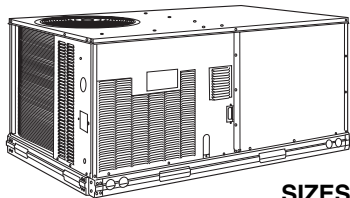


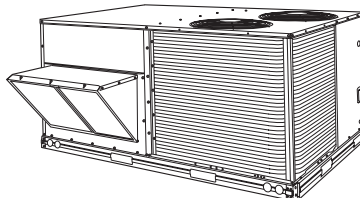


## COMMERCIAL SINGLE PACKAGE ROOFTOP UNITS GAS HEATING/ELECTRIC COOLING UNITS

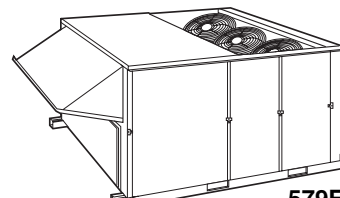
**580F, 579F, 581A/B**  
**DuraPac and**  
**DuraPac Plus Series**  
**Sizes 036-300**  
3 to 25 Tons



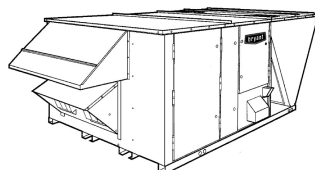
**SIZES 036-073**



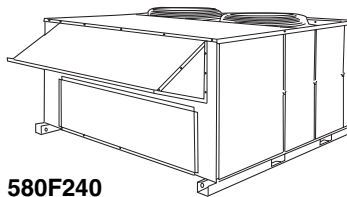
**SIZES 090-151**



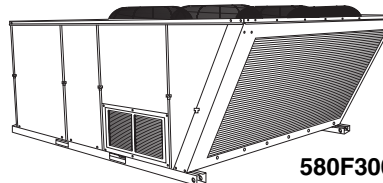
**579F180-216**  
**581A155,180**  
**580F180,210**



**581A210-300**



**580F240**  
**579F240-300**



**580F300**



Standard efficiency units (580F072, 090, 120, 150 and 579F180-300) are available. Standard efficiency units (580F036-060, 073, 091,103,121,151, and 180-300) that meet ASHRAE 90.1-04 minimum energy efficiency requirements are also available. High efficiency units (581B036-150 and 581A155-300) well exceed ASHRAE 90.1-04 energy efficiency requirements and must comply with Energy Star high efficiency requirements. Gas heating with electric cooling rooftops offer:

- Pre-painted galvanized steel cabinet for long life and quality appearance
- Commercial strength base rails with built-in rigging capability
- Convertible design for vertical or horizontal supply/return (036-151 and 210-300 only)
- Non-corrosive, sloped condensate drain pan, meets ASHRAE 62 (IAQ)
- Two-inch return-air filters
- A wide assortment of factory-installed options available, including high-static drives that provide additional performance range
- Factory-installed optional gear driven EconoMi\$er IV (vertical return for sizes 036-151 only) for use with standard rooftop unit controls (includes CO<sub>2</sub> sensor control capability)
- Factory-installed optional gear driven EconoMi\$er2 (vertical return only) for use with third party DDC controls (includes 4 to 20 mA actuator for demand control ventilation)
- Perfect Humidity™ dehumidification package (581B036-150 only)
- Hot gas reheat dehumidification package (581A181-300 only)

### Heat Options

- Exclusive integrated gas control board with diagnostics
- Alumagard™ heat exchanger coating
- Induced-draft fan for gas combustion

- Tubular, dimpled heat exchangers
- Natural gas
- LP conversion kits
- Low NO<sub>x</sub> (size 036-060 only)
- Optional stainless steel heat exchangers.

### FEATURES/BENEFITS

Every compact one-piece unit arrives fully assembled, charged, tested, and ready to run.

**GAS HEAT MODELS** — All ignition components are contained in the compact IGC (integrated gas controller) which is easily accessible for servicing. The IGC control board, designed and manufactured exclusively for Bryant rooftop units, provides built-in diagnostic capability. An LED (light-emitting diode) simplifies troubleshooting by providing visual fault notification and system status confirmation.

The IGC also contains an exclusive anti-cycle protection for gas heat operation. After 4 continuous cycles on the unit high-temperature limit switch, the gas heat operation is disabled, and an error code is issued. This feature greatly improves reliability of the rooftop unit.

The IGC also contains burner control logic for accurate and dependable gas ignition. The LED is visible without removing the unit control box access panel. This LED fault-notification system reduces service person troubleshooting time and minimizes service costs. The IGC also maximizes heating efficiency by controlling evaporator-fan on and off delays.

Tubular, dimpled gas heat exchangers optimize heat transfer for improved efficiency. The tubular design permits hot gases to make multiple passes across the path of the supply air. The dimpled design creates a turbulent gas flow to maximize heating efficiency.

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### FEATURES/BENEFITS (cont)

The efficient in-shot burners and all ignition components are contained in an easily removable, compact assembly.

The California Air Quality Management Districts NO<sub>x</sub> requirement of 40 nanograms/joule or less is met on 036-060 size Low NO<sub>x</sub> models.

The extra thick Alumagard™ heat exchanger coating provides corrosion resistance and ensures long life (optional stainless steel heat exchangers are available).

The unsightly appearance of flue stacks is eliminated and the effects of wind on heating operations are diminished by the induced draft combustion system. The inducer fan draws hot combustion gas through the heat exchanger at the optimum rate for the most effective heat transfer. The heat exchanger operates under negative pressure, preventing flue gas leakage into the indoor supply air.

During the heating mode, the evaporator-fan relay automatically starts the evaporator fan after the heat exchanger warms up to a suitable temperature. The 30-second fan delay prevents cold air from entering the supply duct system when the conditioned space is calling for heat to maximize efficiency.

The direct-spark ignition system saves operating expense when compared to pilot ignition systems. No crossover tube is required, therefore no sooting or pilot fouling problems can occur.

All standard units are designed for natural gas, but an accessory LP (liquid propane) conversion kit is available.

All units have a flame rectification sensor to quickly sense the burner flame and ignite burners almost immediately. Fast shutdown is a certainty since the sensor reacts quickly to any flame outage or system failure. In the event of a shutdown, an error code is issued at the IGC board.

Safety is also assured due to the heating safety controls which will shut down the unit if there is a problem. If excessive temperatures develop, limit switches shut off the gas valve. After 4 continuous short cycles of the high-temperature limit switch, the IGC board locks out the gas heat cycle to prevent any further short cycles. This safety feature is provided exclusively on Bryant rooftop units. The rollout switch also deenergizes the gas valve in the event of a flame rollout.

**QUIET, EFFICIENT OPERATION AND DEPENDABLE PERFORMANCE** — Compressors have vibration isolators for quiet operation. Efficient fan and motor design permits operation at low sound levels.

Unit sizes 090-300 offer lower utility costs through part-load operation using 2 or 3 stages of cooling.

Quiet and efficient operation is provided by belt-driven evaporator fans (standard on all units over 5 tons). The belt-driven evaporator-fan is equipped with variable-pitch pulleys which allow adjustment within the rpm ranges of the factory-supplied pulleys.

Increased operating efficiency is achieved through computer-designed coils featuring staggered internally enhanced copper tubes. Fins are ripple-edged for strength, lanced, and double waved for higher heat transfer.

**DURABLE, DEPENDABLE CONSTRUCTION** — Designed for durability in any climate, the weather-resistant cabinets are constructed of galvanized steel and bonderized, and all exterior panels are coated with a prepainted baked enamel finish. The paint finish is non-chalking, and is capable of withstanding ASTM (American Society for Testing and Materials) B117 500-hour Salt Spray Test. All internal cabinet panels are primed, permitting longer life and a more attractive appearance for the entire unit.

In addition, all size 036-151 units are designed with a single, continuous top piece to eliminate any possible leaks at seams or gasketing. Totally enclosed condenser-fan motors and permanently lubricated bearings provide additional unit dependability.

### EASY INSTALLATION AND CONVERSION

**All Units are Shipped in the Vertical Duct Configuration** for fit-up to standard roof curbs. The contractor can order and install the roof curb early in the construction stage, before decisions on size requirements are made.

All units feature a base rail design with forklift slots and rigging holes for easier maneuvering. Durable packaging protects all units during shipment and storage.

## FEATURES/BENEFITS (cont)

The units can be easily converted from a vertical to a horizontal duct configuration by relocating the panels supplied with the unit (size 036-150 only).

**To Convert 036-151 Units** from vertical to horizontal discharge, simply relocate 2 panels. The same basic unit can be used for a variety of applications and can be quickly modified at the job-site.

**To Convert 155-300 Units** from vertical to horizontal discharge, use the optional horizontal supply/return adapter roof curb (581A155,180 and 579F/580F180-300) or accessory conversion kit (581A210-300). Please note that 581A210-300 units are available from the factory configured for horizontal supply/return.

**Convenient Duct Openings** in the unit basepans permit side-by-side or concentric duct connections (see Application data section) without requiring internal unit modification.

**NOTE:** On units using horizontal supply and return, the accessory barometric relief or power exhaust **MUST** be installed on the return ductwork.

**Thru-The-Bottom Service Connection Capability** comes standard with the rooftop unit to allow power and control wiring and gas connections to be routed through the unit's basepan, thereby minimizing roof penetrations (to prevent water leaks). (Thru-the-bottom gas connection requires thru-the-bottom accessory kit.) Power, gas and control connections are made on the same side of the unit to simplify installation.

**The Non-Corrosive Sloped Condensate Drain Pan (Size 036-150)** permits either an external horizontal side condensate drain (outside the roof curb) or an internal vertical bottom drain (inside the roof curb). Both options require an external, field-supplied P-trap.

**Standard 2-in. Throwaway Filters** are easily accessed through a removable panel located above the air intake hood. No tools are required to change unit filters.

**Belt-Driven Evaporator-Fan Motors** (optional on 580F units under 6 tons) allow maximum on-site flexibility without changing motors or drives.

**Low Voltage Wiring Connections** are easily made thanks to the large terminal board which is located for quick, convenient access.

In addition, color-coded wires permit easy tracing and diagnostics.

**PROVEN COMPRESSOR RELIABILITY** — Design techniques feature computer-programmed balance between compressor, condenser, and evaporator. Bryant-specified hermetic compressors are equipped with compressor overcurrent and overtemperature protection to ensure dependability.

All units have Bryant's exclusive Acutrol™ (036-150) or TXV (thermostatic expansion valve) metering device (155-300) which precisely controls refrigerant flow, preventing slugging and flood-back, while maintaining optimum unit performance. Refrigerant filter driers are standard.

**INTEGRATED ECONOMIZERS AND OUTDOOR-AIR DAMPERS** — Available as options or accessories, economizers and manual outdoor-air dampers introduce outdoor air which mixes with the conditioned air, improving indoor-air quality and often reducing energy consumption.

During a first stage call for cooling, if the outdoor-air temperature is below the economizer control changeover set point, the mixed-air sensor modulates the economizer outdoor-air damper open to take advantage of free cooling provided by the outside air. When second-stage cooling is called for, the compressor is energized in addition to the economizer. If the outdoor-air temperature is above the changeover set point, the first stage of compression is activated and the economizer damper stays at minimum position.

Accessory upgrade kits allow for control by differential dry-bulb temperature (outdoor vs return), outdoor air enthalpy changeover, or more precise differential enthalpy control.

Units can be equipped with different economizer options to meet specific controls applications. The factory-installed or field-installed EconoMi\$er IV and EconoMi\$er2 are available. The EconoMi\$er IV is used with the standard rooftop unit controls and includes an industry standard, stand-alone, solid-state controller. The control can be used with a CO<sub>2</sub> sensor for DCV (demand control ventilation) operation. For direct digital control (DDC) applications, the EconoMi\$er2 can be operated using a third party control system. The EconoMi\$er2 includes 4 to 20 mA actuator capability for demand control ventilation applications.

All economizers incorporate a parallel blade, gear-driven damper system for efficient air mixing and reliable control. In addition, the standard damper actuator includes a spring return to provide reliable closure on power loss. The economizers for sizes 036-151 are equipped with up to 100% barometric relief capability for high outdoor airflow operations. Economizers for unit sizes 036-151 are available, factory-installed, for vertical return only. Economizers for unit sizes 155-300 are compatible for vertical or horizontal return. An optional field-installed barometric relief package is available for size 155-300 units.

In addition, single-stage power exhaust is available as a field-installed accessory for EconoMi\$er IV to help maintain proper building pressure.

For units without economizer, year-round ventilation is enhanced by an optional manual outdoor-air damper. On 036-150 units, a 25% or 50% manual damper is available as a field-installed accessory. Unit sizes 155-300 are equipped with a manual 25% damper.

**SERVICE OPTIONS (581B and 581A Units Only)** — Servicing a rooftop unit has never been easier with the factory-installed service options for these rooftop units. These options include the following:

- Hinged access panels are provided for the filter/indoor-fan motor, compressors, evaporator fan, and control box areas. Quick access to major components is accomplished by simply unlatching and swinging open the various panels. Each hinged panel is permanently mounted to the unit, thereby eliminating the concern of a dropped or wind-blown panel puncturing delicate roof materials. The 4 extended access panels are also equipped with "tie back" retaining devices to hold the door in the open position while servicing the unit.
- An external, covered, 115-v Ground Fault Interrupt (GFI) receptacle is provided as a convenient power source for drills, lights, refrigerant recovery units, or other electrical service tools. A factory-supplied step down transformer is connected to the "load" side of the unit main power connection (size 036-150). For sizes 155-300, connect the outlet to a field-supplied and properly fused branch circuit power supply.
- Slide out "motor-drive-blower" reduces service time (only on 581A210-300).
- An integral non-fused disconnect switch within the rooftop unit reduces installation time, labor and material costs. Safety is assured by an interlock which prevents access to the control box unless the switch is in the OFF position. In addition, the externally mounted handle incorporates power lockout capability to further protect service personnel.

## FEATURES/BENEFITS (cont)

**INDOOR-AIR QUALITY (IAQ) BEGINS WITH BRYANT ROOF-TOPS** — Sloped condensate pans minimize biological growth in rooftop units in accordance with ASHRAE (American Society of Heating, Refrigeration and Air Conditioning Engineers) Standard 62. Two-inch filters with optional dirty filter indicator switch provide for greater particle reduction in the return air. The face-split evaporator coils improve the dehumidification capability of standard units, maximize building humidity control.

Optional proportional reacting CO<sub>2</sub> sensor is available with the EconoMi\$er IV outdoor air damper option/accessory to aid the IAQ benefits.

**PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM (581B036-150 only)** — Bryant's Perfect Humidity adaptive dehumidification system is an all-inclusive factory-installed option that can be ordered with any 581B rooftop unit to meet the demand for providing a flexible and high performing solution to accommodate all of these design related issues. This system expands the envelope of operation of 581B rooftop products to provide unprecedented flexibility to meet year-round comfort conditions. The Perfect Humidity adaptive dehumidification system has the industry's only dual dehumidification mode setting. The Perfect Humidity system includes two new modes of operation. The 581B rooftop coupled with the Perfect Humidity system is capable of operating in normal design cooling mode, subcooling mode, and hot gas reheat mode. Normal Design Cooling mode is when the unit will operate under its normal sequence of operation by cycling compressors to maintain comfort conditions. Subcooling mode will operate to satisfy part load type conditions when the space requires combined sensible and a higher proportion of latent load control. Hot Gas

Reheat mode will operate when outdoor temperatures diminish and the need for latent capacity is required for sole humidity control. Hot Gas Reheat mode will provide neutral air for maximum dehumidification operation.

**EXCLUSIVE HOT GAS REHEAT DEHUMIDIFICATION PACKAGE (581A181-300)** — The hot gas reheat dehumidification package is a result of recent advances by Bryant in controlling comfort levels. This factory-installed option significantly improves the dehumidification capability of the rooftop unit and helps control humidity levels in the building.

This option provides increased dehumidification by cooling the hot liquid refrigerant leaving the condenser coil. The hot gas reheat package consists of a subcooling coil located on the leaving-air side of the evaporator coil. The location of this coil in the indoor airstream enhances the latent capacity of the units by as much as 40%. Many buildings suffer from humidity damage or poor indoor air quality due to humid conditions. The improved latent capacity provided by the hot gas reheat option reduces the building's humidity, eliminating potential property damage and making the space more comfortable.

The hot gas reheat option is the ideal IAQ option for hot and humid regions. The operation of the hot gas reheat package can be controlled by a field-installed, wall mounted humidistat or Thermidistat™ device. The circuit activates only when needed (using the accessory humidistat) as opposed to some dehumidification systems that operate continuously. The humidistat can be set for any humidity level between 20% and 80% relative humidity. The Thermidistat device can be set for any humidity level between 50% and 90% relative humidity.

## MODEL NUMBER NOMENCLATURE 580F036-150 (Standard and Medium Efficiency) 3 to 12<sup>1</sup>/<sub>2</sub> Tons

| 580F                                                                            |                                  | E                                  | V | 060 | 120 | N | KB |
|---------------------------------------------------------------------------------|----------------------------------|------------------------------------|---|-----|-----|---|----|
| 580F – Packaged Rooftop<br>Standard Efficiency                                  |                                  | Factory-Installed Options Code     |   |     |     |   |    |
| Voltage Designation                                                             |                                  | Gas Heat Options                   |   |     |     |   |    |
| J – 208/230-1-60                                                                |                                  | A – Standard                       |   |     |     |   |    |
| P – 208/230-3-60                                                                |                                  | N – Low NOx Unit                   |   |     |     |   |    |
| E – 460-3-60                                                                    |                                  | S – Stainless Steel Heat Exchanger |   |     |     |   |    |
| T – 575-3-60                                                                    |                                  |                                    |   |     |     |   |    |
| Fuel Control Type/Heat Exchanger                                                |                                  |                                    |   |     |     |   |    |
| V – Natural Gas/Direct Spark Ignition                                           |                                  |                                    |   |     |     |   |    |
| N – Low NOx Natural Gas/Direct Spark Ignition/Stainless<br>Steel Heat Exchanger |                                  |                                    |   |     |     |   |    |
| Nominal Tons                                                                    |                                  | Gas Heat Input (Btuh)              |   |     |     |   |    |
|                                                                                 |                                  | Standard Units      Low NOx Units  |   |     |     |   |    |
| 036 – 3                                                                         | 091 – 7-1/2 (Medium Efficiency)  | 074 – 74,000      060 – 60,000     |   |     |     |   |    |
| 048 – 4                                                                         | 103 – 8-1/2 (Medium Efficiency)  | 115 – 115,000      090 – 90,000    |   |     |     |   |    |
| 060 – 5                                                                         | 120 – 10                         | 125 – 125,000      120 – 120,000   |   |     |     |   |    |
| 072 – 6                                                                         | 121 – 10 (Medium Efficiency)     | 150 – 150,000                      |   |     |     |   |    |
| 073 – 6 (Medium<br>Efficiency)                                                  | 150 – 12-1/2                     | 180 – 180,000                      |   |     |     |   |    |
| 090 – 7-1/2                                                                     | 151 – 12-1/2 (Medium Efficiency) | 224 – 224,000                      |   |     |     |   |    |
|                                                                                 |                                  | 250 – 250,000                      |   |     |     |   |    |

**NOTE:** The example model number 580FEV060120NKB designates a 5-ton 460-3-60 volt Low NOx, gas/electric rooftop unit with 120,000 Btuh natural gas heat, EconoMi\$er2 and alternate drive. Low NOx units must show the “N” designation in the model number.



## MODEL NUMBER NOMENCLATURE 581B036-150 (High Efficiency) — 3 to 12<sup>1</sup>/<sub>2</sub> Tons

| 581B                                                                                                               |  | E                                                                                                                                           | V | 060 | 120 | N | DA |
|--------------------------------------------------------------------------------------------------------------------|--|---------------------------------------------------------------------------------------------------------------------------------------------|---|-----|-----|---|----|
| 581B – Single Package<br>High-Efficiency<br>Gas/Electric Unit                                                      |  | Factory-Installed Options*                                                                                                                  |   |     |     |   |    |
| Voltage Designation<br>E – 460-3-60<br>J – 208/230-1-60<br>P – 208/230-3-60<br>T – 575-3-60                        |  | Gas Heat Options<br>A – Standard<br>N – Low NOx Unit<br>S – Stainless Steel Heat Exchanger                                                  |   |     |     |   |    |
| Fuel Control Type/Heat Exchanger<br>V – Natural Gas/Direct Spark Ignition                                          |  | Gas Heat Input (Btuh)<br>072 – 72,000    180 – 180,000<br>115 – 115,000    224 – 224,000<br>125 – 125,000    250 – 250,000<br>150 – 150,000 |   |     |     |   |    |
| Nominal Tons<br>036 – 3    090 – 7-1/2<br>048 – 4    102 – 8-1/2<br>060 – 5    120 – 10<br>072 – 6    150 – 12-1/2 |  | Low NOx    California Compliant 3 Phase<br>060 – 60,000    071 – 72,000<br>090 – 90,000    114 – 115,000<br>120 – 120,000    149 – 150,000  |   |     |     |   |    |

\*Refer to the Trade Prices for ordering codes of factory-installed options.

The Example model number 581BEV060120NDA designates a high efficiency 5-ton 460-3-60 volt Low NOx gas/electric roof top unit with 120,000 Btuh natural gas heat and EconoMi\$er IV. Low NOx units must show an “N” in the nomenclature.



## MODEL NUMBER NOMENCLATURE — 579F180-300

| 579F                                                                                    | E | V | 180 | 230 | -- | C | B                                                                                                                                                              |
|-----------------------------------------------------------------------------------------|---|---|-----|-----|----|---|----------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>579F</b> – Single-Package<br>Standard-Efficiency Gas/Electric Unit                   |   |   |     |     |    |   |                                                                                                                                                                |
| <b>Voltage Designation</b><br>E – 460-3-60<br>P – 208/230-3-60<br>T – 575-3-60          |   |   |     |     |    |   |                                                                                                                                                                |
| <b>Fuel and Control Type</b><br>V – Natural Gas/Electric Relight Pilot                  |   |   |     |     |    |   |                                                                                                                                                                |
| <b>Nominal Tons</b><br>180 – 15 Tons<br>216 – 18 Tons<br>240 – 20 Tons<br>300 – 25 Tons |   |   |     |     |    |   |                                                                                                                                                                |
|                                                                                         |   |   |     |     |    |   | <b>Fan Drive Option<br/>(Standard Motor)</b><br>B – Standard Low-Medium<br>Fan Drive Static<br>Capability<br>D – Alternate High Fan<br>Drive Static Capability |
|                                                                                         |   |   |     |     |    |   | <b>Factory-Installed Outdoor-Air<br/>and Other Upgrade Options</b><br>C – EconoMi\$er IV<br>H – Manual Outdoor-Air Damper                                      |
|                                                                                         |   |   |     |     |    |   | <b>Design Series Code</b>                                                                                                                                      |
|                                                                                         |   |   |     |     |    |   | <b>Gas Heat Input (Btuh)</b><br>230 – 230,000<br>275 – 275,000<br>300 – 300,000<br>360 – 360,000                                                               |

### NOTES:

1. All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.
2. The example model number 579FEV180230--CB designates a 15-ton 460-3-60 volt gas/electric rooftop unit with 230,000 Btuh natural gas heat input, EconoMi\$er IV, and the standard low-medium fan drive static capability.

## MODEL NUMBER NOMENCLATURE 580F180-300

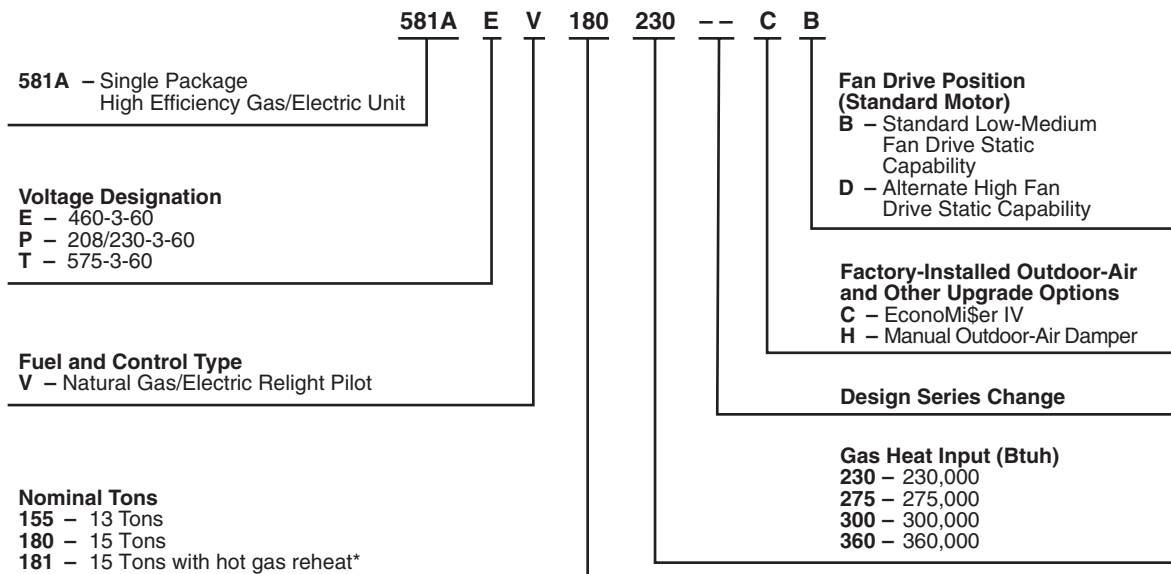
| 580F                                                                                    | E | V | 180 | 275 | -- | C | B                                                                                                                                                                |
|-----------------------------------------------------------------------------------------|---|---|-----|-----|----|---|------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| <b>580F</b> – Single Package<br>Medium-Efficiency Gas/Electric Unit                     |   |   |     |     |    |   |                                                                                                                                                                  |
| <b>Voltage Designation</b><br>E – 460-3-60<br>P – 208/230-3-60<br>T – 575-3-60          |   |   |     |     |    |   |                                                                                                                                                                  |
| <b>Fuel and Control Type</b><br>V – Natural Gas/Electric Relight Pilot                  |   |   |     |     |    |   |                                                                                                                                                                  |
| <b>Nominal Tons</b><br>180 – 15 Tons<br>210 – 18 Tons<br>240 – 20 Tons<br>300 – 25 Tons |   |   |     |     |    |   |                                                                                                                                                                  |
|                                                                                         |   |   |     |     |    |   | <b>Fan Drive Position<br/>(Standard Motor)</b><br>B – Standard Low-Medium<br>Fan Drive Static<br>Capability<br>D – Alternate High Fan<br>Drive Static Capability |
|                                                                                         |   |   |     |     |    |   | <b>Factory-Installed Outdoor-Air<br/>and Other Upgrade Options</b><br>C – EconoMi\$er IV<br>H – Manual Outdoor-Air Damper                                        |
|                                                                                         |   |   |     |     |    |   | <b>Design Series Change</b>                                                                                                                                      |
|                                                                                         |   |   |     |     |    |   | <b>Gas Heat Input (Btuh)</b><br>275 – 275,000<br>300 – 300,000<br>360 – 360,000                                                                                  |

### NOTES:

1. All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.
2. The example model number 580FEV180275--CB designates a 15-ton 460-3-60 volt gas/electric rooftop unit with 275,000 Btuh natural gas heat input, EconoMi\$er IV, and the standard low-medium fan drive static capability.



## MODEL NUMBER NOMENCLATURE 581A155, 180, 181 — 13 to 15 Tons



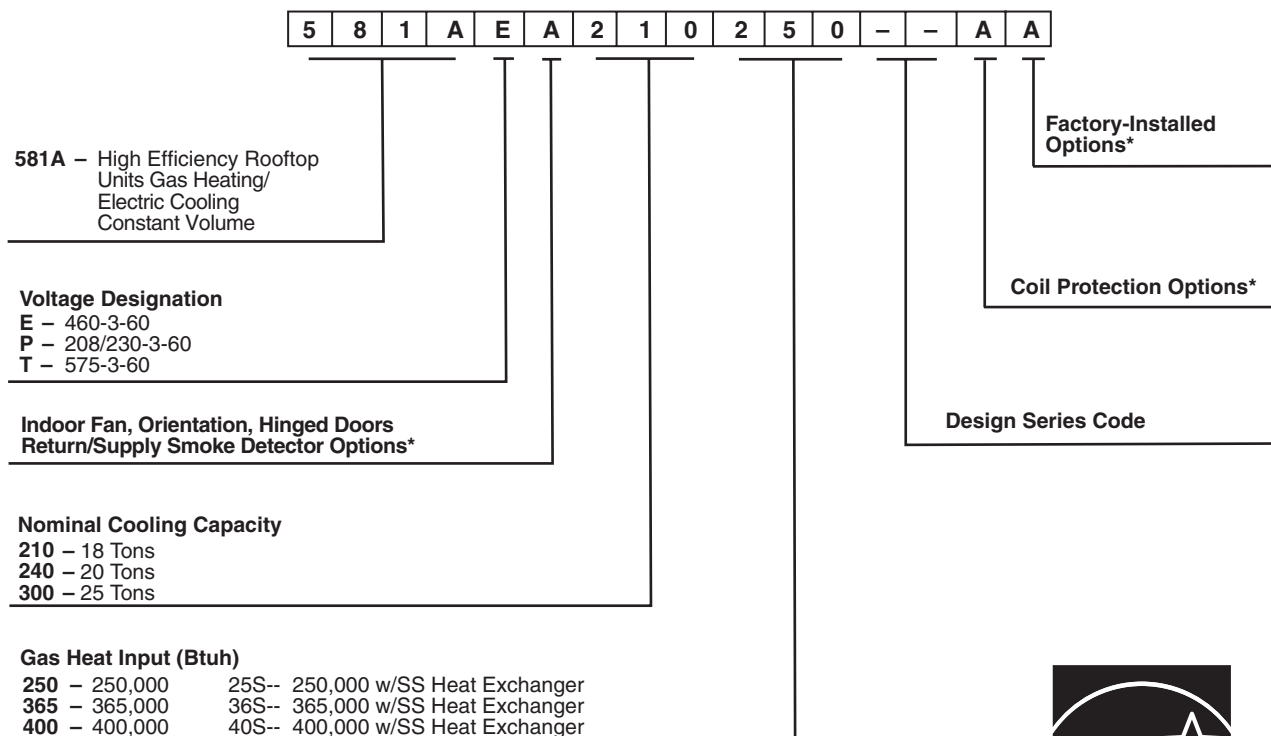
\*See pages 213 and 214 for cooling capacity tables for 5581A181 unit. For all other data, contact application engineering.

**NOTE:** All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

The example model number: 581AEV180230--CB designates a 15 ton 460-3-60 high efficiency gas/electric rooftop unit with 230,000 Btuh natural gas input, EconoMiSer IV and standard, low-medium fan drive static capability.



## MODEL NUMBER NOMENCLATURE 581A210-300 — 18 to 25 Tons



SS — Stainless Steel

\*Refer to unit price pages.





# ARI\* CAPACITY RATINGS — 580F036-151

| UNIT 580F | NOMINAL TONS | STANDARD CFM | NET COOLING CAPACITY (Btuh) | TOTAL kW | SEER†      |              | SOUND RATING (dB) |
|-----------|--------------|--------------|-----------------------------|----------|------------|--------------|-------------------|
|           |              |              |                             |          | Belt Drive | Direct Drive |                   |
| 036       | 3            | 1200         | 35,000                      | 4.0      | 10.0       | 9.7          | 81                |
| 048       | 4            | 1600         | 47,000                      | 5.3      | 10.0       | 9.7          | 81                |
| 060       | 5            | 2000         | 57,000                      | 6.7      | 10.0       | 9.7          | 81                |

| UNIT 580F | NOMINAL TONS | NET COOLING CAPACITY (Btuh) | TOTAL kW | EER  | SOUND RATING (dB) | IPLV |
|-----------|--------------|-----------------------------|----------|------|-------------------|------|
| 072       | 6            | 72,000                      | 8.0      | 9.0  | 81                | **   |
| 073       | 6            | 71,000                      | 7.0      | 10.1 | 80                | **   |
| 090       | 7½           | 85,000                      | 9.6      | 8.9  | 87                | 9.40 |
| 091       | 7½           | 88,000                      | 8.7      | 10.1 | 82                | 10.5 |
| 103       | 8½           | 100,000                     | 9.9      | 10.1 | 82                | 10.4 |
| 120       | 10           | 117,000                     | 13.0     | 9.0  | 88                | 9.40 |
| 121       | 10           | 114,000                     | 11.3     | 10.1 | 84                | 11.0 |
| 150       | 12½          | 144,000                     | 16.0     | 9.0  | 87                | 9.20 |
| 151       | 12½          | 136,000                     | 14.3     | 9.5  | 86                | 9.70 |

## LEGEND

**dB** — Sound Levels (decibels)  
**db** — Dry Bulb  
**EER** — Energy Efficiency Ratio  
**IPLV** — Integrated Part-Load Values  
**SEER** — Seasonal Energy Efficiency Ratio  
**wb** — Wet Bulb

\*Air Conditioning and Refrigeration Institute.

†Applies only to units with capacity of 65,000 Btuh or less.

\*\*The IPLV applies only to two-stage cooling units.

## NOTES:

1. Rated in accordance with ARI Standards 210/240 (for sizes 036-120) or 360, (for size 150 and 151) and 270.
2. ARI ratings are net values, reflecting the effects of circulating fan heat.

3. Ratings are based on:

**Cooling Standard:** 80 F db, 67 F wb indoor entering-air temperature and 95 F db air entering outdoor unit.

**IPLV Standard:** 80 F db, 67 F wb indoor entering-air temperature and 80 F db outdoor entering-air temperature.

4. All 580F036, 048, 060, 073, 091, 103, 121, 151 units are in compliance with ASHRAE 90.1-1999 Energy Standard for minimum SEER and EER requirements. Refer to state and local codes or visit the following website: <http://solstice.crest.org/efficiency/bcap> to determine if compliance with this standard pertains to a given geographical area of the United States.
5. All 581B036-120 units are in compliance with Energy Star high efficiency requirements.



## HEATING CAPACITIES AND EFFICIENCIES (Standard-Efficiency Units) — 580F036-151

### 208/230-1-60 — SINGLE-STAGE GAS HEAT

| UNIT 580F | INPUT CAPACITY | OUTPUT CAPACITY | TEMPERATURE RISE (°F) | MINIMUM HEATING AIRFLOW (CFM) | EFFICIENCY |                  |
|-----------|----------------|-----------------|-----------------------|-------------------------------|------------|------------------|
|           |                |                 |                       |                               | AFUE (%)   | Steady State (%) |
| 036074    | 74,000         | 57,000          | 25-55                 | 1004                          | 80         | 80               |
| 036115    | 115,000        | 89,000          | 55-85                 | 1002                          | 80         | 80               |
| 048074    | 74,000         | 57,000          | 25-55                 | 1004                          | 80         | 80               |
| 048115    | 115,000        | 91,000          | 35-65                 | 1327                          | 80         | 80               |
| 048150    | 150,000        | 118,000         | 50-80                 | 1396                          | 80         | 80               |
| 060074    | 74,000         | 57,000          | 25-55                 | 1004                          | 80         | 80               |
| 060115    | 115,000        | 91,000          | 35-65                 | 1327                          | 80         | 80               |
| 060150    | 150,000        | 118,000         | 50-80                 | 1314                          | 80         | 80               |

### 208/230-1-60 — SINGLE-STAGE GAS HEAT — LOW NOx

| UNIT 580F | INPUT CAPACITY | OUTPUT CAPACITY | TEMPERATURE RISE (°F) | MINIMUM HEATING AIRFLOW (CFM) | EFFICIENCY |                  |
|-----------|----------------|-----------------|-----------------------|-------------------------------|------------|------------------|
|           |                |                 |                       |                               | AFUE (%)   | Steady State (%) |
| 036060N   | 60,000         | 49,000          | 20-50                 | 910                           | 80         | 80               |
| 036090N   | 90,000         | 73,000          | 30-60                 | 1130                          | 80         | 80               |
| 048060N   | 60,000         | 49,000          | 20-50                 | 910                           | 80         | 80               |
| 048090N   | 90,000         | 73,000          | 30-60                 | 1130                          | 80         | 80               |
| 048120N   | 120,000        | 98,000          | 40-70                 | 1300                          | 80         | 80               |
| 060060N   | 60,000         | 49,000          | 20-50                 | 910                           | 80         | 80               |
| 060090N   | 90,000         | 73,000          | 30-60                 | 1130                          | 80         | 80               |
| 060120N   | 120,000        | 98,000          | 40-70                 | 1300                          | 80         | 80               |



# ARI\* CAPACITY RATINGS (cont)

## HEATING CAPACITIES AND EFFICIENCIES (Standard Efficiency Units) — 580F036-151 (cont)

### 208/230/460-3-60 — SINGLE-STAGE GAS HEAT — LOW NOx

| UNIT<br>580F | INPUT<br>CAPACITY | OUTPUT<br>CAPACITY | TEMPERATURE<br>RISE (°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|-------------------|--------------------|--------------------------|----------------------------------|------------|------------------|
|              |                   |                    |                          |                                  | AFUE (%)   | Steady State (%) |
| 036060N      | 60,000            | 49,000             | 20-50                    | 910                              | 80         | 80               |
| 036090N      | 90,000            | 73,000             | 30-60                    | 1130                             | 80         | 80               |
| 048060N      | 60,000            | 49,000             | 20-50                    | 910                              | 80         | 80               |
| 048090N      | 90,000            | 73,000             | 30-60                    | 1130                             | 80         | 80               |
| 048120N      | 120,000           | 98,000             | 40-70                    | 1300                             | 80         | 80               |
| 060060N      | 60,000            | 47,000             | 20-50                    | 910                              | 80         | 80               |
| 060090N      | 90,000            | 73,000             | 30-60                    | 1130                             | 80         | 80               |
| 060120N      | 120,000           | 98,000             | 40-70                    | 1300                             | 80         | 80               |

### 208/230, 460, 575-3-60 — 2-STAGE GAS HEAT

| UNIT<br>580F | INPUT CAPACITY |           | OUTPUT CAPACITY |           | TEMPERATURE<br>RISE (°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|----------------|-----------|-----------------|-----------|--------------------------|----------------------------------|------------|------------------|
|              | 1st Stage      | 2nd Stage | 1st Stage       | 2nd Stage |                          |                                  | AFUE (%)   | Steady State (%) |
| 036115       | 82,000         | 115,000   | 65,600          | 92,000    | 55-85                    | 1004                             | 80         | 80               |
| 048150       | 120,000        | 150,000   | 96,000          | 120,000   | 50-80                    | 1396                             | 80         | 80               |
| 060150       | 120,000        | 150,000   | 96,000          | 120,000   | 50-80                    | 1314                             | 80         | 80               |
| 072150       | 120,000        | 150,000   | 96,000          | 120,000   | 50-80                    | 1390                             | 80         | 80               |
| 090180       | 120,000        | 180,000   | 96,000          | 144,000   | 35-65                    | 2060                             | 80         | 80               |
| 090224       | 180,000        | 224,000   | 144,000         | 179,200   | 45-75                    | 2230                             | 80         | 80               |
| 120180       | 120,000        | 180,000   | 90,000          | 144,000   | 35-65                    | 2060                             | 80         | 80               |
| 120224       | 180,000        | 224,000   | 144,000         | 179,200   | 35-65                    | 2510                             | 80         | 80               |
| 120250       | 200,000        | 250,000   | 160,000         | 200,000   | 40-70                    | 2650                             | 80         | 80               |
| 150224       | 180,000        | 224,000   | 144,000         | 179,200   | 35-65                    | 2510                             | 80         | 80               |
| 150250       | 200,000        | 250,000   | 160,000         | 200,000   | 40-70                    | 2650                             | 80         | 80               |

### 208/230, 460, 575-3-60 — SINGLE-STAGE GAS HEAT

| UNIT<br>580F   | INPUT<br>CAPACITY | OUTPUT<br>CAPACITY | TEMPERATURE<br>(°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|----------------|-------------------|--------------------|---------------------|----------------------------------|------------|------------------|
|                |                   |                    |                     |                                  | AFUE (%)   | Steady State (%) |
| 036074         | 74,000            | 59,200             | 15-45               | 1220                             | 80         | 80               |
| 048074         | 74,000            | 59,200             | 15-45               | 1220                             | 80         | 80               |
| 048115         | 115,000           | 92,000             | 35-65               | 1320                             | 80         | 80               |
| 060074         | 74,000            | 59,200             | 15-45               | 1220                             | 80         | 80               |
| 060115         | 115,000           | 92,000             | 35-65               | 1320                             | 80         | 80               |
| 072074         | 74,000            | 59,200             | 15-45               | 1220                             | 80         | 80               |
| 072115         | 115,000           | 92,000             | 35-65               | 1320                             | 80         | 80               |
| 090125, 091125 | 125,000           | 100,000            | 20-50               | 1860                             | 80         | 80               |
| 103125         | 125,000           | 100,000            | 20-50               | 1860                             | 80         | 80               |

#### LEGEND

AFUE — Annual Fuel Utilization Efficiency

## HEATING CAPACITIES AND EFFICIENCIES (Medium-Efficiency Units) — 580F036-151

| UNIT<br>580F | HEATING INPUT (Btuh)<br>Stage 2/Stage 1 | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | MINIMUM HEATING<br>AIRFLOW (CFM) | AFUE<br>(%) | STEADY-STATE<br>EFFICIENCY (%) |
|--------------|-----------------------------------------|---------------------------|-------------------------|----------------------------------|-------------|--------------------------------|
| 073074       | —/ 74,000                               | 59,200                    | 25-55                   | 1220                             | 80.0        | 80.0                           |
| 073115       | —/115,000                               | 92,000                    | 35-65                   | 1320                             | 80.0        | 80.0                           |
| 073150       | 150,000/120,000                         | 120,000                   | 50-80                   | 1390                             | 80.0        | 80.0                           |
| 091125       | —/125,000                               | 100,000                   | 20-50                   | 1860                             | 80.0        | 80.0                           |
| 091180       | 180,000/120,000                         | 144,000                   | 35-65                   | 2060                             | 80.0        | 80.0                           |
| 091224       | 224,000/180,000                         | 179,200                   | 45-75                   | 2180                             | 80.0        | 80.0                           |
| 103125       | —/125,000                               | 100,000                   | 20-50                   | 1860                             | 80.0        | 80.0                           |
| 103180       | 180,000/120,000                         | 144,000                   | 35-65                   | 2060                             | 80.0        | 80.0                           |
| 103224       | 224,000/180,000                         | 179,200                   | 45-75                   | 2180                             | 80.0        | 80.0                           |
| 121180       | 180,000/120,000                         | 144,000                   | 35-65                   | 2060                             | 80.0        | 80.0                           |
| 121224       | 224,000/180,000                         | 179,200                   | 35-65                   | 2510                             | 80.0        | 80.0                           |
| 121250       | 250,000/200,000                         | 200,000                   | 40-70                   | 2650                             | 80.0        | 80.0                           |
| 151224       | 224,000/180,000                         | 179,200                   | 35-65                   | 2510                             | 80.0        | 80.0                           |
| 151250       | 250,000/200,000                         | 200,000                   | 40-70                   | 2650                             | 80.0        | 80.0                           |

## ARI\* CAPACITY RATINGS — 581B036-150

| UNIT<br>581B | NOMINAL<br>TONS | COOLING<br>(Btuh) | TOTAL<br>kW | SEER† | EER   | SOUND RATING<br>dB | IPLV |
|--------------|-----------------|-------------------|-------------|-------|-------|--------------------|------|
| 036          | 3               | 36,000            | 3.21        | 13.0  | 11.20 | 76                 | **   |
| 048          | 4               | 46,000            | 4.25        | 13.0  | 11.05 | 76                 | **   |
| 060          | 5               | 61,000            | 5.55        | 13.0  | 11.00 | 80                 | **   |
| 072          | 6               | 73,000            | 6.70        | —     | 11.00 | 80                 | **   |
| 090          | 7½              | 90,000            | 8.18        | —     | 11.00 | 82                 | 11.6 |
| 102          | 8½              | 103,000           | 8.90        | —     | 11.60 | 82                 | 12.8 |
| 120          | 10              | 120,000           | 10.91       | —     | 11.00 | 84                 | 11.4 |
| 150          | 12½             | 138,000           | 14.40       | —     | 9.6   | 86                 | 10.3 |

### LEGEND

**EER** — Energy Efficiency Ratio  
**IPLV** — Integrated Part-Load Value  
**SEER** — Seasonal Energy Efficiency Ratio

\*Air-Conditioning & Refrigeration Institute.

†Applies only to units with capacity of 65,000 Btuh or less.

\*\*The IPLV is not applicable to single-compressor units.

### NOTES:

1. Rated in accordance with ARI Standard 210/240 (036-120 units) or 360 (150 units) and 270 (036-150 units).
2. Ratings are net values, reflecting the effects of circulating fan heat.

Ratings are based on:

**Cooling Standard:** 80 F db, 67 wb indoor entering-air temperature and 95 F db outdoor entering-air temperature.

**IPLV Standard:** 80 F db, 67 F wb indoor entering-air temperature and 80 F db outdoor entering-air temperature.



ARI Standard  
210/240 UAC  
Sizes 036-120  
Only



ARI Standard  
340/360  
Sizes 150  
Only



3. All 581B036-150 units are in compliance with ASHRAE 90.1-1999 Energy Standard for minimum SEER and EER requirements. Refer to state and local codes or visit the following website: <http://solstice.crest.org/efficiency/bcap> to determine if compliance with this standard pertains to a given geographical area of the United States.
4. All 581B036-120 units are Energy Star certified.

## HEATING CAPACITIES AND EFFICIENCIES — 581B036-150

### 208/230-1-60 — SINGLE-STAGE GAS HEAT

| UNIT<br>581B | INPUT CAPACITY | OUTPUT CAPACITY | TEMPERATURE<br>RISE (°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|----------------|-----------------|--------------------------|----------------------------------|------------|------------------|
|              |                |                 |                          |                                  | AFUE (%)   | Steady State (%) |
| 036072       | 72,000         | 58,000          | 25-55                    | 1004                             | 82.8       | 82.0             |
| 036115       | 115,000        | 90,000          | 55-85                    | 1002                             | 80.0       | 80.0             |
| 048072       | 72,000         | 58,000          | 25-55                    | 1004                             | 82.8       | 82.0             |
| 048115       | 115,000        | 90,000          | 35-65                    | 1320                             | 81.0       | 81.0             |
| 048150       | 150,000        | 118,000         | 50-80                    | 1396                             | 80.4       | 80.0             |
| 060072       | 72,000         | 58,000          | 25-55                    | 1004                             | 82.8       | 82.0             |
| 060115       | 115,000        | 92,000          | 35-65                    | 1327                             | 81.0       | 81.0             |
| 060150       | 150,000        | 118,000         | 50-80                    | 1314                             | 80.4       | 80.0             |

### LEGEND

**AFUE** — Annual Fuel Utilization Efficiency.

### 208/230-1-60 — SINGLE-STAGE GAS HEAT — LOW NO<sub>x</sub>

| UNIT<br>581B | INPUT CAPACITY | OUTPUT CAPACITY | TEMPERATURE<br>RISE (°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|----------------|-----------------|--------------------------|----------------------------------|------------|------------------|
|              |                |                 |                          |                                  | AFUE (%)   | Steady State (%) |
| 036060N      | 60,000         | 50,000          | 20-50                    | 930                              | 80.2       | 81.2             |
| 036090N      | 90,000         | 74,000          | 30-60                    | 1150                             | 81.0       | 81.4             |
| 048060N      | 60,000         | 50,000          | 20-50                    | 930                              | 80.2       | 81.2             |
| 048090N      | 90,000         | 74,000          | 30-60                    | 1150                             | 81.0       | 81.4             |
| 048120N      | 120,000        | 101,000         | 40-70                    | 1340                             | 80.7       | 82.4             |
| 060060N      | 60,000         | 50,000          | 20-50                    | 930                              | 80.2       | 81.2             |
| 060090N      | 90,000         | 74,000          | 30-60                    | 1150                             | 81.0       | 81.4             |
| 060120N      | 120,000        | 101,000         | 40-70                    | 1340                             | 80.7       | 82.4             |

### LEGEND

**AFUE** — Annual Fuel Utilization Efficiency.

# ARI\* CAPACITY RATINGS (cont)

## HEATING CAPACITIES AND EFFICIENCIES — 581B036-150(cont)

### 208/230/460-3-60 — SINGLE-STAGE GAS HEAT — LOW NOx

| UNIT<br>581B | INPUT CAPACITY | OUTPUT CAPACITY | TEMPERATURE<br>RISE (°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|----------------|-----------------|--------------------------|----------------------------------|------------|------------------|
|              |                |                 |                          |                                  | AFUE (%)   | Steady State (%) |
| 036060N      | 60,000         | 50,000          | 20-50                    | 930                              | 80.2       | 81.2             |
| 036090N      | 90,000         | 74,000          | 30-60                    | 1150                             | 81.0       | 81.4             |
| 048060N      | 60,000         | 50,000          | 20-50                    | 930                              | 80.2       | 81.2             |
| 048090N      | 90,000         | 74,000          | 30-60                    | 1150                             | 81.0       | 81.4             |
| 048120N      | 120,000        | 101,000         | 40-70                    | 1340                             | 80.7       | 82.4             |
| 060060N      | 60,000         | 50,000          | 20-50                    | 930                              | 80.2       | 81.2             |
| 060090N      | 90,000         | 74,000          | 30-60                    | 1150                             | 81.0       | 81.4             |
| 060120N      | 120,000        | 101,000         | 40-70                    | 1340                             | 80.7       | 82.4             |

### 208/230/460-3-60 — SINGLE-STAGE GAS HEAT (California Compliant Models)

| UNIT<br>581B | INPUT CAPACITY | OUTPUT CAPACITY | TEMPERATURE<br>RISE (°F) | MINIMUM HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|----------------|-----------------|--------------------------|----------------------------------|------------|------------------|
|              |                |                 |                          |                                  | AFUE (%)   | Steady State (%) |
| 036071       | 72,000         | 59,040          | 25-55                    | 1000                             | 82.0       | 82.0             |
| 036114       | 115,000        | 93,150          | 55-85                    | 1020                             | 80.0       | 80.0             |
| 048071       | 72,000         | 59,040          | 25-55                    | 1000                             | 82.0       | 82.0             |
| 048114       | 115,000        | 93,150          | 30-60                    | 1440                             | 81.0       | 81.0             |
| 048149       | 150,000        | 120,000         | 50-80                    | 1390                             | 80.0       | 80.0             |
| 060071       | 72,000         | 59,040          | 25-55                    | 1220                             | 82.0       | 82.0             |
| 060114       | 115,000        | 93,150          | 35-65                    | 1330                             | 81.0       | 81.0             |
| 060149       | 150,000        | 120,000         | 50-80                    | 1390                             | 80.0       | 80.0             |

### 208/230/460-3-60 — 2-STAGE GAS HEAT

| UNIT<br>581B | INPUT CAPACITY |           | OUTPUT CAPACITY |           | TEMPERATURE<br>RISE (°F) | MINIMUM<br>HEATING<br>AIRFLOW (CFM) | EFFICIENCY |                  |
|--------------|----------------|-----------|-----------------|-----------|--------------------------|-------------------------------------|------------|------------------|
|              | 1st Stage      | 2nd Stage | 1st Stage       | 2nd Stage |                          |                                     | AFUE (%)   | Steady State (%) |
| 036072       | 50,000         | 72,000    | 41,000          | 59,040    | 25-55                    | 1004                                | 82.8       | 82.0             |
| 036115       | 82,000         | 115,000   | 65,600          | 93,150    | 55-85                    | 1002                                | 80.0       | 80.0             |
| 048072       | 50,000         | 72,000    | 41,000          | 59,040    | 25-55                    | 1004                                | 82.8       | 82.0             |
| 048115       | 82,000         | 115,000   | 66,420          | 93,150    | 35-65                    | 1330                                | 81.0       | 81.0             |
| 048150       | 120,000        | 150,000   | 96,000          | 120,000   | 50-80                    | 1390                                | 80.4       | 80.0             |
| 060072       | 50,000         | 72,000    | 41,000          | 59,040    | 25-55                    | 1004                                | 82.8       | 82.0             |
| 060115       | 82,000         | 115,000   | 66,420          | 93,150    | 35-65                    | 1330                                | 81.0       | 81.0             |
| 060150       | 120,000        | 150,000   | 96,000          | 120,000   | 50-80                    | 1370                                | 80.4       | 80.0             |
| 072072       | 50,000         | 72,000    | 41,000          | 59,040    | 25-55                    | 1220                                | 82.0       | 82.0             |
| 072115       | 82,000         | 115,000   | 66,420          | 93,150    | 35-65                    | 1330                                | 81.0       | 81.0             |
| 072150       | 120,000        | 150,000   | 96,000          | 120,000   | 50-80                    | 1390                                | 80.0       | 80.0             |
| 090125       | 90,000         | 125,000   | 73,800          | 102,500   | 20-50                    | 1900                                | 82.0       | 82.0             |
| 090180       | 120,000        | 180,000   | 98,400          | 147,600   | 35-65                    | 1440                                | 82.0       | 82.0             |
| 090224       | 180,000        | 224,000   | 147,600         | 183,680   | 45-75                    | 2230                                | 82.0       | 82.0             |
| 102125       | 90,000         | 125,000   | 73,800          | 102,500   | 20-50                    | 1900                                | 82.0       | 82.0             |
| 102180       | 120,000        | 180,000   | 98,400          | 147,600   | 35-65                    | 1440                                | 82.0       | 82.0             |
| 102224       | 180,000        | 224,000   | 147,600         | 183,680   | 45-75                    | 2230                                | 82.0       | 82.0             |
| 120180       | 120,000        | 180,000   | 98,400          | 147,600   | 35-65                    | 1440                                | 82.0       | 82.0             |
| 120224       | 180,000        | 224,000   | 147,600         | 183,680   | 35-65                    | 2570                                | 82.0       | 82.0             |
| 120250       | 200,000        | 250,000   | 160,000         | 200,000   | 40-70                    | 2650                                | 80.0       | 80.0             |
| 150224       | 180,000        | 224,000   | 147,600         | 183,680   | 35-65                    | 2570                                | 82.0       | 82.0             |
| 150250       | 200,000        | 250,000   | 160,000         | 200,000   | 40-70                    | 2650                                | 80.0       | 80.0             |

#### LEGEND

AFUE — Annual Fuel Utilization Efficiency

NOTE: Capacities for stainless steel heat exchanger units are the same as standard units.

## ARI\* CAPACITY RATINGS — 579F180-300

### LOW HEAT UNITS

| UNIT<br>579F | NOMINAL<br>TONS | NET COOLING<br>CAPACITY<br>(Btuh) | TOTAL<br>WATTS | EER | SOUND<br>RATING<br>(dB) | IPLV |
|--------------|-----------------|-----------------------------------|----------------|-----|-------------------------|------|
| 180          | 15              | 174,000                           | 20,128         | 8.6 | 88                      | 9.3  |
| 216          | 18              | 188,000                           | 21,619         | 8.7 | 88                      | 9.5  |
| 240          | 20              | 220,000                           | 25,513         | 8.6 | 94                      | 8.7  |
| 300          | 25              | 268,000                           | 31,068         | 8.6 | 94                      | 9.2  |

### HIGH HEAT UNITS

| UNIT<br>579F | NOMINAL<br>TONS | NET COOLING<br>CAPACITY<br>(Btuh) | TOTAL<br>WATTS | EER | SOUND<br>RATING<br>(dB) | IPLV |
|--------------|-----------------|-----------------------------------|----------------|-----|-------------------------|------|
| 180          | 15              | 174,000                           | 20,154         | 8.6 | 88                      | 9.3  |
| 216          | 18              | 186,000                           | 21,798         | 8.5 | 88                      | 9.3  |
| 240          | 20              | 218,000                           | 25,719         | 8.5 | 94                      | 8.5  |
| 300          | 25              | 268,000                           | 31,600         | 8.5 | 94                      | 8.9  |

#### LEGEND

**dB** — Sound Levels (decibels)  
**db** — Dry Bulb  
**EER** — Energy Efficiency Ratio  
**IPLV** — Integrated Part-Load Values  
**wb** — Wet Bulb

\*Air Conditioning and Refrigeration Institute.

#### NOTES:

1. Rated in accordance with ARI Standards 360 and 270.
2. The 579F300 is beyond the scope of the ARI Certification Program.
3. ARI ratings are net values, reflecting the effects of circulating fan heat.



ARI Standard  
340/360



4. Ratings are based on:

**Cooling Standard:** 80 F db, 67 F wb indoor entering-air temperature and 95 F db air entering outdoor unit.

**IPLV Standard:** 80 F db, 67 F wb indoor entering-air temperature and 80 F db outdoor entering-air temperature.

## HEATING CAPACITIES AND EFFICIENCIES — 579F180-300

| UNIT<br>579F | HEATING INPUT<br>(Btuh)<br>Stage 2/Stage 1* | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | STEADY-STATE<br>EFFICIENCY (%) | MINIMUM<br>HEATING CFM |
|--------------|---------------------------------------------|---------------------------|-------------------------|--------------------------------|------------------------|
| 180230       | 230,000/172,000                             | 186,000                   | 15-45                   | 81.0                           | 3830                   |
| 180300       | 300,000/225,000                             | 243,000                   | 30-60                   | 81.0                           | 3750                   |
| 216275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 4580                   |
| 216360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 5400                   |
| 240275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 4580                   |
| 240360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 5400                   |
| 300275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 4580                   |
| 300360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 5400                   |

\*All units are 2-stage heat.

**NOTE:** Minimum allowable temperature of mixed-air entering the heat exchanger during first-stage heating is 45 F. There is no minimum mixed-air temperature limitation during second-stage heating. For entering-air temperatures below 45 F both stages of heat must be energized together to minimize condensation issues and ensure proper unit operation.

### AIR QUANTITY LIMITS

| UNIT 579F | MINIMUM CFM | MAXIMUM CFM |
|-----------|-------------|-------------|
| 180       | 4500        | 7,500       |
| 216       | 5400        | 9,000       |
| 240       | 6000        | 10,000      |
| 300       | 7000        | 11,250      |

### LOW OUTDOOR TEMPERATURE OPERATING LIMITS (F)

| UNITS                                       | TEMPERATURE |
|---------------------------------------------|-------------|
| All                                         | 40          |
| 180 and 216 with Low Ambient Kit            | 10          |
| 240 and 300 with Low Ambient Kit            | 25          |
| All with Motormaster® Head Pressure Control | -20         |

## ARI\* CAPACITY RATINGS — 580F180-300

| UNIT SIZE<br>580F<br>(Low Heat) | NOMINAL<br>TONS | NET COOLING<br>CAPACITY (Btuh) | TOTAL<br>WATTS | EER | SOUND<br>RATING<br>(dB) | IPLV |
|---------------------------------|-----------------|--------------------------------|----------------|-----|-------------------------|------|
| 180                             | 15              | 176,000                        | 17,064         | 9.5 | 88                      | 9.5  |
| 210                             | 18              | 202,000                        | 21,166         | 9.7 | 88                      | 10.2 |
| 240                             | 20              | 236,000                        | 24,832         | 9.5 | 94                      | 10.1 |
| 300                             | 25              | 278,000                        | 28,535         | 9.7 | 94                      | 10.4 |

| UNIT SIZE<br>580F<br>(High Heat) | NOMINAL<br>TONS | NET COOLING<br>CAPACITY (Btuh) | TOTAL<br>WATTS | EER | SOUND<br>RATING<br>(dB) | IPLV |
|----------------------------------|-----------------|--------------------------------|----------------|-----|-------------------------|------|
| 180                              | 15              | 176,000                        | 17,179         | 9.5 | 88                      | 9.5  |
| 210                              | 18              | 202,000                        | 21,301         | 9.7 | 88                      | 10.1 |
| 240                              | 20              | 236,000                        | 24,832         | 9.5 | 94                      | 10.0 |
| 300                              | 25              | 277,000                        | 29,067         | 9.5 | 94                      | 10.0 |

### LEGEND

**Bels** — Sound Levels (1 bel = 10 decibels)  
**db** — Dry Bulb  
**EER** — Energy Efficiency Ratio  
**IPLV** — Integrated Part-Load Values  
**wb** — Wet Bulb

\*Air Conditioning and Refrigeration Institute.

### NOTES:

- Rated in accordance with ARI Standards 360 and 270.
- ARI ratings are net values, reflecting the effects of circulating fan heat.
- Ratings are based on:  
**Cooling Standard:** 80 F db, 67 F wb indoor entering-air temperature and 95 F db air entering outdoor unit.  
**IPLV Standard:** 80 F db, 67 F wb indoor entering-air temperature and 80 F db outdoor entering-air temperature.



ARI Standard  
340/360



- All 580F180-300 units are in compliance with ASHRAE 90.1-1999 Energy Standard for minimum SEER and EER requirements. Refer to state and local codes or visit the following website: <http://solstice.crest.org/efficiency/bcap> to determine if compliance with this standard pertains to a given geographical area of the United States.

## HEATING CAPACITIES AND EFFICIENCIES — 580F180-300

| UNIT<br>580F | HEATING INPUT<br>(Btuh)<br>Stage 2/Stage 1* | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | STEADY-STATE<br>EFFICIENCY (%) | MINIMUM<br>HEATING CFM |
|--------------|---------------------------------------------|---------------------------|-------------------------|--------------------------------|------------------------|
| 180275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 3750                   |
| 180360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 3830                   |
| 210275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 4580                   |
| 210360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 5400                   |
| 240275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 4580                   |
| 240360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 5400                   |
| 300275       | 275,000/206,000                             | 223,000                   | 15-45                   | 81.0                           | 4580                   |
| 300360       | 360,000/270,000                             | 292,000                   | 20-50                   | 81.0                           | 5400                   |

\*All units are 2-stage heat.

**NOTE:** Minimum allowable temperature of mixed-air entering the heat exchanger during first-stage heating is 45 F. There is no minimum mixed-air temperature limitation during second-stage heating. For entering-air temperatures below 45 F both stages of heat must be energized together to minimize condensation issues and ensure proper unit operation.

### AIR QUANTITY LIMITS (Cooling)

| UNIT 580F | MINIMUM CFM | MAXIMUM CFM |
|-----------|-------------|-------------|
| 180       | 4500        | 7,500       |
| 210       | 5400        | 9,000       |
| 240       | 6000        | 10,000      |
| 300       | 7000        | 11,250      |

### COOLING OPERATION LOW OUTDOOR TEMPERATURE OPERATING LIMITS (F)

| UNITS                                       | TEMPERATURE |
|---------------------------------------------|-------------|
| All — Standard Unit                         | 40          |
| 180 and 210 with Low Ambient Kit            | 10          |
| 240 and 300 with Low Ambient Kit            | 25          |
| All with Motormaster® Head Pressure Control | -20         |

## ARI\* CAPACITY RATINGS — 581A155,180

### LOW HEAT UNITS

| UNIT 581A | NOMINAL TONS | NET COOLING CAPACITY (Btuh) | TOTAL WATTS | EER   | SOUND RATING (dB) | IPLV |
|-----------|--------------|-----------------------------|-------------|-------|-------------------|------|
| 155230    | 13           | 134,000                     | 12,209      | 10.60 | 88                | 11.4 |
| 180275    | 15           | 180,000                     | 17,064      | 10.50 | 88                | 11.4 |

### HIGH HEAT UNITS

| UNIT 581A | NOMINAL TONS | NET COOLING CAPACITY (Btuh) | TOTAL WATTS | EER   | SOUND RATING (dB) | IPLV |
|-----------|--------------|-----------------------------|-------------|-------|-------------------|------|
| 155300    | 13           | 134,000                     | 12,218      | 10.60 | 88                | 11.4 |
| 180360    | 15           | 180,000                     | 17,179      | 10.50 | 88                | 11.1 |

#### LEGEND

**dB** — Sound Levels (decibels)  
**db** — Dry Bulb  
**EER** — Energy Efficiency Ratio  
**IPLV** — Integrated Part-Load Values  
**wb** — Wet Bulb

\*Air Conditioning and Refrigeration Institute.

#### NOTES:

1. Rated in accordance with ARI Standards 360 and 270.
2. ARI ratings are net values, reflecting the effects of circulating fan heat.
3. Ratings are based on:  
**Cooling Standard:** 80 F db, 67 F wb indoor entering-air temperature and 95 F db air entering outdoor unit.  
**IPLV Standard:** 80 F db, 67 F wb indoor entering-air temperature and 80 F db outdoor entering-air temperature.



ARI Standard  
340/360



4. All 581A155, 180 units are in compliance with ASHRAE 90.1-1999 Energy Standard for minimum EER requirements. Refer to state and local codes or visit the following website: <http://solstice.crest.org/efficiency/bcap> to determine if compliance with this standard pertains to a given geographical area of the United States.

## HEATING CAPACITIES AND EFFICIENCIES — 581A155-180

| UNIT 581A | HEATING INPUT (Btuh)<br>Stage 2/Stage 1* | OUTPUT CAPACITY (Btuh) | TEMPERATURE RISE (F) | AGA STEADY STATE EFFICIENCY (%) | MINIMUM HEATING CFM† |
|-----------|------------------------------------------|------------------------|----------------------|---------------------------------|----------------------|
| 155230    | 230,000/172,000                          | 186,000                | 15-45                | 81.0                            | 3750                 |
| 155300    | 300,000/225,000                          | 243,000                | 30-60                | 81.0                            | 3830                 |
| 180275    | 275,000/206,000                          | 223,000                | 15-45                | 81.0                            | 4580                 |
| 180360    | 360,000/270,000                          | 292,000                | 20-50                | 81.0                            | 5400                 |

\*All units are 2-stage heat.

†Minimum heating cfm must be maintained to ensure proper heating operation.

**NOTE:** Minimum allowable temperature of mixed air entering the heat exchanger during first stage heating is 45 F. There is no minimum mixed-air limitation during second-stage heating. For entering air temperatures below 45 F, both stages of heat must be energized together to minimize condensation issues and ensure proper unit operation.

### LOW OUTDOOR AIR TEMPERATURE COOLING OPERATION LIMITS

| UNIT SIZE 581A | TEMPERATURE LIMIT (F) |                           |                                |
|----------------|-----------------------|---------------------------|--------------------------------|
|                | Standard Unit         | Unit With Low Ambient Kit | Unit With Motormaster® Control |
| 155, 180       | 40                    | 20                        | -20                            |

### AIR QUANTITY LIMITS (Cooling)

| UNIT 581A | MINIMUM CFM | MAXIMUM CFM |
|-----------|-------------|-------------|
| 155       | 3900        | 6500        |
| 180       | 4500        | 7500        |

## ARI\* CAPACITY RATINGS — 581A210-300

| UNIT<br>581A | NOMINAL<br>TONS | CFM   | NET COOLING<br>CAPACITY (Btuh) | TOTAL<br>kW | EER  | SOUND RATING<br>(dB) | IPLV† |
|--------------|-----------------|-------|--------------------------------|-------------|------|----------------------|-------|
| 210          | 18              | 5,500 | 200,000                        | 18.5        | 10.8 | 81.7                 | 12.0  |
| 240          | 20              | 6,000 | 234,000                        | 21.7        | 10.8 | 81.7                 | 11.9  |
| 300**        | 25              | 7,500 | 278,000                        | 27.8        | 10.0 | 84.6                 | 10.9  |

### LEGEND

db — Dry Bulb  
EER — Energy Efficiency Ratio  
IPLV — Integrated Part-Load Values  
wb — Wet Bulb

\*Air Conditioning and Refrigeration Institute.

†IPLV values are calculated based on control configuration T.CTL = 2 (2 Stage Y1).

\*\*Size 300 unit is not listed with ARI, but is tested to ARI standards.

### NOTES:

1. Rated in accordance with ARI Standards 360-93 and 270-95.
2. ARI ratings are net values, reflecting the effects of circulating fan heat.



3. Ratings are based on:

**Cooling Standard:** 80 F db, 67 F wb indoor entering-air temperature and 95 F db air entering outdoor unit.

**IPLV Standard:** 80 F db, 67 F wb indoor entering-air temperature and 80 F db outdoor entering-air temperature.

4. All 581A210-300 units are in compliance with ASHRAE 90.1 2001 Energy Standard for minimum EER requirements. Refer to state and local codes or visit the following website: <http://solstice.crest.org/efficiency/bcap> to determine if compliance with this standard pertains to a given geographical area of the United States.

## HEATING CAPACITIES AND EFFICIENCIES — 581A210-300

### VERTICAL SUPPLY — NATURAL GAS

| UNIT<br>581A | HEATING INPUT<br>(Btuh) Stage 2/Stage 1 | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | STEADY-STATE<br>EFFICIENCY % | MINIMUM<br>HEATING CFM |
|--------------|-----------------------------------------|---------------------------|-------------------------|------------------------------|------------------------|
| 210250       | 250,000/199,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 210365       | 365,000/281,000                         | 296,000                   | 25-55                   | 81%                          | 4977                   |
| 210400       | 400,000/317,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |
| 240250       | 250,000/199,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 240365       | 365,000/281,000                         | 296,000                   | 25-55                   | 81%                          | 4977                   |
| 240400       | 400,000/317,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |
| 300250       | 250,000/199,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 300365       | 365,000/281,000                         | 296,000                   | 25-55                   | 81%                          | 4977                   |
| 300400       | 400,000/317,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |

NOTE: All units are 2-stage gas heat.

### HORIZONTAL SUPPLY — NATURAL GAS

| UNIT<br>581A | HEATING INPUT<br>(Btuh) Stage 2/Stage 1 | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | STEADY-STATE<br>EFFICIENCY % | MINIMUM<br>HEATING CFM |
|--------------|-----------------------------------------|---------------------------|-------------------------|------------------------------|------------------------|
| 210250       | 250,000/199,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 210365       | 365,000/281,000                         | 296,000                   | 25-55                   | 81%                          | 4977                   |
| 210400       | 400,000/317,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |
| 240250       | 250,000/199,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 240365       | 365,000/281,000                         | 296,000                   | 25-55                   | 81%                          | 4977                   |
| 240400       | 400,000/317,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |
| 300250       | 250,000/199,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 300365       | 365,000/281,000                         | 296,000                   | 25-55                   | 81%                          | 4977*                  |
| 300400       | 400,000/317,000                         | 325,000                   | 25-55                   | 82%                          | 5522*                  |

\*7000 cfm minimum recommended above 1.0 in. wg external static pressure.

NOTE: All units are 2-stage gas heat.

### VERTICAL SUPPLY — PROPANE

| UNIT<br>581A | HEATING INPUT<br>(Btuh) Stage 2/Stage 1 | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | STEADY-STATE<br>EFFICIENCY % | MINIMUM<br>HEATING CFM |
|--------------|-----------------------------------------|---------------------------|-------------------------|------------------------------|------------------------|
| 210250       | 250,000/207,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 210365       | 365,000/291,000                         | 296,000                   | 25-55                   | 81%                          | 4480                   |
| 210400       | 400,000/331,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |
| 240250       | 250,000/207,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 240365       | 365,000/291,000                         | 296,000                   | 25-55                   | 81%                          | 4480                   |
| 240400       | 400,000/331,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |
| 300250       | 250,000/207,000                         | 205,000                   | 15-45                   | 82%                          | 4218                   |
| 300365       | 365,000/291,000                         | 296,000                   | 25-55                   | 81%                          | 4480                   |
| 300400       | 400,000/331,000                         | 328,000                   | 25-55                   | 82%                          | 5522                   |

NOTE: All units are 2-stage gas heat.

### HORIZONTAL SUPPLY — PROPANE

| UNIT<br>581A | HEATING INPUT<br>(Btuh) Stage 2/Stage 1 | OUTPUT CAPACITY<br>(Btuh) | TEMPERATURE<br>RISE (F) | STEADY-STATE<br>EFFICIENCY % | MINIMUM<br>HEATING CFM |
|--------------|-----------------------------------------|---------------------------|-------------------------|------------------------------|------------------------|
| 210250       | 225,000/207,000                         | 185,000                   | 15-45                   | 82%                          | 3807                   |
| 210365       | 329,000/291,000                         | 266,000                   | 25-55                   | 81%                          | 4480                   |
| 210400       | 356,000/331,000                         | 292,000                   | 25-55                   | 82%                          | 4916                   |
| 240250       | 225,000/207,000                         | 184,500                   | 15-45                   | 82%                          | 3796                   |
| 240365       | 329,000/291,000                         | 266,000                   | 25-55                   | 81%                          | 4480                   |
| 240400       | 356,000/331,000                         | 292,000                   | 25-55                   | 82%                          | 4916                   |
| 300250       | 225,000/207,000                         | 185,000                   | 15-45                   | 82%                          | 3807                   |
| 300365       | 329,000/291,000                         | 266,000                   | 25-55                   | 81%                          | 4480*                  |
| 300400       | 356,000/331,000                         | 292,000                   | 25-55                   | 82%                          | 4920*                  |

\*7000 cfm minimum recommended above 1.0 in. wg external static pressure.

NOTE: All units are 2-stage gas heat.



## OPTIONS AND ACCESSORIES

581B036-150 AND 580F036-151

| ITEM                                                          | OPTION* | ACCESSORY† |
|---------------------------------------------------------------|---------|------------|
| 100% Open Two-Position Damper                                 |         | X          |
| 25% Open Two-Position Damper                                  |         | X          |
| Condenser Coil Grille                                         |         | X          |
| Condenser Coil Hail Guard Assembly                            |         | X          |
| Convenience Outlet (Load Side)                                | X       |            |
| Copper Fins Indoor and Outdoor Coil                           | X       |            |
| Copper Fins Outdoor Coil                                      | X       |            |
| E-Coat Outdoor Coil (Aluminum)                                | X       |            |
| E-Coat Outdoor Coil (Copper)                                  | X       |            |
| EconoMi\$er IV with Controller                                | X       | X          |
| EconoMi\$er2 (without controller)                             | X       | X          |
| Electronic Programmable Thermostat                            |         | X          |
| Enthalpy or Differential Enthalpy Sensor                      |         | X          |
| Fan/Filter Status                                             |         | X          |
| Flue Discharge Deflector                                      |         | X          |
| Flue Shield                                                   |         | X          |
| High-Static Motor and Drive                                   | X       |            |
| Hinged Access Panels (581B only)                              | X       |            |
| Hinged Panel Kit for Economizer                               |         | X          |
| Perfect Humidity™ Dehumidification Package (581B only)        | X       |            |
| Humidistat                                                    |         | X          |
| Indoor Air Quality (CO <sub>2</sub> ) Sensor                  |         | X          |
| Light Commercial Thermidistat™ Device                         |         | X          |
| Low NO <sub>x</sub> (036-060)                                 | X       |            |
| Louvered Hail Guard                                           | X       | X          |
| LP (Liquid Propane) Conversion Kit                            |         | X          |
| Manual Outdoor-Air Damper                                     |         | X          |
| Motormaster® I, II, IV Head Pressure Control Low Ambient Kit) |         | X          |
| Outdoor Air Enthalpy Sensor                                   |         | X          |
| Power Exhaust Transformer for 575 v                           |         | X          |
| Power Exhaust with Barometric Relief                          |         | X          |
| Pre-Coat Aluminum Fins on Outdoor Coil                        | X       |            |
| Return Air CO <sub>2</sub> Sensor (EconoMi\$er IV)            |         | X          |
| Return Air Enthalpy Sensor                                    |         | X          |
| Return Air Temperature Sensor                                 |         | X          |
| Roof Curbs (Vertical and Horizontal Discharge)                |         | X          |
| Smoke Detectors, Supply/Return (Blanket Quote Control)        | X       |            |
| Stainless Steel Heat Exchanger                                | X       |            |
| Thermostats and Subbases                                      |         | X          |
| Thru-the-Bottom Utility Connections                           |         | X          |
| Time Guard II (Compressor Cycle Delay) Control Circuit        |         | X          |
| Unit-Mounted Non-Fused Disconnect                             | X       |            |
| UVC Lights (Blanket Quote Control)                            | X       | X          |

\*Factory-installed.

†Field-installed.

### NOTES:

1. Refer to unit price pages or contact your local representative for accessory and option package information.
2. Some options may increase product lead times.

**OPTIONS AND ACCESSORIES (cont)**  
**579F180-300, 580F180-300, AND 581A155-181**

| ITEM                                                                | OPTION* | ACCESSORY† |
|---------------------------------------------------------------------|---------|------------|
| 25% Open Two-Position Damper                                        |         | X          |
| Barometric Relief Damper (not for use with Horizontal Adapter Curb) |         | X          |
| Condenser Coil Hail Guard Assembly (180-240)                        |         | X          |
| Convenience Outlet (Load Side)                                      | X       |            |
| Copper Fins Indoor and Outdoor Coil                                 | X       |            |
| Copper Fins Outdoor Coil                                            | X       |            |
| E-Coat Outdoor Coil (Aluminum)                                      | X       |            |
| E-Coat Outdoor Coil (Copper)                                        | X       |            |
| EconoMi\$er IV with Controller                                      | X       | X          |
| EconoMi\$er2 (without Controller)                                   |         | X          |
| Electronic Programmable Thermostat                                  |         | X          |
| Enthalpy or Differential Enthalpy Sensor                            |         | X          |
| Fan/Filter Status                                                   |         | X          |
| High-Static Motor and Drive                                         | X       |            |
| Hinged Access Panels                                                | X       |            |
| Horizontal Adapter Curb (180-240)                                   |         | X          |
| Hot Gas Reheat Dehumidification Package (581A181 only)              | X       |            |
| Humidistat                                                          |         | X          |
| Indoor Air Quality (CO <sub>2</sub> ) Sensor                        |         | X          |
| Light Commercial Thermidistat™ Device                               |         | X          |
| LP (Liquid Propane) Conversion Kit                                  |         | X          |
| Manual Outdoor-Air Damper                                           |         | X          |
| Motormaster® I, V Head Pressure Control (Low Ambient Kit)           |         | X          |
| Outdoor Air Enthalpy Sensor                                         |         | X          |
| Power Exhaust without Barometric Relief                             |         | X          |
| Pre-coat Aluminum Fins on Outdoor Coil                              | X       |            |
| Return Air CO <sub>2</sub> Sensor                                   |         | X          |
| Return Air Enthalpy Sensor                                          |         | X          |
| Return Air Temperature Sensor                                       |         | X          |
| Roof Curbs (Vertical and Horizontal Discharge)                      |         | X          |
| Thermostats and Subbases                                            |         | X          |
| Time Guard II (Compressor Cycle Delay) Control Circuit              |         | X          |
| Ultraviolet Germicidal Lamps                                        | X       |            |
| Unit-Mounted Non-Fused Disconnect                                   | X       |            |
| Winter Start Time Delay                                             |         | X          |

\*Factory-installed.

†Field-installed.

**NOTES:**

1. Refer to unit price pages or contact your local representative for accessory and option package information.
2. Some options may increase product lead times.
3. No other options are available with hot gas reheat units.

## OPTIONS AND ACCESSORIES (cont)

581A210-300

| ITEM                                              | OPTION* | ACCESSORY† |
|---------------------------------------------------|---------|------------|
| EconoMiSer IV                                     | X       | X          |
| Power Exhaust                                     | X       | X          |
| Barometric Relief                                 | X       | X          |
| Hail Guard                                        | X       | X          |
| Horizontal Kit                                    | X       | X          |
| Return Smoke Detector                             | X       | X          |
| Supply Smoke Detector                             |         | X          |
| Return and Supply Smoke Detector                  | X       |            |
| Non-Fused Disconnect                              | X       |            |
| Non-Powered Convenience Outlet                    | X       |            |
| Outdoor Air Enthalpy Sensor                       |         | X          |
| Return Air Enthalpy Sensor                        |         | X          |
| Return Air Temperature Sensor                     |         | X          |
| Return Air CO <sub>2</sub> Sensor                 |         | X          |
| Indoor Air Quality (CO <sub>2</sub> ) Room Sensor |         | X          |
| Hot Gas Reheat                                    | X       |            |
| Non-Powered Convenience Outlet                    | X       |            |
| Pre-Coat Condenser                                | X       |            |
| E-Coat Condenser Coil                             | X       |            |
| Copper Condenser Coil                             | X       |            |
| Copper Evaporator Coil                            | X       |            |
| E-Coat Copper Evaporator Coil                     | X       |            |
| Low Range Drive                                   | X       |            |
| Mid-Low Range Drive                               | X       |            |
| Mid-High Range Drive                              | X       |            |
| High Range Drive                                  | X       |            |
| Roof Curb (14 in.)                                |         | X          |
| Roof Curb (24 in.)                                |         | X          |
| Low Heat Gas                                      | X       |            |
| High Heat Gas                                     | X       |            |
| Medium Heat Gas                                   | X       |            |
| Stainless Steel Heat Exchangers                   | X       |            |
| Propane Kit                                       |         | X          |
| Drip Edge                                         |         | X          |
| Two-Position Damper                               | X       | X          |
| Condensate Overflow Switch                        |         | X          |
| Phase Loss Detection                              |         | X          |
| Manual Damper                                     | X       | X          |
| Thermostat and Subbase                            |         | X          |
| Hinged Access Panels                              | X       |            |

\*Factory-installed.

†Field-installed.

### NOTES:

1. Refer to unit price pages or contact your local representative for accessory and option package information.
2. Some options may increase product lead times.

## OPTIONS AND ACCESSORIES (cont)

**Roof Curbs (Horizontal and Vertical)** permit installation and securing of ductwork to curb prior to mounting unit on the curb. Both 14-in. and 24-in. roof curbs are available as field-installed accessories.

**EconoMi\$er IV** is available as a factory-installed option in vertical supply/return configuration only for unit sizes 036-151. Vertical or horizontal configuration is available for unit sizes 155-300. (The EconoMi\$er IV is available as a field-installed accessory for horizontal and/or vertical supply return configurations.) The EconoMi\$er IV is provided with an industry standard, stand-alone, solid-state controller that is easy to configure and troubleshoot. The EconoMi\$er IV is compatible with non-DDC applications. The EconoMi\$er IV is equipped with a barometric relief damper capable of relieving up to 100% return air (for unit sizes 036-151 only). Dry bulb outdoor-air temperature sensor is provided as standard. The return air sensor, indoor enthalpy sensor, and outdoor enthalpy sensor are provided as field-installed accessories to provide enthalpy control, differential enthalpy control, and differential dry bulb temperature control.

EconoMi\$er IV on 579F and 581A units is used for both vertical and horizontal return air configurations.

**EconoMi\$er2** is available as a blanket quote control or as a field-installed accessory for horizontal and/or vertical supply return configurations. The EconoMi\$er2 is provided without a controller for use with field-installed third-party controls. The EconoMi\$er2 is equipped with a barometric relief damper capable of relieving up to 100% return air. Dry bulb outdoor-air temperature sensor is provided as standard. The enthalpy, differential temperature (adjustable), and differential enthalpy control are provided as field-installed accessories. The EconoMi\$er2 is capable of control from a 4 to 20 mA signal through optional 4 to 20 mA design without microprocessor control (required for third party control interface).

**Manual Outdoor-Air Damper** can be preset to admit up to 50% outdoor air for year round ventilation and is available as a field-installed accessory.

**Two-Position Damper** package is available as an accessory. Both 25% or 100% outdoor air dampers are available.

**Head Pressure Control** (Motormaster) accessory package maintains condensing temperature between 90 F and 110 F at outdoor ambient temperatures down to -20 F by condenser-fan speed modulation or condenser-fan cycling and wind baffles.

**Unit-Mounted, Non-Fused Disconnect Switch** provides unit power shutoff. The switch is accessible from outside the unit, provides power off lockout capability and is available as a factory-installed option.

**Convenience Outlet** is factory-installed and internally mounted with easily accessible 115-v female receptacle.

**Compressor Cycle Delay** (Time Guard II) accessory prevents unit from restarting for minimum of 5 minutes after shutdown.

**Thru-The-Bottom Utility Connectors** permit electrical connections to be brought to the unit through the basepan. Connectors are available as field-installed accessories.

**Fan/Filter Status Switch** accessory provides status of indoor (evaporator) fan (ON/OFF) or filter (CLEAN/DIRTY).

**Power Exhaust** accessory will provide system exhaust of up to 100% of return air (vertical only). The power exhaust is a field-installed accessory (separate vertical and horizontal design).

**Ultraviolet Germicidal Lamps** eliminate odor causing mold and fungus that may develop in the wet area of the evaporator section of the unit. The high output, low temperature germicidal lamps are field installed in the evaporator section of the unit, aimed at the evaporator coil and condensate pan.

**Hinged Panel Option** provides hinged access panels for the filter, compressor, evaporator fan, and control box areas. Filter hinged panels permit tool-less entry for changing filters. Each hinged panel is permanently attached to the rooftop unit. Hinged panels are a factory-installed option.

## PHYSICAL DATA — 580F036-073

| UNIT SIZE 580F                                            |  | 036         | 048           | 060         | 072         | 073         |
|-----------------------------------------------------------|--|-------------|---------------|-------------|-------------|-------------|
| NOMINAL CAPACITY (tons)                                   |  | 3           | 4             | 5           | 6           | 6           |
| OPERATING WEIGHT (lb)                                     |  |             |               |             |             |             |
| Unit                                                      |  |             |               |             |             |             |
| Al/Al*                                                    |  | 460         | 470           | 490         | 565         | 615         |
| Al/Cu*                                                    |  | 465         | 476           | 497         | 576         | 626         |
| Cu/Cu*                                                    |  | 468         | 482           | 505         | 587         | 637         |
| EconoMiSer IV                                             |  | 50          | 50            | 50          | 50          | 50          |
| EconoMiSer2                                               |  | 46          | 46            | 46          | 46          | 46          |
| Roof Curb†                                                |  | 115         | 115           | 115         | 115         | 115         |
| COMPRESSOR                                                |  |             |               |             |             |             |
| Type                                                      |  |             | Reciprocating |             | Scroll      |             |
| Quantity                                                  |  | 1           | 1             | 1           | 1           | 1           |
| No. Cylinders (per Circuit)                               |  | 2           | 2             | 2           | NA          | 2           |
| Oil (oz)                                                  |  | 50          | 50            | 50          | 54          | 60          |
| REFRIGERANT TYPE                                          |  |             |               |             |             |             |
| Expansion Device                                          |  |             |               |             |             |             |
| Operating Charge (lb-oz)                                  |  |             |               |             |             |             |
| Circuit 1 (first stage)                                   |  | 4-5         | 6-6           | 7-14        | 9-0         | 11-0        |
| Circuit 2 (second stage)                                  |  | —           | —             | —           | —           | —           |
| CONDENSER FAN                                             |  |             |               |             |             |             |
| Nominal Cfm                                               |  | 3500        | 4000          | 4000        | 4000        | 4100        |
| Quantity...Diameter (in.)                                 |  | 1...22.0    | 1...22.0      | 1...22.0    | 1...22.0    | 1...22.0    |
| Motor Hp...Rpm                                            |  | 1/4...1100  | 1/4...1100    | 1/4...1100  | 1/4...1100  | 1/4...1100  |
| Watts Input (Total)                                       |  | 325         | 325           | 325         | 325         | 320         |
| CONDENSER COIL                                            |  |             |               |             |             |             |
| Rows...Fins/in.                                           |  | 1...17      | 2...17        | 2...17      | 2...17      | 2...17      |
| Total Face Area (sq ft)                                   |  | 8.36        | 8.36          | 10.42       | 10.42       | 16.5        |
| EVAPORATOR FAN                                            |  |             |               |             |             |             |
| Quantity...Size (in.)                                     |  |             |               |             |             |             |
| Std                                                       |  | 1...10 x 10 | 1...10 x 10   | 1...11 x 10 | 1...10 x 10 | 1...10 x 10 |
| Alt                                                       |  | 1...10 x 10 | 1...10 x 10   | 1...10 x 10 | —           | —           |
| High-Static                                               |  | 1...10 x 10 | 1...10 x 10   | 1...10 x 10 | 1...10 x 10 | 1...10 x 10 |
| Type Drive                                                |  |             |               |             |             |             |
| Std                                                       |  | Direct      | Direct        | Direct      | Belt        | Belt        |
| Alt                                                       |  | Belt        | Belt          | Belt        | —           | —           |
| High-Static                                               |  | Belt        | Belt          | Belt        | Belt        | Belt        |
| Nominal Cfm                                               |  | 1200        | 1600          | 2000        | 2400        | 2100        |
| Maximum Continuous Bhp                                    |  |             |               |             |             |             |
| Std                                                       |  | .34         | .75           | 1.20        | 2.40        | 2.40        |
| Alt                                                       |  | 1.20        | 1.20          | 1.30/2.40** | —           | —           |
| High-Static                                               |  | 2.40        | 2.40          | 2.90        | 2.90        | 2.90        |
| Motor Frame Size                                          |  |             |               |             |             |             |
| Std                                                       |  | 48          | 48            | 48          | 56          | 56          |
| Alt                                                       |  | 48          | 48            | 56          | —           | —           |
| High-Static                                               |  | 56          | 56            | 56          | 56          | 56          |
| Nominal Rpm High/Low                                      |  |             |               |             |             |             |
| Std                                                       |  | 860/800     | 1075/970      | 1075/1040   | —           | —           |
| Alt                                                       |  | 1620        | 1620          | 1725        | 1725        | 1725        |
| High-Static                                               |  | 1725        | 1725          | 1725        | 1725        | 1725        |
| Fan Rpm Range                                             |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 1070-1460   | 1070-1460   |
| Alt                                                       |  | 685-1045    | 770-1175      | 900-1300    | —           | —           |
| High-Static                                               |  | 1075-1455   | 1075-1455     | 1300-1685   | 1300-1685   | 1300-1685   |
| Motor Bearing Type                                        |  | Ball        | Ball          | Ball        | Ball        | Ball        |
| Maximum Allowable Rpm                                     |  | 2100        | 2100          | 2100        | 2100        | 2100        |
| Motor Pulley Pitch Diameter Min/Max (in.)                 |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 2.8/3.8     | 2.8/3.8     |
| Alt                                                       |  | 1.9/2.9     | 1.9/2.9       | 2.8/3.8     | —           | —           |
| High-Static                                               |  | 2.8/3.8     | 2.8/3.8       | 3.4/4.4     | 3.4/4.4     | 3.4/4.4     |
| Nominal Motor Shaft Diameter (in.)                        |  |             |               |             |             |             |
| Std                                                       |  | 1/2         | 1/2           | 5/8         | 5/8         | 5/8         |
| Alt                                                       |  | 5/8         | 5/8           | 7/8         | —           | —           |
| High-Static                                               |  | 5/8         | 5/8           | 7/8         | 7/8         | 7/8         |
| Fan Pulley Pitch Diameter (in.)                           |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 4.5         | 4.5         |
| Alt                                                       |  | 4.5         | 4.0           | 5.5         | —           | —           |
| High-Static                                               |  | 4.5         | 4.5           | 4.5         | 4.5         | 4.5         |
| Belt, Quantity...Type...Length (in.)                      |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 1...A...39  | 1...A...39  |
| Alt                                                       |  | 1...A...36  | 1...A...36    | 1...A...40  | —           | —           |
| High-Static                                               |  | 1...A...39  | 1...A...39    | 1...A...40  | 1...A...40  | 1...A...40  |
| Pulley Center Line Distance (in.)                         |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 14.7-15.5   | 14.7-15.5   |
| Alt                                                       |  | 10.0-12.4   | 10.0-12.4     | 14.7-15.5   | —           | —           |
| High-Static                                               |  | 10.0-12.4   | 10.0-12.4     | 14.7-15.5   | 14.7-15.5   | 14.7-15.5   |
| Speed Change per Full Turn of Movable Pulley Flange (rpm) |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 80          | 80          |
| Alt                                                       |  | 48          | 70            | 80          | —           | —           |
| High-Static                                               |  | 65          | 65            | 60          | 60          | 60          |
| Movable Pulley Maximum Full Turns From Closed Position    |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 5           | 5           |
| Alt                                                       |  | 5           | 5             | 5           | —           | —           |
| High-Static                                               |  | 6           | 6             | 5           | 5           | 5           |
| Factory Setting                                           |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 3           | 3           |
| Alt                                                       |  | 3           | 3             | 3           | —           | —           |
| High-Static                                               |  | 3 1/2       | 3 1/2         | 3 1/2       | 3 1/2       | 3 1/2       |
| Factory Speed Setting (rpm)                               |  |             |               |             |             |             |
| Std                                                       |  | —           | —             | —           | 1225        | 1226        |
| Alt                                                       |  | 829         | 932           | 1100        | —           | —           |
| High-Static                                               |  | 1233        | 1233          | 1416        | 1396        | 1416        |
| Fan Shaft Diameter at Pulley (in.)                        |  | 5/8         | 5/8           | 5/8         | 5/8         | 5/8         |
| EVAPORATOR COIL                                           |  |             |               |             |             |             |
| Rows...Fins/in.                                           |  | 2...15      | 2...15        | 3...15      | 4...15      | 4...15      |
| Total Face Area (sq ft)                                   |  | 4.17        | 5.5           | 5.5         | 5.5         | 5.5         |

## LEGEND

Al — Aluminum  
Bhp — Brake Horsepower  
Cu — Copper

\*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

†Weight of 14-in. roof curb.

\*\*Single phase/three-phase.

††Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

\*\*\*Three-phase standard high heat models have heating input values as shown. Single-phase standard high heat models have one-stage heating with heating input values as follows:

580F036 — 115,000 Btuh

580F048,060 — 150,000 Btuh

†††California SCAQMD compliant Low NO<sub>x</sub> models have combustion products that are controlled to 40 nanograms per joule or less.

## NOTES:

1. High-static motor not available on single-phase units.
2. An LP kit is available as an accessory. Kit may be used at elevations as high as 2000 ft. LP kit is not used with Low NO<sub>x</sub> units.

**PHYSICAL DATA — 580F036-073 (cont)**

**580F036-151**

| UNIT SIZE 580F                              |                | 036            | 048             | 060                       | 072             | 073             |
|---------------------------------------------|----------------|----------------|-----------------|---------------------------|-----------------|-----------------|
| <b>FURNACE SECTION</b>                      |                |                |                 |                           |                 |                 |
| Rollout Switch Cutout                       |                |                |                 |                           |                 |                 |
| Temp (F)††                                  |                | 195            | 195             | 195                       | 195             | 195             |
| Burner Orifice Diameter (in. ...drill size) |                |                |                 |                           |                 |                 |
| Natural Gas                                 | Std            | 074            | .113...33       | .113...33                 | .113...33       | .113...33       |
|                                             | 115            | .113...33      | .113...33       | .113...33                 | .113...33       | .113...33       |
|                                             | 150            | .113...33      | .129...30       | .129...30                 | .129...30       | .129...30       |
|                                             | 060N           | —              | .102...38       | .102...38                 | —               | —               |
|                                             | 090N           | .102...38      | .102...38       | .102...38                 | —               | —               |
|                                             | 120N           | .102...38      | .116...32       | .116...32                 | —               | —               |
| Liquid Propane                              | Alt            | 074            | .089...43       | .089...43                 | .089...43       | .089...43       |
|                                             | 115            | .089...43      | .089...43       | .089...43                 | .089...43       | .089...43       |
|                                             | 150            | .089...43      | .104...37       | .104...37                 | .102...38       | .104...37       |
| Thermostat Heat Anticipator Setting (amps)  |                |                |                 |                           |                 |                 |
| 208/230 v and 575 Stage 1                   |                | .14            | .14             | .14                       | .14             | .14             |
| Stage 2                                     |                | .14            | .14             | .14                       | .14             | .14             |
| 460 v Stage 1                               |                | .14            | .14             | .14                       | .14             | .14             |
| Stage 2                                     |                | .14            | .14             | .14                       | .14             | .14             |
| Gas Input (Btuh)                            | Standard Units | 074            | —/74,000        | —/74,000                  | —/74,000        | —/74,000        |
| (Stage 1/Stage 2)                           | 115            | —/74,000       | —/115,000       | —/115,000                 | —/115,000       | —/115,000       |
|                                             | 150***         | 82,000/115,000 | 120,000/150,000 | 120,000/150,000           | 120,000/150,000 | 120,000/150,000 |
| Low NOx Units                               | 060N†††        | —              | 60,000          | 60,000                    | —               | —               |
|                                             | 090N†††        | 60,000         | 90,000          | 90,000                    | —               | —               |
|                                             | 120N†††        | 90,000         | 120,000         | 120,000                   | —               | —               |
| Efficiency (Steady State) (%)               |                | 80             | 80              | 80                        | 80              | 80              |
| Temperature Rise Range                      | 074            | —              | 15-45           | 15-45                     | 15-45           | 15-45           |
|                                             | 115            | 15-45          | 35-65           | 35-65                     | 35-65           | 35-65           |
|                                             | 150            | 55-85          | 50-80           | 50-80                     | 50-80           | 50-80           |
|                                             | 060N           | —              | 20-50           | 20-50                     | —               | —               |
|                                             | 090N           | 20-50          | 30-60           | 30-60                     | —               | —               |
|                                             | 120N           | 30-60          | 40-70           | 40-70                     | —               | —               |
| Manifold Pressure (in. wg)                  |                |                |                 |                           |                 |                 |
| Natural Gas                                 | Std            | 3.5            | 3.5             | 3.5                       | 3.5             | 3.5             |
| Liquid Propane                              | Alt            | 3.5            | 3.5             | 3.5                       | 3.5             | 3.5             |
| Gas Valve Quantity                          |                | 1              | 1               | 1                         | 1               | 1               |
| Gas Valve Pressure Range                    |                |                |                 |                           |                 |                 |
| Psig                                        |                | 0.180-0.487    | 0.180-0.487     | 0.180-0.487               | 0.180-0.487     | 0.180-0.487     |
| in. wg                                      |                | 5.0-13.5       | 5.0-13.5        | 5.0-13.5                  | 5.0-13.5        | 5.0-13.5        |
| Field Gas Connection Size (in.)             |                | 1/2            | 1/2             | 1/2                       | 1/2             | 1/2             |
| <b>HIGH-PRESSURE SWITCH (psig)</b>          |                |                |                 |                           |                 |                 |
| Standard Compressor                         |                |                | 450 ± 50        |                           | 500 ± 50        | 500 ± 50        |
| Internal Relief (Differential)              |                |                |                 |                           |                 |                 |
| Cutout                                      |                |                | 428             |                           | 428             | 428             |
| Reset (Auto.)                               |                |                | 320             |                           | 320             | 320             |
| <b>LOW-PRESSURE SWITCH (psig)</b>           |                |                |                 |                           |                 |                 |
| Cutout                                      |                |                |                 | 7 ± 3                     |                 |                 |
| Reset (Auto.)                               |                |                |                 | 22 ± 7                    |                 |                 |
| <b>FREEZE PROTECTION THERMOSTAT (F)</b>     |                |                |                 |                           |                 |                 |
| Opens                                       |                |                |                 | 30 ± 5                    |                 |                 |
| Closes                                      |                |                |                 | 45 ± 5                    |                 |                 |
| <b>OUTDOOR-AIR INLET SCREENS</b>            |                |                |                 |                           |                 |                 |
| Quantity...Size (in.)                       |                |                |                 | Cleanable                 |                 |                 |
|                                             |                |                |                 | Varies by Option Selected |                 |                 |
| <b>RETURN-AIR FILTERS</b>                   |                |                |                 |                           |                 |                 |
| Quantity...Size (in.)                       |                |                |                 | Throwaway                 |                 |                 |
|                                             |                |                |                 | 2...16 x 25 x 2           |                 |                 |

**LEGEND**

Al — Aluminum  
 Bhp — Brake Horsepower  
 Cu — Copper

\*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

†Weight of 14-in. roof curb.

\*\*Single phase/three-phase.

††Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

\*\*\*Three-phase standard high heat models have heating input values as shown. Single-phase standard high heat models have one-stage heating with heating input values as follows:

580F036 — 115,000 Btuh

580F048,060 — 150,000 Btuh

†††California SCAQMD compliant Low NO<sub>x</sub> models have combustion products that are controlled to 40 nanograms per joule or less.

**NOTES:**

1. High-static motor not available on single-phase units.
2. An LP kit is available as an accessory. Kit may be used at elevations as high as 2000 ft. LP kit is not used with Low NO<sub>x</sub> units.

## PHYSICAL DATA — 580F090,120,150 UNITS

| UNIT SIZE 580F                                            |             | 090                                                                   | 120           | 150         |
|-----------------------------------------------------------|-------------|-----------------------------------------------------------------------|---------------|-------------|
| NOMINAL CAPACITY (tons)                                   |             | 7½                                                                    | 10            | 12½         |
| OPERATING WEIGHT (lb)                                     |             |                                                                       |               |             |
| Unit                                                      |             |                                                                       |               |             |
| Al/Al*                                                    |             | 870                                                                   | 1035          | 1050        |
| Al/Cu*                                                    |             | 881                                                                   | 1057          | 1077        |
| Cu/Cu*                                                    |             | 893                                                                   | 1080          | 1100        |
| Economizer                                                |             |                                                                       |               |             |
| EconoMiSer IV                                             |             | 75                                                                    | 75            | 75          |
| Roof Curb†                                                |             | 143                                                                   | 143           | 143         |
| COMPRESSOR                                                |             |                                                                       |               |             |
| Type                                                      |             | Reciprocating                                                         | Reciprocating | Scroll      |
| Quantity                                                  |             | 2                                                                     | 2             | 2           |
| No. Cylinders (per Circuit)                               |             | 2                                                                     | 2             | —           |
| Oil (oz)                                                  |             | 42 ea                                                                 | 54 ea         | 54 ea       |
| REFRIGERANT TYPE                                          |             | R-22                                                                  |               |             |
| Expansion Device                                          |             | Fixed Orifice Metering Device                                         |               |             |
| Operating Charge (lb-oz)                                  |             |                                                                       |               |             |
| Circuit 1 (first stage)                                   |             | 4-13                                                                  | 7- 3          | 8-10        |
| Circuit 2 (second stage)                                  |             | 4-14                                                                  | 7-13          | 8- 6        |
| CONDENSER COIL                                            |             | ¾-in. OD Enhanced Copper Tubes, Aluminum Lanced Fins                  |               |             |
| Rows...Fins/in.                                           |             | 1...17                                                                | 2...17        | 2...17      |
| Total Face Area (sq ft)                                   |             | 20.50                                                                 | 20.47         | 25.00       |
| CONDENSER FAN                                             |             | Propeller Type                                                        |               |             |
| Nominal Cfm                                               |             | 6400                                                                  | 7000          | 7000        |
| Quantity...Diameter (in.)                                 |             | 2...22                                                                | 2...22        | 2...22      |
| Motor Hp...Rpm                                            |             | ¼...1100                                                              | ¼...1100      | ¼...1100    |
| Watts Input (Total)                                       |             | 600                                                                   | 600           | 600         |
| EVAPORATOR COIL                                           |             | ¾-in. OD Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Face Split |               |             |
| Rows...Fins/in.                                           |             | 3...15                                                                | 3...15        | 4...15      |
| Total Face Area (sq ft)                                   |             | 8.0                                                                   | 10.0          | 11.1        |
| EVAPORATOR FAN                                            |             | Centrifugal Type                                                      |               |             |
| Quantity...Size (in.)                                     | Std         | 1...15 x 15                                                           | 1...15 x 15   | 1...15 x 15 |
|                                                           | Alt         | 1...15 x 15                                                           | 1...15 x 15   | 1...15 x 15 |
|                                                           | High-Static | 1...15 x 15                                                           | 1...15 x 15   | —           |
| Type Drive                                                | Std         | Belt                                                                  | Belt          | Belt        |
|                                                           | Alt         | Belt                                                                  | Belt          | Belt        |
|                                                           | High-Static | Belt                                                                  | Belt          | —           |
| Nominal Cfm                                               |             | 3000                                                                  | 4000          | 5000        |
| Maximum Continuous Bhp                                    | Std         | 2.40                                                                  | 2.40          | 3.70        |
|                                                           | Alt         | 2.40                                                                  | 2.90          | 5.25        |
|                                                           | High-Static | 3.70                                                                  | 5.25          | —           |
| Motor Frame Size                                          | Std         | 56                                                                    | 56            | 56          |
|                                                           | Alt         | 56                                                                    | 56            | 56          |
|                                                           | High-Static | 56                                                                    | 56            | —           |
| Fan Rpm Range                                             | Std         | 590-840                                                               | 685-935       | 860-1080    |
|                                                           | Alt         | 685-935                                                               | 835-1085      | 830-1130    |
|                                                           | High-Static | 860-1080                                                              | 830-1130      | —           |
| Motor Bearing Type                                        |             | Ball                                                                  | Ball          | Ball        |
| Maximum Allowable Rpm                                     |             | 2100                                                                  | 2100          | 2100        |
| Motor Pulley Pitch Diameter Min/Max (in.)                 | Std         | 2.4/3.4                                                               | 2.8/3.8       | 4.0/5.0     |
|                                                           | Alt         | 2.8/3.8                                                               | 3.4/4.4       | 3.1/4.1     |
|                                                           | High-Static | 4.0/5.0                                                               | 2.8/3.8       | —           |
| Nominal Motor Shaft Diameter (in.)                        | Std         | 5/8                                                                   | 5/8           | 7/8         |
|                                                           | Alt         | 1/2                                                                   | 7/8           | 7/8         |
|                                                           | High-Static | 7/8                                                                   | 7/8           | —           |
| Fan Pulley Pitch Diameter (in.)                           | Std         | 7.0                                                                   | 7.0           | 8.0         |
|                                                           | Alt         | 7.0                                                                   | 7.0           | 5.9         |
|                                                           | High-Static | 8.0                                                                   | 5.8           | —           |
| Belt, Quantity...Type...Length (in.)                      | Std         | 1...A...48                                                            | 1...A...49    | 1...A...53  |
|                                                           | Alt         | 1...A...48                                                            | 1...A...51    | 1...BX...48 |
|                                                           | High-Static | 1...A...53                                                            | 1...BX...48   | —           |
| Pulley Center Line Distance (in.)                         | Std         | 16.75-19.25                                                           | 15.85-17.50   | 15.85-17.50 |
|                                                           | Alt         | 16.75-19.25                                                           | 15.85-17.50   | 15.85-17.50 |
|                                                           | High-Static | 16.75-19.25                                                           | 15.85-17.50   | —           |
| Speed Change per Full Turn of Movable Pulley Flange (rpm) | Std         | 50                                                                    | 50            | 44          |
|                                                           | Alt         | 50                                                                    | 50            | 50          |
|                                                           | High-Static | 60                                                                    | 60            | —           |
| Movable Pulley Maximum Full Turns From Closed Position    | Std         | 5                                                                     | 5             | 5           |
|                                                           | Alt         | 5                                                                     | 5             | 6           |
|                                                           | High-Static | 5                                                                     | 6             | —           |
| Factory Setting                                           | Std         | 5                                                                     | 5             | 5           |
|                                                           | Alt         | 5                                                                     | 5             | 5           |
|                                                           | High-Static | 5                                                                     | 5             | —           |
| Factory Speed Setting (rpm)                               | Std         | 590                                                                   | 685           | 860         |
|                                                           | Alt         | 685                                                                   | 835           | 960         |
|                                                           | High-Static | 860                                                                   | 887           | —           |
| Fan Shaft Diameter at Pulley (in.)                        |             | 1                                                                     | 1             | 1           |

## LEGEND

Al — Aluminum  
 Bhp — Brake Horsepower  
 Cu — Copper

†Weight of 14-in. roof curb.

\*\*Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

NOTE: High-static motor not available on size 150 units.

\*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

**PHYSICAL DATA — 580F090,120,150 UNITS (cont)**

**580F036-151**

| UNIT SIZE 580F                                                  |         |      |  | 090             | 120             | 150             |
|-----------------------------------------------------------------|---------|------|--|-----------------|-----------------|-----------------|
| <b>FURNACE SECTION</b>                                          |         |      |  |                 |                 |                 |
| Rollout Switch Cutout                                           |         |      |  | 195             | 195             | 195             |
| Temp (F)**                                                      |         |      |  |                 |                 |                 |
| Burner Orifice Diameter                                         |         |      |  |                 |                 |                 |
| (in. ...drill size)                                             |         |      |  |                 |                 |                 |
| Natural Gas                                                     | Std     | Low  |  | .120...31       | .120...31       | .120...31       |
|                                                                 |         | Med  |  | .120...31       | .120...31       | .129...30       |
|                                                                 |         | High |  | .120...31       | .129...30       | —               |
| Liquid Propane                                                  | Alt     | Low  |  | .096...41       | .096...41       | .096...41       |
|                                                                 |         | Med  |  | .096...41       | .096...41       | .102...38       |
|                                                                 |         | High |  | .096...41       | .102...38       | —               |
| Thermostat Heat Anticipator                                     |         |      |  |                 |                 |                 |
| Setting (amps)                                                  |         |      |  |                 |                 |                 |
| 208/230 v and 575                                               | Stage 1 |      |  | .14             | .14             | .14             |
|                                                                 | Stage 2 |      |  | .20             | .20             | .20             |
| 460 v                                                           | Stage 1 |      |  | .14             | .14             | .14             |
|                                                                 | Stage 2 |      |  | .20             | .20             | .20             |
| Gas Input (Btuh)                                                | Stage 1 | Low  |  | 125,000         | 120,000         | 180,000         |
|                                                                 |         | Med  |  | 120,000         | 180,000         | 200,000         |
|                                                                 |         | High |  | 180,000         | 200,000         | —               |
|                                                                 | Stage 2 | Low  |  | —               | 180,000         | 224,000         |
|                                                                 |         | Med  |  | 180,000         | 224,000         | 250,000         |
|                                                                 |         | High |  | 224,000         | 250,000         | —               |
| Efficiency (Steady                                              |         |      |  |                 |                 |                 |
| State) (%)                                                      |         |      |  | 80              | 80              | 80              |
| Temperature Rise Range                                          |         | Low  |  | 20-50           | 35-65           | 35-65           |
|                                                                 |         | Med  |  | 35-65           | 35-65           | 40-70           |
|                                                                 |         | High |  | 45-75           | 40-70           | —               |
| Manifold Pressure (in. wg)                                      |         |      |  |                 |                 |                 |
| Natural Gas                                                     | Std     |      |  | 3.5             | 3.5             | 3.5             |
| Liquid Propane                                                  | Alt     |      |  | 3.5             | 3.5             | 3.5             |
| Gas Valve Quantity                                              |         |      |  | 1               | 1               | 1               |
| Gas Valve Pressure Range                                        |         |      |  |                 |                 |                 |
| Psig                                                            |         |      |  | 0.180-0.487     | 0.180-0.487     | 0.180-0.487     |
| in. wg                                                          |         |      |  | 5.0-13.5        | 5.0-13.5        | 5.0-13.5        |
| Field Gas Connection                                            |         |      |  |                 |                 |                 |
| Size (in.)                                                      |         |      |  | 1/2"/3/4"/3/4"  | 3/4"/3/4"/3/4"  | 3/4"/3/4"       |
| <b>HIGH-PRESSURE SWITCH (psig)</b>                              |         |      |  |                 |                 |                 |
| Standard Compressor                                             |         |      |  | 450 ± 50        |                 | 500 ± 50        |
| Internal Relief (Differential)                                  |         |      |  |                 |                 |                 |
| Cutout                                                          |         |      |  | 428             |                 | 428             |
| Reset (Auto.)                                                   |         |      |  | 320             |                 | 320             |
| <b>LOSS-OF-CHARGE (LOW-PRESSURE) SWITCH (psig)</b>              |         |      |  |                 |                 |                 |
| Cutout                                                          |         |      |  |                 | 7 ± 3           |                 |
| Reset (Auto.)                                                   |         |      |  |                 | 22 ± 7          |                 |
| <b>FREEZE PROTECTION THERMOSTAT (F)</b>                         |         |      |  |                 |                 |                 |
| Opens                                                           |         |      |  |                 | 30 ± 5          |                 |
| Closes                                                          |         |      |  |                 | 45 ± 5          |                 |
| <b>OUTDOOR-AIR INLET SCREENS</b>                                |         |      |  |                 |                 |                 |
| Cleanable...Screen size and quantity varies by option selected. |         |      |  |                 |                 |                 |
| <b>RETURN-AIR FILTERS</b>                                       |         |      |  |                 |                 |                 |
| Throwaway                                                       |         |      |  |                 |                 |                 |
| Quantity...Size (in.)                                           |         |      |  | 4...16 x 20 x 2 | 4...20 x 20 x 2 | 4...20 x 20 x 2 |

**LEGEND**

Al — Aluminum  
 Bhp — Brake Horsepower  
 Cu — Copper

†Weight of 14-in. roof curb.

\*\*Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

**NOTE:** High-static motor not available on size 150 units.

\*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.



## PHYSICAL DATA — 580F091,103,121,151 UNITS

## ASHRAE 90.1 COMPLIANT UNITS

| UNIT SIZE 580F                                            |             | 091                                                                     | 103         | 121         | 151         |
|-----------------------------------------------------------|-------------|-------------------------------------------------------------------------|-------------|-------------|-------------|
| NOMINAL CAPACITY (tons)                                   |             | 7 1/2                                                                   | 8 1/2       | 10          | 12 1/2      |
| OPERATING WEIGHT (lb)                                     |             |                                                                         |             |             |             |
| Unit                                                      |             |                                                                         |             |             |             |
| Al/Al*                                                    |             | 870                                                                     | 880         | 1035        | 1050        |
| Al/Cu*                                                    |             | 881                                                                     | 896         | 1057        | 1077        |
| Cu/Cu*                                                    |             | 893                                                                     | 907         | 1080        | 1100        |
| EconoMi\$er IV                                            |             | 75                                                                      | 75          | 75          | 75          |
| EconoMi\$er2                                              |             | 71                                                                      | 71          | 71          | 71          |
| Roof Curb†                                                |             | 143                                                                     | 143         | 143         | 143         |
| COMPRESSOR                                                |             |                                                                         |             |             |             |
| Type                                                      |             | Reciprocating                                                           | Scroll      | Scroll      | Scroll      |
| Quantity                                                  |             | 2                                                                       | 2           | 2           | 2           |
| No. Cylinders (per Circuit)                               |             | 2                                                                       | 2           | 2           | 2           |
| Oil (oz) (each compressor)                                |             | 42                                                                      | 53          | 50          | 60          |
| REFRIGERANT TYPE                                          |             | R-22                                                                    |             |             |             |
| Expansion Device                                          |             | Acutrol™ Metering Device                                                |             |             |             |
| Operating Charge (lb-oz)                                  |             |                                                                         |             |             |             |
| Circuit 1 (first stage)                                   |             | 7-10                                                                    | 7-14        | 8-10        | 9-8         |
| Circuit 2 (second stage)                                  |             | 8-2                                                                     | 8-5         | 8-8         | 9-5         |
| CONDENSER FAN                                             |             | Propeller Type                                                          |             |             |             |
| Nominal Cfm                                               |             | 6500                                                                    | 6500        | 7000        | 7000        |
| Quantity...Diameter (in.)                                 |             | 2...22                                                                  | 2...22      | 2...22      | 2...22      |
| Motor Hp...Rpm                                            |             | 1/4...1100                                                              | 1/4...1100  | 1/4...1100  | 1/4...1100  |
| Watts Input (Total)                                       |             | 650                                                                     | 650         | 650         | 650         |
| CONDENSER COIL                                            |             | 3/8-in. OD Enhanced Copper Tubes, Aluminum Lanced Fins                  |             |             |             |
| Rows...Fins/in.                                           |             | 2...17                                                                  | 2...17      | 2...17      | 2...17      |
| Total Face Area (sq ft)                                   |             | 20.50                                                                   | 20.50       | 25.00       | 25.00       |
| EVAPORATOR FAN                                            |             | Centrifugal Type                                                        |             |             |             |
| Quantity...Size (in.)                                     | Std         | 1...15 x 15                                                             | 1...15 x 15 | 1...15 x 15 | 1...15 x 15 |
|                                                           | Alt         | 1...15 x 15                                                             | —           | 1...15 x 15 | 1...15 x 15 |
|                                                           | High-Static | 1...15 x 15                                                             | 1...15 x 15 | 1...15 x 15 | —           |
| Type Drive                                                | Std         | Belt                                                                    | Belt        | Belt        | Belt        |
|                                                           | Alt         | Belt                                                                    | —           | Belt        | Belt        |
|                                                           | High-Static | Belt                                                                    | Belt        | Belt        | —           |
| Nominal Cfm                                               |             | 2900                                                                    | 3000        | 3200        | 5000        |
| Maximum Continuous Bhp                                    | Std         | 2.40                                                                    | 2.40        | 2.40        | 3.70        |
|                                                           | Alt         | 2.40                                                                    | —           | 2.90        | 5.25        |
|                                                           | High-Static | 3.70                                                                    | 3.70        | 5.25        | —           |
| Motor Frame Size                                          | Std         | 56                                                                      | 56          | 56          | 56          |
|                                                           | Alt         | 56                                                                      | —           | 56          | 56          |
|                                                           | High-Static | 56                                                                      | 56          | 56          | —           |
| Fan Rpm Range                                             | Std         | 590-840                                                                 | 685-935     | 685-935     | 860-1080    |
|                                                           | Alt         | 685-935                                                                 | —           | 835-1085    | 830-1130    |
|                                                           | High-Static | 860-1080                                                                | 860-1080    | 830-1130    | —           |
| Motor Bearing Type                                        |             | Ball                                                                    | Ball        | Ball        | Ball        |
| Maximum Allowable Rpm                                     |             | 1500                                                                    | 1500        | 1500        | 1500        |
| Motor Pulley Pitch Diameter Min/Max (in.)                 | Std         | 2.4/3.4                                                                 | 2.8/3.8     | 2.8/3.8     | 4.0/5.0     |
|                                                           | Alt         | 2.8/3.8                                                                 | —           | 3.4/4.4     | 3.1/4.1     |
|                                                           | High-Static | 4.0/5.0                                                                 | 4.0/5.0     | 2.8/3.8     | —           |
| Nominal Motor Shaft Diameter (in.)                        | Std         | 5/8                                                                     | 5/8         | 5/8         | 7/8         |
|                                                           | Alt         | 5/8                                                                     | —           | 7/8         | 7/8         |
|                                                           | High-Static | 7/8                                                                     | 7/8         | 7/8         | —           |
| Fan Pulley Pitch Diameter (in.)                           | Std         | 7.0                                                                     | 7.0         | 7.0         | 8.0         |
|                                                           | Alt         | 7.0                                                                     | —           | 7.0         | 5.9         |
|                                                           | High-Static | 8.0                                                                     | 8.0         | 5.8         | —           |
| Belt, Quantity...Type...Length (in.)                      | Std         | 1...A...48                                                              | 1...A...48  | 1...A...49  | 1...A...53  |
|                                                           | Alt         | 1...A...48                                                              | —           | 1...A...51  | 1...BX...48 |
|                                                           | High-Static | 1...A...53                                                              | 1...A...53  | 1...BX...48 | —           |
| Pulley Center Line Distance (in.)                         | Std         | 16.75-19.25                                                             | 16.75-19.25 | 15.85-17.50 | 15.85-17.50 |
|                                                           | Alt         | 16.75-19.25                                                             | —           | 15.85-17.50 | 15.85-17.50 |
|                                                           | High-Static | 16.75-19.25                                                             | 16.75-19.25 | 15.85-17.50 | —           |
| Speed Change per Full Turn of Movable Pulley Flange (rpm) | Std         | 50                                                                      | 50          | 50          | 44          |
|                                                           | Alt         | 50                                                                      | —           | 50          | 50          |
|                                                           | High-Static | 60                                                                      | 60          | 60          | —           |
| Movable Pulley Maximum Full Turns From Closed Position    | Std         | 5                                                                       | 5           | 5           | 5           |
|                                                           | Alt         | 5                                                                       | —           | 5           | 6           |
|                                                           | High-Static | 5                                                                       | 5           | 6           | —           |
| Factory Setting                                           | Std         | 5                                                                       | 5           | 5           | 5           |
|                                                           | Alt         | 5                                                                       | —           | 5           | 5           |
|                                                           | High-Static | 5                                                                       | 5           | 5           | —           |
| Factory Speed Setting (rpm)                               | Std         | 590                                                                     | 685         | 685         | 860         |
|                                                           | Alt         | 685                                                                     | —           | 835         | 887         |
|                                                           | High-Static | 860                                                                     | 860         | 887         | —           |
| Fan Shaft Diameter at Pulley (in.)                        |             | 1                                                                       | 1           | 1           | 1           |
| EVAPORATOR COIL                                           |             | 3/8-in. OD Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Face Split |             |             |             |
| Rows...Fins/in.                                           |             | 3...15                                                                  | 3...15      | 3...15      | 4...15      |
| Total Face Area (sq ft)                                   |             | 8.9                                                                     | 8.9         | 10.0        | 11.1        |

## LEGEND

Al — Aluminum  
 Bhp — Brake Horsepower  
 Cu — Copper

\*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

†Weight of 14-in. roof curb.

\*\*Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

**PHYSICAL DATA — 580F091,103,121,151 UNITS (cont)**

**ASHRAE 90.1 COMPLIANT UNITS (cont)**

**580F036-151**

| UNIT SIZE 580F                              |         |      | 091                       | 103             | 121             | 151             |
|---------------------------------------------|---------|------|---------------------------|-----------------|-----------------|-----------------|
| FURNACE SECTION                             |         |      |                           |                 |                 |                 |
| Rollout Switch Cutout Temp (F)**            |         |      | 195                       | 195             | 195             | 195             |
| Burner Orifice Diameter (in. ...drill size) |         |      |                           |                 |                 |                 |
| Natural Gas                                 | Std     | Low  | .120...31                 | .120...31       | .120...31       | .120...31       |
|                                             |         | Med  | .120...31                 | .120...31       | .120...31       | .129...30       |
|                                             |         | High | .120...31                 | .120...31       | .129...30       | —               |
| Liquid Propane                              | Alt     | Low  | .096...41                 | .096...41       | .096...41       | .096...41       |
|                                             |         | Med  | .096...41                 | .096...41       | .096...41       | .102...38       |
|                                             |         | High | .096...41                 | .096...41       | .102...38       | —               |
| Thermostat Heat Anticipator Setting (amps)  |         |      |                           |                 |                 |                 |
| 208/230 v and 575                           | Stage 1 |      | .14                       | .14             | .14             | .14             |
|                                             | Stage 2 |      | .20                       | .20             | .20             | .20             |
| 460 v                                       | Stage 1 |      | .14                       | .14             | .14             | .14             |
|                                             | Stage 2 |      | .20                       | .20             | .20             | .20             |
| Gas Input (Btuh)                            | Stage 1 | Low  | 125,000                   | 125,000         | 120,000         | 180,000         |
|                                             |         | Med  | 120,000                   | 120,000         | 180,000         | 200,000         |
|                                             |         | High | 180,000                   | 180,000         | 200,000         | —               |
| Stage 2                                     |         | Low  | —                         | —               | 180,000         | 224,000         |
|                                             |         | Med  | 180,000                   | 180,000         | 224,000         | 250,000         |
|                                             |         | High | 224,000                   | 224,000         | 250,000         | —               |
| Efficiency (Steady State) (%)               |         |      | 80                        | 80              | 80              | 80              |
| Temperature Rise Range                      |         | Low  | 20-50                     | 20-50           | 35-65           | 35-65           |
|                                             |         | Med  | 35-65                     | 35-65           | 35-65           | 40-70           |
|                                             |         | High | 45-75                     | 45-75           | 40-70           | —               |
| Manifold Pressure (in. wg)                  |         |      |                           |                 |                 |                 |
| Natural Gas                                 | Std     |      | 3.5                       | 3.5             | 3.5             | 3.5             |
| Liquid Propane                              | Alt     |      | 3.5                       | 3.5             | 3.5             | 3.5             |
| Gas Valve Quantity                          |         |      | 1                         | 1               | 1               | 1               |
| Gas Valve Pressure Range                    |         |      |                           |                 |                 |                 |
| Psig                                        |         |      | 0.180-0.487               | 0.180-0.487     | 0.180-0.487     | 0.180-0.487     |
| in. wg                                      |         |      | 5.0-13.5                  | 5.0-13.5        | 5.0-13.5        | 5.0-13.5        |
| Field Gas Connection Size (in.)             |         | Low  | 1/2                       | 1/2             | 3/4             | 3/4             |
|                                             |         | Med  | 3/4                       | 3/4             | 3/4             | 3/4             |
|                                             |         | High | 3/4                       | 3/4             | 3/4             | —               |
| HIGH-PRESSURE SWITCH (psig)                 |         |      |                           |                 |                 |                 |
| Standard Compressor                         |         |      | 450 ± 50                  |                 |                 | 500 ± 50        |
| Internal Relief (Differential)              |         |      |                           |                 |                 |                 |
| Cutout                                      |         |      | 428                       |                 |                 | 428             |
| Reset (Auto.)                               |         |      | 320                       |                 |                 | 320             |
| LOW-PRESSURE SWITCH (psig)                  |         |      |                           |                 |                 |                 |
| Cutout                                      |         |      | 7 ± 3                     |                 |                 |                 |
| Reset (Auto.)                               |         |      | 22 ± 7                    |                 |                 |                 |
| FREEZE PROTECTION THERMOSTAT (F)            |         |      |                           |                 |                 |                 |
| Opens                                       |         |      | 30 ± 5                    |                 |                 |                 |
| Closes                                      |         |      | 45 ± 5                    |                 |                 |                 |
| OUTDOOR-AIR INLET SCREENS                   |         |      |                           |                 |                 |                 |
| Quantity...Size (in.)                       |         |      | Cleanable                 |                 |                 |                 |
|                                             |         |      | Varies by Option Selected |                 |                 |                 |
| RETURN-AIR FILTERS                          |         |      |                           |                 |                 |                 |
| Quantity...Size (in.)                       |         |      | Throwaway                 |                 |                 |                 |
|                                             |         |      | 4...16 x 20 x 2           | 4...20 x 20 x 2 | 4...20 x 20 x 2 | 4...20 x 20 x 2 |

**LEGEND**

Al — Aluminum  
 Bhp — Brake Horsepower  
 Cu — Copper

\*Evaporator coil fin material/condenser coil fin material. Contact your local representative for details about coated fins.

†Weight of 14-in. roof curb.

\*\*Rollout switch lockout is manually reset by interrupting power to unit or resetting thermostat.

## BASE UNIT DIMENSIONS — 580F036-072

| CONNECTION SIZES |                                          |
|------------------|------------------------------------------|
| A                | 1 3/8" DIA. [35] FIELD POWER SUPPLY HOLE |
| B                | 2" DIA. [51] POWER SUPPLY KNOCK-OUT      |
| C                | 2 1/2" DIA. [64] POWER SUPPLY KNOCK-OUT  |
| D                | 7/8" DIA. [22] FIELD CONTROL WIRING HOLE |
| E                | 3/4" - 1/4 NPT CONDENSATE DRAIN          |
| F                | 1/2" - 1/4 NPT GAS CONNECTION            |

| BOTTOM POWER CHART:<br>THESE HOLES REQ'D FOR USE<br>WITH ACCESSORY PACKAGES -<br>CRBTMPROD101, 2A01, 3A01, OR 4A01 |                  |                            |               |
|--------------------------------------------------------------------------------------------------------------------|------------------|----------------------------|---------------|
| THREADED<br>CONDUIT SIZE                                                                                           | WIRE<br>USE      | REQ'D HOLE<br>SIZES (MAX.) | ACC.          |
| 1/2"                                                                                                               | 24V              | 7/8" [22.2]                | 7/8" [22.2]   |
| 3/4"                                                                                                               | 003 POWER*       | 1 3/8" [44.4]              | 1 3/8" [44.4] |
| 1 1/4"                                                                                                             | 003, 004 POWER*  | 2 1/4" [63.5]              | 2 1/4" [63.5] |
| 1 1/2"                                                                                                             | 003, 1/2 FET GAS | 1 1/4" [31.8]              | 1 1/4" [31.8] |
| 2"                                                                                                                 | 004, 3/4 FET GAS | 1 5/8" [41.3]              | 1 5/8" [41.3] |

\* - SELECT EITHER 3/4" OR 1 1/4"  
FOR POWER, DEPENDING ON WIRE SIZE.

| UNIT<br>580F | STD. UNIT<br>WEIGHT<br>LB | ECONOMIZER<br>WEIGHT<br>LB | VERT. ECONO/<br>W/P.E.<br>KG | (A)                 |                     | (B)                 |                     | (C)                 |                     | (D)                 |                     | PANEL LENGTH |    |      |                    |
|--------------|---------------------------|----------------------------|------------------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|---------------------|--------------|----|------|--------------------|
|              |                           |                            |                              | CORNER WEIGHT<br>LB | CORNER WEIGHT<br>KG | CORNER WEIGHT<br>LB | CORNER WEIGHT<br>KG | CORNER WEIGHT<br>LB | CORNER WEIGHT<br>KG | CORNER WEIGHT<br>LB | CORNER WEIGHT<br>KG |              |    |      |                    |
| 036          | 460                       | 209                        | 50                           | 22.7                | 90                  | 40.9                | 140                 | 63.5                | 105                 | 47.6                | 159                 | 72.1         | 56 | 25.4 | 1'-10 3/8" [568.0] |
| 048          | 470                       | 213                        | 52                           | 23.2                | 94                  | 42.6                | 142                 | 64.4                | 106                 | 48.1                | 162                 | 73.5         | 60 | 27.2 | 1'-10 3/8" [568.0] |
| 060          | 490                       | 222                        | 55                           | 24.9                | 100                 | 45.3                | 150                 | 68.0                | 115                 | 52.2                | 180                 | 81.6         | 65 | 29.5 | 1'-0 3/8" [315.0]  |
| 072          | 565                       | 255                        | 62                           | 28.1                | 115                 | 52.2                | 165                 | 74.8                | 136                 | 61.7                | 200                 | 90.7         | 64 | 29.0 | 1'-0 3/8" [315.0]  |

NOTES:  
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.

2. ⬤ = CENTER OF GRAVITY.

3. ➡ = DIRECTION OF AIR FLOW.

4. ON VERTICAL DISCHARGE UNITS, DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. FOR HORIZONTAL DISCHARGE UNITS FIELD SUPPLIED FLANGES SHOULD BE ATTACHED TO HORIZONTAL DISCHARGE OPENINGS, AND ALL DUCTWORK SHOULD BE ATTACHED TO THE FLANGES.

5. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAILE): UNIT, FLUE SIDE AND COMBUSTIBLE SURFACES, 36 IN. [914.4]; WHEN USING ACCESSORY FLUE DISCHARGE DEFLECTOR, 36 IN. [914.4]; COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 18 IN. [457.2]; BOTTOM OF BASE RAIL TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.

6. CONSUMER INSTALLATION FOR PROPER FLOW: 36 INCHES CLEARANCE TO THE SIDE GETTING THE GREATER CLEARANCE IS OPTIONAL.

7. OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN OPERATION.

8. BETWEEN UNIT AND UNGROUNDED SURFACES, CONTROL BOX DEFLECTOR, PER NEC.

9. BETWEEN UNIT AND GROUND SURFACES, CONTROL BOX DEFLECTOR, PER NEC.

10. GROUNDED SURFACES, CONTROL BOX SIDE 42 IN. PER NEC.

11. HORIZONTAL SUPPLY AND RETURN END, 0 INCHES WHEN THE ALTERNATE CONDENSATE DRAIN IS USED.

12. WITH THE EXCEPTION OF THE CLEARANCE FOR THE CONDENSER AND AN EXHAUST SIDE OR BARRICADE REQUIRES NO CLEARANCE.

13. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B, OR C ROOF COVERING MATERIAL IF SET ON BASERAIL.

14. THE VERTICAL CENTER OF GRAVITY IS 1'-6" [457] UP FROM CORNER "D".

15. THE BOTTOM OF THE BASE RAIL.

16. ELECTRICAL DISCONNECT LOCATION

17. CORNER "A"

18. CORNER "B"

19. CORNER "C"

20. CORNER "D"

21. CONDENSER COIL

22. BOTTOM OF UNIT

23. TYP 3'-5 3/16" [1046]

24. 0'-2 9/16" [65]

25. LEFT SIDE

26. 0'-4 9/16" [115.8]

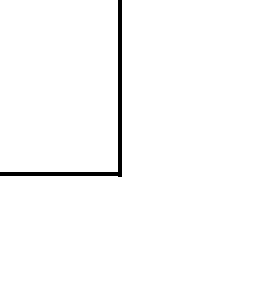
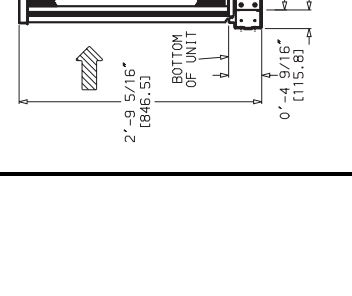
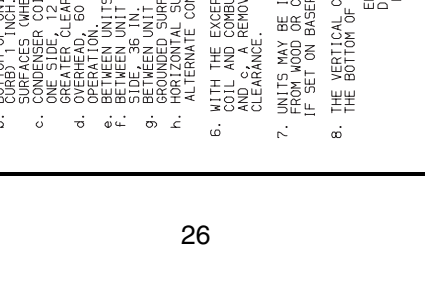
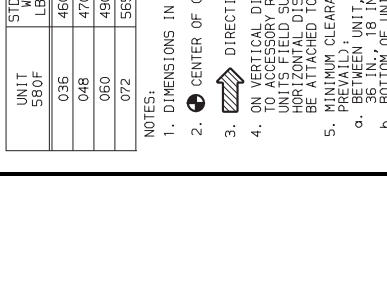
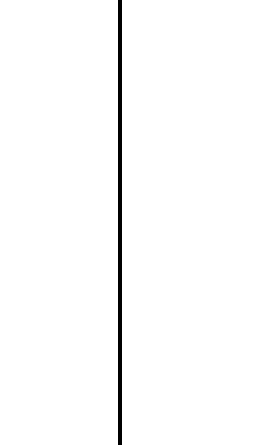
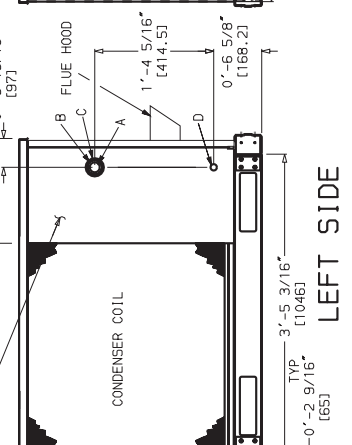
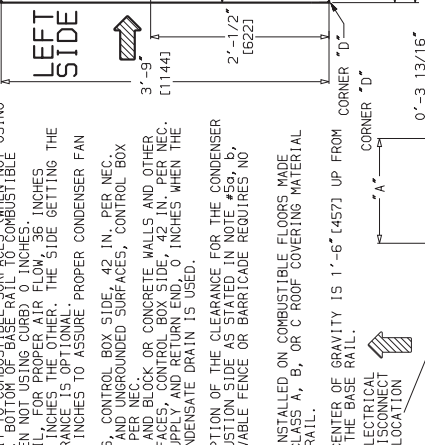
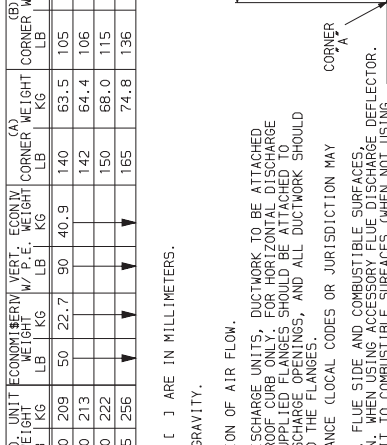
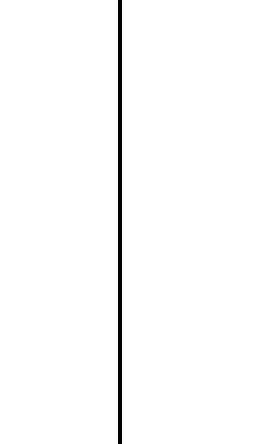
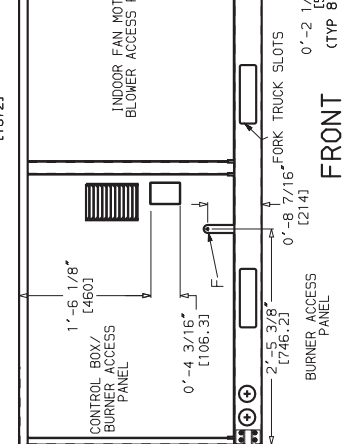
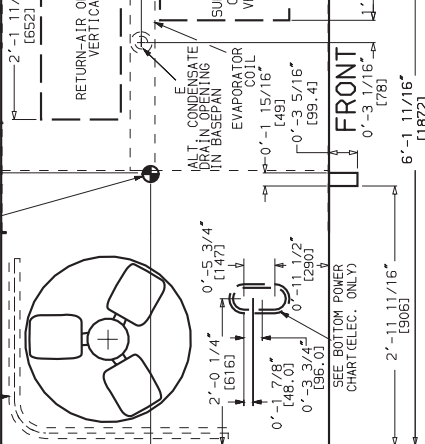
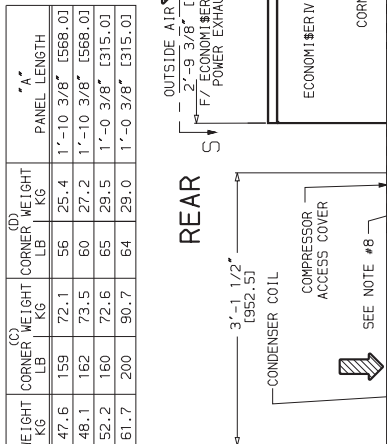
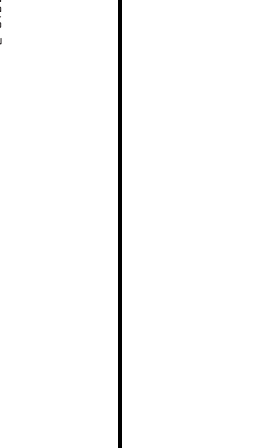
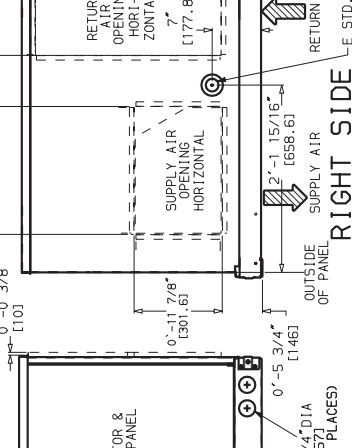
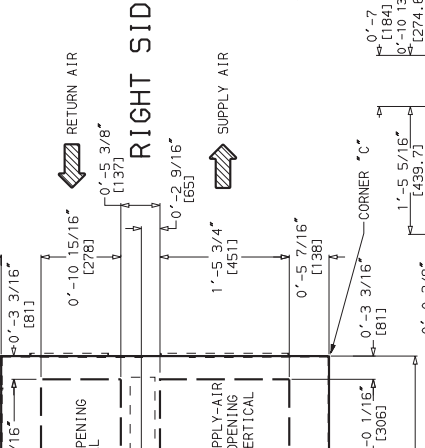
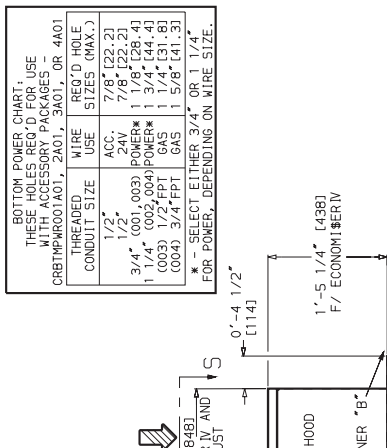
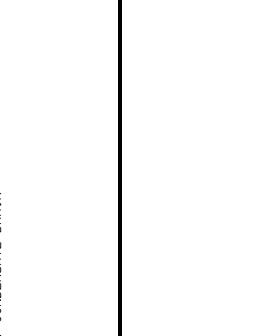
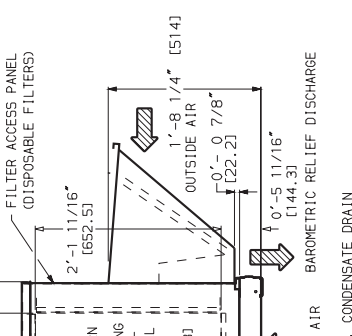
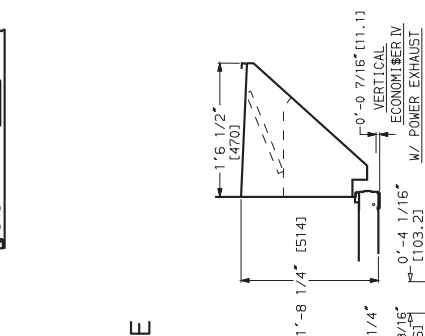
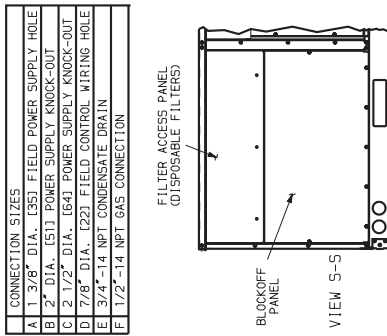
27. 0'-2 9/16" [65]

28. 0'-4 9/16" [115.8]

29. 0'-2 9/16" [65]

30. 0'-4 9/16" [115.8]

31. 0'-2 9/16" [65]



| CONNECTION SIZES |                                           |
|------------------|-------------------------------------------|
| A                | 1 3/8" DIA. (351) FIELD POWER SUPPLY HOLE |
| B                | 2" DIA. (51) POWER SUPPLY KNOCK-OUT       |
| C                | 1 3/4" DIA. (44) CHARGING PORT HOLE       |
| D                | 7/8" DIA. (22) FIELD CONTROL WIRING HOLE  |
| E                | 3/4"-14 NPT CONDENSATE DRAIN              |
| F                | 1/2"-14 NPT GAS CONNECTION                |
| G                | 2 1/2" DIA. (64) POWER SUPPLY KNOCK-OUT   |

| BOTTOM POWER CHART:                                 |                   |
|-----------------------------------------------------|-------------------|
| THESE HOLES REQUIRED FOR USE OF BOTTOM POWER CHART: |                   |
| ORBITAL MOTOR, 240V, 3000 RPM, OR 440V              |                   |
| THREADED CONDUIT SIZE                               | WIRE SIZE (MAX.)  |
| 1/2"                                                | 7/8" (22.2)       |
| 3/4"                                                | 1" (25.4)         |
| 1 1/4"                                              | 1 1/8" (28.4)     |
| 1 1/2"                                              | 1 3/4" (44.4)     |
| 2"                                                  | 2" (50.8)         |
| 2 1/2"                                              | 2 1/2" (63.5)     |
| 3"                                                  | 3" (76.2)         |
| 3 1/2"                                              | 3 1/2" (88.9)     |
| 4"                                                  | 4" (101.6)        |
| 4 1/2"                                              | 4 1/2" (114.3)    |
| 5"                                                  | 5" (127)          |
| 5 1/2"                                              | 5 1/2" (140)      |
| 6"                                                  | 6" (152.4)        |
| 6 1/2"                                              | 6 1/2" (165.1)    |
| 7"                                                  | 7" (177.8)        |
| 7 1/2"                                              | 7 1/2" (190.5)    |
| 8"                                                  | 8" (203.2)        |
| 8 1/2"                                              | 8 1/2" (215.9)    |
| 9"                                                  | 9" (228.6)        |
| 9 1/2"                                              | 9 1/2" (241.3)    |
| 10"                                                 | 10" (254)         |
| 10 1/2"                                             | 10 1/2" (266.7)   |
| 11"                                                 | 11" (279.4)       |
| 11 1/2"                                             | 11 1/2" (292.1)   |
| 12"                                                 | 12" (304.8)       |
| 12 1/2"                                             | 12 1/2" (317.5)   |
| 13"                                                 | 13" (330.2)       |
| 13 1/2"                                             | 13 1/2" (342.9)   |
| 14"                                                 | 14" (355.6)       |
| 14 1/2"                                             | 14 1/2" (368.3)   |
| 15"                                                 | 15" (381)         |
| 15 1/2"                                             | 15 1/2" (393.7)   |
| 16"                                                 | 16" (406.4)       |
| 16 1/2"                                             | 16 1/2" (419.1)   |
| 17"                                                 | 17" (431.8)       |
| 17 1/2"                                             | 17 1/2" (444.5)   |
| 18"                                                 | 18" (457.2)       |
| 18 1/2"                                             | 18 1/2" (469.9)   |
| 19"                                                 | 19" (482.6)       |
| 19 1/2"                                             | 19 1/2" (495.3)   |
| 20"                                                 | 20" (508)         |
| 20 1/2"                                             | 20 1/2" (520.7)   |
| 21"                                                 | 21" (533.4)       |
| 21 1/2"                                             | 21 1/2" (546.1)   |
| 22"                                                 | 22" (558.8)       |
| 22 1/2"                                             | 22 1/2" (571.5)   |
| 23"                                                 | 23" (584.2)       |
| 23 1/2"                                             | 23 1/2" (596.9)   |
| 24"                                                 | 24" (609.6)       |
| 24 1/2"                                             | 24 1/2" (622.3)   |
| 25"                                                 | 25" (635)         |
| 25 1/2"                                             | 25 1/2" (647.7)   |
| 26"                                                 | 26" (660.4)       |
| 26 1/2"                                             | 26 1/2" (673.1)   |
| 27"                                                 | 27" (685.8)       |
| 27 1/2"                                             | 27 1/2" (698.5)   |
| 28"                                                 | 28" (711.2)       |
| 28 1/2"                                             | 28 1/2" (723.9)   |
| 29"                                                 | 29" (736.6)       |
| 29 1/2"                                             | 29 1/2" (749.3)   |
| 30"                                                 | 30" (762)         |
| 30 1/2"                                             | 30 1/2" (774.7)   |
| 31"                                                 | 31" (787.4)       |
| 31 1/2"                                             | 31 1/2" (800.1)   |
| 32"                                                 | 32" (812.8)       |
| 32 1/2"                                             | 32 1/2" (825.5)   |
| 33"                                                 | 33" (838.2)       |
| 33 1/2"                                             | 33 1/2" (850.9)   |
| 34"                                                 | 34" (863.6)       |
| 34 1/2"                                             | 34 1/2" (876.3)   |
| 35"                                                 | 35" (889)         |
| 35 1/2"                                             | 35 1/2" (901.7)   |
| 36"                                                 | 36" (914.4)       |
| 36 1/2"                                             | 36 1/2" (927.1)   |
| 37"                                                 | 37" (939.8)       |
| 37 1/2"                                             | 37 1/2" (952.5)   |
| 38"                                                 | 38" (965.2)       |
| 38 1/2"                                             | 38 1/2" (977.9)   |
| 39"                                                 | 39" (990.6)       |
| 39 1/2"                                             | 39 1/2" (1003.3)  |
| 40"                                                 | 40" (1016)        |
| 40 1/2"                                             | 40 1/2" (1028.7)  |
| 41"                                                 | 41" (1041.4)      |
| 41 1/2"                                             | 41 1/2" (1054.1)  |
| 42"                                                 | 42" (1066.8)      |
| 42 1/2"                                             | 42 1/2" (1079.5)  |
| 43"                                                 | 43" (1092.2)      |
| 43 1/2"                                             | 43 1/2" (1104.9)  |
| 44"                                                 | 44" (1117.6)      |
| 44 1/2"                                             | 44 1/2" (1130.3)  |
| 45"                                                 | 45" (1143)        |
| 45 1/2"                                             | 45 1/2" (1155.7)  |
| 46"                                                 | 46" (1168.4)      |
| 46 1/2"                                             | 46 1/2" (1181.1)  |
| 47"                                                 | 47" (1193.8)      |
| 47 1/2"                                             | 47 1/2" (1206.5)  |
| 48"                                                 | 48" (1219.2)      |
| 48 1/2"                                             | 48 1/2" (1231.9)  |
| 49"                                                 | 49" (1244.6)      |
| 49 1/2"                                             | 49 1/2" (1257.3)  |
| 50"                                                 | 50" (1270)        |
| 50 1/2"                                             | 50 1/2" (1282.7)  |
| 51"                                                 | 51" (1295.4)      |
| 51 1/2"                                             | 51 1/2" (1308.1)  |
| 52"                                                 | 52" (1320.8)      |
| 52 1/2"                                             | 52 1/2" (1333.5)  |
| 53"                                                 | 53" (1346.2)      |
| 53 1/2"                                             | 53 1/2" (1358.9)  |
| 54"                                                 | 54" (1371.6)      |
| 54 1/2"                                             | 54 1/2" (1384.3)  |
| 55"                                                 | 55" (1397)        |
| 55 1/2"                                             | 55 1/2" (1409.7)  |
| 56"                                                 | 56" (1422.4)      |
| 56 1/2"                                             | 56 1/2" (1435.1)  |
| 57"                                                 | 57" (1447.8)      |
| 57 1/2"                                             | 57 1/2" (1460.5)  |
| 58"                                                 | 58" (1473.2)      |
| 58 1/2"                                             | 58 1/2" (1485.9)  |
| 59"                                                 | 59" (1498.6)      |
| 59 1/2"                                             | 59 1/2" (1511.3)  |
| 60"                                                 | 60" (1524)        |
| 60 1/2"                                             | 60 1/2" (1536.7)  |
| 61"                                                 | 61" (1549.4)      |
| 61 1/2"                                             | 61 1/2" (1562.1)  |
| 62"                                                 | 62" (1574.8)      |
| 62 1/2"                                             | 62 1/2" (1587.5)  |
| 63"                                                 | 63" (1600.2)      |
| 63 1/2"                                             | 63 1/2" (1612.9)  |
| 64"                                                 | 64" (1625.6)      |
| 64 1/2"                                             | 64 1/2" (1638.3)  |
| 65"                                                 | 65" (1651)        |
| 65 1/2"                                             | 65 1/2" (1663.7)  |
| 66"                                                 | 66" (1676.4)      |
| 66 1/2"                                             | 66 1/2" (1689.1)  |
| 67"                                                 | 67" (1701.8)      |
| 67 1/2"                                             | 67 1/2" (1714.5)  |
| 68"                                                 | 68" (1727.2)      |
| 68 1/2"                                             | 68 1/2" (1739.9)  |
| 69"                                                 | 69" (1752.6)      |
| 69 1/2"                                             | 69 1/2" (1765.3)  |
| 70"                                                 | 70" (1778)        |
| 70 1/2"                                             | 70 1/2" (1790.7)  |
| 71"                                                 | 71" (1803.4)      |
| 71 1/2"                                             | 71 1/2" (1816.1)  |
| 72"                                                 | 72" (1830.8)      |
| 72 1/2"                                             | 72 1/2" (1843.5)  |
| 73"                                                 | 73" (1856.2)      |
| 73 1/2"                                             | 73 1/2" (1868.9)  |
| 74"                                                 | 74" (1884.6)      |
| 74 1/2"                                             | 74 1/2" (1900.3)  |
| 75"                                                 | 75" (1914)        |
| 75 1/2"                                             | 75 1/2" (1926.7)  |
| 76"                                                 | 76" (1941.4)      |
| 76 1/2"                                             | 76 1/2" (1954.1)  |
| 77"                                                 | 77" (1968.8)      |
| 77 1/2"                                             | 77 1/2" (1981.5)  |
| 78"                                                 | 78" (1994.2)      |
| 78 1/2"                                             | 78 1/2" (2006.9)  |
| 79"                                                 | 79" (2019.6)      |
| 79 1/2"                                             | 79 1/2" (2032.3)  |
| 80"                                                 | 80" (2045)        |
| 80 1/2"                                             | 80 1/2" (2057.7)  |
| 81"                                                 | 81" (2070.4)      |
| 81 1/2"                                             | 81 1/2" (2083.1)  |
| 82"                                                 | 82" (2097.8)      |
| 82 1/2"                                             | 82 1/2" (2109.5)  |
| 83"                                                 | 83" (2122.2)      |
| 83 1/2"                                             | 83 1/2" (2134.9)  |
| 84"                                                 | 84" (2147.6)      |
| 84 1/2"                                             | 84 1/2" (2160.3)  |
| 85"                                                 | 85" (2173)        |
| 85 1/2"                                             | 85 1/2" (2185.7)  |
| 86"                                                 | 86" (2198.4)      |
| 86 1/2"                                             | 86 1/2" (2201.1)  |
| 87"                                                 | 87" (2216)        |
| 87 1/2"                                             | 87 1/2" (2228.7)  |
| 88"                                                 | 88" (2241.4)      |
| 88 1/2"                                             | 88 1/2" (2254.1)  |
| 89"                                                 | 89" (2269.6)      |
| 89 1/2"                                             | 89 1/2" (2280.3)  |
| 90"                                                 | 90" (2295.4)      |
| 90 1/2"                                             | 90 1/2" (2306.1)  |
| 91"                                                 | 91" (2320.8)      |
| 91 1/2"                                             | 91 1/2" (2336.5)  |
| 92"                                                 | 92" (2351)        |
| 92 1/2"                                             | 92 1/2" (2366.7)  |
| 93"                                                 | 93" (2381.4)      |
| 93 1/2"                                             | 93 1/2" (2397.1)  |
| 94"                                                 | 94" (2411.8)      |
| 94 1/2"                                             | 94 1/2" (2427.5)  |
| 95"                                                 | 95" (2442.2)      |
| 95 1/2"                                             | 95 1/2" (2457.9)  |
| 96"                                                 | 96" (2467.6)      |
| 96 1/2"                                             | 96 1/2" (2483.3)  |
| 97"                                                 | 97" (2498)        |
| 97 1/2"                                             | 97 1/2" (2508.7)  |
| 98"                                                 | 98" (2519.4)      |
| 98 1/2"                                             | 98 1/2" (2535.1)  |
| 99"                                                 | 99" (2549.8)      |
| 99 1/2"                                             | 99 1/2" (2565.5)  |
| 100"                                                | 100" (2580.6)     |
| 100 1/2"                                            | 100 1/2" (2596.3) |
| 101"                                                | 101" (2611.4)     |
| 101 1/2"                                            | 101 1/2" (2627.1) |
| 102"                                                | 102" (2641.8)     |
| 102 1/2"                                            | 102 1/2" (2657.5) |
| 103"                                                | 103" (2672.2)     |
| 103 1/2"                                            | 103 1/2" (2687.9) |
| 104"                                                | 104" (2702.6)     |
| 104 1/2"                                            | 104 1/2" (2718.3) |
| 105"                                                | 105" (2732)       |
| 105 1/2"                                            | 105 1/2" (2747.7) |
| 106"                                                | 106" (2762.4)     |
| 106 1/2"                                            | 106 1/2" (2778.1) |
| 107"                                                | 107" (2792.8)     |
| 107 1/2"                                            | 107 1/2" (2808.5) |
| 108"                                                | 108" (2819.2)     |
| 108 1/2"                                            | 108 1/2" (2834.9) |
| 109"                                                | 109" (2849.6)     |
| 109 1/2"                                            | 109 1/2" (2865.3) |
| 110"                                                | 110" (2880)       |
| 110 1/2"                                            | 110 1/2" (2895.7) |
| 111"                                                | 111" (2910.4)     |
| 111 1/2"                                            | 111 1/2" (2926.1) |
| 112"                                                | 112" (2940.8)     |
| 112 1/2"                                            | 112 1/2" (2956.5) |
| 113"                                                | 113" (2971.2)     |
| 113 1/2"                                            | 113 1/2" (2986.9) |
| 114"                                                | 114" (3001.6)     |
| 114 1/2"                                            | 114 1/2" (3017.3) |
| 115"                                                | 115" (3032)       |
| 115 1/2"                                            | 115 1/2" (3047.7) |
| 116"                                                | 116" (3062.4)     |
| 116 1/2"                                            | 116 1/2" (3078.1) |
| 117"                                                | 117" (3092.8)     |
| 117 1/2"                                            | 117 1/2" (3108.5) |
| 118"                                                | 118" (3123.2)     |
| 118 1/2"                                            | 118 1/2" (3138.9) |
| 119"                                                | 119" (3153.6)     |
| 119 1/2"                                            | 119 1/2" (3164.3) |
| 120"                                                | 120" (3179)       |
| 120 1/2"                                            | 120 1/2" (3189.7) |
| 121"                                                | 121" (3204.4)     |
| 121 1/2"                                            | 121 1/2" (3220.1) |
| 122"                                                | 122" (3239.8)     |
| 122 1/2"                                            | 122 1/2" (3250.5) |
| 123"                                                | 123" (3260.2)     |
| 123 1/2"                                            | 123 1/2" (3275.9) |
| 124"                                                | 124" (3290.6)     |
| 124 1/2"                                            | 124 1/2" (3306.3) |
| 125"                                                | 125" (3320)       |
| 125 1/2"                                            | 125 1/2" (3335.7) |
| 126"                                                | 126" (3350.4)     |
| 126 1/2"                                            | 126 1/2" (3366.1) |
| 127"                                                | 127" (3380.8)     |
| 127 1/2"                                            | 127 1/2" (3396.5) |
| 128"                                                | 128" (3411.2)     |
| 128 1/2"                                            | 128 1/2" (3426.9) |
| 129"                                                | 129" (3441.6)     |
| 129 1/2"                                            | 129 1/2" (3457.3) |
| 130"                                                | 130" (3472)       |
| 130 1/2"                                            | 130 1/2" (3487.7) |
| 131"                                                | 131" (3502.4)     |
| 131 1/2"                                            | 131 1/2" (3518.1) |
| 132"                                                | 132" (3532.8)     |
| 132 1/2"                                            | 132 1/2" (3548.5) |
| 133"                                                | 133" (3563.2)     |
| 133 1/2"                                            | 133 1/2" (3578.9) |
| 134"                                                | 134" (3593.6)     |
| 134 1/2"                                            | 134 1/2" (3604.3) |
| 135"                                                | 135" (3619)       |
| 135 1/2"                                            | 135 1/2" (3629.7) |
| 136"                                                | 136" (3649.4)     |
| 136 1/2"                                            | 136 1/2" (3665.1) |
| 137"                                                | 137" (3680)       |
| 137 1/2"                                            | 137 1/2" (3695.7) |
| 138"                                                | 138" (3710.4)     |
| 138 1/2"                                            | 138 1/2" (3726.1) |
| 139"                                                | 139" (3740.8)     |
| 139 1/2"                                            | 139 1/2" (3756.5) |
| 140"                                                | 140" (3771.2)     |
| 140 1/2"                                            | 140 1/2" (3786.9) |
| 141"                                                | 141" (3801.6)     |
| 141 1/2"                                            | 141 1/2" (3817.3) |
| 142"                                                | 142" (3832)       |
| 142 1/2"                                            | 142 1/2" (3847.7) |
| 143"                                                | 143" (3862.4)     |
| 143 1/2"                                            | 143 1/2" (3878.1) |
| 144"                                                | 144" (3892.8)     |
| 144 1/2"                                            | 144 1/2" (3903.5) |
| 145"                                                | 145" (3913.2)     |
| 145 1/2"                                            | 145 1/2" (3928.9) |
| 146"                                                | 146" (3938.6)     |
| 146 1/2"                                            | 146 1/2" (3954.3) |
| 147"                                                | 147" (3969)       |
| 147 1/2"                                            | 147 1/2" (3979.7) |
| 148"                                                | 148" (4000.4)     |
| 148 1/2"                                            | 148 1/2" (4016.1) |
| 149"                                                | 149" (4030.8)     |
| 149 1/2"                                            | 149 1/2" (4046.5) |
| 150"                                                | 150" (4061.2)     |
| 150 1/2"                                            | 150 1/2" (4076.9) |
| 151"                                                | 151" (4091.6)     |
| 151 1/2"                                            | 151 1/2" (4107.3) |
| 152"                                                | 152" (4117)       |
| 152 1/2"                                            | 152 1/2" (4132.7) |
| 153"                                                | 153" (4147.2)     |
| 153 1/2"                                            | 153 1/2" (4162.9) |
| 154"                                                | 154" (4177.6)     |
| 154 1/2"                                            | 154 1/2" (4188.3) |
| 155"                                                | 155" (4198)       |
| 155 1/2"                                            | 155 1/2" (4213.7) |
| 156"                                                | 156" (4229.2)     |
| 156 1/2"                                            | 156 1/2" (4239.9) |
| 157"                                                | 157" (4250.4)     |
| 157 1/2"                                            | 157 1/2" (4276.1) |
| 158"                                                | 158" (4286.8)     |
| 158 1/2"                                            | 158 1/2" (4301.5) |
| 159"                                                | 159" (4317.2)     |
| 159 1/2"                                            | 159 1/2" (4332.9) |
| 160"                                                | 160" (4348)       |
| 160 1/2"                                            | 160 1/2" (4364.3) |
| 161"                                                | 161" (4379.6)     |
| 161 1/2"                                            | 161 1/2" (4395.3) |
| 162"                                                | 162" (4406)       |
| 162 1/2"                                            | 162 1/2" (4421.7) |
| 163"                                                | 163" (4437.2)     |
| 163 1/2"                                            | 163 1/2" (4453.9) |
| 164"                                                | 164" (4464.4)     |
| 164 1/2"                                            | 164 1/2" (4480.1) |
| 165"                                                | 165" (4495.6)     |
| 165 1/2"                                            | 165 1/2" (4506.3) |
| 166"                                                | 166" (4516.8)     |
| 166 1/2"                                            | 166 1/2" (4532.5) |
| 167"                                                | 167" (4543.2)     |
| 167 1/2"                                            | 167 1/2" (4558.9) |
| 168"                                                | 168" (4569.6)     |
| 168 1/2"                                            | 168 1/2" (4585.3) |
| 169"                                                | 169" (4596)       |
| 169 1/2"                                            | 169 1/2" (4611.7) |
| 170"                                                | 170" (4622.4)     |
| 170 1/2"                                            | 170 1/2" (4638.1) |
| 171"                                                | 171" (4648.8)     |
| 171 1/2"                                            | 171 1/2" (4664.5) |
| 172"                                                | 172" (4680)       |
| 172 1/2"                                            | 172 1/2" (4690.7) |
| 173"                                                | 173" (4701.2)     |
| 173 1/2"                                            | 173 1/2" (4716.9) |
| 174"                                                | 174" (4727.6)     |
| 174 1/2"                                            | 174 1/2" (4743.3) |
| 175"                                                | 175" (4758)       |
| 175 1/2"                                            | 175 1/2" (4769.7) |
| 176"                                                | 176" (4784.4)     |
| 176 1/2"                                            | 176 1/2" (4800.1) |
| 177"                                                | 177" (4810.8)     |
| 177 1/2"                                            | 177 1/2" (4826.5) |
| 178"                                                | 178" (4842.2)     |
| 178 1/2"                                            | 178 1/2" (4857.9) |
| 179"                                                | 179" (4868.6)     |
| 179 1/2"                                            | 179 1/2" (4884.3) |
| 180"                                                | 180" (4900)       |
| 180 1/2"                                            | 180 1/2" (4915.7) |
| 181"                                                | 181" (4931.2)     |
| 181 1/2"                                            | 181 1/2" (4946.9) |
| 182"                                                | 182" (4962.4)     |

## BASE UNIT DIMENSIONS — 580F090,120,150

| UNIT<br>580F | STD. UNIT<br>WEIGHT |     | ECONOMIZER W/<br>P.E. WEIGHT |      | ECONOMIZER VERT.<br>W/P.E. WEIGHT |      | CORNER WEIGHT (A) |     | CORNER WEIGHT (B) |     | CORNER WEIGHT (C) |     | CORNER WEIGHT (D) |     | H*   |      | J*  |      | K*    |      | L*    |        |     |
|--------------|---------------------|-----|------------------------------|------|-----------------------------------|------|-------------------|-----|-------------------|-----|-------------------|-----|-------------------|-----|------|------|-----|------|-------|------|-------|--------|-----|
|              | LB                  | KG  | LB                           | KG   | LB                                | KG   | LB                | KG  | LB                | KG  | LB                | KG  | LB                | KG  | FT   | IN.  | MM  | FT   | IN.   | MM   | FT    | IN.    | MM  |
| 090          | 870                 | 395 | 75                           | 34.1 | 145                               | 65.9 | 189               | 86  | 161               | 73  | 239               | 109 | 280               | 127 | 1'-2 | 7/8" | 378 | 3'-5 | 5/16" | 1050 | 2'-9  | 11/16" | 856 |
| 120          | 1035                | 469 |                              |      | 225                               | 102  | 192               | 87  | 285               | 129 | 333               | 151 | 378               | 151 | 2'-5 | 7/8" | 759 | 4'-1 | 5/16" | 1253 | 3'-0  | 3/8"   | 924 |
| 150          | 1050                | 476 |                              |      | 228                               | 103  | 228               | 103 | 88                | 289 | 131               | 338 | 153               | 378 | 1'-2 | 7/8" | 378 | 4'-1 | 5/16" | 1253 | 3'-0  | 3/8"   | 924 |
|              |                     |     |                              |      |                                   |      |                   |     |                   |     |                   |     |                   |     |      |      |     |      |       |      | 2'-10 | 7/16"  | 875 |

NOTES:

1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.

2. ⬤ CENTER OF GRAVITY.

3. ⬤ DIRECTION OF AIR FLOW.

4. ON VERTICAL DISCHARGE UNITS, DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. FOR HORIZONTAL DISCHARGE UNITS FIELD SUPPLIED FLANGES SHOULD BE ATTACHED TO HORIZONTAL DISCHARGE OPENINGS, AND ALL DUCTWORK SHOULD BE ATTACHED TO THE FLANGES.

5. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAILE). FLUE SIDE AND COMBUSTIBLE SURFACES:  
a. 48 INCHES. 18 INCHES WHEN USING ACCESSORY FLUE DISCHARGE DEFLECTOR.  
b. BOTTOM OF UNIT TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.

c. CONDENSER COIL TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.

d. OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN OPERATION.

e. BETWEEN UNITS, CONTROL BOX SIDE 42 IN. PER NEC.

f. BETWEEN UNITS AND UNGROUND SURFACES, CONTROL BOX SIDE 36 IN. PER NEC.

g. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER COMBUSTIBLE SURFACES, 18 INCHES.

h. ALTERNATE CONDENSATE DRAIN IS USED.

6. WITH THE EXCEPTION OF THE CLEARANCE FOR THE CONDENSER COIL AND COMBUSTIBLE SIDE AS STATED IN NOTE 5, b, AND c, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.

7. UNITS MUST BE INSTALLED ON COMBUSTIBLE FLOORS MADE OF CONCRETE OR BRICK. IF SET ON BASE RAIL, COVERING MATERIAL IF SET ON BASE RAIL.

8. THE VERTICAL CENTER OF GRAVITY IS 1'-7" (483) FOR 090, 120 AND 150 UNITS FROM THE BOTTOM OF THE BASE RAIL.

9. CONNECTION SIZES:

A. 1 3/8" DIA. (53) FIELD POWER SUPPLY HOLE

B. 1 1/2" DIA. (63) FIELD POWER SUPPLY KNOCK-OUT

C. 1 3/4" DIA. (63) CHARGING PORT HOLE

D. 7/8" DIA. (22) FIELD CONTROL WIRING HOLE

E. 3/4"-14 NPT CONDENSATE DRAIN

F. 1/2"-14 NPT GAS CONN. 580F090 LOW HEAT

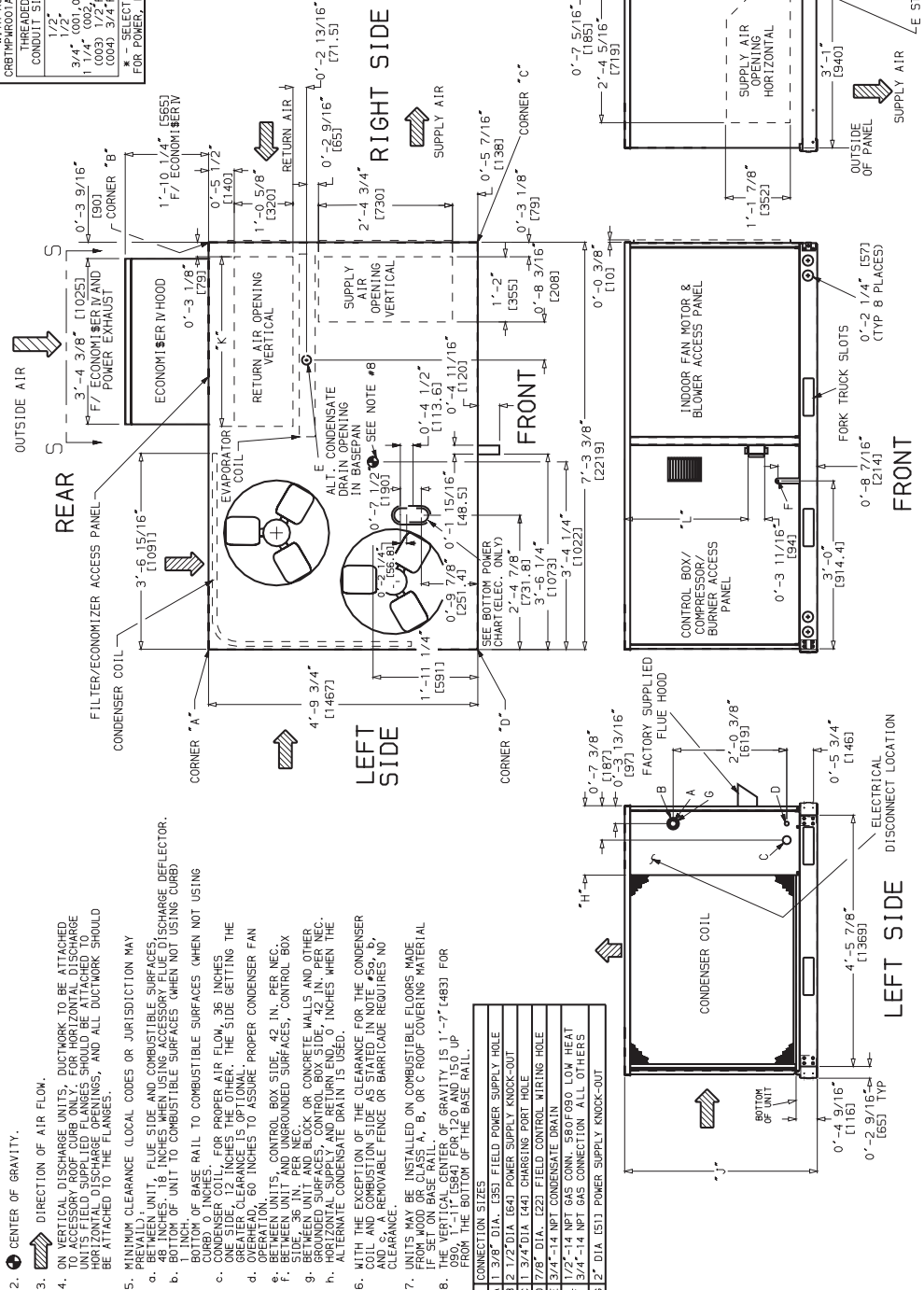
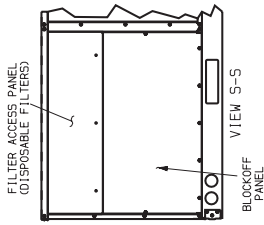
G. 3/4"-14 NPT GAS CONN. 580F120 AND 150

H. 2" DIA. (51) POWER SUPPLY KNOCK-OUT

BOTTOM POWER CHART  
THESE HOLES REQUIRED FOR USE  
WITH ACCESSORY PACKAGES -  
CRBTMPR001A01, 2A01, 3A01, OR 4A01

| THREADED<br>CONDUIT SIZE | WIRE<br>USE      | REQ'D HOLE<br>SIZE (MAX.) |
|--------------------------|------------------|---------------------------|
| 1/2"                     | ACC.             | 7/8" (22.2)               |
| 3/4"                     | 001, 003, POWER* | 1 1/8" (28.4)             |
| 1 1/4"                   | 002, 004, POWER* | 1 3/4" (44.4)             |
| 003                      | 1/2" FET GAS     | 1 1/4" (31.8)             |
| 004                      | 1/2" FET GAS     | 1 5/8" (41.3)             |

\*SELECT EITHER 3/4" OR 1/4"  
FOR POWER, DEPENDING ON WIRE SIZE.





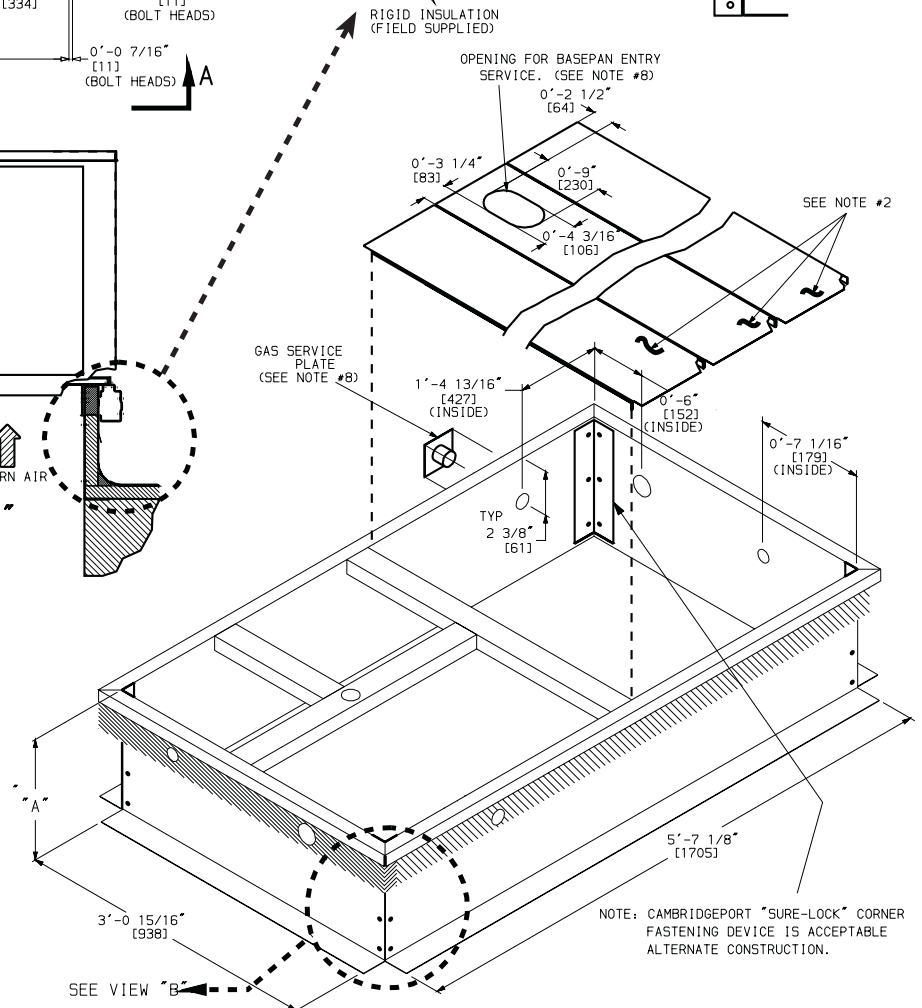
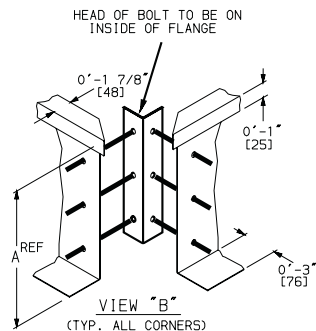
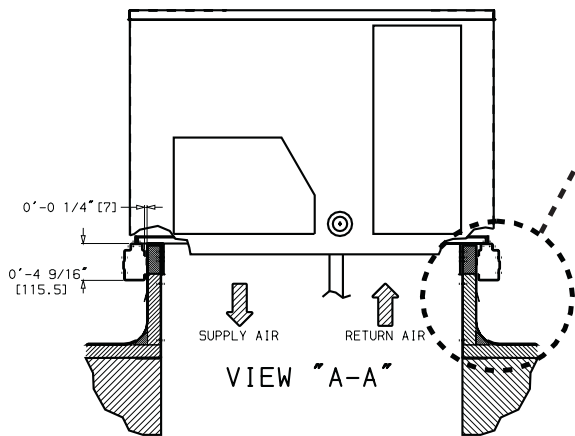
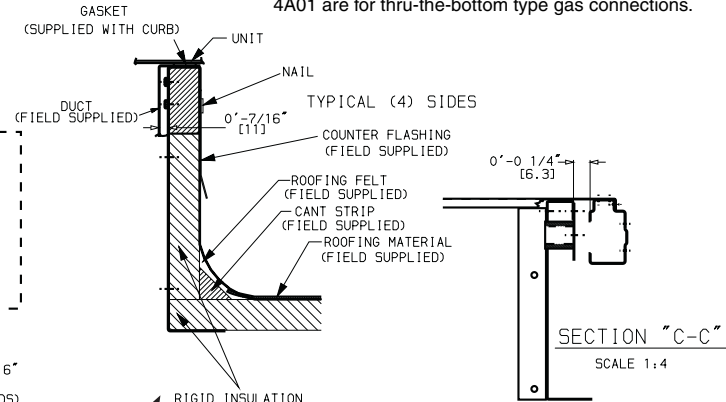
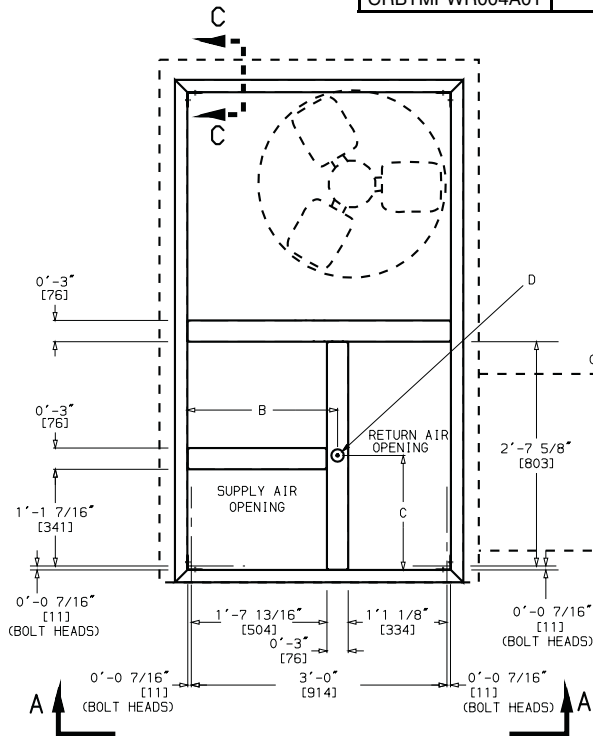
## ACCESSORY DIMENSIONS — 580F

| ROOF CURB ACCESSORY | A           | UNIT SIZE |
|---------------------|-------------|-----------|
| CRRFCURB001A01      | 1'-2" [356] | 580F      |
| CRRFCURB002A01      | 2'-0" [610] | 036-073   |

| CONNECTOR PKG. ACCY. | B                 | C           | D ALT DRAIN HOLE | GAS             | POWER         | CONTROL         | ACCESSORY POWER |
|----------------------|-------------------|-------------|------------------|-----------------|---------------|-----------------|-----------------|
| CRBTMPWR001A01       | 1'-9 11/16" [551] | 1'-4" [406] | 1 3/4" [44.5]    | 3/4" [19] NPT   | 3/4" [19] NPT | 1/2" [12.7] NPT | 1/2" [12.7] NPT |
| CRBTMPWR002A01       |                   |             |                  | 1 1/4" [31.7]   | 1 1/4" [31.7] |                 |                 |
| CRBTMPWR003A01       |                   |             |                  | 1/2" [12.7] NPT | 3/4" [19] NPT |                 |                 |
| CRBTMPWR004A01       |                   |             |                  | 3/4" [19] NPT   | 1 1/4" [31.7] |                 |                 |

## NOTES:

1. Roof curb accessory is shipped disassembled.
2. Insulated panels.
3. Dimensions in [ ] are in millimeters.
4. Roof curb, galvanized steel.
5. Attach ductwork to curb (flanges of duct rest on curb).
6. Service clearance: 4 ft on each side.
7.  Direction of airflow.
8. Connector packages CRBTMPWR001A01 and 2A01 are for thru-the-curb type gas. Packages CRBTMPWR003A01 and 4A01 are for thru-the-bottom type gas connections.



Roof Curb



# ACCESSORY DIMENSIONS — 580F (cont)

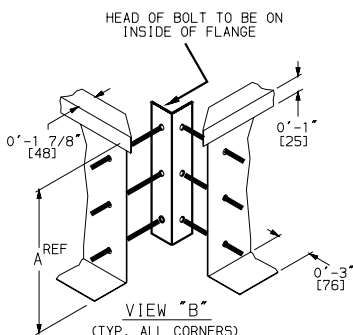
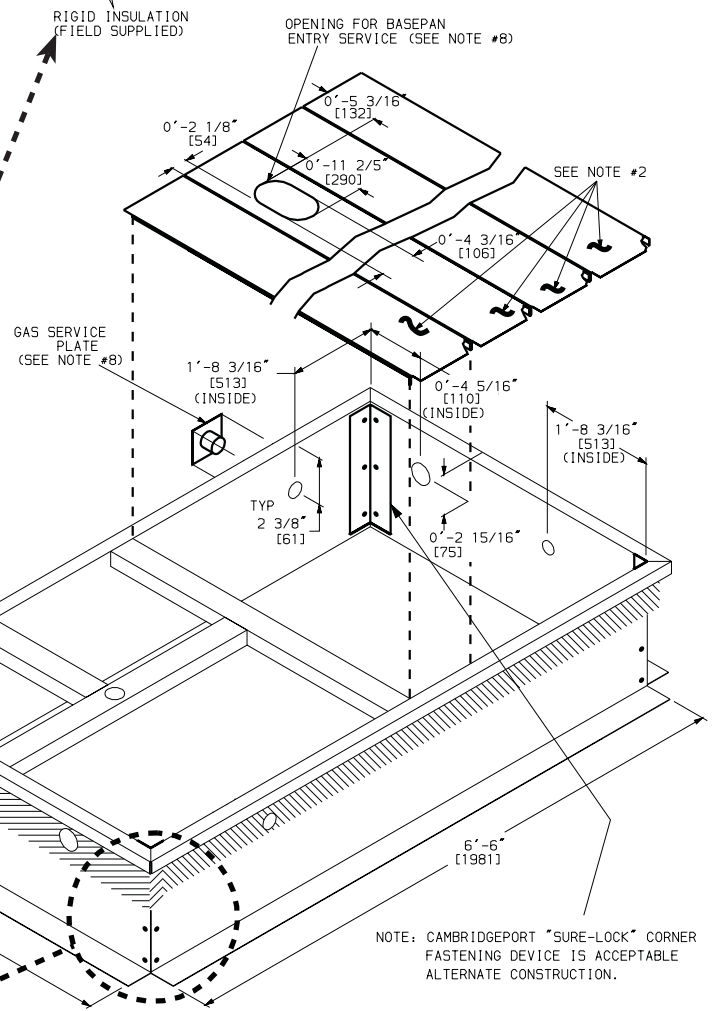
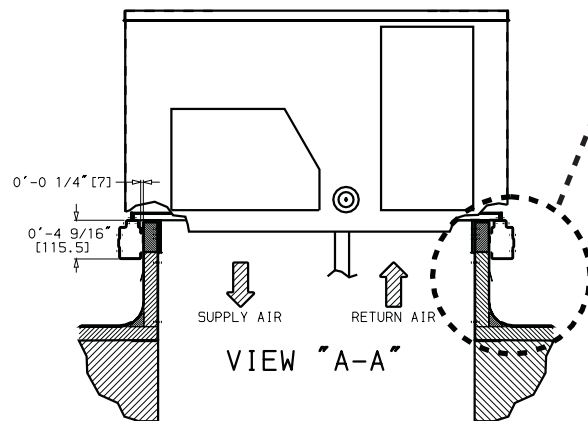
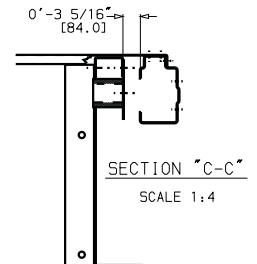
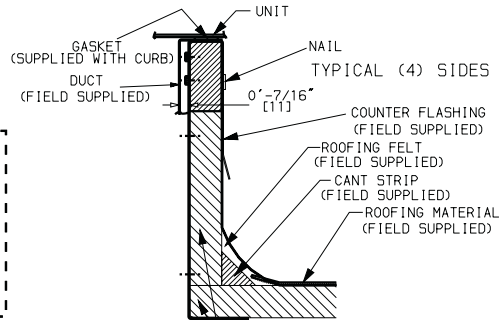
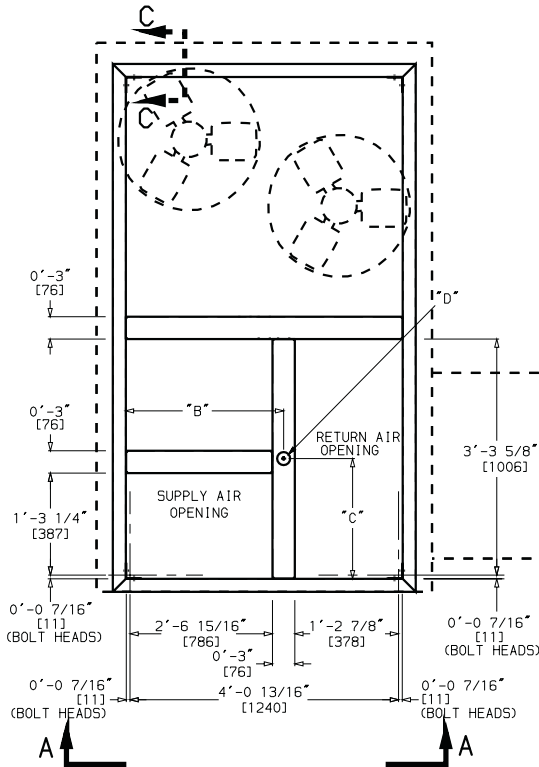
580F036-151

| CONNECTOR<br>PKG. ACCY. | B                      | C                         | D ALT<br>DRAIN<br>HOLE | GAS              | POWER         | CONTROL            | ACCESSORY<br>POWER |
|-------------------------|------------------------|---------------------------|------------------------|------------------|---------------|--------------------|--------------------|
| CRBTMPWR001A01          | 2' -87/<br>16<br>[827] | 1' -10 15/<br>16<br>[583] | 13 1/4"<br>[44.5]      | 3/4"<br>[19] NPT | 3/4" [19] NPT | 1/2"<br>[12.7] NPT | 1/2"<br>[12.7] NPT |
| CRBTMPWR002A01          |                        |                           |                        | 1 1/4" [31.7]    | 1 1/4" [31.7] |                    |                    |
| CRBTMPWR003A01          |                        |                           |                        | 1/2" NPT         | 3/4" [19] NPT |                    |                    |
| CRBTMPWR004A01          |                        |                           |                        | 3/4" [19] NPT    | 1 1/4" [31.7] |                    |                    |

| ROOF CURB<br>ACCESSORY | "A"          | UNIT SIZE |
|------------------------|--------------|-----------|
| CRRFCURB003A01         | 1' -2" [356] | 580F      |
| CRRFCURB004A01         | 2' -0" [610] | 090-151   |

## NOTES:

1. Roof curb accessory is shipped disassembled.
2. Insulated panels: 1-in. thick polyurethane foam, 1 3/4 lb density.
3. Dimensions in [ ] are in millimeters.
4. Roof curb: 16-gage steel.
5. Attach ductwork to curb (flanges of duct rest on curb).
6. Service clearance 4 ft on each side.
7.  Direction of airflow.
8. Connector packages CRBTMPWR001A01 and 2A01 are for thru-the-curb gas type. Packages CRBTMPWR003A01 and 4A01 are for thru-the-bottom type gas connections.



NOTE: CAMBRIDGEPORT "SURE-LOCK" CORNER FASTENING DEVICE IS ACCEPTABLE ALTERNATE CONSTRUCTION.

## Roof Curb Details



### SELECTION PROCEDURE (with 580F060 example)

**I DETERMINE COOLING AND HEATING REQUIREMENTS AT DESIGN CONDITIONS.**

Given:

|                                          |                       |
|------------------------------------------|-----------------------|
| Required Cooling Capacity (TC) . . . . . | 55,000 Btuh           |
| Sensible Heat Capacity (SHC) . . . . .   | 40,000 Btuh           |
| Required Heating Capacity . . . . .      | 60,000 Btuh           |
| Condenser Entering Air Temp . . . . .    | 95 F (Summer)         |
| Evaporator Entering Air Temp. . . . .    | 80 F edb,<br>67 F ewb |

|                                                               |            |
|---------------------------------------------------------------|------------|
| Evaporator Air Quantity . . . . .                             | 2,000 cfm  |
| External Static Pressure . . . . .                            | 0.6 in. wg |
| Electrical Characteristics (V-Ph-Hz) . . . . .                | 230-3-60   |
| Vertical discharge unit with optional EconoMiSer IV required. |            |

edb — Entering dry-bulb  
ewb — Entering wet-bulb

## II SELECT UNIT BASED ON REQUIRED COOLING CAPACITY.

Enter Cooling Capacities table for 580F060 (page 33) at condenser entering temperature 95 F, evaporator air entering at 2,000 cfm and 67 F wb. The 580F060 unit will provide a total cooling capacity of 60,900 Btuh and a sensible heating capacity of 45,300 Btuh. For air entering evaporator at temperatures other than 80 F edb, calculate sensible heat capacity correction as required using the formula in the notes following the Cooling Capacities tables.

**NOTE:** Unit ratings are gross capacities and do not include the effect of evaporator-fan motor heat. To calculate net capacities, see Step V.

### III SELECT HEATING CAPACITY OF UNIT TO PROVIDE DESIGN CONDITION REQUIREMENTS.

In the Heating Capacities and Efficiencies table (page 9) note that the 580F060 074 will provide an output capacity of 59,200 Btuh, which is adequate for the given application.

#### IV DETERMINE FAN SPEED AND POWER REQUIREMENTS AT DESIGN CONDITIONS.

Before entering the Fan Performance tables, calculate the total static pressure required based on unit components. From the given and the Accessory/FIOP Static Pressure table on page 70 find:

|                                |                    |
|--------------------------------|--------------------|
| External static pressure       | 0.60 in. wg        |
| EconoMi\$er IV static pressure | <u>0.12 in. wg</u> |
| Total Static                   | 0.72 in. wg        |

Enter the standard motor Fan Performance table 580F060 Vertical Discharge (page 39) at 2,000 cfm and 0.72 in. wg external static pressure. The standard motor cannot provide 0.87 in. wg external static pressure. Enter the alternate motor Fan Performance table for 580F060, vertical discharge. At 2,000 cfm and 0.72 in. wg external static pressure, find that the rpm is 1219, the Bhp is 1.31, and the watts are 1168 (interpolation required).

#### V DETERMINE NET COOLING CAPACITY.

Cooling capacities are gross capacities and do not include indoor (evaporator) fan motor (IFM) heat. Use the watts input power to the motor calculated in Section IV above.

IFM Watts = 1168

Determine net cooling capacity using the following formula:

$$\begin{aligned} \text{Net capacity} &= \text{Gross capacity} - \text{IFM heat} \\ &= 60,900 \text{ Btuh} - 1168 \text{ Watts} \quad \left( 3.412 \frac{\text{Btuh}}{\text{Watts}} \right) \\ &= 60,900 \text{ Btuh} - 3985 \text{ Btuh} \\ &= 56,915 \text{ Btuh} \end{aligned}$$
$$\begin{aligned}\text{Net sensible capacity} &= 45,300 \text{ Btuh} - 3985 \text{ Btuh} \\ &= 41,315 \text{ Btuh}\end{aligned}$$

The calculations show that a 580F060 unit with the alternate motor and drive is the correct selection for the given conditions.

# PERFORMANCE DATA

## COOLING CAPACITIES

580F036-151

| 580F036 (3 TONS)                               |                 |                                   |      |      |           |      |      |           |      |      |  |
|------------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|------|------|--|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |  |
|                                                |                 | 900/0.11                          |      |      | 1200/0.14 |      |      | 1500/0.17 |      |      |  |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |  |
|                                                |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |  |
| 75                                             | TC<br>SHC<br>kW | 42.8                              | 38.9 | 35.0 | 44.8      | 40.8 | 37.0 | 45.8      | 41.9 | 38.2 |  |
|                                                |                 | 20.0                              | 24.5 | 28.7 | 21.8      | 27.5 | 32.8 | 23.0      | 30.0 | 36.0 |  |
|                                                |                 | 2.91                              | 2.81 | 2.70 | 2.99      | 2.88 | 2.78 | 3.02      | 2.92 | 2.82 |  |
| 85                                             | TC<br>SHC<br>kW | 40.8                              | 36.9 | 33.3 | 42.5      | 38.7 | 35.0 | 43.6      | 39.9 | 36.1 |  |
|                                                |                 | 19.4                              | 23.7 | 27.9 | 21.0      | 26.8 | 31.8 | 22.6      | 29.7 | 35.1 |  |
|                                                |                 | 3.14                              | 3.01 | 2.90 | 3.20      | 3.08 | 2.97 | 3.24      | 3.14 | 3.02 |  |
| 95                                             | TC<br>SHC<br>kW | 38.7                              | 34.9 | 31.4 | 40.4      | 36.6 | 33.0 | 41.4      | 37.6 | 34.1 |  |
|                                                |                 | 18.6                              | 22.9 | 27.0 | 20.3      | 26.0 | 30.9 | 22.0      | 28.8 | 34.0 |  |
|                                                |                 | 3.35                              | 3.21 | 3.09 | 3.42      | 3.29 | 3.16 | 3.47      | 3.35 | 3.22 |  |
| 105                                            | TC<br>SHC<br>kW | 36.5                              | 32.8 | 29.2 | 38.1      | 34.3 | 30.9 | 39.0      | 35.2 | 32.4 |  |
|                                                |                 | 17.8                              | 22.1 | 25.9 | 19.6      | 25.2 | 29.8 | 21.2      | 28.0 | 32.3 |  |
|                                                |                 | 3.55                              | 3.41 | 3.27 | 3.63      | 3.49 | 3.35 | 3.68      | 3.54 | 3.43 |  |
| 115                                            | TC<br>SHC<br>kW | 34.3                              | 30.7 | 26.9 | 35.7      | 32.1 | 28.8 | 36.5      | 32.9 | 30.6 |  |
|                                                |                 | 17.0                              | 21.3 | 24.8 | 19.0      | 24.4 | 28.8 | 20.5      | 27.1 | 30.6 |  |
|                                                |                 | 3.76                              | 3.60 | 3.45 | 3.84      | 3.68 | 3.54 | 3.88      | 3.74 | 3.64 |  |

| 580F060 (5 TONS)                               |                 |                                   |      |      |           |      |      |           |      |      |  |
|------------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|------|------|--|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |  |
|                                                |                 | 1500/0.07                         |      |      | 2000/0.09 |      |      | 2500/0.12 |      |      |  |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |  |
|                                                |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |  |
| 75                                             | TC<br>SHC<br>kW | 71.0                              | 63.8 | 55.4 | 74.5      | 67.2 | 59.2 | 76.5      | 69.7 | 62.1 |  |
|                                                |                 | 33.9                              | 41.5 | 47.9 | 37.4      | 47.4 | 55.8 | 40.6      | 52.8 | 61.8 |  |
|                                                |                 | 5.04                              | 4.82 | 4.62 | 5.20      | 4.97 | 4.76 | 5.29      | 5.06 | 4.87 |  |
| 85                                             | TC<br>SHC<br>kW | 69.2                              | 61.0 | 54.2 | 72.9      | 65.6 | 57.2 | 75.2      | 68.1 | 61.5 |  |
|                                                |                 | 33.4                              | 40.5 | 47.3 | 37.0      | 46.9 | 54.9 | 40.1      | 52.3 | 61.3 |  |
|                                                |                 | 5.50                              | 5.27 | 5.02 | 5.66      | 5.41 | 5.18 | 5.75      | 5.50 | 5.29 |  |
| 95                                             | TC<br>SHC<br>kW | 65.5                              | 56.6 | 50.4 | 69.4      | 60.9 | 53.1 | 71.2      | 63.3 | 57.8 |  |
|                                                |                 | 32.1                              | 38.8 | 45.6 | 35.8      | 45.3 | 52.6 | 39.1      | 50.9 | 57.8 |  |
|                                                |                 | 5.88                              | 5.62 | 5.37 | 6.01      | 5.76 | 5.53 | 6.12      | 5.87 | 5.67 |  |
| 105                                            | TC<br>SHC<br>kW | 61.9                              | 53.1 | 47.1 | 65.4      | 56.6 | 50.5 | 67.1      | 58.8 | 54.5 |  |
|                                                |                 | 30.8                              | 37.5 | 44.1 | 34.5      | 43.7 | 50.2 | 37.9      | 49.3 | 54.5 |  |
|                                                |                 | 6.25                              | 5.99 | 5.72 | 6.38      | 6.13 | 5.91 | 6.50      | 6.23 | 6.06 |  |
| 115                                            | TC<br>SHC<br>kW | 58.2                              | 49.7 | 43.7 | 61.4      | 52.3 | 47.8 | 63.0      | 54.3 | 51.2 |  |
|                                                |                 | 29.5                              | 36.1 | 42.5 | 33.2      | 42.1 | 47.8 | 36.7      | 47.6 | 51.2 |  |
|                                                |                 | 6.63                              | 6.35 | 6.08 | 6.75      | 6.49 | 6.29 | 6.88      | 6.59 | 6.46 |  |

| 580F072 (6 TONS)                               |                 |                                   |      |      |           |      |      |           |      |      |           |      |      |
|------------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|                                                |                 | 1800/0.06                         |      |      | 2100/0.08 |      |      | 2400/0.09 |      |      | 3000/0.11 |      |      |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                                |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                             | TC<br>SHC<br>kW | 86.6                              | 80.0 | 73.6 | 87.8      | 80.3 | 73.2 | 90.8      | 84.1 | 77.2 | 93.2      | 86.6 | 79.7 |
|                                                |                 | 42.2                              | 52.3 | 62.2 | 43.0      | 53.9 | 65.5 | 46.5      | 59.6 | 71.6 | 50.1      | 66.4 | 78.7 |
|                                                |                 | 5.48                              | 5.33 | 5.21 | 5.69      | 5.50 | 5.32 | 5.59      | 5.44 | 5.29 | 5.66      | 5.51 | 5.35 |
| 85                                             | TC<br>SHC<br>kW | 84.1                              | 77.4 | 71.0 | 84.0      | 77.2 | 69.5 | 87.8      | 81.2 | 74.5 | 90.1      | 83.5 | 77.3 |
|                                                |                 | 41.4                              | 51.3 | 61.1 | 41.7      | 53.1 | 64.0 | 45.5      | 58.6 | 70.3 | 49.4      | 65.4 | 76.7 |
|                                                |                 | 6.17                              | 6.00 | 5.85 | 6.21      | 6.04 | 5.83 | 6.27      | 6.11 | 5.94 | 6.35      | 6.19 | 6.02 |
| 95                                             | TC<br>SHC<br>kW | 81.6                              | 74.7 | 68.5 | 81.0      | 73.5 | 66.3 | 84.8      | 78.2 | 71.8 | 87.0      | 80.4 | 74.8 |
|                                                |                 | 40.6                              | 50.3 | 60.0 | 40.8      | 51.8 | 62.8 | 44.6      | 57.6 | 69.1 | 48.7      | 64.5 | 74.7 |
|                                                |                 | 6.86                              | 6.67 | 6.49 | 6.78      | 6.54 | 6.33 | 6.95      | 6.77 | 6.59 | 7.03      | 6.86 | 6.69 |
| 105                                            | TC<br>SHC<br>kW | 78.4                              | 71.8 | 65.6 | 76.8      | 69.7 | 62.5 | 81.6      | 74.9 | 68.9 | 83.3      | 76.9 | 72.1 |
|                                                |                 | 39.4                              | 49.2 | 58.7 | 39.4      | 50.3 | 61.1 | 43.5      | 56.4 | 67.4 | 47.4      | 63.1 | 72.0 |
|                                                |                 | 7.60                              | 7.39 | 7.20 | 7.30      | 7.05 | 6.80 | 7.72      | 7.50 | 7.31 | 7.77      | 7.59 | 7.41 |
| 115                                            | TC<br>SHC<br>kW | 75.1                              | 68.7 | 62.5 | 72.5      | 65.5 | 58.7 | 78.0      | 71.5 | 66.1 | 79.5      | 73.3 | 69.3 |
|                                                |                 | 38.1                              | 47.9 | 57.2 | 37.9      | 48.7 | 58.7 | 42.3      | 55.1 | 65.5 | 46.3      | 61.6 | 69.2 |
|                                                |                 | 8.36                              | 8.14 | 7.93 | 7.81      | 7.53 | 7.27 | 8.49      | 8.25 | 8.06 | 8.55      | 8.33 | 8.18 |

| 580F073 (6 TONS)                               |     |                                   |      |      |           |      |      |           |      |      |           |      |      |
|------------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|                                                |     | 1800/0.06                         |      |      | 2100/0.07 |      |      | 2400/0.09 |      |      | 3000/0.11 |      |      |
|                                                |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                                |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                             | TC  | 81.3                              | 77.8 | 71.3 | 82.7      | 78.7 | 72.9 | 84.2      | 79.7 | 74.6 | 85.3      | 82.5 | 76.7 |
|                                                | SHC | 38.2                              | 51.3 | 61.6 | 40.2      | 54.2 | 65.9 | 42.3      | 57.1 | 70.2 | 43.7      | 64   | 76.4 |
|                                                | kW  | 4.69                              | 4.63 | 4.52 | 4.73      | 4.65 | 4.56 | 4.77      | 4.67 | 4.6  | 4.8       | 4.75 | 4.63 |
| 85                                             | TC  | 78.8                              | 75.6 | 69   | 81.1      | 77.1 | 70.7 | 83.3      | 78.6 | 72.3 | 85        | 80.5 | 75   |
|                                                | SHC | 37.7                              | 50.4 | 60.5 | 40        | 53.9 | 64.9 | 42.2      | 57.5 | 69.2 | 44.3      | 63.6 | 74.9 |
|                                                | kW  | 5.21                              | 5.16 | 5.05 | 5.27      | 5.2  | 5.09 | 5.34      | 5.24 | 5.13 | 5.39      | 5.29 | 5.17 |
| 95                                             | TC  | 77.1                              | 73.3 | 66.9 | 79.2      | 74.8 | 68.5 | 81.3      | 76.2 | 70.1 | 82        | 78   | 73.3 |
|                                                | SHC | 37                                | 49.9 | 59.7 | 39.4      | 53.3 | 64   | 41.8      | 56.8 | 68.3 | 43.5      | 63.4 | 73.2 |
|                                                | kW  | 5.8                               | 5.78 | 5.65 | 5.87      | 5.81 | 5.7  | 5.94      | 5.85 | 5.74 | 5.95      | 5.88 | 5.8  |
| 105                                            | TC  | 75.4                              | 70.7 | 62.9 | 76.6      | 72.1 | 64.8 | 77.9      | 73.4 | 66.7 | 79.7      | 74.9 | 70.9 |
|                                                | SHC | 36.7                              | 48.7 | 58.2 | 38.6      | 52.3 | 62.2 | 40.6      | 55.9 | 66.3 | 43        | 62.4 | 70.9 |
|                                                | kW  | 6.49                              | 6.45 | 6.26 | 6.53      | 6.48 | 6.32 | 6.56      | 6.51 | 6.38 | 6.61      | 6.53 | 6.46 |
| 115                                            | TC  | 72.1                              | 67.9 | 59   | 73.6      | 69   | 61.1 | 75.2      | 70.1 | 63.3 | 76.7      | 71.9 | 68.1 |
|                                                | SHC | 35.3                              | 47.5 | 57.2 | 37.6      | 51.2 | 60.2 | 39.9      | 54.8 | 63.3 | 42.2      | 61.5 | 68.1 |
|                                                | kW  | 7.2                               | 7.17 | 6.94 | 7.25      | 7.18 | 7.01 | 7.29      | 7.2  | 7.08 | 7.35      | 7.26 | 7.15 |

| 580F048 (4 TONS)                               |                 |                                   |      |      |           |      |      |           |      |      |  |
|------------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|------|------|--|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |  |
|                                                |                 | 1200/0.12                         |      |      | 1600/0.15 |      |      | 2000/0.18 |      |      |  |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |  |
|                                                |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |  |
| 75                                             | TC<br>SHC<br>kW | 57.9                              | 53.1 | 48.3 | 60.4      | 55.9 | 51.3 | 62.2      | 57.3 | 52.9 |  |
|                                                |                 | 27.2                              | 33.3 | 39.2 | 29.4      | 37.2 | 44.8 | 31.4      | 40.3 | 49.1 |  |
|                                                |                 | 4.07                              | 3.93 | 3.79 | 4.17      | 4.03 | 3.90 | 4.24      | 4.08 | 3.96 |  |
| 85                                             | TC<br>SHC<br>kW | 55.7                              | 50.8 | 45.3 | 57.7      | 53.4 | 48.5 | 59.4      | 55.0 | 50.2 |  |
|                                                |                 | 26.4                              | 32.5 | 37.8 | 28.4      | 36.7 | 43.6 | 30.5      | 40.3 | 47.9 |  |
|                                                |                 | 4.40                              | 4.24 | 4.08 | 4.47      | 4.35 | 4.20 | 4.54      | 4.42 | 4.25 |  |
| 95                                             | TC<br>SHC<br>kW | 52.9                              | 48.1 | 42.5 | 55.2      | 50.5 | 45.7 | 56.7      | 52.0 | 47.4 |  |
|                                                |                 | 25.5                              | 31.5 | 36.4 | 27.6      | 35.6 | 42.2 | 29.7      | 39.2 | 46.7 |  |
|                                                |                 | 4.70                              | 4.54 | 4.36 | 4.78      | 4.63 | 4.47 | 4.87      | 4.70 | 4.56 |  |
| 105                                            | TC<br>SHC<br>kW | 50.1                              | 45.3 | 39.8 | 52.3      | 47.6 | 42.8 | 53.6      | 48.9 | 44.9 |  |
|                                                |                 | 24.4                              | 30.3 | 35.1 | 26.7      | 34.5 | 40.7 | 28.8      | 38.1 | 44.6 |  |
|                                                |                 | 5.00                              | 4.81 | 4.62 | 5.10      | 4.91 | 4.73 | 5.17      | 4.99 | 4.84 |  |
| 115                                            | TC<br>SHC<br>kW | 47.3                              | 42.6 | 37.2 | 49.3      | 44.6 | 40.0 | 50.5      | 45.9 | 42.4 |  |
|                                                |                 | 23.4                              | 29.2 | 33.7 | 25.9      | 33.3 | 39.3 | 27.8      | 37.1 | 42.4 |  |
|                                                |                 | 5.30                              | 5.07 | 4.88 | 5.42      | 5.19 | 4.99 | 5.48      | 5.28 | 5.12 |  |

Standard Ratings

### LEGEND

- BF — Bypass Factor
- Edb — Entering Dry-Bulb
- Ewb — Entering Wet-Bulb
- kW — Compressor Motor Power Input
- Ldb — Leaving Dry-Bulb
- Lwb — Leaving Wet-Bulb
- SHC — Sensible Heat Capacity (1000 Btu/h) Gross
- TC — Total Capacity (1000 Btu/h) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{db} = t_{edb} - \frac{\text{sensible capacity (Btu/h)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h}_{lwb}\text{)}$$

$$h_{lwb} = h_{edb} - \frac{\text{total capacity (Btu/h)}}{4.5 \times \text{cfm}}$$

Where:  $h_{edb}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

## PERFORMANCE DATA (cont)

## COOLING CAPACITIES (cont)

| 580F090 (7 1/2 TONS)                           |     |                                   |      |      |           |      |      |           |      |      |           |       |      |
|------------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|-------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |       |      |
|                                                |     | 2250/0.07                         |      |      | 2800/0.09 |      |      | 3000/0.10 |      |      | 3750/0.12 |       |      |
|                                                |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |       |      |
|                                                |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67    | 62   |
| 75                                             | TC  | 102.8                             | 94.8 | 86.2 | 105.8     | 98.2 | 90.0 | 106.4     | 99.0 | 90.8 | 109.2     | 101.6 | 93.6 |
|                                                | SHC | 49.4                              | 61.8 | 73.2 | 52.6      | 67.8 | 81.6 | 53.6      | 69.8 | 84.0 | 58.2      | 77.4  | 92.2 |
|                                                | kW  | 7.14                              | 6.82 | 6.50 | 7.28      | 6.98 | 6.68 | 7.32      | 7.04 | 6.72 | 7.46      | 7.18  | 6.86 |
| 85                                             | TC  | 98.2                              | 90.2 | 81.6 | 101.8     | 93.6 | 85.2 | 102.6     | 94.4 | 86.0 | 104.6     | 96.8  | 89.6 |
|                                                | SHC | 48.0                              | 60.2 | 71.2 | 51.6      | 66.4 | 79.6 | 52.8      | 68.6 | 82.0 | 56.8      | 76.0  | 89.4 |
|                                                | kW  | 7.66                              | 7.34 | 7.00 | 7.82      | 7.50 | 7.18 | 7.86      | 7.54 | 7.22 | 7.98      | 7.68  | 7.40 |
| 95                                             | TC  | 93.8                              | 85.2 | 76.6 | 97.0      | 88.4 | 80.0 | 97.6      | 89.0 | 81.2 | 99.4      | 91.2  | 85.2 |
|                                                | SHC | 46.4                              | 58.2 | 68.8 | 50.2      | 64.6 | 77.2 | 51.4      | 66.8 | 79.0 | 55.6      | 74.4  | 85.2 |
|                                                | kW  | 8.18                              | 7.84 | 7.48 | 8.36      | 8.00 | 7.64 | 8.40      | 8.04 | 7.70 | 8.50      | 8.16  | 7.92 |
| 105                                            | TC  | 88.4                              | 79.8 | 70.8 | 91.0      | 82.8 | 74.6 | 91.6      | 83.4 | 76.0 | 93.8      | 85.4  | 80.6 |
|                                                | SHC | 44.6                              | 56.2 | 66.0 | 48.2      | 62.6 | 74.2 | 49.4      | 64.8 | 75.6 | 54.2      | 72.4  | 80.6 |
|                                                | kW  | 8.68                              | 8.30 | 7.98 | 8.80      | 8.46 | 8.14 | 8.86      | 8.50 | 8.20 | 8.98      | 8.64  | 8.42 |
| 115                                            | TC  | 82.8                              | 73.8 | 66.0 | 85.2      | 76.8 | 69.6 | 85.6      | 77.4 | 71.0 | 87.6      | 79.4  | 76.0 |
|                                                | SHC | 42.6                              | 53.8 | 63.2 | 46.4      | 60.4 | 69.6 | 47.8      | 62.6 | 71.0 | 52.8      | 70.4  | 75.8 |
|                                                | kW  | 9.16                              | 8.78 | 8.42 | 9.30      | 8.92 | 8.64 | 9.34      | 8.96 | 8.72 | 9.48      | 9.10  | 8.94 |

| 580F091 (7 1/2 TONS)                           |                 |                                   |      |           |       |       |           |       |       |           |       |       |      |
|------------------------------------------------|-----------------|-----------------------------------|------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |           |       |       |           |       |       |           |       |       |      |
|                                                |                 | 2250/0.10                         |      | 2800/0.11 |       |       | 3000/0.11 |       |       | 3750/0.14 |       |       |      |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |           |       |       |           |       |       |           |       |       |      |
|                                                |                 | 72                                | 67   | 62        | 72    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |      |
| 75                                             | TC<br>SHC<br>kW | 105.8                             | 97.6 | 88.7      | 108.9 | 101.1 | 92.6      | 109.5 | 101.9 | 93.5      | 112.4 | 104.6 | 96.4 |
|                                                |                 | 50.9                              | 63.6 | 75.4      | 54.1  | 69.8  | 84.0      | 55.2  | 71.9  | 86.5      | 59.9  | 79.7  | 94.9 |
|                                                |                 | 6.34                              | 6.05 | 5.77      | 6.46  | 6.19  | 5.93      | 6.50  | 6.25  | 5.96      | 6.62  | 6.37  | 6.09 |
| 85                                             | TC<br>SHC<br>kW | 101.1                             | 92.9 | 84.0      | 104.8 | 96.4  | 87.7      | 105.6 | 97.2  | 88.5      | 107.7 | 99.6  | 92.2 |
|                                                |                 | 49.4                              | 62.0 | 73.3      | 53.1  | 68.4  | 81.9      | 54.4  | 70.6  | 84.4      | 58.5  | 78.2  | 92.0 |
|                                                |                 | 6.80                              | 6.51 | 6.21      | 6.94  | 6.66  | 6.37      | 6.98  | 6.69  | 6.41      | 7.08  | 6.82  | 6.57 |
| 95                                             | TC<br>SHC<br>kW | 96.6                              | 87.7 | 78.9      | 99.9  | 91.0  | 82.4      | 100.5 | 91.6  | 83.6      | 102.3 | 93.9  | 87.7 |
|                                                |                 | 47.8                              | 59.9 | 70.8      | 51.7  | 66.5  | 79.5      | 52.9  | 68.8  | 81.3      | 57.2  | 76.6  | 87.7 |
|                                                |                 | 7.26                              | 6.96 | 6.64      | 7.42  | 7.10  | 6.78      | 7.46  | 7.14  | 6.83      | 7.54  | 7.24  | 7.03 |
| 105                                            | TC<br>SHC<br>kW | 91.0                              | 82.1 | 72.9      | 93.7  | 85.2  | 76.8      | 94.3  | 85.9  | 78.2      | 96.6  | 87.9  | 83.0 |
|                                                |                 | 45.9                              | 57.9 | 67.9      | 49.6  | 64.4  | 76.4      | 50.9  | 66.7  | 77.8      | 55.8  | 74.5  | 83.0 |
|                                                |                 | 7.70                              | 7.37 | 7.08      | 7.81  | 7.51  | 7.22      | 7.86  | 7.54  | 7.28      | 7.97  | 7.67  | 7.47 |
| 115                                            | TC<br>SHC<br>kW | 85.2                              | 76.0 | 67.9      | 87.7  | 79.1  | 71.6      | 88.1  | 79.7  | 73.1      | 90.2  | 81.7  | 78.2 |
|                                                |                 | 43.9                              | 55.4 | 65.1      | 47.8  | 62.2  | 71.6      | 49.2  | 64.4  | 73.1      | 54.4  | 72.5  | 78.0 |
|                                                |                 | 8.13                              | 7.79 | 7.47      | 8.25  | 7.92  | 7.67      | 8.29  | 7.95  | 7.74      | 8.41  | 8.08  | 7.93 |

| 580F103 (8½ TONS)                              |                 |                                  |       |       |           |       |       |           |       |       |           |       |       |
|------------------------------------------------|-----------------|----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF |       |       |           |       |       |           |       |       |           |       |       |
|                                                |                 | 2550/0.08                        |       |       | 3000/0.09 |       |       | 3400/0.11 |       |       | 4250/0.13 |       |       |
|                                                |                 | Air Entering Evaporator — Ewb    |       |       |           |       |       |           |       |       |           |       |       |
|                                                |                 | 72                               | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                             | TC<br>SHC<br>kW | 117.7                            | 104.1 | 93.4  | 121.3     | 107.5 | 97.2  | 122.9     | 109.0 | 98.7  | 124.4     | 111.1 | 101.8 |
|                                                |                 | 55.7                             | 64.7  | 76.6  | 59.3      | 70.6  | 85.0  | 61.3      | 74.7  | 91.4  | 66.8      | 82.1  | 99.7  |
|                                                |                 | 6.42                             | 6.34  | 6.26  | 6.46      | 6.38  | 6.30  | 6.47      | 6.39  | 6.33  | 6.50      | 6.41  | 6.35  |
| 85                                             | TC<br>SHC<br>kW | 113.8                            | 100.4 | 89.2  | 117.9     | 103.8 | 93.4  | 119.6     | 105.3 | 94.7  | 122.1     | 107.5 | 97.2  |
|                                                |                 | 54.3                             | 63.3  | 75.0  | 58.0      | 69.4  | 83.8  | 60.4      | 73.4  | 89.1  | 65.2      | 81.7  | 97.0  |
|                                                |                 | 7.35                             | 7.26  | 7.17  | 7.41      | 7.31  | 7.24  | 7.43      | 7.33  | 7.24  | 7.46      | 7.37  | 7.28  |
| 95                                             | TC<br>SHC<br>kW | 109.6                            | 96.2  | 85.3  | 113.3     | 99.7  | 89.2  | 115.4     | 101.1 | 90.3  | 118.3     | 103.2 | 93.1  |
|                                                |                 | 52.9                             | 61.9  | 73.1  | 56.5      | 67.9  | 81.7  | 59.1      | 71.9  | 87.3  | 64.0      | 80.3  | 93.1  |
|                                                |                 | 8.37                             | 8.27  | 8.16  | 8.42      | 8.33  | 8.24  | 8.46      | 8.34  | 8.22  | 8.51      | 8.40  | 8.31  |
| 105                                            | TC<br>SHC<br>kW | 105.6                            | 92.1  | 81.3  | 108.8     | 95.2  | 84.6  | 110.4     | 96.4  | 86.3  | 113.2     | 98.4  | 89.1  |
|                                                |                 | 51.4                             | 60.4  | 71.6  | 55.2      | 66.4  | 80.0  | 57.5      | 70.3  | 85.3  | 62.5      | 78.3  | 89.1  |
|                                                |                 | 9.49                             | 9.37  | 9.27  | 9.55      | 9.44  | 9.34  | 9.57      | 9.45  | 9.35  | 9.61      | 9.49  | 9.41  |
| 115                                            | TC<br>SHC<br>kW | 100.4                            | 87.9  | 76.8  | 103.1     | 90.4  | 80.3  | 105.1     | 91.7  | 82.1  | 107.6     | 93.5  | 85.0  |
|                                                |                 | 49.4                             | 58.6  | 69.6  | 52.9      | 64.7  | 78.3  | 55.8      | 68.5  | 81.9  | 60.6      | 76.6  | 85.0  |
|                                                |                 | 10.63                            | 10.56 | 10.46 | 10.70     | 10.62 | 10.55 | 10.74     | 10.62 | 10.54 | 10.80     | 10.68 | 10.58 |
| 125                                            | TC<br>SHC<br>kW | 95.8                             | 83.0  | 72.0  | 98.5      | 85.5  | 74.9  | 99.8      | 86.6  | 77.5  | 101.4     | 88.2  | 80.7  |
|                                                |                 | 48.0                             | 56.8  | 67.5  | 51.6      | 62.9  | 74.9  | 54.0      | 66.9  | 77.5  | 58.2      | 74.6  | 80.7  |
|                                                |                 | 11.97                            | 11.83 | 11.61 | 12.02     | 11.89 | 11.73 | 12.05     | 11.92 | 11.80 | 12.09     | 11.97 | 11.86 |

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES (cont)

580F036-151

| 580F120 (10 TONS)                              |     |                                   |       |       |            |       |       |           |       |       |
|------------------------------------------------|-----|-----------------------------------|-------|-------|------------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |       |            |       |       |           |       |       |
|                                                |     | 3000/0.095                        |       |       | 4000/0.125 |       |       | 5000/0.15 |       |       |
|                                                |     | Air Entering Evaporator — Ewb (F) |       |       |            |       |       |           |       |       |
|                                                |     | 72                                | 67    | 62    | 72         | 67    | 62    | 72        | 67    | 62    |
| 75                                             | TC  | 135.8                             | 124.8 | 112.0 | 142.4      | 130.6 | 119.8 | 146.5     | 134.2 | 123.7 |
|                                                | SHC | 66.8                              | 82.6  | 97.4  | 73.2       | 93.4  | 112.7 | 79.7      | 104.4 | 123.1 |
|                                                | kW  | 9.76                              | 9.41  | 9.10  | 10.00      | 9.61  | 9.27  | 10.17     | 9.75  | 9.41  |
| 85                                             | TC  | 130.0                             | 119.6 | 104.0 | 136.0      | 125.0 | 114.5 | 140.0     | 127.9 | 118.8 |
|                                                | SHC | 64.3                              | 80.5  | 93.8  | 71.1       | 91.7  | 110.2 | 77.5      | 101.8 | 118.7 |
|                                                | kW  | 10.41                             | 10.07 | 9.74  | 10.67      | 10.28 | 9.94  | 10.84     | 10.41 | 10.09 |
| 95                                             | TC  | 124.1                             | 113.7 | 96.7  | 129.5      | 118.9 | 106.9 | 132.8     | 122.0 | 114.1 |
|                                                | SHC | 62.2                              | 78.4  | 90.0  | 69.1       | 89.8  | 105.9 | 74.9      | 100.1 | 114.0 |
|                                                | kW  | 11.13                             | 10.78 | 10.40 | 11.38      | 10.99 | 10.63 | 11.52     | 11.14 | 10.83 |
| 105                                            | TC  | 118.1                             | 104.6 | 87.9  | 122.7      | 111.8 | 98.5  | 126.0     | 115.1 | 108.0 |
|                                                | SHC | 60.4                              | 74.9  | 85.2  | 66.9       | 87.7  | 98.5  | 73.1      | 98.3  | 108.0 |
|                                                | kW  | 11.93                             | 11.52 | 11.10 | 12.13      | 11.74 | 11.41 | 12.27     | 11.89 | 11.65 |
| 115                                            | TC  | 115.0                             | 98.0  | 84.2  | 120.0      | 103.8 | 93.4  | 122.6     | 109.8 | 102.8 |
|                                                | SHC | 59.4                              | 72.4  | 83.4  | 66.4       | 84.8  | 93.4  | 72.8      | 96.9  | 102.8 |
|                                                | kW  | 12.26                             | 11.82 | 11.40 | 12.48      | 12.06 | 11.78 | 12.60     | 12.20 | 12.00 |

| 580F121 (10 TONS)                              |     |                                   |       |       |            |       |       |           |       |       |
|------------------------------------------------|-----|-----------------------------------|-------|-------|------------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |       |            |       |       |           |       |       |
|                                                |     | 3000/0.095                        |       |       | 4000/0.125 |       |       | 5000/0.15 |       |       |
|                                                |     | Air Entering Evaporator — Ewb (F) |       |       |            |       |       |           |       |       |
|                                                |     | 72                                | 67    | 62    | 72         | 67    | 62    | 72        | 67    | 62    |
| 75                                             | TC  | 138.2                             | 127.0 | 114.0 | 145.0      | 132.9 | 122.0 | 149.1     | 136.6 | 125.9 |
|                                                | SHC | 68.0                              | 84.1  | 99.1  | 74.5       | 95.1  | 114.7 | 81.1      | 106.3 | 125.3 |
|                                                | kW  | 8.37                              | 8.07  | 7.80  | 8.57       | 8.24  | 7.95  | 8.72      | 8.36  | 8.07  |
| 85                                             | TC  | 132.3                             | 121.7 | 105.9 | 138.4      | 127.2 | 116.6 | 142.5     | 130.2 | 120.9 |
|                                                | SHC | 65.5                              | 81.9  | 95.5  | 72.4       | 93.3  | 112.2 | 78.9      | 103.6 | 120.8 |
|                                                | kW  | 8.92                              | 8.63  | 8.35  | 9.15       | 8.81  | 8.52  | 9.29      | 8.92  | 8.65  |
| 95                                             | TC  | 126.3                             | 115.7 | 98.4  | 131.8      | 121.0 | 108.8 | 135.2     | 124.2 | 116.1 |
|                                                | SHC | 63.3                              | 79.8  | 91.6  | 70.3       | 91.4  | 107.8 | 76.2      | 101.9 | 116.0 |
|                                                | kW  | 9.54                              | 9.24  | 8.91  | 9.75       | 9.42  | 9.11  | 9.87      | 9.55  | 9.28  |
| 105                                            | TC  | 120.2                             | 106.5 | 89.5  | 124.9      | 113.8 | 100.3 | 128.3     | 117.2 | 109.9 |
|                                                | SHC | 61.5                              | 76.2  | 86.7  | 68.1       | 89.3  | 100.3 | 74.4      | 100.1 | 109.9 |
|                                                | kW  | 10.23                             | 9.87  | 9.51  | 10.40      | 10.06 | 9.78  | 10.52     | 10.19 | 9.99  |
| 115                                            | TC  | 117.1                             | 99.8  | 85.7  | 122.2      | 105.7 | 95.1  | 124.8     | 111.8 | 104.6 |
|                                                | SHC | 60.5                              | 73.7  | 84.9  | 67.6       | 86.3  | 95.1  | 74.1      | 98.6  | 104.6 |
|                                                | kW  | 10.51                             | 10.13 | 9.77  | 10.70      | 10.34 | 10.10 | 10.80     | 10.46 | 10.29 |

| 580F150 (12 1/2 TONS)                          |     |                                   |       |       |           |       |       |           |       |       |           |       |       |
|------------------------------------------------|-----|-----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |       |           |       |       |           |       |       |           |       |       |
|                                                |     | 3750/0.08                         |       |       | 4500/0.09 |       |       | 5000/0.10 |       |       | 6250/0.12 |       |       |
|                                                |     | Air Entering Evaporator — Ewb (F) |       |       |           |       |       |           |       |       |           |       |       |
|                                                |     | 72                                | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                             | TC  | 175.6                             | 162.2 | 149.2 | 181.0     | 167.5 | 154.2 | 182.9     | 170.2 | 156.4 | 187.2     | 174.7 | 161.8 |
|                                                | SHC | 85.7                              | 107.3 | 128.0 | 91.4      | 116.2 | 140.3 | 94.2      | 122.2 | 146.5 | 102.1     | 135.3 | 160.7 |
|                                                | kW  | 11.16                             | 10.85 | 10.57 | 11.32     | 11.00 | 10.69 | 11.37     | 11.07 | 10.73 | 11.49     | 11.19 | 10.87 |
| 85                                             | TC  | 169.3                             | 155.7 | 140.6 | 174.2     | 160.7 | 147.0 | 176.9     | 163.0 | 149.7 | 181.5     | 167.3 | 155.8 |
|                                                | SHC | 83.9                              | 104.8 | 124.0 | 89.6      | 113.9 | 137.0 | 92.7      | 119.7 | 143.6 | 100.9     | 133.4 | 155.6 |
|                                                | kW  | 12.15                             | 11.78 | 11.42 | 12.31     | 11.94 | 11.58 | 12.39     | 12.01 | 11.63 | 12.53     | 12.14 | 11.82 |
| 95                                             | TC  | 161.9                             | 148.9 | 132.0 | 166.8     | 153.5 | 139.1 | 169.5     | 155.7 | 142.8 | 173.2     | 159.5 | 149.6 |
|                                                | SHC | 81.4                              | 102.0 | 119.8 | 87.0      | 111.1 | 133.2 | 90.7      | 117.3 | 140.2 | 98.3      | 130.8 | 149.6 |
|                                                | kW  | 13.12                             | 12.72 | 12.28 | 13.30     | 12.89 | 12.46 | 13.40     | 12.97 | 12.56 | 13.54     | 13.11 | 12.78 |
| 105                                            | TC  | 154.9                             | 141.3 | 123.0 | 158.8     | 145.4 | 130.2 | 160.9     | 147.6 | 135.0 | 165.3     | 151.2 | 143.2 |
|                                                | SHC | 79.0                              | 99.2  | 115.5 | 84.5      | 108.2 | 128.1 | 87.8      | 114.3 | 134.9 | 96.6      | 127.8 | 143.1 |
|                                                | kW  | 14.16                             | 13.66 | 13.17 | 14.31     | 13.82 | 13.35 | 14.38     | 13.91 | 13.48 | 14.58     | 14.07 | 13.77 |
| 115                                            | TC  | 146.2                             | 132.2 | 113.1 | 150.5     | 137.0 | 122.4 | 152.3     | 139.4 | 127.8 | 155.2     | 142.7 | 136.0 |
|                                                | SHC | 76.1                              | 95.7  | 110.3 | 81.7      | 105.2 | 122.3 | 85.0      | 111.6 | 127.7 | 92.9      | 125.0 | 135.8 |
|                                                | kW  | 15.09                             | 14.57 | 14.07 | 15.30     | 14.76 | 14.25 | 15.37     | 14.87 | 14.43 | 15.49     | 15.02 | 14.73 |

Standard Ratings

### LEGEND

- BF — Bypass Factor
- Edb — Entering Dry-Bulb
- Ewb — Entering Wet-Bulb
- kW — Compressor Motor Power Input
- Ldb — Leaving Dry-Bulb
- Lwb — Leaving Wet-Bulb
- SHC — Sensible Heat Capacity (1000 Btu/h) Gross
- TC — Total Capacity (1000 Btu/h) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btu/h)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btu/h)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |
|                          |                                |      |      |      |      |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

## PERFORMANCE DATA (cont)

## COOLING CAPACITIES (cont)

| 580F151 (12½ TONS)                             |     |                                  |       |       |           |       |       |           |       |       |           |       |       |
|------------------------------------------------|-----|----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF |       |       |           |       |       |           |       |       |           |       |       |
|                                                |     | 3750/0.08                        |       |       | 4300/0.09 |       |       | 5000/0.11 |       |       | 6250/0.13 |       |       |
|                                                |     | Air Entering Evaporator — Ewb    |       |       |           |       |       |           |       |       |           |       |       |
|                                                |     | 72                               | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                             | TC  | 164.6                            | 152.0 | 139.9 | 167.3     | 155.3 | 142.6 | 170.9     | 158.2 | 146.2 | 173.9     | 162.0 | 151.0 |
|                                                | SHC | 81.3                             | 101.9 | 121.7 | 84.5      | 108.1 | 130.0 | 88.9      | 115.9 | 139.8 | 96.7      | 128.7 | 150.8 |
|                                                | kW  | 10.24                            | 9.96  | 9.71  | 10.31     | 10.05 | 9.78  | 10.42     | 10.12 | 9.84  | 10.50     | 10.23 | 9.95  |
| 85                                             | TC  | 159.9                            | 147.1 | 133.6 | 162.6     | 150.2 | 137.4 | 166.3     | 153.0 | 141.3 | 169.5     | 156.8 | 147.1 |
|                                                | SHC | 79.7                             | 99.9  | 119.1 | 83.1      | 106.3 | 128.0 | 88.3      | 114.1 | 137.7 | 96.1      | 127.4 | 146.9 |
|                                                | kW  | 11.38                            | 11.05 | 10.82 | 11.45     | 11.14 | 10.87 | 11.58     | 11.20 | 10.97 | 11.66     | 11.32 | 11.08 |
| 95                                             | TC  | 154.2                            | 141.5 | 124.4 | 157.2     | 144.6 | 129.3 | 159.9     | 147.6 | 134.5 | 164.0     | 150.9 | 142.3 |
|                                                | SHC | 77.9                             | 98.0  | 114.8 | 81.8      | 104.5 | 124.1 | 86.3      | 112.5 | 133.8 | 94.4      | 125.8 | 142.2 |
|                                                | kW  | 12.59                            | 12.26 | 11.95 | 12.68     | 12.36 | 12.04 | 12.75     | 12.44 | 12.15 | 12.88     | 12.54 | 12.31 |
| 105                                            | TC  | 147.8                            | 134.2 | 114.0 | 150.7     | 137.2 | 119.1 | 153.3     | 140.4 | 136.4 | 156.4     | 143.7 | 136.7 |
|                                                | SHC | 75.4                             | 95.2  | 109.5 | 79.6      | 101.9 | 118.2 | 84.4      | 110.6 | 126.5 | 92.2      | 124.0 | 136.6 |
|                                                | kW  | 13.84                            | 13.48 | 13.12 | 13.92     | 13.58 | 13.24 | 14.01     | 13.69 | 13.37 | 14.06     | 13.80 | 13.58 |
| 115                                            | TC  | 139.7                            | 120.4 | 102.8 | 142.1     | 124.2 | 109.1 | 145.5     | 127.5 | 117.1 | 148.4     | 133.2 | 128.1 |
|                                                | SHC | 72.5                             | 89.8  | 102.6 | 76.7      | 97.0  | 109.1 | 82.1      | 105.7 | 116.6 | 90.4      | 120.1 | 128.0 |
|                                                | kW  | 15.03                            | 14.70 | 14.34 | 15.12     | 14.80 | 15.24 | 15.24     | 14.90 | 14.65 | 15.35     | 15.04 | 14.86 |
| 125                                            | TC  | 130.5                            | 107.0 | 92.5  | 132.8     | 109.7 | 135.5 | 135.5     | 112.7 | 105.0 | 138.2     | 121.1 | 118.3 |
|                                                | SHC | 69.8                             | 84.4  | 92.4  | 73.7      | 91.5  | 99.2  | 79.0      | 99.9  | 104.9 | 87.7      | 114.6 | 118.3 |
|                                                | kW  | 16.32                            | 15.91 | 15.67 | 16.43     | 16.00 | 15.79 | 16.52     | 16.11 | 15.97 | 16.59     | 16.21 | 16.10 |

Standard Ratings

## LEGEND

|     |   |                                          |
|-----|---|------------------------------------------|
| BF  | — | Bypass Factor                            |
| Edb | — | Entering Dry-Bulb                        |
| Ewb | — | Entering Wet-Bulb                        |
| kW  | — | Compressor Motor Power Input             |
| Ldb | — | Leaving Dry-Bulb                         |
| Lwb | — | Leaving Wet-Bulb                         |
| SHC | — | Sensible Heat Capacity (1000 Btuh) Gross |
| TC  | — | Total Capacity (1000 Btuh) Gross         |

## NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

# PERFORMANCE DATA (cont) FAN PERFORMANCE — VERTICAL DISCHARGE UNITS

| 580F036 (3 TONS) — STANDARD MOTOR (DIRECT DRIVE) |           |      |       |                 |      |       |            |      |       |                 |      |       |
|--------------------------------------------------|-----------|------|-------|-----------------|------|-------|------------|------|-------|-----------------|------|-------|
| Airflow<br>(Cfm)                                 | Low Speed |      |       |                 |      |       | High Speed |      |       |                 |      |       |
|                                                  | 208 V     |      |       | 230, 460, 575 V |      |       | 208 V      |      |       | 230, 460, 575 V |      |       |
|                                                  | ESP       | Bhp  | Watts | ESP             | Bhp  | Watts | ESP        | Bhp  | Watts | ESP             | Bhp  | Watts |
| 900                                              | 0.49      | 0.21 | 253   | 0.50            | 0.23 | 277   | 0.51       | 0.26 | 307   | 0.55            | 0.31 | 363   |
| 1000                                             | 0.42      | 0.23 | 270   | 0.43            | 0.25 | 292   | 0.43       | 0.27 | 321   | 0.51            | 0.32 | 374   |
| 1100                                             | 0.37      | 0.24 | 287   | 0.38            | 0.26 | 307   | 0.39       | 0.28 | 335   | 0.46            | 0.33 | 385   |
| 1200                                             | 0.33      | 0.26 | 304   | 0.33            | 0.27 | 323   | 0.34       | 0.29 | 349   | 0.40            | 0.34 | 397   |
| 1300                                             | 0.27      | 0.27 | 321   | 0.28            | 0.29 | 338   | 0.28       | 0.31 | 364   | 0.34            | 0.34 | 408   |
| 1400                                             | 0.20      | 0.29 | 338   | 0.23            | 0.30 | 354   | 0.25       | 0.32 | 378   | —               | —    | —     |
| 1500                                             | 0.16      | 0.30 | 355   | 0.18            | 0.31 | 369   | 0.20       | 0.33 | 392   | —               | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
ESP — External Static Pressure (in. wg)

See page 70 for general fan performance notes.

| 580F036 (3 TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                 | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                              | 643                               | 0.15 | 152   | 768  | 0.22 | 222   | 870  | 0.30 | 296   | 958  | 0.37 | 373   | 1037 | 0.46 | 454   |
| 1000                                             | 683                               | 0.19 | 191   | 804  | 0.27 | 268   | 904  | 0.35 | 348   | 991  | 0.43 | 430   | 1069 | 0.52 | 517   |
| 1100                                             | 725                               | 0.24 | 237   | 842  | 0.32 | 321   | 939  | 0.41 | 407   | 1025 | 0.50 | 496   | 1102 | 0.59 | 588   |
| 1200                                             | 767                               | 0.29 | 291   | 880  | 0.38 | 382   | 976  | 0.48 | 474   | 1060 | 0.57 | 570   | 1136 | 0.67 | 668   |
| 1300                                             | 811                               | 0.35 | 352   | 920  | 0.45 | 451   | 1013 | 0.55 | 550   | 1095 | 0.66 | 652   | 1170 | 0.76 | 756   |
| 1400                                             | 855                               | 0.43 | 423   | 960  | 0.53 | 529   | 1051 | 0.64 | 636   | 1132 | 0.75 | 744   | 1205 | 0.86 | 855   |
| 1500                                             | 900                               | 0.51 | 504   | 1002 | 0.62 | 617   | 1090 | 0.74 | 731   | 1169 | 0.85 | 846   | 1242 | 0.97 | 963   |

| 580F036 (3 TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                         | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                                     | 1110                              | 0.54 | 538   | 1177 | 0.63 | 627   | 1239 | 0.72 | 718   | 1298 | 0.82 | 813   | 1355 | 0.92 | 911   |
| 1000                                                    | 1141                              | 0.61 | 607   | 1207 | 0.70 | 700   | 1269 | 0.80 | 796   | 1328 | 0.90 | 895   | 1384 | 1.00 | 998   |
| 1100                                                    | 1173                              | 0.69 | 683   | 1238 | 0.79 | 781   | 1300 | 0.89 | 883   | 1358 | 0.99 | 987   | 1414 | 1.10 | 1094  |
| 1200                                                    | 1205                              | 0.77 | 768   | 1270 | 0.88 | 872   | 1332 | 0.98 | 979   | 1389 | 1.09 | 1088  | —    | —    | —     |
| 1300                                                    | 1239                              | 0.87 | 863   | 1303 | 0.98 | 972   | 1364 | 1.09 | 1084  | —    | —    | —     | —    | —    | —     |
| 1400                                                    | 1273                              | 0.97 | 967   | 1337 | 1.09 | 1082  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1500                                                    | 1309                              | 1.09 | 1082  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.
3. See page 70 for general fan performance notes.

\*Motor drive range: 685 to 1045 rpm. All other rpms require a field-supplied drive.

| 580F036 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                   | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                    | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                    | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                                | 643                               | 0.15 | 152   | 768  | 0.22 | 222   | 870  | 0.30 | 296   | 958  | 0.37 | 373   | 1037 | 0.46 | 454   |
| 1000                                               | 683                               | 0.19 | 191   | 804  | 0.27 | 268   | 904  | 0.35 | 348   | 991  | 0.43 | 430   | 1069 | 0.52 | 517   |
| 1100                                               | 725                               | 0.24 | 237   | 842  | 0.32 | 321   | 939  | 0.41 | 407   | 1025 | 0.50 | 496   | 1102 | 0.59 | 588   |
| 1200                                               | 767                               | 0.29 | 291   | 880  | 0.38 | 382   | 976  | 0.48 | 474   | 1060 | 0.57 | 570   | 1136 | 0.67 | 668   |
| 1300                                               | 811                               | 0.35 | 352   | 920  | 0.45 | 451   | 1013 | 0.55 | 550   | 1095 | 0.66 | 652   | 1170 | 0.76 | 756   |
| 1400                                               | 855                               | 0.43 | 423   | 960  | 0.53 | 529   | 1051 | 0.64 | 636   | 1132 | 0.75 | 744   | 1205 | 0.86 | 855   |
| 1500                                               | 900                               | 0.51 | 504   | 1002 | 0.62 | 617   | 1090 | 0.74 | 731   | 1169 | 0.85 | 846   | 1242 | 0.97 | 963   |

| 580F036 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                          | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                           | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                           | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                                       | 1110                              | 0.54 | 538   | 1177 | 0.63 | 627   | 1239 | 0.72 | 718   | 1298 | 0.82 | 813   | 1355 | 0.92 | 911   |
| 1000                                                      | 1141                              | 0.61 | 607   | 1207 | 0.70 | 700   | 1269 | 0.80 | 796   | 1328 | 0.90 | 895   | 1384 | 1.00 | 998   |
| 1100                                                      | 1173                              | 0.69 | 683   | 1238 | 0.79 | 781   | 1300 | 0.89 | 883   | 1358 | 0.99 | 987   | 1414 | 1.10 | 1094  |
| 1200                                                      | 1205                              | 0.77 | 768   | 1270 | 0.88 | 872   | 1332 | 0.98 | 979   | 1389 | 1.09 | 1088  | 1444 | 1.21 | 1200  |
| 1300                                                      | 1239                              | 0.87 | 863   | 1303 | 0.98 | 972   | 1364 | 1.09 | 1084  | 1421 | 1.21 | 1199  | 1475 | 1.32 | 1316  |
| 1400                                                      | 1273                              | 0.97 | 967   | 1337 | 1.09 | 1082  | 1397 | 1.21 | 1200  | 1453 | 1.33 | 1320  | 1507 | 1.45 | 1443  |
| 1500                                                      | 1309                              | 1.09 | 1082  | 1371 | 1.21 | 1204  | 1430 | 1.33 | 1327  | 1486 | 1.46 | 1453  | 1540 | 1.59 | 1581  |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

## 580F048 (4 TONS) — STANDARD MOTOR (DIRECT DRIVE)

| Airflow<br>(Cfm) | Low Speed |      |       |                 |      |       | High Speed |      |       |                 |      |       |
|------------------|-----------|------|-------|-----------------|------|-------|------------|------|-------|-----------------|------|-------|
|                  | 208 V     |      |       | 230, 460, 575 V |      |       | 208 V      |      |       | 230, 460, 575 V |      |       |
|                  | ESP       | Bhp  | Watts | ESP             | Bhp  | Watts | ESP        | Bhp  | Watts | ESP             | Bhp  | Watts |
| 1200             | 0.68      | 0.41 | 458   | 0.74            | 0.45 | 506   | 0.74       | 0.51 | 572   | 0.85            | 0.56 | 632   |
| 1300             | 0.61      | 0.42 | 471   | 0.67            | 0.46 | 521   | 0.66       | 0.52 | 589   | 0.78            | 0.58 | 651   |
| 1400             | 0.53      | 0.45 | 503   | 0.59            | 0.49 | 556   | 0.59       | 0.54 | 616   | 0.70            | 0.60 | 681   |
| 1500             | 0.45      | 0.47 | 536   | 0.51            | 0.52 | 593   | 0.52       | 0.56 | 631   | 0.63            | 0.62 | 698   |
| 1600             | 0.36      | 0.49 | 557   | 0.42            | 0.54 | 616   | 0.45       | 0.58 | 654   | 0.56            | 0.64 | 723   |
| 1700             | 0.26      | 0.52 | 584   | 0.32            | 0.57 | 646   | 0.37       | 0.60 | 678   | 0.48            | 0.66 | 750   |
| 1800             | 0.15      | 0.54 | 610   | 0.22            | 0.60 | 674   | 0.30       | 0.62 | 698   | 0.41            | 0.68 | 772   |
| 1900             | 0.04      | 0.56 | 629   | 0.11            | 0.62 | 696   | 0.23       | 0.64 | 720   | 0.34            | 0.70 | 796   |
| 2000             | —         | —    | —     | —               | —    | —     | 0.16       | 0.66 | 744   | 0.26            | 0.73 | 823   |

## LEGEND

See page 70 for general fan performance notes.

Bhp — Brake Horsepower Input to Fan  
 ESP — External Static Pressure (in. wg)

## 580F048 (4 TONS) — ALTERNATE MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 666                               | 0.26 | 257   | 778  | 0.37 | 367   | 871  | 0.47 | 471   | 952  | 0.57 | 572   |
| 1300             | 701                               | 0.31 | 306   | 810  | 0.43 | 426   | 901  | 0.54 | 540   | 981  | 0.65 | 651   |
| 1400             | 737                               | 0.36 | 361   | 842  | 0.49 | 491   | 931  | 0.62 | 616   | 1010 | 0.74 | 738   |
| 1500             | 773                               | 0.42 | 422   | 875  | 0.57 | 564   | 963  | 0.70 | 699   | 1040 | 0.84 | 831   |
| 1600             | 810                               | 0.49 | 491   | 909  | 0.65 | 643   | 994  | 0.79 | 790   | 1070 | 0.94 | 932   |
| 1700             | 847                               | 0.57 | 567   | 943  | 0.73 | 730   | 1027 | 0.89 | 888   | 1101 | 1.05 | 1040  |
| 1800             | 885                               | 0.66 | 652   | 978  | 0.83 | 826   | 1060 | 1.00 | 994   | 1133 | 1.16 | 1157  |
| 1900             | 923                               | 0.75 | 745   | 1014 | 0.94 | 930   | 1093 | 1.11 | 1109  | —    | —    | —     |
| 2000             | 962                               | 0.85 | 847   | 1049 | 1.05 | 1043  | —    | —    | —     | —    | —    | —     |

## 580F048 (4 TONS) — ALTERNATE MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 1093                              | 0.77 | 767   | 1155 | 0.87 | 861   | 1213 | 0.96 | 955   | 1268 | 1.05 | 1047  |
| 1300             | 1119                              | 0.87 | 866   | 1181 | 0.98 | 970   | 1239 | 1.08 | 1073  | 1294 | 1.18 | 1175  |
| 1400             | 1147                              | 0.98 | 972   | 1208 | 1.09 | 1086  | —    | —    | —     | —    | —    | —     |
| 1500             | 1175                              | 1.09 | 1086  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1600             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

## NOTES:

Bhp — Brake Horsepower Input to Fan  
 Watts — Input Watts to Motor

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.
3. See page 70 for general fan performance notes.

\*Motor drive range: 770 to 1175 rpm. All other rpms require a field-supplied drive.

## 580F048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 666                               | 0.26 | 257   | 778  | 0.37 | 367   | 871  | 0.47 | 471   | 952  | 0.57 | 572   |
| 1300             | 701                               | 0.31 | 306   | 810  | 0.43 | 426   | 901  | 0.54 | 540   | 981  | 0.65 | 651   |
| 1400             | 737                               | 0.36 | 361   | 842  | 0.49 | 491   | 931  | 0.62 | 616   | 1010 | 0.74 | 738   |
| 1500             | 773                               | 0.42 | 422   | 875  | 0.57 | 564   | 963  | 0.70 | 699   | 1040 | 0.84 | 831   |
| 1600             | 810                               | 0.49 | 491   | 909  | 0.65 | 643   | 994  | 0.79 | 790   | 1070 | 0.94 | 932   |
| 1700             | 847                               | 0.57 | 567   | 943  | 0.73 | 730   | 1027 | 0.89 | 888   | 1101 | 1.05 | 1040  |
| 1800             | 885                               | 0.66 | 652   | 978  | 0.83 | 826   | 1060 | 1.00 | 994   | 1133 | 1.16 | 1157  |
| 1900             | 923                               | 0.75 | 745   | 1014 | 0.94 | 930   | 1093 | 1.11 | 1109  | 1165 | 1.29 | 1283  |
| 2000             | 962                               | 0.85 | 847   | 1049 | 1.05 | 1043  | 1127 | 1.24 | 1233  | 1198 | 1.42 | 1417  |

## 580F048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 1093                              | 0.77 | 767   | 1155 | 0.87 | 861   | 1213 | 0.96 | 955   | 1268 | 1.05 | 1047  |
| 1300             | 1119                              | 0.87 | 866   | 1181 | 0.98 | 970   | 1239 | 1.08 | 1073  | 1294 | 1.18 | 1175  |
| 1400             | 1147                              | 0.98 | 972   | 1208 | 1.09 | 1086  | 1265 | 1.21 | 1199  | 1320 | 1.32 | 1310  |
| 1500             | 1175                              | 1.09 | 1086  | 1235 | 1.22 | 1209  | 1292 | 1.34 | 1332  | 1346 | 1.46 | 1452  |
| 1600             | 1204                              | 1.21 | 1207  | 1263 | 1.35 | 1340  | 1320 | 1.48 | 1472  | 1373 | 1.61 | 1603  |
| 1700             | 1233                              | 1.34 | 1336  | 1292 | 1.49 | 1480  | 1348 | 1.63 | 1622  | 1401 | 1.77 | 1762  |
| 1800             | 1262                              | 1.48 | 1473  | 1321 | 1.64 | 1627  | 1376 | 1.79 | 1779  | 1428 | 1.94 | 1930  |
| 1900             | 1293                              | 1.63 | 1620  | 1350 | 1.79 | 1784  | 1405 | 1.96 | 1946  | 1457 | 2.12 | 2106  |
| 2000             | 1323                              | 1.79 | 1776  | 1380 | 1.96 | 1950  | 1434 | 2.13 | 2123  | 1486 | 2.31 | 2293  |

## LEGEND

## NOTES:

Bhp — Brake Horsepower Input to Fan  
 Watts — Input Watts to Motor

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F060 (5 TONS) — STANDARD MOTOR (DIRECT DRIVE) |           |      |       |               |      |       |              |      |       |               |      |       |            |      |       |               |      |       |
|--------------------------------------------------|-----------|------|-------|---------------|------|-------|--------------|------|-------|---------------|------|-------|------------|------|-------|---------------|------|-------|
| Airflow<br>(Cfm)                                 | Low Speed |      |       |               |      |       | Medium Speed |      |       |               |      |       | High Speed |      |       |               |      |       |
|                                                  | 208 V     |      |       | 230,460,575 V |      |       | 208 V        |      |       | 230,460,575 V |      |       | 208 V      |      |       | 230,460,575 V |      |       |
|                                                  | ESP       | Bhp  | Watts | ESP           | Bhp  | Watts | ESP          | Bhp  | Watts | ESP           | Bhp  | Watts | ESP        | Bhp  | Watts | ESP           | Bhp  | Watts |
| 1500                                             | 0.69      | 0.67 | 750   | 1.01          | 0.71 | 791   | 1.00         | 0.70 | 782   | 1.20          | 0.76 | 845   | 1.22       | 0.79 | 875   | 1.28          | 0.85 | 949   |
| 1600                                             | 0.49      | 0.70 | 780   | 0.85          | 0.74 | 824   | 0.85         | 0.74 | 821   | 1.06          | 0.79 | 883   | 1.09       | 0.82 | 913   | 1.17          | 0.89 | 988   |
| 1700                                             | 0.29      | 0.73 | 810   | 0.70          | 0.77 | 857   | 0.70         | 0.77 | 861   | 0.93          | 0.83 | 921   | 0.97       | 0.85 | 950   | 1.06          | 0.92 | 1027  |
| 1800                                             | 0.09      | 0.75 | 839   | 0.54          | 0.80 | 891   | 0.55         | 0.81 | 900   | 0.80          | 0.86 | 959   | 0.84       | 0.89 | 988   | 0.95          | 0.96 | 1066  |
| 1900                                             | —         | —    | —     | 0.39          | 0.83 | 924   | 0.40         | 0.84 | 940   | 0.67          | 0.90 | 997   | 0.72       | 0.92 | 1025  | 0.84          | 0.99 | 1105  |
| 2000                                             | —         | —    | —     | 0.23          | 0.86 | 957   | 0.25         | 0.88 | 979   | 0.54          | 0.93 | 1035  | 0.59       | 0.95 | 1063  | 0.73          | 1.03 | 1144  |
| 2100                                             | —         | —    | —     | 0.08          | 0.89 | 990   | 0.10         | 0.91 | 1018  | 0.41          | 0.96 | 1073  | 0.46       | 0.99 | 1101  | 0.62          | 1.06 | 1183  |
| 2200                                             | —         | —    | —     | —             | —    | —     | —            | —    | —     | 0.28          | 1.00 | 1111  | 0.34       | 1.02 | 1138  | 0.51          | 1.10 | 1222  |
| 2300                                             | —         | —    | —     | —             | —    | —     | —            | —    | —     | 0.15          | 1.03 | 1149  | 0.21       | 1.06 | 1176  | 0.40          | 1.13 | 1261  |
| 2400                                             | —         | —    | —     | —             | —    | —     | —            | —    | —     | 0.02          | 1.07 | 1187  | 0.09       | 1.09 | 1213  | 0.29          | 1.17 | 1300  |
| 2500                                             | —         | —    | —     | —             | —    | —     | —            | —    | —     | —             | —    | —     | —          | —    | —     | 0.18          | 1.20 | 1340  |

## LEGEND

See page 70 for general fan performance notes.

Bhp — Brake Horsepower Input to Fan  
 ESP — External Static Pressure (in. wg)

| 580F060 (5 TONS) — SINGLE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |  |
|----------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|--|
| Airflow<br>(Cfm)                                               | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |  |
|                                                                | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |  |
|                                                                | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |  |
| 1500                                                           | 802                               | 0.42 | 370   | 912  | 0.55 | 489   | 1006 | 0.70 | 624   | 1088 | 0.87 | 773   | 1163 | 1.05 | 935   |  |
| 1600                                                           | 840                               | 0.49 | 432   | 947  | 0.63 | 557   | 1038 | 0.78 | 696   | 1119 | 0.95 | 848   | 1193 | 1.14 | 1013  |  |
| 1700                                                           | 878                               | 0.57 | 502   | 982  | 0.71 | 632   | 1071 | 0.87 | 776   | 1151 | 1.05 | 932   | 1224 | 1.24 | 1100  |  |
| 1800                                                           | 917                               | 0.65 | 581   | 1017 | 0.81 | 716   | 1105 | 0.97 | 864   | 1183 | 1.15 | 1024  | —    | —    | —     |  |
| 1900                                                           | 956                               | 0.75 | 668   | 1053 | 0.91 | 808   | 1139 | 1.08 | 961   | 1216 | 1.27 | 1126  | —    | —    | —     |  |
| 2000                                                           | 995                               | 0.86 | 764   | 1090 | 1.02 | 910   | 1173 | 1.20 | 1067  | —    | —    | —     | —    | —    | —     |  |
| 2100                                                           | 1035                              | 0.98 | 869   | 1127 | 1.15 | 1021  | —    | —    | —     | —    | —    | —     | —    | —    | —     |  |
| 2200                                                           | 1075                              | 1.11 | 984   | 1164 | 1.29 | 1141  | —    | —    | —     | —    | —    | —     | —    | —    | —     |  |
| 2300                                                           | 1115                              | 1.25 | 1110  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |  |
| 2400                                                           | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |  |
| 2500                                                           | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |  |

| 580F060 (5 TONS) — SINGLE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |     |       |     |     |       |     |     |       |     |     |       |  |
|-----------------------------------------------------------------------|-----------------------------------|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|--|
| Airflow<br>(Cfm)<br>(Cfm)                                             | External Static Pressure (in. wg) |      |       |     |     |       |     |     |       |     |     |       |     |     |       |  |
|                                                                       | 1.2                               |      |       | 1.4 |     |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |  |
|                                                                       | Rpm                               | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |  |
| 1500                                                                  | 1232                              | 1.25 | 1109  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 1600                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 1700                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 1800                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 1900                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 2000                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 2100                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 2200                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 2300                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 2400                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |
| 2500                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |  |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
 Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.30.
3. See page 70 for general fan performance notes.

\*Motor drive range: 900 to 1300 rpm. All other rpms require a field-supplied drive.



## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F060 (5 TONS) — THREE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                          | 802                               | 0.42 | 370   | 912  | 0.55 | 489   | 1006 | 0.70 | 624   | 1088 | 0.87 | 773   | 1163 | 1.05 | 935   |
| 1600                                                          | 840                               | 0.49 | 432   | 947  | 0.63 | 557   | 1038 | 0.78 | 696   | 1119 | 0.95 | 848   | 1193 | 1.14 | 1013  |
| 1700                                                          | 878                               | 0.57 | 502   | 982  | 0.71 | 632   | 1071 | 0.87 | 776   | 1151 | 1.05 | 932   | 1224 | 1.24 | 1100  |
| 1800                                                          | 917                               | 0.65 | 581   | 1017 | 0.81 | 716   | 1105 | 0.97 | 864   | 1183 | 1.15 | 1024  | 1255 | 1.35 | 1197  |
| 1900                                                          | 956                               | 0.75 | 668   | 1053 | 0.91 | 808   | 1139 | 1.08 | 961   | 1216 | 1.27 | 1126  | 1287 | 1.47 | 1302  |
| 2000                                                          | 995                               | 0.86 | 764   | 1090 | 1.02 | 910   | 1173 | 1.20 | 1067  | 1249 | 1.39 | 1236  | 1319 | 1.59 | 1416  |
| 2100                                                          | 1035                              | 0.98 | 869   | 1127 | 1.15 | 1021  | 1209 | 1.33 | 1183  | 1283 | 1.53 | 1357  | 1351 | 1.74 | 1541  |
| 2200                                                          | 1075                              | 1.11 | 984   | 1164 | 1.29 | 1141  | 1244 | 1.47 | 1309  | 1317 | 1.68 | 1488  | 1385 | 1.89 | 1676  |
| 2300                                                          | 1115                              | 1.25 | 1110  | 1202 | 1.43 | 1273  | 1280 | 1.63 | 1446  | 1352 | 1.83 | 1629  | 1418 | 2.05 | 1822  |
| 2400                                                          | 1155                              | 1.40 | 1246  | 1240 | 1.59 | 1415  | 1316 | 1.79 | 1594  | 1387 | 2.01 | 1782  | 1452 | 2.23 | 1980  |
| 2500                                                          | 1196                              | 1.57 | 1394  | 1278 | 1.77 | 1569  | 1353 | 1.97 | 1753  | 1422 | 2.19 | 1946  | —    | —    | —     |

| 580F060 (5 TONS) — THREE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                                     | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                                      | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                                      | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                                 | 1232                              | 1.25 | 1109  | 1297 | 1.46 | 1295  | 1357 | 1.68 | 1492  | 1415 | 1.91 | 1700  | 1469 | 2.16 | 1917  |
| 1600                                                                 | 1262                              | 1.34 | 1190  | 1325 | 1.55 | 1379  | 1385 | 1.78 | 1579  | 1442 | 2.01 | 1788  | 1496 | 2.26 | 2009  |
| 1700                                                                 | 1291                              | 1.44 | 1281  | 1354 | 1.66 | 1472  | 1414 | 1.89 | 1674  | 1470 | 2.12 | 1887  | 1524 | 2.37 | 2109  |
| 1800                                                                 | 1322                              | 1.55 | 1380  | 1384 | 1.77 | 1575  | 1443 | 2.00 | 1779  | 1499 | 2.25 | 1994  | —    | —    | —     |
| 1900                                                                 | 1352                              | 1.68 | 1489  | 1414 | 1.90 | 1687  | 1472 | 2.13 | 1894  | 1528 | 2.38 | 2112  | —    | —    | —     |
| 2000                                                                 | 1384                              | 1.81 | 1607  | 1445 | 2.04 | 1808  | 1502 | 2.27 | 2019  | —    | —    | —     | —    | —    | —     |
| 2100                                                                 | 1415                              | 1.95 | 1736  | 1476 | 2.18 | 1940  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2200                                                                 | 1448                              | 2.11 | 1875  | 1507 | 2.35 | 2083  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300                                                                 | 1480                              | 2.28 | 2025  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400                                                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 900 to 1300 rpm. All other rpms require a field-supplied drive.

| 580F060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                   | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                    | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                    | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                               | 802                               | 0.42 | 370   | 912  | 0.55 | 489   | 1006 | 0.70 | 624   | 1088 | 0.87 | 773   | 1163 | 1.05 | 935   |
| 1600                                               | 840                               | 0.49 | 432   | 947  | 0.63 | 557   | 1038 | 0.78 | 696   | 1119 | 0.95 | 848   | 1193 | 1.14 | 1013  |
| 1700                                               | 878                               | 0.57 | 502   | 982  | 0.71 | 632   | 1071 | 0.87 | 776   | 1151 | 1.05 | 932   | 1224 | 1.24 | 1100  |
| 1800                                               | 917                               | 0.65 | 581   | 1017 | 0.81 | 716   | 1105 | 0.97 | 864   | 1183 | 1.15 | 1024  | 1255 | 1.35 | 1197  |
| 1900                                               | 956                               | 0.75 | 668   | 1053 | 0.91 | 808   | 1139 | 1.08 | 961   | 1216 | 1.27 | 1126  | 1287 | 1.47 | 1302  |
| 2000                                               | 995                               | 0.86 | 764   | 1090 | 1.02 | 910   | 1173 | 1.20 | 1067  | 1249 | 1.39 | 1236  | 1319 | 1.59 | 1416  |
| 2100                                               | 1035                              | 0.98 | 869   | 1127 | 1.15 | 1021  | 1209 | 1.33 | 1183  | 1283 | 1.53 | 1357  | 1351 | 1.74 | 1541  |
| 2200                                               | 1075                              | 1.11 | 984   | 1164 | 1.29 | 1141  | 1244 | 1.47 | 1309  | 1317 | 1.68 | 1488  | 1385 | 1.89 | 1676  |
| 2300                                               | 1115                              | 1.25 | 1110  | 1202 | 1.43 | 1273  | 1280 | 1.63 | 1446  | 1352 | 1.83 | 1629  | 1418 | 2.05 | 1822  |
| 2400                                               | 1155                              | 1.40 | 1246  | 1240 | 1.59 | 1415  | 1316 | 1.79 | 1594  | 1387 | 2.01 | 1782  | 1452 | 2.23 | 1980  |
| 2500                                               | 1196                              | 1.57 | 1394  | 1278 | 1.77 | 1569  | 1353 | 1.97 | 1753  | 1422 | 2.19 | 1946  | 1486 | 2.42 | 2149  |

| 580F060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                          | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                           | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                           | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                      | 1232                              | 1.25 | 1109  | 1297 | 1.46 | 1295  | 1357 | 1.68 | 1492  | 1415 | 1.91 | 1700  | 1469 | 2.16 | 1917  |
| 1600                                                      | 1262                              | 1.34 | 1190  | 1325 | 1.55 | 1379  | 1385 | 1.78 | 1579  | 1442 | 2.01 | 1788  | 1496 | 2.26 | 2009  |
| 1700                                                      | 1291                              | 1.44 | 1281  | 1354 | 1.66 | 1472  | 1414 | 1.89 | 1674  | 1470 | 2.12 | 1887  | 1524 | 2.37 | 2109  |
| 1800                                                      | 1322                              | 1.55 | 1380  | 1384 | 1.77 | 1575  | 1443 | 2.00 | 1779  | 1499 | 2.25 | 1994  | 1552 | 2.50 | 2219  |
| 1900                                                      | 1352                              | 1.68 | 1489  | 1414 | 1.90 | 1687  | 1472 | 2.13 | 1894  | 1528 | 2.38 | 2112  | 1580 | 2.63 | 2339  |
| 2000                                                      | 1384                              | 1.81 | 1607  | 1445 | 2.04 | 1808  | 1502 | 2.27 | 2019  | 1557 | 2.52 | 2240  | 1609 | 2.78 | 2470  |
| 2100                                                      | 1415                              | 1.95 | 1736  | 1476 | 2.18 | 1940  | 1533 | 2.43 | 2155  | 1587 | 2.68 | 2378  | —    | —    | —     |
| 2200                                                      | 1448                              | 2.11 | 1875  | 1507 | 2.35 | 2083  | 1563 | 2.59 | 2301  | 1617 | 2.85 | 2528  | —    | —    | —     |
| 2300                                                      | 1480                              | 2.28 | 2025  | 1539 | 2.52 | 2237  | 1595 | 2.77 | 2459  | —    | —    | —     | —    | —    | —     |
| 2400                                                      | 1513                              | 2.46 | 2187  | 1571 | 2.71 | 2403  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                      | 1547                              | 2.66 | 2360  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1300 to 1685 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F072,073 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                     | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                | 967                               | 0.65 | 579   | 1077 | 0.81 | 718   | 1172 | 0.96 | 856   | 1257 | 1.12 | 993   | 1334 | 1.27 | 1130  |
| 1900                                                | 1007                              | 0.75 | 663   | 1115 | 0.91 | 811   | 1208 | 1.08 | 957   | 1291 | 1.24 | 1101  | 1368 | 1.40 | 1246  |
| 2000                                                | 1048                              | 0.85 | 757   | 1153 | 1.03 | 913   | 1244 | 1.20 | 1066  | 1326 | 1.37 | 1219  | 1401 | 1.54 | 1371  |
| 2100                                                | 1090                              | 0.97 | 859   | 1191 | 1.15 | 1023  | 1281 | 1.33 | 1185  | 1361 | 1.51 | 1345  | 1435 | 1.69 | 1505  |
| 2200                                                | 1131                              | 1.09 | 970   | 1230 | 1.29 | 1143  | 1318 | 1.48 | 1313  | 1397 | 1.67 | 1481  | 1470 | 1.86 | 1649  |
| 2300                                                | 1173                              | 1.23 | 1091  | 1269 | 1.43 | 1273  | 1355 | 1.63 | 1451  | 1433 | 1.83 | 1627  | 1505 | 2.03 | 1803  |
| 2400                                                | 1215                              | 1.38 | 1223  | 1309 | 1.59 | 1413  | 1393 | 1.80 | 1600  | 1470 | 2.01 | 1784  | 1540 | 2.21 | 1967  |
| 2500                                                | 1258                              | 1.54 | 1365  | 1349 | 1.76 | 1564  | 1431 | 1.98 | 1759  | 1506 | 2.20 | 1951  | —    | —    | —     |
| 2600                                                | 1300                              | 1.71 | 1518  | 1389 | 1.94 | 1726  | 1470 | 2.17 | 1929  | 1544 | 2.40 | 2130  | —    | —    | —     |
| 2700                                                | 1343                              | 1.90 | 1683  | 1430 | 2.14 | 1899  | 1509 | 2.38 | 2111  | —    | —    | —     | —    | —    | —     |
| 2800                                                | 1386                              | 2.09 | 1860  | 1471 | 2.35 | 2085  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900                                                | 1429                              | 2.31 | 2050  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000                                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F072,073 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                       | 1406                              | 1.43 | 1268  | 1473 | 1.58 | 1407  | 1535 | 1.74 | 1548  | 1595 | 1.90 | 1690  | 1652 | 2.06 | 1833  |
| 1900                                                       | 1438                              | 1.57 | 1391  | 1504 | 1.73 | 1537  | 1567 | 1.90 | 1685  | 1626 | 2.06 | 1833  | 1682 | 2.23 | 1983  |
| 2000                                                       | 1471                              | 1.72 | 1523  | 1536 | 1.89 | 1677  | 1598 | 2.06 | 1831  | 1657 | 2.24 | 1986  | —    | —    | —     |
| 2100                                                       | 1504                              | 1.87 | 1665  | 1569 | 2.06 | 1825  | 1630 | 2.24 | 1986  | —    | —    | —     | —    | —    | —     |
| 2200                                                       | 1538                              | 2.04 | 1816  | 1602 | 2.23 | 1984  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300                                                       | 1572                              | 2.23 | 1978  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2600                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2700                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2800                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1070 to 1460 rpm. All other rpms require a field-supplied drive.

| 580F072,073 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                       | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                        | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                        | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                   | 967                               | 0.65 | 579   | 1077 | 0.81 | 718   | 1172 | 0.96 | 856   | 1257 | 1.12 | 993   | 1334 | 1.27 | 1130  |
| 1900                                                   | 1007                              | 0.75 | 663   | 1115 | 0.91 | 811   | 1208 | 1.08 | 957   | 1291 | 1.24 | 1101  | 1368 | 1.40 | 1246  |
| 2000                                                   | 1048                              | 0.85 | 757   | 1153 | 1.03 | 913   | 1244 | 1.20 | 1066  | 1326 | 1.37 | 1219  | 1401 | 1.54 | 1371  |
| 2100                                                   | 1090                              | 0.97 | 859   | 1191 | 1.15 | 1023  | 1281 | 1.33 | 1185  | 1361 | 1.51 | 1345  | 1435 | 1.69 | 1505  |
| 2200                                                   | 1131                              | 1.09 | 970   | 1230 | 1.29 | 1143  | 1318 | 1.48 | 1313  | 1397 | 1.67 | 1481  | 1470 | 1.86 | 1649  |
| 2300                                                   | 1173                              | 1.23 | 1091  | 1269 | 1.43 | 1273  | 1355 | 1.63 | 1451  | 1433 | 1.83 | 1627  | 1505 | 2.03 | 1803  |
| 2400                                                   | 1215                              | 1.38 | 1223  | 1309 | 1.59 | 1413  | 1393 | 1.80 | 1600  | 1470 | 2.01 | 1784  | 1540 | 2.21 | 1967  |
| 2500                                                   | 1258                              | 1.54 | 1365  | 1349 | 1.76 | 1564  | 1431 | 1.98 | 1759  | 1506 | 2.20 | 1951  | 1576 | 2.41 | 2142  |
| 2600                                                   | 1300                              | 1.71 | 1518  | 1389 | 1.94 | 1726  | 1470 | 2.17 | 1929  | 1544 | 2.40 | 2130  | 1613 | 2.62 | 2329  |
| 2700                                                   | 1343                              | 1.90 | 1683  | 1430 | 2.14 | 1899  | 1509 | 2.38 | 2111  | 1581 | 2.61 | 2320  | 1649 | 2.85 | 2527  |
| 2800                                                   | 1386                              | 2.09 | 1860  | 1471 | 2.35 | 2085  | 1548 | 2.60 | 2305  | 1619 | 2.84 | 2522  | —    | —    | —     |
| 2900                                                   | 1429                              | 2.31 | 2050  | 1512 | 2.57 | 2283  | 1588 | 2.83 | 2512  | —    | —    | —     | —    | —    | —     |
| 3000                                                   | 1473                              | 2.54 | 2252  | 1553 | 2.81 | 2494  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F072,073 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                          | 1406                              | 1.43 | 1268  | 1473 | 1.58 | 1407  | 1535 | 1.74 | 1548  | 1595 | 1.90 | 1690  | 1652 | 2.06 | 1833  |
| 1900                                                          | 1438                              | 1.57 | 1391  | 1504 | 1.73 | 1537  | 1567 | 1.90 | 1685  | 1626 | 2.06 | 1833  | 1682 | 2.23 | 1983  |
| 2000                                                          | 1471                              | 1.72 | 1523  | 1536 | 1.89 | 1677  | 1598 | 2.06 | 1831  | 1657 | 2.24 | 1986  | 1713 | 2.41 | 2142  |
| 2100                                                          | 1504                              | 1.87 | 1665  | 1569 | 2.06 | 1825  | 1630 | 2.24 | 1986  | 1688 | 2.42 | 2149  | 1744 | 2.60 | 2312  |
| 2200                                                          | 1538                              | 2.04 | 1816  | 1602 | 2.23 | 1984  | 1663 | 2.42 | 2152  | 1720 | 2.61 | 2321  | 1775 | 2.81 | 2491  |
| 2300                                                          | 1572                              | 2.23 | 1978  | 1635 | 2.42 | 2153  | 1695 | 2.62 | 2328  | 1753 | 2.82 | 2504  | —    | —    | —     |
| 2400                                                          | 1607                              | 2.42 | 2150  | 1669 | 2.63 | 2332  | 1729 | 2.83 | 2515  | —    | —    | —     | —    | —    | —     |
| 2500                                                          | 1642                              | 2.63 | 2333  | 1704 | 2.84 | 2523  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2600                                                          | 1677                              | 2.85 | 2527  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2700                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2800                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1300 to 1685 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F090,091 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |            |             |             |            |             |             |            |             |             |
|------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|------------|-------------|-------------|------------|-------------|-------------|------------|-------------|-------------|
| Airflow<br>(Cfm)                                     | External Static Pressure (in. wg) |      |       |     |      |       |            |             |             |            |             |             |            |             |             |
|                                                      | 0.2                               |      |       | 0.4 |      |       | 0.6        |             |             | 0.8        |             |             | 1.0        |             |             |
|                                                      | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm        | Bhp         | Watts       | Rpm        | Bhp         | Watts       | Rpm        | Bhp         | Watts       |
| 2250                                                 | 513                               | 0.54 | 505   | 595 | 0.76 | 713   | 665        | 1.01        | 940         | 728        | 1.27        | 1187        | 786        | 1.56        | 1453        |
| 2300                                                 | 521                               | 0.57 | 531   | 601 | 0.79 | 741   | 671        | 1.04        | 972         | 734        | 1.31        | 1222        | 791        | 1.60        | 1489        |
| 2400                                                 | 535                               | 0.63 | 584   | 615 | 0.86 | 802   | 684        | 1.11        | 1038        | 745        | 1.39        | 1293        | 802        | 1.68        | 1566        |
| 2500                                                 | 551                               | 0.69 | 642   | 628 | 0.93 | 866   | 696        | 1.19        | 1109        | 757        | 1.47        | 1369        | 813        | 1.77        | 1647        |
| 2550                                                 | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702        | 1.23        | 1146        | 763        | 1.51        | 1409        | 818        | 1.81        | 1689        |
| 2600                                                 | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709        | 1.27        | 1183        | 769        | 1.55        | 1450        | 824        | 1.86        | 1732        |
| 2700                                                 | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721        | 1.35        | 1263        | 781        | 1.65        | 1535        | 835        | 1.95        | 1823        |
| 2800                                                 | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734        | 1.44        | 1347        | 793        | 1.74        | 1625        | <b>847</b> | <b>2.06</b> | <b>1917</b> |
| 2900                                                 | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748        | 1.54        | 1436        | 805        | 1.84        | 1720        | <b>859</b> | <b>2.16</b> | <b>2019</b> |
| 3000                                                 | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761        | 1.64        | 1530        | 818        | 1.95        | 1820        | <b>871</b> | <b>2.28</b> | <b>2125</b> |
| 3100                                                 | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775        | 1.75        | 1630        | 831        | 2.06        | 1925        | <b>883</b> | <b>2.40</b> | <b>2235</b> |
| 3200                                                 | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788        | 1.86        | 1734        | <b>844</b> | <b>2.18</b> | <b>2036</b> | —          | —           | —           |
| 3300                                                 | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802        | 1.98        | 1845        | <b>857</b> | <b>2.31</b> | <b>2152</b> | —          | —           | —           |
| 3400                                                 | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816        | 2.10        | 1961        | —          | —           | —           | —          | —           | —           |
| 3500                                                 | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831        | 2.23        | 2082        | —          | —           | —           | —          | —           | —           |
| 3600                                                 | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | <b>845</b> | <b>2.37</b> | <b>2210</b> | —          | —           | —           | —          | —           | —           |
| 3700                                                 | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | —          | —           | —           | —          | —           | —           | —          | —           | —           |
| 3750                                                 | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | —          | —           | —           | —          | —           | —           | —          | —           | —           |

| 580F090,091 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |             |             |            |             |             |     |     |       |     |     |       |     |     |       |
|-------------------------------------------------------------|-----------------------------------|-------------|-------------|------------|-------------|-------------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                            | External Static Pressure (in. wg) |             |             |            |             |             |     |     |       |     |     |       |     |     |       |
|                                                             | 1.2                               |             |             | 1.4        |             |             | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                                                             | Rpm                               | Bhp         | Watts       | Rpm        | Bhp         | Watts       | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2250                                                        | 839                               | 1.86        | 1735        | <b>889</b> | <b>2.18</b> | <b>2032</b> | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2300                                                        | <b>844</b>                        | <b>1.90</b> | <b>1773</b> | <b>893</b> | <b>2.22</b> | <b>2073</b> | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2400                                                        | <b>854</b>                        | <b>1.99</b> | <b>1855</b> | <b>903</b> | <b>2.32</b> | <b>2159</b> | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2500                                                        | <b>865</b>                        | <b>2.08</b> | <b>1940</b> | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2550                                                        | <b>870</b>                        | <b>2.13</b> | <b>1985</b> | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2600                                                        | <b>875</b>                        | <b>2.18</b> | <b>2031</b> | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2700                                                        | <b>886</b>                        | <b>2.28</b> | <b>2126</b> | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2800                                                        | <b>897</b>                        | <b>2.39</b> | <b>2227</b> | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2900                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3000                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3100                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3200                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3300                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3400                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3500                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3600                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3700                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3750                                                        | —                                 | —           | —           | —          | —           | —           | —   | —   | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 590 to 840 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F090,091 (7½ TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|-------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                      | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                       | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                       | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250                                                  | 513                               | 0.54 | 505   | 595 | 0.76 | 713   | 665 | 1.01 | 940   | 728 | 1.27 | 1187  | 786 | 1.56 | 1453  |
| 2300                                                  | 521                               | 0.57 | 531   | 601 | 0.79 | 741   | 671 | 1.04 | 972   | 734 | 1.31 | 1222  | 791 | 1.60 | 1489  |
| 2400                                                  | 535                               | 0.63 | 584   | 615 | 0.86 | 802   | 684 | 1.11 | 1038  | 745 | 1.39 | 1293  | 802 | 1.68 | 1566  |
| 2500                                                  | 551                               | 0.69 | 642   | 628 | 0.93 | 866   | 696 | 1.19 | 1109  | 757 | 1.47 | 1369  | 813 | 1.77 | 1647  |
| 2550                                                  | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702 | 1.23 | 1146  | 763 | 1.51 | 1409  | 818 | 1.81 | 1689  |
| 2600                                                  | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709 | 1.27 | 1183  | 769 | 1.55 | 1450  | 824 | 1.86 | 1732  |
| 2700                                                  | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721 | 1.35 | 1263  | 781 | 1.65 | 1535  | 835 | 1.95 | 1823  |
| 2800                                                  | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734 | 1.44 | 1347  | 793 | 1.74 | 1625  | 847 | 2.06 | 1917  |
| 2900                                                  | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748 | 1.54 | 1436  | 805 | 1.84 | 1720  | 859 | 2.16 | 2019  |
| 3000                                                  | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761 | 1.64 | 1530  | 818 | 1.95 | 1820  | 871 | 2.28 | 2125  |
| 3100                                                  | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775 | 1.75 | 1630  | 831 | 2.06 | 1925  | 883 | 2.40 | 2235  |
| 3200                                                  | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788 | 1.86 | 1734  | 844 | 2.18 | 2036  | —   | —    | —     |
| 3300                                                  | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802 | 1.98 | 1845  | 857 | 2.31 | 2152  | —   | —    | —     |
| 3400                                                  | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816 | 2.10 | 1961  | —   | —    | —     | —   | —    | —     |
| 3500                                                  | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831 | 2.23 | 2082  | —   | —    | —     | —   | —    | —     |
| 3600                                                  | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | 845 | 2.37 | 2210  | —   | —    | —     | —   | —    | —     |
| 3700                                                  | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3750                                                  | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F090,091 (7½ TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|--------------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                             | External Static Pressure (in. wg) |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|                                                              | 1.2                               |      |       | 1.4 |      |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                                                              | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2250                                                         | 839                               | 1.86 | 1735  | 889 | 2.18 | 2032  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2300                                                         | 844                               | 1.90 | 1773  | 893 | 2.22 | 2073  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2400                                                         | 854                               | 1.99 | 1855  | 903 | 2.32 | 2159  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2500                                                         | 865                               | 2.08 | 1940  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2550                                                         | 870                               | 2.13 | 1985  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2600                                                         | 875                               | 2.18 | 2031  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2700                                                         | 886                               | 2.28 | 2126  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2800                                                         | 897                               | 2.39 | 2227  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2900                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3000                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3100                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3200                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3300                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3400                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3500                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3600                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3700                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3750                                                         | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

## 580F090,091 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250             | 513                               | 0.54 | 505   | 595 | 0.76 | 713   | 665 | 1.01 | 940   | 728 | 1.27 | 1187  | 786 | 1.56 | 1453  |
| 2300             | 521                               | 0.57 | 531   | 601 | 0.79 | 741   | 671 | 1.04 | 972   | 734 | 1.31 | 1222  | 791 | 1.60 | 1489  |
| 2400             | 535                               | 0.63 | 584   | 615 | 0.86 | 802   | 684 | 1.11 | 1038  | 745 | 1.39 | 1293  | 802 | 1.68 | 1566  |
| 2500             | 551                               | 0.69 | 642   | 628 | 0.93 | 866   | 696 | 1.19 | 1109  | 757 | 1.47 | 1369  | 813 | 1.77 | 1647  |
| 2550             | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702 | 1.23 | 1146  | 763 | 1.51 | 1409  | 818 | 1.81 | 1689  |
| 2600             | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709 | 1.27 | 1183  | 769 | 1.55 | 1450  | 824 | 1.86 | 1732  |
| 2700             | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721 | 1.35 | 1263  | 781 | 1.65 | 1535  | 835 | 1.95 | 1823  |
| 2800             | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734 | 1.44 | 1347  | 793 | 1.74 | 1625  | 847 | 2.06 | 1917  |
| 2900             | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748 | 1.54 | 1436  | 805 | 1.84 | 1720  | 859 | 2.16 | 2019  |
| 3000             | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761 | 1.64 | 1530  | 818 | 1.95 | 1820  | 871 | 2.28 | 2125  |
| 3100             | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775 | 1.75 | 1630  | 831 | 2.06 | 1925  | 883 | 2.40 | 2235  |
| 3200             | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788 | 1.86 | 1734  | 844 | 2.18 | 2036  | 895 | 2.52 | 2352  |
| 3300             | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802 | 1.98 | 1845  | 857 | 2.31 | 2152  | 908 | 2.65 | 2475  |
| 3400             | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816 | 2.10 | 1961  | 870 | 2.44 | 2275  | 920 | 2.79 | 2603  |
| 3500             | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831 | 2.23 | 2082  | 884 | 2.58 | 2402  | 933 | 2.93 | 2737  |
| 3600             | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | 845 | 2.37 | 2210  | 897 | 2.72 | 2537  | 946 | 3.09 | 2877  |
| 3700             | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | 860 | 2.51 | 2343  | 911 | 2.87 | 2677  | 959 | 3.24 | 3023  |
| 3750             | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | 867 | 2.59 | 2413  | 918 | 2.95 | 2750  | 966 | 3.32 | 3100  |

## 580F090,091 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |             |             |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|-------------|-------------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |             |             | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp         | Watts       | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2250             | <b>839</b>                        | <b>1.86</b> | <b>1735</b> | 889  | 2.18 | 2032  | 935  | 2.52 | 2345  | 980  | 2.87 | 2673  | 1022 | 3.23 | 3015  |
| 2300             | <b>844</b>                        | <b>1.90</b> | <b>1773</b> | 893  | 2.22 | 2073  | 940  | 2.56 | 2389  | 984  | 2.91 | 2718  | 1027 | 3.28 | 3062  |
| 2400             | <b>854</b>                        | <b>1.99</b> | <b>1855</b> | 903  | 2.32 | 2159  | 950  | 2.66 | 2478  | 993  | 3.02 | 2812  | 1035 | 3.39 | 3159  |
| 2500             | 865                               | 2.08        | 1940        | 913  | 2.41 | 2249  | 959  | 2.76 | 2573  | 1003 | 3.12 | 2911  | 1044 | 3.50 | 3261  |
| 2550             | 870                               | 2.13        | 1985        | 918  | 2.46 | 2296  | 964  | 2.81 | 2622  | 1008 | 3.18 | 2962  | 1049 | 3.55 | 3315  |
| 2600             | 875                               | 2.18        | 2031        | 923  | 2.51 | 2344  | 969  | 2.87 | 2673  | 1012 | 3.23 | 3014  | 1054 | 3.61 | 3370  |
| 2700             | 886                               | 2.28        | 2126        | 934  | 2.62 | 2445  | 979  | 2.98 | 2777  | 1022 | 3.35 | 3123  | —    | —    | —     |
| 2800             | 897                               | 2.39        | 2227        | 944  | 2.73 | 2550  | 989  | 3.10 | 2888  | 1032 | 3.47 | 3238  | —    | —    | —     |
| 2900             | 908                               | 2.50        | 2333        | 955  | 2.85 | 2661  | 1000 | 3.22 | 3003  | 1042 | 3.60 | 3358  | —    | —    | —     |
| 3000             | 920                               | 2.62        | 2443        | 966  | 2.98 | 2777  | 1010 | 3.35 | 3123  | —    | —    | —     | —    | —    | —     |
| 3100             | 931                               | 2.75        | 2560        | 977  | 3.11 | 2899  | 1021 | 3.49 | 3250  | —    | —    | —     | —    | —    | —     |
| 3200             | 943                               | 2.88        | 2682        | 989  | 3.25 | 3026  | 1032 | 3.63 | 3383  | —    | —    | —     | —    | —    | —     |
| 3300             | 955                               | 3.01        | 2810        | 1000 | 3.39 | 3159  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3400             | 967                               | 3.16        | 2945        | 1012 | 3.54 | 3299  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3500             | 980                               | 3.31        | 3084        | 1024 | 3.69 | 3445  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3600             | 992                               | 3.46        | 3230        | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700             | 1005                              | 3.63        | 3383        | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3750             | —                                 | —           | —           | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F103 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|--------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                 | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2550                                             | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702 | 1.23 | 1146  | 763 | 1.51 | 1409  | 818 | 1.81 | 1689  |
| 2600                                             | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709 | 1.27 | 1183  | 769 | 1.55 | 1450  | 824 | 1.86 | 1732  |
| 2700                                             | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721 | 1.35 | 1263  | 781 | 1.65 | 1535  | 835 | 1.95 | 1823  |
| 2800                                             | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734 | 1.44 | 1347  | 793 | 1.74 | 1625  | 847 | 2.06 | 1917  |
| 2900                                             | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748 | 1.54 | 1436  | 805 | 1.84 | 1720  | 859 | 2.16 | 2019  |
| 3000                                             | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761 | 1.64 | 1530  | 818 | 1.95 | 1820  | 871 | 2.28 | 2125  |
| 3100                                             | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775 | 1.75 | 1630  | 831 | 2.06 | 1925  | 883 | 2.40 | 2235  |
| 3200                                             | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788 | 1.86 | 1734  | 844 | 2.18 | 2036  | —   | —    | —     |
| 3300                                             | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802 | 1.98 | 1845  | 857 | 2.31 | 2152  | —   | —    | —     |
| 3400                                             | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816 | 2.10 | 1961  | —   | —    | —     | —   | —    | —     |
| 3500                                             | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831 | 2.23 | 2082  | —   | —    | —     | —   | —    | —     |
| 3600                                             | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | 845 | 2.37 | 2210  | —   | —    | —     | —   | —    | —     |
| 3700                                             | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3750                                             | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3800                                             | 761                               | 1.98 | 1842  | 820 | 2.31 | 2156  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3900                                             | 777                               | 2.12 | 1974  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4000                                             | 794                               | 2.27 | 2113  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4100                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4200                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4250                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F103 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |     |       |     |     |       |     |     |       |     |     |       |
|---------------------------------------------------------|-----------------------------------|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |     |     |       |     |     |       |     |     |       |     |     |       |
|                                                         | 1.2                               |      |       | 1.4 |     |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2550                                                    | 870                               | 2.13 | 1985  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2600                                                    | 875                               | 2.18 | 2031  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2700                                                    | 886                               | 2.28 | 2126  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2800                                                    | 897                               | 2.39 | 2227  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2900                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3000                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3100                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3200                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3300                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3400                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3500                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3600                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3700                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3750                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3800                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3900                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4000                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4100                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4200                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4250                                                    | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

## 580F103 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2550             | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702 | 1.23 | 1146  | 763 | 1.51 | 1409  | 818 | 1.81 | 1689  |
| 2600             | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709 | 1.27 | 1183  | 769 | 1.55 | 1450  | 824 | 1.86 | 1732  |
| 2700             | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721 | 1.35 | 1263  | 781 | 1.65 | 1535  | 835 | 1.95 | 1823  |
| 2800             | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734 | 1.44 | 1347  | 793 | 1.74 | 1625  | 847 | 2.06 | 1917  |
| 2900             | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748 | 1.54 | 1436  | 805 | 1.84 | 1720  | 859 | 2.16 | 2019  |
| 3000             | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761 | 1.64 | 1530  | 818 | 1.95 | 1820  | 871 | 2.28 | 2125  |
| 3100             | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775 | 1.75 | 1630  | 831 | 2.06 | 1925  | 883 | 2.40 | 2235  |
| 3200             | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788 | 1.86 | 1734  | 844 | 2.18 | 2036  | 895 | 2.52 | 2352  |
| 3300             | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802 | 1.98 | 1845  | 857 | 2.31 | 2152  | 908 | 2.65 | 2475  |
| 3400             | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816 | 2.10 | 1961  | 870 | 2.44 | 2275  | 920 | 2.79 | 2603  |
| 3500             | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831 | 2.23 | 2082  | 884 | 2.58 | 2402  | 933 | 2.93 | 2737  |
| 3600             | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | 845 | 2.37 | 2210  | 897 | 2.72 | 2537  | 946 | 3.09 | 2877  |
| 3700             | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | 860 | 2.51 | 2343  | 911 | 2.87 | 2677  | 959 | 3.24 | 3023  |
| 3750             | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | 867 | 2.59 | 2413  | 918 | 2.95 | 2750  | 966 | 3.32 | 3100  |
| 3800             | 761                               | 1.98 | 1842  | 820 | 2.31 | 2156  | 874 | 2.66 | 2484  | 925 | 3.03 | 2824  | 973 | 3.41 | 3177  |
| 3900             | 777                               | 2.12 | 1974  | 835 | 2.46 | 2296  | 889 | 2.82 | 2630  | 939 | 3.19 | 2977  | 986 | 3.58 | 3336  |
| 4000             | 794                               | 2.27 | 2113  | 851 | 2.62 | 2442  | 904 | 2.99 | 2784  | 953 | 3.36 | 3137  | —   | —    | —     |
| 4100             | 811                               | 2.42 | 2259  | 867 | 2.78 | 2595  | 919 | 3.16 | 2944  | 968 | 3.54 | 3304  | —   | —    | —     |
| 4200             | 828                               | 2.59 | 2412  | 883 | 2.95 | 2755  | 934 | 3.34 | 3110  | —   | —    | —     | —   | —    | —     |
| 4250             | 837                               | 2.67 | 2490  | 891 | 3.04 | 2838  | 942 | 3.43 | 3197  | —   | —    | —     | —   | —    | —     |

## 580F103 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2550             | 870                               | 2.13 | 1985  | 918  | 2.46 | 2296  | 964  | 2.81 | 2622  | 1008 | 3.18 | 2962  | 1049 | 3.55 | 3315  |
| 2600             | 875                               | 2.18 | 2031  | 923  | 2.51 | 2344  | 969  | 2.87 | 2673  | 1012 | 3.23 | 3014  | 1054 | 3.61 | 3370  |
| 2700             | 886                               | 2.28 | 2126  | 934  | 2.62 | 2445  | 979  | 2.98 | 2777  | 1022 | 3.35 | 3123  | —    | —    | —     |
| 2800             | 897                               | 2.39 | 2227  | 944  | 2.73 | 2550  | 989  | 3.10 | 2888  | 1032 | 3.47 | 3238  | —    | —    | —     |
| 2900             | 908                               | 2.50 | 2333  | 955  | 2.85 | 2661  | 1000 | 3.22 | 3003  | 1042 | 3.60 | 3358  | —    | —    | —     |
| 3000             | 920                               | 2.62 | 2443  | 966  | 2.98 | 2777  | 1010 | 3.35 | 3123  | —    | —    | —     | —    | —    | —     |
| 3100             | 931                               | 2.75 | 2560  | 977  | 3.11 | 2899  | 1021 | 3.49 | 3250  | —    | —    | —     | —    | —    | —     |
| 3200             | 943                               | 2.88 | 2682  | 989  | 3.25 | 3026  | 1032 | 3.63 | 3383  | —    | —    | —     | —    | —    | —     |
| 3300             | 955                               | 3.01 | 2810  | 1000 | 3.39 | 3159  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3400             | 967                               | 3.16 | 2945  | 1012 | 3.54 | 3299  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3500             | 980                               | 3.31 | 3084  | 1024 | 3.69 | 3445  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3600             | 992                               | 3.46 | 3230  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700             | 1005                              | 3.63 | 3383  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3750             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4250             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                 | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                             | 726                               | 0.75 | 656   | 793  | 0.94 | 822   | 853  | 1.14 | 997   | 910  | 1.35 | 1181  | 962  | 1.56 | 1373  |
| 3100                                             | 746                               | 0.81 | 713   | 811  | 1.01 | 883   | 870  | 1.21 | 1062  | 926  | 1.42 | 1250  | 978  | 1.65 | 1447  |
| 3200                                             | 766                               | 0.88 | 773   | 829  | 1.08 | 947   | 887  | 1.29 | 1131  | 942  | 1.51 | 1323  | 993  | 1.74 | 1524  |
| 3300                                             | 786                               | 0.95 | 836   | 847  | 1.16 | 1016  | 905  | 1.37 | 1204  | 958  | 1.60 | 1400  | 1008 | 1.83 | 1604  |
| 3400                                             | 806                               | 1.03 | 904   | 866  | 1.24 | 1088  | 922  | 1.46 | 1280  | 975  | 1.69 | 1481  | 1024 | 1.92 | 1689  |
| 3500                                             | 826                               | 1.11 | 975   | 885  | 1.33 | 1163  | 940  | 1.55 | 1360  | 991  | 1.78 | 1565  | 1040 | 2.03 | 1778  |
| 3600                                             | 846                               | 1.20 | 1050  | 904  | 1.42 | 1243  | 958  | 1.65 | 1444  | 1008 | 1.88 | 1654  | 1056 | 2.13 | 1870  |
| 3700                                             | 866                               | 1.29 | 1129  | 923  | 1.51 | 1327  | 975  | 1.75 | 1532  | 1025 | 1.99 | 1746  | 1073 | 2.24 | 1967  |
| 3800                                             | 886                               | 1.38 | 1212  | 942  | 1.61 | 1415  | 994  | 1.85 | 1625  | 1043 | 2.10 | 1843  | 1089 | 2.36 | 2068  |
| 3900                                             | 907                               | 1.48 | 1299  | 961  | 1.72 | 1507  | 1012 | 1.96 | 1722  | 1060 | 2.21 | 1944  | —    | —    | —     |
| 4000                                             | 927                               | 1.58 | 1391  | 980  | 1.83 | 1603  | 1030 | 2.08 | 1823  | 1078 | 2.33 | 2049  | —    | —    | —     |
| 4100                                             | 948                               | 1.69 | 1487  | 1000 | 1.94 | 1704  | 1049 | 2.20 | 1928  | —    | —    | —     | —    | —    | —     |
| 4200                                             | 968                               | 1.81 | 1588  | 1019 | 2.06 | 1809  | 1067 | 2.32 | 2038  | —    | —    | —     | —    | —    | —     |
| 4300                                             | 989                               | 1.93 | 1694  | 1039 | 2.19 | 1920  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                             | 1009                              | 2.06 | 1804  | 1058 | 2.32 | 2034  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                             | 1030                              | 2.19 | 1919  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                             | 1051                              | 2.32 | 2039  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |     |     |       |     |     |       |
|---------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |     |     |       |     |     |       |
|                                                         | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8 |     |       | 2.0 |     |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 3000                                                    | 1012                              | 1.79 | 1574  | 1060 | 2.03 | 1781  | 1105 | 2.28 | 1997  | —   | —   | —     | —   | —   | —     |
| 3100                                                    | 1027                              | 1.88 | 1651  | 1073 | 2.12 | 1863  | 1118 | 2.37 | 2081  | —   | —   | —     | —   | —   | —     |
| 3200                                                    | 1041                              | 1.97 | 1732  | 1088 | 2.22 | 1947  | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3300                                                    | 1056                              | 2.07 | 1817  | 1102 | 2.32 | 2036  | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3400                                                    | 1071                              | 2.17 | 1905  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3500                                                    | 1087                              | 2.28 | 1998  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3600                                                    | 1102                              | 2.39 | 2094  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3700                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3800                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 3900                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4000                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4100                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4200                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4300                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4400                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4500                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4600                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4700                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4800                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 4900                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 5000                                                    | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.



## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F120 (10 TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                  | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                   | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                   | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                              | 726                               | 0.75 | 656   | 793  | 0.94 | 822   | 853  | 1.14 | 997   | 910  | 1.35 | 1181  | 962  | 1.56 | 1373  |
| 3100                                              | 746                               | 0.81 | 713   | 811  | 1.01 | 883   | 870  | 1.21 | 1062  | 926  | 1.42 | 1250  | 978  | 1.65 | 1447  |
| 3200                                              | 766                               | 0.88 | 773   | 829  | 1.08 | 947   | 887  | 1.29 | 1131  | 942  | 1.51 | 1323  | 993  | 1.74 | 1524  |
| 3300                                              | 786                               | 0.95 | 836   | 847  | 1.16 | 1016  | 905  | 1.37 | 1204  | 958  | 1.60 | 1400  | 1008 | 1.83 | 1604  |
| 3400                                              | 806                               | 1.03 | 904   | 866  | 1.24 | 1088  | 922  | 1.46 | 1280  | 975  | 1.69 | 1481  | 1024 | 1.92 | 1689  |
| 3500                                              | 826                               | 1.11 | 975   | 885  | 1.33 | 1163  | 940  | 1.55 | 1360  | 991  | 1.78 | 1565  | 1040 | 2.03 | 1778  |
| 3600                                              | 846                               | 1.20 | 1050  | 904  | 1.42 | 1243  | 958  | 1.65 | 1444  | 1008 | 1.88 | 1654  | 1056 | 2.13 | 1870  |
| 3700                                              | 866                               | 1.29 | 1129  | 923  | 1.51 | 1327  | 975  | 1.75 | 1532  | 1025 | 1.99 | 1746  | 1073 | 2.24 | 1967  |
| 3800                                              | 886                               | 1.38 | 1212  | 942  | 1.61 | 1415  | 994  | 1.85 | 1625  | 1043 | 2.10 | 1843  | 1089 | 2.36 | 2068  |
| 3900                                              | 907                               | 1.48 | 1299  | 961  | 1.72 | 1507  | 1012 | 1.96 | 1722  | 1060 | 2.21 | 1944  | 1106 | 2.48 | 2173  |
| 4000                                              | 927                               | 1.58 | 1391  | 980  | 1.83 | 1603  | 1030 | 2.08 | 1823  | 1078 | 2.33 | 2049  | 1123 | 2.60 | 2283  |
| 4100                                              | 948                               | 1.69 | 1487  | 1000 | 1.94 | 1704  | 1049 | 2.20 | 1928  | 1095 | 2.46 | 2159  | 1140 | 2.73 | 2397  |
| 4200                                              | 968                               | 1.81 | 1588  | 1019 | 2.06 | 1809  | 1067 | 2.32 | 2038  | 1113 | 2.59 | 2274  | 1157 | 2.87 | 2516  |
| 4300                                              | 989                               | 1.93 | 1694  | 1039 | 2.19 | 1920  | 1086 | 2.45 | 2153  | 1131 | 2.73 | 2393  | —    | —    | —     |
| 4400                                              | 1009                              | 2.06 | 1804  | 1058 | 2.32 | 2034  | 1105 | 2.59 | 2272  | 1149 | 2.87 | 2517  | —    | —    | —     |
| 4500                                              | 1030                              | 2.19 | 1919  | 1078 | 2.45 | 2154  | 1124 | 2.73 | 2397  | —    | —    | —     | —    | —    | —     |
| 4600                                              | 1051                              | 2.32 | 2039  | 1098 | 2.60 | 2279  | 1143 | 2.88 | 2527  | —    | —    | —     | —    | —    | —     |
| 4700                                              | 1071                              | 2.47 | 2165  | 1118 | 2.75 | 2409  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                              | 1092                              | 2.62 | 2295  | 1138 | 2.90 | 2545  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                              | 1113                              | 2.77 | 2431  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                              | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F120 (10 TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                         | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                          | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                          | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                     | 1012                              | 1.79 | 1574  | 1060 | 2.03 | 1781  | 1105 | 2.28 | 1997  | 1148 | 2.53 | 2219  | 1190 | 2.79 | 2449  |
| 3100                                                     | 1027                              | 1.88 | 1651  | 1073 | 2.12 | 1863  | 1118 | 2.37 | 2081  | 1161 | 2.63 | 2308  | 1202 | 2.89 | 2540  |
| 3200                                                     | 1041                              | 1.97 | 1732  | 1088 | 2.22 | 1947  | 1132 | 2.47 | 2170  | 1174 | 2.73 | 2400  | —    | —    | —     |
| 3300                                                     | 1056                              | 2.07 | 1817  | 1102 | 2.32 | 2036  | 1146 | 2.58 | 2262  | 1188 | 2.84 | 2496  | —    | —    | —     |
| 3400                                                     | 1071                              | 2.17 | 1905  | 1116 | 2.43 | 2128  | 1160 | 2.69 | 2359  | —    | —    | —     | —    | —    | —     |
| 3500                                                     | 1087                              | 2.28 | 1998  | 1131 | 2.53 | 2225  | 1174 | 2.80 | 2459  | —    | —    | —     | —    | —    | —     |
| 3600                                                     | 1102                              | 2.39 | 2094  | 1146 | 2.65 | 2326  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700                                                     | 1118                              | 2.50 | 2195  | 1162 | 2.77 | 2430  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800                                                     | 1134                              | 2.62 | 2300  | 1177 | 2.89 | 2539  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900                                                     | 1150                              | 2.75 | 2410  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000                                                     | 1167                              | 2.88 | 2524  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 835 to 1085 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                     | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                | 726                               | 0.75 | 656   | 793  | 0.94 | 822   | 853  | 1.14 | 997   | 910  | 1.35 | 1181  | 962  | 1.56 | 1373  |
| 3100                                                | 746                               | 0.81 | 713   | 811  | 1.01 | 883   | 870  | 1.21 | 1062  | 926  | 1.42 | 1250  | 978  | 1.65 | 1447  |
| 3200                                                | 766                               | 0.88 | 773   | 829  | 1.08 | 947   | 887  | 1.29 | 1131  | 942  | 1.51 | 1323  | 993  | 1.74 | 1524  |
| 3300                                                | 786                               | 0.95 | 836   | 847  | 1.16 | 1016  | 905  | 1.37 | 1204  | 958  | 1.60 | 1400  | 1008 | 1.83 | 1604  |
| 3400                                                | 806                               | 1.03 | 904   | 866  | 1.24 | 1088  | 922  | 1.46 | 1280  | 975  | 1.69 | 1481  | 1024 | 1.92 | 1689  |
| 3500                                                | 826                               | 1.11 | 975   | 885  | 1.33 | 1163  | 940  | 1.55 | 1360  | 991  | 1.78 | 1565  | 1040 | 2.03 | 1778  |
| 3600                                                | 846                               | 1.20 | 1050  | 904  | 1.42 | 1243  | 958  | 1.65 | 1444  | 1008 | 1.88 | 1654  | 1056 | 2.13 | 1870  |
| 3700                                                | 866                               | 1.29 | 1129  | 923  | 1.51 | 1327  | 975  | 1.75 | 1532  | 1025 | 1.99 | 1746  | 1073 | 2.24 | 1967  |
| 3800                                                | 886                               | 1.38 | 1212  | 942  | 1.61 | 1415  | 994  | 1.85 | 1625  | 1043 | 2.10 | 1843  | 1089 | 2.36 | 2068  |
| 3900                                                | 907                               | 1.48 | 1299  | 961  | 1.72 | 1507  | 1012 | 1.96 | 1722  | 1060 | 2.21 | 1944  | 1106 | 2.48 | 2173  |
| 4000                                                | 927                               | 1.58 | 1391  | 980  | 1.83 | 1603  | 1030 | 2.08 | 1823  | 1078 | 2.33 | 2049  | 1123 | 2.60 | 2283  |
| 4100                                                | 948                               | 1.69 | 1487  | 1000 | 1.94 | 1704  | 1049 | 2.20 | 1928  | 1095 | 2.46 | 2159  | 1140 | 2.73 | 2397  |
| 4200                                                | 968                               | 1.81 | 1588  | 1019 | 2.06 | 1809  | 1067 | 2.32 | 2038  | 1113 | 2.59 | 2274  | 1157 | 2.87 | 2516  |
| 4300                                                | 989                               | 1.93 | 1694  | 1039 | 2.19 | 1920  | 1086 | 2.45 | 2153  | 1131 | 2.73 | 2393  | 1175 | 3.01 | 2640  |
| 4400                                                | 1009                              | 2.06 | 1804  | 1058 | 2.32 | 2034  | 1105 | 2.59 | 2272  | 1149 | 2.87 | 2517  | 1192 | 3.15 | 2768  |
| 4500                                                | 1030                              | 2.19 | 1919  | 1078 | 2.45 | 2154  | 1124 | 2.73 | 2397  | 1168 | 3.01 | 2646  | 1210 | 3.31 | 2901  |
| 4600                                                | 1051                              | 2.32 | 2039  | 1098 | 2.60 | 2279  | 1143 | 2.88 | 2527  | 1186 | 3.17 | 2780  | 1228 | 3.46 | 3040  |
| 4700                                                | 1071                              | 2.47 | 2165  | 1118 | 2.75 | 2409  | 1162 | 3.03 | 2661  | 1205 | 3.33 | 2919  | 1245 | 3.63 | 3184  |
| 4800                                                | 1092                              | 2.62 | 2295  | 1138 | 2.90 | 2545  | 1181 | 3.19 | 2801  | 1223 | 3.49 | 3064  | 1264 | 3.80 | 3333  |
| 4900                                                | 1113                              | 2.77 | 2431  | 1158 | 3.06 | 2685  | 1201 | 3.36 | 2947  | 1242 | 3.66 | 3214  | 1282 | 3.97 | 3487  |
| 5000                                                | 1134                              | 2.93 | 2572  | 1178 | 3.23 | 2832  | 1220 | 3.53 | 3097  | 1261 | 3.84 | 3369  | 1300 | 4.16 | 3647  |

| 580F120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                       | 1012                              | 1.79 | 1574  | 1060 | 2.03 | 1781  | 1105 | 2.28 | 1997  | 1148 | 2.53 | 2219  | 1190 | 2.79 | 2449  |
| 3100                                                       | 1027                              | 1.88 | 1651  | 1073 | 2.12 | 1863  | 1118 | 2.37 | 2081  | 1161 | 2.63 | 2308  | 1202 | 2.89 | 2540  |
| 3200                                                       | 1041                              | 1.97 | 1732  | 1088 | 2.22 | 1947  | 1132 | 2.47 | 2170  | 1174 | 2.73 | 2400  | 1215 | 3.00 | 2636  |
| 3300                                                       | 1056                              | 2.07 | 1817  | 1102 | 2.32 | 2036  | 1146 | 2.58 | 2262  | 1188 | 2.84 | 2496  | 1228 | 3.12 | 2735  |
| 3400                                                       | 1071                              | 2.17 | 1905  | 1116 | 2.43 | 2128  | 1160 | 2.69 | 2359  | 1201 | 2.96 | 2595  | 1241 | 3.23 | 2839  |
| 3500                                                       | 1087                              | 2.28 | 1998  | 1131 | 2.53 | 2225  | 1174 | 2.80 | 2459  | 1215 | 3.08 | 2699  | 1255 | 3.36 | 2946  |
| 3600                                                       | 1102                              | 2.39 | 2094  | 1146 | 2.65 | 2326  | 1188 | 2.92 | 2563  | 1229 | 3.20 | 2808  | 1268 | 3.48 | 3058  |
| 3700                                                       | 1118                              | 2.50 | 2195  | 1162 | 2.77 | 2430  | 1203 | 3.04 | 2672  | 1243 | 3.33 | 2920  | 1282 | 3.62 | 3174  |
| 3800                                                       | 1134                              | 2.62 | 2300  | 1177 | 2.89 | 2539  | 1218 | 3.17 | 2785  | 1258 | 3.46 | 3036  | 1296 | 3.75 | 3295  |
| 3900                                                       | 1150                              | 2.75 | 2410  | 1193 | 3.02 | 2653  | 1233 | 3.31 | 2902  | 1273 | 3.60 | 3158  | 1311 | 3.90 | 3420  |
| 4000                                                       | 1167                              | 2.88 | 2524  | 1208 | 3.16 | 2770  | 1249 | 3.45 | 3024  | 1287 | 3.74 | 3284  | 1325 | 4.04 | 3549  |
| 4100                                                       | 1183                              | 3.01 | 2642  | 1224 | 3.30 | 2893  | 1264 | 3.59 | 3151  | 1302 | 3.89 | 3414  | 1340 | 4.20 | 3683  |
| 4200                                                       | 1200                              | 3.15 | 2765  | 1240 | 3.44 | 3020  | 1280 | 3.74 | 3282  | 1318 | 4.04 | 3549  | 1355 | 4.36 | 3823  |
| 4300                                                       | 1216                              | 3.30 | 2893  | 1257 | 3.59 | 3152  | 1295 | 3.89 | 3418  | 1333 | 4.20 | 3690  | 1370 | 4.52 | 3967  |
| 4400                                                       | 1233                              | 3.45 | 3025  | 1273 | 3.75 | 3289  | 1311 | 4.05 | 3559  | 1349 | 4.37 | 3834  | 1385 | 4.69 | 4116  |
| 4500                                                       | 1250                              | 3.60 | 3163  | 1290 | 3.91 | 3431  | 1328 | 4.22 | 3705  | 1364 | 4.54 | 3985  | —    | —    | —     |
| 4600                                                       | 1268                              | 3.77 | 3306  | 1306 | 4.08 | 3578  | 1344 | 4.39 | 3856  | 1380 | 4.72 | 4140  | —    | —    | —     |
| 4700                                                       | 1285                              | 3.94 | 3454  | 1323 | 4.25 | 3730  | 1360 | 4.57 | 4013  | 1396 | 4.90 | 4300  | —    | —    | —     |
| 4800                                                       | 1303                              | 4.11 | 3608  | 1340 | 4.43 | 3888  | 1377 | 4.76 | 4175  | —    | —    | —     | —    | —    | —     |
| 4900                                                       | 1320                              | 4.29 | 3766  | 1357 | 4.62 | 4051  | 1394 | 4.95 | 4342  | —    | —    | —     | —    | —    | —     |
| 5000                                                       | 1338                              | 4.48 | 3930  | 1375 | 4.81 | 4219  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F121 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|--------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                 | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 3000                                             | 592                               | 0.77 | 672   | 658 | 0.93 | 817   | 719 | 1.10 | 961   | 775 | 1.26 | 1105  | 828 | 1.42 | 1249  |
| 3100                                             | 607                               | 0.83 | 731   | 672 | 1.00 | 881   | 731 | 1.17 | 1030  | 787 | 1.34 | 1179  | 839 | 1.51 | 1328  |
| 3200                                             | 623                               | 0.90 | 794   | 686 | 1.08 | 949   | 744 | 1.26 | 1103  | 798 | 1.43 | 1257  | 850 | 1.61 | 1410  |
| 3300                                             | 638                               | 0.98 | 860   | 700 | 1.16 | 1020  | 757 | 1.34 | 1179  | 810 | 1.52 | 1338  | 861 | 1.71 | 1496  |
| 3400                                             | 653                               | 1.06 | 931   | 714 | 1.25 | 1095  | 770 | 1.44 | 1260  | 822 | 1.62 | 1423  | 872 | 1.81 | 1586  |
| 3500                                             | 669                               | 1.15 | 1005  | 728 | 1.34 | 1175  | 783 | 1.53 | 1344  | 835 | 1.72 | 1512  | 884 | 1.91 | 1680  |
| 3600                                             | 685                               | 1.23 | 1084  | 742 | 1.43 | 1258  | 796 | 1.63 | 1432  | 847 | 1.83 | 1606  | 895 | 2.03 | 1778  |
| 3700                                             | 700                               | 1.33 | 1167  | 757 | 1.53 | 1346  | 810 | 1.74 | 1524  | 860 | 1.94 | 1703  | 907 | 2.14 | 1881  |
| 3800                                             | 716                               | 1.43 | 1254  | 771 | 1.64 | 1438  | 823 | 1.85 | 1621  | 873 | 2.06 | 1805  | 919 | 2.26 | 1987  |
| 3900                                             | 732                               | 1.53 | 1345  | 786 | 1.75 | 1534  | 837 | 1.96 | 1722  | 886 | 2.18 | 1911  | 932 | 2.39 | 2099  |
| 4000                                             | 748                               | 1.64 | 1441  | 801 | 1.86 | 1635  | 851 | 2.08 | 1828  | 899 | 2.30 | 2022  | —   | —    | —     |
| 4100                                             | 764                               | 1.76 | 1542  | 816 | 1.98 | 1741  | 865 | 2.21 | 1939  | —   | —    | —     | —   | —    | —     |
| 4200                                             | 780                               | 1.88 | 1648  | 831 | 2.11 | 1851  | 879 | 2.34 | 2054  | —   | —    | —     | —   | —    | —     |
| 4300                                             | 796                               | 2.00 | 1758  | 846 | 2.24 | 1966  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4400                                             | 812                               | 2.13 | 1874  | 861 | 2.38 | 2087  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4500                                             | 828                               | 2.27 | 1994  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4600                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4700                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4800                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4900                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 5000                                             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F121 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|                                                         | 1.2                               |      |       | 1.4 |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                    | 878                               | 1.59 | 1391  | 925 | 1.75 | 1534  | 970  | 1.91 | 1676  | 1014 | 2.07 | 1817  | 1055 | 2.23 | 1958  |
| 3100                                                    | 888                               | 1.68 | 1475  | 935 | 1.85 | 1623  | 979  | 2.02 | 1769  | 1022 | 2.18 | 1916  | 1063 | 2.35 | 2062  |
| 3200                                                    | 898                               | 1.78 | 1563  | 944 | 1.95 | 1715  | 988  | 2.13 | 1867  | 1031 | 2.30 | 2018  | —    | —    | —     |
| 3300                                                    | 909                               | 1.88 | 1654  | 954 | 2.06 | 1811  | 998  | 2.24 | 1968  | —    | —    | —     | —    | —    | —     |
| 3400                                                    | 919                               | 1.99 | 1749  | 964 | 2.18 | 1911  | 1007 | 2.36 | 2073  | —    | —    | —     | —    | —    | —     |
| 3500                                                    | 930                               | 2.11 | 1848  | 975 | 2.30 | 2015  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3600                                                    | 941                               | 2.22 | 1951  | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700                                                    | 952                               | 2.35 | 2058  | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                                    | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 70 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F121 (10 TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|---------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                  | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                   | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                   | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 3000                                              | 592                               | 0.77 | 672   | 658 | 0.93 | 817   | 719 | 1.10 | 961   | 775 | 1.26 | 1105  | 828 | 1.42 | 1249  |
| 3100                                              | 607                               | 0.83 | 731   | 672 | 1.00 | 881   | 731 | 1.17 | 1030  | 787 | 1.34 | 1179  | 839 | 1.51 | 1328  |
| 3200                                              | 623                               | 0.90 | 794   | 686 | 1.08 | 949   | 744 | 1.26 | 1103  | 798 | 1.43 | 1257  | 850 | 1.61 | 1410  |
| 3300                                              | 638                               | 0.98 | 860   | 700 | 1.16 | 1020  | 757 | 1.34 | 1179  | 810 | 1.52 | 1338  | 861 | 1.71 | 1496  |
| 3400                                              | 653                               | 1.06 | 931   | 714 | 1.25 | 1095  | 770 | 1.44 | 1260  | 822 | 1.62 | 1423  | 872 | 1.81 | 1586  |
| 3500                                              | 669                               | 1.15 | 1005  | 728 | 1.34 | 1175  | 783 | 1.53 | 1344  | 835 | 1.72 | 1512  | 884 | 1.91 | 1680  |
| 3600                                              | 685                               | 1.23 | 1084  | 742 | 1.43 | 1258  | 796 | 1.63 | 1432  | 847 | 1.83 | 1606  | 895 | 2.03 | 1778  |
| 3700                                              | 700                               | 1.33 | 1167  | 757 | 1.53 | 1346  | 810 | 1.74 | 1524  | 860 | 1.94 | 1703  | 907 | 2.14 | 1881  |
| 3800                                              | 716                               | 1.43 | 1254  | 771 | 1.64 | 1438  | 823 | 1.85 | 1621  | 873 | 2.06 | 1805  | 919 | 2.26 | 1987  |
| 3900                                              | 732                               | 1.53 | 1345  | 786 | 1.75 | 1534  | 837 | 1.96 | 1722  | 886 | 2.18 | 1911  | 932 | 2.39 | 2099  |
| 4000                                              | 748                               | 1.64 | 1441  | 801 | 1.86 | 1635  | 851 | 2.08 | 1828  | 899 | 2.30 | 2022  | 944 | 2.52 | 2214  |
| 4100                                              | 764                               | 1.76 | 1542  | 816 | 1.98 | 1741  | 865 | 2.21 | 1939  | 912 | 2.43 | 2137  | 957 | 2.66 | 2334  |
| 4200                                              | 780                               | 1.88 | 1648  | 831 | 2.11 | 1851  | 879 | 2.34 | 2054  | 925 | 2.57 | 2257  | 969 | 2.80 | 2460  |
| 4300                                              | 796                               | 2.00 | 1758  | 846 | 2.24 | 1966  | 894 | 2.48 | 2175  | 939 | 2.71 | 2382  | —   | —    | —     |
| 4400                                              | 812                               | 2.13 | 1874  | 861 | 2.38 | 2087  | 908 | 2.62 | 2299  | 952 | 2.86 | 2512  | —   | —    | —     |
| 4500                                              | 828                               | 2.27 | 1994  | 877 | 2.52 | 2212  | 922 | 2.77 | 2430  | —   | —    | —     | —   | —    | —     |
| 4600                                              | 845                               | 2.42 | 2120  | 892 | 2.67 | 2343  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4700                                              | 861                               | 2.57 | 2251  | 907 | 2.82 | 2479  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4800                                              | 877                               | 2.72 | 2388  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4900                                              | 894                               | 2.88 | 2531  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 5000                                              | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F121 (10 TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                         | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                          | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                          | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                     | 878                               | 1.59 | 1391  | 925  | 1.75 | 1534  | 970  | 1.91 | 1676  | 1014 | 2.07 | 1817  | 1055 | 2.23 | 1958  |
| 3100                                                     | 888                               | 1.68 | 1475  | 935  | 1.85 | 1623  | 979  | 2.02 | 1769  | 1022 | 2.18 | 1916  | 1063 | 2.35 | 2062  |
| 3200                                                     | 898                               | 1.78 | 1563  | 944  | 1.95 | 1715  | 988  | 2.13 | 1867  | 1031 | 2.30 | 2018  | 1072 | 2.47 | 2169  |
| 3300                                                     | 909                               | 1.88 | 1654  | 954  | 2.06 | 1811  | 998  | 2.24 | 1968  | 1040 | 2.42 | 2124  | 1080 | 2.60 | 2280  |
| 3400                                                     | 919                               | 1.99 | 1749  | 964  | 2.18 | 1911  | 1007 | 2.36 | 2073  | 1049 | 2.55 | 2234  | 1089 | 2.73 | 2395  |
| 3500                                                     | 930                               | 2.11 | 1848  | 975  | 2.30 | 2015  | 1017 | 2.49 | 2182  | 1058 | 2.68 | 2348  | 1098 | 2.86 | 2514  |
| 3600                                                     | 941                               | 2.22 | 1951  | 985  | 2.42 | 2123  | 1027 | 2.61 | 2295  | 1068 | 2.81 | 2466  | —    | —    | —     |
| 3700                                                     | 952                               | 2.35 | 2058  | 996  | 2.55 | 2236  | 1038 | 2.75 | 2412  | —    | —    | —     | —    | —    | —     |
| 3800                                                     | 964                               | 2.47 | 2170  | 1007 | 2.68 | 2352  | 1048 | 2.89 | 2534  | —    | —    | —     | —    | —    | —     |
| 3900                                                     | 976                               | 2.60 | 2286  | 1018 | 2.82 | 2473  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000                                                     | 987                               | 2.74 | 2407  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100                                                     | 999                               | 2.88 | 2532  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 70 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 835 to 1085 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F121 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|                                                     | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                | 592                               | 0.77 | 672   | 658 | 0.93 | 817   | 719 | 1.10 | 961   | 775  | 1.26 | 1105  | 828  | 1.42 | 1249  |
| 3100                                                | 607                               | 0.83 | 731   | 672 | 1.00 | 881   | 731 | 1.17 | 1030  | 787  | 1.34 | 1179  | 839  | 1.51 | 1328  |
| 3200                                                | 623                               | 0.90 | 794   | 686 | 1.08 | 949   | 744 | 1.26 | 1103  | 798  | 1.43 | 1257  | 850  | 1.61 | 1410  |
| 3300                                                | 638                               | 0.98 | 860   | 700 | 1.16 | 1020  | 757 | 1.34 | 1179  | 810  | 1.52 | 1338  | 861  | 1.71 | 1496  |
| 3400                                                | 653                               | 1.06 | 931   | 714 | 1.25 | 1095  | 770 | 1.44 | 1260  | 822  | 1.62 | 1423  | 872  | 1.81 | 1586  |
| 3500                                                | 669                               | 1.15 | 1005  | 728 | 1.34 | 1175  | 783 | 1.53 | 1344  | 835  | 1.72 | 1512  | 884  | 1.91 | 1680  |
| 3600                                                | 685                               | 1.23 | 1084  | 742 | 1.43 | 1258  | 796 | 1.63 | 1432  | 847  | 1.83 | 1606  | 895  | 2.03 | 1778  |
| 3700                                                | 700                               | 1.33 | 1167  | 757 | 1.53 | 1346  | 810 | 1.74 | 1524  | 860  | 1.94 | 1703  | 907  | 2.14 | 1881  |
| 3800                                                | 716                               | 1.43 | 1254  | 771 | 1.64 | 1438  | 823 | 1.85 | 1621  | 873  | 2.06 | 1805  | 919  | 2.26 | 1987  |
| 3900                                                | 732                               | 1.53 | 1345  | 786 | 1.75 | 1534  | 837 | 1.96 | 1722  | 886  | 2.18 | 1911  | 932  | 2.39 | 2099  |
| 4000                                                | 748                               | 1.64 | 1441  | 801 | 1.86 | 1635  | 851 | 2.08 | 1828  | 899  | 2.30 | 2022  | 944  | 2.52 | 2214  |
| 4100                                                | 764                               | 1.76 | 1542  | 816 | 1.98 | 1741  | 865 | 2.21 | 1939  | 912  | 2.43 | 2137  | 957  | 2.66 | 2334  |
| 4200                                                | 780                               | 1.88 | 1648  | 831 | 2.11 | 1851  | 879 | 2.34 | 2054  | 925  | 2.57 | 2257  | 969  | 2.80 | 2460  |
| 4300                                                | 796                               | 2.00 | 1758  | 846 | 2.24 | 1966  | 894 | 2.48 | 2175  | 939  | 2.71 | 2382  | 982  | 2.95 | 2589  |
| 4400                                                | 812                               | 2.13 | 1874  | 861 | 2.38 | 2087  | 908 | 2.62 | 2299  | 952  | 2.86 | 2512  | 995  | 3.10 | 2725  |
| 4500                                                | 828                               | 2.27 | 1994  | 877 | 2.52 | 2212  | 922 | 2.77 | 2430  | 966  | 3.02 | 2648  | 1008 | 3.26 | 2865  |
| 4600                                                | 845                               | 2.42 | 2120  | 892 | 2.67 | 2343  | 937 | 2.92 | 2566  | 980  | 3.18 | 2788  | 1022 | 3.43 | 3010  |
| 4700                                                | 861                               | 2.57 | 2251  | 907 | 2.82 | 2479  | 952 | 3.08 | 2706  | 994  | 3.34 | 2934  | 1035 | 3.60 | 3161  |
| 4800                                                | 877                               | 2.72 | 2388  | 923 | 2.99 | 2621  | 966 | 3.25 | 2853  | 1008 | 3.52 | 3086  | 1049 | 3.78 | 3317  |
| 4900                                                | 894                               | 2.88 | 2531  | 938 | 3.15 | 2768  | 981 | 3.42 | 3005  | 1022 | 3.69 | 3242  | 1062 | 3.96 | 3479  |
| 5000                                                | 910                               | 3.05 | 2679  | 954 | 3.33 | 2921  | 996 | 3.60 | 3163  | 1037 | 3.88 | 3405  | 1076 | 4.15 | 3647  |

| 580F121 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                       | 878                               | 1.59 | 1391  | 925  | 1.75 | 1534  | 970  | 1.91 | 1676  | 1014 | 2.07 | 1817  | 1055 | 2.23 | 1958  |
| 3100                                                       | 888                               | 1.68 | 1475  | 935  | 1.85 | 1623  | 979  | 2.02 | 1769  | 1022 | 2.18 | 1916  | 1063 | 2.35 | 2062  |
| 3200                                                       | 898                               | 1.78 | 1563  | 944  | 1.95 | 1715  | 988  | 2.13 | 1867  | 1031 | 2.30 | 2018  | 1072 | 2.47 | 2169  |
| 3300                                                       | 909                               | 1.88 | 1654  | 954  | 2.06 | 1811  | 998  | 2.24 | 1968  | 1040 | 2.42 | 2124  | 1080 | 2.60 | 2280  |
| 3400                                                       | 919                               | 1.99 | 1749  | 964  | 2.18 | 1911  | 1007 | 2.36 | 2073  | 1049 | 2.55 | 2234  | 1089 | 2.73 | 2395  |
| 3500                                                       | 930                               | 2.11 | 1848  | 975  | 2.30 | 2015  | 1017 | 2.49 | 2182  | 1058 | 2.68 | 2348  | 1098 | 2.86 | 2514  |
| 3600                                                       | 941                               | 2.22 | 1951  | 985  | 2.42 | 2123  | 1027 | 2.61 | 2295  | 1068 | 2.81 | 2466  | 1107 | 3.00 | 2637  |
| 3700                                                       | 952                               | 2.35 | 2058  | 996  | 2.55 | 2236  | 1038 | 2.75 | 2412  | 1078 | 2.95 | 2588  | 1117 | 3.15 | 2764  |
| 3800                                                       | 964                               | 2.47 | 2170  | 1007 | 2.68 | 2352  | 1048 | 2.89 | 2534  | 1088 | 3.09 | 2715  | 1126 | 3.30 | 2895  |
| 3900                                                       | 976                               | 2.60 | 2286  | 1018 | 2.82 | 2473  | 1059 | 3.03 | 2660  | 1098 | 3.24 | 2846  | 1136 | 3.45 | 3031  |
| 4000                                                       | 987                               | 2.74 | 2407  | 1029 | 2.96 | 2598  | 1069 | 3.18 | 2790  | 1108 | 3.40 | 2981  | 1146 | 3.61 | 3171  |
| 4100                                                       | 999                               | 2.88 | 2532  | 1041 | 3.11 | 2729  | 1080 | 3.33 | 2925  | 1119 | 3.56 | 3121  | 1156 | 3.78 | 3316  |
| 4200                                                       | 1012                              | 3.03 | 2662  | 1052 | 3.26 | 2863  | 1092 | 3.49 | 3065  | 1130 | 3.72 | 3266  | 1167 | 3.95 | 3466  |
| 4300                                                       | 1024                              | 3.19 | 2796  | 1064 | 3.42 | 3003  | 1103 | 3.66 | 3210  | 1141 | 3.89 | 3415  | 1177 | 4.13 | 3621  |
| 4400                                                       | 1036                              | 3.35 | 2937  | 1076 | 3.59 | 3148  | 1114 | 3.83 | 3359  | 1152 | 4.07 | 3570  | 1188 | 4.31 | 3781  |
| 4500                                                       | 1049                              | 3.51 | 3082  | 1088 | 3.76 | 3298  | 1126 | 4.00 | 3514  | 1163 | 4.25 | 3730  | 1199 | 4.50 | 3945  |
| 4600                                                       | 1062                              | 3.68 | 3232  | 1100 | 3.94 | 3454  | 1138 | 4.19 | 3675  | 1174 | 4.44 | 3895  | 1210 | 4.69 | 4116  |
| 4700                                                       | 1075                              | 3.86 | 3387  | 1113 | 4.12 | 3614  | 1150 | 4.38 | 3840  | 1186 | 4.63 | 4065  | 1221 | 4.89 | 4291  |
| 4800                                                       | 1088                              | 4.04 | 3549  | 1125 | 4.31 | 3780  | 1162 | 4.57 | 4011  | 1198 | 4.83 | 4241  | —    | —    | —     |
| 4900                                                       | 1101                              | 4.23 | 3716  | 1138 | 4.50 | 3951  | 1174 | 4.77 | 4188  | —    | —    | —     | —    | —    | —     |
| 5000                                                       | 1114                              | 4.43 | 3888  | 1151 | 4.70 | 4129  | 1187 | 4.98 | 4370  | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 70 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F150,151 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                      | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                       | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                       | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700                                                  | 728                               | 1.36 | 1266  | 789  | 1.58 | 1473  | 848  | 1.81 | 1686  | 904  | 2.04 | 1906  | 957  | 2.29 | 2132  |
| 3800                                                  | 744                               | 1.46 | 1361  | 804  | 1.69 | 1572  | 861  | 1.92 | 1790  | 916  | 2.16 | 2015  | 969  | 2.41 | 2246  |
| 3900                                                  | 760                               | 1.57 | 1460  | 819  | 1.80 | 1676  | 875  | 2.04 | 1899  | 929  | 2.28 | 2128  | 981  | 2.53 | 2364  |
| 4000                                                  | 777                               | 1.68 | 1563  | 834  | 1.91 | 1785  | 889  | 2.16 | 2012  | 942  | 2.41 | 2247  | 993  | 2.67 | 2487  |
| 4100                                                  | 793                               | 1.79 | 1672  | 850  | 2.04 | 1899  | 904  | 2.29 | 2132  | 956  | 2.54 | 2371  | 1006 | 2.80 | 2615  |
| 4200                                                  | 810                               | 1.92 | 1786  | 865  | 2.16 | 2018  | 918  | 2.42 | 2255  | 969  | 2.68 | 2499  | 1018 | 2.95 | 2748  |
| 4300                                                  | 826                               | 2.04 | 1906  | 880  | 2.30 | 2142  | 932  | 2.56 | 2385  | 983  | 2.82 | 2633  | 1031 | 3.10 | 2888  |
| 4400                                                  | 843                               | 2.18 | 2031  | 896  | 2.44 | 2272  | 947  | 2.70 | 2520  | 996  | 2.97 | 2773  | 1044 | 3.25 | 3032  |
| 4500                                                  | 860                               | 2.32 | 2161  | 912  | 2.58 | 2408  | 962  | 2.85 | 2660  | 1010 | 3.13 | 2918  | 1057 | 3.41 | 3182  |
| 4600                                                  | 876                               | 2.46 | 2297  | 927  | 2.73 | 2549  | 977  | 3.01 | 2807  | 1024 | 3.29 | 3070  | 1070 | 3.58 | 3338  |
| 4700                                                  | 893                               | 2.62 | 2439  | 943  | 2.89 | 2696  | 992  | 3.17 | 2958  | 1038 | 3.46 | 3226  | —    | —    | —     |
| 4800                                                  | 910                               | 2.77 | 2587  | 959  | 3.06 | 2849  | 1007 | 3.34 | 3116  | 1053 | 3.63 | 3390  | —    | —    | —     |
| 4900                                                  | 927                               | 2.94 | 2741  | 975  | 3.23 | 3008  | 1022 | 3.52 | 3280  | —    | —    | —     | —    | —    | —     |
| 5000                                                  | 944                               | 3.11 | 2901  | 991  | 3.40 | 3173  | 1037 | 3.70 | 3451  | —    | —    | —     | —    | —    | —     |
| 5100                                                  | 961                               | 3.29 | 3068  | 1007 | 3.59 | 3345  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5200                                                  | 978                               | 3.48 | 3241  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5300                                                  | 995                               | 3.67 | 3420  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5400                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5500                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5600                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5700                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5800                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F150,151 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                             | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                              | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                              | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700                                                         | 1008                              | 2.54 | 2364  | 1058 | 2.79 | 2602  | 1106 | 3.05 | 2846  | 1152 | 3.32 | 3094  | 1198 | 3.59 | 3348  |
| 3800                                                         | 1019                              | 2.66 | 2482  | 1068 | 2.92 | 2725  | 1116 | 3.19 | 2972  | 1162 | 3.46 | 3226  | —    | —    | —     |
| 3900                                                         | 1031                              | 2.79 | 2605  | 1079 | 3.06 | 2852  | 1126 | 3.33 | 3104  | 1171 | 3.61 | 3362  | —    | —    | —     |
| 4000                                                         | 1042                              | 2.93 | 2733  | 1090 | 3.20 | 2984  | 1136 | 3.48 | 3241  | —    | —    | —     | —    | —    | —     |
| 4100                                                         | 1054                              | 3.07 | 2866  | 1101 | 3.35 | 3122  | 1146 | 3.63 | 3383  | —    | —    | —     | —    | —    | —     |
| 4200                                                         | 1066                              | 3.22 | 3004  | 1112 | 3.50 | 3264  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300                                                         | 1078                              | 3.38 | 3148  | 1123 | 3.66 | 3413  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                                         | 1090                              | 3.54 | 3297  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                                         | 1103                              | 3.70 | 3451  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5100                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5200                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5300                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5400                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5500                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5600                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5700                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5800                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 580F150,151 (12½ TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |             |             |             |             |             |             |             |             |             |
|--------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Airflow<br>(Cfm)                                       | External Static Pressure (in. wg) |      |       |      |      |       |             |             |             |             |             |             |             |             |             |
|                                                        | 0.2                               |      |       | 0.4  |      |       | 0.6         |             |             | 0.8         |             |             | 1.0         |             |             |
|                                                        | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 3700                                                   | 728                               | 1.36 | 1266  | 789  | 1.58 | 1473  | 848         | 1.81        | 1686        | 904         | 2.04        | 1906        | 957         | 2.29        | 2132        |
| 3800                                                   | 744                               | 1.46 | 1361  | 804  | 1.69 | 1572  | 861         | 1.92        | 1790        | 916         | 2.16        | 2015        | 969         | 2.41        | 2246        |
| 3900                                                   | 760                               | 1.57 | 1460  | 819  | 1.80 | 1676  | 875         | 2.04        | 1899        | 929         | 2.28        | 2128        | 981         | 2.53        | 2364        |
| 4000                                                   | 777                               | 1.68 | 1563  | 834  | 1.91 | 1785  | 889         | 2.16        | 2012        | 942         | 2.41        | 2247        | 993         | 2.67        | 2487        |
| 4100                                                   | 793                               | 1.79 | 1672  | 850  | 2.04 | 1899  | 904         | 2.29        | 2132        | 956         | 2.54        | 2371        | 1006        | 2.80        | 2615        |
| 4200                                                   | 810                               | 1.92 | 1786  | 865  | 2.16 | 2018  | 918         | 2.42        | 2255        | 969         | 2.68        | 2499        | 1018        | 2.95        | 2748        |
| 4300                                                   | 826                               | 2.04 | 1906  | 880  | 2.30 | 2142  | 932         | 2.56        | 2385        | 983         | 2.82        | 2633        | 1031        | 3.10        | 2888        |
| 4400                                                   | 843                               | 2.18 | 2031  | 896  | 2.44 | 2272  | 947         | 2.70        | 2520        | 996         | 2.97        | 2773        | 1044        | 3.25        | 3032        |
| 4500                                                   | 860                               | 2.32 | 2161  | 912  | 2.58 | 2408  | 962         | 2.85        | 2660        | 1010        | 3.13        | 2918        | 1057        | 3.41        | 3182        |
| 4600                                                   | 876                               | 2.46 | 2297  | 927  | 2.73 | 2549  | 977         | 3.01        | 2807        | 1024        | 3.29        | 3070        | 1070        | 3.58        | 3338        |
| 4700                                                   | 893                               | 2.62 | 2439  | 943  | 2.89 | 2696  | 992         | 3.17        | 2958        | 1038        | 3.46        | 3226        | 1084        | 3.75        | 3500        |
| 4800                                                   | 910                               | 2.77 | 2587  | 959  | 3.06 | 2849  | 1007        | 3.34        | 3116        | 1053        | 3.63        | 3390        | 1098        | 3.93        | 3668        |
| 4900                                                   | 927                               | 2.94 | 2741  | 975  | 3.23 | 3008  | 1022        | 3.52        | 3280        | 1067        | 3.82        | 3558        | 1111        | 4.12        | 3841        |
| 5000                                                   | 944                               | 3.11 | 2901  | 991  | 3.40 | 3173  | 1037        | 3.70        | 3451        | 1082        | 4.00        | 3733        | 1125        | 4.31        | 4021        |
| 5100                                                   | 961                               | 3.29 | 3068  | 1007 | 3.59 | 3345  | 1053        | 3.89        | 3627        | 1096        | 4.20        | 3915        | <b>1139</b> | <b>4.51</b> | <b>4208</b> |
| 5200                                                   | 978                               | 3.48 | 3241  | 1024 | 3.78 | 3523  | 1068        | 4.09        | 3811        | 1111        | 4.40        | 4103        | <b>1153</b> | <b>4.72</b> | <b>4400</b> |
| 5300                                                   | 995                               | 3.67 | 3420  | 1040 | 3.98 | 3707  | 1084        | 4.29        | 4000        | 1126        | 4.61        | 4298        | <b>1168</b> | <b>4.93</b> | <b>4600</b> |
| 5400                                                   | 1012                              | 3.87 | 3606  | 1056 | 4.18 | 3899  | 1099        | 4.50        | 4196        | <b>1141</b> | <b>4.82</b> | <b>4499</b> | <b>1182</b> | <b>5.15</b> | <b>4806</b> |
| 5500                                                   | 1029                              | 4.07 | 3799  | 1073 | 4.39 | 4097  | 1115        | 4.72        | 4400        | <b>1156</b> | <b>5.05</b> | <b>4707</b> | —           | —           | —           |
| 5600                                                   | 1046                              | 4.29 | 3999  | 1089 | 4.61 | 4302  | <b>1131</b> | <b>4.94</b> | <b>4610</b> | —           | —           | —           | —           | —           | —           |
| 5700                                                   | 1063                              | 4.51 | 4207  | 1105 | 4.84 | 4515  | <b>1146</b> | <b>5.18</b> | <b>4827</b> | —           | —           | —           | —           | —           | —           |
| 5800                                                   | 1080                              | 4.74 | 4420  | 1122 | 5.08 | 4734  | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5900                                                   | 1098                              | 4.98 | 4642  | —    | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6000                                                   | 1115                              | 5.22 | 4872  | —    | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6100                                                   | —                                 | —    | —     | —    | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6200                                                   | —                                 | —    | —     | —    | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6300                                                   | —                                 | —    | —     | —    | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           |

## 580F150,151 (12½ TONS) — ALTERNATE MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                  | 1.2                               |             |             | 1.4         |             |             | 1.6         |             |             | 1.8         |             |             | 2.0         |             |             |
|                  | Rpm                               | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 3700             | 1008                              | 2.54        | 2364        | 1058        | 2.79        | 2602        | 1106        | 3.05        | 2846        | <b>1152</b> | <b>3.32</b> | <b>3094</b> | <b>1198</b> | <b>3.59</b> | <b>3348</b> |
| 3800             | 1019                              | 2.66        | 2482        | 1068        | 2.92        | 2725        | 1116        | 3.19        | 2972        | <b>1162</b> | <b>3.46</b> | <b>3226</b> | <b>1206</b> | <b>3.74</b> | <b>3484</b> |
| 3900             | 1031                              | 2.79        | 2605        | 1079        | 3.06        | 2852        | 1126        | 3.33        | 3104        | <b>1171</b> | <b>3.61</b> | <b>3362</b> | <b>1215</b> | <b>3.89</b> | <b>3624</b> |
| 4000             | 1042                              | 2.93        | 2733        | 1090        | 3.20        | 2984        | <b>1136</b> | <b>3.48</b> | <b>3241</b> | <b>1180</b> | <b>3.76</b> | <b>3503</b> | <b>1224</b> | <b>4.04</b> | <b>3770</b> |
| 4100             | 1054                              | 3.07        | 2866        | 1101        | 3.35        | 3122        | <b>1146</b> | <b>3.63</b> | <b>3383</b> | <b>1190</b> | <b>3.91</b> | <b>3649</b> | <b>1233</b> | <b>4.20</b> | <b>3921</b> |
| 4200             | 1066                              | 3.22        | 3004        | 1112        | 3.50        | 3264        | <b>1157</b> | <b>3.79</b> | <b>3530</b> | <b>1200</b> | <b>4.08</b> | <b>3801</b> | <b>1243</b> | <b>4.37</b> | <b>4077</b> |
| 4300             | 1078                              | 3.38        | 3148        | 1123        | 3.66        | 3413        | <b>1167</b> | <b>3.95</b> | <b>3683</b> | <b>1210</b> | <b>4.24</b> | <b>3958</b> | <b>1252</b> | <b>4.54</b> | <b>4238</b> |
| 4400             | 1090                              | 3.54        | 3297        | <b>1135</b> | <b>3.82</b> | <b>3566</b> | <b>1179</b> | <b>4.12</b> | <b>3841</b> | <b>1221</b> | <b>4.42</b> | <b>4121</b> | <b>1262</b> | <b>4.72</b> | <b>4405</b> |
| 4500             | 1103                              | 3.70        | 3451        | <b>1147</b> | <b>4.00</b> | <b>3726</b> | <b>1190</b> | <b>4.29</b> | <b>4005</b> | <b>1232</b> | <b>4.60</b> | <b>4289</b> | <b>1273</b> | <b>4.91</b> | <b>4578</b> |
| 4600             | 1115                              | 3.87        | 3612        | <b>1159</b> | <b>4.17</b> | <b>3891</b> | <b>1201</b> | <b>4.48</b> | <b>4175</b> | <b>1243</b> | <b>4.79</b> | <b>4464</b> | <b>1283</b> | <b>5.10</b> | <b>4757</b> |
| 4700             | 1128                              | 4.05        | 3778        | <b>1171</b> | <b>4.36</b> | <b>4062</b> | <b>1213</b> | <b>4.67</b> | <b>4350</b> | <b>1254</b> | <b>4.98</b> | <b>4644</b> | —           | —           | —           |
| 4800             | <b>1141</b>                       | <b>4.24</b> | <b>3951</b> | <b>1183</b> | <b>4.55</b> | <b>4239</b> | <b>1225</b> | <b>4.86</b> | <b>4532</b> | <b>1265</b> | <b>5.18</b> | <b>4830</b> | —           | —           | —           |
| 4900             | <b>1154</b>                       | <b>4.43</b> | <b>4130</b> | <b>1196</b> | <b>4.74</b> | <b>4422</b> | <b>1237</b> | <b>5.06</b> | <b>4720</b> | —           | —           | —           | —           | —           | —           |
| 5000             | <b>1167</b>                       | <b>4.63</b> | <b>4314</b> | <b>1209</b> | <b>4.95</b> | <b>4611</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5100             | <b>1181</b>                       | <b>4.83</b> | <b>4505</b> | <b>1221</b> | <b>5.16</b> | <b>4808</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5200             | <b>1194</b>                       | <b>5.04</b> | <b>4703</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5300             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5400             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5500             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5600             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5700             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5800             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5900             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6000             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6100             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6200             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6300             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

- Boldface** indicates field-supplied drive is required.
- Maximum continuous bhp is 5.25.
- See page 70 for General Fan Performance Notes.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont) FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

| 580F036 (3 TONS) — STANDARD MOTOR (DIRECT DRIVE) |           |      |       |                 |      |       |            |      |       |                 |      |       |
|--------------------------------------------------|-----------|------|-------|-----------------|------|-------|------------|------|-------|-----------------|------|-------|
| Airflow<br>(Cfm)                                 | Low Speed |      |       |                 |      |       | High Speed |      |       |                 |      |       |
|                                                  | 208 V     |      |       | 230, 460, 575 V |      |       | 208 V      |      |       | 230, 460, 575 V |      |       |
|                                                  | ESP       | Bhp  | Watts | ESP             | Bhp  | Watts | ESP        | Bhp  | Watts | ESP             | Bhp  | Watts |
| 900                                              | 0.54      | 0.21 | 253   | 0.57            | 0.23 | 277   | 0.55       | 0.26 | 307   | 0.60            | 0.31 | 363   |
| 1000                                             | 0.49      | 0.23 | 270   | 0.51            | 0.25 | 292   | 0.52       | 0.27 | 321   | 0.53            | 0.32 | 374   |
| 1100                                             | 0.43      | 0.24 | 287   | 0.45            | 0.26 | 307   | 0.46       | 0.28 | 335   | 0.49            | 0.33 | 385   |
| 1200                                             | 0.39      | 0.26 | 304   | 0.40            | 0.27 | 323   | 0.38       | 0.29 | 349   | 0.43            | 0.34 | 397   |
| 1300                                             | 0.33      | 0.27 | 321   | 0.35            | 0.29 | 338   | 0.35       | 0.31 | 364   | 0.36            | 0.34 | 408   |
| 1400                                             | 0.26      | 0.29 | 338   | 0.28            | 0.30 | 354   | 0.29       | 0.32 | 378   | —               | —    | —     |
| 1500                                             | 0.21      | 0.30 | 355   | 0.23            | 0.31 | 369   | 0.24       | 0.33 | 392   | —               | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
ESP — External Static Pressure (in. wg)

See page 73 for general fan performance notes.

| 580F036 (3 TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                 | External Static Pressure (in. wg) |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|                                                  | 0.2                               |      |       | 0.4 |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                              | 607                               | 0.14 | 142   | 745 | 0.22 | 221   | 856  | 0.31 | 304   | 952  | 0.39 | 393   | 1037 | 0.49 | 485   |
| 1000                                             | 640                               | 0.18 | 174   | 775 | 0.26 | 261   | 884  | 0.35 | 351   | 978  | 0.45 | 446   | 1062 | 0.55 | 545   |
| 1100                                             | 674                               | 0.21 | 212   | 805 | 0.31 | 307   | 912  | 0.41 | 404   | 1005 | 0.51 | 506   | 1089 | 0.61 | 611   |
| 1200                                             | 708                               | 0.26 | 256   | 836 | 0.36 | 359   | 941  | 0.47 | 464   | 1033 | 0.57 | 572   | 1116 | 0.69 | 683   |
| 1300                                             | 743                               | 0.31 | 307   | 868 | 0.42 | 417   | 971  | 0.53 | 530   | 1062 | 0.65 | 645   | 1143 | 0.77 | 764   |
| 1400                                             | 780                               | 0.37 | 364   | 900 | 0.49 | 483   | 1002 | 0.61 | 603   | 1091 | 0.73 | 726   | 1172 | 0.86 | 851   |
| 1500                                             | 816                               | 0.43 | 428   | 934 | 0.56 | 556   | 1033 | 0.69 | 685   | 1121 | 0.82 | 815   | 1201 | 0.95 | 947   |

| 580F036 (3 TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                         | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                                     | 1114                              | 0.59 | 582   | 1186 | 0.69 | 684   | 1253 | 0.79 | 789   | 1316 | 0.90 | 898   | 1375 | 1.02 | 1010  |
| 1000                                                    | 1139                              | 0.65 | 648   | 1210 | 0.76 | 754   | 1277 | 0.87 | 865   | 1340 | 0.98 | 979   | 1399 | 1.10 | 1097  |
| 1100                                                    | 1165                              | 0.72 | 720   | 1236 | 0.84 | 832   | 1302 | 0.95 | 948   | 1364 | 1.07 | 1068  | 1423 | 1.20 | 1191  |
| 1200                                                    | 1191                              | 0.80 | 799   | 1261 | 0.92 | 917   | 1327 | 1.04 | 1039  | 1389 | 1.17 | 1165  | —    | —    | —     |
| 1300                                                    | 1218                              | 0.89 | 885   | 1288 | 1.02 | 1010  | 1353 | 1.14 | 1138  | —    | —    | —     | —    | —    | —     |
| 1400                                                    | 1246                              | 0.99 | 980   | 1315 | 1.12 | 1111  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1500                                                    | 1274                              | 1.09 | 1083  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.
3. See page 70 for general fan performance notes.

\*Motor drive range: 685 to 1045 rpm. All other rpms require a field-supplied drive.

| 580F036 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                   | External Static Pressure (in. wg) |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|                                                    | 0.2                               |      |       | 0.4 |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                    | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                                | 607                               | 0.14 | 142   | 745 | 0.22 | 221   | 856  | 0.31 | 304   | 952  | 0.39 | 393   | 1037 | 0.49 | 485   |
| 1000                                               | 640                               | 0.18 | 174   | 775 | 0.26 | 261   | 884  | 0.35 | 351   | 978  | 0.45 | 446   | 1062 | 0.55 | 545   |
| 1100                                               | 674                               | 0.21 | 212   | 805 | 0.31 | 307   | 912  | 0.41 | 404   | 1005 | 0.51 | 506   | 1089 | 0.61 | 611   |
| 1200                                               | 708                               | 0.26 | 256   | 836 | 0.36 | 359   | 941  | 0.47 | 464   | 1033 | 0.57 | 572   | 1116 | 0.69 | 683   |
| 1300                                               | 743                               | 0.31 | 307   | 868 | 0.42 | 417   | 971  | 0.53 | 530   | 1062 | 0.65 | 645   | 1143 | 0.77 | 764   |
| 1400                                               | 780                               | 0.37 | 364   | 900 | 0.49 | 483   | 1002 | 0.61 | 603   | 1091 | 0.73 | 726   | 1172 | 0.86 | 851   |
| 1500                                               | 816                               | 0.43 | 428   | 934 | 0.56 | 556   | 1033 | 0.69 | 685   | 1121 | 0.82 | 815   | 1201 | 0.95 | 947   |

| 580F036 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                          | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                           | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                           | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900                                                       | 1114                              | 0.59 | 582   | 1186 | 0.69 | 684   | 1253 | 0.79 | 789   | 1316 | 0.90 | 898   | 1375 | 1.02 | 1010  |
| 1000                                                      | 1139                              | 0.65 | 648   | 1210 | 0.76 | 754   | 1277 | 0.87 | 865   | 1340 | 0.98 | 979   | 1399 | 1.10 | 1097  |
| 1100                                                      | 1165                              | 0.72 | 720   | 1236 | 0.84 | 832   | 1302 | 0.95 | 948   | 1364 | 1.07 | 1068  | 1423 | 1.20 | 1191  |
| 1200                                                      | 1191                              | 0.80 | 799   | 1261 | 0.92 | 917   | 1327 | 1.04 | 1039  | 1389 | 1.17 | 1165  | 1448 | 1.30 | 1293  |
| 1300                                                      | 1218                              | 0.89 | 885   | 1288 | 1.02 | 1010  | 1353 | 1.14 | 1138  | 1414 | 1.28 | 1270  | 1473 | 1.41 | 1404  |
| 1400                                                      | 1246                              | 0.99 | 980   | 1315 | 1.12 | 1111  | 1379 | 1.25 | 1246  | 1440 | 1.39 | 1383  | 1499 | 1.53 | 1523  |
| 1500                                                      | 1274                              | 1.09 | 1083  | 1342 | 1.23 | 1221  | 1406 | 1.37 | 1362  | 1467 | 1.51 | 1505  | 1525 | 1.66 | 1652  |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require a field-supplied drive.



## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

## 580F048 (4 TONS) — STANDARD MOTOR (DIRECT DRIVE)

| Airflow<br>(Cfm) | Low Speed |      |       |                 |      |       | High Speed |      |       |                 |      |       |
|------------------|-----------|------|-------|-----------------|------|-------|------------|------|-------|-----------------|------|-------|
|                  | 208 V     |      |       | 230, 460, 575 V |      |       | 208 V      |      |       | 230, 460, 575 V |      |       |
|                  | ESP       | Bhp  | Watts | ESP             | Bhp  | Watts | ESP        | Bhp  | Watts | ESP             | Bhp  | Watts |
| 1200             | 0.75      | 0.41 | 458   | 0.81            | 0.45 | 506   | 0.87       | 0.51 | 572   | 0.92            | 0.56 | 632   |
| 1300             | 0.68      | 0.42 | 471   | 0.74            | 0.46 | 521   | 0.79       | 0.52 | 589   | 0.85            | 0.58 | 651   |
| 1400             | 0.60      | 0.45 | 503   | 0.66            | 0.49 | 556   | 0.71       | 0.54 | 616   | 0.77            | 0.60 | 681   |
| 1500             | 0.51      | 0.47 | 536   | 0.58            | 0.52 | 593   | 0.64       | 0.56 | 631   | 0.70            | 0.62 | 698   |
| 1600             | 0.42      | 0.49 | 557   | 0.49            | 0.54 | 616   | 0.56       | 0.58 | 654   | 0.63            | 0.64 | 723   |
| 1700             | 0.32      | 0.52 | 584   | 0.39            | 0.57 | 646   | 0.48       | 0.60 | 678   | 0.55            | 0.66 | 750   |
| 1800             | 0.21      | 0.54 | 610   | 0.29            | 0.60 | 674   | 0.41       | 0.62 | 698   | 0.48            | 0.68 | 772   |
| 1900             | 0.09      | 0.56 | 629   | 0.18            | 0.62 | 696   | 0.33       | 0.64 | 720   | 0.41            | 0.70 | 796   |
| 2000             | —         | —    | —     | 0.06            | 0.65 | 731   | 0.26       | 0.66 | 744   | 0.33            | 0.73 | 823   |

## LEGEND

See page 70 for general fan performance notes.

Bhp — Brake Horsepower Input to Fan  
 ESP — External Static Pressure (in. wg)

## 580F048 (4 TONS) — ALTERNATE MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 643                               | 0.23 | 234   | 762  | 0.34 | 343   | 859  | 0.46 | 458   | 944  | 0.58 | 579   |
| 1300             | 675                               | 0.28 | 277   | 790  | 0.40 | 394   | 886  | 0.52 | 517   | 969  | 0.65 | 644   |
| 1400             | 707                               | 0.33 | 326   | 819  | 0.45 | 452   | 913  | 0.58 | 581   | 996  | 0.72 | 716   |
| 1500             | 740                               | 0.38 | 382   | 849  | 0.52 | 515   | 941  | 0.66 | 653   | 1023 | 0.80 | 795   |
| 1600             | 773                               | 0.45 | 444   | 879  | 0.59 | 586   | 970  | 0.73 | 731   | 1050 | 0.88 | 880   |
| 1700             | 807                               | 0.52 | 513   | 910  | 0.67 | 663   | 999  | 0.82 | 817   | 1078 | 0.98 | 973   |
| 1800             | 841                               | 0.59 | 589   | 942  | 0.75 | 749   | 1029 | 0.91 | 910   | 1106 | 1.08 | 1074  |
| 1900             | 875                               | 0.68 | 674   | 974  | 0.85 | 842   | 1059 | 1.02 | 1012  | 1135 | 1.19 | 1184  |
| 2000             | 910                               | 0.77 | 767   | 1006 | 0.95 | 944   | 1090 | 1.13 | 1122  | —    | —    | —     |

## 580F048 (4 TONS) — ALTERNATE MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |     |     |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|-----|-----|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8 |     |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm | Bhp | Watts |
| 1200             | 1089                              | 0.84 | 837   | 1153 | 0.98 | 974   | 1213 | 1.12 | 1115  | —   | —   | —     |
| 1300             | 1113                              | 0.92 | 915   | 1177 | 1.06 | 1058  | —    | —    | —     | —   | —   | —     |
| 1400             | 1138                              | 1.01 | 1000  | 1201 | 1.15 | 1149  | —    | —    | —     | —   | —   | —     |
| 1500             | 1163                              | 1.10 | 1092  | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 1600             | 1189                              | 1.20 | 1191  | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 1700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 1800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 1900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |

## LEGEND

## NOTES:

Bhp — Brake Horsepower Input to Fan  
 Watts — Input Watts to Motor

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.
3. See page 70 for general fan performance notes.

\*Motor drive range: 770 to 1175 rpm. All other rpms require a field-supplied drive.

## 580F048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 643                               | 0.23 | 234   | 762  | 0.34 | 343   | 859  | 0.46 | 458   | 944  | 0.58 | 579   |
| 1300             | 675                               | 0.28 | 277   | 790  | 0.40 | 394   | 886  | 0.52 | 517   | 969  | 0.65 | 644   |
| 1400             | 707                               | 0.33 | 326   | 819  | 0.45 | 452   | 913  | 0.58 | 581   | 996  | 0.72 | 716   |
| 1500             | 740                               | 0.38 | 382   | 849  | 0.52 | 515   | 941  | 0.66 | 653   | 1023 | 0.80 | 795   |
| 1600             | 773                               | 0.45 | 444   | 879  | 0.59 | 586   | 970  | 0.73 | 731   | 1050 | 0.88 | 880   |
| 1700             | 807                               | 0.52 | 513   | 910  | 0.67 | 663   | 999  | 0.82 | 817   | 1078 | 0.98 | 973   |
| 1800             | 841                               | 0.59 | 589   | 942  | 0.75 | 749   | 1029 | 0.91 | 910   | 1106 | 1.08 | 1074  |
| 1900             | 875                               | 0.68 | 674   | 974  | 0.85 | 842   | 1059 | 1.02 | 1012  | 1135 | 1.19 | 1184  |
| 2000             | 910                               | 0.77 | 767   | 1006 | 0.95 | 944   | 1090 | 1.13 | 1122  | 1165 | 1.31 | 1302  |

## 580F048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 1089                              | 0.84 | 837   | 1153 | 0.98 | 974   | 1213 | 1.12 | 1115  | 1270 | 1.27 | 1262  |
| 1300             | 1113                              | 0.92 | 915   | 1177 | 1.06 | 1058  | 1237 | 1.21 | 1205  | 1293 | 1.36 | 1358  |
| 1400             | 1138                              | 1.01 | 1000  | 1201 | 1.15 | 1149  | 1261 | 1.31 | 1303  | 1317 | 1.47 | 1461  |
| 1500             | 1163                              | 1.10 | 1092  | 1226 | 1.25 | 1247  | 1285 | 1.41 | 1407  | 1341 | 1.58 | 1571  |
| 1600             | 1189                              | 1.20 | 1191  | 1252 | 1.36 | 1353  | 1310 | 1.53 | 1520  | 1365 | 1.70 | 1690  |
| 1700             | 1216                              | 1.31 | 1299  | 1277 | 1.48 | 1468  | 1335 | 1.65 | 1640  | 1390 | 1.83 | 1817  |
| 1800             | 1242                              | 1.42 | 1414  | 1303 | 1.60 | 1590  | 1361 | 1.78 | 1770  | 1415 | 1.96 | 1953  |
| 1900             | 1270                              | 1.55 | 1538  | 1330 | 1.73 | 1721  | 1387 | 1.92 | 1908  | 1441 | 2.11 | 2098  |
| 2000             | 1297                              | 1.68 | 1672  | 1357 | 1.87 | 1862  | 1414 | 2.07 | 2055  | 1467 | 2.26 | 2252  |

## LEGEND

## NOTES:

Bhp — Brake Horsepower Input to Fan  
 Watts — Input Watts to Motor

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F060 (5 TONS) — STANDARD MOTOR (DIRECT DRIVE) |           |      |       |                 |      |       |              |      |       |                 |      |       |            |      |       |                 |      |       |
|--------------------------------------------------|-----------|------|-------|-----------------|------|-------|--------------|------|-------|-----------------|------|-------|------------|------|-------|-----------------|------|-------|
| Airflow<br>(Cfm)                                 | Low Speed |      |       |                 |      |       | Medium Speed |      |       |                 |      |       | High Speed |      |       |                 |      |       |
|                                                  | 208V      |      |       | 230, 460, 575 V |      |       | 208 V        |      |       | 230, 460, 575 V |      |       | 208 V      |      |       | 230, 460, 575 V |      |       |
|                                                  | ESP       | Bhp  | Watts | ESP             | Bhp  | Watts | ESP          | Bhp  | Watts | ESP             | Bhp  | Watts | ESP        | Bhp  | Watts | ESP             | Bhp  | Watts |
| 1500                                             | 0.74      | 0.67 | 750   | 1.06            | 0.71 | 791   | 1.07         | 0.70 | 782   | 1.27            | 0.76 | 845   | 1.26       | 0.79 | 875   | 1.33            | 0.85 | 949   |
| 1600                                             | 0.54      | 0.70 | 780   | 0.90            | 0.74 | 824   | 0.92         | 0.74 | 821   | 1.13            | 0.79 | 883   | 1.14       | 0.82 | 913   | 1.22            | 0.89 | 988   |
| 1700                                             | 0.34      | 0.73 | 810   | 0.75            | 0.77 | 857   | 0.77         | 0.77 | 861   | 1.00            | 0.83 | 921   | 1.01       | 0.85 | 950   | 1.11            | 0.92 | 1027  |
| 1800                                             | 0.14      | 0.75 | 839   | 0.59            | 0.80 | 891   | 0.62         | 0.81 | 900   | 0.87            | 0.86 | 959   | 0.89       | 0.88 | 988   | 1.00            | 0.96 | 1066  |
| 1900                                             | —         | —    | —     | 0.44            | 0.83 | 924   | 0.47         | 0.84 | 940   | 0.74            | 0.90 | 997   | 0.77       | 0.92 | 1025  | 0.89            | 0.99 | 1105  |
| 2000                                             | —         | —    | —     | 0.28            | 0.86 | 957   | 0.32         | 0.88 | 979   | 0.61            | 0.93 | 1035  | 0.64       | 0.95 | 1063  | 0.78            | 1.03 | 1144  |
| 2100                                             | —         | —    | —     | 0.13            | 0.89 | 990   | 0.17         | 0.91 | 1018  | 0.48            | 0.96 | 1073  | 0.51       | 0.99 | 1101  | 0.67            | 1.06 | 1183  |
| 2200                                             | —         | —    | —     | —               | —    | —     | 0.02         | 0.95 | 1058  | 0.35            | 1.00 | 1111  | 0.39       | 1.02 | 1138  | 0.56            | 1.10 | 1222  |
| 2300                                             | —         | —    | —     | —               | —    | —     | —            | —    | —     | 0.22            | 1.03 | 1149  | 0.26       | 1.06 | 1176  | 0.45            | 1.13 | 1261  |
| 2400                                             | —         | —    | —     | —               | —    | —     | —            | —    | —     | 0.09            | 1.07 | 1187  | 0.14       | 1.09 | 1213  | 0.34            | 1.17 | 1300  |
| 2500                                             | —         | —    | —     | —               | —    | —     | —            | —    | —     | —               | —    | —     | —          | —    | —     | 0.23            | 1.20 | 1340  |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
 ESP — External Static Pressure (in. wg)

See page 70 for general fan performance notes.

| 580F060 (5 TONS) — SINGLE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                               | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                                | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                                | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                           | 790                               | 0.40 | 353   | 896  | 0.53 | 470   | 990  | 0.67 | 599   | 1074 | 0.83 | 738   | 1151 | 1.00 | 886   |
| 1600                                                           | 828                               | 0.46 | 413   | 930  | 0.60 | 535   | 1021 | 0.75 | 669   | 1103 | 0.91 | 812   | 1179 | 1.09 | 965   |
| 1700                                                           | 866                               | 0.54 | 479   | 964  | 0.68 | 607   | 1053 | 0.84 | 746   | 1133 | 1.01 | 894   | 1207 | 1.18 | 1051  |
| 1800                                                           | 905                               | 0.62 | 553   | 1000 | 0.77 | 687   | 1085 | 0.94 | 831   | 1164 | 1.11 | 984   | 1236 | 1.29 | 1146  |
| 1900                                                           | 944                               | 0.71 | 635   | 1036 | 0.87 | 775   | 1119 | 1.04 | 924   | 1195 | 1.22 | 1082  | —    | —    | —     |
| 2000                                                           | 984                               | 0.82 | 725   | 1072 | 0.98 | 871   | 1153 | 1.15 | 1025  | —    | —    | —     | —    | —    | —     |
| 2100                                                           | 1024                              | 0.93 | 824   | 1109 | 1.10 | 976   | 1188 | 1.28 | 1136  | —    | —    | —     | —    | —    | —     |
| 2200                                                           | 1064                              | 1.05 | 932   | 1147 | 1.23 | 1090  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300                                                           | 1105                              | 1.18 | 1050  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400                                                           | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                           | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F060 (5 TONS) — SINGLE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |     |       |     |     |       |     |     |       |     |     |       |
|-----------------------------------------------------------------------|-----------------------------------|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                                      | External Static Pressure (in. wg) |      |       |     |     |       |     |     |       |     |     |       |     |     |       |
|                                                                       | 1.2                               |      |       | 1.4 |     |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                                                                       | Rpm                               | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 1500                                                                  | 1223                              | 1.18 | 1045  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1600                                                                  | 1249                              | 1.27 | 1127  | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1700                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1800                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1900                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2000                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2100                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2200                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2300                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2400                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2500                                                                  | —                                 | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
 Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.30.
3. See page 70 for general fan performance notes.

\*Motor drive range: 900 to 1300 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F060 (5 TONS) — THREE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                          | 790                               | 0.40 | 353   | 896  | 0.53 | 470   | 990  | 0.67 | 599   | 1074 | 0.83 | 738   | 1151 | 1.00 | 886   |
| 1600                                                          | 828                               | 0.46 | 413   | 930  | 0.60 | 535   | 1021 | 0.75 | 669   | 1103 | 0.91 | 812   | 1179 | 1.09 | 965   |
| 1700                                                          | 866                               | 0.54 | 479   | 964  | 0.68 | 607   | 1053 | 0.84 | 746   | 1133 | 1.01 | 894   | 1207 | 1.18 | 1051  |
| 1800                                                          | 905                               | 0.62 | 553   | 1000 | 0.77 | 687   | 1085 | 0.94 | 831   | 1164 | 1.11 | 984   | 1236 | 1.29 | 1146  |
| 1900                                                          | 944                               | 0.71 | 635   | 1036 | 0.87 | 775   | 1119 | 1.04 | 924   | 1195 | 1.22 | 1082  | 1266 | 1.41 | 1248  |
| 2000                                                          | 984                               | 0.82 | 725   | 1072 | 0.98 | 871   | 1153 | 1.15 | 1025  | 1227 | 1.34 | 1189  | 1297 | 1.53 | 1360  |
| 2100                                                          | 1024                              | 0.93 | 824   | 1109 | 1.10 | 976   | 1188 | 1.28 | 1136  | 1260 | 1.47 | 1305  | 1328 | 1.67 | 1481  |
| 2200                                                          | 1064                              | 1.05 | 932   | 1147 | 1.23 | 1090  | 1223 | 1.41 | 1256  | 1294 | 1.61 | 1430  | 1360 | 1.81 | 1612  |
| 2300                                                          | 1105                              | 1.18 | 1050  | 1185 | 1.37 | 1215  | 1259 | 1.56 | 1386  | 1328 | 1.76 | 1566  | 1393 | 1.97 | 1752  |
| 2400                                                          | 1146                              | 1.33 | 1179  | 1223 | 1.52 | 1349  | 1295 | 1.72 | 1527  | 1362 | 1.93 | 1711  | 1426 | 2.14 | 1903  |
| 2500                                                          | 1187                              | 1.48 | 1317  | 1262 | 1.68 | 1494  | 1332 | 1.89 | 1677  | 1398 | 2.10 | 1868  | 1460 | 2.33 | 2065  |

| 580F060 (5 TONS) — THREE-PHASE, ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                                     | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                                      | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                                      | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                                 | 1223                              | 1.18 | 1045  | 1291 | 1.36 | 1212  | 1355 | 1.56 | 1388  | 1415 | 1.77 | 1573  | 1473 | 1.99 | 1765  |
| 1600                                                                 | 1249                              | 1.27 | 1127  | 1316 | 1.46 | 1298  | 1379 | 1.66 | 1478  | 1439 | 1.87 | 1665  | 1496 | 2.09 | 1860  |
| 1700                                                                 | 1277                              | 1.37 | 1217  | 1342 | 1.57 | 1392  | 1404 | 1.77 | 1575  | 1463 | 1.99 | 1766  | 1520 | 2.21 | 1965  |
| 1800                                                                 | 1305                              | 1.48 | 1316  | 1369 | 1.68 | 1495  | 1430 | 1.89 | 1681  | 1489 | 2.11 | 1876  | 1545 | 2.34 | 2078  |
| 1900                                                                 | 1333                              | 1.60 | 1423  | 1397 | 1.81 | 1606  | 1457 | 2.02 | 1797  | 1514 | 2.25 | 1995  | —    | —    | —     |
| 2000                                                                 | 1363                              | 1.73 | 1540  | 1425 | 1.94 | 1727  | 1484 | 2.16 | 1922  | 1541 | 2.39 | 2124  | —    | —    | —     |
| 2100                                                                 | 1393                              | 1.87 | 1665  | 1454 | 2.09 | 1857  | 1512 | 2.31 | 2056  | —    | —    | —     | —    | —    | —     |
| 2200                                                                 | 1424                              | 2.03 | 1801  | 1484 | 2.25 | 1997  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300                                                                 | 1455                              | 2.19 | 1946  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400                                                                 | 1487                              | 2.37 | 2103  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 900 to 1300 rpm. All other rpms require a field-supplied drive.

| 580F060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                   | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                    | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                    | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                               | 790                               | 0.40 | 353   | 896  | 0.53 | 470   | 990  | 0.67 | 599   | 1074 | 0.83 | 738   | 1151 | 1.00 | 886   |
| 1600                                               | 828                               | 0.46 | 413   | 930  | 0.60 | 535   | 1021 | 0.75 | 669   | 1103 | 0.91 | 812   | 1179 | 1.09 | 965   |
| 1700                                               | 866                               | 0.54 | 479   | 964  | 0.68 | 607   | 1053 | 0.84 | 746   | 1133 | 1.01 | 894   | 1207 | 1.18 | 1051  |
| 1800                                               | 905                               | 0.62 | 553   | 1000 | 0.77 | 687   | 1085 | 0.94 | 831   | 1164 | 1.11 | 984   | 1236 | 1.29 | 1146  |
| 1900                                               | 944                               | 0.71 | 635   | 1036 | 0.87 | 775   | 1119 | 1.04 | 924   | 1195 | 1.22 | 1082  | 1266 | 1.41 | 1248  |
| 2000                                               | 984                               | 0.82 | 725   | 1072 | 0.98 | 871   | 1153 | 1.15 | 1025  | 1227 | 1.34 | 1189  | 1297 | 1.53 | 1360  |
| 2100                                               | 1024                              | 0.93 | 824   | 1109 | 1.10 | 976   | 1188 | 1.28 | 1136  | 1260 | 1.47 | 1305  | 1328 | 1.67 | 1481  |
| 2200                                               | 1064                              | 1.05 | 932   | 1147 | 1.23 | 1090  | 1223 | 1.41 | 1256  | 1294 | 1.61 | 1430  | 1360 | 1.81 | 1612  |
| 2300                                               | 1105                              | 1.18 | 1050  | 1185 | 1.37 | 1215  | 1259 | 1.56 | 1386  | 1328 | 1.76 | 1566  | 1393 | 1.97 | 1752  |
| 2400                                               | 1146                              | 1.33 | 1179  | 1223 | 1.52 | 1349  | 1295 | 1.72 | 1527  | 1362 | 1.93 | 1711  | 1426 | 2.14 | 1903  |
| 2500                                               | 1187                              | 1.48 | 1317  | 1262 | 1.68 | 1494  | 1332 | 1.89 | 1677  | 1398 | 2.10 | 1868  | 1460 | 2.33 | 2065  |

| 580F060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                          | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                           | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                           | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                      | 1223                              | 1.18 | 1045  | 1291 | 1.36 | 1212  | 1355 | 1.56 | 1388  | 1415 | 1.77 | 1573  | 1473 | 1.99 | 1765  |
| 1600                                                      | 1249                              | 1.27 | 1127  | 1316 | 1.46 | 1298  | 1379 | 1.66 | 1478  | 1439 | 1.87 | 1665  | 1496 | 2.09 | 1860  |
| 1700                                                      | 1277                              | 1.37 | 1217  | 1342 | 1.57 | 1392  | 1404 | 1.77 | 1575  | 1463 | 1.99 | 1766  | 1520 | 2.21 | 1965  |
| 1800                                                      | 1305                              | 1.48 | 1316  | 1369 | 1.68 | 1495  | 1430 | 1.89 | 1681  | 1489 | 2.11 | 1876  | 1545 | 2.34 | 2078  |
| 1900                                                      | 1333                              | 1.60 | 1423  | 1397 | 1.81 | 1606  | 1457 | 2.02 | 1797  | 1514 | 2.25 | 1995  | 1570 | 2.48 | 2200  |
| 2000                                                      | 1363                              | 1.73 | 1540  | 1425 | 1.94 | 1727  | 1484 | 2.16 | 1922  | 1541 | 2.39 | 2124  | 1596 | 2.63 | 2333  |
| 2100                                                      | 1393                              | 1.87 | 1665  | 1454 | 2.09 | 1857  | 1512 | 2.31 | 2056  | 1568 | 2.55 | 2262  | 1622 | 2.79 | 2475  |
| 2200                                                      | 1424                              | 2.03 | 1801  | 1484 | 2.25 | 1997  | 1541 | 2.48 | 2200  | 1596 | 2.71 | 2411  | —    | —    | —     |
| 2300                                                      | 1455                              | 2.19 | 1946  | 1514 | 2.42 | 2147  | 1571 | 2.65 | 2355  | 1625 | 2.89 | 2570  | —    | —    | —     |
| 2400                                                      | 1487                              | 2.37 | 2103  | 1545 | 2.60 | 2308  | 1601 | 2.84 | 2521  | —    | —    | —     | —    | —    | —     |
| 2500                                                      | 1520                              | 2.56 | 2269  | 1577 | 2.79 | 2480  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1300 to 1685 rpm. All other rpms require a field-supplied drive.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)**

| 580F072,073 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                     | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                | 919                               | 0.63 | 561   | 1010 | 0.75 | 663   | 1095 | 0.87 | 771   | 1174 | 1.00 | 886   | 1250 | 1.14 | 1008  |
| 1900                                                | 960                               | 0.73 | 648   | 1047 | 0.85 | 754   | 1129 | 0.98 | 867   | 1206 | 1.11 | 986   | 1279 | 1.25 | 1111  |
| 2000                                                | 1001                              | 0.84 | 744   | 1085 | 0.96 | 855   | 1163 | 1.09 | 972   | 1238 | 1.23 | 1095  | 1309 | 1.38 | 1224  |
| 2100                                                | 1043                              | 0.96 | 850   | 1123 | 1.09 | 965   | 1199 | 1.22 | 1086  | 1271 | 1.37 | 1213  | 1340 | 1.52 | 1346  |
| 2200                                                | 1085                              | 1.09 | 966   | 1162 | 1.22 | 1086  | 1235 | 1.36 | 1211  | 1305 | 1.51 | 1342  | 1372 | 1.67 | 1479  |
| 2300                                                | 1127                              | 1.23 | 1092  | 1201 | 1.37 | 1217  | 1272 | 1.52 | 1347  | 1340 | 1.67 | 1482  | 1405 | 1.83 | 1623  |
| 2400                                                | 1169                              | 1.38 | 1229  | 1241 | 1.53 | 1359  | 1310 | 1.68 | 1493  | 1375 | 1.84 | 1633  | 1439 | 2.00 | 1778  |
| 2500                                                | 1212                              | 1.55 | 1378  | 1281 | 1.70 | 1513  | 1348 | 1.86 | 1652  | 1412 | 2.02 | 1796  | 1473 | 2.19 | 1945  |
| 2600                                                | 1255                              | 1.73 | 1539  | 1322 | 1.89 | 1678  | 1386 | 2.05 | 1822  | 1448 | 2.22 | 1970  | 1508 | 2.39 | 2124  |
| 2700                                                | 1298                              | 1.93 | 1713  | 1363 | 2.09 | 1857  | 1425 | 2.26 | 2005  | —    | —    | —     | —    | —    | —     |
| 2800                                                | 1341                              | 2.14 | 1899  | 1404 | 2.31 | 2048  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900                                                | 1384                              | 2.36 | 2099  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000                                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F072,073 (6 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                       | 1321                              | 1.28 | 1137  | 1390 | 1.43 | 1273  | 1455 | 1.59 | 1415  | 1518 | 1.76 | 1563  | 1579 | 1.93 | 1718  |
| 1900                                                       | 1348                              | 1.40 | 1243  | 1415 | 1.56 | 1381  | 1479 | 1.72 | 1526  | 1541 | 1.89 | 1677  | 1601 | 2.06 | 1834  |
| 2000                                                       | 1377                              | 1.53 | 1359  | 1442 | 1.69 | 1500  | 1505 | 1.86 | 1648  | 1565 | 2.03 | 1801  | 1624 | 2.21 | 1961  |
| 2100                                                       | 1406                              | 1.67 | 1485  | 1470 | 1.83 | 1629  | 1531 | 2.00 | 1780  | 1591 | 2.18 | 1936  | 1648 | 2.36 | 2098  |
| 2200                                                       | 1437                              | 1.83 | 1621  | 1499 | 1.99 | 1769  | 1559 | 2.16 | 1923  | 1617 | 2.34 | 2082  | —    | —    | —     |
| 2300                                                       | 1468                              | 1.99 | 1769  | 1529 | 2.16 | 1920  | 1587 | 2.34 | 2077  | —    | —    | —     | —    | —    | —     |
| 2400                                                       | 1500                              | 2.17 | 1928  | 1559 | 2.35 | 2083  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                       | 1533                              | 2.36 | 2098  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2600                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2700                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2800                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000                                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1070 to 1460 rpm. All other rpms require a field-supplied drive.

| 580F072,073 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                       | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                        | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                        | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                   | 919                               | 0.63 | 561   | 1010 | 0.75 | 663   | 1095 | 0.87 | 771   | 1174 | 1.00 | 886   | 1250 | 1.14 | 1008  |
| 1900                                                   | 960                               | 0.73 | 648   | 1047 | 0.85 | 754   | 1129 | 0.98 | 867   | 1206 | 1.11 | 986   | 1279 | 1.25 | 1111  |
| 2000                                                   | 1001                              | 0.84 | 744   | 1085 | 0.96 | 855   | 1163 | 1.09 | 972   | 1238 | 1.23 | 1095  | 1309 | 1.38 | 1224  |
| 2100                                                   | 1043                              | 0.96 | 850   | 1123 | 1.09 | 965   | 1199 | 1.22 | 1086  | 1271 | 1.37 | 1213  | 1340 | 1.52 | 1346  |
| 2200                                                   | 1085                              | 1.09 | 966   | 1162 | 1.22 | 1086  | 1235 | 1.36 | 1211  | 1305 | 1.51 | 1342  | 1372 | 1.67 | 1479  |
| 2300                                                   | 1127                              | 1.23 | 1092  | 1201 | 1.37 | 1217  | 1272 | 1.52 | 1347  | 1340 | 1.67 | 1482  | 1405 | 1.83 | 1623  |
| 2400                                                   | 1169                              | 1.38 | 1229  | 1241 | 1.53 | 1359  | 1310 | 1.68 | 1493  | 1375 | 1.84 | 1633  | 1439 | 2.00 | 1778  |
| 2500                                                   | 1212                              | 1.55 | 1378  | 1281 | 1.70 | 1513  | 1348 | 1.86 | 1652  | 1412 | 2.02 | 1796  | 1473 | 2.19 | 1945  |
| 2600                                                   | 1255                              | 1.73 | 1539  | 1322 | 1.89 | 1678  | 1386 | 2.05 | 1822  | 1448 | 2.22 | 1970  | 1508 | 2.39 | 2124  |
| 2700                                                   | 1298                              | 1.93 | 1713  | 1363 | 2.09 | 1857  | 1425 | 2.26 | 2005  | 1485 | 2.43 | 2158  | 1544 | 2.61 | 2315  |
| 2800                                                   | 1341                              | 2.14 | 1899  | 1404 | 2.31 | 2048  | 1464 | 2.48 | 2201  | 1523 | 2.66 | 2358  | 1580 | 2.84 | 2520  |
| 2900                                                   | 1384                              | 2.36 | 2099  | 1445 | 2.54 | 2253  | 1504 | 2.71 | 2410  | 1561 | 2.90 | 2572  | —    | —    | —     |
| 3000                                                   | 1428                              | 2.60 | 2313  | 1487 | 2.78 | 2471  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F072,073 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800                                                          | 1321                              | 1.28 | 1137  | 1390 | 1.43 | 1273  | 1455 | 1.59 | 1415  | 1518 | 1.76 | 1563  | 1579 | 1.93 | 1718  |
| 1900                                                          | 1348                              | 1.40 | 1243  | 1415 | 1.56 | 1381  | 1479 | 1.72 | 1526  | 1541 | 1.89 | 1677  | 1601 | 2.06 | 1834  |
| 2000                                                          | 1377                              | 1.53 | 1359  | 1442 | 1.69 | 1500  | 1505 | 1.86 | 1648  | 1565 | 2.03 | 1801  | 1624 | 2.21 | 1961  |
| 2100                                                          | 1406                              | 1.67 | 1485  | 1470 | 1.83 | 1629  | 1531 | 2.00 | 1780  | 1591 | 2.18 | 1936  | 1648 | 2.36 | 2098  |
| 2200                                                          | 1437                              | 1.83 | 1621  | 1499 | 1.99 | 1769  | 1559 | 2.16 | 1923  | 1617 | 2.34 | 2082  | 1673 | 2.53 | 2246  |
| 2300                                                          | 1468                              | 1.99 | 1769  | 1529 | 2.16 | 1920  | 1587 | 2.34 | 2077  | 1644 | 2.52 | 2239  | 1699 | 2.71 | 2406  |
| 2400                                                          | 1500                              | 2.17 | 1928  | 1559 | 2.35 | 2083  | 1616 | 2.53 | 2243  | 1672 | 2.71 | 2408  | 1726 | 2.90 | 2579  |
| 2500                                                          | 1533                              | 2.36 | 2098  | 1591 | 2.54 | 2257  | 1647 | 2.73 | 2421  | —    | —    | —     | —    | —    | —     |
| 2600                                                          | 1566                              | 2.57 | 2281  | 1623 | 2.75 | 2444  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2700                                                          | 1600                              | 2.79 | 2477  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2800                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See page 70 for general fan performance notes.

\*Motor drive range: 1300 to 1685 rpm. All other rpms require a field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F090,091 (7 1/2 TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|---------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                         | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250                                                    | 505                               | 0.52 | 484   | 586 | 0.73 | 681   | 657 | 0.97 | 901   | 722 | 1.22 | 1142  | 782 | 1.50 | 1403  |
| 2300                                                    | 513                               | 0.55 | 509   | 592 | 0.76 | 708   | 663 | 1.00 | 931   | 727 | 1.26 | 1174  | 787 | 1.54 | 1437  |
| 2400                                                    | 527                               | 0.60 | 561   | 605 | 0.82 | 766   | 674 | 1.07 | 993   | 738 | 1.33 | 1241  | 796 | 1.62 | 1508  |
| 2500                                                    | 543                               | 0.66 | 617   | 618 | 0.89 | 828   | 686 | 1.14 | 1060  | 748 | 1.41 | 1312  | 806 | 1.70 | 1583  |
| 2550                                                    | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600                                                    | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700                                                    | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800                                                    | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900                                                    | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000                                                    | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100                                                    | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200                                                    | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | —   | —    | —     |
| 3300                                                    | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | —   | —    | —     |
| 3400                                                    | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | —   | —    | —     |
| 3500                                                    | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | —   | —    | —     | —   | —    | —     |
| 3600                                                    | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | —   | —    | —     | —   | —    | —     |
| 3700                                                    | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3750                                                    | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F090,091 (7 1/2 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|----------------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                               | External Static Pressure (in. wg) |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|                                                                | 1.2                               |      |       | 1.4 |      |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                                                                | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2250                                                           | 838                               | 1.81 | 1683  | 891 | 2.12 | 1981  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2300                                                           | 842                               | 1.84 | 1719  | 895 | 2.17 | 2019  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2400                                                           | 851                               | 1.92 | 1793  | 903 | 2.25 | 2097  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2500                                                           | 860                               | 2.01 | 1873  | 911 | 2.34 | 2180  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2550                                                           | 865                               | 2.05 | 1914  | 916 | 2.38 | 2223  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2600                                                           | 869                               | 2.10 | 1957  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2700                                                           | 879                               | 2.19 | 2046  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2800                                                           | 889                               | 2.29 | 2140  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2900                                                           | 899                               | 2.40 | 2239  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3000                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3100                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3200                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3300                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3400                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3500                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3600                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3700                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3750                                                           | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

Bhp — Brake Horsepower Input to Fan  
Watts — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 590 to 840 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F090,091 (7 1/2 TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|----------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                         | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                          | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                          | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250                                                     | 505                               | 0.52 | 484   | 586 | 0.73 | 681   | 657 | 0.97 | 901   | 722 | 1.22 | 1142  | 782 | 1.50 | 1403  |
| 2300                                                     | 513                               | 0.55 | 509   | 592 | 0.76 | 708   | 663 | 1.00 | 931   | 727 | 1.26 | 1174  | 787 | 1.54 | 1437  |
| 2400                                                     | 527                               | 0.60 | 561   | 605 | 0.82 | 766   | 674 | 1.07 | 993   | 738 | 1.33 | 1241  | 796 | 1.62 | 1508  |
| 2500                                                     | 543                               | 0.66 | 617   | 618 | 0.89 | 828   | 686 | 1.14 | 1060  | 748 | 1.41 | 1312  | 806 | 1.70 | 1583  |
| 2550                                                     | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600                                                     | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700                                                     | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800                                                     | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900                                                     | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000                                                     | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100                                                     | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200                                                     | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | —   | —    | —     |
| 3300                                                     | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | —   | —    | —     |
| 3400                                                     | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | —   | —    | —     |
| 3500                                                     | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | —   | —    | —     | —   | —    | —     |
| 3600                                                     | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | —   | —    | —     | —   | —    | —     |
| 3700                                                     | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3750                                                     | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F090,091 (7 1/2 TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|-----------------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                                | External Static Pressure (in. wg) |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|                                                                 | 1.2                               |      |       | 1.4 |      |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                                                                 | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2250                                                            | 838                               | 1.81 | 1683  | 891 | 2.12 | 1981  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2300                                                            | 842                               | 1.84 | 1719  | 895 | 2.17 | 2019  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2400                                                            | 851                               | 1.92 | 1793  | 903 | 2.25 | 2097  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2500                                                            | 860                               | 2.01 | 1873  | 911 | 2.34 | 2180  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2550                                                            | 865                               | 2.05 | 1914  | 916 | 2.38 | 2223  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2600                                                            | 869                               | 2.10 | 1957  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2700                                                            | 879                               | 2.19 | 2046  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2800                                                            | 889                               | 2.29 | 2140  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2900                                                            | 899                               | 2.40 | 2239  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3000                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3100                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3200                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3300                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3400                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3500                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3600                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3700                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3750                                                            | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F090,091 (7 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                            | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250                                                       | 505                               | 0.52 | 484   | 586 | 0.73 | 681   | 657 | 0.97 | 901   | 722 | 1.22 | 1142  | 782 | 1.50 | 1403  |
| 2300                                                       | 513                               | 0.55 | 509   | 592 | 0.76 | 708   | 663 | 1.00 | 931   | 727 | 1.26 | 1174  | 787 | 1.54 | 1437  |
| 2400                                                       | 527                               | 0.60 | 561   | 605 | 0.82 | 766   | 674 | 1.07 | 993   | 738 | 1.33 | 1241  | 796 | 1.62 | 1508  |
| 2500                                                       | 543                               | 0.66 | 617   | 618 | 0.89 | 828   | 686 | 1.14 | 1060  | 748 | 1.41 | 1312  | 806 | 1.70 | 1583  |
| 2550                                                       | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600                                                       | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700                                                       | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800                                                       | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900                                                       | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000                                                       | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100                                                       | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200                                                       | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | 882 | 2.41 | 2249  |
| 3300                                                       | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | 894 | 2.54 | 2365  |
| 3400                                                       | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | 907 | 2.67 | 2488  |
| 3500                                                       | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | 870 | 2.46 | 2297  | 919 | 2.81 | 2616  |
| 3600                                                       | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | 883 | 2.60 | 2425  | 932 | 2.95 | 2750  |
| 3700                                                       | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | 846 | 2.41 | 2245  | 896 | 2.75 | 2560  | 944 | 3.10 | 2889  |
| 3750                                                       | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | 853 | 2.48 | 2312  | 903 | 2.82 | 2630  | 951 | 3.18 | 2962  |

| 580F090,091 (7 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |             |             |      |      |       |      |      |       |      |      |       |      |      |       |
|-------------------------------------------------------------------|-----------------------------------|-------------|-------------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                                  | External Static Pressure (in. wg) |             |             |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                                   | 1.2                               |             |             | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                                   | Rpm                               | Bhp         | Watts       | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2250                                                              | <b>838</b>                        | <b>1.81</b> | <b>1683</b> | 891  | 2.12 | 1981  | 941  | 2.46 | 2297  | 988  | 2.82 | 2629  | 1033 | 3.19 | 2976  |
| 2300                                                              | <b>842</b>                        | <b>1.84</b> | <b>1719</b> | 895  | 2.17 | 2019  | 944  | 2.51 | 2336  | 992  | 2.86 | 2669  | 1037 | 3.24 | 3018  |
| 2400                                                              | <b>851</b>                        | <b>1.92</b> | <b>1793</b> | 903  | 2.25 | 2097  | 952  | 2.59 | 2416  | 999  | 2.95 | 2752  | 1043 | 3.33 | 3104  |
| 2500                                                              | 860                               | 2.01        | 1873        | 911  | 2.34 | 2180  | 960  | 2.68 | 2502  | 1006 | 3.05 | 2842  | 1051 | 3.43 | 3196  |
| 2550                                                              | 865                               | 2.05        | 1914        | 916  | 2.38 | 2223  | 964  | 2.73 | 2547  | 1010 | 3.10 | 2888  | 1054 | 3.48 | 3243  |
| 2600                                                              | 869                               | 2.10        | 1957        | 920  | 2.43 | 2267  | 968  | 2.78 | 2593  | 1014 | 3.15 | 2935  | 1058 | 3.53 | 3292  |
| 2700                                                              | 879                               | 2.19        | 2046        | 929  | 2.53 | 2360  | 976  | 2.88 | 2689  | 1022 | 3.25 | 3035  | 1066 | 3.64 | 3395  |
| 2800                                                              | 889                               | 2.29        | 2140        | 938  | 2.64 | 2458  | 985  | 2.99 | 2791  | 1030 | 3.37 | 3140  | —    | —    | —     |
| 2900                                                              | 899                               | 2.40        | 2239        | 948  | 2.75 | 2561  | 994  | 3.11 | 2898  | 1039 | 3.49 | 3250  | —    | —    | —     |
| 3000                                                              | 910                               | 2.51        | 2343        | 958  | 2.86 | 2670  | 1004 | 3.23 | 3011  | 1048 | 3.61 | 3366  | —    | —    | —     |
| 3100                                                              | 921                               | 2.63        | 2453        | 968  | 2.98 | 2783  | 1013 | 3.35 | 3128  | —    | —    | —     | —    | —    | —     |
| 3200                                                              | 932                               | 2.75        | 2569        | 978  | 3.11 | 2903  | 1023 | 3.49 | 3252  | —    | —    | —     | —    | —    | —     |
| 3300                                                              | 943                               | 2.88        | 2690        | 989  | 3.25 | 3029  | 1033 | 3.63 | 3382  | —    | —    | —     | —    | —    | —     |
| 3400                                                              | 954                               | 3.02        | 2816        | 1000 | 3.39 | 3159  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3500                                                              | 966                               | 3.16        | 2950        | 1011 | 3.54 | 3297  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3600                                                              | 978                               | 3.31        | 3088        | 1022 | 3.69 | 3442  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700                                                              | 990                               | 3.47        | 3233        | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3750                                                              | 996                               | 3.55        | 3308        | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)**

**580F103 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2550             | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600             | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700             | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800             | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900             | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000             | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100             | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200             | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | —   | —    | —     |
| 3300             | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | —   | —    | —     |
| 3400             | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | —   | —    | —     |
| 3500             | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | —   | —    | —     | —   | —    | —     |
| 3600             | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | —   | —    | —     | —   | —    | —     |
| 3700             | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3750             | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3800             | 753                               | 1.91 | 1783  | 808 | 2.22 | 2074  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 3900             | 770                               | 2.05 | 1912  | 824 | 2.37 | 2209  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4000             | 787                               | 2.20 | 2047  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4100             | 804                               | 2.35 | 2189  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4200             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4250             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |

**580F103 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |     |       |     |     |       |     |     |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
|                  | 1.2                               |      |       | 1.4 |      |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 2550             | 865                               | 2.05 | 1914  | 916 | 2.38 | 2223  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2600             | 869                               | 2.10 | 1957  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2700             | 879                               | 2.19 | 2046  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2800             | 889                               | 2.29 | 2140  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2900             | 899                               | 2.40 | 2239  | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3000             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3100             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3200             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3300             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3400             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3500             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3600             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3700             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3750             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3800             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 3900             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4000             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4100             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4200             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 4250             | —                                 | —    | —     | —   | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.



## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

## 580F103 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2550             | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600             | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700             | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800             | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900             | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000             | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100             | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200             | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | 882 | 2.41 | 2249  |
| 3300             | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | 894 | 2.54 | 2365  |
| 3400             | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | 907 | 2.67 | 2488  |
| 3500             | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | 870 | 2.46 | 2297  | 919 | 2.81 | 2616  |
| 3600             | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | 883 | 2.60 | 2425  | 932 | 2.95 | 2750  |
| 3700             | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | 846 | 2.41 | 2245  | 896 | 2.75 | 2560  | 944 | 3.10 | 2889  |
| 3750             | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | 853 | 2.48 | 2312  | 903 | 2.82 | 2630  | 951 | 3.18 | 2962  |
| 3800             | 753                               | 1.91 | 1783  | 808 | 2.22 | 2074  | 861 | 2.55 | 2380  | 910 | 2.90 | 2701  | 957 | 3.26 | 3036  |
| 3900             | 770                               | 2.05 | 1912  | 824 | 2.37 | 2209  | 875 | 2.70 | 2522  | 924 | 3.05 | 2848  | 970 | 3.42 | 3189  |
| 4000             | 787                               | 2.20 | 2047  | 840 | 2.52 | 2351  | 890 | 2.86 | 2669  | 938 | 3.22 | 3002  | 984 | 3.59 | 3348  |
| 4100             | 804                               | 2.35 | 2189  | 856 | 2.68 | 2499  | 905 | 3.03 | 2824  | 952 | 3.39 | 3162  | —   | —    | —     |
| 4200             | 821                               | 2.51 | 2338  | 872 | 2.85 | 2655  | 920 | 3.20 | 2986  | 967 | 3.57 | 3331  | —   | —    | —     |
| 4250             | 829                               | 2.59 | 2415  | 880 | 2.93 | 2735  | 928 | 3.29 | 3069  | 974 | 3.66 | 3417  | —   | —    | —     |

## 580F103 (8½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2550             | 865                               | 2.05 | 1914  | 916  | 2.38 | 2223  | 964  | 2.73 | 2547  | 1010 | 3.10 | 2888  | 1054 | 3.48 | 3243  |
| 2600             | 869                               | 2.10 | 1957  | 920  | 2.43 | 2267  | 968  | 2.78 | 2593  | 1014 | 3.15 | 2935  | 1058 | 3.53 | 3292  |
| 2700             | 879                               | 2.19 | 2046  | 929  | 2.53 | 2360  | 976  | 2.88 | 2689  | 1022 | 3.25 | 3035  | 1066 | 3.64 | 3395  |
| 2800             | 889                               | 2.29 | 2140  | 938  | 2.64 | 2458  | 985  | 2.99 | 2791  | 1030 | 3.37 | 3140  | —    | —    | —     |
| 2900             | 899                               | 2.40 | 2239  | 948  | 2.75 | 2561  | 994  | 3.11 | 2898  | 1039 | 3.49 | 3250  | —    | —    | —     |
| 3000             | 910                               | 2.51 | 2343  | 958  | 2.86 | 2670  | 1004 | 3.23 | 3011  | 1048 | 3.61 | 3366  | —    | —    | —     |
| 3100             | 921                               | 2.63 | 2453  | 968  | 2.98 | 2783  | 1013 | 3.35 | 3128  | —    | —    | —     | —    | —    | —     |
| 3200             | 932                               | 2.75 | 2569  | 978  | 3.11 | 2903  | 1023 | 3.49 | 3252  | —    | —    | —     | —    | —    | —     |
| 3300             | 943                               | 2.88 | 2690  | 989  | 3.25 | 3029  | 1033 | 3.63 | 3382  | —    | —    | —     | —    | —    | —     |
| 3400             | 954                               | 3.02 | 2816  | 1000 | 3.39 | 3159  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3500             | 966                               | 3.16 | 2950  | 1011 | 3.54 | 3297  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3600             | 978                               | 3.31 | 3088  | 1022 | 3.69 | 3442  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700             | 990                               | 3.47 | 3233  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3750             | 996                               | 3.55 | 3308  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800             | 1002                              | 3.63 | 3385  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4250             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F120,121 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                     | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                      | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                      | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 3000                                                 | 555                               | 0.72 | 630   | 629 | 0.87 | 765   | 696 | 1.03 | 904   | 757 | 1.19 | 1048  | 814 | 1.36 | 1198  |
| 3100                                                 | 568                               | 0.78 | 686   | 641 | 0.94 | 825   | 706 | 1.10 | 968   | 766 | 1.27 | 1115  | 823 | 1.45 | 1269  |
| 3200                                                 | 582                               | 0.85 | 745   | 652 | 1.01 | 888   | 717 | 1.18 | 1035  | 776 | 1.35 | 1186  | 832 | 1.53 | 1343  |
| 3300                                                 | 595                               | 0.92 | 808   | 664 | 1.09 | 955   | 728 | 1.26 | 1106  | 786 | 1.44 | 1261  | 841 | 1.62 | 1421  |
| 3400                                                 | 609                               | 1.00 | 874   | 677 | 1.17 | 1026  | 739 | 1.35 | 1181  | 797 | 1.53 | 1340  | 851 | 1.71 | 1503  |
| 3500                                                 | 623                               | 1.08 | 945   | 689 | 1.25 | 1100  | 750 | 1.43 | 1259  | 807 | 1.62 | 1422  | 860 | 1.81 | 1589  |
| 3600                                                 | 636                               | 1.16 | 1019  | 702 | 1.34 | 1179  | 762 | 1.53 | 1341  | 817 | 1.72 | 1508  | 870 | 1.91 | 1679  |
| 3700                                                 | 650                               | 1.25 | 1097  | 714 | 1.44 | 1261  | 773 | 1.63 | 1428  | 828 | 1.82 | 1598  | 880 | 2.02 | 1772  |
| 3800                                                 | 664                               | 1.34 | 1179  | 727 | 1.54 | 1347  | 785 | 1.73 | 1518  | 839 | 1.93 | 1693  | 890 | 2.13 | 1870  |
| 3900                                                 | 678                               | 1.44 | 1266  | 740 | 1.64 | 1438  | 797 | 1.84 | 1613  | 850 | 2.04 | 1791  | 901 | 2.25 | 1973  |
| 4000                                                 | 693                               | 1.55 | 1356  | 753 | 1.75 | 1533  | 809 | 1.95 | 1712  | 861 | 2.16 | 1894  | 911 | 2.37 | 2080  |
| 4100                                                 | 707                               | 1.65 | 1451  | 766 | 1.86 | 1632  | 821 | 2.07 | 1816  | 873 | 2.28 | 2002  | —   | —    | —     |
| 4200                                                 | 721                               | 1.77 | 1551  | 779 | 1.98 | 1736  | 833 | 2.19 | 1924  | —   | —    | —     | —   | —    | —     |
| 4300                                                 | 735                               | 1.89 | 1656  | 792 | 2.10 | 1845  | 846 | 2.32 | 2037  | —   | —    | —     | —   | —    | —     |
| 4400                                                 | 750                               | 2.01 | 1764  | 806 | 2.23 | 1958  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4500                                                 | 764                               | 2.14 | 1879  | 819 | 2.37 | 2077  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4600                                                 | 779                               | 2.28 | 1998  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4700                                                 | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4800                                                 | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4900                                                 | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 5000                                                 | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F120,121 (10 TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|-------------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                            | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|                                                             | 1.2                               |      |       | 1.4 |      |       | 1.6 |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                             | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                        | 867                               | 1.54 | 1353  | 918 | 1.72 | 1513  | 966 | 1.91 | 1680  | 1012 | 2.11 | 1852  | 1056 | 2.31 | 2029  |
| 3100                                                        | 876                               | 1.63 | 1427  | 926 | 1.81 | 1590  | 973 | 2.00 | 1760  | 1019 | 2.20 | 1934  | —    | —    | —     |
| 3200                                                        | 884                               | 1.71 | 1504  | 934 | 1.90 | 1671  | 981 | 2.10 | 1843  | 1026 | 2.30 | 2020  | —    | —    | —     |
| 3300                                                        | 893                               | 1.81 | 1586  | 942 | 2.00 | 1755  | 988 | 2.20 | 1931  | 1033 | 2.40 | 2111  | —    | —    | —     |
| 3400                                                        | 902                               | 1.90 | 1671  | 950 | 2.10 | 1844  | 996 | 2.30 | 2022  | —    | —    | —     | —    | —    | —     |
| 3500                                                        | 911                               | 2.01 | 1760  | 959 | 2.21 | 1937  | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 3600                                                        | 920                               | 2.11 | 1854  | 967 | 2.32 | 2033  | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700                                                        | 929                               | 2.22 | 1951  | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800                                                        | 939                               | 2.34 | 2053  | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                                        | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 685 to 935 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F120,121 (10 TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|-------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                      | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                       | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                       | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 3000                                                  | 555                               | 0.72 | 630   | 629 | 0.87 | 765   | 696 | 1.03 | 904   | 757 | 1.19 | 1048  | 814 | 1.36 | 1198  |
| 3100                                                  | 568                               | 0.78 | 686   | 641 | 0.94 | 825   | 706 | 1.10 | 968   | 766 | 1.27 | 1115  | 823 | 1.45 | 1269  |
| 3200                                                  | 582                               | 0.85 | 745   | 652 | 1.01 | 888   | 717 | 1.18 | 1035  | 776 | 1.35 | 1186  | 832 | 1.53 | 1343  |
| 3300                                                  | 595                               | 0.92 | 808   | 664 | 1.09 | 955   | 728 | 1.26 | 1106  | 786 | 1.44 | 1261  | 841 | 1.62 | 1421  |
| 3400                                                  | 609                               | 1.00 | 874   | 677 | 1.17 | 1026  | 739 | 1.35 | 1181  | 797 | 1.53 | 1340  | 851 | 1.71 | 1503  |
| 3500                                                  | 623                               | 1.08 | 945   | 689 | 1.25 | 1100  | 750 | 1.43 | 1259  | 807 | 1.62 | 1422  | 860 | 1.81 | 1589  |
| 3600                                                  | 636                               | 1.16 | 1019  | 702 | 1.34 | 1179  | 762 | 1.53 | 1341  | 817 | 1.72 | 1508  | 870 | 1.91 | 1679  |
| 3700                                                  | 650                               | 1.25 | 1097  | 714 | 1.44 | 1261  | 773 | 1.63 | 1428  | 828 | 1.82 | 1598  | 880 | 2.02 | 1772  |
| 3800                                                  | 664                               | 1.34 | 1179  | 727 | 1.54 | 1347  | 785 | 1.73 | 1518  | 839 | 1.93 | 1693  | 890 | 2.13 | 1870  |
| 3900                                                  | 678                               | 1.44 | 1266  | 740 | 1.64 | 1438  | 797 | 1.84 | 1613  | 850 | 2.04 | 1791  | 901 | 2.25 | 1973  |
| 4000                                                  | 693                               | 1.55 | 1356  | 753 | 1.75 | 1533  | 809 | 1.95 | 1712  | 861 | 2.16 | 1894  | 911 | 2.37 | 2080  |
| 4100                                                  | 707                               | 1.65 | 1451  | 766 | 1.86 | 1632  | 821 | 2.07 | 1816  | 873 | 2.28 | 2002  | 922 | 2.50 | 2191  |
| 4200                                                  | 721                               | 1.77 | 1551  | 779 | 1.98 | 1736  | 833 | 2.19 | 1924  | 884 | 2.41 | 2114  | 933 | 2.63 | 2307  |
| 4300                                                  | 735                               | 1.89 | 1656  | 792 | 2.10 | 1845  | 846 | 2.32 | 2037  | 896 | 2.54 | 2231  | 944 | 2.77 | 2428  |
| 4400                                                  | 750                               | 2.01 | 1764  | 806 | 2.23 | 1958  | 858 | 2.45 | 2154  | 908 | 2.68 | 2352  | —   | —    | —     |
| 4500                                                  | 764                               | 2.14 | 1879  | 819 | 2.37 | 2077  | 871 | 2.59 | 2276  | 920 | 2.82 | 2479  | —   | —    | —     |
| 4600                                                  | 779                               | 2.28 | 1998  | 833 | 2.51 | 2200  | 883 | 2.74 | 2404  | —   | —    | —     | —   | —    | —     |
| 4700                                                  | 793                               | 2.42 | 2121  | 846 | 2.65 | 2328  | 896 | 2.89 | 2537  | —   | —    | —     | —   | —    | —     |
| 4800                                                  | 808                               | 2.56 | 2251  | 860 | 2.81 | 2462  | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 4900                                                  | 822                               | 2.72 | 2385  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |
| 5000                                                  | 837                               | 2.88 | 2525  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     |

| 580F120,121 (10 TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|--------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|-------------|-------------|-------------|
| Airflow<br>(Cfm)                                             | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|                                                              | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0         |             |             |
|                                                              | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       |
| 3000                                                         | 867                               | 1.54 | 1353  | 918  | 1.72 | 1513  | 966  | 1.91 | 1680  | 1012 | 2.11 | 1852  | 1056        | 2.31        | 2029        |
| 3100                                                         | 876                               | 1.63 | 1427  | 926  | 1.81 | 1590  | 973  | 2.00 | 1760  | 1019 | 2.20 | 1934  | 1062        | 2.41        | 2114        |
| 3200                                                         | 884                               | 1.71 | 1504  | 934  | 1.90 | 1671  | 981  | 2.10 | 1843  | 1026 | 2.30 | 2020  | 1069        | 2.51        | 2203        |
| 3300                                                         | 893                               | 1.81 | 1586  | 942  | 2.00 | 1755  | 988  | 2.20 | 1931  | 1033 | 2.40 | 2111  | 1076        | 2.62        | 2295        |
| 3400                                                         | 902                               | 1.90 | 1671  | 950  | 2.10 | 1844  | 996  | 2.30 | 2022  | 1041 | 2.51 | 2205  | 1083        | 2.73        | 2393        |
| 3500                                                         | 911                               | 2.01 | 1760  | 959  | 2.21 | 1937  | 1004 | 2.41 | 2118  | 1048 | 2.62 | 2303  | <b>1091</b> | <b>2.84</b> | <b>2494</b> |
| 3600                                                         | 920                               | 2.11 | 1854  | 967  | 2.32 | 2033  | 1013 | 2.53 | 2217  | 1056 | 2.74 | 2406  | —           | —           | —           |
| 3700                                                         | 929                               | 2.22 | 1951  | 976  | 2.43 | 2134  | 1021 | 2.65 | 2322  | 1064 | 2.86 | 2513  | —           | —           | —           |
| 3800                                                         | 939                               | 2.34 | 2053  | 985  | 2.55 | 2239  | 1030 | 2.77 | 2430  | —    | —    | —     | —           | —           | —           |
| 3900                                                         | 949                               | 2.46 | 2159  | 995  | 2.68 | 2349  | 1039 | 2.90 | 2543  | —    | —    | —     | —           | —           | —           |
| 4000                                                         | 959                               | 2.59 | 2269  | 1004 | 2.81 | 2462  | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4100                                                         | 969                               | 2.72 | 2384  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4200                                                         | 979                               | 2.85 | 2504  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4300                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4400                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4500                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4600                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4700                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4800                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 4900                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 5000                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 835 to 1085 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F120,121 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |      |      |       |
|---------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                        | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |      |      |       |
|                                                         | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0  |      |       |
|                                                         | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                    | 555                               | 0.72 | 630   | 629 | 0.87 | 765   | 696 | 1.03 | 904   | 757 | 1.19 | 1048  | 814  | 1.36 | 1198  |
| 3100                                                    | 568                               | 0.78 | 686   | 641 | 0.94 | 825   | 706 | 1.10 | 968   | 766 | 1.27 | 1115  | 823  | 1.45 | 1269  |
| 3200                                                    | 582                               | 0.85 | 745   | 652 | 1.01 | 888   | 717 | 1.18 | 1035  | 776 | 1.35 | 1186  | 832  | 1.53 | 1343  |
| 3300                                                    | 595                               | 0.92 | 808   | 664 | 1.09 | 955   | 728 | 1.26 | 1106  | 786 | 1.44 | 1261  | 841  | 1.62 | 1421  |
| 3400                                                    | 609                               | 1.00 | 874   | 677 | 1.17 | 1026  | 739 | 1.35 | 1181  | 797 | 1.53 | 1340  | 851  | 1.71 | 1503  |
| 3500                                                    | 623                               | 1.08 | 945   | 689 | 1.25 | 1100  | 750 | 1.43 | 1259  | 807 | 1.62 | 1422  | 860  | 1.81 | 1589  |
| 3600                                                    | 636                               | 1.16 | 1019  | 702 | 1.34 | 1179  | 762 | 1.53 | 1341  | 817 | 1.72 | 1508  | 870  | 1.91 | 1679  |
| 3700                                                    | 650                               | 1.25 | 1097  | 714 | 1.44 | 1261  | 773 | 1.63 | 1428  | 828 | 1.82 | 1598  | 880  | 2.02 | 1772  |
| 3800                                                    | 664                               | 1.34 | 1179  | 727 | 1.54 | 1347  | 785 | 1.73 | 1518  | 839 | 1.93 | 1693  | 890  | 2.13 | 1870  |
| 3900                                                    | 678                               | 1.44 | 1266  | 740 | 1.64 | 1438  | 797 | 1.84 | 1613  | 850 | 2.04 | 1791  | 901  | 2.25 | 1973  |
| 4000                                                    | 693                               | 1.55 | 1356  | 753 | 1.75 | 1533  | 809 | 1.95 | 1712  | 861 | 2.16 | 1894  | 911  | 2.37 | 2080  |
| 4100                                                    | 707                               | 1.65 | 1451  | 766 | 1.86 | 1632  | 821 | 2.07 | 1816  | 873 | 2.28 | 2002  | 922  | 2.50 | 2191  |
| 4200                                                    | 721                               | 1.77 | 1551  | 779 | 1.98 | 1736  | 833 | 2.19 | 1924  | 884 | 2.41 | 2114  | 933  | 2.63 | 2307  |
| 4300                                                    | 735                               | 1.89 | 1656  | 792 | 2.10 | 1845  | 846 | 2.32 | 2037  | 896 | 2.54 | 2231  | 944  | 2.77 | 2428  |
| 4400                                                    | 750                               | 2.01 | 1764  | 806 | 2.23 | 1958  | 858 | 2.45 | 2154  | 908 | 2.68 | 2352  | 955  | 2.91 | 2553  |
| 4500                                                    | 764                               | 2.14 | 1879  | 819 | 2.37 | 2077  | 871 | 2.59 | 2276  | 920 | 2.82 | 2479  | 966  | 3.06 | 2684  |
| 4600                                                    | 779                               | 2.28 | 1998  | 833 | 2.51 | 2200  | 883 | 2.74 | 2404  | 932 | 2.97 | 2611  | 978  | 3.21 | 2820  |
| 4700                                                    | 793                               | 2.42 | 2121  | 846 | 2.65 | 2328  | 896 | 2.89 | 2537  | 944 | 3.13 | 2747  | 989  | 3.37 | 2960  |
| 4800                                                    | 808                               | 2.56 | 2251  | 860 | 2.81 | 2462  | 909 | 3.05 | 2674  | 956 | 3.29 | 2889  | 1001 | 3.54 | 3106  |
| 4900                                                    | 822                               | 2.72 | 2385  | 873 | 2.96 | 2601  | 922 | 3.21 | 2818  | 968 | 3.46 | 3037  | 1013 | 3.71 | 3258  |
| 5000                                                    | 837                               | 2.88 | 2525  | 887 | 3.13 | 2745  | 935 | 3.38 | 2966  | 981 | 3.63 | 3189  | 1024 | 3.89 | 3414  |

| 580F120,121 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                               | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                                | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                                | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                           | 867                               | 1.54 | 1353  | 918  | 1.72 | 1513  | 966  | 1.91 | 1680  | 1012 | 2.11 | 1852  | 1056 | 2.31 | 2029  |
| 3100                                                           | 876                               | 1.63 | 1427  | 926  | 1.81 | 1590  | 973  | 2.00 | 1760  | 1019 | 2.20 | 1934  | 1062 | 2.41 | 2114  |
| 3200                                                           | 884                               | 1.71 | 1504  | 934  | 1.90 | 1671  | 981  | 2.10 | 1843  | 1026 | 2.30 | 2020  | 1069 | 2.51 | 2203  |
| 3300                                                           | 893                               | 1.81 | 1586  | 942  | 2.00 | 1755  | 988  | 2.20 | 1931  | 1033 | 2.40 | 2111  | 1076 | 2.62 | 2295  |
| 3400                                                           | 902                               | 1.90 | 1671  | 950  | 2.10 | 1844  | 996  | 2.30 | 2022  | 1041 | 2.51 | 2205  | 1083 | 2.73 | 2393  |
| 3500                                                           | 911                               | 2.01 | 1760  | 959  | 2.21 | 1937  | 1004 | 2.41 | 2118  | 1048 | 2.62 | 2303  | 1091 | 2.84 | 2494  |
| 3600                                                           | 920                               | 2.11 | 1854  | 967  | 2.32 | 2033  | 1013 | 2.53 | 2217  | 1056 | 2.74 | 2406  | 1098 | 2.96 | 2600  |
| 3700                                                           | 929                               | 2.22 | 1951  | 976  | 2.43 | 2134  | 1021 | 2.65 | 2322  | 1064 | 2.86 | 2513  | 1106 | 3.09 | 2710  |
| 3800                                                           | 939                               | 2.34 | 2053  | 985  | 2.55 | 2239  | 1030 | 2.77 | 2430  | 1073 | 2.99 | 2625  | 1114 | 3.22 | 2824  |
| 3900                                                           | 949                               | 2.46 | 2159  | 995  | 2.68 | 2349  | 1039 | 2.90 | 2543  | 1081 | 3.12 | 2741  | 1122 | 3.35 | 2943  |
| 4000                                                           | 959                               | 2.59 | 2269  | 1004 | 2.81 | 2462  | 1048 | 3.03 | 2660  | 1090 | 3.26 | 2861  | 1130 | 3.49 | 3067  |
| 4100                                                           | 969                               | 2.72 | 2384  | 1014 | 2.94 | 2581  | 1057 | 3.17 | 2782  | 1098 | 3.40 | 2987  | 1139 | 3.64 | 3195  |
| 4200                                                           | 979                               | 2.85 | 2504  | 1024 | 3.08 | 2705  | 1066 | 3.31 | 2909  | 1107 | 3.55 | 3117  | 1147 | 3.79 | 3329  |
| 4300                                                           | 990                               | 3.00 | 2629  | 1034 | 3.23 | 2833  | 1076 | 3.46 | 3040  | 1117 | 3.71 | 3252  | 1156 | 3.95 | 3467  |
| 4400                                                           | 1000                              | 3.14 | 2758  | 1044 | 3.38 | 2966  | 1085 | 3.62 | 3177  | 1126 | 3.87 | 3392  | 1165 | 4.11 | 3611  |
| 4500                                                           | 1011                              | 3.30 | 2892  | 1054 | 3.54 | 3104  | 1095 | 3.78 | 3319  | 1135 | 4.03 | 3537  | 1174 | 4.28 | 3759  |
| 4600                                                           | 1022                              | 3.45 | 3032  | 1064 | 3.70 | 3247  | 1105 | 3.95 | 3466  | 1145 | 4.20 | 3688  | 1183 | 4.46 | 3913  |
| 4700                                                           | 1033                              | 3.62 | 3176  | 1075 | 3.87 | 3395  | 1115 | 4.12 | 3618  | 1155 | 4.38 | 3843  | 1193 | 4.64 | 4072  |
| 4800                                                           | 1044                              | 3.79 | 3326  | 1085 | 4.04 | 3549  | 1126 | 4.30 | 3775  | 1164 | 4.56 | 4004  | 1202 | 4.83 | 4237  |
| 4900                                                           | 1055                              | 3.97 | 3482  | 1096 | 4.22 | 3708  | 1136 | 4.49 | 3938  | 1174 | 4.75 | 4171  | 1212 | 5.02 | 4406  |
| 5000                                                           | 1066                              | 4.15 | 3642  | 1107 | 4.41 | 3873  | 1146 | 4.68 | 4106  | 1184 | 4.95 | 4342  | 1221 | 5.22 | 4582  |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F150,151 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|-------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                      | External Static Pressure (in. wg) |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|                                                       | 0.2                               |      |       | 0.4 |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                       | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700                                                  | 676                               | 1.19 | 1106  | 747 | 1.42 | 1328  | 811  | 1.66 | 1552  | 871  | 1.91 | 1779  | 927  | 2.15 | 2008  |
| 3800                                                  | 690                               | 1.27 | 1185  | 760 | 1.52 | 1414  | 823  | 1.76 | 1644  | 882  | 2.01 | 1876  | 938  | 2.26 | 2111  |
| 3900                                                  | 705                               | 1.36 | 1269  | 773 | 1.61 | 1503  | 835  | 1.86 | 1739  | 894  | 2.12 | 1977  | 948  | 2.38 | 2217  |
| 4000                                                  | 719                               | 1.45 | 1357  | 786 | 1.71 | 1597  | 848  | 1.97 | 1838  | 905  | 2.23 | 2082  | 959  | 2.50 | 2328  |
| 4100                                                  | 734                               | 1.55 | 1449  | 799 | 1.82 | 1695  | 860  | 2.08 | 1942  | 917  | 2.35 | 2192  | 970  | 2.62 | 2443  |
| 4200                                                  | 748                               | 1.66 | 1545  | 813 | 1.93 | 1797  | 872  | 2.20 | 2050  | 928  | 2.47 | 2305  | 981  | 2.75 | 2562  |
| 4300                                                  | 763                               | 1.76 | 1646  | 826 | 2.04 | 1903  | 885  | 2.32 | 2162  | 940  | 2.60 | 2423  | 992  | 2.88 | 2686  |
| 4400                                                  | 778                               | 1.88 | 1751  | 840 | 2.16 | 2014  | 898  | 2.44 | 2279  | 952  | 2.73 | 2546  | 1004 | 3.02 | 2814  |
| 4500                                                  | 792                               | 1.99 | 1860  | 853 | 2.28 | 2130  | 910  | 2.57 | 2401  | 964  | 2.87 | 2673  | 1015 | 3.16 | 2947  |
| 4600                                                  | 807                               | 2.12 | 1975  | 867 | 2.41 | 2250  | 923  | 2.71 | 2527  | 976  | 3.01 | 2805  | 1027 | 3.31 | 3085  |
| 4700                                                  | 822                               | 2.25 | 2094  | 881 | 2.55 | 2375  | 936  | 2.85 | 2658  | 989  | 3.15 | 2942  | 1038 | 3.46 | 3227  |
| 4800                                                  | 837                               | 2.38 | 2218  | 895 | 2.69 | 2505  | 949  | 3.00 | 2794  | 1001 | 3.31 | 3083  | 1050 | 3.62 | 3375  |
| 4900                                                  | 852                               | 2.52 | 2347  | 909 | 2.83 | 2640  | 963  | 3.15 | 2935  | 1014 | 3.46 | 3230  | —    | —    | —     |
| 5000                                                  | 867                               | 2.66 | 2482  | 923 | 2.98 | 2781  | 976  | 3.30 | 3081  | 1026 | 3.63 | 3383  | —    | —    | —     |
| 5100                                                  | 882                               | 2.81 | 2622  | 937 | 3.14 | 2926  | 989  | 3.47 | 3232  | —    | —    | —     | —    | —    | —     |
| 5200                                                  | 897                               | 2.97 | 2766  | 951 | 3.30 | 3077  | 1003 | 3.63 | 3389  | —    | —    | —     | —    | —    | —     |
| 5300                                                  | 912                               | 3.13 | 2917  | 966 | 3.47 | 3233  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5400                                                  | 927                               | 3.30 | 3073  | 980 | 3.64 | 3395  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5500                                                  | 943                               | 3.47 | 3234  | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5600                                                  | 958                               | 3.65 | 3402  | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5700                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5800                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                                                  | —                                 | —    | —     | —   | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 580F150,151 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                             | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                              | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                              | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700                                                         | 981                               | 2.40 | 2240  | 1031 | 2.65 | 2473  | 1079 | 2.91 | 2709  | 1125 | 3.16 | 2948  | 1169 | 3.42 | 3189  |
| 3800                                                         | 990                               | 2.52 | 2348  | 1040 | 2.77 | 2587  | 1088 | 3.03 | 2828  | 1133 | 3.30 | 3073  | 1177 | 3.56 | 3319  |
| 3900                                                         | 1000                              | 2.64 | 2459  | 1050 | 2.90 | 2705  | 1097 | 3.17 | 2951  | 1142 | 3.43 | 3201  | 1186 | 3.70 | 3452  |
| 4000                                                         | 1011                              | 2.76 | 2576  | 1059 | 3.03 | 2826  | 1106 | 3.30 | 3079  | 1151 | 3.58 | 3334  | —    | —    | —     |
| 4100                                                         | 1021                              | 2.89 | 2697  | 1069 | 3.17 | 2953  | 1116 | 3.44 | 3210  | —    | —    | —     | —    | —    | —     |
| 4200                                                         | 1031                              | 3.03 | 2822  | 1079 | 3.31 | 3083  | 1125 | 3.59 | 3347  | —    | —    | —     | —    | —    | —     |
| 4300                                                         | 1042                              | 3.16 | 2951  | 1089 | 3.45 | 3218  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400                                                         | 1053                              | 3.31 | 3085  | 1100 | 3.60 | 3357  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500                                                         | 1064                              | 3.46 | 3224  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600                                                         | 1075                              | 3.61 | 3367  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5100                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5200                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5300                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5400                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5500                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5600                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5700                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5800                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 580F150,151 (12½ TONS) — ALTERNATE MOTOR (BELT DRIVE)* |                                   |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|--------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|-------------|-------------|-------------|
| AIRFLOW<br>(Cfm)                                       | EXTERNAL STATIC PRESSURE (in. wg) |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|                                                        | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0         |             |             |
|                                                        | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       |
| 3700                                                   | 676                               | 1.19 | 1106  | 747  | 1.42 | 1328  | 811  | 1.66 | 1552  | 871  | 1.91 | 1779  | 927         | 2.15        | 2008        |
| 3800                                                   | 690                               | 1.27 | 1185  | 760  | 1.52 | 1414  | 823  | 1.76 | 1644  | 882  | 2.01 | 1876  | 938         | 2.26        | 2111        |
| 3900                                                   | 705                               | 1.36 | 1269  | 773  | 1.61 | 1503  | 835  | 1.86 | 1739  | 894  | 2.12 | 1977  | 948         | 2.38        | 2217        |
| 4000                                                   | 719                               | 1.45 | 1357  | 786  | 1.71 | 1597  | 848  | 1.97 | 1838  | 905  | 2.23 | 2082  | 959         | 2.50        | 2328        |
| 4100                                                   | 734                               | 1.55 | 1449  | 799  | 1.82 | 1695  | 860  | 2.08 | 1942  | 917  | 2.35 | 2192  | 970         | 2.62        | 2443        |
| 4200                                                   | 748                               | 1.66 | 1545  | 813  | 1.93 | 1797  | 872  | 2.20 | 2050  | 928  | 2.47 | 2305  | 981         | 2.75        | 2562        |
| 4300                                                   | 763                               | 1.76 | 1646  | 826  | 2.04 | 1903  | 885  | 2.32 | 2162  | 940  | 2.60 | 2423  | 992         | 2.88        | 2686        |
| 4400                                                   | 778                               | 1.88 | 1751  | 840  | 2.16 | 2014  | 898  | 2.44 | 2279  | 952  | 2.73 | 2546  | 1004        | 3.02        | 2814        |
| 4500                                                   | 792                               | 1.99 | 1860  | 853  | 2.28 | 2130  | 910  | 2.57 | 2401  | 964  | 2.87 | 2673  | 1015        | 3.16        | 2947        |
| 4600                                                   | 807                               | 2.12 | 1975  | 867  | 2.41 | 2250  | 923  | 2.71 | 2527  | 976  | 3.01 | 2805  | 1027        | 3.31        | 3085        |
| 4700                                                   | 822                               | 2.25 | 2094  | 881  | 2.55 | 2375  | 936  | 2.85 | 2658  | 989  | 3.15 | 2942  | 1038        | 3.46        | 3227        |
| 4800                                                   | 837                               | 2.38 | 2218  | 895  | 2.69 | 2505  | 949  | 3.00 | 2794  | 1001 | 3.31 | 3083  | 1050        | 3.62        | 3375        |
| 4900                                                   | 852                               | 2.52 | 2347  | 909  | 2.83 | 2640  | 963  | 3.15 | 2935  | 1014 | 3.46 | 3230  | 1062        | 3.78        | 3528        |
| 5000                                                   | 867                               | 2.66 | 2482  | 923  | 2.98 | 2781  | 976  | 3.30 | 3081  | 1026 | 3.63 | 3383  | 1074        | 3.95        | 3685        |
| 5100                                                   | 882                               | 2.81 | 2622  | 937  | 3.14 | 2926  | 989  | 3.47 | 3232  | 1039 | 3.80 | 3540  | 1086        | 4.13        | 3849        |
| 5200                                                   | 897                               | 2.97 | 2766  | 951  | 3.30 | 3077  | 1003 | 3.63 | 3389  | 1052 | 3.97 | 3702  | 1099        | 4.31        | 4017        |
| 5300                                                   | 912                               | 3.13 | 2917  | 966  | 3.47 | 3233  | 1016 | 3.81 | 3551  | 1065 | 4.15 | 3870  | 1111        | 4.49        | 4191        |
| 5400                                                   | 927                               | 3.30 | 3073  | 980  | 3.64 | 3395  | 1030 | 3.99 | 3719  | 1078 | 4.34 | 4044  | 1123        | 4.69        | 4370        |
| 5500                                                   | 943                               | 3.47 | 3234  | 994  | 3.82 | 3563  | 1044 | 4.17 | 3892  | 1091 | 4.53 | 4223  | <b>1136</b> | <b>4.88</b> | <b>4555</b> |
| 5600                                                   | 958                               | 3.65 | 3402  | 1009 | 4.01 | 3736  | 1057 | 4.37 | 4071  | 1104 | 4.73 | 4408  | <b>1149</b> | <b>5.09</b> | <b>4746</b> |
| 5700                                                   | 973                               | 3.83 | 3575  | 1023 | 4.20 | 3915  | 1071 | 4.56 | 4256  | 1117 | 4.93 | 4599  | —           | —           | —           |
| 5800                                                   | 988                               | 4.03 | 3754  | 1038 | 4.40 | 4100  | 1085 | 4.77 | 4447  | 1130 | 5.14 | 4796  | —           | —           | —           |
| 5900                                                   | 1004                              | 4.22 | 3939  | 1052 | 4.60 | 4292  | 1099 | 4.98 | 4645  | —    | —    | —     | —           | —           | —           |
| 6000                                                   | 1019                              | 4.43 | 4131  | 1067 | 4.81 | 4489  | 1113 | 5.20 | 4848  | —    | —    | —     | —           | —           | —           |
| 6100                                                   | 1034                              | 4.64 | 4329  | 1082 | 5.03 | 4693  | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 6200                                                   | 1050                              | 4.86 | 4533  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 6300                                                   | 1065                              | 5.09 | 4744  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |

| 580F150,151 (12½ TONS) — ALTERNATE MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| AIRFLOW<br>(Cfm)                                              | EXTERNAL STATIC PRESSURE (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700                                                          | 981                               | 2.40 | 2240  | 1031 | 2.65 | 2473  | 1079 | 2.91 | 2709  | 1125 | 3.16 | 2948  | 1169 | 3.42 | 3189  |
| 3800                                                          | 990                               | 2.52 | 2348  | 1040 | 2.77 | 2587  | 1088 | 3.03 | 2828  | 1133 | 3.30 | 3073  | 1177 | 3.56 | 3319  |
| 3900                                                          | 1000                              | 2.64 | 2459  | 1050 | 2.90 | 2705  | 1097 | 3.17 | 2951  | 1142 | 3.43 | 3201  | 1186 | 3.70 | 3452  |
| 4000                                                          | 1011                              | 2.76 | 2576  | 1059 | 3.03 | 2826  | 1106 | 3.30 | 3079  | 1151 | 3.58 | 3334  | 1194 | 3.85 | 3591  |
| 4100                                                          | 1021                              | 2.89 | 2697  | 1069 | 3.17 | 2953  | 1116 | 3.44 | 3210  | 1160 | 3.72 | 3471  | 1203 | 4.00 | 3733  |
| 4200                                                          | 1031                              | 3.03 | 2822  | 1079 | 3.31 | 3083  | 1125 | 3.59 | 3347  | 1169 | 3.87 | 3612  | 1212 | 4.16 | 3880  |
| 4300                                                          | 1042                              | 3.16 | 2951  | 1089 | 3.45 | 3218  | 1135 | 3.74 | 3487  | 1179 | 4.03 | 3758  | 1221 | 4.32 | 4031  |
| 4400                                                          | 1053                              | 3.31 | 3085  | 1100 | 3.60 | 3357  | 1145 | 3.90 | 3632  | 1188 | 4.19 | 3909  | 1230 | 4.49 | 4187  |
| 4500                                                          | 1064                              | 3.46 | 3224  | 1110 | 3.76 | 3502  | 1155 | 4.06 | 3782  | 1198 | 4.36 | 4064  | 1239 | 4.66 | 4348  |
| 4600                                                          | 1075                              | 3.61 | 3367  | 1121 | 3.91 | 3650  | 1165 | 4.22 | 3937  | 1208 | 4.53 | 4224  | 1249 | 4.84 | 4514  |
| 4700                                                          | 1086                              | 3.77 | 3515  | 1131 | 4.08 | 3805  | 1175 | 4.39 | 4096  | 1217 | 4.71 | 4389  | 1258 | 5.02 | 4684  |
| 4800                                                          | 1097                              | 3.93 | 3668  | 1142 | 4.25 | 3963  | 1186 | 4.57 | 4260  | 1228 | 4.89 | 4559  | 1268 | 5.21 | 4860  |
| 4900                                                          | 1109                              | 4.10 | 3826  | 1153 | 4.43 | 4128  | 1196 | 4.75 | 4430  | 1238 | 5.08 | 4734  | —    | —    | —     |
| 5000                                                          | 1120                              | 4.28 | 3990  | 1164 | 4.61 | 4296  | 1207 | 4.94 | 4604  | —    | —    | —     | —    | —    | —     |
| 5100                                                          | 1132                              | 4.46 | 4159  | 1175 | 4.79 | 4471  | 1218 | 5.13 | 4784  | —    | —    | —     | —    | —    | —     |
| 5200                                                          | 1144                              | 4.65 | 4333  | 1187 | 4.99 | 4651  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5300                                                          | 1155                              | 4.84 | 4512  | 1198 | 5.19 | 4836  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5400                                                          | 1167                              | 5.04 | 4697  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5500                                                          | 1179                              | 5.24 | 4889  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5600                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5700                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5800                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                                                          | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.
3. See page 70 for General Fan Performance Notes.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

### GENERAL NOTES FOR FAN PERFORMANCE DATA TABLES

1. Values include losses for filters, unit casing, and wet coils. See this page for accessory/FIOP static pressure information.
2. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using fan motors up to the wattage ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Performance table on page 73 for additional information.
3. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative for details.
4. Interpolation is permissible. Do not extrapolate. (Belt drive units only.)

### OUTDOOR SOUND POWER (Total Unit)

| UNIT 580F | SOUND RATING<br>60 Hz (dB) | A-WEIGHTED<br>(dB) | OCTAVE BANDS |      |      |      |      |      |      |      |
|-----------|----------------------------|--------------------|--------------|------|------|------|------|------|------|------|
|           |                            |                    | 63           | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 036-072   | 81                         | 80.5               | 56.8         | 75.8 | 72.4 | 72.9 | 74.8 | 75.4 | 71.3 | 69.1 |
| 073       | 80                         | 80.0               | 59.1         | 68.9 | 68.7 | 71.9 | 74.0 | 68.9 | 65.7 | 59.0 |
| 090       | 87                         | 86.4               | 83.2         | 87.4 | 83.5 | 82.8 | 83.0 | 77.7 | 71.8 | 67.0 |
| 091, 103  | 82                         | 82.0               | 62.2         | 69.3 | 71.5 | 74.7 | 76.2 | 72.9 | 68.7 | 61.5 |
| 120       | 88                         | 87.6               | 97.6         | 90.4 | 85.7 | 84.8 | 83.9 | 77.5 | 71.3 | 65.8 |
| 121       | 84                         | 84.0               | 64.6         | 71.7 | 73.3 | 76.9 | 77.6 | 73.7 | 70.6 | 63.7 |
| 150       | 87                         | 86.4               | 83.7         | 87.2 | 83.4 | 82.8 | 83.0 | 77.7 | 71.8 | 67.0 |
| 151       | 86                         | 86.0               | 63.7         | 69.9 | 72.5 | 78.2 | 81.1 | 77.3 | 73.3 | 66.8 |

**NOTE:** Indoor sound power is available in Bryant's Electronic Catalog program (ECAT) for specific operating parameters.

### ACCESSORY/FIOP ECONOMIZER IV AND ECONOMISER2 STATIC PRESSURE\* (in. wg) — 580F036-073

| COMPONENT                                | CFM   |       |      |       |       |       |       |       |
|------------------------------------------|-------|-------|------|-------|-------|-------|-------|-------|
|                                          | 1250  | 1500  | 1750 | 2000  | 2250  | 2500  | 2750  | 3000  |
| Vertical EconoMiSer IV and EconoMiSer2   | 0.045 | 0.065 | 0.08 | 0.12  | 0.145 | 0.175 | 0.22  | 0.255 |
| Horizontal EconoMiSer IV and EconoMiSer2 | —     | —     | 0.1  | 0.125 | 0.15  | 0.18  | 0.225 | 0.275 |

#### LEGEND

FIOP — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should be used in conjunction with the Fan Performance tables to determine indoor blower rpm and watts.

### ACCESSORY/FIOP ECONOMISER IV AND ECONOMISER2 STATIC PRESSURE\* (in. wg) — 580F090-151

| COMPONENT                                | CFM  |       |       |       |      |      |      |       |      |      |       |       |      |      |
|------------------------------------------|------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|------|------|
|                                          | 2250 | 2500  | 2750  | 3000  | 3250 | 3500 | 3750 | 4000  | 4250 | 4500 | 4750  | 5000  | 5250 | 6250 |
| Vertical EconoMiSer IV and EconoMiSer2   | 0.06 | 0.075 | 0.09  | 0.115 | 0.13 | 0.15 | 0.17 | 0.195 | 0.22 | 0.25 | 0.285 | 0.325 | 0.36 | —    |
| Horizontal EconoMiSer IV and EconoMiSer2 | —    | 0.1   | 0.125 | 0.15  | 0.18 | 0.21 | 0.25 | 0.275 | 0.3  | 0.34 | 0.388 | —     | —    | —    |

#### LEGEND

FIOP — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

## PERFORMANCE DATA (cont)

### FAN RPM AT MOTOR PULLEY SETTINGS\* — 580F036-073

| UNIT 580F | MOTOR PULLEY TURNS OPEN |      |      |       |      |       |      |       |      |       |      |       |      |
|-----------|-------------------------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|           | 0                       | 1/2  | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 036†      | 1045                    | 1009 | 973  | 937   | 901  | 865   | 829  | 793   | 757  | 721   | 685  | —     | —    |
| 036**     | 1455                    | 1423 | 1392 | 1360  | 1328 | 1297  | 1265 | 1233  | 1202 | 1170  | 1138 | 1107  | 1075 |
| 048†      | 1175                    | 1135 | 1094 | 1054  | 1013 | 973   | 932  | 892   | 851  | 811   | 770  | —     | —    |
| 048**     | 1455                    | 1423 | 1392 | 1360  | 1328 | 1297  | 1265 | 1233  | 1202 | 1170  | 1138 | 1107  | 1075 |
| 060†      | 1300                    | 1266 | 1233 | 1200  | 1166 | 1133  | 1100 | 1066  | 1033 | 1000  | 966  | 933   | 900  |
| 060**     | 1685                    | 1647 | 1608 | 1570  | 1531 | 1493  | 1454 | 1416  | 1377 | 1339  | 1300 | —     | —    |
| 072,073†† | 1460                    | 1421 | 1382 | 1343  | 1304 | 1265  | 1226 | 1187  | 1148 | 1109  | 1070 | —     | —    |
| 072,073** | 1685                    | 1647 | 1608 | 1570  | 1531 | 1493  | 1454 | 1416  | 1377 | 1339  | 1300 | —     | —    |

\*Approximate fan rpm shown.

†Indicates alternate motor and drive package.

\*\*Indicates high-static motor and drive package.

††Indicates standard motor and drive package.

### FAN RPM AT MOTOR PULLEY SETTINGS\* — 580F090-151

| UNIT 580F  | MOTOR PULLEY TURNS OPEN |      |      |       |      |       |     |       |     |       |     |       |     |
|------------|-------------------------|------|------|-------|------|-------|-----|-------|-----|-------|-----|-------|-----|
|            | 0                       | 1/2  | 1    | 1 1/2 | 2    | 2 1/2 | 3   | 3 1/2 | 4   | 4 1/2 | 5   | 5 1/2 | 6   |
| 090,091†   | 840                     | 815  | 790  | 765   | 740  | 715   | 690 | 665   | 635 | 615   | 590 | —     | —   |
| 090,091**  | 935                     | 910  | 885  | 860   | 835  | 810   | 785 | 760   | 735 | 710   | 685 | —     | —   |
| 090,091††  | 1080                    | 1025 | 1007 | 988   | 970  | 952   | 933 | 915   | 897 | 878   | 860 | —     | —   |
| 103†       | 935                     | 910  | 885  | 860   | 835  | 810   | 785 | 760   | 735 | 710   | 685 | —     | —   |
| 103††      | 1080                    | 1025 | 1007 | 988   | 970  | 952   | 933 | 915   | 897 | 878   | 860 | —     | —   |
| 120,121†   | 935                     | 910  | 885  | 860   | 835  | 810   | 785 | 760   | 735 | 710   | 685 | —     | —   |
| 120,121*** | 1085                    | 1060 | 1035 | 1010  | 985  | 960   | 935 | 910   | 885 | 860   | 835 | —     | —   |
| 120,121††  | 1130                    | 1112 | 1087 | 1062  | 1037 | 1012  | 987 | 962   | 937 | 912   | 887 | 862   | 830 |
| 150,151†   | 1080                    | 1060 | 1035 | 1015  | 990  | 970   | 950 | 925   | 905 | 880   | 860 | —     | —   |
| 150,151*** | 1130                    | 1112 | 1087 | 1062  | 1037 | 1012  | 987 | 962   | 937 | 912   | 887 | 862   | 830 |

\*Approximate fan rpm shown.

†Indicates standard motor and drive package.

\*\*Indicates alternate drive package only.

††Indicates high-static motor and drive package.

\*\*\*Indicates alternate motor and drive package.

### ALTITUDE COMPENSATION\* — 580F036-073 STANDARD UNITS

| ELEVATION<br>(ft) | 74,000 AND 115,000 BTUH<br>NOMINAL INPUT |                                 | 150,000 BTUH<br>NOMINAL INPUT |                                 |
|-------------------|------------------------------------------|---------------------------------|-------------------------------|---------------------------------|
|                   | Natural Gas<br>Orifice Size†             | Liquid Propane<br>Orifice Size† | Natural Gas<br>Orifice Size†  | Liquid Propane<br>Orifice Size† |
| 0-2,000           | 33                                       | 43                              | 30                            | 37                              |
| 2,000             | 36                                       | 44                              | 31                            | 39                              |
| 3,000             | 36                                       | 45                              | 31                            | 40                              |
| 4,000             | 37                                       | 45                              | 32                            | 41                              |
| 5,000             | 38                                       | 46                              | 32                            | 42                              |
| 6,000             | 40                                       | 47                              | 34                            | 43                              |
| 7,000             | 41                                       | 48                              | 35                            | 43                              |
| 8,000             | 42                                       | 49                              | 36                            | 44                              |
| 9,000             | 43                                       | 50                              | 37                            | 45                              |
| 10,000            | 44                                       | 50                              | 39                            | 46                              |
| 11,000            | 45                                       | 51                              | 41                            | 47                              |
| 12,000            | 46                                       | 52                              | 42                            | 48                              |
| 13,000            | 47                                       | 52                              | 43                            | 49                              |
| 14,000            | 48                                       | 53                              | 44                            | 50                              |

\*As the height above sea level increases, there is less oxygen per cubic foot of air. Therefore, heat input rate should be reduced at higher altitudes.

†Orifices available through your local Bryant distributor.

### ALTITUDE COMPENSATION\* — 580F090-151

| ELEVATION<br>(ft) | 125,000, 180,000, AND 224,000<br>BTUH NOMINAL INPUT |                                 | 250,000 BTUH<br>NOMINAL INPUT |                                 |
|-------------------|-----------------------------------------------------|---------------------------------|-------------------------------|---------------------------------|
|                   | Natural Gas<br>Orifice Size†                        | Liquid Propane<br>Orifice Size† | Natural Gas<br>Orifice Size†  | Liquid Propane<br>Orifice Size† |
| 0-2,000           | 31                                                  | 41                              | 30                            | 38                              |
| 2,000             | 32                                                  | 42                              | 30                            | 39                              |
| 3,000             | 32                                                  | 42                              | 31                            | 40                              |
| 4,000             | 32                                                  | 42                              | 32                            | 41                              |
| 5,000             | 33                                                  | 43                              | 33                            | 42                              |
| 6,000             | 34                                                  | 43                              | 34                            | 43                              |
| 7,000             | 35                                                  | 44                              | 35                            | 43                              |
| 8,000             | 36                                                  | 44                              | 36                            | 44                              |
| 9,000             | 37                                                  | 45                              | 37                            | 44                              |
| 10,000            | 38                                                  | 46                              | 38                            | 45                              |
| 11,000            | 39                                                  | 47                              | 39                            | 45                              |
| 12,000            | 40                                                  | 47                              | 40                            | 46                              |
| 13,000            | 41                                                  | 48                              | 41                            | 47                              |
| 14,000            | 42                                                  | 48                              | 42                            | 47                              |

\*As the height above sea level increases, there is less oxygen per cubic foot of air. Therefore, heat input rate should be reduced at higher altitudes.

†Orifices available through your local Bryant distributor.

### ALTITUDE COMPENSATION\* — 580F036-073 LOW NOx UNITS

| ELEVATION<br>(ft) | 60,000 AND 90,000 BTUH<br>NOMINAL INPUT | 120,000 BTUH<br>NOMINAL INPUT |
|-------------------|-----------------------------------------|-------------------------------|
|                   | Natural Gas Orifice Size†               | Natural Gas Orifice Size      |
| 0-2,000           | 38                                      | 32                            |
| 2,000             | 40                                      | 33                            |
| 3,000             | 41                                      | 35                            |
| 4,000             | 42                                      | 36                            |
| 5,000             | 43                                      | 37                            |
| 6,000             | 43                                      | 38                            |
| 7,000             | 44                                      | 39                            |
| 8,000             | 45                                      | 41                            |
| 9,000             | 46                                      | 42                            |
| 10,000            | 47                                      | 43                            |
| 11,000            | 48                                      | 44                            |
| 12,000            | 49                                      | 44                            |
| 13,000            | 50                                      | 46                            |
| 14,000            | 51                                      | 47                            |

\*As the height above sea level increases, there is less oxygen per cubic foot of air. Therefore, the input rate should be reduced at higher altitudes.

†Orifices are available through your local Bryant distributor.

### ALTITUDE DERATING FACTOR\*

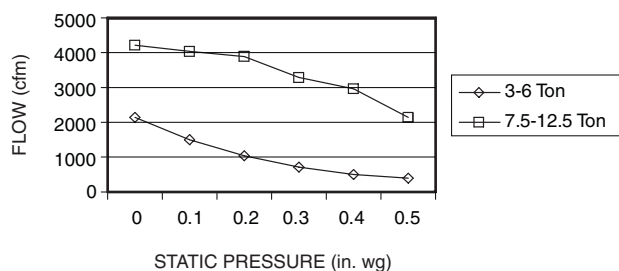
| ELEVATION<br>(ft) | MAXIMUM HEATING VALUE<br>(Btu/ft³) |
|-------------------|------------------------------------|
| 0-2,000           | 1,100                              |
| 2,001-3,000       | 1,050                              |
| 3,001-4,000       | 1,000                              |
| 4,001-5,000       | 950                                |
| 5,001-6,000       | 900                                |

\*Derating of the unit is not required unless the heating value of the gas exceeds the values listed in the table above, or if the elevation exceeds 6000 ft. Derating conditions must be 4% per thousand ft above 2000 ft. For example, at 4000 ft, if the heating value of the gas exceeds 1000 Btu/ft³, the unit will require a 16% derating. For elevations above 6000 ft, the same formula applies. For example, at 7000 ft, the unit will require a 28% derating of the maximum heating value per the National Fuel Gas Code.

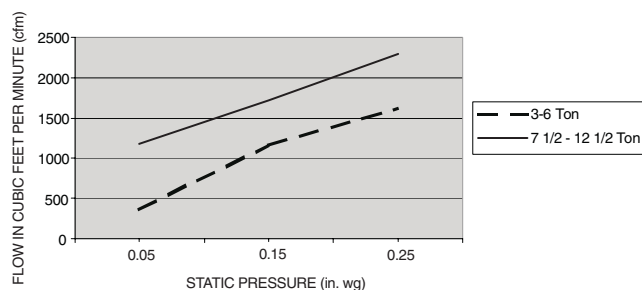
**IMPORTANT:** Local utility companies may be reducing heat content of gas at altitudes above 2000 ft. If this is being done, changing spuds may not be required.



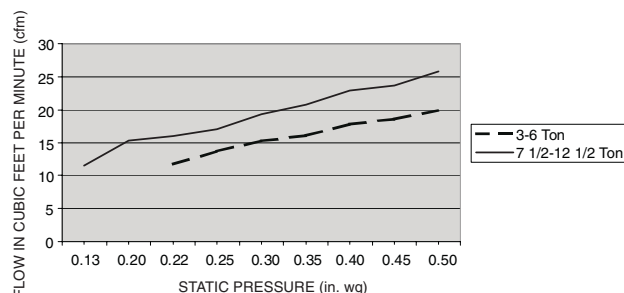
## PERFORMANCE DATA (cont)



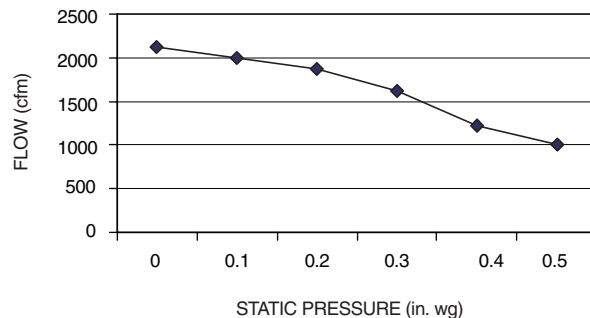
VERTICAL POWER EXHAUST PERFORMANCE



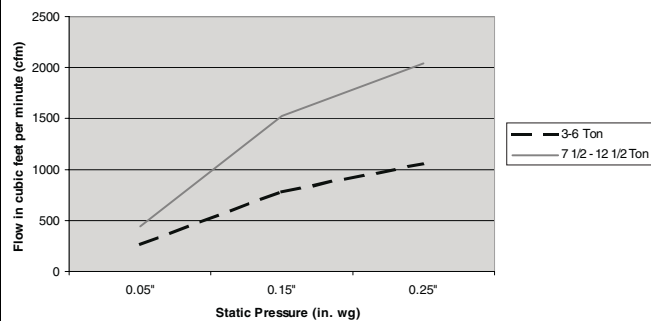
BAROMETRIC RELIEF FLOW CAPACITY



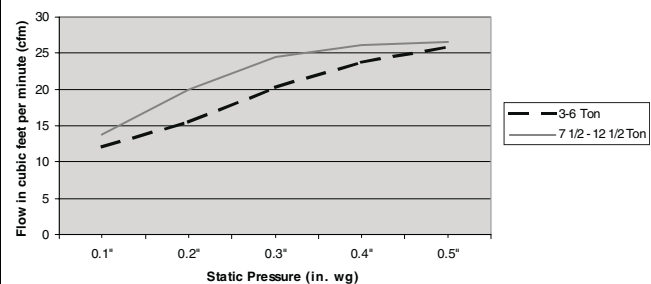
OUTDOOR AIR DAMPER LEAKAGE

Vertical EconoMi\$er IV and EconoMi\$er2  
Performance Data (580F036-151)

HORIZONTAL POWER EXHAUST PERFORMANCE



BAROMETRIC RELIEF CAPACITY



OUTDOOR AIR DAMPER LEAKAGE

Horizontal EconoMi\$er IV and EconoMi\$er2  
Performance Data (580F036-151)

## OPTIONAL POWER EXHAUST

## POWER REQUIREMENTS

| UNIT SIZE   | AMPS AT 230 V (2 Fans Running) | MOCP      |           |           |
|-------------|--------------------------------|-----------|-----------|-----------|
|             |                                | 230 VAC   | 460 VAC   | 575 VAC   |
| 580F036-073 | 1.40 Amps at 60 Hz             | 15.0 amps | 15.0 amps | 15.0 amps |
| 580F090-151 | 3.04 Amps at 60 Hz             |           |           |           |

## LEGEND

MOCP — Maximum Overcurrent Protection

## EVAPORATOR-FAN MOTOR EFFICIENCY

| UNIT 580F | MOTOR EFFICIENCY (%) |
|-----------|----------------------|
| 036,048   | 75                   |
| 060       | 74/84*               |
| 072, 073  | 84                   |
| 090-121   | 80                   |
| 150, 151  | 87                   |

\*Single phase/three-phase.

**NOTE:** The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT-compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements. Therefore, the indoor-fan motors for these units are exempt from these requirements.

# PERFORMANCE DATA (cont)

## EVAPORATOR-FAN MOTOR PERFORMANCE

580F036-151

| UNIT 580F | EVAPORATOR-FAN MOTOR | UNIT VOLTAGE | MAXIMUM ACCEPTABLE CONTINUOUS BHP* | MAXIMUM ACCEPTABLE OPERATING WATTS | MAXIMUM AMP DRAW |
|-----------|----------------------|--------------|------------------------------------|------------------------------------|------------------|
| 036       | Standard             | 208/230      | 0.34                               | 440                                | 2.8              |
|           |                      | 460          |                                    |                                    | 1.3              |
|           |                      | 575          |                                    |                                    | 1.3              |
|           | Alternate            | 208/230      | 1.20                               | 1000                               | 4.9              |
|           |                      | 460          |                                    |                                    | 2.1              |
|           |                      | 575          |                                    |                                    | 2.1              |
|           | High Static          | 208/230      | 2.40                               | 2120                               | 6.0              |
|           |                      | 460          |                                    |                                    | 3.0              |
|           |                      | 575          |                                    |                                    | 3.0              |
| 048       | Standard             | 208/230      | 0.75                               | 850                                | 3.5              |
|           |                      | 460          |                                    |                                    | 1.8              |
|           |                      | 575          |                                    |                                    | 1.8              |
|           | Alternate            | 208/230      | 1.20                               | 1000                               | 4.9              |
|           |                      | 460          |                                    |                                    | 2.1              |
|           |                      | 575          |                                    |                                    | 2.1              |
|           | High Static          | 208/230      | 2.40                               | 2120                               | 6.0              |
|           |                      | 460          |                                    |                                    | 3.0              |
|           |                      | 575          |                                    |                                    | 3.0              |
| 060       | Standard             | 208/230      | 1.20                               | 1340                               | 5.9              |
|           |                      | 460          |                                    |                                    | 3.2              |
|           |                      | 575          |                                    |                                    | 3.2              |
|           | Alternate            | 208/230      | 1.30/2.40†                         | 2120                               | 6.6/5.2†         |
|           |                      | 460          |                                    |                                    | 2.6              |
|           |                      | 575          |                                    |                                    | 3.0              |
|           | High Static          | 208/230      | 2.90                               | 2562                               | 8.6              |
|           |                      | 460          |                                    |                                    | 3.9              |
|           |                      | 575          |                                    |                                    | 3.9              |
| 072,073   | Standard             | 208/230      | 2.40                               | 2120                               | 5.2              |
|           |                      | 460          |                                    |                                    | 3.0              |
|           |                      | 575          |                                    |                                    | 3.0              |
|           | High Static          | 208/230      | 2.90                               | 2562                               | 8.6              |
|           |                      | 460          |                                    |                                    | 3.9              |
|           |                      | 575          |                                    |                                    | 3.9              |
| 090,091   | Standard, Alternate  | 208/230      | 2.40                               | 2120                               | 6.7              |
|           |                      | 460          |                                    |                                    | 3.0              |
|           |                      | 575          |                                    |                                    | 3.0              |
|           | High Static          | 208/230      | 3.70                               | 3313                               | 12.2             |
|           |                      | 460          |                                    |                                    | 5.5              |
|           |                      | 575          |                                    |                                    | 5.5              |
| 103       | Standard             | 208/230      | 2.40                               | 2120                               | 6.7              |
|           |                      | 460          |                                    |                                    | 3.0              |
|           |                      | 575          |                                    |                                    | 3.0              |
|           | High Static          | 208/230      | 3.70                               | 3313                               | 12.2             |
|           |                      | 460          |                                    |                                    | 5.5              |
|           |                      | 575          |                                    |                                    | 5.5              |
| 120,121   | Standard             | 208/230      | 2.40                               | 2120                               | 6.7              |
|           |                      | 460          |                                    |                                    | 3.0              |
|           |                      | 575          |                                    |                                    | 3.0              |
|           | Alternate            | 208/230      | 2.90                               | 2615                               | 8.6              |
|           |                      | 460          |                                    |                                    | 3.9              |
|           |                      | 575          |                                    |                                    | 3.9              |
|           | High Static          | 208/230      | 5.25                               | 4400                               | 17.3             |
|           |                      | 460          |                                    |                                    | 8.5              |
|           |                      | 575          |                                    |                                    | 8.5              |
| 150, 151  | Standard             | 208/230      | 3.70                               | 3313                               | 12.2             |
|           |                      | 460          |                                    |                                    | 5.5              |
|           |                      | 575          |                                    |                                    | 5.5              |
|           | Alternate            | 208/230      | 5.25                               | 4400                               | 17.3             |
|           |                      | 460          |                                    |                                    | 8.5              |
|           |                      | 575          |                                    |                                    | 8.5              |

### LEGEND

BHP — Brake Horsepower

†Single phase/three-phase.

NOTE: High-static motor not available on single-phase units.

\*Extensive motor and electrical testing on these units ensures that the full horsepower range of the motors can be utilized with confidence. Using your fan motors up to the horsepower ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

**PERFORMANCE DATA (cont)****POWER EXHAUST OPTIONS**

| <b>VERTICAL — MOUNTED IN ECONOMIZER HOOD</b>   |                                         |                              |                                      |                     |
|------------------------------------------------|-----------------------------------------|------------------------------|--------------------------------------|---------------------|
| <b>POWER EXHAUST<br/>PART NO.</b>              | <b>POWER EXHAUST DESCRIPTION</b>        | <b>APPLICATION<br/>USAGE</b> | <b>POWER OUTPUT<br/>(Hp per fan)</b> | <b>NO.<br/>FANS</b> |
| <b>CRPWREXH030A01</b>                          | Power Exhaust System (208/230-1-60)     | 036-073                      | 0.23                                 | 2                   |
| <b>CRPWREXH021A01</b>                          | Power Exhaust System (460-3-60)         | 036-073                      | 0.24                                 | 2                   |
| <b>CRPWREXH022A01</b>                          | Power Exhaust System (208/230-1-60)     | 090-151                      | 0.47                                 | 2                   |
| <b>CRPWREXH023A01</b>                          | Power Exhaust System (460-3-60)         | 090-151                      | 0.37                                 | 2                   |
| <b>HORIZONTAL — MOUNTED IN RETURN DUCTWORK</b> |                                         |                              |                                      |                     |
| <b>POWER EXHAUST<br/>PART NO.</b>              | <b>POWER EXHAUST DESCRIPTION</b>        | <b>APPLICATION<br/>USAGE</b> | <b>POWER OUTPUT<br/>(Hp per fan)</b> | <b>NO.<br/>FANS</b> |
| <b>CRPWREXH028A01</b>                          | Horizontal Power Exhaust (208/230-1-60) | All                          | 0.48                                 | 1                   |
| <b>CRPWREXH029A01</b>                          | Horizontal Power Exhaust (460-3-60)     | All                          | 0.48                                 | 1                   |

# ELECTRICAL DATA

580F036-151

| UNIT SIZE<br>580F | NOMINAL<br>V-PH-Hz | IFM<br>TYPE    | CONV<br>OUTLET | VOLTAGE RANGE |     | COMPRESSOR (each) |      |     | OFM (each) |     | IFM<br>FLA | COMBUSTION<br>FAN MOTOR | POWER SUPPLY |       | MINIMUM UNIT<br>DISCONNECT SIZE* |     |      |     |   |     |     |     |      |    |    |     |
|-------------------|--------------------|----------------|----------------|---------------|-----|-------------------|------|-----|------------|-----|------------|-------------------------|--------------|-------|----------------------------------|-----|------|-----|---|-----|-----|-----|------|----|----|-----|
|                   |                    |                |                | Min           | Max | Qty               | RLA  | LRA | Qty        | FLA |            | FLA                     | MCA          | MOCP† | FLA                              | LRA |      |     |   |     |     |     |      |    |    |     |
| 036<br>(3 Ton)    | 208/230-1-60       | STD            | NO             | 187           | 254 | 1                 | 16.2 | 96  | 1          | 1.4 | 3.5        | 0.6                     | 25.2         | 35    | 24                               | 106 |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 31.2         | 35    | 30                               | 111 |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 26.6         | 40    | 26                               | 111 |      |     |   |     |     |     |      |    |    |     |
|                   |                    | ALT            | YES            |               |     |                   |      |     |            |     | 4.9        |                         | 32.6         | 40    | 31                               | 116 |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 17.7         | 25    | 17                               | 85  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 23.7         | 25    | 23                               | 90  |      |     |   |     |     |     |      |    |    |     |
|                   | 208/230-3-60       | STD            | NO             | 187           | 254 | 1                 | 10.2 | 75  | 1          | 1.4 | 3.5        | 0.6                     | 19.1         | 25    | 19                               | 90  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 25.1         | 30    | 25                               | 95  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 19.4         | 25    | 19                               | 109 |      |     |   |     |     |     |      |    |    |     |
|                   |                    | HIGH           | YES            |               |     |                   |      |     |            |     | 5.2        |                         | 25.4         | 30    | 25                               | 114 |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 7.6          | 15    | 7                                | 44  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 10.3         | 15    | 10                               | 47  |      |     |   |     |     |     |      |    |    |     |
|                   | 460-3-60           | STD            | NO             | 414           | 508 | 1                 | 4.4  | 40  | 1          | 0.8 | 1.3        | 0.3                     | 8.4          | 15    | 8                                | 48  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 11.1         | 15    | 11                               | 50  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 8.9          | 15    | 9                                | 57  |      |     |   |     |     |     |      |    |    |     |
|                   |                    | ALT            | YES            |               |     |                   |      |     |            |     | 2.6        |                         | 11.6         | 15    | 11                               | 59  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 7.1          | 15    | 7                                | 37  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 9.3          | 15    | 9                                | 39  |      |     |   |     |     |     |      |    |    |     |
|                   | 575-3-60           | STD            | NO             | 518           | 632 | 1                 | 3.7  | 31  | 1          | 0.6 | 1.9        | 0.3                     | 7.2          | 15    | 8                                | 44  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 9.4          | 15    | 10                               | 45  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 34.0         | 40    | 32                               | 129 |      |     |   |     |     |     |      |    |    |     |
|                   |                    | 048<br>(4 Ton) | 208/230-1-60   |               |     |                   |      |     |            |     | STD        |                         | NO           | 187   | 254                              | 1   | 23.3 | 118 | 1 | 1.4 | 3.5 | 0.6 | 40.0 | 45 | 38 | 134 |
|                   |                    |                |                |               |     |                   |      |     |            |     |            |                         | YES          |       |                                  |     |      |     |   |     |     |     | 35.4 | 45 | 34 | 133 |
|                   |                    |                |                |               |     |                   |      |     |            |     |            |                         | NO           |       |                                  |     |      |     |   |     |     |     | 41.4 | 50 | 40 | 138 |
| ALT               | YES                |                |                | 4.9           |     | 24.2              | 30   | 23  | 101        |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
|                   | NO                 |                |                |               |     | 30.2              | 35   | 29  | 106        |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
|                   | YES                |                |                |               |     | 25.6              | 30   | 25  | 105        |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
| 208/230-3-60      | STD                |                | NO             | 187           | 254 | 1                 | 15.4 | 90  | 1          | 1.4 | 3.5        | 0.6                     | 31.6         | 35    | 30                               | 110 |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 25.9         | 30    | 25                               | 124 |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 31.9         | 35    | 31                               | 129 |      |     |   |     |     |     |      |    |    |     |
|                   | ALT                |                | YES            |               |     |                   |      |     |            |     | 5.2        |                         | 13.0         | 20    | 13                               | 51  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 15.7         | 20    | 15                               | 53  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 13.3         | 20    | 13                               | 53  |      |     |   |     |     |     |      |    |    |     |
| 460-3-60          | STD                |                | NO             | 414           | 508 | 1                 | 8.3  | 45  | 1          | 0.8 | 1.8        | 0.3                     | 16.0         | 20    | 15                               | 55  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 13.8         | 20    | 13                               | 62  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 16.5         | 20    | 16                               | 64  |      |     |   |     |     |     |      |    |    |     |
|                   | ALT                |                | YES            |               |     |                   |      |     |            |     | 2.1        |                         | 10.5         | 15    | 10                               | 42  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         | 12.7         | 15    | 12                               | 43  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         | 10.6         | 15    | 10                               | 49  |      |     |   |     |     |     |      |    |    |     |
| 575-3-60          | STD                |                | NO             | 518           | 632 | 1                 | 6.4  | 36  | 1          | 0.6 | 1.9        | 0.3                     | 12.8         | 15    | 12                               | 50  |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
|                   | ALT                |                | YES            |               |     |                   |      |     |            |     | 2.0        |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | NO             |               |     |                   |      |     |            |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |
|                   |                    |                | YES            |               |     |                   |      |     |            |     |            |                         |              |       |                                  |     |      |     |   |     |     |     |      |    |    |     |

## LEGEND

**FLA** — Full Load Amps  
**HACR** — Heating, Air Conditioning and Refrigeration  
**IFM** — Indoor (Evaporator) Fan Motor  
**LRA** — Locked Rotor Amps  
**MCA** — Minimum Circuit Amps  
**MOCP** — Maximum Overcurrent Protection  
**NEC** — National Electrical Code  
**OFM** — Outdoor (Condenser) Fan Motor  
**RLA** — Rated Load Amps

\*Used to determine minimum disconnect per NEC.

†Fuse or HACR circuit breaker.

## NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.

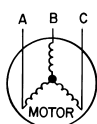
### 2. Unbalanced 3-Phase Supply Voltage

Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

% Voltage Imbalance

$$= 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



AB = 452 v  
 BC = 464 v  
 AC = 455 v

$$\text{Average Voltage} = \frac{452 + 464 + 455}{3}$$

$$= \frac{1371}{3}$$

$$= 457$$

Determine maximum deviation from average voltage.

(AB) 457 - 452 = 5 v

(BC) 464 - 457 = 7 v

(AC) 457 - 455 = 2 v

Maximum deviation is 7 v.



Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457}$$

$$= 1.53\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

- For units with power exhaust: If a single power source is to be used, size wire to include power exhaust MCA and MOCP. Check MCA and MOCP when power exhaust is powered through the unit (must be in accordance with NEC and/or local codes). Determine the new MCA including the power exhaust using the following formula:

MCA New = MCA unit only + MCA of Power Exhaust

For example, using a 580F060 unit with MCA = 28.9 and MOCP = 35, with CRPWREXH030A01 power exhaust.

MCA New = 28.9 amps + 1.6 amps = 30.5 amps

If the new MCA does not exceed the published MOCP, then MOCP would not change. The MOCP in this example is 35 amps, the MCA New is below 35, therefore the MOCP is acceptable. If "MCA New" is larger than the published MOCP, raise the MOCP to the next larger size. For separate power, the MOCP for the power exhaust will be 15 amps per NEC.

## POWER EXHAUST ELECTRICAL DATA

| POWER EXHAUST<br>PART NO. | APPLICATION<br>USAGE | MCA<br>(230 V) | MCA<br>(460 V) | MCA<br>(575 V) | MOCP<br>(separate<br>power source<br>only) |
|---------------------------|----------------------|----------------|----------------|----------------|--------------------------------------------|
| CRPWREXH030A01            | 036-073*             | 1.6            | N/A            | 0.64           | 15                                         |
| CRPWREXH021A01            | 036-073              | N/A            | 0.68           | N/A            | 15                                         |
| CRPWREXH022A01            | 090-151*             | 3.4            | N/A            | 1.32           | 15                                         |
| CRPWREXH023A01            | 090-151              | N/A            | 1.4            | N/A            | 15                                         |
| CRPWREXH028A01            | ALL*                 | 1.7            | N/A            | 0.68           | 15                                         |
| CRPWREXH029A01            | ALL                  | N/A            | 0.7            | N/A            | 15                                         |

\*Single or three phase.

## ELECTRICAL DATA (cont)

| UNIT SIZE<br>580F | NOMINAL<br>V-PH-Hz | IFM<br>TYPE     | CONV<br>OUTLET | VOLTAGE RANGE |     | COMPRESSOR (each) |      |     | OFM (each) |                 | IFM<br>FLA     | COMBUSTION<br>FAN MOTOR<br>FLA | POWER SUPPL |       | MINIMUM UNIT<br>DISCONNECT SIZE* |      |     |      |      |      |      |     |     |     |
|-------------------|--------------------|-----------------|----------------|---------------|-----|-------------------|------|-----|------------|-----------------|----------------|--------------------------------|-------------|-------|----------------------------------|------|-----|------|------|------|------|-----|-----|-----|
|                   |                    |                 |                | Min           | Max | Qty               | RLA  | LRA | Qty        | FLA             |                |                                | MCA         | MOCP† | FLA                              | LRA  |     |      |      |      |      |     |     |     |
| 060<br>(5 Ton)    | 208/230-1-60       | STD             | NO             | 187           | 254 | 1                 | 28.8 | 147 | 1          | 1.4             | 5.9            | 0.6                            | 43.3        | 60    | 42                               | 161  |     |      |      |      |      |     |     |     |
|                   |                    |                 | YES            |               |     |                   |      |     |            |                 | 49.3           |                                | 60          | 47    | 166                              |      |     |      |      |      |      |     |     |     |
|                   |                    | ALT             | NO             |               |     |                   |      |     |            |                 | 208/230-3-60   |                                | 187         | 254   | 1                                | 16   | 114 | 1    | 1.4  | 6.6  | 44.0 | 60  | 42  | 184 |
|                   |                    |                 | YES            |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      |      | 50.0 | 60   | 48  | 188 |     |
|                   | STD                | NO              | 460-3-60       | 414           | 508 | 1                 | 7.4  | 64  | 1          | 0.8             |                | 5.9                            |             |       |                                  |      |     |      |      | 27.3 | 35   | 27  | 128 |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                | 33.3                           |             |       |                                  |      |     |      |      | 40   | 32   | 133 |     |     |
|                   | ALT                | NO              |                |               |     |                   |      |     |            |                 | 575-3-60       | 518                            | 632         | 1     | 6.2                              | 52   | 1   | 0.6  | 5.2  | 26.6 | 35   | 26  | 148 |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 32.6 | 35   | 32   | 153 |     |     |
|                   | HIGH               | NO              | 072<br>(6 Ton) | 187           | 254 | 1                 | 20.6 | 146 | 1          | 1.4             |                |                                |             |       |                                  |      |     |      | 7.5  | 28.9 | 35   | 29  | 174 |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 34.9 | 40   | 34   | 179 |     |     |
|                   | STD                | NO              |                |               |     |                   |      |     |            |                 | 460-3-60       | 414                            | 508         | 1     | 7.4                              | 64   | 1   | 0.8  | 3.1  | 13.2 | 20   | 13  | 71  |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 15.9 | 20   | 15   | 74  |     |     |
|                   | ALT                | NO              | 575-3-60       | 518           | 632 | 1                 | 6.2  | 52  | 1          | 0.6             |                |                                |             |       |                                  |      |     |      | 2.6  | 12.7 | 15   | 12  | 81  |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 15.4 | 20   | 15   | 84  |     |     |
|                   | HIGH               | NO              |                |               |     |                   |      |     |            |                 | 073<br>(6 Ton) | 187                            | 254         | 1     | 20.6                             | 146  | 1   | 1.4  | 3.4  | 13.5 | 20   | 13  | 93  |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 16.2 | 20   | 16   | 96  |     |     |
|                   | ALT                | NO              | 460-3-60       | 414           | 508 | 1                 | 9.5  | 73  | 1          | 0.9             |                |                                |             |       |                                  |      |     |      | 1.9  | 10.4 | 15   | 11  | 65  |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 12.6 | 15   | 12   | 66  |     |     |
|                   | HIGH               | NO              |                |               |     |                   |      |     |            |                 | 575-3-60       | 518                            | 632         | 1     | 7.6                              | 58.4 | 1   | 0.6  | 2.0  | 11.2 | 15   | 11  | 74  |     |
|                   |                    | YES             |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     |      | 13.5 | 15   | 13   | 74  |     |     |
| STD               | NO                 | 074<br>(6 Ton)  | 187            | 254           | 1   | 20.6              | 146  | 1   | 1.4        | 5.2             |                |                                |             |       |                                  |      |     |      | 32.4 | 40   | 31   | 180 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            | 38.4            |                |                                |             |       |                                  |      |     |      | 45   | 37   | 184  |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 460-3-60        | 414            | 508                            | 1           | 9.5   | 73                               | 1    | 0.9 | 7.5  | 34.7 | 40   | 34   | 205 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 40.7 | 45   | 39   | 210  |     |     |     |
| STD               | NO                 | 575-3-60        | 518            | 632           | 1   | 7.6               | 58.4 | 1   | 0.6        |                 |                |                                |             |       |                                  |      |     | 2.6  | 15.3 | 20   | 15   | 90  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 18.0 | 20   | 17   | 92   |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 075<br>(6 Ton)  | 187            | 254                            | 1           | 20.6  | 146                              | 1    | 1.4 | 3.4  | 16.1 | 20   | 16   | 103 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 18.8 | 25   | 18   | 105  |     |     |     |
| STD               | NO                 | 460-3-60        | 414            | 508           | 1   | 9.5               | 73   | 1   | 0.9        |                 |                |                                |             |       |                                  |      |     | 2.0  | 12.1 | 15   | 12   | 71  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 13.3 | 20   | 13   | 72   |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 575-3-60        | 518            | 632                            | 1           | 7.6   | 62                               | 1    | 0.6 | 2.8  | 12.9 | 15   | 13   | 80  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 14.1 | 20   | 15   | 81   |     |     |     |
| STD               | NO                 | 076<br>(6 Ton)  | 187            | 254           | 1   | 20.6              | 146  | 1   | 1.4        |                 |                |                                |             |       |                                  |      |     | 5.2  | 32.4 | 40   | 31   | 180 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 38.4 | 45   | 37   | 184  |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 460-3-60        | 414            | 508                            | 1           | 9.5   | 73                               | 1    | 0.9 | 7.5  | 34.7 | 40   | 34   | 205 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 40.7 | 45   | 39   | 210  |     |     |     |
| STD               | NO                 | 575-3-60        | 518            | 632           | 1   | 7.6               | 62   | 1   | 0.6        |                 |                |                                |             |       |                                  |      |     | 2.6  | 15.4 | 20   | 15   | 90  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 18.0 | 20   | 17   | 92   |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 077<br>(6 Ton)  | 187            | 254                            | 1           | 20.6  | 146                              | 1    | 1.4 | 3.4  | 16.2 | 20   | 16   | 103 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 18.8 | 25   | 18   | 105  |     |     |     |
| STD               | NO                 | 460-3-60        | 414            | 508           | 1   | 9.5               | 73   | 1   | 0.9        |                 |                |                                |             |       |                                  |      |     | 1.9  | 12.3 | 15   | 13   | 75  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 14.4 | 20   | 15   | 77   |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 575-3-60        | 518            | 632                            | 1           | 7.6   | 62                               | 1    | 0.6 | 2.0  | 13.1 | 20   | 14   | 84  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 15.3 | 20   | 16   | 86   |     |     |     |
| STD               | NO                 | 078<br>(7½ Ton) | 187            | 254           | 2   | 14                | 91   | 2   | 1.4        |                 |                |                                |             |       |                                  |      |     | 5.8  | 40.1 | 45   | 42   | 229 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 46.1 | 50   | 48   | 233  |     |     |     |
| ALT               | NO                 |                 |                |               |     |                   |      |     |            | 460-3-60        | 414            | 508                            | 2           | 6.4   | 42                               | 2    | 0.7 | 5.8  | 40.1 | 45   | 42   | 229 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 46.1 | 50   | 48   | 233  |     |     |     |
| HIGH              | NO                 | 575-3-60        | 518            | 632           | 2   | 5.2               | 39   | 2   | 0.6        |                 |                |                                |             |       |                                  |      |     | 10.6 | 44.9 | 50   | 48   | 273 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 50.9 | 60   | 53   | 273  |     |     |     |
| STD               | NO                 |                 |                |               |     |                   |      |     |            | 079<br>(7½ Ton) | 187            | 254                            | 2           | 14    | 91                               | 2    | 1.4 | 2.6  | 18.4 | 20   | 19   | 108 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 24.4 | 25   | 22   | 110  |     |     |     |
| ALT               | NO                 | 460-3-60        | 414            | 508           | 2   | 6.4               | 42   | 2   | 0.7        |                 |                |                                |             |       |                                  |      |     | 2.6  | 18.4 | 20   | 19   | 108 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 24.4 | 25   | 22   | 110  |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 575-3-60        | 518            | 632                            | 2           | 5.2   | 39                               | 2    | 0.6 | 4.8  | 20.6 | 25   | 22   | 130 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 23.3 | 30   | 24   | 132  |     |     |     |
| STD               | NO                 | 080<br>(7½ Ton) | 187            | 254           | 2   | 14                | 91   | 2   | 1.4        |                 |                |                                |             |       |                                  |      |     | 2.0  | 14.9 | 20   | 16   | 97  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 20.9 | 25   | 18   | 99   |     |     |     |
| ALT               | NO                 |                 |                |               |     |                   |      |     |            | 460-3-60        | 414            | 508                            | 2           | 6.4   | 42                               | 2    | 0.7 | 2.0  | 14.9 | 20   | 16   | 97  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 20.9 | 25   | 18   | 99   |     |     |     |
| HIGH              | NO                 | 575-3-60        | 518            | 632           | 2   | 5.2               | 39   | 2   | 0.6        |                 |                |                                |             |       |                                  |      |     | 2.8  | 16.7 | 20   | 18   | 114 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 19.4 | 25   | 20   | 117  |     |     |     |
| STD               | NO                 |                 |                |               |     |                   |      |     |            | 081<br>(7½ Ton) | 187            | 254                            | 2           | 14    | 91                               | 2    | 1.4 | 5.8  | 40.1 | 45   | 42   | 229 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 44.9 | 50   | 48   | 234  |     |     |     |
| ALT               | NO                 | 460-3-60        | 414            | 508           | 2   | 6.4               | 42   | 2   | 0.7        |                 |                |                                |             |       |                                  |      |     | 5.8  | 40.1 | 45   | 42   | 229 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 44.9 | 50   | 48   | 234  |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 575-3-60        | 518            | 632                            | 2           | 5.2   | 39                               | 2    | 0.6 | 10.6 | 44.9 | 50   | 48   | 273 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 49.7 | 60   | 53   | 277  |     |     |     |
| STD               | NO                 | 082<br>(7½ Ton) | 187            | 254           | 2   | 14                | 91   | 2   | 1.4        |                 |                |                                |             |       |                                  |      |     | 2.6  | 18.4 | 20   | 19   | 108 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 20.6 | 25   | 22   | 110  |     |     |     |
| ALT               | NO                 |                 |                |               |     |                   |      |     |            | 460-3-60        | 414            | 508                            | 2           | 6.4   | 42                               | 2    | 0.7 | 2.6  | 18.4 | 20   | 19   | 108 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 20.6 | 25   | 22   | 110  |     |     |     |
| HIGH              | NO                 | 575-3-60        | 518            | 632           | 2   | 5.2               | 39   | 2   | 0.6        |                 |                |                                |             |       |                                  |      |     | 4.8  | 20.6 | 25   | 22   | 130 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 22.8 | 25   | 24   | 132  |     |     |     |
| STD               | NO                 |                 |                |               |     |                   |      |     |            | 083<br>(7½ Ton) | 187            | 254                            | 2           | 14    | 91                               | 2    | 1.4 | 2.0  | 14.9 | 20   | 16   | 97  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 16.6 | 20   | 18   | 99   |     |     |     |
| ALT               | NO                 | 460-3-60        | 414            | 508           | 2   | 6.4               | 42   | 2   | 0.6        |                 |                |                                |             |       |                                  |      |     | 2.0  | 14.9 | 20   | 16   | 97  |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 16.6 | 20   | 18   | 99   |     |     |     |
| HIGH              | NO                 |                 |                |               |     |                   |      |     |            | 575-3-60        | 518            | 632                            | 2           | 5.2   | 39                               | 2    | 0.6 | 2.8  | 16.7 | 20   | 18   | 114 |     |     |
|                   | YES                |                 |                |               |     |                   |      |     |            |                 |                |                                |             |       |                                  |      |     | 18.4 | 20   | 20   | 116  |     |     |     |

# ELECTRICAL DATA (cont)

580F036-151

| UNIT SIZE<br>580F  | NOMINAL<br>V-PH-Hz | IFM<br>TYPE | CONV<br>OUTLET | VOLTAGE RANGE |     | COMPRESSOR (each) |      |       | OFM (each) |     | IFM<br>FLA | COMBUSTION<br>FAN MOTOR<br>FLA | POWER SUPPLY |       | MINIMUM UNIT<br>DISCONNECT SIZE* |     |
|--------------------|--------------------|-------------|----------------|---------------|-----|-------------------|------|-------|------------|-----|------------|--------------------------------|--------------|-------|----------------------------------|-----|
|                    |                    |             |                | Min           | Max | Qty               | RLA  | LRA   | Qty        | FLA |            |                                | MCA          | MOCP† | FLA                              | LRA |
| 103<br>(8 1/2 Ton) | 208/230-3-60       | STD         | NO             | 187           | 254 | 2                 | 17.3 | 120.0 | 2          | 1.4 | 5.8        | 0.6                            | 44.3         | 50    | 46                               | 272 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 49.1         | 60    | 52                               | 277 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 49.1         | 60    | 52                               | 316 |
|                    |                    | HIGH        | YES            |               |     |                   |      |       |            |     | 10.6       |                                | 53.9         | 60    | 57                               | 320 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 21.0         | 25    | 22                               | 149 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 23.2         | 30    | 24                               | 151 |
|                    | 460-3-60           | STD         | NO             | 414           | 508 | 2                 | 7.9  | 70.0  | 2          | 0.7 | 2.6        | 0.3                            | 23.2         | 30    | 24                               | 171 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 25.4         | 30    | 27                               | 173 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 16.7         | 20    | 17                               | 109 |
|                    |                    | HIGH        | YES            |               |     |                   |      |       |            |     | 2.0        |                                | 18.4         | 25    | 19                               | 111 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 18.5         | 25    | 19                               | 126 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 2.8        |                                | 20.2         | 25    | 21                               | 128 |
| 120<br>(10 Ton)    | 208/230-3-60       | STD         | NO             | 187           | 254 | 2                 | 15.8 | 130   | 2          | 1.4 | 5.8        | 0.6                            | 44.2         | 50    | 46                               | 307 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 50.2         | 60    | 52                               | 311 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 45.9         | 50    | 48                               | 326 |
|                    |                    | ALT         | YES            |               |     |                   |      |       |            |     | 7.5        |                                | 51.9         | 60    | 54                               | 330 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 53.4         | 60    | 57                               | 374 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 15.0       |                                | 59.4         | 70    | 62                               | 378 |
|                    | 460-3-60           | STD         | NO             | 414           | 508 | 2                 | 7.9  | 64    | 2          | 0.7 | 2.6        | 0.3                            | 21.8         | 25    | 23                               | 152 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 27.8         | 30    | 25                               | 154 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 22.6         | 25    | 24                               | 191 |
|                    |                    | ALT         | YES            |               |     |                   |      |       |            |     | 3.4        |                                | 25.3         | 30    | 26                               | 193 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 26.6         | 30    | 28                               | 185 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 7.4        |                                | 29.3         | 35    | 31                               | 187 |
|                    | 575-3-60           | STD         | NO             | 518           | 632 | 2                 | 6.6  | 52    | 2          | 0.6 | 2.0        | 0.3                            | 18.1         | 25    | 19                               | 123 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 24.1         | 25    | 21                               | 109 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 18.7         | 25    | 20                               | 155 |
|                    |                    | ALT         | YES            |               |     |                   |      |       |            |     | 2.0        |                                | 24.7         | 25    | 22                               | 141 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 21.9         | 30    | 23                               | 150 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 2.8        |                                | 24.6         | 30    | 25                               | 136 |
| 121<br>(10 Ton)    | 208/230-3-60       | STD         | NO             | 187           | 254 | 2                 | 15.8 | 130   | 2          | 1.4 | 5.8        | 0.6                            | 44.6         | 50    | 46                               | 307 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 49.4         | 60    | 52                               | 312 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 46.3         | 60    | 48                               | 326 |
|                    |                    | ALT         | YES            |               |     |                   |      |       |            |     | 7.5        |                                | 51.1         | 60    | 54                               | 331 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 53.8         | 60    | 57                               | 374 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 15.0       |                                | 58.6         | 70    | 62                               | 379 |
|                    | 460-3-60           | STD         | NO             | 414           | 508 | 2                 | 7.9  | 64    | 2          | 0.7 | 2.6        | 0.3                            | 22.0         | 25    | 23                               | 152 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 24.2         | 30    | 25                               | 154 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 22.8         | 25    | 24                               | 191 |
|                    |                    | ALT         | YES            |               |     |                   |      |       |            |     | 3.4        |                                | 25.0         | 30    | 26                               | 193 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 26.8         | 30    | 28                               | 185 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 7.4        |                                | 29.0         | 35    | 30                               | 187 |
|                    | 575-3-60           | STD         | NO             | 518           | 632 | 2                 | 6.6  | 52    | 2          | 0.6 | 2.0        | 0.3                            | 18.1         | 20    | 19                               | 123 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     |            |                                | 19.8         | 25    | 21                               | 125 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 18.7         | 20    | 20                               | 150 |
|                    |                    | ALT         | YES            |               |     |                   |      |       |            |     | 2.8        |                                | 20.4         | 25    | 22                               | 156 |
|                    |                    |             | NO             |               |     |                   |      |       |            |     |            |                                | 21.9         | 25    | 23                               | 155 |
|                    |                    |             | YES            |               |     |                   |      |       |            |     | 3.3        |                                | 23.6         | 25    | 25                               | 151 |

## LEGEND

- FLA** — Full Load Amps  
**HACR** — Heating, Air Conditioning and Refrigeration  
**IFM** — Indoor (Evaporator) Fan Motor  
**LRA** — Locked Rotor Amps  
**MCA** — Minimum Circuit Amps  
**MOCP** — Maximum Overcurrent Protection  
**NEC** — National Electrical Code  
**OFM** — Outdoor (Condenser) Fan Motor  
**RLA** — Rated Load Amps

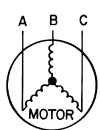
\*Used to determine minimum disconnect per NEC.  
 †Fuse or HACR circuit breaker.

## NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- Unbalanced 3-Phase Supply Voltage**  
*Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.*

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



$$\begin{aligned}
 &AB = 452 \text{ v} \\
 &BC = 464 \text{ v} \\
 &AC = 455 \text{ v} \\
 &\text{Average Voltage} = \frac{452 + 464 + 455}{3} \\
 &= \frac{1371}{3} \\
 &= 457
 \end{aligned}$$

Determine maximum deviation from average voltage.

- (AB) 457 - 452 = 5 v  
 (BC) 464 - 457 = 7 v  
 (AC) 457 - 455 = 2 v  
 Maximum deviation is 7 v.

Determine percent of voltage imbalance.

$$\begin{aligned}
 \% \text{ Voltage Imbalance} &= 100 \times \frac{7}{457} \\
 &= 1.53\%
 \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

- For units with power exhaust: If a single power source is to be used, size wire to include power exhaust MCA and MOCP. Check MCA and MOCP when power exhaust is powered through the unit (must be in accordance with NEC and/or local codes). Determine the new MCA including the power exhaust using the following formula:

MCA New = MCA unit only + MCA of Power Exhaust

For example, using a 580F060 unit with MCA = 28.9 and MOCP = 35, with CRPWREXH030A01 power exhaust.

MCA New = 28.9 amps + 1.6 amps = 30.5 amps

If the new MCA does not exceed the published MOCP, then MOCP would not change. The MOCP in this example is 35 amps, the MCA New is below 35, therefore the MOCP is acceptable. If "MCA New" is larger than the published MOCP, raise the MOCP to the next larger size. For separate power, the MOCP for the power exhaust will be 15 amps per NEC.

## POWER EXHAUST ELECTRICAL DATA

| POWER EXHAUST<br>PART NO. | APPLICATION<br>USAGE | MCA<br>(230 V) | MCA<br>(460 V) | MCA<br>(575 V) | MOCP<br>(separate<br>power source<br>only) |
|---------------------------|----------------------|----------------|----------------|----------------|--------------------------------------------|
| CRPWREXH030A01            | 036-073*             | 1.6            | N/A            | 0.64           | 15                                         |
| CRPWREXH021A01            | 036-073              | N/A            | 0.68           | N/A            | 15                                         |
| CRPWREXH022A01            | 090-151*             | 3.4            | N/A            | 1.32           | 15                                         |
| CRPWREXH023A01            | 090-151              | N/A            | 1.4            | N/A            | 15                                         |
| CRPWREXH028A01            | ALL*                 | 1.7            | N/A            | 0.68           | 15                                         |
| CRPWREXH029A01            | ALL                  | N/A            | 0.7            | N/A            | 15                                         |

\*Single or three phase.

## ELECTRICAL DATA (cont)

| UNIT SIZE<br>580F | NOMINAL<br>V-PH-Hz | IFM<br>TYPE | CONV<br>OUTLET | VOLTAGE RANGE |     | COMPRESSOR (each) |      |      | OFM (each) |     | IFM<br>FLA | COMBUSTION<br>FAN MOTOR | POWER SUPPLY |       | MINIMUM UNIT<br>DISCONNECT SIZE* |     |
|-------------------|--------------------|-------------|----------------|---------------|-----|-------------------|------|------|------------|-----|------------|-------------------------|--------------|-------|----------------------------------|-----|
|                   |                    |             |                | Min           | Max | Qty               | RLA  | LRA  | Qty        | FLA |            | FLA                     | MCA          | MOCP† | FLA                              | LRA |
| 150<br>(12½ Ton)  | 208/230-3-60       | STD         | NO             | 187           | 254 | 2                 | 23   | 146  | 2          | 1.4 | 10.6       | 0.6                     | 65.2         | 80    | 68                               | 383 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 71.2         | 80    | 74                               | 387 |
|                   |                    | HIGH        | NO             |               |     |                   |      |      |            |     | 15.0       |                         | 69.6         | 80    | 73                               | 406 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 75.6         | 80    | 79                               | 410 |
|                   | 460-3-60           | STD         | NO             | 414           | 508 | 2                 | 10.4 | 73   | 2          | 0.7 | 4.8        | 0.3                     | 29.6         | 35    | 31                               | 192 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 35.6         | 40    | 34                               | 194 |
|                   |                    | HIGH        | NO             |               |     |                   |      |      |            |     | 7.4        |                         | 32.2         | 35    | 34                               | 203 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 34.9         | 40    | 37                               | 205 |
|                   | 575-3-60           | STD         | NO             | 518           | 632 | 2                 | 8.3  | 58.4 | 2          | 0.6 | 2.0        | 0.3                     | 23.6         | 30    | 25                               | 154 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 29.6         | 35    | 27                               | 156 |
|                   |                    | HIGH        | NO             |               |     |                   |      |      |            |     | 2.8        |                         | 25.7         | 30    | 27                               | 163 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 31.7         | 35    | 29                               | 165 |
| 151<br>(12½ Ton)  | 208/230-3-60       | STD         | NO             | 187           | 254 | 2                 | 19   | 156  | 2          | 1.4 | 10.6       | 0.6                     | 56.2         | 70    | 59                               | 359 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 61.0         | 70    | 65                               | 364 |
|                   |                    | HIGH        | NO             |               |     |                   |      |      |            |     | 15.0       |                         | 60.6         | 70    | 64                               | 378 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 65.4         | 80    | 70                               | 383 |
|                   | 460-3-60           | STD         | NO             | 414           | 508 | 2                 | 9    | 75   | 2          | 0.7 | 4.8        | 0.3                     | 26.5         | 30    | 28                               | 174 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 28.7         | 35    | 30                               | 176 |
|                   |                    | HIGH        | NO             |               |     |                   |      |      |            |     | 7.4        |                         | 29.1         | 35    | 31                               | 213 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 31.3         | 35    | 33                               | 215 |
|                   | 575-3-60           | STD         | NO             | 518           | 632 | 2                 | 7.4  | 54   | 2          | 0.6 | 3.3        | 0.3                     | 21.6         | 25    | 23                               | 127 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 23.3         | 30    | 25                               | 129 |
|                   |                    | HIGH        | NO             |               |     |                   |      |      |            |     | 5.6        |                         | 23.7         | 25    | 25                               | 159 |
|                   |                    |             | YES            |               |     |                   |      |      |            |     |            |                         | 25.4         | 30    | 27                               | 160 |

## LEGEND

|      |   |                                             |
|------|---|---------------------------------------------|
| FLA  | — | Full Load Amps                              |
| HACR | — | Heating, Air Conditioning and Refrigeration |
| IFM  | — | Indoor (Evaporator) Fan Motor               |
| LRA  | — | Locked Rotor Amps                           |
| MCA  | — | Minimum Circuit Amps                        |
| MOCP | — | Maximum Overcurrent Protection              |
| NEC  | — | National Electrical Code                    |
| OFM  | — | Outdoor (Condenser) Fan Motor               |
| RLA  | — | Rated Load Amps                             |

\*Used to determine minimum disconnect per NEC.

†Fuse or HACR circuit breaker.

## NOTES:

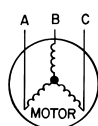
- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.

## 2. Unbalanced 3-Phase Supply Voltage

Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



AB = 452 v  
BC = 464 v  
AC = 455 v

$$\begin{aligned} \text{Average Voltage} &= \frac{452 + 464 + 455}{3} \\ &= \frac{1371}{3} \\ &= 457 \end{aligned}$$

Determine maximum deviation from average voltage.

(AB) 457 - 452 = 5 v

(BC) 464 - 457 = 7 v

(AC) 457 - 455 = 2 v

Maximum deviation is 7 v.



Determine percent of voltage imbalance.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{7}{457} \\ &= 1.53\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

- For units with power exhaust: If a single power source is to be used, size wire to include power exhaust MCA and MOCP. Check MCA and MOCP when power exhaust is powered through the unit (must be in accordance with NEC and/or local codes). Determine the new MCA including the power exhaust using the following formula:

MCA New = MCA unit only + MCA of Power Exhaust

For example, using a 580F060 unit with MCA = 28.9 and MOCP = 35, with CRPWREXH030A01 power exhaust.

MCA New = 28.9 amps + 1.6 amps = 30.5 amps

If the new MCA does not exceed the published MOCP, then MOCP would not change. The MOCP in this example is 35 amps, the MCA New is below 35, therefore the MOCP is acceptable. If "MCA New" is larger than the published MOCP, raise the MOCP to the next larger size. For separate power, the MOCP for the power exhaust will be 15 amps per NEC.

## POWER EXHAUST ELECTRICAL DATA

| POWER EXHAUST<br>PART NO. | APPLICATION<br>USAGE | MCA<br>(230 V) | MCA<br>(460 V) | MCA<br>(575 V) | MOCP<br>(separate<br>power source<br>only) |
|---------------------------|----------------------|----------------|----------------|----------------|--------------------------------------------|
| CRPWREXH030A01            | 036-073*             | 1.6            | N/A            | 0.64           | 15                                         |
| CRPWREXH021A01            | 036-073              | N/A            | 0.68           | N/A            | 15                                         |
| CRPWREXH022A01            | 090-151*             | 3.4            | N/A            | 1.32           | 15                                         |
| CRPWREXH023A01            | 090-151              | N/A            | 1.4            | N/A            | 15                                         |
| CRPWREXH028A01            | ALL*                 | 1.7            | N/A            | 0.68           | 15                                         |
| CRPWREXH029A01            | ALL                  | N/A            | 0.7            | N/A            | 15                                         |

\*Single or three phase.

# TYPICAL WIRING SCHEMATICS — 580F036-151 (580F090, 460-3-60 Shown)

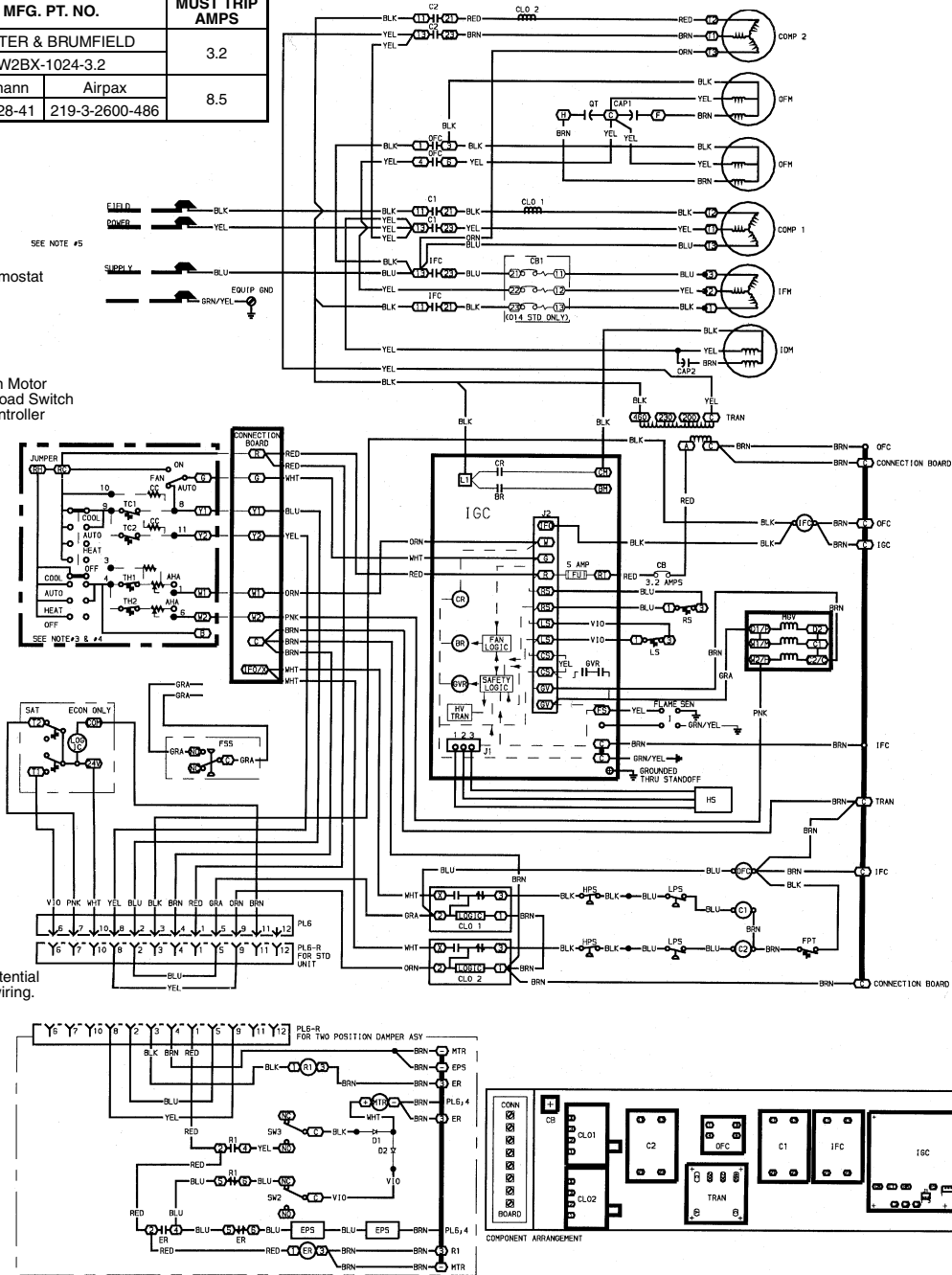
580F036-151

| CIRCUIT BREAKER      | VOLTS    | MFG. PT. NO.                                           | MUST TRIP AMPS |
|----------------------|----------|--------------------------------------------------------|----------------|
| CB                   | 24 V     | POTTER & BRUMFIELD<br>W2BX-1024-3.2                    | 3.2            |
| CB1<br>(150,151 Std) | 460-3-60 | Heinemann      Airpax<br>CF3-Z228-41    219-3-2600-486 | 8.5            |

## LEGEND

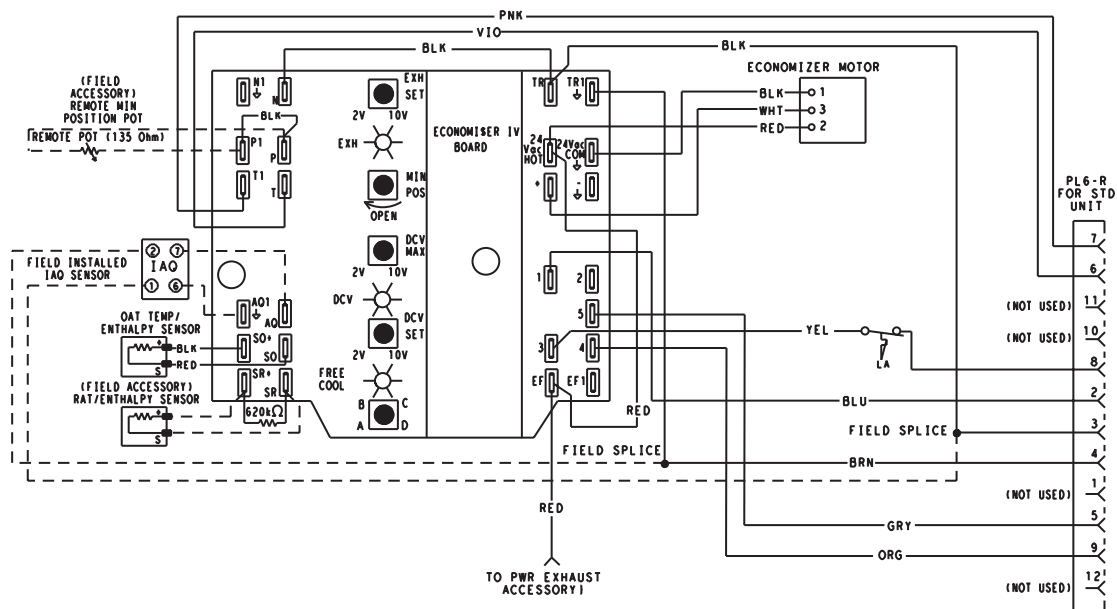
|        |                                  |
|--------|----------------------------------|
| C      | Contactor, Compressor            |
| CAP    | Capacitor                        |
| CB     | Circuit Breaker                  |
| CLO    | Compressor Lockout               |
| COMP   | Compressor Motor                 |
| EQUIP  | Equipment                        |
| FPT    | Freeze Protection Thermostat     |
| GND    | Ground                           |
| HPS    | High-Pressure Switch             |
| HS     | Hall Effect Sensor               |
| I      | Ignitor                          |
| IDM    | Induced Draft Motor              |
| IFC    | Indoor Fan Contactor             |
| IFM    | Indoor (Evaporator) Fan Motor    |
| IFMOVL | Indoor Fan Motor Overload Switch |
| IGC    | Integrated Gas Unit Controller   |
| LPS    | Low-Pressure Switch              |
| LS     | Limit Switch                     |
| MGV    | Main Gas Valve                   |
| OFC    | Outdoor Fan Contactor            |
| OFM    | Outdoor Fan Motor                |
| P      | Plug                             |
| PL     | Plug Assembly                    |
| QT     | Quadruple Terminal               |
| RAT    | Return Air Temperature Sensor    |
| RS     | Rollout Switch                   |
| SAT    | Mixed-Air Temperature Sensor     |
| SEN    | Sensor                           |
| TRAN   | Transformer                      |

|  |                                                             |
|--|-------------------------------------------------------------|
|  | Field Splice                                                |
|  | Marked Wire                                                 |
|  | Terminal (Marked)                                           |
|  | Terminal (Unmarked)                                         |
|  | Terminal Block                                              |
|  | Splice                                                      |
|  | Splice (Marked)                                             |
|  | Factory Wiring                                              |
|  | Field Control Wiring                                        |
|  | Field Power Wiring                                          |
|  | Accessory or Optional Wiring                                |
|  | To indicate common potential only. Not to represent wiring. |

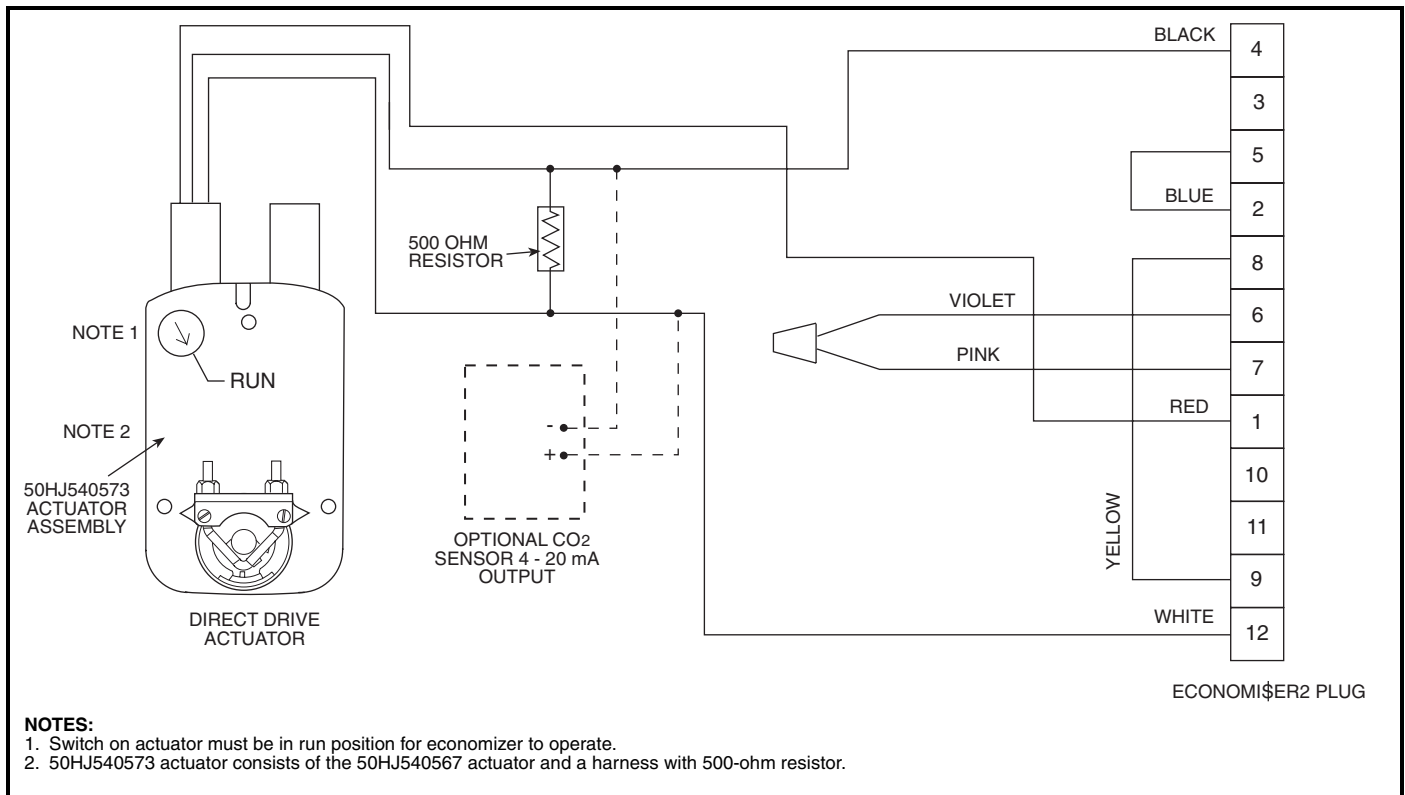




# TYPICAL WIRING SCHEMATICS — 580F036-151 (cont)

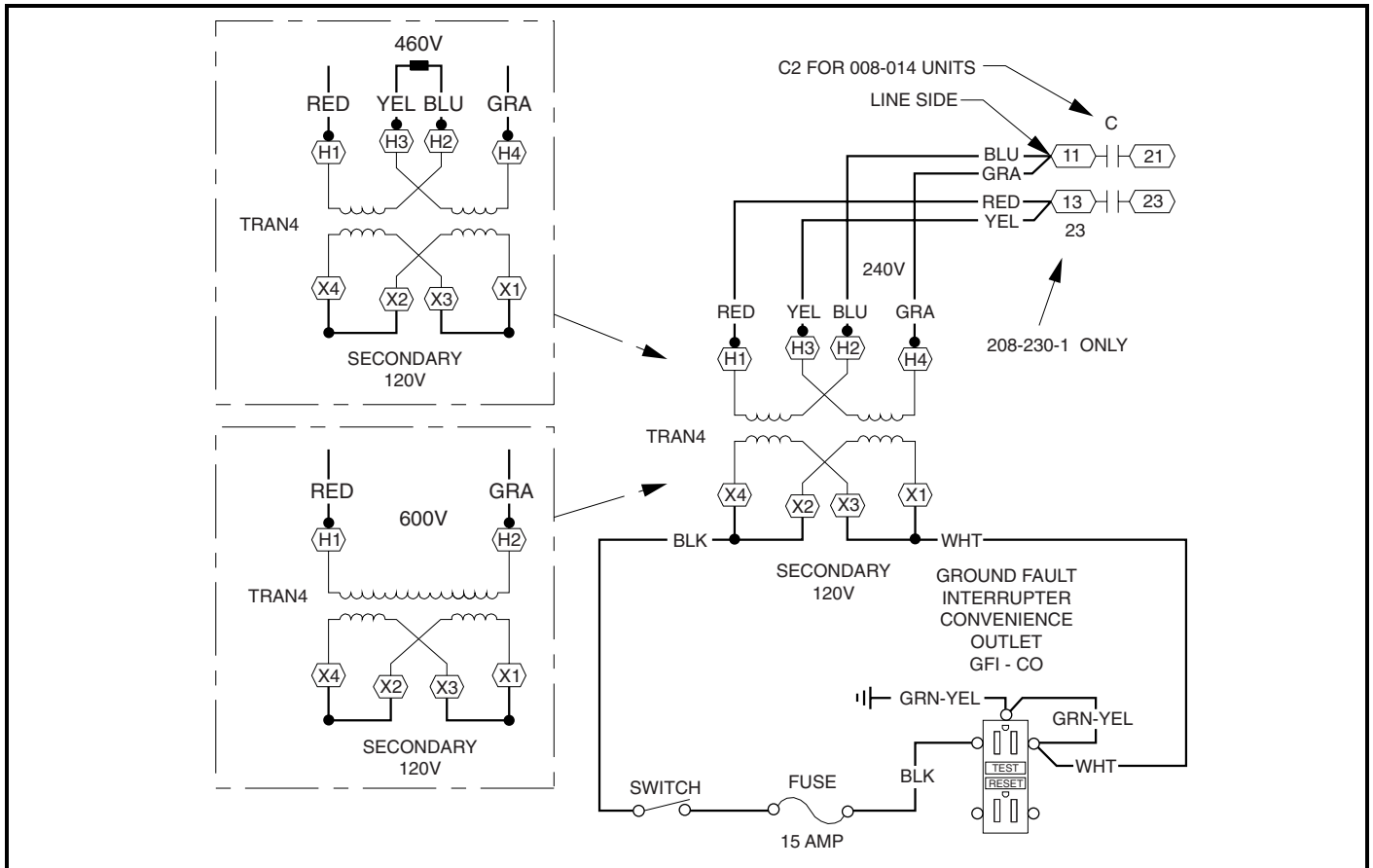


## EconoMi\$er IV Wiring — 580F036-151 Units

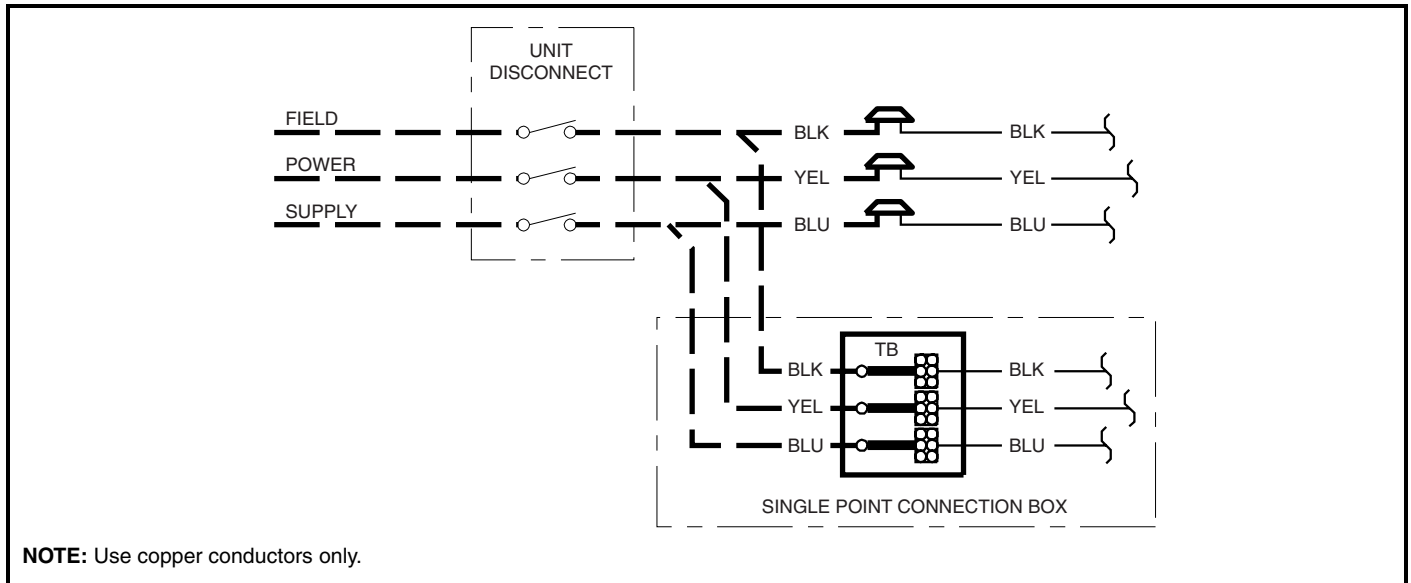


## EconoMi\$er2 Wiring — 580F036-151 Units

## TYPICAL WIRING SCHEMATICS — 580F (cont)



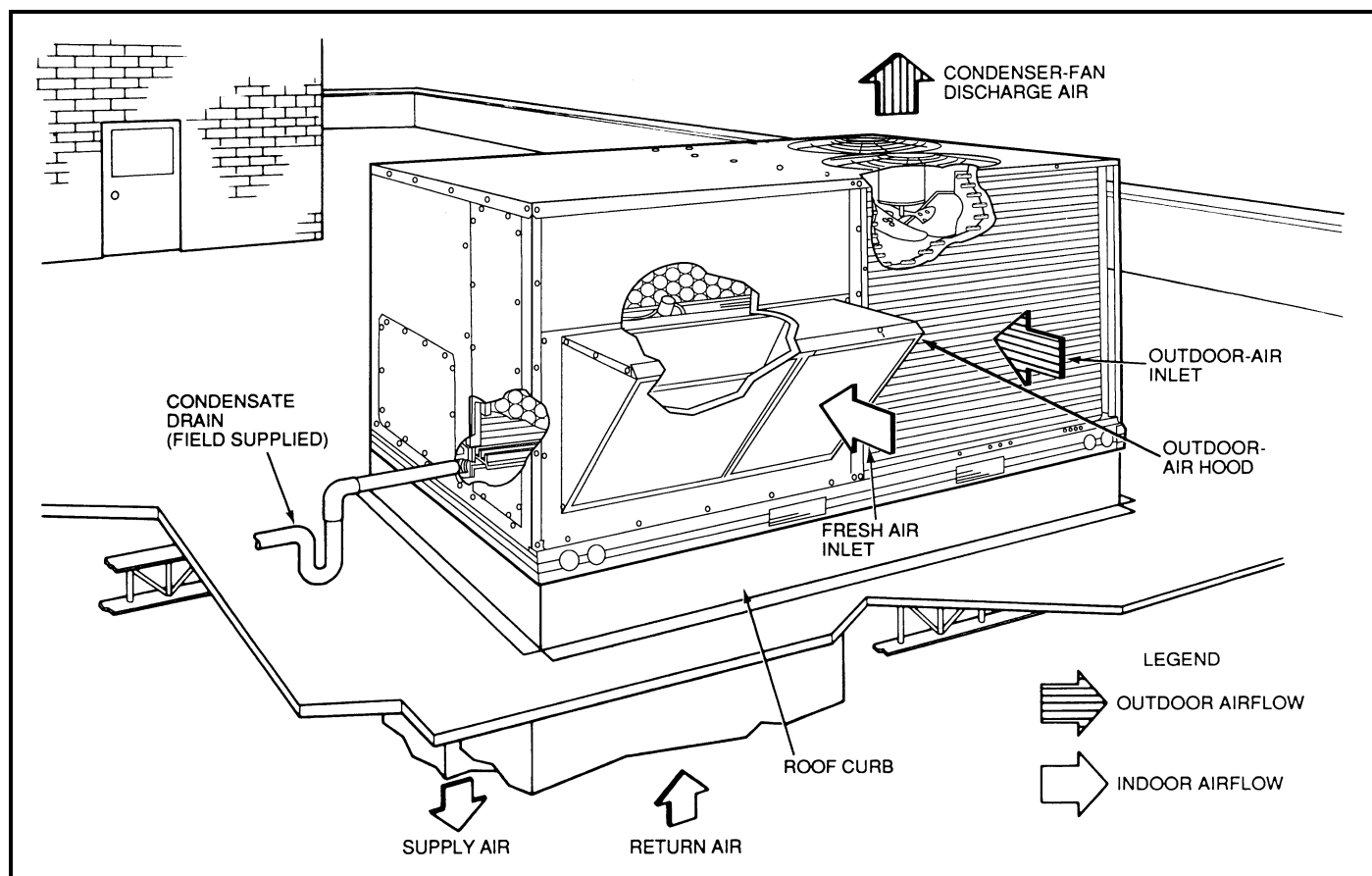
Convenience Outlet (Optional) — Sizes 580F036-151



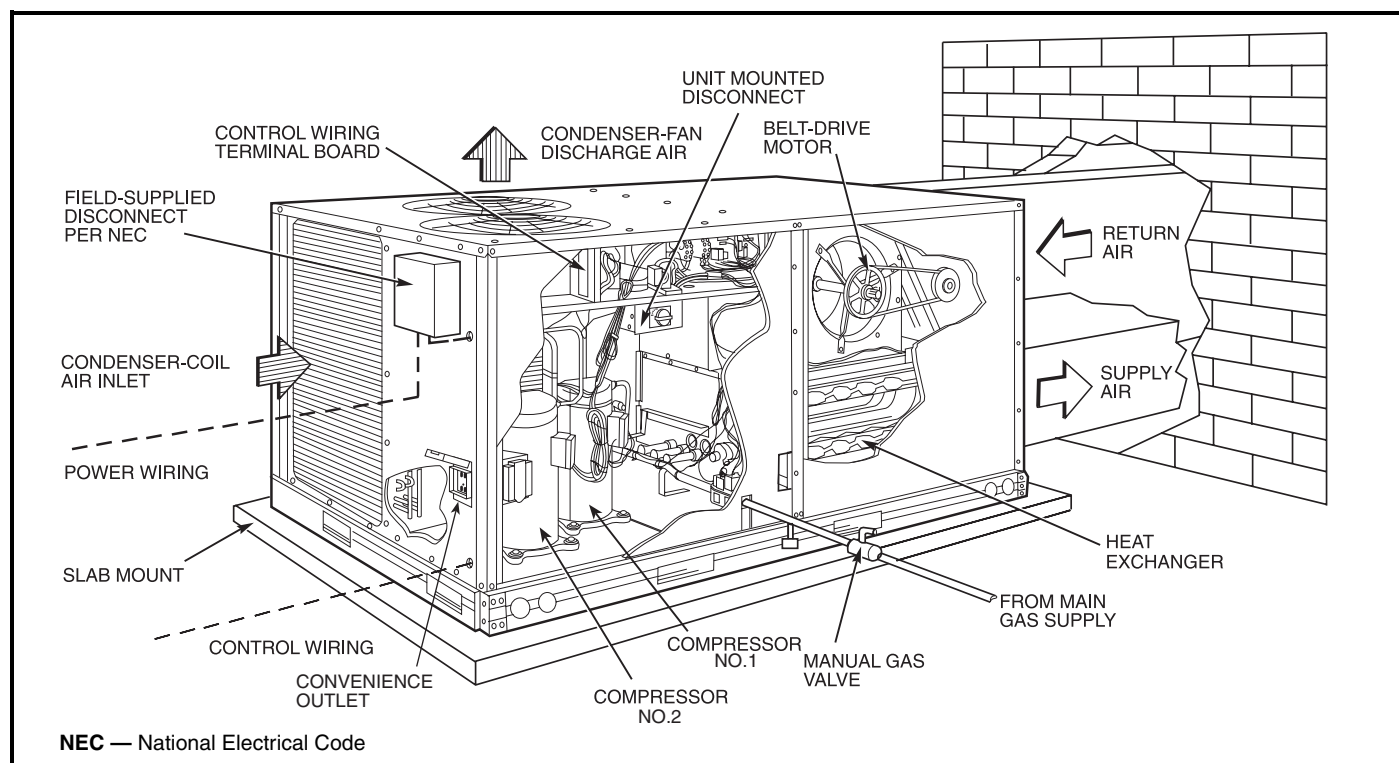
NOTE: Use copper conductors only.

Non-Fused Disconnect (Optional) — Sizes 580F036-151

## TYPICAL PIPING AND WIRING — 580F036-151



## Vertical Discharge Ducting



### Horizontal Discharge Ducting

# PHYSICAL DATA — 581B036-072

| UNIT SIZE 581B                                      |           | 036                                                                                   | 048         | 060         | 072         |
|-----------------------------------------------------|-----------|---------------------------------------------------------------------------------------|-------------|-------------|-------------|
| NOMINAL CAPACITY                                    |           | 3                                                                                     | 4           | 5           | 6           |
| OPERATING WEIGHT (lb)                               |           |                                                                                       |             |             |             |
| Unit                                                |           | 530                                                                                   | 540         | 560         | 635         |
| With EconoMiSer IV                                  |           | 580                                                                                   | 590         | 610         | 685         |
| With EconoMiSer2                                    |           | 576                                                                                   | 586         | 606         | 681         |
| With Perfect Humidity™ Dehumidification Package     |           | 548                                                                                   | 558         | 578         | 653         |
| Vertical Power Exhaust                              |           | 50                                                                                    | 50          | 50          | 50          |
| Horizontal Power Exhaust                            |           | 30                                                                                    | 30          | 30          | 30          |
| Roof Curb                                           |           | 115                                                                                   | 115         | 115         | 115         |
| COMPRESSOR                                          |           | Scroll                                                                                |             |             |             |
| Quantity                                            |           | 1                                                                                     | 1           | 1           | 1           |
| Oil (oz)                                            |           | 42                                                                                    | 53          | 50          | 60          |
| REFRIGERANT TYPE                                    |           | R-22                                                                                  |             |             |             |
| Operating Charge (lb-oz)                            |           |                                                                                       |             |             |             |
| Standard Unit                                       |           | 5-8                                                                                   | 10-2        | 10- 0       | 12-8        |
| Unit With Perfect Humidity Dehumidification Package |           | 9-0                                                                                   | 15-8        | 17-0        | 21-0        |
| CONDENSER FAN                                       |           | Propeller                                                                             |             |             |             |
| Quantity...Diameter (in.)                           |           | 1...22                                                                                | 1...22      | 1...22      | 1...22      |
| Nominal Cfm                                         |           | 3500                                                                                  | 3500        | 4100        | 4100        |
| Motor Hp...Rpm                                      |           | 1/4...825                                                                             | 1/4...825   | 1/4...1100  | 1/4...1100  |
| Watts Input (Total)                                 |           | 180                                                                                   | 180         | 320         | 320         |
| CONDENSER COIL                                      |           | 3/8-in. OD Enhanced Copper Tubes, Aluminum Lanced Fins                                |             |             |             |
| Standard Unit                                       |           |                                                                                       |             |             |             |
| Rows...Fins/in.                                     |           | 1...17                                                                                | 2...17      | 2...17      | 2...17      |
| Total Face Area (sq ft)                             |           | 14.6                                                                                  | 16.5        | 16.5        | 16.5        |
| Unit with Perfect Humidity Dehumidification Package |           |                                                                                       |             |             |             |
| Rows...Fins/in.                                     |           | 1...17                                                                                | 1...17      | 1...17      | 1...17      |
| Total Face Area (sq ft)                             |           | 3.9                                                                                   | 3.9         | 3.9         | 3.9         |
| EVAPORATOR COIL                                     |           | 3/8-in. OD Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Acutrol™ Metering Device |             |             |             |
| Rows...Fins/in.                                     |           | 2...15                                                                                | 2...15      | 4...15      | 4...15      |
| Total Face Area (sq ft)                             |           | 5.5                                                                                   | 5.5         | 5.5         | 5.5         |
| EVAPORATOR FAN                                      |           | Centrifugal Type, Belt Drive                                                          |             |             |             |
| Quantity...Size (in.)                               |           | 1...10 x 10                                                                           | 1...10 x 10 | 1...10 x 10 | 1...10 x 10 |
| Nominal Cfm                                         |           | 1200                                                                                  | 1600        | 2000        | 2400        |
| Maximum Continuous Bhp                              |           | 1.20                                                                                  | 1.20        | 1.30/2.40*  | 2.40        |
| Motor Frame Size                                    |           | 2.40                                                                                  | 2.40        | 2.90        | 2.90        |
|                                                     | Std       | 48                                                                                    | 48          | 48/56*      | 56          |
|                                                     | Hi-Static | 56                                                                                    | 56          | 56          | 56          |
| Fan Rpm Range                                       |           | 680-1044                                                                              | 770-1185    | 1035-1460   | 1119-1585   |
|                                                     | Std       | 1075-1455                                                                             | 1075-1455   | 1300-1685   | 1300-1685   |
|                                                     | Hi-Static |                                                                                       |             |             |             |
| Motor Bearing Type                                  |           | Ball                                                                                  | Ball        | Ball        | Ball        |
| Maximum Fan Rpm                                     |           | 2100                                                                                  | 2100        | 2100        | 2100        |
| Motor Pulley Pitch Diameter A/B (in.)               |           | 1.9/2.9                                                                               | 1.9/2.0     | 2.4/3.4     | 2.4/3.4     |
|                                                     | Std       | 2.8/3.8                                                                               | 2.8/3.8     | 3.4/4.4     | 3.4/3.4     |
|                                                     | Hi-Static | 1/2                                                                                   | 1/2         | 5/8         | 5/8         |
| Nominal Motor Shaft Diameter (in.)                  |           | 5/8                                                                                   | 5/8         | 5/8         | 7/8         |
|                                                     | Hi-Static | 4.5                                                                                   | 4.0         | 4.0         | 3.7         |
| Fan Pulley Pitch Diameter (in.)                     |           | 4.5                                                                                   | 4.5         | 4.5         | 4.5         |
|                                                     | Hi-Static |                                                                                       |             |             |             |
| Belt — Type...Length (in.)                          |           | 1...A...36                                                                            | 1...A...36  | 1...A...40  | 1...A...38  |
|                                                     | Std       | 1...A...39                                                                            | 1...A...39  | 1...A...40  | 1...A...40  |
|                                                     | Hi-Static |                                                                                       |             |             |             |
| Pulley Center Line Distance (in.)                   |           | 10.0-12.4                                                                             | 10.0-12.4   | 14.7-15.5   | 14.7-15.5   |
| Speed Change per Full Turn of                       |           |                                                                                       |             |             |             |
| Movable Pulley Flange (rpm)                         |           | 65                                                                                    | 70          | 75          | 95          |
|                                                     | Std       | 65                                                                                    | 65          | 60          | 60          |
| Movable Pulley Maximum Full                         |           | 5                                                                                     | 5           | 6           | 5           |
| Turns from Closed Position                          |           | 6                                                                                     | 6           | 5           | 5           |
|                                                     | Hi-Static | 3                                                                                     | 3           | 3           | 3           |
| Factory Setting — Full Turns Open                   |           | 3 1/2                                                                                 | 3 1/2       | 3 1/2       | 3 1/2       |
|                                                     | Std       | 826                                                                                   | 936         | 1248        | 1305        |
| Factory Speed Setting (rpm)                         |           | 1233                                                                                  | 1233        | 1396        | 1396        |
|                                                     | Hi-Static |                                                                                       |             |             |             |
| Fan Shaft Diameter at Pulley (in.)                  |           | 5/8                                                                                   | 5/8         | 5/8         | 5/8         |

## LEGEND

Bhp — Brake Horsepower

\*Single phase/three phase.

†Indicates automatic reset.

\*\*60,000 and 72,000 Btuh heat input units have 2 burners. 90,000 and 120,000 Btuh heat input units have 3 burners. 115,000 Btuh heat input units and 150,000 Btuh Heat input units have 3 burners.

††An LP kit is available as an accessory.

‡California compliant three-phase models.

\*\*\*California SCAQMD compliant low NO<sub>x</sub> models have combustion products that are controlled to 40 nanograms per joule or less.

581B036-150

**PHYSICAL DATA — 581B036-072 (cont)**

| UNIT SIZE 581B                                                        |         | 036            | 048                       | 060             | 072             |
|-----------------------------------------------------------------------|---------|----------------|---------------------------|-----------------|-----------------|
| <b>FURNACE SECTION</b>                                                |         |                |                           |                 |                 |
| Rollout Switch Cutout Temp (F)†                                       |         | 195            | 195                       | 195             | 195             |
| Burner Orifice Diameter (in. ...drill size)**                         |         |                |                           |                 |                 |
| Natural Gas — Std                                                     | 071/072 | .113...33      | .113...33                 | .113...33       | .113...33       |
|                                                                       | 114/115 | .113...33      | .113...33                 | .113...33       | .113...33       |
|                                                                       | 149/150 | —              | .129...30                 | .129...30       | .129...30       |
|                                                                       | 060N    | .102...38      | .102...38                 | .102...38       | —               |
|                                                                       | 090N    | .102...38      | .102...38                 | .102...38       | —               |
|                                                                       | 120N    | —              | .116...32                 | .116...32       | —               |
| Liquid Propane — Alt††                                                | 071/072 | .089...43      | .089...43                 | .089...43       | .089...43       |
|                                                                       | 114/115 | .089...43      | .089...43                 | .089...43       | .089...43       |
|                                                                       | 149/150 | —              | .102...38                 | .102...38       | .102...38       |
| Thermostat Heat Anticipator Setting (amps)                            |         |                |                           |                 |                 |
| 208/230/460 v                                                         |         |                |                           |                 |                 |
| First Stage                                                           |         | .14            | .14                       | .14             | .14             |
| Second Stage                                                          |         | .14            | .14                       | .14             | .14             |
| Gas Input (Btuh)                                                      |         |                |                           |                 |                 |
| First Stage/Second Stage (3-phase units)                              | 072     | 50,000/ 72,000 | 50,000/ 72,000            | 50,000/ 72,000  | 50,000/ 72,000  |
|                                                                       | 115     | 82,000/115,000 | 82,000/115,000            | 82,000/115,000  | 82,000/115,000  |
|                                                                       | 150     | —              | 120,000/150,000           | 120,000/150,000 | 120,000/150,000 |
|                                                                       | 071II   | —/ 72,000      | —/ 72,000                 | —/ 72,000       | —               |
|                                                                       | 114II   | —/115,000      | —/115,000                 | —/115,000       | —               |
|                                                                       | 149II   | —              | —/150,000                 | —/150,000       | —               |
|                                                                       | 060N*** | —/ 60,000      | —/ 60,000                 | —/ 60,000       | —               |
|                                                                       | 090N*** | —/ 90,000      | —/ 90,000                 | —/ 90,000       | —               |
|                                                                       | 120N*** | —              | —/120,000                 | —/120,000       | —               |
| Efficiency (Steady State) (%)                                         | 072     | 82             | 82                        | 82              | 82              |
|                                                                       | 115     | 80             | 81                        | 81              | 81              |
|                                                                       | 150     | —              | 80                        | 80              | 80              |
|                                                                       | 071     | 82             | 82                        | 82              | —               |
|                                                                       | 114     | 80             | 81                        | 81              | —               |
|                                                                       | 149     | —              | 80                        | 80              | —               |
|                                                                       | 060N    | 80             | 80                        | 80              | —               |
|                                                                       | 090N    | 80             | 80                        | 80              | —               |
|                                                                       | 120N    | —              | 80                        | 80              | —               |
| Temperature Rise Range                                                | 072     | 25-55          | 25-55                     | 25-55           | 25-55           |
|                                                                       | 115     | 55-85          | 35-65                     | 35-65           | 35-65           |
|                                                                       | 150     | —              | 50-80                     | 50-80           | 50-80           |
|                                                                       | 071     | 25-55          | 25-55                     | 25-55           | —               |
|                                                                       | 114     | 55-85          | 35-65                     | 35-65           | —               |
|                                                                       | 149     | —              | 50-80                     | 50-80           | —               |
|                                                                       | 060N    | 20-50          | 20-50                     | 20-50           | —               |
|                                                                       | 090N    | 30-60          | 30-60                     | 30-60           | —               |
|                                                                       | 120N    | —              | 40-70                     | 40-70           | —               |
| Manifold Pressure (in. wg)                                            |         |                |                           |                 |                 |
| Natural Gas — Std                                                     |         | 3.5            | 3.5                       | 3.5             | 3.5             |
| Liquid Propane — Alt††                                                |         | 3.5            | 3.5                       | 3.5             | 3.5             |
| Maximum Static Pressure (in. wg)                                      |         | 1.0            | 1.0                       | 1.0             | 1.0             |
| Field Gas Connection Size (in.)                                       |         | 1/2            | 1/2                       | 1/2             | 1/2             |
| <b>HIGH-PRESSURE SWITCH (psig)</b>                                    |         |                |                           |                 |                 |
| Standard Compressor Internal Relief                                   |         |                | 450 ± 50                  |                 |                 |
| Cutout                                                                |         |                | 428                       |                 |                 |
| Reset (Auto.)                                                         |         |                | 320                       |                 |                 |
| <b>LOSS-OF-CHARGE SWITCH/LOW-PRESSURE SWITCH (Liquid Line) (psig)</b> |         |                |                           |                 |                 |
| Cutout                                                                |         |                | 7 ± 3                     |                 |                 |
| Reset (Auto.)                                                         |         |                | 22 ± 5                    |                 |                 |
| <b>FREEZE PROTECTION THERMOSTAT</b>                                   |         |                |                           |                 |                 |
| Opens (F)                                                             |         |                | 30 ± 5                    |                 |                 |
| Closes (F)                                                            |         |                | 45 ± 5                    |                 |                 |
| <b>OUTDOOR-AIR INLET SCREENS</b>                                      |         |                |                           |                 |                 |
| Quantity...Size (in.)                                                 |         |                | Cleanable                 |                 |                 |
| <b>RETURN-AIR FILTERS</b>                                             |         |                |                           |                 |                 |
| Quantity...Size (in.)                                                 |         |                | Varies By Option Selected |                 |                 |
| <b>Throwaway</b>                                                      |         |                |                           |                 |                 |
| Quantity...Size (in.)                                                 |         |                | 2...16 x 25 x 2           |                 | 4...16 x 16 x 2 |

**LEGEND**

**Bhp**— Brake Horsepower

\*Single phase/three phase.

†Indicates automatic reset.

\*\*60,000 and 72,000 Btuh heat input units have 2 burners. 90,000 and 120,000 Btuh heat input units have 3 burners. 115,000 Btuh heat input units and 150,000 Btuh Heat input units have 3 burners.

††An LP kit is available as an accessory. In order to convert a Low NO<sub>x</sub> unit to LP gas, the baffle must be removed. Low NO<sub>x</sub> units converted to LP gas are no longer California SCAQMD compliant.

IICalifornia compliant three-phase models.

\*\*\*California SCAQMD compliant low NO<sub>x</sub> models have combustion products that are controlled to 40 nanograms per joule or less.

# PHYSICAL DATA — 581B090-150

| UNIT SIZE 581B                                      |  | 090                                                         | 102                           | 120         | 150                            |
|-----------------------------------------------------|--|-------------------------------------------------------------|-------------------------------|-------------|--------------------------------|
| NOMINAL CAPACITY (tons)                             |  | 7 <sup>1</sup> / <sub>2</sub>                               | 8 <sup>1</sup> / <sub>2</sub> | 10          | 12 <sup>1</sup> / <sub>2</sub> |
| OPERATING WEIGHT (lb)                               |  |                                                             |                               |             |                                |
| Unit                                                |  | 870                                                         | 1015                          | 1035        | 1050                           |
| With EconoMiSer IV                                  |  | 945                                                         | 1077                          | 1110        | 1125                           |
| With EconoMiSer2                                    |  | 941                                                         | 1072                          | 1106        | 1121                           |
| With Perfect Humidity™ Dehumidification Package     |  | 899                                                         | 1044                          | 1068        | 1083                           |
| Roof Curb                                           |  | 143                                                         | 143                           | 143         | 143                            |
| COMPRESSOR                                          |  | Scroll                                                      |                               |             |                                |
| Quantity                                            |  | 2                                                           | 2                             | 2           | 2                              |
| Oil (oz) (each compressor)                          |  | 53                                                          | 50                            | 50          | 60                             |
| REFRIGERANT TYPE                                    |  | R-22                                                        |                               |             |                                |
| Operating Charge (lb-oz)                            |  |                                                             |                               |             |                                |
| Standard Unit                                       |  |                                                             |                               |             |                                |
| Circuit 1 (first stage)                             |  | 7-10                                                        | 9- 8                          | 9-10        | 9-8                            |
| Circuit 2 (second stage)                            |  | 8- 2                                                        | 8-13                          | 10-10       | 9-5                            |
| Unit With Perfect Humidity Dehumidification Package |  |                                                             |                               |             |                                |
| Circuit 1 (first stage)                             |  | 13-0                                                        | 16-0                          | 16-8        | 15-3                           |
| Circuit 2 (second stage)                            |  | 13-6                                                        | 16-8                          | 17-8        | 16-6                           |
| CONDENSER FAN                                       |  | Propeller                                                   |                               |             |                                |
| Quantity...Diameter (in.)                           |  | 2...22                                                      | 2...22                        | 2...22      | 2...22                         |
| Nominal Cfm                                         |  | 6500                                                        | 6500                          | 7000        | 7000                           |
| Motor Hp...Rpm                                      |  | 1/4...1100                                                  | 1/4...1100                    | 1/4...1100  | 1/4...1100                     |
| Watts Input (Total)                                 |  | 650                                                         | 650                           | 650         | 650                            |
| CONDENSER COIL                                      |  | 3/8-in. OD Enhanced Copper Tubes, Aluminum Lanced Fins      |                               |             |                                |
| Standard Unit                                       |  |                                                             |                               |             |                                |
| Rows...Fins/in.                                     |  | 2...17                                                      | 2...17                        | 2...17      | 2...17                         |
| Total Face Area (sq ft)                             |  | 20.5                                                        | 25.0                          | 25.0        | 25.0                           |
| Unit with Perfect Humidity Dehumidification Package |  |                                                             |                               |             |                                |
| Rows...Fins/in.                                     |  | 1...17                                                      | 1...17                        | 1...17      | 1...17                         |
| Total Face Area (sq ft)                             |  | 6.3                                                         | 8.4                           | 8.4         | 8.4                            |
| EVAPORATOR FAN                                      |  | Centrifugal                                                 |                               |             |                                |
| Size (in.)                                          |  | 15 x 15                                                     | 15 x 15                       | 15 x 15     | 15 x 15                        |
| Type Drive                                          |  | Belt                                                        | Belt                          | Belt        | Belt                           |
| Nominal Cfm                                         |  | 3000                                                        | 3400                          | 4000        | 5000                           |
| Maximum Continuous Bhp                              |  | 2.90                                                        | 2.90                          | 3.70        | 5.25                           |
|                                                     |  | Std                                                         | 4.20                          | 5.25        | —                              |
|                                                     |  | Hi-Static                                                   | —                             | —           | —                              |
| Motor Frame                                         |  | 56                                                          | 56                            | 56          | 56                             |
| Fan Rpm Range                                       |  | 840-1085                                                    | 840-1085                      | 860-1080    | 830-1130                       |
|                                                     |  | Std                                                         | 860-1080                      | 830-1130    | —                              |
|                                                     |  | Hi-Static                                                   | —                             | —           | —                              |
| Motor Bearing Type                                  |  | Ball                                                        | Ball                          | Ball        | Ball                           |
| Maximum Fan Rpm                                     |  | 2100                                                        | 2100                          | 2100        | 2100                           |
| Motor Pulley Pitch Diameter                         |  | 3.4/4.4                                                     | 3.4/4.4                       | 4.0/5.0     | 2.8/3.8                        |
| A/B (in.)                                           |  | Std                                                         | Hi-Static                     | 4.0/5.0     | —                              |
| Nominal Motor Shaft Diameter (in.)                  |  | 7/8                                                         | 7/8                           | 7/8         | 7/8                            |
| Fan Pulley Pitch Diameter (in.)                     |  | Std                                                         | Hi-Static                     | 8.0         | 5.8                            |
|                                                     |  | 8.0                                                         | 8.0                           | 5.8         | —                              |
| Belt — Type...Length (in.)                          |  | Std                                                         | Hi-Static                     | A...53      | BX...48                        |
|                                                     |  | A...48                                                      | A...53                        | BX...45     | —                              |
| Pulley Center Line Distance (in.)                   |  | 16.75-19.25                                                 | 16.75-19.25                   | 15.85-17.50 | 15.85-17.50                    |
| Speed Change per Full Turn of                       |  | Std                                                         | 50                            | 45          | 60                             |
| Movable Pulley Flange (rpm)                         |  | Hi-Static                                                   | 60                            | 60          | —                              |
| Movable Pulley Maximum Full                         |  | Std                                                         | 5                             | 5           | 6                              |
| Turns from Closed Position                          |  | Hi-Static                                                   | 5                             | 6           | —                              |
| Factory Setting — Full Turns Open                   |  | Std                                                         | 5                             | 5           | 5                              |
|                                                     |  | Hi-Static                                                   | 5                             | 5           | —                              |
| Factory Speed Setting (rpm)                         |  | Std                                                         | 840                           | 860         | 887                            |
|                                                     |  | Hi-Static                                                   | 860                           | 890         | —                              |
| Fan Shaft Diameter at Pulley (in.)                  |  | 1                                                           | 1                             | 1           | 1                              |
| EVAPORATOR COIL                                     |  | 3/8-in. OD Enhanced Copper Tubes, Aluminum Double-Wavy Fins |                               |             |                                |
| Rows...Fins/in.                                     |  | 3...15                                                      | 4...15                        | 4...15      | 4...15                         |
| Total Face Area (sq ft)                             |  | 8.9                                                         | 11.1                          | 11.1        | 11.1                           |

## LEGEND

Bhp — Brake Horsepower

\*Single phase/three phase.

†Indicates automatic reset.

\*\*72,000 Btuh heat input units have 2 burners.

115,000 Btuh heat input units and 150,000 Btuh Heat input units have 3 burners.

††An LP kit is available as an accessory.

581B036-150

**PHYSICAL DATA — 581B090-150 (cont)**

| UNIT SIZE 581B                                                 |         |     | 090             | 102             | 120             | 150             |
|----------------------------------------------------------------|---------|-----|-----------------|-----------------|-----------------|-----------------|
| FURNACE SECTION                                                |         |     |                 |                 |                 |                 |
| Rollout Switch Cutout Temp (F)†                                |         |     | 195             | 195             | 195             | 195             |
| Burner Orifice Diameter (in. ...drill size)**                  |         |     |                 |                 |                 |                 |
| Natural Gas — Std                                              | Lo      |     | .120...31       | .120...31       | .120...31       | .120...31       |
|                                                                | Med     |     | .120...31       | .120...31       | .120...31       | .129...30       |
|                                                                | Hi      |     | .120...31       | .120...31       | .129...30       |                 |
| Liquid Propane — Alt††                                         | Lo      |     | .096...41       | .096...41       | .096...41       | .096...41       |
|                                                                | Med     |     | .096...41       | .096...41       | .096...41       | .102...38       |
|                                                                | Hi      |     | .096...41       | .096...41       | .102...38       |                 |
| Thermostat Heat Anticipator Setting (amps)                     |         |     |                 |                 |                 |                 |
| Stage 1                                                        |         |     | .14             | .14             | .14             | .14             |
|                                                                |         |     | .14             | .14             | .14             | .14             |
|                                                                |         |     | .14             | .14             | .14             |                 |
| Stage 2                                                        |         |     | .14             | .14             | .20             | .20             |
|                                                                |         |     | .20             | .20             | .20             | .20             |
|                                                                |         |     | .20             | .20             | .20             |                 |
| Gas Input (Btuh)                                               | Stage 1 | Lo  | 90,000          | 90,000          | 120,000         | 120,000         |
|                                                                |         | Med | 120,000         | 120,000         | 180,000         | 180,000         |
|                                                                |         | Hi  | 180,000         | 180,000         | 200,000         |                 |
|                                                                | Stage 2 | Lo  | 125,000         | 125,000         | 180,000         | 180,000         |
|                                                                |         | Med | 180,000         | 180,000         | 224,000         | 224,000         |
|                                                                |         | Hi  | 224,000         | 224,000         | 250,000         |                 |
| Efficiency (Steady State) (%)                                  |         |     | 82              | 82              | 82              | 82              |
|                                                                |         | 82  | 82              | 82              | 80              |                 |
|                                                                |         | 82  | 82              | 80              |                 |                 |
| Temperature Rise Range                                         | Lo      |     | 20-50           | 20-50           | 35-65           | 35-65           |
|                                                                | Med     |     | 35-65           | 35-65           | 35-65           | 40-70           |
|                                                                | Hi      |     | 45-75           | 45-75           | 40-70           |                 |
| Manifold Pressure (in. wg)                                     |         |     |                 |                 |                 |                 |
| Natural Gas — Std                                              |         |     | 3.5             | 3.5             | 3.5             | 3.5             |
| Liquid Propane — Alt††                                         |         |     | 3.5             | 3.5             | 3.5             | 3.5             |
| Field Gas Connection Size (in.)                                | Lo      |     | .50             | .50             | .75             | .75             |
|                                                                | Med     |     | .75             | .75             | .75             | .75             |
|                                                                | Hi      |     | .75             | .75             | .75             |                 |
| HIGH-PRESSURE SWITCH (psig)                                    |         |     |                 |                 |                 |                 |
| Standard Compressor Internal Relief                            |         |     | 450 ± 50        |                 |                 |                 |
| Cutout                                                         |         |     | 428             |                 |                 |                 |
| Reset (Auto.)                                                  |         |     | 320             |                 |                 |                 |
| LOSS-OF-CHARGE SWITCH/LOW-PRESSURE SWITCH (Liquid Line) (psig) |         |     |                 |                 |                 |                 |
| Cutout                                                         |         |     | 7 ± 3           |                 |                 |                 |
| Reset (Auto.)                                                  |         |     | 22 ± 7          |                 |                 |                 |
| FREEZE PROTECTION THERMOSTAT                                   |         |     |                 |                 |                 |                 |
| Opens (F)                                                      |         |     | 30 ± 5          |                 |                 |                 |
| Closes (F)                                                     |         |     | 45 ± 5          |                 |                 |                 |
| OUTDOOR-AIR INLET SCREENS                                      |         |     |                 |                 |                 |                 |
|                                                                |         |     | Cleanable       |                 |                 |                 |
| Quantity...Size (in.)                                          |         |     | 1...20 x 25 x 1 |                 |                 |                 |
|                                                                |         |     | 1...16 x 25 x 1 |                 |                 |                 |
| RETURN-AIR FILTERS                                             |         |     |                 |                 |                 |                 |
| Quantity...Size (in.)                                          |         |     | 4...16 x 20 x 2 | 4...20 x 20 x 2 | 4...20 x 20 x 2 | 4...20 x 20 x 2 |

**LEGEND**

**Bhp** — Brake Horsepower

\*Single phase/three phase.

†Indicates automatic reset.

\*\*180,000 Btuh heat input units have 2 burners.

224,000 Btuh heat input units and 250,000 Btuh Heat input units have 3 burners.

††An LP kit is available as an accessory.

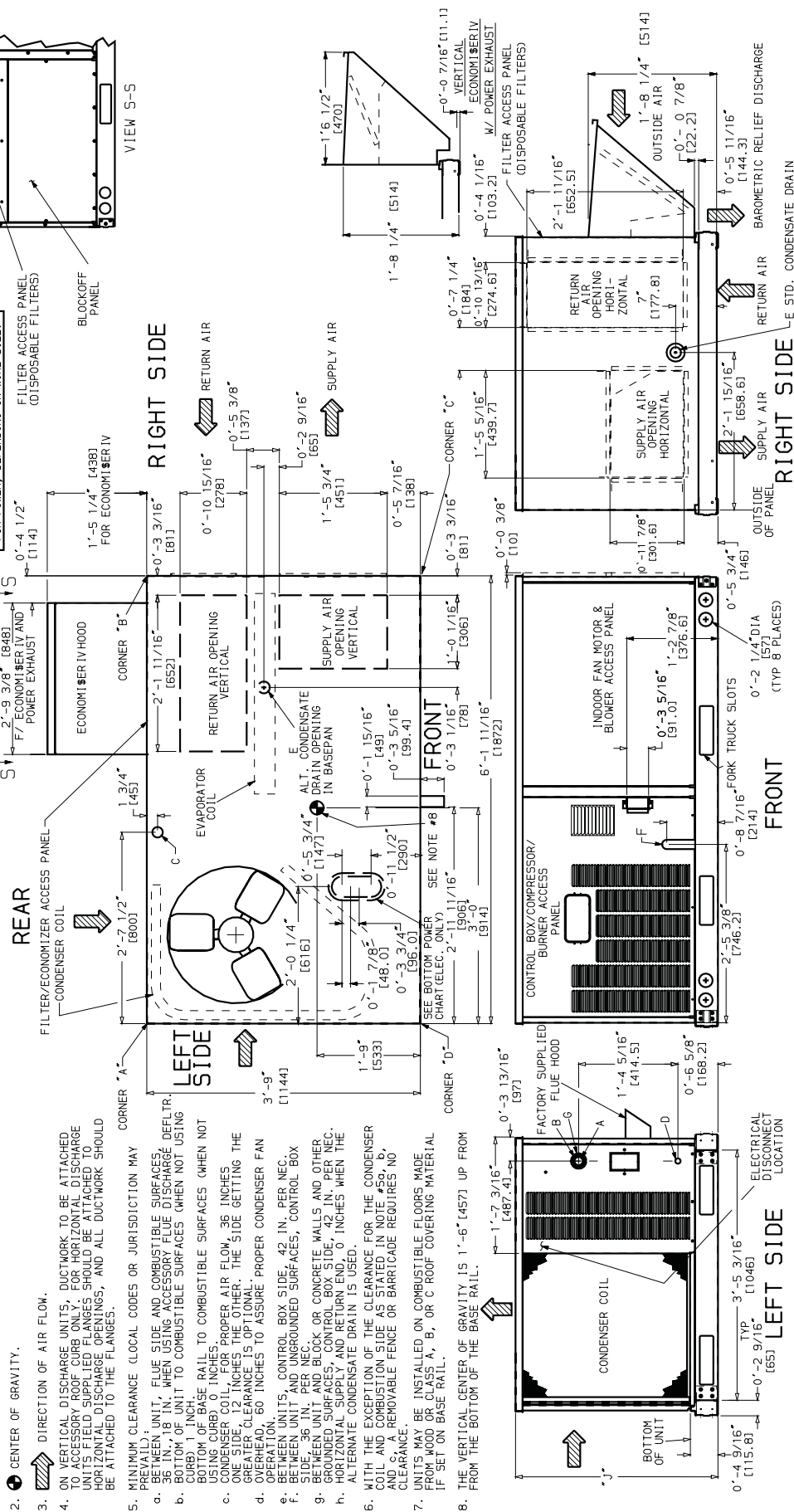
581B036-150

# BASE UNIT DIMENSIONS — 581B036-072

| CONNECTION SIZES |                                          |
|------------------|------------------------------------------|
| A                | 1 3/8" DIA. [35] FIELD POWER SUPPLY HOLE |
| B                | 2" DIA. [51] POWER SUPPLY KNOCK-OUT      |
| C                | 1 3/4" DIA. [44] CHARGING PORT HOLE      |
| D                | 7/8" DIA. [22] FIELD CONTROL WIRING HOLE |
| E                | 3/4" -14 NPT CONDENSATE DRAIN            |
| F                | 1/2" -14 NPT GAS CONNECTION              |
| G                | 2 1/2" DIA. [64] POWER SUPPLY KNOCK-OUT  |

| BOTTOM POWER CHART                                                                               |                                    |
|--------------------------------------------------------------------------------------------------|------------------------------------|
| THESE HOLES REQUIRED FOR USE WITH ACCESSORY PACKAGES OR 4401 CBRM/4402/4401, 2401, 3401, OR 4401 |                                    |
| THREADED CONDUIT SIZE                                                                            | WIRE REG. O. HOLE USE SIZES (MAX.) |
| 1/2"                                                                                             | 7/8" [22.2]                        |
| 3/4"                                                                                             | 1" [25.4]                          |
| 1" [25.4]                                                                                        | 1 1/8" [31.8]                      |
| 1 1/4"                                                                                           | 1 3/4" [34.9]                      |
| 1 1/2"                                                                                           | 2" [50.8]                          |
| 2"                                                                                               | 2 1/2" [63.5]                      |
| 2 1/2"                                                                                           | 3" [76.2]                          |
| 3"                                                                                               | 3 1/2" [88.9]                      |
| 3 1/2"                                                                                           | 4" [101.6]                         |
| 4"                                                                                               | 4 1/2" [114.3]                     |
| 4 1/2"                                                                                           | 5" [127]                           |
| 5"                                                                                               | 5 1/2" [140]                       |
| 5 1/2"                                                                                           | 6" [152.4]                         |
| 6"                                                                                               | 6 1/2" [165.1]                     |
| 6 1/2"                                                                                           | 7" [177.8]                         |
| 7"                                                                                               | 7 1/2" [190.5]                     |
| 7 1/2"                                                                                           | 8" [203.2]                         |
| 8"                                                                                               | 8 1/2" [215.9]                     |
| 8 1/2"                                                                                           | 9" [228.6]                         |
| 9"                                                                                               | 9 1/2" [241.3]                     |
| 9 1/2"                                                                                           | 10" [254]                          |
| 10"                                                                                              | 10 1/2" [266.7]                    |
| 10 1/2"                                                                                          | 11" [279.4]                        |
| 11"                                                                                              | 11 1/2" [292.1]                    |
| 11 1/2"                                                                                          | 12" [304.8]                        |
| 12"                                                                                              | 12 1/2" [317.5]                    |
| 12 1/2"                                                                                          | 13" [330.2]                        |
| 13"                                                                                              | 13 1/2" [342.9]                    |
| 13 1/2"                                                                                          | 14" [355.6]                        |
| 14"                                                                                              | 14 1/2" [368.3]                    |
| 14 1/2"                                                                                          | 15" [381]                          |
| 15"                                                                                              | 15 1/2" [393.7]                    |
| 15 1/2"                                                                                          | 16" [406.4]                        |
| 16"                                                                                              | 16 1/2" [419.1]                    |
| 16 1/2"                                                                                          | 17" [431.8]                        |
| 17"                                                                                              | 17 1/2" [444.5]                    |
| 17 1/2"                                                                                          | 18" [457.2]                        |
| 18"                                                                                              | 18 1/2" [469.9]                    |
| 18 1/2"                                                                                          | 19" [482.6]                        |
| 19"                                                                                              | 19 1/2" [495.3]                    |
| 19 1/2"                                                                                          | 20" [508]                          |
| 20"                                                                                              | 20 1/2" [520.7]                    |
| 20 1/2"                                                                                          | 21" [533.4]                        |
| 21"                                                                                              | 21 1/2" [546.1]                    |
| 21 1/2"                                                                                          | 22" [558.8]                        |
| 22"                                                                                              | 22 1/2" [571.5]                    |
| 22 1/2"                                                                                          | 23" [584.2]                        |
| 23"                                                                                              | 23 1/2" [596.9]                    |
| 23 1/2"                                                                                          | 24" [609.6]                        |
| 24"                                                                                              | 24 1/2" [622.3]                    |
| 24 1/2"                                                                                          | 25" [635]                          |
| 25"                                                                                              | 25 1/2" [647.7]                    |
| 25 1/2"                                                                                          | 26" [660.4]                        |
| 26"                                                                                              | 26 1/2" [673.1]                    |
| 26 1/2"                                                                                          | 27" [685.8]                        |
| 27"                                                                                              | 27 1/2" [698.5]                    |
| 27 1/2"                                                                                          | 28" [711.2]                        |
| 28"                                                                                              | 28 1/2" [723.9]                    |
| 28 1/2"                                                                                          | 29" [736.6]                        |
| 29"                                                                                              | 29 1/2" [749.3]                    |
| 29 1/2"                                                                                          | 30" [762]                          |
| 30"                                                                                              | 30 1/2" [774.7]                    |
| 30 1/2"                                                                                          | 31" [787.4]                        |
| 31"                                                                                              | 31 1/2" [800.1]                    |
| 31 1/2"                                                                                          | 32" [812.8]                        |
| 32"                                                                                              | 32 1/2" [825.5]                    |
| 32 1/2"                                                                                          | 33" [838.2]                        |
| 33"                                                                                              | 33 1/2" [850.9]                    |
| 33 1/2"                                                                                          | 34" [863.6]                        |
| 34"                                                                                              | 34 1/2" [876.3]                    |
| 34 1/2"                                                                                          | 35" [889]                          |
| 35"                                                                                              | 35 1/2" [901.7]                    |
| 35 1/2"                                                                                          | 36" [914.4]                        |
| 36"                                                                                              | 36 1/2" [927.1]                    |
| 36 1/2"                                                                                          | 37" [939.8]                        |
| 37"                                                                                              | 37 1/2" [952.5]                    |
| 37 1/2"                                                                                          | 38" [965.2]                        |
| 38"                                                                                              | 38 1/2" [977.9]                    |
| 38 1/2"                                                                                          | 39" [990.6]                        |
| 39"                                                                                              | 39 1/2" [1003.3]                   |
| 39 1/2"                                                                                          | 40" [1016]                         |
| 40"                                                                                              | 40 1/2" [1028.7]                   |
| 40 1/2"                                                                                          | 41" [1041.4]                       |
| 41"                                                                                              | 41 1/2" [1054.1]                   |
| 41 1/2"                                                                                          | 42" [1066.8]                       |
| 42"                                                                                              | 42 1/2" [1079.5]                   |
| 42 1/2"                                                                                          | 43" [1092.2]                       |
| 43"                                                                                              | 43 1/2" [1104.9]                   |
| 43 1/2"                                                                                          | 44" [1117.6]                       |
| 44"                                                                                              | 44 1/2" [1130.3]                   |
| 44 1/2"                                                                                          | 45" [1143]                         |
| 45"                                                                                              | 45 1/2" [1155.7]                   |
| 45 1/2"                                                                                          | 46" [1168.4]                       |
| 46"                                                                                              | 46 1/2" [1181.1]                   |
| 46 1/2"                                                                                          | 47" [1193.8]                       |
| 47"                                                                                              | 47 1/2" [1206.5]                   |
| 47 1/2"                                                                                          | 48" [1219.2]                       |
| 48"                                                                                              | 48 1/2" [1231.9]                   |
| 48 1/2"                                                                                          | 49" [1244.6]                       |
| 49"                                                                                              | 49 1/2" [1257.3]                   |
| 49 1/2"                                                                                          | 50" [1270]                         |
| 50"                                                                                              | 50 1/2" [1282.7]                   |
| 50 1/2"                                                                                          | 51" [1295.4]                       |
| 51"                                                                                              | 51 1/2" [1308.1]                   |
| 51 1/2"                                                                                          | 52" [1320.8]                       |
| 52"                                                                                              | 52 1/2" [1333.5]                   |
| 52 1/2"                                                                                          | 53" [1346.2]                       |
| 53"                                                                                              | 53 1/2" [1358.9]                   |
| 53 1/2"                                                                                          | 54" [1371.6]                       |
| 54"                                                                                              | 54 1/2" [1384.3]                   |
| 54 1/2"                                                                                          | 55" [1397]                         |
| 55"                                                                                              | 55 1/2" [1409.7]                   |
| 55 1/2"                                                                                          | 56" [1422.4]                       |
| 56"                                                                                              | 56 1/2" [1435.1]                   |
| 56 1/2"                                                                                          | 57" [1447.8]                       |
| 57"                                                                                              | 57 1/2" [1460.5]                   |
| 57 1/2"                                                                                          | 58" [1473.2]                       |
| 58"                                                                                              | 58 1/2" [1485.9]                   |
| 58 1/2"                                                                                          | 59" [1498.6]                       |
| 59"                                                                                              | 59 1/2" [1511.3]                   |
| 59 1/2"                                                                                          | 60" [1524]                         |
| 60"                                                                                              | 60 1/2" [1536.7]                   |
| 60 1/2"                                                                                          | 61" [1549.4]                       |
| 61"                                                                                              | 61 1/2" [1562.1]                   |
| 61 1/2"                                                                                          | 62" [1574.8]                       |
| 62"                                                                                              | 62 1/2" [1587.5]                   |
| 62 1/2"                                                                                          | 63" [1600.2]                       |
| 63"                                                                                              | 63 1/2" [1612.9]                   |
| 63 1/2"                                                                                          | 64" [1625.6]                       |
| 64"                                                                                              | 64 1/2" [1638.3]                   |
| 64 1/2"                                                                                          | 65" [1651]                         |
| 65"                                                                                              | 65 1/2" [1663.7]                   |
| 65 1/2"                                                                                          | 66" [1676.4]                       |
| 66"                                                                                              | 66 1/2" [1689.1]                   |
| 66 1/2"                                                                                          | 67" [1701.8]                       |
| 67"                                                                                              | 67 1/2" [1714.5]                   |
| 67 1/2"                                                                                          | 68" [1727.2]                       |
| 68"                                                                                              | 68 1/2" [1739.9]                   |
| 68 1/2"                                                                                          | 69" [1752.6]                       |
| 69"                                                                                              | 69 1/2" [1765.3]                   |
| 69 1/2"                                                                                          | 70" [1778]                         |
| 70"                                                                                              | 70 1/2" [1790.7]                   |
| 70 1/2"                                                                                          | 71" [1803.4]                       |
| 71"                                                                                              | 71 1/2" [1816.1]                   |
| 71 1/2"                                                                                          | 72" [1828.8]                       |
| 72"                                                                                              | 72 1/2" [1841.5]                   |
| 72 1/2"                                                                                          | 73" [1854.2]                       |
| 73"                                                                                              | 73 1/2" [1866.9]                   |
| 73 1/2"                                                                                          | 74" [1879.6]                       |
| 74"                                                                                              | 74 1/2" [1892.3]                   |
| 74 1/2"                                                                                          | 75" [1905]                         |
| 75"                                                                                              | 75 1/2" [1917.7]                   |
| 75 1/2"                                                                                          | 76" [1930.4]                       |
| 76"                                                                                              | 76 1/2" [1943.1]                   |
| 76 1/2"                                                                                          | 77" [1955.8]                       |
| 77"                                                                                              | 77 1/2" [1968.5]                   |
| 77 1/2"                                                                                          | 78" [1981.2]                       |
| 78"                                                                                              | 78 1/2" [1993.9]                   |
| 78 1/2"                                                                                          | 79" [2006.6]                       |
| 79"                                                                                              | 79 1/2" [2019.3]                   |
| 79 1/2"                                                                                          | 80" [2032]                         |
| 80"                                                                                              | 80 1/2" [2044.7]                   |
| 80 1/2"                                                                                          | 81" [2057.4]                       |
| 81"                                                                                              | 81 1/2" [2070.1]                   |
| 81 1/2"                                                                                          | 82" [2082.8]                       |
| 82"                                                                                              | 82 1/2" [2095.5]                   |
| 82 1/2"                                                                                          | 83" [2108.2]                       |
| 83"                                                                                              | 83 1/2" [2120.9]                   |
| 83 1/2"                                                                                          | 84" [2133.6]                       |
| 84"                                                                                              | 84 1/2" [2146.3]                   |
| 84 1/2"                                                                                          | 85" [2159]                         |
| 85"                                                                                              | 85 1/2" [2171.7]                   |
| 85 1/2"                                                                                          | 86" [2184.4]                       |
| 86"                                                                                              | 86 1/2" [2197.1]                   |
| 86 1/2"                                                                                          | 87" [2209.8]                       |
| 87"                                                                                              | 87 1/2" [2222.5]                   |
| 87 1/2"                                                                                          | 88" [2235.2]                       |
| 88"                                                                                              | 88 1/2" [2247.9]                   |
| 88 1/2"                                                                                          | 89" [2260.6]                       |
| 89"                                                                                              | 89 1/2" [2273.3]                   |
| 89 1/2"                                                                                          | 90" [2286]                         |
| 90"                                                                                              | 90 1/2" [2298.7]                   |
| 90 1/2"                                                                                          | 91" [2311.4]                       |
| 91"                                                                                              | 91 1/2" [2324.1]                   |
| 91 1/2"                                                                                          | 92" [2336.8]                       |
| 92"                                                                                              | 92 1/2" [2349.5]                   |
| 92 1/2"                                                                                          | 93" [2362.2]                       |
| 93"                                                                                              | 93 1/2" [2374.9]                   |
| 93 1/2"                                                                                          | 94" [2387.6]                       |
| 94"                                                                                              | 94 1/2" [2400.3]                   |
| 94 1/2"                                                                                          | 95" [2413]                         |
| 95"                                                                                              | 95 1/2" [2425.7]                   |
| 95 1/2"                                                                                          | 96" [2438.4]                       |
| 96"                                                                                              | 96 1/2" [2451.1]                   |
| 96 1/2"                                                                                          | 97" [2463.8]                       |
| 97"                                                                                              | 97 1/2" [2476.5]                   |
| 97 1/2"                                                                                          | 98" [2489.2]                       |
| 98"                                                                                              | 98 1/2" [2501.9]                   |
| 98 1/2"                                                                                          | 99" [2514.6]                       |
| 99"                                                                                              | 99 1/2" [2527.3]                   |
| 99 1/2"                                                                                          | 100" [2540]                        |

- NOTES:
1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
  2. CENTER OF GRAVITY.
  3. DIRECTION OF AIR FLOW.
  4. ON VERTICAL DISCHARGE UNITS, DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY. FOR HORIZONTAL DISCHARGE UNITS, FIELD SUPPLIED FLANGES SHOULD BE ATTACHED TO DISCHARGE FLANGES, AND ALL DUCTWORK SHOULD BE ATTACHED TO THE FLANGES.
  5. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
    - a. BETWEEN UNIT, FLUE SIDE AND COMBUSTIBLE SURFACES, DEFLECTOR, 36 IN., 18 IN. WHEN USING ACCESSORY FLUE DISCHARGE CURB.
    - b. BETWEEN UNIT TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB) 0 INCHES.
    - c. CONDENSER COIL, FOR PROPER AIR FLOW, 36 INCHES GREATER CLEARANCE IS OPTIONAL. THE SIDE GETTING THE OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN OPERATION.
    - d. BETWEEN UNIT, CONTROL BOX SIDE, 42 IN., PER NEC.
    - e. BETWEEN UNIT AND UNGRADED SURFACES, CONTROL BOX SIDE, 36 IN., PER NEC.
    - f. BETWEEN UNIT AND BLOCK OR CONCRETE WALLS AND OTHER GROUNDED SURFACES, CONTROL BOX SIDE, 42 IN., PER NEC.
    - g. HORIZONTAL SUPPLY AND RETURN END, 0 INCHES WHEN THE ALTERNATE CONDENSATE DRAIN IS USED.
    - h. WITH THE EXCEPTION OF THE CLEARANCE FOR THE CONDENSER COIL AND COMBUSTION SIDE AS STATED IN NOTE #5a, b, c, AND d, 36 INCHES.
    - i. 36 INCHES BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLUSTAL A, B, OR C ROOF COVERING MATERIAL IF SET ON BASE RAIL.
    - j. THE VERTICAL CENTER OF GRAVITY IS 1'-6" [457] UP FROM THE BOTTOM OF THE BASE RAIL.



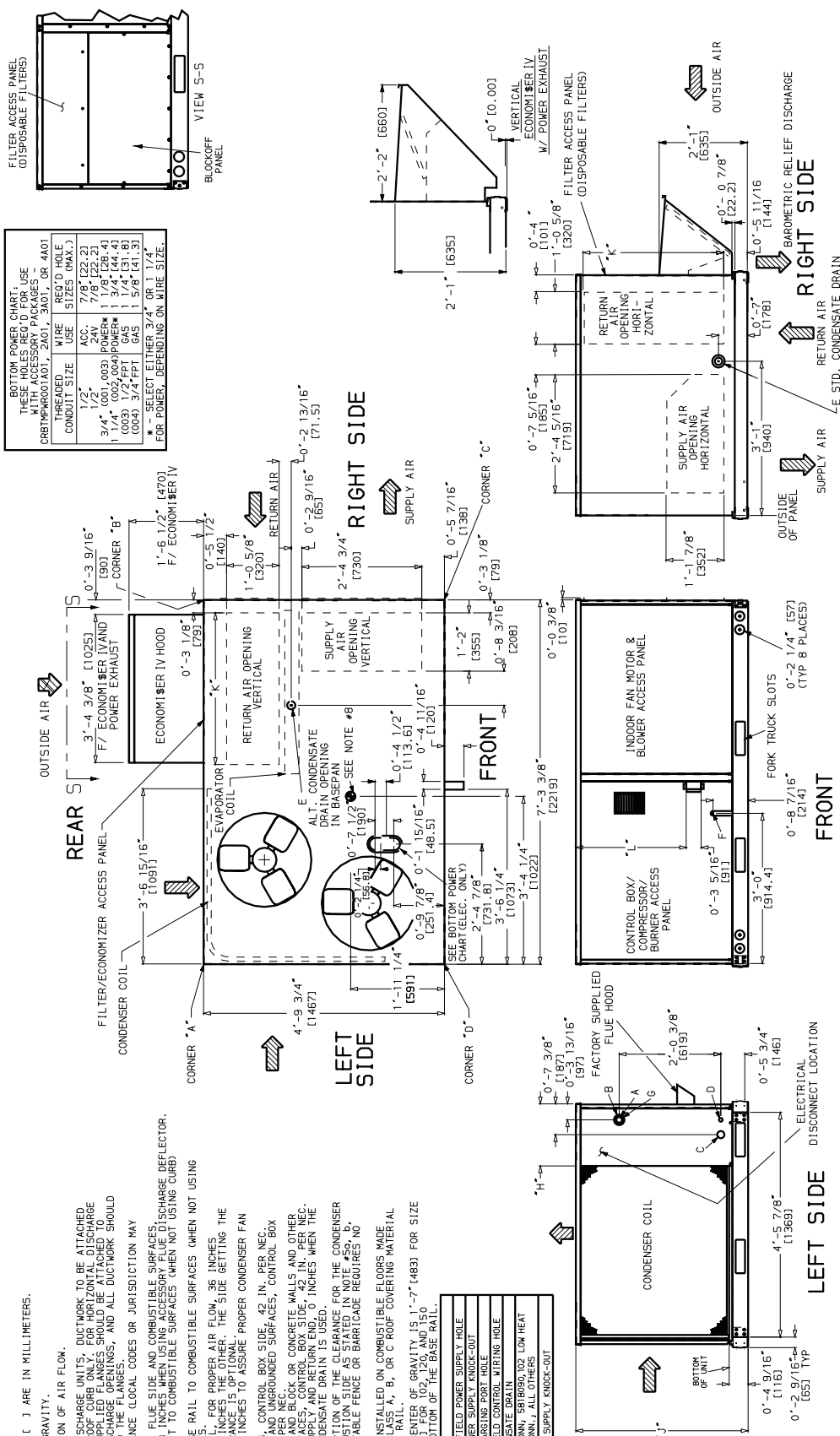


| UNIT<br>581B | STD UNIT<br>WEIGHT |     | ECONOMISER IV<br>WEIGHT |      | VERT ECON IV<br>W/P.E. WEIGHT |      | (A)<br>CORNER WEIGHT |     | (B)<br>CORNER WEIGHT |    | (C)<br>CORNER WEIGHT |     | (D)<br>CORNER WEIGHT |     | "H"     |     | "J"     |      | "K"     |     | "L"      |     |
|--------------|--------------------|-----|-------------------------|------|-------------------------------|------|----------------------|-----|----------------------|----|----------------------|-----|----------------------|-----|---------|-----|---------|------|---------|-----|----------|-----|
|              | Lb                 | Kg  | Lb                      | Kg   | Lb                            | Kg   | Lb                   | Kg  | Lb                   | Kg | Lb                   | Kg  | Lb                   | Kg  | ft-in.  | mm  | ft-in.  | mm   | ft-in.  | mm  | ft-in.   | mm  |
| 090          | 870                | 395 | 75                      | 34.1 | 145                           | 65.9 | 189                  | 86  | 161                  | 73 | 239                  | 109 | 260                  | 127 | 2-07/16 | 378 | 3-55/16 | 1050 | 2-91/16 | 856 | 2-21/16  | 672 |
| 100          | 1015               | 460 | 75                      | 34.1 | 145                           | 65.9 | 223                  | 101 | 188                  | 85 | 279                  | 126 | 327                  | 148 | 1-27/16 | 414 | 4-15/16 | 1253 | 3-09/16 | 924 | 2-107/16 | 875 |
| 120          | 1035               | 469 | 75                      | 34.1 | 145                           | 65.9 | 225                  | 102 | 192                  | 85 | 283                  | 129 | 333                  | 151 | 1-27/16 | 378 | 4-15/16 | 1253 | 3-09/16 | 924 | 2-107/16 | 875 |
| 150          | 1050               | 476 | 75                      | 34.1 | 145                           | 65.9 | 228                  | 103 | 195                  | 88 | 289                  | 131 | 338                  | 153 | 1-27/16 | 378 | 4-15/16 | 1253 | 3-09/16 | 924 | 2-107/16 | 875 |

## NOTES:

1. DIMENSIONS IN [ ] ARE IN MILLIMETERS.
2. 1" = 25.4 mm
3.  CENTER OF GRAVITY.
4.  DIRECTION OF AIR FLOW.
5. ON VERTICAL DISCHARGE UNITS, DUCTWORK TO BE ATTACHED TO ACCESSORY CURB ONLY. FOR HORIZONTAL DISCHARGE UNITS FIELD SUPPLIED FLANGES SHOULD BE ATTACHED TO HORZONTAL DISCHARGE OPENINGS, AND ALL DUCTWORK SHOULD BE INSTALLED TO THE SAME PLANES.
6. 5. MINIMUM CLEARANCE (LOCAL CODES OR JURISDICTION MAY PREVAIL):
  - a. 48 INCHES UNIT, FUE SIDE AND COMBUSTIBLE SURFACES,
  - b. 48 INCHES 18 INCHES WHEN USING ACCESSORY FUEL DISCHARGE DEFLECTOR.
  - c. 60 INCHES 18 INCHES TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB)
  - d. 18 INCH
  - e. BOTTOM OF BASE RAIL TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB)
7. COMBUSTIBLE SURFACES:
  - a. CONSIDER 12 INCHES FOR PROPER AIR FLOW, 36 INCHES CONSIDER 12 INCHES THE OTHER; THE FLOW GETTING THE GREATER CLEARANCE IS OPTIONAL
  - b. OVERHEAD, 60 INCHES TO ASSURE PROPER CONDENSER FAN CLEARANCE
8. BETWEEN UNITS, CONTROL BOX SIZE, 42 IN. PER NEC.
9. BETWEEN UNIT AND UNGROUNDED SURFACES, CONTROL BOX SIZE 36 IN. PER NEC.
10. BETWEEN UNIT AND CONCRETE WALLS AND OTHER GROUNDED SURFACES, CONTROL BOX SIZE, 42 IN. PER NEC.
11. HORIZONTAL SUPPLY AND RETURN END, 0 INCHES WHEN THE ALTERNATE CONDENSATE DRAIN IS USED.
12. WITH THE EXCEPTION OF THE CLEARANCE FOR THE CONDENSER DISCHARGE, ALL CLEARANCES MAY BE REDUCED TO 18 INCHES, 0, AND C. A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.
13. UNITS MAY BE INSTALLED ON COMBUSTIBLE FLOORS MADE FROM WOOD OR CLASS A, B, OR C RAIL COVERING MATERIAL IF SET ON BASE RAIL.
14. THE VENTILATION CENTER OF GRAVITY IS 1'-7" (483) FOR SIZE 10, 1'-10" (305) FOR SIZE 12, 1'-10 1/2" (354) FOR SIZE 14, AND 1'-10 3/4" (350) UP FROM THE BOTTOM OF THE BASE RAIL.

| CONNECTION SIZES |                                                  |
|------------------|--------------------------------------------------|
| A                | 1/8" DIA. (35) FIELD POWER SUPPLY HOLE           |
| B                | 1/2" DIA. (64) POWER SUPPLY KNOCK-OUT            |
| C                | 3/4" DIA. (44) CHARGING PORT HOLE                |
| D                | 7/8" DIA. (22) FIELD CONTROL WIRING HOLE         |
| E                | 3/4" - 14 NPT CONDENSATE DRAIN                   |
| F                | 1/2" - 14 NPT GAS CONN.; 5/8" BO90, 102 LOW HEAT |
| G                | 3/4" - 14 NPT GAS CONN., ALL OTHERS              |
| H                | 2" DIA. (51) POWER SUPPLY KNOCK-OUT              |





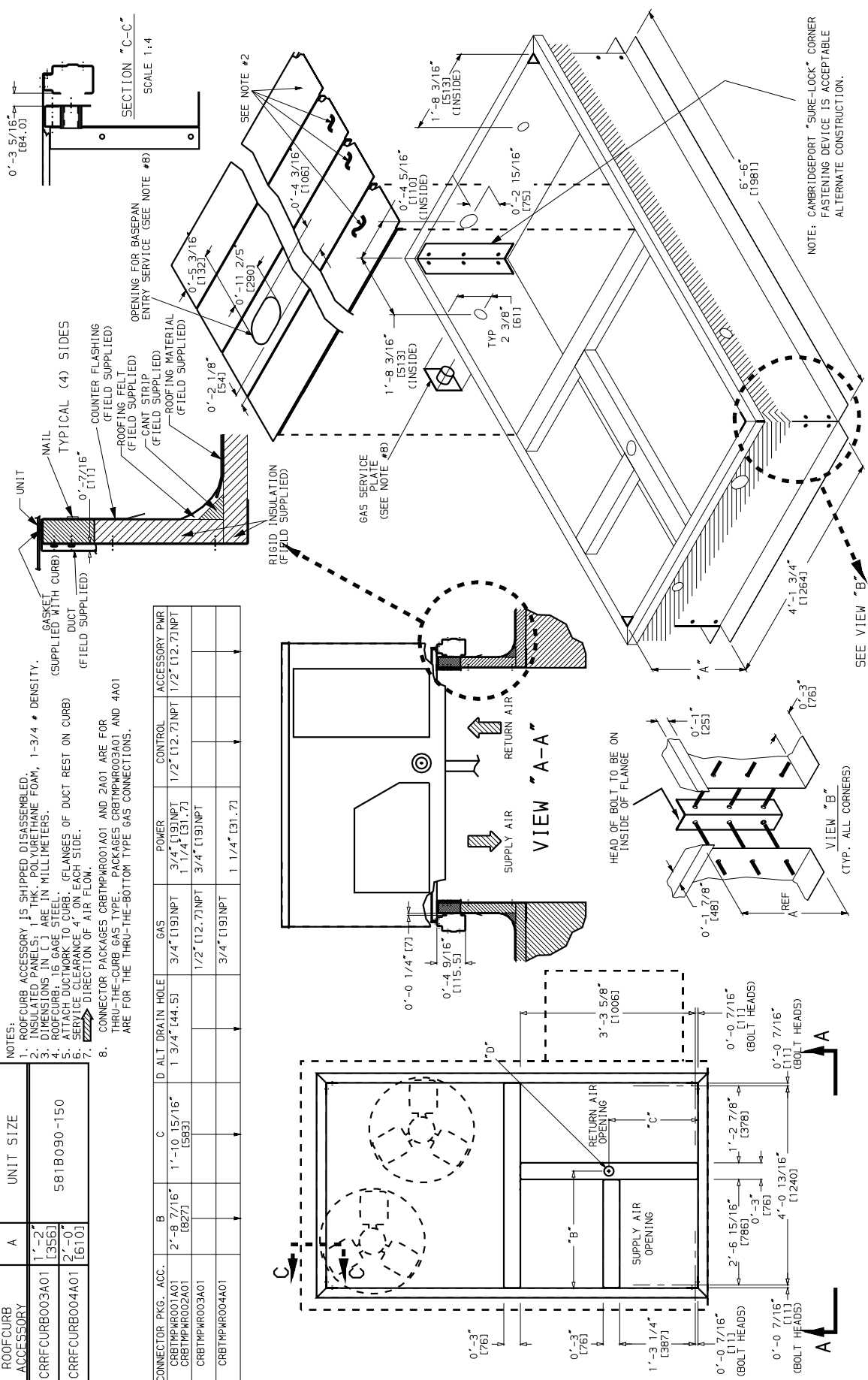
## ACCESSORY DIMENSIONS — 581B090-150

| ROOFCURB ACCESSORY | A              | UNIT SIZE   |
|--------------------|----------------|-------------|
| CRRFCURB003A01     | 1'-2"<br>[356] | 581B090-150 |
| CRRFCURB004A01     | 2'-0"<br>[610] |             |

## 5

- (SUP) FOUR ACCESSORY IS SHIPPED DISASSEMBLED.  
 INSULATED PANELS: 1 THK. POLYURETHANE FOAM, 1-3/4" DENSITY.  
 DIMENSIONS IN [ ] ARE IN MILLIMETERS.  
 (FT) FOUR: 16 GAGE STEEL.  
 ATTACH DUCTWORK TO CURB. (FLANGES OF DUCT REST ON CURB)  
 CLEARANCE 4" ON EACH SIDE.  
 DIRECTION OF AIR FLOW.
- CONNECTOR PACKAGES CRBTPR001A01 AND 2A01 ARE FOR  
 THRU-THE-CURB GAS TYPE. PACKAGES CRBTPR003A01 AND 4A01  
 ARE FOR THE THRU-THE-BOTTOM TYPE GAS CONNECTIONS.

| CONNECTOR PKG. ACC. | B                | C                  | D ALT DRAIN HOLE | GAS             | POWER          | CONTROL         | ACCESSORY PWR   |
|---------------------|------------------|--------------------|------------------|-----------------|----------------|-----------------|-----------------|
| CRBTFMWR001A01      | 2'-8 7/16" [827] | 1'-10 15/16" [583] | 1 3/4" [44, 5]   | 3/4" [19]NPT    | 3/4" [19]NPT   | 1/2" [12, 7]NPT | 1/2" [12, 7]NPT |
| CRBTFMWR002A01      |                  |                    |                  |                 | 1 1/4" [31, 7] |                 |                 |
| CRBTFMWR003A01      |                  |                    |                  | 1/2" [12, 7]NPT | 3/4" [19]NPT   |                 |                 |
| CRBTFMWR004A01      |                  |                    |                  | 3/4" [19]NPT    | 1 1/4" [31, 7] |                 |                 |



## SELECTION PROCEDURE (With 581B048 Example)

### I DETERMINE COOLING AND HEATING REQUIREMENTS AT DESIGN CONDITIONS.

Given:

Required Cooling Capacity (TC) ..... 44,600 Btuh  
Sensible Heat Capacity (SHC) ..... 32,000 Btuh  
Required Heating Capacity ..... 85,000 Btuh  
Condenser Entering-Air Temperature ..... 95 F  
Evaporator Entering-Air Temperature ..... 82 F edb,  
67 F ewb  
Evaporator Air Quantity ..... 1600 cfm  
External Static Pressure (ESP) ..... 0.75 in. wg  
Electrical Characteristics (V-Ph-Hz) ..... 230-1-60

### II SELECT UNIT BASED ON REQUIRED COOLING CAPACITY.

Enter the Cooling Capacities table (page 92) at condenser entering temperature of 95 F, evaporator-air entering at 1600 cfm and 80 F db and 67 F wb. The 581B--048115 unit will provide cooling capacity of 48,900 Btuh and a sensible heat capacity of 34,700 Btuh. For evaporator-air temperature other than 80 F edb, calculate sensible heat capacity correction, as required, using the formula found in Note 3 following the Cooling Capacities tables.

For this example:

$$\text{Correction factor} = 1.10 \times (1 - .21) \times (82 - 80) = 1.738$$

Multiply the correction factor of 1.738 by 1600 cfm (a total of 2781). From the Gross Cooling Capacities tables find that the sensible heat capacity at 80 F is 34.7 MBtuh (equivalent to 34,700 Btuh). Add 34,700 and 2781 to get the corrected sensible heat capacity of 37,481.

**NOTE:** Unit ratings are gross capacities and do not include the effect of evaporator-fan motor heat. To calculate net capacities, see Step V.

### III SELECT HEATING CAPACITY OF UNIT TO PROVIDE DESIGN CONDITION REQUIREMENTS.

In the Heating Capacities and Efficiencies table (page 10) note that unit 581B--048115 will provide output capacity of 93,150 Btuh, which is adequate for the given application.

### IV DETERMINE FAN SPEED AND POWER REQUIREMENTS AT DESIGN CONDITIONS.

Before entering the Fan Performance tables, calculate the total static pressure required based on unit components. From the given and the Pressure Drop tables (page 128), find:

External static pressure ..... .75 in. wg

Total static pressure ..... = .75 in. wg

Enter the Fan Performance table for 581B--048115 vertical discharge unit on page 104. At 1600 cfm and 0.75 in. wg interpolation is required. The rpm is 1051. The bhp is 0.90. The watts are 897. The factory-installed standard motor and drive are sufficient for operation.

### V DETERMINE NET COOLING CAPACITY.

Cooling capacities are gross and do not include indoor-fan motor (IFM) heat. Determine net capacity using the following formula:

$$\begin{aligned} \text{Net capacity} &= \text{gross capacity} - \text{IFM heat} \\ &= 48,900 \text{ Btuh} - 897 \text{ Watts} \\ &\quad \left( 3.413 \frac{\text{Btuh}}{\text{Watts}} \right) \\ &= 48,900 \text{ Btuh} - 3061 \text{ Btuh} \end{aligned}$$

$$\text{Net capacity} = 45,839 \text{ Btuh}$$

$$\begin{aligned} \text{Net sensible capacity} &= 37,481 \text{ Btuh} - 3061 \text{ Btuh} \\ &= 34,420 \text{ Btuh} \end{aligned}$$

# **PERFORMANCE DATA** **COOLING CAPACITIES, STANDARD UNITS**

| 581B036 (3 TONS)                          |     |                                  |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----|----------------------------------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF |      |      |           |      |      |           |      |      |
|                                           |     | 900/0.14                         |      |      | 1200/0.17 |      |      | 1500/0.20 |      |      |
|                                           |     | Air Entering Evaporator — Ewb    |      |      |           |      |      |           |      |      |
|                                           |     | 72                               | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC  | 41.9                             | 38.7 | 35.7 | 43.5      | 40.8 | 37.7 | 44.8      | 41.8 | 39.0 |
|                                           | SHC | 20.4                             | 25.2 | 29.7 | 21.8      | 28.2 | 33.8 | 23.3      | 30.7 | 37.0 |
|                                           | KW  | 2.19                             | 2.16 | 2.12 | 2.21      | 2.18 | 2.15 | 2.23      | 2.19 | 2.16 |
| 85                                        | TC  | 40.7                             | 37.5 | 34.5 | 42.1      | 39.3 | 36.4 | 43.5      | 40.4 | 37.6 |
|                                           | SHC | 19.9                             | 24.7 | 29.2 | 21.5      | 27.7 | 33.2 | 23.2      | 30.3 | 36.4 |
|                                           | KW  | 2.46                             | 2.42 | 2.39 | 2.47      | 2.44 | 2.41 | 2.50      | 2.45 | 2.42 |
| 95                                        | TC  | 39.3                             | 36.1 | 33.1 | 40.8      | 37.8 | 34.9 | 42.0      | 38.9 | 36.1 |
|                                           | SHC | 19.5                             | 24.1 | 28.4 | 21.1      | 27.2 | 32.5 | 22.8      | 29.9 | 35.6 |
|                                           | KW  | 2.75                             | 2.71 | 2.66 | 2.77      | 2.73 | 2.69 | 2.79      | 2.74 | 2.71 |
| 105                                       | TC  | 37.7                             | 34.6 | 31.7 | 39.3      | 36.2 | 33.4 | 40.1      | 37.2 | 34.7 |
|                                           | SHC | 18.8                             | 23.5 | 27.8 | 20.7      | 26.6 | 31.8 | 22.1      | 29.3 | 34.7 |
|                                           | KW  | 3.06                             | 3.02 | 2.98 | 3.09      | 3.04 | 3.01 | 3.10      | 3.06 | 3.03 |
| 115                                       | TC  | 36.0                             | 33.0 | 29.7 | 37.4      | 34.5 | 31.5 | 38.1      | 35.5 | 33.2 |
|                                           | SHC | 18.3                             | 22.9 | 26.7 | 19.9      | 26.1 | 30.9 | 21.3      | 28.7 | 33.2 |
|                                           | KW  | 3.41                             | 3.36 | 3.31 | 3.43      | 3.39 | 3.34 | 3.44      | 3.41 | 3.37 |
| 125                                       | TC  | 34.2                             | 31.3 | 27.8 | 35.6      | 32.7 | 29.4 | 36.3      | 33.6 | 31.9 |
|                                           | SHC | 17.6                             | 22.2 | 25.8 | 19.4      | 25.4 | 29.4 | 20.8      | 28.0 | 31.8 |
|                                           | KW  | 3.78                             | 3.73 | 3.66 | 3.80      | 3.76 | 3.71 | 3.81      | 3.78 | 3.75 |

| 581B048 (4 TONS)                          |     |                                   |      |      |           |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 1200/0.17                         |      |      | 1450/0.19 |      |      | 1600/0.21 |      |      | 2000/0.24 |      |      |
|                                           |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC  | 54.0                              | 50.7 | 44.2 | 55.9      | 52.2 | 47.7 | 56.4      | 52.8 | 49.1 | 58.1      | 54.5 | 50.6 |
|                                           | SHC | 26.1                              | 32.7 | 37.5 | 27.6      | 35.1 | 41.8 | 28.2      | 36.2 | 43.8 | 30.2      | 39.5 | 47.5 |
|                                           | kW  | 2.81                              | 2.80 | 2.76 | 2.83      | 2.81 | 2.78 | 2.83      | 2.80 | 2.79 | 2.84      | 2.82 | 2.79 |
| 85                                        | TC  | 52.2                              | 48.9 | 41.9 | 54.1      | 50.4 | 45.9 | 54.5      | 51.0 | 47.2 | 55.3      | 52.3 | 48.7 |
|                                           | SHC | 25.4                              | 32.0 | 36.4 | 26.9      | 34.5 | 40.8 | 27.5      | 35.7 | 42.8 | 28.6      | 38.5 | 46.6 |
|                                           | kW  | 3.20                              | 3.19 | 3.15 | 3.22      | 3.20 | 3.17 | 3.22      | 3.20 | 3.18 | 3.22      | 3.20 | 3.18 |
| 95                                        | TC  | 50.7                              | 46.9 | 39.5 | 51.9      | 48.4 | 43.5 | 52.5      | 48.9 | 45.2 | 53.9      | 50.1 | 46.7 |
|                                           | SHC | 24.9                              | 31.1 | 35.0 | 26.1      | 33.6 | 39.6 | 26.8      | 34.7 | 41.8 | 28.8      | 37.5 | 45.6 |
|                                           | kW  | 3.64                              | 3.61 | 3.57 | 3.65      | 3.62 | 3.60 | 3.65      | 3.62 | 3.60 | 3.67      | 3.63 | 3.61 |
| 105                                       | TC  | 48.8                              | 44.5 | 36.7 | 49.8      | 46.2 | 40.7 | 50.2      | 46.7 | 42.1 | 51.5      | 48.2 | 44.7 |
|                                           | SHC | 24.3                              | 30.2 | 33.6 | 25.3      | 32.8 | 38.2 | 26.0      | 33.9 | 40.3 | 27.9      | 37.4 | 44.4 |
|                                           | kW  | 4.12                              | 4.09 | 4.03 | 4.12      | 4.09 | 4.06 | 4.12      | 4.09 | 4.07 | 4.14      | 4.11 | 4.08 |
| 115                                       | TC  | 46.5                              | 41.1 | 34.3 | 47.7      | 43.3 | 37.0 | 48.0      | 44.4 | 38.5 | 48.9      | 45.7 | 42.0 |
|                                           | SHC | 23.4                              | 28.9 | 32.4 | 24.9      | 31.8 | 36.3 | 25.4      | 33.4 | 38.3 | 27.1      | 36.9 | 42.0 |
|                                           | kW  | 4.64                              | 4.59 | 4.53 | 4.65      | 4.62 | 4.55 | 4.64      | 4.63 | 4.56 | 4.65      | 4.63 | 4.60 |
| 125                                       | TC  | 43.8                              | 37.5 | 32.4 | 45.1      | 39.0 | 33.8 | 45.3      | 40.1 | 35.4 | 46.3      | 42.6 | 38.8 |
|                                           | SHC | 22.5                              | 27.4 | 31.5 | 24.1      | 30.2 | 33.7 | 24.7      | 31.9 | 35.4 | 26.5      | 35.9 | 38.8 |
|                                           | kW  | 5.19                              | 5.13 | 5.05 | 5.20      | 5.15 | 5.09 | 5.19      | 5.17 | 5.11 | 5.20      | 5.19 | 5.15 |

| 581B060 (5 TONS)                          |     |                                   |      |      |           |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 1500/0.08                         |      |      | 1750/0.09 |      |      | 2000/0.11 |      |      | 2500/0.13 |      |      |
|                                           |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC  | 70.8                              | 65.4 | 58.5 | 72.5      | 67.3 | 61.1 | 73.0      | 68.4 | 62.8 | 74.8      | 70.3 | 64.8 |
|                                           | SHC | 34.1                              | 42.7 | 49.9 | 35.7      | 45.5 | 54.2 | 36.8      | 48.0 | 57.8 | 39.6      | 53.0 | 63.4 |
|                                           | KW  | 3.53                              | 3.49 | 3.44 | 3.55      | 3.50 | 3.46 | 3.55      | 3.51 | 3.47 | 3.57      | 3.54 | 3.48 |
| 85                                        | TC  | 68.9                              | 63.2 | 55.3 | 70.5      | 65.1 | 57.9 | 72.2      | 66.4 | 60.2 | 73.2      | 68.1 | 62.9 |
|                                           | SHC | 33.5                              | 41.8 | 48.4 | 35.0      | 44.8 | 52.8 | 37.0      | 47.6 | 56.8 | 39.3      | 52.5 | 62.4 |
|                                           | KW  | 3.98                              | 3.94 | 3.87 | 4.00      | 3.96 | 3.90 | 4.03      | 3.97 | 3.92 | 4.04      | 3.99 | 3.94 |
| 95                                        | TC  | 66.8                              | 60.6 | 52.4 | 68.3      | 62.5 | 54.3 | 69.3      | 63.8 | 56.6 | 71.2      | 65.6 | 60.6 |
|                                           | SHC | 32.8                              | 40.7 | 47.0 | 34.5      | 43.8 | 51.1 | 36.0      | 46.7 | 55.0 | 39.1      | 51.8 | 60.5 |
|                                           | KW  | 4.48                              | 4.43 | 4.35 | 4.50      | 4.45 | 4.37 | 4.51      | 4.46 | 4.40 | 4.55      | 4.48 | 4.44 |
| 105                                       | TC  | 64.3                              | 57.7 | 49.9 | 65.9      | 59.8 | 51.7 | 66.9      | 61.1 | 54.1 | 68.4      | 62.8 | 58.4 |
|                                           | SHC | 32.0                              | 39.6 | 45.8 | 33.7      | 42.8 | 49.7 | 35.3      | 45.7 | 53.5 | 38.4      | 51.0 | 58.4 |
|                                           | KW  | 5.03                              | 4.96 | 4.87 | 5.05      | 4.99 | 4.90 | 5.06      | 5.00 | 4.93 | 5.08      | 5.02 | 4.98 |
| 115                                       | TC  | 61.5                              | 54.8 | 47.3 | 62.8      | 56.7 | 49.1 | 64.0      | 58.2 | 51.6 | 65.4      | 59.9 | 56.1 |
|                                           | SHC | 31.0                              | 38.4 | 44.5 | 32.5      | 41.6 | 48.2 | 34.4      | 44.6 | 51.6 | 37.4      | 50.0 | 56.1 |
|                                           | KW  | 5.61                              | 5.55 | 5.46 | 5.62      | 5.58 | 5.49 | 5.65      | 5.60 | 5.52 | 5.67      | 5.61 | 5.57 |
| 125                                       | TC  | 58.7                              | 51.6 | 44.5 | 59.9      | 53.4 | 46.2 | 60.8      | 54.9 | 49.0 | 62.2      | 56.8 | 53.5 |
|                                           | SHC | 30.0                              | 37.2 | 43.1 | 31.7      | 40.4 | 46.2 | 33.3      | 43.4 | 48.9 | 36.4      | 48.9 | 53.4 |
|                                           | KW  | 6.27                              | 6.19 | 6.09 | 6.28      | 6.21 | 6.13 | 6.29      | 6.24 | 6.17 | 6.31      | 6.27 | 6.22 |

Standard Ratings

## **LEGEND**

BF — Bypass Factor  
Edb — Entering Dry Bulb  
Ewb — Entering Wet Bulb  
kW — Compressor Motor Power Input  
SHC — Sensible Heat Capacity (1000 Btuh) Gross  
TC — Total Capacity (1000 Btuh) Gross

## **NOTES:**

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h}_{lwb}\text{)}$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil.  
Below 80 F edb, subtract (corr factor x cfm) from SHC.  
Above 80 F edb, add (corr factor x cfm) to SHC.  
Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

**PERFORMANCE DATA (cont)**  
**COOLING CAPACITIES, STANDARD UNITS (cont)**

| 581B072 (6 TONS)                          |     |                                   |      |      |           |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 1800/0.05                         |      |      | 2100/0.06 |      |      | 2400/0.06 |      |      | 3000/0.08 |      |      |
|                                           |     |                                   |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC  | 86.7                              | 80.7 | 74.4 | 88.8      | 82.7 | 76.6 | 90.5      | 84.4 | 78.2 | 92.6      | 86.3 | 81.0 |
|                                           | SHC | 43.0                              | 53.7 | 63.8 | 45.0      | 57.4 | 68.9 | 47.2      | 61.2 | 73.6 | 51.2      | 67.4 | 80.7 |
|                                           | kW  | 4.58                              | 4.46 | 4.33 | 4.63      | 4.50 | 4.38 | 4.67      | 4.55 | 4.41 | 4.72      | 4.58 | 4.47 |
| 85                                        | TC  | 84.1                              | 78.2 | 72.0 | 86.4      | 80.3 | 74.1 | 88.2      | 81.7 | 75.7 | 90.2      | 84.0 | 78.8 |
|                                           | SHC | 42.0                              | 52.6 | 62.7 | 44.5      | 56.6 | 68.0 | 46.8      | 60.2 | 72.5 | 50.6      | 67.4 | 78.7 |
|                                           | kW  | 5.10                              | 4.97 | 4.85 | 5.16      | 5.03 | 4.90 | 5.21      | 5.06 | 4.93 | 5.26      | 5.12 | 4.99 |
| 95                                        | TC  | 81.3                              | 75.3 | 69.2 | 83.4      | 77.3 | 71.3 | 85.1      | 78.9 | 72.9 | 87.2      | 80.6 | 76.2 |
|                                           | SHC | 41.0                              | 51.4 | 61.4 | 43.4      | 55.3 | 66.6 | 45.8      | 59.2 | 71.2 | 50.2      | 65.8 | 76.2 |
|                                           | kW  | 5.65                              | 5.52 | 5.39 | 5.71      | 5.57 | 5.44 | 5.77      | 5.62 | 5.48 | 5.83      | 5.66 | 5.55 |
| 105                                       | TC  | 77.9                              | 72.0 | 66.1 | 80.0      | 73.8 | 68.0 | 81.6      | 75.3 | 69.6 | 83.4      | 77.1 | 73.2 |
|                                           | SHC | 39.7                              | 50.2 | 60.0 | 42.2      | 54.0 | 65.2 | 44.6      | 57.8 | 69.3 | 49.0      | 64.5 | 73.2 |
|                                           | kW  | 6.22                              | 6.08 | 5.94 | 6.29      | 6.13 | 6.00 | 6.34      | 6.17 | 6.04 | 6.40      | 6.22 | 6.12 |
| 115                                       | TC  | 74.7                              | 68.4 | 61.8 | 75.9      | 70.0 | 64.1 | 77.6      | 71.3 | 66.5 | 78.7      | 73.0 | 70.1 |
|                                           | SHC | 38.7                              | 48.8 | 58.1 | 40.8      | 52.6 | 63.2 | 43.3      | 56.4 | 66.4 | 46.9      | 63.2 | 70.0 |
|                                           | kW  | 6.84                              | 6.68 | 6.49 | 6.87      | 6.71 | 6.56 | 6.93      | 6.75 | 6.63 | 6.96      | 6.80 | 6.72 |
| 125                                       | TC  | 70.3                              | 63.6 | 57.2 | 71.8      | 65.5 | 59.1 | 72.9      | 66.8 | 61.9 | 74.0      | 68.6 | 66.4 |
|                                           | SHC | 37.2                              | 47.0 | 55.8 | 39.5      | 51.0 | 59.1 | 41.7      | 55.0 | 61.9 | 45.4      | 61.8 | 66.3 |
|                                           | kW  | 7.43                              | 7.25 | 7.03 | 7.48      | 7.30 | 7.13 | 7.51      | 7.35 | 7.22 | 7.54      | 7.41 | 7.33 |

| 581B090 (7 1/2 TONS)                      |     |                                   |      |      |           |      |      |           |       |      |
|-------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|-------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |       |      |
|                                           |     | 2250/0.10                         |      |      | 3000/0.11 |      |      | 3750/0.14 |       |      |
|                                           |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |       |      |
|                                           |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67    | 62   |
| 75                                        | TC  | 105.5                             | 96.9 | 87.6 | 107.3     | 99.6 | 90.7 | 110.3     | 101.9 | 93.8 |
|                                           | SHC | 50.6                              | 63.6 | 75.7 | 53.3      | 69.2 | 83.7 | 58.0      | 76.6  | 92.2 |
|                                           | KW  | 5.15                              | 5.07 | 5.04 | 5.16      | 5.11 | 5.06 | 5.20      | 5.13  | 5.07 |
| 85                                        | TC  | 102.5                             | 93.6 | 83.6 | 105.1     | 96.5 | 87.5 | 107.7     | 99.0  | 90.6 |
|                                           | SHC | 49.7                              | 62.4 | 73.9 | 52.8      | 68.4 | 82.2 | 57.3      | 75.9  | 90.0 |
|                                           | KW  | 5.86                              | 5.79 | 5.73 | 5.89      | 5.82 | 5.77 | 5.93      | 5.86  | 5.78 |
| 95                                        | TC  | 98.9                              | 90.1 | 79.3 | 101.6     | 92.9 | 83.5 | 103.8     | 95.3  | 87.4 |
|                                           | SHC | 48.5                              | 61.2 | 71.9 | 51.9      | 67.2 | 80.2 | 56.2      | 74.9  | 87.3 |
|                                           | KW  | 6.65                              | 6.58 | 6.49 | 6.69      | 6.61 | 6.53 | 6.72      | 6.64  | 6.57 |
| 105                                       | TC  | 95.3                              | 86.2 | 75.7 | 97.6      | 88.8 | 79.6 | 100.0     | 91.0  | 84.1 |
|                                           | SHC | 47.3                              | 59.6 | 70.2 | 50.7      | 65.9 | 78.0 | 55.3      | 73.6  | 84.1 |
|                                           | KW  | 7.51                              | 7.44 | 7.31 | 7.55      | 7.48 | 7.36 | 7.59      | 7.50  | 7.41 |
| 115                                       | TC  | 91.0                              | 82.0 | 71.6 | 93.2      | 84.5 | 75.4 | 95.6      | 86.6  | 80.7 |
|                                           | SHC | 45.9                              | 58.0 | 68.1 | 49.3      | 64.2 | 75.3 | 54.2      | 72.1  | 80.7 |
|                                           | KW  | 8.43                              | 8.33 | 8.20 | 8.46      | 8.37 | 8.27 | 8.52      | 8.42  | 8.34 |
| 125                                       | TC  | 86.2                              | 77.8 | 68.1 | 88.3      | 80.0 | 71.9 | 90.0      | 81.9  | 77.2 |
|                                           | SHC | 44.1                              | 56.4 | 66.3 | 47.5      | 62.6 | 71.8 | 52.1      | 70.1  | 77.2 |
|                                           | KW  | 9.38                              | 9.29 | 9.14 | 9.43      | 9.34 | 9.24 | 9.47      | 9.38  | 9.32 |

| 581B102 (8½ TONS)                         |     |                                   |       |       |       |           |       |       |       |           |       |       |       |           |       |       |       |
|-------------------------------------------|-----|-----------------------------------|-------|-------|-------|-----------|-------|-------|-------|-----------|-------|-------|-------|-----------|-------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |       |       |           |       |       |       |           |       |       |       |           |       |       |       |
|                                           |     | 2550/0.11                         |       |       |       | 3000/0.12 |       |       |       | 3400/0.13 |       |       |       | 4250/0.17 |       |       |       |
|                                           |     |                                   |       |       |       |           |       |       |       |           |       |       |       |           |       |       |       |
|                                           |     | Air Entering Evaporator — Ewb (F) |       |       |       |           |       |       |       |           |       |       |       |           |       |       |       |
| 57                                        | 62  | 67                                | 72    | 57    | 62    | 67        | 57    | 62    | 67    | 72        | 57    | 62    | 67    | 72        | 57    |       |       |
| 75                                        | TC  | 94.6                              | 101.0 | 110.0 | 119.2 | 100.4     | 104.4 | 113.4 | 121.8 | 104.2     | 106.8 | 115.8 | 123.4 | 109.8     | 111.0 | 119.0 | 125.8 |
|                                           | SHC | 94.6                              | 84.4  | 69.4  | 54.4  | 100.4     | 92.4  | 75.0  | 57.2  | 104.2     | 99.0  | 80.0  | 59.8  | 109.8     | 110.4 | 89.4  | 64.2  |
|                                           | kW  | 5.72                              | 5.76  | 5.76  | 5.82  | 5.74      | 5.76  | 5.80  | 5.86  | 5.74      | 5.76  | 5.82  | 5.88  | 5.76      | 5.78  | 5.84  | 5.90  |
| 85                                        | TC  | 91.0                              | 97.4  | 106.8 | 115.8 | 97.4      | 101.0 | 110.0 | 119.6 | 101.2     | 103.0 | 112.0 | 121.6 | 108.0     | 108.0 | 116.0 | 123.4 |
|                                           | SHC | 91.0                              | 83.0  | 68.8  | 53.2  | 97.4      | 91.2  | 74.2  | 57.0  | 101.2     | 97.6  | 78.8  | 59.6  | 108.0     | 108.0 | 89.4  | 64.2  |
|                                           | kW  | 6.46                              | 6.5   | 6.52  | 6.58  | 6.50      | 6.52  | 6.54  | 6.60  | 6.50      | 6.52  | 6.54  | 6.64  | 6.54      | 6.54  | 6.60  | 6.64  |
| 95                                        | TC  | 85.2                              | 91.4  | 103.0 | 112.8 | 93.4      | 96.6  | 106.2 | 116.0 | 98.2      | 99.2  | 108.4 | 117.8 | 104.6     | 104.6 | 111.6 | 121.2 |
|                                           | SHC | 85.2                              | 80.4  | 67.2  | 52.6  | 93.4      | 89.4  | 73.0  | 55.8  | 98.2      | 96.2  | 78.2  | 58.8  | 104.6     | 104.6 | 88.0  | 64.6  |
|                                           | kW  | 7.24                              | 7.28  | 7.36  | 7.42  | 7.30      | 7.32  | 7.38  | 7.44  | 7.34      | 7.36  | 7.4   | 7.46  | 7.36      | 7.36  | 7.42  | 7.50  |
| 105                                       | TC  | 80.0                              | 82.2  | 98.6  | 108.6 | 87.0      | 87.8  | 101.6 | 111.8 | 93.4      | 93.6  | 103.8 | 114.0 | 101.0     | 100.8 | 106.8 | 116.6 |
|                                           | SHC | 80.0                              | 76.6  | 65.6  | 51.2  | 87.0      | 85.6  | 71.6  | 54.8  | 93.4      | 93.2  | 76.6  | 57.8  | 101.0     | 100.8 | 86.8  | 63.6  |
|                                           | kW  | 8.08                              | 8.12  | 8.26  | 8.32  | 8.16      | 8.16  | 8.28  | 8.36  | 8.20      | 8.20  | 8.3   | 8.38  | 8.28      | 8.28  | 8.30  | 8.40  |
| 115                                       | TC  | 73.6                              | 74.6  | 89.4  | 103.4 | 81.0      | 81.2  | 95.2  | 106.4 | 86.2      | 86.2  | 98.4  | 108.4 | 96.4      | 96.4  | 101.6 | 111.8 |
|                                           | SHC | 73.6                              | 73.0  | 62.2  | 49.6  | 81.0      | 81.2  | 69.4  | 53.0  | 86.2      | 86.2  | 75.0  | 56.4  | 96.4      | 96.4  | 85.4  | 62.8  |
|                                           | kW  | 9.00                              | 9.00  | 9.16  | 9.28  | 9.08      | 9.08  | 9.22  | 9.30  | 9.14      | 9.14  | 9.26  | 9.34  | 9.22      | 9.22  | 9.30  | 9.38  |
| 125                                       | TC  | 68.6                              | 68.6  | 80.2  | 98.2  | 74.4      | 74.4  | 84.0  | 101.0 | 79.2      | 79.2  | 86.8  | 102.8 | 88.0      | 88.0  | 93.8  | 105.6 |
|                                           | SHC | 68.6                              | 68.6  | 59.0  | 48.0  | 74.4      | 74.4  | 65.4  | 51.6  | 79.2      | 79.2  | 71.0  | 54.6  | 88.0      | 88.0  | 82.8  | 61.0  |
|                                           | kW  | 9.98                              | 9.98  | 10.14 | 10.32 | 10.06     | 10.06 | 10.18 | 10.36 | 10.14     | 10.14 | 10.22 | 10.38 | 10.24     | 10.24 | 10.28 | 10.42 |

Standard Ratings

**LEGEND**

BF — Bypass Factor  
Edb — Entering Dry Bulb  
Ewb — Entering Wet Bulb  
kW — Compressor Motor Power Input  
SHC — Sensible Heat Capacity (1000 Btuh) Gross  
TC — Total Capacity (1000 Btuh) Gross

**NOTES:**

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{db} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{wb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h}_{wb}\text{)}$$

$$h_{wb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.  
Below 80 F edb, subtract (corr factor x cfm) from SHC.  
Above 80 F edb, add (corr factor x cfm) to SHC.  
Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

581B036-150

**PERFORMANCE DATA (cont)**  
**COOLING CAPACITIES, STANDARD UNITS (cont)**

| 581B120 (10 TONS)                         |     |                                  |       |       |           |       |       |           |       |       |           |       |       |
|-------------------------------------------|-----|----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF |       |       |           |       |       |           |       |       |           |       |       |
|                                           |     | 3000/0.03                        |       |       | 3200/0.03 |       |       | 4000/0.04 |       |       | 5000/0.04 |       |       |
|                                           |     | Air Entering Evaporator — Ewb    |       |       |           |       |       |           |       |       |           |       |       |
|                                           |     | 72                               | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                        | TC  | 140.3                            | 129.4 | 115.0 | 141.2     | 130.4 | 118.1 | 145.2     | 134.0 | 122.1 | 147.5     | 136.6 | 125.3 |
|                                           | SHC | 65.6                             | 82.2  | 97.4  | 66.7      | 84.4  | 101.5 | 71.3      | 93.1  | 113.5 | 77.9      | 103.7 | 124.7 |
|                                           | kW  | 7.35                             | 7.21  | 7.12  | 7.37      | 7.23  | 7.13  | 7.46      | 7.31  | 7.17  | 7.51      | 7.37  | 7.22  |
| 85                                        | TC  | 137.7                            | 125.3 | 110.0 | 138.9     | 126.6 | 113.6 | 142.6     | 130.6 | 117.7 | 144.6     | 133.3 | 122.3 |
|                                           | SHC | 65.0                             | 81.2  | 95.2  | 66.3      | 83.6  | 99.7  | 71.0      | 92.8  | 112.0 | 76.9      | 103.1 | 122.2 |
|                                           | kW  | 8.29                             | 8.13  | 8.02  | 8.32      | 8.16  | 8.03  | 8.40      | 8.24  | 8.09  | 8.45      | 8.31  | 8.16  |
| 95                                        | TC  | 133.8                            | 120.7 | 103.0 | 135.1     | 121.9 | 107.2 | 138.8     | 125.8 | 112.8 | 141.7     | 128.5 | 118.5 |
|                                           | SHC | 63.9                             | 79.6  | 92.2  | 65.2      | 82.0  | 97.0  | 70.6      | 91.5  | 109.7 | 76.9      | 102.5 | 118.4 |
|                                           | kW  | 9.33                             | 9.16  | 8.98  | 9.35      | 9.18  | 9.00  | 9.44      | 9.27  | 9.07  | 9.51      | 9.33  | 9.19  |
| 105                                       | TC  | 128.7                            | 115.4 | 96.5  | 129.8     | 116.6 | 99.7  | 133.7     | 120.3 | 107.1 | 136.7     | 122.8 | 114.5 |
|                                           | SHC | 62.3                             | 77.6  | 89.4  | 63.6      | 80.2  | 93.5  | 69.4      | 89.6  | 106.8 | 76.0      | 100.6 | 114.3 |
|                                           | kW  | 10.46                            | 10.28 | 10.00 | 10.47     | 10.30 | 10.07 | 10.57     | 10.38 | 10.21 | 10.66     | 10.43 | 10.31 |
| 115                                       | TC  | 123.2                            | 109.1 | 90.8  | 124.3     | 110.3 | 92.2  | 127.9     | 114.4 | 100.8 | 130.9     | 116.8 | 110.1 |
|                                           | SHC | 60.4                             | 75.1  | 86.6  | 61.9      | 77.8  | 90.0  | 67.6      | 87.6  | 100.7 | 74.6      | 98.7  | 109.9 |
|                                           | kW  | 11.66                            | 11.47 | 11.20 | 11.68     | 11.51 | 11.25 | 11.77     | 11.60 | 11.41 | 11.89     | 11.66 | 11.58 |
| 125                                       | TC  | 117.5                            | 101.8 | 86.2  | 118.5     | 103.0 | 87.4  | 121.6     | 107.1 | 96.0  | 124.1     | 110.3 | 104.8 |
|                                           | SHC | 58.5                             | 72.5  | 84.5  | 60.0      | 75.0  | 87.3  | 65.8      | 85.1  | 96.0  | 72.5      | 96.9  | 104.8 |
|                                           | kW  | 12.99                            | 12.77 | 12.50 | 13.02     | 12.81 | 12.55 | 13.10     | 12.92 | 12.74 | 13.19     | 13.01 | 12.91 |

| 581B150 (12½ TONS)                        |     |                                  |       |       |           |       |       |           |       |       |           |       |       |
|-------------------------------------------|-----|----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF |       |       |           |       |       |           |       |       |           |       |       |
|                                           |     | 3750/0.08                        |       |       | 4300/0.09 |       |       | 5000/0.11 |       |       | 6250/0.13 |       |       |
|                                           |     | Air Entering Evaporator — Ewb    |       |       |           |       |       |           |       |       |           |       |       |
|                                           |     | 72                               | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                        | TC  | 167.1                            | 154.3 | 142.0 | 169.8     | 157.7 | 144.8 | 173.5     | 160.6 | 148.4 | 176.5     | 164.5 | 153.3 |
|                                           | SHC | 82.5                             | 103.5 | 123.6 | 85.8      | 109.7 | 132.0 | 90.3      | 117.7 | 141.9 | 98.2      | 130.7 | 153.1 |
|                                           | kW  | 9.44                             | 9.18  | 8.95  | 9.50      | 9.26  | 9.01  | 9.60      | 9.33  | 9.07  | 9.68      | 9.43  | 9.17  |
| 85                                        | TC  | 162.3                            | 149.3 | 135.6 | 165.1     | 152.5 | 139.5 | 168.8     | 155.3 | 143.5 | 172.1     | 159.2 | 149.3 |
|                                           | SHC | 80.9                             | 101.4 | 120.9 | 84.4      | 107.9 | 129.9 | 89.6      | 115.8 | 139.8 | 97.6      | 129.3 | 149.1 |
|                                           | kW  | 10.49                            | 10.18 | 9.97  | 10.55     | 10.27 | 10.02 | 10.67     | 10.32 | 10.11 | 10.75     | 10.43 | 10.21 |
| 95                                        | TC  | 156.5                            | 143.7 | 126.3 | 159.6     | 146.8 | 131.3 | 162.3     | 149.8 | 136.5 | 166.5     | 153.2 | 144.5 |
|                                           | SHC | 79.1                             | 99.5  | 116.5 | 83.0      | 106.1 | 126.0 | 87.6      | 114.2 | 135.8 | 95.8      | 127.7 | 144.4 |
|                                           | kW  | 11.60                            | 11.30 | 11.01 | 11.69     | 11.39 | 11.10 | 11.75     | 11.47 | 11.20 | 11.87     | 11.56 | 11.35 |
| 105                                       | TC  | 150.0                            | 136.2 | 115.7 | 153.0     | 139.3 | 120.9 | 155.6     | 142.5 | 138.5 | 158.8     | 145.9 | 138.8 |
|                                           | SHC | 76.5                             | 96.7  | 111.2 | 80.8      | 103.5 | 120.0 | 85.7      | 112.3 | 128.4 | 93.6      | 125.9 | 138.7 |
|                                           | kW  | 12.76                            | 12.42 | 12.09 | 12.83     | 12.52 | 12.20 | 12.91     | 12.62 | 12.32 | 12.96     | 12.72 | 12.52 |
| 115                                       | TC  | 141.8                            | 122.2 | 104.4 | 144.3     | 126.1 | 110.8 | 147.7     | 129.4 | 118.9 | 150.7     | 135.2 | 130.1 |
|                                           | SHC | 73.6                             | 91.2  | 104.2 | 77.9      | 98.5  | 110.8 | 83.4      | 107.3 | 118.4 | 91.8      | 121.9 | 129.9 |
|                                           | kW  | 13.85                            | 13.55 | 13.22 | 13.94     | 13.64 | 13.35 | 14.05     | 13.73 | 13.50 | 14.15     | 13.86 | 13.70 |
| 125                                       | TC  | 132.5                            | 108.6 | 93.9  | 134.8     | 111.4 | 100.7 | 137.6     | 114.4 | 106.6 | 140.3     | 122.9 | 120.1 |
|                                           | SHC | 70.9                             | 85.7  | 93.8  | 74.8      | 92.9  | 100.7 | 80.2      | 101.4 | 106.5 | 89.0      | 116.3 | 120.1 |
|                                           | kW  | 15.04                            | 14.66 | 14.44 | 15.14     | 14.75 | 14.55 | 15.23     | 14.85 | 14.72 | 15.29     | 14.94 | 14.84 |

Standard Ratings

**LEGEND**

BF — Bypass Factor  
Edb — Entering Dry Bulb  
Ewb — Entering Wet Bulb  
kW — Compressor Motor Power Input  
SHC — Sensible Heat Capacity (1000 Btuh) Gross  
TC — Total Capacity (1000 Btuh) Gross

**NOTES:**

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC. Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION

| 581B036 (3 TONS) — SUBCOOLING MODE        |                 |                                   |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |
|                                           |                 | 900/0.14                          |      |      | 1200/0.17 |      |      | 1500/0.20 |      |      |
|                                           |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |
|                                           |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC<br>SHC<br>kW | 41.3                              | 37.3 | 34.3 | 43.5      | 39.2 | 35.9 | 45.5      | 41.6 | 38.2 |
|                                           |                 | 17.5                              | 22.4 | 26.7 | 19.6      | 25.5 | 31.2 | 21.5      | 28.5 | 35.2 |
|                                           |                 | 2.19                              | 2.14 | 2.10 | 2.21      | 2.16 | 2.14 | 2.24      | 2.19 | 2.16 |
| 85                                        | TC<br>SHC<br>kW | 38.6                              | 34.4 | 31.6 | 41.3      | 37.5 | 33.3 | 43.5      | 38.6 | 35.5 |
|                                           |                 | 15.2                              | 20.1 | 25.1 | 17.1      | 23.2 | 29.0 | 18.9      | 26.3 | 32.9 |
|                                           |                 | 2.46                              | 2.40 | 2.37 | 2.47      | 2.43 | 2.40 | 2.51      | 2.45 | 2.42 |
| 95                                        | TC<br>SHC<br>kW | 35.9                              | 31.4 | 28.8 | 39.2      | 35.9 | 30.6 | 41.3      | 35.7 | 32.9 |
|                                           |                 | 13.0                              | 17.9 | 23.3 | 14.5      | 21.1 | 26.9 | 16.1      | 24.2 | 30.6 |
|                                           |                 | 2.74                              | 2.68 | 2.63 | 2.76      | 2.74 | 2.67 | 2.80      | 2.75 | 2.71 |
| 105                                       | TC<br>SHC<br>kW | 33.8                              | 29.7 | 27.4 | 36.3      | 32.2 | 28.7 | 38.1      | 32.8 | 30.4 |
|                                           |                 | 10.9                              | 15.8 | 21.0 | 12.5      | 18.9 | 24.6 | 14.0      | 21.7 | 28.1 |
|                                           |                 | 3.05                              | 3.00 | 2.97 | 3.09      | 3.04 | 2.99 | 3.12      | 3.07 | 3.03 |
| 115                                       | TC<br>SHC<br>kW | 31.8                              | 28.0 | 25.5 | 33.2      | 28.7 | 26.5 | 34.9      | 30.0 | 27.9 |
|                                           |                 | 9.0                               | 13.7 | 18.4 | 10.3      | 16.8 | 22.3 | 11.9      | 19.3 | 25.2 |
|                                           |                 | 3.40                              | 3.36 | 3.31 | 3.45      | 3.38 | 3.32 | 3.48      | 3.41 | 3.37 |
| 125                                       | TC<br>SHC<br>kW | 28.7                              | 26.3 | 23.4 | 29.7      | 25.5 | 22.9 | 31.3      | 27.1 | 25.5 |
|                                           |                 | 6.9                               | 12.2 | 17.3 | 7.9       | 14.5 | 20.6 | 9.2       | 17.3 | 22.3 |
|                                           |                 | 3.78                              | 3.73 | 3.66 | 3.84      | 3.77 | 3.71 | 3.87      | 3.79 | 3.75 |

581B036-150

| 581B036 (3 TONS) — HOT GAS REHEAT MODE    |                 |                                                |       |       |                                              |       |       |                                                |       |       |
|-------------------------------------------|-----------------|------------------------------------------------|-------|-------|----------------------------------------------|-------|-------|------------------------------------------------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Ewb (F)              |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |
|                                           |                 | Air Entering Evaporator — Cfm                  |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 900                                            | 1200  | 1500  | 900                                          | 1200  | 1500  | 900                                            | 1200  | 1500  |
| 80                                        | TC<br>SHC<br>kW | 12.83                                          | 15.84 | 18.20 | 13.24                                        | 16.31 | 18.73 | 13.58                                          | 16.72 | 19.18 |
|                                           |                 | 4.06                                           | 5.69  | 6.98  | 2.21                                         | 3.83  | 5.12  | .59                                            | 2.20  | 3.50  |
|                                           |                 | 2.12                                           | 2.12  | 2.12  | 2.13                                         | 2.13  | 2.13  | 2.14                                           | 2.14  | 2.14  |
| 75                                        | TC<br>SHC<br>kW | 13.61                                          | 16.44 | 18.67 | 14.03                                        | 16.93 | 19.20 | 14.39                                          | 17.34 | 19.67 |
|                                           |                 | 4.62                                           | 6.16  | 7.37  | 2.89                                         | 4.43  | 5.65  | 1.40                                           | 2.93  | 4.15  |
|                                           |                 | 2.11                                           | 2.11  | 2.11  | 2.12                                         | 2.12  | 2.12  | 2.14                                           | 2.14  | 2.14  |
| 70                                        | TC<br>SHC<br>kW | 14.39                                          | 17.05 | 19.14 | 14.82                                        | 17.54 | 19.68 | 15.19                                          | 17.96 | 20.15 |
|                                           |                 | 5.17                                           | 6.62  | 7.77  | 3.58                                         | 5.03  | 6.18  | 2.20                                           | 3.65  | 4.80  |
|                                           |                 | 2.10                                           | 2.10  | 2.10  | 2.12                                         | 2.12  | 2.12  | 2.13                                           | 2.13  | 2.13  |
| 60                                        | TC<br>SHC<br>kW | 15.95                                          | 18.26 | 20.08 | 16.40                                        | 18.77 | 20.63 | 16.79                                          | 19.21 | 21.11 |
|                                           |                 | 6.27                                           | 7.55  | 8.56  | 4.95                                         | 6.23  | 7.24  | 3.81                                           | 5.09  | 6.10  |
|                                           |                 | 2.09                                           | 2.09  | 2.09  | 2.11                                         | 2.11  | 2.11  | 2.12                                           | 2.12  | 2.12  |
| 50                                        | TC<br>SHC<br>kW | 17.50                                          | 19.48 | 21.02 | 17.98                                        | 20.00 | 21.58 | 18.40                                          | 20.45 | 22.07 |
|                                           |                 | 7.37                                           | 8.47  | 9.35  | 6.32                                         | 7.43  | 8.30  | 5.42                                           | 6.52  | 7.39  |
|                                           |                 | 2.07                                           | 2.07  | 2.07  | 2.10                                         | 2.10  | 2.10  | 2.12                                           | 2.12  | 2.12  |
| 40                                        | TC<br>SHC<br>kW | 19.06                                          | 20.69 | 21.07 | 19.56                                        | 21.23 | 22.54 | 20.00                                          | 21.70 | 23.03 |
|                                           |                 | 8.47                                           | 9.40  | 10.13 | 7.71                                         | 8.63  | 9.36  | 7.02                                           | 7.95  | 8.69  |
|                                           |                 | 2.06                                           | 2.06  | 2.06  | 2.08                                         | 2.08  | 2.08  | 2.11                                           | 2.11  | 2.11  |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.

- The following formulas may be used:

$$t_{\text{fdb}} = t_{\text{edb}} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{\text{iwb}} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (h}_{\text{iwb}})$$

$$h_{\text{iwb}} = h_{\text{ewb}} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{\text{ewb}}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil.  
 Below 80 F edb, subtract (corr factor x cfm) from SHC.  
 Above 80 F edb, add (corr factor x cfm) to SHC.  
 Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .



# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

### 581B048 (4 TONS) — SUBCOOLING MODE

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
|                                           |     | 1200/0.17                         |      |      | 1450/0.19 |      |      | 1600/0.21 |      |      | 2000/0.24 |      |      |
|                                           |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC  | 52.9                              | 47.5 | 41.5 | 55.7      | 50.9 | 47.5 | 57.0      | 51.7 | 48.1 | 60.5      | 55.6 | 52.1 |
|                                           | SHC | 22.7                              | 28.4 | 33.4 | 26.1      | 34.1 | 38.9 | 25.9      | 33.7 | 41.6 | 29.4      | 39.1 | 47.5 |
|                                           | kW  | 2.87                              | 2.86 | 2.82 | 2.89      | 2.87 | 2.84 | 2.89      | 2.86 | 2.85 | 2.90      | 2.88 | 2.85 |
| 85                                        | TC  | 49.2                              | 43.8 | 37.1 | 52.1      | 47.2 | 43.6 | 52.9      | 47.9 | 43.7 | 55.4      | 51.4 | 47.0 |
|                                           | SHC | 19.8                              | 25.5 | 30.4 | 22.2      | 29.5 | 35.8 | 22.4      | 31.1 | 38.7 | 24.2      | 36.0 | 44.3 |
|                                           | kW  | 3.26                              | 3.25 | 3.21 | 3.28      | 3.26 | 3.23 | 3.28      | 3.26 | 3.24 | 3.28      | 3.26 | 3.24 |
| 95                                        | TC  | 45.8                              | 40.1 | 32.8 | 48.2      | 43.6 | 39.4 | 48.8      | 44.0 | 39.3 | 51.7      | 47.4 | 43.0 |
|                                           | SHC | 17.2                              | 22.5 | 27.3 | 18.4      | 24.8 | 32.6 | 19.0      | 28.1 | 35.9 | 20.7      | 33.0 | 41.0 |
|                                           | kW  | 3.71                              | 3.68 | 3.64 | 3.72      | 3.69 | 3.67 | 3.72      | 3.69 | 3.67 | 3.74      | 3.70 | 3.68 |
| 105                                       | TC  | 41.6                              | 37.0 | 29.7 | 43.2      | 38.9 | 35.4 | 43.9      | 39.7 | 34.7 | 46.5      | 41.4 | 37.5 |
|                                           | SHC | 13.5                              | 19.5 | 23.9 | 14.7      | 21.7 | 29.2 | 15.0      | 23.7 | 30.6 | 16.4      | 27.8 | 35.1 |
|                                           | kW  | 4.20                              | 4.17 | 4.11 | 4.20      | 4.17 | 4.14 | 4.20      | 4.17 | 4.15 | 4.22      | 4.19 | 4.16 |
| 115                                       | TC  | 37.2                              | 33.2 | 27.1 | 38.4      | 34.0 | 30.8 | 39.4      | 35.5 | 30.0 | 41.3      | 35.2 | 31.9 |
|                                           | SHC | 9.9                               | 16.4 | 20.7 | 11.3      | 18.5 | 25.6 | 11.2      | 19.7 | 25.4 | 12.4      | 22.4 | 28.6 |
|                                           | kW  | 4.73                              | 4.68 | 4.62 | 4.74      | 4.71 | 4.64 | 4.73      | 4.72 | 4.65 | 4.74      | 4.72 | 4.69 |
| 125                                       | TC  | 32.4                              | 28.1 | 24.9 | 33.8      | 28.1 | 27.4 | 35.3      | 30.5 | 26.6 | 36.1      | 32.0 | 28.7 |
|                                           | SHC | 7.2                               | 12.9 | 18.3 | 8.4       | 14.5 | 21.9 | 16.8      | 21.1 | 21.2 | 9.5       | 18.3 | 24.1 |
|                                           | kW  | 5.29                              | 5.23 | 5.15 | 5.30      | 5.25 | 5.19 | 5.29      | 5.27 | 5.21 | 5.30      | 5.29 | 5.25 |

### 581B048 (4 TONS) — HOT GAS REHEAT MODE\*

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Ewb (F)              |       |       |                                              |       |       |                                                |       |       |
|-------------------------------------------|-----|------------------------------------------------|-------|-------|----------------------------------------------|-------|-------|------------------------------------------------|-------|-------|
|                                           |     | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |
|                                           |     | Air Entering Evaporator — Cfm                  |       |       |                                              |       |       |                                                |       |       |
|                                           |     | 1200                                           | 1450  | 1600  | 1200                                         | 1450  | 1600  | 1200                                           | 1450  | 1600  |
| 80                                        | TC  | 12.13                                          | 14.30 | 15.43 | 14.98                                        | 17.20 | 18.36 | 17.44                                          | 19.71 | 20.90 |
|                                           | SHC | 1.01                                           | 1.60  | 1.90  | -0.18                                        | 0.41  | 0.72  | -1.20                                          | -0.61 | -0.30 |
|                                           | kW  | 2.76                                           | 2.76  | 2.76  | 2.75                                         | 2.75  | 2.75  | 2.74                                           | 2.74  | 2.74  |
| 75                                        | TC  | 13.25                                          | 15.28 | 16.34 | 15.96                                        | 18.05 | 19.14 | 18.31                                          | 20.44 | 21.56 |
|                                           | SHC | 1.60                                           | 2.14  | 2.43  | 0.50                                         | 1.05  | 1.34  | -0.45                                          | 0.11  | 0.40  |
|                                           | kW  | 7.54                                           | 7.54  | 7.57  | 7.61                                         | 7.64  | 7.66  | 7.66                                           | 7.70  | 7.71  |
| 70                                        | TC  | 14.37                                          | 16.27 | 17.26 | 16.94                                        | 18.90 | 19.92 | 19.17                                          | 21.17 | 22.22 |
|                                           | SHC | 2.18                                           | 2.69  | 2.96  | 1.17                                         | 1.69  | 1.96  | 0.30                                           | 0.82  | 1.10  |
|                                           | kW  | 2.70                                           | 2.70  | 2.70  | 2.70                                         | 2.70  | 2.70  | 2.70                                           | 2.70  | 2.70  |
| 60                                        | TC  | 16.60                                          | 18.24 | 19.10 | 18.91                                        | 20.60 | 21.48 | 20.91                                          | 22.64 | 23.54 |
|                                           | SHC | 3.35                                           | 3.79  | 4.03  | 2.52                                         | 2.97  | 3.21  | 1.80                                           | 2.25  | 2.50  |
|                                           | kW  | 2.64                                           | 2.64  | 2.64  | 2.65                                         | 2.65  | 2.65  | 2.65                                           | 2.65  | 2.65  |
| 50                                        | TC  | 18.83                                          | 20.22 | 20.94 | 20.87                                        | 22.30 | 23.04 | 22.65                                          | 24.10 | 24.86 |
|                                           | SHC | 4.51                                           | 4.89  | 5.09  | 3.86                                         | 4.25  | 4.45  | 3.30                                           | 3.69  | 3.89  |
|                                           | kW  | 2.59                                           | 2.59  | 2.59  | 2.60                                         | 2.60  | 2.60  | 2.61                                           | 2.61  | 2.61  |
| 40                                        | TC  | 21.06                                          | 22.19 | 22.78 | 22.84                                        | 24.00 | 24.61 | 24.38                                          | 25.57 | 26.19 |
|                                           | SHC | 5.68                                           | 5.99  | 6.16  | 5.21                                         | 5.53  | 5.69  | 4.80                                           | 5.12  | 5.29  |
|                                           | kW  | 2.53                                           | 2.53  | 2.53  | 2.55                                         | 2.55  | 2.55  | 2.57                                           | 2.57  | 2.57  |

#### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

\*Negative SHC value indicates that the air entering the coil is being heated.

#### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{tdb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.  
 Below 80 F edb, subtract (corr factor x cfm) from SHC.  
 Above 80 F edb, add (corr factor x cfm) to SHC.  
 Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

| 581B060 (5 TONS) — SUBCOOLING MODE        |                 |                                   |      |      |           |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|                                           |                 | 1500/0.08                         |      |      | 1750/0.09 |      |      | 2000/0.11 |      |      | 2500/0.13 |      |      |
|                                           |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                           |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC<br>SHC<br>kW | 69.9                              | 62.7 | 56.2 | 74.7      | 67.3 | 61.0 | 78.5      | 71.2 | 64.8 | 81.7      | 75.5 | 69.3 |
|                                           |                 | 29.0                              | 36.9 | 43.9 | 31.7      | 40.5 | 51.2 | 34.5      | 44.2 | 55.4 | 37.8      | 52.0 | 62.8 |
|                                           |                 | 3.61                              | 3.55 | 3.51 | 3.64      | 3.58 | 3.49 | 3.65      | 3.60 | 3.51 | 3.62      | 3.58 | 3.51 |
| 85                                        | TC<br>SHC<br>kW | 65.9                              | 59.1 | 51.7 | 70.6      | 63.2 | 56.3 | 75.5      | 66.8 | 60.7 | 78.1      | 70.8 | 65.1 |
|                                           |                 | 25.3                              | 34.0 | 41.9 | 27.5      | 37.6 | 48.0 | 30.7      | 41.6 | 52.0 | 33.8      | 47.4 | 58.0 |
|                                           |                 | 4.05                              | 3.97 | 3.91 | 4.07      | 4.01 | 3.92 | 4.11      | 4.00 | 3.95 | 4.08      | 4.02 | 3.96 |
| 95                                        | TC<br>SHC<br>kW | 61.9                              | 55.2 | 47.7 | 66.5      | 58.8 | 51.3 | 70.4      | 61.9 | 55.7 | 74.2      | 65.9 | 60.6 |
|                                           |                 | 21.6                              | 31.1 | 40.0 | 23.5      | 34.5 | 44.6 | 26.0      | 38.6 | 47.9 | 30.0      | 42.8 | 52.6 |
|                                           |                 | 4.53                              | 4.43 | 4.35 | 4.55      | 4.47 | 4.37 | 4.56      | 4.42 | 4.41 | 4.58      | 4.49 | 4.44 |
| 105                                       | TC<br>SHC<br>kW | 57.7                              | 51.1 | 44.9 | 61.8      | 54.5 | 47.7 | 65.1      | 57.2 | 50.8 | 68.4      | 60.3 | 56.1 |
|                                           |                 | 18.1                              | 27.8 | 35.7 | 20.0      | 31.2 | 40.1 | 22.1      | 34.3 | 43.5 | 26.1      | 38.9 | 48.5 |
|                                           |                 | 5.05                              | 4.93 | 4.84 | 5.09      | 4.97 | 4.88 | 5.11      | 4.96 | 4.92 | 5.11      | 5.03 | 4.98 |
| 115                                       | TC<br>SHC<br>kW | 53.4                              | 47.2 | 42.0 | 56.6      | 50.0 | 44.2 | 59.6      | 52.5 | 46.2 | 62.6      | 54.9 | 51.6 |
|                                           |                 | 14.7                              | 24.6 | 31.5 | 16.5      | 27.8 | 35.7 | 18.2      | 30.0 | 39.0 | 22.1      | 34.9 | 44.3 |
|                                           |                 | 5.60                              | 5.49 | 5.40 | 5.64      | 5.52 | 5.45 | 5.69      | 5.55 | 5.48 | 5.69      | 5.61 | 5.57 |
| 125                                       | TC<br>SHC<br>kW | 48.7                              | 42.0 | 36.9 | 51.3      | 45.0 | 39.0 | 54.1      | 46.8 | 40.9 | 56.9      | 49.2 | 45.9 |
|                                           |                 | 10.9                              | 19.6 | 28.0 | 12.5      | 22.2 | 31.5 | 13.5      | 24.0 | 34.0 | 16.5      | 28.0 | 38.8 |
|                                           |                 | 6.26                              | 6.12 | 6.02 | 6.28      | 6.18 | 6.09 | 6.33      | 6.18 | 6.13 | 6.33      | 6.27 | 6.22 |

581B036-150

| 581B060 (5 TONS) — HOT GAS REHEAT MODE*   |                 |                                                |       |       |                                              |       |       |                                                |       |       |
|-------------------------------------------|-----------------|------------------------------------------------|-------|-------|----------------------------------------------|-------|-------|------------------------------------------------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Ewb (F)              |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |
|                                           |                 | Air Entering Evaporator — Cfm                  |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 1500                                           | 1750  | 2000  | 1500                                         | 1750  | 2000  | 1500                                           | 1750  | 2000  |
| 80                                        | TC<br>SHC<br>kW | 17.67                                          | 19.23 | 20.59 | 17.51                                        | 19.09 | 20.48 | 17.37                                          | 18.98 | 20.39 |
|                                           |                 | -0.39                                          | 0.07  | 0.46  | -1.61                                        | -1.15 | -0.75 | -2.67                                          | -2.21 | -1.80 |
|                                           |                 | 3.45                                           | 3.45  | 3.45  | 3.48                                         | 3.48  | 3.48  | 3.50                                           | 3.50  | 3.50  |
| 75                                        | TC<br>SHC<br>kW | 18.55                                          | 20.03 | 21.32 | 18.45                                        | 19.95 | 21.27 | 18.36                                          | 19.89 | 21.23 |
|                                           |                 | 0.28                                           | 0.71  | 1.09  | -0.85                                        | -0.42 | -0.04 | -1.83                                          | -1.39 | -1.01 |
|                                           |                 | 3.43                                           | 3.43  | 3.43  | 3.46                                         | 3.46  | 3.46  | 3.49                                           | 3.49  | 3.49  |
| 70                                        | TC<br>SHC<br>kW | 19.44                                          | 20.83 | 22.06 | 19.39                                        | 20.81 | 22.06 | 19.35                                          | 20.80 | 22.07 |
|                                           |                 | 0.95                                           | 1.36  | 1.71  | -0.09                                        | 0.32  | 0.68  | -0.99                                          | -0.58 | -0.22 |
|                                           |                 | 3.42                                           | 3.42  | 3.42  | 3.45                                         | 3.45  | 3.45  | 3.48                                           | 3.48  | 3.48  |
| 60                                        | TC<br>SHC<br>kW | 21.20                                          | 22.44 | 23.53 | 21.27                                        | 22.54 | 23.65 | 21.33                                          | 22.62 | 23.75 |
|                                           |                 | 2.30                                           | 2.65  | 2.95  | 1.44                                         | 1.80  | 2.11  | 0.70                                           | 1.06  | 1.37  |
|                                           |                 | 3.38                                           | 3.38  | 3.38  | 3.42                                         | 3.42  | 3.42  | 3.46                                           | 3.46  | 3.46  |
| 50                                        | TC<br>SHC<br>kW | 22.96                                          | 24.05 | 25.00 | 23.15                                        | 24.26 | 25.23 | 23.31                                          | 24.43 | 25.42 |
|                                           |                 | 3.64                                           | 3.94  | 4.20  | 2.97                                         | 3.27  | 3.53  | 2.39                                           | 2.69  | 2.96  |
|                                           |                 | 3.35                                           | 3.35  | 3.35  | 3.40                                         | 3.40  | 3.40  | 3.43                                           | 3.43  | 3.43  |
| 40                                        | TC<br>SHC<br>kW | 24.73                                          | 25.66 | 26.48 | 25.03                                        | 25.98 | 26.81 | 25.28                                          | 26.25 | 27.10 |
|                                           |                 | 4.99                                           | 5.23  | 5.45  | 4.50                                         | 4.75  | 4.96  | 4.07                                           | 4.32  | 4.54  |
|                                           |                 | 3.32                                           | 3.32  | 3.32  | 3.37                                         | 3.37  | 3.37  | 3.41                                           | 3.41  | 3.41  |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

\*Negative SHC value indicates that the air entering the coil is being heated.

### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{db} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.

Below 80 F edb, subtract (corr factor x cfm) from SHC.

Above 80 F edb, add (corr factor x cfm) to SHC.

Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

### 581B072 (6 TONS) — SUBCOOLING MODE

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |           |      |      |           |      |      |           |      |      |
|-------------------------------------------|-----|-----------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
|                                           |     | 1800/0.05                         |      |      | 2100/0.06 |      |      | 2400/0.06 |      |      | 3000/0.08 |      |      |
|                                           |     | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |      |      |           |      |      |
|                                           |     | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   | 72        | 67   | 62   |
| 75                                        | TC  | 82.6                              | 75.6 | 68.5 | 84.9      | 78.0 | 70.9 | 85.9      | 79.5 | 73.5 | 89.1      | 82.7 | 77.0 |
|                                           | SHC | 36.0                              | 44.8 | 55.4 | 37.5      | 49.1 | 59.7 | 38.8      | 51.1 | 64.0 | 41.8      | 58.1 | 70.2 |
|                                           | kW  | 4.60                              | 4.52 | 4.36 | 4.67      | 4.57 | 4.46 | 4.70      | 4.57 | 4.45 | 4.77      | 4.61 | 4.51 |
| 85                                        | TC  | 78.2                              | 71.6 | 64.5 | 80.9      | 73.4 | 65.8 | 82.0      | 74.4 | 67.9 | 85.8      | 78.2 | 72.3 |
|                                           | SHC | 31.4                              | 41.2 | 51.7 | 33.0      | 44.7 | 55.8 | 34.7      | 47.4 | 60.1 | 37.6      | 54.3 | 66.7 |
|                                           | kW  | 5.16                              | 5.03 | 4.89 | 5.22      | 5.11 | 4.96 | 5.26      | 5.09 | 4.97 | 5.32      | 5.17 | 5.04 |
| 95                                        | TC  | 73.8                              | 67.4 | 60.2 | 76.3      | 68.3 | 60.5 | 77.5      | 69.3 | 62.3 | 82.0      | 72.8 | 67.5 |
|                                           | SHC | 27.0                              | 37.6 | 47.9 | 28.2      | 40.0 | 51.6 | 30.2      | 43.7 | 56.2 | 33.6      | 49.2 | 62.9 |
|                                           | kW  | 5.75                              | 5.60 | 5.44 | 5.80      | 5.66 | 5.48 | 5.84      | 5.68 | 5.53 | 5.90      | 5.73 | 5.60 |
| 105                                       | TC  | 68.4                              | 62.6 | 55.9 | 71.4      | 64.3 | 56.2 | 72.1      | 64.6 | 58.3 | 75.7      | 67.0 | 62.4 |
|                                           | SHC | 22.3                              | 33.5 | 43.5 | 23.4      | 36.5 | 48.0 | 25.4      | 38.4 | 50.2 | 29.1      | 45.2 | 56.2 |
|                                           | kW  | 6.37                              | 6.22 | 6.06 | 6.45      | 6.27 | 6.10 | 6.46      | 6.29 | 6.16 | 6.53      | 6.36 | 6.24 |
| 115                                       | TC  | 63.4                              | 57.8 | 50.7 | 66.0      | 60.1 | 51.5 | 66.4      | 59.6 | 54.5 | 68.8      | 60.8 | 57.5 |
|                                           | SHC | 18.1                              | 29.5 | 38.9 | 18.8      | 32.9 | 44.1 | 20.7      | 33.3 | 43.8 | 24.3      | 41.4 | 49.7 |
|                                           | kW  | 7.04                              | 6.89 | 6.68 | 7.10      | 6.91 | 6.74 | 7.12      | 6.95 | 6.83 | 7.16      | 7.01 | 6.92 |
| 125                                       | TC  | 55.5                              | 49.6 | 45.8 | 58.4      | 52.4 | 46.1 | 57.6      | 52.1 | 49.5 | 59.2      | 52.8 | 53.1 |
|                                           | SHC | 15.3                              | 24.0 | 35.2 | 15.7      | 27.5 | 39.0 | 17.5      | 27.5 | 38.4 | 20.9      | 34.6 | 44.4 |
|                                           | kW  | 7.80                              | 7.61 | 7.38 | 7.83      | 7.67 | 7.49 | 7.89      | 7.72 | 7.58 | 7.92      | 7.78 | 7.70 |

### 581B072 (6 TONS) — HOT GAS REHEAT MODE\*

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Ewb (F)              |       |       |                                              |       |       |                                                |       |       |
|-------------------------------------------|-----------------|------------------------------------------------|-------|-------|----------------------------------------------|-------|-------|------------------------------------------------|-------|-------|
|                                           |                 | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |
|                                           |                 | Air Entering Evaporator — Cfm                  |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 1800                                           | 2100  | 2400  | 1800                                         | 2100  | 2400  | 1800                                           | 2100  | 2400  |
| 80                                        | TC<br>SHC<br>kW | 27.41                                          | 28.12 | 28.75 | 27.25                                        | 27.98 | 28.62 | 27.12                                          | 27.86 | 28.51 |
|                                           |                 | 5.74                                           | 7.61  | 9.25  | 1.68                                         | 3.52  | 5.14  | -1.85                                          | -0.03 | 1.58  |
|                                           |                 | 4.40                                           | 4.39  | 4.39  | 4.44                                         | 4.44  | 4.44  | 4.49                                           | 4.49  | 4.49  |
| 75                                        | TC<br>SHC<br>kW | 27.98                                          | 28.66 | 29.24 | 27.89                                        | 28.58 | 29.18 | 27.81                                          | 28.52 | 29.13 |
|                                           |                 | 5.73                                           | 7.48  | 9.02  | 1.92                                         | 3.65  | 5.18  | -1.38                                          | 0.34  | 1.85  |
|                                           |                 | 4.45                                           | 4.45  | 4.45  | 4.50                                         | 4.50  | 4.50  | 4.55                                           | 4.55  | 4.55  |
| 70                                        | TC<br>SHC<br>kW | 28.55                                          | 29.19 | 29.74 | 28.53                                        | 29.18 | 29.74 | 28.51                                          | 29.17 | 29.74 |
|                                           |                 | 5.71                                           | 7.35  | 8.79  | 2.17                                         | 3.79  | 5.22  | -0.91                                          | 0.70  | 2.12  |
|                                           |                 | 4.51                                           | 4.51  | 4.51  | 4.57                                         | 4.57  | 4.57  | 4.62                                           | 4.62  | 4.62  |
| 60                                        | TC<br>SHC<br>kW | 29.70                                          | 30.25 | 30.74 | 29.80                                        | 30.37 | 30.86 | 29.89                                          | 30.47 | 30.97 |
|                                           |                 | 5.67                                           | 7.09  | 8.34  | 2.65                                         | 4.06  | 5.29  | 0.04                                           | 1.43  | 2.65  |
|                                           |                 | 4.62                                           | 4.62  | 4.62  | 4.69                                         | 4.69  | 4.69  | 4.75                                           | 4.75  | 4.75  |
| 50                                        | TC<br>SHC<br>kW | 30.84                                          | 31.32 | 31.73 | 31.07                                        | 31.56 | 31.98 | 31.27                                          | 31.77 | 32.20 |
|                                           |                 | 5.63                                           | 6.83  | 7.89  | 3.14                                         | 4.33  | 5.37  | 0.98                                           | 2.15  | 3.19  |
|                                           |                 | 4.74                                           | 4.74  | 4.74  | 4.82                                         | 4.82  | 4.82  | 4.89                                           | 4.89  | 4.89  |
| 40                                        | TC<br>SHC<br>kW | 31.99                                          | 32.38 | 32.73 | 32.35                                        | 32.75 | 33.12 | 32.66                                          | 33.07 | 33.43 |
|                                           |                 | 5.60                                           | 6.57  | 7.43  | 3.63                                         | 4.59  | 5.44  | 1.92                                           | 2.88  | 3.72  |
|                                           |                 | 4.86                                           | 4.86  | 4.86  | 4.95                                         | 4.95  | 4.95  | 5.02                                           | 5.02  | 5.02  |

#### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

\*Negative SHC value indicates that the air entering the coil is being heated.

#### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{\text{adb}} = t_{\text{edb}} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{\text{iwb}} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{\text{iwb}})$$

$$h_{\text{iwb}} = h_{\text{ewb}} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{\text{ewb}}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.  
 Below 80 F edb, subtract (corr factor x cfm) from SHC.  
 Above 80 F edb, add (corr factor x cfm) to SHC.  
 Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

| 581B090 (7½ TONS) — SUBCOOLING MODE       |                 |                                   |      |      |           |      |      |           |       |      |
|-------------------------------------------|-----------------|-----------------------------------|------|------|-----------|------|------|-----------|-------|------|
| TEMP (F)<br>AIR ENT<br>CONDENSER<br>(Edb) |                 | AIR ENTERING EVAPORATOR — Cfm/BF  |      |      |           |      |      |           |       |      |
|                                           |                 | 2250/0.10                         |      |      | 3000/0.11 |      |      | 3750/0.14 |       |      |
|                                           |                 | Air Entering Evaporator — Ewb (F) |      |      |           |      |      |           |       |      |
|                                           |                 | 72                                | 67   | 62   | 72        | 67   | 62   | 72        | 67    | 62   |
| 75                                        | TC<br>SHC<br>kW | 98.4                              | 91.1 | 81.1 | 103.7     | 97.9 | 91.8 | 105.8     | 101.3 | 94.1 |
|                                           |                 | 44.5                              | 55.4 | 67.0 | 50.4      | 65.4 | 80.5 | 54.5      | 72.4  | 89.5 |
|                                           |                 | 5.05                              | 4.96 | 4.87 | 5.09      | 5.04 | 4.97 | 5.16      | 5.04  | 4.99 |
| 85                                        | TC<br>SHC<br>kW | 94.2                              | 85.8 | 76.9 | 100.3     | 92.4 | 85.2 | 103.5     | 96.8  | 89.0 |
|                                           |                 | 39.7                              | 51.3 | 62.7 | 46.2      | 58.3 | 75.7 | 50.6      | 68.2  | 84.3 |
|                                           |                 | 5.74                              | 5.65 | 5.55 | 5.81      | 5.75 | 5.64 | 5.89      | 5.74  | 5.70 |
| 95                                        | TC<br>SHC<br>kW | 89.9                              | 80.5 | 72.6 | 96.9      | 86.8 | 78.6 | 101.1     | 92.2  | 83.8 |
|                                           |                 | 34.8                              | 47.2 | 58.3 | 41.9      | 51.2 | 71.0 | 46.6      | 63.9  | 79.1 |
|                                           |                 | 6.42                              | 6.33 | 6.22 | 6.52      | 6.45 | 6.31 | 6.62      | 6.43  | 6.40 |
| 105                                       | TC<br>SHC<br>kW | 84.6                              | 75.3 | 68.0 | 91.6      | 81.3 | 73.4 | 94.5      | 86.3  | 78.4 |
|                                           |                 | 30.0                              | 42.5 | 53.9 | 36.9      | 49.3 | 66.4 | 41.4      | 59.2  | 73.8 |
|                                           |                 | 7.26                              | 7.16 | 7.05 | 7.36      | 7.25 | 7.15 | 7.46      | 7.29  | 7.23 |
| 115                                       | TC<br>SHC<br>kW | 79.2                              | 70.1 | 63.3 | 86.2      | 75.8 | 68.1 | 87.9      | 80.3  | 72.9 |
|                                           |                 | 25.2                              | 37.8 | 49.4 | 31.9      | 47.4 | 61.9 | 36.1      | 54.4  | 68.5 |
|                                           |                 | 8.10                              | 7.99 | 7.87 | 8.20      | 8.05 | 7.98 | 8.30      | 8.14  | 8.05 |
| 125                                       | TC<br>SHC<br>kW | 72.8                              | 64.5 | 57.2 | 78.0      | 69.8 | 62.3 | 81.6      | 73.2  | 69.2 |
|                                           |                 | 20.1                              | 33.4 | 44.1 | 25.4      | 42.5 | 56.5 | 31.1      | 48.9  | 64.7 |
|                                           |                 | 9.10                              | 8.94 | 8.83 | 9.23      | 9.05 | 8.95 | 9.26      | 9.10  | 8.99 |

581B036-150

| 581B090 (7½ TONS) — HOT GAS REHEAT MODE*  |                 |                                                |       |       |                                              |       |       |                                                |       |       |
|-------------------------------------------|-----------------|------------------------------------------------|-------|-------|----------------------------------------------|-------|-------|------------------------------------------------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Ewb (F)              |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |
|                                           |                 | Air Entering Evaporator — Cfm                  |       |       |                                              |       |       |                                                |       |       |
|                                           |                 | 2250                                           | 3000  | 3750  | 2250                                         | 3000  | 3750  | 2250                                           | 3000  | 3750  |
| 80                                        | TC<br>SHC<br>kW | 37.74                                          | 40.54 | 42.68 | 38.48                                        | 41.35 | 43.55 | 39.12                                          | 42.05 | 44.29 |
|                                           |                 | 10.67                                          | 15.63 | 19.63 | 5.01                                         | 9.84  | 13.74 | 0.10                                           | 4.82  | 8.63  |
|                                           |                 | 4.92                                           | 4.92  | 4.92  | 4.97                                         | 4.97  | 4.97  | 5.01                                           | 5.01  | 5.01  |
| 75                                        | TC<br>SHC<br>kW | 37.34                                          | 39.95 | 41.95 | 38.08                                        | 40.75 | 42.81 | 38.72                                          | 41.45 | 43.55 |
|                                           |                 | 9.83                                           | 14.48 | 18.24 | 4.52                                         | 9.05  | 12.70 | −0.09                                          | 4.34  | 7.91  |
|                                           |                 | 5.19                                           | 5.19  | 5.19  | 5.25                                         | 5.25  | 5.25  | 5.30                                           | 5.30  | 5.30  |
| 70                                        | TC<br>SHC<br>kW | 36.93                                          | 39.36 | 41.22 | 37.67                                        | 40.16 | 42.07 | 38.31                                          | 40.85 | 42.80 |
|                                           |                 | 8.99                                           | 13.33 | 16.84 | 4.02                                         | 8.26  | 11.67 | −0.28                                          | 3.86  | 7.19  |
|                                           |                 | 5.46                                           | 5.46  | 5.46  | 5.52                                         | 5.52  | 5.52  | 5.58                                           | 5.58  | 5.58  |
| 60                                        | TC<br>SHC<br>kW | 36.13                                          | 38.18 | 39.75 | 36.87                                        | 38.97 | 40.58 | 37.51                                          | 39.66 | 41.31 |
|                                           |                 | 7.31                                           | 11.04 | 14.04 | 3.04                                         | 6.67  | 9.60  | −0.66                                          | 2.89  | 5.75  |
|                                           |                 | 5.99                                           | 5.99  | 5.99  | 6.08                                         | 6.08  | 6.08  | 6.15                                           | 6.15  | 6.15  |
| 50                                        | TC<br>SHC<br>kW | 35.32                                          | 37.00 | 38.29 | 36.06                                        | 37.78 | 39.10 | 36.75                                          | 38.46 | 39.81 |
|                                           |                 | 5.63                                           | 8.74  | 11.25 | 2.06                                         | 5.09  | 7.53  | −1.03                                          | 1.93  | 4.32  |
|                                           |                 | 6.52                                           | 6.52  | 6.52  | 6.63                                         | 6.63  | 6.63  | 6.73                                           | 6.73  | 6.73  |
| 40                                        | TC<br>SHC<br>kW | 34.52                                          | 35.82 | 36.82 | 35.26                                        | 36.60 | 37.62 | 35.90                                          | 37.27 | 38.32 |
|                                           |                 | 3.94                                           | 6.44  | 8.45  | 1.08                                         | 3.51  | 5.47  | −1.41                                          | 0.97  | 2.88  |
|                                           |                 | 7.05                                           | 7.05  | 7.05  | 7.18                                         | 7.18  | 7.18  | 7.30                                           | 7.30  | 7.30  |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

\*Negative SHC value indicates that the air entering the coil is being heated.

### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{db} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (} h_{lwb} \text{)}$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.  
 Below 80 F edb, subtract (corr factor x cfm) from SHC.  
 Above 80 F edb, add (corr factor x cfm) to SHC.  
 Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

### 581B102 (8½ TONS) — SUBCOOLING MODE

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |      |           |       |       |           |       |       |           |       |       |
|-------------------------------------------|-----|-----------------------------------|-------|------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|                                           |     | 2550/0.08                         |       |      | 3000/0.09 |       |       | 3400/0.11 |       |       | 4250/0.13 |       |       |
|                                           |     | Air Entering Evaporator — Ewb (F) |       |      |           |       |       |           |       |       |           |       |       |
|                                           |     | 72                                | 67    | 62   | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                        | TC  | 114.1                             | 104.1 | 97.8 | 116.3     | 108.5 | 103.4 | 117.6     | 111.9 | 108.0 | 122.2     | 118.9 | 111.4 |
|                                           | SHC | 49.8                              | 64.2  | 81.2 | 52.6      | 70.8  | 89.0  | 55.4      | 76.9  | 95.4  | 62.0      | 87.0  | 107.2 |
|                                           | kW  | 5.57                              | 5.46  | 5.44 | 5.59      | 5.50  | 5.44  | 5.60      | 5.51  | 5.44  | 5.62      | 5.62  | 5.69  |
| 85                                        | TC  | 107.3                             | 98.4  | 92.6 | 111.0     | 101.8 | 98.0  | 113.0     | 104.2 | 102.0 | 117.1     | 111.4 | 106.1 |
|                                           | SHC | 42.2                              | 58.3  | 76.0 | 47.1      | 64.5  | 83.5  | 51.2      | 70.2  | 89.2  | 57.3      | 81.2  | 101.2 |
|                                           | kW  | 6.32                              | 6.30  | 6.15 | 6.32      | 6.27  | 6.18  | 6.34      | 6.22  | 6.20  | 6.30      | 6.31  | 6.45  |
| 95                                        | TC  | 101.9                             | 92.4  | 86.8 | 105.3     | 95.5  | 92.8  | 107.4     | 97.7  | 96.5  | 112.1     | 103.7 | 100.3 |
|                                           | SHC | 35.4                              | 51.9  | 70.3 | 40.1      | 58.5  | 77.9  | 44.9      | 64.9  | 83.7  | 52.1      | 74.0  | 94.8  |
|                                           | kW  | 7.06                              | 7.13  | 6.93 | 7.06      | 7.06  | 6.95  | 7.06      | 6.99  | 6.98  | 7.01      | 7.04  | 7.17  |
| 105                                       | TC  | 94.5                              | 85.4  | 77.0 | 97.6      | 88.3  | 82.4  | 99.9      | 90.6  | 88.0  | 104.1     | 96.1  | 94.0  |
|                                           | SHC | 29.7                              | 45.7  | 63.2 | 33.9      | 52.2  | 70.1  | 38.0      | 58.3  | 75.7  | 44.4      | 67.6  | 88.5  |
|                                           | kW  | 7.99                              | 8.00  | 7.81 | 8.01      | 7.97  | 7.85  | 8.02      | 7.94  | 7.89  | 7.96      | 7.96  | 8.08  |
| 115                                       | TC  | 86.4                              | 75.0  | 68.3 | 89.3      | 80.2  | 74.1  | 91.4      | 83.2  | 78.4  | 96.5      | 88.4  | 87.1  |
|                                           | SHC | 24.0                              | 38.7  | 56.4 | 27.4      | 45.6  | 62.9  | 31.1      | 51.9  | 67.0  | 37.0      | 60.8  | 81.8  |
|                                           | kW  | 8.91                              | 8.83  | 8.66 | 8.93      | 8.86  | 8.76  | 8.97      | 8.86  | 8.84  | 8.91      | 8.93  | 8.90  |
| 125                                       | TC  | 78.6                              | 65.5  | 60.2 | 81.3      | 68.9  | 64.7  | 83.3      | 71.6  | 68.2  | 88.5      | 78.8  | 78.9  |
|                                           | SHC | 18.3                              | 32.0  | 48.8 | 21.2      | 38.0  | 53.5  | 24.1      | 44.1  | 57.5  | 29.4      | 53.3  | 73.8  |
|                                           | kW  | 9.81                              | 9.65  | 9.53 | 9.86      | 9.68  | 9.64  | 9.89      | 9.71  | 9.75  | 9.90      | 9.72  | 9.88  |

### 581B102 (8½ TONS) — HOT GAS REHEAT MODE

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Ewb (F)              |       |       |       |                                              |       |       |       |                                                |       |       |       |
|-------------------------------------------|-----------------|------------------------------------------------|-------|-------|-------|----------------------------------------------|-------|-------|-------|------------------------------------------------|-------|-------|-------|
|                                           |                 | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |       |
|                                           |                 | Air Entering Evaporator — Cfm                  |       |       |       |                                              |       |       |       |                                                |       |       |       |
|                                           |                 | 2550                                           | 3000  | 3400  | 4250  | 2550                                         | 3000  | 3400  | 4250  | 2550                                           | 3000  | 3400  | 4250  |
| 80                                        | TC<br>SHC<br>kW | 43.44                                          | 46.26 | 48.45 | 52.38 | 45.26                                        | 48.15 | 50.39 | 54.43 | 46.84                                          | 49.79 | 52.08 | 56.20 |
|                                           |                 | 12.34                                          | 16.78 | 20.29 | 26.74 | 5.79                                         | 10.15 | 13.60 | 19.93 | 0.11                                           | 4.40  | 7.80  | 14.03 |
|                                           |                 | 6.31                                           | 6.31  | 6.31  | 6.31  | 6.05                                         | 6.05  | 6.05  | 6.05  | 5.83                                           | 5.83  | 5.83  | 5.83  |
| 75                                        | TC<br>SHC<br>kW | 44.33                                          | 47.00 | 49.06 | 52.78 | 46.12                                        | 48.85 | 50.97 | 54.78 | 47.67                                          | 50.46 | 52.63 | 56.52 |
|                                           |                 | 12.92                                          | 17.12 | 20.44 | 26.54 | 6.81                                         | 10.94 | 14.20 | 20.20 | 1.51                                           | 5.58  | 8.79  | 14.70 |
|                                           |                 | 6.38                                           | 6.38  | 6.8   | 6.38  | 6.15                                         | 6.15  | 6.15  | 6.15  | 5.95                                           | 5.95  | 5.95  | 5.95  |
| 70                                        | TC<br>SHC<br>kW | 45.22                                          | 47.73 | 49.68 | 53.18 | 46.98                                        | 49.55 | 51.55 | 55.14 | 48.51                                          | 51.14 | 53.18 | 56.84 |
|                                           |                 | 13.50                                          | 17.47 | 20.59 | 26.34 | 7.83                                         | 11.73 | 14.81 | 20.46 | 2.92                                           | 6.76  | 9.79  | 15.36 |
|                                           |                 | 6.46                                           | 6.46  | 6.46  | 6.46  | 6.25                                         | 6.25  | 6.25  | 6.25  | 6.07                                           | 6.07  | 6.07  | 6.07  |
| 60                                        | TC<br>SHC<br>kW | 46.99                                          | 49.19 | 50.90 | 53.97 | 48.70                                        | 50.96 | 52.71 | 55.86 | 50.18                                          | 52.49 | 54.27 | 57.49 |
|                                           |                 | 14.67                                          | 18.15 | 20.90 | 25.95 | 9.88                                         | 13.31 | 16.01 | 20.99 | 5.73                                           | 9.11  | 11.78 | 16.68 |
|                                           |                 | 6.60                                           | 6.60  | 6.60  | 6.60  | 6.45                                         | 6.45  | 6.45  | 6.45  | 6.32                                           | 6.32  | 6.32  | 6.32  |
| 50                                        | TC<br>SHC<br>kW | 48.77                                          | 50.66 | 52.13 | 54.77 | 50.42                                        | 52.36 | 53.87 | 56.57 | 51.85                                          | 53.83 | 55.37 | 58.14 |
|                                           |                 | 15.83                                          | 18.83 | 21.20 | 25.56 | 11.93                                        | 14.89 | 17.22 | 21.51 | 8.55                                           | 11.47 | 13.77 | 18.01 |
|                                           |                 | 6.74                                           | 6.74  | 6.74  | 6.74  | 6.64                                         | 6.64  | 6.64  | 6.64  | 6.56                                           | 6.56  | 6.56  | 6.56  |
| 40                                        | TC<br>SHC<br>kW | 50.54                                          | 52.13 | 53.35 | 55.56 | 52.14                                        | 53.76 | 55.02 | 57.29 | 53.53                                          | 55.18 | 56.47 | 58.78 |
|                                           |                 | 17.00                                          | 19.52 | 21.51 | 25.16 | 13.98                                        | 16.47 | 18.43 | 22.04 | 11.36                                          | 13.82 | 15.76 | 19.33 |
|                                           |                 | 6.88                                           | 6.88  | 6.88  | 6.88  | 6.84                                         | 6.84  | 6.84  | 6.84  | 6.81                                           | 6.81  | 6.81  | 6.81  |

#### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

#### NOTES:

- Direct interpolation is permissible. Do not extrapolate.

- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

- The SHC is based on 80 F edb temperature of air entering evaporator coil.  
 Below 80 F edb, subtract (corr factor x cfm) from SHC.  
 Above 80 F edb, add (corr factor x cfm) to SHC.  
 Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

| 581B120 (10 TONS) — SUBCOOLING MODE       |                 |                                   |       |       |           |       |       |           |       |       |           |       |       |
|-------------------------------------------|-----------------|-----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |       |       |           |       |       |           |       |       |           |       |       |
|                                           |                 | 3000/0.03                         |       |       | 3200/0.03 |       |       | 4000/0.04 |       |       | 5000/0.04 |       |       |
|                                           |                 | Air Entering Evaporator — Ewb (F) |       |       |           |       |       |           |       |       |           |       |       |
|                                           |                 | 72                                | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                        | TC<br>SHC<br>kW | 134.3                             | 122.5 | 111.4 | 135.8     | 124.3 | 113.0 | 138.4     | 129.5 | 123.5 | 143.3     | 136.5 | 130.2 |
|                                           |                 | 60.0                              | 76.1  | 93.7  | 61.3      | 79.1  | 97.4  | 68.0      | 89.5  | 109.4 | 75.2      | 100.9 | 123.3 |
|                                           |                 | 7.03                              | 6.84  | 6.72  | 7.01      | 6.89  | 6.77  | 7.10      | 6.92  | 6.77  | 7.15      | 7.03  | 6.88  |
| 85                                        | TC<br>SHC<br>kW | 127.6                             | 115.4 | 104.6 | 128.9     | 118.1 | 107.0 | 132.5     | 121.5 | 116.6 | 137.2     | 128.0 | 122.9 |
|                                           |                 | 51.5                              | 68.8  | 87.2  | 53.9      | 72.0  | 91.2  | 61.0      | 82.7  | 102.4 | 68.6      | 93.6  | 115.9 |
|                                           |                 | 7.96                              | 7.86  | 7.59  | 7.94      | 7.78  | 7.51  | 8.02      | 7.84  | 7.69  | 8.02      | 7.94  | 7.79  |
| 95                                        | TC<br>SHC<br>kW | 120.9                             | 108.3 | 97.8  | 121.9     | 111.8 | 101.0 | 126.5     | 113.4 | 109.7 | 131.1     | 119.4 | 115.5 |
|                                           |                 | 43.0                              | 61.5  | 80.6  | 46.5      | 64.8  | 84.9  | 53.9      | 75.9  | 95.4  | 62.0      | 86.2  | 108.4 |
|                                           |                 | 8.88                              | 8.87  | 8.46  | 8.86      | 8.66  | 8.26  | 8.94      | 8.76  | 8.60  | 8.89      | 8.85  | 8.69  |
| 105                                       | TC<br>SHC<br>kW | 112.0                             | 99.9  | 90.4  | 113.1     | 103.2 | 93.4  | 117.2     | 105.0 | 100.7 | 122.1     | 110.5 | 105.9 |
|                                           |                 | 36.1                              | 54.1  | 73.8  | 38.8      | 57.8  | 78.9  | 45.6      | 68.2  | 86.8  | 53.0      | 78.3  | 99.7  |
|                                           |                 | 10.0                              | 10.0  | 9.6   | 10.0      | 9.8   | 9.5   | 10.1      | 9.9   | 9.8   | 10.1      | 10.0  | 9.9   |
| 115                                       | TC<br>SHC<br>kW | 103.0                             | 91.5  | 83.1  | 104.3     | 94.6  | 85.9  | 107.8     | 96.7  | 91.7  | 113.0     | 101.6 | 96.4  |
|                                           |                 | 29.2                              | 46.7  | 66.9  | 31.2      | 50.7  | 72.9  | 37.3      | 60.6  | 78.3  | 44.0      | 70.3  | 90.9  |
|                                           |                 | 11.2                              | 11.1  | 10.8  | 11.2      | 11.0  | 10.7  | 11.3      | 11.1  | 11.0  | 11.3      | 11.2  | 11.1  |
| 125                                       | TC<br>SHC<br>kW | 94.1                              | 83.1  | 75.7  | 95.5      | 86.0  | 78.3  | 98.5      | 88.3  | 82.7  | 104.0     | 92.7  | 86.8  |
|                                           |                 | 22.3                              | 39.3  | 60.1  | 23.5      | 43.7  | 66.8  | 29.0      | 52.9  | 69.7  | 35.0      | 62.4  | 82.2  |
|                                           |                 | 12.35                             | 12.15 | 11.94 | 12.38     | 12.13 | 11.92 | 12.48     | 12.27 | 12.25 | 12.53     | 12.30 | 12.28 |

581B036-150

| 581B120 (10 TONS) — HOT GAS REHEAT MODE*  |                 |                                                |       |       |       |                                              |       |       |       |                                                |       |       |       |
|-------------------------------------------|-----------------|------------------------------------------------|-------|-------|-------|----------------------------------------------|-------|-------|-------|------------------------------------------------|-------|-------|-------|
| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Ewb (F)              |       |       |       |                                              |       |       |       |                                                |       |       |       |
|                                           |                 | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |       |
|                                           |                 | Air Entering Evaporator — Cfm                  |       |       |       |                                              |       |       |       |                                                |       |       |       |
|                                           |                 | 3000                                           | 3200  | 4000  | 5000  | 3000                                         | 3200  | 4000  | 5000  | 3000                                           | 3200  | 4000  | 5000  |
| 80                                        | TC<br>SHC<br>kW | 49.15                                          | 50.16 | 53.80 | 57.72 | 51.04                                        | 52.08 | 55.86 | 59.94 | 52.67                                          | 53.74 | 57.65 | 61.86 |
|                                           |                 | 9.58                                           | 12.02 | 20.74 | 29.89 | 2.88                                         | 5.29  | 13.88 | 22.89 | -2.92                                          | -0.55 | 7.93  | 16.83 |
|                                           |                 | 7.39                                           | 7.38  | 7.38  | 7.37  | 7.45                                         | 7.45  | 7.44  | 7.43  | 7.50                                           | 7.50  | 7.49  | 7.49  |
| 75                                        | TC<br>SHC<br>kW | 49.60                                          | 50.61 | 54.30 | 58.28 | 51.45                                        | 52.50 | 56.33 | 60.45 | 53.05                                          | 54.14 | 58.09 | 62.34 |
|                                           |                 | 10.07                                          | 12.38 | 20.60 | 29.23 | 3.82                                         | 6.09  | 14.20 | 22.70 | -1.60                                          | 0.64  | 8.65  | 17.05 |
|                                           |                 | 7.56                                           | 7.56  | 7.55  | 7.55  | 7.63                                         | 7.63  | 7.62  | 7.62  | 7.69                                           | 7.69  | 7.69  | 7.68  |
| 70                                        | TC<br>SHC<br>kW | 50.04                                          | 51.07 | 54.81 | 58.83 | 51.86                                        | 52.92 | 56.80 | 60.96 | 53.43                                          | 54.53 | 58.52 | 62.82 |
|                                           |                 | 10.56                                          | 12.73 | 20.47 | 28.58 | 4.75                                         | 6.89  | 14.52 | 22.52 | -0.28                                          | 1.83  | 9.36  | 17.26 |
|                                           |                 | 7.73                                           | 7.73  | 7.72  | 7.72  | 7.81                                         | 7.81  | 7.81  | 7.80  | 7.89                                           | 7.88  | 7.88  | 7.87  |
| 60                                        | TC<br>SHC<br>kW | 50.93                                          | 51.98 | 55.81 | 59.93 | 52.68                                        | 53.77 | 57.73 | 61.99 | 54.20                                          | 55.32 | 59.39 | 63.77 |
|                                           |                 | 11.54                                          | 13.44 | 20.19 | 27.28 | 6.62                                         | 8.49  | 15.16 | 22.15 | 2.36                                           | 4.21  | 10.79 | 17.70 |
|                                           |                 | 8.07                                           | 8.07  | 8.07  | 8.06  | 8.18                                         | 8.18  | 8.17  | 8.17  | 8.27                                           | 8.27  | 8.26  | 8.26  |
| 50                                        | TC<br>SHC<br>kW | 51.82                                          | 52.90 | 56.81 | 61.03 | 53.50                                        | 54.62 | 58.66 | 63.01 | 54.96                                          | 56.10 | 60.26 | 64.73 |
|                                           |                 | 12.53                                          | 14.14 | 19.92 | 25.98 | 8.50                                         | 10.09 | 15.80 | 21.78 | 5.00                                           | 6.58  | 12.22 | 18.14 |
|                                           |                 | 8.42                                           | 8.42  | 8.41  | 8.41  | 8.54                                         | 8.54  | 8.54  | 8.54  | 8.66                                           | 8.65  | 8.65  | 8.65  |
| 40                                        | TC<br>SHC<br>kW | 52.71                                          | 53.81 | 57.82 | 62.13 | 54.32                                        | 55.46 | 59.59 | 64.04 | 55.72                                          | 56.89 | 61.13 | 65.69 |
|                                           |                 | 13.51                                          | 14.85 | 19.64 | 24.67 | 10.37                                        | 11.70 | 16.43 | 21.41 | 7.64                                           | 8.96  | 13.65 | 18.58 |
|                                           |                 | 8.76                                           | 8.76  | 8.76  | 8.75  | 8.91                                         | 8.91  | 8.91  | 8.91  | 9.04                                           | 9.04  | 9.04  | 9.03  |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

\*Negative SHC value indicates that the air entering the coil is being heated.

### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.  
Below 80 F edb, subtract (corr factor x cfm) from SHC.  
Above 80 F edb, add (corr factor x cfm) to SHC.  
Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES — UNITS WITH PERFECT HUMIDITY™ ADAPTIVE DEHUMIDIFICATION SYSTEM OPTION (cont)

### 581B150 (12<sup>1</sup>/<sub>2</sub> TONS) — SUBCOOLING MODE

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |       |           |       |       |           |       |       |           |       |       |
|-------------------------------------------|-----|-----------------------------------|-------|-------|-----------|-------|-------|-----------|-------|-------|-----------|-------|-------|
|                                           |     | 3750/0.08                         |       |       | 4300/0.09 |       |       | 5000/0.11 |       |       | 6250/0.13 |       |       |
|                                           |     | Air Entering Evaporator — Ewb (F) |       |       |           |       |       |           |       |       |           |       |       |
|                                           |     | 72                                | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    | 72        | 67    | 62    |
| 75                                        | TC  | 156.3                             | 144.2 | 132.3 | 160.0     | 148.4 | 136.2 | 162.8     | 150.6 | 138.2 | 169.0     | 157.5 | 145.6 |
|                                           | SHC | 66.6                              | 87.6  | 112.1 | 72.5      | 94.8  | 121.3 | 76.9      | 99.6  | 127.5 | 87.0      | 115.5 | 142.7 |
|                                           | kW  | 9.28                              | 8.98  | 8.59  | 9.35      | 9.08  | 8.80  | 9.40      | 9.18  | 8.9   | 9.43      | 9.18  | 8.93  |
| 85                                        | TC  | 147.6                             | 136.2 | 123.7 | 150.7     | 140.1 | 127.2 | 154.1     | 140.8 | 127.9 | 161.1     | 148.0 | 135.4 |
|                                           | SHC | 58.7                              | 80.0  | 103.8 | 63.5      | 86.5  | 112.2 | 68.7      | 91.0  | 118.1 | 77.7      | 107.8 | 133.2 |
|                                           | kW  | 10.29                             | 9.93  | 9.58  | 10.36     | 10.08 | 9.77  | 10.40     | 10.34 | 10.03 | 10.45     | 10.18 | 9.88  |
| 95                                        | TC  | 138.9                             | 128.2 | 115.1 | 141.4     | 131.8 | 118.3 | 145.3     | 131.0 | 117.6 | 153.1     | 138.4 | 125.1 |
|                                           | SHC | 50.8                              | 72.3  | 95.5  | 54.4      | 78.1  | 103.2 | 60.5      | 82.3  | 108.7 | 68.5      | 100.0 | 123.7 |
|                                           | kW  | 11.29                             | 10.87 | 10.57 | 11.37     | 11.08 | 10.74 | 11.40     | 11.50 | 11.1  | 11.46     | 11.17 | 10.83 |
| 105                                       | TC  | 129.1                             | 117.8 | 105.8 | 131.7     | 121.0 | 108.7 | 134.8     | 119.9 | 107.7 | 140.9     | 126.9 | 115.9 |
|                                           | SHC | 42.1                              | 63.5  | 86.5  | 45.4      | 69.0  | 93.9  | 51.2      | 74.2  | 101.3 | 57.7      | 90.2  | 113.6 |
|                                           | kW  | 12.59                             | 12.14 | 11.82 | 12.67     | 12.34 | 11.96 | 12.70     | 12.67 | 12.28 | 12.79     | 12.46 | 12.08 |
| 115                                       | TC  | 119.2                             | 107.3 | 96.4  | 122.1     | 110.2 | 99.0  | 124.2     | 108.8 | 97.8  | 128.7     | 115.3 | 106.7 |
|                                           | SHC | 33.5                              | 54.8  | 77.5  | 36.4      | 59.8  | 84.7  | 41.9      | 66.1  | 93.8  | 46.8      | 80.5  | 103.5 |
|                                           | kW  | 13.90                             | 13.40 | 13.08 | 13.98     | 13.59 | 13.18 | 14.00     | 13.83 | 13.41 | 14.11     | 13.75 | 13.33 |
| 125                                       | TC  | 109.4                             | 96.9  | 87.1  | 112.4     | 99.4  | 89.3  | 113.7     | 97.7  | 87.8  | 116.5     | 103.8 | 97.5  |
|                                           | SHC | 24.8                              | 46.0  | 68.5  | 27.4      | 50.7  | 75.5  | 32.6      | 58.0  | 86.4  | 36.0      | 70.7  | 93.5  |
|                                           | kW  | 15.20                             | 14.67 | 14.33 | 15.28     | 14.85 | 14.40 | 15.30     | 15.00 | 14.54 | 15.44     | 15.04 | 14.58 |

### 581B150 (12<sup>1</sup>/<sub>2</sub> TONS) — HOT GAS REHEAT MODE\*

| Temp (F)<br>Air Ent<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Ewb (F)              |       |       |       |                                              |       |       |       |                                                |       |       |       |
|-------------------------------------------|-----|------------------------------------------------|-------|-------|-------|----------------------------------------------|-------|-------|-------|------------------------------------------------|-------|-------|-------|
|                                           |     | 75 Dry Bulb<br>62.5 Wet Bulb<br>(50% Relative) |       |       |       | 75 Dry Bulb<br>64 Wet Bulb<br>(55% Relative) |       |       |       | 75 Dry Bulb<br>65.3 Wet Bulb<br>(60% Relative) |       |       |       |
|                                           |     | Air Entering Evaporator — Cfm                  |       |       |       |                                              |       |       |       |                                                |       |       |       |
|                                           |     | 3750                                           | 4300  | 5000  | 6250  | 3750                                         | 4300  | 5000  | 6250  | 3750                                           | 4300  | 5000  | 6250  |
| 80                                        | TC  | 43.54                                          | 45.21 | 47.05 | 49.78 | 45.46                                        | 47.16 | 49.05 | 51.85 | 47.11                                          | 48.86 | 50.78 | 53.64 |
|                                           | SHC | -4.36                                          | 0.76  | 6.50  | 15.20 | -9.51                                        | -4.35 | 1.45  | 10.22 | -13.97                                         | -8.77 | -2.93 | 5.90  |
|                                           | kW  | 8.70                                           | 8.70  | 8.70  | 8.70  | 8.82                                         | 8.82  | 8.82  | 8.82  | 8.92                                           | 8.92  | 8.92  | 8.92  |
| 75                                        | TC  | 44.45                                          | 46.02 | 47.75 | 50.32 | 46.33                                        | 47.94 | 49.71 | 52.34 | 47.96                                          | 49.60 | 51.41 | 54.10 |
|                                           | SHC | -3.84                                          | 0.96  | 6.36  | 14.53 | -8.66                                        | -3.81 | 1.63  | 9.86  | -12.84                                         | -7.96 | -2.48 | 5.82  |
|                                           | kW  | 8.90                                           | 8.90  | 8.90  | 8.90  | 9.03                                         | 9.03  | 9.03  | 9.03  | 9.14                                           | 9.14  | 9.14  | 9.14  |
| 70                                        | TC  | 45.36                                          | 46.82 | 48.45 | 50.86 | 47.20                                        | 48.71 | 50.37 | 52.84 | 48.80                                          | 50.34 | 52.04 | 54.55 |
|                                           | SHC | -3.32                                          | 1.17  | 6.21  | 13.85 | -7.81                                        | -3.28 | 1.80  | 9.50  | -11.71                                         | -7.14 | -2.02 | 5.74  |
|                                           | kW  | 9.10                                           | 9.10  | 9.10  | 9.10  | 9.24                                         | 9.24  | 9.24  | 9.24  | 9.36                                           | 9.36  | 9.36  | 9.36  |
| 60                                        | TC  | 47.17                                          | 48.44 | 49.84 | 51.93 | 48.95                                        | 50.25 | 51.69 | 53.83 | 50.49                                          | 51.82 | 53.29 | 55.47 |
|                                           | SHC | -2.28                                          | 1.59  | 5.93  | 12.50 | -6.12                                        | -2.22 | 2.16  | 8.79  | -9.45                                          | -5.52 | -1.11 | 5.57  |
|                                           | kW  | 9.51                                           | 9.51  | 9.51  | 9.51  | 9.66                                         | 9.66  | 9.66  | 9.66  | 9.80                                           | 9.80  | 9.80  | 9.80  |
| 50                                        | TC  | 48.98                                          | 50.05 | 51.24 | 53.00 | 50.70                                        | 51.80 | 53.01 | 54.82 | 52.18                                          | 53.31 | 54.55 | 56.39 |
|                                           | SHC | -1.24                                          | 2.00  | 5.64  | 11.15 | -4.43                                        | -1.15 | 2.52  | 8.07  | -7.18                                          | -3.89 | -0.19 | 5.41  |
|                                           | kW  | 9.91                                           | 9.91  | 9.91  | 9.91  | 10.09                                        | 10.09 | 10.09 | 10.09 | 10.24                                          | 10.24 | 10.24 | 10.24 |
| 40                                        | TC  | 50.79                                          | 51.67 | 52.64 | 54.07 | 52.44                                        | 53.34 | 54.33 | 55.80 | 53.87                                          | 54.79 | 55.80 | 57.30 |
|                                           | SHC | -0.20                                          | 2.41  | 5.35  | 9.80  | -2.73                                        | -0.19 | 2.87  | 7.36  | -4.92                                          | -2.26 | 0.72  | 5.24  |
|                                           | kW  | 10.31                                          | 10.31 | 10.31 | 10.31 | 10.51                                        | 10.51 | 10.51 | 10.51 | 10.68                                          | 10.68 | 10.68 | 10.68 |

#### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Motor Power Input  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

\*Negative SHC value indicates that the air entering the coil is being heated.

#### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.

2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil.

3. The SHC is based on 80 F edb temperature of air entering evaporator coil.  
 Below 80 F edb, subtract (corr factor x cfm) from SHC.  
 Above 80 F edb, add (corr factor x cfm) to SHC.  
 Correction Factor =  $1.10 \times (1 - BF) \times (\text{edb} - 80)$ .

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS**

**581B036 (3 TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 567                               | 0.15 | 145   | 688 | 0.22 | 222   | 786 | 0.30 | 296   | 871  | 0.37 | 368   | 947  | 0.44 | 437   |
| 1000             | 599                               | 0.18 | 177   | 717 | 0.27 | 265   | 814 | 0.35 | 349   | 897  | 0.43 | 430   | 972  | 0.51 | 509   |
| 1100             | 632                               | 0.22 | 215   | 747 | 0.31 | 313   | 842 | 0.41 | 407   | 925  | 0.50 | 498   | 999  | 0.59 | 587   |
| 1200             | 666                               | 0.26 | 257   | 778 | 0.37 | 367   | 871 | 0.47 | 471   | 952  | 0.57 | 572   | 1025 | 0.67 | 670   |
| 1300             | 701                               | 0.31 | 306   | 810 | 0.43 | 426   | 901 | 0.54 | 540   | 981  | 0.65 | 651   | 1053 | 0.76 | 760   |
| 1400             | 737                               | 0.36 | 361   | 842 | 0.49 | 491   | 931 | 0.62 | 616   | 1010 | 0.74 | 738   | 1081 | 0.86 | 856   |
| 1500             | 773                               | 0.42 | 422   | 875 | 0.57 | 564   | 963 | 0.70 | 699   | 1040 | 0.84 | 831   | 1110 | 0.96 | 960   |

**581B036 (3 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 1016                              | 0.51 | 505   | 1080 | 0.57 | 572   | 1139 | 0.64 | 637   | 1195 | 0.71 | 702   | 1249 | 0.77 | 765   |
| 1000             | 1041                              | 0.59 | 587   | 1104 | 0.67 | 662   | 1163 | 0.74 | 737   | 1219 | 0.81 | 811   | 1272 | 0.89 | 883   |
| 1100             | 1066                              | 0.68 | 674   | 1129 | 0.76 | 759   | 1188 | 0.85 | 843   | 1243 | 0.93 | 925   | 1296 | 1.01 | 1007  |
| 1200             | 1093                              | 0.77 | 767   | 1155 | 0.87 | 861   | 1213 | 0.96 | 955   | 1268 | 1.05 | 1047  | 1321 | 1.14 | 1137  |
| 1300             | 1119                              | 0.87 | 866   | 1181 | 0.98 | 970   | 1239 | 1.08 | 1073  | 1294 | 1.18 | 1175  | —    | —    | —     |
| 1400             | 1147                              | 0.98 | 972   | 1208 | 1.09 | 1086  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1500             | 1175                              | 1.09 | 1086  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

Refer to this page for general Fan Performance Data notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.

\*Motor drive range: 680 to 1044 rpm. All other rpms require field-supplied drive.

**581B048 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 567                               | 0.15 | 145   | 688 | 0.22 | 222   | 786 | 0.30 | 296   | 871  | 0.37 | 368   | 947  | 0.44 | 437   |
| 1000             | 599                               | 0.18 | 177   | 717 | 0.27 | 265   | 814 | 0.35 | 349   | 897  | 0.43 | 430   | 972  | 0.51 | 509   |
| 1100             | 632                               | 0.22 | 215   | 747 | 0.31 | 313   | 842 | 0.41 | 407   | 925  | 0.50 | 498   | 999  | 0.59 | 587   |
| 1200             | 666                               | 0.26 | 257   | 778 | 0.37 | 367   | 871 | 0.47 | 471   | 952  | 0.57 | 572   | 1025 | 0.67 | 670   |
| 1300             | 701                               | 0.31 | 306   | 810 | 0.43 | 426   | 901 | 0.54 | 540   | 981  | 0.65 | 651   | 1053 | 0.76 | 760   |
| 1400             | 737                               | 0.36 | 361   | 842 | 0.49 | 491   | 931 | 0.62 | 616   | 1010 | 0.74 | 738   | 1081 | 0.86 | 856   |
| 1500             | 773                               | 0.42 | 422   | 875 | 0.57 | 564   | 963 | 0.70 | 699   | 1040 | 0.84 | 831   | 1110 | 0.96 | 960   |

**581B048 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 1016                              | 0.51 | 505   | 1080 | 0.57 | 572   | 1139 | 0.64 | 637   | 1195 | 0.71 | 702   | 1249 | 0.77 | 765   |
| 1000             | 1041                              | 0.59 | 587   | 1104 | 0.67 | 662   | 1163 | 0.74 | 737   | 1219 | 0.81 | 811   | 1272 | 0.89 | 883   |
| 1100             | 1066                              | 0.68 | 674   | 1129 | 0.76 | 759   | 1188 | 0.85 | 843   | 1243 | 0.93 | 925   | 1296 | 1.01 | 1007  |
| 1200             | 1093                              | 0.77 | 767   | 1155 | 0.87 | 861   | 1213 | 0.96 | 955   | 1268 | 1.05 | 1047  | 1321 | 1.14 | 1137  |
| 1300             | 1119                              | 0.87 | 866   | 1181 | 0.98 | 970   | 1239 | 1.08 | 1073  | 1294 | 1.18 | 1175  | 1346 | 1.28 | 1275  |
| 1400             | 1147                              | 0.98 | 972   | 1208 | 1.09 | 1086  | 1265 | 1.21 | 1199  | 1320 | 1.32 | 1310  | 1371 | 1.43 | 1419  |
| 1500             | 1175                              | 1.09 | 1086  | 1235 | 1.22 | 1209  | 1292 | 1.34 | 1332  | 1346 | 1.46 | 1452  | 1397 | 1.58 | 1572  |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

Refer to this page for general Fan Performance Data notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require field-supplied drive.

**GENERAL NOTES FOR FAN PERFORMANCE DATA TABLES**

1. Static pressure losses (i.e., EconoMi\$er IV) must be added to external static pressure before entering Fan Performance table.
2. Interpolation is permissible. Do not extrapolate.
3. Fan performance is based on wet coils, clean filters, and casing losses. See Accessory/FIOP Static Pressure table on page 128.
4. Extensive motor and drive testing on these units ensures that the full horsepower and watts range of the motor can be utilized with confidence. Using the fan motors up to the watts or bhp rating shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.
5. Use of a field-supplied motor may affect wire size. Contact your Bryant representative for details.



## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

## 581B048 (4 TONS) — STANDARD MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 666                               | 0.26 | 257   | 778  | 0.37 | 367   | 871  | 0.47 | 471   | 952  | 0.57 | 572   | 1025 | 0.67 | 670   |
| 1300             | 701                               | 0.31 | 306   | 810  | 0.43 | 426   | 901  | 0.54 | 540   | 981  | 0.65 | 651   | 1053 | 0.76 | 760   |
| 1400             | 737                               | 0.36 | 361   | 842  | 0.49 | 491   | 931  | 0.62 | 616   | 1010 | 0.74 | 738   | 1081 | 0.86 | 856   |
| 1500             | 773                               | 0.42 | 422   | 875  | 0.57 | 564   | 963  | 0.70 | 699   | 1040 | 0.84 | 831   | 1110 | 0.96 | 960   |
| 1600             | 810                               | 0.49 | 491   | 909  | 0.65 | 643   | 994  | 0.79 | 790   | 1070 | 0.94 | 932   | 1140 | 1.08 | 1070  |
| 1700             | 847                               | 0.57 | 567   | 943  | 0.73 | 730   | 1027 | 0.89 | 888   | 1101 | 1.05 | 1040  | 1170 | 1.20 | 1189  |
| 1800             | 885                               | 0.66 | 652   | 978  | 0.83 | 826   | 1060 | 1.00 | 994   | 1133 | 1.16 | 1157  | —    | —    | —     |
| 1900             | 923                               | 0.75 | 745   | 1014 | 0.94 | 930   | 1093 | 1.11 | 1109  | —    | —    | —     | —    | —    | —     |
| 2000             | 962                               | 0.85 | 847   | 1049 | 1.05 | 1043  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## 581B048 (4 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 1093                              | 0.77 | 767   | 1155 | 0.87 | 861   | 1213 | 0.96 | 955   | 1268 | 1.05 | 1047  | 1321 | 1.14 | 1137  |
| 1300             | 1119                              | 0.87 | 866   | 1181 | 0.98 | 970   | 1239 | 1.08 | 1073  | 1294 | 1.18 | 1175  | —    | —    | —     |
| 1400             | 1147                              | 0.98 | 972   | 1208 | 1.09 | 1086  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1500             | 1175                              | 1.09 | 1086  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1600             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower  
Watts — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.

\*Motor drive range: 770 to 1185 rpm. All other rpms require field-supplied drive.

## 581B048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 666                               | 0.26 | 257   | 778  | 0.37 | 367   | 871  | 0.47 | 471   | 952  | 0.57 | 572   | 1025 | 0.67 | 670   |
| 1300             | 701                               | 0.31 | 306   | 810  | 0.43 | 426   | 901  | 0.54 | 540   | 981  | 0.65 | 651   | 1053 | 0.76 | 760   |
| 1400             | 737                               | 0.36 | 361   | 842  | 0.49 | 491   | 931  | 0.62 | 616   | 1010 | 0.74 | 738   | 1081 | 0.86 | 856   |
| 1500             | 773                               | 0.42 | 422   | 875  | 0.57 | 564   | 963  | 0.70 | 699   | 1040 | 0.84 | 831   | 1110 | 0.96 | 960   |
| 1600             | 810                               | 0.49 | 491   | 909  | 0.65 | 643   | 994  | 0.79 | 790   | 1070 | 0.94 | 932   | 1140 | 1.08 | 1070  |
| 1700             | 847                               | 0.57 | 567   | 943  | 0.73 | 730   | 1027 | 0.89 | 888   | 1101 | 1.05 | 1040  | 1170 | 1.20 | 1189  |
| 1800             | 885                               | 0.66 | 652   | 978  | 0.83 | 826   | 1060 | 1.00 | 994   | 1133 | 1.16 | 1157  | 1200 | 1.32 | 1316  |
| 1900             | 923                               | 0.75 | 745   | 1014 | 0.94 | 930   | 1093 | 1.11 | 1109  | 1165 | 1.29 | 1283  | 1231 | 1.46 | 1453  |
| 2000             | 962                               | 0.85 | 847   | 1049 | 1.05 | 1043  | 1127 | 1.24 | 1233  | 1198 | 1.42 | 1417  | 1263 | 1.61 | 1598  |

## 581B048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 1093                              | 0.77 | 767   | 1155 | 0.87 | 861   | 1213 | 0.96 | 955   | 1268 | 1.05 | 1047  | 1321 | 1.14 | 1137  |
| 1300             | 1119                              | 0.87 | 866   | 1181 | 0.98 | 970   | 1239 | 1.08 | 1073  | 1294 | 1.18 | 1175  | 1346 | 1.28 | 1275  |
| 1400             | 1147                              | 0.98 | 972   | 1208 | 1.09 | 1086  | 1265 | 1.21 | 1199  | 1320 | 1.32 | 1310  | 1371 | 1.43 | 1419  |
| 1500             | 1175                              | 1.09 | 1086  | 1235 | 1.22 | 1209  | 1292 | 1.34 | 1332  | 1346 | 1.46 | 1452  | 1397 | 1.58 | 1572  |
| 1600             | 1204                              | 1.21 | 1207  | 1263 | 1.35 | 1340  | 1320 | 1.48 | 1472  | 1373 | 1.61 | 1603  | 1424 | 1.74 | 1732  |
| 1700             | 1233                              | 1.34 | 1336  | 1292 | 1.49 | 1480  | 1348 | 1.63 | 1622  | 1401 | 1.77 | 1762  | 1451 | 1.91 | 1901  |
| 1800             | 1262                              | 1.48 | 1473  | 1321 | 1.64 | 1627  | 1376 | 1.79 | 1779  | 1428 | 1.94 | 1930  | 1479 | 2.09 | 2078  |
| 1900             | 1293                              | 1.63 | 1620  | 1350 | 1.79 | 1784  | 1405 | 1.96 | 1946  | 1457 | 2.12 | 2106  | 1506 | 2.28 | 2265  |
| 2000             | 1323                              | 1.79 | 1776  | 1380 | 1.96 | 1950  | 1434 | 2.13 | 2123  | 1486 | 2.31 | 2293  | —    | —    | —     |

## LEGEND

Bhp — Brake Horsepower  
Watts — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

### 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)\* — SINGLE-PHASE UNITS

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500             | 848                               | 0.42 | 371   | 968  | 0.55 | 486   | 1069 | 0.68 | 600   | 1158 | 0.80 | 715   | 1238 | 0.94 | 831   |
| 1600             | 887                               | 0.49 | 433   | 1004 | 0.63 | 556   | 1103 | 0.76 | 678   | 1190 | 0.90 | 800   | 1269 | 1.04 | 922   |
| 1700             | 927                               | 0.57 | 502   | 1040 | 0.71 | 633   | 1137 | 0.86 | 763   | 1223 | 1.00 | 892   | 1302 | 1.15 | 1022  |
| 1800             | 967                               | 0.65 | 579   | 1077 | 0.81 | 718   | 1172 | 0.96 | 856   | 1257 | 1.12 | 993   | 1334 | 1.27 | 1130  |
| 1900             | 1007                              | 0.75 | 663   | 1115 | 0.91 | 811   | 1208 | 1.08 | 957   | 1291 | 1.24 | 1101  | —    | —    | —     |
| 2000             | 1048                              | 0.85 | 757   | 1153 | 1.03 | 913   | 1244 | 1.20 | 1066  | —    | —    | —     | —    | —    | —     |
| 2100             | 1090                              | 0.97 | 859   | 1191 | 1.15 | 1023  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2200             | 1131                              | 1.09 | 970   | 1230 | 1.29 | 1143  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300             | 1173                              | 1.23 | 1091  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)\* — SINGLE-PHASE UNITS (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |     |     |       |     |     |       |     |     |       |
|------------------|-----------------------------------|------|-------|------|------|-------|-----|-----|-------|-----|-----|-------|-----|-----|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6 |     |       | 1.8 |     |       | 2.0 |     |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 1500             | 1312                              | 1.07 | 948   | 1380 | 1.20 | 1067  | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1600             | 1342                              | 1.18 | 1047  | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1700             | 1374                              | 1.30 | 1153  | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1800             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 1900             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2000             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2100             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2200             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2300             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2400             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |
| 2500             | —                                 | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     | —   | —   | —     |

#### LEGEND

Bhp — Brake Horsepower  
Watts — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

#### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.30.

\*Motor drive range: 1035 to 1460 rpm. All other rpms require field-supplied drive.

### 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)\* — THREE-PHASE UNITS

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500             | 848                               | 0.42 | 371   | 968  | 0.55 | 486   | 1069 | 0.68 | 600   | 1158 | 0.80 | 715   | 1238 | 0.94 | 831   |
| 1600             | 887                               | 0.49 | 433   | 1004 | 0.63 | 556   | 1103 | 0.76 | 678   | 1190 | 0.90 | 800   | 1269 | 1.04 | 922   |
| 1700             | 927                               | 0.57 | 502   | 1040 | 0.71 | 633   | 1137 | 0.86 | 763   | 1223 | 1.00 | 892   | 1302 | 1.15 | 1022  |
| 1800             | 967                               | 0.65 | 579   | 1077 | 0.81 | 718   | 1172 | 0.96 | 856   | 1257 | 1.12 | 993   | 1334 | 1.27 | 1130  |
| 1900             | 1007                              | 0.75 | 663   | 1115 | 0.91 | 811   | 1208 | 1.08 | 957   | 1291 | 1.24 | 1101  | 1368 | 1.40 | 1246  |
| 2000             | 1048                              | 0.85 | 757   | 1153 | 1.03 | 913   | 1244 | 1.20 | 1066  | 1326 | 1.37 | 1219  | 1401 | 1.54 | 1371  |
| 2100             | 1090                              | 0.97 | 859   | 1191 | 1.15 | 1023  | 1281 | 1.33 | 1185  | 1361 | 1.51 | 1345  | 1435 | 1.69 | 1505  |
| 2200             | 1131                              | 1.09 | 970   | 1230 | 1.29 | 1143  | 1318 | 1.48 | 1313  | 1397 | 1.67 | 1481  | 1470 | 1.86 | 1649  |
| 2300             | 1173                              | 1.23 | 1091  | 1269 | 1.43 | 1273  | 1355 | 1.63 | 1451  | 1433 | 1.83 | 1627  | 1505 | 2.03 | 1803  |
| 2400             | 1215                              | 1.38 | 1223  | 1309 | 1.59 | 1413  | 1393 | 1.80 | 1600  | 1470 | 2.01 | 1784  | 1540 | 2.21 | 1967  |
| 2500             | 1258                              | 1.54 | 1365  | 1349 | 1.76 | 1564  | 1431 | 1.98 | 1759  | 1506 | 2.20 | 1951  | —    | —    | —     |

### 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)\* — THREE-PHASE UNITS (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500             | 1312                              | 1.07 | 948   | 1380 | 1.20 | 1067  | 1445 | 1.34 | 1189  | 1506 | 1.48 | 1312  | 1564 | 1.62 | 1437  |
| 1600             | 1342                              | 1.18 | 1047  | 1411 | 1.32 | 1173  | 1474 | 1.46 | 1300  | 1535 | 1.61 | 1429  | 1593 | 1.76 | 1560  |
| 1700             | 1374                              | 1.30 | 1153  | 1441 | 1.45 | 1286  | 1505 | 1.60 | 1420  | 1565 | 1.75 | 1555  | 1622 | 1.91 | 1692  |
| 1800             | 1406                              | 1.43 | 1268  | 1473 | 1.58 | 1407  | 1535 | 1.74 | 1548  | 1595 | 1.90 | 1690  | 1652 | 2.06 | 1833  |
| 1900             | 1438                              | 1.57 | 1391  | 1504 | 1.73 | 1537  | 1567 | 1.90 | 1685  | 1626 | 2.06 | 1833  | 1682 | 2.23 | 1983  |
| 2000             | 1471                              | 1.72 | 1523  | 1536 | 1.89 | 1677  | 1598 | 2.06 | 1831  | 1657 | 2.24 | 1986  | —    | —    | —     |
| 2100             | 1504                              | 1.87 | 1665  | 1569 | 2.06 | 1825  | 1630 | 2.24 | 1986  | —    | —    | —     | —    | —    | —     |
| 2200             | 1538                              | 2.04 | 1816  | 1602 | 2.23 | 1984  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300             | 1572                              | 2.23 | 1978  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

#### LEGEND

Bhp — Brake Horsepower  
Watts — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

#### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1035 to 1460 rpm. All other rpms require field-supplied drive.

581B036-150

## PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

## 581B060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500             | 848                               | 0.42 | 371   | 968  | 0.55 | 486   | 1069 | 0.68 | 600   | 1158 | 0.80 | 715   | 1238 | 0.94 | 831   |
| 1600             | 887                               | 0.49 | 433   | 1004 | 0.63 | 556   | 1103 | 0.76 | 678   | 1190 | 0.90 | 800   | 1269 | 1.04 | 922   |
| 1700             | 927                               | 0.57 | 502   | 1040 | 0.71 | 633   | 1137 | 0.86 | 763   | 1223 | 1.00 | 892   | 1302 | 1.15 | 1022  |
| 1800             | 967                               | 0.65 | 579   | 1077 | 0.81 | 718   | 1172 | 0.96 | 856   | 1257 | 1.12 | 993   | 1334 | 1.27 | 1130  |
| 1900             | 1007                              | 0.75 | 663   | 1115 | 0.91 | 811   | 1208 | 1.08 | 957   | 1291 | 1.24 | 1101  | 1368 | 1.40 | 1246  |
| 2000             | 1048                              | 0.85 | 757   | 1153 | 1.03 | 913   | 1244 | 1.20 | 1066  | 1326 | 1.37 | 1219  | 1401 | 1.54 | 1371  |
| 2100             | 1090                              | 0.97 | 859   | 1191 | 1.15 | 1023  | 1281 | 1.33 | 1185  | 1361 | 1.51 | 1345  | 1435 | 1.69 | 1505  |
| 2200             | 1131                              | 1.09 | 970   | 1230 | 1.29 | 1143  | 1318 | 1.48 | 1313  | 1397 | 1.67 | 1481  | 1470 | 1.86 | 1649  |
| 2300             | 1173                              | 1.23 | 1091  | 1269 | 1.43 | 1273  | 1355 | 1.63 | 1451  | 1433 | 1.83 | 1627  | 1505 | 2.03 | 1803  |
| 2400             | 1215                              | 1.38 | 1223  | 1309 | 1.59 | 1413  | 1393 | 1.80 | 1600  | 1470 | 2.01 | 1784  | 1540 | 2.21 | 1967  |
| 2500             | 1258                              | 1.54 | 1365  | 1349 | 1.76 | 1564  | 1431 | 1.98 | 1759  | 1506 | 2.20 | 1951  | 1576 | 2.41 | 2142  |

## 581B060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |             |             |             |             |             |             |             |             |             |             |             |             |
|------------------|-----------------------------------|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                  | 1.2                               |      |       | 1.4         |             |             | 1.6         |             |             | 1.8         |             |             | 2.0         |             |             |
|                  | Rpm                               | Bhp  | Watts | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 1500             | 1312                              | 1.07 | 948   | 1380        | 1.20        | 1067        | 1445        | 1.34        | 1189        | 1506        | 1.48        | 1312        | 1564        | 1.62        | 1437        |
| 1600             | 1342                              | 1.18 | 1047  | 1411        | 1.32        | 1173        | 1474        | 1.46        | 1300        | 1535        | 1.61        | 1429        | 1593        | 1.76        | 1560        |
| 1700             | 1374                              | 1.30 | 1153  | 1441        | 1.45        | 1286        | 1505        | 1.60        | 1420        | 1565        | 1.75        | 1555        | 1622        | 1.91        | 1692        |
| 1800             | 1406                              | 1.43 | 1268  | 1473        | 1.58        | 1407        | 1535        | 1.74        | 1548        | 1595        | 1.90        | 1690        | 1652        | 2.06        | 1833        |
| 1900             | 1438                              | 1.57 | 1391  | 1504        | 1.73        | 1537        | 1567        | 1.90        | 1685        | 1626        | 2.06        | 1833        | 1682        | 2.23        | 1983        |
| 2000             | 1471                              | 1.72 | 1523  | 1536        | 1.89        | 1677        | 1598        | 2.06        | 1831        | 1657        | 2.24        | 1986        | 1713        | 2.41        | 2142        |
| 2100             | 1504                              | 1.87 | 1665  | 1569        | 2.06        | 1825        | 1630        | 2.24        | 1986        | <b>1688</b> | <b>2.42</b> | <b>2149</b> | <b>1744</b> | <b>2.60</b> | <b>2312</b> |
| 2200             | 1538                              | 2.04 | 1816  | 1602        | 2.23        | 1984        | 1663        | 2.42        | 2152        | <b>1720</b> | <b>2.61</b> | <b>2321</b> | <b>1775</b> | <b>2.81</b> | <b>2491</b> |
| 2300             | 1572                              | 2.23 | 1978  | 1635        | 2.42        | 2153        | <b>1695</b> | <b>2.62</b> | <b>2328</b> | <b>1753</b> | <b>2.82</b> | <b>2504</b> | —           | —           | —           |
| 2400             | 1607                              | 2.42 | 2150  | 1669        | 2.63        | 2332        | <b>1729</b> | <b>2.83</b> | <b>2515</b> | —           | —           | —           | —           | —           | —           |
| 2500             | 1642                              | 2.63 | 2333  | <b>1704</b> | <b>2.84</b> | <b>2523</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |

## LEGEND

Bhp — Brake Horsepower  
Watts — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 1300 to 1685 rpm. All other rpms require field-supplied drive.

## 581B072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800             | 967                               | 0.63 | 563   | 1075 | 0.80 | 715   | 1170 | 0.97 | 861   | 1255 | 1.13 | 1002  | 1333 | 1.28 | 1139  |
| 1900             | 1008                              | 0.72 | 643   | 1112 | 0.91 | 805   | 1205 | 1.08 | 960   | 1289 | 1.25 | 1111  | 1366 | 1.42 | 1258  |
| 2000             | 1049                              | 0.82 | 731   | 1151 | 1.02 | 903   | 1241 | 1.20 | 1068  | 1323 | 1.38 | 1228  | 1399 | 1.56 | 1384  |
| 2100             | 1091                              | 0.93 | 827   | 1189 | 1.14 | 1008  | 1278 | 1.33 | 1183  | 1358 | 1.52 | 1353  | 1433 | 1.71 | 1519  |
| 2200             | 1133                              | 1.05 | 933   | 1229 | 1.26 | 1123  | 1315 | 1.47 | 1308  | 1393 | 1.67 | 1487  | 1467 | 1.87 | 1662  |
| 2300             | 1176                              | 1.18 | 1047  | 1268 | 1.40 | 1247  | 1352 | 1.62 | 1441  | 1429 | 1.84 | 1630  | 1501 | 2.04 | 1815  |
| 2400             | 1218                              | 1.32 | 1170  | 1308 | 1.55 | 1380  | 1390 | 1.78 | 1584  | 1466 | 2.01 | 1782  | 1537 | 2.23 | 1977  |
| 2500             | 1261                              | 1.47 | 1304  | 1349 | 1.72 | 1523  | 1429 | 1.96 | 1736  | 1503 | 2.19 | 1945  | —    | —    | —     |
| 2600             | 1305                              | 1.63 | 1448  | 1390 | 1.89 | 1677  | 1468 | 2.14 | 1900  | 1540 | 2.38 | 2117  | —    | —    | —     |
| 2700             | 1348                              | 1.80 | 1602  | 1431 | 2.07 | 1841  | 1507 | 2.33 | 2073  | —    | —    | —     | —    | —    | —     |
| 2800             | 1392                              | 1.99 | 1768  | 1472 | 2.27 | 2016  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900             | 1435                              | 2.19 | 1945  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000             | 1479                              | 2.40 | 2135  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

## 581B072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |             |             |             |             |             |             |             |             |             |             |             |             |
|------------------|-----------------------------------|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                  | 1.2                               |      |       | 1.4         |             |             | 1.6         |             |             | 1.8         |             |             | 2.0         |             |             |
|                  | Rpm                               | Bhp  | Watts | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 1800             | 1406                              | 1.43 | 1273  | 1475        | 1.58        | 1403        | 1540        | 1.72        | 1531        | <b>1601</b> | <b>1.87</b> | <b>1657</b> | <b>1660</b> | <b>2.00</b> | <b>1780</b> |
| 1900             | 1438                              | 1.58 | 1401  | 1505        | 1.73        | 1541        | 1569        | 1.89        | 1678        | <b>1630</b> | <b>2.04</b> | <b>1813</b> | <b>1689</b> | <b>2.19</b> | <b>1945</b> |
| 2000             | 1470                              | 1.73 | 1537  | 1537        | 1.90        | 1686        | <b>1600</b> | <b>2.06</b> | <b>1833</b> | <b>1660</b> | <b>2.23</b> | <b>1977</b> | <b>1718</b> | <b>2.38</b> | <b>2118</b> |
| 2100             | 1502                              | 1.89 | 1681  | 1568        | 2.07        | 1840        | <b>1631</b> | <b>2.25</b> | <b>1996</b> | —           | —           | —           | —           | —           | —           |
| 2200             | 1535                              | 2.06 | 1834  | <b>1600</b> | <b>2.25</b> | <b>2002</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2300             | 1569                              | 2.25 | 1996  | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2400             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2500             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2600             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2700             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2800             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2900             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 3000             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |

## LEGEND

Bhp — Brake Horsepower  
Watts — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

## NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1119 to 1585 rpm. All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

### 581B072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800             | 967                               | 0.63 | 563   | 1075 | 0.80 | 715   | 1170 | 0.97 | 861   | 1255 | 1.13 | 1002  | 1333 | 1.28 | 1139  |
| 1900             | 1008                              | 0.72 | 643   | 1112 | 0.91 | 805   | 1205 | 1.08 | 960   | 1289 | 1.25 | 1111  | 1366 | 1.42 | 1258  |
| 2000             | 1049                              | 0.82 | 731   | 1151 | 1.02 | 903   | 1241 | 1.20 | 1068  | 1323 | 1.38 | 1228  | 1399 | 1.56 | 1384  |
| 2100             | 1091                              | 0.93 | 827   | 1189 | 1.14 | 1008  | 1278 | 1.33 | 1183  | 1358 | 1.52 | 1353  | 1433 | 1.71 | 1519  |
| 2200             | 1133                              | 1.05 | 933   | 1229 | 1.26 | 1123  | 1315 | 1.47 | 1308  | 1393 | 1.67 | 1487  | 1467 | 1.87 | 1662  |
| 2300             | 1176                              | 1.18 | 1047  | 1268 | 1.40 | 1247  | 1352 | 1.62 | 1441  | 1429 | 1.84 | 1630  | 1501 | 2.04 | 1815  |
| 2400             | 1218                              | 1.32 | 1170  | 1308 | 1.55 | 1380  | 1390 | 1.78 | 1584  | 1466 | 2.01 | 1782  | 1537 | 2.23 | 1977  |
| 2500             | 1261                              | 1.47 | 1304  | 1349 | 1.72 | 1523  | 1429 | 1.96 | 1736  | 1503 | 2.19 | 1945  | 1572 | 2.42 | 2149  |
| 2600             | 1305                              | 1.63 | 1448  | 1390 | 1.89 | 1677  | 1468 | 2.14 | 1900  | 1540 | 2.38 | 2117  | 1608 | 2.62 | 2331  |
| 2700             | 1348                              | 1.80 | 1602  | 1431 | 2.07 | 1841  | 1507 | 2.33 | 2073  | 1578 | 2.59 | 2301  | 1645 | 2.84 | 2524  |
| 2800             | 1392                              | 1.99 | 1768  | 1472 | 2.27 | 2016  | 1547 | 2.54 | 2258  | 1616 | 2.81 | 2495  | —    | —    | —     |
| 2900             | 1435                              | 2.19 | 1945  | 1514 | 2.48 | 2203  | 1587 | 2.76 | 2455  | —    | —    | —     | —    | —    | —     |
| 3000             | 1479                              | 2.40 | 2135  | 1556 | 2.70 | 2402  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### 581B072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |             |             |             |             |             |             |             |             |             |             |             |             |
|------------------|-----------------------------------|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                  | 1.2                               |      |       | 1.4         |             |             | 1.6         |             |             | 1.8         |             |             | 2.0         |             |             |
|                  | Rpm                               | Bhp  | Watts | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 1800             | 1406                              | 1.43 | 1273  | 1475        | 1.58        | 1403        | 1540        | 1.72        | 1531        | 1601        | 1.87        | 1657        | 1660        | 2.00        | 1780        |
| 1900             | 1438                              | 1.58 | 1401  | 1505        | 1.73        | 1541        | 1569        | 1.89        | 1678        | 1630        | 2.04        | 1813        | <b>1689</b> | <b>2.19</b> | <b>1945</b> |
| 2000             | 1470                              | 1.73 | 1537  | 1537        | 1.90        | 1686        | 1600        | 2.06        | 1833        | 1660        | 2.23        | 1977        | <b>1718</b> | <b>2.38</b> | <b>2118</b> |
| 2100             | 1502                              | 1.89 | 1681  | 1568        | 2.07        | 1840        | 1631        | 2.25        | 1996        | <b>1690</b> | <b>2.42</b> | <b>2149</b> | <b>1747</b> | <b>2.59</b> | <b>2300</b> |
| 2200             | 1535                              | 2.06 | 1834  | 1600        | 2.25        | 2002        | 1662        | 2.44        | 2167        | <b>1721</b> | <b>2.62</b> | <b>2330</b> | <b>1778</b> | <b>2.80</b> | <b>2490</b> |
| 2300             | 1569                              | 2.25 | 1996  | 1633        | 2.45        | 2174        | <b>1694</b> | <b>2.64</b> | <b>2348</b> | <b>1752</b> | <b>2.84</b> | <b>2520</b> | —           | —           | —           |
| 2400             | 1603                              | 2.44 | 2167  | 1666        | 2.65        | 2355        | <b>1727</b> | <b>2.86</b> | <b>2539</b> | —           | —           | —           | —           | —           | —           |
| 2500             | 1638                              | 2.64 | 2349  | <b>1700</b> | <b>2.87</b> | <b>2546</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2600             | 1673                              | 2.86 | 2541  | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2700             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2800             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2900             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 3000             | —                                 | —    | —     | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |

#### LEGEND

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Motor drive range: 1300 to 1685 rpm. All other rpms require field-supplied drive.

Refer to page 103 for general Fan Performance Data notes.

#### NOTES:

- 1. Boldface** indicates field-supplied drive is required.
- Maximum continuous bhp is 2.90.

581B036-150

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

**581B090 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250             | 513                               | 0.54 | 505   | 595 | 0.76 | 713   | 665 | 1.01 | 940   | 728 | 1.27 | 1187  | 786 | 1.56 | 1453  |
| 2300             | 521                               | 0.57 | 531   | 601 | 0.79 | 741   | 671 | 1.04 | 972   | 734 | 1.31 | 1222  | 791 | 1.60 | 1489  |
| 2400             | 535                               | 0.63 | 584   | 615 | 0.86 | 802   | 684 | 1.11 | 1038  | 745 | 1.39 | 1293  | 802 | 1.68 | 1566  |
| 2500             | 551                               | 0.69 | 642   | 628 | 0.93 | 866   | 696 | 1.19 | 1109  | 757 | 1.47 | 1369  | 813 | 1.77 | 1647  |
| 2550             | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702 | 1.23 | 1146  | 763 | 1.51 | 1409  | 818 | 1.81 | 1689  |
| 2600             | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709 | 1.27 | 1183  | 769 | 1.55 | 1450  | 824 | 1.86 | 1732  |
| 2700             | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721 | 1.35 | 1263  | 781 | 1.65 | 1535  | 835 | 1.95 | 1823  |
| 2800             | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734 | 1.44 | 1347  | 793 | 1.74 | 1625  | 847 | 2.06 | 1917  |
| 2900             | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748 | 1.54 | 1436  | 805 | 1.84 | 1720  | 859 | 2.16 | 2019  |
| 3000             | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761 | 1.64 | 1530  | 818 | 1.95 | 1820  | 871 | 2.28 | 2125  |
| 3100             | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775 | 1.75 | 1630  | 831 | 2.06 | 1925  | 883 | 2.40 | 2235  |
| 3200             | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788 | 1.86 | 1734  | 844 | 2.18 | 2036  | 895 | 2.52 | 2352  |
| 3300             | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802 | 1.98 | 1845  | 857 | 2.31 | 2152  | 908 | 2.65 | 2475  |
| 3400             | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816 | 2.10 | 1961  | 870 | 2.44 | 2275  | 920 | 2.79 | 2603  |
| 3500             | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831 | 2.23 | 2082  | 884 | 2.58 | 2402  | —   | —    | —     |
| 3600             | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | 845 | 2.37 | 2210  | 897 | 2.72 | 2537  | —   | —    | —     |
| 3700             | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | 860 | 2.51 | 2343  | 911 | 2.87 | 2677  | —   | —    | —     |
| 3750             | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | 867 | 2.59 | 2413  | —   | —    | —     | —   | —    | —     |

**581B090 (7½ TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |     |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|-----|-------|
|                  | 1.2                               |      |       | 1.4 |      |       | 1.6 |      |       | 1.8 |      |       | 2.0 |     |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp | Watts |
| 2250             | 839                               | 1.86 | 1735  | 889 | 2.18 | 2032  | 935 | 2.52 | 2345  | 980 | 2.87 | 2673  | —   | —   | —     |
| 2300             | 844                               | 1.90 | 1773  | 893 | 2.22 | 2073  | 940 | 2.56 | 2389  | —   | —    | —     | —   | —   | —     |
| 2400             | 854                               | 1.99 | 1855  | 903 | 2.32 | 2159  | 950 | 2.66 | 2478  | —   | —    | —     | —   | —   | —     |
| 2500             | 865                               | 2.08 | 1940  | 913 | 2.41 | 2249  | 959 | 2.76 | 2573  | —   | —    | —     | —   | —   | —     |
| 2550             | 870                               | 2.13 | 1985  | 918 | 2.46 | 2296  | 964 | 2.81 | 2622  | —   | —    | —     | —   | —   | —     |
| 2600             | 875                               | 2.18 | 2031  | 923 | 2.51 | 2344  | 969 | 2.87 | 2673  | —   | —    | —     | —   | —   | —     |
| 2700             | 886                               | 2.28 | 2126  | 934 | 2.62 | 2445  | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 2800             | 897                               | 2.39 | 2227  | 944 | 2.73 | 2550  | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 2900             | 908                               | 2.50 | 2333  | 955 | 2.85 | 2661  | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3000             | 920                               | 2.62 | 2443  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3100             | 931                               | 2.75 | 2560  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3200             | 943                               | 2.88 | 2682  | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3300             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3400             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3500             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3600             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3700             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3750             | —                                 | —    | —     | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 840 to 1085 rpm. All other rpms require field-supplied drive.

581B036-150

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581B090 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                     | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250                                                | 513                               | 0.54 | 505   | 595 | 0.76 | 713   | 665 | 1.01 | 940   | 728 | 1.27 | 1187  | 786 | 1.56 | 1453  |
| 2300                                                | 521                               | 0.57 | 531   | 601 | 0.79 | 741   | 671 | 1.04 | 972   | 734 | 1.31 | 1222  | 791 | 1.60 | 1489  |
| 2400                                                | 535                               | 0.63 | 584   | 615 | 0.86 | 802   | 684 | 1.11 | 1038  | 745 | 1.39 | 1293  | 802 | 1.68 | 1566  |
| 2500                                                | 551                               | 0.69 | 642   | 628 | 0.93 | 866   | 696 | 1.19 | 1109  | 757 | 1.47 | 1369  | 813 | 1.77 | 1647  |
| 2550                                                | 558                               | 0.72 | 673   | 635 | 0.97 | 900   | 702 | 1.23 | 1146  | 763 | 1.51 | 1409  | 818 | 1.81 | 1689  |
| 2600                                                | 566                               | 0.76 | 705   | 642 | 1.00 | 935   | 709 | 1.27 | 1183  | 769 | 1.55 | 1450  | 824 | 1.86 | 1732  |
| 2700                                                | 582                               | 0.83 | 771   | 656 | 1.08 | 1008  | 721 | 1.35 | 1263  | 781 | 1.65 | 1535  | 835 | 1.95 | 1823  |
| 2800                                                | 597                               | 0.90 | 842   | 670 | 1.16 | 1086  | 734 | 1.44 | 1347  | 793 | 1.74 | 1625  | 847 | 2.06 | 1917  |
| 2900                                                | 613                               | 0.98 | 918   | 684 | 1.25 | 1169  | 748 | 1.54 | 1436  | 805 | 1.84 | 1720  | 859 | 2.16 | 2019  |
| 3000                                                | 629                               | 1.07 | 999   | 699 | 1.35 | 1256  | 761 | 1.64 | 1530  | 818 | 1.95 | 1820  | 871 | 2.28 | 2125  |
| 3100                                                | 645                               | 1.16 | 1085  | 713 | 1.45 | 1349  | 775 | 1.75 | 1630  | 831 | 2.06 | 1925  | 883 | 2.40 | 2235  |
| 3200                                                | 662                               | 1.26 | 1176  | 728 | 1.55 | 1448  | 788 | 1.86 | 1734  | 844 | 2.18 | 2036  | 895 | 2.52 | 2352  |
| 3300                                                | 678                               | 1.36 | 1272  | 743 | 1.66 | 1551  | 802 | 1.98 | 1845  | 857 | 2.31 | 2152  | 908 | 2.65 | 2475  |
| 3400                                                | 694                               | 1.47 | 1374  | 758 | 1.78 | 1660  | 816 | 2.10 | 1961  | 870 | 2.44 | 2275  | 920 | 2.79 | 2603  |
| 3500                                                | 711                               | 1.59 | 1482  | 773 | 1.90 | 1775  | 831 | 2.23 | 2082  | 884 | 2.58 | 2402  | 933 | 2.93 | 2737  |
| 3600                                                | 727                               | 1.71 | 1596  | 789 | 2.03 | 1896  | 845 | 2.37 | 2210  | 897 | 2.72 | 2537  | 946 | 3.09 | 2877  |
| 3700                                                | 744                               | 1.84 | 1716  | 804 | 2.17 | 2023  | 860 | 2.51 | 2343  | 911 | 2.87 | 2677  | 959 | 3.24 | 3023  |
| 3750                                                | 752                               | 1.91 | 1778  | 812 | 2.24 | 2089  | 867 | 2.59 | 2413  | 918 | 2.95 | 2750  | 966 | 3.32 | 3100  |

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| 581B090 (7½ TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |             |             |             |             |             |             |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |             |             |             |             |             |             |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8         |             |             | 2.0         |             |             |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 2250                                                       | 839                               | 1.86 | 1735  | 889  | 2.18 | 2032  | 935  | 2.52 | 2345  | 980         | 2.87        | 2673        | 1022        | 3.23        | 3015        |
| 2300                                                       | 844                               | 1.90 | 1773  | 893  | 2.22 | 2073  | 940  | 2.56 | 2389  | 984         | 2.91        | 2718        | 1027        | 3.28        | 3062        |
| 2400                                                       | 854                               | 1.99 | 1855  | 903  | 2.32 | 2159  | 950  | 2.66 | 2478  | 993         | 3.02        | 2812        | 1035        | 3.39        | 3159        |
| 2500                                                       | 865                               | 2.08 | 1940  | 913  | 2.41 | 2249  | 959  | 2.76 | 2573  | 1003        | 3.12        | 2911        | 1044        | 3.50        | 3261        |
| 2550                                                       | 870                               | 2.13 | 1985  | 918  | 2.46 | 2296  | 964  | 2.81 | 2622  | 1008        | 3.18        | 2962        | 1049        | 3.55        | 3315        |
| 2600                                                       | 875                               | 2.18 | 2031  | 923  | 2.51 | 2344  | 969  | 2.87 | 2673  | 1012        | 3.23        | 3014        | 1054        | 3.61        | 3370        |
| 2700                                                       | 886                               | 2.28 | 2126  | 934  | 2.62 | 2445  | 979  | 2.98 | 2777  | 1022        | 3.35        | 3123        | 1063        | 3.74        | 3483        |
| 2800                                                       | 897                               | 2.39 | 2227  | 944  | 2.73 | 2550  | 989  | 3.10 | 2888  | 1032        | 3.47        | 3238        | 1073        | 3.86        | 3601        |
| 2900                                                       | 908                               | 2.50 | 2333  | 955  | 2.85 | 2661  | 1000 | 3.22 | 3003  | 1042        | 3.60        | 3358        | <b>1083</b> | <b>4.00</b> | <b>3725</b> |
| 3000                                                       | 920                               | 2.62 | 2443  | 966  | 2.98 | 2777  | 1010 | 3.35 | 3123  | 1052        | 3.74        | 3484        | <b>1093</b> | <b>4.14</b> | <b>3856</b> |
| 3100                                                       | 931                               | 2.75 | 2560  | 977  | 3.11 | 2899  | 1021 | 3.49 | 3250  | 1063        | 3.88        | 3615        | —           | —           | —           |
| 3200                                                       | 943                               | 2.88 | 2682  | 989  | 3.25 | 3026  | 1032 | 3.63 | 3383  | 1074        | 4.02        | 3752        | —           | —           | —           |
| 3300                                                       | 955                               | 3.01 | 2810  | 1000 | 3.39 | 3159  | 1043 | 3.78 | 3521  | <b>1084</b> | <b>4.18</b> | <b>3896</b> | —           | —           | —           |
| 3400                                                       | 967                               | 3.16 | 2945  | 1012 | 3.54 | 3299  | 1055 | 3.93 | 3667  | —           | —           | —           | —           | —           | —           |
| 3500                                                       | 980                               | 3.31 | 3084  | 1024 | 3.69 | 3445  | 1066 | 4.09 | 3817  | —           | —           | —           | —           | —           | —           |
| 3600                                                       | 992                               | 3.46 | 3230  | 1036 | 3.86 | 3596  | —    | —    | —     | —           | —           | —           | —           | —           | —           |
| 3700                                                       | 1005                              | 3.63 | 3383  | 1048 | 4.03 | 3755  | —    | —    | —     | —           | —           | —           | —           | —           | —           |
| 3750                                                       | 1011                              | 3.71 | 3462  | 1054 | 4.11 | 3836  | —    | —    | —     | —           | —           | —           | —           | —           | —           |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

Refer to page 103 for general Fan Performance Data notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 4.20.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

**581B102 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2500             | 541                               | 0.50 | 467   | 624 | 0.66 | 614   | 701 | 0.83 | 771   | 771 | 1.00 | 936   | 837  | 1.19 | 1109  |
| 2600             | 556                               | 0.55 | 513   | 637 | 0.71 | 665   | 711 | 0.89 | 827   | 781 | 1.07 | 996   | 845  | 1.26 | 1173  |
| 2700             | 571                               | 0.60 | 562   | 650 | 0.77 | 720   | 722 | 0.95 | 885   | 790 | 1.14 | 1059  | 854  | 1.33 | 1241  |
| 2800             | 586                               | 0.66 | 615   | 663 | 0.83 | 777   | 734 | 1.02 | 948   | 800 | 1.21 | 1126  | 863  | 1.41 | 1312  |
| 2900             | 601                               | 0.72 | 672   | 676 | 0.90 | 839   | 745 | 1.09 | 1014  | 811 | 1.28 | 1197  | 872  | 1.49 | 1387  |
| 3000             | 616                               | 0.79 | 732   | 689 | 0.97 | 904   | 757 | 1.16 | 1083  | 821 | 1.36 | 1271  | 882  | 1.57 | 1465  |
| 3100             | 632                               | 0.85 | 796   | 703 | 1.04 | 972   | 769 | 1.24 | 1157  | 832 | 1.45 | 1349  | 892  | 1.66 | 1548  |
| 3200             | 648                               | 0.93 | 864   | 717 | 1.12 | 1045  | 782 | 1.32 | 1235  | 843 | 1.53 | 1431  | 902  | 1.75 | 1635  |
| 3300             | 663                               | 1.00 | 936   | 731 | 1.20 | 1122  | 795 | 1.41 | 1316  | 855 | 1.63 | 1517  | 912  | 1.85 | 1725  |
| 3400             | 679                               | 1.09 | 1012  | 745 | 1.29 | 1203  | 808 | 1.50 | 1402  | 867 | 1.72 | 1608  | 923  | 1.95 | 1820  |
| 3500             | 695                               | 1.17 | 1092  | 760 | 1.38 | 1288  | 821 | 1.60 | 1492  | 879 | 1.83 | 1703  | 934  | 2.06 | 1920  |
| 3600             | 711                               | 1.26 | 1177  | 774 | 1.48 | 1379  | 834 | 1.70 | 1587  | 891 | 1.93 | 1802  | 945  | 2.17 | 2024  |
| 3700             | 728                               | 1.36 | 1266  | 789 | 1.58 | 1473  | 848 | 1.81 | 1686  | 904 | 2.04 | 1906  | 957  | 2.29 | 2132  |
| 3800             | 744                               | 1.46 | 1361  | 804 | 1.69 | 1572  | 861 | 1.92 | 1790  | 916 | 2.16 | 2015  | 969  | 2.41 | 2246  |
| 3900             | 760                               | 1.57 | 1460  | 819 | 1.80 | 1676  | 875 | 2.04 | 1899  | 929 | 2.28 | 2128  | 981  | 2.53 | 2364  |
| 4000             | 777                               | 1.68 | 1563  | 834 | 1.91 | 1785  | 889 | 2.16 | 2012  | 942 | 2.41 | 2247  | 993  | 2.67 | 2487  |
| 4100             | 793                               | 1.79 | 1672  | 850 | 2.04 | 1899  | 904 | 2.29 | 2132  | 956 | 2.54 | 2371  | 1006 | 2.80 | 2615  |
| 4200             | 810                               | 1.92 | 1786  | 865 | 2.16 | 2018  | 918 | 2.42 | 2255  | 969 | 2.68 | 2499  | —    | —    | —     |
| 4300             | 826                               | 2.04 | 1906  | 880 | 2.30 | 2142  | 932 | 2.56 | 2385  | 983 | 2.82 | 2633  | —    | —    | —     |

**581B102 (8½ TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2500             | 900                               | 1.38 | 1289  | 959  | 1.58 | 1476  | 1015 | 1.79 | 1669  | 1069 | 2.00 | 1868  | 1121 | 2.22 | 2073  |
| 2600             | 907                               | 1.46 | 1357  | 965  | 1.66 | 1548  | 1021 | 1.87 | 1745  | 1074 | 2.09 | 1948  | 1125 | 2.31 | 2158  |
| 2700             | 914                               | 1.53 | 1429  | 972  | 1.74 | 1624  | 1027 | 1.96 | 1825  | 1079 | 2.18 | 2032  | 1130 | 2.41 | 2245  |
| 2800             | 922                               | 1.61 | 1505  | 979  | 1.83 | 1704  | 1033 | 2.05 | 1909  | 1085 | 2.27 | 2120  | 1135 | 2.51 | 2337  |
| 2900             | 931                               | 1.70 | 1584  | 986  | 1.92 | 1787  | 1040 | 2.14 | 1996  | 1091 | 2.37 | 2211  | 1141 | 2.61 | 2432  |
| 3000             | 939                               | 1.79 | 1667  | 994  | 2.01 | 1874  | 1047 | 2.24 | 2087  | 1098 | 2.47 | 2307  | 1147 | 2.71 | 2532  |
| 3100             | 948                               | 1.88 | 1753  | 1002 | 2.11 | 1965  | 1054 | 2.34 | 2183  | 1105 | 2.58 | 2406  | 1153 | 2.83 | 2635  |
| 3200             | 957                               | 1.98 | 1844  | 1011 | 2.21 | 2060  | 1062 | 2.45 | 2283  | 1112 | 2.69 | 2510  | —    | —    | —     |
| 3300             | 967                               | 2.08 | 1939  | 1020 | 2.32 | 2160  | 1070 | 2.56 | 2386  | 1119 | 2.81 | 2618  | —    | —    | —     |
| 3400             | 977                               | 2.19 | 2039  | 1029 | 2.43 | 2264  | 1079 | 2.67 | 2494  | —    | —    | —     | —    | —    | —     |
| 3500             | 987                               | 2.30 | 2143  | 1038 | 2.54 | 2372  | 1088 | 2.80 | 2607  | —    | —    | —     | —    | —    | —     |
| 3600             | 998                               | 2.41 | 2251  | 1048 | 2.66 | 2485  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3700             | 1008                              | 2.54 | 2364  | 1058 | 2.79 | 2602  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800             | 1019                              | 2.66 | 2482  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900             | 1031                              | 2.79 | 2605  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 840 to 1085 rpm. All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581B102 (8 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |      |      |       |
|--------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                       | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |      |      |       |
|                                                        | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0  |      |       |
|                                                        | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2500                                                   | 541                               | 0.50 | 467   | 624 | 0.66 | 614   | 701 | 0.83 | 771   | 771 | 1.00 | 936   | 837  | 1.19 | 1109  |
| 2600                                                   | 556                               | 0.55 | 513   | 637 | 0.71 | 665   | 711 | 0.89 | 827   | 781 | 1.07 | 996   | 845  | 1.26 | 1173  |
| 2700                                                   | 571                               | 0.60 | 562   | 650 | 0.77 | 720   | 722 | 0.95 | 885   | 790 | 1.14 | 1059  | 854  | 1.33 | 1241  |
| 2800                                                   | 586                               | 0.66 | 615   | 663 | 0.83 | 777   | 734 | 1.02 | 948   | 800 | 1.21 | 1126  | 863  | 1.41 | 1312  |
| 2900                                                   | 601                               | 0.72 | 672   | 676 | 0.90 | 839   | 745 | 1.09 | 1014  | 811 | 1.28 | 1197  | 872  | 1.49 | 1387  |
| 3000                                                   | 616                               | 0.79 | 732   | 689 | 0.97 | 904   | 757 | 1.16 | 1083  | 821 | 1.36 | 1271  | 882  | 1.57 | 1465  |
| 3100                                                   | 632                               | 0.85 | 796   | 703 | 1.04 | 972   | 769 | 1.24 | 1157  | 832 | 1.45 | 1349  | 892  | 1.66 | 1548  |
| 3200                                                   | 648                               | 0.93 | 864   | 717 | 1.12 | 1045  | 782 | 1.32 | 1235  | 843 | 1.53 | 1431  | 902  | 1.75 | 1635  |
| 3300                                                   | 663                               | 1.00 | 936   | 731 | 1.20 | 1122  | 795 | 1.41 | 1316  | 855 | 1.63 | 1517  | 912  | 1.85 | 1725  |
| 3400                                                   | 679                               | 1.09 | 1012  | 745 | 1.29 | 1203  | 808 | 1.50 | 1402  | 867 | 1.72 | 1608  | 923  | 1.95 | 1820  |
| 3500                                                   | 695                               | 1.17 | 1092  | 760 | 1.38 | 1288  | 821 | 1.60 | 1492  | 879 | 1.83 | 1703  | 934  | 2.06 | 1920  |
| 3600                                                   | 711                               | 1.26 | 1177  | 774 | 1.48 | 1379  | 834 | 1.70 | 1587  | 891 | 1.93 | 1802  | 945  | 2.17 | 2024  |
| 3700                                                   | 728                               | 1.36 | 1266  | 789 | 1.58 | 1473  | 848 | 1.81 | 1686  | 904 | 2.04 | 1906  | 957  | 2.29 | 2132  |
| 3800                                                   | 744                               | 1.46 | 1361  | 804 | 1.69 | 1572  | 861 | 1.92 | 1790  | 916 | 2.16 | 2015  | 969  | 2.41 | 2246  |
| 3900                                                   | 760                               | 1.57 | 1460  | 819 | 1.80 | 1676  | 875 | 2.04 | 1899  | 929 | 2.28 | 2128  | 981  | 2.53 | 2364  |
| 4000                                                   | 777                               | 1.68 | 1563  | 834 | 1.91 | 1785  | 889 | 2.16 | 2012  | 942 | 2.41 | 2247  | 993  | 2.67 | 2487  |
| 4100                                                   | 793                               | 1.79 | 1672  | 850 | 2.04 | 1899  | 904 | 2.29 | 2132  | 956 | 2.54 | 2371  | 1006 | 2.80 | 2615  |
| 4200                                                   | 810                               | 1.92 | 1786  | 865 | 2.16 | 2018  | 918 | 2.42 | 2255  | 969 | 2.68 | 2499  | 1018 | 2.95 | 2748  |
| 4300                                                   | 826                               | 2.04 | 1906  | 880 | 2.30 | 2142  | 932 | 2.56 | 2385  | 983 | 2.82 | 2633  | 1031 | 3.10 | 2888  |

581B036-150

| 581B102 (8 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2500                                                          | 900                               | 1.38 | 1289  | 959  | 1.58 | 1476  | 1015 | 1.79 | 1669  | 1069 | 2.00 | 1868  | 1121 | 2.22 | 2073  |
| 2600                                                          | 907                               | 1.46 | 1357  | 965  | 1.66 | 1548  | 1021 | 1.87 | 1745  | 1074 | 2.09 | 1948  | 1125 | 2.31 | 2158  |
| 2700                                                          | 914                               | 1.53 | 1429  | 972  | 1.74 | 1624  | 1027 | 1.96 | 1825  | 1079 | 2.18 | 2032  | 1130 | 2.41 | 2245  |
| 2800                                                          | 922                               | 1.61 | 1505  | 979  | 1.83 | 1704  | 1033 | 2.05 | 1909  | 1085 | 2.27 | 2120  | 1135 | 2.51 | 2337  |
| 2900                                                          | 931                               | 1.70 | 1584  | 986  | 1.92 | 1787  | 1040 | 2.14 | 1996  | 1091 | 2.37 | 2211  | 1141 | 2.61 | 2432  |
| 3000                                                          | 939                               | 1.79 | 1667  | 994  | 2.01 | 1874  | 1047 | 2.24 | 2087  | 1098 | 2.47 | 2307  | 1147 | 2.71 | 2532  |
| 3100                                                          | 948                               | 1.88 | 1753  | 1002 | 2.11 | 1965  | 1054 | 2.34 | 2183  | 1105 | 2.58 | 2406  | 1153 | 2.83 | 2635  |
| 3200                                                          | 957                               | 1.98 | 1844  | 1011 | 2.21 | 2060  | 1062 | 2.45 | 2283  | 1112 | 2.69 | 2510  | 1160 | 2.94 | 2743  |
| 3300                                                          | 967                               | 2.08 | 1939  | 1020 | 2.32 | 2160  | 1070 | 2.56 | 2386  | 1119 | 2.81 | 2618  | 1167 | 3.06 | 2855  |
| 3400                                                          | 977                               | 2.19 | 2039  | 1029 | 2.43 | 2264  | 1079 | 2.67 | 2494  | 1127 | 2.93 | 2730  | 1174 | 3.19 | 2971  |
| 3500                                                          | 987                               | 2.30 | 2143  | 1038 | 2.54 | 2372  | 1088 | 2.80 | 2607  | 1135 | 3.05 | 2847  | 1181 | 3.32 | 3092  |
| 3600                                                          | 998                               | 2.41 | 2251  | 1048 | 2.66 | 2485  | 1097 | 2.92 | 2724  | 1144 | 3.18 | 2968  | 1189 | 3.45 | 3218  |
| 3700                                                          | 1008                              | 2.54 | 2364  | 1058 | 2.79 | 2602  | 1106 | 3.05 | 2846  | 1152 | 3.32 | 3094  | 1198 | 3.59 | 3348  |
| 3800                                                          | 1019                              | 2.66 | 2482  | 1068 | 2.92 | 2725  | 1116 | 3.19 | 2972  | 1162 | 3.46 | 3226  | 1206 | 3.74 | 3484  |
| 3900                                                          | 1031                              | 2.79 | 2605  | 1079 | 3.06 | 2852  | 1126 | 3.33 | 3104  | 1171 | 3.61 | 3362  | 1215 | 3.89 | 3624  |
| 4000                                                          | 1042                              | 2.93 | 2733  | 1090 | 3.20 | 2984  | 1136 | 3.48 | 3241  | 1180 | 3.76 | 3503  | 1224 | 4.04 | 3770  |
| 4100                                                          | 1054                              | 3.07 | 2866  | 1101 | 3.35 | 3122  | 1146 | 3.63 | 3383  | 1190 | 3.91 | 3649  | 1233 | 4.20 | 3921  |
| 4200                                                          | 1066                              | 3.22 | 3004  | 1112 | 3.50 | 3264  | 1157 | 3.79 | 3530  | 1200 | 4.08 | 3801  | —    | —    | —     |
| 4300                                                          | 1078                              | 3.38 | 3148  | 1123 | 3.66 | 3413  | 1167 | 3.95 | 3683  | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 4.20.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.



# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

### 581B120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000             | 616                               | 0.79 | 732   | 689 | 0.97 | 904   | 757  | 1.16 | 1083  | 821  | 1.36 | 1271  | 882  | 1.57 | 1465  |
| 3100             | 632                               | 0.85 | 796   | 703 | 1.04 | 972   | 769  | 1.24 | 1157  | 832  | 1.45 | 1349  | 892  | 1.66 | 1548  |
| 3200             | 648                               | 0.93 | 864   | 717 | 1.12 | 1045  | 782  | 1.32 | 1235  | 843  | 1.53 | 1431  | 902  | 1.75 | 1635  |
| 3300             | 663                               | 1.00 | 936   | 731 | 1.20 | 1122  | 795  | 1.41 | 1316  | 855  | 1.63 | 1517  | 912  | 1.85 | 1725  |
| 3400             | 679                               | 1.09 | 1012  | 745 | 1.29 | 1203  | 808  | 1.50 | 1402  | 867  | 1.72 | 1608  | 923  | 1.95 | 1820  |
| 3500             | 695                               | 1.17 | 1092  | 760 | 1.38 | 1288  | 821  | 1.60 | 1492  | 879  | 1.83 | 1703  | 934  | 2.06 | 1920  |
| 3600             | 711                               | 1.26 | 1177  | 774 | 1.48 | 1379  | 834  | 1.70 | 1587  | 891  | 1.93 | 1802  | 945  | 2.17 | 2024  |
| 3700             | 728                               | 1.36 | 1266  | 789 | 1.58 | 1473  | 848  | 1.81 | 1686  | 904  | 2.04 | 1906  | 957  | 2.29 | 2132  |
| 3800             | 744                               | 1.46 | 1361  | 804 | 1.69 | 1572  | 861  | 1.92 | 1790  | 916  | 2.16 | 2015  | 969  | 2.41 | 2246  |
| 3900             | 760                               | 1.57 | 1460  | 819 | 1.80 | 1676  | 875  | 2.04 | 1899  | 929  | 2.28 | 2128  | 981  | 2.53 | 2364  |
| 4000             | 777                               | 1.68 | 1563  | 834 | 1.91 | 1785  | 889  | 2.16 | 2012  | 942  | 2.41 | 2247  | 993  | 2.67 | 2487  |
| 4100             | 793                               | 1.79 | 1672  | 850 | 2.04 | 1899  | 904  | 2.29 | 2132  | 956  | 2.54 | 2371  | 1006 | 2.80 | 2615  |
| 4200             | 810                               | 1.92 | 1786  | 865 | 2.16 | 2018  | 918  | 2.42 | 2255  | 969  | 2.68 | 2499  | 1018 | 2.95 | 2748  |
| 4300             | 826                               | 2.04 | 1906  | 880 | 2.30 | 2142  | 932  | 2.56 | 2385  | 983  | 2.82 | 2633  | 1031 | 3.10 | 2888  |
| 4400             | 843                               | 2.18 | 2031  | 896 | 2.44 | 2272  | 947  | 2.70 | 2520  | 996  | 2.97 | 2773  | 1044 | 3.25 | 3032  |
| 4500             | 860                               | 2.32 | 2161  | 912 | 2.58 | 2408  | 962  | 2.85 | 2660  | 1010 | 3.13 | 2918  | 1057 | 3.41 | 3182  |
| 4600             | 876                               | 2.46 | 2297  | 927 | 2.73 | 2549  | 977  | 3.01 | 2807  | 1024 | 3.29 | 3070  | 1070 | 3.58 | 3338  |
| 4700             | 893                               | 2.62 | 2439  | 943 | 2.89 | 2696  | 992  | 3.17 | 2958  | 1038 | 3.46 | 3226  | —    | —    | —     |
| 4800             | 910                               | 2.77 | 2587  | 959 | 3.06 | 2849  | 1007 | 3.34 | 3116  | 1053 | 3.63 | 3390  | —    | —    | —     |
| 4900             | 927                               | 2.94 | 2741  | 975 | 3.23 | 3008  | 1022 | 3.52 | 3280  | —    | —    | —     | —    | —    | —     |
| 5000             | 944                               | 3.11 | 2901  | 991 | 3.40 | 3173  | 1037 | 3.70 | 3451  | —    | —    | —     | —    | —    | —     |

### 581B120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000             | 939                               | 1.79 | 1667  | 994  | 2.01 | 1874  | 1047 | 2.24 | 2087  | 1098 | 2.47 | 2307  | 1147 | 2.71 | 2532  |
| 3100             | 948                               | 1.88 | 1753  | 1002 | 2.11 | 1965  | 1054 | 2.34 | 2183  | 1105 | 2.58 | 2406  | 1153 | 2.83 | 2635  |
| 3200             | 957                               | 1.98 | 1844  | 1011 | 2.21 | 2060  | 1062 | 2.45 | 2283  | 1112 | 2.69 | 2510  | 1160 | 2.94 | 2743  |
| 3300             | 967                               | 2.08 | 1939  | 1020 | 2.32 | 2160  | 1070 | 2.56 | 2386  | 1119 | 2.81 | 2618  | 1167 | 3.06 | 2855  |
| 3400             | 977                               | 2.19 | 2039  | 1029 | 2.43 | 2264  | 1079 | 2.67 | 2494  | 1127 | 2.93 | 2730  | 1174 | 3.19 | 2971  |
| 3500             | 987                               | 2.30 | 2143  | 1038 | 2.54 | 2372  | 1088 | 2.80 | 2607  | 1135 | 3.05 | 2847  | 1181 | 3.32 | 3092  |
| 3600             | 998                               | 2.41 | 2251  | 1048 | 2.66 | 2485  | 1097 | 2.92 | 2724  | 1144 | 3.18 | 2968  | 1189 | 3.45 | 3218  |
| 3700             | 1008                              | 2.54 | 2364  | 1058 | 2.79 | 2602  | 1106 | 3.05 | 2846  | 1152 | 3.32 | 3094  | 1198 | 3.59 | 3348  |
| 3800             | 1019                              | 2.66 | 2482  | 1068 | 2.92 | 2725  | 1116 | 3.19 | 2972  | 1162 | 3.46 | 3226  | —    | —    | —     |
| 3900             | 1031                              | 2.79 | 2605  | 1079 | 3.06 | 2852  | 1126 | 3.33 | 3104  | 1171 | 3.61 | 3362  | —    | —    | —     |
| 4000             | 1042                              | 2.93 | 2733  | 1090 | 3.20 | 2984  | 1136 | 3.48 | 3241  | —    | —    | —     | —    | —    | —     |
| 4100             | 1054                              | 3.07 | 2866  | 1101 | 3.35 | 3122  | 1146 | 3.63 | 3383  | —    | —    | —     | —    | —    | —     |
| 4200             | 1066                              | 3.22 | 3004  | 1112 | 3.50 | 3264  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300             | 1078                              | 3.38 | 3148  | 1123 | 3.66 | 3413  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400             | 1090                              | 3.54 | 3297  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500             | 1103                              | 3.70 | 3451  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

#### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

#### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

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# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581B120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |     |      |       |      |      |       |      |      |       |      |      |       |
|                                                     | 0.2                               |      |       | 0.4 |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                | 616                               | 0.79 | 732   | 689 | 0.97 | 904   | 757  | 1.16 | 1083  | 821  | 1.36 | 1271  | 882  | 1.57 | 1465  |
| 3100                                                | 632                               | 0.85 | 796   | 703 | 1.04 | 972   | 769  | 1.24 | 1157  | 832  | 1.45 | 1349  | 892  | 1.66 | 1548  |
| 3200                                                | 648                               | 0.93 | 864   | 717 | 1.12 | 1045  | 782  | 1.32 | 1235  | 843  | 1.53 | 1431  | 902  | 1.75 | 1635  |
| 3300                                                | 663                               | 1.00 | 936   | 731 | 1.20 | 1122  | 795  | 1.41 | 1316  | 855  | 1.63 | 1517  | 912  | 1.85 | 1725  |
| 3400                                                | 679                               | 1.09 | 1012  | 745 | 1.29 | 1203  | 808  | 1.50 | 1402  | 867  | 1.72 | 1608  | 923  | 1.95 | 1820  |
| 3500                                                | 695                               | 1.17 | 1092  | 760 | 1.38 | 1288  | 821  | 1.60 | 1492  | 879  | 1.83 | 1703  | 934  | 2.06 | 1920  |
| 3600                                                | 711                               | 1.26 | 1177  | 774 | 1.48 | 1379  | 834  | 1.70 | 1587  | 891  | 1.93 | 1802  | 945  | 2.17 | 2024  |
| 3700                                                | 728                               | 1.36 | 1266  | 789 | 1.58 | 1473  | 848  | 1.81 | 1686  | 904  | 2.04 | 1906  | 957  | 2.29 | 2132  |
| 3800                                                | 744                               | 1.46 | 1361  | 804 | 1.69 | 1572  | 861  | 1.92 | 1790  | 916  | 2.16 | 2015  | 969  | 2.41 | 2246  |
| 3900                                                | 760                               | 1.57 | 1460  | 819 | 1.80 | 1676  | 875  | 2.04 | 1899  | 929  | 2.28 | 2128  | 981  | 2.53 | 2364  |
| 4000                                                | 777                               | 1.68 | 1563  | 834 | 1.91 | 1785  | 889  | 2.16 | 2012  | 942  | 2.41 | 2247  | 993  | 2.67 | 2487  |
| 4100                                                | 793                               | 1.79 | 1672  | 850 | 2.04 | 1899  | 904  | 2.29 | 2132  | 956  | 2.54 | 2371  | 1006 | 2.80 | 2615  |
| 4200                                                | 810                               | 1.92 | 1786  | 865 | 2.16 | 2018  | 918  | 2.42 | 2255  | 969  | 2.68 | 2499  | 1018 | 2.95 | 2748  |
| 4300                                                | 826                               | 2.04 | 1906  | 880 | 2.30 | 2142  | 932  | 2.56 | 2385  | 983  | 2.82 | 2633  | 1031 | 3.10 | 2888  |
| 4400                                                | 843                               | 2.18 | 2031  | 896 | 2.44 | 2272  | 947  | 2.70 | 2520  | 996  | 2.97 | 2773  | 1044 | 3.25 | 3032  |
| 4500                                                | 860                               | 2.32 | 2161  | 912 | 2.58 | 2408  | 962  | 2.85 | 2660  | 1010 | 3.13 | 2918  | 1057 | 3.41 | 3182  |
| 4600                                                | 876                               | 2.46 | 2297  | 927 | 2.73 | 2549  | 977  | 3.01 | 2807  | 1024 | 3.29 | 3070  | 1070 | 3.58 | 3338  |
| 4700                                                | 893                               | 2.62 | 2439  | 943 | 2.89 | 2696  | 992  | 3.17 | 2958  | 1038 | 3.46 | 3226  | 1084 | 3.75 | 3500  |
| 4800                                                | 910                               | 2.77 | 2587  | 959 | 3.06 | 2849  | 1007 | 3.34 | 3116  | 1053 | 3.63 | 3390  | 1098 | 3.93 | 3668  |
| 4900                                                | 927                               | 2.94 | 2741  | 975 | 3.23 | 3008  | 1022 | 3.52 | 3280  | 1067 | 3.82 | 3558  | 1111 | 4.12 | 3841  |
| 5000                                                | 944                               | 3.11 | 2901  | 991 | 3.40 | 3173  | 1037 | 3.70 | 3451  | 1082 | 4.00 | 3733  | 1125 | 4.31 | 4021  |

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| 581B120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                       | 939                               | 1.79 | 1667  | 994  | 2.01 | 1874  | 1047 | 2.24 | 2087  | 1098 | 2.47 | 2307  | 1147 | 2.71 | 2532  |
| 3100                                                       | 948                               | 1.88 | 1753  | 1002 | 2.11 | 1965  | 1054 | 2.34 | 2183  | 1105 | 2.58 | 2406  | 1153 | 2.83 | 2635  |
| 3200                                                       | 957                               | 1.98 | 1844  | 1011 | 2.21 | 2060  | 1062 | 2.45 | 2283  | 1112 | 2.69 | 2510  | 1160 | 2.94 | 2743  |
| 3300                                                       | 967                               | 2.08 | 1939  | 1020 | 2.32 | 2160  | 1070 | 2.56 | 2386  | 1119 | 2.81 | 2618  | 1167 | 3.06 | 2855  |
| 3400                                                       | 977                               | 2.19 | 2039  | 1029 | 2.43 | 2264  | 1079 | 2.67 | 2494  | 1127 | 2.93 | 2730  | 1174 | 3.19 | 2971  |
| 3500                                                       | 987                               | 2.30 | 2143  | 1038 | 2.54 | 2372  | 1088 | 2.80 | 2607  | 1135 | 3.05 | 2847  | 1181 | 3.32 | 3092  |
| 3600                                                       | 998                               | 2.41 | 2251  | 1048 | 2.66 | 2485  | 1097 | 2.92 | 2724  | 1144 | 3.18 | 2968  | 1189 | 3.45 | 3218  |
| 3700                                                       | 1008                              | 2.54 | 2364  | 1058 | 2.79 | 2602  | 1106 | 3.05 | 2846  | 1152 | 3.32 | 3094  | 1198 | 3.59 | 3348  |
| 3800                                                       | 1019                              | 2.66 | 2482  | 1068 | 2.92 | 2725  | 1116 | 3.19 | 2972  | 1162 | 3.46 | 3226  | 1206 | 3.74 | 3484  |
| 3900                                                       | 1031                              | 2.79 | 2605  | 1079 | 3.06 | 2852  | 1126 | 3.33 | 3104  | 1171 | 3.61 | 3362  | 1215 | 3.89 | 3624  |
| 4000                                                       | 1042                              | 2.93 | 2733  | 1090 | 3.20 | 2984  | 1136 | 3.48 | 3241  | 1180 | 3.76 | 3503  | 1224 | 4.04 | 3770  |
| 4100                                                       | 1054                              | 3.07 | 2866  | 1101 | 3.35 | 3122  | 1146 | 3.63 | 3383  | 1190 | 3.91 | 3649  | 1233 | 4.20 | 3921  |
| 4200                                                       | 1066                              | 3.22 | 3004  | 1112 | 3.50 | 3264  | 1157 | 3.79 | 3530  | 1200 | 4.08 | 3801  | 1243 | 4.37 | 4077  |
| 4300                                                       | 1078                              | 3.38 | 3148  | 1123 | 3.66 | 3413  | 1167 | 3.95 | 3683  | 1210 | 4.24 | 3958  | 1252 | 4.54 | 4238  |
| 4400                                                       | 1090                              | 3.54 | 3297  | 1135 | 3.82 | 3566  | 1179 | 4.12 | 3841  | 1221 | 4.42 | 4121  | 1262 | 4.72 | 4405  |
| 4500                                                       | 1103                              | 3.70 | 3451  | 1147 | 4.00 | 3726  | 1190 | 4.29 | 4005  | 1232 | 4.60 | 4289  | 1273 | 4.91 | 4578  |
| 4600                                                       | 1115                              | 3.87 | 3612  | 1159 | 4.17 | 3891  | 1201 | 4.48 | 4175  | 1243 | 4.79 | 4464  | 1283 | 5.10 | 4757  |
| 4700                                                       | 1128                              | 4.05 | 3778  | 1171 | 4.36 | 4062  | 1213 | 4.67 | 4350  | 1254 | 4.98 | 4644  | —    | —    | —     |
| 4800                                                       | 1141                              | 4.24 | 3951  | 1183 | 4.55 | 4239  | 1225 | 4.86 | 4532  | 1265 | 5.18 | 4830  | —    | —    | —     |
| 4900                                                       | 1154                              | 4.43 | 4130  | 1196 | 4.74 | 4422  | 1237 | 5.06 | 4720  | —    | —    | —     | —    | —    | —     |
| 5000                                                       | 1167                              | 4.63 | 4314  | 1209 | 4.95 | 4611  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

Refer to page 103 for general Fan Performance Data notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

### 581B150 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700             | 728                               | 1.36 | 1266  | 789  | 1.58 | 1473  | 848  | 1.81 | 1686  | 904  | 2.04 | 1906  | 957  | 2.29 | 2132  |
| 3800             | 744                               | 1.46 | 1361  | 804  | 1.69 | 1572  | 861  | 1.92 | 1790  | 916  | 2.16 | 2015  | 969  | 2.41 | 2246  |
| 3900             | 760                               | 1.57 | 1460  | 819  | 1.80 | 1676  | 875  | 2.04 | 1899  | 929  | 2.28 | 2128  | 981  | 2.53 | 2364  |
| 4000             | 777                               | 1.68 | 1563  | 834  | 1.91 | 1785  | 889  | 2.16 | 2012  | 942  | 2.41 | 2247  | 993  | 2.67 | 2487  |
| 4100             | 793                               | 1.79 | 1672  | 850  | 2.04 | 1899  | 904  | 2.29 | 2132  | 956  | 2.54 | 2371  | 1006 | 2.80 | 2615  |
| 4200             | 810                               | 1.92 | 1786  | 865  | 2.16 | 2018  | 918  | 2.42 | 2255  | 969  | 2.68 | 2499  | 1018 | 2.95 | 2748  |
| 4300             | 826                               | 2.04 | 1906  | 880  | 2.30 | 2142  | 932  | 2.56 | 2385  | 983  | 2.82 | 2633  | 1031 | 3.10 | 2888  |
| 4400             | 843                               | 2.18 | 2031  | 896  | 2.44 | 2272  | 947  | 2.70 | 2520  | 996  | 2.97 | 2773  | 1044 | 3.25 | 3032  |
| 4500             | 860                               | 2.32 | 2161  | 912  | 2.58 | 2408  | 962  | 2.85 | 2660  | 1010 | 3.13 | 2918  | 1057 | 3.41 | 3182  |
| 4600             | 876                               | 2.46 | 2297  | 927  | 2.73 | 2549  | 977  | 3.01 | 2807  | 1024 | 3.29 | 3070  | 1070 | 3.58 | 3338  |
| 4700             | 893                               | 2.62 | 2439  | 943  | 2.89 | 2696  | 992  | 3.17 | 2958  | 1038 | 3.46 | 3226  | 1084 | 3.75 | 3500  |
| 4800             | 910                               | 2.77 | 2587  | 959  | 3.06 | 2849  | 1007 | 3.34 | 3116  | 1053 | 3.63 | 3390  | 1098 | 3.93 | 3668  |
| 4900             | 927                               | 2.94 | 2741  | 975  | 3.23 | 3008  | 1022 | 3.52 | 3280  | 1067 | 3.82 | 3558  | 1111 | 4.12 | 3841  |
| 5000             | 944                               | 3.11 | 2901  | 991  | 3.40 | 3173  | 1037 | 3.70 | 3451  | 1082 | 4.00 | 3733  | 1125 | 4.31 | 4021  |
| 5100             | 961                               | 3.29 | 3068  | 1007 | 3.59 | 3345  | 1053 | 3.89 | 3627  | 1096 | 4.20 | 3915  | 1139 | 4.51 | 4208  |
| 5200             | 978                               | 3.48 | 3241  | 1024 | 3.78 | 3523  | 1068 | 4.09 | 3811  | 1111 | 4.40 | 4103  | 1153 | 4.72 | 4400  |
| 5300             | 995                               | 3.67 | 3420  | 1040 | 3.98 | 3707  | 1084 | 4.29 | 4000  | 1126 | 4.61 | 4298  | 1168 | 4.93 | 4600  |
| 5400             | 1012                              | 3.87 | 3606  | 1056 | 4.18 | 3899  | 1099 | 4.50 | 4196  | 1141 | 4.82 | 4499  | 1182 | 5.15 | 4806  |
| 5500             | 1029                              | 4.07 | 3799  | 1073 | 4.39 | 4097  | 1115 | 4.72 | 4400  | 1156 | 5.05 | 4707  | —    | —    | —     |
| 5600             | 1046                              | 4.29 | 3999  | 1089 | 4.61 | 4302  | 1131 | 4.94 | 4610  | —    | —    | —     | —    | —    | —     |
| 5700             | 1063                              | 4.51 | 4207  | 1105 | 4.84 | 4515  | 1146 | 5.18 | 4827  | —    | —    | —     | —    | —    | —     |
| 5800             | 1080                              | 4.74 | 4420  | 1122 | 5.08 | 4734  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900             | 1098                              | 4.98 | 4642  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000             | 1115                              | 5.22 | 4872  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### 581B150 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3700             | 1008                              | 2.54 | 2364  | 1058 | 2.79 | 2602  | 1106 | 3.05 | 2846  | 1152 | 3.32 | 3094  | 1198 | 3.59 | 3348  |
| 3800             | 1019                              | 2.66 | 2482  | 1068 | 2.92 | 2725  | 1116 | 3.19 | 2972  | 1162 | 3.46 | 3226  | 1206 | 3.74 | 3484  |
| 3900             | 1031                              | 2.79 | 2605  | 1079 | 3.06 | 2852  | 1126 | 3.33 | 3104  | 1171 | 3.61 | 3362  | 1215 | 3.89 | 3624  |
| 4000             | 1042                              | 2.93 | 2733  | 1090 | 3.20 | 2984  | 1136 | 3.48 | 3241  | 1180 | 3.76 | 3503  | 1224 | 4.04 | 3770  |
| 4100             | 1054                              | 3.07 | 2866  | 1101 | 3.35 | 3122  | 1146 | 3.63 | 3383  | 1190 | 3.91 | 3649  | 1233 | 4.20 | 3921  |
| 4200             | 1066                              | 3.22 | 3004  | 1112 | 3.50 | 3264  | 1157 | 3.79 | 3530  | 1200 | 4.08 | 3801  | 1243 | 4.37 | 4077  |
| 4300             | 1078                              | 3.38 | 3148  | 1123 | 3.66 | 3413  | 1167 | 3.95 | 3683  | 1210 | 4.24 | 3958  | 1252 | 4.54 | 4238  |
| 4400             | 1090                              | 3.54 | 3297  | 1135 | 3.82 | 3566  | 1179 | 4.12 | 3841  | 1221 | 4.42 | 4121  | 1262 | 4.72 | 4405  |
| 4500             | 1103                              | 3.70 | 3451  | 1147 | 4.00 | 3726  | 1190 | 4.29 | 4005  | 1232 | 4.60 | 4289  | 1273 | 4.91 | 4578  |
| 4600             | 1115                              | 3.87 | 3612  | 1159 | 4.17 | 3891  | 1201 | 4.48 | 4175  | 1243 | 4.79 | 4464  | 1283 | 5.10 | 4757  |
| 4700             | 1128                              | 4.05 | 3778  | 1171 | 4.36 | 4062  | 1213 | 4.67 | 4350  | 1254 | 4.98 | 4644  | —    | —    | —     |
| 4800             | 1141                              | 4.24 | 3951  | 1183 | 4.55 | 4239  | 1225 | 4.86 | 4532  | 1265 | 5.18 | 4830  | —    | —    | —     |
| 4900             | 1154                              | 4.43 | 4130  | 1196 | 4.74 | 4422  | 1237 | 5.06 | 4720  | —    | —    | —     | —    | —    | —     |
| 5000             | 1167                              | 4.63 | 4314  | 1209 | 4.95 | 4611  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5100             | 1181                              | 4.83 | 4505  | 1221 | 5.16 | 4808  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5200             | 1194                              | 5.04 | 4703  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5300             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5400             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5500             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5600             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6100             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6200             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

#### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

Refer to page 103 for general Fan Performance Data notes.

#### NOTES:

- Boldface** indicates field-supplied drive is required.
- Maximum continuous bhp is 5.25.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS**

**581B036 (3 TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 553                               | 0.14 | 134   | 681 | 0.22 | 221   | 782 | 0.32 | 316   | 870  | 0.42 | 417   | 948  | 0.53 | 526   |
| 1000             | 582                               | 0.16 | 163   | 707 | 0.26 | 257   | 807 | 0.36 | 358   | 894  | 0.47 | 466   | 971  | 0.58 | 580   |
| 1100             | 612                               | 0.20 | 196   | 734 | 0.30 | 297   | 833 | 0.41 | 405   | 919  | 0.52 | 519   | 995  | 0.64 | 639   |
| 1200             | 643                               | 0.23 | 234   | 762 | 0.34 | 343   | 859 | 0.46 | 458   | 944  | 0.58 | 579   | 1020 | 0.71 | 705   |
| 1300             | 675                               | 0.28 | 277   | 790 | 0.40 | 394   | 886 | 0.52 | 517   | 969  | 0.65 | 644   | 1044 | 0.78 | 777   |
| 1400             | 707                               | 0.33 | 326   | 819 | 0.45 | 452   | 913 | 0.58 | 581   | 996  | 0.72 | 716   | 1070 | 0.86 | 855   |
| 1500             | 740                               | 0.38 | 382   | 849 | 0.52 | 515   | 941 | 0.66 | 653   | 1023 | 0.80 | 795   | 1096 | 0.95 | 941   |

**581B036 (3 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 1019                              | 0.64 | 640   | 1084 | 0.76 | 760   | 1146 | 0.89 | 885   | 1203 | 1.02 | 1016  | 1258 | 1.16 | 1152  |
| 1000             | 1042                              | 0.70 | 700   | 1107 | 0.83 | 825   | 1168 | 0.96 | 956   | 1225 | 1.10 | 1091  | —    | —    | —     |
| 1100             | 1065                              | 0.77 | 765   | 1130 | 0.90 | 896   | 1190 | 1.04 | 1032  | 1247 | 1.18 | 1173  | —    | —    | —     |
| 1200             | 1089                              | 0.84 | 837   | 1153 | 0.98 | 974   | 1213 | 1.12 | 1115  | —    | —    | —     | —    | —    | —     |
| 1300             | 1113                              | 0.92 | 915   | 1177 | 1.06 | 1058  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1400             | 1138                              | 1.01 | 1000  | 1201 | 1.15 | 1149  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 1500             | 1163                              | 1.10 | 1092  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.

\*Motor drive range: 680 to 1044 rpm. All other rpms require field-supplied drive.

**581B036 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 553                               | 0.14 | 134   | 681 | 0.22 | 221   | 782 | 0.32 | 316   | 870  | 0.42 | 417   | 948  | 0.53 | 526   |
| 1000             | 582                               | 0.16 | 163   | 707 | 0.26 | 257   | 807 | 0.36 | 358   | 894  | 0.47 | 466   | 971  | 0.58 | 580   |
| 1100             | 612                               | 0.20 | 196   | 734 | 0.30 | 297   | 833 | 0.41 | 405   | 919  | 0.52 | 519   | 995  | 0.64 | 639   |
| 1200             | 643                               | 0.23 | 234   | 762 | 0.34 | 343   | 859 | 0.46 | 458   | 944  | 0.58 | 579   | 1020 | 0.71 | 705   |
| 1300             | 675                               | 0.28 | 277   | 790 | 0.40 | 394   | 886 | 0.52 | 517   | 969  | 0.65 | 644   | 1044 | 0.78 | 777   |
| 1400             | 707                               | 0.33 | 326   | 819 | 0.45 | 452   | 913 | 0.58 | 581   | 996  | 0.72 | 716   | 1070 | 0.86 | 855   |
| 1500             | 740                               | 0.38 | 382   | 849 | 0.52 | 515   | 941 | 0.66 | 653   | 1023 | 0.80 | 795   | 1096 | 0.95 | 941   |

**581B036 (3 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 900              | 1019                              | 0.64 | 640   | 1084 | 0.76 | 760   | 1146 | 0.89 | 885   | 1203 | 1.02 | 1016  | 1258 | 1.16 | 1152  |
| 1000             | 1042                              | 0.70 | 700   | 1107 | 0.83 | 825   | 1168 | 0.96 | 956   | 1225 | 1.10 | 1091  | 1279 | 1.24 | 1232  |
| 1100             | 1065                              | 0.77 | 765   | 1130 | 0.90 | 896   | 1190 | 1.04 | 1032  | 1247 | 1.18 | 1173  | 1301 | 1.33 | 1319  |
| 1200             | 1089                              | 0.84 | 837   | 1153 | 0.98 | 974   | 1213 | 1.12 | 1115  | 1270 | 1.27 | 1262  | 1324 | 1.42 | 1413  |
| 1300             | 1113                              | 0.92 | 915   | 1177 | 1.06 | 1058  | 1237 | 1.21 | 1205  | 1293 | 1.36 | 1358  | 1347 | 1.52 | 1514  |
| 1400             | 1138                              | 1.01 | 1000  | 1201 | 1.15 | 1149  | 1261 | 1.31 | 1303  | 1317 | 1.47 | 1461  | 1370 | 1.63 | 1623  |
| 1500             | 1163                              | 1.10 | 1092  | 1226 | 1.25 | 1247  | 1285 | 1.41 | 1407  | 1341 | 1.58 | 1571  | 1394 | 1.75 | 1740  |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require field-supplied drive.

581B036-150

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)**

**581B048 (4 TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 643                               | 0.23 | 234   | 762  | 0.34 | 343   | 859  | 0.46 | 458   | 944  | 0.58 | 579   | 1020 | 0.71 | 705   |
| 1300             | 675                               | 0.28 | 277   | 790  | 0.40 | 394   | 886  | 0.52 | 517   | 969  | 0.65 | 644   | 1044 | 0.78 | 777   |
| 1400             | 707                               | 0.33 | 326   | 819  | 0.45 | 452   | 913  | 0.58 | 581   | 996  | 0.72 | 716   | 1070 | 0.86 | 855   |
| 1500             | 740                               | 0.38 | 382   | 849  | 0.52 | 515   | 941  | 0.66 | 653   | 1023 | 0.80 | 795   | 1096 | 0.95 | 941   |
| 1600             | 773                               | 0.45 | 444   | 879  | 0.59 | 586   | 970  | 0.73 | 731   | 1050 | 0.88 | 880   | 1123 | 1.04 | 1034  |
| 1700             | 807                               | 0.52 | 513   | 910  | 0.67 | 663   | 999  | 0.82 | 817   | 1078 | 0.98 | 973   | 1150 | 1.14 | 1134  |
| 1800             | 841                               | 0.59 | 589   | 942  | 0.75 | 749   | 1029 | 0.91 | 910   | 1106 | 1.08 | 1074  | —    | —    | —     |
| 1900             | 875                               | 0.68 | 674   | 974  | 0.85 | 842   | 1059 | 1.02 | 1012  | 1135 | 1.19 | 1184  | —    | —    | —     |
| 2000             | 910                               | 0.77 | 767   | 1006 | 0.95 | 944   | 1090 | 1.13 | 1122  | —    | —    | —     | —    | —    | —     |

**581B048 (4 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |     |     |       |     |     |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|-----|-----|-------|-----|-----|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8 |     |       | 2.0 |     |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 1200             | 1089                              | 0.84 | 837   | 1153 | 0.98 | 974   | 1213 | 1.12 | 1115  | —   | —   | —     | —   | —   | —     |
| 1300             | 1113                              | 0.92 | 915   | 1177 | 1.06 | 1058  | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1400             | 1138                              | 1.01 | 1000  | 1201 | 1.15 | 1149  | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1500             | 1163                              | 1.10 | 1092  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1600             | 1189                              | 1.20 | 1191  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.20.

\*Motor drive range: 770 to 1185 rpm. All other rpms require field-supplied drive.

**581B048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 643                               | 0.23 | 234   | 762  | 0.34 | 343   | 859  | 0.46 | 458   | 944  | 0.58 | 579   | 1020 | 0.71 | 705   |
| 1300             | 675                               | 0.28 | 277   | 790  | 0.40 | 394   | 886  | 0.52 | 517   | 969  | 0.65 | 644   | 1044 | 0.78 | 777   |
| 1400             | 707                               | 0.33 | 326   | 819  | 0.45 | 452   | 913  | 0.58 | 581   | 996  | 0.72 | 716   | 1070 | 0.86 | 855   |
| 1500             | 740                               | 0.38 | 382   | 849  | 0.52 | 515   | 941  | 0.66 | 653   | 1023 | 0.80 | 795   | 1096 | 0.95 | 941   |
| 1600             | 773                               | 0.45 | 444   | 879  | 0.59 | 586   | 970  | 0.73 | 731   | 1050 | 0.88 | 880   | 1123 | 1.04 | 1034  |
| 1700             | 807                               | 0.52 | 513   | 910  | 0.67 | 663   | 999  | 0.82 | 817   | 1078 | 0.98 | 973   | 1150 | 1.14 | 1134  |
| 1800             | 841                               | 0.59 | 589   | 942  | 0.75 | 749   | 1029 | 0.91 | 910   | 1106 | 1.08 | 1074  | 1177 | 1.25 | 1242  |
| 1900             | 875                               | 0.68 | 674   | 974  | 0.85 | 842   | 1059 | 1.02 | 1012  | 1135 | 1.19 | 1184  | 1205 | 1.37 | 1360  |
| 2000             | 910                               | 0.77 | 767   | 1006 | 0.95 | 944   | 1090 | 1.13 | 1122  | 1165 | 1.31 | 1302  | 1234 | 1.49 | 1485  |

**581B048 (4 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1200             | 1089                              | 0.84 | 837   | 1153 | 0.98 | 974   | 1213 | 1.12 | 1115  | 1270 | 1.27 | 1262  | 1324 | 1.42 | 1413  |
| 1300             | 1113                              | 0.92 | 915   | 1177 | 1.06 | 1058  | 1237 | 1.21 | 1205  | 1293 | 1.36 | 1358  | 1347 | 1.52 | 1514  |
| 1400             | 1138                              | 1.01 | 1000  | 1201 | 1.15 | 1149  | 1261 | 1.31 | 1303  | 1317 | 1.47 | 1461  | 1370 | 1.63 | 1623  |
| 1500             | 1163                              | 1.10 | 1092  | 1226 | 1.25 | 1247  | 1285 | 1.41 | 1407  | 1341 | 1.58 | 1571  | 1394 | 1.75 | 1740  |
| 1600             | 1189                              | 1.20 | 1191  | 1252 | 1.36 | 1353  | 1310 | 1.53 | 1520  | 1365 | 1.70 | 1690  | 1418 | 1.87 | 1865  |
| 1700             | 1216                              | 1.31 | 1299  | 1277 | 1.48 | 1468  | 1335 | 1.65 | 1640  | 1390 | 1.83 | 1817  | 1442 | 2.01 | 1998  |
| 1800             | 1242                              | 1.42 | 1414  | 1303 | 1.60 | 1590  | 1361 | 1.78 | 1770  | 1415 | 1.96 | 1953  | 1467 | 2.15 | 2140  |
| 1900             | 1270                              | 1.55 | 1538  | 1330 | 1.73 | 1721  | 1387 | 1.92 | 1908  | 1441 | 2.11 | 2098  | 1493 | 2.30 | 2292  |
| 2000             | 1297                              | 1.68 | 1672  | 1357 | 1.87 | 1862  | 1414 | 2.07 | 2055  | 1467 | 2.26 | 2252  | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1075 to 1455 rpm. All other rpms require field-supplied drive.

581B036-150

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)* — SINGLE-PHASE UNITS |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                                     | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                                      | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                                      | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500                                                                 | 800                               | 0.39 | 350   | 904  | 0.49 | 438   | 999  | 0.60 | 535   | 1087 | 0.72 | 640   | 1169 | 0.85 | 753   |
| 1600                                                                 | 839                               | 0.46 | 412   | 938  | 0.57 | 505   | 1030 | 0.68 | 605   | 1115 | 0.80 | 714   | 1195 | 0.93 | 829   |
| 1700                                                                 | 879                               | 0.54 | 483   | 974  | 0.65 | 580   | 1062 | 0.77 | 684   | 1144 | 0.90 | 796   | 1221 | 1.03 | 914   |
| 1800                                                                 | 919                               | 0.63 | 561   | 1010 | 0.75 | 663   | 1095 | 0.87 | 771   | 1174 | 1.00 | 886   | 1250 | 1.14 | 1008  |
| 1900                                                                 | 960                               | 0.73 | 648   | 1047 | 0.85 | 754   | 1129 | 0.98 | 867   | 1206 | 1.11 | 986   | 1279 | 1.25 | 1111  |
| 2000                                                                 | 1001                              | 0.84 | 744   | 1085 | 0.96 | 855   | 1163 | 1.09 | 972   | 1238 | 1.23 | 1095  | —    | —    | —     |
| 2100                                                                 | 1043                              | 0.96 | 850   | 1123 | 1.09 | 965   | 1199 | 1.22 | 1086  | —    | —    | —     | —    | —    | —     |
| 2200                                                                 | 1085                              | 1.09 | 966   | 1162 | 1.22 | 1086  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2300                                                                 | 1127                              | 1.23 | 1092  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2400                                                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500                                                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)* — SINGLE-PHASE UNITS (cont) |                                   |      |       |      |      |       |      |      |       |     |     |       |     |     |       |
|-----------------------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|-----|-----|-------|-----|-----|-------|
| Airflow<br>(Cfm)                                                            | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |     |     |       |     |     |       |
|                                                                             | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8 |     |       | 2.0 |     |       |
|                                                                             | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm | Bhp | Watts | Rpm | Bhp | Watts |
| 1500                                                                        | 1247                              | 0.98 | 873   | 1320 | 1.13 | 1002  | 1390 | 1.28 | 1137  | —   | —   | —     | —   | —   | —     |
| 1600                                                                        | 1270                              | 1.07 | 952   | 1342 | 1.22 | 1083  | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1700                                                                        | 1295                              | 1.17 | 1040  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1800                                                                        | 1321                              | 1.28 | 1137  | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 1900                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2000                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2100                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2200                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2300                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2400                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |
| 2500                                                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     | —   | —   | —     |

### LEGEND

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Motor drive range: 1035 to 1460 rpm. All other rpms require field-supplied drive.

See page 103 for general fan performance notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 1.30.

| 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)* — THREE-PHASE UNITS |                                   |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|---------------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|-------------|-------------|-------------|
| Airflow<br>(Cfm)                                                    | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|                                                                     | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0         |             |             |
|                                                                     | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       |
| 1500                                                                | 800                               | 0.39 | 350   | 904  | 0.49 | 438   | 999  | 0.60 | 535   | 1087 | 0.72 | 640   | 1169        | 0.85        | 753         |
| 1600                                                                | 839                               | 0.46 | 412   | 938  | 0.57 | 505   | 1030 | 0.68 | 605   | 1115 | 0.80 | 714   | 1195        | 0.93        | 829         |
| 1700                                                                | 879                               | 0.54 | 483   | 974  | 0.65 | 580   | 1062 | 0.77 | 684   | 1144 | 0.90 | 796   | 1221        | 1.03        | 914         |
| 1800                                                                | 919                               | 0.63 | 561   | 1010 | 0.75 | 663   | 1095 | 0.87 | 771   | 1174 | 1.00 | 886   | 1250        | 1.14        | 1008        |
| 1900                                                                | 960                               | 0.73 | 648   | 1047 | 0.85 | 754   | 1129 | 0.98 | 867   | 1206 | 1.11 | 986   | 1279        | 1.25        | 1111        |
| 2000                                                                | 1001                              | 0.84 | 744   | 1085 | 0.96 | 855   | 1163 | 1.09 | 972   | 1238 | 1.23 | 1095  | 1309        | 1.38        | 1224        |
| 2100                                                                | 1043                              | 0.96 | 850   | 1123 | 1.09 | 965   | 1199 | 1.22 | 1086  | 1271 | 1.37 | 1213  | 1340        | 1.52        | 1346        |
| 2200                                                                | 1085                              | 1.09 | 966   | 1162 | 1.22 | 1086  | 1235 | 1.36 | 1211  | 1305 | 1.51 | 1342  | 1372        | 1.67        | 1479        |
| 2300                                                                | 1127                              | 1.23 | 1092  | 1201 | 1.37 | 1217  | 1272 | 1.52 | 1347  | 1340 | 1.67 | 1482  | 1405        | 1.83        | 1623        |
| 2400                                                                | 1169                              | 1.38 | 1229  | 1241 | 1.53 | 1359  | 1310 | 1.68 | 1493  | 1375 | 1.84 | 1633  | 1439        | 2.00        | 1778        |
| 2500                                                                | 1212                              | 1.55 | 1378  | 1281 | 1.70 | 1513  | 1348 | 1.86 | 1652  | 1412 | 2.02 | 1796  | <b>1473</b> | <b>2.19</b> | <b>1945</b> |

| 581B060 (5 TONS) — STANDARD MOTOR (BELT DRIVE)* — THREE-PHASE UNITS (cont) |                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|----------------------------------------------------------------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Airflow<br>(Cfm)                                                           | External Static Pressure (in. wg) |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|                                                                            | 1.2                               |             |             | 1.4         |             |             | 1.6         |             |             | 1.8         |             |             | 2.0         |             |             |
|                                                                            | Rpm                               | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 1500                                                                       | 1247                              | 0.98        | 873         | 1320        | 1.13        | 1002        | 1390        | 1.28        | 1137        | 1457        | 1.44        | 1280        | <b>1522</b> | <b>1.61</b> | <b>1430</b> |
| 1600                                                                       | 1270                              | 1.07        | 952         | 1342        | 1.22        | 1083        | 1411        | 1.37        | 1221        | <b>1476</b> | <b>1.54</b> | <b>1365</b> | <b>1540</b> | <b>1.71</b> | <b>1517</b> |
| 1700                                                                       | 1295                              | 1.17        | 1040        | 1365        | 1.32        | 1173        | 1432        | 1.48        | 1313        | <b>1497</b> | <b>1.64</b> | <b>1459</b> | <b>1559</b> | <b>1.82</b> | <b>1612</b> |
| 1800                                                                       | 1321                              | 1.28        | 1137        | 1390        | 1.43        | 1273        | 1455        | 1.59        | 1415        | <b>1518</b> | <b>1.76</b> | <b>1563</b> | <b>1579</b> | <b>1.93</b> | <b>1718</b> |
| 1900                                                                       | 1348                              | 1.40        | 1243        | 1415        | 1.56        | 1381        | <b>1479</b> | <b>1.72</b> | <b>1526</b> | <b>1541</b> | <b>1.89</b> | <b>1677</b> | <b>1601</b> | <b>2.06</b> | <b>1834</b> |
| 2000                                                                       | 1377                              | 1.53        | 1359        | 1442        | 1.69        | 1500        | <b>1505</b> | <b>1.86</b> | <b>1648</b> | <b>1565</b> | <b>2.03</b> | <b>1801</b> | <b>1624</b> | <b>2.21</b> | <b>1961</b> |
| 2100                                                                       | 1406                              | 1.67        | 1485        | <b>1470</b> | <b>1.83</b> | <b>1629</b> | <b>1531</b> | <b>2.00</b> | <b>1780</b> | <b>1591</b> | <b>2.18</b> | <b>1936</b> | <b>1648</b> | <b>2.36</b> | <b>2098</b> |
| 2200                                                                       | 1437                              | 1.83        | 1621        | <b>1499</b> | <b>1.99</b> | <b>1769</b> | <b>1559</b> | <b>2.16</b> | <b>1923</b> | <b>1617</b> | <b>2.34</b> | <b>2082</b> | —           | —           | —           |
| 2300                                                                       | <b>1468</b>                       | <b>1.99</b> | <b>1769</b> | <b>1529</b> | <b>2.16</b> | <b>1920</b> | <b>1587</b> | <b>2.34</b> | <b>2077</b> | —           | —           | —           | —           | —           | —           |
| 2400                                                                       | <b>1500</b>                       | <b>2.17</b> | <b>1928</b> | <b>1559</b> | <b>2.35</b> | <b>2083</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 2500                                                                       | <b>1533</b>                       | <b>2.36</b> | <b>2098</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |

### LEGEND

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Motor drive range: 1035 to 1460 rpm. All other rpms require field-supplied drive.

See page 103 for general fan performance notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

581B036-150

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)**

**581B060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500             | 800                               | 0.39 | 350   | 904  | 0.49 | 438   | 999  | 0.60 | 535   | 1087 | 0.72 | 640   | 1169 | 0.85 | 753   |
| 1600             | 839                               | 0.46 | 412   | 938  | 0.57 | 505   | 1030 | 0.68 | 605   | 1115 | 0.80 | 714   | 1195 | 0.93 | 829   |
| 1700             | 879                               | 0.54 | 483   | 974  | 0.65 | 580   | 1062 | 0.77 | 684   | 1144 | 0.90 | 796   | 1221 | 1.03 | 914   |
| 1800             | 919                               | 0.63 | 561   | 1010 | 0.75 | 663   | 1095 | 0.87 | 771   | 1174 | 1.00 | 886   | 1250 | 1.14 | 1008  |
| 1900             | 960                               | 0.73 | 648   | 1047 | 0.85 | 754   | 1129 | 0.98 | 867   | 1206 | 1.11 | 986   | 1279 | 1.25 | 1111  |
| 2000             | 1001                              | 0.84 | 744   | 1085 | 0.96 | 855   | 1163 | 1.09 | 972   | 1238 | 1.23 | 1095  | 1309 | 1.38 | 1224  |
| 2100             | 1043                              | 0.96 | 850   | 1123 | 1.09 | 965   | 1199 | 1.22 | 1086  | 1271 | 1.37 | 1213  | 1340 | 1.52 | 1346  |
| 2200             | 1085                              | 1.09 | 966   | 1162 | 1.22 | 1086  | 1235 | 1.36 | 1211  | 1305 | 1.51 | 1342  | 1372 | 1.67 | 1479  |
| 2300             | 1127                              | 1.23 | 1092  | 1201 | 1.37 | 1217  | 1272 | 1.52 | 1347  | 1340 | 1.67 | 1482  | 1405 | 1.83 | 1623  |
| 2400             | 1169                              | 1.38 | 1229  | 1241 | 1.53 | 1359  | 1310 | 1.68 | 1493  | 1375 | 1.84 | 1633  | 1439 | 2.00 | 1778  |
| 2500             | 1212                              | 1.55 | 1378  | 1281 | 1.70 | 1513  | 1348 | 1.86 | 1652  | 1412 | 2.02 | 1796  | 1473 | 2.19 | 1945  |

**581B060 (5 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1500             | 1247                              | 0.98 | 873   | 1320 | 1.13 | 1002  | 1390 | 1.28 | 1137  | 1457 | 1.44 | 1280  | 1522 | 1.61 | 1430  |
| 1600             | 1270                              | 1.07 | 952   | 1342 | 1.22 | 1083  | 1411 | 1.37 | 1221  | 1476 | 1.54 | 1365  | 1540 | 1.71 | 1517  |
| 1700             | 1295                              | 1.17 | 1040  | 1365 | 1.32 | 1173  | 1432 | 1.48 | 1313  | 1497 | 1.64 | 1459  | 1559 | 1.82 | 1612  |
| 1800             | 1321                              | 1.28 | 1137  | 1390 | 1.43 | 1273  | 1455 | 1.59 | 1415  | 1518 | 1.76 | 1563  | 1579 | 1.93 | 1718  |
| 1900             | 1348                              | 1.40 | 1243  | 1415 | 1.56 | 1381  | 1479 | 1.72 | 1526  | 1541 | 1.89 | 1677  | 1601 | 2.06 | 1834  |
| 2000             | 1377                              | 1.53 | 1359  | 1442 | 1.69 | 1500  | 1505 | 1.86 | 1648  | 1565 | 2.03 | 1801  | 1624 | 2.21 | 1961  |
| 2100             | 1406                              | 1.67 | 1485  | 1470 | 1.83 | 1629  | 1531 | 2.00 | 1780  | 1591 | 2.18 | 1936  | 1648 | 2.36 | 2098  |
| 2200             | 1437                              | 1.83 | 1621  | 1499 | 1.99 | 1769  | 1559 | 2.16 | 1923  | 1617 | 2.34 | 2082  | 1673 | 2.53 | 2246  |
| 2300             | 1468                              | 1.99 | 1769  | 1529 | 2.16 | 1920  | 1587 | 2.34 | 2077  | 1644 | 2.52 | 2239  | 1699 | 2.71 | 2406  |
| 2400             | 1500                              | 2.17 | 1928  | 1559 | 2.35 | 2083  | 1616 | 2.53 | 2243  | 1672 | 2.71 | 2408  | 1726 | 2.90 | 2579  |
| 2500             | 1533                              | 2.36 | 2098  | 1591 | 2.54 | 2257  | 1647 | 2.73 | 2421  | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 1300 to 1685 rpm. All other rpms require field-supplied drive.

**581B072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800             | 913                               | 0.64 | 569   | 1010 | 0.80 | 715   | 1098 | 0.98 | 869   | 1178 | 1.16 | 1032  | 1252 | 1.35 | 1203  |
| 1900             | 952                               | 0.73 | 652   | 1046 | 0.91 | 805   | 1131 | 1.09 | 965   | 1210 | 1.28 | 1134  | 1282 | 1.48 | 1311  |
| 2000             | 992                               | 0.84 | 744   | 1083 | 1.02 | 903   | 1166 | 1.21 | 1070  | 1242 | 1.40 | 1245  | 1313 | 1.61 | 1427  |
| 2100             | 1032                              | 0.95 | 844   | 1120 | 1.14 | 1010  | 1200 | 1.33 | 1184  | 1275 | 1.54 | 1365  | 1345 | 1.75 | 1553  |
| 2200             | 1073                              | 1.07 | 954   | 1158 | 1.27 | 1127  | 1236 | 1.47 | 1307  | 1308 | 1.68 | 1495  | 1377 | 1.90 | 1689  |
| 2300             | 1114                              | 1.21 | 1074  | 1196 | 1.41 | 1254  | 1272 | 1.62 | 1440  | 1343 | 1.84 | 1634  | 1409 | 2.07 | 1834  |
| 2400             | 1155                              | 1.36 | 1204  | 1234 | 1.57 | 1391  | 1308 | 1.78 | 1584  | 1377 | 2.01 | 1784  | 1443 | 2.24 | 1990  |
| 2500             | 1196                              | 1.51 | 1345  | 1273 | 1.73 | 1538  | 1345 | 1.96 | 1738  | 1412 | 2.19 | 1945  | —    | —    | —     |
| 2600             | 1238                              | 1.69 | 1497  | 1312 | 1.91 | 1697  | 1382 | 2.14 | 1904  | 1448 | 2.38 | 2117  | —    | —    | —     |
| 2700             | 1280                              | 1.87 | 1660  | 1352 | 2.10 | 1867  | 1420 | 2.34 | 2081  | —    | —    | —     | —    | —    | —     |
| 2800             | 1322                              | 2.07 | 1835  | 1392 | 2.31 | 2050  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900             | 1364                              | 2.28 | 2023  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**581B072 (6 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |     |     |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|-----|-----|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0 |     |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm | Bhp | Watts |
| 1800             | 1322                              | 1.56 | 1382  | 1388 | 1.77 | 1568  | 1451 | 1.98 | 1762  | 1510 | 2.21 | 1962  | —   | —   | —     |
| 1900             | 1351                              | 1.68 | 1495  | 1416 | 1.90 | 1686  | 1477 | 2.12 | 1885  | 1536 | 2.35 | 2090  | —   | —   | —     |
| 2000             | 1380                              | 1.82 | 1617  | 1444 | 2.04 | 1814  | 1505 | 2.27 | 2017  | —    | —    | —     | —   | —   | —     |
| 2100             | 1411                              | 1.97 | 1748  | 1473 | 2.20 | 1950  | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2200             | 1441                              | 2.13 | 1890  | 1503 | 2.36 | 2097  | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2300             | 1473                              | 2.30 | 2041  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2400             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2500             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2600             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 2900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |
| 3000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —   | —   | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.40.

\*Motor drive range: 1119 to 1585 rpm. All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

### 581B072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800             | 913                               | 0.64 | 569   | 1010 | 0.80 | 715   | 1098 | 0.98 | 869   | 1178 | 1.16 | 1032  | 1252 | 1.35 | 1203  |
| 1900             | 952                               | 0.73 | 652   | 1046 | 0.91 | 805   | 1131 | 1.09 | 965   | 1210 | 1.28 | 1134  | 1282 | 1.48 | 1311  |
| 2000             | 992                               | 0.84 | 744   | 1083 | 1.02 | 903   | 1166 | 1.21 | 1070  | 1242 | 1.40 | 1245  | 1313 | 1.61 | 1427  |
| 2100             | 1032                              | 0.95 | 844   | 1120 | 1.14 | 1010  | 1200 | 1.33 | 1184  | 1275 | 1.54 | 1365  | 1345 | 1.75 | 1553  |
| 2200             | 1073                              | 1.07 | 954   | 1158 | 1.27 | 1127  | 1236 | 1.47 | 1307  | 1308 | 1.68 | 1495  | 1377 | 1.90 | 1689  |
| 2300             | 1114                              | 1.21 | 1074  | 1196 | 1.41 | 1254  | 1272 | 1.62 | 1440  | 1343 | 1.84 | 1634  | 1409 | 2.07 | 1834  |
| 2400             | 1155                              | 1.36 | 1204  | 1234 | 1.57 | 1391  | 1308 | 1.78 | 1584  | 1377 | 2.01 | 1784  | 1443 | 2.24 | 1990  |
| 2500             | 1196                              | 1.51 | 1345  | 1273 | 1.73 | 1538  | 1345 | 1.96 | 1738  | 1412 | 2.19 | 1945  | 1477 | 2.43 | 2157  |
| 2600             | 1238                              | 1.69 | 1497  | 1312 | 1.91 | 1697  | 1382 | 2.14 | 1904  | 1448 | 2.38 | 2117  | 1511 | 2.63 | 2335  |
| 2700             | 1280                              | 1.87 | 1660  | 1352 | 2.10 | 1867  | 1420 | 2.34 | 2081  | 1484 | 2.59 | 2300  | 1546 | 2.84 | 2526  |
| 2800             | 1322                              | 2.07 | 1835  | 1392 | 2.31 | 2050  | 1458 | 2.56 | 2270  | 1521 | 2.81 | 2496  | —    | —    | —     |
| 2900             | 1364                              | 2.28 | 2023  | 1432 | 2.53 | 2245  | 1496 | 2.78 | 2472  | —    | —    | —     | —    | —    | —     |
| 3000             | 1406                              | 2.50 | 2224  | 1472 | 2.76 | 2452  | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### 581B072 (6 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 1800             | 1322                              | 1.56 | 1382  | 1388 | 1.77 | 1568  | 1451 | 1.98 | 1762  | 1510 | 2.21 | 1962  | 1568 | 2.44 | 2169  |
| 1900             | 1351                              | 1.68 | 1495  | 1416 | 1.90 | 1686  | 1477 | 2.12 | 1885  | 1536 | 2.35 | 2090  | 1593 | 2.59 | 2302  |
| 2000             | 1380                              | 1.82 | 1617  | 1444 | 2.04 | 1814  | 1505 | 2.27 | 2017  | 1563 | 2.51 | 2227  | 1619 | 2.75 | 2443  |
| 2100             | 1411                              | 1.97 | 1748  | 1473 | 2.20 | 1950  | 1533 | 2.43 | 2159  | 1590 | 2.67 | 2374  | —    | —    | —     |
| 2200             | 1441                              | 2.13 | 1890  | 1503 | 2.36 | 2097  | 1562 | 2.60 | 2311  | 1618 | 2.85 | 2532  | —    | —    | —     |
| 2300             | 1473                              | 2.30 | 2041  | 1533 | 2.54 | 2254  | 1591 | 2.79 | 2474  | —    | —    | —     | —    | —    | —     |
| 2400             | 1505                              | 2.48 | 2203  | 1564 | 2.73 | 2422  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2500             | 1537                              | 2.68 | 2376  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2600             | 1571                              | 2.88 | 2560  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 2900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

#### LEGEND

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

#### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 1300 to 1686 rpm. All other rpms require field-supplied drive.

581B036-150



**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)**

**581B090 (7 1/2 TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250             | 505                               | 0.52 | 484   | 586 | 0.73 | 681   | 657 | 0.97 | 901   | 722 | 1.22 | 1142  | 782 | 1.50 | 1403  |
| 2300             | 513                               | 0.55 | 509   | 592 | 0.76 | 708   | 663 | 1.00 | 931   | 727 | 1.26 | 1174  | 787 | 1.54 | 1437  |
| 2400             | 527                               | 0.60 | 561   | 605 | 0.82 | 766   | 674 | 1.07 | 993   | 738 | 1.33 | 1241  | 796 | 1.62 | 1508  |
| 2500             | 543                               | 0.66 | 617   | 618 | 0.89 | 828   | 686 | 1.14 | 1060  | 748 | 1.41 | 1312  | 806 | 1.70 | 1583  |
| 2550             | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600             | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700             | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800             | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900             | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000             | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100             | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200             | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | 882 | 2.41 | 2249  |
| 3300             | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | 894 | 2.54 | 2365  |
| 3400             | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | 907 | 2.67 | 2488  |
| 3500             | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | 870 | 2.46 | 2297  | 919 | 2.81 | 2616  |
| 3600             | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | 883 | 2.60 | 2425  | —   | —    | —     |
| 3700             | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | 846 | 2.41 | 2245  | 896 | 2.75 | 2560  | —   | —    | —     |
| 3750             | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | 853 | 2.48 | 2312  | 903 | 2.82 | 2630  | —   | —    | —     |

**581B090 (7 1/2 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |             |             |     |      |       |     |      |       |     |      |       |     |     |       |
|------------------|-----------------------------------|-------------|-------------|-----|------|-------|-----|------|-------|-----|------|-------|-----|-----|-------|
|                  | 1.2                               |             |             | 1.4 |      |       | 1.6 |      |       | 1.8 |      |       | 2.0 |     |       |
|                  | Rpm                               | Bhp         | Watts       | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp | Watts |
| 2250             | <b>838</b>                        | <b>1.81</b> | <b>1683</b> | 891 | 2.12 | 1981  | 941 | 2.46 | 2297  | 988 | 2.82 | 2629  | —   | —   | —     |
| 2300             | 842                               | 1.84        | 1719        | 895 | 2.17 | 2019  | 944 | 2.51 | 2336  | 992 | 2.86 | 2669  | —   | —   | —     |
| 2400             | 851                               | 1.92        | 1793        | 903 | 2.25 | 2097  | 952 | 2.59 | 2416  | —   | —    | —     | —   | —   | —     |
| 2500             | 860                               | 2.01        | 1873        | 911 | 2.34 | 2180  | 960 | 2.68 | 2502  | —   | —    | —     | —   | —   | —     |
| 2550             | 865                               | 2.05        | 1914        | 916 | 2.38 | 2223  | 964 | 2.73 | 2547  | —   | —    | —     | —   | —   | —     |
| 2600             | 869                               | 2.10        | 1957        | 920 | 2.43 | 2267  | 968 | 2.78 | 2593  | —   | —    | —     | —   | —   | —     |
| 2700             | 879                               | 2.19        | 2046        | 929 | 2.53 | 2360  | 976 | 2.88 | 2689  | —   | —    | —     | —   | —   | —     |
| 2800             | 889                               | 2.29        | 2140        | 938 | 2.64 | 2458  | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 2900             | 899                               | 2.40        | 2239        | 948 | 2.75 | 2561  | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3000             | 910                               | 2.51        | 2343        | 958 | 2.86 | 2670  | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3100             | 921                               | 2.63        | 2453        | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3200             | 932                               | 2.75        | 2569        | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3300             | 943                               | 2.88        | 2690        | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3400             | —                                 | —           | —           | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3500             | —                                 | —           | —           | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3600             | —                                 | —           | —           | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3700             | —                                 | —           | —           | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |
| 3750             | —                                 | —           | —           | —   | —    | —     | —   | —    | —     | —   | —    | —     | —   | —   | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 840 to 1085 rpm. All other rpms require field-supplied drive.

581B036-150

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581B090 (7 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|--------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                       | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                        | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                        | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2250                                                   | 505                               | 0.52 | 484   | 586 | 0.73 | 681   | 657 | 0.97 | 901   | 722 | 1.22 | 1142  | 782 | 1.50 | 1403  |
| 2300                                                   | 513                               | 0.55 | 509   | 592 | 0.76 | 708   | 663 | 1.00 | 931   | 727 | 1.26 | 1174  | 787 | 1.54 | 1437  |
| 2400                                                   | 527                               | 0.60 | 561   | 605 | 0.82 | 766   | 674 | 1.07 | 993   | 738 | 1.33 | 1241  | 796 | 1.62 | 1508  |
| 2500                                                   | 543                               | 0.66 | 617   | 618 | 0.89 | 828   | 686 | 1.14 | 1060  | 748 | 1.41 | 1312  | 806 | 1.70 | 1583  |
| 2550                                                   | 550                               | 0.69 | 647   | 625 | 0.92 | 860   | 692 | 1.17 | 1095  | 754 | 1.45 | 1349  | 811 | 1.74 | 1623  |
| 2600                                                   | 558                               | 0.73 | 677   | 632 | 0.96 | 894   | 698 | 1.21 | 1131  | 759 | 1.49 | 1388  | 816 | 1.78 | 1664  |
| 2700                                                   | 574                               | 0.80 | 742   | 645 | 1.03 | 964   | 710 | 1.29 | 1207  | 770 | 1.58 | 1469  | 826 | 1.88 | 1749  |
| 2800                                                   | 589                               | 0.87 | 811   | 659 | 1.11 | 1039  | 723 | 1.38 | 1287  | 782 | 1.67 | 1554  | 837 | 1.97 | 1839  |
| 2900                                                   | 605                               | 0.95 | 885   | 673 | 1.20 | 1119  | 736 | 1.47 | 1372  | 794 | 1.76 | 1644  | 848 | 2.07 | 1933  |
| 3000                                                   | 621                               | 1.03 | 963   | 688 | 1.29 | 1204  | 749 | 1.57 | 1463  | 806 | 1.87 | 1740  | 859 | 2.18 | 2033  |
| 3100                                                   | 637                               | 1.12 | 1046  | 702 | 1.39 | 1293  | 762 | 1.67 | 1558  | 818 | 1.97 | 1840  | 871 | 2.29 | 2139  |
| 3200                                                   | 654                               | 1.22 | 1135  | 717 | 1.49 | 1388  | 776 | 1.78 | 1658  | 831 | 2.09 | 1946  | 882 | 2.41 | 2249  |
| 3300                                                   | 670                               | 1.32 | 1228  | 732 | 1.60 | 1488  | 789 | 1.89 | 1764  | 843 | 2.21 | 2057  | 894 | 2.54 | 2365  |
| 3400                                                   | 686                               | 1.42 | 1328  | 747 | 1.71 | 1593  | 803 | 2.01 | 1876  | 856 | 2.33 | 2174  | 907 | 2.67 | 2488  |
| 3500                                                   | 703                               | 1.54 | 1433  | 762 | 1.83 | 1705  | 817 | 2.14 | 1993  | 870 | 2.46 | 2297  | 919 | 2.81 | 2616  |
| 3600                                                   | 720                               | 1.66 | 1543  | 777 | 1.95 | 1822  | 832 | 2.27 | 2116  | 883 | 2.60 | 2425  | 932 | 2.95 | 2750  |
| 3700                                                   | 736                               | 1.78 | 1660  | 793 | 2.09 | 1944  | 846 | 2.41 | 2245  | 896 | 2.75 | 2560  | 944 | 3.10 | 2889  |
| 3750                                                   | 745                               | 1.85 | 1721  | 801 | 2.15 | 2008  | 853 | 2.48 | 2312  | 903 | 2.82 | 2630  | 951 | 3.18 | 2962  |

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| 581B090 (7 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |             |             |             |             |             |             |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|-------------|-------------|-------------|-------------|-------------|-------------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |             |             |             |             |             |             |
|                                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8         |             |             | 2.0         |             |             |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 2250                                                          | 838                               | 1.81 | 1683  | 891  | 2.12 | 1981  | 941  | 2.46 | 2297  | 988         | 2.82        | 2629        | 1033        | 3.19        | 2976        |
| 2300                                                          | 842                               | 1.84 | 1719  | 895  | 2.17 | 2019  | 944  | 2.51 | 2336  | 992         | 2.86        | 2669        | 1037        | 3.24        | 3018        |
| 2400                                                          | 851                               | 1.92 | 1793  | 903  | 2.25 | 2097  | 952  | 2.59 | 2416  | 999         | 2.95        | 2752        | 1043        | 3.33        | 3104        |
| 2500                                                          | 860                               | 2.01 | 1873  | 911  | 2.34 | 2180  | 960  | 2.68 | 2502  | 1006        | 3.05        | 2842        | 1051        | 3.43        | 3196        |
| 2550                                                          | 865                               | 2.05 | 1914  | 916  | 2.38 | 2223  | 964  | 2.73 | 2547  | 1010        | 3.10        | 2888        | 1054        | 3.48        | 3243        |
| 2600                                                          | 869                               | 2.10 | 1957  | 920  | 2.43 | 2267  | 968  | 2.78 | 2593  | 1014        | 3.15        | 2935        | 1058        | 3.53        | 3292        |
| 2700                                                          | 879                               | 2.19 | 2046  | 929  | 2.53 | 2360  | 976  | 2.88 | 2689  | 1022        | 3.25        | 3035        | 1066        | 3.64        | 3395        |
| 2800                                                          | 889                               | 2.29 | 2140  | 938  | 2.64 | 2458  | 985  | 2.99 | 2791  | 1030        | 3.37        | 3140        | 1073        | 3.76        | 3503        |
| 2900                                                          | 899                               | 2.40 | 2239  | 948  | 2.75 | 2561  | 994  | 3.11 | 2898  | 1039        | 3.49        | 3250        | <b>1082</b> | <b>3.88</b> | <b>3616</b> |
| 3000                                                          | 910                               | 2.51 | 2343  | 958  | 2.86 | 2670  | 1004 | 3.23 | 3011  | 1048        | 3.61        | 3366        | <b>1090</b> | <b>4.01</b> | <b>3736</b> |
| 3100                                                          | 921                               | 2.63 | 2453  | 968  | 2.98 | 2783  | 1013 | 3.35 | 3128  | 1057        | 3.74        | 3488        | <b>1099</b> | <b>4.14</b> | <b>3861</b> |
| 3200                                                          | 932                               | 2.75 | 2569  | 978  | 3.11 | 2903  | 1023 | 3.49 | 3252  | 1066        | 3.88        | 3616        | —           | —           | —           |
| 3300                                                          | 943                               | 2.88 | 2690  | 989  | 3.25 | 3029  | 1033 | 3.63 | 3382  | 1076        | 4.02        | 3749        | —           | —           | —           |
| 3400                                                          | 954                               | 3.02 | 2816  | 1000 | 3.39 | 3159  | 1044 | 3.77 | 3518  | <b>1086</b> | <b>4.17</b> | <b>3889</b> | —           | —           | —           |
| 3500                                                          | 966                               | 3.16 | 2950  | 1011 | 3.54 | 3297  | 1054 | 3.92 | 3660  | —           | —           | —           | —           | —           | —           |
| 3600                                                          | 978                               | 3.31 | 3088  | 1022 | 3.69 | 3442  | 1065 | 4.08 | 3808  | —           | —           | —           | —           | —           | —           |
| 3700                                                          | 990                               | 3.47 | 3233  | 1034 | 3.85 | 3591  | —    | —    | —     | —           | —           | —           | —           | —           | —           |
| 3750                                                          | 996                               | 3.55 | 3308  | 1040 | 3.93 | 3669  | —    | —    | —     | —           | —           | —           | —           | —           | —           |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

See page 103 for general fan performance notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 4.20.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

### 581B102 (8 1/2 TONS) — STANDARD MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2500             | 513                               | 0.45 | 423   | 603 | 0.62 | 576   | 682 | 0.78 | 732   | 753 | 0.96 | 892   | 817 | 1.13 | 1055  |
| 2600             | 526                               | 0.50 | 463   | 614 | 0.67 | 621   | 692 | 0.84 | 783   | 761 | 1.02 | 948   | 825 | 1.20 | 1117  |
| 2700             | 539                               | 0.54 | 505   | 625 | 0.72 | 670   | 702 | 0.90 | 837   | 770 | 1.08 | 1008  | 834 | 1.27 | 1182  |
| 2800             | 552                               | 0.59 | 551   | 637 | 0.77 | 721   | 712 | 0.96 | 894   | 780 | 1.15 | 1070  | 842 | 1.34 | 1250  |
| 2900             | 565                               | 0.64 | 599   | 648 | 0.83 | 775   | 722 | 1.02 | 954   | 789 | 1.22 | 1136  | 851 | 1.42 | 1321  |
| 3000             | 579                               | 0.70 | 651   | 660 | 0.89 | 832   | 732 | 1.09 | 1017  | 799 | 1.29 | 1204  | 860 | 1.50 | 1395  |
| 3100             | 592                               | 0.76 | 706   | 672 | 0.96 | 893   | 743 | 1.16 | 1083  | 808 | 1.37 | 1276  | 869 | 1.58 | 1471  |
| 3200             | 606                               | 0.82 | 764   | 684 | 1.03 | 957   | 754 | 1.24 | 1153  | 818 | 1.45 | 1351  | 878 | 1.66 | 1552  |
| 3300             | 620                               | 0.88 | 825   | 696 | 1.10 | 1024  | 765 | 1.31 | 1225  | 829 | 1.53 | 1429  | 888 | 1.75 | 1636  |
| 3400             | 634                               | 0.95 | 890   | 709 | 1.17 | 1095  | 777 | 1.40 | 1302  | 839 | 1.62 | 1511  | 897 | 1.85 | 1723  |
| 3500             | 648                               | 1.03 | 958   | 721 | 1.25 | 1169  | 788 | 1.48 | 1381  | 850 | 1.71 | 1597  | 907 | 1.95 | 1815  |
| 3600             | 662                               | 1.10 | 1030  | 734 | 1.34 | 1246  | 800 | 1.57 | 1465  | 860 | 1.81 | 1686  | 917 | 2.05 | 1909  |
| 3700             | 676                               | 1.19 | 1106  | 747 | 1.42 | 1328  | 811 | 1.66 | 1552  | 871 | 1.91 | 1779  | 927 | 2.15 | 2008  |
| 3800             | 690                               | 1.27 | 1185  | 760 | 1.52 | 1414  | 823 | 1.76 | 1644  | 882 | 2.01 | 1876  | 938 | 2.26 | 2111  |
| 3900             | 705                               | 1.36 | 1269  | 773 | 1.61 | 1503  | 835 | 1.86 | 1739  | 894 | 2.12 | 1977  | 948 | 2.38 | 2217  |
| 4000             | 719                               | 1.45 | 1357  | 786 | 1.71 | 1597  | 848 | 1.97 | 1838  | 905 | 2.23 | 2082  | 959 | 2.50 | 2328  |
| 4100             | 734                               | 1.55 | 1449  | 799 | 1.82 | 1695  | 860 | 2.08 | 1942  | 917 | 2.35 | 2192  | 970 | 2.62 | 2443  |
| 4200             | 748                               | 1.66 | 1545  | 813 | 1.93 | 1797  | 872 | 2.20 | 2050  | 928 | 2.47 | 2305  | 981 | 2.75 | 2562  |
| 4300             | 763                               | 1.76 | 1646  | 826 | 2.04 | 1903  | 885 | 2.32 | 2162  | 940 | 2.60 | 2423  | 992 | 2.88 | 2686  |

### 581B102 (8 1/2 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2500             | 877                               | 1.31 | 1222  | 933  | 1.49 | 1392  | 986  | 1.68 | 1565  | 1037 | 1.87 | 1742  | 1085 | 2.06 | 1921  |
| 2600             | 885                               | 1.38 | 1289  | 940  | 1.57 | 1464  | 993  | 1.76 | 1643  | 1043 | 1.96 | 1824  | 1091 | 2.15 | 2008  |
| 2700             | 892                               | 1.46 | 1359  | 948  | 1.65 | 1540  | 1000 | 1.85 | 1723  | 1049 | 2.05 | 1909  | 1097 | 2.25 | 2099  |
| 2800             | 900                               | 1.54 | 1432  | 955  | 1.74 | 1618  | 1007 | 1.94 | 1807  | 1056 | 2.14 | 1998  | 1103 | 2.35 | 2192  |
| 2900             | 908                               | 1.62 | 1508  | 963  | 1.82 | 1699  | 1014 | 2.03 | 1893  | 1063 | 2.24 | 2089  | 1110 | 2.45 | 2289  |
| 3000             | 917                               | 1.70 | 1587  | 970  | 1.91 | 1784  | 1021 | 2.13 | 1983  | 1070 | 2.34 | 2185  | 1117 | 2.56 | 2389  |
| 3100             | 925                               | 1.79 | 1670  | 979  | 2.01 | 1872  | 1029 | 2.23 | 2076  | 1077 | 2.45 | 2283  | 1123 | 2.67 | 2492  |
| 3200             | 934                               | 1.88 | 1756  | 987  | 2.10 | 1963  | 1037 | 2.33 | 2172  | 1085 | 2.56 | 2384  | 1131 | 2.79 | 2599  |
| 3300             | 943                               | 1.98 | 1845  | 995  | 2.21 | 2057  | 1045 | 2.44 | 2272  | 1092 | 2.67 | 2490  | —    | —    | —     |
| 3400             | 952                               | 2.08 | 1939  | 1004 | 2.31 | 2156  | 1053 | 2.55 | 2376  | 1100 | 2.79 | 2599  | —    | —    | —     |
| 3500             | 961                               | 2.18 | 2035  | 1013 | 2.42 | 2258  | 1062 | 2.66 | 2483  | —    | —    | —     | —    | —    | —     |
| 3600             | 971                               | 2.29 | 2135  | 1022 | 2.53 | 2364  | 1070 | 2.78 | 2595  | —    | —    | —     | —    | —    | —     |
| 3700             | 981                               | 2.40 | 2240  | 1031 | 2.65 | 2473  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3800             | 990                               | 2.52 | 2348  | 1040 | 2.77 | 2587  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 3900             | 1000                              | 2.64 | 2459  | 1050 | 2.90 | 2705  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4000             | 1011                              | 2.76 | 2576  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4100             | 1021                              | 2.89 | 2697  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4200             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4300             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

#### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

#### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 2.90.

\*Motor drive range: 840 to 1085 rpm. All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581B102 (8 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|--------------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|-----|------|-------|
| Airflow<br>(Cfm)                                       | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |     |      |       |     |      |       |
|                                                        | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8 |      |       | 1.0 |      |       |
|                                                        | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts |
| 2500                                                   | 513                               | 0.45 | 423   | 603 | 0.62 | 576   | 682 | 0.78 | 732   | 753 | 0.96 | 892   | 817 | 1.13 | 1055  |
| 2600                                                   | 526                               | 0.50 | 463   | 614 | 0.67 | 621   | 692 | 0.84 | 783   | 761 | 1.02 | 948   | 825 | 1.20 | 1117  |
| 2700                                                   | 539                               | 0.54 | 505   | 625 | 0.72 | 670   | 702 | 0.90 | 837   | 770 | 1.08 | 1008  | 834 | 1.27 | 1182  |
| 2800                                                   | 552                               | 0.59 | 551   | 637 | 0.77 | 721   | 712 | 0.96 | 894   | 780 | 1.15 | 1070  | 842 | 1.34 | 1250  |
| 2900                                                   | 565                               | 0.64 | 599   | 648 | 0.83 | 775   | 722 | 1.02 | 954   | 789 | 1.22 | 1136  | 851 | 1.42 | 1321  |
| 3000                                                   | 579                               | 0.70 | 651   | 660 | 0.89 | 832   | 732 | 1.09 | 1017  | 799 | 1.29 | 1204  | 860 | 1.50 | 1395  |
| 3100                                                   | 592                               | 0.76 | 706   | 672 | 0.96 | 893   | 743 | 1.16 | 1083  | 808 | 1.37 | 1276  | 869 | 1.58 | 1471  |
| 3200                                                   | 606                               | 0.82 | 764   | 684 | 1.03 | 957   | 754 | 1.24 | 1153  | 818 | 1.45 | 1351  | 878 | 1.66 | 1552  |
| 3300                                                   | 620                               | 0.88 | 825   | 696 | 1.10 | 1024  | 765 | 1.31 | 1225  | 829 | 1.53 | 1429  | 888 | 1.75 | 1636  |
| 3400                                                   | 634                               | 0.95 | 890   | 709 | 1.17 | 1095  | 777 | 1.40 | 1302  | 839 | 1.62 | 1511  | 897 | 1.85 | 1723  |
| 3500                                                   | 648                               | 1.03 | 958   | 721 | 1.25 | 1169  | 788 | 1.48 | 1381  | 850 | 1.71 | 1597  | 907 | 1.95 | 1815  |
| 3600                                                   | 662                               | 1.10 | 1030  | 734 | 1.34 | 1246  | 800 | 1.57 | 1465  | 860 | 1.81 | 1686  | 917 | 2.05 | 1909  |
| 3700                                                   | 676                               | 1.19 | 1106  | 747 | 1.42 | 1328  | 811 | 1.66 | 1552  | 871 | 1.91 | 1779  | 927 | 2.15 | 2008  |
| 3800                                                   | 690                               | 1.27 | 1185  | 760 | 1.52 | 1414  | 823 | 1.76 | 1644  | 882 | 2.01 | 1876  | 938 | 2.26 | 2111  |
| 3900                                                   | 705                               | 1.36 | 1269  | 773 | 1.61 | 1503  | 835 | 1.86 | 1739  | 894 | 2.12 | 1977  | 948 | 2.38 | 2217  |
| 4000                                                   | 719                               | 1.45 | 1357  | 786 | 1.71 | 1597  | 848 | 1.97 | 1838  | 905 | 2.23 | 2082  | 959 | 2.50 | 2328  |
| 4100                                                   | 734                               | 1.55 | 1449  | 799 | 1.82 | 1695  | 860 | 2.08 | 1942  | 917 | 2.35 | 2192  | 970 | 2.62 | 2443  |
| 4200                                                   | 748                               | 1.66 | 1545  | 813 | 1.93 | 1797  | 872 | 2.20 | 2050  | 928 | 2.47 | 2305  | 981 | 2.75 | 2562  |
| 4300                                                   | 763                               | 1.76 | 1646  | 826 | 2.04 | 1903  | 885 | 2.32 | 2162  | 940 | 2.60 | 2423  | 992 | 2.88 | 2686  |

581B036-150

| 581B102 (8 1/2 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 2500                                                          | 877                               | 1.31 | 1222  | 933  | 1.49 | 1392  | 986  | 1.68 | 1565  | 1037 | 1.87 | 1742  | 1085 | 2.06 | 1921  |
| 2600                                                          | 885                               | 1.38 | 1289  | 940  | 1.57 | 1464  | 993  | 1.76 | 1643  | 1043 | 1.96 | 1824  | 1091 | 2.15 | 2008  |
| 2700                                                          | 892                               | 1.46 | 1359  | 948  | 1.65 | 1540  | 1000 | 1.85 | 1723  | 1049 | 2.05 | 1909  | 1097 | 2.25 | 2099  |
| 2800                                                          | 900                               | 1.54 | 1432  | 955  | 1.74 | 1618  | 1007 | 1.94 | 1807  | 1056 | 2.14 | 1998  | 1103 | 2.35 | 2192  |
| 2900                                                          | 908                               | 1.62 | 1508  | 963  | 1.82 | 1699  | 1014 | 2.03 | 1893  | 1063 | 2.24 | 2089  | 1110 | 2.45 | 2289  |
| 3000                                                          | 917                               | 1.70 | 1587  | 970  | 1.91 | 1784  | 1021 | 2.13 | 1983  | 1070 | 2.34 | 2185  | 1117 | 2.56 | 2389  |
| 3100                                                          | 925                               | 1.79 | 1670  | 979  | 2.01 | 1872  | 1029 | 2.23 | 2076  | 1077 | 2.45 | 2283  | 1123 | 2.67 | 2492  |
| 3200                                                          | 934                               | 1.88 | 1756  | 987  | 2.10 | 1963  | 1037 | 2.33 | 2172  | 1085 | 2.56 | 2384  | 1131 | 2.79 | 2599  |
| 3300                                                          | 943                               | 1.98 | 1845  | 995  | 2.21 | 2057  | 1045 | 2.44 | 2272  | 1092 | 2.67 | 2490  | 1138 | 2.91 | 2710  |
| 3400                                                          | 952                               | 2.08 | 1939  | 1004 | 2.31 | 2156  | 1053 | 2.55 | 2376  | 1100 | 2.79 | 2599  | 1145 | 3.03 | 2824  |
| 3500                                                          | 961                               | 2.18 | 2035  | 1013 | 2.42 | 2258  | 1062 | 2.66 | 2483  | 1108 | 2.91 | 2711  | 1153 | 3.15 | 2942  |
| 3600                                                          | 971                               | 2.29 | 2135  | 1022 | 2.53 | 2364  | 1070 | 2.78 | 2595  | 1116 | 3.03 | 2827  | 1161 | 3.29 | 3063  |
| 3700                                                          | 981                               | 2.40 | 2240  | 1031 | 2.65 | 2473  | 1079 | 2.91 | 2709  | 1125 | 3.16 | 2948  | 1169 | 3.42 | 3189  |
| 3800                                                          | 990                               | 2.52 | 2348  | 1040 | 2.77 | 2587  | 1088 | 3.03 | 2828  | 1133 | 3.30 | 3073  | 1177 | 3.56 | 3319  |
| 3900                                                          | 1000                              | 2.64 | 2459  | 1050 | 2.90 | 2705  | 1097 | 3.17 | 2951  | 1142 | 3.43 | 3201  | 1186 | 3.70 | 3452  |
| 4000                                                          | 1011                              | 2.76 | 2576  | 1059 | 3.03 | 2826  | 1106 | 3.30 | 3079  | 1151 | 3.58 | 3334  | 1194 | 3.85 | 3591  |
| 4100                                                          | 1021                              | 2.89 | 2697  | 1069 | 3.17 | 2953  | 1116 | 3.44 | 3210  | 1160 | 3.72 | 3471  | 1203 | 4.00 | 3733  |
| 4200                                                          | 1031                              | 3.03 | 2822  | 1079 | 3.31 | 3083  | 1125 | 3.59 | 3347  | 1169 | 3.87 | 3612  | 1212 | 4.16 | 3880  |
| 4300                                                          | 1042                              | 3.16 | 2951  | 1089 | 3.45 | 3218  | 1135 | 3.74 | 3487  | 1179 | 4.03 | 3758  | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 4.20.

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)**

**581B120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)\***

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
|                  | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000             | 579                               | 0.70 | 651   | 660 | 0.89 | 832   | 732 | 1.09 | 1017  | 799  | 1.29 | 1204  | 860  | 1.50 | 1395  |
| 3100             | 592                               | 0.76 | 706   | 672 | 0.96 | 893   | 743 | 1.16 | 1083  | 808  | 1.37 | 1276  | 869  | 1.58 | 1471  |
| 3200             | 606                               | 0.82 | 764   | 684 | 1.03 | 957   | 754 | 1.24 | 1153  | 818  | 1.45 | 1351  | 878  | 1.66 | 1552  |
| 3300             | 620                               | 0.88 | 825   | 696 | 1.10 | 1024  | 765 | 1.31 | 1225  | 829  | 1.53 | 1429  | 888  | 1.75 | 1636  |
| 3400             | 634                               | 0.95 | 890   | 709 | 1.17 | 1095  | 777 | 1.40 | 1302  | 839  | 1.62 | 1511  | 897  | 1.85 | 1723  |
| 3500             | 648                               | 1.03 | 958   | 721 | 1.25 | 1169  | 788 | 1.48 | 1381  | 850  | 1.71 | 1597  | 907  | 1.95 | 1815  |
| 3600             | 662                               | 1.10 | 1030  | 734 | 1.34 | 1246  | 800 | 1.57 | 1465  | 860  | 1.81 | 1686  | 917  | 2.05 | 1909  |
| 3700             | 676                               | 1.19 | 1106  | 747 | 1.42 | 1328  | 811 | 1.66 | 1552  | 871  | 1.91 | 1779  | 927  | 2.15 | 2008  |
| 3800             | 690                               | 1.27 | 1185  | 760 | 1.52 | 1414  | 823 | 1.76 | 1644  | 882  | 2.01 | 1876  | 938  | 2.26 | 2111  |
| 3900             | 705                               | 1.36 | 1269  | 773 | 1.61 | 1503  | 835 | 1.86 | 1739  | 894  | 2.12 | 1977  | 948  | 2.38 | 2217  |
| 4000             | 719                               | 1.45 | 1357  | 786 | 1.71 | 1597  | 848 | 1.97 | 1838  | 905  | 2.23 | 2082  | 959  | 2.50 | 2328  |
| 4100             | 734                               | 1.55 | 1449  | 799 | 1.82 | 1695  | 860 | 2.08 | 1942  | 917  | 2.35 | 2192  | 970  | 2.62 | 2443  |
| 4200             | 748                               | 1.66 | 1545  | 813 | 1.93 | 1797  | 872 | 2.20 | 2050  | 928  | 2.47 | 2305  | 981  | 2.75 | 2562  |
| 4300             | 763                               | 1.76 | 1646  | 826 | 2.04 | 1903  | 885 | 2.32 | 2162  | 940  | 2.60 | 2423  | 992  | 2.88 | 2686  |
| 4400             | 778                               | 1.88 | 1751  | 840 | 2.16 | 2014  | 898 | 2.44 | 2279  | 952  | 2.73 | 2546  | 1004 | 3.02 | 2814  |
| 4500             | 792                               | 1.99 | 1860  | 853 | 2.28 | 2130  | 910 | 2.57 | 2401  | 964  | 2.87 | 2673  | 1015 | 3.16 | 2947  |
| 4600             | 807                               | 2.12 | 1975  | 867 | 2.41 | 2250  | 923 | 2.71 | 2527  | 976  | 3.01 | 2805  | 1027 | 3.31 | 3085  |
| 4700             | 822                               | 2.25 | 2094  | 881 | 2.55 | 2375  | 936 | 2.85 | 2658  | 989  | 3.15 | 2942  | 1038 | 3.46 | 3227  |
| 4800             | 837                               | 2.38 | 2218  | 895 | 2.69 | 2505  | 949 | 3.00 | 2794  | 1001 | 3.31 | 3083  | 1050 | 3.62 | 3375  |
| 4900             | 852                               | 2.52 | 2347  | 909 | 2.83 | 2640  | 963 | 3.15 | 2935  | 1014 | 3.46 | 3230  | —    | —    | —     |
| 5000             | 867                               | 2.66 | 2482  | 923 | 2.98 | 2781  | 976 | 3.30 | 3081  | 1026 | 3.63 | 3383  | —    | —    | —     |

**581B120 (10 TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)**

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000             | 917                               | 1.70 | 1587  | 970  | 1.91 | 1784  | 1021 | 2.13 | 1983  | 1070 | 2.34 | 2185  | 1117 | 2.56 | 2389  |
| 3100             | 925                               | 1.79 | 1670  | 979  | 2.01 | 1872  | 1029 | 2.23 | 2076  | 1077 | 2.45 | 2283  | 1123 | 2.67 | 2492  |
| 3200             | 934                               | 1.88 | 1756  | 987  | 2.10 | 1963  | 1037 | 2.33 | 2172  | 1085 | 2.56 | 2384  | 1131 | 2.79 | 2599  |
| 3300             | 943                               | 1.98 | 1845  | 995  | 2.21 | 2057  | 1045 | 2.44 | 2272  | 1092 | 2.67 | 2490  | 1138 | 2.91 | 2710  |
| 3400             | 952                               | 2.08 | 1939  | 1004 | 2.31 | 2156  | 1053 | 2.55 | 2376  | 1100 | 2.79 | 2599  | 1145 | 3.03 | 2824  |
| 3500             | 961                               | 2.18 | 2035  | 1013 | 2.42 | 2258  | 1062 | 2.66 | 2483  | 1108 | 2.91 | 2711  | 1153 | 3.15 | 2942  |
| 3600             | 971                               | 2.29 | 2135  | 1022 | 2.53 | 2364  | 1070 | 2.78 | 2595  | 1116 | 3.03 | 2827  | 1161 | 3.29 | 3063  |
| 3700             | 981                               | 2.40 | 2240  | 1031 | 2.65 | 2473  | 1079 | 2.91 | 2709  | 1125 | 3.16 | 2948  | 1169 | 3.42 | 3189  |
| 3800             | 990                               | 2.52 | 2348  | 1040 | 2.77 | 2587  | 1088 | 3.03 | 2828  | 1133 | 3.30 | 3073  | 1177 | 3.56 | 3319  |
| 3900             | 1000                              | 2.64 | 2459  | 1050 | 2.90 | 2705  | 1097 | 3.17 | 2951  | 1142 | 3.43 | 3201  | 1186 | 3.70 | 3452  |
| 4000             | 1011                              | 2.76 | 2576  | 1059 | 3.03 | 2826  | 1106 | 3.30 | 3079  | 1151 | 3.58 | 3334  | —    | —    | —     |
| 4100             | 1021                              | 2.89 | 2697  | 1069 | 3.17 | 2953  | 1116 | 3.44 | 3210  | —    | —    | —     | —    | —    | —     |
| 4200             | 1031                              | 3.03 | 2822  | 1079 | 3.31 | 3083  | 1125 | 3.59 | 3347  | —    | —    | —     | —    | —    | —     |
| 4300             | 1042                              | 3.16 | 2951  | 1089 | 3.45 | 3218  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4400             | 1053                              | 3.31 | 3085  | 1100 | 3.60 | 3357  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4500             | 1064                              | 3.46 | 3224  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4600             | 1075                              | 3.61 | 3367  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4700             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4800             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 4900             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 5000             | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 860 to 1080 rpm. All other rpms require field-supplied drive.

See page 103 for general fan performance notes.

**NOTES:**

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 3.70.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581B120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* |                                   |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|-----------------------------------------------------|-----------------------------------|------|-------|-----|------|-------|-----|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                    | External Static Pressure (in. wg) |      |       |     |      |       |     |      |       |      |      |       |      |      |       |
|                                                     | 0.2                               |      |       | 0.4 |      |       | 0.6 |      |       | 0.8  |      |       | 1.0  |      |       |
|                                                     | Rpm                               | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                | 579                               | 0.70 | 651   | 660 | 0.89 | 832   | 732 | 1.09 | 1017  | 799  | 1.29 | 1204  | 860  | 1.50 | 1395  |
| 3100                                                | 592                               | 0.76 | 706   | 672 | 0.96 | 893   | 743 | 1.16 | 1083  | 808  | 1.37 | 1276  | 869  | 1.58 | 1471  |
| 3200                                                | 606                               | 0.82 | 764   | 684 | 1.03 | 957   | 754 | 1.24 | 1153  | 818  | 1.45 | 1351  | 878  | 1.66 | 1552  |
| 3300                                                | 620                               | 0.88 | 825   | 696 | 1.10 | 1024  | 765 | 1.31 | 1225  | 829  | 1.53 | 1429  | 888  | 1.75 | 1636  |
| 3400                                                | 634                               | 0.95 | 890   | 709 | 1.17 | 1095  | 777 | 1.40 | 1302  | 839  | 1.62 | 1511  | 897  | 1.85 | 1723  |
| 3500                                                | 648                               | 1.03 | 958   | 721 | 1.25 | 1169  | 788 | 1.48 | 1381  | 850  | 1.71 | 1597  | 907  | 1.95 | 1815  |
| 3600                                                | 662                               | 1.10 | 1030  | 734 | 1.34 | 1246  | 800 | 1.57 | 1465  | 860  | 1.81 | 1686  | 917  | 2.05 | 1909  |
| 3700                                                | 676                               | 1.19 | 1106  | 747 | 1.42 | 1328  | 811 | 1.66 | 1552  | 871  | 1.91 | 1779  | 927  | 2.15 | 2008  |
| 3800                                                | 690                               | 1.27 | 1185  | 760 | 1.52 | 1414  | 823 | 1.76 | 1644  | 882  | 2.01 | 1876  | 938  | 2.26 | 2111  |
| 3900                                                | 705                               | 1.36 | 1269  | 773 | 1.61 | 1503  | 835 | 1.86 | 1739  | 894  | 2.12 | 1977  | 948  | 2.38 | 2217  |
| 4000                                                | 719                               | 1.45 | 1357  | 786 | 1.71 | 1597  | 848 | 1.97 | 1838  | 905  | 2.23 | 2082  | 959  | 2.50 | 2328  |
| 4100                                                | 734                               | 1.55 | 1449  | 799 | 1.82 | 1695  | 860 | 2.08 | 1942  | 917  | 2.35 | 2192  | 970  | 2.62 | 2443  |
| 4200                                                | 748                               | 1.66 | 1545  | 813 | 1.93 | 1797  | 872 | 2.20 | 2050  | 928  | 2.47 | 2305  | 981  | 2.75 | 2562  |
| 4300                                                | 763                               | 1.76 | 1646  | 826 | 2.04 | 1903  | 885 | 2.32 | 2162  | 940  | 2.60 | 2423  | 992  | 2.88 | 2686  |
| 4400                                                | 778                               | 1.88 | 1751  | 840 | 2.16 | 2014  | 898 | 2.44 | 2279  | 952  | 2.73 | 2546  | 1004 | 3.02 | 2814  |
| 4500                                                | 792                               | 1.99 | 1860  | 853 | 2.28 | 2130  | 910 | 2.57 | 2401  | 964  | 2.87 | 2673  | 1015 | 3.16 | 2947  |
| 4600                                                | 807                               | 2.12 | 1975  | 867 | 2.41 | 2250  | 923 | 2.71 | 2527  | 976  | 3.01 | 2805  | 1027 | 3.31 | 3085  |
| 4700                                                | 822                               | 2.25 | 2094  | 881 | 2.55 | 2375  | 936 | 2.85 | 2658  | 989  | 3.15 | 2942  | 1038 | 3.46 | 3227  |
| 4800                                                | 837                               | 2.38 | 2218  | 895 | 2.69 | 2505  | 949 | 3.00 | 2794  | 1001 | 3.31 | 3083  | 1050 | 3.62 | 3375  |
| 4900                                                | 852                               | 2.52 | 2347  | 909 | 2.83 | 2640  | 963 | 3.15 | 2935  | 1014 | 3.46 | 3230  | 1062 | 3.78 | 3528  |
| 5000                                                | 867                               | 2.66 | 2482  | 923 | 2.98 | 2781  | 976 | 3.30 | 3081  | 1026 | 3.63 | 3383  | 1074 | 3.95 | 3685  |

581B036-150

| 581B120 (10 TONS) — HIGH-STATIC MOTOR (BELT DRIVE)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3000                                                       | 917                               | 1.70 | 1587  | 970  | 1.91 | 1784  | 1021 | 2.13 | 1983  | 1070 | 2.34 | 2185  | 1117 | 2.56 | 2389  |
| 3100                                                       | 925                               | 1.79 | 1670  | 979  | 2.01 | 1872  | 1029 | 2.23 | 2076  | 1077 | 2.45 | 2283  | 1123 | 2.67 | 2492  |
| 3200                                                       | 934                               | 1.88 | 1756  | 987  | 2.10 | 1963  | 1037 | 2.33 | 2172  | 1085 | 2.56 | 2384  | 1131 | 2.79 | 2599  |
| 3300                                                       | 943                               | 1.98 | 1845  | 995  | 2.21 | 2057  | 1045 | 2.44 | 2272  | 1092 | 2.67 | 2490  | 1138 | 2.91 | 2710  |
| 3400                                                       | 952                               | 2.08 | 1939  | 1004 | 2.31 | 2156  | 1053 | 2.55 | 2376  | 1100 | 2.79 | 2599  | 1145 | 3.03 | 2824  |
| 3500                                                       | 961                               | 2.18 | 2035  | 1013 | 2.42 | 2258  | 1062 | 2.66 | 2483  | 1108 | 2.91 | 2711  | 1153 | 3.15 | 2942  |
| 3600                                                       | 971                               | 2.29 | 2135  | 1022 | 2.53 | 2364  | 1070 | 2.78 | 2595  | 1116 | 3.03 | 2827  | 1161 | 3.29 | 3063  |
| 3700                                                       | 981                               | 2.40 | 2240  | 1031 | 2.65 | 2473  | 1079 | 2.91 | 2709  | 1125 | 3.16 | 2948  | 1169 | 3.42 | 3189  |
| 3800                                                       | 990                               | 2.52 | 2348  | 1040 | 2.77 | 2587  | 1088 | 3.03 | 2828  | 1133 | 3.30 | 3073  | 1177 | 3.56 | 3319  |
| 3900                                                       | 1000                              | 2.64 | 2459  | 1050 | 2.90 | 2705  | 1097 | 3.17 | 2951  | 1142 | 3.43 | 3201  | 1186 | 3.70 | 3452  |
| 4000                                                       | 1011                              | 2.76 | 2576  | 1059 | 3.03 | 2826  | 1106 | 3.30 | 3079  | 1151 | 3.58 | 3334  | 1194 | 3.85 | 3591  |
| 4100                                                       | 1021                              | 2.89 | 2697  | 1069 | 3.17 | 2953  | 1116 | 3.44 | 3210  | 1160 | 3.72 | 3471  | 1203 | 4.00 | 3733  |
| 4200                                                       | 1031                              | 3.03 | 2822  | 1079 | 3.31 | 3083  | 1125 | 3.59 | 3347  | 1169 | 3.87 | 3612  | 1212 | 4.16 | 3880  |
| 4300                                                       | 1042                              | 3.16 | 2951  | 1089 | 3.45 | 3218  | 1135 | 3.74 | 3487  | 1179 | 4.03 | 3758  | 1221 | 4.32 | 4031  |
| 4400                                                       | 1053                              | 3.31 | 3085  | 1100 | 3.60 | 3357  | 1145 | 3.90 | 3632  | 1188 | 4.19 | 3909  | 1230 | 4.49 | 4187  |
| 4500                                                       | 1064                              | 3.46 | 3224  | 1110 | 3.76 | 3502  | 1155 | 4.06 | 3782  | 1198 | 4.36 | 4064  | 1239 | 4.66 | 4348  |
| 4600                                                       | 1075                              | 3.61 | 3367  | 1121 | 3.91 | 3650  | 1165 | 4.22 | 3937  | 1208 | 4.53 | 4224  | 1249 | 4.84 | 4514  |
| 4700                                                       | 1086                              | 3.77 | 3515  | 1131 | 4.08 | 3805  | 1175 | 4.39 | 4096  | 1217 | 4.71 | 4389  | 1258 | 5.02 | 4684  |
| 4800                                                       | 1097                              | 3.93 | 3668  | 1142 | 4.25 | 3963  | 1186 | 4.57 | 4260  | 1228 | 4.89 | 4559  | 1268 | 5.21 | 4860  |
| 4900                                                       | 1109                              | 4.10 | 3826  | 1153 | 4.43 | 4128  | 1196 | 4.75 | 4430  | 1238 | 5.08 | 4734  | —    | —    | —     |
| 5000                                                       | 1120                              | 4.28 | 3990  | 1164 | 4.61 | 4296  | 1207 | 4.94 | 4604  | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

See page 103 for general fan performance notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B150 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)\*

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |             |             |             |
|------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|-------------|-------------|-------------|
|                  | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0         |             |             |
|                  | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm         | Bhp         | Watts       |
| 3700             | 676                               | 1.19 | 1106  | 747  | 1.42 | 1328  | 811  | 1.66 | 1552  | 871  | 1.91 | 1779  | 927         | 2.15        | 2008        |
| 3800             | 690                               | 1.27 | 1185  | 760  | 1.52 | 1414  | 823  | 1.76 | 1644  | 882  | 2.01 | 1876  | 938         | 2.26        | 2111        |
| 3900             | 705                               | 1.36 | 1269  | 773  | 1.61 | 1503  | 835  | 1.86 | 1739  | 894  | 2.12 | 1977  | 948         | 2.38        | 2217        |
| 4000             | 719                               | 1.45 | 1357  | 786  | 1.71 | 1597  | 848  | 1.97 | 1838  | 905  | 2.23 | 2082  | 959         | 2.50        | 2328        |
| 4100             | 734                               | 1.55 | 1449  | 799  | 1.82 | 1695  | 860  | 2.08 | 1942  | 917  | 2.35 | 2192  | 970         | 2.62        | 2443        |
| 4200             | 748                               | 1.66 | 1545  | 813  | 1.93 | 1797  | 872  | 2.20 | 2050  | 928  | 2.47 | 2305  | 981         | 2.75        | 2562        |
| 4300             | 763                               | 1.76 | 1646  | 826  | 2.04 | 1903  | 885  | 2.32 | 2162  | 940  | 2.60 | 2423  | 992         | 2.88        | 2686        |
| 4400             | 778                               | 1.88 | 1751  | 840  | 2.16 | 2014  | 898  | 2.44 | 2279  | 952  | 2.73 | 2546  | 1004        | 3.02        | 2814        |
| 4500             | 792                               | 1.99 | 1860  | 853  | 2.28 | 2130  | 910  | 2.57 | 2401  | 964  | 2.87 | 2673  | 1015        | 3.16        | 2947        |
| 4600             | 807                               | 2.12 | 1975  | 867  | 2.41 | 2250  | 923  | 2.71 | 2527  | 976  | 3.01 | 2805  | 1027        | 3.31        | 3085        |
| 4700             | 822                               | 2.25 | 2094  | 881  | 2.55 | 2375  | 936  | 2.85 | 2658  | 989  | 3.15 | 2942  | 1038        | 3.46        | 3227        |
| 4800             | 837                               | 2.38 | 2218  | 895  | 2.69 | 2505  | 949  | 3.00 | 2794  | 1001 | 3.31 | 3083  | 1050        | 3.62        | 3375        |
| 4900             | 852                               | 2.52 | 2347  | 909  | 2.83 | 2640  | 963  | 3.15 | 2935  | 1014 | 3.46 | 3230  | 1062        | 3.78        | 3528        |
| 5000             | 867                               | 2.66 | 2482  | 923  | 2.98 | 2781  | 976  | 3.30 | 3081  | 1026 | 3.63 | 3383  | 1074        | 3.95        | 3685        |
| 5100             | 882                               | 2.81 | 2622  | 937  | 3.14 | 2926  | 989  | 3.47 | 3232  | 1039 | 3.80 | 3540  | 1086        | 4.13        | 3849        |
| 5200             | 897                               | 2.97 | 2766  | 951  | 3.30 | 3077  | 1003 | 3.63 | 3389  | 1052 | 3.97 | 3702  | 1099        | 4.31        | 4017        |
| 5300             | 912                               | 3.13 | 2917  | 966  | 3.47 | 3233  | 1016 | 3.81 | 3551  | 1065 | 4.15 | 3870  | 1111        | 4.49        | 4191        |
| 5400             | 927                               | 3.30 | 3073  | 980  | 3.64 | 3395  | 1030 | 3.99 | 3719  | 1078 | 4.34 | 4044  | 1123        | 4.69        | 4370        |
| 5500             | 943                               | 3.47 | 3234  | 994  | 3.82 | 3563  | 1044 | 4.17 | 3892  | 1091 | 4.53 | 4223  | <b>1136</b> | <b>4.88</b> | <b>4555</b> |
| 5600             | 958                               | 3.65 | 3402  | 1009 | 4.01 | 3736  | 1057 | 4.37 | 4071  | 1104 | 4.73 | 4408  | <b>1149</b> | <b>5.09</b> | <b>4746</b> |
| 5700             | 973                               | 3.83 | 3575  | 1023 | 4.20 | 3915  | 1071 | 4.56 | 4256  | 1117 | 4.93 | 4599  | —           | —           | —           |
| 5800             | 988                               | 4.03 | 3754  | 1038 | 4.40 | 4100  | 1085 | 4.77 | 4447  | 1130 | 5.14 | 4796  | —           | —           | —           |
| 5900             | 1004                              | 4.22 | 3939  | 1052 | 4.60 | 4292  | 1099 | 4.98 | 4645  | —    | —    | —     | —           | —           | —           |
| 6000             | 1019                              | 4.43 | 4131  | 1067 | 4.81 | 4489  | 1113 | 5.20 | 4848  | —    | —    | —     | —           | —           | —           |
| 6100             | 1034                              | 4.64 | 4329  | 1082 | 5.03 | 4693  | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 6200             | 1050                              | 4.86 | 4533  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |
| 6300             | 1065                              | 5.09 | 4744  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —           | —           | —           |

581B150 (12½ TONS) — STANDARD MOTOR (BELT DRIVE)\* (cont)

| Airflow<br>(Cfm) | External Static Pressure (in. wg) |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|------------------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
|                  | 1.2                               |             |             | 1.4         |             |             | 1.6         |             |             | 1.8         |             |             | 2.0         |             |             |
|                  | Rpm                               | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       | Rpm         | Bhp         | Watts       |
| 3700             | 981                               | 2.40        | 2240        | 1031        | 2.65        | 2473        | 1079        | 2.91        | 2709        | 1125        | 3.16        | 2948        | <b>1169</b> | <b>3.42</b> | <b>3189</b> |
| 3800             | 990                               | 2.52        | 2348        | 1040        | 2.77        | 2587        | 1088        | 3.03        | 2828        | <b>1133</b> | <b>3.30</b> | <b>3073</b> | <b>1177</b> | <b>3.56</b> | <b>3319</b> |
| 3900             | 1000                              | 2.64        | 2459        | 1050        | 2.90        | 2705        | 1097        | 3.17        | 2951        | <b>1142</b> | <b>3.43</b> | <b>3201</b> | <b>1186</b> | <b>3.70</b> | <b>3452</b> |
| 4000             | 1011                              | 2.76        | 2576        | 1059        | 3.03        | 2826        | 1106        | 3.30        | 3079        | <b>1151</b> | <b>3.58</b> | <b>3334</b> | <b>1194</b> | <b>3.85</b> | <b>3591</b> |
| 4100             | 1021                              | 2.89        | 2697        | 1069        | 3.17        | 2953        | 1116        | 3.44        | 3210        | <b>1160</b> | <b>3.72</b> | <b>3471</b> | <b>1203</b> | <b>4.00</b> | <b>3733</b> |
| 4200             | 1031                              | 3.03        | 2822        | 1079        | 3.31        | 3083        | 1125        | 3.59        | 3347        | <b>1169</b> | <b>3.87</b> | <b>3612</b> | <b>1212</b> | <b>4.16</b> | <b>3880</b> |
| 4300             | 1042                              | 3.16        | 2951        | 1089        | 3.45        | 3218        | <b>1135</b> | <b>3.74</b> | <b>3487</b> | <b>1179</b> | <b>4.03</b> | <b>3758</b> | <b>1221</b> | <b>4.32</b> | <b>4031</b> |
| 4400             | 1053                              | 3.31        | 3085        | 1100        | 3.60        | 3357        | <b>1145</b> | <b>3.90</b> | <b>3632</b> | <b>1188</b> | <b>4.19</b> | <b>3909</b> | <b>1230</b> | <b>4.49</b> | <b>4187</b> |
| 4500             | 1064                              | 3.46        | 3224        | 1110        | 3.76        | 3502        | <b>1155</b> | <b>4.06</b> | <b>3782</b> | <b>1198</b> | <b>4.36</b> | <b>4064</b> | <b>1239</b> | <b>4.66</b> | <b>4348</b> |
| 4600             | 1075                              | 3.61        | 3367        | 1121        | 3.91        | 3650        | <b>1165</b> | <b>4.22</b> | <b>3937</b> | <b>1208</b> | <b>4.53</b> | <b>4224</b> | <b>1249</b> | <b>4.84</b> | <b>4514</b> |
| 4700             | 1086                              | 3.77        | 3515        | <b>1131</b> | <b>4.08</b> | <b>3805</b> | <b>1175</b> | <b>4.39</b> | <b>4096</b> | <b>1217</b> | <b>4.71</b> | <b>4389</b> | <b>1258</b> | <b>5.02</b> | <b>4684</b> |
| 4800             | 1097                              | 3.93        | 3668        | <b>1142</b> | <b>4.25</b> | <b>3963</b> | <b>1186</b> | <b>4.57</b> | <b>4260</b> | <b>1228</b> | <b>4.89</b> | <b>4559</b> | <b>1268</b> | <b>5.21</b> | <b>4860</b> |
| 4900             | 1109                              | 4.10        | 3826        | <b>1153</b> | <b>4.43</b> | <b>4128</b> | <b>1196</b> | <b>4.75</b> | <b>4430</b> | <b>1238</b> | <b>5.08</b> | <b>4734</b> | —           | —           | —           |
| 5000             | 1120                              | 4.28        | 3990        | <b>1164</b> | <b>4.61</b> | <b>4296</b> | <b>1207</b> | <b>4.94</b> | <b>4604</b> | —           | —           | —           | —           | —           | —           |
| 5100             | <b>1132</b>                       | <b>4.46</b> | <b>4159</b> | <b>1175</b> | <b>4.79</b> | <b>4471</b> | <b>1218</b> | <b>5.13</b> | <b>4784</b> | —           | —           | —           | —           | —           | —           |
| 5200             | <b>1144</b>                       | <b>4.65</b> | <b>4333</b> | <b>1187</b> | <b>4.99</b> | <b>4651</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5300             | <b>1155</b>                       | <b>4.84</b> | <b>4512</b> | <b>1198</b> | <b>5.19</b> | <b>4836</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5400             | <b>1167</b>                       | <b>5.04</b> | <b>4697</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5500             | <b>1179</b>                       | <b>5.24</b> | <b>4889</b> | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5600             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5700             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5800             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 5900             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6000             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6100             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6200             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |
| 6300             | —                                 | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           | —           |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

See page 103 for general fan performance notes.

### NOTES:

1. **Boldface** indicates field-supplied drive is required.
2. Maximum continuous bhp is 5.25.

\*Motor drive range: 830 to 1130 rpm. All other rpms require field-supplied drive.

## PERFORMANCE DATA (cont)

### FAN RPM AT MOTOR PULLEY SETTING WITH STANDARD MOTOR\* — 581B036-150

| UNIT<br>581B | MOTOR PULLEY TURNS OPEN |      |      |       |      |       |      |       |      |       |      |       |      |
|--------------|-------------------------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|              | 0                       | 1/2  | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 036          | 1044                    | 1008 | 971  | 935   | 898  | 862   | 826  | 789   | 753  | 716   | 680  | —     | —    |
| 048          | 1185                    | 1144 | 1102 | 1061  | 1019 | 978   | 936  | 895   | 853  | 812   | 770  | —     | —    |
| 060          | 1460                    | 1425 | 1389 | 1354  | 1318 | 1283  | 1248 | 1212  | 1177 | 1141  | 1106 | 1070  | 1035 |
| 072          | 1585                    | 1538 | 1492 | 1445  | 1399 | 1352  | 1305 | 1259  | 1212 | 1166  | 1119 | —     | —    |
| 090,102      | 1085                    | 1060 | 1035 | 1010  | 985  | 960   | 935  | 910   | 890  | 865   | 840  | —     | —    |
| 120          | 1080                    | 1060 | 1035 | 1015  | 990  | 970   | 950  | 925   | 905  | 880   | 860  | —     | —    |
| 150          | 1130                    | 1112 | 1087 | 1062  | 1037 | 1212  | 987  | 962   | 937  | 912   | 887  | 962   | 830  |

\*Approximate fan rpm shown (standard motor/drive).

### FAN RPM AT MOTOR PULLEY SETTING WITH HIGH-STATIC MOTOR\* — 581B036-150

| UNIT<br>581B | MOTOR PULLEY TURNS OPEN |      |      |       |      |       |      |       |      |       |      |       |      |
|--------------|-------------------------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|              | 0                       | 1/2  | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 036          | 1455                    | 1423 | 1392 | 1360  | 1328 | 1297  | 1265 | 1233  | 1202 | 1170  | 1138 | 1107  | 1075 |
| 048          | 1455                    | 1423 | 1392 | 1360  | 1328 | 1297  | 1265 | 1233  | 1202 | 1170  | 1138 | 1107  | 1075 |
| 060          | 1685                    | 1589 | 1557 | 1525  | 1493 | 1460  | 1428 | 1396  | 1364 | 1332  | 1300 | —     | —    |
| 072          | 1685                    | 1589 | 1557 | 1525  | 1493 | 1460  | 1428 | 1396  | 1364 | 1332  | 1300 | —     | —    |
| 090          | 1080                    | 1025 | 1007 | 988   | 970  | 952   | 933  | 915   | 897  | 878   | 860  | —     | —    |
| 102          | 1080                    | 1025 | 1007 | 988   | 970  | 952   | 933  | 915   | 897  | 878   | 860  | —     | —    |
| 120          | 1130                    | 1112 | 1087 | 1062  | 1037 | 1212  | 987  | 962   | 937  | 912   | 887  | 962   | 830  |

\*Approximate fan rpm shown (high-static motor/drive).

### ALTITUDE COMPENSATION\* — 581B036-072

| ELEVATION<br>(ft) | 72,000 AND 115,000/<br>60,000 AND 90,000 BTUH<br>NOMINAL INPUT |                                    | 150,000/120,000 BTUH<br>NOMINAL INPUT |                                    |
|-------------------|----------------------------------------------------------------|------------------------------------|---------------------------------------|------------------------------------|
|                   | Natural Gas<br>Orifice Size†                                   | Liquid<br>Propane<br>Orifice Size† | Natural Gas<br>Orifice Size           | Liquid<br>Propane<br>Orifice Size† |
| 0-2,000           | 33/38                                                          | 43                                 | 30/32                                 | 38                                 |
| 2,000             | 34/39                                                          | 43                                 | 30/33                                 | 39                                 |
| 3,000             | 35/40                                                          | 44                                 | 31/34                                 | 40                                 |
| 4,000             | 36/41                                                          | 44                                 | 32/35                                 | 41                                 |
| 5,000             | 36/41                                                          | 44                                 | 33/35                                 | 42                                 |
| 6,000             | 37/42                                                          | 45                                 | 34/36                                 | 43                                 |
| 7,000             | 37/42                                                          | 45                                 | 35/37                                 | 43                                 |
| 8,000             | 38/43                                                          | 46                                 | 36/37                                 | 44                                 |
| 9,000             | 39/43                                                          | 47                                 | 37/38                                 | 44                                 |
| 10,000            | 41/44                                                          | 48                                 | 38/40                                 | 45                                 |
| 11,000            | 43/45                                                          | 48                                 | 39/41                                 | 45                                 |
| 12,000            | 44/45                                                          | 49                                 | 40/42                                 | 46                                 |
| 13,000            | 44/46                                                          | 49                                 | 41/43                                 | 47                                 |
| 14,000            | 45/47                                                          | 50                                 | 42/43                                 | 47                                 |

\*As the height above sea level increases, there is less oxygen per cubic foot of air. Therefore, the input rate should be reduced at higher altitudes.

†Orifices are available through your local Bryant distributor.

### ALTITUDE COMPENSATION\* — 581B090-150

| ELEVATION<br>(ft) | 125,000, 180,000, AND<br>224,000 BTUH<br>NOMINAL INPUT |                                    | 250,000 BTUH<br>NOMINAL INPUT |                                    |
|-------------------|--------------------------------------------------------|------------------------------------|-------------------------------|------------------------------------|
|                   | Natural Gas<br>Orifice Size†                           | Liquid<br>Propane<br>Orifice Size† | Natural Gas<br>Orifice Size†  | Liquid<br>Propane<br>Orifice Size† |
| 0-2,000           | 31                                                     | 41                                 | 30                            | 38                                 |
| 2,000             | 32                                                     | 42                                 | 30                            | 39                                 |
| 3,000             | 32                                                     | 42                                 | 31                            | 40                                 |
| 4,000             | 32                                                     | 42                                 | 32                            | 41                                 |
| 5,000             | 33                                                     | 43                                 | 33                            | 42                                 |
| 6,000             | 34                                                     | 43                                 | 34                            | 43                                 |
| 7,000             | 35                                                     | 44                                 | 35                            | 43                                 |
| 8,000             | 36                                                     | 44                                 | 36                            | 44                                 |
| 9,000             | 37                                                     | 45                                 | 37                            | 44                                 |
| 10,000            | 38                                                     | 46                                 | 38                            | 45                                 |
| 11,000            | 39                                                     | 47                                 | 39                            | 45                                 |
| 12,000            | 40                                                     | 47                                 | 40                            | 46                                 |
| 13,000            | 41                                                     | 48                                 | 41                            | 47                                 |
| 14,000            | 42                                                     | 48                                 | 42                            | 47                                 |

\*As the height above sea level increases, there is less oxygen per cubic foot of air. Therefore, the input rate should be reduced at higher altitudes.

†Orifices are available through your local Bryant distributor.

### ALTITUDE DERATING FACTOR\*

| ELEVATION | MAXIMUM HEATING VALUE (Btu/ft³) |
|-----------|---------------------------------|
| 0-2000    | 1100                            |
| 2001-3000 | 1050                            |
| 3001-4000 | 1000                            |
| 4001-5000 | 950                             |
| 5001-6000 | 900                             |

\*Derating of the unit is not required unless the heating value of the gas exceeds the values listed in the table above, or if the elevation exceeds 6000 ft. Derating conditions must be 4% per thousand ft above 2000 ft. For example, at 4000 ft, if the heating value of the gas exceeds 1000 Btu/ft³, the unit will require a 16% derating. For elevations above 6000 ft, the same formula applies. For example, at 7000 ft, the unit will require a 28% derating of the maximum heating value per the National Fuel Gas Code.

**IMPORTANT:** Local utility companies may be reducing heat content of gas at altitudes above 2000 ft. If this is being done, changing spuds may not be required.



**PERFORMANCE DATA (cont)**  
**OUTDOOR SOUND POWER (TOTAL UNIT)**

| UNIT<br>581B | SOUND<br>RATING<br>(dB) | OCTAVE BANDS |      |      |      |      |      |      |      |
|--------------|-------------------------|--------------|------|------|------|------|------|------|------|
|              |                         | 63           | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 036,048      | 76                      | 55.9         | 66.0 | 64.0 | 66.2 | 68.4 | 64.5 | 61.7 | 57.3 |
| 060,072      | 80                      | 59.1         | 68.9 | 68.7 | 71.9 | 74.0 | 68.9 | 65.7 | 59.0 |
| 090,102      | 82                      | 62.2         | 69.3 | 71.5 | 74.7 | 76.2 | 72.9 | 68.7 | 61.5 |
| 120          | 84                      | 64.6         | 71.1 | 73.3 | 76.9 | 77.6 | 73.7 | 70.6 | 63.7 |
| 150          | 86                      | 63.7         | 69.9 | 72.5 | 78.2 | 81.1 | 77.3 | 73.3 | 66.8 |

**LEGEND**

dB — Sound Levels (decibels)

**NOTE:** The indoor sound power is available in Bryant's Electronic Catalog program (ECAT) for specific operating parameters.

**EVAPORATOR-FAN MOTOR EFFICIENCY**

| UNIT SIZE 581B | EFFICIENCY% |
|----------------|-------------|
| 036,048        | 75          |
| 060            | 74/84*      |
| 072            | 84          |
| 090,102        | 80          |
| 120            | 85          |
| 150            | 87          |

\*Single phase/3 phase.

**NOTES:**

1. Convert bhp to watts using the following formula:

$$\text{watts} = \frac{\text{bhp (746)}}{\text{motor efficiency}}$$

2. The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT-compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements. Therefore, the indoor fan motors for Bryant 581B036-150 units are exempt from these requirements.

**ACCESSORY/FIOP ECONOMISER IV AND ECONOMISER2 STATIC PRESSURE\* (in. wg) — 581B036-072**

| COMPONENT                                | CFM   |       |      |       |       |       |       |       |
|------------------------------------------|-------|-------|------|-------|-------|-------|-------|-------|
|                                          | 1250  | 1500  | 1750 | 2000  | 2250  | 2500  | 2750  | 3000  |
| Vertical EconoMiSer IV and EconoMiSer2   | 0.045 | 0.065 | 0.08 | 0.12  | 0.145 | 0.175 | 0.22  | 0.255 |
| Horizontal EconoMiSer IV and EconoMiSer2 | —     | —     | 0.1  | 0.125 | 0.15  | 0.18  | 0.225 | 0.275 |

**LEGEND**

FIOP — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should be used in conjunction with the Fan Performance tables to determine indoor blower rpm and watts.

**ACCESSORY/FIOP ECONOMISER IV AND ECONOMISER2 STATIC PRESSURE\* (in. wg) — 581B090-150**

| COMPONENT                                | CFM  |       |       |       |      |      |      |       |      |      |       |       |      |      |
|------------------------------------------|------|-------|-------|-------|------|------|------|-------|------|------|-------|-------|------|------|
|                                          | 2250 | 2500  | 2750  | 3000  | 3250 | 3500 | 3750 | 4000  | 4250 | 4500 | 4750  | 5000  | 5250 | 6250 |
| Vertical EconoMiSer IV and EconoMiSer2   | 0.06 | 0.075 | 0.09  | 0.115 | 0.13 | 0.15 | 0.17 | 0.195 | 0.22 | 0.25 | 0.285 | 0.325 | 0.36 | —    |
| Horizontal EconoMiSer IV and EconoMiSer2 | —    | 0.1   | 0.125 | 0.15  | 0.18 | 0.21 | 0.25 | 0.275 | 0.3  | 0.34 | 0.388 | —     | —    | —    |

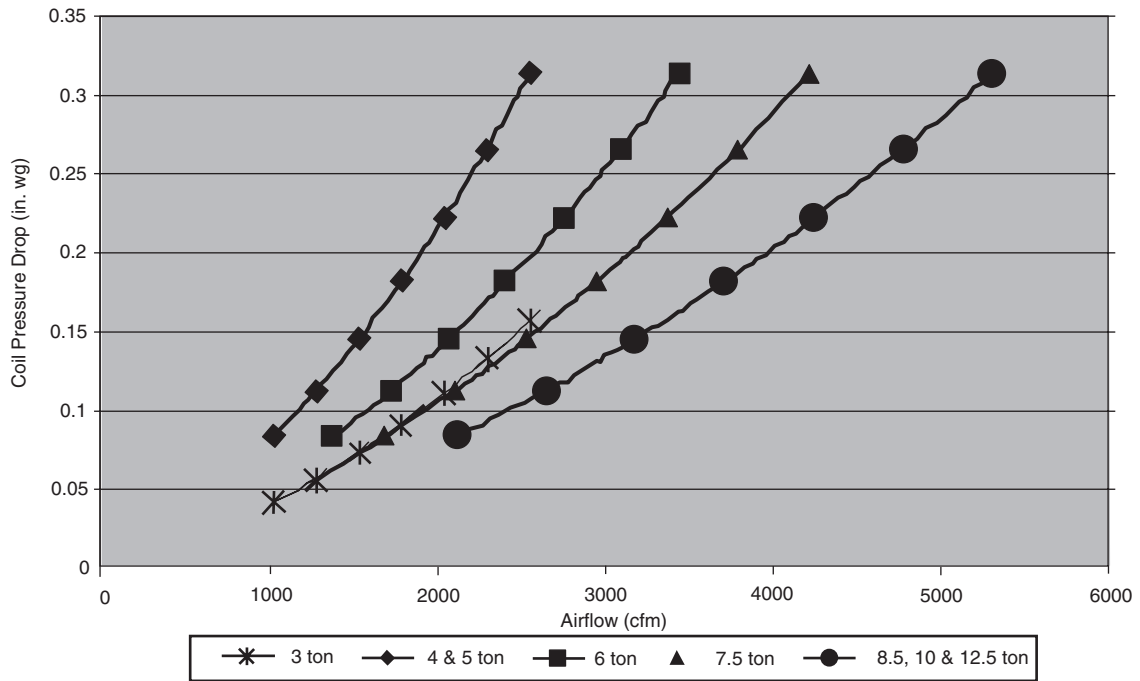
**LEGEND**

FIOP — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should be used in conjunction with the Fan Performance tables to determine indoor blower rpm and watts.

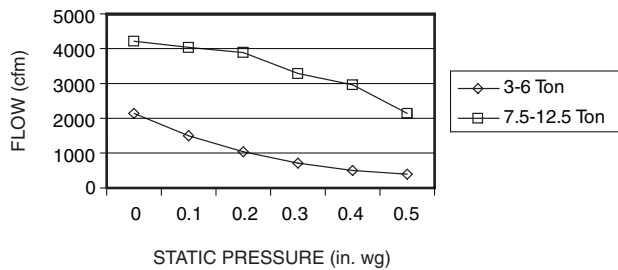
581B036-150

# PERFORMANCE DATA (cont)

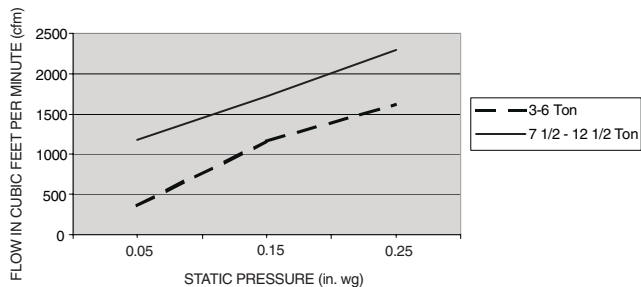


Perfect Humidity™ Adaptive Dehumidification Coil Pressure Drop  
(Subcooling and Reheat Modes of Operation)

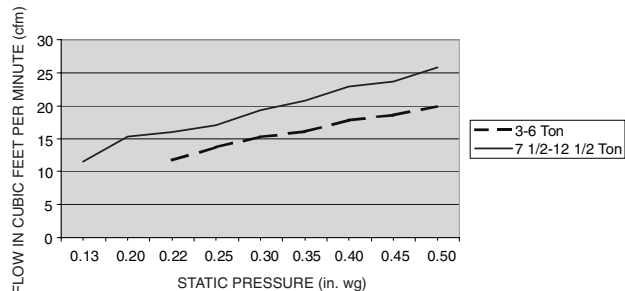
## PERFORMANCE DATA (cont)



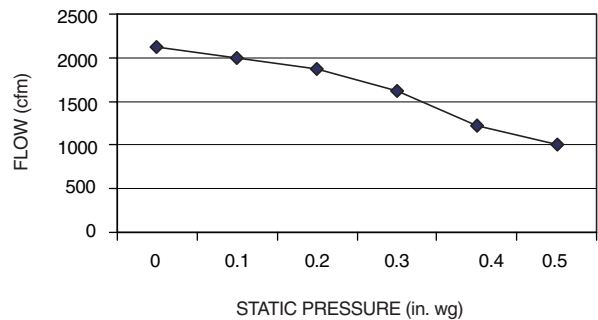
**VERTICAL POWER EXHAUST PERFORMANCE**



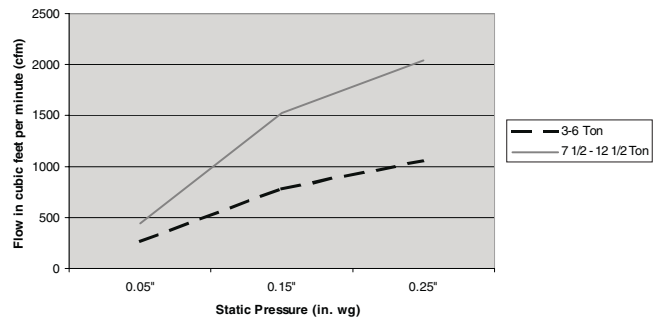
**BAROMETRIC RELIEF FLOW CAPACITY**



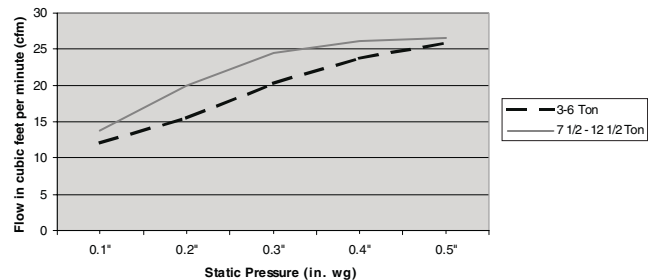
**OUTDOOR AIR DAMPER LEAKAGE**



**HORIZONTAL POWER EXHAUST PERFORMANCE**



**BAROMETRIC RELIEF CAPACITY**



**OUTDOOR AIR DAMPER LEAKAGE**

**Vertical EconoMi\$er IV and EconoMi\$er2  
Performance Data (581B036-150)**

**Horizontal EconoMi\$er IV and EconoMi\$er2  
Performance Data (581B036-150)**

## POWER EXHAUST POWER REQUIREMENTS

| POWER EXHAUST SIZE  | AMPS AT 230 V (2 FANS RUNNING) | MOCP      |           |           |
|---------------------|--------------------------------|-----------|-----------|-----------|
|                     |                                | 230 VAC   | 460 VAC   | 575 VAC   |
| 3 to 6 Ton          | 1.40 amps at 60 Hz             | 15.0 amps | 15.0 amps | 15.0 amps |
| 7 1/2 to 12 1/2 Ton | 3.04 amps at 60 Hz             |           |           |           |

### LEGEND

MOCP — Maximum Overcurrent Protection

# PERFORMANCE DATA (cont)

## EVAPORATOR-FAN MOTOR PERFORMANCE — STANDARD MOTOR

| UNIT<br>581B | UNIT<br>VOLTAGE | UNIT<br>PHASE | MAXIMUM<br>CONTINUOUS BHP* | MAXIMUM<br>OPERATING WATTS* | MAXIMUM<br>AMP DRAW |
|--------------|-----------------|---------------|----------------------------|-----------------------------|---------------------|
| 036          | 208/230         | Single        | 1.20                       | 1000                        | 4.9                 |
|              | 208/230         | Three         | 1.20                       | 1000                        | 4.9                 |
|              | 460             |               |                            |                             | 2.2                 |
|              | 575             |               |                            |                             | 2.2                 |
| 048          | 208/230         | Single        | 1.20                       | 1000                        | 4.9                 |
|              | 208/230         | Three         | 1.20                       | 1000                        | 4.9                 |
|              | 460             |               |                            |                             | 2.2                 |
|              | 575             |               |                            |                             | 2.2                 |
| 060          | 208/230         | Single        | 1.30                       | 1650                        | 10.1                |
|              | 208/230         | Three         | 2.40                       | 2120                        | 6.7                 |
|              | 460             |               |                            |                             | 3.0                 |
|              | 575             |               |                            |                             | 3.0                 |
| 072          | 208/230         | Three         | 2.40                       | 2120                        | 6.7                 |
|              | 460             |               |                            |                             | 3.0                 |
|              | 575             |               |                            |                             | 3.0                 |
| 090,102      | 208/230         | Three         | 2.90                       | 2615                        | 8.6                 |
|              | 460             |               |                            |                             | 3.9                 |
|              | 575             |               |                            |                             | 3.9                 |
| 120          | 208/230         | Three         | 3.70                       | 3775                        | 12.2                |
|              | 460             |               |                            |                             | 5.5                 |
|              | 575             |               |                            |                             | 5.5                 |
| 150          | 208/230         | Three         | 5.25                       | 4400                        | 17.3                |
|              | 460             |               |                            |                             | 8.5                 |
|              | 575             |               |                            |                             | 8.5                 |

581B036-150

### LEGEND

**Bhp** — Brake Horsepower

\*Extensive motor and electrical testing on these units ensures that the full horsepower and watts range of the motors can be utilized with confidence. Using fan motors up to the ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

## EVAPORATOR-FAN MOTOR PERFORMANCE — HIGH-STATIC MOTOR

| UNIT<br>581B | UNIT<br>VOLTAGE | UNIT<br>PHASE | MAXIMUM<br>CONTINUOUS BHP* | MAXIMUM<br>OPERATING WATTS* | MAXIMUM<br>AMP DRAW |
|--------------|-----------------|---------------|----------------------------|-----------------------------|---------------------|
| 036          | 208/230         | Three         | 2.40                       | 2120                        | 6.7                 |
|              | 460             |               |                            |                             | 3.0                 |
|              | 575             |               |                            |                             | 3.0                 |
| 048          | 208/230         | Three         | 2.40                       | 2120                        | 6.7                 |
|              | 460             |               |                            |                             | 3.0                 |
|              | 575             |               |                            |                             | 3.0                 |
| 060          | 208/230         | Three         | 2.90                       | 2615                        | 8.6                 |
|              | 460             |               |                            |                             | 3.9                 |
|              | 575             |               |                            |                             | 3.9                 |
| 072          | 208/230         | Three         | 2.90                       | 2615                        | 8.6                 |
|              | 460             |               |                            |                             | 3.9                 |
|              | 575             |               |                            |                             | 3.9                 |
| 090,102      | 208/230         | Three         | 4.20                       | 3775                        | 12.2                |
|              | 460             |               |                            |                             | 5.5                 |
|              | 575             |               |                            |                             | 5.5                 |
| 120          | 208/230         | Three         | 5.25                       | 4400                        | 17.3                |
|              | 460             |               |                            |                             | 8.5                 |
|              | 575             |               |                            |                             | 8.5                 |

### LEGEND

**Bhp** — Brake Horsepower

\*Extensive motor and electrical testing on these units ensures that the full horsepower and watts range of the motors can be utilized with confidence. Using fan motors up to the ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

## PERFORMANCE DATA (cont)

### POWER EXHAUST OPTIONS

| VERTICAL — MOUNTED IN ECONOMIZER HOOD   |                                         |                      |                              |             |
|-----------------------------------------|-----------------------------------------|----------------------|------------------------------|-------------|
| POWER EXHAUST<br>PART NO.               | POWER EXHAUST DESCRIPTION               | APPLICATION<br>USAGE | POWER OUTPUT<br>(Hp per fan) | NO.<br>FANS |
| CRPWREXH030A01                          | Power Exhaust System (208/230-1-60)     | 036-072*             | 0.23                         | 2           |
| CRPWREXH021A01                          | Power Exhaust System (460-3-60)         | 036-072              | 0.24                         | 2           |
| CRPWREXH022A01                          | Power Exhaust System (208/230-1-60)     | 090-150*             | 0.47                         | 2           |
| CRPWREXH023A01                          | Power Exhaust System (460-3-60)         | 090-150              | 0.37                         | 2           |
| HORIZONTAL — MOUNTED IN RETURN DUCTWORK |                                         |                      |                              |             |
| POWER EXHAUST<br>PART NO.               | POWER EXHAUST DESCRIPTION               | APPLICATION<br>USAGE | POWER OUTPUT<br>(Hp per fan) | NO.<br>FANS |
| CRPWREXH028A01                          | Horizontal Power Exhaust (208/230-1-60) | All*                 | 0.48                         | 1           |
| CRPWREXH029A01                          | Horizontal Power Exhaust (460-3-60)     | All                  | 0.48                         | 1           |

\*Single or three phase.

# ELECTRICAL DATA

## 581B036-150 UNITS

| UNIT SIZE<br>581B | NOMINAL<br>V-PH-Hz | IFM<br>TYPE     | CONV<br>OUTLET | VOLTAGE<br>RANGE |      | COMPRESSOR (each) |      |      | OFM (each) |     | IFM<br>FLA | COMBUSTION<br>FAN MOTOR<br>FLA | POWER SUPPLY* |         | MINIMUM UNIT<br>DISCONNECT SIZE† |     |     |     |     |      |    |    |     |
|-------------------|--------------------|-----------------|----------------|------------------|------|-------------------|------|------|------------|-----|------------|--------------------------------|---------------|---------|----------------------------------|-----|-----|-----|-----|------|----|----|-----|
|                   |                    |                 |                | Min              | Max  | Qty               | RLA  | LRA  | Qty        | FLA |            |                                | MCA           | MOCPS** | FLA                              | LRA |     |     |     |      |    |    |     |
| 036<br>(3 Tons)   | 208/230-1-60       | STD             | NO             | 187              | 254  | 1                 | 16   | 88   | 1          | 0.7 | 4.9        | 0.6                            | 25.6          | 30      | 25                               | 101 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 31.6          | 35      | 30                               | 106 |     |     |     |      |    |    |     |
|                   | 208/230-3-60       | STD             | NO             | 187              | 254  | 1                 | 10.3 | 77   | 1          | 0.7 | 4.9        | 0.6                            | 18.5          | 25      | 18                               | 90  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 24.5          | 30      | 24                               | 95  |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 5.2        |                                | 19.4          | 25      | 19                               | 120 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 25.4          | 30      | 25                               | 124 |     |     |     |      |    |    |     |
|                   | 460-3-60           | STD             | NO             | 414              | 508  | 1                 | 5.1  | 39   | 1          | 0.4 | 2.2        | 0.3                            | 9.0           | 15      | 9                                | 46  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 11.7          | 15      | 11                               | 48  |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 2.6        |                                | 9.4           | 15      | 9                                | 60  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 12.1          | 15      | 12                               | 63  |     |     |     |      |    |    |     |
|                   | 575-3-60           | STD             | NO             | 518              | 632  | 1                 | 4.2  | 31   | 1          | 0.4 | 1.9        | 0.3                            | 7.6           | 10      | 7                                | 36  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 9.7           | 15      | 9                                | 38  |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 2.0        |                                | 7.7           | 10      | 8                                | 43  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 9.8           | 15      | 10                               | 44  |     |     |     |      |    |    |     |
|                   |                    | PH              | NO             |                  |      |                   |      |      | 2.6        | 0.9 | 8.3        | 10                             | 8             | 52      |                                  |     |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     | 10.4       | 15                             | 10            | 54      |                                  |     |     |     |     |      |    |    |     |
|                   |                    | 048<br>(4 Tons) | 208/230-1-60   |                  |      |                   |      |      | STD        | NO  | 187        | 254                            | 1             | 23.7    | 126                              | 1   | 0.7 | 4.9 | 0.6 | 35.2 | 45 | 34 | 139 |
|                   |                    |                 |                |                  |      |                   |      |      |            | YES |            |                                |               |         |                                  |     |     |     |     | 41.2 | 50 | 39 | 144 |
| 208/230-3-60      | STD                |                 | NO             | 187              | 254  | 1                 | 13.5 | 93   | 1          | 0.7 | 4.9        | 0.6                            | 22.5          | 30      | 22                               | 106 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 28.5          | 35      | 27                               | 111 |     |     |     |      |    |    |     |
|                   | HIGH               |                 | NO             |                  |      |                   |      |      |            |     | 5.8        |                                | 23.4          | 30      | 23                               | 136 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 29.4          | 35      | 29                               | 140 |     |     |     |      |    |    |     |
| 460-3-60          | STD                |                 | NO             | 414              | 508  | 1                 | 6.4  | 46.5 | 1          | 0.4 | 2.2        | 0.3                            | 10.6          | 15      | 10                               | 54  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 13.3          | 15      | 13                               | 56  |     |     |     |      |    |    |     |
|                   | HIGH               |                 | NO             |                  |      |                   |      |      |            |     | 2.6        |                                | 11.0          | 15      | 11                               | 68  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 13.7          | 15      | 13                               | 70  |     |     |     |      |    |    |     |
| 575-3-60          | STD                |                 | NO             | 518              | 632  | 1                 | 6.4  | 40   | 1          | 0.4 | 1.9        | 0.3                            | 10.3          | 15      | 10                               | 45  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 12.5          | 15      | 12                               | 47  |     |     |     |      |    |    |     |
|                   | HIGH               |                 | NO             |                  |      |                   |      |      |            |     | 2.0        |                                | 10.4          | 15      | 10                               | 52  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 12.6          | 15      | 12                               | 53  |     |     |     |      |    |    |     |
|                   | PH                 |                 | NO             |                  |      |                   |      |      | 2.6        | 0.9 | 11.0       | 15                             | 11            | 61      |                                  |     |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     | 13.2       | 15                             | 13            | 63      |                                  |     |     |     |     |      |    |    |     |
|                   | 060<br>(5 Tons)    |                 | 208/230-1-60   |                  |      |                   |      |      | STD        | NO  | 187        | 254                            | 1             | 28.8    | 169                              | 1   | 1.5 | 6.6 | 0.6 | 44.1 | 60 | 42 | 206 |
|                   |                    |                 |                |                  |      |                   |      |      |            | YES |            |                                |               |         |                                  |     |     |     |     | 50.1 | 60 | 48 | 210 |
| 208/230-3-60      |                    | STD             | NO             | 187              | 254  | 1                 | 17.3 | 123  | 1          | 1.5 | 5.8        | 0.6                            | 28.9          | 35      | 28                               | 168 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 34.9          | 40      | 34                               | 173 |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 7.5        |                                | 30.6          | 35      | 30                               | 187 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 36.6          | 40      | 36                               | 192 |     |     |     |      |    |    |     |
| 460-3-60          |                    | STD             | NO             | 414              | 508  | 1                 | 9    | 62   | 1          | 0.8 | 2.6        | 0.3                            | 14.7          | 20      | 14                               | 84  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 17.4          | 20      | 17                               | 87  |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 3.4        |                                | 15.5          | 20      | 15                               | 94  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 18.2          | 20      | 18                               | 96  |     |     |     |      |    |    |     |
| 575-3-60          |                    | STD             | NO             | 518              | 632  | 1                 | 7.1  | 50   | 1          | 0.6 | 2.0        | 0.3                            | 11.5          | 15      | 11                               | 63  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 13.6          | 15      | 13                               | 64  |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 2.8        |                                | 12.3          | 15      | 12                               | 72  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 14.4          | 20      | 14                               | 73  |     |     |     |      |    |    |     |
|                   |                    | PH              | NO             |                  |      |                   |      |      | 3.4        | 0.3 | 12.2       | 15                             | 12            | 76      |                                  |     |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     | 14.4       | 20                             | 14            | 77      |                                  |     |     |     |     |      |    |    |     |
|                   |                    | 072<br>(6 Tons) | 208/230-3-60   |                  |      |                   |      |      | STD        | NO  | 187        | 254                            | 1             | 20.5    | 156                              | 1   | 1.4 | 5.8 | 0.6 | 32.8 | 40 | 32 | 200 |
|                   |                    |                 |                |                  |      |                   |      |      |            | YES |            |                                |               |         |                                  |     |     |     |     | 38.8 | 45 | 37 | 205 |
| HIGH              | NO                 |                 |                | 7.5              | 0.6  | 34.5              | 40   | 34   | 219        |     |            |                                |               |         |                                  |     |     |     |     |      |    |    |     |
|                   | YES                |                 |                |                  |      | 40.5              | 45   | 39   | 224        |     |            |                                |               |         |                                  |     |     |     |     |      |    |    |     |
| 460-3-60          | STD                |                 | NO             | 414              | 508  | 1                 | 9.6  | 75   | 1          | 0.6 | 2.6        | 0.3                            | 15.2          | 20      | 15                               | 97  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 17.9          | 20      | 17                               | 99  |     |     |     |      |    |    |     |
|                   | HIGH               |                 | NO             |                  |      |                   |      |      |            |     | 3.4        |                                | 0.3           | 16.0    | 20                               | 16  | 107 |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                |               | 18.7    | 25                               | 18  | 109 |     |     |      |    |    |     |
| 575-3-60          | STD                |                 | NO             | 518              | 632  | 1                 | 7.7  | 56   | 1          | 0.8 | 2.0        | 0.3                            | 12.4          | 15      | 12                               | 69  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 14.6          | 20      | 14                               | 70  |     |     |     |      |    |    |     |
|                   | HIGH               |                 | NO             |                  |      |                   |      |      |            |     | 2.8        |                                | 13.2          | 20      | 13                               | 79  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 15.4          | 20      | 15                               | 80  |     |     |     |      |    |    |     |
|                   | PH                 |                 | NO             |                  |      |                   |      |      | 3.4        | 0.3 | 12.8       | 15                             | 13            | 81      |                                  |     |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     | 15.0       | 20                             | 15            | 83      |                                  |     |     |     |     |      |    |    |     |
|                   | 090<br>(7½ Tons)   |                 | 208/230-3-60   |                  |      |                   |      |      | STD        | NO  | 187        | 254                            | 2             | 12.4    | 88                               | 2   | 1.4 | 7.5 | 0.6 | 38.2 | 45 | 40 | 242 |
|                   |                    |                 |                |                  |      |                   |      |      |            | YES |            |                                |               |         |                                  |     |     |     |     | 44.2 | 50 | 46 | 247 |
| HIGH              |                    |                 |                | NO               | 10.6 | 0.6               | 41.3 | 45   | 44         | 267 |            |                                |               |         |                                  |     |     |     |     |      |    |    |     |
|                   |                    |                 |                | YES              |      |                   | 47.3 | 50   | 49         | 271 |            |                                |               |         |                                  |     |     |     |     |      |    |    |     |
| 460-3-60          |                    | STD             | NO             | 414              | 508  | 2                 | 6.4  | 44   | 2          | 0.7 | 3.4        | 0.3                            | 19.2          | 25      | 20                               | 121 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 21.9          | 25      | 23                               | 123 |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 4.8        |                                | 20.6          | 25      | 22                               | 134 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 23.3          | 25      | 24                               | 136 |     |     |     |      |    |    |     |
| 575-3-60          |                    | STD             | NO             | 518              | 632  | 2                 | 4.8  | 34   | 2          | 0.6 | 2.8        | 0.3                            | 14.6          | 20      | 15                               | 95  |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 16.8          | 20      | 17                               | 95  |     |     |     |      |    |    |     |
|                   |                    | HIGH            | NO             |                  |      |                   |      |      |            |     | 3.3        |                                | 15.3          | 20      | 17                               | 104 |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     |            |                                | 17.5          | 20      | 19                               | 104 |     |     |     |      |    |    |     |
|                   |                    | PH              | NO             |                  |      |                   |      |      | 4.8        | 0.3 | 15.8       | 20                             | 17            | 104     |                                  |     |     |     |     |      |    |    |     |
|                   |                    |                 | YES            |                  |      |                   |      |      |            |     | 17.9       | 20                             | 19            | 104     |                                  |     |     |     |     |      |    |    |     |

# ELECTRICAL DATA (cont)

## 581B036-150 UNITS

| UNIT SIZE<br>581B | NOMINAL<br>V-PH-Hz | IFM TYPE | CONV<br>OUTLET | VOLTAGE<br>RANGE |     | COMPRESSOR (each) |      |      | OFM (each) |     | IFM<br>FLA | COMBUSTION<br>FAN MOTOR<br>FLA | POWER SUPPLY* |        | MINIMUM UNIT<br>DISCONNECT SIZE† |     |     |
|-------------------|--------------------|----------|----------------|------------------|-----|-------------------|------|------|------------|-----|------------|--------------------------------|---------------|--------|----------------------------------|-----|-----|
|                   |                    |          |                | Min              | Max | Qty               | RLA  | LRA  | Qty        | FLA |            |                                | MCA           | MOCP** | FLA                              | LRA |     |
| 102<br>(8½ Tons)  | 208/230-3-60       | STD      | NO             | 187              | 254 | 2                 | 13.1 | 105  | 2          | 1.4 | 7.5        | 0.6                            | 40.2          | 45     | 42                               | 276 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 46.2          | 50     | 48                               | 281 |     |
|                   |                    | HIGH     | NO             |                  |     |                   |      |      |            |     | 10.6       |                                | 43.3          | 50     | 46                               | 301 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 49.3          | 60     | 51                               | 305 |     |
|                   | 460-3-60           | STD      | NO             | 414              | 508 | 2                 | 7.4  | 55   | 2          | 0.7 | 3.4        | 0.3                            | 21.5          | 25     | 23                               | 143 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 24.2          | 30     | 25                               | 145 |     |
|                   |                    | HIGH     | NO             |                  |     |                   |      |      |            |     | 4.8        |                                | 22.9          | 25     | 24                               | 156 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 25.6          | 30     | 27                               | 158 |     |
|                   | 575-3-60           | STD      | NO             | 518              | 632 | 2                 | 6.4  | 44   | 2          | 0.6 | 2.8        | 0.3                            | 18.2          | 20     | 19                               | 115 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 20.4          | 25     | 21                               | 116 |     |
|                   |                    | HIGH     | NO             |                  |     |                   |      |      |            | 3.3 | 18.9       |                                | 25            | 20     | 124                              |     |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     | 21.1       |                                | 25            | 22     | 126                              |     |     |
|                   |                    | PH       | NO             |                  |     |                   |      |      | 0.7        | 4.8 | 0.3        |                                | 19.4          | 25     | 20                               | 124 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 21.5          | 25     | 22                               | 126 |     |
|                   |                    |          | NO             |                  |     |                   |      |      |            |     |            |                                | 53.0          | 60     | 56                               | 341 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 59.0          | 70     | 61                               | 345 |     |
| 120<br>(10 Tons)  | 208/230-3-60       | STD      | NO             | 187              | 254 | 2                 | 17.6 | 125  | 2          | 1.4 | 10.6       | 0.6                            | 57.4          | 70     | 61                               | 364 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 63.4          | 70     | 66                               | 369 |     |
|                   |                    | HIGH     | NO             |                  |     |                   |      |      |            |     | 15.0       |                                | 24.9          | 30     | 26                               | 171 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 27.6          | 30     | 29                               | 173 |     |
|                   | 460-3-60           | STD      | NO             | 414              | 508 | 2                 | 8.3  | 62.5 | 2          | 0.7 | 4.8        | 0.3                            | 27.5          | 30     | 29                               | 182 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 30.2          | 35     | 32                               | 184 |     |
|                   |                    | HIGH     | NO             |                  |     |                   |      |      |            |     | 7.4        |                                | 19.1          | 25     | 20                               | 136 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 21.3          | 25     | 22                               | 138 |     |
|                   | 575-3-60           | STD      | NO             | 518              | 632 | 2                 | 6.3  | 50   | 2          | 0.6 | 3.3        | 0.3                            | 21.0          | 25     | 23                               | 146 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 23.1          | 25     | 25                               | 148 |     |
|                   |                    | HIGH     | NO             |                  |     |                   |      |      |            |     | 5.6        |                                | 21.2          | 25     | 23                               | 146 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 23.4          | 25     | 25                               | 148 |     |
|                   |                    | PH       | NO             |                  |     |                   |      |      | 2          | 0.7 | 7.4        |                                | 0.3           | 60.6   | 70                               | 64  | 426 |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                |               | 66.6   | 70                               | 70  | 431 |
|                   |                    |          | NO             |                  |     |                   |      |      |            |     |            |                                |               | 29.1   | 35                               | 31  | 207 |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                |               | 31.8   | 35                               | 33  | 209 |
| 150<br>(12½ Tons) | 208/230-3-60       | STD      | NO             | 187              | 254 | 2                 | 19   | 156  | 2          | 1.4 | 15.0       | 0.6                            | 29.1          | 35     | 31                               | 207 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 31.8          | 35     | 33                               | 209 |     |
|                   | 460-3-60           | STD      | NO             | 414              | 508 | 2                 | 9    | 75   | 2          | 0.7 | 7.4        | 0.3                            | 23.5          | 30     | 25                               | 154 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 25.6          | 30     | 27                               | 156 |     |
|                   | 575-3-60           | ST       | NO             | 518              | 632 | 2                 | 7.4  | 54   | 2          | 0.6 | 5.6        | 0.3                            | 23.7          | 30     | 25                               | 154 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 25.9          | 30     | 27                               | 156 |     |
|                   |                    | PH       | NO             |                  |     |                   |      |      | 2          | 0.7 | 7.4        | 0.3                            | 23.7          | 30     | 25                               | 154 |     |
|                   |                    |          | YES            |                  |     |                   |      |      |            |     |            |                                | 25.9          | 30     | 27                               | 156 |     |

### LEGEND

CONV — Convenience Outlet  
 FLA — Full Load Amps  
 HACR — Heating, Air Conditioning and Refrigeration  
 IFM — Indoor (Evaporator) Fan Motor  
 LRA — Locked Rotor Amps  
 MCA — Minimum Circuit Amps  
 MOCP — Maximum Overcurrent Protection  
 NEC — National Electrical Code  
 OFM — Outdoor (Condenser) Fan Motor  
 PH — Perfect Humidity™ Dehumidification System  
 RLA — Rated Load Amps  
 UL — Underwriters' Laboratories



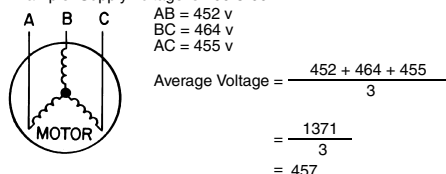
\*The values listed in this table do not include power exhaust. See table at right for power exhaust requirements.  
 †Used to determine minimum disconnect per NEC.  
 \*\*Fuse or HACR circuit breaker.

### NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. The UL, Canada units may be fuse or circuit breaker.
- Electrical data based on 95 F ambient outdoor-air temperature ± 10% voltage.
- Unbalanced 3-Phase Supply Voltage**  
 Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

$$= 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457} = 1.53\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

### POWER EXHAUST ELECTRICAL DATA

| POWER EXHAUST<br>PART NO. | APPLICATION<br>USAGE | MCA<br>(230 V) | MCA<br>(460 V) | MCA<br>(575 V) | MOCP<br>(separate<br>power source<br>only) |
|---------------------------|----------------------|----------------|----------------|----------------|--------------------------------------------|
| CRPWREXH030A01            | 036-072*             | 1.6            | N/A            | 0.64           | 15                                         |
| CRPWREXH021A01            | 036-072              | N/A            | 0.68           | N/A            | 15                                         |
| CRPWREXH022A01            | 090-150*             | 3.4            | N/A            | 1.32           | 15                                         |
| CRPWREXH023A01            | 090-150              | N/A            | 1.4            | N/A            | 15                                         |
| CRPWREXH028A01            | ALL*                 | 1.7            | N/A            | 0.68           | 15                                         |
| CRPWREXH029A01            | ALL                  | N/A            | 0.7            | N/A            | 15                                         |

N/A — Not Available

\*Single or three phase.

**NOTE:** If a single power source is to be used, size wire to include power exhaust MCA and MOCP.

Check MCA and MOCP when power exhaust is powered through the unit. Determine the new MCA including the power exhaust using the following formula:

MCA New = MCA unit only + MCA of Power Exhaust

For example, using a 581B060 unit with MCA = 28.9 and MOCP = 35, with CRPWREXH030A01 power exhaust.

MCA New = 28.9 amps + 1.6 amps = 30.5 amps

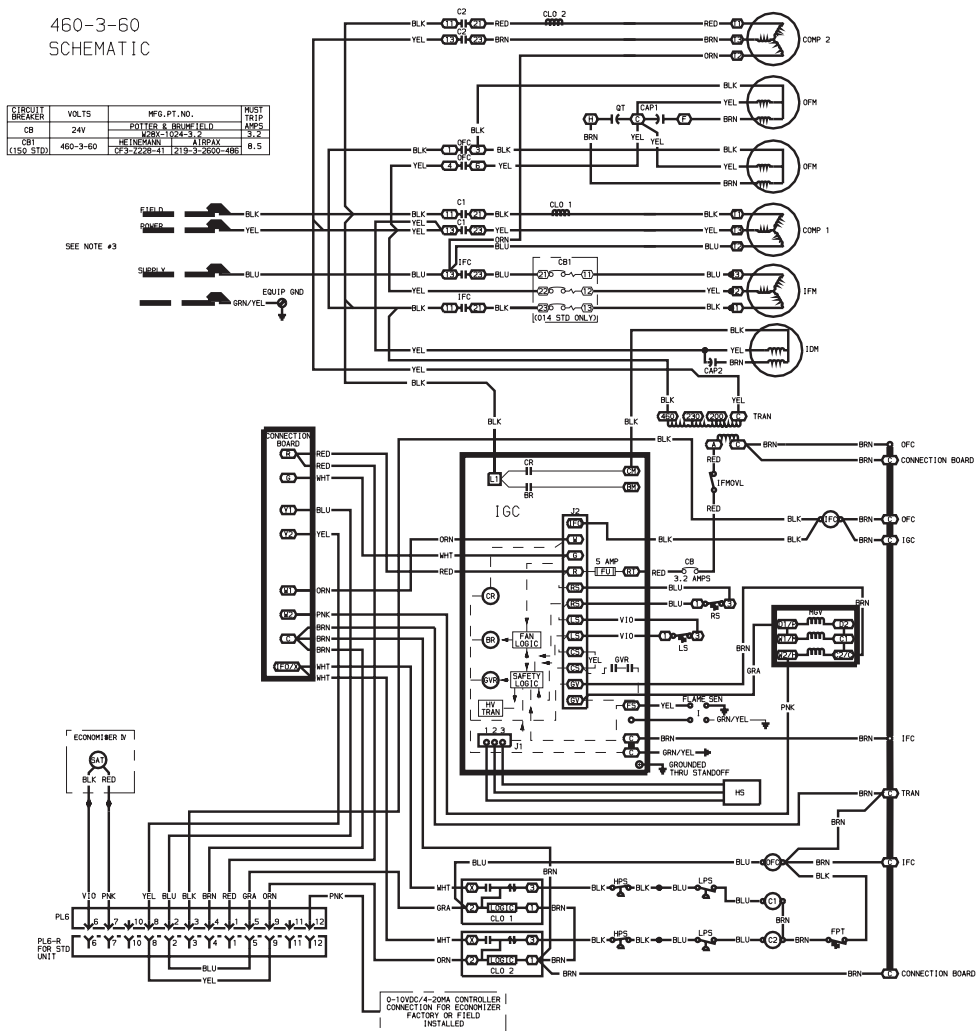
If the new MCA does not exceed the published MOCP, then MOCP would not change. The MOCP in this example is 35 amps and the MCA New is below 35; therefore the MOCP is acceptable. If "MCA New" is larger than the published MOCP, raise the MOCP to the next larger size. For separate power, the MOCP for the power exhaust will be 15 amps per NEC.

# TYPICAL WIRING SCHEMATICS — 581B

460-3-60  
SCHEMATIC

| CIRCUIT BREAKER | VOLTS     | MFG. PT. NO.       | RUST TRIP AMPS |
|-----------------|-----------|--------------------|----------------|
| CB              | 24V       | POTTER & BRUMFIELD | 3-2            |
| CB1             | 460-3-60  | HEINEMANN          | ATDAX          |
| CB1             | (150 STD) | C-2-240-11         | 219-3-2000-480 |
|                 |           |                    | 8.5            |

SEE NOTE #3



PLB-8 FOR STD UNIT

0-10VDC/4-20MA CONTROLLER CONNECTION FOR ECONOMIZER FACTORY OR FIELD INSTALLED

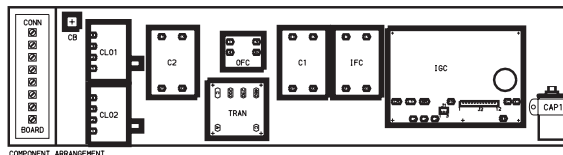
- C CONTACTOR, COMPRESSOR
- CAP CAPACITOR
- CB CIRCUIT BREAKER
- CLO COMPRESSOR LOCKOUT
- COMP COMPRESSOR MOTOR
- EQUIP EQUIPMENT
- FPT FREEZE UP PROTECTION THERMOSTAT
- GND GROUND
- HPS HIGH PRESSURE SWITCH
- HS HALL EFFECT SEN.
- I INDICATOR
- IDM INDUCED DRAFT MOTOR
- IFC INDOOR FAN CONTACTOR
- IFM INDOOR FAN MOTOR
- IPROVL INDOOR FAN MOTOR OVERLOAD SWITCH
- IGC INTEGRATED GAS UNIT CONTROLLER
- LPS LOW PRESSURE SWITCH
- LS LIMIT SWITCH
- MEV MAIN GAS VALVE
- OFC OUTDOOR FAN CONTACTOR
- OFM OUTDOOR FAN MOTOR
- P PLUS
- PL PLUS ASSEMBLY
- QT QUADRIPOLE TERMINAL
- RAT RETURN AIR TEMP. SEN.
- RS ROLLOUT SWITCH
- SAT SAT SUPPLY AIR TEMP. SEN.
- SEN SENSOR
- TRAN TRANSFORMER

## NOTES

1. IF ANY OF THE ORIGINAL WIRE FURNISHED MUST BE REPLACED, IT MUST BE REPLACED WITH TYPE 90 C WIRE OR ITS EQUIVALENT.
2. THREE PHASE MOTORS ARE PROTECTED UNDER PRIMARY SINGLE PHASING CONDITIONS.
3. USE COPPER CONDUCTORS ONLY.

## LEGEND

- FIELD SPLICE
- MARKED WIRE
- TERMINAL (MARKED)
- TERMINAL (UNMARKED)
- TERMINAL BLOCK
- SPLICE
- SPLICE (MARKED)
- FACTORY WIRING
- FIELD CONTROL WIRING
- FIELD POWER WIRING
- ACCESSORY OR OPTIONAL WIRING
- TO INDICATE COMMON POTENTIAL ONLY
- NOT TO REPRESENT WIRING

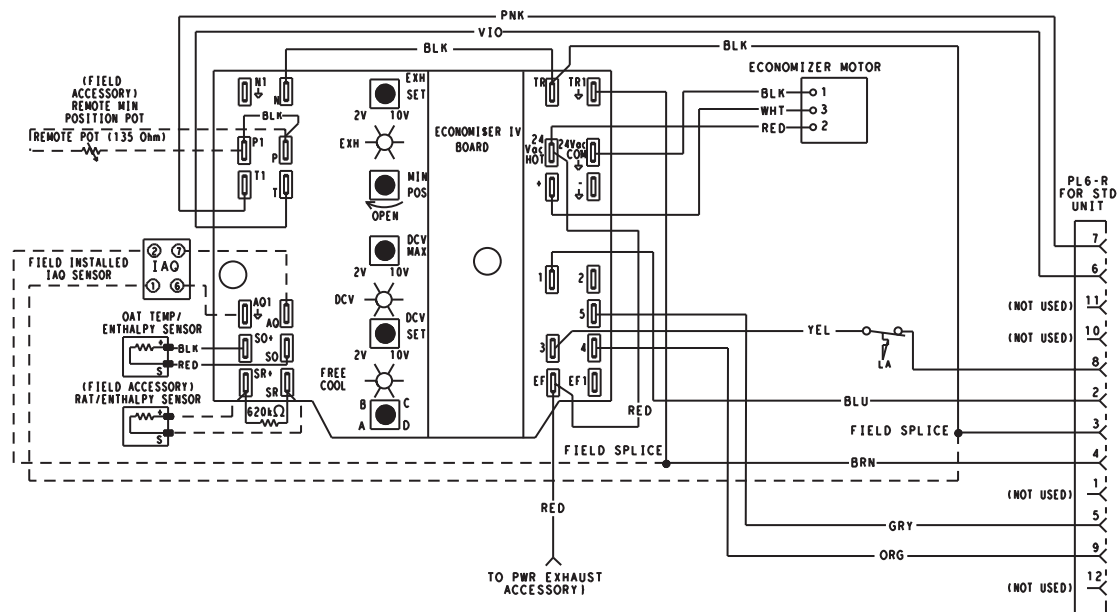


SIZES 036-150 (581B090, 460-3-60 Shown)

581B036-150



## TYPICAL WIRING SCHEMATICS — 581B (cont)



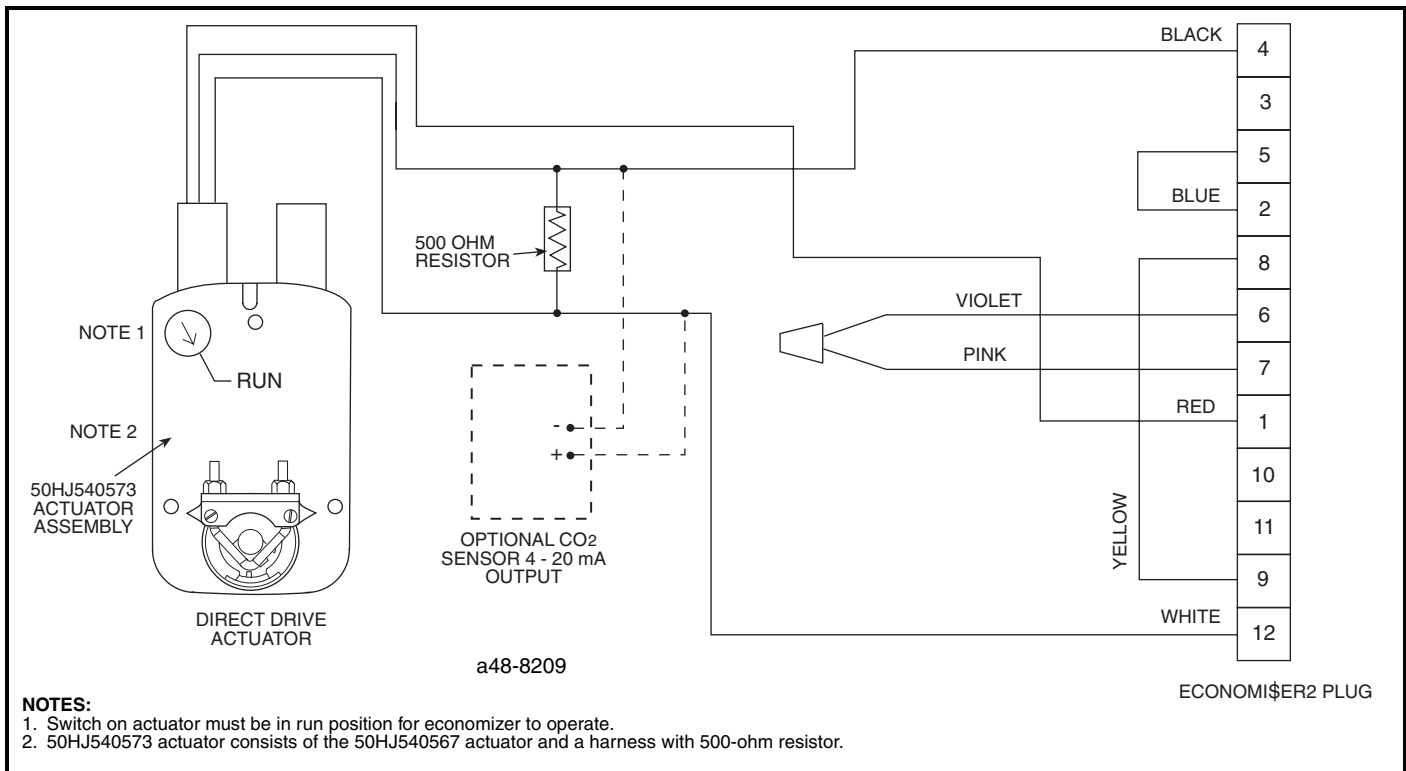
**LEGEND**

IAQ — Indoor Air Quality  
 LA — Low Ambient Lockout Device  
 POT — Potentiometer  
 OAT — Outdoor-Air Temperature  
 RAT — Return-Air Temperature

**NOTE:**  
 Potentiometer Defaults Settings:  
 Power Exhaust Middle  
 Minimum Pos. Fully Closed  
 DCV Max. Middle  
 DCV Set Middle  
 Enthalpy C Setting

**ECONOMIZER NOTES:**

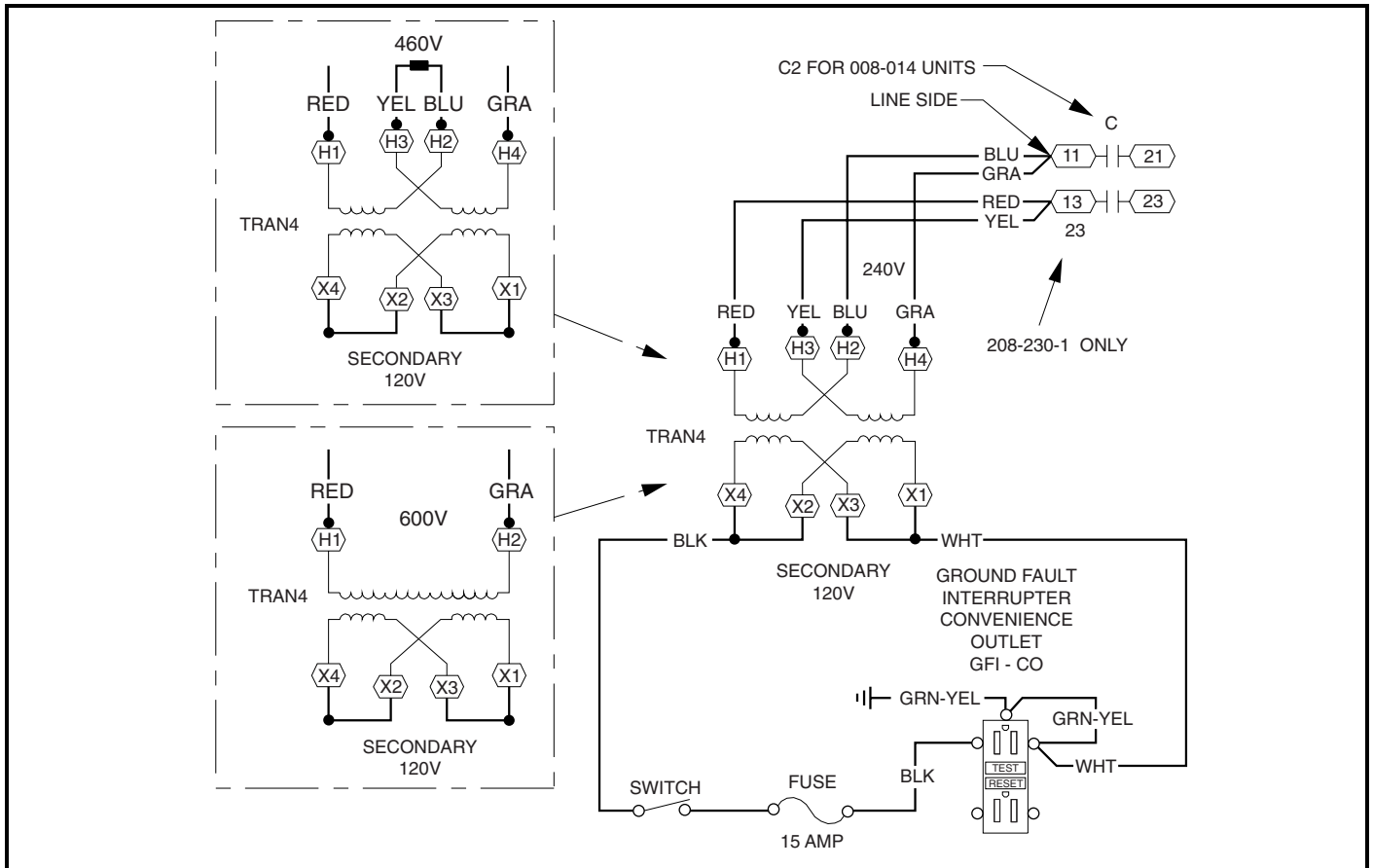
1. 620 ohm, 1 watt 5% resistor should be removed only when using differential enthalpy or dry bulb.
2. If a separate field supplied 24v transformer is used for the IAQ sensor power supply, it cannot have the secondary of the transformer grounded.
3. For field installed remote minimum position POT, remove black wire jumper between P and P1 and set control minimum position POT to the minimum position.

**EconoMi\$er IV Wiring — 581B036-150 Units****NOTES:**

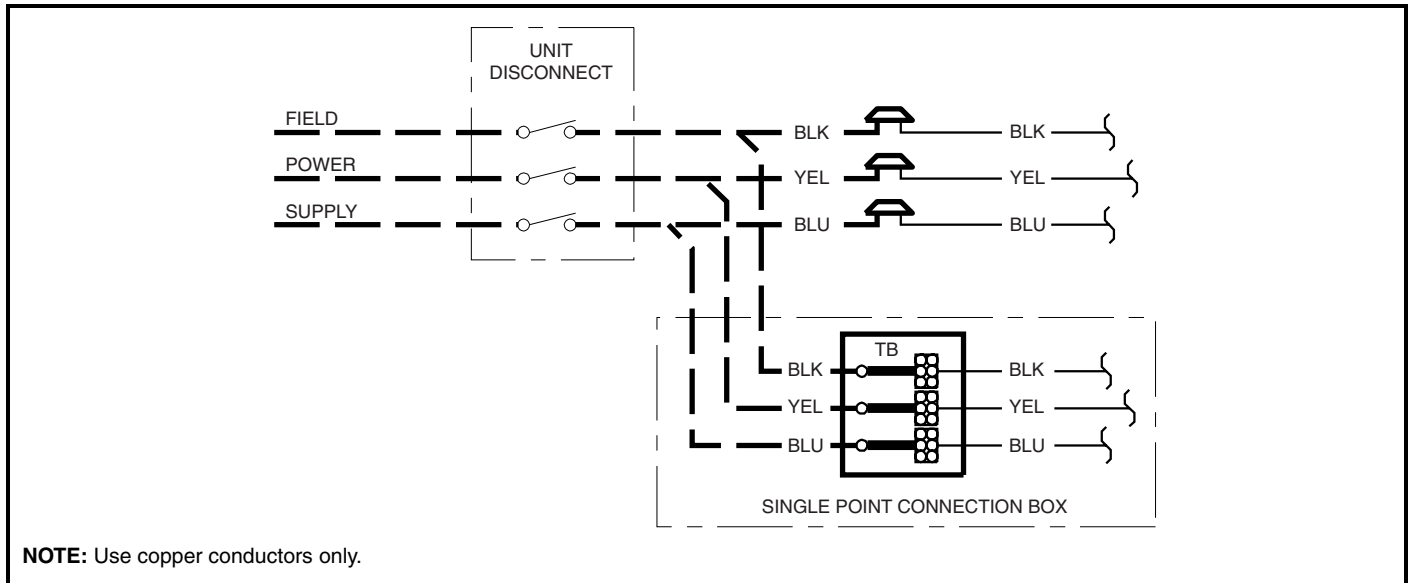
1. Switch on actuator must be in run position for economizer to operate.
2. 50HJ540573 actuator consists of the 50HJ540567 actuator and a harness with 500-ohm resistor.

**EconoMi\$er2 Wiring — 581B036-150 Units**

## TYPICAL WIRING SCHEMATICS — 581B (cont)



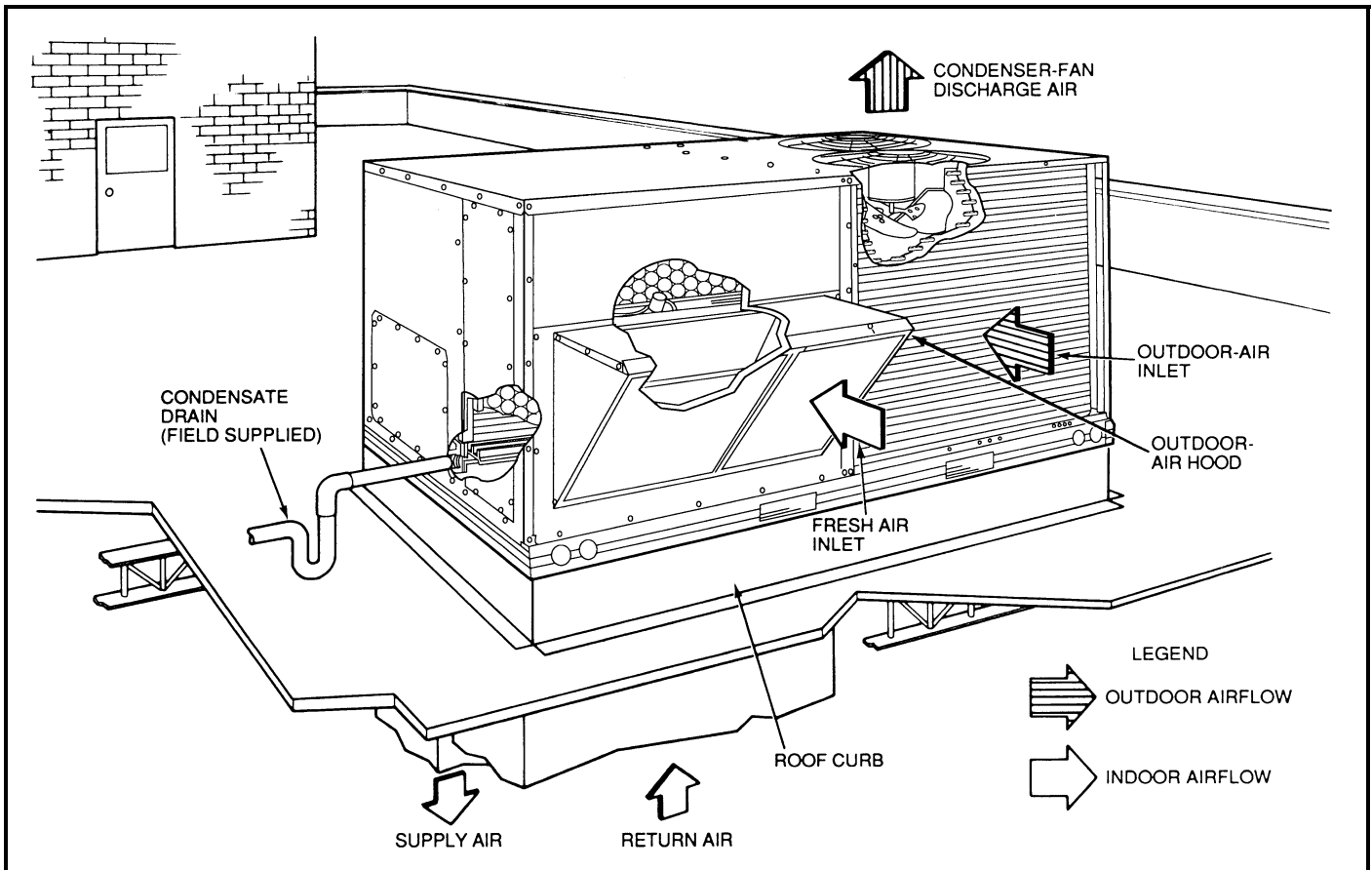
Convenience Outlet (Optional) — Sizes 581B036-150



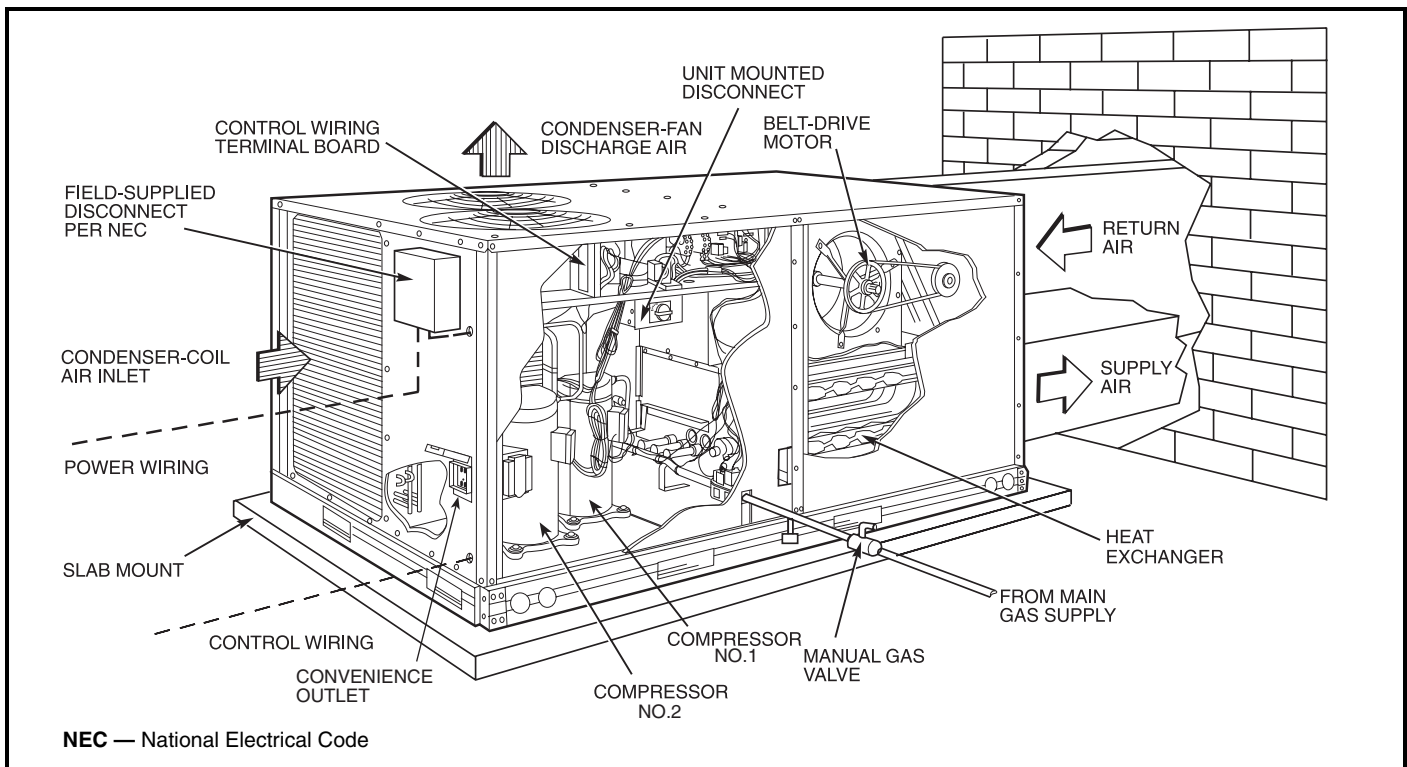
Non-Fused Disconnect (Optional) — Sizes 581B036-150

## TYPICAL PIPING AND WIRING — 581B036-150

581B036-150



Vertical Discharge Ducting



NEC — National Electrical Code

Horizontal Discharge Ducting

**PACKAGED ROOFTOP ELECTRIC COOLING UNIT WITH GAS HEAT — CONSTANT VOLUME APPLICATION**

HVAC GUIDE SPECIFICATIONS

SIZE RANGE: 3 TO 12<sup>1</sup>/<sub>2</sub> TONS, NOMINAL (COOLING)  
60,000 TO 250,000 BTUH, NOMINAL (INPUT HEATING)

BRYANT MODEL NUMBERS: 580F, 581B



581B036-121 UNITS ARE  
ENERGY STAR QUALIFIED



**PART 1 — GENERAL**

**1.01 SYSTEM DESCRIPTION**

Outdoor rooftop mounted, electrically controlled heating and cooling unit utilizing a hermetic compressor(s) for cooling duty and gas combustion for heating duty. Unit shall discharge supply air vertically or horizontally as shown on contract drawings.

**1.02 QUALITY ASSURANCE**

- A. Unit well exceeds ASHRAE 90.1-2001 Energy Standards. Units 581B036-120 are Energy Star qualified.
- B. Unit shall be rated in accordance with ARI Standards 210 or 360. Designed in accordance with UL Standard 1995.
- C. Unit shall be designed to conform to ASHRAE 15, latest revision.
- D. Unit shall be UL-tested and certified in accordance with ANSI Z21.47 Standards and UL-listed and certified under Canadian standards as a total package for safety requirements.
- E. Roof curb shall be designed to conform to NRCA Standards.
- F. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
- G. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- H. Unit shall be designed in accordance with ISO 9001:2000, and shall be manufactured in a facility registered to ISO 9001:2000.
- I. Each unit shall be subjected to a completely automated run testing on the assembly line. A factory-supplied print-out indicating tested pressures, amperages, data, and inspectors; providing certification of the unit status at the time of manufacture, shall be available upon request.

**1.03 DELIVERY, STORAGE, AND HANDLING**

Unit shall be stored and handled per manufacturer's recommendations.

**PART 2 — PRODUCTS**

**2.01 EQUIPMENT (STANDARD)**

- A. General:
 

Factory assembled, single-piece heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R-22), and special features required prior to field start-up.
- B. Unit Cabinet:
  1. Unit cabinet shall be constructed of galvanized steel, and shall be bonderized and coated with a pre-painted baked enamel finish on all externally exposed surfaces.
  2. Evaporator fan compartment interior cabinet surfaces shall be insulated with a minimum 1<sup>1</sup>/<sub>2</sub>-in. thick,

1 lb density, flexible fiberglass insulation, neoprene coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the gas heat compartment.

3. Cabinet panels shall be easily removable for servicing.
4. Holes shall be provided in the base rails for rigging shackles to facilitate maneuvering and overhead rigging.
5. Unit shall have a factory-installed, sloped condensate drain pan made of a non-corrosive material, providing a minimum 3/4-in.-14 NPT connection with both vertical and horizontal drains, and shall comply with ASHRAE Standard 62.
6. Unit shall have a factory-installed filter access panel to provide filter access with tool-less removal.
7. Unit shall have standard thru-the-bottom gas and power connection capability (accessory kit is required).

C. Fans:

1. Evaporator Fan:
  - a. Fan shall be direct or belt driven as shown on the equipment drawings. Belt drive shall include an adjustable-pitch motor pulley.
  - b. Fan wheel shall be double-inlet type with forward-curved blades.
  - c. Bearings shall be sealed, permanently lubricated ball-bearing type for longer life and lower maintenance.
2. Evaporator fan shall be made from steel with a corrosion-resistant finish and shall be dynamically balanced.
3. Bryant rooftop evaporator fan motors smaller than 5 hp are specifically designed for Bryant and are rated in maximum continuous Bhp or maximum continuous watts. The motors do not have a horsepower rating on the nameplate.
4. Condenser fan shall be of the direct-driven (with totally enclosed motors) propeller type and shall discharge air vertically.
5. Condenser fan shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.
6. Induced-draft blower shall be of the direct-driven, single inlet, forward-curved centrifugal type, made from steel with a corrosion-resistant finish and shall be dynamically balanced.

D. Compressor(s):

1. Fully hermetic type, internally protected scroll-type.
2. Factory mounted on rubber grommets and internally spring mounted for vibration isolation.
3. On dual electrically and mechanically independent circuits (090-150).

E. Coils:

1. Standard evaporator and condenser coils shall have aluminum lanced plate fins mechanically bonded to seamless internally grooved 3/8-in. OD copper tubes with all joints brazed.
2. Dual compressor models (size 090-150) shall have face-split type evaporator coil (circuit no. 1 on bottom).

## GUIDE SPECIFICATIONS — 580F036-151 AND 581B036-150 (cont)

### 3. Testing:

- a. Evaporator and condenser coils shall be qualified to UL 1995 burst test at 2,200 psi.
- b. Evaporator and condenser coils shall be leak tested to 150 psig and pressure tested to 400 psig.

### 4. Optional Coils:

- a. Optional pre-coated aluminum-fin coils shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
- b. Copper-fin coils shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan. All copper construction shall provide protection in moderate coastal environments.
- c. E-Coated aluminum-fin coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss — 60 deg of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be aluminum fins mechanically bonded to copper tubes.
- d. E-Coated copper-fin coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss — 60 deg of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in.-lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be copper fins mechanically bonded to copper tubes with copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between coil and pan.

### F. Heating Section:

1. Induced-draft combustion type with energy saving direct-spark ignition system and redundant main gas valve.
2. Heat Exchanger:
  - a. The standard heat exchanger shall be of the tubular-section type constructed of a minimum of 20-gage steel coated with a nominal 1.2 mil aluminum-silicone alloy for corrosion resistance.
  - b. The optional stainless steel heat exchanger shall be of the tubular-section type, constructed of a minimum of 20-gage type 409 stainless steel.
3. Burners shall be of the in-shot type constructed of aluminum-coated steel.
4. All gas piping shall enter the unit cabinet at a single location on side of unit (horizontal plane).
5. The integrated gas controller (IGC) board shall include gas heat operation fault notification using an LED (light-emitting diode).
6. Unit shall be equipped with anti-cycle protection with one short cycle on unit flame rollout switch or 4 continuous short cycles on the high-temperature limit switch. Fault indication shall be made using an LED.
7. The IGC board shall contain algorithms that modify evaporator-fan operation to prevent future cycling on high-temperature limit switch.
8. The LED shall be visible without removal of control box access panel.

### G. Refrigerant Components:

Refrigerant circuit components shall include:

1. Fixed orifice metering system.
2. Refrigerant filter drier.
3. Service gage connections on suction, discharge, and liquid lines.

### H. Filter Section:

1. Standard filter section shall consist of factory-installed, low velocity, throwaway 2-in. thick fiberglass filters of commercially available sizes.
2. Filter face velocity shall not exceed 320 fpm at nominal airflows.
3. Filter section should use only one size filter.
4. Filters shall be accessible through an access panel with “no-tool” removal.

### I. Controls and Safeties:

1. Unit Controls:

Unit shall be complete with self-contained low-voltage control circuit protected by a fuse on the 24-v transformer side (090-150 units have a resettable circuit breaker).
2. Safeties:
  - a. Unit shall incorporate a solid-state compressor protector which provides anti-cycle reset capability at the space thermostat, should any of the following standard safety devices trip and shut off compressor.
    - 1) Compressor overtemperature, overcurrent.
    - 2) Loss-of-charge/low-pressure switch.
    - 3) Freeze-protection thermostat, evaporator coil.
    - 4) High-pressure switch.
    - 5) Automatic reset motor thermal overload protector.

The lockout protection shall be easily disconnected at the control board, if necessary.

## GUIDE SPECIFICATIONS — 580F036-151 AND 581B036-150 (cont)

- b. Heating section shall be provided with the following minimum protections:
  - 1) High-temperature limit switches.
  - 2) Induced draft motor speed sensor.
  - 3) Flame rollout switch.
  - 4) Flame proving controls.

### J. Operating Characteristics:

- 1. Unit shall be capable of starting and running at 125 F ambient outdoor temperature, meeting maximum load criteria of ARI Standard 210/240 or 360 at  $\pm 10\%$  voltage.
- 2. Compressor with standard controls shall be capable of operation down to 25 F ambient outdoor temperature.

### K. Electrical Requirements:

All unit power wiring shall enter unit cabinet at a single factory-predrilled location.

### L. Motors:

- 1. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have line break thermal and current overload protection.
- 2. Evaporator-fan motor shall have permanently lubricated bearings and inherent automatic-reset thermal overload protection. Evaporator motors are designed specifically for Bryant and do *not* have conventional horsepower (HP) ratings listed on the motor nameplate. Motors are designed and qualified in the “air-over” location downstream of the cooling coil and carry a maximum continuous bhp rating that is the maximum application bhp rating for the motor; no “safety factors” above that rating may be applied.
- 3. Totally enclosed condenser-fan motor shall have permanently lubricated bearings, and inherent automatic-reset thermal overload protection.
- 4. Induced-draft motor shall have permanently lubricated sealed bearings and inherent automatic-reset thermal overload protection.

### M. Special Features:

Certain features are not applicable when the features designated \* are specified. For assistance in amending the specifications, contact your local Bryant Sales Office.

- 1. Roof Curbs (Horizontal and Vertical):
  - a. Formed galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
  - b. Permits installation and securing of ductwork to curb prior to mounting unit on the curb.

#### \* 2. Integrated Economizers:

- a. Integrated integral modulating type capable of simultaneous economizer and compressor operation. During economizer operation, up to two compressors on sizes 090-150 will operate.
- b. Available as a factory-installed option in vertical supply/return configuration only. (Available as a field-installed accessory for dedicated horizontal and/or vertical supply return configurations.)
- c. Includes all hardware and controls to provide cooling with outdoor air.
- d. Equipped with low-leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
- e. Capable of introducing up to 100% outdoor air.

- f. EconoMi\$er IV and EconoMi\$er2 shall be equipped with a barometric relief damper capable of relieving up to 100% return air.

- g. Designed to close damper(s) during loss-of-power situations with spring return built into motor.

- h. Dry bulb outdoor-air temperature sensor shall be provided as standard. Outdoor air sensor set point is adjustable and shall range from 40 to 100 F. For the EconoMi\$er IV, the return air sensor, indoor enthalpy sensor, and outdoor enthalpy sensor shall be provided as field-installed accessories to provide enthalpy control, differential enthalpy control, and differential dry bulb temperature control. For the EconoMi\$er2, the enthalpy, differential temperature (adjustable), and differential enthalpy control shall be provided as field-installed accessories.

- i. EconoMi\$er IV controller shall use a mixed air thermistor mounted on the evaporator fan housing to control EconoMi\$er IV operation to a supply air temperature of 55 F.

- j. The EconoMi\$er IV and EconoMi\$er2 shall have a gear-driven parallel blade design.

- k. EconoMi\$er IV controller shall provide control of internal building pressure through its accessory power exhaust function. Factory set at 100%, with a range of 0% to 100%.

- l. EconoMi\$er2 shall be capable of control from a 4 to 20 mA signal through optional 4 to 20 mA design without microprocessor control (required for PremierLink™ or third party control interface).

- m. EconoMi\$er IV controller Occupied Minimum Damper Position Setting maintains the minimum airflow into the building during occupied period providing design ventilation rate for full occupancy (damper position during heating). A remote potentiometer may be used to override the set point.

- n. EconoMi\$er IV controller Unoccupied Minimum Damper Position Setting — The EconoMi\$er IV dampers shall be closed when the unit is in the occupied mode.

- o. EconoMi\$er IV controller IAQ/DCV Maximum Damper Position Setting — Setting the maximum position of the damper prevents the introduction of large amounts of hot or cold air into the space. This position is intended to satisfy the base minimum ventilation rate.

- p. EconoMi\$er IV controller IAQ/DCV control modulates the outdoor-air damper to provide ventilation based on the optional 2 to 10 vdc CO<sub>2</sub> sensor input.

- q. Compressor lockout sensor (opens at 35 F, closes at 50 F).

- r. Actuator shall be direct coupled to economizer gear, eliminating linkage arms and rods.

- s. Control LEDs:

- 1) When the outdoor air damper is capable of providing free cooling, the “Free Cool” LED shall illuminate.
- 2) The IAQ LED indicates when the module is on the DCV mode.
- 3) The EXH LED indicates when the exhaust fan contact is closed.

## GUIDE SPECIFICATIONS — 580F036-151 AND 581B036-150 (cont)

t. Remote Minimum Position Control — A field-installed accessory remote potentiometer allows the outdoor air damper to be opened or closed beyond the minimum position in the occupied mode for modified ventilation.

### 3. Manual Outdoor-Air Damper:

Manual damper package shall consist of damper, birdscreen, and rainhood which can be preset to admit up to 50% outdoor air for year round ventilation.

### \* 4. 100% Two-Position Damper:

- Two-position damper package shall include single blade damper and motor. Admits up to 100% outdoor air.
- Damper shall close upon indoor (evaporator) fan shutoff.
- Designed to close damper during loss of power situations.
- Equipped with 15% barometric relief damper.

### \* 5. 25% Two-Position Damper:

- Two-position damper package shall include single blade damper and motor. Admits up to 25% outdoor air.
- Damper shall close upon indoor (evaporator) fan shutoff.

### \* 6. Head Pressure Control Package:

Consists of solid-state control and condenser-coil temperature sensor to maintain condensing temperature between 90 F and 110 F at outdoor ambient temperatures down to -20 F by condenser-fan speed modulation or condenser-fan cycling and wind baffles.

### 7. LP (Liquid Propane) Conversion Kit:

Package shall contain all the necessary hardware and instructions to convert a standard natural gas unit for use with liquefied propane (valid up to 2000 ft elevation).

### \* 8. Electronic Programmable Thermostat:

Units shall be capable of using deluxe full-featured electronic thermostat. Thermostat shall use built-in compressor cycle delay control for both heating and cooling duty. Thermostat shall be capable of working with third party direct digital controls.

### 9. Light Commercial Thermidistat™ Device:

Field-installed wall-mounted thermostat is used to control temperature and activation of the dehumidification package. The Thermidistat device can be set for humidity settings from 50% to 90% relative humidity. Automatic humidity control adjusts indoor humidity based on the outdoor temperature sensor.

### \* 10. Flue Shield:

Flue shield shall provide protection from the hot sides of the gas flue hood.

### \* 11. Thermostat and Subbase:

Thermostat and subbase shall provide staged cooling and heating automatic (or manual) changeover, fan control, and indicator light.

### \* 12. Condenser Coil Hail Guard Assembly:

Hail guard shall protect against damage from hail and flying debris.

### 13. Unit-Mounted, Non-Fused Disconnect Switch:

Switch shall be factory-installed, internally mounted. NEC and UL approved non-fused switch shall

provide unit power shutoff. Switch shall be accessible from outside the unit and shall provide power off lockout capability.

### 14. Convenience Outlet:

Outlet shall be factory-installed and internally mounted with easily accessible 115-v female receptacle. Shall include 15 amp GFI receptacle with independent fuse protection. Voltage required to operate convenience outlet shall be provided by a factory-installed step-down transformer. Shall be accessible from outside the unit.

### 15. High-Static Indoor Fan Motor(s) and Drive(s) (036-120):

High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.

### 16. Flue Discharge Deflector:

Flue discharge deflector directs unit exhaust vertically instead of horizontally.

### 17. Condenser Coil Grille:

The grille protects the condenser coil from damage by large objects without increasing unit clearances.

### 18. Compressor Cycle Delay:

Unit shall be prevented from restarting for minimum of 5 minutes after shutdown.

### 19. Thru-the-Bottom Utility Connectors:

Kit shall provide connectors to permit gas and electrical connections to be brought to the unit through the basepan.

### 20. Fan/Filter Status Switch:

Switch shall provide status of indoor (evaporator) fan (ON/OFF) or filter (CLEAN/DIRTY). Status shall be displayed over communication bus when used with direct digital controls or with an indicator light at the thermostat.

### 21. Power Exhaust Accessory for EconoMi\$er IV or EconoMi\$er2:

Power exhaust shall be used in conjunction with EconoMi\$er IV or EconoMi\$er2 to provide system exhaust of up to 100% of return air (vertical only). The power exhaust is a field-installed accessory (separate vertical and horizontal design).

**NOTE:** Horizontal power exhaust is intended to mount in return ductwork.

As the outdoor-air damper opens and closes, *both* propeller fans are energized and deenergized through the EconoMi\$er IV controller. The set point is factory set at 100% of outdoor-air, and is adjustable 0 to 100% to meet specific job requirements. Available in 208/230-1-60 v or 460-3-60 v. An LED light on the controller indicates when the power exhaust is operating.

For the EconoMi\$er2, the power exhaust shall be controlled by the third party controls.

### 22. Outdoor Air Enthalpy Sensor (EconoMi\$er IV or EconoMi\$er2):

The outdoor air enthalpy sensor shall be used with the EconoMi\$er IV or EconoMi\$er2 device to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the EconoMi\$er IV or EconoMi\$er2 device will provide differential enthalpy control. The sensor allows the EconoMi\$er IV or EconoMi\$er2 controller to determine if outside air is suitable for free cooling.

## GUIDE SPECIFICATIONS — 580F036-151 AND 581B036-150 (cont)

23. Return Air Enthalpy Sensor (EconoMi\$er IV or EconoMi\$er2):  
The return air enthalpy sensor shall be used with the EconoMi\$er IV or EconoMi\$er2 device. When used in conjunction with an outdoor air enthalpy sensor, the EconoMi\$er IV or EconoMi\$er2 device will provide differential enthalpy control.
24. Return Air Temperature Sensor (EconoMi\$er IV or EconoMi\$er2):  
The return air temperature sensor shall be used with the EconoMi\$er IV or EconoMi\$er2 device. When used in conjunction with the standard outdoor air temperature sensor, the EconoMi\$er IV or EconoMi\$er2 device will provide differential temperature control.
25. Indoor Air Quality (CO<sub>2</sub>) Sensor (EconoMi\$er2):
- Shall have the ability to provide demand ventilation indoor air quality (IAQ) control through the EconoMi\$er2 with an IAQ sensor.
  - The IAQ sensor shall be available in duct mount, wall mount, and wall mount with LED display. The set point shall have adjustment capability.
  - Requires EconoMi\$er2 control option.
26. Indoor Air Quality (CO<sub>2</sub>) Room Sensor (EconoMi\$er IV):  
Sensor shall have the ability to provide demand ventilation control through the EconoMi\$er IV. The IAQ sensor shall be wall mounted with an LED display in parts per million. The set point shall have adjustment capability.
27. Return Air CO<sub>2</sub> Sensor (EconoMi\$er IV):  
Sensor shall have the ability to provide demand ventilation control through the EconoMi\$er IV. The IAQ sensor shall be duct mounted. The set point shall have adjustment capability.
28. Gas Heat options (sizes 004-006):
- Single-stage gas heat shall be provided in lieu of two-stage heat.
  - NOx reduction shall be provided to reduce nitrous oxide emissions to meet the California Air Quality Management NOx requirement of 40 nanograms/joule or less.
  - Primary tubes on low NOx units shall be 409 stainless steel. Other components shall be aluminumized steel.
29. Ultraviolet Germicidal Lamps:  
Ultraviolet germicidal lamps are designed to eliminate odor causing mold and fungus that may develop in the wet area of the evaporator section of the unit. The high output, low temperature germicidal lamps are field installed in the evaporator section of the unit, aimed at the evaporator coil and condensate pan. The short wavelength ultraviolet light inhibits and kills mold, fungus and microbial growth. The lamps have an output rating at 45F in 400 fpm airflow of 120 microwatts/cm<sup>2</sup> at 1 meter.
30. Perfect Humidity™ Adaptive Dehumidification System (581B only):
- The Perfect Humidity dehumidification system shall be factory-installed in the rooftop units, and shall provide greater dehumidification of the occupied space by two modes of dehumidification operations beside its normal design cooling mode:
    - 1) Subcooling mode further subcools the hot liquid refrigerant leaving the condenser coil when both temperature and humidity in the space are not satisfied.
    - 2) Hot gas reheat mode shall mix a portion of the hot gas from the discharge of the compressor with the hot liquid refrigerant leaving the condenser coil to create a two-phase heat transfer in the system, resulting in a neutral leaving-air temperature when only humidity in the space is not satisfied.
  - The system shall consist of a subcooling/reheat dehumidification coil located downstream of the standard evaporator coil. This dehumidification coil is a two-row coil with the exception of the 036 unit, which has a one-row coil.
  - The system shall include crankcase heater(s) for the scroll compressor(s).
  - The system shall include a low outdoor air temperature switch to lock out both subcooling and hot gas reheat mode when the outdoor-air temperature is below 40 F.
  - The system shall include a Motormaster® low ambient control to ensure the normal design cooling mode capable of down to 0° F low ambient operation.
  - The system shall include a low-pressure switch on the suction line to ensure low pressure start-up of hot gas reheat mode at lower outdoor temperature condition.
  - The system operation may be controlled by a field-installed, wall-mounted humidistat. The dehumidification circuit will then operate only when needed. Field connections for the humidistat are made in the low-voltage compartment of the unit control box. The sensor can be set for any level between 55% and 80% relative humidity.
  - The system shall include a thermostatic expansion valve (TXV) to ensure a positive superheat condition and a balance of pressure drop.
  - For units with two compressors (sizes 090-150), depending on the conditions required to maintain the space set points, one or both compressors can operate in subcooling mode, one compressor could operate in subcooling mode while the other operates in hot gas reheat mode, or one or both compressors can operate in hot gas reheat mode.
31. Humidistat:  
Field-installed, wall-mounted humidistat is used to control activation of the dehumidification package. The humidistat can be set for humidity levels between 20% and 80% relative humidity.
32. Hinged Panel Option:  
Hinged panel option provides hinged access panels for the filter, compressor, evaporator fan, and control box areas. Filter hinged panels permit tool-less entry for changing filters. Each hinged panel is permanently attached to the rooftop unit.
33. Louvered Hail Guard:  
The hail guard shall protect the entire outdoor coil surface from direct or indirect (from adjacent surfaces) hail damage. Hail guard shall have a pressure drop of 2%.



# PHYSICAL DATA — 579F180-300

| UNIT 579F                                                 |  | 180                                                                                            |             | 216                        | 240                                 | 300                                   |
|-----------------------------------------------------------|--|------------------------------------------------------------------------------------------------|-------------|----------------------------|-------------------------------------|---------------------------------------|
|                                                           |  | 208/230, 460 v                                                                                 | 575 v       |                            |                                     |                                       |
| NOMINAL CAPACITY (tons)                                   |  | 15                                                                                             |             | 18                         | 20                                  | 25                                    |
| OPERATING WEIGHT (lb)                                     |  | 1650                                                                                           |             | 1800                       | 1850                                | 2000                                  |
| Economizer                                                |  | 90                                                                                             |             | 90                         | 90                                  | 90                                    |
| Roof Curb                                                 |  | 200                                                                                            |             | 200                        | 200                                 | 200                                   |
| COMPRESSOR                                                |  | Scroll                                                                                         |             |                            |                                     |                                       |
| Quantity...Model (Ckt 1, Ckt 2)                           |  | 2...SR*942AE                                                                                   |             | 1...SM120,<br>1...SR*782AE | 1...SM120,<br>1...SM110             | 1...SM161,<br>1...SM120               |
| Number of Refrigerant Circuits                            |  | 2                                                                                              |             | 2                          | 2                                   | 2                                     |
| Oil (oz) (Ckt 1, Ckt 2)                                   |  | 90, 90                                                                                         |             | 110, 72                    | 110, 110                            | 112, 110                              |
| Stages of Capacity Control (%)                            |  | 50/50                                                                                          |             | 60/40                      | 52/48                               | 56/44                                 |
| REFRIGERANT TYPE                                          |  | R-22                                                                                           |             |                            |                                     |                                       |
| Expansion Device                                          |  | TXV                                                                                            |             |                            |                                     |                                       |
| Operating Charge (lb-oz)                                  |  |                                                                                                |             |                            |                                     |                                       |
| Circuit 1*                                                |  | 10-13                                                                                          |             | 15-2                       | 16-3                                | 21-0                                  |
| Circuit 2                                                 |  | 10-5                                                                                           |             | 11-5                       | 14-8                                | 15-4                                  |
| CONDENSER COIL                                            |  | Cross-Hatched 3/8-in. Copper Tubes, Aluminum Lanced, Aluminum Pre-Coated, or Copper Plate Fins |             |                            |                                     |                                       |
| Rows...Fins/in.                                           |  | 2...17                                                                                         |             | 3...15                     | 3...15                              | 4...15                                |
| Total Face Area (sq ft)                                   |  | 21.7                                                                                           |             | 21.7                       | 21.7                                | 21.7                                  |
| CONDENSER FAN                                             |  | Propeller Type                                                                                 |             |                            |                                     |                                       |
| Nominal Cfm                                               |  | 10,400                                                                                         |             | 9300                       | 13,700                              | 12,500                                |
| Quantity...Diameter (in.)                                 |  | 3...22                                                                                         |             | 3...22                     | 2...30                              | 2...30                                |
| Motor Hp...Rpm                                            |  | 1/2...1050                                                                                     |             | 1/2...1050                 | 1...1075                            | 1...1075                              |
| Watts Input (Total)                                       |  | 1100                                                                                           |             | 1100                       | 3400                                | 3400                                  |
| EVAPORATOR COIL                                           |  | Cross-Hatched 3/8-in. Copper Tubes, Aluminum Lanced or Copper Plate Fins, Face Split           |             |                            |                                     |                                       |
| Rows...Fins/in.                                           |  | 2...17                                                                                         |             | 3...15                     | 3...15                              | 4...15                                |
| Total Face Area (sq ft)                                   |  | 17.5                                                                                           |             | 17.5                       | 17.5                                | 17.5                                  |
| EVAPORATOR FAN                                            |  | Centrifugal Type                                                                               |             |                            |                                     |                                       |
| Quantity...Size (in.)                                     |  | 2...10 x 10                                                                                    | 2...10 x 10 | 2...12 x 12                | 2...12 x 12                         | 2...12 x 12                           |
| Type Drive                                                |  | Belt                                                                                           | Belt        | Belt                       | Belt                                | Belt                                  |
| Nominal Cfm                                               |  | 6000                                                                                           | 6000        | 7200                       | 8000                                | 10,000                                |
| Motor Hp                                                  |  | 3.7                                                                                            | 3.0         | 5                          | 7.5                                 | 10                                    |
| Motor Nominal Rpm                                         |  | 1725                                                                                           | 1725        | 1745                       | 1745                                | 1740                                  |
| Maximum Continuous Bhp                                    |  | 4.25                                                                                           | 3.45        | 5.90                       | 8.7 [208/230, 575 v]<br>9.5 [460 v] | 10.2 [208/230, 575 v]<br>11.8 [460 v] |
| Motor Frame Size                                          |  | 56H                                                                                            | 56H         | 184T                       | 213T                                | 215T                                  |
| Nominal Rpm High/Low                                      |  | —                                                                                              | —           | —                          | —                                   | —                                     |
| Fan r/s Range                                             |  | 891-1179                                                                                       | 1159-1429   | 910-1095                   | 1002-1225                           | 1066-1283                             |
|                                                           |  | Low-Medium Static                                                                              | High Static | 1069-1287                  | 1193-1458                           | 1332-1550                             |
| Motor Bearing Type                                        |  | Ball                                                                                           | Ball        | Ball                       | Ball                                | Ball                                  |
| Maximum Allowable Rpm                                     |  | 1550                                                                                           | 1550        | 1550                       | 1550                                | 1550                                  |
| Motor Pulley Pitch Diameter                               |  | 3.1/4.1                                                                                        | 4.3/5.3     | 4.9/5.9                    | 5.4/6.6                             | 4.9/5.9                               |
| Min/Max (in.)                                             |  | 3.7/4.7                                                                                        | —           | 4.9/5.9                    | 5.4/6.6                             | 4.9/5.9                               |
| Nominal Motor Shaft Diameter (in.)                        |  | 7/8                                                                                            | 7/8         | 1 1/8                      | 1 3/8                               | 1 3/8                                 |
| Fan Pulley Pitch Diameter (in.)                           |  | Low-Medium Static                                                                              | High Static | 9.4                        | 9.4                                 | 8.0                                   |
|                                                           |  | 5.2                                                                                            | —           | 8.0                        | 7.9                                 | 6.4                                   |
| Nominal Fan Shaft Diameter (in.)                          |  | 1 3/16                                                                                         | 1 3/16      | 1 7/16                     | 1 7/16                              | 1 7/16                                |
| Belt, Quantity...Type...Length (in.)                      |  | Low-Medium Static                                                                              | High Static | 1...BX...50                | 1...BX...54                         | 2...BX...50                           |
|                                                           |  | 13.5-15.5                                                                                      | 13.5-15.5   | 1...BX...48                | 1...BX...50                         | 2...BX...47                           |
| Pulley Center Line Distance (in.)                         |  | 48                                                                                             | 44          | 37                         | 37                                  | 36                                    |
| Speed Change per Full Turn of Movable Pulley Flange (rpm) |  | Low-Medium Static                                                                              | High Static | 34                         | 44                                  | 45                                    |
| Movable Pulley Maximum Full Turns From Closed Position    |  | 5                                                                                              | 5           | 5                          | 5                                   | 5                                     |
| Factory Speed                                             |  | 3.5                                                                                            | 3.5         | 3.5                        | 3.5                                 | 3.5                                   |
| Factory Speed Setting (rpm)                               |  | 1035                                                                                           | 1296        | 1002                       | 1120                                | 1182                                  |
|                                                           |  | Low-Medium Static                                                                              | High Static | 1178                       | 1328                                | 1470                                  |
| Fan Shaft Diameter at Pulley (in.)                        |  | 1 3/16                                                                                         | 1 3/16      | 1 7/16                     | 1 7/16                              | 1 7/16                                |

## LEGEND

**Bhp** — Brake Horsepower  
**TXV** — Thermostatic Expansion Valve

\*Circuit 1 uses the lower portion of condenser coil and lower portion of evaporator coils; and Circuit 2 uses the upper portion of both coils.

†Rollout switch is manual reset.

\*\*The 579F300 units requires 2-in. industrial-grade filters capable of handling face velocities of up to 625 ft/min (such as American Air Filter no. 5700 or equivalent).

**NOTE:** The 579F units have a low-pressure switch (standard) located on the suction side.

# PHYSICAL DATA — 579F180-300 (cont)

| UNIT 579F                                   | 180                    | 216                    | 240                                                                               | 300                    |
|---------------------------------------------|------------------------|------------------------|-----------------------------------------------------------------------------------|------------------------|
| <b>FURNACE SECTION</b>                      |                        |                        |                                                                                   |                        |
| Rollout Switch Cutout Temp (F)†             | 190                    | 190                    | 190                                                                               | 190                    |
| Burner Orifice Diameter (in. ...drill size) |                        |                        |                                                                                   |                        |
| Natural Gas                                 | 0.1285...30/0.136...29 | 0.1285...30/0.136...29 | 0.1285...30/0.136...29                                                            | 0.1285...30/0.136...29 |
| Thermostat Heat Anticipator Setting (amps)  |                        |                        |                                                                                   |                        |
| 208/230, 575                                |                        |                        |                                                                                   |                        |
| Stage 1                                     | 0.98                   | 0.98                   | 0.98                                                                              | 0.98                   |
| Stage 2                                     | 0.44                   | 0.44                   | 0.44                                                                              | 0.44                   |
| 460 v                                       | 0.80                   | 0.80                   | 0.80                                                                              | 0.80                   |
| Stage 1                                     | 0.44                   | 0.44                   | 0.44                                                                              | 0.44                   |
| Stage 2                                     |                        |                        |                                                                                   |                        |
| Gas Input                                   | 172,000/225,000        | 206,000/270,000        | 206,000/270,000                                                                   | 206,000/270,000        |
| Efficiency (Steady State) (%)               | 230,000/300,000        | 275,000/360,000        | 275,000/360,000                                                                   | 275,000/360,000        |
| Temperature Rise Range                      | 81                     | 81                     | 81                                                                                | 81                     |
| Manifold Pressure (in. wg)                  | 15-45/20-50            | 15-45/20-50            | 15-45/20-50                                                                       | 15-45/20-50            |
| Natural Gas                                 | 3.3                    | 3.3                    | 3.3                                                                               | 3.3                    |
| Gas Valve Quantity                          | 1                      | 1                      | 1                                                                                 | 1                      |
| Field Gas Connection Size (in.-FPT)         | 3/4                    | 3/4                    | 3/4                                                                               | 3/4                    |
| <b>HIGH-PRESSURE SWITCH (psig)</b>          |                        |                        |                                                                                   |                        |
| Cutout                                      |                        |                        | 426                                                                               |                        |
| Reset (Auto)                                |                        |                        | 320                                                                               |                        |
| <b>LOW-PRESSURE SWITCH (psig)</b>           |                        |                        |                                                                                   |                        |
| Cutout                                      |                        |                        | 27                                                                                |                        |
| Reset (Auto)                                |                        |                        | 44                                                                                |                        |
| <b>FREEZE PROTECTION THERMOSTAT (F)</b>     |                        |                        |                                                                                   |                        |
| Opens                                       |                        |                        | 30 ± 5                                                                            |                        |
| Closes                                      |                        |                        | 45 ± 5                                                                            |                        |
| <b>OUTDOOR-AIR INLET SCREENS</b>            |                        |                        |                                                                                   |                        |
| Quantity...Size (in.)                       |                        |                        | Cleanable                                                                         |                        |
|                                             |                        |                        | 2...20 x 25 x 1                                                                   |                        |
|                                             |                        |                        | 1...20 x 20 x 1                                                                   |                        |
| <b>RETURN-AIR FILTERS</b>                   |                        |                        |                                                                                   |                        |
| Quantity...Size (in.)                       |                        |                        | Throwaway**                                                                       |                        |
|                                             |                        |                        | 4...20 x 20 x 2                                                                   |                        |
|                                             |                        |                        | 4...16 x 20 x 2                                                                   |                        |
| <b>POWER EXHAUST</b>                        |                        |                        |                                                                                   |                        |
|                                             |                        |                        | 1/2 Hp, 208/230-460 v Motor Direct Drive, Propeller-Fan (Factory-Wired for 460 v) |                        |

## LEGEND

Bhp — Brake Horsepower  
TXV — Thermostatic Expansion Valve

†Rollout switch is manual reset.

\*\*The 579F300 units requires 2-in. industrial-grade filters capable of handling face velocities of up to 625 ft/min (such as American Air Filter no. 5700 or equivalent).

NOTE: The 579F units have a low-pressure switch (standard) located on the suction side.

\*Circuit 1 uses the lower portion of condenser coil and lower portion of evaporator coils; and Circuit 2 uses the upper portion of both coils.

## OPERATING AND RIGGING WEIGHTS

| UNIT | BASE UNIT OPERATING WEIGHTS* |     |      |     |      |     |      |     |
|------|------------------------------|-----|------|-----|------|-----|------|-----|
|      | 180                          |     | 216  |     | 240  |     | 300  |     |
|      | lb                           | kg  | lb   | kg  | lb   | kg  | lb   | kg  |
| 579F | 1650                         | 748 | 1800 | 816 | 1850 | 839 | 2000 | 907 |

\*Base unit weight does not include electric heaters, copper coils, economizer, power exhaust, barometric relief or crating. See Options and Accessories table below for more information.

NOTE: For 180 and 216 unit sizes add 75 lb (34 kg) for domestic crating. For 240 and 300 unit sizes add 135 lb (61 kg). For export crating add 500 lb (227 kg).

## OPTIONS AND ACCESSORIES (Weight Adders)

| OPTION/<br>ACCESSORY                      | OPTION/ACCESSORY WEIGHTS |     |     |     |     |     |     |     |
|-------------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                           | 180                      |     | 216 |     | 240 |     | 300 |     |
|                                           | lb                       | kg  | lb  | kg  | lb  | kg  | lb  | kg  |
| Barometric Relief Damper                  | 50                       | 23  | 50  | 23  | 50  | 23  | 50  | 23  |
| Power Exhaust                             | 85                       | 39  | 85  | 39  | 85  | 39  | 85  | 39  |
| EconoMi\$er IV                            | 90                       | 41  | 90  | 41  | 90  | 41  | 90  | 41  |
| Cu Condenser Coil                         | 150                      | 68  | 150 | 68  | 150 | 68  | 150 | 68  |
| Cu Condenser and Evaporator Coils         | 280                      | 127 | 280 | 127 | 280 | 127 | 280 | 127 |
| Roof Curb (14-in. curb)                   | 200                      | 91  | 200 | 91  | 200 | 91  | 200 | 91  |
| Horizontal Adapter Curb (Pre-Assembled)   | 250                      | 113 | 250 | 113 | 250 | 113 | 250 | 113 |
| Horizontal Adapter Curb (Field-Assembled) | 343                      | 156 | 343 | 156 | 343 | 156 | 343 | 156 |
| Hail Guard                                | 60                       | 27  | 60  | 27  | 60  | 27  | 60  | 27  |

## LEGEND

Cu — Copper

579F180-300

| UNIT<br>579F | STD UNIT<br>WEIGHT |     | ECONOMIZER<br>WEIGHT |    | CORNER<br>A |     | CORNER<br>B |     | CORNER<br>C |     | CORNER<br>D |     | DIM A   |      | DIM B   |      | DIM C   |     |
|--------------|--------------------|-----|----------------------|----|-------------|-----|-------------|-----|-------------|-----|-------------|-----|---------|------|---------|------|---------|-----|
|              | Lb                 | Kg  | Lb                   | Kg | Lb          | Kg  | Lb          | Kg  | Lb          | Kg  | Lb          | Kg  | ft.-in. | mm   | ft.-in. | mm   | ft.-in. | mm  |
| 180          | 1650               | 748 | 90                   | 41 | 423         | 192 | 386         | 175 | 403         | 183 | 438         | 199 | 3-5     | 1041 | 3-5     | 1041 | 1-10    | 559 |
| 216          | 1800               | 816 | 90                   | 41 | 432         | 196 | 410         | 186 | 461         | 209 | 472         | 214 | 3-3     | 991  | 3-7     | 1092 | 1-8     | 508 |

**NOTES:**

- NOTES:
1. Refer to print for roof curb accessory dimensions.
  2. Dimensions in ( ) are in millimeters.

3.  Center of Gravity.

4.  Direction of airflow.

5. Ductwork to be attached to accessory roof curb only.

6. Minimum clearance:

- Rear: 7'-0" (2134) for coil removal. This dimension can be reduced to 4'-0" (1219) if conditions permit coil removal from the top.
- 4'-0" (1219) to combustible surfaces, all four sides (includes between units).
- Left side: 4'-0" (1219) for proper condenser coil airflow.
- Front: 4'-0" (1219) for control box access.

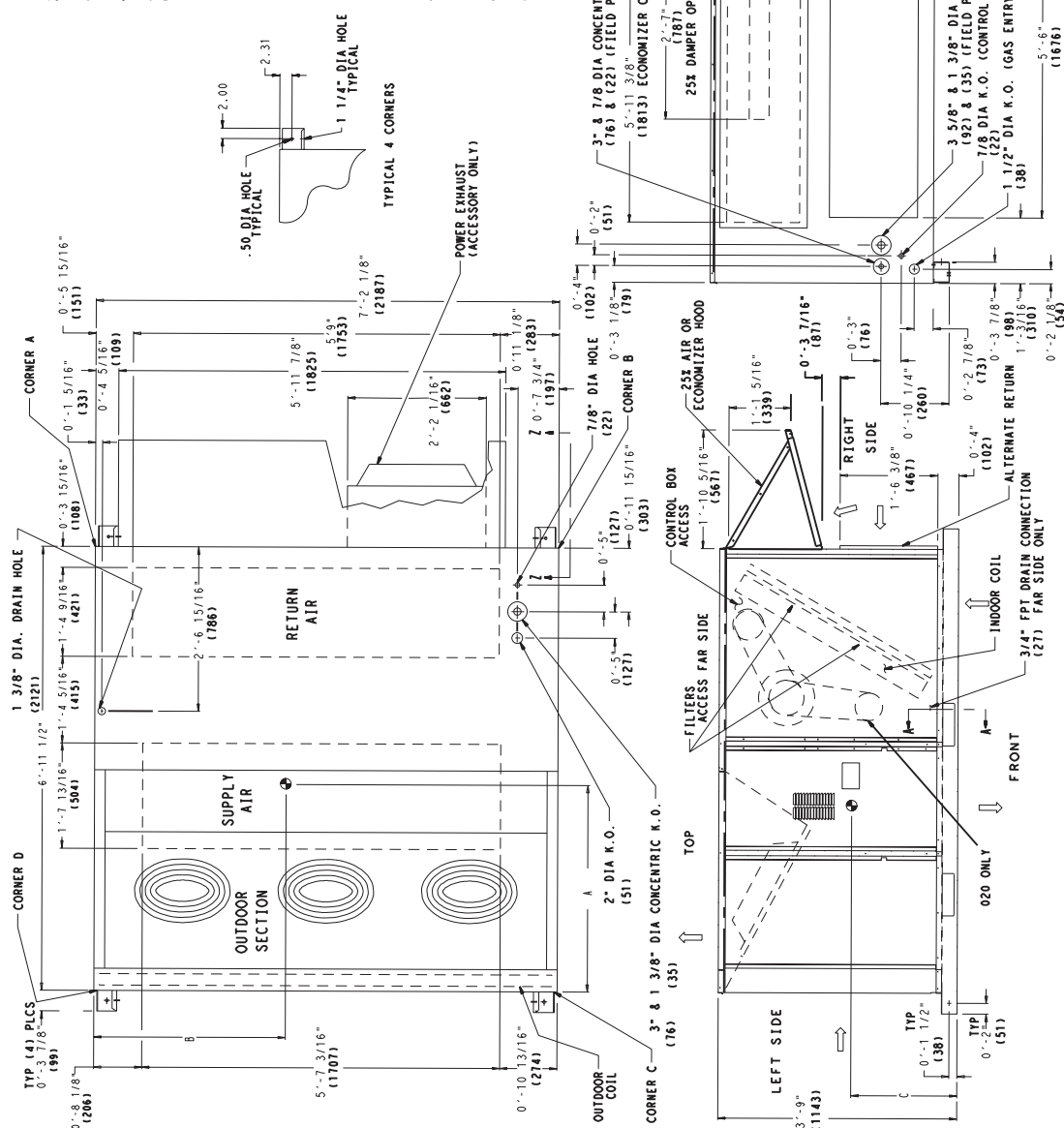
- Right side: 4'-0" (1219) for proper operation of damper and power exhaust if so equipped.
- Top: 6'-0" (1829) to assure proper condenser fan operation.
- Bottom: 14" (356) to combustible surfaces (when not using curb).
- Control box side: 3'-0" (914) to ungrounded surfaces, non-combustible.
- Control box side: 3'-6" (1067) to block or concrete walls, or other grounded surfaces.

- Local codes or jurisdiction may prevail.

7. With the exception of clearance for the condenser coil and the damper/power exhaust as stated in Note #6, a removable fence or barricade requires no clearance.

8. Dimensions are from outside of corner post. Allow 0' -5/16" (8) on each side for top cover drip edge.

9. See drawing 50TJ500352 for service option details.

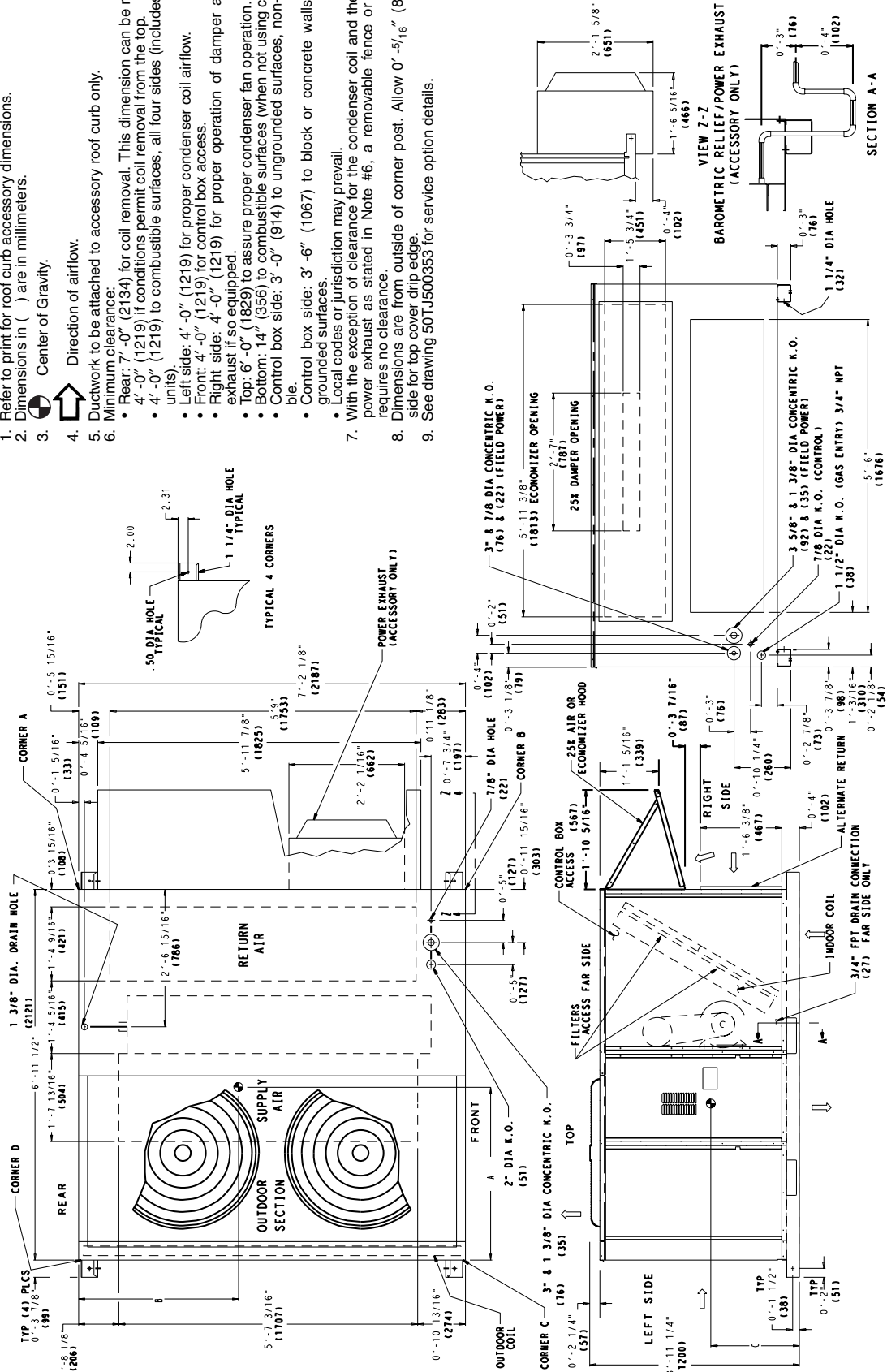


# BASE UNIT DIMENSIONS — 579F240,300

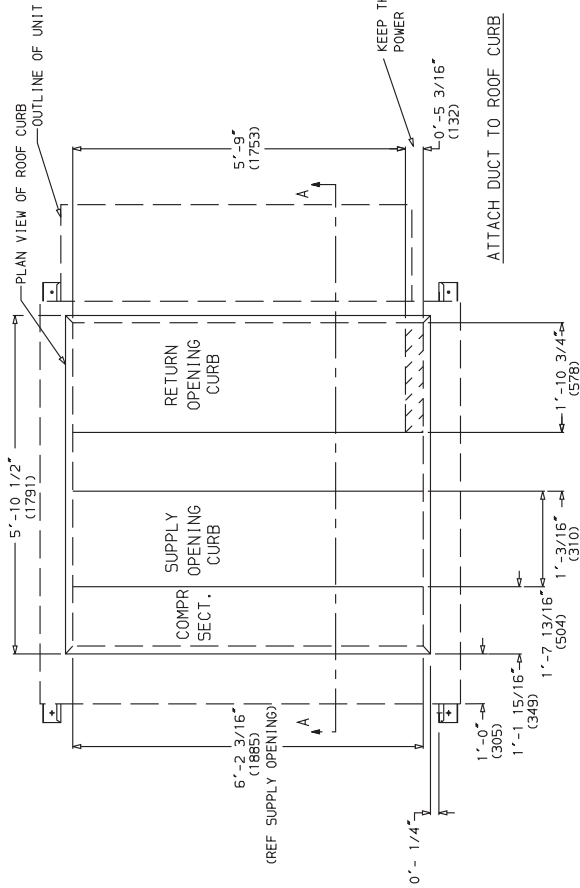
| UNIT<br>579F | STD UNIT WEIGHT |     | ECONOMIZER WEIGHT |    | CORNER A |     | CORNER B |     | CORNER C |     | CORNER D |     | DIM A  |     | DIM B  |      | DIM C  |     |
|--------------|-----------------|-----|-------------------|----|----------|-----|----------|-----|----------|-----|----------|-----|--------|-----|--------|------|--------|-----|
|              | Lb              | Kg  | Lb                | Kg | Lb       | Kg  | Lb       | Kg  | Lb       | Kg  | Lb       | Kg  | ft-in. | mm  | ft-in. | mm   | ft-in. | mm  |
| 240          | 1850            | 839 | 90                | 41 | 443      | 201 | 406      | 184 | 476      | 216 | 525      | 238 | 3-2    | 965 | 3-5    | 1041 | 1-8    | 508 |
| 300          | 2000            | 907 | 90                | 41 | 471      | 214 | 428      | 194 | 526      | 239 | 574      | 260 | 3-2    | 965 | 3-5    | 1041 | 1-8    | 508 |

## NOTES:

1. Refer to print for roof curb accessory dimensions.
2. Dimensions in ( ) are in millimeters.
3.  Center of Gravity.
4.  Direction of airflow.
5. Ductwork to be attached to accessory roof curb only.
6. Minimum clearance:
  - Rear: 7'-0" (2134) for coil removal. This dimension can be reduced to 4'-0" (1219) if conditions permit coil removal from the top.
  - Left side: 4'-0" (1219) to combustible surfaces, all four sides (includes between units).
  - Right side: 4'-0" (1219) for proper operation of damper and power exhaust, if so equipped.
  - Top: 6'-0" (1829) to assure proper condenser fan operation.
  - Bottom: 14" (356) to combustible surfaces (when not using curb).
  - Control box side: 3'-0" (914) to ungrounded surfaces, non-combustible.
  - Control box side: 3'-6" (1067) to block or concrete walls, or other grounded surfaces.
  - Local codes or jurisdiction may prevail.
7. With the exception of clearance for the condenser coil and the damper/power exhaust as stated in Note #6, a removable fence or barricade requires no clearance.
8. Dimensions are from outside of corner post. Allow 0'-5 1/16" (8) on each side for top cover drip edge.
9. See drawing 50TJ500353 for service option details.

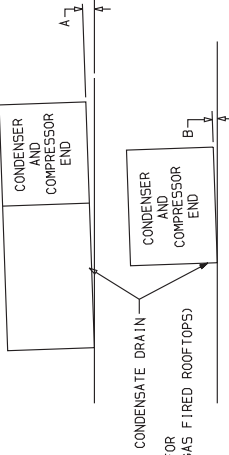


| PKG. NO. REF.  | CURB HEIGHT | DESCRIPTION                                         |
|----------------|-------------|-----------------------------------------------------|
| CRRFCURB010A00 | 1'-2" (305) | Standard Curb 14" High                              |
| CRRFCURB011A00 | 2'-0" (610) | Standard Curb for Units Requiring High Installation |
| CRRFCURB012A00 | 2'-0" (610) | Side Supply and Return Curb for High Installation   |



- NOTES:
1. ROOF CURB ACCESSORY IS SHIPPED DISASSEMBLED.
  2. INSULATED PANELS, THICK NEOPRENE COATED, 1-1/2 LB DENSITY, DIMENSIONS ARE IN INCHES.
  3. DIRECTION OF AIR FLOW.
  4. CONDENSATE DRAIN (1753).
  5. ROOF CURB IS 6A (VA03-56) STL.
  6. A 90 DEGREE ELBOW MUST BE INSTALLED ON THE SUPPLY DUCT WORK BELOW THE UNIT DISCHARGE FOR UNITS EQUIPPED WITH ELECTRIC HEATERS.

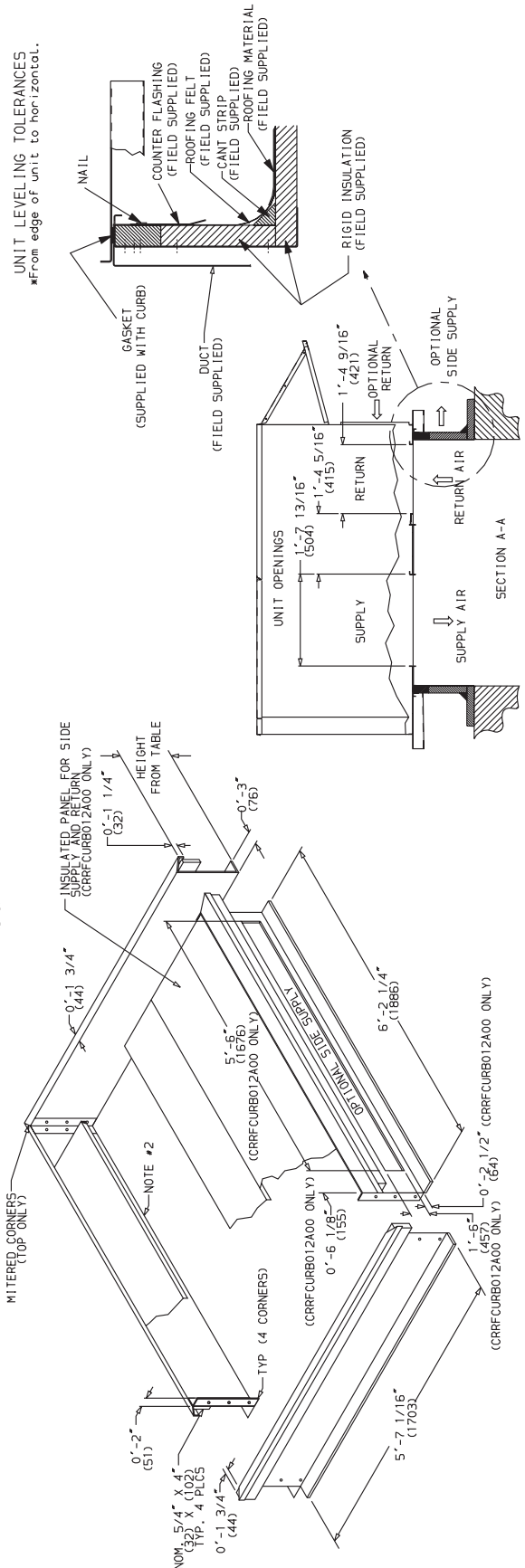
NOTE:  
TO PREVENT THE HAZARD OF STAGNANT WATER BUILD-UP IN THE DRAIN PAN OF THE INDOOR SECTION, UNIT CAN ONLY BE PITCHED AS SHOWN.



DIMENSIONS (degrees and inches)

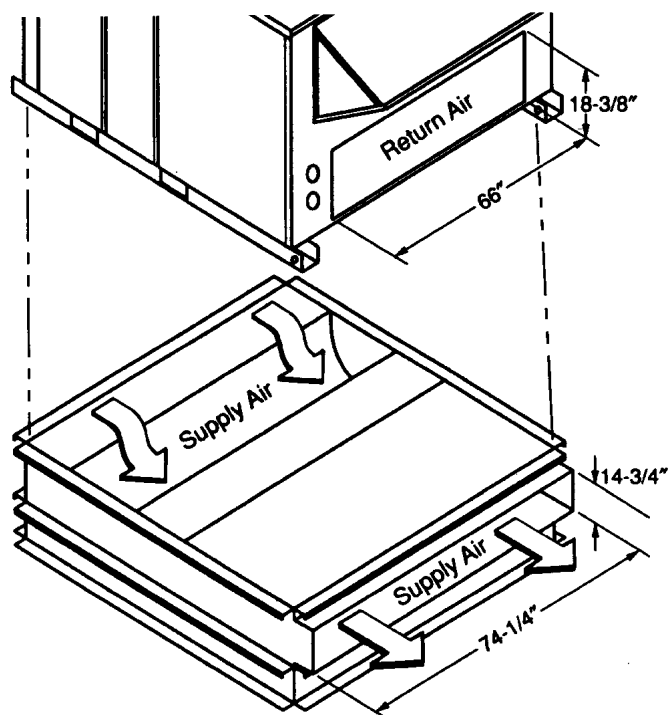
| UNIT | A    | B   |
|------|------|-----|
|      | DEG. | IN. |
| ALL  | .28  | .45 |
|      | .28  | .43 |

UNIT LEVELING TOLERANCES  
\*From edge of unit to horizontal.



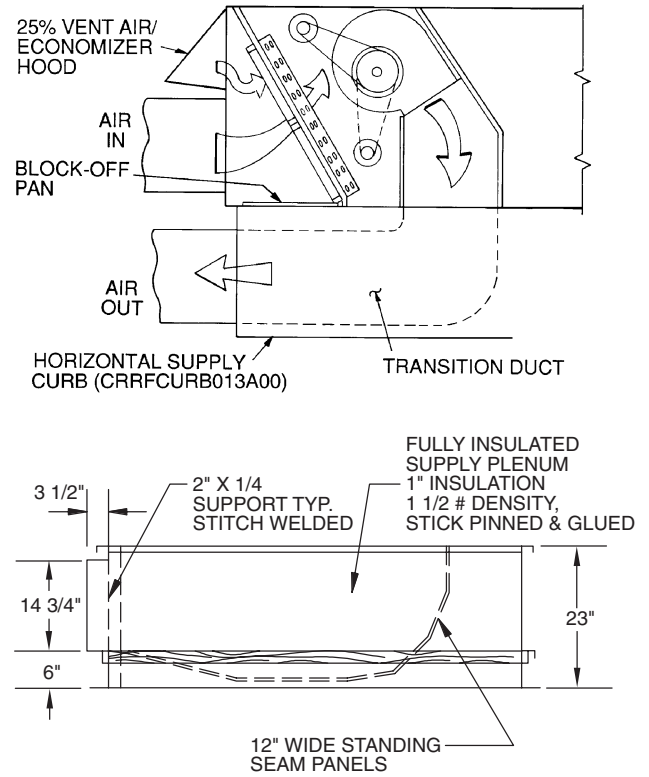
Horizontal and Vertical Roof Curbs — 579F180-300

## ACCESSORY DIMENSIONS — 579F180-300 (cont)



**NOTE:** CRRFCURB013A00 is a fully factory preassembled horizontal adapter and includes an insulated transition duct. The pressure drop through the adapter curb is negligible.

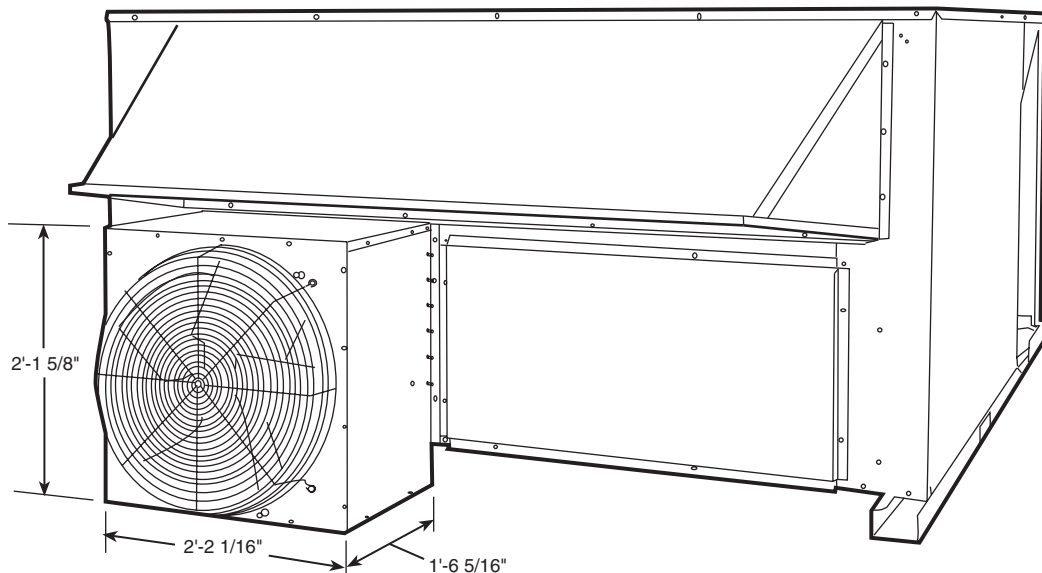
For horizontal return applications: The power exhaust and barometric relief dampers must be installed in the return air duct.



| ACCESSORY PACKAGE NO. | CURB HEIGHT   | DESCRIPTION                                  |
|-----------------------|---------------|----------------------------------------------|
| CRRFCURB013A00        | 1' -11" (584) | Pre-Assembled, Roof Curb, Horizontal Adapter |

579F180-300

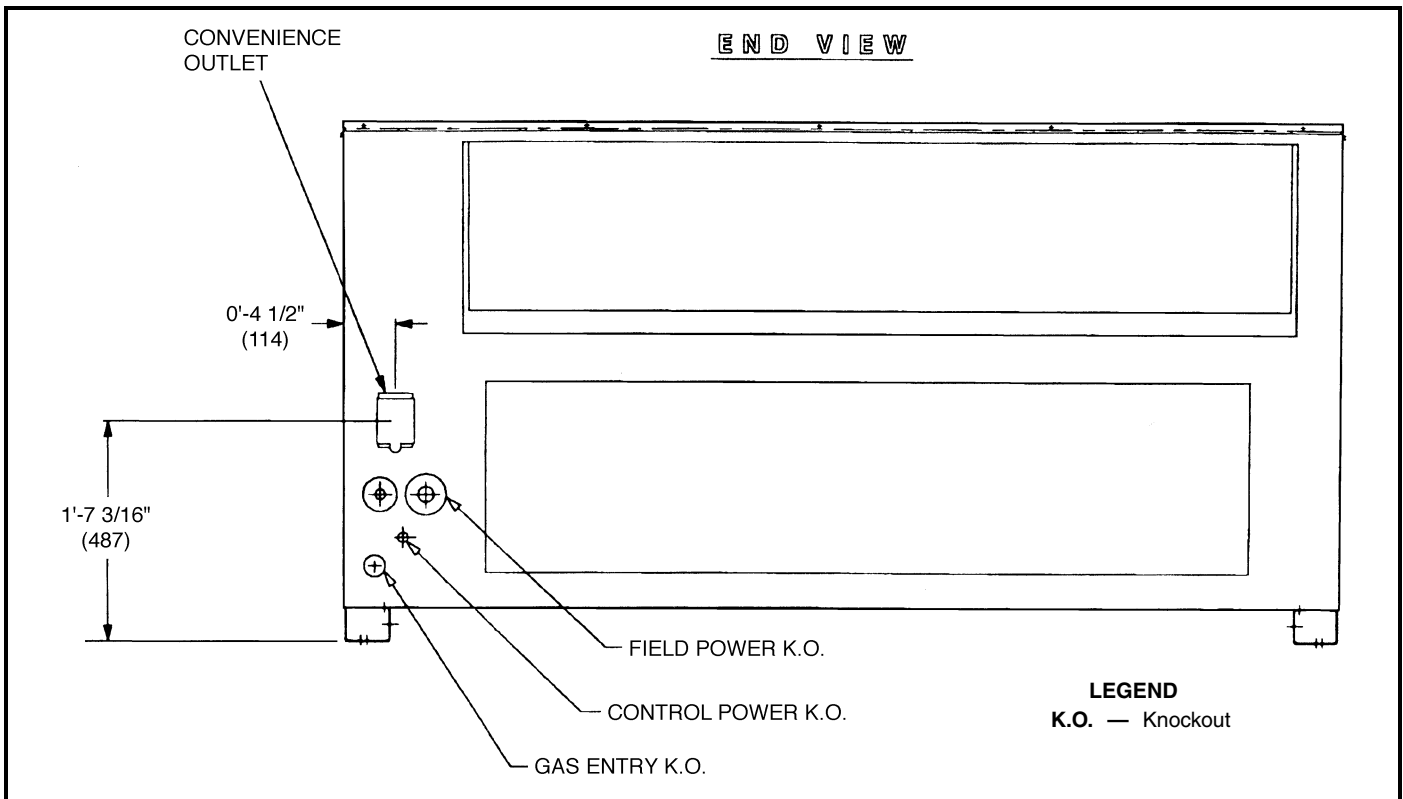
### Horizontal Supply/Return Adapter Installation (579F180-300)



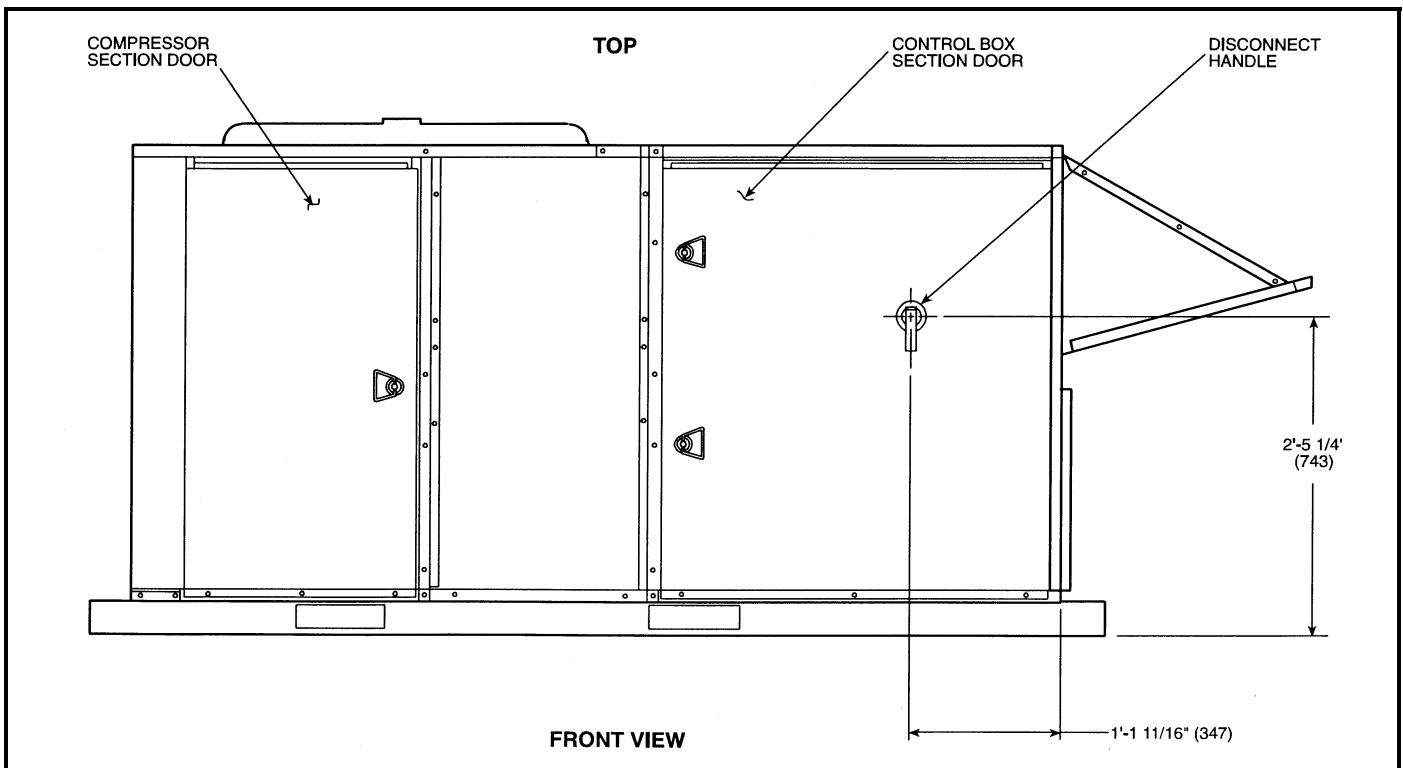
For horizontal return applications: The power exhaust relief must be installed in the return air duct.

### Barometric Relief/Power Exhaust

## ACCESSORY DIMENSIONS (cont)



**Factory-Installed Convenience Outlet**



**Factory-Installed Non-Fused Disconnect**

## SELECTION PROCEDURE (With 579F180 Example)

### I DETERMINE COOLING AND HEATING REQUIREMENTS AT DESIGN CONDITIONS.

Given:

Required Cooling Capacity . . . . . 170,000 Btuh  
Sensible Heat Capacity . . . . . 111,000 Btuh  
Required Heating Capacity . . . . . 200,000 Btuh  
Condenser Entering Air Temp . . . . . 95 F (Summer)  
Evaporator Entering Air Temp . . . . . 80 F edb,  
67 F ewb  
Evaporator Air Quantity . . . . . 4,500 cfm  
External Static Pressure . . . . . 0.6 in. wg  
Electrical Characteristics (V-Ph-Hz) . . . . . 460-3-60  
Vertical discharge unit with optional EconoMi\$er IV  
required.

edb — Entering dry-bulb

ewb — Entering wet-bulb

### II SELECT UNIT BASED ON REQUIRED COOLING CAPACITY.

Enter Cooling Capacities table for 579F180300 (page 152) at condenser entering temperature 95 F, evaporator air entering at 4,500 cfm and 67 F wb. The 579F180300 unit will provide a total cooling capacity of 179,000 Btuh and a sensible heating capacity of 117,000 Btuh. For air entering evaporator at temperatures other than 80 F edb, calculate sensible heat capacity correction as required using the formula in the notes following the Cooling Capacities tables.

**NOTE:** Unit ratings are gross capacities and do not include the effect of evaporator-fan motor heat. To calculate net capacities, see Step V.

### III SELECT HEATING CAPACITY OF UNIT TO PROVIDE DESIGN CONDITION REQUIREMENTS.

In the ARI Heating Capacities and Efficiencies table (page 12) note that the 579F180300 will provide an output capacity of 243,000 Btuh, which is adequate for the given application.

### IV DETERMINE FAN SPEED AND POWER REQUIREMENTS AT DESIGN CONDITIONS.

Before entering the Fan Performance tables, calculate the total static pressure required based on unit components. From the given and the Accessory/FIOP Static Pressure table on page 164 find:

|                                |             |
|--------------------------------|-------------|
| External static pressure       | 0.60 in. wg |
| EconoMi\$er IV static pressure | 0.04 in. wg |
| Total static pressure          | 0.64 in. wg |

Enter the Fan Performance table 579F180300 (page 161) at 4,500 cfm and 0.64 in. wg external static pressure. By interpolation, find that the rpm is 1017 and the watts are 1743.

### V DETERMINE NET COOLING CAPACITY.

Cooling capacities are gross capacities and do not include indoor (evaporator) fan motor (IFM) heat. Use the watts input power to the motor calculated in Section IV above.

IFM Watts = 1743

Determine net cooling capacity using the following formula:

Net capacity = Gross capacity – IFM heat  
= 179,000 Btuh – 1743 Watts

(3.412  $\frac{\text{Btuh}}{\text{Watts}}$ )

= 179,000 Btuh – 5947 Btuh  
= 173,053 Btuh

Net sensible capacity = 117,000 Btuh – 5947 Btuh  
= 111,053 Btuh

The calculations show that a 579F180300 unit with the standard motor and standard low-medium static drive is the correct selection for the given conditions.

579F180-300



# PERFORMANCE DATA — 579F

## COOLING CAPACITIES

| 579F180 (15 Tons)                              |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 4500                          |         |         |         |         |         |         | 5250    |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.48                       | 58/0.32 | 62/0.22 | 67/0.20 | 72/0.19 | 76/0.24 | 80/0.04 | 54/0.54 | 58/0.39 | 62/0.25 | 67/0.23 | 72/0.21 | 76/0.23 | 80/0.04 |
| 75                                             | TC  | —                             | 168     | 177     | 192     | 209     | 225     | 240     | 171     | 171     | 182     | 197     | 214     | 229     | 246     |
|                                                | SHC | —                             | 152     | 142     | 123     | 103     | 85      | 69      | 171     | 150     | 151     | 130     | 108     | 88      | 69      |
|                                                | kW  | —                             | 12.4    | 12.6    | 13.0    | 13.3    | 13.6    | 13.9    | 12.5    | 12.6    | 12.7    | 13.1    | 13.4    | 13.7    | 14.0    |
| 85                                             | TC  | 159                           | 164     | 171     | 186     | 202     | 219     | 233     | 166     | 172     | 175     | 190     | 207     | 222     | 237     |
|                                                | SHC | 159                           | 148     | 139     | 120     | 100     | 83      | 66      | 166     | 151     | 148     | 127     | 105     | 86      | 67      |
|                                                | kW  | 13.7                          | 13.8    | 14.1    | 14.4    | 14.8    | 15.5    | 15.4    | 13.9    | 14.0    | 14.1    | 14.5    | 14.9    | 15.2    | 15.5    |
| 95                                             | TC  | 154                           | 159     | 165     | 179     | 195     | 210     | 226     | 161     | 164     | 169     | 183     | 199     | 214     | 229     |
|                                                | SHC | 154                           | 142     | 136     | 117     | 98      | 80      | 64      | 161     | 155     | 145     | 124     | 102     | 83      | 64      |
|                                                | kW  | 15.3                          | 15.4    | 15.5    | 15.9    | 16.3    | 16.7    | 17.3    | 15.5    | 15.5    | 15.7    | 16.0    | 16.5    | 16.8    | 17.1    |
| 105                                            | TC  | 149                           | 154     | 158     | 172     | 187     | 201     | 216     | 156     | 156     | 162     | 176     | 191     | 205     | 222     |
|                                                | SHC | 149                           | 137     | 133     | 114     | 95      | 78      | 61      | 156     | 156     | 142     | 121     | 99      | 81      | 62      |
|                                                | kW  | 16.9                          | 17.0    | 17.1    | 17.6    | 18.0    | 18.4    | 18.7    | 17.2    | 17.1    | 17.2    | 17.7    | 18.1    | 18.5    | 19.1    |
| 115                                            | TC  | 144                           | 145     | 152     | 165     | 179     | 193     | 207     | 150     | 151     | 156     | 168     | 183     | 196     | 210     |
|                                                | SHC | 144                           | 142     | 130     | 111     | 92      | 75      | 58      | 150     | 151     | 137     | 118     | 96      | 78      | 58      |
|                                                | kW  | 18.6                          | 18.6    | 18.9    | 19.3    | 19.8    | 20.2    | 20.6    | 18.9    | 18.9    | 19.0    | 19.5    | 19.9    | 20.3    | 20.7    |
| 117                                            | TC  | 143                           | 143     | 150     | 163     | 178     | 191     | 205     | 149     | 149     | 154     | 167     | 181     | 194     | 208     |
|                                                | SHC | 143                           | 142     | 129     | 110     | 91      | 74      | 57      | 149     | 149     | 136     | 117     | 96      | 77      | 58      |
|                                                | kW  | 18.9                          | 19.0    | 19.2    | 19.7    | 20.2    | 20.5    | 20.9    | 19.2    | 19.2    | 19.4    | 19.8    | 20.3    | 20.7    | 21.0    |
| 120                                            | TC  | 141                           | 141     | 148     | 161     | 175     | —       | —       | 147     | 148     | 152     | 164     | 179     | —       | —       |
|                                                | SHC | 141                           | 141     | 128     | 109     | 90      | —       | —       | 147     | 148     | 135     | 116     | 95      | —       | —       |
|                                                | kW  | 19.5                          | 19.5    | 19.8    | 20.2    | 20.7    | —       | —       | 19.8    | 19.8    | 19.9    | 20.4    | 20.8    | —       | —       |

| 579F180 (15 Tons) (cont)                       |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 6000                          |         |         |         |         |         |         | 6750    |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.58                       | 58/0.43 | 62/0.30 | 67/0.25 | 72/0.23 | 76/0.24 | 80/0.04 | 54/0.62 | 58/0.48 | 62/0.36 | 67/0.28 | 72/0.25 | 76/0.25 | 80/0.03 |
| 75                                             | TC  | 178                           | 174     | 185     | 200     | 218     | 233     | 250     | 183     | 179     | 183     | 203     | 221     | 236     | 253     |
|                                                | SHC | 178                           | 171     | 159     | 136     | 112     | 91      | 70      | 183     | 179     | 161     | 142     | 116     | 93      | 70      |
|                                                | kW  | 12.7                          | 12.7    | 12.8    | 13.1    | 13.5    | 13.8    | 14.1    | 12.8    | 12.7    | 12.8    | 13.2    | 13.5    | 13.9    | 14.1    |
| 85                                             | TC  | 173                           | 173     | 179     | 193     | 210     | 227     | 244     | 178     | 178     | 183     | 196     | 213     | 228     | 247     |
|                                                | SHC | 173                           | 172     | 156     | 133     | 109     | 89      | 68      | 178     | 178     | 161     | 139     | 113     | 91      | 68      |
|                                                | kW  | 14.1                          | 14.1    | 14.2    | 14.6    | 15.0    | 15.8    | 16.2    | 14.2    | 14.2    | 14.3    | 14.7    | 15.1    | 15.3    | 16.3    |
| 95                                             | TC  | 167                           | 167     | 173     | 186     | 203     | 217     | 232     | 173     | 173     | 177     | 189     | 205     | 220     | 235     |
|                                                | SHC | 167                           | 167     | 152     | 130     | 106     | 86      | 64      | 173     | 173     | 157     | 137     | 111     | 88      | 65      |
|                                                | kW  | 15.7                          | 15.6    | 15.8    | 16.1    | 16.6    | 16.9    | 17.2    | 15.8    | 15.8    | 15.9    | 16.2    | 16.6    | 17.0    | 17.3    |
| 105                                            | TC  | 162                           | 162     | 167     | 179     | 194     | 208     | 223     | 168     | 167     | 171     | 181     | 197     | 211     | 225     |
|                                                | SHC | 162                           | 162     | 147     | 127     | 104     | 83      | 61      | 168     | 167     | 152     | 133     | 108     | 85      | 62      |
|                                                | kW  | 17.3                          | 17.3    | 17.4    | 17.8    | 18.2    | 18.5    | 18.9    | 17.4    | 17.4    | 17.5    | 17.9    | 18.3    | 18.6    | 18.9    |
| 115                                            | TC  | 156                           | 156     | 160     | 171     | 186     | 199     | 213     | 160     | 160     | 165     | 173     | 188     | 201     | 215     |
|                                                | SHC | 156                           | 156     | 143     | 124     | 101     | 80      | 59      | 160     | 160     | 145     | 130     | 104     | 82      | 59      |
|                                                | kW  | 19.1                          | 19.1    | 19.1    | 19.6    | 20.0    | 20.4    | 20.7    | 19.2    | 19.2    | 19.3    | 19.6    | 20.1    | 20.5    | 20.8    |
| 117                                            | TC  | 154                           | 155     | 159     | 169     | 184     | 197     | 211     | 159     | 159     | 163     | 171     | 186     | 199     | —       |
|                                                | SHC | 154                           | 155     | 142     | 124     | 100     | 79      | 58      | 159     | 159     | 144     | 129     | 104     | 82      | —       |
|                                                | kW  | 19.4                          | 19.4    | 19.5    | 19.9    | 20.4    | 20.8    | 21.1    | 19.6    | 19.6    | 19.7    | 20.0    | 20.4    | 20.8    | —       |
| 120                                            | TC  | 153                           | 153     | 157     | 167     | 181     | —       | —       | 157     | 157     | 161     | 169     | —       | —       | —       |
|                                                | SHC | 153                           | 153     | 140     | 122     | 99      | —       | —       | 157     | 157     | 142     | 128     | —       | —       | —       |
|                                                | kW  | 19.9                          | 19.9    | 20.0    | 20.4    | 20.9    | —       | —       | 20.1    | 20.1    | 20.2    | 20.5    | —       | —       | —       |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$t_{lwb}$  = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil ( $h_{lwb}$ )

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.  
Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F180 (15 Tons) (cont)                       |     |                               |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |
|                                                |     | 7500                          |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |
|                                                |     | 54/0.65                       | 58/0.52 | 62/0.41 | 67/0.30 | 72/0.28 | 76/0.27 | 80/0.03 |
| 75                                             | TC  | 188                           | 183     | 193     | 206     | 223     | 239     | 256     |
|                                                | SHC | 188                           | 183     | 170     | 148     | 120     | 95      | 70      |
|                                                | kW  | 12.9                          | 12.8    | 13.0    | 13.2    | 13.6    | 13.9    | 14.2    |
| 85                                             | TC  | 183                           | 183     | 187     | 199     | 215     | 233     | 249     |
|                                                | SHC | 183                           | 183     | 167     | 145     | 117     | 94      | 68      |
|                                                | kW  | 14.4                          | 14.4    | 14.4    | 14.7    | 15.1    | 15.9    | 16.3    |
| 95                                             | TC  | 177                           | 177     | 181     | 191     | 207     | 222     | 237     |
|                                                | SHC | 177                           | 177     | 161     | 142     | 114     | 90      | 65      |
|                                                | kW  | 15.9                          | 15.9    | 16.0    | 16.3    | 16.7    | 17.0    | 17.3    |
| 105                                            | TC  | 171                           | 171     | 175     | 183     | 199     | 213     | 228     |
|                                                | SHC | 171                           | 171     | 154     | 138     | 111     | 87      | 62      |
|                                                | kW  | 17.6                          | 17.6    | 17.7    | 18.0    | 18.4    | 18.7    | 19.0    |
| 115                                            | TC  | 164                           | 164     | 169     | 175     | 190     | 203     | 217     |
|                                                | SHC | 164                           | 164     | 146     | 135     | 108     | 84      | 59      |
|                                                | kW  | 19.4                          | 19.4    | 19.5    | 19.7    | 20.2    | 20.5    | 20.9    |
| 117                                            | TC  | 163                           | 163     | 167     | 173     | 188     | 201     | —       |
|                                                | SHC | 163                           | 163     | 145     | 134     | 107     | 84      | —       |
|                                                | kW  | 19.7                          | 19.7    | 19.9    | 20.0    | 20.5    | 20.9    | —       |
| 120                                            | TC  | 161                           | 161     | 165     | 170     | —       | —       | —       |
|                                                | SHC | 161                           | 161     | 143     | 133     | —       | —       | —       |
|                                                | kW  | 20.2                          | 20.3    | 20.4    | 20.6    | —       | —       | —       |

### LEGEND

|     |   |                                          |
|-----|---|------------------------------------------|
| BF  | — | Bypass Factor                            |
| Edb | — | Entering Dry-Bulb                        |
| Ewb | — | Entering Wet-Bulb                        |
| kW  | — | Compressor Motor Power Input             |
| ldb | — | Leaving Dry-Bulb                         |
| lwb | — | Leaving Wet-Bulb                         |
| SHC | — | Sensible Heat Capacity (1000 Btuh) Gross |
| TC  | — | Total Capacity (1000 Btuh) Gross         |

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

579F180-300

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F216 (18 Tons)                              |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 5400                          |         |         |         |         |         |         | 6000    |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.49                       | 58/0.31 | 62/0.20 | 67/0.18 | 72/0.16 | 76/0.19 | 80/0.05 | 54/0.53 | 58/0.35 | 62/0.23 | 67/0.19 | 72/0.17 | 76/0.19 | 80/0.05 |
| 75                                             | TC  | 194                           | 198     | 206     | 223     | 243     | 260     | 277     | 200     | 203     | 210     | 227     | 246     | 263     | —       |
|                                                | SHC | 194                           | 178     | 169     | 146     | 121     | 99      | 79      | 200     | 191     | 177     | 152     | 125     | 102     | —       |
|                                                | kW  | 13.6                          | 13.7    | 13.9    | 14.2    | 14.6    | 15.0    | 15.2    | 13.7    | 13.8    | 14.0    | 14.4    | 14.7    | 15.1    | —       |
| 85                                             | TC  | 189                           | 192     | 200     | 217     | 235     | 252     | 269     | 195     | 195     | 204     | 220     | 239     | 255     | —       |
|                                                | SHC | 189                           | 176     | 166     | 143     | 118     | 97      | 76      | 195     | 195     | 174     | 149     | 123     | 100     | —       |
|                                                | kW  | 15.1                          | 15.2    | 15.4    | 15.9    | 16.3    | 16.6    | 16.9    | 15.3    | 15.3    | 15.7    | 16.0    | 16.4    | 16.8    | —       |
| 95                                             | TC  | 183                           | 184     | 193     | 209     | 227     | 243     | —       | 189     | 190     | 196     | 212     | 230     | 246     | —       |
|                                                | SHC | 183                           | 181     | 162     | 140     | 115     | 94      | —       | 189     | 190     | 170     | 146     | 120     | 97      | —       |
|                                                | kW  | 16.8                          | 16.8    | 17.1    | 17.6    | 18.0    | 18.4    | —       | 17.0    | 17.0    | 17.2    | 17.6    | 18.1    | 18.5    | —       |
| 105                                            | TC  | 177                           | 178     | 185     | 201     | 218     | 234     | —       | 183     | 185     | 189     | 204     | 221     | 237     | —       |
|                                                | SHC | 177                           | 178     | 159     | 137     | 112     | 91      | —       | 183     | 185     | 166     | 143     | 116     | 94      | —       |
|                                                | kW  | 18.6                          | 18.6    | 18.8    | 19.3    | 19.8    | 20.2    | —       | 18.8    | 18.6    | 18.9    | 19.4    | 19.9    | 20.3    | —       |
| 115                                            | TC  | 171                           | 171     | 177     | 192     | 209     | 224     | —       | 176     | 177     | 181     | 195     | 212     | 226     | —       |
|                                                | SHC | 171                           | 171     | 154     | 133     | 109     | 88      | —       | 176     | 177     | 161     | 139     | 113     | 90      | —       |
|                                                | kW  | 20.5                          | 20.5    | 20.7    | 21.2    | 21.8    | 22.1    | —       | 20.7    | 20.7    | 20.8    | 21.3    | 21.8    | 22.2    | —       |
| 117                                            | TC  | 170                           | 170     | 176     | 191     | 207     | 222     | —       | 175     | 175     | 180     | 193     | 210     | 224     | —       |
|                                                | SHC | 170                           | 170     | 154     | 132     | 108     | 87      | —       | 175     | 175     | 160     | 138     | 112     | 90      | —       |
|                                                | kW  | 20.9                          | 20.9    | 21.1    | 21.6    | 22.1    | 22.5    | —       | 21.1    | 21.1    | 21.2    | 21.7    | 22.2    | 22.6    | —       |
| 120                                            | TC  | 168                           | 168     | 173     | 188     | 204     | —       | —       | 173     | 173     | 177     | 191     | 207     | —       | —       |
|                                                | SHC | 168                           | 168     | 152     | 131     | 107     | —       | —       | 173     | 173     | 159     | 137     | 111     | —       | —       |
|                                                | kW  | 21.5                          | 21.5    | 21.7    | 22.2    | 22.7    | —       | —       | 21.7    | 21.7    | 21.8    | 22.3    | 22.8    | —       | —       |

| 579F216 (18 Tons) (cont)                       |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 7000                          |         |         |         |         |         |         | 8000    |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.58                       | 58/0.42 | 62/0.29 | 67/0.21 | 72/0.20 | 76/0.20 | 80/0.05 | 54/0.62 | 58/0.48 | 62/0.36 | 67/0.23 | 72/0.22 | 76/0.21 | 80/0.04 |
| 75                                             | TC  | 209                           | 209     | 215     | 232     | 251     | 268     | —       | 216     | 217     | 221     | 236     | 255     | 272     | —       |
|                                                | SHC | 209                           | 209     | 189     | 162     | 132     | 106     | —       | 216     | 217     | 198     | 171     | 138     | 109     | —       |
|                                                | kW  | 13.9                          | 13.9    | 14.1    | 14.5    | 14.9    | 15.2    | —       | 14.1    | 14.1    | 14.2    | 14.5    | 15.0    | 15.3    | —       |
| 85                                             | TC  | 203                           | 204     | 209     | 224     | 243     | 260     | —       | 211     | 211     | 215     | 228     | 247     | 263     | —       |
|                                                | SHC | 203                           | 204     | 185     | 159     | 129     | 103     | —       | 211     | 211     | 192     | 168     | 135     | 107     | —       |
|                                                | kW  | 15.5                          | 15.5    | 15.7    | 16.1    | 16.5    | 16.9    | —       | 15.7    | 15.7    | 15.8    | 16.2    | 16.6    | 17.0    | —       |
| 95                                             | TC  | 197                           | 197     | 202     | 216     | 235     | 251     | —       | 204     | 204     | 209     | 220     | 238     | 254     | —       |
|                                                | SHC | 197                           | 197     | 180     | 156     | 126     | 100     | —       | 204     | 204     | 185     | 165     | 132     | 104     | —       |
|                                                | kW  | 17.2                          | 17.2    | 17.4    | 17.8    | 18.2    | 18.7    | —       | 17.4    | 17.4    | 17.6    | 17.9    | 18.3    | 18.7    | —       |
| 105                                            | TC  | 191                           | 191     | 195     | 208     | 225     | 241     | —       | 197     | 197     | 202     | 211     | 228     | 244     | —       |
|                                                | SHC | 191                           | 191     | 175     | 152     | 123     | 97      | —       | 197     | 197     | 177     | 161     | 128     | 100     | —       |
|                                                | kW  | 19.0                          | 19.0    | 19.2    | 19.5    | 20.0    | 20.5    | —       | 19.2    | 19.2    | 19.3    | 19.6    | 20.1    | 20.6    | —       |
| 115                                            | TC  | 184                           | 184     | 188     | 199     | 215     | 230     | —       | 190     | 190     | 194     | 202     | 218     | —       | —       |
|                                                | SHC | 184                           | 184     | 168     | 149     | 119     | 94      | —       | 190     | 190     | 170     | 158     | 125     | —       | —       |
|                                                | kW  | 21.0                          | 21.0    | 21.1    | 21.5    | 22.0    | 22.4    | —       | 21.1    | 21.1    | 21.2    | 21.6    | 22.1    | —       | —       |
| 117                                            | TC  | 183                           | 183     | 187     | 197     | 214     | 228     | —       | 188     | 188     | 192     | 200     | 216     | —       | —       |
|                                                | SHC | 183                           | 183     | 166     | 148     | 118     | 93      | —       | 188     | 188     | 171     | 157     | 124     | —       | —       |
|                                                | kW  | 21.3                          | 21.4    | 21.5    | 21.8    | 22.4    | 22.7    | —       | 21.5    | 21.5    | 21.7    | 22.0    | 22.5    | —       | —       |
| 120                                            | TC  | 180                           | 180     | 185     | 194     | 210     | —       | —       | 186     | 186     | 190     | 197     | —       | —       | —       |
|                                                | SHC | 180                           | 180     | 163     | 147     | 117     | —       | —       | 186     | 186     | 172     | 156     | —       | —       | —       |
|                                                | kW  | 21.9                          | 22.0    | 22.1    | 22.4    | 23.0    | —       | —       | 22.1    | 22.1    | 22.2    | 22.5    | —       | —       | —       |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F216 (18 Tons) (cont)                       |     |                               |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |
|                                                |     | 9000                          |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |
|                                                |     | 54/0.65                       | 58/0.53 | 62/0.40 | 67/0.25 | 72/0.23 | 76/0.23 | 80/0.05 |
| 75                                             | TC  | 223                           | 223     | 228     | 239     | 258     | 275     | —       |
|                                                | SHC | 223                           | 223     | 202     | 181     | 144     | 113     | —       |
|                                                | kW  | 14.3                          | 14.3    | 14.4    | 14.6    | 15.0    | 15.4    | —       |
| 85                                             | TC  | 216                           | 217     | 222     | 231     | 250     | 266     | —       |
|                                                | SHC | 216                           | 217     | 194     | 177     | 141     | 110     | —       |
|                                                | kW  | 15.8                          | 15.9    | 16.0    | 16.3    | 16.7    | 17.1    | —       |
| 95                                             | TC  | 210                           | 210     | 215     | 223     | 241     | 257     | —       |
|                                                | SHC | 210                           | 210     | 187     | 174     | 138     | 107     | —       |
|                                                | kW  | 17.6                          | 17.6    | 17.7    | 18.0    | 18.4    | 18.8    | —       |
| 105                                            | TC  | 202                           | 202     | 207     | 214     | 231     | —       | —       |
|                                                | SHC | 202                           | 202     | 184     | 170     | 134     | —       | —       |
|                                                | kW  | 19.4                          | 19.4    | 19.5    | 19.7    | 20.2    | —       | —       |
| 115                                            | TC  | 195                           | 195     | 196     | 204     | 221     | —       | —       |
|                                                | SHC | 195                           | 195     | 192     | 166     | 131     | —       | —       |
|                                                | kW  | 21.3                          | 21.3    | 21.4    | 21.7    | 22.2    | —       | —       |
| 117                                            | TC  | 193                           | 193     | 194     | 202     | 219     | —       | —       |
|                                                | SHC | 193                           | 193     | 192     | 166     | 130     | —       | —       |
|                                                | kW  | 21.7                          | 21.7    | 21.7    | 22.0    | 22.6    | —       | —       |
| 120                                            | TC  | 191                           | 191     | 191     | 199     | —       | —       | —       |
|                                                | SHC | 191                           | 191     | 191     | 164     | —       | —       | —       |
|                                                | kW  | 22.3                          | 22.3    | 22.3    | 22.6    | —       | —       | —       |

### LEGEND

|     |   |                                          |
|-----|---|------------------------------------------|
| BF  | — | Bypass Factor                            |
| Edb | — | Entering Dry-Bulb                        |
| Ewb | — | Entering Wet-Bulb                        |
| kW  | — | Compressor Motor Power Input             |
| ldb | — | Leaving Dry-Bulb                         |
| lwb | — | Leaving Wet-Bulb                         |
| SHC | — | Sensible Heat Capacity (1000 Btuh) Gross |
| TC  | — | Total Capacity (1000 Btuh) Gross         |

### NOTES:

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

3. The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

579F180-300

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F240 (20 Tons)                              |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 6,000                         |         |         |         |         |         |         | 7,000   |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.48                       | 58/0.31 | 62/0.21 | 67/0.19 | 72/0.17 | 76/0.22 | 80/0.05 | 54/0.54 | 58/0.37 | 62/0.25 | 67/0.21 | 72/0.19 | 76/0.21 | 80/0.04 |
| 75                                             | TC  | 217                           | 222     | 232     | 252     | 274     | 294     | 316     | 227     | 231     | 238     | 254     | 281     | 297     | 322     |
|                                                | SHC | 217                           | 199     | 189     | 163     | 136     | 112     | 90      | 227     | 217     | 202     | 172     | 143     | 115     | 91      |
|                                                | kW  | 15.1                          | 15.2    | 15.4    | 15.8    | 16.2    | 16.6    | 17.0    | 15.3    | 15.4    | 15.5    | 15.9    | 16.4    | 16.5    | 17.2    |
| 85                                             | TC  | 212                           | 217     | 226     | 244     | 266     | 285     | 306     | 222     | 225     | 231     | 250     | 272     | 291     | 312     |
|                                                | SHC | 212                           | 194     | 185     | 159     | 133     | 109     | 87      | 222     | 211     | 198     | 170     | 140     | 113     | 88      |
|                                                | kW  | 16.9                          | 17.2    | 17.3    | 17.6    | 18.0    | 18.4    | 18.8    | 17.1    | 17.3    | 17.3    | 17.7    | 18.2    | 18.6    | 19.0    |
| 95                                             | TC  | 206                           | 208     | 217     | 236     | 257     | 276     | 295     | 215     | 216     | 223     | 241     | 262     | 281     | 301     |
|                                                | SHC | 206                           | 197     | 181     | 156     | 129     | 106     | 84      | 215     | 213     | 194     | 166     | 136     | 110     | 84      |
|                                                | kW  | 18.9                          | 18.8    | 19.0    | 19.5    | 20.0    | 20.4    | 20.8    | 19.0    | 19.0    | 19.2    | 19.6    | 20.1    | 20.5    | 21.0    |
| 105                                            | TC  | 199                           | 202     | 209     | 227     | 247     | 265     | 285     | 208     | 209     | 215     | 232     | 252     | 270     | —       |
|                                                | SHC | 199                           | 190     | 177     | 152     | 126     | 103     | 80      | 208     | 209     | 189     | 163     | 132     | 107     | —       |
|                                                | kW  | 20.8                          | 20.9    | 21.1    | 21.6    | 22.0    | 22.5    | 22.9    | 21.0    | 21.0    | 21.2    | 21.7    | 22.2    | 22.6    | —       |
| 115                                            | TC  | 192                           | 194     | 200     | 218     | 237     | 254     | —       | 202     | 202     | 207     | 222     | 242     | 259     | —       |
|                                                | SHC | 192                           | 192     | 173     | 149     | 122     | 99      | —       | 202     | 202     | 183     | 159     | 129     | 103     | —       |
|                                                | kW  | 23.0                          | 22.9    | 23.3    | 23.8    | 24.3    | 24.8    | —       | 23.2    | 23.2    | 23.5    | 23.9    | 24.5    | 24.9    | —       |
| 117                                            | TC  | 191                           | 191     | 199     | 216     | 235     | 252     | —       | 200     | 200     | 205     | 220     | 240     | 257     | —       |
|                                                | SHC | 191                           | 191     | 172     | 148     | 121     | 99      | —       | 200     | 200     | 182     | 158     | 128     | 102     | —       |
|                                                | kW  | 23.5                          | 23.5    | 23.7    | 24.2    | 24.8    | 25.2    | —       | 23.8    | 23.8    | 23.9    | 24.4    | 24.9    | 25.3    | —       |
| 120                                            | TC  | 189                           | 189     | 196     | 213     | 232     | 249     | —       | 197     | 198     | 203     | 217     | 236     | —       | —       |
|                                                | SHC | 189                           | 189     | 170     | 147     | 120     | 98      | —       | 197     | 198     | 181     | 156     | 127     | —       | —       |
|                                                | kW  | 24.2                          | 24.2    | 24.4    | 25.0    | 25.5    | 25.9    | —       | 24.5    | 24.5    | 24.6    | 25.1    | 25.6    | —       | —       |

| 579F240 (20 Tons) (cont)                       |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 8,000                         |         |         |         |         |         |         | 9,000   |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.58                       | 58/0.43 | 62/0.30 | 67/0.23 | 72/0.21 | 76/0.22 | 80/0.04 | 54/0.62 | 58/0.48 | 62/0.35 | 67/0.24 | 72/0.23 | 76/0.23 | 80/0.04 |
| 75                                             | TC  | 236                           | 238     | 241     | 259     | 286     | 302     | 328     | 244     | 244     | 250     | 267     | 290     | 307     | —       |
|                                                | SHC | 236                           | 232     | 211     | 181     | 149     | 119     | 91      | 244     | 244     | 222     | 192     | 155     | 123     | —       |
|                                                | kW  | 15.5                          | 15.5    | 15.6    | 15.9    | 16.5    | 16.6    | 17.3    | 15.7    | 15.7    | 15.8    | 16.1    | 16.6    | 16.7    | —       |
| 85                                             | TC  | 231                           | 230     | 237     | 254     | 276     | 296     | —       | 237     | 238     | 243     | 258     | 281     | 300     | —       |
|                                                | SHC | 231                           | 230     | 209     | 179     | 146     | 117     | —       | 237     | 238     | 216     | 189     | 152     | 121     | —       |
|                                                | kW  | 17.5                          | 17.3    | 17.4    | 17.8    | 18.3    | 18.7    | —       | 17.5    | 17.6    | 17.6    | 18.0    | 18.4    | 18.8    | —       |
| 95                                             | TC  | 223                           | 223     | 229     | 245     | 267     | 285     | —       | 231     | 230     | 235     | 249     | 270     | 289     | —       |
|                                                | SHC | 223                           | 223     | 203     | 176     | 142     | 114     | —       | 231     | 230     | 209     | 185     | 148     | 117     | —       |
|                                                | kW  | 19.2                          | 19.2    | 19.3    | 19.8    | 20.2    | 20.6    | —       | 19.5    | 19.4    | 19.5    | 19.8    | 20.3    | 20.8    | —       |
| 105                                            | TC  | 216                           | 216     | 221     | 236     | 256     | 274     | —       | 222     | 223     | 228     | 239     | 260     | 278     | —       |
|                                                | SHC | 216                           | 216     | 197     | 172     | 139     | 110     | —       | 222     | 223     | 202     | 181     | 145     | 114     | —       |
|                                                | kW  | 21.3                          | 21.3    | 21.4    | 21.8    | 22.3    | 22.7    | —       | 21.4    | 21.5    | 21.6    | 21.9    | 22.4    | 22.8    | —       |
| 115                                            | TC  | 208                           | 209     | 213     | 226     | 246     | 263     | —       | 214     | 214     | 220     | 229     | 249     | 266     | —       |
|                                                | SHC | 208                           | 209     | 190     | 168     | 135     | 107     | —       | 214     | 214     | 193     | 177     | 141     | 110     | —       |
|                                                | kW  | 23.5                          | 23.5    | 23.7    | 24.0    | 24.6    | 25.0    | —       | 23.7    | 23.7    | 23.9    | 24.2    | 24.7    | 25.1    | —       |
| 117                                            | TC  | 207                           | 207     | 212     | 224     | 243     | 260     | —       | 213     | 213     | 219     | 227     | 246     | 263     | —       |
|                                                | SHC | 207                           | 207     | 188     | 167     | 134     | 106     | —       | 213     | 213     | 191     | 176     | 140     | 109     | —       |
|                                                | kW  | 24.0                          | 24.0    | 24.1    | 24.5    | 25.0    | 25.5    | —       | 24.2    | 24.2    | 24.2    | 24.6    | 25.1    | 25.6    | —       |
| 120                                            | TC  | 204                           | 205     | 209     | 221     | 240     | —       | —       | 210     | 210     | 215     | 224     | 243     | —       | —       |
|                                                | SHC | 204                           | 205     | 185     | 166     | 133     | —       | —       | 210     | 210     | 193     | 175     | 139     | —       | —       |
|                                                | kW  | 24.7                          | 24.7    | 24.8    | 25.2    | 25.7    | —       | —       | 24.9    | 24.9    | 25.0    | 25.3    | 25.8    | —       | —       |

### LEGEND

BF — Bypass Factor  
 Edb — Entering Dry-Bulb  
 Ewb — Entering Wet-Bulb  
 kW — Compressor Motor Power Input  
 ldb — Leaving Dry-Bulb  
 lwb — Leaving Wet-Bulb  
 SHC — Sensible Heat Capacity (1000 Btuh) Gross  
 TC — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F240 (20 Tons) (cont)                       |     |                               |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |
|                                                |     | 10,000                        |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |
|                                                |     | 54/0.65                       | 58/0.52 | 62/0.40 | 67/0.26 | 72/0.24 | 76/0.24 | 80/0.04 |
| 75                                             | TC  | 250                           | 250     | 256     | 267     | 294     | 314     | —       |
|                                                | SHC | 250                           | 250     | 227     | 200     | 161     | 127     | —       |
|                                                | kW  | 15.8                          | 15.8    | 15.9    | 16.1    | 16.7    | 17.1    | —       |
| 85                                             | TC  | 243                           | 244     | 249     | 262     | 284     | 303     | —       |
|                                                | SHC | 243                           | 244     | 220     | 198     | 158     | 124     | —       |
|                                                | kW  | 17.6                          | 17.8    | 17.7    | 18.0    | 18.5    | 18.9    | —       |
| 95                                             | TC  | 236                           | 236     | 241     | 252     | 274     | 292     | —       |
|                                                | SHC | 236                           | 236     | 212     | 194     | 154     | 121     | —       |
|                                                | kW  | 19.5                          | 19.5    | 19.7    | 19.9    | 20.4    | 20.9    | —       |
| 105                                            | TC  | 228                           | 228     | 234     | 242     | 263     | 281     | —       |
|                                                | SHC | 228                           | 228     | 203     | 190     | 151     | 117     | —       |
|                                                | kW  | 21.6                          | 21.6    | 21.8    | 22.0    | 22.5    | 22.9    | —       |
| 115                                            | TC  | 220                           | 220     | 223     | 232     | 251     | 268     | —       |
|                                                | SHC | 220                           | 220     | 207     | 186     | 147     | 113     | —       |
|                                                | kW  | 23.9                          | 23.9    | 23.9    | 24.2    | 24.7    | 25.2    | —       |
| 117                                            | TC  | 218                           | 218     | 221     | 230     | 249     | 266     | —       |
|                                                | SHC | 218                           | 218     | 205     | 185     | 146     | 112     | —       |
|                                                | kW  | 24.3                          | 24.3    | 24.4    | 24.7    | 25.2    | 25.6    | —       |
| 120                                            | TC  | 215                           | 215     | 218     | 226     | 245     | —       | —       |
|                                                | SHC | 215                           | 215     | 203     | 183     | 145     | —       | —       |
|                                                | kW  | 25.1                          | 25.1    | 25.1    | 25.4    | 25.9    | —       | —       |

### LEGEND

|     |   |                                          |
|-----|---|------------------------------------------|
| BF  | — | Bypass Factor                            |
| Edb | — | Entering Dry-Bulb                        |
| Ewb | — | Entering Wet-Bulb                        |
| kW  | — | Compressor Motor Power Input             |
| ldb | — | Leaving Dry-Bulb                         |
| lwb | — | Leaving Wet-Bulb                         |
| SHC | — | Sensible Heat Capacity (1000 Btuh) Gross |
| TC  | — | Total Capacity (1000 Btuh) Gross         |

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

579F180-300

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F300 (25 Tons)                              |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 7,000                         |         |         |         |         |         |         | 8,000   |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.44                       | 58/0.26 | 62/0.13 | 67/0.12 | 72/0.12 | 76/0.19 | 80/0.01 | 54/0.49 | 58/0.32 | 62/0.15 | 67/0.14 | 72/0.13 | 76/0.17 | 80/0.00 |
| 75                                             | TC  | —                             | 256     | 270     | 298     | 325     | 349     | 370     | 266     | 268     | 280     | 304     | 324     | 352     | 379     |
|                                                | SHC | —                             | 243     | 229     | 198     | 164     | 133     | 106     | 266     | 251     | 246     | 209     | 168     | 137     | 107     |
|                                                | kW  | —                             | 19.3    | 20.0    | 20.3    | 21.0    | 21.6    | 22.2    | 19.5    | 19.6    | 19.9    | 20.5    | 20.9    | 21.8    | 22.4    |
| 85                                             | TC  | 249                           | 251     | 265     | 289     | 315     | 340     | 361     | 260     | 262     | 272     | 294     | 321     | 344     | 367     |
|                                                | SHC | 249                           | 238     | 226     | 194     | 160     | 130     | 103     | 260     | 254     | 243     | 205     | 167     | 135     | 104     |
|                                                | kW  | 21.3                          | 21.3    | 21.7    | 22.4    | 23.1    | 24.3    | 24.4    | 21.6    | 21.6    | 22.0    | 22.5    | 23.3    | 23.9    | 24.6    |
| 95                                             | TC  | 244                           | 245     | 257     | 279     | 306     | 328     | 349     | 254     | 256     | 262     | 284     | 310     | 332     | 355     |
|                                                | SHC | 244                           | 230     | 223     | 190     | 156     | 127     | 99      | 254     | 249     | 238     | 201     | 163     | 131     | 100     |
|                                                | kW  | 23.6                          | 23.5    | 24.1    | 24.6    | 25.6    | 26.2    | 26.7    | 23.8    | 23.9    | 24.1    | 24.8    | 25.5    | 26.2    | 26.9    |
| 105                                            | TC  | 237                           | 238     | 247     | 269     | 293     | 315     | 336     | 246     | 247     | 253     | 274     | 298     | 319     | 343     |
|                                                | SHC | 237                           | 233     | 218     | 185     | 152     | 122     | 95      | 246     | 245     | 233     | 197     | 159     | 127     | 96      |
|                                                | kW  | 25.9                          | 25.9    | 26.3    | 27.0    | 27.8    | 28.5    | 29.2    | 26.3    | 26.3    | 26.5    | 27.2    | 28.0    | 28.7    | 29.5    |
| 115                                            | TC  | 229                           | 231     | 237     | 258     | 283     | 302     | 322     | 238     | 239     | 243     | 264     | 286     | 306     | 328     |
|                                                | SHC | 229                           | 225     | 213     | 181     | 148     | 119     | 91      | 238     | 239     | 228     | 193     | 155     | 123     | 91      |
|                                                | kW  | 28.6                          | 28.6    | 28.9    | 29.6    | 30.3    | 31.2    | 31.9    | 28.9    | 28.9    | 29.1    | 29.7    | 30.6    | 31.4    | 32.1    |
| 117                                            | TC  | 228                           | 230     | 236     | 256     | 279     | 299     | —       | 237     | 237     | 241     | 260     | 283     | 304     | —       |
|                                                | SHC | 228                           | 225     | 212     | 180     | 147     | 118     | —       | 237     | 237     | 227     | 192     | 154     | 122     | —       |
|                                                | kW  | 29.1                          | 29.1    | 29.4    | 30.2    | 31.0    | 31.7    | —       | 29.4    | 29.5    | 29.6    | 30.2    | 31.2    | 31.9    | —       |
| 120                                            | TC  | 226                           | 226     | 232     | 252     | 276     | —       | —       | 234     | 234     | 238     | 257     | 280     | —       | —       |
|                                                | SHC | 226                           | 225     | 211     | 179     | 145     | —       | —       | 234     | 234     | 225     | 190     | 152     | —       | —       |
|                                                | kW  | 30.0                          | 30.0    | 30.3    | 30.9    | 31.8    | —       | —       | 30.3    | 30.3    | 30.5    | 31.1    | 32.0    | —       | —       |

| 579F300 (25 Tons) (cont)                       |     |                               |         |         |         |         |         |         |         |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 9,000                         |         |         |         |         |         |         | 10,000  |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |         |         |         |         |         |         |         |
|                                                |     | 54/0.53                       | 58/0.37 | 62/0.18 | 67/0.15 | 72/0.14 | 76/0.17 | 80/0.00 | 54/0.57 | 58/0.41 | 62/0.23 | 67/0.16 | 72/0.15 | 76/0.17 | 80/0.00 |
| 75                                             | TC  | 277                           | 276     | 286     | 310     | 336     | 361     | 385     | 286     | 284     | 291     | 314     | 341     | 365     | 390     |
|                                                | SHC | 277                           | 269     | 261     | 221     | 178     | 142     | 108     | 286     | 284     | 274     | 232     | 186     | 147     | 108     |
|                                                | kW  | 19.8                          | 19.5    | 20.0    | 20.6    | 21.3    | 22.0    | 22.6    | 20.0    | 20.2    | 20.2    | 20.8    | 21.5    | 22.1    | 22.7    |
| 85                                             | TC  | 271                           | 272     | 277     | 300     | 326     | 349     | 373     | 278     | 278     | 282     | 304     | 330     | 354     | 378     |
|                                                | SHC | 271                           | 264     | 257     | 217     | 175     | 139     | 104     | 278     | 278     | 269     | 228     | 182     | 143     | 105     |
|                                                | kW  | 22.2                          | 21.9    | 22.1    | 22.7    | 23.4    | 24.1    | 24.8    | 22.1    | 22.1    | 22.2    | 22.8    | 23.6    | 24.2    | 24.9    |
| 95                                             | TC  | 263                           | 263     | 268     | 289     | 316     | 337     | 360     | 270     | 270     | 273     | 293     | 319     | 341     | 364     |
|                                                | SHC | 263                           | 263     | 251     | 213     | 171     | 135     | 100     | 270     | 270     | 262     | 223     | 177     | 139     | 101     |
|                                                | kW  | 24.1                          | 24.1    | 24.3    | 24.9    | 25.9    | 26.4    | 27.1    | 24.4    | 24.4    | 24.4    | 25.1    | 25.8    | 26.5    | 27.2    |
| 105                                            | TC  | 255                           | 255     | 258     | 278     | 302     | 326     | 346     | 261     | 262     | 264     | 282     | 306     | 328     | 352     |
|                                                | SHC | 255                           | 255     | 246     | 208     | 166     | 132     | 96      | 261     | 262     | 254     | 219     | 173     | 135     | 97      |
|                                                | kW  | 26.5                          | 26.5    | 26.6    | 27.3    | 28.1    | 29.0    | 29.6    | 26.8    | 26.8    | 26.9    | 27.5    | 28.3    | 29.0    | 29.8    |
| 115                                            | TC  | 247                           | 246     | 249     | 267     | 290     | 311     | —       | 253     | 253     | 255     | 270     | 293     | 315     | —       |
|                                                | SHC | 247                           | 246     | 239     | 204     | 162     | 127     | —       | 253     | 253     | 245     | 214     | 168     | 131     | —       |
|                                                | kW  | 29.1                          | 29.2    | 29.3    | 30.0    | 30.8    | 31.5    | —       | 29.3    | 29.3    | 29.6    | 30.1    | 30.9    | 31.7    | —       |
| 117                                            | TC  | 244                           | 244     | 247     | 265     | 288     | 308     | —       | 251     | 251     | 253     | 268     | 291     | —       | —       |
|                                                | SHC | 244                           | 244     | 237     | 203     | 161     | 126     | —       | 251     | 251     | 243     | 213     | 168     | —       | —       |
|                                                | kW  | 29.7                          | 29.7    | 29.8    | 30.4    | 31.3    | 32.1    | —       | 30.0    | 30.0    | 30.0    | 30.6    | 31.4    | —       | —       |
| 120                                            | TC  | 241                           | 242     | 244     | 261     | —       | —       | —       | 248     | 248     | 250     | 264     | —       | —       | —       |
|                                                | SHC | 241                           | 242     | 235     | 201     | —       | —       | —       | 248     | 248     | 239     | 212     | —       | —       | —       |
|                                                | kW  | 30.6                          | 30.6    | 30.7    | 31.3    | —       | —       | —       | 30.8    | 30.8    | 31.0    | 31.5    | —       | —       | —       |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$t_{lwb}$  = Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil ( $h_{lwb}$ )

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA — 579F (cont)

## COOLING CAPACITIES (cont)

| 579F300 (25 Tons) (cont)                       |     |                               |         |         |         |         |         |         |
|------------------------------------------------|-----|-------------------------------|---------|---------|---------|---------|---------|---------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm |         |         |         |         |         |         |
|                                                |     | 11,250                        |         |         |         |         |         |         |
|                                                |     | Evaporator Air — Ewb (F)/BF   |         |         |         |         |         |         |
|                                                |     | 54/0.61                       | 58/0.47 | 62/0.30 | 67/0.16 | 72/0.17 | 76/0.17 | 80/0.00 |
| 75                                             | TC  | 295                           | 295     | 298     | 319     | 342     | 367     | 392     |
|                                                | SHC | 295                           | 295     | 285     | 245     | 193     | 151     | 108     |
|                                                | kW  | 20.3                          | 20.3    | 20.4    | 20.9    | 21.2    | 21.5    | 21.9    |
| 85                                             | TC  | 288                           | 287     | 289     | 310     | 334     | 359     | 384     |
|                                                | SHC | 288                           | 287     | 278     | 241     | 190     | 148     | 106     |
|                                                | kW  | 22.5                          | 22.4    | 22.4    | 23.1    | 23.7    | 24.4    | 25.3    |
| 95                                             | TC  | 278                           | 278     | 280     | 318     | 323     | 346     | —       |
|                                                | SHC | 278                           | 278     | 269     | 150     | 186     | 144     | —       |
|                                                | kW  | 24.6                          | 24.6    | 24.7    | 30.0    | 26.0    | 26.7    | —       |
| 105                                            | TC  | 269                           | 269     | 272     | 285     | 310     | 332     | —       |
|                                                | SHC | 269                           | 269     | 259     | 232     | 182     | 140     | —       |
|                                                | kW  | 27.0                          | 27.0    | 27.1    | 27.6    | 28.4    | 29.1    | —       |
| 115                                            | TC  | 259                           | 260     | 262     | 273     | 297     | 318     | —       |
|                                                | SHC | 259                           | 260     | 247     | 227     | 177     | 136     | —       |
|                                                | kW  | 29.7                          | 29.6    | 29.8    | 30.2    | 31.1    | 31.8    | —       |
| 117                                            | TC  | 257                           | 257     | 261     | 271     | 294     | —       | —       |
|                                                | SHC | 257                           | 257     | 245     | 226     | 176     | —       | —       |
|                                                | kW  | 30.3                          | 30.3    | 30.3    | 30.7    | 31.6    | —       | —       |
| 120                                            | TC  | 254                           | 254     | 257     | 267     | —       | —       | —       |
|                                                | SHC | 254                           | 254     | 242     | 224     | —       | —       | —       |
|                                                | kW  | 31.1                          | 31.1    | 31.3    | 31.6    | —       | —       | —       |

### LEGEND

|     |   |                                          |
|-----|---|------------------------------------------|
| BF  | — | Bypass Factor                            |
| Edb | — | Entering Dry-Bulb                        |
| Ewb | — | Entering Wet-Bulb                        |
| kW  | — | Compressor Motor Power Input             |
| ldb | — | Leaving Dry-Bulb                         |
| lwb | — | Leaving Wet-Bulb                         |
| SHC | — | Sensible Heat Capacity (1000 Btuh) Gross |
| TC  | — | Total Capacity (1000 Btuh) Gross         |

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor        |                                |      |      |      |      |                          |
| 0.05                     | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| 0.10                     | 0.98                           | 1.96 | 2.94 | 3.92 | 4.91 |                          |
| 0.20                     | 0.87                           | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| 0.30                     | 0.76                           | 1.53 | 2.29 | 3.05 | 3.82 |                          |
| 0.40                     | 0.65                           | 1.31 | 1.96 | 2.62 | 3.27 |                          |
| 0.50                     | 0.55                           | 1.09 | 1.64 | 2.18 | 2.73 |                          |
| 0.60                     | 0.44                           | 0.87 | 1.31 | 1.74 | 2.18 |                          |
| 0.70                     | 0.33                           | 0.65 | 0.98 | 1.31 | 1.64 |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

579F180-300



**PERFORMANCE DATA — 579F (cont)**  
**FAN PERFORMANCE — 579F180-300 UNITS**

| 579F180230 (15 TONS) * |                                             |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)       | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                        | 0.2                                         |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |      |       |
|                        | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 4500                   | 809                                         | 1.53 | 1317  | 906  | 1.74 | 1502  | 994  | 1.96 | 1690  | 1078 | 2.18 | 1882  | 1156 | 2.41 | 2077  | 1230 | 2.64 | 2275  |
| 4800                   | 850                                         | 1.76 | 1516  | 942  | 1.98 | 1706  | 1027 | 2.20 | 1899  | 1107 | 2.43 | 2094  | 1183 | 2.66 | 2293  | 1255 | 2.89 | 2495  |
| 5100                   | 892                                         | 2.01 | 1733  | 979  | 2.24 | 1928  | 1061 | 2.46 | 2125  | 1138 | 2.70 | 2325  | 1211 | 2.93 | 2528  | 1281 | 3.17 | 2733  |
| 5400                   | 934                                         | 2.28 | 1970  | 1017 | 2.52 | 2169  | 1096 | 2.75 | 2371  | 1170 | 2.99 | 2575  | 1241 | 3.22 | 2781  | 1309 | 3.47 | 2990  |
| 5700                   | 976                                         | 2.58 | 2225  | 1056 | 2.82 | 2429  | 1132 | 3.06 | 2635  | 1204 | 3.30 | 2843  | 1272 | 3.54 | 3053  | 1338 | 3.79 | 3266  |
| 6000                   | 1019                                        | 2.90 | 2500  | 1096 | 3.14 | 2709  | 1168 | 3.38 | 2919  | 1238 | 3.63 | 3131  | 1304 | 3.88 | 3345  | 1368 | 4.13 | 3562  |
| 6300                   | 1063                                        | 3.24 | 2795  | 1136 | 3.49 | 3008  | 1206 | 3.74 | 3223  | 1273 | 3.99 | 3439  | 1337 | 4.24 | 3657  | —    | —    | —     |
| 6600                   | 1106                                        | 3.61 | 3111  | 1177 | 3.86 | 3329  | 1244 | 4.11 | 3547  | 1309 | 4.37 | 3767  | —    | —    | —     | —    | —    | —     |
| 6900                   | 1150                                        | 4.00 | 3448  | 1218 | 4.26 | 3670  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7200                   | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7500                   | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 579F180230 (15 TONS)* (cont) |                                             |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)             | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                              | 1.4                                         |      |       | 1.6  |      |       | 1.8  |      |       | 1.9  |      |       | 2.0  |      |       |
|                              | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 4500                         | 1301                                        | 2.87 | 2477  | 1369 | 3.11 | 2683  | 1434 | 3.35 | 2891  | 1497 | 3.47 | 2997  | 1497 | 3.60 | 3103  |
| 4800                         | 1324                                        | 3.13 | 2700  | 1390 | 3.37 | 2909  | 1454 | 3.62 | 3120  | 1515 | 3.74 | 3226  | 1515 | 3.87 | 3334  |
| 5100                         | 1349                                        | 3.41 | 2942  | 1413 | 3.66 | 3153  | 1475 | 3.90 | 3367  | 1535 | 4.03 | 3475  | 1535 | 4.16 | 3584  |
| 5400                         | 1374                                        | 3.71 | 3202  | 1437 | 3.96 | 3416  | 1498 | 4.21 | 3633  | —    | —    | —     | —    | —    | —     |
| 5700                         | 1402                                        | 4.04 | 3481  | 1463 | 4.29 | 3699  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                         | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                         | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6600                         | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6900                         | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7200                         | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7500                         | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 891 to 1179 rpm (208/230 v and 460 v) or 1159 to 1429 (575 v). Alternate high-static drive range is 1227 to 1550 (208/230 v and 460 v only). Other rpms require a field-supplied drive.

Refer to page 162 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 4.25 (208/230 v and 460 v) or 3.45 (575 v) and the maximum continuous watts are 3775 (208/230 v and 460 v) or 3065 (575 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

| 579F216275 AND 240275 (18 AND 20 TONS) * |                                             |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |       |       |
|------------------------------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Airflow<br>(Cfm)                         | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |       |       |
|                                          | 0.2                                         |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |       |       |
|                                          | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp   | Watts |
| 5,500                                    | 755                                         | 2.27 | 1908  | 831  | 2.58 | 2171  | 901  | 2.91 | 2443  | 968  | 3.24 | 2723  | 1031 | 3.58 | 3009  | 1091 | 3.93  | 3302  |
| 6,000                                    | 810                                         | 2.72 | 2287  | 881  | 3.04 | 2556  | 947  | 3.37 | 2833  | 1010 | 3.71 | 3116  | 1070 | 4.05 | 3406  | 1127 | 4.40  | 3702  |
| 6,500                                    | 866                                         | 3.22 | 2710  | 932  | 3.55 | 2985  | 994  | 3.88 | 3266  | 1054 | 4.23 | 3554  | 1111 | 4.57 | 3847  | 1166 | 4.93  | 4146  |
| 7,000                                    | 923                                         | 3.78 | 3177  | 985  | 4.11 | 3458  | 1044 | 4.45 | 3744  | 1100 | 4.80 | 4036  | 1155 | 5.15 | 4333  | 1207 | 5.51  | 4635  |
| 7,500                                    | 980                                         | 4.39 | 3690  | 1038 | 4.73 | 3976  | 1094 | 5.07 | 4267  | 1148 | 5.43 | 4564  | 1200 | 5.78 | 4864  | 1250 | 6.15  | 5170  |
| 8,000                                    | 1038                                        | 5.06 | 4251  | 1093 | 5.40 | 4542  | 1146 | 5.75 | 4838  | 1197 | 6.11 | 5138  | 1246 | 6.47 | 5443  | 1294 | 6.84  | 5752  |
| 8,500                                    | 1096                                        | 5.78 | 4859  | 1148 | 6.13 | 5156  | 1198 | 6.49 | 5456  | 1247 | 6.85 | 5761  | 1294 | 7.22 | 6070  | 1340 | 7.59  | 6382  |
| 9,000                                    | 1154                                        | 6.56 | 5517  | 1204 | 6.92 | 5818  | 1251 | 7.28 | 6123  | 1298 | 7.65 | 6432  | 1343 | 8.02 | 6745  | 1388 | 8.40  | 7062  |
| 9,500                                    | 1213                                        | 7.40 | 6224  | 1260 | 7.77 | 6531  | 1306 | 8.13 | 6840  | 1350 | 8.51 | 7154  | 1394 | 8.88 | 7471  | 1436 | 9.26  | 7791  |
| 10,000                                   | 1272                                        | 8.30 | 6983  | 1317 | 8.67 | 7294  | 1360 | 9.05 | 7608  | 1403 | 9.43 | 7926  | 1445 | 9.81 | 8247  | 1486 | 10.19 | 8570  |

| 579F216275 AND 240275 (18 AND 20 TONS)* (cont) |                                             |      |       |      |       |       |      |      |       |      |      |       |      |      |       |
|------------------------------------------------|---------------------------------------------|------|-------|------|-------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                               | Available External Static Pressure (in. wg) |      |       |      |       |       |      |      |       |      |      |       |      |      |       |
|                                                | 1.4                                         |      |       | 1.6  |       |       | 1.8  |      |       | 1.9  |      |       | 2.0  |      |       |
|                                                | Rpm                                         | Bhp  | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 5,500                                          | 1149                                        | 4.28 | 3602  | 1204 | 4.65  | 3907  | 1258 | 5.02 | 4217  | 1284 | 5.20 | 4375  | 1309 | 5.39 | 4533  |
| 6,000                                          | 1183                                        | 4.76 | 4003  | 1236 | 5.13  | 4310  | 1288 | 5.50 | 4622  | 1313 | 5.68 | 4780  | 1337 | 5.87 | 4939  |
| 6,500                                          | 1219                                        | 5.29 | 4450  | 1270 | 5.66  | 4759  | 1320 | 6.03 | 5073  | 1344 | 6.22 | 5232  | 1368 | 6.41 | 5391  |
| 7,000                                          | 1258                                        | 5.88 | 4942  | 1307 | 6.25  | 5253  | 1355 | 6.62 | 5569  | 1378 | 6.81 | 5729  | 1402 | 7.00 | 5890  |
| 7,500                                          | 1299                                        | 6.52 | 5480  | 1346 | 6.89  | 5794  | 1392 | 7.27 | 6113  | 1415 | 7.46 | 6273  | 1437 | 7.65 | 6435  |
| 8,000                                          | 1341                                        | 7.21 | 6065  | 1387 | 7.59  | 6383  | 1392 | 7.97 | 6704  | 1453 | 8.16 | 6866  | 1475 | 8.36 | 7300  |
| 8,500                                          | 1385                                        | 7.97 | 6699  | 1429 | 8.35  | 7019  | 1472 | 8.73 | 7343  | 1493 | 8.93 | 7506  | 1514 | 9.12 | 7670  |
| 9,000                                          | 1431                                        | 8.78 | 7382  | 1473 | 9.15  | 7705  | 1515 | 9.55 | 8032  | 1535 | 9.75 | 8196  | —    | —    | —     |
| 9,500                                          | 1478                                        | 9.65 | 8114  | 1519 | 10.04 | 8441  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                         | —                                           | —    | —     | —    | —     | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range for the 216 size is 910 to 1095 rpm. Standard low-medium static drive range for the 240 size is 1002 to 1225 rpm. Alternate high-static drive range for the 216 size is 1069 to 1287. Alternate high-static drive range for the 240 size is 1193 to 1458 rpm. Other rpms require a field-supplied drive.

Refer to page 162 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp for the 216 size is 5.90. Maximum continuous bhp for the 240 size is 8.70 (208/230 and 575 v) or 9.50 (460 v). The maximum continuous watts for the 216 size is 5180. The maximum continuous watts for the 240 size is 7915 (208/230 and 575 v) or 8640 (460 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

**PERFORMANCE DATA — 579F (cont)**  
**FAN PERFORMANCE — 579F180-300 UNITS (cont)**

| 579F300275 (25 TONS) * |                                             |       |        |      |       |        |      |       |       |      |       |        |      |       |        |      |       |        |
|------------------------|---------------------------------------------|-------|--------|------|-------|--------|------|-------|-------|------|-------|--------|------|-------|--------|------|-------|--------|
| Airflow<br>(Cfm)       | Available External Static Pressure (in. wg) |       |        |      |       |        |      |       |       |      |       |        |      |       |        |      |       |        |
|                        | 0.2                                         |       |        | 0.4  |       |        | 0.6  |       |       | 0.8  |       |        | 1.0  |       |        | 1.2  |       |        |
|                        | Rpm                                         | Bhp   | Watts  | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts  |
| 7,000                  | 941                                         | 3.35  | 2,769  | 1002 | 3.80  | 3,140  | 1061 | 4.27  | 3528  | 1117 | 4.76  | 3,934  | 1171 | 5.27  | 4,356  | 1224 | 5.80  | 4,794  |
| 7,500                  | 999                                         | 4.05  | 3,348  | 1057 | 4.53  | 3,742  | 1112 | 5.02  | 4152  | 1166 | 5.54  | 4,579  | 1218 | 6.07  | 5,216  | 1268 | 6.63  | 5,478  |
| 8,000                  | 1058                                        | 4.85  | 4,007  | 1113 | 5.35  | 4,424  | 1165 | 5.87  | 4856  | 1216 | 6.41  | 5,304  | 1266 | 6.97  | 5,766  | 1314 | 7.55  | 6,243  |
| 8,500                  | 1117                                        | 5.74  | 4,750  | 1169 | 6.28  | 5,190  | 1219 | 6.83  | 5645  | 1268 | 7.40  | 6,114  | 1315 | 7.98  | 6,597  | 1361 | 8.58  | 7,094  |
| 9,000                  | 1177                                        | 6.75  | 5,583  | 1226 | 7.31  | 6,047  | 1274 | 7.89  | 6524  | 1320 | 8.48  | 7,015  | 1365 | 9.09  | 7,520  | 1410 | 9.72  | 8,037  |
| 9,500                  | 1237                                        | 7.98  | 6,511  | 1284 | 8.46  | 6,999  | 1329 | 9.07  | 7499  | 1374 | 9.69  | 8,012  | 1417 | 10.33 | 8,538  | 1459 | 10.98 | 9,076  |
| 10,000                 | 1297                                        | 9.12  | 7,450  | 1342 | 9.74  | 8,051  | 1385 | 10.37 | 8574  | 1428 | 11.02 | 9,110  | 1469 | 11.68 | 9,657  | 1510 | 12.36 | 10,217 |
| 10,500                 | 1358                                        | 10.49 | 8,674  | 1400 | 11.14 | 9,209  | 1442 | 11.80 | 9755  | 1483 | 12.47 | 10,314 | 1523 | 13.16 | 10,883 | —    | —     | —      |
| 11,000                 | 1418                                        | 12.00 | 9,919  | 1459 | 12.67 | 10,478 | —    | —     | —     | —    | —     | —      | —    | —     | —      | —    | —     | —      |
| 11,250                 | 1449                                        | 12.80 | 10,585 | —    | —     | —      | —    | —     | —     | —    | —     | —      | —    | —     | —      | —    | —     | —      |

| 579F300275 (25 TONS) * (cont) |                                             |       |       |      |       |        |      |      |       |
|-------------------------------|---------------------------------------------|-------|-------|------|-------|--------|------|------|-------|
| Airflow<br>(Cfm)              | Available External Static Pressure (in. wg) |       |       |      |       |        |      |      |       |
|                               | 1.4                                         |       |       | 1.6  |       |        | 1.8  |      |       |
|                               | Rpm                                         | Bhp   | Watts | Rpm  | Bhp   | Watts  | Rpm  | Bhp  | Watts |
| 7,000                         | 1274                                        | 6.35  | 5248  | 1323 | 6.92  | 5,718  | 1371 | 5.54 | 6204  |
| 7,500                         | 1316                                        | 7.20  | 6960  | 1364 | 7.79  | 6,437  | 1410 | 6.41 | 6939  |
| 8,000                         | 1360                                        | 8.14  | 6734  | 1406 | 8.76  | 7,239  | 1450 | 7.40 | 7759  |
| 8,500                         | 1406                                        | 9.20  | 7605  | 1449 | 9.83  | 8,129  | 1492 | 8.48 | 8666  |
| 9,000                         | 1453                                        | 10.36 | 8568  | 1495 | 11.02 | 9,111  | 1536 | 9.69 | 9667  |
| 9,500                         | 1501                                        | 11.64 | 9627  | 1541 | 12.32 | 10,190 | —    | —    | —     |
| 10,000                        | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |
| 10,500                        | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |
| 11,000                        | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |
| 11,250                        | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 1066 to 1283 rpm. Alternate high-static drive range is 1332 to 1550. Other rpms require a field-supplied drive.

Refer to page 162 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 10.20 (208/230 and 575 v) or 11.80 (460 v) and the maximum continuous watts are 9510 (208/230 and 575 v) or 11,000 (460 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

| 579F180300 (15 TONS)* |                                             |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)      | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                       | 0.2                                         |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |      |       |
|                       | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 4500                  | 819                                         | 1.55 | 1335  | 914  | 1.76 | 1518  | 1001 | 1.98 | 1705  | 1083 | 2.20 | 1894  | 1160 | 2.42 | 2088  | 1234 | 2.65 | 2284  |
| 4800                  | 861                                         | 1.78 | 1538  | 951  | 2.00 | 1726  | 1035 | 2.22 | 1916  | 1113 | 2.45 | 2110  | 1188 | 2.68 | 2307  | 1259 | 2.91 | 2507  |
| 5100                  | 904                                         | 2.04 | 1759  | 989  | 2.26 | 1952  | 1069 | 2.49 | 2147  | 1145 | 2.72 | 2345  | 1218 | 2.95 | 2545  | 1287 | 3.17 | 2749  |
| 5400                  | 947                                         | 2.32 | 1999  | 1300 | 2.55 | 2197  | 1105 | 2.78 | 2396  | 1179 | 3.01 | 2598  | 1248 | 3.25 | 2802  | 1315 | 3.49 | 3009  |
| 5700                  | 990                                         | 2.62 | 2259  | 1068 | 2.85 | 2461  | 1142 | 3.09 | 2665  | 1213 | 3.33 | 2871  | 1280 | 3.57 | 3079  | 1345 | 3.81 | 3289  |
| 6000                  | 1034                                        | 2.94 | 2539  | 1109 | 3.18 | 2745  | 1180 | 3.42 | 2953  | 1248 | 3.67 | 3163  | 1313 | 3.91 | 3375  | 1376 | 4.16 | 3589  |
| 6300                  | 1078                                        | 3.29 | 2840  | 1150 | 3.54 | 3050  | 1218 | 3.78 | 3262  | 1284 | 4.03 | 3476  | 1348 | 4.28 | 3692  | —    | —    | —     |
| 6600                  | 1123                                        | 3.67 | 3161  | 1192 | 3.91 | 3376  | 1258 | 4.16 | 3592  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6900                  | 1167                                        | 4.06 | 3504  | 1234 | 4.32 | 3723  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7200                  | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7500                  | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 579F180300 (15 TONS) * (cont) |                                             |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-------------------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)              | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                               | 1.4                                         |      |       | 1.6  |      |       | 1.8  |      |       | 1.9  |      |       | 2.0  |      |       |
|                               | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 4500                          | 1304                                        | 2.88 | 2484  | 1371 | 3.12 | 2688  | 1435 | 3.36 | 2895  | 1467 | 3.48 | 2999  | 1497 | 3.60 | 3104  |
| 4800                          | 1327                                        | 3.14 | 2711  | 1393 | 3.38 | 2917  | 1456 | 3.62 | 3126  | 1486 | 3.75 | 3232  | 1517 | 3.87 | 3338  |
| 5100                          | 1353                                        | 3.43 | 2955  | 1417 | 3.67 | 3165  | 1478 | 3.92 | 3377  | 1508 | 4.04 | 3484  | 1537 | 4.16 | 3592  |
| 5400                          | 1380                                        | 3.73 | 3219  | 1442 | 3.98 | 3432  | 1502 | 4.23 | 3646  | 1531 | 4.35 | 3755  | —    | —    | —     |
| 5700                          | 1408                                        | 4.06 | 3503  | 1468 | 4.31 | 3718  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6000                          | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6300                          | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6600                          | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 6900                          | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7200                          | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7500                          | —                                           | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 891 to 1179 rpm (208/230 v and 460 v) or 1159 to 1429 (575 v). Alternate high-static drive range is 1227 to 1550 (208/230 v and 460 v only). Other rpms require a field-supplied drive.

Refer to page 162 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 4.25 (208/230 v and 460 v) or 3.45 (575 v) and the maximum continuous watts are 3775 (208/230 v and 460 v) or 3065 (575 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

**PERFORMANCE DATA — 579F (cont)**  
**FAN PERFORMANCE — 579F180-300 UNITS (cont)**

**579F216360 and 240360 (18 AND 20 TONS) \***

| Airflow<br>(Cfm) | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |       |       |      |      |       |      |      |       |
|------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|-------|-------|------|------|-------|------|------|-------|
|                  | 0.2                                         |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |       |       | 1.0  |      |       | 1.2  |      |       |
|                  | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 5,500            | 795                                         | 2.43 | 2043  | 866  | 2.74 | 2306  | 934  | 3.07 | 2578  | 998  | 3.40  | 2856  | 1059 | 3.74 | 3142  | 1117 | 4.08 | 3434  |
| 6,000            | 854                                         | 2.92 | 2452  | 921  | 3.24 | 2722  | 984  | 3.57 | 3998  | 1044 | 3.90  | 3281  | 1102 | 4.25 | 3570  | 1158 | 4.60 | 3865  |
| 6,500            | 914                                         | 3.46 | 2909  | 977  | 3.79 | 3184  | 1036 | 4.12 | 3465  | 1093 | 4.46  | 3752  | 1148 | 4.81 | 4045  | 1201 | 5.16 | 4343  |
| 7,000            | 975                                         | 4.06 | 3414  | 1034 | 4.39 | 3695  | 1090 | 4.73 | 3981  | 1144 | 5.08  | 4272  | 1196 | 5.43 | 4569  | 1246 | 5.79 | 4870  |
| 7,500            | 1037                                        | 4.72 | 3969  | 1092 | 5.06 | 4255  | 1145 | 5.41 | 4546  | 1196 | 5.76  | 4842  | 1256 | 6.12 | 5142  | 1294 | 6.48 | 5447  |
| 8,000            | 1099                                        | 5.44 | 4575  | 1150 | 5.79 | 4866  | 1201 | 6.14 | 5162  | 1249 | 6.50  | 5462  | 1297 | 6.86 | 5766  | 1343 | 7.22 | 6075  |
| 8,500            | 1161                                        | 6.22 | 5232  | 1210 | 6.57 | 5529  | 1258 | 6.93 | 5829  | 1304 | 7.29  | 6134  | 1349 | 7.66 | 6443  | 1393 | 8.03 | 6755  |
| 9,000            | 1223                                        | 7.07 | 5943  | 1270 | 7.43 | 6245  | 1315 | 7.79 | 6550  | 1360 | 8.16  | 6869  | 1403 | 8.53 | 7171  | 1445 | 8.90 | 7487  |
| 9,500            | 1286                                        | 7.98 | 6708  | 1331 | 8.34 | 7014  | 1374 | 8.71 | 7324  | 1416 | 9.08  | 7638  | 1457 | 9.46 | 7954  | 1498 | 9.84 | 8274  |
| 10,000           | 1349                                        | 8.95 | 7528  | 1392 | 9.32 | 7839  | 1433 | 9.70 | 8154  | 1473 | 10.07 | 8471  | —    | —    | —     | —    | —    | —     |

**579F216360 and 240360 (18 AND 20 TONS) \* (cont)**

| Airflow<br>(Cfm) | Available External Static Pressure (in. wg) |       |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------|---------------------------------------------|-------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
|                  | 1.4                                         |       |       | 1.6  |      |       | 1.8  |      |       | 1.9  |      |       | 2.0  |      |       |
|                  | Rpm                                         | Bhp   | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 5,500            | 1173                                        | 4.44  | 3732  | 1227 | 4.80 | 4036  | 1279 | 5.17 | 4345  | 1304 | 5.35 | 4502  | 1329 | 5.54 | 4629  |
| 6,000            | 1211                                        | 4.95  | 4165  | 1263 | 5.32 | 4471  | 1313 | 5.69 | 4782  | 1337 | 5.87 | 4939  | 1361 | 6.06 | 5097  |
| 6,500            | 1252                                        | 5.53  | 4646  | 1302 | 5.89 | 4954  | 1350 | 6.26 | 5267  | 1373 | 6.56 | 5425  | 1396 | 6.64 | 5584  |
| 7,000            | 1295                                        | 6.16  | 5176  | 1343 | 6.52 | 5487  | 1389 | 6.90 | 5802  | 1412 | 7.09 | 5961  | 1434 | 7.28 | 6121  |
| 7,500            | 1340                                        | 6.85  | 5756  | 1386 | 7.22 | 6070  | 1431 | 7.60 | 6387  | 1452 | 7.79 | 6547  | 1474 | 7.98 | 6709  |
| 8,000            | 1388                                        | 7.60  | 6388  | 1431 | 7.97 | 6704  | 1474 | 8.35 | 7240  | 1495 | 8.54 | 7186  | 1516 | 8.74 | 7348  |
| 8,500            | 1436                                        | 8.41  | 7071  | 1478 | 8.79 | 7390  | 1520 | 9.17 | 7713  | 1540 | 9.37 | 7876  | —    | —    | —     |
| 9,000            | 1486                                        | 9.28  | 7807  | 1527 | 9.67 | 8130  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500            | 1538                                        | 10.22 | 8597  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000           | —                                           | —     | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range for the 216 size is 910 to 1095 rpm. Standard low-medium static drive range for the 240 size is 1002 to 1225 rpm. Alternate high-static drive range for the 216 size is 1069 to 1287. Alternate high-static drive range for the 240 size is 1193 to 1458 rpm. Other rpms require a field-supplied drive.

Refer to this page for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp for the 216 size is 5.90. Maximum continuous bhp for the 240 size is 8.70 (208/230 and 575 v) or 9.50 (460 v). The maximum continuous watts for the 216 size is 5180. The maximum continuous watts for the 240 size is 7915 (208/230 and 575 v) or 8640 (460 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

**579F300360 (25 TONS) \***

| Airflow<br>(Cfm) | Available External Static Pressure (in. wg) |       |        |      |       |        |      |       |       |      |       |       |      |       |       |      |       |       |
|------------------|---------------------------------------------|-------|--------|------|-------|--------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
|                  | 0.2                                         |       |        | 0.4  |       |        | 0.6  |       |       | 0.8  |       |       | 1.0  |       |       | 1.2  |       |       |
|                  | Rpm                                         | Bhp   | Watts  | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts |
| 7,000            | 992                                         | 4.05  | 3,348  | 1051 | 4.44  | 3,668  | 1106 | 4.83  | 3995  | 1160 | 5.24  | 4331  | 1212 | 5.65  | 4675  | 1262 | 6.08  | 5026  |
| 7,500            | 1055                                        | 4.77  | 3,947  | 1110 | 5.17  | 4,277  | 1162 | 5.58  | 4615  | 1214 | 6.00  | 4960  | 1263 | 6.43  | 5312  | 1311 | 6.86  | 5672  |
| 8,000            | 1118                                        | 5.58  | 4,610  | 1170 | 5.99  | 4,950  | 1220 | 6.41  | 5298  | 1268 | 6.84  | 5653  | 1315 | 7.27  | 6014  | 1361 | 7.72  | 6382  |
| 8,500            | 1182                                        | 6.46  | 5,339  | 1231 | 6.88  | 5,690  | 1278 | 7.31  | 6047  | 1324 | 7.75  | 6411  | 1369 | 8.20  | 6782  | 1413 | 8.66  | 7158  |
| 9,000            | 1246                                        | 7.42  | 6,136  | 1292 | 7.86  | 6,498  | 1337 | 8.30  | 6865  | 1381 | 8.75  | 7239  | 1424 | 9.21  | 7618  | 1466 | 9.68  | 8003  |
| 9,500            | 1310                                        | 8.47  | 7,005  | 1354 | 8.92  | 7,377  | 1397 | 9.38  | 7754  | 1439 | 9.84  | 8137  | 1480 | 10.31 | 8525  | 1520 | 10.79 | 8918  |
| 10,000           | 1374                                        | 9.61  | 7,947  | 1416 | 10.07 | 8,329  | 1457 | 10.54 | 8715  | 1497 | 11.02 | 9107  | 1537 | 11.50 | 9504  | —    | —     | —     |
| 10,500           | 1439                                        | 10.84 | 8,964  | 1479 | 11.32 | 9,356  | 1518 | 11.79 | 9752  | —    | —     | —     | —    | —     | —     | —    | —     | —     |
| 11,000           | 1503                                        | 12.17 | 10,059 | 1542 | 12.65 | 10,460 | —    | —     | —     | —    | —     | —     | —    | —     | —     | —    | —     | —     |
| 11,250           | 1536                                        | 12.86 | 10,636 | —    | —     | —      | —    | —     | —     | —    | —     | —     | —    | —     | —     | —    | —     | —     |

**579F300360 (25 TONS) \* (cont)**

| Airflow<br>(Cfm) | Available External Static Pressure (in. wg) |       |       |      |       |       |      |      |       |
|------------------|---------------------------------------------|-------|-------|------|-------|-------|------|------|-------|
|                  | 1.4                                         |       |       | 1.6  |       |       | 1.8  |      |       |
|                  | Rpm                                         | Bhp   | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp  | Watts |
| 7,000            | 1311                                        | 6.51  | 5385  | 1359 | 6.96  | 5751  | 1405 | 6.00 | 6124  |
| 7,500            | 1358                                        | 7.30  | 6039  | 1403 | 7.76  | 6412  | 1448 | 6.84 | 6792  |
| 8,000            | 1406                                        | 8.17  | 6767  | 1560 | 8.63  | 7137  | 1492 | 7.75 | 7524  |
| 8,500            | 1456                                        | 9.12  | 7541  | 1498 | 9.59  | 7929  | 1539 | 8.75 | 8323  |
| 9,000            | 1507                                        | 10.15 | 8393  | 1548 | 10.63 | 8790  | —    | —    | —     |
| 9,500            | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 10,000           | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 10,500           | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 11,000           | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 11,250           | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 1066 to 1283 rpm. Alternate high-static drive range is 1332 to 1550. Other rpms require a field-supplied drive.

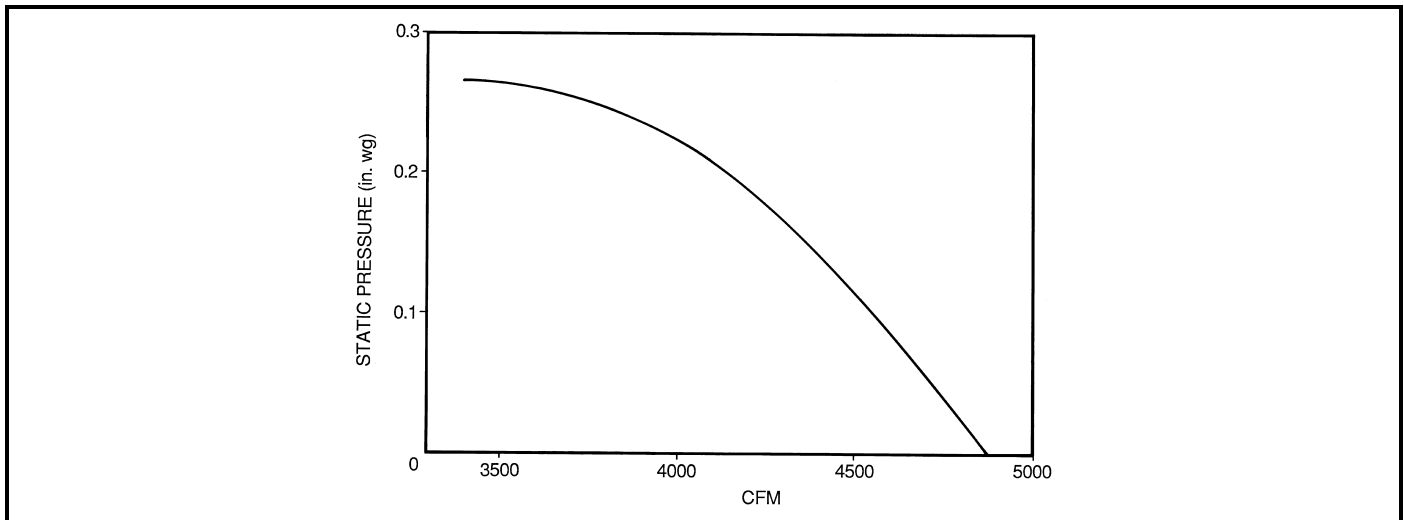
Refer to this page for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 10.20 (208/230 and 575 v) or 11.80 (460 v) and the maximum continuous watts are 9510 (208/230 and 575 v) or 11,000 (460 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

**GENERAL NOTES FOR FAN PERFORMANCE DATA TABLES**

- Static pressure losses (i.e., EconoMi\$er IV) must be added to external static pressure before entering Fan Performance table.
- Interpolation is permissible. Do not extrapolate.
- Fan performance is based on wet coils, clean filters, and casing losses. See Accessory/FIOP Static Pressure table on page 164.
- Extensive motor and drive testing on these units ensures that the full horsepower and watts range of the motor can be utilized with confidence. Using fan motors up to the watts or bhp rating shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.
- Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative for details.

## PERFORMANCE DATA — 579F (cont)



Fan Performance Using Accessory Power Exhaust (579F180-300)

### ALTITUDE COMPENSATION\* — 579F180-300

| ELEVATION<br>(ft) | NATURAL GAS ORIFICE SIZE† |           |
|-------------------|---------------------------|-----------|
|                   | Low Heat                  | High Heat |
| 0-3,000           | 30                        | 29        |
| 3,000- 7,000      | 31                        | 30        |
| 7,000- 9,000      | 32                        | 31        |
| 9,000-10,000      | 33                        | 31        |
| above 10,000      | 35                        | 32        |

\*Includes a 4% input reduction per each 1,000 feet.

†Orifices available through your Bryant distributor.

### ALTITUDE DERATING FACTOR\*

| ELEVATION (ft) | MAXIMUM HEATING VALUE<br>(Btu/ft <sup>3</sup> ) |
|----------------|-------------------------------------------------|
| 0-2,000        | 1,100                                           |
| 2,001-3,000    | 1,050                                           |
| 3,001-4,000    | 1,000                                           |
| 4,001-5,000    | 950                                             |
| 5,001-6,000    | 900                                             |

\*Derating of the unit is not required unless the heating value of the gas exceeds the values listed in the table above, or if the elevation exceeds 6000 ft. Derating conditions must be 4% per thousand ft above 2000 ft. For example, at 4000 ft, if the heating value of the gas exceeds 1000 Btu/ft<sup>3</sup>, the unit will require a 16% derating. For elevations above 6000 ft, the same formula applies. For example, at 7000 ft, the unit will require a 28% derating of the maximum heating value per the National Fuel Gas Code.

**IMPORTANT:** Local utility companies may be reducing heat content of gas at altitudes above 2000 ft. If this is being done, then changing spuds may not be required.

579F180-300

**PERFORMANCE DATA — 579F (cont)**  
**ALTITUDE COMPENSATION — 579F180-300**  
**(LP Gas Units)**

| ELEVATION<br>(ft) | LIQUID PROPANE ORIFICE SIZE |
|-------------------|-----------------------------|
|                   | Low Heat and High Heat      |
| 0-2,000           | 36                          |
| 2,000             | 37                          |
| 3,000             | 38                          |
| 4,000             | 38                          |
| 5,000             | 39                          |
| 6,000             | 40                          |
| 7,000             | 41                          |
| 8,000             | 41                          |
| 9,000             | 42                          |
| 10,000            | 43                          |

**OUTDOOR SOUND POWER**

| UNIT<br>579F | SOUND<br>RATING<br>(60 Hz) | A-WEIGHTED<br>(dB) | OCTAVE BANDS |      |      |      |      |      |      |      |
|--------------|----------------------------|--------------------|--------------|------|------|------|------|------|------|------|
|              |                            |                    | 63           | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 180          | 88 dB                      | 87.8               | 90.8         | 88.7 | 86.4 | 84.3 | 83.5 | 78.4 | 75.6 | 66.8 |
| 216          | 88 dB                      | 87.8               | 90.8         | 88.7 | 86.4 | 84.3 | 83.5 | 78.4 | 75.6 | 66.8 |
| 240          | 95 dB                      | 94.1               | 98.7         | 92.3 | 93.8 | 90.9 | 89.6 | 85.9 | 80.3 | 74.3 |
| 300          | 95 dB                      | 94.1               | 98.7         | 92.3 | 93.8 | 90.9 | 89.6 | 85.9 | 80.3 | 74.3 |

**NOTE:** Indoor sound power is available in Bryant's Electronic Catalog program (ECAT) for specific operating parameters.

**ACCESSORY/FIOP STATIC PRESSURE (in. wg)\* — 579F180-300**

| COMPONENT                     | CFM   |       |       |       |       |       |       |        |        |  |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--|
|                               | 4500  | 5000  | 5400  | 6000  | 7200  | 7500  | 9000  | 10,000 | 11,250 |  |
| EconoMiSer IV and EconoMiSer2 | 0.040 | 0.050 | 0.060 | 0.070 | 0.090 | 0.100 | 0.110 | 0.120  | 0.140  |  |

**LEGEND**

**FIOP** — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

**FAN RPM AT MOTOR PULLEY SETTINGS\***

| UNIT<br>579F             | MOTOR PULLEY TURNS OPEN |     |      |       |      |       |      |       |      |       |      |       |      |
|--------------------------|-------------------------|-----|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|                          | 0                       | 1/2 | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 180† (208/230 and 460-v) | ††                      | ††  | 1179 | 1150  | 1121 | 1093  | 1064 | 1035  | 1006 | 978   | 949  | 920   | 891  |
| 180**                    | ††                      | ††  | 1559 | 1522  | 1488 | 1455  | 1422 | 1389  | 1356 | 1323  | 1289 | 1256  | 1227 |
| 180† (575-v)             | ††                      | ††  | 1429 | 1403  | 1376 | 1349  | 1323 | 1296  | 1269 | 1242  | 1215 | 1188  | 1159 |
| 216†                     | ††                      | ††  | 1095 | 1077  | 1058 | 1040  | 1021 | 1002  | 984  | 965   | 947  | 928   | 910  |
| 216**                    | ††                      | ††  | 1287 | 1265  | 1243 | 1222  | 1200 | 1178  | 1156 | 1134  | 1112 | 1091  | 1069 |
| 240†                     | ††                      | ††  | 1225 | 1209  | 1187 | 1165  | 1143 | 1120  | 1098 | 1076  | 1053 | 1031  | 1002 |
| 240**                    | ††                      | ††  | 1458 | 1434  | 1407 | 1381  | 1354 | 1328  | 1301 | 1275  | 1248 | 1222  | 1193 |
| 300†                     | ††                      | ††  | 1283 | 1269  | 1247 | 1225  | 1203 | 1182  | 1160 | 1138  | 1116 | 1095  | 1066 |
| 300**                    | ††                      | ††  | —    | —     | 1551 | 1524  | 1497 | 1470  | 1443 | 1415  | 1388 | 1361  | 1332 |

\*Approximate fan rpm shown.

†Indicates standard drive package.

\*\*Indicates alternate drive package.

††Due to belt and pulley size, pulley cannot be set to this number of turns open.

## PERFORMANCE DATA — 579F (cont)

### EVAPORATOR-FAN MOTOR DATA

| UNIT<br>579F | UNIT<br>VOLTAGE | MAXIMUM<br>ACCEPTABLE<br>CONTINUOUS<br>BHP* | MAXIMUM<br>ACCEPTABLE<br>CONTINUOUS<br>BkW* | MAXIMUM<br>ACCEPTABLE<br>OPERATING<br>WATTS | MAXIMUM<br>AMP DRAW |
|--------------|-----------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------|
| 180          | 208/230         | 4.25                                        | 3.17                                        | 3,775                                       | 10.5                |
|              | 460             | 4.25                                        | 3.17                                        | 3,775                                       | 4.8                 |
|              | 575             | 3.45                                        | 2.59                                        | 3,065                                       | 3.9                 |
| 216          | 208/230         | 5.90                                        | 4.40                                        | 5,180                                       | 15.8                |
|              | 460             |                                             |                                             |                                             | 7.9                 |
|              | 575             |                                             |                                             |                                             | 6.0                 |
| 240          | 208/230         | 8.70                                        | 6.49                                        | 7,915                                       | 22.0                |
|              | 460             | 9.50                                        | 7.08                                        | 8,640                                       | 13.0                |
|              | 575             | 8.70                                        | 6.49                                        | 7,915                                       | 10.0                |
| 300          | 208/230         | 10.20                                       | 7.61                                        | 9,510                                       | 28.0                |
|              | 460             | 11.80                                       | 8.80                                        | 11,000                                      | 14.6                |
|              | 575             | 10.20                                       | 7.61                                        | 9,510                                       | 13.0                |

#### LEGEND

**BHP** — Brake Horsepower

**BkW** — Brake Kilowatts

\*Extensive motor and electrical testing on these units ensures that the full horsepower (brake kilowatt) range of the motors can be utilized with confidence. Using fan motors up to the horsepower (brake kilowatt) ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

**NOTE:** All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

### EVAPORATOR-FAN MOTOR EFFICIENCY

| UNIT<br>579F | MOTOR EFFICIENCY<br>(%) |
|--------------|-------------------------|
| 180 (3.0 Hp) | 81.7                    |
| 180 (3.7 Hp) | 85.8                    |
| 216 (5 Hp)   | 87.5                    |
| 240 (7.5 Hp) | 88.5                    |
| 300 (10 Hp)  | 89.5                    |

**NOTE:** All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

# ELECTRICAL DATA

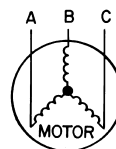
| UNIT<br>579F     | NOMINAL<br>VOLTAGE<br>(3 Ph, 60 Hz) | VOLTAGE<br>RANGE |     | COMPRESSOR |     |      |     | OFM |     |          | IFM  |           | POWER<br>EXHAUST |      | COMBUSTION<br>FAN MOTOR | POWER<br>SUPPLY |         |
|------------------|-------------------------------------|------------------|-----|------------|-----|------|-----|-----|-----|----------|------|-----------|------------------|------|-------------------------|-----------------|---------|
|                  |                                     | Min              | Max | RLA        | LRA | RLA  | LRA | Qty | Hp  | FLA (ea) | Hp   | FLA       | FLA              | LRA  | FLA                     | MCA             | MOCP*   |
| 180<br>(15 Tons) | 208/230                             | 187              | 253 | 28.8       | 195 | 28.8 | 195 | 3   | 0.5 | 1.7      | 3.7  | 10.5/11.0 | —                | —    | 0.57                    | 81/81           | 100/100 |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 85/86           | 110/110 |
|                  | 460                                 | 414              | 508 | 14.7       | 95  | 14.7 | 95  | 3   | 0.5 | 0.8      | 3.7  | 4.8       | —                | —    | 0.30                    | 40              | 50      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 43              | 50      |
|                  | 575                                 | 518              | 633 | 10.8       | 80  | 10.8 | 80  | 3   | 0.5 | 0.8      | 3.0  | 3.9       | —                | —    | 0.57                    | 30              | 40      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 32              | 40      |
| 216<br>(18 Tons) | 208/230                             | 187              | 253 | 30.1       | 225 | 28.8 | 195 | 3   | 0.5 | 1.7      | 5.0  | 15.8/15.8 | —                | —    | 0.57                    | 87/87           | 110/110 |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 92/92           | 110/110 |
|                  | 460                                 | 414              | 508 | 15.5       | 114 | 14.7 | 95  | 3   | 0.5 | 0.8      | 5.0  | 7.9       | —                | —    | 0.30                    | 44              | 50      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 47              | 60      |
|                  | 575                                 | 518              | 633 | 12.1       | 80  | 10.8 | 80  | 3   | 0.5 | 0.8      | 5.0  | 6.0       | —                | —    | 0.57                    | 34              | 40      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 36              | 40      |
| 240<br>(20 Tons) | 208/230                             | 187              | 253 | 37.8       | 239 | 30.1 | 225 | 2   | 1   | 6.6      | 7.5  | 25.0/25.0 | —                | —    | 0.57                    | 116/116         | 150/150 |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 120/120         | 150/150 |
|                  | 460                                 | 414              | 508 | 17.2       | 125 | 15.5 | 114 | 2   | 1   | 3.3      | 7.5  | 13.0      | —                | —    | 0.30                    | 57              | 70      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 59              | 70      |
|                  | 575                                 | 518              | 633 | 12.4       | 80  | 12.1 | 80  | 2   | 1   | 3.4      | 7.5  | 10.0      | —                | —    | 0.57                    | 44              | 50      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 46              | 50      |
| 300<br>(25 Tons) | 208/230                             | 187              | 253 | 41.0       | 350 | 37.8 | 239 | 2   | 1   | 6.6      | 10.0 | 28.0/28.0 | —                | —    | 0.57                    | 130/130         | 150/150 |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 135/135         | 175/175 |
|                  | 460                                 | 414              | 508 | 21.8       | 158 | 17.2 | 125 | 2   | 1   | 3.3      | 10.0 | 14.6      | —                | —    | 0.30                    | 66              | 80      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 68              | 80      |
|                  | 575                                 | 518              | 633 | 17.3       | 125 | 12.4 | 80  | 2   | 1   | 3.4      | 10.0 | 13.0      | —                | —    | 0.57                    | 54              | 70      |
|                  |                                     |                  |     |            |     |      |     |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 56              | 70      |

## LEGEND

**FLA** — Full Load Amps  
**HACR** — Heating, Air Conditioning and Refrigeration  
**IFM** — Indoor (Evaporator) Fan Motor  
**LRA** — Locked Rotor Amps  
**MCA** — Minimum Circuit Amps  
**MOCP** — Maximum Overcurrent Protection  
**NEC** — National Electrical Code  
**OFM** — Outdoor (Condenser) Fan Motor  
**RLA** — Rated Load Amps

\*Fuse or HACR circuit breaker.

EXAMPLE: Supply voltage is 460-3-60.



AB = 452 v  
 BC = 464 v  
 AC = 455 v

$$\begin{aligned}
 \text{Average Voltage} &= \frac{452 + 464 + 455}{3} \\
 &= \frac{1371}{3} \\
 &= 457
 \end{aligned}$$

Determine maximum deviation from average voltage.

(AB) 457 - 452 = 5 v  
 (BC) 464 - 457 = 7 v  
 (AC) 457 - 455 = 2 v

Maximum deviation is 7 v.

Determine percent voltage imbalance.

$$\begin{aligned}
 \% \text{ Voltage Imbalance} &= 100 \times \frac{7}{457} \\
 &= 1.53\%
 \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

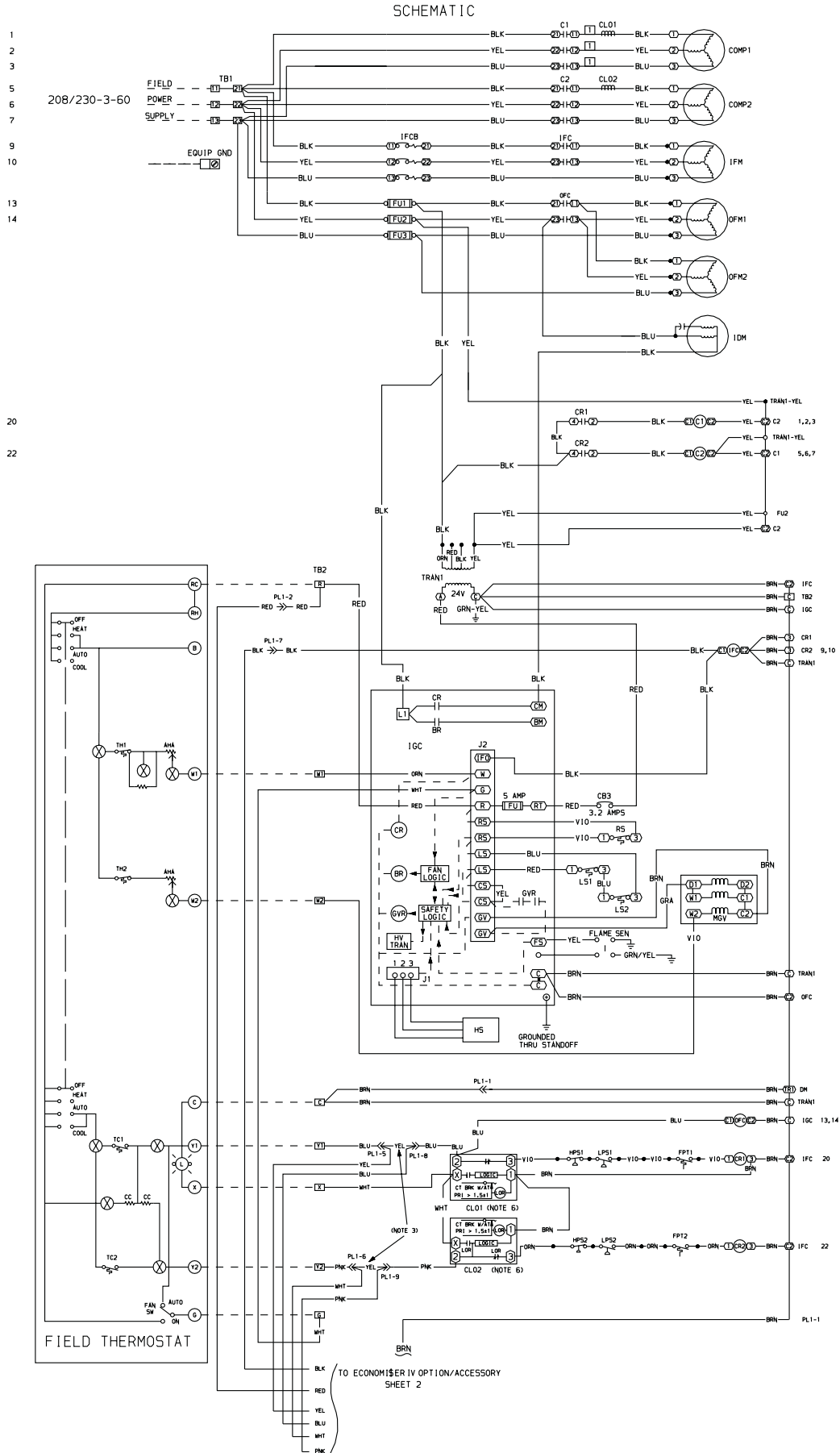


## NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- Unbalanced 3-Phase Supply Voltage**  
*Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent voltage imbalance.*

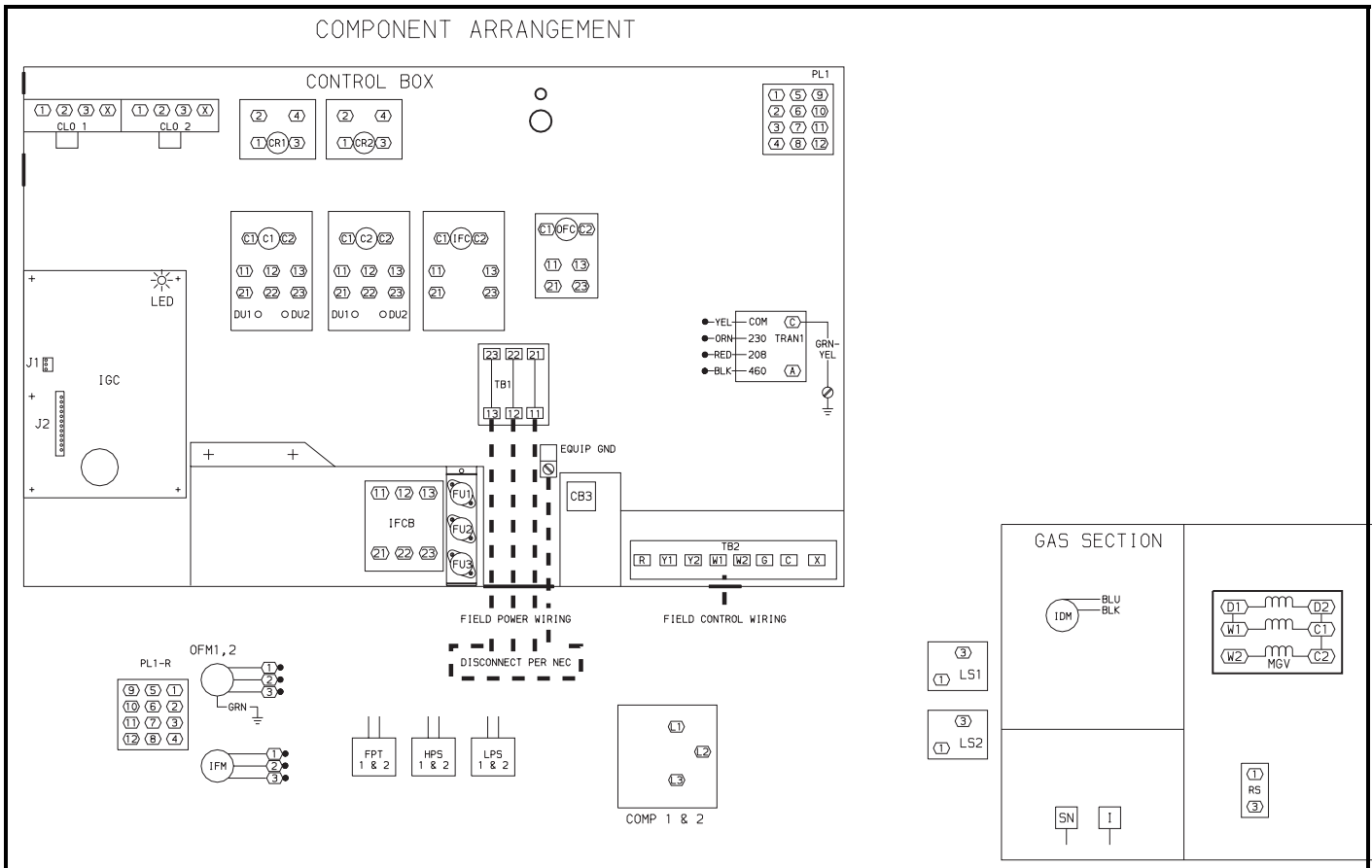
$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

# **TYPICAL WIRING SCHEMATICS — 579F** **(579F240, 208/230 V Shown)**





# **TYPICAL WIRING SCHEMATICS — 579F** **(579F240, 208/230 V Shown) (cont)**



## **LEGEND AND NOTES**

### **LEGEND**

**AHA** — Adjustable Heat Anticipator  
**BKR W/AT** — Breaker with Amp Turns  
**C** — Contactor, Compressor  
**CB** — Circuit Breaker  
**CC** — Cooling Compensator  
**CLO** — Compressor Lockout  
**COMP** — Compressor Motor  
**CR** — Control Relay  
**CT** — Control Transformer  
**DM** — Damper Motor  
**DU** — Dummy Terminal  
**EQUIP** — Equipment  
**FPT** — Freeze Protection Thermostat  
**FU** — Fuse  
**GND** — Ground  
**HPS** — High-Pressure Switch  
**HS** — Hall Effect Sensor  
**HV** — High Voltage  
**I** — Ignitor  
**IDM** — Induced-Draft Motor  
**IFC** — Indoor-Fan Contactor

**IFCB** — Indoor-Fan Circuit Breaker  
**IFM** — Indoor-Fan Motor  
**IGC** — Integrated Gas Unit Controller  
**L** — Light  
**LED** — Light-Emitting Diode  
**LOR** — Lockout Relay  
**LPS** — Low-Pressure Switch  
**LS** — Limit Switch  
**MGV** — Main Gas Valve  
**NEC** — National Electrical Code  
**OFC** — Outdoor-Fan Contactor  
**OFM** — Outdoor-Fan Motor  
**PL** — Plug Assembly  
**PRI** — Primary  
**RS** — Rollout Switch  
**SN** — Sensor  
**SR** — Solenoid Relay  
**SW** — Switch  
**TB** — Terminal Block  
**TC** — Thermostat Cooling  
**TH** — Thermostat Heating

**TRAN** — Transformer

Terminal (Marked)

Terminal (Unmarked)

Terminal Block

Splice

Splice (Marked)

Splice (Field Supplied)

Factory Wiring

Field Control Wiring

Field Power Wiring

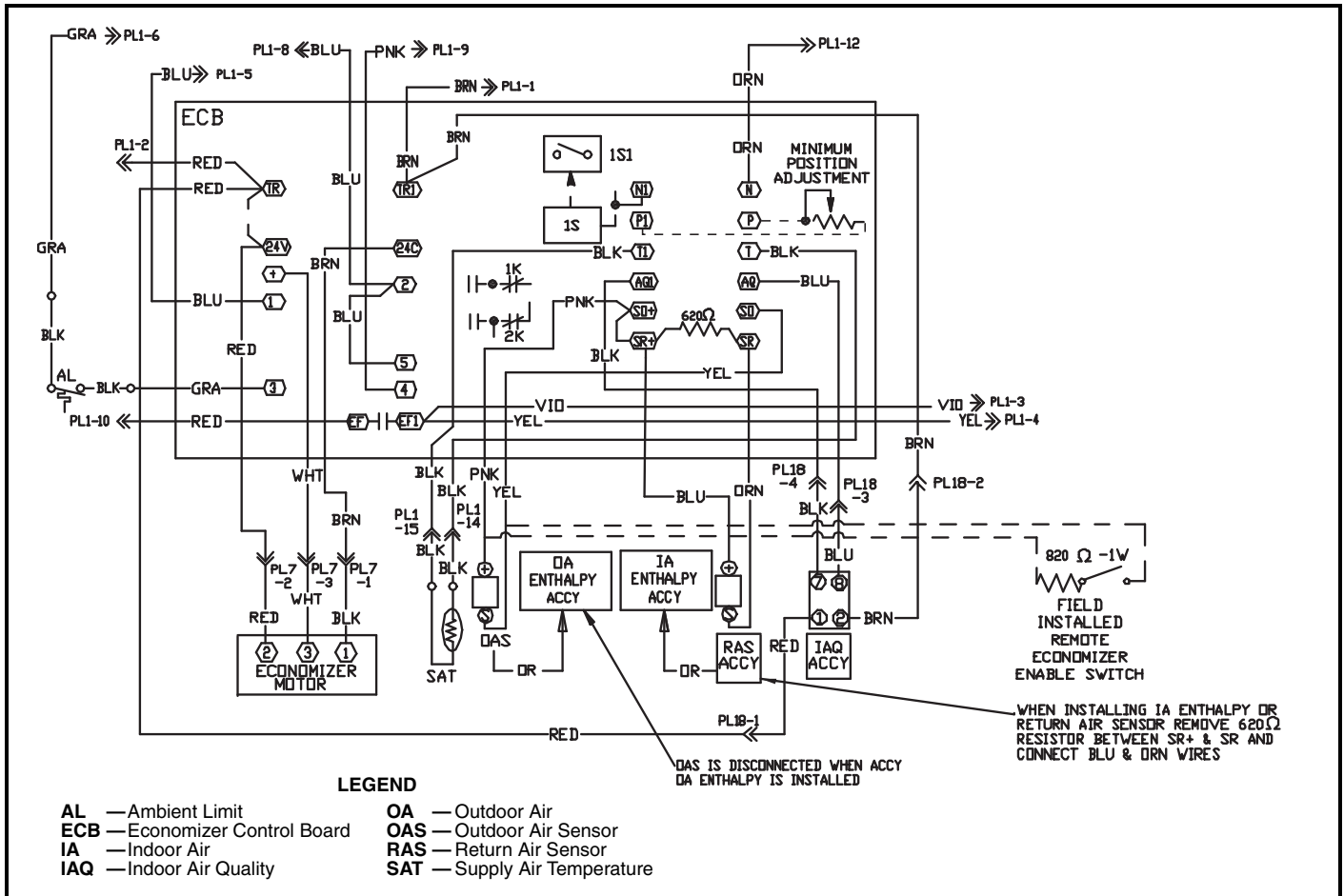
Accessory or Optional Wiring

To indicate common potential only; not to represent wiring.

### **NOTES:**

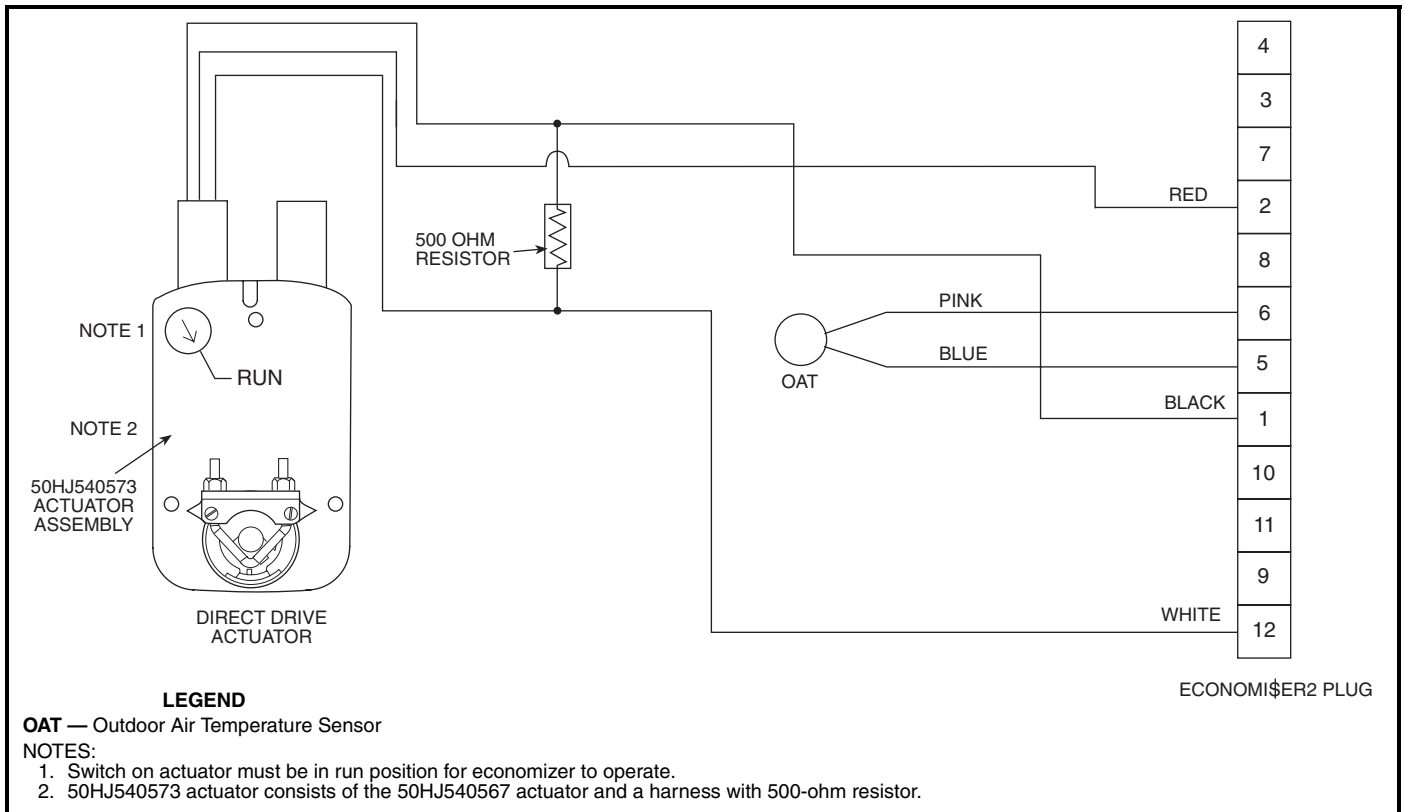
- Compressor and fan motors thermally protected; 3-phase motors protected against primary single-phasing conditions.
- If any of the original wire furnished must be replaced, it must be replaced with type 90 C wire or its equivalent.
- Jumpers are omitted when unit is equipped with economizer.
- IFCB must trip amps is equal to or less than 140% full load amps.
- On 208/230-v unit, TRAN1 is factory wired to ORN lead for 230-v power supply. If unit is to run on 208-v power supply, TRAN1 must be rewired. Disconnect the BLK wire on TRAN1 and connect wire to 208-v RED wire. Insulate 230-v ORN wire.
- The CLO locks out the compressor to prevent short cycling on compressor overload and safety devices. Before replacing CLO, check these devices.
- Number(s) indicates the line location of used contacts. A bracket over (2) numbers signifies a single-pole, double-throw contact. An underlined number signifies a normally closed contact. A plain (no line) number signifies a normally open contact.

## TYPICAL WIRING SCHEMATICS — 579F (cont)



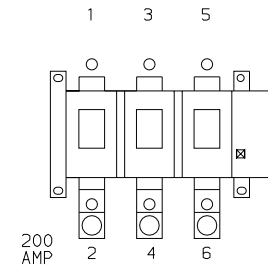
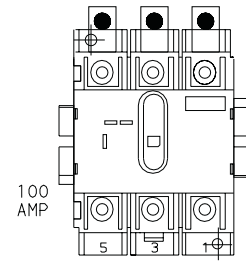
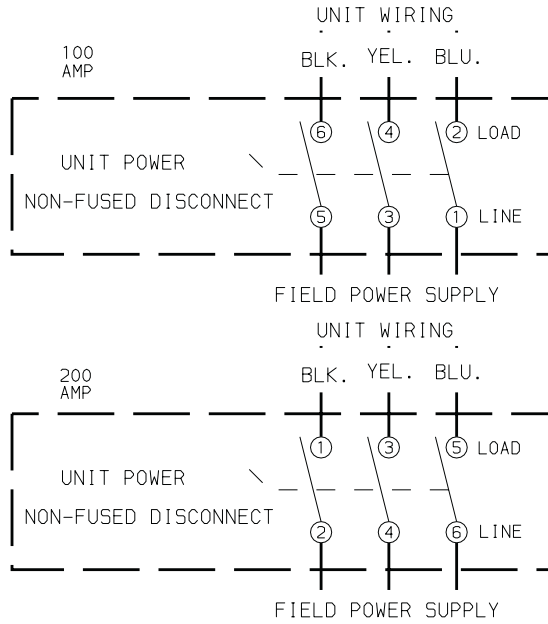
**EconoMi\$er IV Wiring — 579F180-300 Units**

579F180-300



**EconoMi\$er2 Wiring — 579F180-300 Units**

## TYPICAL WIRING SCHEMATICS — 579F (cont)

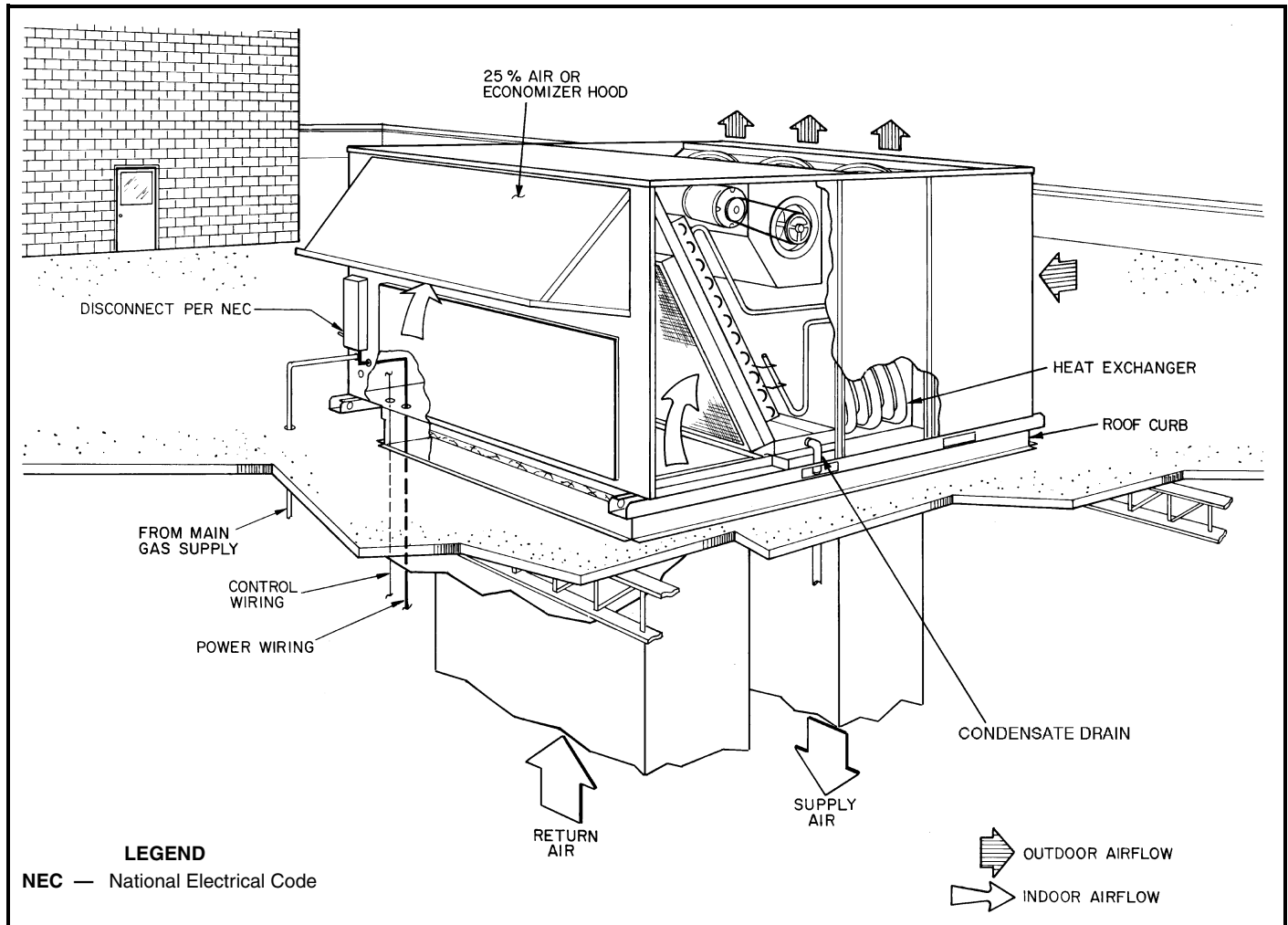


### NOTES:

1. If the Non-Fused Disconnect Service Option is ordered for these units, the Non-Fused Disconnect will be factory-installed.
2. The Disconnect takes the place of TB-1 as shown on the unit wiring diagram label and the component arrangement label.

### Non-Fused Disconnect (Optional) — 579F180-300

**TYPICAL PIPING AND WIRING — 579F180-300  
(579F180 Shown)**



579F180-300

# PHYSICAL DATA — 580F180-300

| UNIT 580F                                                                                      |  | 180                       | 210                        | 240                                 | 300                                   |
|------------------------------------------------------------------------------------------------|--|---------------------------|----------------------------|-------------------------------------|---------------------------------------|
| NOMINAL CAPACITY (tons)                                                                        |  | 15                        | 18                         | 20                                  | 25                                    |
| OPERATING WEIGHT                                                                               |  |                           |                            |                                     |                                       |
| Unit                                                                                           |  | 1800                      | 1850                       | 1900                                | 2270                                  |
| EconoMiSer IV                                                                                  |  | 80                        | 80                         | 80                                  | 80                                    |
| COMPRESSOR/MANUFACTURER                                                                        |  |                           |                            |                                     |                                       |
| Scroll, Copeland                                                                               |  |                           |                            |                                     |                                       |
| Quantity...Model (Ckt 1, Ckt 2)                                                                |  | 1...ZR94KC,<br>1...ZR72KC | 1...ZR108KC,<br>1...ZR94KC | 1...ZR125KC,<br>1...ZR108KC         | 1...ZR4140KC,<br>2...ZR144KC          |
| Capacity Stages (%)                                                                            |  | 60, 40                    | 55, 45                     | 55, 45                              | 60, 40                                |
| Number of Refrigerant Circuits                                                                 |  | 2                         | 2                          | 2                                   | 2                                     |
| Oil (oz) (Ckt 1, Ckt 2)                                                                        |  | 85, 60                    | 106, 81                    | 106, 106                            | 136, 106                              |
| REFRIGERANT TYPE                                                                               |  |                           |                            |                                     |                                       |
| R-22                                                                                           |  |                           |                            |                                     |                                       |
| TXV                                                                                            |  |                           |                            |                                     |                                       |
| Expansion Device                                                                               |  |                           |                            |                                     |                                       |
| Operating Charge (lb-oz)                                                                       |  |                           |                            |                                     |                                       |
| Circuit 1*                                                                                     |  | 19-8                      | 19-8                       | 19-11                               | 26-13                                 |
| Circuit 2                                                                                      |  | 13-8                      | 19-2                       | 13-14                               | 25-10                                 |
| CONDENSER COIL                                                                                 |  |                           |                            |                                     |                                       |
| Cross-Hatched 3/8-in. Copper Tubes, Aluminum Lanced, Aluminum Pre-Coated, or Copper Plate Fins |  |                           |                            |                                     |                                       |
| Rows...Fins/in.                                                                                |  | 4...15                    | 4...15                     | 4...15                              | 3...15 (2 coils)                      |
| Total Face Area (sq ft)                                                                        |  | 21.7                      | 21.7                       | 21.7                                | 43.4                                  |
| CONDENSER FAN                                                                                  |  |                           |                            |                                     |                                       |
| Propeller Type                                                                                 |  |                           |                            |                                     |                                       |
| Nominal Cfm                                                                                    |  | 10,500                    | 10,500                     | 14,200                              | 21,000                                |
| Quantity...Diameter (in.)                                                                      |  | 3...22                    | 3...22                     | 2...30                              | 6...22                                |
| Motor Hp...Rpm                                                                                 |  | 1/2...1050                | 1/2...1050                 | 1...1075                            | 1/2...1050                            |
| Watts Input (Total)                                                                            |  | 1100                      | 1100                       | 3400                                | 2200                                  |
| EVAPORATOR COIL                                                                                |  |                           |                            |                                     |                                       |
| Cross-Hatched 3/8-in. Copper Tubes, Aluminum Lanced or Copper Plate Fins, Face Split           |  |                           |                            |                                     |                                       |
| Rows...Fins/in.                                                                                |  | 4...15                    | 4...15                     | 4...15                              | 4...15                                |
| Total Face Area (sq ft)                                                                        |  | 17.5                      | 17.5                       | 17.5                                | 17.5                                  |
| EVAPORATOR FAN                                                                                 |  |                           |                            |                                     |                                       |
| Centrifugal Type                                                                               |  |                           |                            |                                     |                                       |
| Quantity...Size (in.)                                                                          |  | 2...12 x 12               | 2...12 x 12                | 2...12 x 12                         | 2...12 x 12                           |
| Type Drive                                                                                     |  | Belt                      | Belt                       | Belt                                | Belt                                  |
| Nominal Cfm                                                                                    |  | 6000                      | 7200                       | 8000                                | 10,000                                |
| Motor Hp                                                                                       |  | 5                         | 5                          | 7.5                                 | 10                                    |
| Motor Nominal Rpm                                                                              |  | 1745                      | 1745                       | 1745                                | 1740                                  |
| Maximum Continuous Bhp                                                                         |  | 6.13                      | 5.90                       | 8.7 [208/230, 575 v]<br>9.5 [460 v] | 10.2 [208/230, 575 v]<br>11.8 [460 v] |
| Motor Frame Size                                                                               |  | 184T                      | 184T                       | 213T                                | 215T                                  |
| Nominal Rpm High/Low                                                                           |  | —                         | —                          | —                                   | —                                     |
| Fan Rpm Range                                                                                  |  | 873-1021<br>1025-1200     | 910-1095<br>1069-1287      | 1002-1151<br>1193-1369              | 1066-1283<br>1332-1550                |
| Motor Bearing Type                                                                             |  | Ball                      | Ball                       | Ball                                | Ball                                  |
| Maximum Allowable Rpm                                                                          |  | 1550                      | 1550                       | 1550                                | 1550                                  |
| Motor Pulley Pitch Diameter                                                                    |  | 4.9/5.9                   | 4.9/5.9                    | 5.4/6.6                             | 4.9/5.9                               |
| Min/Max (in.)                                                                                  |  | 4.9/5.9                   | 4.9/5.9                    | 5.4/6.6                             | 4.9/5.9                               |
| Nominal Motor Shaft Diameter (in.)                                                             |  | 1 1/8                     | 1 1/8                      | 1 3/8                               | 1 3/8                                 |
| Fan Pulley Pitch Diameter (in.)                                                                |  | 9.4                       | 9.4                        | 9.4                                 | 8.0                                   |
| Nominal Fan Shaft Diameter (in.)                                                               |  | 8.0                       | 8.0                        | 7.9                                 | 6.4                                   |
| Belt, Quantity...Type...Length (in.)                                                           |  | 17 1/16                   | 17 1/16                    | 17 1/16                             | 17 1/16                               |
| Low-Medium Static                                                                              |  | 1...BX...50               | 1...BX...50                | 1...BX...53                         | 2...BX...50                           |
| High Static                                                                                    |  | 1...BX...48               | 1...BX...48                | 1...BX...50                         | 2...BX...47                           |
| Pulley Center Line Distance (in.)                                                              |  | 13.3-14.8                 | 13.3-14.8                  | 14.6-15.4                           | 14.6-15.4                             |
| Speed Change per Full Turn of Movable Pulley Flange (rpm)                                      |  | 37                        | 37                         | 37                                  | 36                                    |
| Movable Pulley Maximum Full Turns From Closed Position                                         |  | 44                        | 34                         | 44                                  | 45                                    |
| Factory Speed                                                                                  |  | 4                         | 6                          | 6                                   | 6                                     |
| Factory Speed Setting (rpm)                                                                    |  | 3.5                       | 3.5                        | 3.5                                 | 3.5                                   |
| Low-Medium Static                                                                              |  | 965                       | 1002                       | 1095                                | 1182                                  |
| High Static                                                                                    |  | 1134                      | 1178                       | 1303                                | 1470                                  |
| Fan Shaft Diameter at Pulley (in.)                                                             |  | 17 1/16                   | 17 1/16                    | 17 1/16                             | 17 1/16                               |

## LEGEND

**Bhp** — Brake Horsepower  
**TXV** — Thermostatic Expansion Valve

\*Circuit 1 uses the lower portion of the condenser coil and lower portion of the evaporator coils; and Circuit 2 uses the upper portion of both coils.

†Rollout switch is manual reset.

\*\*The 580F300 unit requires 2-in. industrial-grade filters capable of handling face velocities up to 625 ft/min (such as American Air Filter no. 5700 or equivalent).

**NOTE:** The 580F180-300 units have a low-pressure switch (standard) located on the suction side.

# PHYSICAL DATA — 580F180-300 (cont)

| UNIT 580F                                   | 180                    | 210                    | 240                                                                               | 300                    |
|---------------------------------------------|------------------------|------------------------|-----------------------------------------------------------------------------------|------------------------|
| <b>FURNACE SECTION</b>                      |                        |                        |                                                                                   |                        |
| Rollout Switch Cutout Temp (F)†             | 190                    | 190                    | 190                                                                               | 190                    |
| Burner Orifice Diameter (in. ...drill size) | 0.1285...30/0.136...29 | 0.1285...30/0.136...29 | 0.1285...30/0.136...29                                                            | 0.1285...30/0.136...29 |
| Natural Gas                                 |                        |                        |                                                                                   |                        |
| Thermostat Heat Anticipator Setting (amps)  |                        |                        |                                                                                   |                        |
| 208/230, 575 v                              | 0.98                   | 0.98                   | 0.98                                                                              | 0.98                   |
| Stage 1                                     | 0.44                   | 0.44                   | 0.44                                                                              | 0.44                   |
| Stage 2                                     | 0.80                   | 0.80                   | 0.80                                                                              | 0.80                   |
| 460 v                                       | 0.44                   | 0.44                   | 0.44                                                                              | 0.44                   |
| Stage 1                                     | 206,000/270,000        | 206,000/270,000        | 206,000/270,000                                                                   | 206,000/270,000        |
| Stage 2                                     | 275,000/360,000        | 275,000/360,000        | 275,000/360,000                                                                   | 275,000/360,000        |
| Gas Input                                   |                        |                        |                                                                                   |                        |
| Efficiency (Steady-State) (%)               | 81                     | 81                     | 81                                                                                | 81                     |
| Temperature Rise Range                      | 15-45/20-50            | 15-45/20-50            | 15-45/20-50                                                                       | 15-45/20-50            |
| Manifold Pressure (in. wg)                  |                        |                        |                                                                                   |                        |
| Natural Gas                                 | 3.3                    | 3.3                    | 3.3                                                                               | 3.3                    |
| Gas Valve Quantity                          | 1                      | 1                      | 1                                                                                 | 1                      |
| Gas Valve Pressure Range                    |                        |                        |                                                                                   |                        |
| in. wg                                      | 5.5-13.5               | 5.5-13.5               | 5.5-13.5                                                                          | 5.5-13.5               |
| psig                                        | 0.235-0.487            | 0.235-0.487            | 0.235-0.487                                                                       | 0.235-0.487            |
| Field Gas Connection Size (in.-FPT)         | 3/4                    | 3/4                    | 3/4                                                                               | 3/4                    |
| <b>HIGH-PRESSURE SWITCH (psig)</b>          |                        |                        |                                                                                   |                        |
| Cutout                                      |                        |                        | 426                                                                               |                        |
| Reset (Auto)                                |                        |                        | 320                                                                               |                        |
| <b>LOW-PRESSURE SWITCH (psig)</b>           |                        |                        |                                                                                   |                        |
| Cutout                                      |                        |                        | 27                                                                                |                        |
| Reset (Auto)                                |                        |                        | 44                                                                                |                        |
| <b>FREEZE PROTECTION THERMOSTAT (F)</b>     |                        |                        |                                                                                   |                        |
| Opens                                       |                        |                        | 30 ± 5                                                                            |                        |
| Closes                                      |                        |                        | 45 ± 5                                                                            |                        |
| <b>OUTDOOR-AIR INLET SCREENS</b>            |                        |                        |                                                                                   |                        |
|                                             |                        |                        | Cleanable                                                                         |                        |
| Quantity...Size (in.)                       |                        |                        | 2...20 x 25 x 1                                                                   |                        |
|                                             |                        |                        | 1...20 x 20 x 1                                                                   |                        |
| <b>RETURN-AIR FILTERS</b>                   |                        |                        |                                                                                   |                        |
|                                             |                        |                        | Throwaway**                                                                       |                        |
| Quantity...Size (in.)                       |                        |                        | 4...20 x 20 x 2                                                                   |                        |
|                                             |                        |                        | 4...16 x20 x 2                                                                    |                        |
| <b>POWER EXHAUST</b>                        |                        |                        |                                                                                   |                        |
|                                             |                        |                        | 1/2 Hp, 208/230-460 v Motor Direct Drive, Propeller-Fan (Factory-Wired for 460 v) |                        |

## LEGEND

**Bhp** — Brake Horsepower  
**TXV** — Thermostatic Expansion Valve

\*Circuit 1 uses the lower portion of the condenser coil and lower portion of the evaporator coils;  
 and Circuit 2 uses the upper portion of both coils.

†Rollout switch is manual reset.

\*\*The 580F300 unit requires 2-in. industrial-grade filters capable of handling face velocities up to 625 ft/min  
 (such as American Air Filter no. 5700 or equivalent).

**NOTE:** The 580F180-300 units have a low-pressure switch (standard) located on the suction side.

## OPERATING AND RIGGING WEIGHTS

| UNIT | BASE UNIT OPERATING WEIGHTS* |     |      |     |      |     |      |      |
|------|------------------------------|-----|------|-----|------|-----|------|------|
|      | 180                          |     | 210  |     | 240  |     | 300  |      |
|      | lb                           | kg  | lb   | kg  | lb   | kg  | lb   | kg   |
| 580F | 1800                         | 816 | 1850 | 839 | 1900 | 862 | 2270 | 1030 |

\*Base unit weight does not include copper coils, economizer, power exhaust, barometric relief or crating. See  
 Options and Accessories table below for more information.

**NOTE:** For 180 or 210 unit, add 75 lb (34 kg) for domestic crating. For 240 unit, add 135 lb (61 kg). For 300  
 unit, add 175 lb (79 kg) for domestic crating.

## OPTIONS AND ACCESSORIES (Weight Adders)

| OPTION/<br>ACCESSORY                      | OPTION/ACCESSORY WEIGHTS |     |     |     |     |     |     |     |
|-------------------------------------------|--------------------------|-----|-----|-----|-----|-----|-----|-----|
|                                           | 180                      |     | 210 |     | 240 |     | 300 |     |
|                                           | lb                       | kg  | lb  | kg  | lb  | kg  | lb  | kg  |
| Barometric Relief Damper                  | 50                       | 23  | 50  | 23  | 50  | 23  | 50  | 23  |
| Power Exhaust                             | 85                       | 39  | 85  | 39  | 85  | 39  | 85  | 39  |
| EconoMiSer IV                             | 90                       | 41  | 90  | 41  | 90  | 41  | 90  | 41  |
| Cu Condenser Coil                         | 150                      | 68  | 150 | 68  | 150 | 68  | 150 | 68  |
| Cu Condenser and Evaporator Coils         | 280                      | 127 | 280 | 127 | 280 | 127 | 280 | 127 |
| Roof Curb (14-in. curb)                   | 200                      | 91  | 200 | 91  | 200 | 91  | 200 | 91  |
| Horizontal Adapter Curb (Pre-Assembled)   | 250                      | 113 | 250 | 113 | 250 | 113 | 250 | 113 |
| Horizontal Adapter Curb (Field-Assembled) | 348                      | 156 | 343 | 156 | 343 | 156 | 343 | 156 |
| Hail Guard                                | 60                       | 27  | 60  | 27  | 60  | 27  | 60  | 27  |

## LEGEND

**Cu** — Copper

580F180-300

## BASE UNIT DIMENSIONS — 580F180, 210

| UNIT | STD. WEIGHT       | UNIT WEIGHT    | CORNER A         | CORNER B         | CORNER C         | CORNER D         | DIM A           | DIM B           | DIM C           |
|------|-------------------|----------------|------------------|------------------|------------------|------------------|-----------------|-----------------|-----------------|
| 180  | 1800 LB<br>816 KG | 90 LB<br>41 KG | 417 LB<br>189 KG | 399 LB<br>181 KG | 481 LB<br>218 KG | 503 LB<br>228 KG | 3'-2"<br>(967)  | 3'-6"<br>(1070) | 1'-10"<br>(559) |
| 210  | 1850 LB<br>835 KG | 90 LB<br>41 KG | 450 LB<br>204 KG | 433 LB<br>197 KG | 463 LB<br>210 KG | 504 LB<br>229 KG | 3'-4"<br>(1016) | 3'-7"<br>(1092) | 1'-10"<br>(559) |

NOTES:  
1. REFER TO PRINT FOR ROOF CURB ACCESSORY DIMENSIONS.  
2. DIMENSIONS IN ( ) ARE IN MILLIMETERS.

3. CENTER OF GRAVITY.

4. DIRECTION OF AIR FLOW.

5. DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY.

6. MINIMUM CLEARANCE: FOR COIL REMOVAL. THIS DIMENSION CAN BE REDUCED TO 0' (1219) IF CONDITIONS PERMIT COIL REMOVAL FROM THE TOP.

7. 4'0" (1219) TO COMBUSTIBLE SURFACES, ALL FOUR SIDES (INCLUDES BETWEEN UNITS).

8. LEFT SIDE: 4'0" (1219) FOR PROPER CONDENSER COIL AIR FLOW.

9. FRONT: 4'0" (1219) FOR CONTROL BOX ACCESS.

10. DAMPER AND POWER EXHAUST IF SO EQUIPPED.

11. TOP: 6'0" (1829) TO ASSURE PROPER CONDENSER FAN OPERATION.

12. BOTTOM: 14" (356) TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB).

13. CONTROL BOX SIDE: 3'0" (914) TO UNGROUNDED SURFACES, NON-COMBUSTIBLE.

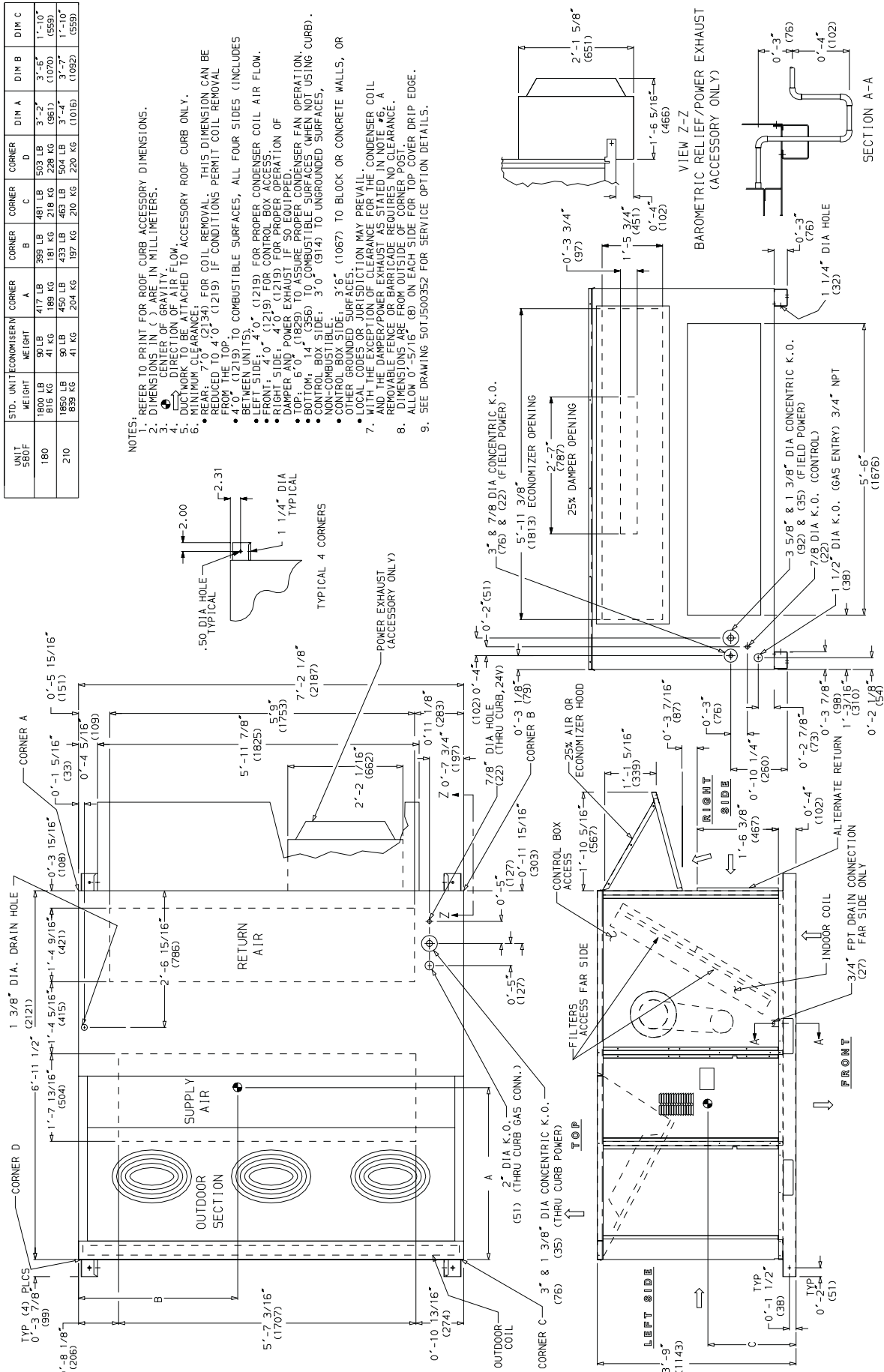
14. CONTROL BOX SIDE: 3'6" (1067) TO BLOCK OR CONCRETE WALLS, OR OTHER GROUNDED SURFACES.

15. WITH THE EXCEPTION OF CLEARANCE FOR THE CONDENSER COIL REMOVABLE FENCE OR BARRICADE AS STATED IN NOTE #6, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.

16. DIMENSIONS ARE FROM OUTSIDE OF CORNER POST.

17. ALLOW 0'-5/16" (8) ON EACH SIDE FOR TOP DRIP EDGE.

18. SEE DRAWING 50TJ500352 FOR SERVICE OPTION DETAILS.







BASE UNIT DIMENSIONS — 580F300

| UNIT    | STD. UNIT WEIGHT   | CONDENSER WEIGHT | CORNER A         | CORNER B         | CORNER C         | CORNER D         | DIM A           | DIM B               | DIM C              |
|---------|--------------------|------------------|------------------|------------------|------------------|------------------|-----------------|---------------------|--------------------|
| 580F300 | 2270 LB<br>1030 KG | 90 LB<br>41 KG   | 532 LB<br>242 KG | 526 LB<br>239 KG | 569 LB<br>259 KG | 593 LB<br>270 KG | 4'-6"<br>(1372) | 3'-7 1/4"<br>(1099) | 1'-1 1/4"<br>(641) |

NOTES:  
1. REFER TO PRINT FOR ROOF CURB ACCESSORY DIMENSIONS.  
2. DIMENSIONS IN ( ) ARE IN MILLIMETERS.  
3. CENTER OF GRAVITY.

4. DIRECTION OF AIR FLOW.

5. DUCTWORK TO BE ATTACHED TO ACCESSORY ROOF CURB ONLY.

6. REAR WORK CLEARANCE FOR COIL REMOVAL. THIS DIMENSION CAN BE REDUCED TO 4'-0" (1219) IF CONDITIONS PERMIT COIL REMOVAL FROM THE TOP.

7. 4'-0" (1219) TO COMBUSTIBLE SURFACES, ALL FOUR SIDES (INCLUDES BETWEEN UNITS).

8. 4'-0" (1219) FOR PROPER CONDENSER COIL AIR FLOW.

9. 4'-0" (1219) FOR PROPER CONDENSER COIL AIR FLOW.

10. 4'-0" (1219) FOR PROPER OPERATION OF DAMPER AND POWER EXHAUST IF SO EQUIPPED.

11. 6'-0" (1829) TO ASSURE PROPER CONDENSER FAN OPERATION.

12. BOTTOM: 14" (356) TO COMBUSTIBLE SURFACES (WHEN NOT USING CURB).

13. CONTROL BOX SIDE: 3'-0" (914) TO UNGROUNDED SURFACES, NON-COMBUSTIBLE.

14. CONTROL BOX SIDE: 3'-6" (1067) TO BLOCK OR CONCRETE WALLS, OR CONCRETE FLOOR SURFACES.

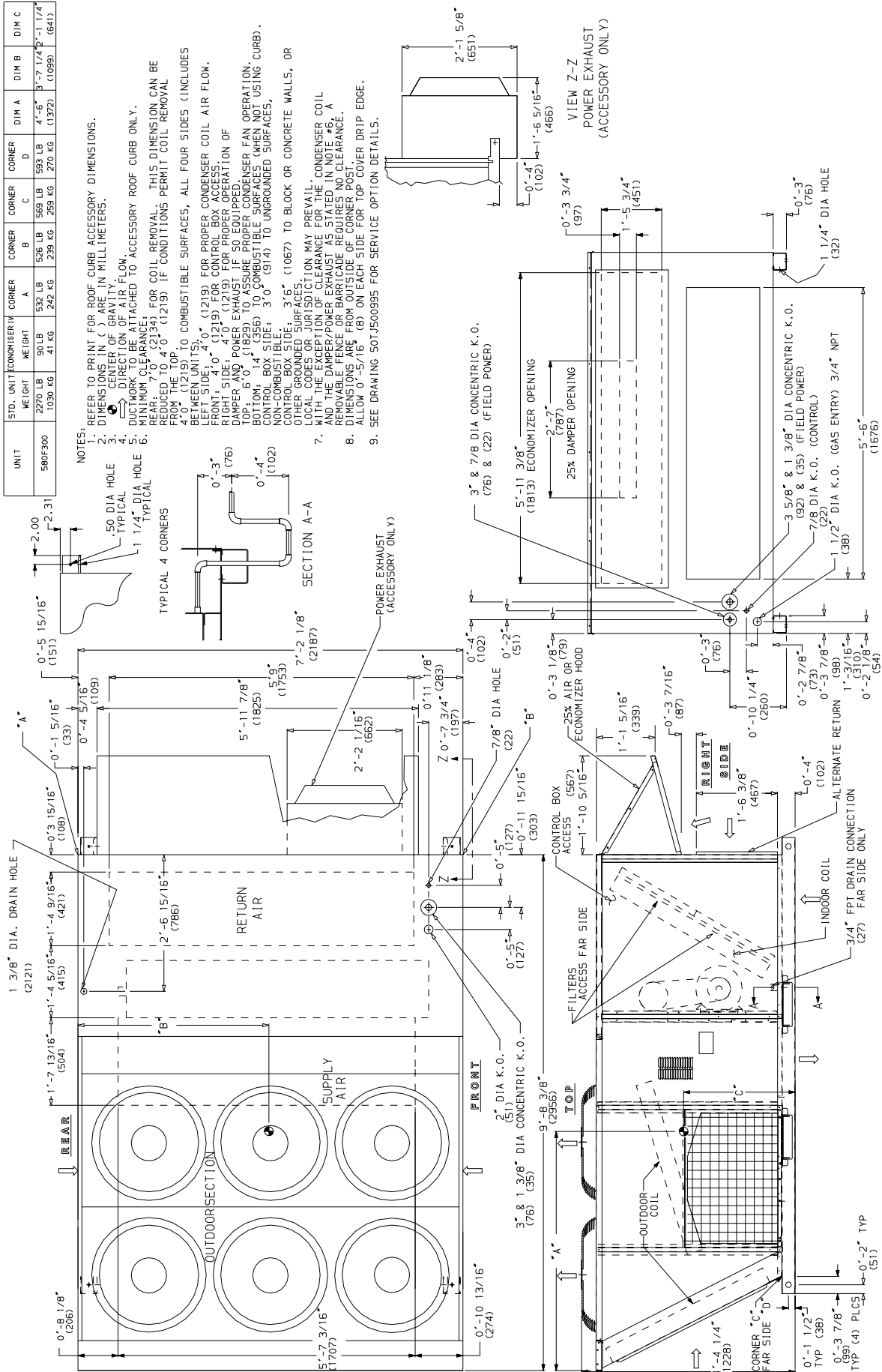
15. LOCAL CODES OR JURISDICTION MAY PREVAIL.

16. WITH THE EXCEPTION OF CLEARANCE FOR THE CONDENSER COIL REMOVABLE FENCE OR BARRICADE AS STATED IN NOTE #6, A REMOVABLE FENCE OR BARRICADE REQUIRES NO CLEARANCE.

17. DIMENSIONS ARE FROM OUTSIDE OF CORNER POST.

18. ALLOW 0'-5/16" (8) ON EACH SIDE FOR TOP COVER DRIP EDGE.

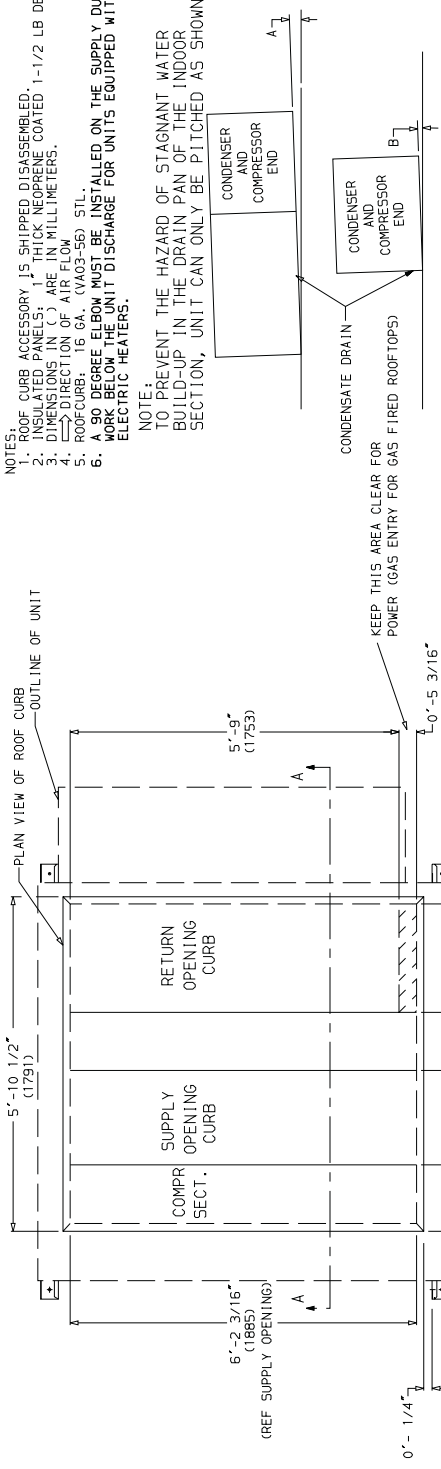
19. SEE DRAWING 501J500995 FOR SERVICE OPTION DETAILS.



| PKG. NO. REF.  | CURB HEIGHT   | DESCRIPTION                                         |
|----------------|---------------|-----------------------------------------------------|
| CRRFCURB010A00 | 1' - 2" (305) | Standard Curb 14" High                              |
| CRRFCURB011A00 | 2' - 0" (610) | Standard Curb for Units Requiring High Installation |
| CRRFCURB012A00 | 2' - 0" (610) | Side Supply and Return Curb for High Installation   |

- NOTES:
1. ROOF CURB ACCESSORY IS SHIPPED DISASSEMBLED.
  2. INSULATED PANELS; THICK NEOPRENE COATED, 1-1/2 LB DENSITY.
  3. DUCTS AND PANELS ARE TO BE INSTALLED WITH THE FOLLOWING DIRECTIONS:
  4. DUCT DIRECTION OF AIR FLOW.
  5. ROOF CURB: 16 GA. (VA03-56) STL.
  6. A 90 DEGREE ELBOW MUST BE INSTALLED ON THE SUPPLY DUCT WORK BELOW THE UNIT DISCHARGE FOR UNITS EQUIPPED WITH ELECTRIC HEATERS.

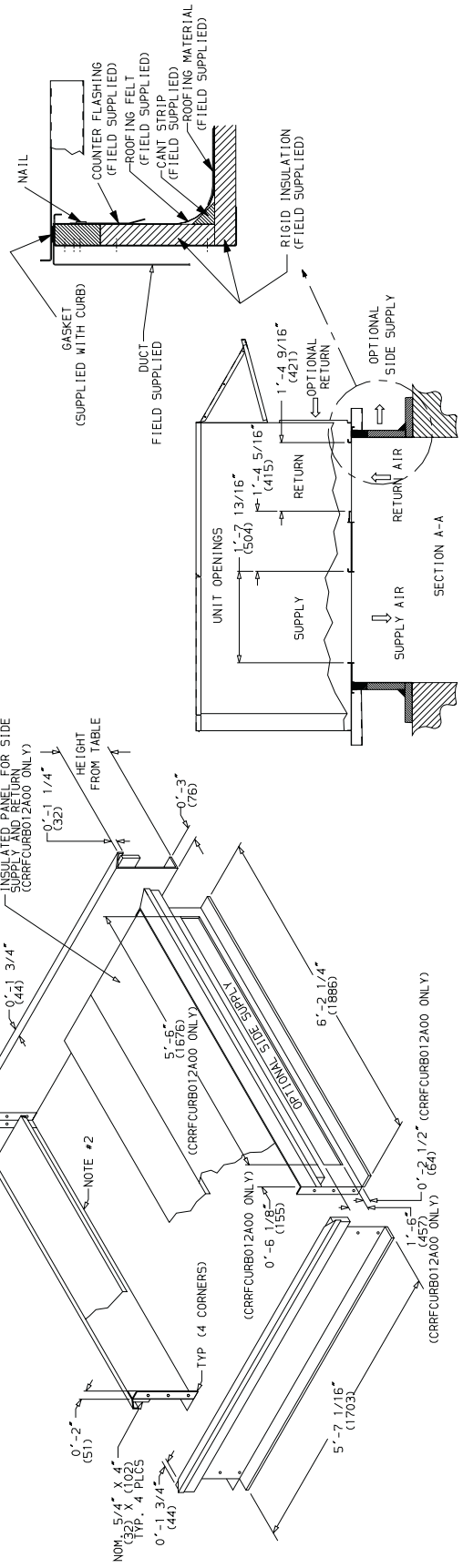
NOTE:  
TO PREVENT THE HAZARD OF STAGNANT WATER BUILD-UP IN THE DRAIN PAN OF THE INDOOR SECTION, UNIT CAN ONLY BE PITCHED AS SHOWN.



DIMENSIONS (degrees and inches)

| UNIT | A    |     | B    |     |
|------|------|-----|------|-----|
|      | DEG. | IN. | DEG. | IN. |
| ALL  | .28  | .45 | .28  | .43 |

UNIT LEVELING TOLERANCES  
\*From edge of unit to horizontal.

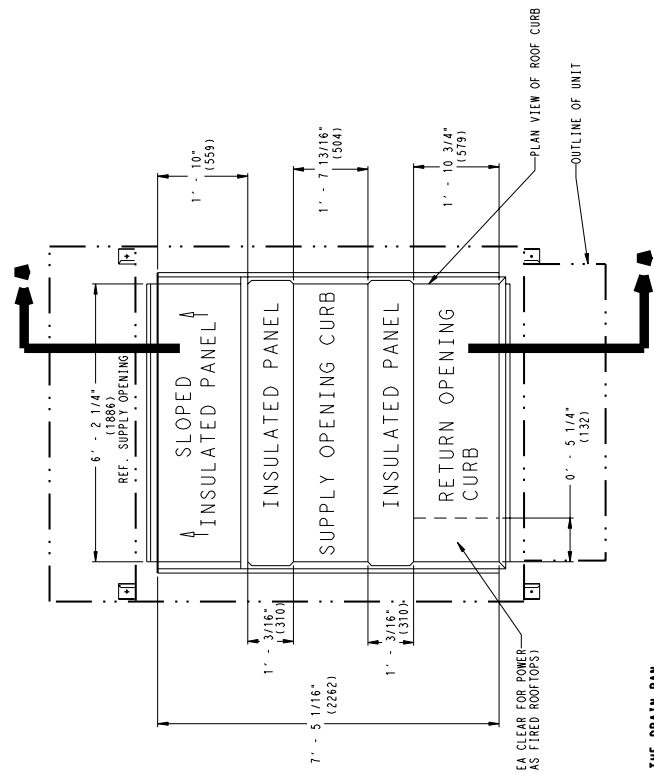
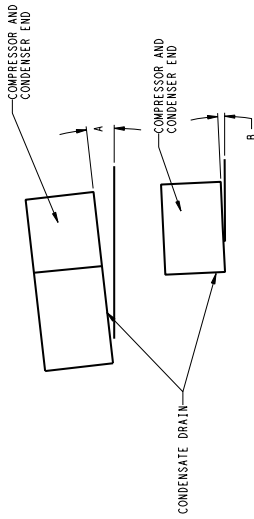


| ROOFCURB ACCESSORY | CURB HEIGHT | DESCRIPTION        |
|--------------------|-------------|--------------------|
| CRRFCURB025A00     | 1'-2" [356] | ROOF CURB 14" HIGH |

DIMENSIONS (DEGREES AND INCHES)

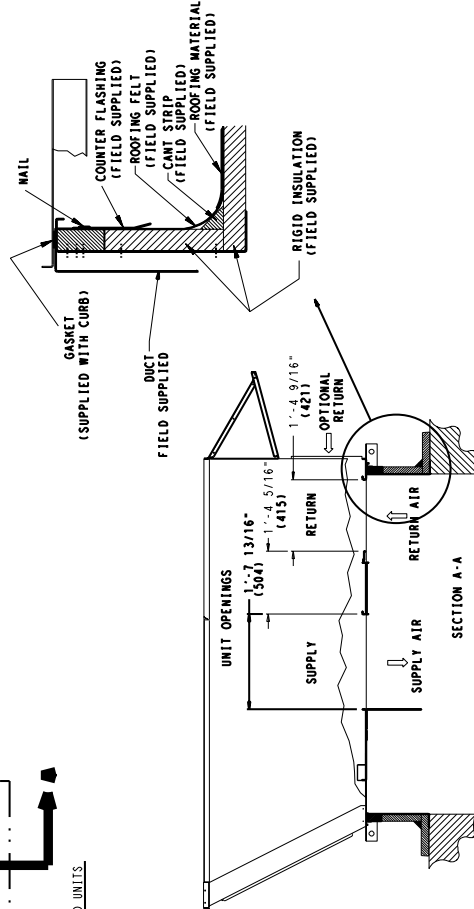
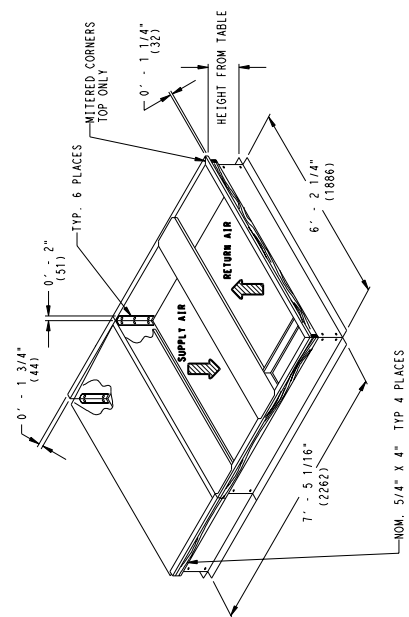
| UNIT | DEG. | IN. | DEG. | IN. |
|------|------|-----|------|-----|
| ALL  | .28  | .45 | .28  | .43 |

MAX CURB LEVELING TOLERANCES:  
FROM EDGE OF UNIT TO HORIZONTAL



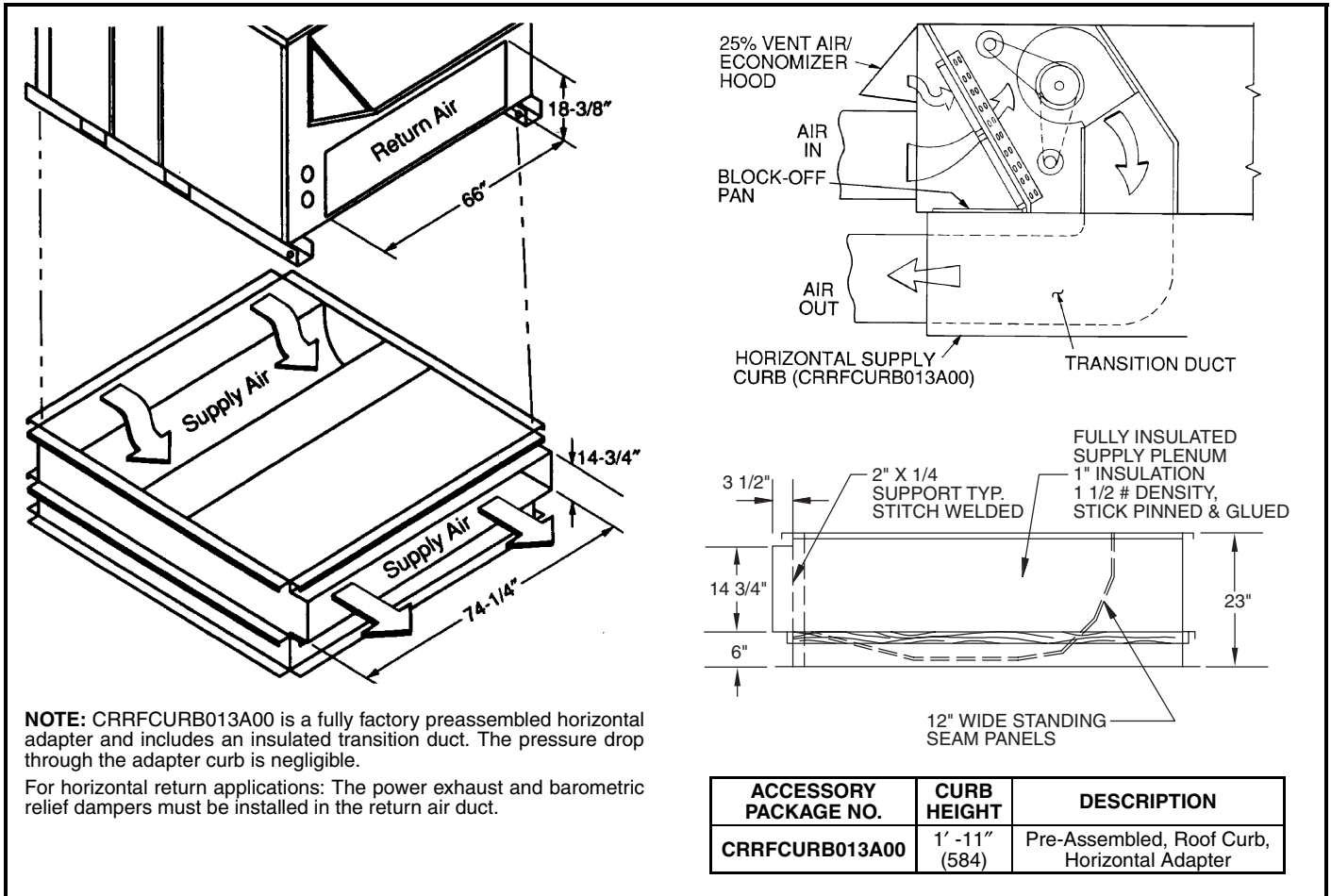
ATTACH DUCT WORK TO UNITS

- NOTES:
1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
  2. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
  3. DIRECTION OF AIRFLOW.
  4. ROOF CURB: 16 GA. (VA03-56) STEEL.
  5. TO PREVENT THE HAZARD OF STAGNANT WATER BUILD-UP IN THE DRAIN PAN OF THE INDOOR SECTION, UNIT CAN ONLY BE PITCHED AS SHOWN.
  6. INSULATED PANELS: 1" THICK NEOPRENE COATED 1-1/2 LB DENSITY.
  7. A 90° ELBOW MUST BE INSTALLED ON THE SUPPLY DUCT WORK BELOW THE UNIT DISCHARGE FOR UNITS EQUIPPED WITH ELECTRIC HEATERS.

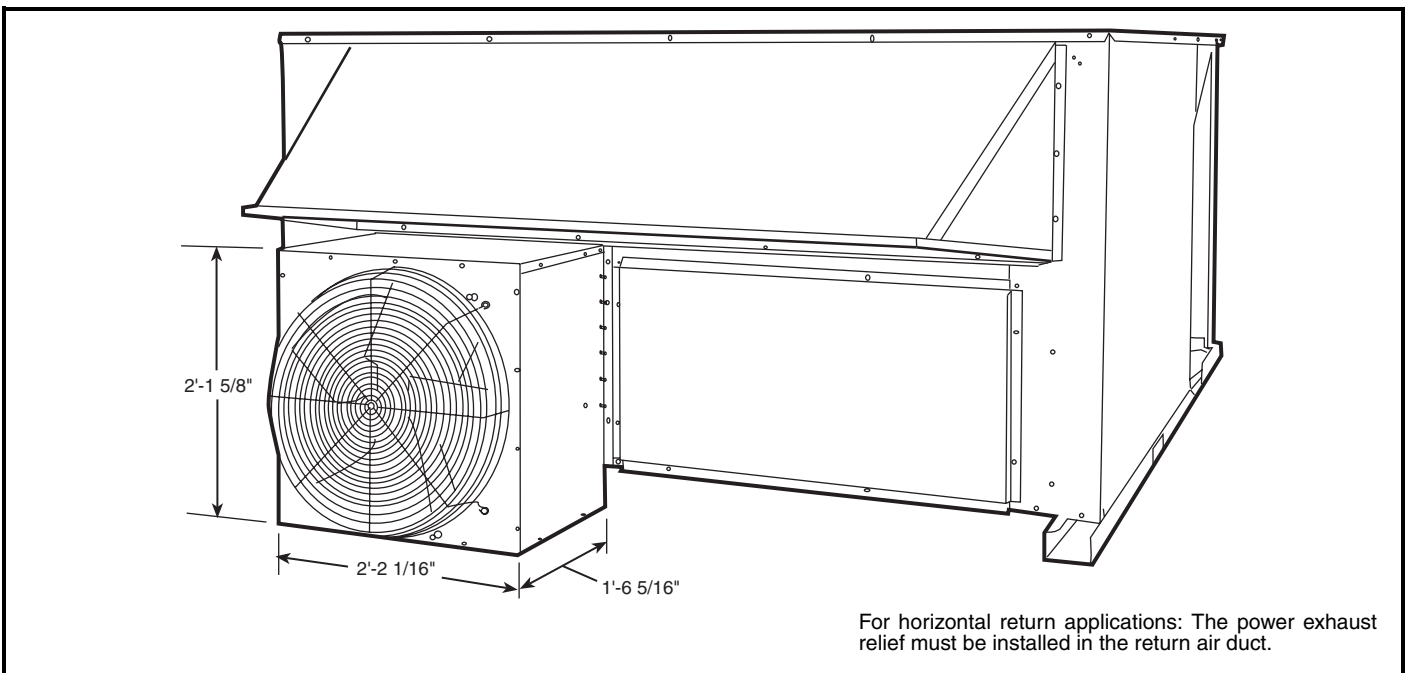


Vertical Roof Curbs  
580F300

## ACCESSORY DIMENSIONS — 580F (cont)

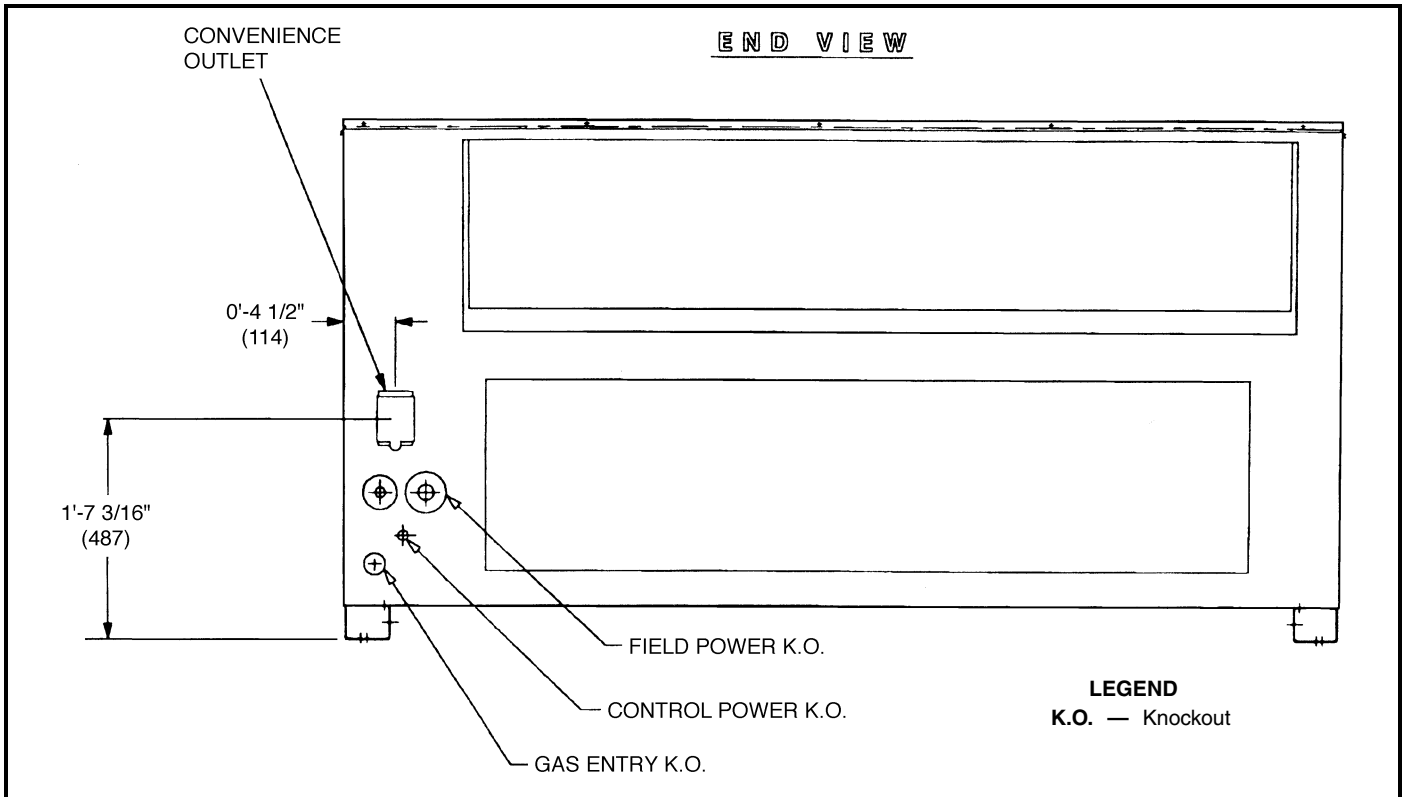


### Horizontal Supply/Return Adapter Installation (580F180-240)

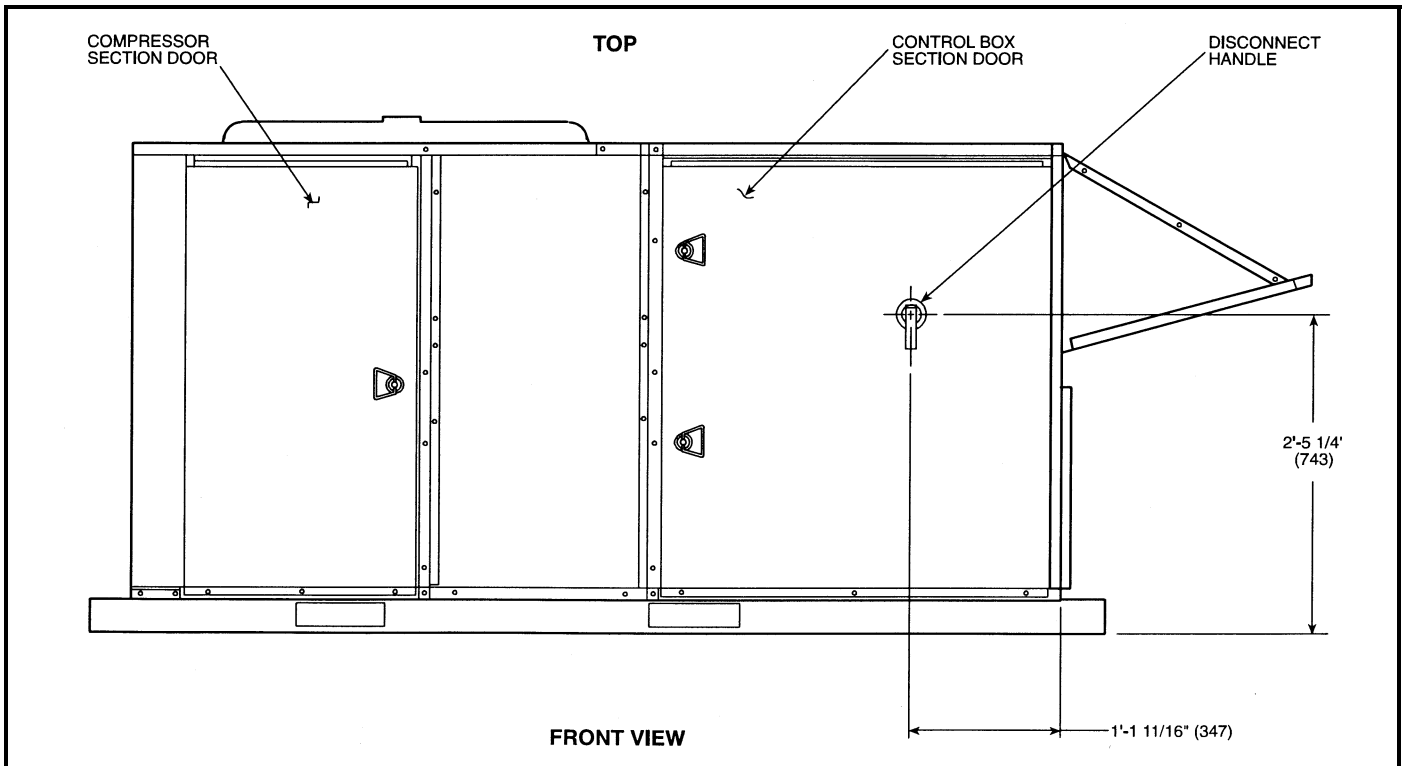


### Barometric Relief/Power Exhaust

# ACCESSORY DIMENSIONS — 580F (cont)



Factory-Installed Convenience Outlet



Factory-Installed Non-Fused Disconnect (180-300)

580F180-300



# PERFORMANCE DATA

## COOLING CAPACITIES

| 580F180 (15 TONS)                              |     |                                   |       |       |             |       |       |             |       |       |             |       |       |             |       |       |
|------------------------------------------------|-----|-----------------------------------|-------|-------|-------------|-------|-------|-------------|-------|-------|-------------|-------|-------|-------------|-------|-------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |       |       |             |       |       |             |       |       |             |       |       |             |       |       |
|                                                |     | 4,500/0.010                       |       |       | 5,250/0.120 |       |       | 6,000/0.140 |       |       | 6,750/0.150 |       |       | 7,500/0.160 |       |       |
|                                                |     | Air Entering Evaporator — Ewb (F) |       |       |             |       |       |             |       |       |             |       |       |             |       |       |
|                                                |     | 62                                | 67    | 72    | 62          | 67    | 72    | 62          | 67    | 72    | 62          | 67    | 72    | 62          | 67    | 72    |
| 75                                             | TC  | 175.7                             | 191.8 | 210.9 | 180.5       | 196.4 | 214.9 | 183.3       | 201.0 | 218.9 | 187.1       | 203.0 | 222.9 | 189.2       | 205.0 | 224.9 |
|                                                | SHC | 145.5                             | 123.0 | 99.9  | 156.2       | 131.5 | 104.9 | 167.8       | 139.1 | 110.6 | 175.3       | 146.3 | 115.0 | 183.7       | 155.8 | 119.4 |
|                                                | kW  | 14.0                              | 14.4  | 15.0  | 14.2        | 14.6  | 15.1  | 14.3        | 14.7  | 15.2  | 14.4        | 14.9  | 15.4  | 14.5        | 14.9  | 15.4  |
| 85                                             | TC  | 168.8                             | 185.1 | 203.0 | 173.3       | 189.2 | 207.0 | 177.1       | 192.8 | 210.9 | 179.7       | 196.0 | 214.9 | 182.3       | 198.0 | 216.9 |
|                                                | SHC | 141.7                             | 119.8 | 97.1  | 151.6       | 128.6 | 101.9 | 162.4       | 135.9 | 106.7 | 171.1       | 143.1 | 111.0 | 179.1       | 150.2 | 116.4 |
|                                                | kW  | 15.2                              | 15.6  | 16.1  | 15.3        | 15.8  | 16.3  | 15.5        | 15.9  | 16.5  | 15.6        | 16.1  | 16.6  | 15.7        | 16.1  | 16.7  |
| 95                                             | TC  | 161.8                             | 177.5 | 194.4 | 166.4       | 181.5 | 199.0 | 169.0       | 184.7 | 203.0 | 171.7       | 187.7 | 205.0 | 174.5       | 189.4 | 207.0 |
|                                                | SHC | 138.7                             | 116.8 | 93.9  | 147.5       | 125.2 | 99.1  | 157.6       | 132.7 | 103.3 | 167.2       | 139.9 | 108.3 | 173.9       | 146.5 | 112.2 |
|                                                | kW  | 16.4                              | 16.9  | 17.4  | 16.6        | 17.0  | 17.6  | 16.7        | 17.2  | 17.7  | 16.8        | 17.3  | 17.8  | 16.9        | 17.4  | 17.9  |
| 105                                            | TC  | 154.6                             | 169.3 | 185.3 | 158.6       | 173.1 | 189.2 | 161.2       | 175.9 | 192.0 | 164.0       | 178.1 | 194.6 | 167.4       | 179.7 | 196.2 |
|                                                | SHC | 133.9                             | 113.6 | 90.7  | 143.7       | 121.4 | 95.7  | 154.2       | 129.0 | 100.3 | 161.8       | 136.1 | 104.7 | 167.2       | 142.7 | 108.7 |
|                                                | kW  | 17.6                              | 18.2  | 18.7  | 17.8        | 18.3  | 18.8  | 17.9        | 18.5  | 18.9  | 18.1        | 18.5  | 19.1  | 18.2        | 18.6  | 19.1  |
| 115                                            | TC  | 147.1                             | 160.8 | 175.5 | 150.4       | 164.2 | 179.1 | 152.4       | 166.4 | 181.9 | 155.8       | 168.6 | 184.3 | 159.6       | 169.7 | 185.7 |
|                                                | SHC | 130.1                             | 110.2 | 87.4  | 139.7       | 117.8 | 92.1  | 149.3       | 125.4 | 96.7  | 155.6       | 131.9 | 101.1 | 159.2       | 139.1 | 105.3 |
|                                                | kW  | 19.0                              | 19.5  | 20.0  | 19.1        | 19.7  | 20.2  | 19.2        | 19.8  | 20.2  | 19.4        | 19.9  | 20.4  | 19.5        | 19.9  | 20.4  |
| 118                                            | TC  | 144.7                             | 158.0 | 172.5 | 147.7       | 161.2 | 175.9 | 150.0       | 163.4 | 178.3 | 153.4       | 165.4 | 180.7 | 157.0       | 166.8 | 182.1 |
|                                                | SHC | 129.0                             | 109.1 | 86.4  | 138.5       | 116.6 | 91.1  | 147.7       | 124.2 | 95.5  | 153.4       | 130.7 | 99.9  | 156.8       | 137.7 | 104.1 |
|                                                | kW  | 19.4                              | 19.9  | 20.4  | 19.5        | 20.0  | 20.6  | 19.6        | 20.2  | 20.6  | 19.8        | 20.2  | 20.8  | 19.9        | 20.4  | 20.8  |
| 120                                            | TC  | 142.9                             | 156.2 | 170.5 | 145.9       | 159.2 | —     | 148.3       | 161.2 | —     | 151.8       | 163.2 | —     | 155.4       | 164.8 | —     |
|                                                | SHC | 128                               | 108   | 86    | 138         | 116   | —     | 146         | 123   | —     | 152         | 130   | —     | 155         | 137   | —     |
|                                                | kW  | 19.6                              | 20.2  | 20.6  | 19.8        | 20.2  | —     | 19.9        | 20.4  | —     | 20.0        | 20.4  | —     | 20.2        | 20.6  | —     |

| 580F210 (18 TONS)                              |     |                                   |      |      |             |      |      |             |      |      |             |      |      |             |      |      |
|------------------------------------------------|-----|-----------------------------------|------|------|-------------|------|------|-------------|------|------|-------------|------|------|-------------|------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |             |      |      |             |      |      |             |      |      |             |      |      |
|                                                |     | 5,400/0.095                       |      |      | 6,000/0.105 |      |      | 7,000/0.120 |      |      | 8,000/0.140 |      |      | 9,000/0.150 |      |      |
|                                                |     | Air Entering Evaporator — Ewb (F) |      |      |             |      |      |             |      |      |             |      |      |             |      |      |
|                                                |     | 62                                | 67   | 72   | 62          | 67   | 72   | 62          | 67   | 72   | 62          | 67   | 72   | 62          | 67   | 72   |
| 75                                             | TC  | 227                               | 247  | 269  | 232         | 251  | 274  | 237         | 255  | 277  | 241         | 258  | 280  | 248         | 261  | 283  |
|                                                | SHC | 200                               | 167  | 134  | 215         | 178  | 141  | 231         | 194  | 152  | 241         | 205  | 160  | 248         | 219  | 167  |
|                                                | kW  | 15.9                              | 16.5 | 17.2 | 16.1        | 16.7 | 17.3 | 16.3        | 16.8 | 17.5 | 16.5        | 16.9 | 17.6 | 16.7        | 17.0 | 17.7 |
| 85                                             | TC  | 219                               | 238  | 259  | 224         | 242  | 265  | 229         | 247  | 269  | 235         | 250  | 272  | 241         | 252  | 273  |
|                                                | SHC | 197                               | 164  | 131  | 210         | 175  | 137  | 225         | 188  | 145  | 234         | 200  | 153  | 240         | 214  | 163  |
|                                                | kW  | 17.2                              | 17.8 | 18.5 | 17.4        | 17.9 | 18.6 | 17.6        | 18.1 | 18.8 | 17.8        | 18.3 | 19.0 | 18.0        | 18.3 | 19.0 |
| 95                                             | TC  | 210                               | 229  | 248  | 214         | 233  | 253  | 219         | 237  | 258  | 225         | 239  | 261  | 231         | 242  | 263  |
|                                                | SHC | 192                               | 160  | 126  | 205         | 171  | 133  | 218         | 183  | 141  | 225         | 194  | 148  | 231         | 206  | 156  |
|                                                | kW  | 18.5                              | 19.2 | 19.9 | 18.7        | 19.3 | 20.0 | 19.0        | 19.5 | 20.2 | 19.2        | 19.6 | 20.3 | 19.4        | 19.7 | 20.4 |
| 105                                            | TC  | 200                               | 218  | 237  | 205         | 222  | 241  | 210         | 225  | 245  | 216         | 228  | 249  | 221         | 230  | 250  |
|                                                | SHC | 186                               | 155  | 123  | 199         | 166  | 129  | 210         | 178  | 136  | 216         | 190  | 143  | 221         | 201  | 150  |
|                                                | kW  | 19.9                              | 20.5 | 21.2 | 20.1        | 20.7 | 21.3 | 20.4        | 20.8 | 21.5 | 20.6        | 21.0 | 21.7 | 20.8        | 21.0 | 21.8 |
| 115                                            | TC  | 190                               | 207  | 225  | 195         | 210  | 228  | 201         | 213  | 232  | 206         | 216  | 235  | 211         | 217  | 236  |
|                                                | SHC | 181                               | 151  | 118  | 193         | 161  | 124  | 201         | 173  | 132  | 206         | 185  | 139  | 211         | 196  | 146  |
|                                                | kW  | 21.3                              | 21.9 | 22.6 | 21.5        | 22.1 | 22.8 | 21.8        | 22.2 | 22.9 | 22.0        | 22.4 | 23.1 | 22.2        | 22.4 | 23.1 |
| 120                                            | TC  | 185                               | 200  | 218  | 189         | 205  | 221  | 196         | 207  | 225  | 201         | 209  | 227  | 205         | 210  | 229  |
|                                                | SHC | 179                               | 149  | 117  | 189         | 159  | 122  | 196         | 171  | 130  | 201         | 182  | 137  | 205         | 193  | 144  |
|                                                | kW  | 22.1                              | 22.6 | —    | 22.3        | 22.8 | —    | 22.5        | 22.9 | —    | 22.7        | —    | —    | 22.9        | —    | —    |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry Bulb  
**Ewb** — Entering Wet Bulb  
**kW** — Compressor Power  
**SHC** — Gross Sensible Capacity (1000 Btuh)  
**TC** — Gross Cooling Capacity (1000 Btuh)

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES (cont)

| 580F240 (20 TONS)                              |     |                                   |      |      |            |      |      |            |      |      |            |      |      |             |      |      |
|------------------------------------------------|-----|-----------------------------------|------|------|------------|------|------|------------|------|------|------------|------|------|-------------|------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |            |      |      |            |      |      |            |      |      |             |      |      |
|                                                |     | 6,000/0.04                        |      |      | 7,000/0.05 |      |      | 8,000/0.06 |      |      | 9,000/0.07 |      |      | 10,000/0.08 |      |      |
|                                                |     | Air Entering Evaporator — Ewb (F) |      |      |            |      |      |            |      |      |            |      |      |             |      |      |
|                                                |     | 62                                | 67   | 72   | 62         | 67   | 72   | 62         | 67   | 72   | 62         | 67   | 72   | 62          | 67   | 72   |
| 75                                             | TC  | 237                               | 258  | 282  | 242        | 264  | 288  | 247        | 268  | 291  | 252        | 271  | 295  | 258         | 274  | 298  |
|                                                | SHC | 204                               | 171  | 138  | 221        | 184  | 146  | 237        | 199  | 156  | 247        | 210  | 164  | 257         | 221  | 172  |
|                                                | kW  | 16.7                              | 17.4 | 18.1 | 16.9       | 17.6 | 18.3 | 17.1       | 17.8 | 18.5 | 17.3       | 17.9 | 18.6 | 17.5        | 18.0 | 18.7 |
| 85                                             | TC  | 229                               | 249  | 272  | 234        | 254  | 278  | 239        | 260  | 283  | 245        | 262  | 286  | 250         | 265  | 287  |
|                                                | SHC | 201                               | 167  | 135  | 216        | 180  | 142  | 231        | 193  | 150  | 240        | 203  | 157  | 250         | 217  | 167  |
|                                                | kW  | 18.1                              | 18.7 | 19.5 | 18.3       | 18.9 | 19.7 | 18.5       | 19.1 | 19.9 | 18.7       | 19.3 | 20.1 | 18.8        | 19.4 | 20.1 |
| 95                                             | TC  | 220                               | 239  | 261  | 225        | 245  | 267  | 230        | 249  | 271  | 235        | 251  | 275  | 241         | 255  | 277  |
|                                                | SHC | 195                               | 163  | 130  | 211        | 176  | 138  | 224        | 188  | 145  | 233        | 199  | 152  | 241         | 210  | 160  |
|                                                | kW  | 19.4                              | 20.2 | 20.9 | 19.7       | 20.4 | 21.2 | 19.9       | 20.6 | 21.3 | 20.1       | 20.6 | 21.4 | 20.3        | 20.8 | 21.6 |
| 105                                            | TC  | 209                               | 228  | 249  | 216        | 234  | 254  | 220        | 237  | 259  | 225        | 240  | 262  | 230         | 242  | 263  |
|                                                | SHC | 189                               | 159  | 126  | 206        | 171  | 134  | 217        | 183  | 140  | 225        | 195  | 148  | 230         | 205  | 154  |
|                                                | kW  | 20.9                              | 21.5 | 22.3 | 21.2       | 21.8 | 22.5 | 21.4       | 22.0 | 22.7 | 21.6       | 22.1 | 22.9 | 21.8        | 22.2 | 23.0 |
| 115                                            | TC  | 200                               | 217  | 237  | 205        | 222  | 241  | 211        | 225  | 244  | 216        | 227  | 248  | 221         | 229  | 249  |
|                                                | SHC | 185                               | 154  | 122  | 199        | 166  | 129  | 209        | 178  | 136  | 216        | 189  | 143  | 221         | 200  | 150  |
|                                                | kW  | 22.5                              | 23.1 | 23.8 | 22.7       | 23.3 | 24.0 | 22.9       | 23.4 | 24.2 | 23.2       | 23.6 | 24.4 | 23.4        | 23.7 | 24.4 |
| 120                                            | TC  | 194                               | 211  | 230  | 199        | 216  | 234  | 205        | 218  | 237  | 210        | 220  | 240  | 214         | 222  | 241  |
|                                                | SHC | 183                               | 152  | 121  | 195        | 164  | 126  | 204        | 175  | 134  | 210        | 186  | 141  | 214         | 196  | 148  |
|                                                | kW  | 23.2                              | 23.8 | 24.6 | 23.5       | 24.0 | —    | 23.7       | 24.2 | —    | 23.9       | 24.4 | —    | 24.1        | 24.4 | —    |

| 580F300 (25 TONS)                              |                 |                                   |      |      |      |            |      |      |      |            |      |      |      |             |      |      |      |             |      |      |      |
|------------------------------------------------|-----------------|-----------------------------------|------|------|------|------------|------|------|------|------------|------|------|------|-------------|------|------|------|-------------|------|------|------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |      |            |      |      |      |            |      |      |      |             |      |      |      |             |      |      |      |
|                                                |                 | 7,000/0.05                        |      |      |      | 8,000/0.06 |      |      |      | 9,000/0.07 |      |      |      | 10,000/0.08 |      |      |      | 11,250/0.09 |      |      |      |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |      |            |      |      |      |            |      |      |      |             |      |      |      |             |      |      |      |
|                                                |                 | 57                                | 62   | 67   | 72   | 57         | 62   | 67   | 72   | 57         | 62   | 67   | 72   | 57          | 62   | 67   | 72   | 57          | 62   | 67   | 72   |
| 75                                             | TC<br>SHC<br>kW | 256                               | 271  | 299  | 327  | 267        | 278  | 305  | 336  | 276        | 283  | 309  | 341  | 285         | 286  | 313  | 344  | 294         | 294  | 316  | 347  |
|                                                |                 | 256                               | 232  | 196  | 159  | 267        | 249  | 208  | 166  | 276        | 265  | 220  | 173  | 285         | 281  | 232  | 182  | 294         | 294  | 252  | 198  |
|                                                |                 | 18.0                              | 18.3 | 18.9 | 19.6 | 18.3       | 18.5 | 19.1 | 19.8 | 18.5       | 18.7 | 19.2 | 19.9 | 18.7        | 18.8 | 19.4 | 20.1 | 19.0        | 19.0 | 19.5 | 20.2 |
| 85                                             | TC<br>SHC<br>kW | 248                               | 262  | 288  | 316  | 259        | 267  | 293  | 322  | 267        | 273  | 298  | 328  | 276         | 276  | 302  | 331  | 284         | 285  | 305  | 336  |
|                                                |                 | 248                               | 228  | 192  | 154  | 259        | 244  | 204  | 161  | 267        | 259  | 216  | 169  | 276         | 274  | 228  | 175  | 284         | 284  | 244  | 187  |
|                                                |                 | 20.0                              | 20.4 | 20.9 | 21.5 | 20.3       | 20.4 | 21   | 21.7 | 20.6       | 20.6 | 21.2 | 21.9 | 20.8        | 20.8 | 21.3 | 22   | 21          | 21   | 21.5 | 22.1 |
| 95                                             | TC<br>SHC<br>kW | 241                               | 252  | 277  | 303  | 251        | 257  | 281  | 309  | 259        | 262  | 286  | 314  | 266         | 267  | 290  | 317  | 274         | 275  | 293  | 321  |
|                                                |                 | 241                               | 223  | 187  | 149  | 251        | 239  | 198  | 157  | 259        | 254  | 210  | 164  | 266         | 265  | 222  | 171  | 274         | 275  | 238  | 180  |
|                                                |                 | 22.4                              | 22.6 | 23.1 | 23.7 | 22.6       | 22.7 | 23.3 | 23.9 | 22.8       | 22.9 | 23.4 | 24   | 23          | 23   | 23.5 | 24.2 | 23.2        | 23.2 | 23.6 | 24.2 |
| 105                                            | TC<br>SHC<br>kW | 233                               | 243  | 266  | 289  | 242        | 247  | 270  | 295  | 250        | 252  | 273  | 299  | 256         | 258  | 277  | 303  | 264         | 265  | 280  | 306  |
|                                                |                 | 233                               | 218  | 182  | 145  | 242        | 233  | 194  | 152  | 250        | 248  | 206  | 159  | 256         | 257  | 217  | 166  | 264         | 265  | 232  | 176  |
|                                                |                 | 24.9                              | 25.1 | 25.6 | 26.2 | 25.2       | 25.3 | 25.8 | 26.3 | 25.4       | 25.4 | 25.9 | 26.5 | 25.6        | 25.6 | 26   | 26.6 | 25.8        | 25.8 | 26.1 | 26.7 |
| 115                                            | TC<br>SHC<br>kW | 225                               | 232  | 254  | 277  | 234        | 236  | 258  | 281  | 241        | 242  | 261  | 285  | 247         | 247  | 264  | 288  | 254         | 255  | 267  | 291  |
|                                                |                 | 225                               | 214  | 178  | 140  | 234        | 228  | 189  | 148  | 241        | 241  | 201  | 155  | 247         | 247  | 211  | 162  | 253         | 255  | 227  | 171  |
|                                                |                 | 27.9                              | 27.9 | 28.5 | 29   | 28         | 28.1 | 28.6 | 29.2 | 28.2       | 28.2 | 28.7 | 29.2 | 28.4        | 28.4 | 28.8 | 29.3 | 28.7        | 28.7 | 28.9 | 29.5 |
| 125                                            | TC<br>SHC<br>kW | 216                               | 221  | 241  | 263  | 224        | 225  | 245  | 267  | 231        | 231  | 248  | 269  | 237         | 236  | 251  | 273  | 243         | 242  | 253  | 276  |
|                                                |                 | 216                               | 208  | 173  | 136  | 223        | 221  | 184  | 142  | 230        | 231  | 196  | 149  | 236         | 236  | 206  | 157  | 243         | 242  | 221  | 166  |
|                                                |                 | 30.9                              | 31.1 | 31.6 | 32   | 31.2       | 31.2 | 31.7 | 32.2 | 31.4       | 31.4 | 31.7 | 32.3 | 31.6        | 31.6 | 31.9 | 32.3 | 31.7        | 31.7 | 31.9 | 32.5 |

### LEGEND

|     |                     |     |                                       |
|-----|---------------------|-----|---------------------------------------|
| BF  | — Bypass Factor     | kW  | — Compressor Power                    |
| Edb | — Entering Dry Bulb | SHC | — Gross Sensible Capacity (1000 Btuh) |
| Ewb | — Entering Wet Bulb | TC  | — Gross Cooling Capacity (1000 Btuh)  |



**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — 580F180-300 UNITS**

| 580F180275*      |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm) | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                  | 0.2                                         |       |      | 0.4  |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                  | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 4500             | 753                                         | 1307  | 1.53 | 761  | 1330  | 1.56 | 840  | 1572  | 1.84 | 912  | 1822  | 2.14 | 980  | 2080  | 2.44 |
| 4800             | 747                                         | 1384  | 1.62 | 790  | 1515  | 1.78 | 866  | 1765  | 2.07 | 936  | 2023  | 2.37 | 1002 | 2289  | 2.68 |
| 5100             | 741                                         | 1465  | 1.72 | 820  | 1718  | 2.01 | 893  | 1977  | 2.32 | 961  | 2243  | 2.63 | 1280 | 2516  | 2.95 |
| 5700             | 810                                         | 1911  | 2.24 | 882  | 2182  | 2.56 | 950  | 2459  | 2.88 | 1014 | 2741  | 3.21 | 1075 | 3029  | 3.55 |
| 6000             | 844                                         | 2164  | 2.54 | 914  | 2444  | 2.87 | 980  | 2730  | 3.20 | 1042 | 3021  | 3.54 | 1100 | 3317  | 3.89 |
| 6300             | 879                                         | 2439  | 2.86 | 947  | 2729  | 3.20 | 1010 | 3023  | 3.55 | 1070 | 3322  | 3.90 | 1127 | 3626  | 4.25 |
| 6600             | 915                                         | 2737  | 3.21 | 980  | 3035  | 3.56 | 1041 | 3338  | 3.91 | 1099 | 3645  | 4.28 | 1155 | 3957  | 4.64 |
| 6900             | 950                                         | 3057  | 3.59 | 1013 | 3364  | 3.95 | 1072 | 3675  | 4.31 | 1129 | 3991  | 4.68 | 1183 | 4311  | 5.06 |
| 7200             | 986                                         | 3401  | 3.99 | 1047 | 3717  | 4.36 | 1104 | 4037  | 4.74 | 1159 | 4361  | 5.11 | 1211 | 4689  | 5.50 |
| 7500             | 1022                                        | 3770  | 4.42 | 1081 | 4095  | 4.80 | 1136 | 4423  | 5.19 | 1189 | 4755  | 5.58 | 1241 | 5091  | 5.97 |

| 580F180275* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|--------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)   | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                    | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                    | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 4500               | 1044                                        | 2345  | 2.75 | 1105 | 2619  | 3.07 | 1163 | 2899  | 3.40 | 1218 | 3187  | 3.74 | 1271 | 3481  | 4.08 |
| 4800               | 1065                                        | 2561  | 3.00 | 1124 | 2841  | 3.33 | 1180 | 3127  | 3.67 | 1235 | 3420  | 4.01 | 1287 | 3720  | 4.36 |
| 5100               | 1086                                        | 2795  | 3.28 | 1144 | 3082  | 3.61 | 1199 | 3375  | 3.96 | 1252 | 3674  | 4.31 | 1304 | 3979  | 4.67 |
| 5700               | 1132                                        | 3324  | 3.90 | 1187 | 3624  | 4.25 | 1240 | 3929  | 4.61 | 1291 | 4241  | 4.97 | 1341 | 4558  | 5.35 |
| 6000               | 1157                                        | 3619  | 4.24 | 1210 | 3925  | 4.60 | 1262 | 4239  | 4.97 | 1312 | 4557  | 5.34 | 1361 | 4880  | 5.72 |
| 6300               | 1182                                        | 3935  | 4.62 | 1234 | 4249  | 4.98 | 1285 | 4569  | 5.36 | 1334 | 4894  | 5.74 | —    | —     | —    |
| 6600               | 1208                                        | 4274  | 5.01 | 1259 | 4595  | 5.39 | 1309 | 4922  | 5.77 | —    | —     | —    | —    | —     | —    |
| 6900               | 1235                                        | 4636  | 5.44 | 1285 | 4964  | 5.82 | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7200               | 1262                                        | 5021  | 5.89 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7500               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |

| 580F180275* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|--------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)   | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                    | 2.2                                         |       |      | 2.4  |       |      | 2.6  |       |      | 2.8  |       |      | 3.0  |       |      |
|                    | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 4500               | 1322                                        | 3781  | 4.43 | 1372 | 4088  | 4.79 | 1419 | 4400  | 5.16 | 1466 | 4719  | 5.53 | 1511 | 5042  | 5.91 |
| 4800               | 1337                                        | 4280  | 4.72 | 1386 | 4337  | 5.09 | 1433 | 4655  | 5.46 | 1479 | 4978  | 5.84 | —    | —     | —    |
| 5100               | 1353                                        | 4290  | 5.03 | 1401 | 4607  | 5.40 | 1448 | 4930  | 5.78 | —    | —     | —    | —    | —     | —    |
| 5700               | 1388                                        | 4881  | 5.72 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6000               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6300               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6600               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6900               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7200               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7500               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 873 to 1021 rpm. Alternate high-static drive range is 1025 to 1200. Other rpms require a field-supplied drive.

Refer to page 189 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp for the standard motor is 6.13. The maximum continuous watts is 5180. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — 580F180-300 UNITS (cont)**

| 580F180360*      |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm) | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                  | 0.2                                         |       |      | 0.4  |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                  | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 4500             | 753                                         | 1307  | 1.53 | 786  | 1404  | 1.65 | 861  | 1644  | 1.93 | 932  | 1893  | 2.22 | 997  | 2150  | 2.52 |
| 4800             | 747                                         | 1384  | 1.62 | 818  | 1603  | 1.88 | 890  | 1852  | 2.17 | 958  | 2108  | 2.47 | 1022 | 2373  | 2.78 |
| 5100             | 775                                         | 1571  | 1.84 | 850  | 1822  | 2.14 | 920  | 2079  | 2.44 | 986  | 2344  | 2.75 | 1048 | 2616  | 3.07 |
| 5700             | 849                                         | 2054  | 2.41 | 918  | 2323  | 2.73 | 982  | 2598  | 3.05 | 1044 | 2879  | 3.38 | 1102 | 3166  | 3.71 |
| 6000             | 886                                         | 2329  | 2.73 | 952  | 2607  | 3.06 | 1015 | 2891  | 3.39 | 1074 | 3180  | 3.73 | 1130 | 3474  | 4.08 |
| 6300             | 924                                         | 2628  | 3.08 | 987  | 2915  | 3.42 | 1047 | 3207  | 3.76 | 1105 | 3504  | 4.11 | 1160 | 3807  | 4.46 |
| 6600             | 962                                         | 2951  | 3.46 | 1023 | 3246  | 3.81 | 1081 | 3547  | 4.16 | 1136 | 3853  | 4.52 | 1190 | 4163  | 4.88 |
| 6900             | 1000                                        | 3298  | 3.87 | 1059 | 3603  | 4.23 | 1115 | 3912  | 4.59 | 1168 | 4225  | 4.96 | 1220 | 4543  | 5.33 |
| 7200             | 1038                                        | 3672  | 4.31 | 1095 | 3986  | 4.67 | 1149 | 4303  | 5.05 | 1201 | 4625  | 5.42 | 1251 | 4950  | 5.81 |
| 7500             | 1077                                        | 4072  | 4.78 | 1131 | 4394  | 5.15 | 1184 | 4720  | 5.54 | 1234 | 5050  | 5.92 | —    | —     | —    |

| 580F180360* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|--------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)   | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                    | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                    | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 4500               | 1060                                        | 2414  | 2.83 | 1119 | 2685  | 3.15 | 1175 | 2964  | 3.48 | 1230 | 3250  | 3.81 | 1282 | 3542  | 4.15 |
| 4800               | 1082                                        | 2644  | 3.10 | 1140 | 2922  | 3.43 | 1195 | 3207  | 3.76 | 1248 | 3498  | 4.10 | 1299 | 3795  | 4.45 |
| 5100               | 1106                                        | 2894  | 3.39 | 1163 | 3178  | 3.73 | 1216 | 3470  | 4.07 | 1268 | 3767  | 4.42 | 1319 | 4071  | 4.77 |
| 5700               | 1157                                        | 3459  | 4.06 | 1211 | 3757  | 4.41 | 1262 | 4061  | 4.76 | 1312 | 4371  | 5.13 | 1360 | 4686  | 5.50 |
| 6000               | 1184                                        | 3774  | 4.43 | 1236 | 4080  | 4.79 | 1287 | 4391  | 5.15 | 1335 | 4707  | 5.52 | 1382 | 5029  | 5.90 |
| 6300               | 1212                                        | 4114  | 4.83 | 1263 | 4427  | 5.19 | 1312 | 4745  | 5.57 | 1359 | 5067  | 5.94 | —    | —     | —    |
| 6600               | 1241                                        | 4478  | 5.25 | 1290 | 4798  | 5.63 | 1338 | 5122  | 6.01 | —    | —     | —    | —    | —     | —    |
| 6900               | 1270                                        | 4866  | 5.71 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7200               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7500               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |

| 580F180360* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|--------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)   | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                    | 2.2                                         |       |      | 2.4  |       |      | 2.6  |       |      | 2.8  |       |      | 3.0  |       |      |
|                    | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 4500               | 1332                                        | 3841  | 4.50 | 1381 | 4145  | 4.86 | 1428 | 4456  | 5.23 | 1473 | 4772  | 5.60 | 1518 | 5095  | 5.98 |
| 4800               | 1349                                        | 4100  | 4.81 | 1397 | 4409  | 5.17 | 1443 | 4725  | 5.54 | 1488 | 5046  | 5.92 | —    | —     | —    |
| 5100               | 1367                                        | 4380  | 5.14 | 1414 | 4695  | 5.51 | 1460 | 5180  | 5.88 | —    | —     | —    | —    | —     | —    |
| 5700               | 1407                                        | 5007  | 5.87 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6000               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6300               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6600               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 6900               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7200               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 7500               | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 873 to 1021 rpm. Alternate high-static drive range is 1025 to 1200. Other rpms require a field-supplied drive.

Refer to page 189 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp for the standard motor is 6.13. The maximum continuous watts is 5180. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm.

580F180-300

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — 580F180-300 UNITS (cont)**

| 580F210275 (18 TONS)* |                                             |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |       |       |
|-----------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|-------|-------|
| Airflow<br>(Cfm)      | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |      |       |       |
|                       | 0.2                                         |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       | 1.2  |       |       |
|                       | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp   | Watts |
| 5,500                 | 755                                         | 2.27 | 1908  | 831  | 2.58 | 2171  | 901  | 2.91 | 2443  | 968  | 3.24 | 2723  | 1031 | 3.58 | 3009  | 1091 | 3.93  | 3302  |
| 6,000                 | 810                                         | 2.72 | 2287  | 881  | 3.04 | 2556  | 947  | 3.37 | 2833  | 1010 | 3.71 | 3116  | 1070 | 4.05 | 3406  | 1127 | 4.40  | 3702  |
| 6,500                 | 866                                         | 3.22 | 2710  | 932  | 3.55 | 2985  | 994  | 3.88 | 3266  | 1054 | 4.23 | 3554  | 1111 | 4.57 | 3847  | 1166 | 4.93  | 4146  |
| 7,000                 | 923                                         | 3.78 | 3177  | 985  | 4.11 | 3458  | 1044 | 4.45 | 3744  | 1100 | 4.80 | 4036  | 1155 | 5.15 | 4333  | 1207 | 5.51  | 4635  |
| 7,500                 | 980                                         | 4.39 | 3690  | 1038 | 4.73 | 3976  | 1094 | 5.07 | 4267  | 1148 | 5.43 | 4564  | 1200 | 5.78 | 4864  | 1250 | 6.15  | 5170  |
| 8,000                 | 1038                                        | 5.06 | 4251  | 1093 | 5.40 | 4542  | 1146 | 5.75 | 4838  | 1197 | 6.11 | 5138  | 1246 | 6.47 | 5443  | 1294 | 6.84  | 5752  |
| 8,500                 | 1096                                        | 5.78 | 4859  | 1148 | 6.13 | 5156  | 1198 | 6.49 | 5456  | 1247 | 6.85 | 5761  | 1294 | 7.22 | 6070  | 1340 | 7.59  | 6382  |
| 9,000                 | 1154                                        | 6.56 | 5517  | 1204 | 6.92 | 5818  | 1251 | 7.28 | 6123  | 1298 | 7.65 | 6432  | 1343 | 8.02 | 6745  | 1388 | 8.40  | 7062  |
| 9,500                 | 1213                                        | 7.40 | 6224  | 1260 | 7.77 | 6531  | 1306 | 8.13 | 6840  | 1350 | 8.51 | 7154  | 1394 | 8.88 | 7471  | 1436 | 9.26  | 7791  |
| 10,000                | 1272                                        | 8.30 | 6983  | 1317 | 8.67 | 7294  | 1360 | 9.05 | 7608  | 1403 | 9.43 | 7926  | 1445 | 9.81 | 8247  | 1486 | 10.19 | 8570  |

| 580F210275 (18 TONS)* (cont) |                                             |      |       |      |       |       |      |      |       |      |      |       |      |      |       |
|------------------------------|---------------------------------------------|------|-------|------|-------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)             | Available External Static Pressure (in. wg) |      |       |      |       |       |      |      |       |      |      |       |      |      |       |
|                              | 1.4                                         |      |       | 1.6  |       |       | 1.8  |      |       | 1.9  |      |       | 2.0  |      |       |
|                              | Rpm                                         | Bhp  | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 5,500                        | 1149                                        | 4.28 | 3602  | 1204 | 4.65  | 3907  | 1258 | 5.02 | 4217  | 1284 | 5.20 | 4375  | 1309 | 5.39 | 4533  |
| 6,000                        | 1183                                        | 4.76 | 4003  | 1236 | 5.13  | 4310  | 1288 | 5.50 | 4622  | 1313 | 5.68 | 4780  | 1337 | 5.87 | 4939  |
| 6,500                        | 1219                                        | 5.29 | 4450  | 1270 | 5.66  | 4759  | 1320 | 6.03 | 5073  | 1344 | 6.22 | 5232  | 1368 | 6.41 | 5391  |
| 7,000                        | 1258                                        | 5.88 | 4942  | 1307 | 6.25  | 5253  | 1355 | 6.62 | 5569  | 1378 | 6.81 | 5729  | 1402 | 7.00 | 5890  |
| 7,500                        | 1299                                        | 6.52 | 5480  | 1346 | 6.89  | 5794  | 1392 | 7.27 | 6113  | 1415 | 7.46 | 6273  | 1437 | 7.65 | 6435  |
| 8,000                        | 1341                                        | 7.21 | 6065  | 1387 | 7.59  | 6383  | 1392 | 7.97 | 6704  | 1453 | 8.16 | 6866  | 1475 | 8.36 | 7000  |
| 8,500                        | 1385                                        | 7.97 | 6699  | 1429 | 8.35  | 7019  | 1472 | 8.73 | 7343  | 1493 | 8.93 | 7506  | 1514 | 9.12 | 7670  |
| 9,000                        | 1431                                        | 8.78 | 7382  | 1473 | 9.15  | 7705  | 1515 | 9.55 | 8032  | 1535 | 9.75 | 8196  | —    | —    | —     |
| 9,500                        | 1478                                        | 9.65 | 8114  | 1519 | 10.04 | 8441  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                       | —                                           | —    | —     | —    | —     | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**  
**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 910 to 1095 rpm. Alternate high-static drive range is 1069 to 1287. Other rpms require a field-supplied drive.

Refer to page 189 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 5.90. The maximum continuous watts is 5180.

| 580F210360 (18 TONS)* |                                             |      |       |      |      |       |      |      |       |      |       |       |      |      |       |      |      |       |
|-----------------------|---------------------------------------------|------|-------|------|------|-------|------|------|-------|------|-------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)      | Available External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |       |       |      |      |       |      |      |       |
|                       | 0.2                                         |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |       |       | 1.0  |      |       | 1.2  |      |       |
|                       | Rpm                                         | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 5,500                 | 795                                         | 2.43 | 2043  | 866  | 2.74 | 2306  | 934  | 3.07 | 2578  | 998  | 3.40  | 2856  | 1059 | 3.74 | 3142  | 1117 | 4.08 | 3434  |
| 6,000                 | 854                                         | 2.92 | 2452  | 921  | 3.24 | 2722  | 984  | 3.57 | 3998  | 1044 | 3.90  | 3281  | 1102 | 4.25 | 3570  | 1158 | 4.60 | 3865  |
| 6,500                 | 914                                         | 3.46 | 2909  | 977  | 3.79 | 3184  | 1036 | 4.12 | 3465  | 1093 | 4.46  | 3752  | 1148 | 4.81 | 4045  | 1201 | 5.16 | 4343  |
| 7,000                 | 975                                         | 4.06 | 3414  | 1034 | 4.39 | 3695  | 1090 | 4.73 | 3981  | 1144 | 5.08  | 4272  | 1196 | 5.43 | 4569  | 1246 | 5.79 | 4870  |
| 7,500                 | 1037                                        | 4.72 | 3969  | 1092 | 5.06 | 4255  | 1145 | 5.41 | 4546  | 1196 | 5.76  | 4842  | 1256 | 6.12 | 5142  | 1294 | 6.48 | 5447  |
| 8,000                 | 1099                                        | 5.44 | 4575  | 1150 | 5.79 | 4866  | 1201 | 6.14 | 5162  | 1249 | 6.50  | 5462  | 1297 | 6.86 | 5766  | 1343 | 7.22 | 6075  |
| 8,500                 | 1161                                        | 6.22 | 5232  | 1210 | 6.57 | 5529  | 1258 | 6.93 | 5829  | 1304 | 7.29  | 6134  | 1349 | 7.66 | 6443  | 1393 | 8.03 | 6755  |
| 9,000                 | 1223                                        | 7.07 | 5943  | 1270 | 7.43 | 6245  | 1315 | 7.79 | 6550  | 1360 | 8.16  | 6869  | 1403 | 8.53 | 7171  | 1445 | 8.90 | 7487  |
| 9,500                 | 1286                                        | 7.98 | 6708  | 1331 | 8.34 | 7014  | 1374 | 8.71 | 7324  | 1416 | 9.08  | 7638  | 1457 | 9.46 | 7954  | 1498 | 9.84 | 8274  |
| 10,000                | 1349                                        | 8.95 | 7528  | 1392 | 9.32 | 7839  | 1433 | 9.70 | 8154  | 1473 | 10.07 | 8471  | —    | —    | —     | —    | —    | —     |

| 580F210360 (18 TONS)* (cont) |                                             |       |       |      |      |       |      |      |       |      |      |       |      |      |       |
|------------------------------|---------------------------------------------|-------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)             | Available External Static Pressure (in. wg) |       |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                              | 1.4                                         |       |       | 1.6  |      |       | 1.8  |      |       | 1.9  |      |       | 2.0  |      |       |
|                              | Rpm                                         | Bhp   | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 5,500                        | 1173                                        | 4.44  | 3732  | 1227 | 4.80 | 4036  | 1279 | 5.17 | 4345  | 1304 | 5.35 | 4502  | 1329 | 5.54 | 4629  |
| 6,000                        | 1211                                        | 4.95  | 4165  | 1263 | 5.32 | 4471  | 1313 | 5.69 | 4782  | 1337 | 5.87 | 4939  | 1361 | 6.06 | 5097  |
| 6,500                        | 1252                                        | 5.53  | 4646  | 1302 | 5.89 | 4954  | 1350 | 6.26 | 5267  | 1373 | 6.56 | 5425  | 1396 | 6.64 | 5584  |
| 7,000                        | 1295                                        | 6.16  | 5176  | 1343 | 6.52 | 5487  | 1389 | 6.90 | 5802  | 1412 | 7.09 | 5961  | 1434 | 7.28 | 6121  |
| 7,500                        | 1340                                        | 6.85  | 5756  | 1386 | 7.22 | 6070  | 1431 | 7.60 | 6387  | 1452 | 7.79 | 6547  | 1474 | 7.98 | 6709  |
| 8,000                        | 1388                                        | 7.60  | 6388  | 1431 | 7.97 | 6704  | 1474 | 8.35 | 7260  | 1495 | 8.54 | 7186  | 1516 | 8.74 | 7348  |
| 8,500                        | 1436                                        | 8.41  | 7071  | 1478 | 8.79 | 7390  | 1520 | 9.17 | 7713  | 1540 | 9.37 | 7876  | —    | —    | —     |
| 9,000                        | 1486                                        | 9.28  | 7807  | 1527 | 9.67 | 8130  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                        | 1538                                        | 10.22 | 8597  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                       | —                                           | —     | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

**LEGEND**  
**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 910 to 1095 rpm. Alternate high-static drive range is 1069 to 1287. Other rpms require a field-supplied drive.

Refer to page 189 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 5.90. The maximum continuous watts is 5180.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — 580F180-300 UNITS (cont)**

| 580F240275 (20 TONS)* |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-----------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Cfm                   | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                       | 0.2                                         |       |      | 0.4  |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                       | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 6,000                 | 824                                         | 2607  | 3.09 | 894  | 2844  | 3.37 | 961  | 3085  | 3.66 | 1023 | 3330  | 3.95 | 1083 | 3578  | 4.24 |
| 6,500                 | 881                                         | 3030  | 3.59 | 947  | 3266  | 3.88 | 1009 | 3507  | 4.16 | 1069 | 3751  | 4.45 | 1126 | 3998  | 4.74 |
| 7,000                 | 939                                         | 3488  | 4.14 | 1001 | 3725  | 4.42 | 1060 | 3965  | 4.70 | 1116 | 4208  | 4.99 | 1170 | 4454  | 5.28 |
| 7,500                 | 998                                         | 3982  | 4.72 | 1055 | 4218  | 5.00 | 1111 | 4458  | 5.29 | 1165 | 4701  | 5.58 | 1217 | 4946  | 5.87 |
| 8,000                 | 1056                                        | 4512  | 5.35 | 1111 | 4748  | 5.63 | 1164 | 4988  | 5.92 | 1215 | 5230  | 6.20 | 1264 | 5474  | 6.49 |
| 8,500                 | 1116                                        | 5077  | 6.02 | 1167 | 5314  | 6.30 | 1218 | 5553  | 6.59 | 1266 | 5795  | 6.87 | 1314 | 6039  | 7.16 |
| 9,000                 | 1175                                        | 5678  | 6.74 | 1224 | 5915  | 7.02 | 1272 | 6154  | 7.30 | 1319 | 6395  | 7.59 | 1364 | 6639  | 7.88 |
| 9,500                 | 1235                                        | 6315  | 7.49 | 1282 | 6552  | 7.77 | 1327 | 6791  | 8.06 | 1372 | 7033  | 8.34 | 1415 | 7276  | 8.63 |
| 10,000                | 1295                                        | 6988  | 8.29 | 1340 | 7225  | 8.57 | 1383 | 7465  | 8.86 | 1426 | 7706  | 9.14 | 1468 | 7949  | 9.43 |

| 580F240275 (20 TONS)* (cont) |                                             |       |      |      |       |       |      |       |      |      |       |      |      |       |      |
|------------------------------|---------------------------------------------|-------|------|------|-------|-------|------|-------|------|------|-------|------|------|-------|------|
| Cfm                          | Available External Static Pressure (in. wg) |       |      |      |       |       |      |       |      |      |       |      |      |       |      |
|                              | 1.2                                         |       |      | 1.4  |       |       | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                              | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 6,000                        | 1141                                        | 3829  | 4.54 | 1196 | 4082  | 4.84  | 1249 | 4337  | 5.15 | 1301 | 4596  | 5.45 | 1351 | 4856  | 5.76 |
| 6,500                        | 1181                                        | 4247  | 5.04 | 1234 | 4499  | 5.34  | 1285 | 4753  | 5.64 | 1334 | 5009  | 5.94 | 1383 | 5267  | 6.25 |
| 7,000                        | 1223                                        | 4702  | 5.58 | 1274 | 4953  | 5.88  | 1323 | 5205  | 6.18 | 1371 | 5460  | 6.48 | 1417 | 5716  | 6.78 |
| 7,500                        | 1267                                        | 5194  | 6.16 | 1316 | 5443  | 6.46  | 1363 | 5694  | 6.76 | 1409 | 5947  | 7.06 | 1454 | 6202  | 7.36 |
| 8,000                        | 1313                                        | 5721  | 6.79 | 1359 | 5970  | 7.08  | 1405 | 6220  | 7.38 | 1449 | 6472  | 7.68 | 1493 | 6726  | 7.98 |
| 8,500                        | 1360                                        | 6285  | 7.46 | 1405 | 6533  | 7.75  | 1449 | 6783  | 8.05 | 1491 | 7034  | 8.34 | 1533 | 7286  | 8.64 |
| 9,000                        | 1408                                        | 6885  | 8.17 | 1451 | 7132  | 8.46  | 1494 | 7381  | 8.76 | 1535 | 7631  | 9.05 | —    | —     | —    |
| 9,500                        | 1458                                        | 7521  | 8.92 | 1499 | 7768  | 9.22  | 1540 | 8180  | 9.51 | —    | —     | —    | —    | —     | —    |
| 10,000                       | 1508                                        | 8193  | 9.72 | 1549 | 8440  | 10.01 | —    | —     | —    | —    | —     | —    | —    | —     | —    |

| 580F240275 (20 TONS)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |     |       |     |
|------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|-----|-------|-----|
| Cfm                          | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |     |       |     |
|                              | 2.2                                         |       |      | 2.4  |       |      | 2.6  |       |      | 2.8  |       |      | 3.0 |       |     |
|                              | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm | Watts | Bhp |
| 6,000                        | 1399                                        | 5118  | 6.07 | 1446 | 5381  | 6.38 | 1492 | 5647  | 6.70 | 1537 | 5914  | 7.02 | —   | —     | —   |
| 6,500                        | 1429                                        | 5527  | 6.56 | 1475 | 5789  | 6.87 | 1520 | 6052  | 7.18 | —    | —     | —    | —   | —     | —   |
| 7,000                        | 1462                                        | 5974  | 7.09 | 1507 | 6234  | 7.40 | 1550 | 6495  | 7.71 | —    | —     | —    | —   | —     | —   |
| 7,500                        | 1498                                        | 6459  | 7.66 | 1540 | 6717  | 7.97 | —    | —     | —    | —    | —     | —    | —   | —     | —   |
| 8,000                        | 1535                                        | 6981  | 8.28 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   |
| 8,500                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   |
| 9,000                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   |
| 9,500                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   |
| 10,000                       | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 1002 to 1151 rpm. Alternate high-static drive range is 1193 to 1369. Other rpms require a field-supplied drive.

Refer to page 189 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp for the standard motor is 8.70 (for 208/230 and 575-v units) and 9.50 (for 460-v units). The maximum continuous watts is 7915 (for 208/230 and 575-v units) and 8640 (for 460-v units). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Performance table for additional information.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — 580F180-300 UNITS (cont)**

| 580F240360 (20 TONS)* |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-----------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Cfm                   | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                       | 0.2                                         |       |      | 0.4  |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                       | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 6,000                 | 868                                         | 2752  | 3.26 | 934  | 2987  | 3.54 | 997  | 3227  | 3.83 | 1058 | 3470  | 4.12 | 1115 | 3716  | 4.41 |
| 6,500                 | 929                                         | 3201  | 3.80 | 991  | 3436  | 4.08 | 1051 | 3675  | 4.36 | 1108 | 3917  | 4.65 | 1162 | 4163  | 4.94 |
| 7,000                 | 991                                         | 3687  | 4.37 | 1049 | 3923  | 4.65 | 1105 | 4161  | 4.94 | 1159 | 4403  | 5.22 | 1211 | 4647  | 5.51 |
| 7,500                 | 1054                                        | 4211  | 5.00 | 1109 | 4447  | 5.28 | 1161 | 4686  | 5.56 | 1213 | 4926  | 5.84 | 1262 | 5170  | 6.13 |
| 8,000                 | 1117                                        | 4773  | 5.66 | 1168 | 5009  | 5.94 | 1218 | 5247  | 6.22 | 1267 | 5488  | 6.51 | 1314 | 5731  | 6.80 |
| 8,500                 | 1180                                        | 5373  | 6.37 | 1229 | 5609  | 6.65 | 1277 | 5847  | 6.94 | 1323 | 6088  | 7.22 | 1368 | 6331  | 7.51 |
| 9,000                 | 1244                                        | 6011  | 7.13 | 1290 | 6247  | 7.41 | 1335 | 6485  | 7.69 | 1380 | 6726  | 7.98 | 1423 | 6968  | 8.27 |
| 9,500                 | 1308                                        | 6687  | 7.93 | 1352 | 6924  | 8.21 | 1395 | 7162  | 8.50 | 1437 | 7402  | 8.78 | 1479 | 7644  | 9.07 |
| 10,000                | 1372                                        | 7401  | 8.78 | 1414 | 7638  | 9.06 | 1455 | 7876  | 9.34 | 1496 | 8117  | 9.63 | 1535 | 8358  | 9.92 |

| 580F240360 (20 TONS)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Cfm                          | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                              | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                              | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 6,000                        | 1171                                        | 3965  | 4.70 | 1224 | 4216  | 5.00 | 1276 | 4469  | 5.30 | 1326 | 4726  | 5.61 | 1374 | 4983  | 5.91 |
| 6,500                        | 1215                                        | 4410  | 5.23 | 1266 | 4659  | 5.53 | 1316 | 4911  | 5.83 | 1364 | 5165  | 6.13 | 1411 | 5421  | 6.43 |
| 7,000                        | 1262                                        | 4894  | 5.81 | 1311 | 5142  | 6.10 | 1358 | 5392  | 6.40 | 1404 | 5645  | 6.70 | 1449 | 5899  | 7.00 |
| 7,500                        | 1310                                        | 5415  | 6.42 | 1357 | 5663  | 6.72 | 1403 | 5912  | 7.01 | 1447 | 6164  | 7.31 | 1490 | 6416  | 7.61 |
| 8,000                        | 1360                                        | 5976  | 7.09 | 1405 | 6222  | 7.38 | 1449 | 6471  | 7.68 | 1492 | 6721  | 7.97 | 1533 | 6973  | 8.27 |
| 8,500                        | 1412                                        | 6575  | 7.80 | 1455 | 6821  | 8.09 | 1497 | 7068  | 8.39 | 1538 | 7318  | 8.68 | —    | —     | —    |
| 9,000                        | 1465                                        | 7212  | 8.56 | 1506 | 7457  | 8.85 | 1547 | 7705  | 9.14 | —    | —     | —    | —    | —     | —    |
| 9,500                        | 1519                                        | 7888  | 9.36 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |
| 10,000                       | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    |

| 580F240360 (20 TONS)* (cont) |                                             |       |      |      |       |      |      |       |      |     |       |     |     |       |     |
|------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|-----|-------|-----|-----|-------|-----|
| Cfm                          | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |     |       |     |     |       |     |
|                              | 2.2                                         |       |      | 2.4  |       |      | 2.6  |       |      | 2.8 |       |     | 3.0 |       |     |
|                              | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm | Watts | Bhp | Rpm | Watts | Bhp |
| 6,000                        | 1422                                        | 5243  | 6.22 | 1468 | 5505  | 6.53 | 1513 | 5768  | 6.84 | —   | —     | —   | —   | —     | —   |
| 6,500                        | 1456                                        | 5679  | 6.74 | 1501 | 5938  | 7.04 | 1544 | 6199  | 7.35 | —   | —     | —   | —   | —     | —   |
| 7,000                        | 1493                                        | 6155  | 7.30 | 1536 | 6412  | 7.61 | —    | —     | —    | —   | —     | —   | —   | —     | —   |
| 7,500                        | 1533                                        | 6670  | 7.91 | —    | —     | —    | —    | —     | —    | —   | —     | —   | —   | —     | —   |
| 8,000                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   | —   | —     | —   |
| 8,500                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   | —   | —     | —   |
| 9,000                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   | —   | —     | —   |
| 9,500                        | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   | —   | —     | —   |
| 10,000                       | —                                           | —     | —    | —    | —     | —    | —    | —     | —    | —   | —     | —   | —   | —     | —   |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

Refer to page 189 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp for the standard motor is 8.70 (for 208/230 and 575-v units) and 9.50 (for 460-v units). The maximum continuous watts is 7915 (for 208/230 and 575-v units) and 8640 (for 460-v units). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Performance table for more information.

\*Standard low-medium static drive range is 1002 to 1151 rpm. Alternate high-static drive range is 1193 to 1369. Other rpms require a field-supplied drive.

**PERFORMANCE DATA (cont)\**  
**FAN PERFORMANCE — 580F180-300 UNITS (cont)**

| 580F300275 (25 TONS)* |                                             |       |        |      |       |        |      |       |       |      |       |        |      |       |        |      |       |        |
|-----------------------|---------------------------------------------|-------|--------|------|-------|--------|------|-------|-------|------|-------|--------|------|-------|--------|------|-------|--------|
| Airflow<br>(Cfm)      | Available External Static Pressure (in. wg) |       |        |      |       |        |      |       |       |      |       |        |      |       |        |      |       |        |
|                       | 0.2                                         |       |        | 0.4  |       |        | 0.6  |       |       | 0.8  |       |        | 1.0  |       |        | 1.2  |       |        |
|                       | Rpm                                         | Bhp   | Watts  | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts  |
| 7,000                 | 941                                         | 3.35  | 2,769  | 1002 | 3.80  | 3,140  | 1061 | 4.27  | 3528  | 1117 | 4.76  | 3,934  | 1171 | 5.27  | 4,356  | 1224 | 5.80  | 4,794  |
| 7,500                 | 999                                         | 4.05  | 3,348  | 1057 | 4.53  | 3,742  | 1112 | 5.02  | 4152  | 1166 | 5.54  | 4,579  | 1218 | 6.07  | 5,210  | 1268 | 6.63  | 5,478  |
| 8,000                 | 1058                                        | 4.85  | 4,007  | 1113 | 5.35  | 4,424  | 1165 | 5.87  | 4856  | 1216 | 6.41  | 5,304  | 1266 | 6.97  | 5,766  | 1314 | 7.55  | 6,243  |
| 8,500                 | 1117                                        | 5.74  | 4,750  | 1169 | 6.28  | 5,190  | 1219 | 6.83  | 5645  | 1268 | 7.40  | 6,114  | 1315 | 7.98  | 6,597  | 1361 | 8.58  | 7,094  |
| 9,000                 | 1177                                        | 6.75  | 5,583  | 1226 | 7.31  | 6,047  | 1274 | 7.89  | 6524  | 1320 | 8.48  | 7,015  | 1365 | 9.09  | 7,520  | 1410 | 9.72  | 8,037  |
| 9,500                 | 1237                                        | 7.98  | 6,511  | 1284 | 8.46  | 6,999  | 1329 | 9.07  | 7499  | 1374 | 9.69  | 8,012  | 1417 | 10.33 | 8,538  | 1459 | 10.98 | 9,076  |
| 10,000                | 1297                                        | 9.12  | 7,450  | 1342 | 9.74  | 8,051  | 1385 | 10.37 | 8574  | 1428 | 11.02 | 9,110  | 1469 | 11.68 | 9,657  | 1510 | 12.36 | 10,217 |
| 10,500                | 1358                                        | 10.49 | 8,674  | 1400 | 11.14 | 9,209  | 1442 | 11.80 | 9755  | 1483 | 12.47 | 10,314 | 1523 | 13.16 | 10,883 | —    | —     | —      |
| 11,000                | 1418                                        | 12.00 | 9,919  | 1459 | 12.67 | 10,478 | —    | —     | —     | —    | —     | —      | —    | —     | —      | —    | —     | —      |
| 11,250                | 1449                                        | 12.80 | 10,585 | —    | —     | —      | —    | —     | —     | —    | —     | —      | —    | —     | —      | —    | —     | —      |

| 580F300275 (25 TONS)* (cont) |                                             |       |       |      |       |        |      |      |       |
|------------------------------|---------------------------------------------|-------|-------|------|-------|--------|------|------|-------|
| Airflow<br>(Cfm)             | Available External Static Pressure (in. wg) |       |       |      |       |        |      |      |       |
|                              | 1.4                                         |       |       | 1.6  |       |        | 1.8  |      |       |
|                              | Rpm                                         | Bhp   | Watts | Rpm  | Bhp   | Watts  | Rpm  | Bhp  | Watts |
| 7,000                        | 1274                                        | 6.35  | 5248  | 1323 | 6.92  | 5,718  | 1371 | 5.54 | 6204  |
| 7,500                        | 1316                                        | 7.20  | 6960  | 1364 | 7.79  | 6,437  | 1410 | 6.41 | 6939  |
| 8,000                        | 1360                                        | 8.14  | 6734  | 1406 | 8.76  | 7,239  | 1450 | 7.40 | 7759  |
| 8,500                        | 1406                                        | 9.20  | 7605  | 1449 | 9.83  | 8,129  | 1492 | 8.48 | 8666  |
| 9,000                        | 1453                                        | 10.36 | 8568  | 1495 | 11.02 | 9,111  | 1536 | 9.69 | 9667  |
| 9,500                        | 1501                                        | 11.64 | 9627  | 1541 | 12.32 | 10,190 | —    | —    | —     |
| 10,000                       | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |
| 10,500                       | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |
| 11,000                       | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |
| 11,250                       | —                                           | —     | —     | —    | —     | —      | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 1066 to 1283 rpm. Alternate high-static drive range is 1332 to 1550. Other rpms require a field-supplied drive.

Refer to this page for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 10.20 (208/230 and 575 v) or 11.80 (460 v) and the maximum continuous watts are 9510 (208/230 and 575 v) or 11,000 (460 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Performance table for more information.

| 580F300360 (25 TONS)* |                                             |       |        |      |       |        |      |       |       |      |       |       |      |       |       |      |       |       |
|-----------------------|---------------------------------------------|-------|--------|------|-------|--------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Airflow<br>(Cfm)      | Available External Static Pressure (in. wg) |       |        |      |       |        |      |       |       |      |       |       |      |       |       |      |       |       |
|                       | 0.2                                         |       |        | 0.4  |       |        | 0.6  |       |       | 0.8  |       |       | 1.0  |       |       | 1.2  |       |       |
|                       | Rpm                                         | Bhp   | Watts  | Rpm  | Bhp   | Watts  | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp   | Watts |
| 7,000                 | 992                                         | 4.05  | 3,348  | 1051 | 4.44  | 3,668  | 1106 | 4.83  | 3995  | 1160 | 5.24  | 4331  | 1212 | 5.65  | 4675  | 1262 | 6.08  | 5026  |
| 7,500                 | 1055                                        | 4.77  | 3,947  | 1110 | 5.17  | 4,277  | 1162 | 5.58  | 4615  | 1214 | 6.00  | 4960  | 1263 | 6.43  | 5312  | 1311 | 6.86  | 5672  |
| 8,000                 | 1118                                        | 5.58  | 4,610  | 1170 | 5.99  | 4,950  | 1220 | 6.41  | 5298  | 1268 | 6.84  | 5653  | 1315 | 7.27  | 6014  | 1361 | 7.72  | 6382  |
| 8,500                 | 1182                                        | 6.46  | 5,339  | 1231 | 6.88  | 5,690  | 1278 | 7.31  | 6047  | 1324 | 7.75  | 6411  | 1369 | 8.20  | 6782  | 1413 | 8.66  | 7158  |
| 9,000                 | 1246                                        | 7.42  | 6,136  | 1292 | 7.86  | 6,498  | 1337 | 8.30  | 6865  | 1381 | 8.75  | 7239  | 1424 | 9.21  | 7618  | 1466 | 9.68  | 8003  |
| 9,500                 | 1310                                        | 8.47  | 7,005  | 1354 | 8.92  | 7,377  | 1397 | 9.38  | 7754  | 1439 | 9.84  | 8137  | 1480 | 10.31 | 8525  | 1520 | 10.79 | 8918  |
| 10,000                | 1374                                        | 9.61  | 7,947  | 1416 | 10.07 | 8,329  | 1457 | 10.54 | 8715  | 1497 | 11.02 | 9107  | 1537 | 11.50 | 9504  | —    | —     | —     |
| 10,500                | 1439                                        | 10.84 | 8,964  | 1479 | 11.32 | 9,356  | 1518 | 11.79 | 9752  | —    | —     | —     | —    | —     | —     | —    | —     | —     |
| 11,000                | 1503                                        | 12.17 | 10,059 | 1542 | 12.65 | 10,460 | —    | —     | —     | —    | —     | —     | —    | —     | —     | —    | —     | —     |
| 11,250                | 1536                                        | 12.86 | 10,636 | —    | —     | —      | —    | —     | —     | —    | —     | —     | —    | —     | —     | —    | —     | —     |

| 580F300360 (25 TONS)* (cont) |                                             |       |       |      |       |       |      |      |       |
|------------------------------|---------------------------------------------|-------|-------|------|-------|-------|------|------|-------|
| Airflow<br>(Cfm)             | Available External Static Pressure (in. wg) |       |       |      |       |       |      |      |       |
|                              | 1.4                                         |       |       | 1.6  |       |       | 1.8  |      |       |
|                              | Rpm                                         | Bhp   | Watts | Rpm  | Bhp   | Watts | Rpm  | Bhp  | Watts |
| 7,000                        | 1311                                        | 6.51  | 5385  | 1359 | 6.96  | 5751  | 1405 | 6.00 | 6124  |
| 7,500                        | 1358                                        | 7.30  | 6039  | 1403 | 7.76  | 6412  | 1448 | 6.84 | 6792  |
| 8,000                        | 1406                                        | 8.17  | 6767  | 1560 | 8.63  | 7137  | 1492 | 7.75 | 7524  |
| 8,500                        | 1456                                        | 9.12  | 7541  | 1498 | 9.59  | 7929  | 1539 | 8.75 | 8323  |
| 9,000                        | 1507                                        | 10.15 | 8393  | 1548 | 10.63 | 8790  | —    | —    | —     |
| 9,500                        | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 10,000                       | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 10,500                       | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 11,000                       | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |
| 11,250                       | —                                           | —     | —     | —    | —     | —     | —    | —    | —     |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 1066 to 1283 rpm. Alternate high-static drive range is 1332 to 1550. Other rpms require a field-supplied drive.

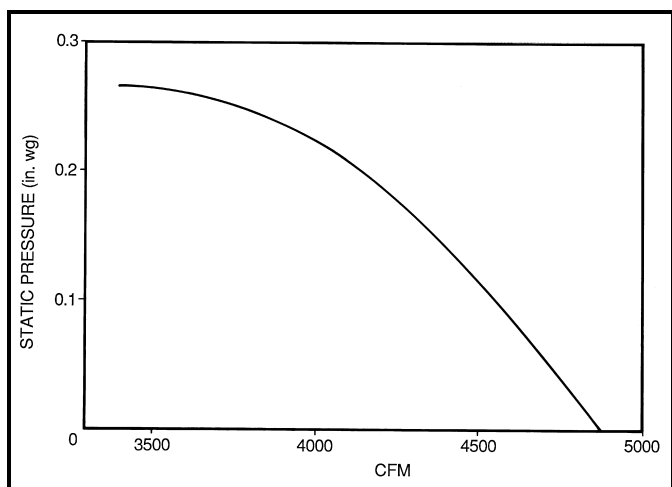
Refer to this page for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is 10.20 (208/230 and 575 v) or 11.80 (460 v) and the maximum continuous watts are 9510 (208/230 and 575 v) or 11,000 (460 v). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Performance table for more information.

**GENERAL NOTES FOR FAN PERFORMANCE DATA TABLES**

- Static pressure losses (i.e., EconoMiSer IV) must be added to external static pressure before entering Fan Performance table.
- Interpolation is permissible. Do not extrapolate.
- Fan performance is based on wet coils, clean filters, and casing losses. See Accessory/FIOP Static Pressure table on page 191.
- Extensive motor and drive testing on these units ensures that the full horsepower and watts range of the motor can be utilized with confidence. Using fan motors up to the watts or bhp rating shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.
- Use of a field-supplied motor may affect wire size. Contact your Bryant representative for details.

## PERFORMANCE DATA (cont)



Fan Performance Using Accessory  
Power Exhaust (580F180-300)

### ALTITUDE COMPENSATION\* — 580F180-300

| ELEVATION<br>(ft) | NATURAL GAS ORIFICE SIZE† |           |
|-------------------|---------------------------|-----------|
|                   | Low Heat                  | High Heat |
| 0-3,000           | 30                        | 29        |
| 3,000- 7,000      | 31                        | 30        |
| 7,000- 9,000      | 32                        | 31        |
| 9,000-10,000      | 33                        | 31        |
| above 10,000      | 35                        | 32        |

\*Includes a 4% input reduction per each 1,000 feet.

†Orifices available through your Bryant dealer.

### ALTITUDE DERATING FACTOR\*

| ELEVATION<br>(ft) | MAXIMUM HEATING VALUE<br>(Btu/ft³) |
|-------------------|------------------------------------|
| 0-2,000           | 1,100                              |
| 2,001-3,000       | 1,050                              |
| 3,001-4,000       | 1,000                              |
| 4,001-5,000       | 950                                |
| 5,001-6,000       | 900                                |

\*Derating of the unit is not required unless the heating value of the gas exceeds the values listed in the table above, or if the elevation exceeds 6000 ft. Derating conditions must be 4% per thousand ft above 2000 ft. For example, at 4000 ft, if the heating value of the gas exceeds 1000 Btu/ft³, the unit will require a 16% derating. For elevations above 6000 ft, the same formula applies. For example, at 7000 ft, the unit will require a 28% derating of the maximum heating value per the National Fuel Gas Code.

**IMPORTANT:** Local utility companies may be reducing heat content of gas at altitudes above 2000 ft. If this is being done, changing spuds may not be required.

### ALTITUDE COMPENSATION — 580F180-300 (LP Gas Units)

| ELEVATION<br>(ft) | LIQUID PROPANE<br>ORIFICE SIZE |
|-------------------|--------------------------------|
|                   | Low Heat and High Heat         |
| 0-2,000           | 36                             |
| 2,000             | 37                             |
| 3,000             | 38                             |
| 4,000             | 38                             |
| 5,000             | 39                             |
| 6,000             | 40                             |
| 7,000             | 41                             |
| 8,000             | 41                             |
| 9,000             | 42                             |
| 10,000            | 43                             |

## OUTDOOR SOUND POWER

| UNIT<br>580F | SOUND<br>RATING<br>(60 Hz) | A-WEIGHTED<br>(dB) | OCTAVE BANDS |      |      |      |      |      |      |      |
|--------------|----------------------------|--------------------|--------------|------|------|------|------|------|------|------|
|              |                            |                    | 63           | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 180          | 88 dB                      | 87.6               | 90.8         | 88.7 | 86.4 | 84.3 | 83.5 | 78.4 | 75.6 | 66.8 |
| 210          | 88 dB                      | 87.8               | 90.8         | 88.7 | 86.4 | 84.3 | 83.5 | 78.4 | 75.6 | 66.8 |
| 240          | 94 dB                      | 94.4               | 99.7         | 93.0 | 93.7 | 91.8 | 89.7 | 85.9 | 80.7 | 74.4 |
| 300          | 94 dB                      | 94.1               | 98.7         | 92.3 | 93.8 | 90.9 | 89.6 | 85.9 | 80.3 | 74.3 |

### LEGEND

Bels — Sound Levels (1 bel = 10 decibels)

**NOTE:** Indoor sound power is available in Bryant's Electronic Catalog program (ECAT) for specific operating parameters.

## PERFORMANCE DATA (cont)

### ACCESSORY/FIOP STATIC PRESSURE (in. wg)\* — 580F180-300

| COMPONENT                     | CFM   |       |       |       |       |       |       |        |        |
|-------------------------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
|                               | 4500  | 5000  | 5400  | 6000  | 7200  | 7500  | 9000  | 10,000 | 11,250 |
| EconoMiSer IV and EconoMiSer2 | 0.040 | 0.050 | 0.060 | 0.070 | 0.090 | 0.100 | 0.110 | 0.120  | 0.140  |

#### LEGEND

FIOP — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

### FAN RPM AT MOTOR PULLEY SETTINGS\*

| UNIT<br>580F | MOTOR PULLEY TURNS OPEN |     |      |       |      |       |      |       |      |       |      |       |      |
|--------------|-------------------------|-----|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|              | 0                       | 1/2 | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 180†         | ††                      | ††  | ††   | ††    | 1021 | 1002  | 984  | 965   | 947  | 928   | 910  | 891   | 873  |
| 180**        | ††                      | ††  | ††   | ††    | 1200 | 1178  | 1156 | 1134  | 1112 | 1091  | 1069 | 1047  | 1025 |
| 210†         | ††                      | ††  | 1095 | 1077  | 1058 | 1040  | 1021 | 1002  | 984  | 965   | 947  | 928   | 910  |
| 210**        | ††                      | ††  | 1287 | 1265  | 1243 | 1222  | 1200 | 1178  | 1156 | 1134  | 1112 | 1091  | 1069 |
| 240†         | ††                      | ††  | ††   | ††    | 1151 | 1132  | 1114 | 1095  | 1077 | 1058  | 1040 | 1021  | 1002 |
| 240**        | ††                      | ††  | ††   | ††    | 1369 | 1347  | 1325 | 1303  | 1281 | 1259  | 1237 | 1215  | 1193 |
| 300†         | ††                      | ††  | 1283 | 1269  | 1247 | 1225  | 1203 | 1182  | 1160 | 1138  | 1116 | 1095  | 1066 |
| 300**        | ††                      | ††  | ††   | ††    | 1551 | 1524  | 1497 | 1470  | 1443 | 1415  | 1388 | 1361  | 1332 |

\*Approximate fan rpm shown.

†Indicates standard drive package.

\*\*Indicates alternate drive package.

††Due to belt and pulley size, pulley cannot be set to this number of turns open.

### EVAPORATOR-FAN MOTOR PERFORMANCE

| UNIT<br>580F | UNIT<br>VOLTAGE | MAXIMUM<br>ACCEPTABLE<br>CONTINUOUS<br>BHP* | MAXIMUM<br>ACCEPTABLE<br>CONTINUOUS<br>BkW* | MAXIMUM<br>ACCEPTABLE<br>OPERATING<br>WATTS | MAXIMUM<br>AMP DRAW |
|--------------|-----------------|---------------------------------------------|---------------------------------------------|---------------------------------------------|---------------------|
| 180          | 208/230         | 6.13                                        | 4.57                                        | 5,180                                       | 15.8                |
|              | 460             |                                             |                                             |                                             | 7.9                 |
|              | 575             |                                             |                                             |                                             | 6.0                 |
| 210          | 208/230         | 5.90                                        | 4.40                                        | 5,180                                       | 15.8                |
|              | 460             |                                             |                                             |                                             | 7.9                 |
|              | 575             |                                             |                                             |                                             | 6.0                 |
| 240          | 208/230         | 8.70                                        | 6.49                                        | 7,915                                       | 22.0                |
|              | 460             | 9.50                                        | 7.08                                        | 8,640                                       | 13.0                |
|              | 575             | 8.70                                        | 6.49                                        | 7,915                                       | 10.0                |
| 300          | 208/230         | 10.20                                       | 7.61                                        | 9,510                                       | 28.0                |
|              | 460             | 11.80                                       | 8.80                                        | 11,000                                      | 14.6                |
|              | 575             | 10.20                                       | 7.61                                        | 9,510                                       | 13.0                |

#### LEGEND

BHP — Brake Horsepower  
BkW — Brake Kilowatts

\*Extensive motor and electrical testing on these units ensures that the full horsepower (brake kilowatt) range of the motors can be utilized with confidence. Using your fan motors up to the horsepower (brake kilowatt) ratings shown in this table

will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

**NOTE:** All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

### EVAPORATOR-FAN MOTOR EFFICIENCY

| UNIT 580F | MOTOR EFFICIENCY (%) |
|-----------|----------------------|
| 5 Hp      | 87.5                 |
| 7.5 Hp    | 88.5                 |
| 10 Hp     | 89.5                 |

**NOTE:** The EPACT (Energy Policy Act of 1992) regulates energy requirements for specific types of indoor fan motors. Motors regulated by EPACT include any general purpose, T-frame (three-digit, 143 and larger), single-speed, foot mounted, polyphase, squirrel cage induction motors of NEMA (National Electrical Manufacturers Association) design A and B, manufactured for use in the United States. Ranging from 1 to 200 Hp, these continuous-duty motors operate on 230 and 460 volt, 60 Hz power. If a motor does not fit into these specifications, the motor does not have to be replaced by an EPACT-compliant energy-efficient motor. Variable-speed motors are exempt from EPACT compliance requirements. Therefore, the indoor-fan motors for these units are exempt from these requirements.

580F180-300



# ELECTRICAL DATA

| UNIT<br>580F | NOMINAL<br>VOLTAGE<br>(3 Ph, 60 Hz) | VOLTAGE<br>RANGE |       | COMPRESSOR |      |        |     |       |      | OFM |     |          | IFM  |           | POWER<br>EXHAUST |      | COMBUSTION<br>FAN MOTOR | POWER<br>SUPPLY |         |
|--------------|-------------------------------------|------------------|-------|------------|------|--------|-----|-------|------|-----|-----|----------|------|-----------|------------------|------|-------------------------|-----------------|---------|
|              |                                     |                  |       | No. 1      |      | No. 1A |     | No. 2 |      |     |     |          |      |           |                  |      |                         |                 |         |
|              |                                     | Min              | Max   | RLA        | LRA  | RLA    | LRA | RLA   | LRA  | Qty | Hp  | FLA (ea) | Hp   | FLA       | FLA              | LRA  | FLA                     | MCA             | MOCP*   |
| 180          | 208/230                             | 187              | 253   | 32.1       | 195  | —      | —   | 20.7  | 156  | 3   | 0.5 | 1.7      | 5.0  | 15.8/15.8 | —                | —    | 0.57                    | 82/82           | 110/110 |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 86/86           | 110/110 |
|              | 460                                 | 414              | 508   | 16.4       | 95   | —      | —   | 10    | 70   | 3   | 0.5 | 0.8      | 5.0  | 7.9       | —                | —    | 0.30                    | 41              | 50      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 43              | 50      |
|              | 575                                 | 518              | 633   | 12         | 80   | —      | —   | 8.2   | 54   | 3   | 0.5 | 0.75     | 5.0  | 6.0       | —                | —    | 0.57                    | 31              | 40      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 34              | 40      |
| 210          | 208/230                             | 187              | 253   | 30.1       | 225  | —      | —   | 28.8  | 195  | 3   | 0.5 | 1.7      | 5.0  | 15.8/15.8 | —                | —    | 0.57                    | 87/87           | 110/110 |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 92/92           | 110/110 |
|              | 460                                 | 414              | 508   | 15.5       | 114  | —      | —   | 14.7  | 95   | 3   | 0.5 | 0.8      | 5.0  | 7.9       | —                | —    | 0.30                    | 44              | 50      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 47              | 60      |
|              | 575                                 | 518              | 632.5 | 12.1       | 80   | —      | —   | 10.7  | 80   | 3   | 0.5 | 0.75     | 5.0  | 6.0       | —                | —    | 0.57                    | 34              | 40      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 36              | 40      |
| 240          | 208/230                             | 187              | 253   | 42         | 239  | —      | —   | 33.6  | 225  | 2   | 1   | 6.6      | 7.5  | 25.0/25.0 | —                | —    | 0.57                    | 124/124         | 150/150 |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 129/129         | 150/150 |
|              | 460                                 | 414              | 508   | 19.2       | 125  | —      | —   | 17.3  | 114  | 2   | 1   | 3.3      | 7.5  | 13.0      | —                | —    | 0.30                    | 61              | 80      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.3              | 6.0  | 0.30                    | 63              | 80      |
|              | 575                                 | 518              | 633   | 13.8       | 80.0 | —      | —   | 13.5  | 80.0 | 2   | 1.0 | 3.4      | 7.5  | 10.0      | —                | —    | 0.57                    | 48              | 60      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 50              | 60      |
| 300          | 208/230                             | 187.2            | 253   | 20.7       | 156  | 20.7   | 156 | 47.1  | 245  | 6   | 0.5 | 1.7      | 10.0 | 28.0/28.0 | —                | —    | 0.57                    | 138/138         | 175/175 |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 4.6              | 18.8 | 0.57                    | 143/143         | 150/175 |
|              | 460                                 | 414              | 508   | 10         | 75   | 10     | 75  | 19.6  | 125  | 6   | 0.5 | 0.8      | 10.0 | 14.6      | —                | —    | 0.30                    | 64              | 80      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.3              | 6    | 0.30                    | 66              | 80      |
|              | 575                                 | 517.5            | 632.5 | 8.2        | 54   | 8.2    | 54  | 15.8  | 100  | 6   | 0.5 | 0.8      | 10.0 | 13.0      | —                | —    | 0.57                    | 54              | 60      |
|              |                                     |                  |       |            |      |        |     |       |      |     |     |          |      |           | 2.1              | 4.8  | 0.57                    | 56              | 70      |

## LEGEND

|      |   |                                             |
|------|---|---------------------------------------------|
| FLA  | — | Full Load Amps                              |
| HACR | — | Heating, Air Conditioning and Refrigeration |
| IFM  | — | Indoor (Evaporator) Fan Motor               |
| LRA  | — | Locked Rotor Amps                           |
| MCA  | — | Minimum Circuit Amps                        |
| MOCP | — | Maximum Overcurrent Protection              |
| NEC  | — | National Electrical Code                    |
| OFM  | — | Outdoor (Condenser) Fan Motor               |
| RLA  | — | Rated Load Amps                             |

\*Fuse or HACR circuit breaker.



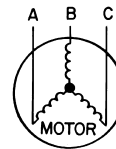
## NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- Unbalanced 3-Phase Supply Voltage**  
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent voltage imbalance.

% Voltage Imbalance

$$= 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

EXAMPLE: Supply voltage is 460-3-60.



AB = 452 v  
BC = 464 v  
AC = 455 v

$$\text{Average Voltage} = \frac{452 + 464 + 455}{3}$$

$$= \frac{1371}{3}$$

$$= 457$$

Determine maximum deviation from average voltage.

$$(AB) 457 - 452 = 5 \text{ v}$$

$$(BC) 464 - 457 = 7 \text{ v}$$

$$(AC) 457 - 455 = 2 \text{ v}$$

Maximum deviation is 7 v.

Determine percent voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457}$$

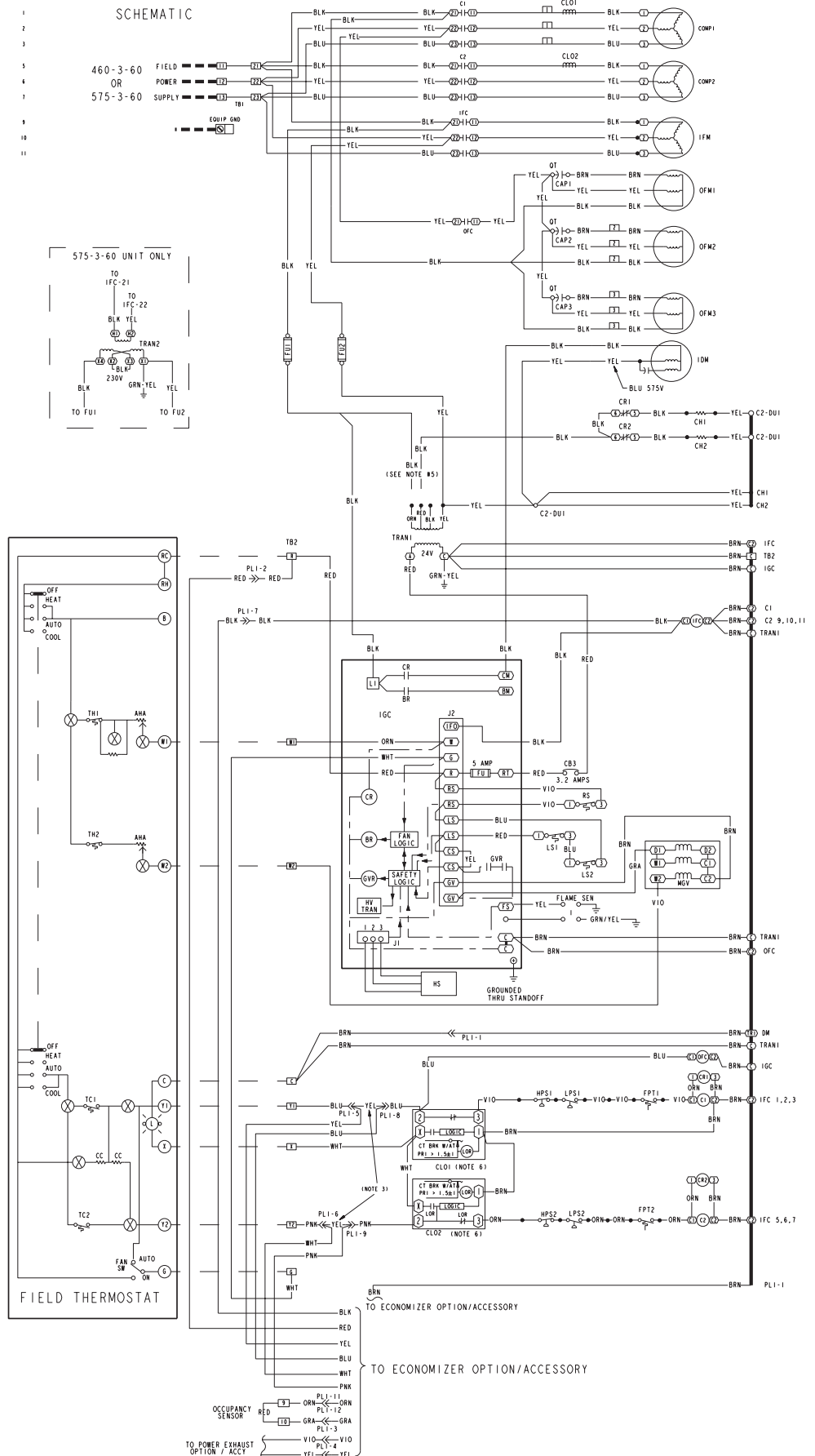
$$= 1.53\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

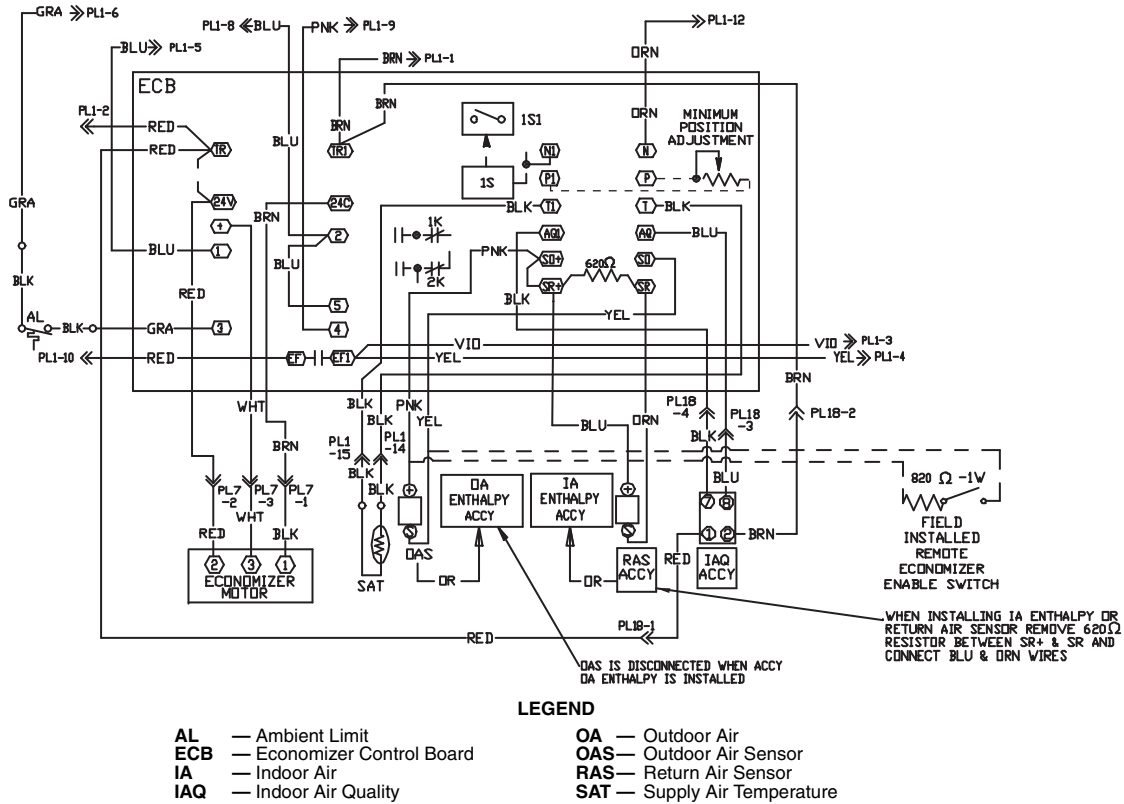
# TYPICAL WIRING SCHEMATICS — 580F

- LEGEND**
- AHA — Adjustable Heat Anticipator
  - C — Contactor, Compressor
  - CAP — Capacitor
  - CB — Circuit Breaker
  - CC — Cooling Compensator
  - CH — Crankcase Heater
  - CLO — Compressor Lockout
  - COMP — Compressor Motor
  - CR — Control Relay
  - DU — Dummy Terminal
  - EQUIP — Equipment
  - FPT — Freeze Protection Thermostat
  - FU — Fuse
  - GND — Ground
  - HPS — High-Pressure Switch
  - HS — Hall Effect Sensor
  - HV — High Voltage
  - I — Ignitor
  - IDM — Induced-Draft Motor
  - IFC — Indoor-Fan Contactor
  - IFCB — Indoor-Fan Circuit Breaker
  - IFM — Indoor-Fan Motor
  - IGC — Integrated Gas Unit Controller
  - L — Light
  - LOR — Lockout Relay
  - LPS — Low-Pressure Switch
  - LS — Limit Switch
  - MGV — Main Gas Valve
  - OFC — Outdoor-Fan Contactor
  - OFM — Outdoor-Fan Motor
  - PL — Plug Assembly
  - PRI — Primary
  - QT — Quadruple Terminal
  - R — Relay
  - RS — Rollout Switch
  - SEN — Sensor
  - SW — Switch
  - TB — Terminal Block
  - TC — Thermostat, Cooling
  - TH — Thermostat, Heating
  - TRAN — Transformer
  - Terminal (Marked)
  - Terminal (Unmarked)
  - Terminal Block
  - Splice
  - Factory Wiring
  - Field Wiring
  - Option/Accessory Wiring
  - To indicate common potential only, not to represent wiring.



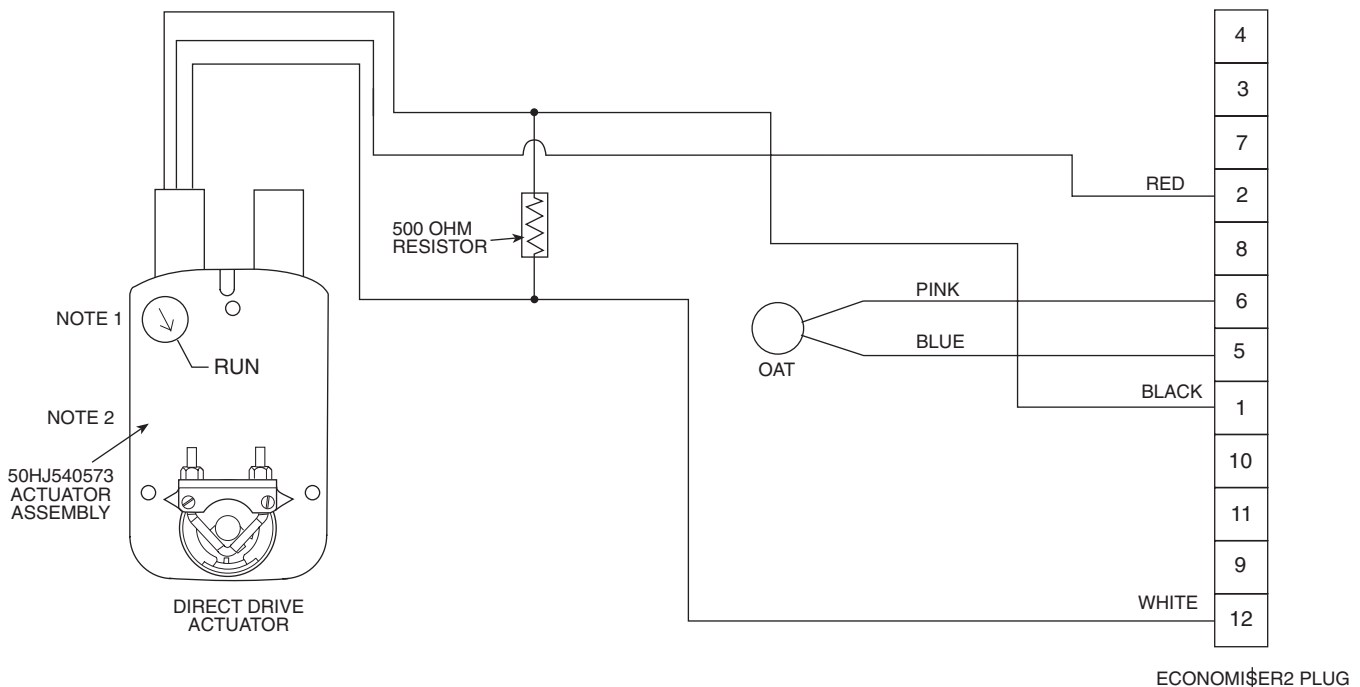
Typical Wiring Schematic — 580F180, 460-3-60 Shown

## TYPICAL WIRING SCHEMATICS — 580F (cont)



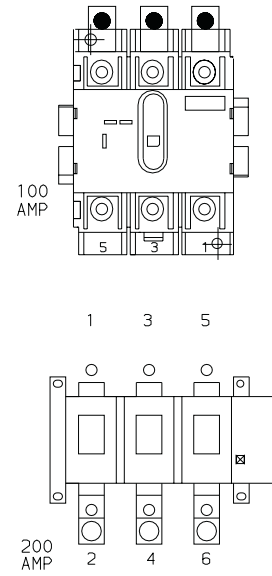
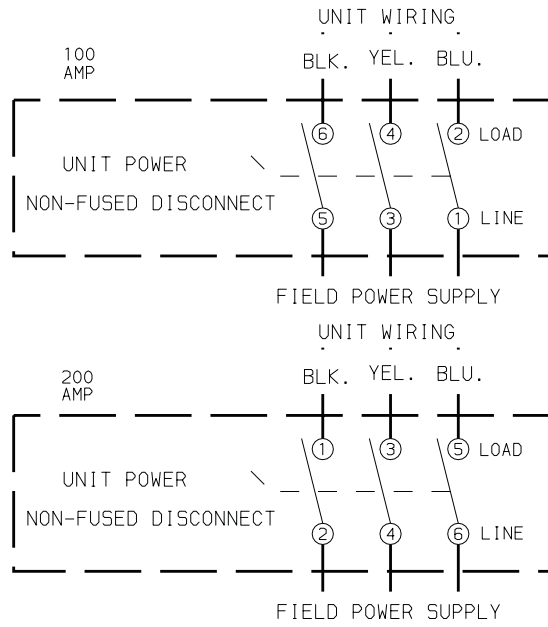
EconoMiSer IV Wiring — 580F180-300

580F180-300



EconoMiSer2 Wiring — 580F180-300

## TYPICAL WIRING SCHEMATICS — 580F (cont)

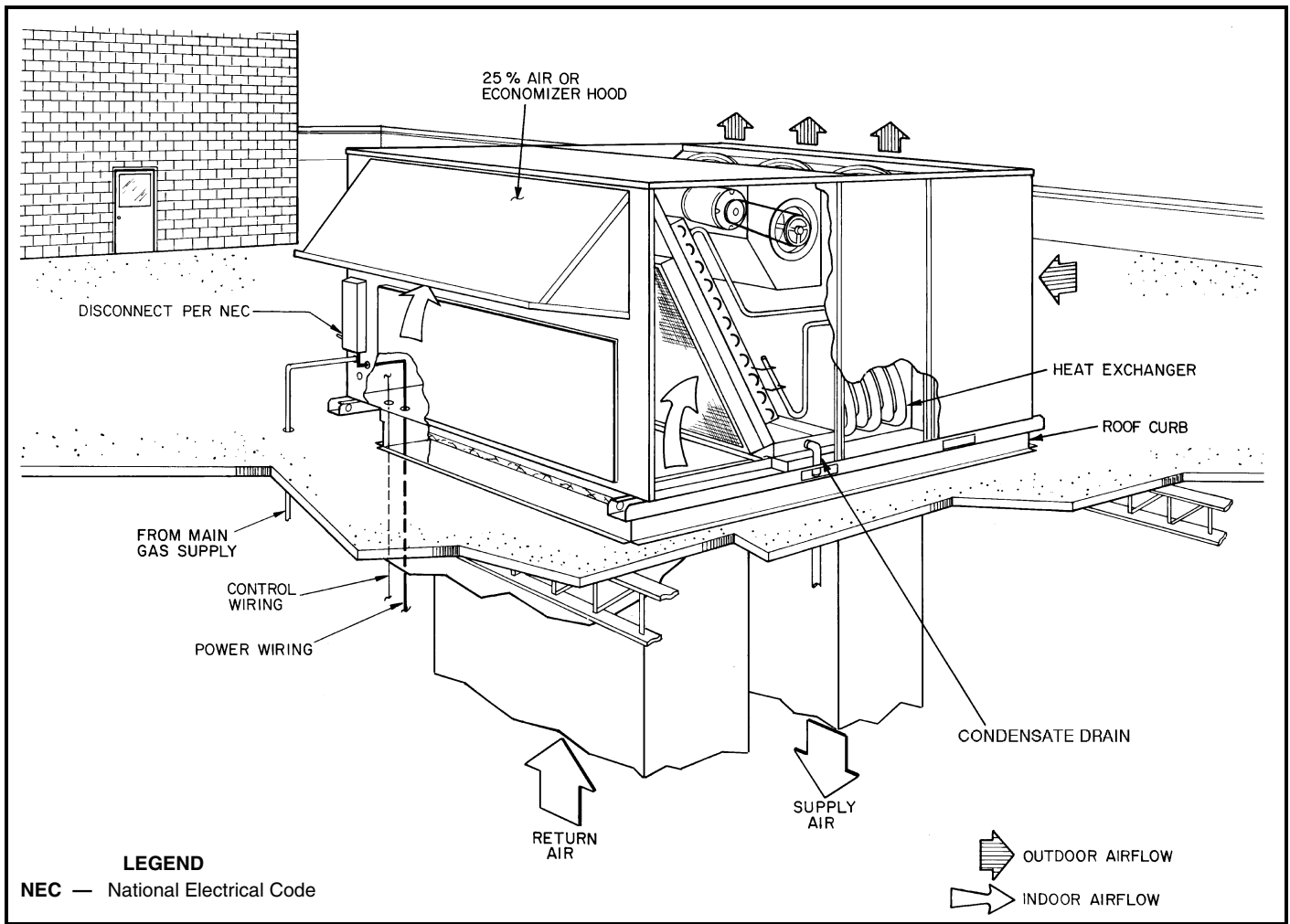


### NOTES:

1. If the Non-Fused Disconnect Service Option is ordered for these units, the Non-Fused Disconnect will be factory-installed.
2. The Disconnect takes the place of TB-1 as shown on the unit wiring diagram label and the component arrangement label.

### Non-Fused Disconnect (Optional) — 580F180-300

# TYPICAL PIPING AND WIRING — 580F180-300



# PHYSICAL DATA — 581A155,180

| UNIT 581A                                                 | 155                                                                                            |     |     | 180                     |     |     |
|-----------------------------------------------------------|------------------------------------------------------------------------------------------------|-----|-----|-------------------------|-----|-----|
|                                                           | 208/230                                                                                        | 460 | 575 | 208/230                 | 460 | 575 |
| <b>NOMINAL CAPACITY (tons)</b>                            | 12                                                                                             |     |     | 15                      |     |     |
| <b>OPERATING WEIGHT (lb)</b>                              |                                                                                                |     |     |                         |     |     |
| Unit                                                      |                                                                                                |     |     |                         |     |     |
| Al/Al*                                                    | 1725                                                                                           |     |     | 1800                    |     |     |
| Al/Cu*                                                    | 1875                                                                                           |     |     | 1950                    |     |     |
| Cu/Cu*                                                    | 2005                                                                                           |     |     | 2080                    |     |     |
| EconoMiSer IV                                             | 90                                                                                             |     |     | 90                      |     |     |
| EconoMiSer2                                               | 85                                                                                             |     |     | 85                      |     |     |
| Roof Curb†                                                | 200                                                                                            |     |     | 200                     |     |     |
| Hot Gas Reheat Dehumidification Package                   | —                                                                                              |     |     | 40                      |     |     |
| <b>COMPRESSOR</b>                                         |                                                                                                |     |     |                         |     |     |
| Quantity...Model (Ckt 1, Ckt 2)                           | 2...ZR72KC                                                                                     |     |     | 1...ZR94KC, 1...ZR72KC  |     |     |
| Number of Refrigerant Circuits                            | 2                                                                                              |     |     | 2                       |     |     |
| Loading (% of full capacity)                              | 0.53,100                                                                                       |     |     | 0.60,100                |     |     |
| Crankcase Heater Watts                                    | 70                                                                                             |     |     | 70                      |     |     |
| Oil (oz) (Ckt 1, Ckt 2)                                   | 60,60                                                                                          |     |     | 85,60                   |     |     |
| <b>REFRIGERANT TYPE</b>                                   | R-22                                                                                           |     |     |                         |     |     |
| Expansion Device                                          | TXV                                                                                            |     |     |                         |     |     |
| Operating Charge (lb)                                     |                                                                                                |     |     |                         |     |     |
| Circuit 1**                                               | 20.7                                                                                           |     |     | 19.5                    |     |     |
| Circuit 2                                                 | 13.4                                                                                           |     |     | 13.45                   |     |     |
| <b>CONDENSER FAN</b>                                      | Propeller Type                                                                                 |     |     |                         |     |     |
| Nominal Cfm                                               | 10,500                                                                                         |     |     | 10,500                  |     |     |
| Quantity...Diameter (in.)                                 | 3...22                                                                                         |     |     | 3...22                  |     |     |
| Motor Hp...Rpm                                            | 1/2...1050                                                                                     |     |     | 1/2...1050              |     |     |
| Watts Input (Total)                                       | 1100                                                                                           |     |     | 1100                    |     |     |
| <b>CONDENSER COIL</b>                                     | Cross-Hatched 3/8-in. Copper Tubes, Aluminum Lanced, Aluminum Pre-Coated, or Copper Plate Fins |     |     |                         |     |     |
| Rows...Fins/in.                                           | 4...15                                                                                         |     |     | 4...15                  |     |     |
| Total Face Area (sq ft)                                   | 21.7                                                                                           |     |     | 21.7                    |     |     |
| <b>EVAPORATOR FAN</b>                                     | Centrifugal Type                                                                               |     |     |                         |     |     |
| Quantity...Size (in.)                                     | 2...12 X 12                                                                                    |     |     | 2...12 x 12             |     |     |
| Type Drive                                                | Belt                                                                                           |     |     | Belt                    |     |     |
| Nominal Cfm                                               | 5200                                                                                           |     |     | 6000                    |     |     |
| Std Motor Hp                                              | 2.9                                                                                            |     |     | 5                       |     |     |
| Opt Motor Hp                                              | 3.7                                                                                            |     |     | N/A                     |     |     |
| Motor Nominal Rpm                                         | 1725                                                                                           |     |     | 1745                    |     |     |
| Std Maximum Continuous Bhp                                | 3.13                                                                                           |     |     | 3.38                    |     |     |
| Opt Maximum Continuous Bhp                                | 4.26                                                                                           |     |     | N/A                     |     |     |
| Motor Frame Size                                          | 56H                                                                                            |     |     | 184T                    |     |     |
| Fan Rpm Range                                             | 895-1147                                                                                       |     |     | 873-1021                |     |     |
| Motor Bearing Type                                        | Ball                                                                                           |     |     | Ball                    |     |     |
| Maximum Allowable Rpm                                     | 1550                                                                                           |     |     | 1550                    |     |     |
| Motor Pulley Pitch Dia.                                   | 3.1/4.1                                                                                        |     |     | 4.9/5.9                 |     |     |
| Nominal Motor Shaft Diameter (in.)                        | 3.7/4.7                                                                                        |     |     | N/A                     |     |     |
| Fan Pulley Pitch Diameter (in.)                           | 7/8                                                                                            |     |     | 1 1/8                   |     |     |
| Nominal Fan Shaft Diameter (in.)                          | 6.0                                                                                            |     |     | 6.0                     |     |     |
| Belt, Quantity...Type... Length (in.)                     | 13/16                                                                                          |     |     | 17/16                   |     |     |
| Pulley Center Line Distance (in.)                         | 1...BX...45                                                                                    |     |     | 1...BX...50             |     |     |
| Speed Change per Full Turn of Movable Pulley Flange (Rpm) | 14.5-16.0                                                                                      |     |     | 13.3-14.8               |     |     |
| Movable Pulley Maximum Full Turns From Closed Position    | 45                                                                                             |     |     | 37                      |     |     |
| Factory Speed                                             | 45                                                                                             |     |     | 44                      |     |     |
| Factory Speed Setting (Rpm)                               | 6                                                                                              |     |     | 4††                     |     |     |
|                                                           | 3.5                                                                                            |     |     | 3.5                     |     |     |
|                                                           | 987                                                                                            |     |     | 965                     |     |     |
|                                                           | 1155                                                                                           |     |     | 1134                    |     |     |
| <b>EVAPORATOR COIL</b>                                    | Cross-Hatched 3/8-in. Copper Tubes, Aluminum Lanced or Copper Plate Fins, Face Split           |     |     |                         |     |     |
| Rows...Fins/in.                                           | 4...15                                                                                         |     |     | 4...15                  |     |     |
| Total Face Area (sq ft)                                   | 17.5                                                                                           |     |     | 17.5                    |     |     |
| <b>FURNACE SECTION</b>                                    |                                                                                                |     |     |                         |     |     |
| Rollout Switch Cutout Temp (F)***                         | 190                                                                                            |     |     | 190                     |     |     |
| Burner Orifice Diameter (in...drill size)                 |                                                                                                |     |     |                         |     |     |
| Natural Gas                                               | 0.1285...30/ 0.136...29                                                                        |     |     | 0.1285...30/ 0.136...29 |     |     |
| Liquid Propane†††                                         | 0.1065...36/0.1065...36                                                                        |     |     | 0.1065...36/0.1065...36 |     |     |
| Thermostat Heat Anticipator Setting                       |                                                                                                |     |     |                         |     |     |
| 208/230/460/575 v                                         |                                                                                                |     |     |                         |     |     |
| Stage 1 (amps)                                            | 0.98                                                                                           |     |     | 0.98                    |     |     |
| Stage 2 (amps)                                            | 0.44                                                                                           |     |     | 0.44                    |     |     |
| Gas Input (Btuh) Stage 1                                  | 172,000/230,000                                                                                |     |     | 206,000/270,000         |     |     |
| Stage 2                                                   | 225,000/300,000                                                                                |     |     | 275,000/360,000         |     |     |
| Efficiency (Steady State) (%)                             | 81                                                                                             |     |     | 81                      |     |     |
| Temperature Rise Range                                    | 15-45/30-60                                                                                    |     |     | 15-45/20-50             |     |     |
| Manifold Pressure (in. wg)                                |                                                                                                |     |     |                         |     |     |
| Natural Gas                                               | 3.3                                                                                            |     |     | 3.3                     |     |     |
| Liquid Propane†††                                         | 3.3                                                                                            |     |     | 3.3                     |     |     |
| Gas Valve Quantity                                        | 1                                                                                              |     |     | 1                       |     |     |
| Gas Valve Pressure Range (Min-Max Allowable) (in. wg)     | 5.5-13.5                                                                                       |     |     | 5.5-13.5                |     |     |
| Field Gas Connection Size (in.-FPT)                       | 235-.487                                                                                       |     |     | 235-.487                |     |     |
|                                                           | 3/4                                                                                            |     |     | 3/4                     |     |     |
| <b>HIGH-PRESSURE SWITCH (psig)</b>                        |                                                                                                |     |     |                         |     |     |
| Cutout                                                    | 426                                                                                            |     |     |                         |     |     |
| Reset (Auto.)                                             | 320                                                                                            |     |     |                         |     |     |
| <b>LOW-PRESSURE SWITCH (psig)</b>                         |                                                                                                |     |     |                         |     |     |
| Cutout                                                    | 27                                                                                             |     |     |                         |     |     |
| Reset (Auto.)                                             | 44                                                                                             |     |     |                         |     |     |
| <b>FREEZE PROTECTION THERMOSTAT (F)</b>                   |                                                                                                |     |     |                         |     |     |
| Opens                                                     | 30 ± 5                                                                                         |     |     |                         |     |     |
| Closes                                                    | 45 ± 5                                                                                         |     |     |                         |     |     |
| <b>OUTDOOR-AIR INLET SCREENS</b>                          | Cleanable                                                                                      |     |     |                         |     |     |
| Quantity...Size (in.)                                     | 2...20 x 25 x 1                                                                                |     |     |                         |     |     |
|                                                           | 1...20 x 20 x 1                                                                                |     |     |                         |     |     |
| <b>RETURN-AIR FILTERS</b>                                 | Throwaway                                                                                      |     |     |                         |     |     |
| Quantity...Size (in.)                                     | 4...20 x 20 x 2                                                                                |     |     |                         |     |     |
|                                                           | 4...16 x 20 x 2                                                                                |     |     |                         |     |     |

## LEGEND

Al — Aluminum  
 Bhp — Brake Horsepower  
 Cu — Copper  
 TXV — Thermostatic Expansion Valve

\*Evaporator coil fin material/condenser coil fin material.

†Weight of 14-in. roof curb.

\*\*Circuit 1 uses the lower portion of condenser coil and lower portion of evaporator coils, and Circuit 2 uses the upper portion of both coils.

††Due to belt and pulley style, moveable pulley cannot be set to 0 to 1/2 turns open.

\*\*\*Rollout switch is manual reset.

†††A Liquid Propane kit is available as an accessory. Kit may be used at elevations as high as 2000 ft.

581A155-300

# PHYSICAL DATA — 581A210-300

| UNIT 581A                                   | 210                                      | 240                | 300                |
|---------------------------------------------|------------------------------------------|--------------------|--------------------|
| NOMINAL CAPACITY (tons)                     | 18                                       | 20                 | 25                 |
| OPERATING WEIGHT (lb)                       |                                          |                    |                    |
| AI/AI                                       | 2224                                     | 2272               | 2526               |
| COMPRESSOR                                  |                                          |                    |                    |
| Quantity                                    | 3                                        | 3                  | 2                  |
| Number of Refrigerant Circuits              | 3                                        | 3                  | 2                  |
| Oil (ounces) Ckt A...Ckt B...Ckt C          | 68...68...90                             | 90...90...90       | 110...110...NA     |
| REFRIGERANT TYPE                            |                                          |                    |                    |
| Expansion Device                            | TXV                                      | TXV                | TXV                |
| Operating Charge (lb)                       |                                          |                    |                    |
| Circuit A                                   | 13.1                                     | 13.8               | 21.8               |
| Circuit B                                   | 12.7                                     | 13.9               | 20.3               |
| Circuit C                                   | 15.2                                     | 15.5               | NA                 |
| CONDENSER FAN                               |                                          |                    |                    |
| Nominal Cfm (Total, all fans)               | 14,000                                   | 14,000             | 21,000             |
| Quantity...Diameter (in.)                   | 4...22                                   | 4...22             | 6...22             |
| Motor Hp...Rpm                              | 1/4...1100                               | 1/4...1100         | 1/4...1100         |
| Watts Input (Total)                         | 1400                                     | 1400               | 2100               |
| CONDENSER COIL                              |                                          |                    |                    |
| Rows...Fins/in.                             | 2...17                                   | 2...17             | 2...17             |
| Total Face Area (sq ft)                     | 57.78                                    | 57.78              | 66.67              |
| EVAPORATOR FAN                              |                                          |                    |                    |
| Quantity...Size                             | 2...15x11                                | 2...15x11          | 2...15x11          |
| Type Drive                                  | Belt                                     | Belt               | Belt               |
| Nominal Cfm                                 | 7000                                     | 8000               | 10,000             |
| Motor Bearing Type                          | Ball                                     | Ball               | Ball               |
| Maximum Allowable Fan Rpm                   | 1400                                     | 1400               | 1400               |
| EVAPORATOR COIL                             |                                          |                    |                    |
| Rows...Fins/in.                             | 3...15                                   | 4...15             | 4...15             |
| Total Face Area (sq ft)                     | 23.33                                    | 23.33              | 27.22              |
| FURNACE SECTION                             |                                          |                    |                    |
| Rollout Switch Cutout Temp (F)              | 225                                      | 225                | 225                |
| Burner Orifice Diameter (in. ...drill size) | 0.136...29                               | 0.136...29         | 0.136...29         |
| Gas                                         | Natural                                  | Natural            | Natural            |
| Thermostat Heat Anticipator Setting         |                                          |                    |                    |
| Stage 1 (amps)                              | 0.98                                     | 0.98               | 0.98               |
| Stage 2 (amps)                              | 0.44                                     | 0.44               | 0.44               |
| Gas Input (Btuh) HIGH HEAT                  | Stage 1<br>317,000<br>Stage 2<br>400,000 | 317,000<br>400,000 | 317,000<br>400,000 |
| Efficiency (Steady State) %                 | 82                                       | 82                 | 82                 |
| Temperature Rise Range                      | 25-55                                    | 25-55              | 25-55              |
| Gas Input (Btuh) MEDIUM HEAT                | Stage 1<br>281,000<br>Stage 2<br>365,000 | 281,000<br>365,000 | 281,000<br>365,000 |
| Efficiency (Steady State) %                 | 81                                       | 81                 | 81                 |
| Temperature Rise Range                      | 25-55                                    | 25-55              | 25-55              |
| Gas Input (Btuh) LOW HEAT                   | Stage 1<br>199,000<br>Stage 2<br>250,000 | 199,000<br>250,000 | 199,000<br>250,000 |
| Efficiency (Steady State) %                 | 82                                       | 82                 | 82                 |
| Temperature Rise Range (F)                  | 15-45                                    | 15-45              | 15-45              |
| Manifold Pressure                           |                                          |                    |                    |
| Natural Gas (in. wg)                        | 3.00                                     | 3.00               | 3.00               |
| Natural Gas (in. wg)                        | 2.95                                     | 2.95               | 2.95               |
| Gas Valve Quantity                          | 1                                        | 1                  | 1                  |
| Gas Valve Pressure Range                    | (in. wg)<br>5.5-13.0                     | 5.5-13.0           | 5.5-13.0           |
| Min-Max Allowable                           | (psig)<br>.235-.469                      | .235-.469          | .235-.469          |
| Field Gas Connection Size (in. FPT)         | 3/4                                      | 3/4                | 3/4                |
| HIGH-PRESSURE SWITCH (psig)                 |                                          |                    |                    |
| Cutout                                      | 426                                      | 426                | 426                |
| Reset (Auto)                                | 320                                      | 320                | 320                |
| OUTDOOR-AIR INLET SCREENS                   |                                          |                    |                    |
| Quantity...Size (in.)                       | 3...20x25                                | 3...20x25          | 3...20x25          |
| RETURN-AIR FILTERS                          |                                          |                    |                    |
| Quantity...Size (in.)                       | 9...16x25                                | 9...16x25          | 9...18x24          |

## LEGEND

TXV — Thermostatic Expansion Valve

# PHYSICAL DATA (cont)

## EVAPORATOR FAN DATA — 581A210-300 VERTICAL SUPPLY/RETURN UNITS

| 581A                                          | 210               |               | 240               |              | 300               |              |
|-----------------------------------------------|-------------------|---------------|-------------------|--------------|-------------------|--------------|
|                                               | 203/230 and 460 V | 575 V         | 203/230 and 460 V | 575 V        | 203/230 and 460 V | 575 V        |
| <b>LOW RANGE</b>                              |                   |               |                   |              |                   |              |
| Motor Hp                                      | 3.7               | 3             | 5                 | 5            | 5                 | 5            |
| Motor Nominal RPM                             | 1725              | 1725          | 1745              | 1745         | 1745              | 1745         |
| Maximum Continuous Bhp                        | 4.25              | 3.45          | 5.75              | 5.75         | 5.75              | 5.75         |
| Maximum Continuous Watts                      | 3698              | 3149          | 4900              | 4900         | 4900              | 4900         |
| Motor Frame Size                              | 56HZ              | 56HZ          | S184T             | 184T         | S184T             | 184T         |
| Motor Shaft Diameter (in.)                    | 7/8               | 7/8           | 1 1/8             | 1 1/8        | 1 1/8             | 1 1/8        |
| Fan Rpm Range                                 | 647-886           | 810-1072      | 949-1206          | 949-1206     | 805-1007          | 805-1007     |
| Motor Pulley Min. Pitch Diameter (in.)        | 2.7               | 3.1           | 3.7               | 3.7          | 4.8               | 4.8          |
| Motor Pulley Max. Pitch Diameter (in.)        | 3.7               | 4.1           | 4.7               | 4.7          | 6.0               | 6.0          |
| Blower Pulley Pitch Diameter (in.)            | 7.2               | 6.6           | 6.8               | 6.8          | 10.4              | 10.4         |
| Blower Pulley Shaft Diameter (in.)            | 1.1875            | 1.1875        | 1.1875            | 1.1875       | 1.1875            | 1.1875       |
| Blower Pulley Type                            | Fixed             | Fixed         | Fixed             | Fixed        | Fixed             | Fixed        |
| Pulley Center Line Distance (in.)             | 11.293-13.544     | 11.286-14.475 | 9.81-13.055       | 9.81-13.055  | 9.81-13.055       | 9.81-13.055  |
| Belt, Quantity...Type...Length (in.)          | 1...BX...38       | 1...BX...38   | 1...BX...38       | 1...BX...38  | 1...BX...45       | 1...BX...45  |
| Speed Change Per Turn — Moveable Pulley (rpm) | 48                | 52            | 51                | 51           | 40                | 40           |
| Moveable Pulley Maximum Full Turns            | 6                 | 6             | 6                 | 6            | 6                 | 6            |
| Factory Speed Setting (rpm)                   | 767               | 941           | 1078              | 1078         | 906               | 906          |
| <b>HIGH RANGE</b>                             |                   |               |                   |              |                   |              |
| Motor Hp                                      | 5                 | 5             | 7.5               | 7.5          | 7.5               | 7.5          |
| Motor Nominal Rpm                             | 1745              | 1745          | 1745              | 1745         | 1745              | 1745         |
| Maximum Continuous Bhp                        | 5.75              | 5.75          | 8.63              | 8.63         | 8.63              | 8.63         |
| Maximum Continuous Watts                      | 4900              | 4900          | 7267              | 7267         | 7267              | 7267         |
| Motor Frame Size                              | S184T             | 184T          | S213T             | S213T        | S213T             | S213T        |
| Motor Shaft Diameter (in.)                    | 1 1/8             | 1 1/8         | 1 3/8             | 1 3/8        | 1 3/8             | 1 3/8        |
| Fan Rpm Range                                 | 897-1139          | 873-1108      | 941-1176          | 941-1176     | 941-1176          | 941-1176     |
| Motor Pulley Min. Pitch Diameter (in.)        | 3.7               | 3.7           | 4.8               | 4.8          | 4.8               | 4.8          |
| Motor Pulley Max. Pitch Diameter (in.)        | 4.7               | 4.7           | 6.0               | 6.0          | 6.0               | 6.0          |
| Blower Pulley Pitch Diameter (in.)            | 7.2               | 7.4           | 8.9               | 8.9          | 8.9               | 8.9          |
| Blower Pulley Shaft Diameter (in.)            | 1.1875            | 1.1875        | 1.1875            | 1.1875       | 1.1875            | 1.1875       |
| Blower Pulley Type                            | Fixed             | Fixed         | Fixed             | Fixed        | Fixed             | Fixed        |
| Pulley Center Line Distance (in.)             | 9.81-13.055       | 9.81-13.055   | 9.025-12.179      | 9.025-12.179 | 9.025-12.179      | 9.025-12.179 |
| Belt, Quantity...Type...Length (in.)          | 1...BX...38       | 1...BX...38   | 1...BX...42       | 1...BX...42  | 1...BX...42       | 1...BX...42  |
| Speed Change Per Turn — Moveable Pulley (rpm) | 48                | 47            | 47                | 47           | 47                | 47           |
| Moveable Pulley Maximum Full Turns            | 6                 | 6             | 6                 | 6            | 6                 | 6            |
| Factory Speed Setting (rpm)                   | 1018              | 991           | 1059              | 1059         | 1059              | 1059         |

### LEGEND

Bhp — Brake Horsepower

## EVAPORATOR FAN DATA — 581A210-300 HORIZONTAL SUPPLY/RETURN UNITS

| 581A                                          | 210               |               | 240               |             | 300               |              |
|-----------------------------------------------|-------------------|---------------|-------------------|-------------|-------------------|--------------|
|                                               | 203/230 and 460 V | 575 V         | 203/230 and 460 V | 575 V       | 203/230 and 460 V | 575 V        |
| <b>LOW RANGE</b>                              |                   |               |                   |             |                   |              |
| Motor Hp                                      | 3.7               | 3             | 3.7               | 5           | 5                 | 5            |
| Motor Nominal Rpm                             | 1725              | 1725          | 1725              | 1745        | 1745              | 1745         |
| Maximum Continuous Bhp                        | 4.25              | 3.45          | 4.25              | 5.75        | 5.75              | 5.75         |
| Maximum Continuous Watts                      | 3698              | 3149          | 3698              | 4900        | 4900              | 4900         |
| Motor Frame Size                              | 56HZ              | 56HZ          | 56HZ              | 184T        | S184T             | 184T         |
| Motor Shaft Diameter (in.)                    | 7/8               | 7/8           | 7/8               | 1 1/8       | 1 1/8             | 1 1/8        |
| Fan Rpm Range                                 | 896-1227          | 863-1141      | 896-1227          | 873-1108    | 805-1007          | 805-1007     |
| Motor Pulley Min. Pitch Diameter (in.)        | 2.7               | 3.1           | 2.7               | 3.7         | 4.8               | 4.8          |
| Motor Pulley Max. Pitch Diameter (in.)        | 3.7               | 4.1           | 3.7               | 4.7         | 6.0               | 6.0          |
| Blower Pulley Pitch Diameter (in.)            | 5.2               | 6.2           | 5.2               | 7.4         | 10.4              | 10.4         |
| Blower Pulley Shaft Diameter (in.)            | 1.1875            | 1.1875        | 1.1875            | 1.1875      | 1.1875            | 1.1875       |
| Blower Pulley Type                            | Fixed             | Fixed         | Fixed             | Fixed       | Fixed             | Fixed        |
| Pulley Center Line Distance (in.)             | 11.293-13.544     | 11.286-14.475 | 11.293-13.544     | 9.81-13.055 | 9.81-13.055       | 9.81-13.055  |
| Belt, Quantity...Type...Length (in.)          | 1...BX...35       | 1...BX...38   | 1...BX...35       | 1...BX...38 | 1...BX...45       | 1...BX...45  |
| Speed Change Per Turn — Moveable Pulley (rpm) | 66                | 56            | 66                | 47          | 40                | 40           |
| Moveable Pulley Maximum Full Turns            | 6                 | 6             | 6                 | 6           | 6                 | 6            |
| Factory Speed Setting (rpm)                   | 1062              | 1002          | 1062              | 991         | 906               | 906          |
| <b>HIGH RANGE</b>                             |                   |               |                   |             |                   |              |
| Motor Hp                                      | 5                 | 5             | 5                 | 5           | 7.5               | 7.5          |
| Motor Nominal Rpm                             | 1745              | 1745          | 1745              | 1745        | 1745              | 1745         |
| Maximum Continuous Bhp                        | 5.75              | 5.75          | 5.75              | 5.75        | 8.63              | 8.63         |
| Maximum Continuous Watts                      | 4900              | 4900          | 4900              | 4900        | 7267              | 7267         |
| Motor Frame Size                              | S184T             | 184T          | S184T             | 184T        | S213T             | S213T        |
| Motor Shaft Diameter (in.)                    | 1 1/8             | 1 1/8         | 1 1/8             | 1 1/8       | 1 3/8             | 1 3/8        |
| Fan Rpm Range                                 | 1113-1414         | 1042-1285     | 1113-1414         | 1113-1414   | 941-1176          | 941-1176     |
| Motor Pulley Min. Pitch Diameter (in.)        | 3.7               | 4.3           | 3.7               | 3.7         | 4.8               | 4.8          |
| Motor Pulley Max. Pitch Diameter (in.)        | 4.7               | 5.3           | 4.7               | 4.7         | 6.0               | 6.0          |
| Blower Pulley Pitch Diameter (in.)            | 5.8               | 7.2           | 5.8               | 5.8         | 8.9               | 8.9          |
| Blower Pulley Shaft Diameter (in.)            | 1.1875            | 1.1875        | 1.1875            | 1.1875      | 1.1875            | 1.1875       |
| Blower Pulley Type                            | Fixed             | Fixed         | Fixed             | Fixed       | Fixed             | Fixed        |
| Pulley Center Line Distance (in.)             | 9.81-13.055       | 9.81-13.055   | 9.81-13.055       | 9.81-13.055 | 9.025-12.179      | 9.025-12.179 |
| Belt, Quantity...Type...Length (in.)          | 1...BX...35       | 1...BX...38   | 1...BX...35       | 1...BX...35 | 1...BX...42       | 1...BX...42  |
| Speed Change Per Turn — Moveable Pulley (rpm) | 60                | 48            | 60                | 60          | 47                | 47           |
| Moveable Pulley Maximum Full Turns            | 6                 | 6             | 6                 | 6           | 6                 | 6            |
| Factory Speed Setting (rpm)                   | 1264              | 1164          | 1264              | 1264        | 1059              | 1059         |

### LEGEND

Bhp — Brake Horsepower

581A155-300



**PHYSICAL DATA (cont)**  
**OPERATING AND RIGGING WEIGHTS — 581A155,180**

| UNIT        | BASE UNIT OPERATING WEIGHTS* |     |      |     |
|-------------|------------------------------|-----|------|-----|
|             | 155                          |     | 180  |     |
|             | lb                           | kg  | lb   | kg  |
| <b>581A</b> | 1725                         | 782 | 1800 | 816 |

\*Base unit weight does not include electric heaters, copper coils, economizer, power exhaust, barometric relief or crating. See Options and Accessories table below for more information.

**NOTE:** For 155 and 180 unit sizes add 75 lb (34 kg) for domestic crating. For export crating add 500 lb (227 kg).

**OPTIONS AND ACCESSORIES — 581A155,180 (Weight Adders)**

| OPTION/<br>ACCESSORY                           | OPTION/ACCESSORY WEIGHTS |     |         |     |
|------------------------------------------------|--------------------------|-----|---------|-----|
|                                                | 48HJ015                  |     | 48HJ017 |     |
|                                                | lb                       | kg  | lb      | kg  |
| Barometric Relief Damper                       | 50                       | 23  | 50      | 23  |
| Power Exhaust                                  | 85                       | 39  | 85      | 39  |
| EconoMiSer IV                                  | 90                       | 41  | 90      | 41  |
| EconoMiSer2                                    | 85                       | 39  | 85      | 39  |
| Cu Condenser Coil                              | 150                      | 68  | 150     | 68  |
| Cu Condenser and Evaporator Coils              | 280                      | 127 | 280     | 127 |
| Roof Curb (14-in. curb)                        | 200                      | 91  | 200     | 91  |
| Horizontal Adapter Roof Curb (Preassembled)    | 250                      | 113 | 250     | 113 |
| Horizontal Adapter Roof Curb (Field-assembled) | 343                      | 156 | 343     | 156 |
| Hail Guard                                     | 60                       | 27  | 60      | 27  |
| Hot Gas Reheat Dehumidification Package        | —                        | —   | 40      | 18  |

**LEGEND**

Cu — Copper

**OPTIONS AND ACCESSORIES — 581A210-300 (Weight Adders)**

| OPTION/<br>ACCESSORY              | OPTION/ACCESSORY WEIGHTS |     |         |     |         |     |
|-----------------------------------|--------------------------|-----|---------|-----|---------|-----|
|                                   | 581A210                  |     | 581A240 |     | 581A300 |     |
|                                   | lb                       | kg  | lb      | kg  | lb      | kg  |
| Barometric Relief Damper          | 50                       | 23  | 50      | 23  | 50      | 23  |
| Power Exhaust                     | 125                      | 57  | 125     | 57  | 125     | 57  |
| Economizer                        | 170                      | 77  | 170     | 77  | 195     | 88  |
| Cu Condenser Coil                 | 162                      | 73  | 162     | 73  | 202     | 92  |
| Cu Condenser and Evaporator Coils | 316                      | 143 | 290     | 132 | 365     | 166 |
| 5-Cell Gas Heat Assembly          | 85                       | 39  | 85      | 39  | 85      | 39  |
| 8-Cell Gas Heat Assembly          | 113                      | 51  | 113     | 51  | 113     | 51  |
| Roof Curb (14 inch)               | 210                      | 95  | 210     | 95  | 210     | 95  |
| Optional Indoor Motor             | 28                       | 13  | 28      | 13  | 20      | 9   |
| Two-Position Damper               | 45                       | 20  | 45      | 20  | 45      | 20  |
| Hail Guard                        | 85                       | 39  | 85      | 39  | 100     | 45  |
| Horizontal Airflow                | 90                       | 41  | 90      | 41  | 90      | 41  |
| Hot Gas Reheat                    | 70                       | 32  | 70      | 32  | 85      | 39  |
| CO <sub>2</sub> Sensor            | 5                        | 2   | 5       | 2   | 5       | 2   |
| Return Smoke Detector             | 5                        | 2   | 5       | 2   | 5       | 2   |
| Supply Smoke Detector             | 5                        | 2   | 5       | 2   | 5       | 2   |
| Non-Fused Disconnect              | 15                       | 7   | 15      | 7   | 15      | 7   |
| Non-Powered Convenience Outlet    | 20                       | 9   | 20      | 9   | 20      | 9   |
| Enthalpy Sensor                   | 2                        | 1   | 2       | 1   | 2       | 1   |
| Differential Enthalpy Sensor      | 3                        | 1   | 3       | 1   | 3       | 1   |
| Drip Edge                         | 5                        | 2   | 5       | 2   | 5       | 2   |
| Manual Damper                     | 25                       | 11  | 25      | 11  | 25      | 11  |

**LEGEND**

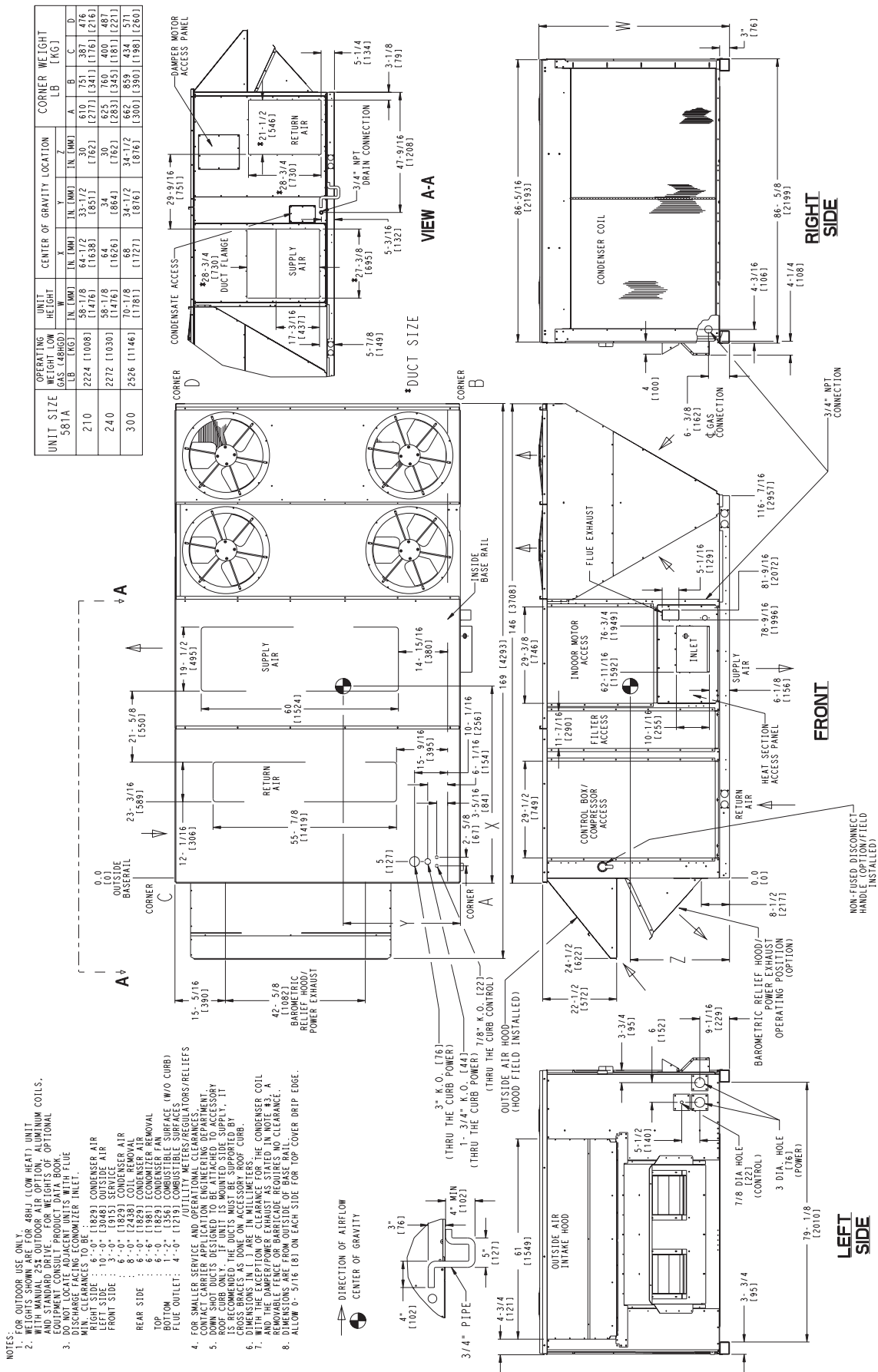
Cu — Copper  
HACR — Heating, Air Conditioning and Refrigeration

## 581A155-300

[illegible]

## BASE UNIT DIMENSIONS — 581A210-300

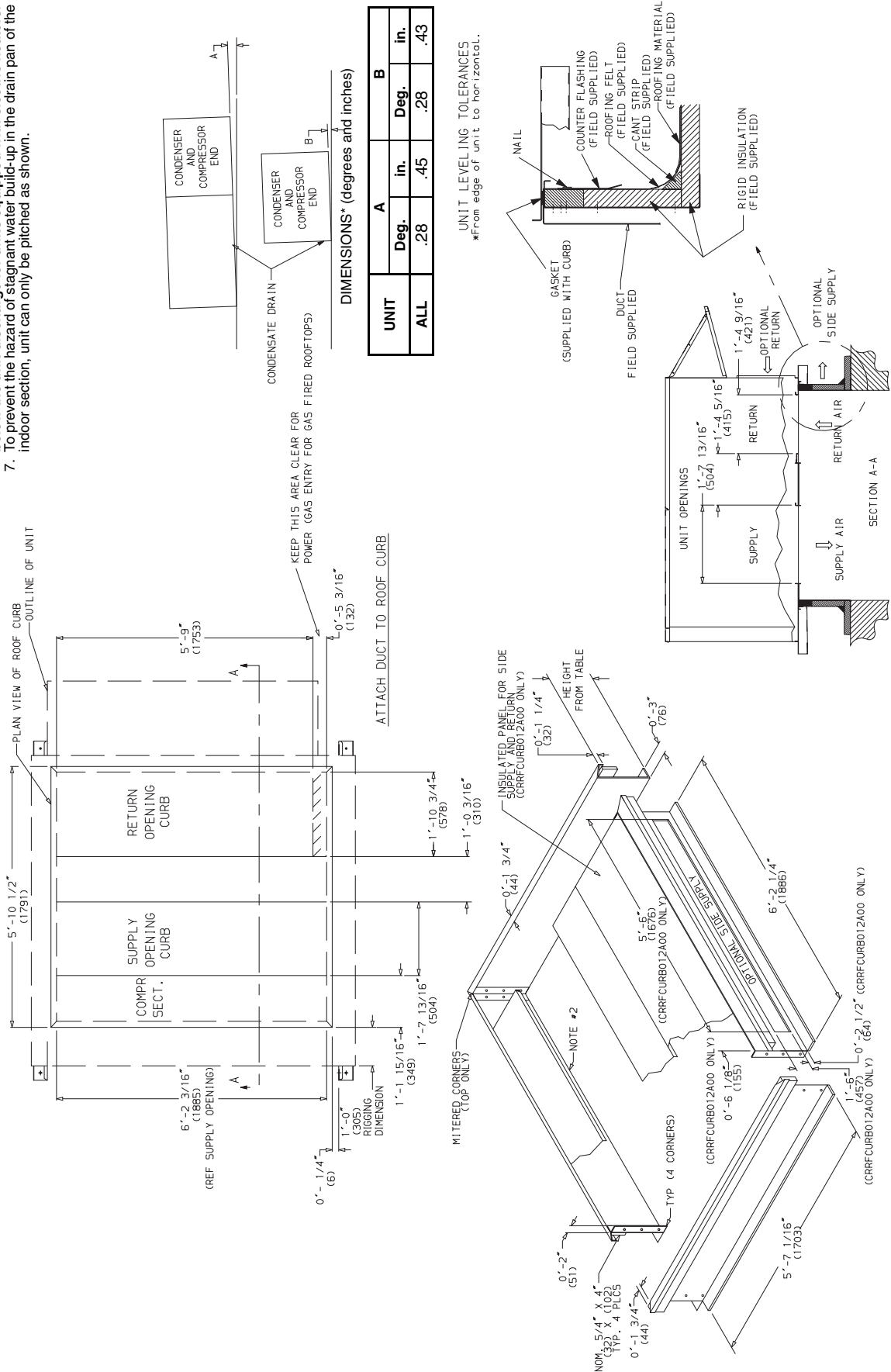
| UNIT SIZE | OPERATING WEIGHT LOW<br>(LB. 448000) | UNIT HEIGHT | CENTER OF GRAVITY |        | LOCATION |    | CORNER WEIGHT<br>(LBS) |     |     |     |
|-----------|--------------------------------------|-------------|-------------------|--------|----------|----|------------------------|-----|-----|-----|
|           |                                      |             | W                 | H      | TH       | TL | A                      | B   | C   | D   |
| 581A      | 2224 (10038)                         | 58-7/8      | 64-1/2            | 33-1/2 | TH       | TL | 610                    | 551 | 387 | 416 |
| 210       | 2224 (10038)                         | 58-7/8      | 64-1/2            | 34     | TH       | TL | 627                    | 560 | 400 | 487 |
| 240       | 2224 (10038)                         | 58-7/8      | 64-1/2            | 34     | TH       | TL | 627                    | 560 | 400 | 487 |
| 210       | 2224 (10038)                         | 58-7/8      | 64-1/2            | 34-1/2 | TH       | TL | 630                    | 569 | 404 | 491 |
| 240       | 2224 (10038)                         | 58-7/8      | 64-1/2            | 34-1/2 | TH       | TL | 630                    | 569 | 404 | 491 |
| 210       | 2526 (1146)                          | 70-1/8      | 68-1/2            | 38-1/2 | TH       | TL | 630                    | 569 | 434 | 557 |
| 300       | 2526 (1146)                          | 70-1/8      | 68-1/2            | 38-1/2 | TH       | TL | 630                    | 569 | 434 | 557 |



| PKG. NO. REF.  | CURB HEIGHT  | DESCRIPTION                                         |
|----------------|--------------|-----------------------------------------------------|
| CRRFCURB010A00 | 1' -2" (305) | Standard Curb 14" High                              |
| CRRFCURB011A00 | 2' -0" (610) | Standard Curb for Units Requiring High Installation |
| CRRFCURB012A00 | 2' -0" (610) | Side Supply and Return Curb for High Installation   |

**NOTES:**

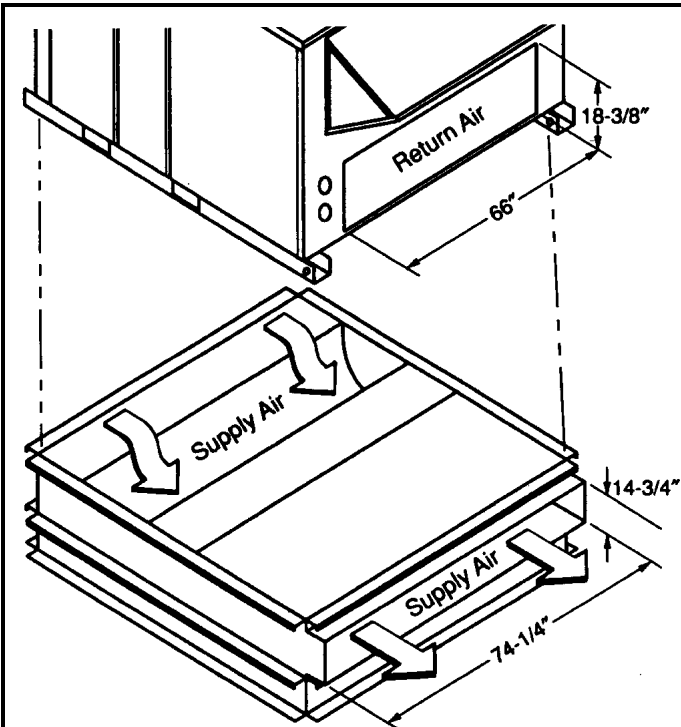
1. Roof curb accessory is shipped disassembled.
2. Insulated panels: 1" thick neoprene coated 1½" lb density.
3. Dimensions in ( ) are in millimeters.
4.  Direction of airflow.
5. Roof curb: 16 ga. (VA03-56) stl
6. **A 90 degree elbow must be installed on the supply ductwork below the unit discharge for units equipped with electric heaters.**
7. To prevent the hazard of stagnant water build-up in the drain pan of the indoor section, unit can only be pitched as shown.



UNIT LEVELING TOLERANCES  
\*From edge of unit to horizontal.

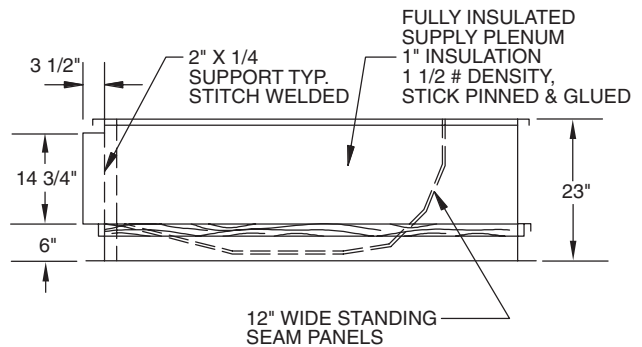
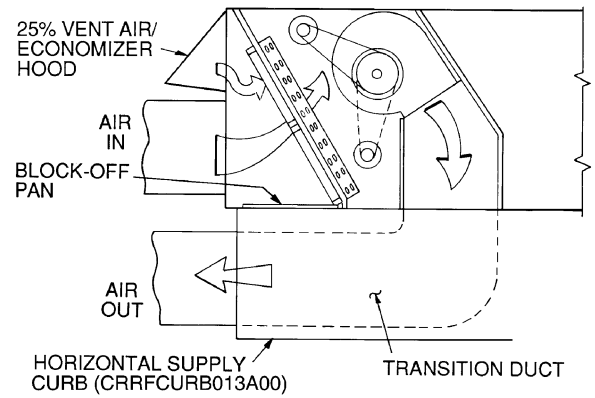
| UNIT | A    |     | B    |     |
|------|------|-----|------|-----|
|      | Deg. | in. | Deg. | in. |
| ALL  | .28  | .45 | .28  | .43 |

## ACCESSORY DIMENSIONS (cont)



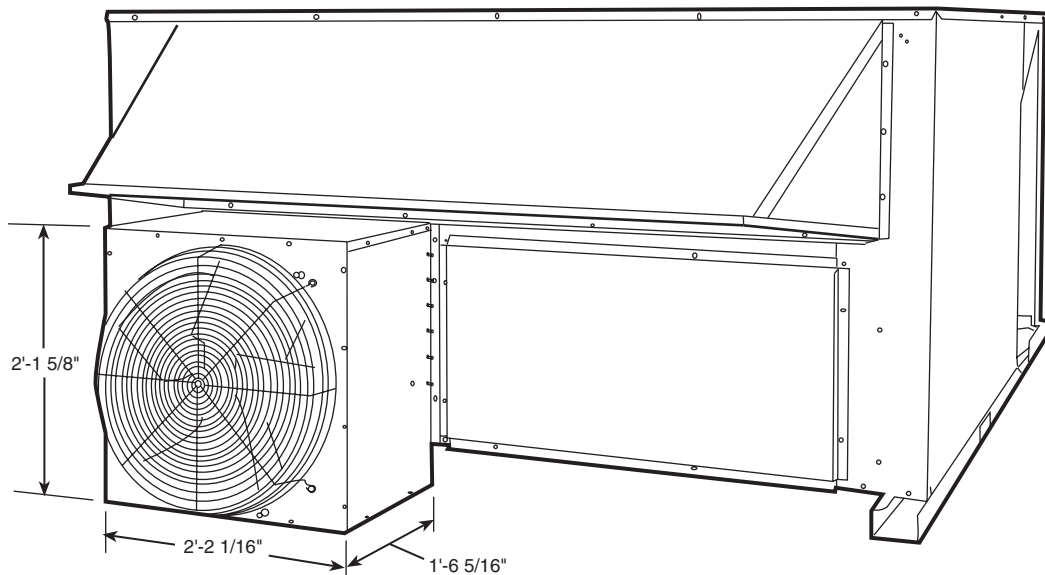
**NOTE:** CRRFCURB013A00 is a fully factory preassembled horizontal adapter and includes an insulated transition duct. The pressure drop through the adapter curb is negligible.

For horizontal return applications: The power exhaust and barometric relief dampers must be installed in the return air duct.



| ACCESSORY PACKAGE NO. | CURB HEIGHT   | DESCRIPTION                                 |
|-----------------------|---------------|---------------------------------------------|
| CRRFCURB013A00        | 1' -11" (584) | Pre-Assembled, Horizontal Adapter Roof Curb |

### Horizontal Supply/Return Adapter Installation (581A155,180)

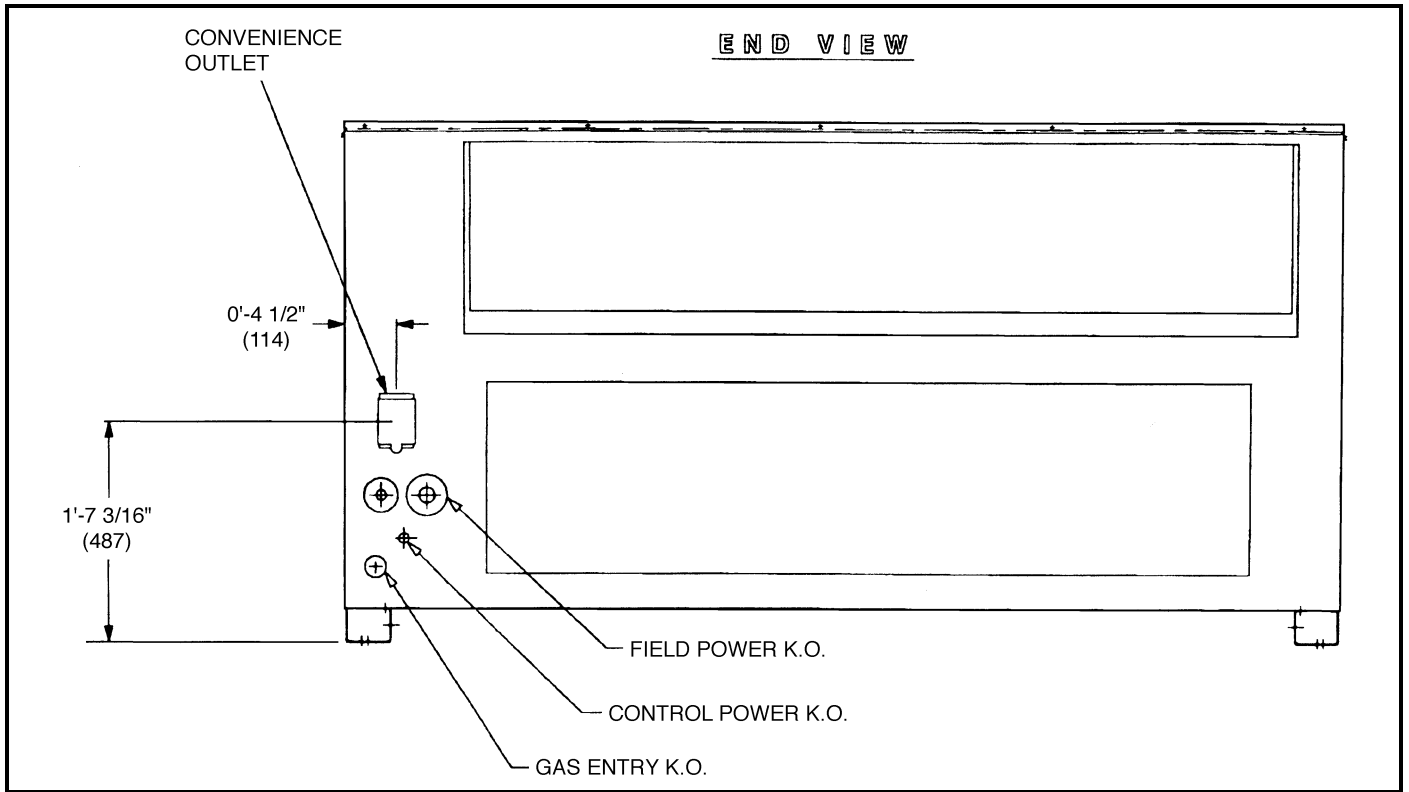


For horizontal return applications: The power exhaust relief must be installed in the return air duct.

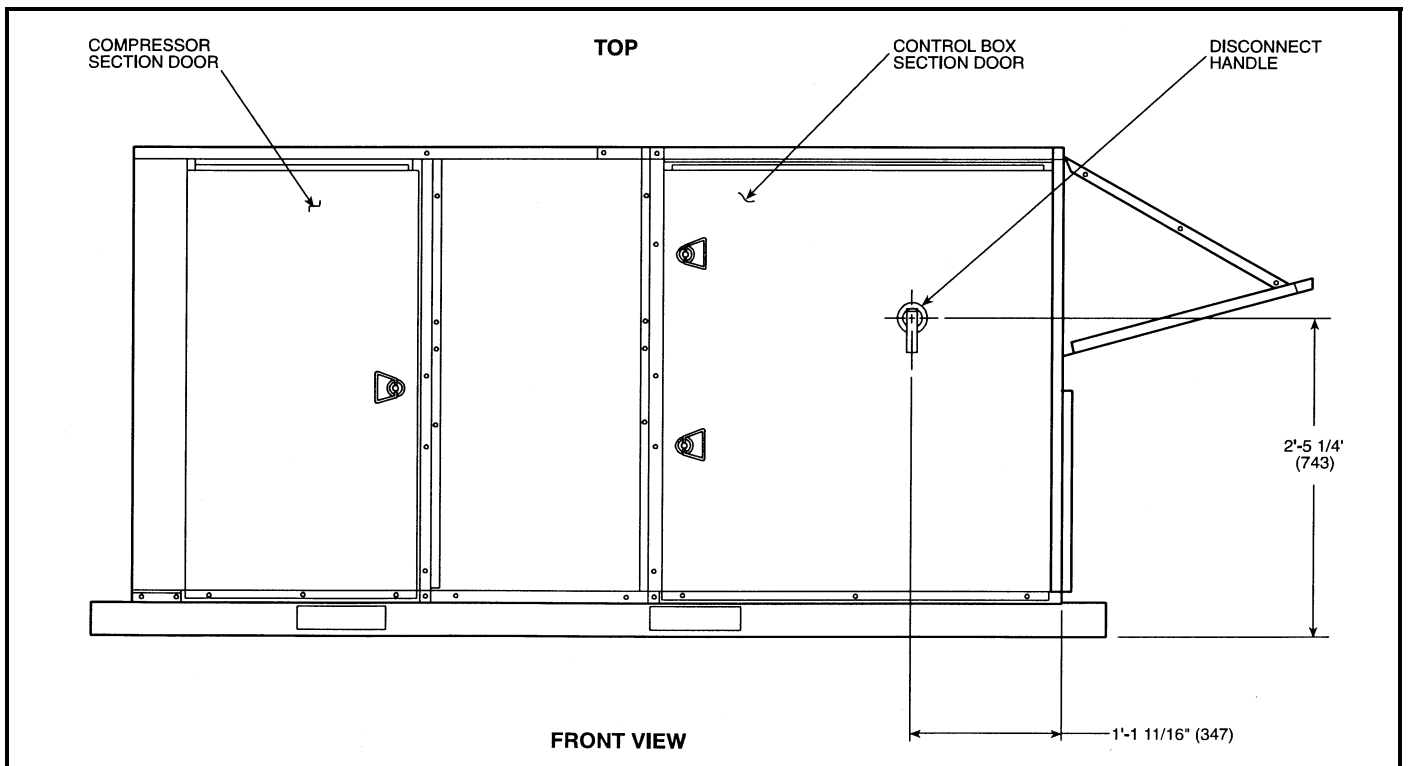
### Barometric Relief/Power Exhaust

581A155-300

## ACCESSORY DIMENSIONS (cont)



**Factory-Installed Convenience Outlet**



**Factory-Installed Non-Fused Disconnect**

581A155-300

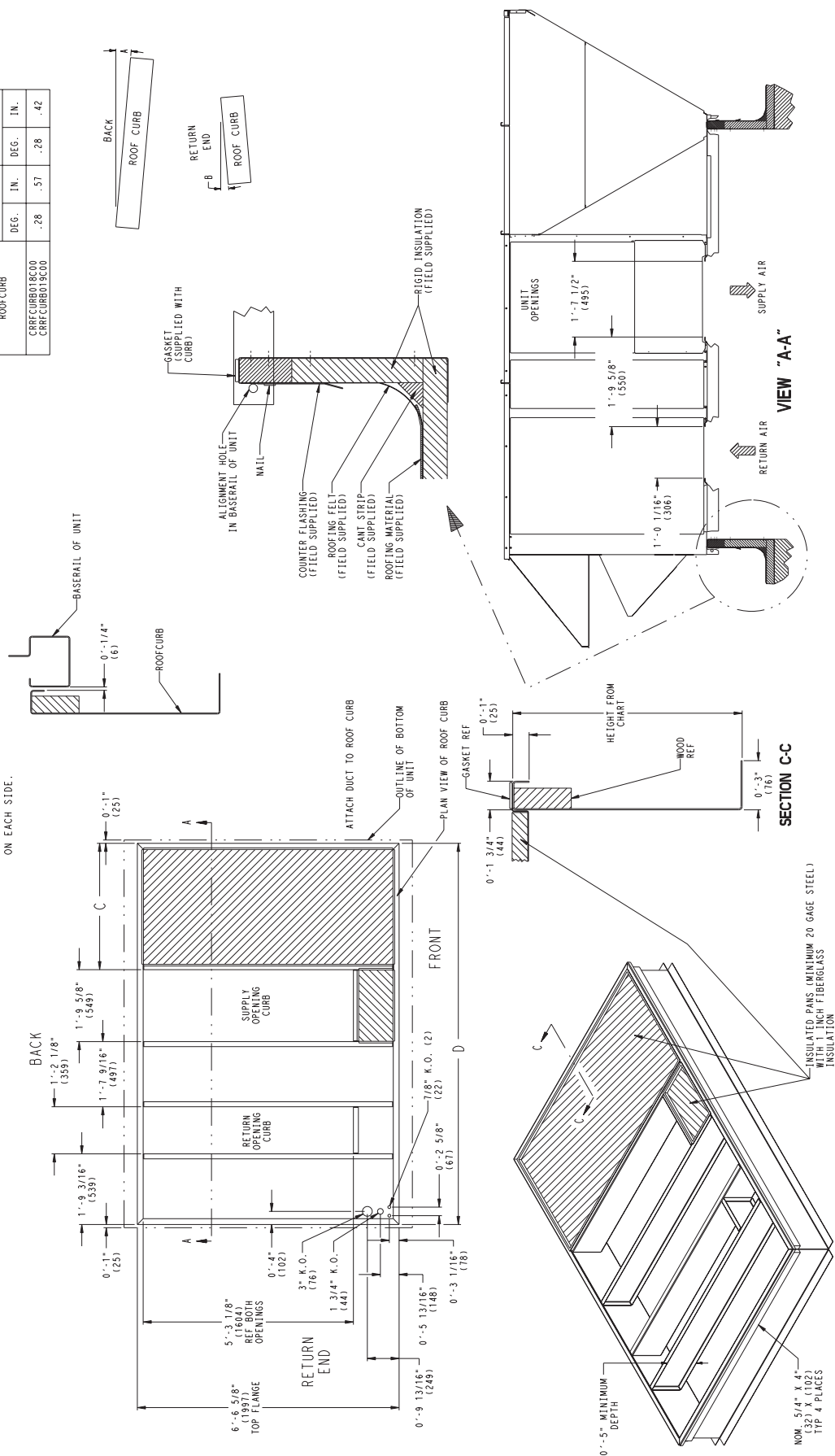
| ROOF/CURB ACCESSORY | CURB HEIGHT    | DESCRIPTION           | C                    | D                    |
|---------------------|----------------|-----------------------|----------------------|----------------------|
| CRRFCURB018000      | 1'-2"<br>[356] | ROOF CURB<br>14" HIGH | 3'-1 15/16"<br>[963] | 9'-6 7/16"<br>[2206] |
| CRRFCURB019000      | 2'-0"<br>[610] | ROOF CURB<br>24" HIGH | 3'-1 15/16"<br>[963] | 9'-6 7/16"<br>[2206] |

NOTES:

1. ROOFCURB ACCESSORY IS SHIPPED DISASSEMBLED.
2. DIMENSIONS IN ( ) ARE IN MILLIMETERS.
3.  DIRECTION OF AIRFLOW.
4. ROOF CURB: 16 GA. (AW03-56) STEEL.
5. TO PREVENT THE HAZARD OF STAGNANT WATER BUILD-UP IN THE UNIT DO NOT EXCEED CURB LEVELING TOLERANCES.
6. CLEARANCE BETWEEN UNIT BASE RAIL AND CURB FLANGE IS 1/4-IN. (6 MM) ON EACH SIDE.

MAX CURB LEVELING TOLERANCES:

| ROOFCURB       | A    |     | B    |     |
|----------------|------|-----|------|-----|
|                | DEG. | IN. | DEG. | IN. |
| CRRFCURB018C00 |      |     |      |     |
| CRRFCURB019C00 | .28  | .57 | .28  | .42 |



## SELECTION PROCEDURE

### I DETERMINE COOLING AND HEATING REQUIREMENTS AT DESIGN CONDITIONS.

Given:

Required Gross Cooling  
Capacity (TC) ..... 168,000 Btuh  
Gross Sensible Heat  
Capacity (SHC) ..... 121,000 Btuh  
Required Heating Capacity ..... 190,000 Btuh  
Condenser Entering Air  
Temperature ..... 95 F Summer  
Indoor Air Temperature ..... 80 F edb, 67 F ewb  
Evaporator Air Quantity ..... 6,000 cfm  
External Static Pressure ..... 1.40 in. wg  
Electrical Characteristics (V-Ph-Hz) ..... 230-3-60

### II SELECT UNIT BASED ON REQUIRED COOLING CAPACITY.

Enter Cooling Capacities table for 581A180 at condenser entering temperature of 95 F, evaporator air quantity of 6,000 cfm, and indoor air temperature of 67 F. The 581A180 unit will provide a total cooling capacity of 190,000 Btuh and a SHC of 136,000 Btuh. For evaporator air temperatures other than 80 F, calculate SHC correction using formula in notes under cooling capacity tables.

Unit meets design conditions for TC and SHC.

**NOTE:** Unit ratings are gross capacities and do not include the effect of indoor fan motor heat. To calculate net capacities, see Step V.

### III SELECT HEATING CAPACITY OF UNIT TO PROVIDE DESIGN CONDITION REQUIREMENT.

In Heating Capacities and Efficiencies table, note that 581A180275 unit will provide 223,000 Btuh with an input of 275,000 Btuh.

### IV DETERMINE FAN SPEED AND POWER REQUIREMENTS AT DESIGN CONDITIONS.

Before entering the Fan Performance tables, calculate the total static pressure required based on unit components. Tabulated fan performance includes filters and wet evaporator coil. Refer to Accessory/FIOP Static Pressure table for added pressure drops.

Calculate pressure drop:

Design External Static Pressure 1.40

EconoMi\$er IV 0.07

1.47 in. wg (ESP)

Enter Fan Performance tables for 581A180 (low heat units) at 6,000 cfm and 1.47 in. wg. The rpm is 1228 and the Bhp is 4.73. The factory-installed 5 hp motor and alternate high-static drive are sufficient for this operation.

### V DETERMINE NET COOLING CAPACITIES.

Cooling capacities are gross capacities and do not include indoor (evaporator) fan motor (IFM) heat. To determine input power to the motor, enter the Fan Performance tables for 581A180 (low heat units) at 6,000 cfm and 1.47 in. wg. Input watts to the motor are 4035.

Determine net cooling capacity and net sensible cooling capacity using the following formulas:

$$\begin{aligned}\text{IFM Heat} &= \text{Input Watts} \times 3.412 \text{ Btuh/Watt} \\ &= 4035 \times 3.412 \\ &= 13,767 \text{ Btuh}\end{aligned}$$

$$\begin{aligned}\text{Net Capacity} &= \text{Gross Capacity} - \text{IFM Heat} \\ &= 190,000 - 13,767 \\ &= 176,233 \text{ Btuh}\end{aligned}$$

$$\begin{aligned}\text{Net Sensible Cap.} &= \text{Gross Sensible Cap.} - \text{IFM Heat} \\ &= 136,000 - 13,767 \\ &= 122,233 \text{ Btuh}\end{aligned}$$

The calculations show that a 581A180275 unit is the correct selection for the given conditions.

### VI SELECT THE UNIT THAT CORRESPONDS TO POWER SOURCE AVAILABLE.

The electrical data table shows that the 230-3-60 unit is available.



# **PERFORMANCE DATA** **COOLING CAPACITIES — STANDARD UNITS**

| 581A155 (12 Tons)           |                 |                    |      |      |      |      |      |      |           |      |      |      |      |      |      |           |      |      |      |      |      |      |
|-----------------------------|-----------------|--------------------|------|------|------|------|------|------|-----------|------|------|------|------|------|------|-----------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |                 | Evap Air — Cfm/BF  |      |      |      |      |      |      |           |      |      |      |      |      |      |           |      |      |      |      |      |      |
|                             |                 | 3600/0.01          |      |      |      |      |      |      | 4375/0.01 |      |      |      |      |      |      | 5000/0.01 |      |      |      |      |      |      |
|                             |                 | Evap Air — Ewb (F) |      |      |      |      |      |      |           |      |      |      |      |      |      |           |      |      |      |      |      |      |
|                             |                 | 54                 | 58   | 62   | 67   | 72   | 76   | 80   | 54        | 58   | 62   | 67   | 72   | 76   | 80   | 54        | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC<br>SHC<br>kW | 152                | 156  | 161  | 174  | 189  | 201  | 213  | 161       | 164  | 167  | 180  | 195  | 207  | 218  | 169       | 171  | 172  | 184  | 199  | 211  | 222  |
|                             |                 | 152                | 144  | 135  | 114  | 92.9 | 75.4 | 57.5 | 161       | 156  | 150  | 125  | 99.6 | 78.7 | 57.5 | 169       | 166  | 162  | 134  | 105  | 81.3 | 57.4 |
|                             |                 | 7.56               | 7.65 | 7.74 | 8.01 | 8.33 | 8.6  | 8.86 | 7.76      | 7.82 | 7.88 | 8.14 | 8.46 | 8.72 | 8.97 | 7.92      | 7.95 | 7.98 | 8.24 | 8.55 | 8.82 | 9.06 |
| 70                          | TC<br>SHC<br>kW | 148                | 152  | 156  | 169  | 183  | 195  | 206  | 157       | 160  | 162  | 174  | 189  | 200  | 211  | 165       | 166  | 167  | 179  | 193  | 204  | 214  |
|                             |                 | 148                | 141  | 133  | 112  | 90.6 | 73.2 | 55.4 | 157       | 153  | 148  | 123  | 97.3 | 76.5 | 55.3 | 165       | 162  | 160  | 132  | 103  | 79.1 | 55.3 |
|                             |                 | 8.5                | 8.58 | 8.67 | 8.97 | 9.26 | 9.53 | 9.8  | 8.7       | 8.75 | 8.81 | 9.07 | 9.39 | 9.66 | 9.91 | 8.86      | 8.89 | 8.91 | 9.16 | 9.49 | 9.76 | 9.99 |
| 75                          | TC<br>SHC<br>kW | 146                | 150  | 154  | 166  | 181  | 192  | 204  | 155       | 158  | 160  | 172  | 186  | 197  | 208  | 163       | 164  | 164  | 176  | 189  | 201  | 212  |
|                             |                 | 146                | 139  | 132  | 111  | 89.7 | 72.2 | 54.6 | 155       | 151  | 146  | 122  | 96.2 | 75.5 | 54.6 | 163       | 161  | 158  | 131  | 101  | 78.1 | 54.5 |
|                             |                 | 9.02               | 9.1  | 9.18 | 9.45 | 9.8  | 10.1 | 10.4 | 9.22      | 9.27 | 9.31 | 9.58 | 9.91 | 10.2 | 10.5 | 9.39      | 9.41 | 9.43 | 9.68 | 9.99 | 10.3 | 10.6 |
| 85                          | TC<br>SHC<br>kW | 142                | 145  | 149  | 161  | 175  | 186  | 196  | 151       | 153  | 154  | 166  | 179  | 190  | 200  | 158       | 159  | 159  | 170  | 183  | 194  | 203  |
|                             |                 | 142                | 136  | 129  | 109  | 87.4 | 70   | 52.4 | 151       | 147  | 144  | 119  | 93.9 | 73.2 | 52.3 | 158       | 157  | 155  | 128  | 99.1 | 75.8 | 52.2 |
|                             |                 | 10.1               | 10.2 | 10.3 | 10.6 | 10.9 | 11.2 | 11.5 | 10.3      | 10.4 | 10.4 | 10.7 | 11   | 11.3 | 11.6 | 10.5      | 10.5 | 10.5 | 10.8 | 11.1 | 11.4 | 11.7 |
| 95                          | TC<br>SHC<br>kW | 138                | 141  | 143  | 155  | 168  | 179  | 189  | 147       | 148  | 149  | 160  | 173  | 183  | 192  | 153       | 153  | 154  | 164  | 177  | 187  | 195  |
|                             |                 | 138                | 133  | 127  | 106  | 85   | 67.7 | 50.1 | 147       | 144  | 141  | 117  | 91.6 | 70.9 | 50   | 153       | 153  | 152  | 126  | 96.9 | 73.5 | 49.9 |
|                             |                 | 11.4               | 11.4 | 11.5 | 11.8 | 12.2 | 12.4 | 12.7 | 11.6      | 11.6 | 11.6 | 11.9 | 12.3 | 12.6 | 12.8 | 11.8      | 11.8 | 11.8 | 12   | 12.4 | 12.7 | 12.9 |
| 105                         | TC<br>SHC<br>kW | 134                | 136  | 138  | 149  | 162  | 172  | 181  | 141       | 142  | 143  | 153  | 166  | 176  | 184  | 148       | 148  | 148  | 157  | 169  | 179  | 186  |
|                             |                 | 134                | 129  | 124  | 104  | 82.4 | 65.3 | 47.7 | 141       | 139  | 137  | 114  | 89   | 68.4 | 47.5 | 148       | 148  | 148  | 123  | 94.3 | 70.9 | 47.4 |
|                             |                 | 12.7               | 12.8 | 12.8 | 13.2 | 13.5 | 13.8 | 14.1 | 12.9      | 13   | 13   | 13.3 | 13.6 | 13.9 | 14.2 | 13.1      | 13.1 | 13.1 | 13.4 | 13.7 | 14   | 14.3 |
| 115                         | TC<br>SHC<br>kW | 129                | 130  | 132  | 143  | 155  | 164  | 172  | 136       | 137  | 138  | 146  | 158  | 168  | 175  | 142       | 142  | 142  | 149  | 161  | 171  | 177  |
|                             |                 | 129                | 125  | 121  | 101  | 79.8 | 62.7 | 45.1 | 136       | 135  | 133  | 111  | 86.3 | 65.9 | 45   | 142       | 142  | 142  | 120  | 91.6 | 68.4 | 45   |
|                             |                 | 14.2               | 14.2 | 14.3 | 14.6 | 15   | 15.3 | 15.6 | 14.4      | 14.4 | 14.5 | 14.7 | 15.1 | 15.5 | 15.7 | 14.6      | 14.6 | 14.6 | 14.8 | 15.2 | 15.6 | 15.7 |
| 125                         | TC<br>SHC<br>kW | 124                | 125  | 126  | 136  | 147  | 156  | 163  | 131       | 131  | 132  | 140  | 150  | 159  | 165  | 136       | 136  | 136  | 142  | 153  | 162  | 167  |
|                             |                 | 124                | 121  | 118  | 98.2 | 77   | 60.1 | 42.5 | 131       | 130  | 128  | 109  | 83.5 | 63.2 | 42.5 | 136       | 136  | 136  | 117  | 88.7 | 65.7 | 42.4 |
|                             |                 | 15.8               | 15.8 | 15.9 | 16.2 | 16.6 | 17   | 17.2 | 16.1      | 16.1 | 16.1 | 16.4 | 16.7 | 17.1 | 17.3 | 16.3      | 16.2 | 16.2 | 16.4 | 16.8 | 17.2 | 17.4 |

| 581A155 (12 Tons) (cont)    |     |                    |      |      |      |      |      |      |           |      |      |      |      |      |      |
|-----------------------------|-----|--------------------|------|------|------|------|------|------|-----------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |     | Evap Air — Cfm/BF  |      |      |      |      |      |      |           |      |      |      |      |      |      |
|                             |     | 5625/0.02          |      |      |      |      |      |      | 6250/0.02 |      |      |      |      |      |      |
|                             |     | Evap Air — Ewb (F) |      |      |      |      |      |      |           |      |      |      |      |      |      |
|                             |     | 54                 | 58   | 62   | 67   | 72   | 76   | 80   | 54        | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC  | 175                | 175  | 176  | 187  | 202  | 214  | 224  | 180       | 180  | 180  | 190  | 204  | 216  | 226  |
|                             | SHC | 175                | 173  | 171  | 142  | 110  | 83.8 | 57.3 | 180       | 180  | 180  | 151  | 115  | 86.2 | 57.2 |
|                             | kW  | 8.03               | 8.05 | 8.07 | 8.3  | 8.61 | 8.87 | 9.1  | 8.14      | 8.15 | 8.16 | 8.36 | 8.66 | 8.93 | 9.14 |
| 70                          | TC  | 170                | 171  | 171  | 181  | 195  | 207  | 216  | 175       | 176  | 176  | 184  | 198  | 209  | 218  |
|                             | SHC | 170                | 169  | 168  | 140  | 108  | 81.5 | 55.2 | 175       | 176  | 176  | 148  | 113  | 84   | 55.1 |
|                             | kW  | 8.98               | 8.99 | 9.01 | 9.23 | 9.55 | 9.81 | 10   | 9.09      | 9.1  | 9.11 | 9.3  | 9.61 | 9.87 | 10.1 |
| 75                          | TC  | 168                | 168  | 169  | 179  | 192  | 203  | 213  | 173       | 173  | 173  | 181  | 195  | 206  | 215  |
|                             | SHC | 168                | 167  | 166  | 139  | 107  | 80.5 | 54.4 | 173       | 173  | 173  | 147  | 112  | 83   | 54.3 |
|                             | kW  | 9.5                | 9.51 | 9.52 | 9.75 | 10.1 | 10.3 | 10.6 | 9.62      | 9.62 | 9.62 | 9.81 | 10.1 | 10.4 | 10.6 |
| 85                          | TC  | 163                | 163  | 164  | 172  | 185  | 196  | 205  | 168       | 168  | 168  | 175  | 188  | 198  | 206  |
|                             | SHC | 163                | 162  | 162  | 136  | 104  | 78.2 | 52.2 | 168       | 168  | 168  | 145  | 109  | 80.6 | 52.1 |
|                             | kW  | 10.6               | 10.6 | 10.6 | 10.9 | 11.2 | 11.5 | 11.7 | 10.7      | 10.7 | 10.8 | 10.9 | 11.2 | 11.5 | 11.8 |
| 95                          | TC  | 158                | 158  | 158  | 166  | 178  | 189  | 196  | 162       | 162  | 162  | 168  | 180  | 190  | 197  |
|                             | SHC | 158                | 157  | 157  | 134  | 102  | 75.9 | 49.8 | 162       | 162  | 162  | 142  | 107  | 78.3 | 49.7 |
|                             | kW  | 11.9               | 11.9 | 11.9 | 12.1 | 12.4 | 12.7 | 12.9 | 12        | 12   | 12   | 12.1 | 12.5 | 12.8 | 13   |
| 105                         | TC  | 152                | 152  | 152  | 159  | 171  | 181  | 187  | 157       | 157  | 157  | 161  | 173  | 182  | 188  |
|                             | SHC | 152                | 152  | 152  | 131  | 99.3 | 73.3 | 47.4 | 157       | 157  | 157  | 139  | 104  | 75.7 | 47.4 |
|                             | kW  | 13.2               | 13.2 | 13.2 | 13.4 | 13.8 | 14.1 | 14.3 | 13.4      | 13.4 | 13.4 | 13.5 | 13.9 | 14.2 | 14.4 |
| 115                         | TC  | 146                | 146  | 146  | 151  | 163  | 172  | 177  | 150       | 150  | 150  | 153  | 165  | 174  | 178  |
|                             | SHC | 146                | 146  | 146  | 128  | 96.6 | 70.7 | 44.9 | 150       | 150  | 150  | 136  | 102  | 73.1 | 44.8 |
|                             | kW  | 14.7               | 14.7 | 14.7 | 14.9 | 15.3 | 15.6 | 15.8 | 14.9      | 14.9 | 14.9 | 14.9 | 15.4 | 15.7 | 15.8 |
| 125                         | TC  | 140                | 140  | 140  | 144  | 155  | 163  | 167  | 144       | 144  | 144  | 146  | 156  | 164  | 168  |
|                             | SHC | 140                | 140  | 140  | 125  | 93.7 | 67.9 | 42.4 | 144       | 144  | 144  | 133  | 98.7 | 70.2 | 42.3 |
|                             | kW  | 16.4               | 16.4 | 16.4 | 16.5 | 16.9 | 17.2 | 17.4 | 16.5      | 16.5 | 16.5 | 16.6 | 17   | 17.3 | 17.4 |

## **LEGEND**

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

## **NOTES:**

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                             |
|--------------------------|--------------------------------|------|------|------|------|-----------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                    |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                     |
|                          | Correction Factor              |      |      |      |      |                             |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula<br>shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                             |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                             |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                             |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

- Use chart below for bypass factor.

| CFM  | ENTERING WET-BULB (F) |       |       |       |       |       |       |
|------|-----------------------|-------|-------|-------|-------|-------|-------|
|      | 54                    | 58    | 62    | 67    | 72    | 76    | 80    |
|      | Bypass Factor         |       |       |       |       |       |       |
| 3600 | 0.355                 | 0.158 | 0.054 | 0.038 | 0.049 | 0.000 | 0.000 |
| 4375 | 0.439                 | 0.255 | 0.112 | 0.043 | 0.057 | 0.000 | 0.000 |
| 5000 | 0.486                 | 0.314 | 0.126 | 0.054 | 0.037 | 0.000 | 0.000 |
| 5625 | 0.525                 | 0.360 | 0.174 | 0.066 | 0.073 | 0.000 | 0.000 |
| 6250 | 0.551                 | 0.410 | 0.202 | 0.080 | 0.079 | 0.000 | 0.000 |

**PERFORMANCE DATA (cont)**  
**COOLING CAPACITIES — STANDARD UNITS (cont)**

| 581A180 (15 Tons)           |           |                    |       |       |       |       |       |       |       |           |       |       |       |       |       |       |       |           |       |       |       |       |  |
|-----------------------------|-----------|--------------------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|-------|--|
| Temp (F)<br>Air Ent<br>Cond |           | Evap Air — Cfm/BF  |       |       |       |       |       |       |       |           |       |       |       |       |       |       |       |           |       |       |       |       |  |
|                             |           | 4500/0.01          |       |       |       |       |       |       |       | 5250/0.01 |       |       |       |       |       |       |       | 6000/0.01 |       |       |       |       |  |
|                             |           | Evap Air — Ewb (F) |       |       |       |       |       |       |       |           |       |       |       |       |       |       |       |           |       |       |       |       |  |
|                             |           | 54                 | 58    | 62    | 67    | 72    | 76    | 80    | 54    | 58        | 62    | 67    | 72    | 76    | 80    | 54    | 58    | 62        | 67    | 72    | 76    | 80    |  |
| 60                          | TC        | 180.5              | 184.6 | 188.7 | 203.5 | 219.9 | 233.7 | 247   | 189.3 | 191.7     | 194.2 | 208.7 | 224.1 | 238   | 251   | 198.1 | 198.8 | 199.6     | 212.9 | 229.3 | 242   | 255   |  |
|                             | SHC<br>kW | 180.5              | 172.4 | 159.4 | 132.3 | 104.7 | 87.9  | 65.7  | 189.3 | 183.2     | 173.2 | 142.8 | 110.4 | 91    | 65.5  | 198.1 | 195.1 | 185.1     | 153.1 | 116.7 | 94    | 65.4  |  |
|                             |           | 9.41               | 9.49  | 9.58  | 9.87  | 10.19 | 10.47 | 10.78 | 9.58  | 9.63      | 9.68  | 9.97  | 10.29 | 10.57 | 10.87 | 9.75  | 9.77  | 9.79      | 10.07 | 10.39 | 10.67 | 10.95 |  |
| 70                          | TC        | 176.7              | 180.5 | 184.4 | 199   | 215.1 | 227.8 | 242   | 185.3 | 187.5     | 189.8 | 203   | 219.2 | 231.8 | 245   | 193   | 194.5 | 195.1     | 208.1 | 224.3 | 237   | 248   |  |
|                             | SHC<br>kW | 176.7              | 169   | 155.8 | 129.4 | 102.4 | 86    | 63.9  | 185.3 | 179.7     | 169.3 | 138.9 | 108   | 89.1  | 63.8  | 193   | 191.4 | 181       | 149.7 | 114.2 | 92.2  | 63.7  |  |
|                             |           | 10.5               | 10.57 | 10.64 | 10.96 | 11.35 | 11.62 | 11.95 | 10.68 | 10.72     | 10.76 | 11.06 | 11.45 | 11.72 | 12.04 | 10.85 | 10.87 | 10.89     | 11.17 | 11.55 | 11.82 | 12.13 |  |
| 75                          | TC        | 174.7              | 177.5 | 181   | 196   | 213   | 224.2 | 238   | 182.3 | 184.4     | 186   | 201   | 217   | 229.2 | 242   | 190.9 | 191.3 | 189       | 204   | 219   | 233.1 | 246   |  |
|                             | SHC<br>kW | 174.7              | 167.2 | 147   | 124   | 99    | 84.9  | 62.9  | 182.3 | 177.9     | 160   | 133   | 105   | 88    | 62.8  | 190.9 | 189.5 | 173       | 143   | 113   | 91    | 62.7  |  |
|                             |           | 11.07              | 11.14 | 11.2  | 11.6  | 12    | 12.23 | 12.57 | 11.25 | 11.3      | 11.3  | 11.7  | 12.1  | 12.33 | 12.66 | 11.45 | 11.45 | 11.45     | 11.8  | 12.1  | 12.44 | 12.75 |  |
| 85                          | TC        | 169.6              | 172.2 | 175   | 190   | 205   | 218.1 | 230.8 | 177.2 | 179       | 180   | 194   | 209   | 221.9 | 233.3 | 185.6 | 185.9 | 183       | 198   | 212   | 225.7 | 237   |  |
|                             | SHC<br>kW | 169.6              | 163.3 | 145   | 121   | 97    | 82.5  | 60.7  | 177.2 | 174.1     | 157   | 130   | 102   | 85.6  | 60.5  | 185.6 | 184.7 | 168       | 139   | 106   | 88.6  | 60.4  |  |
|                             |           | 12.29              | 12.35 | 12.3  | 12.7  | 13.1  | 13.5  | 13.86 | 12.47 | 12.51     | 12.5  | 12.8  | 13.2  | 13.61 | 13.96 | 12.67 | 12.68 | 12.6      | 12.9  | 13.3  | 13.71 | 14.05 |  |
| 95                          | TC        | 164.3              | 166.5 | 168   | 182   | 197   | 209.8 | 221.2 | 171.7 | 172.6     | 172   | 187   | 201   | 213.4 | 224.6 | 179.1 | 179.3 | 176       | 190   | 203   | 217.1 | 228   |  |
|                             | SHC<br>kW | 164.3              | 158.9 | 142   | 118   | 93    | 79.8  | 57.9  | 171.7 | 168.8     | 154   | 127   | 98    | 82.8  | 57.9  | 179.1 | 178.7 | 164       | 136   | 102   | 86    | 57.8  |  |
|                             |           | 13.59              | 13.65 | 13.5  | 13.9  | 14.3  | 14.85 | 15.23 | 13.8  | 13.82     | 13.6  | 14    | 14.4  | 14.96 | 15.32 | 14    | 14    | 13.8      | 14.1  | 14.5  | 15.07 | 15.43 |  |
| 105                         | TC        | 158.1              | 159.8 | 161   | 174   | 188   | 200.3 | 212.4 | 165.2 | 166       | 165   | 178   | 191   | 203.8 | 214.6 | 172.3 | 172.3 | 169       | 181   | 193   | 207.3 | 216.8 |  |
|                             | SHC<br>kW | 158.1              | 154.2 | 138   | 115   | 91    | 76.8  | 55.2  | 165.2 | 163.1     | 150   | 124   | 95    | 79.9  | 55.1  | 172.3 | 172.2 | 158       | 132   | 98    | 83    | 54.9  |  |
|                             |           | 14.97              | 15.02 | 14.8  | 15.2  | 15.6  | 16.28 | 16.69 | 15.19 | 15.21     | 14.9  | 15.3  | 15.7  | 16.39 | 16.77 | 15.41 | 15.4  | 15.1      | 15.4  | 15.7  | 16.5  | 16.86 |  |
| 115                         | TC        | 151.8              | 152.8 | 152   | 165   | 179   | 190.6 | 201.3 | 158.4 | 158.8     | 157   | 168   | 180   | 194   | 204.5 | 165   | 164.9 | 161       | 171   | 181   | 197.3 | 206.6 |  |
|                             | SHC<br>kW | 151.8              | 149.1 | 134   | 111   | 87    | 73.7  | 52.1  | 158.4 | 157       | 145   | 120   | 91    | 76.7  | 52.1  | 165   | 164.9 | 151       | 128   | 94    | 79.8  | 51.9  |  |
|                             |           | 16.45              | 16.48 | 16.1  | 16.5  | 16.9  | 17.79 | 18.21 | 16.68 | 16.68     | 16.2  | 16.6  | 17    | 17.91 | 18.3  | 16.89 | 16.88 | 16.4      | 16.7  | 17    | 18.01 | 18.39 |  |
| 125                         | TC        | 144.7              | 145.4 | 146   | 157.1 | 170.5 | 180.7 | 191.1 | 150.8 | 151.1     | 151.5 | 160.2 | 172.9 | 183.9 | 192   | 156.8 | 156.9 | 157       | 163.2 | 175.4 | 186.2 | 193.9 |  |
|                             | SHC<br>kW | 144.7              | 143.5 | 123.4 | 102.2 | 81.16 | 70.4  | 48.9  | 150.8 | 150.2     | 135.2 | 109.6 | 85.15 | 73.4  | 48.8  | 156.8 | 156.9 | 145.6     | 117.4 | 89.3  | 76.4  | 48.7  |  |
|                             |           | 17.96              | 18.01 | 18.05 | 18.49 | 18.99 | 19.44 | 19.85 | 18.18 | 18.22     | 18.25 | 18.6  | 19.11 | 19.5  | 19.89 | 18.42 | 18.44 | 18.46     | 18.72 | 19.14 | 19.65 | 19.93 |  |

| 581A180 (15 Tons) (cont)    |           |                    |       |       |       |       |       |       |       |       |       |           |       |       |       |  |  |  |  |  |  |  |  |
|-----------------------------|-----------|--------------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-----------|-------|-------|-------|--|--|--|--|--|--|--|--|
| Temp (F)<br>Air Ent<br>Cond |           | Evap Air — Cfm/BF  |       |       |       |       |       |       |       |       |       |           |       |       |       |  |  |  |  |  |  |  |  |
|                             |           | 6750/0.01          |       |       |       |       |       |       |       |       |       | 7500/0.02 |       |       |       |  |  |  |  |  |  |  |  |
|                             |           | Evap Air — Ewb (F) |       |       |       |       |       |       |       |       |       |           |       |       |       |  |  |  |  |  |  |  |  |
|                             |           | 54                 | 58    | 62    | 67    | 72    | 76    | 80    | 54    | 58    | 62    | 67        | 72    | 76    | 80    |  |  |  |  |  |  |  |  |
| 60                          | TC        | 203.8              | 204.2 | 204.6 | 216.3 | 231.7 | 244   | 257   | 209.5 | 209.5 | 209.6 | 218.8     | 235   | 248   | 259   |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 203.8              | 201.8 | 191.2 | 164.1 | 124.1 | 97    | 65.4  | 209.5 | 209.5 | 196.6 | 173.7     | 138.1 | 100   | 65.2  |  |  |  |  |  |  |  |  |
| 70                          | TC        | 199.6              | 199.8 | 200.1 | 210.5 | 226.5 | 239   | 250   | 205.2 | 205.1 | 205.1 | 213.8     | 228.8 | 241   | 252   |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 199.6              | 197.8 | 187   | 159.7 | 121.3 | 95.2  | 63.5  | 205.2 | 205.1 | 192.4 | 169.8     | 134.5 | 98.2  | 63.5  |  |  |  |  |  |  |  |  |
| 75                          | TC        | 196.4              | 196.6 | 194   | 206   | 220   | 235   | 247   | 201.9 | 201.9 | 198   | 208       | 223   | 237   | 249   |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 196.4              | 195.7 | 181   | 153   | 120   | 94    | 62.5  | 201.9 | 201.9 | 186   | 163       | 163   | 97.1  | 62.5  |  |  |  |  |  |  |  |  |
| 85                          | TC        | 191                | 191.1 | 188   | 200   | 213   | 227.8 | 239   | 196.4 | 196.4 | 192   | 202       | 214   | 229.8 | 241   |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 191                | 190.5 | 175   | 148   | 115   | 91.6  | 60.2  | 196.4 | 196.4 | 180   | 157       | 119   | 94.6  | 60.2  |  |  |  |  |  |  |  |  |
| 95                          | TC        | 184.4              | 184.5 | 181   | 192   | 205   | 219.1 | 229.7 | 189.7 | 189.7 | 185   | 194       | 206   | 221.1 | 230.5 |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 184.4              | 184.2 | 170   | 144   | 108   | 88.9  | 57.7  | 189.7 | 189.7 | 174   | 153       | 113   | 91.9  | 57.6  |  |  |  |  |  |  |  |  |
| 105                         | TC        | 176.7              | 176.7 | 173   | 182   | 194   | 209.2 | 218.5 | 181.9 | 181.9 | 177   | 184       | 194   | 211.1 | 220.1 |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 176.7              | 176.7 | 162   | 140   | 103   | 86    | 54.9  | 181.9 | 181.9 | 166   | 148       | 107   | 88.9  | 54.7  |  |  |  |  |  |  |  |  |
| 115                         | TC        | 169.5              | 169.4 | 166   | 172   | 183   | 198.2 | 207.1 | 173.9 | 173.8 | 169   | 174       | 183   | 200   | 208.6 |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 169.5              | 169.4 | 155   | 136   | 98    | 82.7  | 51.8  | 173.9 | 173.8 | 158   | 142       | 101   | 85.6  | 51.7  |  |  |  |  |  |  |  |  |
| 125                         | TC        | 160.9              | 161.1 | 161.2 | 165.6 | 177.4 | 187.9 | 195.4 | 165.1 | 165.2 | 165.4 | 167.8     | 179.2 | 188.6 | 196   |  |  |  |  |  |  |  |  |
|                             | SHC<br>kW | 160.9              | 161.1 | 150.7 | 125.6 | 95.04 | 79.4  | 48.7  | 165.1 | 165.2 | 155.2 | 133.2     | 105.3 | 82.3  | 48.6  |  |  |  |  |  |  |  |  |

**LEGEND**

BF — Bypass Factor  
 Edb — Entering Dry-Bulb  
 Ewb — Entering Wet-Bulb  
 kW — Compressor Motor Power Input  
 ldb — Leaving Dry-Bulb  
 lwb — Leaving Wet-Bulb  
 SHC — Sensible Heat Capacity (1000 Btuh) Gross  
 TC — Total Capacity (1000 Btuh) Gross

**NOTES:**

1. Direct interpolation is permissible. Do not extrapolate.
2. The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

3. The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

4. Use chart below for bypass factor.

| CFM  | ENTERING WET-BULB (F) |       |       |       |       |       |       |
|------|-----------------------|-------|-------|-------|-------|-------|-------|
|      | 54                    | 58    | 62    | 67    | 72    | 76    | 80    |
|      | Bypass Factor         |       |       |       |       |       |       |
| 4500 | 0.396                 | 0.193 | 0.054 | 0.053 | 0.067 | 0.000 | 0.000 |
| 5250 | 0.455                 | 0.272 | 0.077 | 0.065 | 0.077 | 0.000 | 0.000 |
| 6000 | 0.504                 | 0.337 | 0.121 | 0.077 | 0.088 | 0.000 | 0.000 |
| 6750 | 0.544                 | 0.390 | 0.193 | 0.094 | 0.100 | 0.000 | 0.000 |
| 7500 | 0.578                 | 0.436 | 0.244 | 0.108 | 0.114 | 0.000 | 0.000 |

581A155-300

**PERFORMANCE DATA (cont)**  
**COOLING CAPACITIES — STANDARD UNITS (cont)**

| 581A210 (18 Tons)           |                 |                    |      |      |      |      |      |           |      |      |      |      |      |           |      |      |      |      |      |      |      |      |
|-----------------------------|-----------------|--------------------|------|------|------|------|------|-----------|------|------|------|------|------|-----------|------|------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |                 | Evap Air — Cfm/BF  |      |      |      |      |      |           |      |      |      |      |      |           |      |      |      |      |      |      |      |      |
|                             |                 | 5400/0.05          |      |      |      |      |      | 6300/0.06 |      |      |      |      |      | 7200/0.07 |      |      |      |      |      |      |      |      |
|                             |                 | Evap Air — Ewb (F) |      |      |      |      |      |           |      |      |      |      |      |           |      |      |      |      |      |      |      |      |
|                             |                 | 54                 | 58   | 62   | 67   | 72   | 76   | 80        | 54   | 58   | 62   | 67   | 72   | 76        | 80   | 54   | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC<br>SHC<br>kW | 202                | 206  | 211  | 229  | 248  | 263  | 279       | 212  | 215  | 218  | 235  | 254  | 269       | 285  | 220  | 221  | 223  | 239  | 259  | 273  | 289  |
|                             |                 | 202                | 193  | 184  | 155  | 124  | 99.3 | 74.7      | 212  | 205  | 199  | 166  | 131  | 103       | 74.9 | 220  | 216  | 213  | 177  | 138  | 106  | 75   |
|                             |                 | 10.2               | 10.3 | 10.4 | 10.6 | 10.8 | 11   | 11.2      | 10.4 | 10.4 | 10.4 | 10.7 | 10.9 | 11.1      | 11.3 | 10.5 | 10.5 | 10.5 | 10.7 | 11   | 11.2 | 11.4 |
| 70                          | TC<br>SHC<br>kW | 197                | 202  | 206  | 223  | 242  | 256  | 272       | 207  | 209  | 212  | 228  | 247  | 262       | 277  | 215  | 216  | 217  | 233  | 252  | 267  | 282  |
|                             |                 | 197                | 189  | 181  | 152  | 122  | 97   | 72.5      | 207  | 202  | 196  | 163  | 129  | 101       | 72.7 | 215  | 212  | 210  | 174  | 135  | 104  | 72.8 |
|                             |                 | 11.4               | 11.5 | 11.5 | 11.8 | 12   | 12.2 | 12.5      | 11.6 | 11.6 | 11.6 | 11.9 | 12.1 | 12.3      | 12.6 | 11.7 | 11.7 | 11.7 | 11.9 | 12.2 | 12.4 | 12.6 |
| 75                          | TC<br>SHC<br>kW | 195                | 199  | 203  | 219  | 238  | 253  | 268       | 204  | 206  | 209  | 225  | 244  | 258       | 273  | 212  | 213  | 214  | 229  | 248  | 263  | 277  |
|                             |                 | 195                | 187  | 180  | 150  | 120  | 95.8 | 71.3      | 204  | 199  | 195  | 162  | 127  | 99.3      | 71.4 | 212  | 210  | 208  | 173  | 134  | 103  | 71.5 |
|                             |                 | 12.1               | 12.2 | 12.2 | 12.5 | 12.7 | 13   | 13.2      | 12.3 | 12.3 | 12.3 | 12.6 | 12.8 | 13        | 13.3 | 12.4 | 12.4 | 12.4 | 12.6 | 12.9 | 13.1 | 13.3 |
| 85                          | TC<br>SHC<br>kW | 190                | 193  | 196  | 213  | 231  | 246  | 260       | 199  | 201  | 202  | 218  | 236  | 251       | 264  | 206  | 207  | 208  | 222  | 240  | 255  | 268  |
|                             |                 | 190                | 183  | 177  | 148  | 118  | 93.4 | 68.8      | 199  | 195  | 191  | 159  | 125  | 96.9      | 68.9 | 206  | 205  | 204  | 170  | 131  | 100  | 69   |
|                             |                 | 13.5               | 13.5 | 13.6 | 13.8 | 14.1 | 14.4 | 14.6      | 13.6 | 13.7 | 13.7 | 13.9 | 14.2 | 14.5      | 14.7 | 13.7 | 13.8 | 13.8 | 14   | 14.3 | 14.5 | 14.8 |
| 95                          | TC<br>SHC<br>kW | 184                | 187  | 190  | 205  | 222  | 236  | 250       | 193  | 194  | 195  | 210  | 227  | 241       | 254  | 200  | 200  | 201  | 214  | 231  | 245  | 258  |
|                             |                 | 184                | 179  | 173  | 144  | 114  | 90.2 | 65.9      | 193  | 190  | 187  | 156  | 121  | 93.7      | 66.1 | 200  | 199  | 199  | 167  | 128  | 97.1 | 66.2 |
|                             |                 | 15                 | 15   | 15.1 | 15.4 | 15.7 | 15.9 | 16.2      | 15.1 | 15.2 | 15.2 | 15.5 | 15.8 | 16        | 16.3 | 15.3 | 15.3 | 15.3 | 15.5 | 15.8 | 16.1 | 16.3 |
| 105                         | TC<br>SHC<br>kW | 178                | 180  | 182  | 197  | 213  | 228  | 240       | 186  | 187  | 188  | 201  | 217  | 232       | 244  | 193  | 193  | 193  | 205  | 221  | 235  | 247  |
|                             |                 | 178                | 173  | 169  | 141  | 111  | 87.3 | 62.9      | 186  | 184  | 183  | 152  | 118  | 90.8      | 63.1 | 193  | 193  | 193  | 163  | 124  | 94.1 | 63.2 |
|                             |                 | 16.6               | 16.7 | 16.7 | 17   | 17.3 | 17.7 | 17.9      | 16.8 | 16.8 | 16.8 | 17.1 | 17.4 | 17.8      | 18   | 16.9 | 16.9 | 16.9 | 17.2 | 17.5 | 17.8 | 18   |
| 115                         | TC<br>SHC<br>kW | 171                | 172  | 174  | 188  | 203  | 217  | 228       | 179  | 179  | 179  | 192  | 207  | 221       | 232  | 185  | 185  | 185  | 195  | 210  | 224  | 235  |
|                             |                 | 171                | 168  | 165  | 137  | 107  | 83.6 | 59.6      | 179  | 178  | 178  | 149  | 114  | 87.1      | 59.7 | 185  | 185  | 185  | 159  | 121  | 90.4 | 59.9 |
|                             |                 | 18.4               | 18.4 | 18.4 | 18.8 | 19.1 | 19.4 | 19.7      | 18.6 | 18.6 | 18.6 | 18.9 | 19.2 | 19.5      | 19.8 | 18.7 | 18.7 | 18.7 | 19   | 19.3 | 19.6 | 19.9 |
| 125                         | TC<br>SHC<br>kW | 164                | 165  | 165  | 178  | 192  | 205  | 216       | 171  | 171  | 171  | 182  | 196  | 208       | 219  | 177  | 177  | 177  | 185  | 199  | 211  | 222  |
|                             |                 | 164                | 162  | 160  | 134  | 104  | 79.8 | 56.1      | 171  | 171  | 171  | 145  | 110  | 83.2      | 56.3 | 177  | 177  | 177  | 155  | 117  | 86.5 | 56.4 |
|                             |                 | 20.2               | 20.3 | 20.3 | 20.6 | 21   | 21.3 | 21.6      | 20.4 | 20.4 | 20.4 | 20.8 | 21.1 | 21.4      | 21.7 | 20.6 | 20.6 | 20.6 | 20.8 | 21.2 | 21.5 | 21.8 |

| 581A210 (18 Tons) (cont)    |     |                    |      |      |      |      |      |           |      |      |      |      |      |      |      |
|-----------------------------|-----|--------------------|------|------|------|------|------|-----------|------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |     | Evap Air — Cfm/BF  |      |      |      |      |      |           |      |      |      |      |      |      |      |
|                             |     | 8100/0.08          |      |      |      |      |      | 9000/0.09 |      |      |      |      |      |      |      |
|                             |     | Evap Air — Ewb (F) |      |      |      |      |      |           |      |      |      |      |      |      |      |
|                             |     | 54                 | 58   | 62   | 67   | 72   | 76   | 80        | 54   | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC  | 227                | 227  | 228  | 243  | 262  | 277  | 293       | 233  | 233  | 233  | 246  | 265  | 280  | 295  |
|                             | SHC | 227                | 226  | 224  | 187  | 144  | 109  | 75.1      | 233  | 233  | 233  | 198  | 151  | 113  | 75.1 |
|                             | kW  | 10.5               | 10.6 | 10.6 | 10.7 | 11   | 11.2 | 11.4      | 10.6 | 10.6 | 10.6 | 10.8 | 11   | 11.3 | 11.5 |
| 70                          | TC  | 222                | 222  | 222  | 236  | 255  | 271  | 284       | 228  | 228  | 227  | 239  | 258  | 272  | 287  |
|                             | SHC | 222                | 221  | 221  | 185  | 142  | 107  | 72.8      | 228  | 228  | 227  | 195  | 148  | 110  | 72.9 |
|                             | kW  | 11.8               | 11.8 | 11.8 | 12   | 12.2 | 12.5 | 12.7      | 11.9 | 11.9 | 11.8 | 12   | 12.3 | 12.5 | 12.7 |
| 75                          | TC  | 219                | 219  | 219  | 232  | 251  | 266  | 280       | 225  | 224  | 224  | 235  | 254  | 268  | 282  |
|                             | SHC | 219                | 218  | 218  | 183  | 140  | 106  | 71.6      | 225  | 224  | 224  | 193  | 147  | 109  | 71.7 |
|                             | kW  | 12.5               | 12.5 | 12.5 | 12.7 | 12.9 | 13.2 | 13.4      | 12.6 | 12.5 | 12.5 | 12.7 | 13   | 13.2 | 13.4 |
| 85                          | TC  | 213                | 213  | 213  | 225  | 243  | 258  | 271       | 218  | 218  | 218  | 228  | 245  | 260  | 273  |
|                             | SHC | 213                | 213  | 213  | 180  | 138  | 103  | 69.1      | 218  | 218  | 218  | 190  | 144  | 107  | 69.2 |
|                             | kW  | 13.8               | 13.8 | 13.8 | 14.1 | 14.3 | 14.6 | 14.8      | 13.9 | 13.9 | 13.9 | 14.1 | 14.4 | 14.6 | 14.8 |
| 95                          | TC  | 206                | 206  | 206  | 217  | 234  | 248  | 260       | 211  | 211  | 211  | 220  | 236  | 250  | 262  |
|                             | SHC | 206                | 206  | 206  | 177  | 134  | 100  | 66.3      | 211  | 211  | 211  | 187  | 141  | 103  | 66.4 |
|                             | kW  | 15.4               | 15.4 | 15.4 | 15.6 | 15.9 | 16.1 | 16.4      | 15.5 | 15.5 | 15.5 | 15.6 | 15.9 | 16.2 | 16.4 |
| 105                         | TC  | 199                | 199  | 199  | 208  | 224  | 238  | 249       | 203  | 203  | 204  | 210  | 226  | 240  | 251  |
|                             | SHC | 199                | 199  | 199  | 173  | 131  | 97.2 | 63.2      | 203  | 203  | 204  | 183  | 137  | 100  | 63.4 |
|                             | kW  | 17                 | 17.1 | 17.1 | 17.3 | 17.6 | 17.9 | 18.1      | 17.2 | 17.2 | 17.2 | 17.3 | 17.6 | 17.9 | 18.1 |
| 115                         | TC  | 191                | 191  | 191  | 198  | 213  | 226  | 237       | 195  | 195  | 195  | 201  | 215  | 228  | 238  |
|                             | SHC | 191                | 191  | 191  | 169  | 127  | 93.5 | 60        | 195  | 195  | 195  | 179  | 133  | 96.6 | 60   |
|                             | kW  | 18.8               | 18.8 | 18.8 | 19   | 19.3 | 19.7 | 19.9      | 18.9 | 18.9 | 18.9 | 19.1 | 19.4 | 19.7 | 19.9 |
| 125                         | TC  | 182                | 182  | 182  | 188  | 201  | 213  | 224       | 186  | 186  | 186  | 190  | 203  | 215  | 225  |
|                             | SHC | 182                | 182  | 182  | 165  | 123  | 89.6 | 56.5      | 186  | 186  | 186  | 174  | 129  | 92.6 | 56.6 |
|                             | kW  | 20.7               | 20.7 | 20.7 | 20.9 | 21.2 | 21.6 | 21.9      | 20.9 | 20.9 | 20.9 | 21   | 21.3 | 21.6 | 21.9 |

**LEGEND**

BF — Bypass Factor  
 Edb — Entering Dry-Bulb  
 Ewb — Entering Wet-Bulb  
 kW — Compressor Motor Power Input  
 ldb — Leaving Dry-Bulb  
 lwb — Leaving Wet-Bulb  
 SHC — Sensible Heat Capacity (1000 Btuh) Gross  
 TC — Total Capacity (1000 Btuh) Gross

**NOTES:**

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                             |
|--------------------------|--------------------------------|------|------|------|------|-----------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                    |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                     |
|                          | Correction Factor              |      |      |      |      |                             |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula<br>shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                             |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                             |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                             |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

- Use chart below for bypass factor.

| CFM  | ENTERING WET-BULB (F) |       |       |       |       |       |       |
|------|-----------------------|-------|-------|-------|-------|-------|-------|
|      | 54                    | 58    | 62    | 67    | 72    | 76    | 80    |
|      | Bypass Factor         |       |       |       |       |       |       |
| 5400 | 0.424                 | 0.238 | 0.125 | 0.120 | 0.138 | 0.000 | 0.000 |
| 6300 | 0.478                 | 0.304 | 0.153 | 0.132 | 0.145 | 0.000 | 0.000 |
| 7200 | 0.525                 | 0.364 | 0.190 | 0.144 | 0.153 | 0.000 | 0.000 |
| 8100 | 0.562                 | 0.414 | 0.231 | 0.156 | 0.162 | 0.000 | 0.000 |
| 9000 | 0.594                 | 0.456 | 0.281 | 0.168 | 0.170 | 0.000 | 0.000 |

**PERFORMANCE DATA (cont)**  
**COOLING CAPACITIES — STANDARD UNITS (cont)**

| 581A240 (20 Tons)           |           |                    |             |             |             |             |              |              |             |             |             |             |             |              |              |             |             |             |             |             |              |              |
|-----------------------------|-----------|--------------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|-------------|-------------|-------------|-------------|-------------|--------------|--------------|
| Temp (F)<br>Air Ent<br>Cond |           | Evap Air — Cfm/BF  |             |             |             |             |              |              |             |             |             |             |             |              |              |             |             |             |             |             |              |              |
|                             |           | 6,000/0.04         |             |             |             |             |              |              |             | 7,000/0.05  |             |             |             |              |              |             |             | 8,000/0.05  |             |             |              |              |
|                             |           | Evap Air — Ewb (F) |             |             |             |             |              |              |             |             |             |             |             |              |              |             |             |             |             |             |              |              |
|                             |           | 54                 | 58          | 62          | 67          | 72          | 76           | 80           | 54          | 58          | 62          | 67          | 72          | 76           | 80           | 54          | 58          | 62          | 67          | 72          | 76           | 80           |
| 60                          | TC        | 235                | 242         | 248         | 267         | 288         | 306          | 323          | 247         | 251         | 256         | 274         | 296         | 312          | 330          | 257         | 259         | 262         | 279         | 300         | 317          | 333          |
|                             | SHC<br>kW | 235<br>11.5        | 224<br>11.6 | 212<br>11.7 | 178<br>12   | 143<br>12.4 | 115<br>12.7  | 86.6<br>13   | 247<br>11.7 | 238<br>11.8 | 230<br>11.8 | 191<br>12.1 | 151<br>12.5 | 119<br>12.8  | 87<br>13.1   | 257<br>11.9 | 251<br>11.9 | 246<br>11.9 | 204<br>12.2 | 159<br>12.6 | 123<br>12.9  | 86.7<br>13.1 |
| 70                          | TC        | 231                | 237         | 242         | 261         | 282         | 300          | 316          | 242         | 246         | 250         | 268         | 289         | 305          | 323          | 252         | 254         | 256         | 273         | 293         | 310          | 326          |
|                             | SHC<br>kW | 231<br>13.1        | 220<br>13.2 | 209<br>13.3 | 175<br>13.6 | 141<br>14   | 113<br>14.3  | 84.5<br>14.6 | 242<br>13.3 | 234<br>13.3 | 227<br>13.4 | 189<br>13.7 | 149<br>14.1 | 117<br>14.4  | 84.9<br>14.8 | 252<br>13.4 | 247<br>13.5 | 243<br>13.5 | 201<br>13.8 | 156<br>14.2 | 120<br>14.5  | 84.6<br>14.8 |
| 75                          | TC        | 228                | 234         | 239         | 257         | 278         | 295          | 311          | 239         | 243         | 246         | 264         | 285         | 301          | 318          | 249         | 250         | 252         | 269         | 290         | 305          | 322          |
|                             | SHC<br>kW | 228<br>13.9        | 218<br>14   | 208<br>14.1 | 174<br>14.5 | 139<br>14.9 | 112<br>15.2  | 83.1<br>15.6 | 239<br>14.1 | 232<br>14.2 | 225<br>14.2 | 187<br>14.6 | 147<br>15   | 115<br>15.3  | 83.6<br>15.7 | 249<br>14.3 | 245<br>14.4 | 241<br>14.4 | 199<br>14.7 | 155<br>15.1 | 119<br>15.4  | 83.5<br>15.8 |
| 85                          | TC        | 223                | 227         | 231         | 250         | 270         | 287          | 303          | 234         | 236         | 238         | 256         | 277         | 292          | 310          | 243         | 244         | 245         | 261         | 282         | 296          | 314          |
|                             | SHC<br>kW | 223<br>15.6        | 213<br>15.7 | 204<br>15.8 | 171<br>16.2 | 136<br>16.6 | 109<br>17.1  | 80.5<br>17.4 | 234<br>15.8 | 227<br>15.9 | 221<br>16.3 | 184<br>16.8 | 144<br>17.2 | 112<br>17.6  | 80.9<br>17.6 | 243<br>16   | 240<br>16.1 | 236<br>16.1 | 196<br>16.5 | 152<br>16.9 | 116<br>17.3  | 81.3<br>17.7 |
| 95                          | TC        | 216                | 219         | 223         | 241         | 260         | 277          | 292          | 226         | 228         | 230         | 247         | 267         | 282          | 298          | 235         | 235         | 236         | 251         | 272         | 285          | 303          |
|                             | SHC<br>kW | 216<br>17.4        | 208<br>17.5 | 200<br>17.6 | 167<br>18.1 | 132<br>18.6 | 105<br>19    | 77.2<br>19.4 | 226<br>17.7 | 221<br>17.7 | 217<br>17.8 | 180<br>18.2 | 141<br>18.7 | 109<br>19.1  | 77.7<br>19.6 | 235<br>17.9 | 233<br>17.9 | 231<br>17.9 | 192<br>18.3 | 148<br>18.9 | 112<br>19.2  | 78<br>19.7   |
| 105                         | TC        | 208                | 211         | 214         | 231         | 249         | 265          | 279          | 218         | 219         | 220         | 236         | 256         | 270          | 285          | 226         | 226         | 226         | 241         | 260         | 273          | 290          |
|                             | SHC<br>kW | 208<br>19.3        | 202<br>19.4 | 195<br>19.5 | 163<br>20   | 129<br>20.6 | 101<br>21    | 73.6<br>21.5 | 218<br>19.6 | 215<br>19.6 | 212<br>19.7 | 176<br>20.2 | 137<br>20.8 | 105<br>21.2  | 74<br>21.6   | 226<br>19.9 | 226<br>19.9 | 225<br>19.9 | 188<br>20.3 | 145<br>20.9 | 108<br>21.3  | 74.4<br>21.8 |
| 115                         | TC        | 200                | 202         | 204         | 220         | 237         | 253          | 266          | 209         | 210         | 210         | 225         | 243         | 257          | 271          | 217         | 217         | 217         | 229         | 248         | 260          | 275          |
|                             | SHC<br>kW | 200<br>21.3        | 195<br>21.4 | 190<br>21.5 | 158<br>22   | 124<br>22.7 | 97.2<br>23.2 | 69.5<br>23.6 | 209<br>21.7 | 207<br>21.7 | 206<br>21.7 | 171<br>22.2 | 132<br>22.9 | 101<br>23.3  | 70<br>23.8   | 217<br>21.9 | 217<br>21.9 | 217<br>21.9 | 183<br>22.4 | 140<br>23   | 104<br>23.4  | 70.4<br>23.9 |
| 125                         | TC        | 191                | 192         | 193         | 208         | 224         | 239          | 251          | 199         | 199         | 200         | 212         | 230         | 243          | 255          | 207         | 207         | 206         | 216         | 232         | 245          | 257          |
|                             | SHC<br>kW | 191<br>23.5        | 188<br>23.5 | 185<br>23.6 | 153<br>24.2 | 120<br>24.8 | 92.8<br>25.4 | 65.3<br>25.9 | 199<br>23.8 | 199<br>23.8 | 199<br>23.8 | 166<br>24.4 | 128<br>25   | 96.4<br>25.5 | 65.7<br>26   | 207<br>24.1 | 207<br>24.1 | 206<br>24.1 | 178<br>24.5 | 135<br>25.1 | 99.8<br>25.7 | 65.5<br>26.1 |

| 581A240 (20 Tons) (cont)    |                 |                    |      |      |      |      |      |      |             |      |      |      |      |      |      |
|-----------------------------|-----------------|--------------------|------|------|------|------|------|------|-------------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |                 | Evap Air — Cfm/BF  |      |      |      |      |      |      |             |      |      |      |      |      |      |
|                             |                 | 9,000/0.06         |      |      |      |      |      |      | 10,000/0.07 |      |      |      |      |      |      |
|                             |                 | Evap Air — Ewb (F) |      |      |      |      |      |      |             |      |      |      |      |      |      |
|                             |                 | 54                 | 58   | 62   | 67   | 72   | 76   | 80   | 54          | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC<br>SHC<br>kW | 265                | 266  | 267  | 284  | 305  | 321  | 338  | 272         | 272  | 272  | 287  | 307  | 325  | 340  |
|                             |                 | 265                | 262  | 260  | 216  | 166  | 126  | 87   | 272         | 271  | 271  | 227  | 173  | 130  | 86.7 |
|                             |                 | 12                 | 12   | 12   | 12.3 | 12.7 | 12.9 | 13.2 | 12.1        | 12.1 | 12.1 | 12.4 | 12.7 | 13   | 13.3 |
| 70                          | TC<br>SHC<br>kW | 260                | 261  | 261  | 277  | 298  | 315  | 331  | 266         | 267  | 267  | 281  | 301  | 317  | 333  |
|                             |                 | 260                | 258  | 256  | 213  | 164  | 124  | 85   | 266         | 267  | 267  | 225  | 171  | 127  | 84.7 |
|                             |                 | 13.6               | 13.6 | 13.6 | 13.9 | 14.3 | 14.6 | 14.9 | 13.7        | 13.7 | 13.7 | 14   | 14.3 | 14.6 | 15   |
| 75                          | TC<br>SHC<br>kW | 256                | 257  | 258  | 273  | 294  | 310  | 326  | 263         | 263  | 263  | 277  | 296  | 312  | 327  |
|                             |                 | 256                | 255  | 254  | 211  | 162  | 123  | 83.7 | 263         | 263  | 263  | 223  | 169  | 126  | 83.4 |
|                             |                 | 14.5               | 14.5 | 14.5 | 14.8 | 15.2 | 15.5 | 15.8 | 14.6        | 14.6 | 14.6 | 14.9 | 15.2 | 15.6 | 15.9 |
| 85                          | TC<br>SHC<br>kW | 250                | 250  | 250  | 265  | 285  | 301  | 316  | 257         | 256  | 256  | 268  | 287  | 303  | 317  |
|                             |                 | 250                | 250  | 249  | 208  | 159  | 120  | 81   | 257         | 256  | 256  | 220  | 166  | 123  | 80.7 |
|                             |                 | 16.2               | 16.2 | 16.2 | 16.5 | 17   | 17.4 | 17.7 | 16.4        | 16.4 | 16.4 | 16.6 | 17   | 17.4 | 17.7 |
| 95                          | TC<br>SHC<br>kW | 242                | 242  | 242  | 255  | 274  | 288  | 304  | 248         | 248  | 248  | 258  | 276  | 292  | 306  |
|                             |                 | 242                | 242  | 242  | 204  | 155  | 116  | 77.8 | 248         | 248  | 248  | 215  | 162  | 120  | 77.6 |
|                             |                 | 18.1               | 18.1 | 18.1 | 18.4 | 18.9 | 19.3 | 19.7 | 18.3        | 18.3 | 18.2 | 18.5 | 19   | 19.4 | 19.7 |
| 105                         | TC<br>SHC<br>kW | 233                | 233  | 233  | 244  | 263  | 275  | 291  | 239         | 239  | 239  | 247  | 264  | 279  | 291  |
|                             |                 | 233                | 233  | 233  | 200  | 152  | 112  | 74.2 | 239         | 239  | 239  | 211  | 158  | 116  | 73.9 |
|                             |                 | 20.1               | 20.1 | 20.1 | 20.4 | 21   | 21.4 | 21.8 | 20.3        | 20.2 | 20.2 | 20.5 | 21   | 21.5 | 21.8 |
| 115                         | TC<br>SHC<br>kW | 223                | 223  | 223  | 232  | 250  | 262  | 276  | 229         | 228  | 228  | 235  | 251  | 263  | 276  |
|                             |                 | 223                | 223  | 223  | 195  | 147  | 108  | 70.2 | 229         | 228  | 228  | 206  | 154  | 111  | 69.9 |
|                             |                 | 22.2               | 22.1 | 22.1 | 22.5 | 23.1 | 23.5 | 24   | 22.3        | 22.3 | 22.3 | 22.6 | 23.1 | 23.6 | 24   |
| 125                         | TC<br>SHC<br>kW | 213                | 212  | 212  | 219  | 234  | 247  | 258  | 218         | 217  | 217  | 222  | 235  | 248  | 259  |
|                             |                 | 213                | 212  | 212  | 189  | 142  | 103  | 65.4 | 218         | 217  | 217  | 200  | 148  | 106  | 65.2 |
|                             |                 | 24.3               | 24.3 | 24.3 | 24.6 | 25.2 | 25.7 | 26.2 | 24.5        | 24.5 | 24.5 | 24.7 | 25.3 | 25.8 | 26.2 |

**LEGEND**

BF — Bypass Factor  
 Edb — Entering Dry-Bulb  
 Ewb — Entering Wet-Bulb  
 kW — Compressor Motor Power Input  
 ldb — Leaving Dry-Bulb  
 lwb — Leaving Wet-Bulb  
 SHC — Sensible Heat Capacity (1000 Btuh) Gross  
 TC — Total Capacity (1000 Btuh) Gross

**NOTES:**

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

- Use chart below for bypass factor.

| CFM    | ENTERING WET-BULB (F) |       |       |       |       |       |       |
|--------|-----------------------|-------|-------|-------|-------|-------|-------|
|        | 54                    | 58    | 62    | 67    | 72    | 76    | 80    |
|        | Bypass Factor         |       |       |       |       |       |       |
| 6,000  | 0.386                 | 0.197 | 0.108 | 0.109 | 0.134 | 0.000 | 0.000 |
| 7,000  | 0.444                 | 0.260 | 0.131 | 0.121 | 0.138 | 0.000 | 0.000 |
| 8,000  | 0.492                 | 0.321 | 0.163 | 0.133 | 0.145 | 0.000 | 0.000 |
| 9,000  | 0.532                 | 0.375 | 0.205 | 0.146 | 0.154 | 0.000 | 0.000 |
| 10,000 | 0.566                 | 0.420 | 0.245 | 0.158 | 0.164 | 0.000 | 0.000 |

**PERFORMANCE DATA (cont)**  
**COOLING CAPACITIES — STANDARD UNITS (cont)**

| 581A300 (25 Tons)           |                 |                    |      |      |      |      |      |      |            |      |      |      |      |      |      |            |      |      |      |      |      |      |
|-----------------------------|-----------------|--------------------|------|------|------|------|------|------|------------|------|------|------|------|------|------|------------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |                 | Evap Air — Cfm/BF  |      |      |      |      |      |      |            |      |      |      |      |      |      |            |      |      |      |      |      |      |
|                             |                 | 7,500/0.05         |      |      |      |      |      |      | 8,250/0.06 |      |      |      |      |      |      | 9,500/0.07 |      |      |      |      |      |      |
|                             |                 | Evap Air — Ewb (F) |      |      |      |      |      |      |            |      |      |      |      |      |      |            |      |      |      |      |      |      |
|                             |                 | 54                 | 58   | 62   | 67   | 72   | 76   | 80   | 54         | 58   | 62   | 67   | 72   | 76   | 80   | 54         | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC<br>SHC<br>kW | 287                | 296  | 304  | 331  | 359  | 385  | 408  | 297        | 304  | 310  | 336  | 367  | 390  | 414  | 311        | 315  | 319  | 345  | 375  | 398  | 421  |
|                             |                 | 287                | 274  | 261  | 220  | 178  | 145  | 110  | 297        | 285  | 273  | 229  | 185  | 148  | 110  | 311        | 303  | 294  | 246  | 194  | 152  | 111  |
|                             |                 | 15.5               | 15.7 | 15.9 | 16.5 | 17.3 | 17.9 | 18.6 | 15.7       | 15.9 | 16   | 16.7 | 17.4 | 18.1 | 18.7 | 16         | 16.1 | 16.2 | 16.9 | 17.6 | 18.3 | 19   |
| 70                          | TC<br>SHC<br>kW | 279                | 286  | 293  | 318  | 345  | 367  | 392  | 288        | 293  | 298  | 323  | 350  | 372  | 397  | 301        | 303  | 306  | 329  | 357  | 381  | 403  |
|                             |                 | 279                | 267  | 255  | 214  | 173  | 139  | 105  | 288        | 278  | 268  | 224  | 178  | 142  | 105  | 301        | 294  | 287  | 239  | 188  | 147  | 105  |
|                             |                 | 17                 | 17.2 | 17.3 | 18   | 18.7 | 19.3 | 20   | 17.2       | 17.3 | 17.5 | 18.1 | 18.8 | 19.4 | 20.1 | 17.5       | 17.6 | 17.7 | 18.3 | 19   | 19.7 | 20.3 |
| 75                          | TC<br>SHC<br>kW | 275                | 281  | 287  | 311  | 338  | 360  | 383  | 283        | 288  | 293  | 316  | 343  | 365  | 388  | 296        | 298  | 300  | 323  | 349  | 372  | 394  |
|                             |                 | 275                | 264  | 252  | 212  | 170  | 136  | 102  | 283        | 274  | 265  | 221  | 176  | 139  | 103  | 296        | 290  | 284  | 237  | 185  | 144  | 103  |
|                             |                 | 17.9               | 18.1 | 18.2 | 18.8 | 19.5 | 20.1 | 20.8 | 18.1       | 18.2 | 18.4 | 18.9 | 19.7 | 20.3 | 20.9 | 18.4       | 18.5 | 18.5 | 19.1 | 19.8 | 20.5 | 21.1 |
| 85                          | TC<br>SHC<br>kW | 267                | 272  | 277  | 299  | 324  | 345  | 366  | 274        | 278  | 282  | 304  | 329  | 350  | 370  | 286        | 287  | 289  | 311  | 334  | 355  | 375  |
|                             |                 | 267                | 257  | 247  | 207  | 165  | 131  | 97.3 | 274        | 267  | 259  | 216  | 171  | 134  | 97.3 | 286        | 282  | 278  | 232  | 180  | 139  | 97.3 |
|                             |                 | 19.8               | 19.9 | 20   | 20.6 | 21.2 | 21.8 | 22.4 | 20         | 20.1 | 20.7 | 21.4 | 22   | 22.6 | 20.2 | 20.3       | 20.3 | 20.9 | 21.5 | 22.1 | 22.7 |      |
| 95                          | TC<br>SHC<br>kW | 259                | 263  | 267  | 288  | 311  | 331  | 350  | 267        | 270  | 273  | 293  | 315  | 335  | 354  | 278        | 279  | 281  | 299  | 322  | 340  | 358  |
|                             |                 | 259                | 251  | 242  | 202  | 160  | 126  | 92.5 | 267        | 261  | 255  | 212  | 166  | 129  | 92.5 | 278        | 276  | 273  | 227  | 175  | 134  | 92.4 |
|                             |                 | 22.1               | 22.2 | 22.3 | 22.8 | 23.4 | 23.9 | 24.5 | 22.3       | 22.4 | 22.5 | 22.9 | 23.5 | 24   | 24.6 | 22.6       | 22.6 | 22.6 | 23.1 | 23.6 | 24.2 | 24.7 |
| 105                         | TC<br>SHC<br>kW | 253                | 256  | 260  | 279  | 301  | 318  | 335  | 260        | 262  | 264  | 282  | 304  | 322  | 338  | 269        | 270  | 270  | 287  | 308  | 326  | 342  |
|                             |                 | 253                | 246  | 239  | 198  | 156  | 122  | 87.9 | 260        | 255  | 250  | 207  | 162  | 125  | 87.8 | 269        | 268  | 267  | 222  | 171  | 129  | 87.7 |
|                             |                 | 24.9               | 25   | 25.1 | 25.4 | 25.9 | 26.4 | 26.9 | 25.1       | 25.1 | 25.1 | 25.5 | 26   | 26.5 | 26.9 | 25.2       | 25.2 | 25.2 | 25.6 | 26.1 | 26.6 | 27.1 |
| 115                         | TC<br>SHC<br>kW | 246                | 249  | 252  | 270  | 291  | 305  | 320  | 253        | 255  | 256  | 274  | 294  | 309  | 323  | 262        | 262  | 262  | 277  | 298  | 312  | 328  |
|                             |                 | 246                | 240  | 235  | 195  | 152  | 118  | 83.5 | 253        | 250  | 246  | 204  | 158  | 121  | 83.4 | 262        | 261  | 261  | 218  | 167  | 125  | 83.9 |
|                             |                 | 28.1               | 28.2 | 28.3 | 28.6 | 29   | 29.3 | 29.6 | 28.3       | 28.3 | 28.3 | 28.6 | 29   | 29.4 | 29.7 | 28.4       | 28.4 | 28.4 | 28.7 | 29.1 | 29.4 | 29.9 |
| 125                         | TC<br>SHC<br>kW | 238                | 240  | 242  | 259  | 279  | 293  | 305  | 245        | 246  | 246  | 262  | 281  | 295  | 310  | 253        | 253  | 253  | 266  | 284  | 298  | 313  |
|                             |                 | 238                | 234  | 230  | 190  | 148  | 114  | 79.2 | 245        | 243  | 240  | 199  | 153  | 116  | 79.7 | 253        | 253  | 253  | 214  | 162  | 120  | 79.9 |
|                             |                 | 31.6               | 31.7 | 31.7 | 32   | 32.4 | 32.6 | 32.9 | 31.8       | 31.8 | 31.8 | 32.1 | 32.4 | 32.7 | 33   | 31.9       | 31.9 | 31.9 | 32.1 | 32.5 | 32.7 | 33.1 |

| 581A300 (25 Tons) (cont)    |     |                    |      |      |      |      |      |      |             |      |      |      |      |      |      |
|-----------------------------|-----|--------------------|------|------|------|------|------|------|-------------|------|------|------|------|------|------|
| Temp (F)<br>Air Ent<br>Cond |     | Evap Air — Cfm/BF  |      |      |      |      |      |      |             |      |      |      |      |      |      |
|                             |     | 10,750/0.08        |      |      |      |      |      |      | 12,000/0.09 |      |      |      |      |      |      |
|                             |     | Evap Air — Ewb (F) |      |      |      |      |      |      |             |      |      |      |      |      |      |
|                             |     | 54                 | 58   | 62   | 67   | 72   | 76   | 80   | 54          | 58   | 62   | 67   | 72   | 76   | 80   |
| 60                          | TC  | 322                | 324  | 327  | 351  | 380  | 404  | 429  | 332         | 333  | 334  | 357  | 386  | 410  | 432  |
|                             | SHC | 322                | 317  | 313  | 260  | 203  | 157  | 111  | 332         | 330  | 329  | 276  | 212  | 162  | 111  |
|                             | kW  | 16.3               | 16.4 | 16.4 | 17   | 17.8 | 18.5 | 19.2 | 16.6        | 16.6 | 16.6 | 17.2 | 18   | 18.6 | 19.2 |
| 70                          | TC  | 311                | 312  | 314  | 336  | 364  | 386  | 408  | 320         | 320  | 321  | 341  | 368  | 392  | 414  |
|                             | SHC | 311                | 308  | 305  | 255  | 198  | 151  | 105  | 320         | 320  | 319  | 269  | 206  | 156  | 106  |
|                             | kW  | 17.8               | 17.8 | 17.9 | 18.4 | 19.2 | 19.8 | 20.5 | 18          | 18   | 18   | 18.5 | 19.3 | 20   | 20.6 |
| 75                          | TC  | 306                | 307  | 308  | 329  | 356  | 378  | 398  | 315         | 315  | 315  | 333  | 360  | 383  | 404  |
|                             | SHC | 306                | 304  | 302  | 252  | 195  | 149  | 103  | 315         | 314  | 314  | 266  | 203  | 153  | 103  |
|                             | kW  | 18.7               | 18.7 | 18.7 | 19.3 | 20   | 20.6 | 21.3 | 18.9        | 18.9 | 18.9 | 19.4 | 20.1 | 20.8 | 21.4 |
| 85                          | TC  | 295                | 296  | 297  | 315  | 340  | 362  | 379  | 303         | 303  | 303  | 319  | 344  | 365  | 385  |
|                             | SHC | 295                | 295  | 294  | 246  | 189  | 144  | 97.3 | 303         | 303  | 303  | 260  | 198  | 148  | 97.9 |
|                             | kW  | 20.5               | 20.5 | 20.5 | 21   | 21.7 | 22.3 | 22.8 | 20.7        | 20.7 | 20.7 | 21.1 | 21.8 | 22.4 | 23   |
| 95                          | TC  | 286                | 286  | 286  | 303  | 327  | 344  | 364  | 293         | 293  | 294  | 307  | 330  | 347  | 366  |
|                             | SHC | 286                | 286  | 286  | 241  | 185  | 138  | 93   | 293         | 293  | 294  | 255  | 193  | 142  | 92.8 |
|                             | kW  | 22.7               | 22.7 | 22.7 | 23.1 | 23.8 | 24.3 | 24.9 | 22.9        | 22.9 | 22.9 | 23.2 | 23.9 | 24.4 | 24.9 |
| 105                         | TC  | 277                | 277  | 277  | 290  | 312  | 329  | 347  | 284         | 284  | 285  | 295  | 314  | 331  | 352  |
|                             | SHC | 277                | 277  | 277  | 236  | 179  | 133  | 88.3 | 284         | 284  | 285  | 250  | 188  | 137  | 88.7 |
|                             | kW  | 25.4               | 25.4 | 25.4 | 25.7 | 26.2 | 26.7 | 27.2 | 25.5        | 25.6 | 25.6 | 25.8 | 26.3 | 26.7 | 27.3 |
| 115                         | TC  | 268                | 269  | 269  | 281  | 300  | 315  | 332  | 274         | 274  | 275  | 283  | 303  | 317  | 333  |
|                             | SHC | 268                | 269  | 269  | 232  | 176  | 129  | 84.4 | 274         | 274  | 275  | 245  | 184  | 133  | 84   |
|                             | kW  | 28.5               | 28.5 | 28.5 | 28.7 | 29.2 | 29.5 | 30   | 28.6        | 28.6 | 28.6 | 28.8 | 29.2 | 29.5 | 30   |
| 125                         | TC  | 260                | 259  | 259  | 269  | 287  | 300  | 316  | 265         | 265  | 264  | 271  | 289  | 302  | 318  |
|                             | SHC | 260                | 259  | 259  | 227  | 171  | 125  | 80   | 265         | 265  | 264  | 240  | 179  | 129  | 80.1 |
|                             | kW  | 32                 | 32   | 32   | 32.1 | 32.5 | 32.8 | 33.2 | 32.1        | 32.1 | 32.1 | 32.2 | 32.5 | 32.8 | 33.3 |

**LEGEND**

BF — Bypass Factor  
 Edb — Entering Dry-Bulb  
 Ewb — Entering Wet-Bulb  
 kW — Compressor Motor Power Input  
 ldb — Leaving Dry-Bulb  
 lwb — Leaving Wet-Bulb  
 SHC — Sensible Heat Capacity (1000 Btuh) Gross  
 TC — Total Capacity (1000 Btuh) Gross

**NOTES:**

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil (} h_{lwb} \text{)}$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                             |
|--------------------------|--------------------------------|------|------|------|------|-----------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                    |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                     |
|                          | Correction Factor              |      |      |      |      |                             |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula<br>shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                             |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                             |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                             |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

- Use chart below for bypass factor.

| CFM    | ENTERING WET-BULB (F) |       |       |       |       |       |       |
|--------|-----------------------|-------|-------|-------|-------|-------|-------|
|        | 54                    | 58    | 62    | 67    | 72    | 76    | 80    |
|        | Bypass Factor         |       |       |       |       |       |       |
| 7,500  | 0.407                 | 0.208 | 0.097 | 0.104 | 0.123 | 0.000 | 0.000 |
| 8,250  | 0.443                 | 0.256 | 0.110 | 0.112 | 0.128 | 0.000 | 0.000 |
| 9,500  | 0.494                 | 0.324 | 0.138 | 0.123 | 0.136 | 0.000 | 0.000 |
| 10,750 | 0.536                 | 0.380 | 0.181 | 0.134 | 0.145 | 0.000 | 0.000 |
| 12,000 | 0.571                 | 0.427 | 0.232 | 0.145 | 0.154 | 0.000 | 0.000 |

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES, UNITS WITH HOT GAS REHEAT OPTION

| 581A181 (15 TONS) UNIT WITH HOT GAS REHEAT IN COOLING MODE |           |                                   |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|------------------------------------------------------------|-----------|-----------------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb)             |           | Air Entering Evaporator — Cfm/BF  |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|                                                            |           | 4500/0.02                         |             |             |             | 5250/0.03   |             |             |             | 6000/0.04   |             |             |             | 6750/0.04   |             |             |             | 7500/0.05   |             |             |             |
|                                                            |           | Air Entering Evaporator — Ewb (F) |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |             |
|                                                            |           | 57                                | 62          | 67          | 72          | 57          | 62          | 67          | 72          | 57          | 62          | 67          | 72          | 57          | 62          | 67          | 72          | 57          | 62          | 67          | 72          |
| 75                                                         | TC        | 166                               | 179         | 193         | 214         | 175         | 186         | 202         | 221         | 183         | 191         | 208         | 227         | 190         | 195         | 212         | 232         | 197         | 199         | 216         | 236         |
|                                                            | SHC<br>kW | 165<br>10.4                       | 152<br>10.6 | 129<br>10.7 | 108<br>10.9 | 175<br>10.5 | 166<br>10.6 | 140<br>10.8 | 115<br>11.0 | 183<br>10.6 | 178<br>10.7 | 150<br>10.9 | 121<br>11.1 | 190<br>10.7 | 189<br>10.7 | 159<br>10.9 | 127<br>11.2 | 197<br>10.8 | 196<br>10.8 | 168<br>11.0 | 133<br>11.2 |
| 85                                                         | TC        | 162                               | 174         | 189         | 209         | 171         | 180         | 195         | 216         | 179         | 185         | 200         | 222         | 186         | 189         | 205         | 226         | 192         | 194         | 208         | 230         |
|                                                            | SHC<br>kW | 162<br>11.7                       | 150<br>11.9 | 127<br>12.1 | 106<br>12.3 | 171<br>11.8 | 163<br>12.0 | 137<br>12.1 | 113<br>12.4 | 179<br>11.9 | 175<br>12.0 | 147<br>12.2 | 119<br>12.5 | 186<br>12.0 | 185<br>12.1 | 156<br>12.3 | 125<br>12.5 | 192<br>12.1 | 192<br>12.1 | 164<br>12.3 | 131<br>12.6 |
| 95                                                         | TC        | 158                               | 169         | 182         | 202         | 166         | 174         | 187         | 209         | 174         | 179         | 194         | 214         | 181         | 183         | 198         | 218         | 187         | 188         | 201         | 221         |
|                                                            | SHC<br>kW | 158<br>12.7                       | 148<br>12.9 | 126<br>13.1 | 104<br>13.3 | 166<br>12.9 | 160<br>13.0 | 134<br>13.2 | 110<br>13.4 | 174<br>13.0 | 172<br>13.0 | 145<br>13.2 | 116<br>13.5 | 181<br>13.1 | 180<br>13.1 | 154<br>13.3 | 122<br>13.6 | 187<br>13.1 | 187<br>13.2 | 163<br>13.4 | 128<br>13.6 |
| 105                                                        | TC        | 153                               | 163         | 178         | 195         | 162         | 168         | 181         | 201         | 169         | 172         | 188         | 206         | 175         | 177         | 191         | 209         | 181         | 181         | 194         | 213         |
|                                                            | SHC<br>kW | 153<br>14.1                       | 145<br>14.2 | 123<br>14.4 | 101<br>14.7 | 162<br>14.2 | 157<br>14.3 | 133<br>14.5 | 107<br>14.8 | 169<br>14.3 | 167<br>14.3 | 142<br>14.6 | 113<br>14.8 | 175<br>14.4 | 175<br>14.4 | 151<br>14.6 | 119<br>14.9 | 181<br>14.5 | 181<br>14.5 | 160<br>14.7 | 125<br>14.9 |
| 115                                                        | TC        | 148                               | 156         | 171         | 188         | 157         | 161         | 176         | 193         | 163         | 165         | 180         | 197         | 169         | 170         | 183         | 201         | 174         | 175         | 185         | 203         |
|                                                            | SHC<br>kW | 148<br>15.5                       | 141<br>15.6 | 120<br>15.8 | 98<br>16.1  | 157<br>15.6 | 153<br>15.7 | 130<br>15.9 | 104<br>16.2 | 163<br>15.7 | 162<br>15.8 | 139<br>16.0 | 110<br>16.3 | 169<br>15.8 | 169<br>15.8 | 148<br>16.1 | 116<br>16.3 | 174<br>15.9 | 174<br>15.9 | 156<br>16.1 | 122<br>16.4 |
| 125                                                        | TC        | 143                               | 149         | 163         | 179         | 151         | 153         | 168         | 184         | 157         | 158         | 171         | 188         | 163         | 163         | 174         | 190         | 167         | 167         | 176         | 192         |
|                                                            | SHC<br>kW | 143<br>17.0                       | 138<br>17.1 | 117<br>17.4 | 95<br>17.7  | 151<br>17.2 | 149<br>17.2 | 126<br>17.5 | 101<br>17.8 | 157<br>17.3 | 156<br>17.3 | 136<br>17.6 | 107<br>17.8 | 163<br>17.4 | 163<br>17.4 | 144<br>17.6 | 112<br>17.9 | 167<br>17.5 | 167<br>17.5 | 153<br>17.6 | 118<br>17.9 |

| 581A181 (15 TONS) UNIT WITH HOT GAS REHEAT — A IN REHEAT, B AND C OFF |     |                                        |     |     |           |     |     |           |     |     |           |     |     |           |     |     |
|-----------------------------------------------------------------------|-----|----------------------------------------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb)                        |     | Evaporator Air Quantity — Cfm/BF       |     |     |           |     |     |           |     |     |           |     |     |           |     |     |
|                                                                       |     | 4500/0.12                              |     |     | 5250/0.14 |     |     | 6000/0.15 |     |     | 6750/0.18 |     |     | 7500/0.18 |     |     |
|                                                                       |     | Evaporator Air — Relative Humidity (%) |     |     |           |     |     |           |     |     |           |     |     |           |     |     |
|                                                                       |     | 50                                     | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  |
| 65                                                                    | TC  | 55                                     | 57  | 59  | 56        | 58  | 59  | 56        | 58  | 60  | 57        | 59  | 60  | 57        | 59  | 61  |
|                                                                       | SHC | 34                                     | 32  | 30  | 36        | 34  | 32  | 37        | 35  | 33  | 38        | 36  | 35  | 40        | 38  | 36  |
|                                                                       | KW  | 4.4                                    | 4.5 | 4.5 | 4.4       | 4.5 | 4.5 | 4.4       | 4.5 | 4.5 | 4.4       | 4.5 | 4.5 | 4.4       | 4.5 | 4.5 |
| 75                                                                    | TC  | 42                                     | 44  | 45  | 43        | 44  | 46  | 43        | 45  | 46  | 43        | 45  | 46  | 44        | 45  | 47  |
|                                                                       | SHC | 22                                     | 19  | 17  | 23        | 21  | 18  | 25        | 22  | 20  | 26        | 24  | 21  | 28        | 25  | 23  |
|                                                                       | KW  | 4.8                                    | 4.8 | 4.8 | 4.8       | 4.8 | 4.8 | 4.8       | 4.8 | 4.8 | 4.8       | 4.8 | 4.8 | 4.8       | 4.8 | 4.8 |
| 85                                                                    | TC  | 29                                     | 30  | 31  | 29        | 31  | 32  | 30        | 31  | 32  | 30        | 32  | 33  | 31        | 32  | 33  |
|                                                                       | SHC | 9                                      | 6   | 3   | 11        | 8   | 5   | 13        | 10  | 7   | 14        | 11  | 8   | 16        | 12  | 9   |
|                                                                       | KW  | 5.2                                    | 5.2 | 5.3 | 5.2       | 5.2 | 5.3 | 5.2       | 5.2 | 5.3 | 5.2       | 5.2 | 5.3 | 5.2       | 5.2 | 5.3 |
| 95                                                                    | TC  | 15                                     | 16  | 17  | 16        | 17  | 18  | 16        | 18  | 18  | 17        | 18  | 19  | 17        | 18  | 19  |
|                                                                       | SHC | -3                                     | -7  | -11 | -1        | -5  | -9  | 1         | -3  | -7  | 2         | -2  | -5  | 4         | 0   | -4  |
|                                                                       | KW  | 5.6                                    | 5.6 | 5.6 | 5.6       | 5.6 | 5.6 | 5.6       | 5.6 | 5.6 | 5.6       | 5.6 | 5.6 | 5.6       | 5.6 | 5.6 |

| 581A181 (15 TONS) UNIT WITH HOT GAS REHEAT — A AND B IN REHEAT, C OFF |     |                                        |     |     |           |     |     |           |     |     |           |     |     |           |     |     |  |
|-----------------------------------------------------------------------|-----|----------------------------------------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|--|
| Temp (F)<br>Air Entering<br>Condenser<br>(Edb)                        |     | Evaporator Air Quantity — Cfm/BF       |     |     |           |     |     |           |     |     |           |     |     |           |     |     |  |
|                                                                       |     | 4500/0.12                              |     |     | 5250/0.14 |     |     | 6000/0.15 |     |     | 6750/0.18 |     |     | 7500/0.18 |     |     |  |
|                                                                       |     | Evaporator Air — Relative Humidity (%) |     |     |           |     |     |           |     |     |           |     |     |           |     |     |  |
|                                                                       |     | 50                                     | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  |  |
| 65                                                                    | TC  | 81                                     | 84  | 86  | 82        | 85  | 87  | 83        | 86  | 88  | 84        | 87  | 89  | 85        | 87  | 90  |  |
|                                                                       | SHC | 34                                     | 32  | 30  | 36        | 33  | 31  | 37        | 35  | 33  | 39        | 36  | 34  | 40        | 38  | 36  |  |
|                                                                       | KW  | 7.8                                    | 7.9 | 7.9 | 7.8       | 7.9 | 7.9 | 7.8       | 7.9 | 7.9 | 7.8       | 7.9 | 7.9 | 7.8       | 7.9 | 7.9 |  |
| 75                                                                    | TC  | 62                                     | 64  | 66  | 62        | 65  | 67  | 63        | 66  | 68  | 64        | 66  | 68  | 64        | 67  | 69  |  |
|                                                                       | SHC | 22                                     | 19  | 16  | 24        | 21  | 18  | 25        | 22  | 20  | 27        | 24  | 21  | 28        | 25  | 22  |  |
|                                                                       | KW  | 8.5                                    | 8.5 | 8.5 | 8.5       | 8.5 | 8.5 | 8.5       | 8.5 | 8.5 | 8.5       | 8.5 | 8.5 | 8.5       | 8.5 | 8.5 |  |
| 85                                                                    | TC  | 42                                     | 44  | 46  | 43        | 45  | 46  | 43        | 45  | 47  | 44        | 46  | 48  | 44        | 46  | 48  |  |
|                                                                       | SHC | 10                                     | 6   | 2   | 12        | 8   | 4   | 14        | 10  | 6   | 15        | 11  | 8   | 16        | 13  | 9   |  |
|                                                                       | KW  | 9.2                                    | 9.2 | 9.3 | 9.2       | 9.2 | 9.3 | 9.2       | 9.2 | 9.3 | 9.2       | 9.2 | 9.2 | 9.3       | 9.2 | 9.2 |  |
| 95                                                                    | TC  | 23                                     | 24  | 26  | 23        | 25  | 26  | 24        | 25  | 27  | 24        | 26  | 27  | 24        | 26  | 27  |  |
|                                                                       | SHC | -2                                     | -7  | -11 | 0         | -5  | -9  | 2         | -3  | -7  | 3         | -1  | -6  | 5         | 0   | -4  |  |
|                                                                       | KW  | 9.9                                    | 9.9 | 9.9 | 9.9       | 9.9 | 9.9 | 9.9       | 9.9 | 9.9 | 9.9       | 9.9 | 9.9 | 9.9       | 9.9 | 9.9 |  |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

581A155-300

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES, UNITS WITH HOT GAS REHEAT OPTION (cont)

### 581A181 (15 TONS) UNIT WITH HOT GAS REHEAT — A AND B IN REHEAT, C ON

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |      |      |           |      |      |           |      |      |           |      |      |           |      |      |
|------------------------------------------------|-----|----------------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
|                                                |     | 4500/0.12                              |      |      | 5250/0.14 |      |      | 6000/.015 |      |      | 6750/0.18 |      |      | 7500/0.18 |      |      |
|                                                |     | Evaporator Air — Relative Humidity (%) |      |      |           |      |      |           |      |      |           |      |      |           |      |      |
|                                                |     | 50                                     | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   |
| 65                                             | TC  | 133                                    | 140  | 146  | 134       | 141  | 147  | 135       | 142  | 148  | 136       | 143  | 149  | 137       | 144  | 150  |
|                                                | SHC | 73                                     | 69   | 65   | 75        | 71   | 67   | 77        | 73   | 69   | 79        | 75   | 71   | 81        | 76   | 72   |
|                                                | kW  | 10.7                                   | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 |
| 75                                             | TC  | 116                                    | 123  | 128  | 117       | 123  | 129  | 117       | 124  | 130  | 118       | 125  | 131  | 118       | 126  | 132  |
|                                                | SHC | 61                                     | 55   | 50   | 63        | 57   | 52   | 65        | 59   | 54   | 66        | 61   | 56   | 68        | 62   | 57   |
|                                                | kW  | 11.8                                   | 11.8 | 11.8 | 11.8      | 11.8 | 11.8 | 11.8      | 11.8 | 11.8 | 11.8      | 11.8 | 11.8 | 11.8      | 11.8 | 11.8 |
| 85                                             | TC  | 98                                     | 105  | 111  | 99        | 106  | 112  | 99        | 106  | 112  | 100       | 107  | 113  | 100       | 107  | 113  |
|                                                | SHC | 48                                     | 41   | 35   | 50        | 43   | 37   | 52        | 45   | 39   | 54        | 46   | 40   | 55        | 48   | 42   |
|                                                | kW  | 12.9                                   | 13.0 | 13.0 | 12.9      | 13.0 | 13.0 | 12.9      | 13.0 | 13.0 | 12.9      | 13.0 | 13.0 | 12.9      | 13.0 | 13.0 |
| 95                                             | TC  | 81                                     | 88   | 94   | 81        | 88   | 94   | 81        | 88   | 95   | 81        | 89   | 95   | 81        | 89   | 95   |
|                                                | SHC | 36                                     | 28   | 21   | 38        | 29   | 22   | 39        | 31   | 24   | 41        | 32   | 25   | 42        | 34   | 26   |
|                                                | kW  | 14.0                                   | 14.1 | 14.1 | 14.0      | 14.1 | 14.1 | 14.0      | 14.1 | 14.1 | 14.0      | 14.1 | 14.1 | 14.0      | 14.1 | 14.1 |

### 581A210 (18 TONS) UNIT WITH HOT GAS REHEAT IN COOLING MODE

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |      |           |      |      |      |           |      |      |      |           |      |      |      |           |      |      |      |
|------------------------------------------------|-----------------|-----------------------------------|------|------|------|-----------|------|------|------|-----------|------|------|------|-----------|------|------|------|-----------|------|------|------|
|                                                |                 | 5400/0.03                         |      |      |      | 6300/0.04 |      |      |      | 7200/0.05 |      |      |      | 8100/0.06 |      |      |      | 9000/0.07 |      |      |      |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |      |           |      |      |      |           |      |      |      |           |      |      |      |           |      |      |      |
|                                                |                 | 57                                | 62   | 67   | 72   | 57        | 62   | 67   | 72   | 57        | 62   | 67   | 72   | 57        | 62   | 67   | 72   | 57        | 62   | 67   | 72   |
| 75                                             | TC<br>SHC<br>kW | 183                               | 198  | 215  | 236  | 192       | 206  | 224  | 245  | 201       | 212  | 230  | 252  | 210       | 216  | 235  | 257  | 217       | 222  | 240  | 262  |
|                                                |                 | 182                               | 169  | 143  | 120  | 192       | 184  | 156  | 127  | 201       | 197  | 166  | 134  | 210       | 209  | 177  | 141  | 217       | 218  | 186  | 147  |
|                                                |                 | 11.5                              | 11.7 | 11.9 | 12.2 | 11.6      | 11.8 | 12.1 | 12.4 | 11.7      | 11.9 | 12.2 | 12.5 | 11.9      | 11.9 | 12.2 | 12.5 | 12.0      | 12.0 | 12.3 | 12.6 |
| 85                                             | TC<br>SHC<br>kW | 179                               | 192  | 210  | 231  | 188       | 200  | 217  | 239  | 197       | 205  | 223  | 244  | 205       | 210  | 227  | 249  | 212       | 215  | 232  | 254  |
|                                                |                 | 179                               | 166  | 142  | 117  | 188       | 181  | 153  | 125  | 197       | 194  | 163  | 131  | 205       | 206  | 173  | 138  | 212       | 213  | 183  | 145  |
|                                                |                 | 12.8                              | 13.1 | 13.3 | 13.7 | 13.0      | 13.2 | 13.5 | 13.8 | 13.2      | 13.3 | 13.6 | 13.9 | 13.3      | 13.4 | 13.7 | 14.0 | 13.4      | 13.5 | 13.7 | 14.1 |
| 95                                             | TC<br>SHC<br>kW | 175                               | 186  | 202  | 223  | 184       | 193  | 209  | 229  | 193       | 198  | 215  | 236  | 200       | 203  | 219  | 241  | 206       | 208  | 223  | 245  |
|                                                |                 | 175                               | 163  | 142  | 114  | 184       | 177  | 151  | 121  | 193       | 191  | 160  | 128  | 200       | 200  | 170  | 135  | 206       | 207  | 180  | 142  |
|                                                |                 | 14.1                              | 14.3 | 14.6 | 14.9 | 14.3      | 14.4 | 14.7 | 15.1 | 14.4      | 14.5 | 14.8 | 15.2 | 14.6      | 14.6 | 14.9 | 15.3 | 14.7      | 14.7 | 15.0 | 15.4 |
| 105                                            | TC<br>SHC<br>kW | 170                               | 180  | 197  | 215  | 179       | 186  | 201  | 222  | 187       | 192  | 208  | 226  | 194       | 197  | 212  | 230  | 200       | 202  | 215  | 235  |
|                                                |                 | 170                               | 160  | 136  | 111  | 179       | 174  | 147  | 118  | 187       | 186  | 158  | 125  | 194       | 195  | 168  | 131  | 200       | 201  | 178  | 138  |
|                                                |                 | 15.6                              | 15.8 | 16.1 | 16.5 | 15.8      | 15.9 | 16.2 | 16.6 | 15.9      | 16.0 | 16.3 | 16.7 | 16.1      | 16.1 | 16.4 | 16.8 | 16.2      | 16.2 | 16.5 | 16.9 |
| 115                                            | TC<br>SHC<br>kW | 165                               | 173  | 189  | 208  | 173       | 179  | 195  | 214  | 181       | 184  | 199  | 218  | 187       | 189  | 203  | 222  | 193       | 194  | 205  | 225  |
|                                                |                 | 165                               | 157  | 133  | 109  | 173       | 170  | 144  | 116  | 181       | 181  | 154  | 122  | 187       | 188  | 164  | 128  | 193       | 194  | 173  | 134  |
|                                                |                 | 17.2                              | 17.4 | 17.7 | 18.1 | 17.4      | 17.5 | 17.8 | 18.2 | 17.5      | 17.6 | 17.9 | 18.3 | 17.7      | 17.7 | 18.0 | 18.4 | 17.8      | 17.9 | 18.1 | 18.5 |
| 125                                            | TC<br>SHC<br>kW | 159                               | 166  | 181  | 199  | 167       | 171  | 186  | 203  | 174       | 177  | 190  | 207  | 180       | 182  | 193  | 210  | 186       | 187  | 196  | 213  |
|                                                |                 | 159                               | 154  | 130  | 105  | 167       | 166  | 140  | 112  | 174       | 175  | 151  | 118  | 180       | 181  | 160  | 124  | 186       | 187  | 170  | 130  |
|                                                |                 | 18.9                              | 19.1 | 19.5 | 19.9 | 19.1      | 19.2 | 19.6 | 20.0 | 19.3      | 19.4 | 19.7 | 20.1 | 19.5      | 19.5 | 19.8 | 20.1 | 19.6      | 19.6 | 19.8 | 20.2 |

### 581A210 (18 TONS) UNIT WITH HOT GAS REHEAT — A IN REHEAT, B AND C OFF

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |     |     |           |     |     |           |     |     |           |     |     |           |     |     |
|------------------------------------------------|-----|----------------------------------------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|
|                                                |     | 5400/0.03                              |     |     | 6300/0.04 |     |     | 7200/0.05 |     |     | 8100/0.06 |     |     | 9000/0.07 |     |     |
|                                                |     | Evaporator Air — Relative Humidity (%) |     |     |           |     |     |           |     |     |           |     |     |           |     |     |
|                                                |     | 50                                     | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  |
| 65                                             | TC  | 61                                     | 63  | 65  | 62        | 64  | 66  | 63        | 65  | 66  | 63        | 65  | 67  | 64        | 66  | 68  |
|                                                | SHC | 38                                     | 35  | 34  | 40        | 37  | 35  | 41        | 39  | 37  | 43        | 41  | 39  | 44        | 42  | 40  |
|                                                | kW  | 5.0                                    | 5.0 | 5.0 | 5.0       | 5.0 | 5.0 | 5.0       | 5.0 | 5.0 | 5.0       | 5.0 | 5.0 | 5.0       | 5.0 | 5.0 |
| 75                                             | TC  | 47                                     | 48  | 50  | 47        | 49  | 51  | 48        | 50  | 51  | 48        | 50  | 52  | 49        | 51  | 52  |
|                                                | SHC | 24                                     | 21  | 18  | 26        | 23  | 20  | 28        | 25  | 22  | 29        | 26  | 24  | 31        | 28  | 25  |
|                                                | kW  | 5.4                                    | 5.4 | 5.4 | 5.4       | 5.4 | 5.4 | 5.4       | 5.4 | 5.4 | 5.4       | 5.4 | 5.4 | 5.4       | 5.4 | 5.4 |
| 85                                             | TC  | 32                                     | 33  | 35  | 32        | 34  | 35  | 33        | 34  | 36  | 33        | 35  | 36  | 34        | 35  | 37  |
|                                                | SHC | 11                                     | 7   | 3   | 13        | 9   | 5   | 14        | 11  | 7   | 16        | 12  | 9   | 17        | 14  | 10  |
|                                                | kW  | 5.9                                    | 5.9 | 5.9 | 5.9       | 5.9 | 5.9 | 5.9       | 5.9 | 5.9 | 5.9       | 5.9 | 5.9 | 5.9       | 5.9 | 5.9 |
| 95                                             | TC  | 17                                     | 18  | 19  | 18        | 19  | 20  | 18        | 19  | 20  | 19        | 20  | 21  | 19        | 20  | 21  |
|                                                | SHC | −3                                     | −8  | −12 | −1        | −6  | −10 | 1         | −4  | −8  | 3         | −2  | −6  | 4         | 0   | −4  |
|                                                | kW  | 6.3                                    | 6.3 | 6.3 | 6.3       | 6.3 | 6.3 | 6.3       | 6.3 | 6.3 | 6.3       | 6.3 | 6.3 | 6.3       | 6.3 | 6.3 |

#### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

#### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                             |
|--------------------------|--------------------------------|------|------|------|------|-----------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                    |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                     |
|                          | Correction Factor              |      |      |      |      |                             |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula<br>shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                             |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                             |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                             |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES, UNITS WITH HOT GAS REHEAT OPTION (cont)

581A210 (18 TONS) UNIT WITH HOT GAS REHEAT — A AND B IN REHEAT, C OFF

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |      |      |           |      |      |           |      |      |           |      |      |           |      |      |
|------------------------------------------------|-----|----------------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
|                                                |     | 5400/0.03                              |      |      | 6300/0.04 |      |      | 7200/0.05 |      |      | 8100/0.06 |      |      | 9000/0.07 |      |      |
|                                                |     | Evaporator Air — Relative Humidity (%) |      |      |           |      |      |           |      |      |           |      |      |           |      |      |
|                                                |     | 50                                     | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   |
| 65                                             | TC  | 90                                     | 93   | 95   | 91        | 94   | 97   | 92        | 95   | 98   | 93        | 96   | 99   | 94        | 97   | 100  |
|                                                | SHC | 38                                     | 35   | 33   | 40        | 37   | 35   | 41        | 39   | 37   | 43        | 40   | 38   | 44        | 42   | 40   |
|                                                | KW  | 8.8                                    | 8.8  | 8.8  | 8.8       | 8.8  | 8.8  | 8.8       | 8.8  | 8.8  | 8.8       | 8.8  | 8.8  | 8.8       | 8.8  | 8.8  |
| 75                                             | TC  | 68                                     | 71   | 73   | 69        | 72   | 74   | 70        | 73   | 75   | 71        | 74   | 76   | 72        | 74   | 77   |
|                                                | SHC | 24                                     | 21   | 18   | 26        | 23   | 20   | 28        | 25   | 22   | 30        | 26   | 23   | 31        | 28   | 25   |
|                                                | KW  | 9.6                                    | 9.6  | 9.6  | 9.6       | 9.6  | 9.6  | 9.6       | 9.6  | 9.6  | 9.6       | 9.6  | 9.6  | 9.6       | 9.6  | 9.6  |
| 85                                             | TC  | 47                                     | 49   | 51   | 47        | 50   | 52   | 48        | 50   | 52   | 49        | 51   | 53   | 49        | 51   | 53   |
|                                                | SHC | 11                                     | 7    | 3    | 13        | 9    | 5    | 15        | 11   | 7    | 17        | 12   | 9    | 18        | 14   | 10   |
|                                                | KW  | 10.3                                   | 10.3 | 10.3 | 10.3      | 10.3 | 10.3 | 10.3      | 10.3 | 10.3 | 10.3      | 10.3 | 10.3 | 10.3      | 10.3 | 10.3 |
| 95                                             | TC  | 25                                     | 27   | 29   | 26        | 27   | 29   | 26        | 28   | 29   | 26        | 28   | 30   | 27        | 29   | 30   |
|                                                | SHC | -2                                     | -8   | -12  | 0         | -5   | -10  | 2         | -3   | -8   | 3         | -2   | -6   | 5         | 0    | -5   |
|                                                | KW  | 11.1                                   | 11.1 | 11.1 | 11.1      | 11.1 | 11.1 | 11.1      | 11.1 | 11.1 | 11.1      | 11.1 | 11.1 | 11.1      | 11.1 | 11.1 |

581A210 (18 TONS) UNIT WITH HOT GAS REHEAT — A AND B IN REHEAT, C ON

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |      |      |           |      |      |           |      |      |           |      |      |           |      |      |
|------------------------------------------------|-----|----------------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|
|                                                |     | 5400/0.03                              |      |      | 6300/0.04 |      |      | 7200/0.05 |      |      | 8100/0.06 |      |      | 9000/0.07 |      |      |
|                                                |     | Evaporator Air — Relative Humidity (%) |      |      |           |      |      |           |      |      |           |      |      |           |      |      |
|                                                |     | 50                                     | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   |
| 65                                             | TC  | 147                                    | 155  | 162  | 148       | 157  | 164  | 150       | 158  | 165  | 151       | 160  | 167  | 152       | 161  | 168  |
|                                                | SHC | 81                                     | 76   | 72   | 84        | 79   | 75   | 86        | 81   | 77   | 88        | 83   | 79   | 90        | 85   | 80   |
|                                                | kW  | 11.9                                   | 12.0 | 12.0 | 11.9      | 12.0 | 12.0 | 11.9      | 12.0 | 12.0 | 11.9      | 12.0 | 12.0 | 11.9      | 12.0 | 12.0 |
| 75                                             | TC  | 128                                    | 136  | 143  | 129       | 137  | 144  | 130       | 138  | 146  | 131       | 139  | 147  | 132       | 140  | 148  |
|                                                | SHC | 67                                     | 61   | 56   | 70        | 63   | 58   | 72        | 65   | 60   | 74        | 67   | 62   | 76        | 69   | 63   |
|                                                | kW  | 13.2                                   | 13.2 | 13.2 | 13.2      | 13.2 | 13.2 | 13.2      | 13.2 | 13.2 | 13.2      | 13.2 | 13.2 | 13.2      | 13.2 | 13.2 |
| 85                                             | TC  | 108                                    | 117  | 124  | 109       | 118  | 125  | 110       | 118  | 126  | 110       | 119  | 127  | 111       | 120  | 127  |
|                                                | SHC | 54                                     | 46   | 39   | 56        | 48   | 41   | 58        | 50   | 43   | 60        | 52   | 45   | 61        | 53   | 46   |
|                                                | kW  | 14.5                                   | 14.5 | 14.5 | 14.5      | 14.5 | 14.5 | 14.5      | 14.5 | 14.5 | 14.5      | 14.5 | 14.5 | 14.5      | 14.5 | 14.5 |
| 95                                             | TC  | 89                                     | 98   | 105  | 89        | 98   | 106  | 89        | 98   | 106  | 90        | 99   | 107  | 90        | 99   | 107  |
|                                                | SHC | 40                                     | 31   | 23   | 42        | 33   | 25   | 44        | 34   | 26   | 45        | 36   | 28   | 47        | 37   | 29   |
|                                                | kW  | 15.8                                   | 15.7 | 15.7 | 15.8      | 15.7 | 15.7 | 15.8      | 15.7 | 15.7 | 15.8      | 15.7 | 15.7 | 15.8      | 15.7 | 15.7 |

581A240 (20 TONS) UNIT WITH HOT GAS REHEAT IN COOLING MODE

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |                 | Air Entering Evaporator — Cfm/BF  |      |      |      |           |      |      |      |           |      |      |      |           |      |      |      |             |      |      |      |
|------------------------------------------------|-----------------|-----------------------------------|------|------|------|-----------|------|------|------|-----------|------|------|------|-----------|------|------|------|-------------|------|------|------|
|                                                |                 | 6000/0.04                         |      |      |      | 7000/0.05 |      |      |      | 8000/0.06 |      |      |      | 9000/0.07 |      |      |      | 10,000/0.08 |      |      |      |
|                                                |                 | Air Entering Evaporator — Ewb (F) |      |      |      |           |      |      |      |           |      |      |      |           |      |      |      |             |      |      |      |
|                                                |                 | 57                                | 62   | 67   | 72   | 57        | 62   | 67   | 72   | 57        | 62   | 67   | 72   | 57        | 62   | 67   | 72   | 57          | 62   | 67   | 72   |
| 75                                             | TC<br>SHC<br>kW | 216                               | 234  | 255  | 279  | 226       | 243  | 265  | 290  | 237       | 251  | 273  | 298  | 247       | 256  | 279  | 305  | 256         | 263  | 284  | 310  |
|                                                |                 | 213                               | 199  | 171  | 141  | 225       | 217  | 185  | 151  | 237       | 232  | 198  | 159  | 247       | 241  | 211  | 168  | 256         | 251  | 223  | 176  |
|                                                |                 | 13.9                              | 14.2 | 14.6 | 15.0 | 14.0      | 14.4 | 14.8 | 15.3 | 14.3      | 14.5 | 15.0 | 15.4 | 14.5      | 14.6 | 15.1 | 15.6 | 14.6        | 14.8 | 15.2 | 15.7 |
| 85                                             | TC<br>SHC<br>kW | 211                               | 227  | 249  | 272  | 221       | 237  | 258  | 282  | 232       | 243  | 265  | 287  | 242       | 250  | 270  | 293  | 250         | 255  | 275  | 300  |
|                                                |                 | 209                               | 194  | 168  | 141  | 221       | 214  | 182  | 148  | 232       | 228  | 195  | 155  | 242       | 237  | 206  | 163  | 250         | 244  | 220  | 173  |
|                                                |                 | 15.4                              | 15.8 | 16.2 | 16.7 | 15.7      | 16.0 | 16.4 | 16.9 | 15.9      | 16.1 | 16.6 | 17.1 | 16.1      | 16.3 | 16.7 | 17.2 | 16.3        | 16.4 | 16.8 | 17.4 |
| 95                                             | TC<br>SHC<br>kW | 207                               | 220  | 240  | 262  | 217       | 228  | 250  | 269  | 228       | 235  | 254  | 278  | 236       | 241  | 259  | 286  | 243         | 247  | 264  | 290  |
|                                                |                 | 205                               | 192  | 164  | 134  | 217       | 209  | 179  | 142  | 228       | 222  | 190  | 152  | 236       | 230  | 202  | 161  | 243         | 236  | 214  | 169  |
|                                                |                 | 17.2                              | 17.5 | 17.9 | 18.4 | 17.4      | 17.7 | 18.2 | 18.6 | 17.7      | 17.9 | 18.3 | 18.8 | 17.9      | 18.0 | 18.4 | 19.0 | 18.1        | 18.2 | 18.6 | 19.1 |
| 105                                            | TC<br>SHC<br>kW | 201                               | 214  | 232  | 253  | 211       | 221  | 238  | 261  | 221       | 228  | 247  | 266  | 229       | 234  | 251  | 271  | 236         | 239  | 255  | 278  |
|                                                |                 | 197                               | 190  | 161  | 131  | 211       | 206  | 172  | 140  | 221       | 216  | 188  | 146  | 229       | 223  | 200  | 155  | 236         | 229  | 212  | 165  |
|                                                |                 | 19.0                              | 19.3 | 19.8 | 20.3 | 19.3      | 19.5 | 20.0 | 20.6 | 19.5      | 19.7 | 20.2 | 20.7 | 19.8      | 19.9 | 20.3 | 20.8 | 20.0        | 20.0 | 20.4 | 21.0 |
| 115                                            | TC<br>SHC<br>kW | 195                               | 206  | 224  | 245  | 205       | 213  | 230  | 252  | 214       | 219  | 236  | 258  | 221       | 225  | 240  | 262  | 228         | 231  | 243  | 265  |
|                                                |                 | 191                               | 185  | 158  | 129  | 205       | 201  | 171  | 137  | 214       | 209  | 183  | 145  | 221       | 215  | 194  | 152  | 228         | 221  | 207  | 160  |
|                                                |                 | 21.0                              | 21.3 | 21.8 | 22.4 | 21.3      | 21.5 | 22.0 | 22.7 | 21.6      | 21.7 | 22.2 | 22.8 | 21.8      | 21.9 | 22.3 | 22.9 | 22.0        | 22.1 | 22.4 | 23.0 |
| 125                                            | TC<br>SHC<br>kW | 189                               | 198  | 215  | 235  | 198       | 204  | 221  | 239  | 207       | 210  | 225  | 244  | 214       | 216  | 229  | 248  | 220         | 222  | 232  | 251  |
|                                                |                 | 184                               | 179  | 154  | 125  | 198       | 194  | 167  | 132  | 207       | 201  | 179  | 139  | 214       | 207  | 191  | 147  | 220         | 212  | 202  | 154  |
|                                                |                 | 23.1                              | 23.4 | 24.0 | 24.7 | 23.5      | 23.7 | 24.2 | 24.8 | 23.8      | 23.9 | 24.4 | 25.0 | 24.0      | 24.1 | 24.5 | 25.1 | 24.2        | 24.3 | 24.6 | 25.2 |

### LEGEND

BF — Bypass Factor  
Edb — Entering Dry-Bulb  
Ewb — Entering Wet-Bulb  
kW — Compressor Motor Power Input  
ldb — Leaving Dry-Bulb  
lwb — Leaving Wet-Bulb  
SHC — Sensible Heat Capacity (1000 Btuh) Gross  
TC — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS FACTOR (BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------|--------------------------------|------|------|------|------|--------------------------|
|                    | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                    | 81                             | 82   | 83   | 84   | 85   | over 85                  |
| Correction Factor  |                                |      |      |      |      |                          |
| .05                | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

Correction Factor =  $1.10 \times (1 - BF) \times (edb - 80)$ .

581A155-300



# PERFORMANCE DATA (cont)

## COOLING CAPACITIES, UNITS WITH HOT GAS REHEAT OPTION (cont)

581A240 (20 TONS) UNIT WITH HOT GAS REHEAT — A IN REHEAT, B AND C OFF

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |     |     |           |     |     |           |     |     |           |     |     |             |     |     |
|------------------------------------------------|-----|----------------------------------------|-----|-----|-----------|-----|-----|-----------|-----|-----|-----------|-----|-----|-------------|-----|-----|
|                                                |     | 6000/0.04                              |     |     | 7000/0.05 |     |     | 8000/0.06 |     |     | 9000/0.07 |     |     | 10,000/0.08 |     |     |
|                                                |     | Evaporator Air — Relative Humidity (%) |     |     |           |     |     |           |     |     |           |     |     |             |     |     |
|                                                |     | 50                                     | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50        | 55  | 60  | 50          | 55  | 60  |
| 65                                             | TC  | 73                                     | 75  | 77  | 73        | 76  | 78  | 74        | 76  | 79  | 75        | 77  | 79  | 75          | 78  | 80  |
|                                                | SHC | 45                                     | 42  | 40  | 47        | 44  | 42  | 49        | 47  | 44  | 51        | 48  | 46  | 53          | 50  | 48  |
|                                                | kW  | 6.1                                    | 6.1 | 6.1 | 6.1       | 6.1 | 6.1 | 6.1       | 6.1 | 6.1 | 6.1       | 6.1 | 6.1 | 6.1         | 6.1 | 6.1 |
| 75                                             | TC  | 55                                     | 57  | 59  | 56        | 58  | 60  | 56        | 58  | 60  | 57        | 59  | 61  | 57          | 59  | 61  |
|                                                | SHC | 29                                     | 25  | 22  | 31        | 27  | 24  | 33        | 30  | 26  | 35        | 31  | 28  | 37          | 33  | 30  |
|                                                | kW  | 6.6                                    | 6.6 | 6.6 | 6.6       | 6.6 | 6.6 | 6.6       | 6.6 | 6.6 | 6.6       | 6.6 | 6.6 | 6.6         | 6.6 | 6.6 |
| 85                                             | TC  | 38                                     | 40  | 41  | 38        | 40  | 42  | 39        | 40  | 42  | 39        | 41  | 42  | 39          | 41  | 43  |
|                                                | SHC | 13                                     | 8   | 4   | 15        | 10  | 7   | 17        | 13  | 9   | 19        | 14  | 10  | 21          | 16  | 12  |
|                                                | kW  | 7.2                                    | 7.2 | 7.2 | 7.2       | 7.2 | 7.2 | 7.2       | 7.2 | 7.2 | 7.2       | 7.2 | 7.2 | 7.2         | 7.2 | 7.2 |
| 95                                             | TC  | 20                                     | 22  | 23  | 21        | 22  | 24  | 21        | 22  | 24  | 21        | 23  | 24  | 21          | 23  | 24  |
|                                                | SHC | -4                                     | -9  | -14 | -1        | -7  | -11 | 1         | -4  | -9  | 3         | -3  | -7  | 5           | -1  | -6  |
|                                                | kW  | 7.7                                    | 7.7 | 7.7 | 7.7       | 7.7 | 7.7 | 7.7       | 7.7 | 7.7 | 7.7       | 7.7 | 7.7 | 7.7         | 7.7 | 7.7 |

581A240 (20 TONS) UNIT WITH HOT GAS REHEAT — A AND B IN REHEAT, C OFF

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |      |      |           |      |      |           |      |      |           |      |      |             |      |      |
|------------------------------------------------|-----|----------------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|-------------|------|------|
|                                                |     | 6000/0.04                              |      |      | 7000/0.05 |      |      | 8000/0.06 |      |      | 9000/0.07 |      |      | 10,000/0.08 |      |      |
|                                                |     | Evaporator Air — Relative Humidity (%) |      |      |           |      |      |           |      |      |           |      |      |             |      |      |
|                                                |     | 50                                     | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50          | 55   | 60   |
| 65                                             | TC  | 106                                    | 110  | 113  | 108       | 111  | 114  | 109       | 113  | 116  | 110       | 114  | 117  | 111         | 115  | 118  |
|                                                | SHC | 45                                     | 42   | 39   | 47        | 44   | 41   | 49        | 46   | 44   | 51        | 48   | 46   | 53          | 50   | 47   |
|                                                | kW  | 10.7                                   | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 | 10.7      | 10.7 | 10.8 | 10.7        | 10.7 | 10.8 |
| 75                                             | TC  | 81                                     | 84   | 87   | 82        | 85   | 88   | 83        | 86   | 89   | 83        | 87   | 89   | 84          | 87   | 90   |
|                                                | SHC | 29                                     | 25   | 21   | 31        | 27   | 24   | 34        | 29   | 26   | 36        | 31   | 28   | 37          | 33   | 30   |
|                                                | kW  | 11.6                                   | 11.6 | 11.6 | 11.6      | 11.6 | 11.6 | 11.6      | 11.6 | 11.6 | 11.6      | 11.6 | 11.6 | 11.6        | 11.6 | 11.6 |
| 85                                             | TC  | 56                                     | 58   | 61   | 56        | 59   | 61   | 56        | 59   | 61   | 57        | 59   | 62   | 57          | 60   | 62   |
|                                                | SHC | 13                                     | 8    | 3    | 16        | 10   | 6    | 18        | 13   | 8    | 20        | 15   | 10   | 22          | 16   | 12   |
|                                                | kW  | 12.6                                   | 12.7 | 12.7 | 12.6      | 12.7 | 12.7 | 12.6      | 12.7 | 12.7 | 12.6      | 12.7 | 12.7 | 12.6        | 12.7 | 12.7 |
| 95                                             | TC  | 30                                     | 33   | 34   | 30        | 32   | 34   | 30        | 32   | 34   | 30        | 32   | 34   | 30          | 32   | 34   |
|                                                | SHC | -3                                     | -9   | -14  | 0         | -6   | -12  | 2         | -4   | -10  | 4         | -2   | -8   | 6           | 0    | -6   |
|                                                | kW  | 13.6                                   | 13.6 | 13.6 | 13.6      | 13.6 | 13.6 | 13.6      | 13.6 | 13.6 | 13.6      | 13.6 | 13.6 | 13.6        | 13.6 | 13.6 |

581A240 (20 TONS) UNIT WITH HOT GAS REHEAT — A AND B IN REHEAT, C ON

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |      |      |           |      |      |           |      |      |           |      |      |             |      |      |
|------------------------------------------------|-----|----------------------------------------|------|------|-----------|------|------|-----------|------|------|-----------|------|------|-------------|------|------|
|                                                |     | 6000/0.04                              |      |      | 7000/0.05 |      |      | 8000/0.06 |      |      | 9000/0.07 |      |      | 10,000/0.08 |      |      |
|                                                |     | Evaporator Air — Relative Humidity (%) |      |      |           |      |      |           |      |      |           |      |      |             |      |      |
|                                                |     | 50                                     | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50        | 55   | 60   | 50          | 55   | 60   |
| 65                                             | TC  | 177                                    | 185  | 191  | 177       | 185  | 192  | 178       | 186  | 192  | 178       | 186  | 193  | 178         | 186  | 193  |
|                                                | SHC | 98                                     | 92   | 86   | 100       | 94   | 88   | 101       | 95   | 90   | 103       | 97   | 92   | 104         | 98   | 93   |
|                                                | kW  | 14.5                                   | 14.6 | 14.7 | 14.5      | 14.6 | 14.7 | 14.5      | 14.6 | 14.7 | 14.5      | 14.6 | 14.7 | 14.5        | 14.6 | 14.7 |
| 75                                             | TC  | 154                                    | 161  | 168  | 154       | 162  | 169  | 155       | 162  | 169  | 155       | 163  | 169  | 155         | 163  | 170  |
|                                                | SHC | 81                                     | 73   | 66   | 83        | 75   | 69   | 85        | 78   | 71   | 87        | 80   | 73   | 89          | 81   | 75   |
|                                                | kW  | 16.1                                   | 16.1 | 16.1 | 16.1      | 16.1 | 16.1 | 16.1      | 16.1 | 16.1 | 16.1      | 16.1 | 16.1 | 16.1        | 16.1 | 16.1 |
| 85                                             | TC  | 131                                    | 138  | 145  | 131       | 139  | 145  | 131       | 139  | 146  | 132       | 139  | 146  | 132         | 140  | 146  |
|                                                | SHC | 63                                     | 54   | 46   | 66        | 57   | 49   | 69        | 60   | 52   | 71        | 62   | 54   | 73          | 64   | 56   |
|                                                | kW  | 17.7                                   | 17.7 | 17.8 | 17.7      | 17.7 | 17.8 | 17.7      | 17.7 | 17.8 | 17.7      | 17.7 | 17.8 | 17.7        | 17.7 | 17.8 |
| 95                                             | TC  | 107                                    | 115  | 122  | 108       | 115  | 122  | 108       | 116  | 122  | 108       | 116  | 123  | 109         | 116  | 123  |
|                                                | SHC | 46                                     | 35   | 25   | 50        | 39   | 29   | 53        | 42   | 32   | 55        | 45   | 35   | 58          | 47   | 38   |
|                                                | kW  | 19.3                                   | 19.3 | 19.3 | 19.3      | 19.3 | 19.3 | 19.3      | 19.3 | 19.3 | 19.3      | 19.3 | 19.3 | 19.3        | 19.3 | 19.3 |

### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

- Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil  
The SHC is based on 80 F edb temperature of air entering evaporator coil.  
Below 80 F edb, subtract (corr factor x cfm) from SHC.  
Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                             |
|--------------------------|--------------------------------|------|------|------|------|-----------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                    |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                     |
|                          | Correction Factor              |      |      |      |      |                             |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula<br>shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                             |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                             |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                             |

Interpolation is permissible.  
Correction Factor =  $1.10 \times (1 - \text{BF}) \times (\text{edb} - 80)$ .

# PERFORMANCE DATA (cont)

## COOLING CAPACITIES, UNITS WITH HOT GAS REHEAT OPTION (cont)

### 581A300 (25 TONS) UNIT WITH HOT GAS REHEAT IN COOLING MODE

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Air Entering Evaporator — Cfm/BF  |      |      |      |            |      |      |      |            |      |      |      |              |      |      |      |              |      |      |      |
|------------------------------------------------|-----|-----------------------------------|------|------|------|------------|------|------|------|------------|------|------|------|--------------|------|------|------|--------------|------|------|------|
|                                                |     | 7000/0.042                        |      |      |      | 8250/0.052 |      |      |      | 9500/0.062 |      |      |      | 10,750/0.072 |      |      |      | 12,000/0.082 |      |      |      |
|                                                |     | Air Entering Evaporator — Ewb (F) |      |      |      |            |      |      |      |            |      |      |      |              |      |      |      |              |      |      |      |
|                                                |     | 57                                | 62   | 67   | 72   | 57         | 62   | 67   | 72   | 57         | 62   | 67   | 72   | 57           | 62   | 67   | 72   | 57           | 62   | 67   | 72   |
| 75                                             | TC  | 245                               | 268  | 293  | 318  | 259        | 282  | 303  | 333  | 274        | 291  | 314  | 340  | 289          | 301  | 322  | 348  | 305          | 309  | 332  | 356  |
|                                                | SHC | 245                               | 229  | 197  | 162  | 259        | 254  | 213  | 173  | 274        | 271  | 230  | 183  | 289          | 287  | 247  | 195  | 305          | 298  | 267  | 203  |
|                                                | kW  | 16.4                              | 17.0 | 17.6 | 18.2 | 16.7       | 17.4 | 17.9 | 18.6 | 17.1       | 17.6 | 18.2 | 18.8 | 17.5         | 17.8 | 18.4 | 19.0 | 18.0         | 18.1 | 18.6 | 19.2 |
| 85                                             | TC  | 233                               | 259  | 278  | 309  | 256        | 273  | 293  | 324  | 271        | 282  | 305  | 330  | 285          | 290  | 312  | 337  | 298          | 303  | 321  | 343  |
|                                                | SHC | 233                               | 228  | 186  | 158  | 256        | 252  | 211  | 171  | 271        | 264  | 229  | 180  | 285          | 276  | 246  | 191  | 298          | 295  | 261  | 201  |
|                                                | kW  | 17.9                              | 18.7 | 19.3 | 19.9 | 18.5       | 19.1 | 19.7 | 20.4 | 19.0       | 19.4 | 20.0 | 20.8 | 19.3         | 19.6 | 20.2 | 21.1 | 19.8         | 19.9 | 20.4 | 21.3 |
| 95                                             | TC  | 230                               | 252  | 276  | 303  | 251        | 265  | 284  | 314  | 269        | 274  | 290  | 326  | 274          | 282  | 300  | 332  | 283          | 293  | 308  | 334  |
|                                                | SHC | 230                               | 225  | 191  | 156  | 251        | 249  | 202  | 166  | 269        | 269  | 220  | 181  | 274          | 274  | 238  | 190  | 283          | 280  | 259  | 197  |
|                                                | kW  | 20.0                              | 20.8 | 21.4 | 22.1 | 20.7       | 21.2 | 21.5 | 22.4 | 21.3       | 21.4 | 21.9 | 23.0 | 21.5         | 21.7 | 22.1 | 23.2 | 21.6         | 22.0 | 22.5 | 23.3 |
| 105                                            | TC  | 226                               | 245  | 268  | 292  | 242        | 253  | 277  | 301  | 255        | 264  | 284  | 308  | 266          | 275  | 290  | 314  | 278          | 281  | 294  | 319  |
|                                                | SHC | 226                               | 223  | 188  | 153  | 242        | 241  | 205  | 163  | 255        | 255  | 221  | 171  | 265          | 265  | 240  | 185  | 278          | 278  | 253  | 194  |
|                                                | kW  | 22.0                              | 22.8 | 23.3 | 24.3 | 22.7       | 23.1 | 23.7 | 24.7 | 23.1       | 23.4 | 24.0 | 25.0 | 23.6         | 23.7 | 24.3 | 25.2 | 24.0         | 24.1 | 24.4 | 25.4 |
| 115                                            | TC  | 221                               | 233  | 258  | 281  | 232        | 242  | 267  | 290  | 247        | 253  | 274  | 297  | 253          | 260  | 275  | 302  | 267          | 269  | 279  | 306  |
|                                                | SHC | 221                               | 217  | 183  | 149  | 232        | 230  | 200  | 160  | 247        | 246  | 217  | 170  | 253          | 254  | 233  | 179  | 267          | 267  | 248  | 189  |
|                                                | kW  | 24.3                              | 25.1 | 25.7 | 26.7 | 24.8       | 25.4 | 26.1 | 27.1 | 25.3       | 25.8 | 26.4 | 27.2 | 25.8         | 26.0 | 26.5 | 27.3 | 26.1         | 26.3 | 26.7 | 27.4 |
| 125                                            | TC  | 216                               | 223  | 247  | 268  | 225        | 230  | 253  | 275  | 237        | 240  | 256  | 280  | 247          | 248  | 260  | 285  | 254          | 255  | 263  | 288  |
|                                                | SHC | 216                               | 212  | 181  | 145  | 225        | 223  | 196  | 155  | 237        | 236  | 211  | 163  | 247          | 247  | 228  | 174  | 254          | 254  | 242  | 184  |
|                                                | kW  | 26.9                              | 27.1 | 28.0 | 29.0 | 27.4       | 27.5 | 28.3 | 29.4 | 27.8       | 27.9 | 28.5 | 29.6 | 28.2         | 28.3 | 28.7 | 29.8 | 28.5         | 28.6 | 28.9 | 29.9 |

### 581A300 (25 TONS) UNIT WITH HOT GAS REHEAT — A IN REHEAT, B OFF

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |     |     |            |     |     |            |     |     |              |     |     |              |     |     |
|------------------------------------------------|-----|----------------------------------------|-----|-----|------------|-----|-----|------------|-----|-----|--------------|-----|-----|--------------|-----|-----|
|                                                |     | 7500/0.045                             |     |     | 8250/0.055 |     |     | 9500/0.065 |     |     | 10,750/0.075 |     |     | 12,000/0.085 |     |     |
|                                                |     | Evaporator Air — Relative Humidity (%) |     |     |            |     |     |            |     |     |              |     |     |              |     |     |
|                                                |     | 50                                     | 55  | 60  | 50         | 55  | 60  | 50         | 55  | 60  | 50           | 55  | 60  | 50           | 55  | 60  |
| 65                                             | TC  | 79                                     | 83  | 87  | 80         | 84  | 88  | 81         | 85  | 89  | 82           | 86  | 90  | 83           | 87  | 91  |
|                                                | SHC | 39                                     | 33  | 28  | 41         | 35  | 30  | 43         | 37  | 32  | 45           | 39  | 34  | 47           | 41  | 36  |
|                                                | KW  | 11                                     | 11  | 11  | 11         | 11  | 11  | 11         | 11  | 11  | 11           | 11  | 11  | 11           | 11  | 11  |
| 75                                             | TC  | 56                                     | 61  | 65  | 57         | 62  | 66  | 59         | 63  | 67  | 60           | 64  | 68  | 61           | 65  | 69  |
|                                                | SHC | 18                                     | 11  | 5   | 20         | 12  | 6   | 22         | 15  | 8   | 24           | 16  | 10  | 26           | 18  | 12  |
|                                                | KW  | 11                                     | 11  | 11  | 11         | 11  | 11  | 11         | 11  | 11  | 11           | 11  | 11  | 11           | 11  | 11  |
| 85                                             | TC  | 34                                     | 38  | 42  | 35         | 39  | 43  | 37         | 41  | 45  | 38           | 42  | 46  | 39           | 43  | 47  |
|                                                | SHC | -2                                     | -11 | -19 | -1         | -10 | -18 | 1          | -8  | -16 | 3            | -7  | -14 | 4            | -5  | -13 |
|                                                | KW  | 11                                     | 11  | 12  | 11         | 12  | 12  | 12         | 12  | 12  | 12           | 12  | 12  | 12           | 12  | 12  |
| 95                                             | TC  | 12                                     | 16  | 19  | 13         | 17  | 21  | 15         | 19  | 22  | 16           | 20  | 24  | 17           | 22  | 25  |
|                                                | SHC | -23                                    | -33 | -42 | -22        | -32 | -41 | -20        | -31 | -40 | -19          | -30 | -39 | -17          | -28 | -38 |
|                                                | KW  | 12                                     | 12  | 12  | 12         | 12  | 12  | 12         | 12  | 12  | 12           | 12  | 12  | 12           | 12  | 12  |

### 581A300 (25 TONS) UNIT WITH HOT GAS REHEAT — A IN REHEAT, B ON

| Temp (F)<br>Air Entering<br>Condenser<br>(Edb) |     | Evaporator Air Quantity — Cfm/BF       |     |     |            |     |     |            |     |     |              |     |     |              |     |     |
|------------------------------------------------|-----|----------------------------------------|-----|-----|------------|-----|-----|------------|-----|-----|--------------|-----|-----|--------------|-----|-----|
|                                                |     | 7500/0.045                             |     |     | 8250/0.055 |     |     | 9500/0.065 |     |     | 10,750/0.075 |     |     | 12,000/0.085 |     |     |
|                                                |     | Evaporator Air — Relative Humidity (%) |     |     |            |     |     |            |     |     |              |     |     |              |     |     |
|                                                |     | 50                                     | 55  | 60  | 50         | 55  | 60  | 50         | 55  | 60  | 50           | 55  | 60  | 50           | 55  | 60  |
| 65                                             | TC  | 211                                    | 222 | 231 | 215        | 226 | 235 | 220        | 232 | 241 | 226          | 237 | 247 | 230          | 242 | 252 |
|                                                | SHC | 123                                    | 115 | 109 | 129        | 121 | 115 | 139        | 131 | 124 | 147          | 139 | 133 | 155          | 147 | 140 |
|                                                | kW  | 19                                     | 19  | 20  | 19         | 19  | 20  | 19         | 19  | 20  | 19           | 20  | 20  | 19           | 20  | 20  |
| 75                                             | TC  | 182                                    | 193 | 202 | 185        | 196 | 205 | 189        | 200 | 210 | 192          | 204 | 214 | 196          | 208 | 218 |
|                                                | SHC | 103                                    | 93  | 85  | 110        | 100 | 91  | 120        | 110 | 101 | 128          | 118 | 110 | 136          | 126 | 118 |
|                                                | kW  | 20                                     | 21  | 21  | 20         | 21  | 21  | 21         | 21  | 21  | 21           | 21  | 21  | 21           | 21  | 21  |
| 85                                             | TC  | 153                                    | 164 | 174 | 155        | 166 | 176 | 157        | 169 | 178 | 159          | 171 | 181 | 161          | 173 | 184 |
|                                                | SHC | 84                                     | 72  | 62  | 90         | 78  | 68  | 100        | 88  | 78  | 110          | 97  | 87  | 118          | 106 | 95  |
|                                                | kW  | 22                                     | 22  | 22  | 22         | 22  | 22  | 22         | 22  | 22  | 22           | 22  | 22  | 22           | 22  | 22  |
| 95                                             | TC  | 124                                    | 135 | 145 | 125        | 136 | 146 | 125        | 137 | 147 | 126          | 138 | 148 | 127          | 139 | 149 |
|                                                | SHC | 64                                     | 50  | 38  | 71         | 57  | 45  | 81         | 67  | 55  | 91           | 76  | 64  | 99           | 85  | 72  |
|                                                | kW  | 23                                     | 23  | 23  | 23         | 23  | 23  | 23         | 23  | 24  | 23           | 23  | 24  | 23           | 24  | 24  |

#### LEGEND

**BF** — Bypass Factor  
**Edb** — Entering Dry-Bulb  
**Ewb** — Entering Wet-Bulb  
**kW** — Compressor Motor Power Input  
**ldb** — Leaving Dry-Bulb  
**lwb** — Leaving Wet-Bulb  
**SHC** — Sensible Heat Capacity (1000 Btuh) Gross  
**TC** — Total Capacity (1000 Btuh) Gross

#### NOTES:

- Direct interpolation is permissible. Do not extrapolate.
- The following formulas may be used:

$$t_{ldb} = t_{edb} - \frac{\text{sensible capacity (Btuh)}}{1.10 \times \text{cfm}}$$

$$t_{lwb} = \text{Wet-bulb temperature corresponding to enthalpy of air leaving evaporator coil } (h_{lwb})$$

$$h_{lwb} = h_{ewb} - \frac{\text{total capacity (Btuh)}}{4.5 \times \text{cfm}}$$

Where:  $h_{ewb}$  = Enthalpy of air entering evaporator coil

- The SHC is based on 80 F edb temperature of air entering evaporator coil. Below 80 F edb, subtract (corr factor x cfm) from SHC. Above 80 F edb, add (corr factor x cfm) to SHC.

| BYPASS<br>FACTOR<br>(BF) | ENTERING AIR DRY-BULB TEMP (F) |      |      |      |      |                          |
|--------------------------|--------------------------------|------|------|------|------|--------------------------|
|                          | 79                             | 78   | 77   | 76   | 75   | under 75                 |
|                          | 81                             | 82   | 83   | 84   | 85   | over 85                  |
|                          | Correction Factor              |      |      |      |      |                          |
| .05                      | 1.04                           | 2.07 | 3.11 | 4.14 | 5.18 | Use formula shown below. |
| .10                      | .98                            | 1.96 | 2.94 | 3.92 | 4.90 |                          |
| .20                      | .87                            | 1.74 | 2.62 | 3.49 | 4.36 |                          |
| .30                      | .76                            | 1.53 | 2.29 | 3.05 | 3.82 |                          |

Interpolation is permissible.

$$\text{Correction Factor} = 1.10 \times (1 - \text{BF}) \times (\text{edb} - 80).$$

# **PERFORMANCE DATA (cont)** **FAN PERFORMANCE — VERTICAL DISCHARGE UNITS**

| 581A155 (12 TONS) WITH STANDARD MOTOR (Low Heat Units)* |                                             |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|---------------------------------------------------------|---------------------------------------------|-------|------|-----|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                        | Available External Static Pressure (in. wg) |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|                                                         | 0.2                                         |       |      | 0.4 |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                                         | Rpm                                         | Watts | Bhp  | Rpm | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                    | 597                                         | 895   | 0.84 | 692 | 967   | 1.07 | 781  | 1150  | 1.33 | 858  | 1342  | 1.59 | 928  | 1527  | 1.85 |
| 4000                                                    | 625                                         | 1014  | 0.98 | 714 | 1097  | 1.21 | 800  | 1292  | 1.48 | 876  | 1495  | 1.75 | 945  | 1689  | 2.03 |
| 4250                                                    | 653                                         | 1141  | 1.13 | 737 | 1236  | 1.36 | 820  | 1442  | 1.64 | 895  | 1656  | 1.93 | 963  | 1859  | 2.22 |
| 4500                                                    | 682                                         | 1274  | 1.29 | 761 | 1382  | 1.54 | 840  | 1599  | 1.82 | 914  | 1824  | 2.11 | 982  | 2037  | 2.42 |
| 4750                                                    | 711                                         | 1415  | 1.48 | 786 | 1538  | 1.73 | 861  | 1765  | 2.01 | 934  | 2001  | 2.32 | 1001 | 2224  | 2.63 |
| 5000                                                    | 740                                         | 1563  | 1.68 | 812 | 1702  | 1.94 | 884  | 1940  | 2.22 | 954  | 2188  | 2.53 | 1020 | 2419  | 2.86 |
| 5250                                                    | 769                                         | 1719  | 1.89 | 839 | 1875  | 2.16 | 907  | 2125  | 2.45 | 974  | 2384  | 2.77 | 1039 | 2625  | 3.10 |
| 5500                                                    | 799                                         | 1884  | 2.13 | 867 | 2060  | 2.41 | 931  | 2321  | 2.70 | 996  | 2592  | 3.02 | 1059 | 2841  | 3.36 |
| 5750                                                    | 828                                         | 2058  | 2.38 | 894 | 2256  | 2.67 | 956  | 2528  | 2.97 | 1018 | 2810  | 3.29 | 1080 | 3069  | 3.64 |
| 6000                                                    | 857                                         | 2243  | 2.64 | 923 | 2464  | 2.96 | 982  | 2748  | 3.26 | 1041 | 3042  | 3.59 | 1101 | 3308  | 3.94 |
| 6250                                                    | 885                                         | 2438  | 2.93 | 951 | 2687  | 3.27 | 1008 | 2981  | 3.58 | 1065 | 3286  | 3.91 | 1122 | 3559  | 4.26 |

| 581A155 (12 TONS) WITH STANDARD MOTOR (Low Heat Units)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|----------------------------------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                               | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                                                | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                                                                | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                           | 992                                         | 1756  | 2.12 | 1053 | 1988  | 2.40 | 1112 | 2236  | 2.68 | 1169 | 2497  | 2.97 | 1224 | 2769  | 3.27 |
| 4000                                                           | 1009                                        | 1931  | 2.31 | 1069 | 2173  | 2.59 | 1126 | 2431  | 2.88 | 1181 | 2702  | 3.18 | 1234 | 2984  | 3.48 |
| 4250                                                           | 1026                                        | 2114  | 2.51 | 1085 | 2366  | 2.80 | 1141 | 2634  | 3.10 | 1194 | 2914  | 3.40 | 1246 | 3206  | 3.72 |
| 4500                                                           | 1044                                        | 2304  | 2.72 | 1102 | 2566  | 3.02 | 1157 | 2844  | 3.33 | 1209 | 3133  | 3.65 | 1260 | 3433  | 3.97 |
| 4750                                                           | 1062                                        | 2504  | 2.95 | 1120 | 2775  | 3.26 | 1174 | 3062  | 3.58 | 1226 | 3360  | 3.91 | 1275 | 3666  | 4.23 |
| 5000                                                           | 1081                                        | 2712  | 3.19 | 1138 | 2993  | 3.52 | 1191 | 3288  | 3.85 | 1242 | 3592  | 4.18 | 1291 | 3905  | 4.52 |
| 5250                                                           | 1100                                        | 2931  | 3.44 | 1156 | 3220  | 3.79 | 1209 | 3523  | 4.13 | 1260 | 3832  | 4.47 | 1308 | 4148  | 4.82 |
| 5500                                                           | 1119                                        | 3160  | 3.72 | 1175 | 3457  | 4.07 | 1228 | 3765  | 4.43 | 1278 | 4077  | 4.78 | 1326 | 4395  | 5.14 |
| 5750                                                           | 1138                                        | 3399  | 4.00 | 1194 | 3702  | 4.37 | 1246 | 4014  | 4.74 | 1296 | 4328  | 5.11 | 1343 | 4644  | 5.48 |
| 6000                                                           | 1158                                        | 3649  | 4.31 | 1213 | 3957  | 4.69 | 1265 | 4270  | 5.07 | 1315 | 4581  | 5.45 | —    | —     | —    |
| 6250                                                           | 1179                                        | 3910  | 4.64 | 1233 | 4219  | 5.02 | 1284 | 4531  | 5.41 | —    | —     | —    | —    | —     | —    |

**LEGEND**  
**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 895 to 1147 rpm. Other rpms require a field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTES:**

1. Field-supplied motor required.
2. Maximum continuous bhp for the standard motor is 3.13 (for 208/230 and 460-v units) or 3.38 (for 575-v units). The maximum continuous watts is 2700 (for 208/230 and 460-v units) or 3065 (for 575-v units). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Data tables for more information.
3. Fan performance is identical for horizontal discharge applications using Bryant horizontal adapter curb.

| 581A155 (12 TONS) WITH OPTIONAL MOTOR (Low Heat Units)* |                                             |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|---------------------------------------------------------|---------------------------------------------|-------|------|-----|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                        | Available External Static Pressure (in. wg) |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|                                                         | 0.2                                         |       |      | 0.4 |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                                         | Rpm                                         | Watts | Bhp  | Rpm | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                    | 597                                         | 895   | 0.84 | 692 | 967   | 1.07 | 781  | 1150  | 1.33 | 858  | 1342  | 1.59 | 928  | 1527  | 1.85 |
| 4000                                                    | 625                                         | 1014  | 0.98 | 714 | 1097  | 1.21 | 800  | 1292  | 1.48 | 876  | 1495  | 1.75 | 945  | 1689  | 2.03 |
| 4250                                                    | 653                                         | 1141  | 1.13 | 737 | 1236  | 1.36 | 820  | 1442  | 1.64 | 895  | 1656  | 1.93 | 963  | 1859  | 2.22 |
| 4500                                                    | 682                                         | 1274  | 1.29 | 761 | 1382  | 1.54 | 840  | 1599  | 1.82 | 914  | 1824  | 2.11 | 982  | 2037  | 2.42 |
| 4750                                                    | 711                                         | 1415  | 1.48 | 786 | 1538  | 1.73 | 861  | 1765  | 2.01 | 934  | 2001  | 2.32 | 1001 | 2224  | 2.63 |
| 5000                                                    | 740                                         | 1563  | 1.68 | 812 | 1702  | 1.94 | 884  | 1940  | 2.22 | 954  | 2188  | 2.53 | 1020 | 2419  | 2.86 |
| 5250                                                    | 769                                         | 1719  | 1.89 | 839 | 1875  | 2.16 | 907  | 2125  | 2.45 | 974  | 2384  | 2.77 | 1039 | 2625  | 3.10 |
| 5500                                                    | 799                                         | 1884  | 2.13 | 867 | 2060  | 2.41 | 931  | 2321  | 2.70 | 996  | 2592  | 3.02 | 1059 | 2841  | 3.36 |
| 5750                                                    | 828                                         | 2058  | 2.38 | 894 | 2256  | 2.67 | 956  | 2528  | 2.97 | 1018 | 2810  | 3.29 | 1080 | 3069  | 3.64 |
| 6000                                                    | 857                                         | 2243  | 2.64 | 923 | 2464  | 2.96 | 982  | 2748  | 3.26 | 1041 | 3042  | 3.59 | 1101 | 3308  | 3.94 |
| 6250                                                    | 885                                         | 2438  | 2.93 | 951 | 2687  | 3.27 | 1008 | 2981  | 3.58 | 1065 | 3286  | 3.91 | 1122 | 3559  | 4.26 |

| 581A155 (12 TONS) WITH OPTIONAL MOTOR (Low Heat Units)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|----------------------------------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                               | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                                                | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                                                                | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                           | 992                                         | 1756  | 2.12 | 1053 | 1988  | 2.40 | 1112 | 2236  | 2.68 | 1169 | 2497  | 2.97 | 1224 | 2769  | 3.27 |
| 4000                                                           | 1009                                        | 1931  | 2.31 | 1069 | 2173  | 2.59 | 1126 | 2431  | 2.88 | 1181 | 2702  | 3.18 | 1234 | 2984  | 3.48 |
| 4250                                                           | 1026                                        | 2114  | 2.51 | 1085 | 2366  | 2.80 | 1141 | 2634  | 3.10 | 1194 | 2914  | 3.40 | 1246 | 3206  | 3.72 |
| 4500                                                           | 1044                                        | 2304  | 2.72 | 1102 | 2566  | 3.02 | 1157 | 2844  | 3.33 | 1209 | 3133  | 3.65 | 1260 | 3433  | 3.97 |
| 4750                                                           | 1062                                        | 2504  | 2.95 | 1120 | 2775  | 3.26 | 1174 | 3062  | 3.58 | 1226 | 3360  | 3.91 | 1275 | 3666  | 4.23 |
| 5000                                                           | 1081                                        | 2712  | 3.19 | 1138 | 2993  | 3.52 | 1191 | 3288  | 3.85 | 1242 | 3592  | 4.18 | 1291 | 3905  | 4.52 |
| 5250                                                           | 1100                                        | 2931  | 3.44 | 1156 | 3220  | 3.79 | 1209 | 3523  | 4.13 | 1260 | 3832  | 4.47 | 1308 | 4148  | 4.82 |
| 5500                                                           | 1119                                        | 3160  | 3.72 | 1175 | 3457  | 4.07 | 1228 | 3765  | 4.43 | 1278 | 4077  | 4.78 | 1326 | 4395  | 5.14 |
| 5750                                                           | 1138                                        | 3399  | 4.00 | 1194 | 3702  | 4.37 | 1246 | 4014  | 4.74 | 1296 | 4328  | 5.11 | 1343 | 4644  | 5.48 |
| 6000                                                           | 1158                                        | 3649  | 4.31 | 1213 | 3957  | 4.69 | 1265 | 4270  | 5.07 | 1315 | 4581  | 5.45 | —    | —     | —    |
| 6250                                                           | 1179                                        | 3910  | 4.64 | 1233 | 4219  | 5.02 | 1284 | 4531  | 5.41 | —    | —     | —    | —    | —     | —    |

**LEGEND**  
**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Alternate high-static drive range is 1040 to 1315 (for 208/230 and 460-v units). The alternate high-static drive is not available for 575-v units. Other rpms require a field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTES:**

1. Field-supplied motor required.
2. Maximum continuous bhp for the optional motor is 4.26. Maximum continuous watts for the optional motor is 3610. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Data tables for more information.
3. Fan performance is identical for horizontal discharge applications using Bryant horizontal adapter curb.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

| 581A155 (12 TONS) WITH STANDARD MOTOR (High Heat Units)* |                                             |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|----------------------------------------------------------|---------------------------------------------|-------|------|-----|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                         | Available External Static Pressure (in. wg) |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|                                                          | 0.2                                         |       |      | 0.4 |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                                          | Rpm                                         | Watts | Bhp  | Rpm | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                     | 622                                         | 888   | 0.89 | 713 | 1027  | 1.13 | 795  | 1234  | 1.37 | 869  | 1454  | 1.63 | 936  | 1584  | 1.89 |
| 4000                                                     | 652                                         | 1015  | 1.04 | 738 | 1168  | 1.28 | 818  | 1388  | 1.54 | 890  | 1620  | 1.80 | 956  | 1756  | 2.07 |
| 4250                                                     | 682                                         | 1151  | 1.20 | 763 | 1317  | 1.45 | 841  | 1550  | 1.72 | 911  | 1793  | 1.99 | 976  | 1937  | 2.27 |
| 4500                                                     | 713                                         | 1295  | 1.38 | 790 | 1474  | 1.63 | 864  | 1719  | 1.91 | 934  | 1973  | 2.20 | 997  | 2126  | 2.49 |
| 4750                                                     | 744                                         | 1448  | 1.58 | 817 | 1641  | 1.84 | 889  | 1896  | 2.12 | 956  | 2159  | 2.42 | 1019 | 2326  | 2.72 |
| 5000                                                     | 776                                         | 1610  | 1.80 | 845 | 1817  | 2.06 | 914  | 2081  | 2.35 | 979  | 2353  | 2.66 | 1041 | 2536  | 2.97 |
| 5250                                                     | 808                                         | 1783  | 2.04 | 874 | 2003  | 2.31 | 940  | 2277  | 2.60 | 1003 | 2556  | 2.91 | 1064 | 2757  | 3.24 |
| 5500                                                     | 840                                         | 1967  | 2.29 | 903 | 2200  | 2.57 | 966  | 2482  | 2.87 | 1028 | 2768  | 3.19 | 1087 | 2991  | 3.52 |
| 5750                                                     | 872                                         | 2163  | 2.57 | 933 | 2410  | 2.86 | 993  | 2699  | 3.16 | 1053 | 2990  | 3.49 | 1110 | 3237  | 3.83 |
| 6000                                                     | 905                                         | 2373  | 2.87 | 963 | 2634  | 3.16 | 1021 | 2929  | 3.47 | 1078 | 3225  | 3.81 | 1134 | 3497  | 4.15 |
| 6250                                                     | 937                                         | 2596  | 3.19 | 994 | 2872  | 3.49 | 1049 | 3172  | 3.81 | 1105 | 3473  | 4.15 | 1159 | 3769  | 4.50 |

| 581A155 (12 TONS) WITH STANDARD MOTOR (High Heat Units)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-----------------------------------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                                | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                                                 | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                                                                 | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                            | 999                                         | 1829  | 2.15 | 1059 | 2091  | 2.42 | 1117 | 2343  | 2.70 | 1174 | 2521  | 2.99 | 1228 | 2801  | 3.29 |
| 4000                                                            | 1017                                        | 2010  | 2.35 | 1076 | 2279  | 2.63 | 1132 | 2540  | 2.91 | 1186 | 2738  | 3.21 | 1239 | 3023  | 3.51 |
| 4250                                                            | 1036                                        | 2198  | 2.56 | 1093 | 2474  | 2.85 | 1148 | 2743  | 3.14 | 1201 | 2962  | 3.44 | 1253 | 3251  | 3.75 |
| 4500                                                            | 1056                                        | 2395  | 2.78 | 1112 | 2675  | 3.08 | 1166 | 2951  | 3.39 | 1217 | 3194  | 3.70 | 1267 | 3487  | 4.01 |
| 4750                                                            | 1077                                        | 2601  | 3.03 | 1132 | 2885  | 3.34 | 1184 | 3168  | 3.65 | 1235 | 3435  | 3.97 | 1284 | 3731  | 4.29 |
| 5000                                                            | 1098                                        | 2816  | 3.29 | 1152 | 3104  | 3.61 | 1204 | 3392  | 3.93 | 1253 | 3683  | 4.26 | 1301 | 3981  | 4.59 |
| 5250                                                            | 1120                                        | 3042  | 3.56 | 1173 | 3332  | 3.90 | 1224 | 3626  | 4.23 | 1273 | 3940  | 4.57 | 1320 | 4239  | 4.91 |
| 5500                                                            | 1142                                        | 3279  | 3.86 | 1195 | 3570  | 4.20 | 1245 | 3870  | 4.55 | 1293 | 4203  | 4.89 | 1339 | 4501  | 5.24 |
| 5750                                                            | 1165                                        | 3528  | 4.18 | 1217 | 3819  | 4.53 | 1266 | 4125  | 4.88 | 1313 | 4471  | 5.24 | —    | —     | —    |
| 6000                                                            | 1188                                        | 3789  | 4.51 | 1239 | 4080  | 4.88 | 1288 | 4389  | 5.24 | —    | —     | —    | —    | —     | —    |
| 6250                                                            | 1212                                        | 4062  | 4.87 | 1262 | 4351  | 5.24 | —    | —     | —    | —    | —     | —    | —    | —     | —    |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 895 to 1147 rpm. Other rpms require a field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTES:**

1.  Field-supplied motor required.
2. Maximum continuous bhp for the standard motor is 3.13 (for 208/230 and 460-v units) or 3.38 (for 575-v units). The maximum continuous watts is 2700 (for 208/230 and 460-v units) or 3065 (for 575-v units). Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Data tables for more information.
3. Fan performance is identical for horizontal discharge applications using Bryant horizontal adapter curb.

| 581A155 (12 TONS) WITH OPTIONAL MOTOR (High Heat Units)* |                                             |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|----------------------------------------------------------|---------------------------------------------|-------|------|-----|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                         | Available External Static Pressure (in. wg) |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|                                                          | 0.2                                         |       |      | 0.4 |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                                          | Rpm                                         | Watts | Bhp  | Rpm | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                     | 622                                         | 888   | 0.89 | 713 | 1027  | 1.13 | 795  | 1234  | 1.37 | 869  | 1454  | 1.63 | 936  | 1584  | 1.89 |
| 4000                                                     | 652                                         | 1015  | 1.04 | 738 | 1168  | 1.28 | 818  | 1388  | 1.54 | 890  | 1620  | 1.80 | 956  | 1756  | 2.07 |
| 4250                                                     | 682                                         | 1151  | 1.20 | 763 | 1317  | 1.45 | 841  | 1550  | 1.72 | 911  | 1793  | 1.99 | 976  | 1937  | 2.27 |
| 4500                                                     | 713                                         | 1295  | 1.38 | 790 | 1474  | 1.63 | 864  | 1719  | 1.91 | 934  | 1973  | 2.20 | 997  | 2126  | 2.49 |
| 4750                                                     | 744                                         | 1448  | 1.58 | 817 | 1641  | 1.84 | 889  | 1896  | 2.12 | 956  | 2159  | 2.42 | 1019 | 2326  | 2.72 |
| 5000                                                     | 776                                         | 1610  | 1.80 | 845 | 1817  | 2.06 | 914  | 2081  | 2.35 | 979  | 2353  | 2.66 | 1041 | 2536  | 2.97 |
| 5250                                                     | 808                                         | 1783  | 2.04 | 874 | 2003  | 2.31 | 940  | 2277  | 2.60 | 1003 | 2556  | 2.91 | 1064 | 2757  | 3.24 |
| 5500                                                     | 840                                         | 1967  | 2.29 | 903 | 2200  | 2.57 | 966  | 2482  | 2.87 | 1028 | 2768  | 3.19 | 1087 | 2991  | 3.52 |
| 5750                                                     | 872                                         | 2163  | 2.57 | 933 | 2410  | 2.86 | 993  | 2699  | 3.16 | 1053 | 2990  | 3.49 | 1110 | 3237  | 3.83 |
| 6000                                                     | 905                                         | 2373  | 2.87 | 963 | 2634  | 3.16 | 1021 | 2929  | 3.47 | 1078 | 3225  | 3.81 | 1134 | 3497  | 4.15 |
| 6250                                                     | 937                                         | 2596  | 3.19 | 994 | 2872  | 3.49 | 1049 | 3172  | 3.81 | 1105 | 3473  | 4.15 | 1159 | 3769  | 4.50 |

| 581A155 (12 TONS) WITH OPTIONAL MOTOR (High Heat Units)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-----------------------------------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                                                | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                                                 | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                                                                 | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3750                                                            | 999                                         | 1829  | 2.15 | 1059 | 2091  | 2.42 | 1117 | 2343  | 2.70 | 1174 | 2521  | 2.99 | 1228 | 2801  | 3.29 |
| 4000                                                            | 1017                                        | 2010  | 2.35 | 1076 | 2279  | 2.63 | 1132 | 2540  | 2.91 | 1186 | 2738  | 3.21 | 1239 | 3023  | 3.51 |
| 4250                                                            | 1036                                        | 2198  | 2.56 | 1093 | 2474  | 2.85 | 1148 | 2743  | 3.14 | 1201 | 2962  | 3.44 | 1253 | 3251  | 3.75 |
| 4500                                                            | 1056                                        | 2395  | 2.78 | 1112 | 2675  | 3.08 | 1166 | 2951  | 3.39 | 1217 | 3194  | 3.70 | 1267 | 3487  | 4.01 |
| 4750                                                            | 1077                                        | 2601  | 3.03 | 1132 | 2885  | 3.34 | 1184 | 3168  | 3.65 | 1235 | 3435  | 3.97 | 1284 | 3731  | 4.29 |
| 5000                                                            | 1098                                        | 2816  | 3.29 | 1152 | 3104  | 3.61 | 1204 | 3392  | 3.93 | 1253 | 3683  | 4.26 | 1301 | 3981  | 4.59 |
| 5250                                                            | 1120                                        | 3042  | 3.56 | 1173 | 3332  | 3.90 | 1224 | 3626  | 4.23 | 1273 | 3940  | 4.57 | 1320 | 4239  | 4.91 |
| 5500                                                            | 1142                                        | 3279  | 3.86 | 1195 | 3570  | 4.20 | 1245 | 3870  | 4.55 | 1293 | 4203  | 4.89 | 1339 | 4501  | 5.24 |
| 5750                                                            | 1165                                        | 3528  | 4.18 | 1217 | 3819  | 4.53 | 1266 | 4125  | 4.88 | 1313 | 4471  | 5.24 | —    | —     | —    |
| 6000                                                            | 1188                                        | 3789  | 4.51 | 1239 | 4080  | 4.88 | 1288 | 4389  | 5.24 | —    | —     | —    | —    | —     | —    |
| 6250                                                            | 1212                                        | 4062  | 4.87 | 1262 | 4351  | 5.24 | —    | —     | —    | —    | —     | —    | —    | —     | —    |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Alternate high-static drive range is 1040 to 1315. Other rpms require a field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTES:**

1.  Field-supplied motor required.
2. Maximum continuous bhp for the optional motor is 4.26. The maximum continuous watts is 3610. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Data tables for more information.
3. Fan performance is identical for horizontal discharge applications using Bryant horizontal adapter curb.

581A155-300

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

| <b>581A180 (15 TONS) (Low Heat Units)*</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|--------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                   | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                            | <b>0.2</b>                                         |              |            | <b>0.4</b> |              |            | <b>0.6</b> |              |            | <b>0.8</b> |              |            | <b>1.0</b> |              |            |
|                                            | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| 4500                                       | 753                                                | 1307         | 1.53       | 761        | 1330         | 1.56       | 840        | 1572         | 1.84       | 912        | 1822         | 2.14       | 980        | 2080         | 2.44       |
| 4800                                       | 747                                                | 1384         | 1.62       | 790        | 1515         | 1.78       | 866        | 1765         | 2.07       | 936        | 2023         | 2.37       | 1002       | 2289         | 2.68       |
| 5100                                       | 741                                                | 1465         | 1.72       | 820        | 1718         | 2.01       | 893        | 1977         | 2.32       | 961        | 2243         | 2.63       | 1025       | 2516         | 2.95       |
| 5700                                       | 810                                                | 1911         | 2.24       | 882        | 2182         | 2.56       | 950        | 2459         | 2.88       | 1014       | 2741         | 3.21       | 1075       | 3029         | 3.55       |
| 6000                                       | 844                                                | 2164         | 2.54       | 914        | 2444         | 2.87       | 980        | 2730         | 3.20       | 1042       | 3021         | 3.54       | 1100       | 3317         | 3.89       |
| 6300                                       | 879                                                | 2439         | 2.86       | 947        | 2729         | 3.20       | 1010       | 3023         | 3.55       | 1070       | 3322         | 3.90       | 1127       | 3626         | 4.25       |
| 6600                                       | 915                                                | 2737         | 3.21       | 980        | 3035         | 3.56       | 1041       | 3338         | 3.91       | 1099       | 3645         | 4.28       | 1155       | 3957         | 4.64       |
| 6900                                       | 950                                                | 3057         | 3.59       | 1013       | 3364         | 3.95       | 1072       | 3675         | 4.31       | 1129       | 3991         | 4.68       | 1183       | 4311         | 5.06       |
| 7200                                       | 986                                                | 3401         | 3.99       | 1047       | 3717         | 4.36       | 1104       | 4037         | 4.74       | 1159       | 4361         | 5.11       | 1211       | 4689         | 5.50       |
| 7500                                       | 1022                                               | 3770         | 4.42       | 1081       | 4095         | 4.80       | 1136       | 4423         | 5.19       | 1189       | 4755         | 5.58       | 1241       | 5091         | 5.97       |

| <b>581A180 (15 TONS) (Low Heat Units)* (cont)</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|---------------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                          | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                                   | <b>1.2</b>                                         |              |            | <b>1.4</b> |              |            | <b>1.6</b> |              |            | <b>1.8</b> |              |            | <b>2.0</b> |              |            |
|                                                   | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| 4500                                              | 1044                                               | 2345         | 2.75       | 1105       | 2619         | 3.07       | 1163       | 2899         | 3.40       | 1218       | 3187         | 3.74       | 1271       | 3481         | 4.08       |
| 4800                                              | 1065                                               | 2561         | 3.00       | 1124       | 2841         | 3.33       | 1180       | 3127         | 3.67       | 1235       | 3420         | 4.01       | 1287       | 3720         | 4.36       |
| 5100                                              | 1086                                               | 2795         | 3.28       | 1144       | 3082         | 3.61       | 1199       | 3375         | 3.96       | 1252       | 3674         | 4.31       | 1304       | 3979         | 4.67       |
| 5700                                              | 1132                                               | 3324         | 3.90       | 1187       | 3624         | 4.25       | 1240       | 3929         | 4.61       | 1291       | 4241         | 4.97       | 1341       | 4558         | 5.35       |
| 6000                                              | 1157                                               | 3619         | 4.24       | 1210       | 3925         | 4.60       | 1262       | 4239         | 4.97       | 1312       | 4557         | 5.34       | 1361       | 4880         | 5.72       |
| 6300                                              | 1182                                               | 3935         | 4.62       | 1234       | 4249         | 4.98       | 1285       | 4569         | 5.36       | 1334       | 4894         | 5.74       | —          | —            | —          |
| 6600                                              | 1208                                               | 4274         | 5.01       | 1259       | 4595         | 5.39       | 1309       | 4922         | 5.77       | —          | —            | —          | —          | —            | —          |
| 6900                                              | 1235                                               | 4636         | 5.44       | 1285       | 4964         | 5.82       | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7200                                              | 1262                                               | 5021         | 5.89       | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7500                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |

| <b>581A180 (15 TONS) (Low Heat Units)* (cont)</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|---------------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                          | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                                   | <b>2.2</b>                                         |              |            | <b>2.4</b> |              |            | <b>2.6</b> |              |            | <b>2.8</b> |              |            | <b>3.0</b> |              |            |
|                                                   | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| 4500                                              | 1322                                               | 3781         | 4.43       | 1372       | 4088         | 4.79       | 1419       | 4400         | 5.16       | 1466       | 4719         | 5.53       | 1511       | 5042         | 5.91       |
| 4800                                              | 1337                                               | 4025         | 4.72       | 1386       | 4337         | 5.09       | 1433       | 4655         | 5.46       | 1479       | 4978         | 5.84       | —          | —            | —          |
| 5100                                              | 1353                                               | 4290         | 5.03       | 1401       | 4607         | 5.40       | 1448       | 4930         | 5.78       | —          | —            | —          | —          | —            | —          |
| 5700                                              | 1388                                               | 4881         | 5.72       | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6000                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6300                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6600                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6900                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7200                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7500                                              | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |

**LEGEND**

**Bhp** — Brake Horsepower  
**FLOP** — Factory-Installed Option  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 873 to 1021 rpm. Alternate high-static drive range is 1025 to 1200. Other rpms require a field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTES:**

- Maximum continuous bhp for the standard motor is 6.13. The maximum continuous watts is 5180. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Data tables for more information.
- Fan performance is identical for horizontal discharge applications using Bryant horizontal adapter curb.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

| <b>581A180 (15 TONS) (High Heat Units)*</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|---------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                    | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                             | <b>0.2</b>                                         |              |            | <b>0.4</b> |              |            | <b>0.6</b> |              |            | <b>0.8</b> |              |            | <b>1.0</b> |              |            |
|                                             | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| 4500                                        | 753                                                | 1307         | 1.53       | 786        | 1404         | 1.65       | 861        | 1644         | 1.93       | 932        | 1893         | 2.22       | 997        | 2150         | 2.52       |
| 4800                                        | 747                                                | 1384         | 1.62       | 818        | 1603         | 1.88       | 890        | 1852         | 2.17       | 958        | 2108         | 2.47       | 1022       | 2373         | 2.78       |
| 5100                                        | 775                                                | 1571         | 1.84       | 850        | 1822         | 2.14       | 920        | 2079         | 2.44       | 986        | 2344         | 2.75       | 1048       | 2616         | 3.07       |
| 5700                                        | 849                                                | 2054         | 2.41       | 918        | 2323         | 2.73       | 982        | 2598         | 3.05       | 1044       | 2879         | 3.38       | 1102       | 3166         | 3.71       |
| 6000                                        | 886                                                | 2329         | 2.73       | 952        | 2607         | 3.06       | 1015       | 2891         | 3.39       | 1074       | 3180         | 3.73       | 1130       | 3474         | 4.08       |
| 6300                                        | 924                                                | 2628         | 3.08       | 987        | 2915         | 3.42       | 1047       | 3207         | 3.76       | 1105       | 3504         | 4.11       | 1160       | 3807         | 4.46       |
| 6600                                        | 962                                                | 2951         | 3.46       | 1023       | 3246         | 3.81       | 1081       | 3547         | 4.16       | 1136       | 3853         | 4.52       | 1190       | 4163         | 4.88       |
| 6900                                        | 1000                                               | 3298         | 3.87       | 1059       | 3603         | 4.23       | 1115       | 3912         | 4.59       | 1168       | 4225         | 4.96       | 1220       | 4543         | 5.33       |
| 7200                                        | 1038                                               | 3672         | 4.31       | 1095       | 3986         | 4.67       | 1149       | 4303         | 5.05       | 1201       | 4625         | 5.42       | 1251       | 4950         | 5.81       |
| 7500                                        | 1077                                               | 4072         | 4.78       | 1131       | 4394         | 5.15       | 1184       | 4720         | 5.54       | 1234       | 5050         | 5.92       | —          | —            | —          |

| <b>581A180 (15 TONS) (High Heat Units)* (cont)</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|----------------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                           | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                                    | <b>1.2</b>                                         |              |            | <b>1.4</b> |              |            | <b>1.6</b> |              |            | <b>1.8</b> |              |            | <b>2.0</b> |              |            |
|                                                    | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| 4500                                               | 1060                                               | 2414         | 2.83       | 1119       | 2685         | 3.15       | 1175       | 2964         | 3.48       | 1230       | 3250         | 3.81       | 1282       | 3542         | 4.15       |
| 4800                                               | 1082                                               | 2644         | 3.10       | 1140       | 2922         | 3.43       | 1195       | 3207         | 3.76       | 1248       | 3498         | 4.10       | 1299       | 3795         | 4.45       |
| 5100                                               | 1106                                               | 2894         | 3.39       | 1163       | 3178         | 3.73       | 1216       | 3470         | 4.07       | 1268       | 3767         | 4.42       | 1319       | 4071         | 4.77       |
| 5700                                               | 1157                                               | 3459         | 4.06       | 1211       | 3757         | 4.41       | 1262       | 4061         | 4.76       | 1312       | 4371         | 5.13       | 1360       | 4686         | 5.50       |
| 6000                                               | 1184                                               | 3774         | 4.43       | 1236       | 4080         | 4.79       | 1287       | 4391         | 5.15       | 1335       | 4707         | 5.52       | 1382       | 5029         | 5.90       |
| 6300                                               | 1212                                               | 4114         | 4.83       | 1263       | 4427         | 5.19       | 1312       | 4745         | 5.57       | 1359       | 5067         | 5.94       | —          | —            | —          |
| 6600                                               | 1241                                               | 4478         | 5.25       | 1290       | 4798         | 5.63       | 1338       | 5122         | 6.01       | —          | —            | —          | —          | —            | —          |
| 6900                                               | 1270                                               | 4866         | 5.71       | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7200                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7500                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |

| <b>581A180 (15 TONS) (High Heat Units)* (cont)</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|----------------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                           | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                                    | <b>2.2</b>                                         |              |            | <b>2.4</b> |              |            | <b>2.6</b> |              |            | <b>2.8</b> |              |            | <b>3.0</b> |              |            |
|                                                    | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| 4500                                               | 1332                                               | 3841         | 4.50       | 1381       | 4145         | 4.86       | 1428       | 4456         | 5.23       | 1473       | 4772         | 5.60       | 1518       | 5095         | 5.98       |
| 4800                                               | 1349                                               | 4100         | 4.81       | 1397       | 4409         | 5.17       | 1443       | 4725         | 5.54       | 1488       | 5046         | 5.92       | —          | —            | —          |
| 5100                                               | 1367                                               | 4380         | 5.14       | 1414       | 4695         | 5.51       | 1460       | 5016         | 5.88       | —          | —            | —          | —          | —            | —          |
| 5700                                               | 1407                                               | 5007         | 5.87       | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6000                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6300                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6600                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 6900                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7200                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |
| 7500                                               | —                                                  | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          | —          | —            | —          |

**LEGEND**

**Bhp** — Brake Horsepower  
**Watts** — Input Watts to Motor

\*Standard low-medium static drive range is 873 to 1021 rpm. Alternate high-static drive range is 1025 to 1200. Other rpms require a field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTES:**

1. Maximum continuous bhp for the standard motor is 6.13. The maximum continuous watts is 5180. Do not adjust motor rpm such that motor maximum bhp and/or watts is exceeded at the maximum operating cfm. See Evaporator Fan Motor Data tables for more information.
2. Fan performance is identical for horizontal discharge applications using Bryant horizontal adapter curb.

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

| <b>581A210 (18 TONS) (Low Heat Units)*</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|--------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                   | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                            | <b>0.2</b>                                         |              |            | <b>0.4</b> |              |            | <b>0.6</b> |              |            | <b>0.8</b> |              |            | <b>1.0</b> |              |            |
|                                            | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| <b>3500</b>                                | 460                                                | 591          | 0.68       | 548        | 774          | 0.89       | 623        | 951          | 1.09       | 692        | 1126         | 1.29       | 755        | 1301         | 1.50       |
| <b>4000</b>                                | 499                                                | 774          | 0.89       | 581        | 976          | 1.12       | 653        | 1170         | 1.35       | 717        | 1361         | 1.56       | 777        | 1551         | 1.78       |
| <b>4500</b>                                | 538                                                | 990          | 1.14       | 617        | 1212         | 1.39       | 685        | 1423         | 1.64       | 746        | 1630         | 1.88       | 803        | 1835         | 2.11       |
| <b>5000</b>                                | 579                                                | 1243         | 1.43       | 654        | 1485         | 1.71       | 719        | 1715         | 1.97       | 778        | 1938         | 2.23       | 832        | 2158         | 2.48       |
| <b>5500</b>                                | 621                                                | 1536         | 1.77       | 693        | 1798         | 2.07       | 755        | 2045         | 2.35       | 811        | 2285         | 2.63       | 864        | 2520         | 2.90       |
| <b>6000</b>                                | 664                                                | 1871         | 2.15       | 732        | 2152         | 2.48       | 792        | 2417         | 2.78       | 846        | 2673         | 3.07       | 897        | 2925         | 3.36       |
| <b>6500</b>                                | 707                                                | 2250         | 2.59       | 772        | 2550         | 2.93       | 830        | 2834         | 3.26       | 883        | 3106         | 3.57       | 932        | 3373         | 3.88       |
| <b>7000</b>                                | 751                                                | 2676         | 3.08       | 813        | 2994         | 3.44       | 869        | 3295         | 3.79       | 920        | 3585         | 4.12       | 967        | 3868         | 4.45       |
| <b>7500</b>                                | 795                                                | 3150         | 3.62       | 855        | 3487         | 4.01       | 909        | 3805         | 4.38       | 958        | 4112         | 4.73       | 1004       | 4411         | 5.07       |
| <b>8000</b>                                | 839                                                | 3676         | 4.23       | 897        | 4029         | 4.63       | 949        | 4366         | 5.02       | 997        | 4689         | 5.39       | 1042       | 5004         | 5.75       |
| <b>8500</b>                                | 884                                                | 4253         | 4.89       | 940        | 4625         | 5.32       | 990        | 4978         | 5.73       | 1037       | 5318         | 6.12       | 1080       | 5649         | 6.50       |

| <b>581A210 (18 TONS) (Low Heat Units)* (cont)</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|---------------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                          | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                                   | <b>1.2</b>                                         |              |            | <b>1.4</b> |              |            | <b>1.6</b> |              |            | <b>1.8</b> |              |            | <b>2.0</b> |              |            |
|                                                   | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| <b>3500</b>                                       | 814                                                | 1476         | 1.70       | 871        | 1650         | 1.90       | 924        | 1825         | 2.10       | 975        | 1999         | 2.30       | 1023       | 2173         | 2.50       |
| <b>4000</b>                                       | 834                                                | 1740         | 2.00       | 888        | 1930         | 2.22       | 939        | 2119         | 2.44       | 988        | 2308         | 2.65       | 1035       | 2497         | 2.87       |
| <b>4500</b>                                       | 857                                                | 2039         | 2.35       | 909        | 2243         | 2.58       | 958        | 2446         | 2.81       | 1005       | 2650         | 3.05       | 1051       | 2853         | 3.28       |
| <b>5000</b>                                       | 884                                                | 2376         | 2.73       | 933        | 2594         | 2.98       | 980        | 2811         | 3.23       | 1026       | 3028         | 3.48       | 1070       | 3244         | 3.73       |
| <b>5500</b>                                       | 913                                                | 2753         | 3.17       | 960        | 2984         | 3.43       | 1006       | 3215         | 3.70       | 1049       | 3445         | 3.96       | 1092       | 3674         | 4.23       |
| <b>6000</b>                                       | 945                                                | 3172         | 3.65       | 990        | 3417         | 3.93       | 1034       | 3662         | 4.21       | 1076       | 3905         | 4.49       | 1117       | 4147         | 4.77       |
| <b>6500</b>                                       | 978                                                | 3636         | 4.18       | 1022       | 3895         | 4.48       | 1064       | 4153         | 4.78       | 1104       | 4409         | 5.07       | 1144       | 4665         | 5.37       |
| <b>7000</b>                                       | 1012                                               | 4145         | 4.77       | 1055       | 4419         | 5.08       | 1095       | 4691         | 5.39       | 1135       | 4960         | 5.70       | 1173       | 5229         | 6.01       |
| <b>7500</b>                                       | 1047                                               | 4703         | 5.41       | 1089       | 4992         | 5.74       | 1128       | 5277         | 6.07       | 1167       | 5561         | 6.40       | 1204       | 5842         | 6.72       |
| <b>8000</b>                                       | 1084                                               | 5311         | 6.11       | 1124       | 5615         | 6.46       | 1163       | 5915         | 6.80       | 1200       | 6211         | 7.14       | 1236       | 6506         | 7.48       |
| <b>8500</b>                                       | 1121                                               | 5972         | 6.87       | 1160       | 6290         | 7.23       | 1198       | 6604         | 7.60       | 1234       | 6914         | 7.95       | 1269       | 7223         | 8.31       |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

*Refer to page 230 for general Fan Performance Data notes.*

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 3.45 (575-v)  
 High Range: 5.75

\*Motor drive ranges:  
 Low Range: 647-886 (208/230 and 460-v), 810-1072 (575-v)  
 High Range: 897-1139 (208/230 and 460-v), 873-1108 (575-v)  
 All other rpms require field-supplied drive.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A210 (18 TONS) (Medium Heat Units)* |                                             |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|----------------------------------------|---------------------------------------------|-------|------|-----|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                       | Available External Static Pressure (in. wg) |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|                                        | 0.2                                         |       |      | 0.4 |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                        | Rpm                                         | Watts | Bhp  | Rpm | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3500                                   | 470                                         | 611   | 0.70 | 556 | 791   | 0.91 | 630  | 967   | 1.11 | 697  | 1141  | 1.31 | 760  | 1314  | 1.51 |
| 4000                                   | 511                                         | 802   | 0.92 | 591 | 1001  | 1.15 | 661  | 1194  | 1.37 | 725  | 1383  | 1.59 | 784  | 1572  | 1.81 |
| 4500                                   | 553                                         | 1029  | 1.18 | 629 | 1248  | 1.44 | 695  | 1458  | 1.68 | 756  | 1663  | 1.91 | 812  | 1866  | 2.15 |
| 5000                                   | 597                                         | 1297  | 1.49 | 669 | 1534  | 1.76 | 732  | 1761  | 2.03 | 789  | 1982  | 2.28 | 843  | 2201  | 2.53 |
| 5500                                   | 641                                         | 1606  | 1.85 | 709 | 1862  | 2.14 | 770  | 2106  | 2.42 | 825  | 2343  | 2.70 | 876  | 2577  | 2.96 |
| 6000                                   | 686                                         | 1961  | 2.26 | 751 | 2234  | 2.57 | 809  | 2495  | 2.87 | 862  | 2749  | 3.16 | 911  | 2997  | 3.45 |
| 6500                                   | 732                                         | 2363  | 2.72 | 794 | 2653  | 3.05 | 849  | 2931  | 3.37 | 900  | 3201  | 3.68 | 948  | 3465  | 3.99 |
| 7000                                   | 779                                         | 2815  | 3.24 | 837 | 3122  | 3.59 | 891  | 3416  | 3.93 | 940  | 3702  | 4.26 | 986  | 3981  | 4.58 |
| 7500                                   | 826                                         | 3320  | 3.82 | 882 | 3642  | 4.19 | 933  | 3953  | 4.55 | 980  | 4254  | 4.89 | 1025 | 4549  | 5.23 |
| 8000                                   | 873                                         | 3879  | 4.46 | 926 | 4217  | 4.85 | 975  | 4542  | 5.22 | 1021 | 4860  | 5.59 | 1065 | 5169  | 5.95 |
| 8500                                   | 921                                         | 4495  | 5.17 | 972 | 4847  | 5.57 | 1019 | 5189  | 5.97 | 1063 | 5521  | 6.35 | 1105 | 5846  | 6.72 |

| 581A210 (18 TONS) (Medium Heat Units)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-----------------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                              | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                               | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                                               | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3500                                          | 818                                         | 1488  | 1.71 | 874  | 1661  | 1.91 | 927  | 1835  | 2.11 | 978  | 2008  | 2.31 | 1026 | 2182  | 2.51 |
| 4000                                          | 840                                         | 1760  | 2.02 | 893  | 1948  | 2.24 | 943  | 2136  | 2.46 | 992  | 2324  | 2.67 | 1039 | 2512  | 2.89 |
| 4500                                          | 865                                         | 2068  | 2.38 | 915  | 2270  | 2.61 | 964  | 2472  | 2.84 | 1011 | 2673  | 3.07 | 1056 | 2876  | 3.31 |
| 5000                                          | 893                                         | 2417  | 2.78 | 942  | 2632  | 3.03 | 988  | 2848  | 3.28 | 1033 | 3063  | 3.52 | 1076 | 3278  | 3.77 |
| 5500                                          | 925                                         | 2808  | 3.23 | 971  | 3037  | 3.49 | 1016 | 3266  | 3.76 | 1059 | 3494  | 4.02 | 1100 | 3721  | 4.28 |
| 6000                                          | 958                                         | 3243  | 3.73 | 1003 | 3486  | 4.01 | 1045 | 3728  | 4.29 | 1087 | 3970  | 4.57 | 1127 | 4210  | 4.84 |
| 6500                                          | 993                                         | 3725  | 4.28 | 1036 | 3982  | 4.58 | 1077 | 4238  | 4.87 | 1117 | 4492  | 5.17 | 1156 | 4745  | 5.46 |
| 7000                                          | 1029                                        | 4256  | 4.90 | 1071 | 4528  | 5.21 | 1111 | 4797  | 5.52 | 1150 | 5064  | 5.82 | 1187 | 5330  | 6.13 |
| 7500                                          | 1067                                        | 4838  | 5.56 | 1107 | 5124  | 5.89 | 1146 | 5407  | 6.22 | 1184 | 5688  | 6.54 | 1220 | 5967  | 6.86 |
| 8000                                          | 1106                                        | 5474  | 6.30 | 1145 | 5774  | 6.64 | 1182 | 6071  | 6.98 | 1219 | 6365  | 7.32 | 1254 | 6657  | 7.66 |
| 8500                                          | 1145                                        | 6165  | 7.09 | 1183 | 6479  | 7.45 | 1220 | 6790  | 7.81 | 1255 | 7098  | 8.16 | 1290 | 7403  | 8.51 |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 647-886 (208/230 and 460-v), 810-1072 (575-v)  
 High Range: 897-1139 (208/230 and 460-v), 873-1108 (575-v)  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 3.45 (575-v)  
 High Range: 5.75



# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A210 (18 TONS) (High Heat Units)* |                                             |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|--------------------------------------|---------------------------------------------|-------|------|-----|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                     | Available External Static Pressure (in. wg) |       |      |     |       |      |      |       |      |      |       |      |      |       |      |
|                                      | 0.2                                         |       |      | 0.4 |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                      | Rpm                                         | Watts | Bhp  | Rpm | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3500                                 | 470                                         | 611   | 0.70 | 556 | 791   | 0.91 | 630  | 967   | 1.11 | 697  | 1141  | 1.31 | 760  | 1314  | 1.51 |
| 4000                                 | 511                                         | 802   | 0.92 | 591 | 1001  | 1.15 | 661  | 1194  | 1.37 | 725  | 1383  | 1.59 | 784  | 1572  | 1.81 |
| 4500                                 | 553                                         | 1029  | 1.18 | 629 | 1248  | 1.44 | 695  | 1458  | 1.68 | 756  | 1663  | 1.91 | 812  | 1866  | 2.15 |
| 5000                                 | 597                                         | 1297  | 1.49 | 669 | 1534  | 1.76 | 732  | 1761  | 2.03 | 789  | 1982  | 2.28 | 843  | 2201  | 2.53 |
| 5500                                 | 641                                         | 1606  | 1.85 | 709 | 1862  | 2.14 | 770  | 2106  | 2.42 | 825  | 2343  | 2.70 | 876  | 2577  | 2.96 |
| 6000                                 | 686                                         | 1961  | 2.26 | 751 | 2234  | 2.57 | 809  | 2495  | 2.87 | 862  | 2749  | 3.16 | 911  | 2997  | 3.45 |
| 6500                                 | 732                                         | 2363  | 2.72 | 794 | 2653  | 3.05 | 849  | 2931  | 3.37 | 900  | 3201  | 3.68 | 948  | 3465  | 3.99 |
| 7000                                 | 779                                         | 2815  | 3.24 | 837 | 3122  | 3.59 | 891  | 3416  | 3.93 | 940  | 3702  | 4.26 | 986  | 3981  | 4.58 |
| 7500                                 | 826                                         | 3320  | 3.82 | 882 | 3642  | 4.19 | 933  | 3953  | 4.55 | 980  | 4254  | 4.89 | 1025 | 4549  | 5.23 |
| 8000                                 | 873                                         | 3879  | 4.46 | 926 | 4217  | 4.85 | 975  | 4542  | 5.22 | 1021 | 4860  | 5.59 | 1065 | 5169  | 5.95 |
| 8500                                 | 921                                         | 4495  | 5.17 | 972 | 4847  | 5.57 | 1019 | 5189  | 5.97 | 1063 | 5521  | 6.35 | 1105 | 5846  | 6.72 |

| 581A210 (18 TONS) (High Heat Units)* (cont) |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|---------------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                            | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                             | 1.2                                         |       |      | 1.4  |       |      | 1.6  |       |      | 1.8  |       |      | 2.0  |       |      |
|                                             | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 3500                                        | 818                                         | 1488  | 1.71 | 874  | 1661  | 1.91 | 927  | 1835  | 2.11 | 978  | 2008  | 2.31 | 1026 | 2182  | 2.51 |
| 4000                                        | 840                                         | 1760  | 2.02 | 893  | 1948  | 2.24 | 943  | 2136  | 2.46 | 992  | 2324  | 2.67 | 1039 | 2512  | 2.89 |
| 4500                                        | 865                                         | 2068  | 2.38 | 915  | 2270  | 2.61 | 964  | 2472  | 2.84 | 1011 | 2673  | 3.07 | 1056 | 2876  | 3.31 |
| 5000                                        | 893                                         | 2417  | 2.78 | 942  | 2632  | 3.03 | 988  | 2848  | 3.28 | 1033 | 3063  | 3.52 | 1076 | 3278  | 3.77 |
| 5500                                        | 925                                         | 2808  | 3.23 | 971  | 3037  | 3.49 | 1016 | 3266  | 3.76 | 1059 | 3494  | 4.02 | 1100 | 3721  | 4.28 |
| 6000                                        | 958                                         | 3243  | 3.73 | 1003 | 3486  | 4.01 | 1045 | 3728  | 4.29 | 1087 | 3970  | 4.57 | 1127 | 4210  | 4.84 |
| 6500                                        | 993                                         | 3725  | 4.28 | 1036 | 3982  | 4.58 | 1077 | 4238  | 4.87 | 1117 | 4492  | 5.17 | 1156 | 4745  | 5.46 |
| 7000                                        | 1029                                        | 4256  | 4.90 | 1071 | 4528  | 5.21 | 1111 | 4797  | 5.52 | 1150 | 5064  | 5.82 | 1187 | 5330  | 6.13 |
| 7500                                        | 1067                                        | 4838  | 5.56 | 1107 | 5124  | 5.89 | 1146 | 5407  | 6.22 | 1184 | 5688  | 6.54 | 1220 | 5967  | 6.86 |
| 8000                                        | 1106                                        | 5474  | 6.30 | 1145 | 5774  | 6.64 | 1182 | 6071  | 6.98 | 1219 | 6365  | 7.32 | 1254 | 6657  | 7.66 |
| 8500                                        | 1145                                        | 6165  | 7.09 | 1183 | 6479  | 7.45 | 1220 | 6790  | 7.81 | 1255 | 7098  | 8.16 | 1290 | 7403  | 8.51 |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 647-886 (208/230 and 460-v), 810-1072 (575-v)  
 High Range: 897-1139 (208/230 and 460-v), 873-1108 (575-v)  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 3.45 (575-v)  
 High Range: 5.75

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A240 (20 TONS) (Low Heat Units)* |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|-------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                    | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                     | 0.2                                         |       |      | 0.4  |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                     | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 5,000                               | 590                                         | 1276  | 1.47 | 663  | 1516  | 1.74 | 727  | 1745  | 2.01 | 786  | 1968  | 2.26 | 840  | 2189  | 2.52 |
| 5,500                               | 633                                         | 1579  | 1.82 | 703  | 1838  | 2.11 | 764  | 2084  | 2.40 | 820  | 2324  | 2.67 | 872  | 2560  | 2.94 |
| 6,000                               | 677                                         | 1925  | 2.21 | 744  | 2203  | 2.53 | 803  | 2467  | 2.84 | 857  | 2723  | 3.13 | 907  | 2974  | 3.42 |
| 6,500                               | 722                                         | 2317  | 2.67 | 786  | 2614  | 3.01 | 842  | 2896  | 3.33 | 894  | 3167  | 3.64 | 942  | 3434  | 3.95 |
| 7,000                               | 767                                         | 2758  | 3.17 | 828  | 3073  | 3.53 | 883  | 3371  | 3.88 | 933  | 3660  | 4.21 | 979  | 3942  | 4.53 |
| 7,500                               | 813                                         | 3250  | 3.74 | 871  | 3582  | 4.12 | 924  | 3897  | 4.48 | 972  | 4202  | 4.83 | 1017 | 4500  | 5.18 |
| 8,000                               | 859                                         | 3795  | 4.36 | 915  | 4143  | 4.77 | 966  | 4475  | 5.15 | 1012 | 4797  | 5.52 | 1056 | 5110  | 5.88 |
| 8,500                               | 906                                         | 4394  | 5.05 | 959  | 4759  | 5.47 | 1008 | 5107  | 5.87 | 1053 | 5445  | 6.26 | 1096 | 5774  | 6.64 |
| 9,000                               | 952                                         | 5051  | 5.81 | 1004 | 5432  | 6.25 | 1051 | 5797  | 6.67 | 1095 | 6150  | 7.07 | 1136 | 6494  | 7.47 |
| 9,500                               | 999                                         | 5767  | 6.63 | 1049 | 6163  | 7.09 | 1094 | 6544  | 7.53 | 1137 | 6913  | 7.95 | 1177 | 7272  | 8.36 |
| 10,000                              | 1047                                        | 6544  | 7.53 | 1094 | 6956  | 8.00 | 1138 | 7352  | 8.46 | 1180 | 7736  | 8.90 | 1219 | 8111  | 9.33 |

| 581A240 (20 TONS) (Low Heat Units)* (cont) |                                             |       |      |      |       |       |      |       |       |      |       |       |      |       |       |
|--------------------------------------------|---------------------------------------------|-------|------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Airflow<br>(Cfm)                           | Available External Static Pressure (in. wg) |       |      |      |       |       |      |       |       |      |       |       |      |       |       |
|                                            | 1.2                                         |       |      | 1.4  |       |       | 1.6  |       |       | 1.8  |       |       | 2.0  |       |       |
|                                            | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp   |
| 5,000                                      | 891                                         | 2408  | 2.77 | 940  | 2625  | 3.02  | 987  | 2843  | 3.27  | 1032 | 3060  | 3.52  | 1076 | 3277  | 3.77  |
| 5,500                                      | 921                                         | 2792  | 3.21 | 968  | 3024  | 3.48  | 1014 | 3255  | 3.74  | 1057 | 3485  | 4.01  | 1099 | 3716  | 4.27  |
| 6,000                                      | 954                                         | 3221  | 3.70 | 999  | 3467  | 3.99  | 1042 | 3711  | 4.27  | 1084 | 3955  | 4.55  | 1125 | 4198  | 4.83  |
| 6,500                                      | 988                                         | 3696  | 4.25 | 1032 | 3956  | 4.55  | 1073 | 4214  | 4.85  | 1114 | 4470  | 5.14  | 1153 | 4726  | 5.44  |
| 7,000                                      | 1024                                        | 4219  | 4.85 | 1066 | 4493  | 5.17  | 1106 | 4764  | 5.48  | 1145 | 5034  | 5.79  | 1183 | 5303  | 6.10  |
| 7,500                                      | 1060                                        | 4792  | 5.51 | 1101 | 5080  | 5.84  | 1140 | 5365  | 6.17  | 1178 | 5649  | 6.50  | 1215 | 5930  | 6.82  |
| 8,000                                      | 1098                                        | 5417  | 6.23 | 1138 | 5719  | 6.58  | 1176 | 6018  | 6.92  | 1213 | 6315  | 7.26  | 1249 | 6610  | 7.60  |
| 8,500                                      | 1137                                        | 6096  | 7.01 | 1175 | 6413  | 7.38  | 1212 | 6726  | 7.74  | 1248 | 7036  | 8.09  | 1283 | 7344  | 8.45  |
| 9,000                                      | 1176                                        | 6831  | 7.86 | 1214 | 7163  | 8.24  | 1250 | 7490  | 8.61  | 1285 | 7814  | 8.99  | 1319 | 8135  | 9.36  |
| 9,500                                      | 1216                                        | 7624  | 8.77 | 1253 | 7970  | 9.17  | 1288 | 8312  | 9.56  | 1322 | 8649  | 9.95  | 1355 | 8984  | 10.33 |
| 10,000                                     | 1256                                        | 8478  | 9.75 | 1292 | 8838  | 10.16 | 1327 | 9193  | 10.57 | 1360 | 9545  | 10.98 | 1393 | 9893  | 11.38 |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 949-1206  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63

**PERFORMANCE DATA (cont)**  
**FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)**

| <b>581A240 (20 TONS) (Medium Heat Units)*</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|-----------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                      | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                               | <b>0.2</b>                                         |              |            | <b>0.4</b> |              |            | <b>0.6</b> |              |            | <b>0.8</b> |              |            | <b>1.0</b> |              |            |
|                                               | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| <b>5,000</b>                                  | 607                                                | 1329         | 1.53       | 677        | 1565         | 1.80       | 740        | 1791         | 2.06       | 797        | 2013         | 2.31       | 850        | 2231         | 2.57       |
| <b>5,500</b>                                  | 652                                                | 1648         | 1.90       | 719        | 1902         | 2.19       | 779        | 2145         | 2.47       | 833        | 2382         | 2.74       | 884        | 2616         | 3.01       |
| <b>6,000</b>                                  | 699                                                | 2013         | 2.32       | 763        | 2285         | 2.63       | 819        | 2545         | 2.93       | 872        | 2798         | 3.22       | 921        | 3046         | 3.50       |
| <b>6,500</b>                                  | 746                                                | 2428         | 2.79       | 807        | 2716         | 3.12       | 861        | 2993         | 3.44       | 911        | 3262         | 3.75       | 958        | 3525         | 4.05       |
| <b>7,000</b>                                  | 794                                                | 2895         | 3.33       | 851        | 3198         | 3.68       | 904        | 3491         | 4.02       | 952        | 3776         | 4.34       | 998        | 4055         | 4.66       |
| <b>7,500</b>                                  | 842                                                | 3415         | 3.93       | 897        | 3735         | 4.30       | 947        | 4043         | 4.65       | 994        | 4343         | 5.00       | 1038       | 4637         | 5.33       |
| <b>8,000</b>                                  | 891                                                | 3992         | 4.59       | 943        | 4327         | 4.98       | 991        | 4650         | 5.35       | 1036       | 4966         | 5.71       | 1079       | 5274         | 6.07       |
| <b>8,500</b>                                  | 940                                                | 4628         | 5.32       | 990        | 4977         | 5.72       | 1036       | 5316         | 6.11       | 1080       | 5646         | 6.49       | 1121       | 5970         | 6.87       |
| <b>9,000</b>                                  | 990                                                | 5325         | 6.12       | 1037       | 5688         | 6.54       | 1082       | 6042         | 6.95       | 1124       | 6386         | 7.35       | 1163       | 6724         | 7.73       |
| <b>9,500</b>                                  | 1039                                               | 6085         | 7.00       | 1085       | 6462         | 7.43       | 1128       | 6829         | 7.85       | 1168       | 7188         | 8.27       | 1207       | 7541         | 8.67       |
| <b>10,000</b>                                 | 1089                                               | 6911         | 7.95       | 1133       | 7301         | 8.40       | 1174       | 7682         | 8.83       | 1213       | 8055         | 9.26       | 1251       | 8421         | 9.69       |

| <b>581A240 (20 TONS) (Medium Heat Units)* (cont)</b> |                                                    |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|------------------------------------------------------|----------------------------------------------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|------------|--------------|------------|
| <b>Airflow<br/>(Cfm)</b>                             | <b>Available External Static Pressure (in. wg)</b> |              |            |            |              |            |            |              |            |            |              |            |            |              |            |
|                                                      | <b>1.2</b>                                         |              |            | <b>1.4</b> |              |            | <b>1.6</b> |              |            | <b>1.8</b> |              |            | <b>2.0</b> |              |            |
|                                                      | <b>Rpm</b>                                         | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> | <b>Rpm</b> | <b>Watts</b> | <b>Bhp</b> |
| <b>5,000</b>                                         | 900                                                | 2448         | 2.82       | 949        | 2664         | 3.06       | 995        | 2879         | 3.31       | 1040       | 3095         | 3.56       | 1083       | 3310         | 3.81       |
| <b>5,500</b>                                         | 933                                                | 2847         | 3.27       | 979        | 3077         | 3.54       | 1023       | 3305         | 3.80       | 1066       | 3534         | 4.06       | 1108       | 3762         | 4.33       |
| <b>6,000</b>                                         | 967                                                | 3292         | 3.79       | 1011       | 3535         | 4.07       | 1054       | 3778         | 4.35       | 1095       | 4019         | 4.62       | 1135       | 4260         | 4.90       |
| <b>6,500</b>                                         | 1003                                               | 3785         | 4.35       | 1046       | 4043         | 4.65       | 1087       | 4298         | 4.94       | 1127       | 4553         | 5.24       | 1165       | 4806         | 5.53       |
| <b>7,000</b>                                         | 1041                                               | 4330         | 4.98       | 1082       | 4601         | 5.29       | 1122       | 4870         | 5.60       | 1160       | 5138         | 5.91       | 1197       | 5404         | 6.22       |
| <b>7,500</b>                                         | 1079                                               | 4926         | 5.67       | 1119       | 5212         | 5.99       | 1158       | 5495         | 6.32       | 1195       | 5776         | 6.64       | 1231       | 6055         | 6.96       |
| <b>8,000</b>                                         | 1119                                               | 5578         | 6.42       | 1158       | 5878         | 6.76       | 1195       | 6174         | 7.10       | 1231       | 6468         | 7.44       | 1267       | 6761         | 7.78       |
| <b>8,500</b>                                         | 1160                                               | 6288         | 7.23       | 1198       | 6601         | 7.59       | 1234       | 6912         | 7.95       | 1269       | 7219         | 8.30       | 1303       | 7524         | 8.65       |
| <b>9,000</b>                                         | 1202                                               | 7056         | 8.12       | 1238       | 7384         | 8.49       | 1273       | 7708         | 8.87       | 1308       | 8029         | 9.23       | 1341       | 8347         | 9.60       |
| <b>9,500</b>                                         | 1244                                               | 7887         | 9.07       | 1279       | 8228         | 9.46       | 1314       | 8566         | 9.85       | 1347       | 8900         | 10.24      | 1379       | 9231         | 10.62      |
| <b>10,000</b>                                        | 1287                                               | 8781         | 10.10      | 1321       | 9137         | 10.51      | 1355       | 9488         | 10.91      | 1387       | 9836         | 11.31      | —          | —            | —          |

**LEGEND**

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 949-1206  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63

## PERFORMANCE DATA (cont)

### FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A240 (20 TONS) (High Heat Units)* |                                             |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|--------------------------------------|---------------------------------------------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|
| Airflow<br>(Cfm)                     | Available External Static Pressure (in. wg) |       |      |      |       |      |      |       |      |      |       |      |      |       |      |
|                                      | 0.2                                         |       |      | 0.4  |       |      | 0.6  |       |      | 0.8  |       |      | 1.0  |       |      |
|                                      | Rpm                                         | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  | Rpm  | Watts | Bhp  |
| 5,000                                | 607                                         | 1329  | 1.53 | 677  | 1565  | 1.80 | 740  | 1791  | 2.06 | 797  | 2013  | 2.31 | 850  | 2231  | 2.57 |
| 5,500                                | 652                                         | 1648  | 1.90 | 719  | 1902  | 2.19 | 779  | 2145  | 2.47 | 833  | 2382  | 2.74 | 884  | 2616  | 3.01 |
| 6,000                                | 699                                         | 2013  | 2.32 | 763  | 2285  | 2.63 | 819  | 2545  | 2.93 | 872  | 2798  | 3.22 | 921  | 3046  | 3.50 |
| 6,500                                | 746                                         | 2428  | 2.79 | 807  | 2716  | 3.12 | 861  | 2993  | 3.44 | 911  | 3262  | 3.75 | 958  | 3525  | 4.05 |
| 7,000                                | 794                                         | 2895  | 3.33 | 851  | 3198  | 3.68 | 904  | 3491  | 4.02 | 952  | 3776  | 4.34 | 998  | 4055  | 4.66 |
| 7,500                                | 842                                         | 3415  | 3.93 | 897  | 3735  | 4.30 | 947  | 4043  | 4.65 | 994  | 4343  | 5.00 | 1038 | 4637  | 5.33 |
| 8,000                                | 891                                         | 3992  | 4.59 | 943  | 4327  | 4.98 | 991  | 4650  | 5.35 | 1036 | 4966  | 5.71 | 1079 | 5274  | 6.07 |
| 8,500                                | 940                                         | 4628  | 5.32 | 990  | 4977  | 5.72 | 1036 | 5316  | 6.11 | 1080 | 5646  | 6.49 | 1121 | 5970  | 6.87 |
| 9,000                                | 990                                         | 5325  | 6.12 | 1037 | 5688  | 6.54 | 1082 | 6042  | 6.95 | 1124 | 6386  | 7.35 | 1163 | 6724  | 7.73 |
| 9,500                                | 1039                                        | 6085  | 7.00 | 1085 | 6462  | 7.43 | 1128 | 6829  | 7.85 | 1168 | 7188  | 8.27 | 1207 | 7541  | 8.67 |
| 10,000                               | 1089                                        | 6911  | 7.95 | 1133 | 7301  | 8.40 | 1174 | 7682  | 8.83 | 1213 | 8055  | 9.26 | 1251 | 8421  | 9.69 |

| 581A240 (20 TONS) (High Heat Units)* (cont) |                                             |       |       |      |       |       |      |       |       |      |       |       |      |       |       |
|---------------------------------------------|---------------------------------------------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|------|-------|-------|
| Airflow<br>(Cfm)                            | Available External Static Pressure (in. wg) |       |       |      |       |       |      |       |       |      |       |       |      |       |       |
|                                             | 1.2                                         |       |       | 1.4  |       |       | 1.6  |       |       | 1.8  |       |       | 2.0  |       |       |
|                                             | Rpm                                         | Watts | Bhp   | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp   | Rpm  | Watts | Bhp   |
| 5,000                                       | 900                                         | 2448  | 2.82  | 949  | 2664  | 3.06  | 995  | 2879  | 3.31  | 1040 | 3095  | 3.56  | 1083 | 3310  | 3.81  |
| 5,500                                       | 933                                         | 2847  | 3.27  | 979  | 3077  | 3.54  | 1023 | 3305  | 3.80  | 1066 | 3534  | 4.06  | 1108 | 3762  | 4.33  |
| 6,000                                       | 967                                         | 3292  | 3.79  | 1011 | 3535  | 4.07  | 1054 | 3778  | 4.35  | 1095 | 4019  | 4.62  | 1135 | 4260  | 4.90  |
| 6,500                                       | 1003                                        | 3785  | 4.35  | 1046 | 4043  | 4.65  | 1087 | 4298  | 4.94  | 1127 | 4553  | 5.24  | 1165 | 4806  | 5.53  |
| 7,000                                       | 1041                                        | 4330  | 4.98  | 1082 | 4601  | 5.29  | 1122 | 4870  | 5.60  | 1160 | 5138  | 5.91  | 1197 | 5404  | 6.22  |
| 7,500                                       | 1079                                        | 4926  | 5.67  | 1119 | 5212  | 5.99  | 1158 | 5495  | 6.32  | 1195 | 5776  | 6.64  | 1231 | 6055  | 6.96  |
| 8,000                                       | 1119                                        | 5578  | 6.42  | 1158 | 5878  | 6.76  | 1195 | 6174  | 7.10  | 1231 | 6468  | 7.44  | 1267 | 6761  | 7.78  |
| 8,500                                       | 1160                                        | 6288  | 7.23  | 1198 | 6601  | 7.59  | 1234 | 6912  | 7.95  | 1269 | 7219  | 8.30  | 1303 | 7524  | 8.65  |
| 9,000                                       | 1202                                        | 7056  | 8.12  | 1238 | 7384  | 8.49  | 1273 | 7708  | 8.87  | 1308 | 8029  | 9.23  | 1341 | 8347  | 9.60  |
| 9,500                                       | 1244                                        | 7887  | 9.07  | 1279 | 8228  | 9.46  | 1314 | 8566  | 9.85  | 1347 | 8900  | 10.24 | 1379 | 9231  | 10.62 |
| 10,000                                      | 1287                                        | 8781  | 10.10 | 1321 | 9137  | 10.51 | 1355 | 9488  | 10.91 | 1387 | 9836  | 11.31 | —    | —     | —     |

#### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 949-1206  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A300 (25 TONS) (Low Heat Units)* |                                             |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|-------------------------------------|---------------------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                    | Available External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                     | 0.2                                         |        |       | 0.4  |        |       | 0.6  |        |       | 0.8  |        |       | 1.0  |        |       |
|                                     | Rpm                                         | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   |
| 6,500                               | 750                                         | 2,468  | 2.84  | 806  | 2,767  | 3.18  | 854  | 3,031  | 3.49  | 898  | 3,298  | 3.79  | 943  | 3,584  | 4.12  |
| 7,000                               | 797                                         | 2,942  | 3.38  | 853  | 3,276  | 3.77  | 899  | 3,557  | 4.09  | 941  | 3,832  | 4.41  | 982  | 4,118  | 4.74  |
| 7,500                               | 845                                         | 3,468  | 3.99  | 900  | 3,840  | 4.42  | 945  | 4,142  | 4.76  | 985  | 4,430  | 5.09  | 1024 | 4,721  | 5.43  |
| 8,000                               | 892                                         | 4,045  | 4.65  | 948  | 4,462  | 5.13  | 991  | 4,789  | 5.51  | 1030 | 5,092  | 5.86  | 1067 | 5,391  | 6.20  |
| 8,500                               | 939                                         | 4,677  | 5.38  | 995  | 5,141  | 5.91  | 1038 | 5,497  | 6.32  | 1076 | 5,818  | 6.69  | 1112 | 6,129  | 7.05  |
| 9,000                               | 986                                         | 5,364  | 6.17  | 1042 | 5,882  | 6.76  | 1085 | 6,269  | 7.21  | 1122 | 6,611  | 7.60  | 1157 | 6,936  | 7.98  |
| 9,500                               | 1033                                        | 6,108  | 7.03  | 1090 | 6,684  | 7.69  | 1132 | 7,105  | 8.17  | 1169 | 7,470  | 8.59  | 1203 | 7,813  | 8.99  |
| 10,000                              | 1079                                        | 6,911  | 7.95  | 1137 | 7,550  | 8.68  | 1180 | 8,007  | 9.21  | 1216 | 8,399  | 9.66  | 1249 | 8,761  | 10.08 |
| 10,500                              | 1126                                        | 7,773  | 8.94  | 1184 | 8,480  | 9.75  | 1227 | 8,978  | 10.33 | 1263 | 9,399  | 10.81 | 1296 | 9,782  | 11.25 |
| 11,000                              | 1172                                        | 8,696  | 10.00 | 1232 | 9,475  | 10.90 | 1274 | 10,017 | 11.52 | 1310 | 10,468 | 12.04 | 1342 | 10,876 | 12.51 |
| 11,500                              | 1219                                        | 9,681  | 11.13 | 1279 | 10,539 | 12.12 | 1322 | 11,127 | 12.80 | 1357 | 11,611 | 13.35 | —    | —      | —     |
| 12,000                              | 1265                                        | 10,732 | 12.34 | 1326 | 11,669 | 13.42 | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                              | 1311                                        | 11,848 | 13.63 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

| 581A300 (25 TONS) (Low Heat Units)* (cont) |                                             |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|--------------------------------------------|---------------------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                           | Available External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                            | 1.2                                         |        |       | 1.4  |        |       | 1.6  |        |       | 1.8  |        |       | 2.0  |        |       |
|                                            | Rpm                                         | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   |
| 6,500                                      | 988                                         | 3,900  | 4.49  | 1035 | 4,250  | 4.89  | 1082 | 4,634  | 5.33  | 1130 | 5,053  | 5.81  | 1177 | 5,499  | 6.32  |
| 7,000                                      | 1024                                        | 4,426  | 5.09  | 1066 | 4,760  | 5.48  | 1109 | 5,126  | 5.90  | 1153 | 5,524  | 6.35  | 1197 | 5,953  | 6.85  |
| 7,500                                      | 1063                                        | 5,026  | 5.78  | 1101 | 5,351  | 6.15  | 1141 | 5,702  | 6.56  | 1181 | 6,081  | 6.99  | 1222 | 6,490  | 7.46  |
| 8,000                                      | 1104                                        | 5,698  | 6.55  | 1140 | 6,020  | 6.92  | 1176 | 6,361  | 7.32  | 1213 | 6,727  | 7.74  | 1251 | 7,118  | 8.19  |
| 8,500                                      | 1146                                        | 6,443  | 7.41  | 1180 | 6,765  | 7.78  | 1214 | 7,103  | 8.17  | 1249 | 7,459  | 8.58  | 1283 | 7,837  | 9.01  |
| 9,000                                      | 1190                                        | 7,259  | 8.35  | 1222 | 7,586  | 8.73  | 1255 | 7,925  | 9.11  | 1287 | 8,276  | 9.52  | 1319 | 8,645  | 9.94  |
| 9,500                                      | 1235                                        | 8,148  | 9.37  | 1266 | 8,483  | 9.76  | 1296 | 8,824  | 10.15 | 1327 | 9,176  | 10.55 | 1357 | 9,541  | 10.97 |
| 10,000                                     | 1280                                        | 9,111  | 10.48 | 1310 | 9,456  | 10.88 | 1340 | 9,804  | 11.28 | 1369 | 10,158 | 11.68 | 1398 | 10,522 | 12.10 |
| 10,500                                     | 1326                                        | 10,147 | 11.67 | 1355 | 10,505 | 12.08 | 1384 | 10,862 | 12.49 | —    | —      | —     | —    | —      | —     |
| 11,000                                     | 1372                                        | 11,259 | 12.95 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 11,500                                     | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,000                                     | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                                     | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:

Low Range: 805-1007

High Range: 941-1176

All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:

Low Range: 5.75

High Range: 8.63

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A300 (25 TONS) (Medium Heat Units)* |                                             |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|----------------------------------------|---------------------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                       | Available External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                        | 0.2                                         |        |       | 0.4  |        |       | 0.6  |        |       | 0.8  |        |       | 1.0  |        |       |
|                                        | Rpm                                         | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   |
| 6,500                                  | 775                                         | 2,600  | 2.99  | 825  | 2,872  | 3.30  | 871  | 3,130  | 3.60  | 915  | 3,400  | 3.91  | 959  | 3,692  | 4.25  |
| 7,000                                  | 826                                         | 3,115  | 3.58  | 875  | 3,408  | 3.92  | 918  | 3,679  | 4.23  | 959  | 3,954  | 4.55  | 1000 | 4,245  | 4.88  |
| 7,500                                  | 878                                         | 3,690  | 4.24  | 925  | 4,006  | 4.61  | 966  | 4,292  | 4.94  | 1005 | 4,575  | 5.26  | 1043 | 4,868  | 5.60  |
| 8,000                                  | 929                                         | 4,326  | 4.98  | 975  | 4,667  | 5.37  | 1015 | 4,970  | 5.72  | 1052 | 5,265  | 6.06  | 1088 | 5,564  | 6.40  |
| 8,500                                  | 981                                         | 5,029  | 5.78  | 1026 | 5,395  | 6.20  | 1064 | 5,717  | 6.58  | 1100 | 6,025  | 6.93  | 1134 | 6,332  | 7.28  |
| 9,000                                  | 1033                                        | 5,799  | 6.67  | 1076 | 6,191  | 7.12  | 1114 | 6,533  | 7.51  | 1148 | 6,856  | 7.89  | 1181 | 7,173  | 8.25  |
| 9,500                                  | 1085                                        | 6,640  | 7.64  | 1128 | 7,058  | 8.12  | 1164 | 7,421  | 8.54  | 1198 | 7,761  | 8.93  | 1229 | 8,091  | 9.31  |
| 10,000                                 | 1137                                        | 7,553  | 8.69  | 1179 | 8,000  | 9.20  | 1214 | 8,385  | 9.64  | 1247 | 8,741  | 10.05 | 1278 | 9,086  | 10.45 |
| 10,500                                 | 1190                                        | 8,542  | 9.82  | 1230 | 9,016  | 10.37 | 1265 | 9,424  | 10.84 | 1297 | 9,799  | 11.27 | 1327 | 10,158 | 11.68 |
| 11,000                                 | 1242                                        | 9,609  | 11.05 | 1282 | 10,111 | 11.63 | 1316 | 10,542 | 12.12 | 1347 | 10,937 | 12.58 | 1376 | 11,311 | 13.01 |
| 11,500                                 | 1294                                        | 10,756 | 12.37 | 1333 | 11,287 | 12.98 | 1367 | 11,741 | 13.50 | —    | —      | —     | —    | —      | —     |
| 12,000                                 | 1347                                        | 11,985 | 13.78 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                                 | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

| 581A300 (25 TONS) (Medium Heat Units)* (cont) |                                             |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|-----------------------------------------------|---------------------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|-------|-------|
| Airflow<br>(Cfm)                              | Available External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|                                               | 1.2                                         |        |       | 1.4  |        |       | 1.6  |        |       | 1.8  |        |       | 2.0  |       |       |
|                                               | Rpm                                         | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts | Bhp   |
| 6,500                                         | 1004                                        | 4,016  | 4.62  | 1050 | 4,374  | 5.03  | 1098 | 4,769  | 5.48  | 1145 | 5,195  | 5.97  | 1192 | 5,646 | 6.49  |
| 7,000                                         | 1041                                        | 4,559  | 5.24  | 1083 | 4,902  | 5.64  | 1126 | 5,277  | 6.07  | 1170 | 5,685  | 6.54  | 1214 | 6,122 | 7.04  |
| 7,500                                         | 1081                                        | 5,179  | 5.96  | 1120 | 5,512  | 6.34  | 1159 | 5,872  | 6.75  | 1199 | 6,261  | 7.20  | 1240 | 6,680 | 7.68  |
| 8,000                                         | 1124                                        | 5,875  | 6.76  | 1160 | 6,203  | 7.13  | 1196 | 6,553  | 7.54  | 1233 | 6,928  | 7.97  | 1270 | 7,329 | 8.43  |
| 8,500                                         | 1168                                        | 6,647  | 7.64  | 1202 | 6,974  | 8.02  | 1235 | 7,318  | 8.42  | 1269 | 7,684  | 8.84  | 1304 | 8,071 | 9.28  |
| 9,000                                         | 1214                                        | 7,495  | 8.62  | 1245 | 7,825  | 9.00  | 1277 | 8,168  | 9.39  | 1309 | 8,527  | 9.81  | 1341 | 8,905 | 10.24 |
| 9,500                                         | 1260                                        | 8,421  | 9.69  | 1290 | 8,756  | 10.07 | 1320 | 9,100  | 10.47 | 1351 | 9,457  | 10.88 | 1381 | 9,830 | 11.31 |
| 10,000                                        | 1308                                        | 9,425  | 10.84 | 1337 | 9,768  | 11.23 | 1365 | 10,116 | 11.63 | 1394 | 10,474 | 12.05 | —    | —     | —     |
| 10,500                                        | 1356                                        | 10,510 | 12.09 | 1384 | 10,862 | 12.49 | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,000                                        | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,500                                        | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,000                                        | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,500                                        | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 805-1007  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63

## PERFORMANCE DATA (cont)

### FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

| 581A300 (25 TONS) (High Heat Units)* |                                             |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|--------------------------------------|---------------------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                     | Available External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                      | 0.2                                         |        |       | 0.4  |        |       | 0.6  |        |       | 0.8  |        |       | 1.0  |        |       |
|                                      | Rpm                                         | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   |
| 6,500                                | 775                                         | 2,600  | 2.99  | 825  | 2,872  | 3.30  | 871  | 3,130  | 3.60  | 915  | 3,400  | 3.91  | 959  | 3,692  | 4.25  |
| 7,000                                | 826                                         | 3,115  | 3.58  | 875  | 3,408  | 3.92  | 918  | 3,679  | 4.23  | 959  | 3,954  | 4.55  | 1000 | 4,245  | 4.88  |
| 7,500                                | 878                                         | 3,690  | 4.24  | 925  | 4,006  | 4.61  | 966  | 4,292  | 4.94  | 1005 | 4,575  | 5.26  | 1043 | 4,868  | 5.60  |
| 8,000                                | 929                                         | 4,326  | 4.98  | 975  | 4,667  | 5.37  | 1015 | 4,970  | 5.72  | 1052 | 5,265  | 6.06  | 1088 | 5,564  | 6.40  |
| 8,500                                | 981                                         | 5,029  | 5.78  | 1026 | 5,395  | 6.20  | 1064 | 5,717  | 6.58  | 1100 | 6,025  | 6.93  | 1134 | 6,332  | 7.28  |
| 9,000                                | 1033                                        | 5,799  | 6.67  | 1076 | 6,191  | 7.12  | 1114 | 6,533  | 7.51  | 1148 | 6,856  | 7.89  | 1181 | 7,173  | 8.25  |
| 9,500                                | 1085                                        | 6,640  | 7.64  | 1128 | 7,058  | 8.12  | 1164 | 7,421  | 8.54  | 1198 | 7,761  | 8.93  | 1229 | 8,091  | 9.31  |
| 10,000                               | 1137                                        | 7,553  | 8.69  | 1179 | 8,000  | 9.20  | 1214 | 8,385  | 9.64  | 1247 | 8,741  | 10.05 | 1278 | 9,086  | 10.45 |
| 10,500                               | 1190                                        | 8,542  | 9.82  | 1230 | 9,016  | 10.37 | 1265 | 9,424  | 10.84 | 1297 | 9,799  | 11.27 | 1327 | 10,158 | 11.68 |
| 11,000                               | 1242                                        | 9,609  | 11.05 | 1282 | 10,111 | 11.63 | 1316 | 10,542 | 12.12 | 1347 | 10,937 | 12.58 | 1376 | 11,311 | 13.01 |
| 11,500                               | 1294                                        | 10,756 | 12.37 | 1333 | 11,287 | 12.98 | 1367 | 11,741 | 13.50 | —    | —      | —     | —    | —      | —     |
| 12,000                               | 1347                                        | 11,985 | 13.78 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                               | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

| 581A300 (25 TONS) (High Heat Units)* (cont) |                                             |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|---------------------------------------------|---------------------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|-------|-------|
| Airflow<br>(Cfm)                            | Available External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|                                             | 1.2                                         |        |       | 1.4  |        |       | 1.6  |        |       | 1.8  |        |       | 2.0  |       |       |
|                                             | Rpm                                         | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts  | Bhp   | Rpm  | Watts | Bhp   |
| 6,500                                       | 1004                                        | 4,016  | 4.62  | 1050 | 4,374  | 5.03  | 1098 | 4,769  | 5.48  | 1145 | 5,195  | 5.97  | 1192 | 5,646 | 6.49  |
| 7,000                                       | 1041                                        | 4,559  | 5.24  | 1083 | 4,902  | 5.64  | 1126 | 5,277  | 6.07  | 1170 | 5,685  | 6.54  | 1214 | 6,122 | 7.04  |
| 7,500                                       | 1081                                        | 5,179  | 5.96  | 1120 | 5,512  | 6.34  | 1159 | 5,872  | 6.75  | 1199 | 6,261  | 7.20  | 1240 | 6,680 | 7.68  |
| 8,000                                       | 1124                                        | 5,875  | 6.76  | 1160 | 6,203  | 7.13  | 1196 | 6,553  | 7.54  | 1233 | 6,928  | 7.97  | 1270 | 7,329 | 8.43  |
| 8,500                                       | 1168                                        | 6,647  | 7.64  | 1202 | 6,974  | 8.02  | 1235 | 7,318  | 8.42  | 1269 | 7,684  | 8.84  | 1304 | 8,071 | 9.28  |
| 9,000                                       | 1214                                        | 7,495  | 8.62  | 1245 | 7,825  | 9.00  | 1277 | 8,168  | 9.39  | 1309 | 8,527  | 9.81  | 1341 | 8,905 | 10.24 |
| 9,500                                       | 1260                                        | 8,421  | 9.69  | 1290 | 8,756  | 10.07 | 1320 | 9,100  | 10.47 | 1351 | 9,457  | 10.88 | 1381 | 9,830 | 11.31 |
| 10,000                                      | 1308                                        | 9,425  | 10.84 | 1337 | 9,768  | 11.23 | 1365 | 10,116 | 11.63 | 1394 | 10,474 | 12.05 | —    | —     | —     |
| 10,500                                      | 1356                                        | 10,510 | 12.09 | 1384 | 10,862 | 12.49 | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,000                                      | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,500                                      | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,000                                      | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,500                                      | —                                           | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |

#### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:

Low Range: 805-1007

High Range: 941-1176

All other rpms require field-supplied drive.

Refer to this page for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:

Low Range: 5.75

High Range: 8.63

#### GENERAL NOTES FOR FAN PERFORMANCE DATA TABLES

1. Static pressure losses (i.e., EconoMi\$er IV) must be added to external static pressure before entering Fan Performance table.
2. Interpolation is permissible. Do not extrapolate.
3. Fan performance is based on wet coils, clean filters, and casing losses. See Accessory/FIOP Static Pressure table on pages 241 and 243.
4. Extensive motor and drive testing on these units ensures that the full horsepower and watts range of the motor can be utilized with

confidence. Using the fan motors up to the watts or bhp rating shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected.

5. Use of a field-supplied motor may affect wire size. Contact your Bryant representative for details.
6. Field-supplied drive requires changing belt and motor pulley to meet desired airflow. See application data or contact your local Bryant representative for details.

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A210 (18 TONS) (Low Heat Units)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                    | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                     | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                     | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                               | 635                               | 1064 | 1.22  | 709  | 1278 | 1.47  | 776  | 1492 | 1.72  | 838  | 1708 | 1.96  | 896  | 1924 | 2.21  |
| 4,000                               | 707                               | 1402 | 1.61  | 773  | 1627 | 1.87  | 835  | 1853 | 2.13  | 892  | 2080 | 2.39  | 947  | 2307 | 2.65  |
| 4,500                               | 780                               | 1802 | 2.07  | 840  | 2037 | 2.34  | 897  | 2273 | 2.61  | 950  | 2510 | 2.89  | 1001 | 2465 | 2.84  |
| 5,000                               | 853                               | 2264 | 2.60  | 909  | 2510 | 2.89  | 961  | 2756 | 3.17  | 1011 | 2710 | 3.12  | 1059 | 3015 | 3.47  |
| 5,500                               | 928                               | 2794 | 3.21  | 979  | 3049 | 3.51  | 1028 | 3012 | 3.46  | 1075 | 3333 | 3.83  | 1120 | 3661 | 4.21  |
| 6,000                               | 1003                              | 3047 | 3.50  | 1051 | 3376 | 3.88  | 1096 | 3714 | 4.27  | 1140 | 4059 | 4.67  | 1182 | 4411 | 5.07  |
| 6,500                               | 1079                              | 3812 | 4.38  | 1123 | 4166 | 4.79  | 1166 | 4529 | 5.21  | 1207 | 4898 | 5.63  | 1247 | 5274 | 6.07  |
| 7,000                               | 1155                              | 4697 | 5.40  | 1196 | 5078 | 5.84  | 1236 | 5465 | 6.29  | 1275 | 5859 | 6.74  | 1313 | 6260 | 7.20  |
| 7,500                               | 1231                              | 5714 | 6.57  | 1270 | 6120 | 7.04  | 1308 | 6533 | 7.51  | 1345 | 6952 | 8.00  | 1381 | 7378 | 8.49  |
| 8,000                               | 1308                              | 6871 | 7.90  | 1344 | 7303 | 8.40  | 1380 | 7741 | 8.90  | —    | —    | —     | —    | —    | —     |
| 8,500                               | 1385                              | 8177 | 9.40  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                               | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                               | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                              | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581A210 (18 TONS) (Low Heat Units)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                      | 951                               | 2143 | 2.46  | 1003 | 2120 | 2.44  | 1052 | 2387 | 2.75  | 1100 | 2662 | 3.06  | 1146 | 2944 | 3.39  |
| 4,000                                      | 998                               | 2535 | 2.92  | 1048 | 2548 | 2.93  | 1095 | 2835 | 3.26  | 1141 | 3129 | 3.60  | 1184 | 3432 | 3.95  |
| 4,500                                      | 1050                              | 2756 | 3.17  | 1097 | 3055 | 3.51  | 1142 | 3363 | 3.87  | 1185 | 3678 | 4.23  | 1227 | 4001 | 4.60  |
| 5,000                                      | 1105                              | 3329 | 3.83  | 1150 | 3651 | 4.20  | 1192 | 3979 | 4.58  | 1234 | 4315 | 4.96  | 1274 | 4658 | 5.36  |
| 5,500                                      | 1163                              | 3997 | 4.60  | 1205 | 4342 | 4.99  | 1246 | 4692 | 5.40  | 1286 | 5051 | 5.81  | 1324 | 5415 | 6.23  |
| 6,000                                      | 1224                              | 4771 | 5.49  | 1263 | 5138 | 5.91  | 1302 | 5511 | 6.34  | 1340 | 5892 | 6.78  | 1377 | 6278 | 7.22  |
| 6,500                                      | 1286                              | 5658 | 6.51  | 1324 | 6048 | 6.96  | 1361 | 6445 | 7.41  | 1397 | 6847 | 7.87  | —    | —    | —     |
| 7,000                                      | 1350                              | 6668 | 7.67  | 1386 | 7081 | 8.14  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7,500                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,000                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 896-1227 (208/230 and 460-v), 863-1141 (575-v)  
 High Range: 1113-1414 (208/230 and 460-v), 1042-1285 (575-v)  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 3.45 (575-v)  
 High Range: 5.75



# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A210 (18 TONS) (Medium Heat Units)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                       | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                        | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                        | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                  | 645                               | 1105 | 1.27  | 720  | 1329 | 1.53  | 788  | 1549 | 1.78  | 851  | 1767 | 2.03  | 910  | 1982 | 2.28  |
| 4,000                                  | 718                               | 1454 | 1.67  | 785  | 1692 | 1.95  | 848  | 1926 | 2.22  | 906  | 2158 | 2.48  | 962  | 2388 | 2.75  |
| 4,500                                  | 792                               | 1866 | 2.15  | 853  | 2117 | 2.43  | 911  | 2364 | 2.72  | 965  | 2609 | 3.00  | 1017 | 2583 | 2.97  |
| 5,000                                  | 867                               | 2343 | 2.69  | 923  | 2605 | 3.00  | 977  | 2865 | 3.30  | 1027 | 2845 | 3.27  | 1076 | 3163 | 3.64  |
| 5,500                                  | 943                               | 2889 | 3.32  | 995  | 3162 | 3.64  | 1044 | 3158 | 3.63  | 1092 | 3497 | 4.02  | 1138 | 3843 | 4.42  |
| 6,000                                  | 1019                              | 3177 | 3.65  | 1067 | 3532 | 4.06  | 1113 | 3892 | 4.48  | 1158 | 4259 | 4.90  | 1201 | 4631 | 5.33  |
| 6,500                                  | 1096                              | 3973 | 4.57  | 1141 | 4354 | 5.01  | 1184 | 4742 | 5.45  | 1226 | 5136 | 5.91  | 1267 | 5535 | 6.37  |
| 7,000                                  | 1173                              | 4894 | 5.63  | 1215 | 5304 | 6.10  | 1256 | 5719 | 6.58  | 1295 | 6140 | 7.06  | 1334 | 6567 | 7.55  |
| 7,500                                  | 1250                              | 5952 | 6.85  | 1290 | 6389 | 7.35  | 1328 | 6832 | 7.86  | 1366 | 7281 | 8.37  | —    | —    | —     |
| 8,000                                  | 1328                              | 7153 | 8.23  | 1365 | 7620 | 8.76  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581A210 (18 TONS) (Medium Heat Units)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                         | 965                               | 2195 | 2.53  | 1018 | 2181 | 2.51  | 1068 | 2442 | 2.81  | 1116 | 2708 | 3.11  | 1162 | 2979 | 3.43  |
| 4,000                                         | 1014                              | 2364 | 2.72  | 1064 | 2644 | 3.04  | 1112 | 2930 | 3.37  | 1158 | 3221 | 3.70  | 1202 | 3517 | 4.05  |
| 4,500                                         | 1067                              | 2882 | 3.31  | 1114 | 3187 | 3.67  | 1160 | 3498 | 4.02  | 1204 | 3814 | 4.39  | 1246 | 4135 | 4.76  |
| 5,000                                         | 1123                              | 3489 | 4.01  | 1168 | 3820 | 4.39  | 1211 | 4156 | 4.78  | 1253 | 4497 | 5.17  | 1294 | 4844 | 5.57  |
| 5,500                                         | 1182                              | 4194 | 4.82  | 1224 | 4551 | 5.23  | 1266 | 4913 | 5.65  | 1306 | 5280 | 6.07  | 1345 | 5652 | 6.50  |
| 6,000                                         | 1243                              | 5008 | 5.76  | 1283 | 5391 | 6.20  | 1323 | 5779 | 6.65  | 1361 | 6172 | 7.10  | 1398 | 6569 | 7.56  |
| 6,500                                         | 1306                              | 5939 | 6.83  | 1345 | 6349 | 7.30  | 1382 | 6763 | 7.78  | —    | —    | —     | —    | —    | —     |
| 7,000                                         | 1371                              | 6997 | 8.05  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7,500                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,000                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 896-1227 (208/230 and 460-v), 863-1141 (575-v)  
 High Range: 1113-1414 (208/230 and 460-v), 1042-1285 (575-v)  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 3.45 (575-v)  
 High Range: 5.75

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A210 (18 TONS) (High Heat Units)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                     | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                      | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                      | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                | 645                               | 1105 | 1.27  | 720  | 1329 | 1.53  | 788  | 1549 | 1.78  | 851  | 1767 | 2.03  | 910  | 1982 | 2.28  |
| 4,000                                | 718                               | 1454 | 1.67  | 785  | 1692 | 1.95  | 848  | 1926 | 2.22  | 906  | 2158 | 2.48  | 962  | 2388 | 2.75  |
| 4,500                                | 792                               | 1866 | 2.15  | 853  | 2117 | 2.43  | 911  | 2364 | 2.72  | 965  | 2609 | 3.00  | 1017 | 2583 | 2.97  |
| 5,000                                | 867                               | 2343 | 2.69  | 923  | 2605 | 3.00  | 977  | 2865 | 3.30  | 1027 | 2845 | 3.27  | 1076 | 3163 | 3.64  |
| 5,500                                | 943                               | 2889 | 3.32  | 995  | 3162 | 3.64  | 1044 | 3158 | 3.63  | 1092 | 3497 | 4.02  | 1138 | 3843 | 4.42  |
| 6,000                                | 1019                              | 3177 | 3.65  | 1067 | 3532 | 4.06  | 1113 | 3892 | 4.48  | 1158 | 4259 | 4.90  | 1201 | 4631 | 5.33  |
| 6,500                                | 1096                              | 3973 | 4.57  | 1141 | 4354 | 5.01  | 1184 | 4742 | 5.45  | 1226 | 5136 | 5.91  | 1267 | 5535 | 6.37  |
| 7,000                                | 1173                              | 4894 | 5.63  | 1215 | 5304 | 6.10  | 1256 | 5719 | 6.58  | 1295 | 6140 | 7.06  | 1334 | 6567 | 7.55  |
| 7,500                                | 1250                              | 5952 | 6.85  | 1290 | 6389 | 7.35  | 1328 | 6832 | 7.86  | 1366 | 7281 | 8.37  | —    | —    | —     |
| 8,000                                | 1328                              | 7153 | 8.23  | 1365 | 7620 | 8.76  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                               | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581A210 (18 TONS) (High Heat Units)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                            | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                             | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                             | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                       | 965                               | 2195 | 2.53  | 1018 | 2181 | 2.51  | 1068 | 2442 | 2.81  | 1116 | 2708 | 3.11  | 1162 | 2979 | 3.43  |
| 4,000                                       | 1014                              | 2364 | 2.72  | 1064 | 2644 | 3.04  | 1112 | 2930 | 3.37  | 1158 | 3221 | 3.70  | 1202 | 3517 | 4.05  |
| 4,500                                       | 1067                              | 2882 | 3.31  | 1114 | 3187 | 3.67  | 1160 | 3498 | 4.02  | 1204 | 3814 | 4.39  | 1246 | 4135 | 4.76  |
| 5,000                                       | 1123                              | 3489 | 4.01  | 1168 | 3820 | 4.39  | 1211 | 4156 | 4.78  | 1253 | 4497 | 5.17  | 1294 | 4844 | 5.57  |
| 5,500                                       | 1182                              | 4194 | 4.82  | 1224 | 4551 | 5.23  | 1266 | 4913 | 5.65  | 1306 | 5280 | 6.07  | 1345 | 5652 | 6.50  |
| 6,000                                       | 1243                              | 5008 | 5.76  | 1283 | 5391 | 6.20  | 1323 | 5779 | 6.65  | 1361 | 6172 | 7.10  | 1398 | 6569 | 7.56  |
| 6,500                                       | 1306                              | 5939 | 6.83  | 1345 | 6349 | 7.30  | 1382 | 6763 | 7.78  | —    | —    | —     | —    | —    | —     |
| 7,000                                       | 1371                              | 6997 | 8.05  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7,500                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,000                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 896-1227 (208/230 and 460-v), 863-1141 (575-v)  
 High Range: 1113-1414 (208/230 and 460-v), 1042-1285 (575-v)  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 3.45 (575-v)  
 High Range: 5.75

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A240 (20 TONS) (Low Heat Units)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                    | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                     | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                     | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                               | 642                               | 1082 | 1.24  | 714  | 1296 | 1.49  | 781  | 1510 | 1.74  | 843  | 1726 | 1.98  | 901  | 1943 | 2.23  |
| 4,000                               | 714                               | 1426 | 1.64  | 780  | 1651 | 1.90  | 841  | 1877 | 2.16  | 898  | 2103 | 2.42  | 952  | 2330 | 2.68  |
| 4,500                               | 787                               | 1831 | 2.11  | 847  | 2067 | 2.38  | 904  | 2303 | 2.65  | 957  | 2540 | 2.92  | 1008 | 2501 | 2.88  |
| 5,000                               | 862                               | 2301 | 2.65  | 917  | 2547 | 2.93  | 969  | 2793 | 3.21  | 1019 | 2755 | 3.17  | 1066 | 3062 | 3.52  |
| 5,500                               | 937                               | 2838 | 3.26  | 988  | 3094 | 3.56  | 1036 | 3067 | 3.53  | 1083 | 3390 | 3.90  | 1127 | 3719 | 4.28  |
| 6,000                               | 1013                              | 3113 | 3.58  | 1060 | 3445 | 3.96  | 1105 | 3783 | 4.35  | 1149 | 4130 | 4.75  | 1191 | 4484 | 5.16  |
| 6,500                               | 1089                              | 3893 | 4.48  | 1133 | 4250 | 4.89  | 1175 | 4615 | 5.31  | 1216 | 4986 | 5.73  | 1256 | 5364 | 6.17  |
| 7,000                               | 1166                              | 4798 | 5.52  | 1207 | 5181 | 5.96  | 1247 | 5570 | 6.41  | 1285 | 5965 | 6.86  | 1323 | 6369 | 7.32  |
| 7,500                               | 1243                              | 5837 | 6.71  | 1282 | 6244 | 7.18  | 1319 | 6658 | 7.66  | 1355 | 7080 | 8.14  | 1391 | 7507 | 8.63  |
| 8,000                               | 1320                              | 7017 | 8.07  | 1356 | 7450 | 8.57  | 1392 | 7890 | 9.08  | —    | —    | —     | —    | —    | —     |
| 8,500                               | 1398                              | 8350 | 9.60  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                               | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                               | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                              | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581A240 (20 TONS) (Low Heat Units)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                           | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                            | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                            | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                      | 955                               | 2160 | 2.48  | 1007 | 2142 | 2.46  | 1056 | 2409 | 2.77  | 1104 | 2684 | 3.09  | 1149 | 2968 | 3.41  |
| 4,000                                      | 1004                              | 2299 | 2.64  | 1053 | 2578 | 2.96  | 1100 | 2865 | 3.29  | 1145 | 3160 | 3.63  | 1189 | 3463 | 3.98  |
| 4,500                                      | 1056                              | 2793 | 3.21  | 1103 | 3093 | 3.56  | 1147 | 3402 | 3.91  | 1191 | 3718 | 4.28  | 1233 | 4041 | 4.65  |
| 5,000                                      | 1112                              | 3376 | 3.88  | 1156 | 3699 | 4.25  | 1199 | 4029 | 4.63  | 1240 | 4366 | 5.02  | 1280 | 4710 | 5.42  |
| 5,500                                      | 1171                              | 4057 | 4.67  | 1212 | 4402 | 5.06  | 1253 | 4754 | 5.47  | 1292 | 5114 | 5.88  | 1331 | 5480 | 6.30  |
| 6,000                                      | 1232                              | 4845 | 5.57  | 1271 | 5213 | 6.00  | 1310 | 5588 | 6.43  | 1348 | 5970 | 6.87  | 1384 | 6358 | 7.31  |
| 6,500                                      | 1295                              | 5749 | 6.61  | 1333 | 6141 | 7.06  | 1369 | 6538 | 7.52  | —    | —    | —     | —    | —    | —     |
| 7,000                                      | 1360                              | 6778 | 7.80  | 1396 | 7193 | 8.27  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7,500                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,000                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                     | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 896-1227 (208/230 and 460-v), 873-1108 (575-v)  
 High Range: 1113-1414  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 5.75 (575-v)  
 High Range: 5.75

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A240 (20 TONS) (Medium Heat Units)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|----------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                       | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                        | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                        | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                  | 652                               | 1123 | 1.29  | 726  | 1347 | 1.55  | 793  | 1567 | 1.80  | 856  | 1784 | 2.05  | 914  | 2000 | 2.30  |
| 4,000                                  | 725                               | 1479 | 1.70  | 792  | 1716 | 1.97  | 854  | 1950 | 2.24  | 912  | 2182 | 2.51  | 967  | 2412 | 2.77  |
| 4,500                                  | 800                               | 1897 | 2.18  | 861  | 2148 | 2.47  | 918  | 2395 | 2.75  | 972  | 2639 | 3.04  | 1024 | 2620 | 3.01  |
| 5,000                                  | 875                               | 2383 | 2.74  | 931  | 2645 | 3.04  | 984  | 2904 | 3.34  | 1035 | 2892 | 3.33  | 1083 | 3212 | 3.69  |
| 5,500                                  | 952                               | 2937 | 3.38  | 1003 | 2883 | 3.32  | 1053 | 3217 | 3.70  | 1100 | 3558 | 4.09  | 1145 | 3905 | 4.49  |
| 6,000                                  | 1029                              | 3249 | 3.74  | 1077 | 3605 | 4.15  | 1123 | 3966 | 4.56  | 1167 | 4334 | 4.98  | 1210 | 4707 | 5.41  |
| 6,500                                  | 1106                              | 4061 | 4.67  | 1151 | 4445 | 5.11  | 1194 | 4834 | 5.56  | 1236 | 5229 | 6.01  | 1276 | 5629 | 6.47  |
| 7,000                                  | 1184                              | 5003 | 5.75  | 1226 | 5414 | 6.23  | 1266 | 5831 | 6.71  | 1306 | 6253 | 7.19  | 1344 | 6681 | 7.68  |
| 7,500                                  | 1262                              | 6083 | 7.00  | 1302 | 6522 | 7.50  | 1340 | 6967 | 8.01  | 1377 | 7417 | 8.53  | —    | —    | —     |
| 8,000                                  | 1341                              | 7312 | 8.41  | 1378 | 7779 | 8.95  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                  | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                 | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581A240 (20 TONS) (Medium Heat Units)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|-----------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                              | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                               | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                               | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                         | 970                               | 2213 | 2.55  | 1022 | 2203 | 2.53  | 1072 | 2464 | 2.83  | 1120 | 2730 | 3.14  | 1166 | 3002 | 3.45  |
| 4,000                                         | 1019                              | 2393 | 2.75  | 1069 | 2673 | 3.07  | 1117 | 2959 | 3.40  | 1163 | 3251 | 3.74  | 1207 | 3548 | 4.08  |
| 4,500                                         | 1073                              | 2920 | 3.36  | 1120 | 3226 | 3.71  | 1165 | 3537 | 4.07  | 1209 | 3854 | 4.43  | 1252 | 4176 | 4.80  |
| 5,000                                         | 1130                              | 3537 | 4.07  | 1174 | 3870 | 4.45  | 1218 | 4207 | 4.84  | 1259 | 4549 | 5.23  | 1300 | 4896 | 5.63  |
| 5,500                                         | 1189                              | 4257 | 4.90  | 1232 | 4614 | 5.31  | 1273 | 4977 | 5.72  | 1313 | 5345 | 6.15  | 1352 | 5719 | 6.58  |
| 6,000                                         | 1251                              | 5086 | 5.85  | 1292 | 5469 | 6.29  | 1331 | 5859 | 6.74  | 1369 | 6253 | 7.19  | —    | —    | —     |
| 6,500                                         | 1315                              | 6035 | 6.94  | 1354 | 6446 | 7.41  | 1391 | 6861 | 7.89  | —    | —    | —     | —    | —    | —     |
| 7,000                                         | 1381                              | 7114 | 8.18  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7,500                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,000                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                         | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                        | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 896-1227 (208/230 and 460-v), 873-1108 (575-v)  
 High Range: 1113-1414  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 5.75 (575-v)  
 High Range: 5.75

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A240 (20 TONS) (High Heat Units)* |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|--------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                     | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                      | 0.2                               |      |       | 0.4  |      |       | 0.6  |      |       | 0.8  |      |       | 1.0  |      |       |
|                                      | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                | 652                               | 1123 | 1.29  | 726  | 1347 | 1.55  | 793  | 1567 | 1.80  | 856  | 1784 | 2.05  | 914  | 2000 | 2.30  |
| 4,000                                | 725                               | 1479 | 1.70  | 792  | 1716 | 1.97  | 854  | 1950 | 2.24  | 912  | 2182 | 2.51  | 967  | 2412 | 2.77  |
| 4,500                                | 800                               | 1897 | 2.18  | 861  | 2148 | 2.47  | 918  | 2395 | 2.75  | 972  | 2639 | 3.04  | 1024 | 2620 | 3.01  |
| 5,000                                | 875                               | 2383 | 2.74  | 931  | 2645 | 3.04  | 984  | 2904 | 3.34  | 1035 | 2892 | 3.33  | 1083 | 3212 | 3.69  |
| 5,500                                | 952                               | 2937 | 3.38  | 1003 | 2883 | 3.32  | 1053 | 3217 | 3.70  | 1100 | 3558 | 4.09  | 1145 | 3905 | 4.49  |
| 6,000                                | 1029                              | 3249 | 3.74  | 1077 | 3605 | 4.15  | 1123 | 3966 | 4.56  | 1167 | 4334 | 4.98  | 1210 | 4707 | 5.41  |
| 6,500                                | 1106                              | 4061 | 4.67  | 1151 | 4445 | 5.11  | 1194 | 4834 | 5.56  | 1236 | 5229 | 6.01  | 1276 | 5629 | 6.47  |
| 7,000                                | 1184                              | 5003 | 5.75  | 1226 | 5414 | 6.23  | 1266 | 5831 | 6.71  | 1306 | 6253 | 7.19  | 1344 | 6681 | 7.68  |
| 7,500                                | 1262                              | 6083 | 7.00  | 1302 | 6522 | 7.50  | 1340 | 6967 | 8.01  | 1377 | 7417 | 8.53  | —    | —    | —     |
| 8,000                                | 1341                              | 7312 | 8.41  | 1378 | 7779 | 8.95  | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                               | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

| 581A240 (20 TONS) (High Heat Units)* (cont) |                                   |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|---------------------------------------------|-----------------------------------|------|-------|------|------|-------|------|------|-------|------|------|-------|------|------|-------|
| Airflow<br>(Cfm)                            | External Static Pressure (in. wg) |      |       |      |      |       |      |      |       |      |      |       |      |      |       |
|                                             | 1.2                               |      |       | 1.4  |      |       | 1.6  |      |       | 1.8  |      |       | 2.0  |      |       |
|                                             | Rpm                               | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts | Rpm  | Bhp  | Watts |
| 3,500                                       | 970                               | 2213 | 2.55  | 1022 | 2203 | 2.53  | 1072 | 2464 | 2.83  | 1120 | 2730 | 3.14  | 1166 | 3002 | 3.45  |
| 4,000                                       | 1019                              | 2393 | 2.75  | 1069 | 2673 | 3.07  | 1117 | 2959 | 3.40  | 1163 | 3251 | 3.74  | 1207 | 3548 | 4.08  |
| 4,500                                       | 1073                              | 2920 | 3.36  | 1120 | 3226 | 3.71  | 1165 | 3537 | 4.07  | 1209 | 3854 | 4.43  | 1252 | 4176 | 4.80  |
| 5,000                                       | 1130                              | 3537 | 4.07  | 1174 | 3870 | 4.45  | 1218 | 4207 | 4.84  | 1259 | 4549 | 5.23  | 1300 | 4896 | 5.63  |
| 5,500                                       | 1189                              | 4257 | 4.90  | 1232 | 4614 | 5.31  | 1273 | 4977 | 5.72  | 1313 | 5345 | 6.15  | 1352 | 5719 | 6.58  |
| 6,000                                       | 1251                              | 5086 | 5.85  | 1292 | 5469 | 6.29  | 1331 | 5859 | 6.74  | 1369 | 6253 | 7.19  | —    | —    | —     |
| 6,500                                       | 1315                              | 6035 | 6.94  | 1354 | 6446 | 7.41  | 1391 | 6861 | 7.89  | —    | —    | —     | —    | —    | —     |
| 7,000                                       | 1381                              | 7114 | 8.18  | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 7,500                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,000                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 8,500                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,000                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 9,500                                       | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |
| 10,000                                      | —                                 | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     | —    | —    | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 896-1227 (208/230 and 460-v), 873-1108 (575-v)  
 High Range: 1113-1414  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 4.25 (208/230 and 460-v), 5.75 (575-v)  
 High Range: 5.75

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A300 (25 TONS) (Low Heat Units)* |                                   |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|-------------------------------------|-----------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                    | External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                     | 0.2                               |        |       | 0.4  |        |       | 0.6  |        |       | 0.8  |        |       | 1.0  |        |       |
|                                     | Rpm                               | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts |
| 6,500                               | 786                               | 2,658  | 3.06  | 819  | 2,835  | 3.26  | 857  | 3,052  | 3.51  | 899  | 3,304  | 3.80  | 943  | 3,586  | 4.12  |
| 7,000                               | 842                               | 3,208  | 3.69  | 871  | 3,386  | 3.89  | 905  | 3,599  | 4.14  | 943  | 3,847  | 4.42  | 983  | 4,123  | 4.74  |
| 7,500                               | 898                               | 3,827  | 4.40  | 925  | 4,006  | 4.61  | 955  | 4,217  | 4.85  | 989  | 4,460  | 5.13  | 1026 | 4,733  | 5.44  |
| 8,000                               | 955                               | 4,518  | 5.20  | 979  | 4,699  | 5.40  | 1007 | 4,908  | 5.65  | 1037 | 5,148  | 5.92  | 1070 | 5,416  | 6.23  |
| 8,500                               | 1012                              | 5,284  | 6.08  | 1034 | 5,466  | 6.29  | 1059 | 5,675  | 6.53  | 1087 | 5,912  | 6.80  | 1117 | 6,176  | 7.10  |
| 9,000                               | 1069                              | 6,127  | 7.05  | 1090 | 6,312  | 7.26  | 1113 | 6,521  | 7.50  | 1138 | 6,757  | 7.77  | 1165 | 7,017  | 8.07  |
| 9,500                               | 1127                              | 7,050  | 8.11  | 1146 | 7,238  | 8.32  | 1167 | 7,448  | 8.57  | 1190 | 7,682  | 8.84  | 1215 | 7,940  | 9.13  |
| 10,000                              | 1184                              | 8,057  | 9.27  | 1202 | 8,247  | 9.49  | 1221 | 8,460  | 9.73  | 1243 | 8,693  | 10.00 | 1266 | 8,948  | 10.29 |
| 10,500                              | 1242                              | 9,149  | 10.52 | 1258 | 9,344  | 10.75 | 1276 | 9,557  | 10.99 | 1296 | 9,791  | 11.26 | 1318 | 10,046 | 11.55 |
| 11,000                              | 1299                              | 10,331 | 11.88 | 1315 | 10,529 | 12.11 | 1332 | 10,745 | 12.36 | 1350 | 10,979 | 12.63 | 1370 | 11,232 | 12.92 |
| 11,500                              | 1357                              | 11,604 | 13.35 | 1372 | 11,806 | 13.58 | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,000                              | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                              | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

| 581A300 (25 TONS) (Low Heat Units)* (cont) |                                   |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|--------------------------------------------|-----------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                           | External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                            | 1.2                               |        |       | 1.4  |        |       | 1.6  |        |       | 1.8  |        |       | 2.0  |        |       |
|                                            | Rpm                               | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts |
| 6,500                                      | 988                               | 3,900  | 4.49  | 1035 | 4,248  | 4.89  | 1082 | 4,632  | 5.33  | 1129 | 5,050  | 5.81  | 1177 | 5,499  | 6.32  |
| 7,000                                      | 1024                              | 4,428  | 5.09  | 1066 | 4,760  | 5.48  | 1109 | 5,124  | 5.89  | 1153 | 5,521  | 6.35  | 1197 | 5,950  | 6.84  |
| 7,500                                      | 1063                              | 5,031  | 5.79  | 1102 | 5,354  | 6.16  | 1141 | 5,703  | 6.56  | 1181 | 6,081  | 6.99  | 1221 | 6,487  | 7.46  |
| 8,000                                      | 1105                              | 5,709  | 6.57  | 1140 | 6,025  | 6.93  | 1176 | 6,364  | 7.32  | 1213 | 6,729  | 7.74  | 1250 | 7,116  | 8.18  |
| 8,500                                      | 1149                              | 6,465  | 7.44  | 1181 | 6,777  | 7.79  | 1215 | 7,109  | 8.18  | 1249 | 7,463  | 8.58  | 1283 | 7,838  | 9.02  |
| 9,000                                      | 1194                              | 7,302  | 8.40  | 1225 | 7,608  | 8.75  | 1256 | 7,935  | 9.13  | 1287 | 8,282  | 9.53  | 1319 | 8,649  | 9.95  |
| 9,500                                      | 1242                              | 8,222  | 9.46  | 1270 | 8,524  | 9.80  | 1298 | 8,847  | 10.17 | 1328 | 9,189  | 10.57 | 1358 | 9,548  | 10.98 |
| 10,000                                     | 1290                              | 9,227  | 10.61 | 1316 | 9,525  | 10.96 | 1343 | 9,845  | 11.32 | 1370 | 10,181 | 11.71 | 1399 | 10,536 | 12.12 |
| 10,500                                     | 1340                              | 10,321 | 11.87 | 1364 | 10,617 | 12.21 | 1389 | 10,932 | 12.57 | —    | —      | —     | —    | —      | —     |
| 11,000                                     | 1391                              | 11,505 | 13.23 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 11,500                                     | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,000                                     | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                                     | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 805-1007  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A300 (25 TONS) (Medium Heat Units)* |                                   |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|----------------------------------------|-----------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                       | External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                        | 0.2                               |        |       | 0.4  |        |       | 0.6  |        |       | 0.8  |        |       | 1.0  |        |       |
|                                        | Rpm                               | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts |
| 6,500                                  | 799                               | 2,730  | 3.14  | 833  | 2,914  | 3.35  | 872  | 3,135  | 3.61  | 914  | 3,392  | 3.90  | 958  | 3,687  | 4.24  |
| 7,000                                  | 856                               | 3,294  | 3.79  | 887  | 3,481  | 4.00  | 921  | 3,699  | 4.25  | 958  | 3,950  | 4.54  | 999  | 4,235  | 4.87  |
| 7,500                                  | 913                               | 3,929  | 4.52  | 941  | 4,118  | 4.74  | 972  | 4,335  | 4.99  | 1006 | 4,582  | 5.27  | 1042 | 4,860  | 5.59  |
| 8,000                                  | 971                               | 4,637  | 5.33  | 996  | 4,829  | 5.55  | 1024 | 5,046  | 5.80  | 1055 | 5,290  | 6.08  | 1088 | 5,562  | 6.40  |
| 8,500                                  | 1029                              | 5,421  | 6.24  | 1052 | 5,617  | 6.46  | 1078 | 5,835  | 6.71  | 1106 | 6,077  | 6.99  | 1136 | 6,345  | 7.30  |
| 9,000                                  | 1087                              | 6,285  | 7.23  | 1108 | 6,484  | 7.46  | 1132 | 6,703  | 7.71  | 1158 | 6,946  | 7.99  | 1185 | 7,211  | 8.29  |
| 9,500                                  | 1145                              | 7,231  | 8.32  | 1165 | 7,433  | 8.55  | 1187 | 7,655  | 8.80  | 1211 | 7,898  | 9.08  | 1236 | 8,161  | 9.39  |
| 10,000                                 | 1203                              | 8,262  | 9.50  | 1222 | 8,468  | 9.74  | 1243 | 8,693  | 10.00 | 1265 | 8,936  | 10.28 | 1288 | 9,199  | 10.58 |
| 10,500                                 | 1261                              | 9,381  | 10.79 | 1279 | 9,592  | 11.03 | 1299 | 9,820  | 11.29 | 1319 | 10,065 | 11.58 | 1341 | 10,327 | 11.88 |
| 11,000                                 | 1320                              | 10,592 | 12.18 | 1337 | 10,807 | 12.43 | 1355 | 11,038 | 12.70 | 1374 | 11,284 | 12.98 | 1394 | 11,547 | 13.28 |
| 11,500                                 | 1378                              | 11,896 | 13.68 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,000                                 | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                                 | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

| 581A300 (25 TONS) (Medium Heat Units)* (cont) |                                   |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|-----------------------------------------------|-----------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|-------|-------|
| Airflow<br>(Cfm)                              | External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|                                               | 1.2                               |        |       | 1.4  |        |       | 1.6  |        |       | 1.8  |        |       | 2.0  |       |       |
|                                               | Rpm                               | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp   | Watts |
| 6,500                                         | 1005                              | 4,020  | 4.62  | 1052 | 4,390  | 5.05  | 1100 | 4,791  | 5.51  | 1148 | 5,221  | 6.00  | 1195 | 5,673 | 6.52  |
| 7,000                                         | 1041                              | 4,555  | 5.24  | 1084 | 4,908  | 5.64  | 1128 | 5,294  | 6.09  | 1172 | 5,710  | 6.57  | 1217 | 6,153 | 7.08  |
| 7,500                                         | 1080                              | 5,168  | 5.94  | 1119 | 5,508  | 6.33  | 1160 | 5,878  | 6.76  | 1201 | 6,279  | 7.22  | 1242 | 6,708 | 7.71  |
| 8,000                                         | 1122                              | 5,862  | 6.74  | 1158 | 6,190  | 7.12  | 1195 | 6,548  | 7.53  | 1233 | 6,934  | 7.97  | 1272 | 7,347 | 8.45  |
| 8,500                                         | 1167                              | 6,638  | 7.63  | 1200 | 6,959  | 8.00  | 1234 | 7,305  | 8.40  | 1269 | 7,677  | 8.83  | 1304 | 8,076 | 9.29  |
| 9,000                                         | 1214                              | 7,499  | 8.63  | 1244 | 7,813  | 8.99  | 1275 | 8,149  | 9.37  | 1308 | 8,511  | 9.79  | 1340 | 8,896 | 10.23 |
| 9,500                                         | 1262                              | 8,447  | 9.72  | 1290 | 8,754  | 10.07 | 1319 | 9,084  | 10.45 | 1349 | 9,437  | 10.85 | 1379 | 9,812 | 11.28 |
| 10,000                                        | 1312                              | 9,482  | 10.91 | 1338 | 9,785  | 11.25 | 1365 | 10,110 | 11.63 | 1392 | 10,454 | 12.02 | —    | —     | —     |
| 10,500                                        | 1363                              | 10,608 | 12.20 | 1387 | 10,909 | 12.55 | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,000                                        | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,500                                        | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,000                                        | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,500                                        | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

\*Motor drive ranges:  
 Low Range: 805-1007  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63

# PERFORMANCE DATA (cont)

## FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

| 581A300 (25 TONS) (High Heat Units)* |                                   |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|--------------------------------------|-----------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|
| Airflow<br>(Cfm)                     | External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |        |       |
|                                      | 0.2                               |        |       | 0.4  |        |       | 0.6  |        |       | 0.8  |        |       | 1.0  |        |       |
|                                      | Rpm                               | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts |
| 6,500                                | 799                               | 2,730  | 3.14  | 833  | 2,914  | 3.35  | 872  | 3,135  | 3.61  | 914  | 3,392  | 3.90  | 958  | 3,687  | 4.24  |
| 7,000                                | 856                               | 3,294  | 3.79  | 887  | 3,481  | 4.00  | 921  | 3,699  | 4.25  | 958  | 3,950  | 4.54  | 999  | 4,235  | 4.87  |
| 7,500                                | 913                               | 3,929  | 4.52  | 941  | 4,118  | 4.74  | 972  | 4,335  | 4.99  | 1006 | 4,582  | 5.27  | 1042 | 4,860  | 5.59  |
| 8,000                                | 971                               | 4,637  | 5.33  | 996  | 4,829  | 5.55  | 1024 | 5,046  | 5.80  | 1055 | 5,290  | 6.08  | 1088 | 5,562  | 6.40  |
| 8,500                                | 1029                              | 5,421  | 6.24  | 1052 | 5,617  | 6.46  | 1078 | 5,835  | 6.71  | 1106 | 6,077  | 6.99  | 1136 | 6,345  | 7.30  |
| 9,000                                | 1087                              | 6,285  | 7.23  | 1108 | 6,484  | 7.46  | 1132 | 6,703  | 7.71  | 1158 | 6,946  | 7.99  | 1185 | 7,211  | 8.29  |
| 9,500                                | 1145                              | 7,231  | 8.32  | 1165 | 7,433  | 8.55  | 1187 | 7,655  | 8.80  | 1211 | 7,898  | 9.08  | 1236 | 8,161  | 9.39  |
| 10,000                               | 1203                              | 8,262  | 9.50  | 1222 | 8,468  | 9.74  | 1243 | 8,693  | 10.00 | 1265 | 8,936  | 10.28 | 1288 | 9,199  | 10.58 |
| 10,500                               | 1261                              | 9,381  | 10.79 | 1279 | 9,592  | 11.03 | 1299 | 9,820  | 11.29 | 1319 | 10,065 | 11.58 | 1341 | 10,327 | 11.88 |
| 11,000                               | 1320                              | 10,592 | 12.18 | 1337 | 10,807 | 12.43 | 1355 | 11,038 | 12.70 | 1374 | 11,284 | 12.98 | 1394 | 11,547 | 13.28 |
| 11,500                               | 1378                              | 11,896 | 13.68 | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,000                               | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |
| 12,500                               | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     |

| 581A300 (25 TONS) (High Heat Units)* (cont) |                                   |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|---------------------------------------------|-----------------------------------|--------|-------|------|--------|-------|------|--------|-------|------|--------|-------|------|-------|-------|
| Airflow<br>(Cfm)                            | External Static Pressure (in. wg) |        |       |      |        |       |      |        |       |      |        |       |      |       |       |
|                                             | 1.2                               |        |       | 1.4  |        |       | 1.6  |        |       | 1.8  |        |       | 2.0  |       |       |
|                                             | Rpm                               | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp    | Watts | Rpm  | Bhp   | Watts |
| 6,500                                       | 1005                              | 4,020  | 4.62  | 1052 | 4,390  | 5.05  | 1100 | 4,791  | 5.51  | 1148 | 5,221  | 6.00  | 1195 | 5,673 | 6.52  |
| 7,000                                       | 1041                              | 4,555  | 5.24  | 1084 | 4,908  | 5.64  | 1128 | 5,294  | 6.09  | 1172 | 5,710  | 6.57  | 1217 | 6,153 | 7.08  |
| 7,500                                       | 1080                              | 5,168  | 5.94  | 1119 | 5,508  | 6.33  | 1160 | 5,878  | 6.76  | 1201 | 6,279  | 7.22  | 1242 | 6,708 | 7.71  |
| 8,000                                       | 1122                              | 5,862  | 6.74  | 1158 | 6,190  | 7.12  | 1195 | 6,548  | 7.53  | 1233 | 6,934  | 7.97  | 1272 | 7,347 | 8.45  |
| 8,500                                       | 1167                              | 6,638  | 7.63  | 1200 | 6,959  | 8.00  | 1234 | 7,305  | 8.40  | 1269 | 7,677  | 8.83  | 1304 | 8,076 | 9.29  |
| 9,000                                       | 1214                              | 7,499  | 8.63  | 1244 | 7,813  | 8.99  | 1275 | 8,149  | 9.37  | 1308 | 8,511  | 9.79  | 1340 | 8,896 | 10.23 |
| 9,500                                       | 1262                              | 8,447  | 9.72  | 1290 | 8,754  | 10.07 | 1319 | 9,084  | 10.45 | 1349 | 9,437  | 10.85 | 1379 | 9,812 | 11.28 |
| 10,000                                      | 1312                              | 9,482  | 10.91 | 1338 | 9,785  | 11.25 | 1365 | 10,110 | 11.63 | 1392 | 10,454 | 12.02 | —    | —     | —     |
| 10,500                                      | 1363                              | 10,608 | 12.20 | 1387 | 10,909 | 12.55 | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,000                                      | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 11,500                                      | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,000                                      | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |
| 12,500                                      | —                                 | —      | —     | —    | —      | —     | —    | —      | —     | —    | —      | —     | —    | —     | —     |

### LEGEND

**Bhp** — Brake Horsepower Input to Fan  
**Watts** — Input Watts to Motor

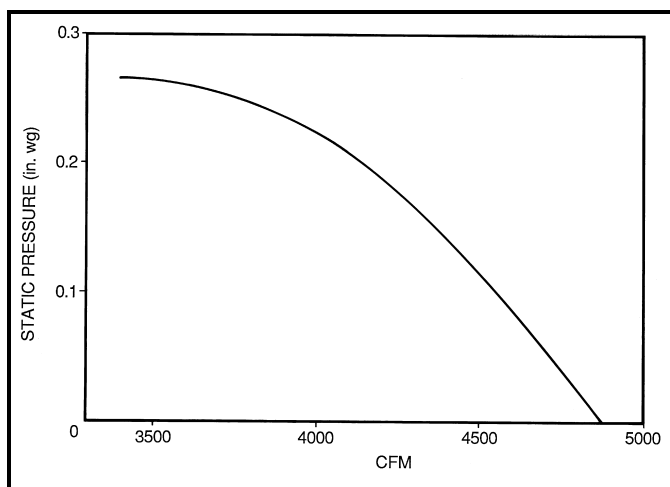
\*Motor drive ranges:  
 Low Range: 805-1007  
 High Range: 941-1176  
 All other rpms require field-supplied drive.

Refer to page 230 for general Fan Performance Data notes.

**NOTE:** Maximum continuous bhp is:  
 Low Range: 5.75  
 High Range: 8.63



## PERFORMANCE DATA (cont)



Fan Performance Using Accessory Power Exhaust (581A155,180)

### ALTITUDE COMPENSATION\* — 581A155,180 (Natural Gas Units)

| ELEVATION (ft) | NATURAL GAS ORIFICE SIZE† |           |
|----------------|---------------------------|-----------|
|                | Low Heat                  | High Heat |
| 0-3,000        | 30                        | 29        |
| 3,000- 7,000   | 31                        | 30        |
| 7,000- 9,000   | 32                        | 31        |
| 9,000-10,000   | 33                        | 31        |
| above 10,000   | 35                        | 32        |

\*Includes a 4% input reduction per each 1,000 feet.

†Orifices available through your Bryant dealer.

### ALTITUDE COMPENSATION — 581A155,180 (LP Gas Units)

| ELEVATION (ft) | LIQUID PROPANE ORIFICE SIZE |  |
|----------------|-----------------------------|--|
|                | Low Heat and High Heat      |  |
| 0-2,000        | 36                          |  |
| 2,000          | 37                          |  |
| 3,000          | 38                          |  |
| 4,000          | 38                          |  |
| 5,000          | 39                          |  |
| 6,000          | 40                          |  |
| 7,000          | 41                          |  |
| 8,000          | 41                          |  |
| 9,000          | 42                          |  |
| 10,000         | 43                          |  |

### ALTITUDE COMPENSATION — 581A210-300 (Natural Gas)

| ELEVATION (ft) | ORIFICE SIZE — NATURAL GAS |             |                    |                    |
|----------------|----------------------------|-------------|--------------------|--------------------|
|                | Low Heat                   | Medium Heat | High Heat (6 Cell) | High Heat (8 Cell) |
| 0-2,000        | 29                         | 30          | 29                 | 29                 |
| 2,000          | 29                         | 30          | 29                 | 29                 |
| 3,000          | 30                         | 31          | 30                 | 30                 |
| 4,000          | 30                         | 31          | 30                 | 30                 |
| 5,000          | 30                         | 31          | 30                 | 30                 |
| 6,000          | 30                         | 31          | 30                 | 30                 |
| 7,000          | 31                         | 32          | 31                 | 31                 |
| 8,000          | 31                         | 32          | 31                 | 31                 |
| 9,000          | 31                         | 32          | 31                 | 31                 |
| above 10,000   | 32                         | 33          | 32                 | 32                 |

### ALTITUDE COMPENSATION — 581A210-300 (LP Gas)

| ELEVATION (ft) | ORIFICE SIZE — LP GAS |             |                    |                    |
|----------------|-----------------------|-------------|--------------------|--------------------|
|                | Low Heat              | Medium Heat | High Heat (6 Cell) | High Heat (8 Cell) |
| 0-2,000        | 35                    | 38          | 35                 | 35                 |
| 2,000          | 36                    | 39          | 36                 | 36                 |
| 3,000          | 36                    | 39          | 36                 | 36                 |
| 4,000          | 37                    | 40          | 37                 | 37                 |
| 5,000          | 37                    | 40          | 37                 | 37                 |
| 6,000          | 38                    | 41          | 38                 | 38                 |
| 7,000          | 39                    | 42          | 39                 | 39                 |
| 8,000          | 40                    | 43          | 40                 | 40                 |
| 9,000          | 41                    | 44          | 41                 | 41                 |
| above 10,000   | 42                    | 45          | 42                 | 42                 |

### ALTITUDE DERATING FACTOR\*

| ELEVATION (ft) | MAXIMUM HEATING VALUE (Btu/ft³) |
|----------------|---------------------------------|
| 0-2,000        | 1,100                           |
| 2,001-3,000    | 1,050                           |
| 3,001-4,000    | 1,000                           |
| 4,001-5,000    | 950                             |
| 5,001-6,000    | 900                             |

\*Derating of the unit is not required unless the heating value of the gas exceeds the values listed in the table above, or if the elevation exceeds 6000 ft. Derating conditions must be 4% per thousand ft above 2000 ft. For example, at 4000 ft, if the heating value of the gas exceeds 1000 Btu/ft³, the unit will require a 16% derating. For elevations above 6000 ft, the same formula applies. For example, at 7000 ft, the unit will require a 28% derating of the maximum heating value per the National Fuel Gas Code.

**IMPORTANT:** Local utility companies may be reducing heat content of gas at altitudes above 2000 ft. If this is being done, changing spuds may not be required.

### EVAPORATOR-FAN MOTOR EFFICIENCY — 581A155,180

| MOTOR HORSEPOWER | MOTOR EFFICIENCY (%) |
|------------------|----------------------|
| 3.0              | 81.7                 |
| 2.9, 3.7         | 85.8                 |
| 5.0              | 87.5                 |

**NOTE:** All indoor-fan motors 5 hp and larger meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

## PERFORMANCE DATA (cont)

### ACCESSORY/FIOP STATIC PRESSURE (in. wg)\* — 581A155,180

| COMPONENT     | CFM   |       |       |       |       |       |       |        |        |
|---------------|-------|-------|-------|-------|-------|-------|-------|--------|--------|
|               | 4500  | 5000  | 5400  | 6000  | 7200  | 7500  | 9000  | 10,000 | 11,250 |
| EconoMiSer IV | 0.040 | 0.050 | 0.060 | 0.070 | 0.090 | 0.100 | 0.110 | 0.120  | 0.140  |

#### LEGEND

**FIOP** — Factory-Installed Option

\*The static pressure must be added to external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

### INDOOR SOUND DATA (TOTAL UNIT) — 581A155,180

| UNIT 581A | SOUND RATING-dB (60 Hz) | A-WEIGHTED (dB) | SOUND POWER (dB) |      |      |      |      |      |      |      |
|-----------|-------------------------|-----------------|------------------|------|------|------|------|------|------|------|
|           |                         |                 | Octave Bands     |      |      |      |      |      |      |      |
|           |                         |                 | 63               | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 155       | 87                      | 87.3            | 87.1             | 89.9 | 86.4 | 84.0 | 82.7 | 79.0 | 73.9 | 68.6 |
| 180       | 88                      | 88.0            | 95.7             | 88.9 | 87.2 | 85.2 | 91.9 | 79.5 | 72.7 | 66.0 |

### EVAPORATOR FAN MOTOR PERFORMANCE — 581A155,180

| UNIT 581A               | NOMINAL HP | VOLTAGE | MAX WATTS | EFF. % | MAX BHP | MAX BkW | MAX AMPS |
|-------------------------|------------|---------|-----------|--------|---------|---------|----------|
| 155<br>(Standard Motor) | 2.9        | 208     | 2700      | 85.8   | 3.13    | 2.34    | 9.46     |
|                         | 2.9        | 230     | 2700      | 85.8   | 3.13    | 2.34    | 8.6      |
|                         | 2.9        | 460     | 2700      | 85.8   | 3.13    | 2.34    | 4.3      |
|                         | 3          | 575     | 3065      | 81.7   | 3.38    | 2.53    | 3.9      |
| 155<br>(Optional Motor) | 3.7        | 208     | 3610      | 85.8   | 4.38    | 3.27    | 10.5     |
|                         | 3.7        | 230     | 3610      | 85.8   | 4.38    | 3.27    | 10.5     |
|                         | 3.7        | 460     | 3610      | 85.8   | 4.38    | 3.27    | 4.8      |
| 180                     | 5          | 208     | 5180      | 87.5   | 6.13    | 4.57    | 15.8     |
|                         | 5          | 230     | 5180      | 87.5   | 6.13    | 4.57    | 15.8     |
|                         | 5          | 460     | 5180      | 87.5   | 6.13    | 4.57    | 7.9      |
|                         | 5          | 575     | 5180      | 87.5   | 6.13    | 4.57    | 6.0      |

#### LEGEND

**BHP** — Brake Horsepower

**BkW** — Brake Kilowatts

### FAN RPM AT MOTOR PULLEY SETTINGS\* — 581A155,180

| UNIT 581A | MOTOR PULLEY TURNS OPEN |      |      |       |      |       |      |       |      |       |      |       |      |
|-----------|-------------------------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|           | 0                       | 1/2  | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 155†      | 1147                    | 1124 | 1101 | 1078  | 1055 | 1032  | 1010 | 987   | 964  | 941   | 918  | 895   | ††   |
| 155**     | 1315                    | 1292 | 1269 | 1246  | 1223 | 1200  | 1178 | 1155  | 1132 | 1109  | 1086 | 1063  | 1040 |
| 180†      | ††                      | ††   | ††   | ††    | 1021 | 1002  | 984  | 965   | 947  | 928   | 910  | 891   | 873  |
| 180**     | ††                      | ††   | ††   | ††    | 1200 | 1178  | 1156 | 1134  | 1112 | 1091  | 1069 | 1047  | 1025 |

\*Approximate fan rpm shown.

†Indicates standard drive package.

\*\*Indicates alternate drive package.

††Due to belt and pulley style, pulley cannot be set to this number of turns open.

**PERFORMANCE DATA (cont)**  
**OUTDOOR SOUND POWER (TOTAL UNIT)**

| UNIT<br>581A | ARI<br>RATING<br>(decibels) | A-WEIGHTED<br>(db) | OCTAVE BANDS |      |      |      |      |      |      |      |
|--------------|-----------------------------|--------------------|--------------|------|------|------|------|------|------|------|
|              |                             |                    | 63           | 125  | 250  | 500  | 1000 | 2000 | 4000 | 8000 |
| 155,180      | 88                          | 87.6               | 90.8         | 88.7 | 86.4 | 84.3 | 83.5 | 78.4 | 75.6 | 66.8 |
| 210, 240     | 82                          | 81.7               | 90.2         | 84.8 | 80.7 | 79.0 | 77.6 | 71.4 | 66.7 | 60.7 |
| 300          | 85                          | 84.9               | 90.0         | 86.3 | 83.6 | 82.9 | 80.3 | 74.9 | 71.4 | 66.5 |

**LEGEND**

**ARI** — Air Conditioning and Refrigeration Institute

**NOTE:** Indoor sound power is available in Bryant's Electronic Catalog Program (ECAT) for specific operating parameters.

**FAN RPM AT MOTOR PULLEY SETTINGS\* — 581A210-300**

| 581A                             | DRIVE                 | MOTOR PULLEY TURNS OPEN |      |      |       |      |       |      |       |      |       |      |       |      |
|----------------------------------|-----------------------|-------------------------|------|------|-------|------|-------|------|-------|------|-------|------|-------|------|
|                                  |                       | 0                       | 1/2  | 1    | 1 1/2 | 2    | 2 1/2 | 3    | 3 1/2 | 4    | 4 1/2 | 5    | 5 1/2 | 6    |
| 210<br>(208/230 and<br>460 volt) | Low Range Vertical    | 647                     | 667  | 687  | 707   | 727  | 747   | 767  | 786   | 806  | 826   | 846  | 866   | 886  |
|                                  | High Range Vertical   | 897                     | 917  | 937  | 958   | 978  | 998   | 1018 | 1038  | 1058 | 1079  | 1099 | 1119  | 1139 |
|                                  | Low Range Horizontal  | 896                     | 924  | 951  | 979   | 1006 | 1034  | 1062 | 1089  | 1117 | 1144  | 1172 | 1199  | 1227 |
|                                  | High Range Horizontal | 1113                    | 1138 | 1163 | 1188  | 1213 | 1238  | 1264 | 1289  | 1314 | 1339  | 1364 | 1389  | 1414 |
| 210<br>(575 volt)                | Low Range Vertical    | 810                     | 832  | 854  | 876   | 897  | 919   | 941  | 963   | 985  | 1007  | 1028 | 1050  | 1072 |
|                                  | High Range Vertical   | 873                     | 893  | 912  | 932   | 951  | 971   | 991  | 1010  | 1030 | 1049  | 1069 | 1088  | 1108 |
|                                  | Low Range Horizontal  | 863                     | 886  | 909  | 933   | 956  | 979   | 1002 | 1025  | 1048 | 1072  | 1095 | 1118  | 1141 |
|                                  | High Range Horizontal | 1042                    | 1062 | 1083 | 1103  | 1123 | 1143  | 1164 | 1184  | 1204 | 1224  | 1245 | 1265  | 1285 |
| 240<br>(208/230 and<br>460 volt) | Low Range Vertical    | 949                     | 970  | 992  | 1013  | 1035 | 1056  | 1078 | 1099  | 1120 | 1142  | 1163 | 1185  | 1206 |
|                                  | High Range Vertical   | 941                     | 961  | 980  | 1000  | 1019 | 1039  | 1059 | 1078  | 1098 | 1117  | 1137 | 1156  | 1176 |
|                                  | Low Range Horizontal  | 896                     | 924  | 951  | 979   | 1006 | 1034  | 1062 | 1089  | 1117 | 1144  | 1172 | 1199  | 1227 |
|                                  | High Range Horizontal | 1113                    | 1138 | 1163 | 1188  | 1213 | 1238  | 1264 | 1289  | 1314 | 1339  | 1364 | 1389  | 1414 |
| 240<br>(575 volt)                | Low Range Vertical    | 949                     | 970  | 992  | 1013  | 1035 | 1056  | 1078 | 1099  | 1120 | 1142  | 1163 | 1185  | 1206 |
|                                  | High Range Vertical   | 941                     | 961  | 980  | 1000  | 1019 | 1039  | 1059 | 1078  | 1098 | 1117  | 1137 | 1156  | 1176 |
|                                  | Low Range Horizontal  | 873                     | 893  | 912  | 932   | 951  | 971   | 991  | 1010  | 1030 | 1049  | 1069 | 1088  | 1108 |
|                                  | High Range Horizontal | 1113                    | 1138 | 1163 | 1188  | 1213 | 1238  | 1264 | 1289  | 1314 | 1339  | 1364 | 1389  | 1414 |
| 300<br>(all voltages)            | Low Range Vertical    | 805                     | 822  | 839  | 856   | 872  | 889   | 906  | 923   | 940  | 957   | 973  | 990   | 1007 |
|                                  | High Range Vertical   | 941                     | 961  | 980  | 1000  | 1019 | 1039  | 1059 | 1078  | 1098 | 1117  | 1137 | 1156  | 1176 |
|                                  | Low Range Horizontal  | 805                     | 822  | 839  | 856   | 872  | 889   | 906  | 923   | 940  | 957   | 973  | 990   | 1007 |
|                                  | High Range Horizontal | 941                     | 961  | 980  | 1000  | 1019 | 1039  | 1059 | 1078  | 1098 | 1117  | 1137 | 1156  | 1176 |

\*Approximate fan rpm shown.

# PERFORMANCE DATA (cont)

## EVAPORATOR FAN MOTOR SPECIFICATIONS — 581A210-300

| UNIT<br>581A | DRIVE    | ORIENTATION | MOTOR<br>P/N | NOMINAL<br>HP | VOLTAGE | MAX<br>WATTS | EFFICIENCY<br>% | MAX<br>BHP | MAX<br>BkW | MAX<br>AMPS |
|--------------|----------|-------------|--------------|---------------|---------|--------------|-----------------|------------|------------|-------------|
| 210          | Low      | Vertical    | HD60FK651    | 3.7           | 208     | 3698         | 85.8            | 4.25       | 3.17       | 10.6        |
|              |          |             | HD60FK651    | 3.7           | 230     | 3698         | 85.8            | 4.25       | 3.17       | 9.6         |
|              |          |             | HD60FK651    | 3.7           | 460     | 3698         | 85.8            | 4.25       | 3.17       | 4.8         |
|              |          |             | HD58DL575    | 3             | 575     | 3149         | 81.7            | 3.45       | 2.57       | 3.9         |
|              | High     | Vertical    | HD60FL650    | 5             | 208     | 4900         | 87.5            | 5.75       | 4.29       | 16.7        |
|              |          |             | HD60FL650    | 5             | 230     | 4900         | 87.5            | 5.75       | 4.29       | 15.2        |
|              |          |             | HD60FL650    | 5             | 460     | 4900         | 87.5            | 5.75       | 4.29       | 7.6         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
|              | Low      | Horizontal  | HD60FK651    | 3.7           | 208     | 3698         | 85.8            | 4.25       | 3.17       | 10.6        |
|              |          |             | HD60FK651    | 3.7           | 230     | 3698         | 85.8            | 4.25       | 3.17       | 9.6         |
|              |          |             | HD60FK651    | 3.7           | 460     | 3698         | 85.8            | 4.25       | 3.17       | 4.8         |
|              |          |             | HD58DL575    | 3             | 575     | 3149         | 81.7            | 3.45       | 2.57       | 3.9         |
|              | High     | Horizontal  | HD60FL650    | 5             | 208     | 4900         | 87.5            | 5.75       | 4.29       | 16.7        |
|              |          |             | HD60FL650    | 5             | 230     | 4900         | 87.5            | 5.75       | 4.29       | 15.2        |
|              |          |             | HD60FL650    | 5             | 460     | 4900         | 87.5            | 5.75       | 4.29       | 7.6         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
| 240          | Low      | Vertical    | HD60FL650    | 5             | 208     | 4900         | 87.5            | 5.75       | 4.29       | 16.7        |
|              |          |             | HD60FL650    | 5             | 230     | 4900         | 87.5            | 5.75       | 4.29       | 15.2        |
|              |          |             | HD60FL650    | 5             | 460     | 4900         | 87.5            | 5.75       | 4.29       | 7.6         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
|              | High     | Vertical    | HD62FL650    | 7.5           | 208     | 7267         | 88.5            | 8.63       | 6.43       | 24.2        |
|              |          |             | HD62FL650    | 7.5           | 230     | 7267         | 88.5            | 8.63       | 6.43       | 22          |
|              |          |             | HD62FL650    | 7.5           | 460     | 7267         | 88.5            | 8.63       | 6.43       | 11          |
|              |          |             | HD62FL575    | 7.5           | 575     | 7267         | 88.5            | 8.63       | 6.43       | 9           |
|              | Low      | Horizontal  | HD60FK651    | 3.7           | 208     | 3698         | 85.8            | 4.25       | 3.17       | 10.6        |
|              |          |             | HD60FK651    | 3.7           | 230     | 3698         | 85.8            | 4.25       | 3.17       | 9.6         |
|              |          |             | HD60FK651    | 3.7           | 460     | 3698         | 85.8            | 4.25       | 3.17       | 4.8         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
|              | High     | Horizontal  | HD60FL650    | 5             | 208     | 4900         | 87.5            | 5.75       | 4.29       | 16.7        |
|              |          |             | HD60FL650    | 5             | 230     | 4900         | 87.5            | 5.75       | 4.29       | 15.2        |
|              |          |             | HD60FL650    | 5             | 460     | 4900         | 87.5            | 5.75       | 4.29       | 7.6         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
| 300          | Mid-Low  | Vertical    | HD60FL650    | 5             | 208     | 4900         | 87.5            | 5.75       | 4.29       | 16.7        |
|              |          |             | HD60FL650    | 5             | 230     | 4900         | 87.5            | 5.75       | 4.29       | 15.2        |
|              |          |             | HD60FL650    | 5             | 460     | 4900         | 87.5            | 5.75       | 4.29       | 7.6         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
|              | Mid-High | Vertical    | HD62FL650    | 7.5           | 208     | 7267         | 88.5            | 8.63       | 6.43       | 24.2        |
|              |          |             | HD62FL650    | 7.5           | 230     | 7267         | 88.5            | 8.63       | 6.43       | 22          |
|              |          |             | HD62FL650    | 7.5           | 460     | 7267         | 88.5            | 8.63       | 6.43       | 11          |
|              |          |             | HD62FL575    | 7.5           | 575     | 7267         | 88.5            | 8.63       | 6.43       | 9           |
|              | Mid-Low  | Horizontal  | HD60FL650    | 5             | 208     | 4900         | 87.5            | 5.75       | 4.29       | 16.7        |
|              |          |             | HD60FL650    | 5             | 230     | 4900         | 87.5            | 5.75       | 4.29       | 15.2        |
|              |          |             | HD60FL650    | 5             | 460     | 4900         | 87.5            | 5.75       | 4.29       | 7.6         |
|              |          |             | HD60FL575    | 5             | 575     | 4900         | 87.5            | 5.75       | 4.29       | 6.1         |
|              | Mid-High | Horizontal  | HD62FL650    | 7.5           | 208     | 7267         | 88.5            | 8.63       | 6.43       | 24.2        |
|              |          |             | HD62FL650    | 7.5           | 230     | 7267         | 88.5            | 8.63       | 6.43       | 22          |
|              |          |             | HD62FL650    | 7.5           | 460     | 7267         | 88.5            | 8.63       | 6.43       | 11          |
|              |          |             | HD62FL575    | 7.5           | 575     | 7267         | 88.5            | 8.63       | 6.43       | 9           |

### LEGEND

BHP — Brake Horsepower  
BkW — Brake Kilowatts

## ACCESSORY/FIOP STATIC PRESSURE (in. wg) — 581A210-300

| COMPONENT  | CFM   |       |       |       |       |       |       |       |       |       |       |       |        |        |        |        |        |
|------------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|-------|--------|--------|--------|--------|--------|
|            | 4,000 | 4,500 | 5,000 | 5,500 | 6,000 | 6,500 | 7,000 | 7,500 | 8,000 | 8,500 | 9,000 | 9,500 | 10,000 | 10,500 | 11,000 | 11,500 | 12,000 |
| Economizer | 0.02  | 0.03  | 0.04  | 0.05  | 0.06  | 0.07  | 0.08  | 0.09  | 0.10  | 0.11  | 0.12  | 0.13  | 0.15   | 0.16   | 0.17   | 0.19   | 0.20   |

### LEGEND

FIOP — Factory-Installed Option

\*The static pressure must be added to the external static pressure. The sum and the evaporator entering-air cfm should then be used in conjunction with the Fan Performance tables to determine blower rpm and watts.

581A155-300

# ELECTRICAL DATA — 581A (cont)

## ELECTRICAL DATA — 581A155,180

| UNIT<br>581A             | NOMINAL<br>VOLTAGE<br>(3 Ph, 60 Hz) | VOLTAGE<br>RANGE |      | COMPRESSOR |      |       |      | OFM |      |          | IFM  |           | POWER<br>EXHAUST |      | COMBUSTION<br>FAN MOTOR | POWER<br>SUPPLY |       |         |
|--------------------------|-------------------------------------|------------------|------|------------|------|-------|------|-----|------|----------|------|-----------|------------------|------|-------------------------|-----------------|-------|---------|
|                          |                                     |                  |      | No. 1      |      | No. 2 |      |     |      |          |      |           |                  |      |                         |                 |       |         |
|                          |                                     | Min              | Max  | RLA        | LRA  | RLA   | LRA  | Qty | Hp   | FLA (ea) | Hp   | FLA       | FLA              | LRA  | FLA                     | MCA             | MOCP* |         |
| 155<br>(Standard<br>IFM) | 208/230                             | 187              | 253  | 20.7       | 156  | 20.7  | 156  | 3   | 0.5  | 1.70     | 2.9  | 8.8/ 8.4  | —                | —    | 0.57                    | 60/60           | 80/80 |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           | 4.6              | 18.8 | 0.57                    | 65/65           | 80/80 |         |
|                          | 460                                 | 414              | 506  | 10.0       | 75   | 10.0  | 75   | 3   | 0.5  | 0.80     | 2.9  | 4.2       | —                | —    | 0.30                    | 29              | 35    |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           | 2.3              | 6.0  | 0.30                    | 31              | 40    |         |
|                          | 575                                 | 518              | 633  | 8.2        | 54   | 8.2   | 54   | 3   | 0.5  | 0.75     | 3.0  | 3.9       | —                | —    | 0.57                    | 25              | 30    |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           | 2.1              | 4.8  | 0.57                    | 27              | 30    |         |
| 155<br>(Optional<br>IFM) | 208/230                             | 187              | 253  | 20.7       | 156  | 20.7  | 156  | 3   | 0.5  | 1.70     | 3.7  | 10.5/11.0 | —                | —    | 0.57                    | 62/63           | 80/80 |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           | 4.6              | 18.8 | 0.57                    | 67/67           | 80/80 |         |
|                          | 460                                 | 414              | 506  | 10.0       | 75   | 10.0  | 75   | 3   | 0.5  | 0.80     | 3.7  | 4.8       | —                | —    | 0.30                    | 30              | 35    |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           | 2.3              | 6.0  | 0.30                    | 32              | 40    |         |
|                          | 180                                 | 208/230          | 187  | 253        | 32.1 | 195   | 20.7 | 156 | 3    | 0.5      | 1.70 | 5.0       | 15.8/15.8        | —    | —                       | 0.57            | 82/82 | 110/110 |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           |                  | 4.6  | 18.8                    | 0.57            | 86/86 | 110/110 |
| 460                      |                                     | 414              | 506  | 16.4       | 95   | 10.0  | 75   | 3   | 0.5  | 0.80     | 5.0  | 7.9       | —                | —    | 0.30                    | 41              | 50    |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      |           | 2.3              | 6.0  | 0.30                    | 43              | 50    |         |
| 575                      | 518                                 | 633              | 12.0 | 80         | 8.2  | 54    | 3    | 0.5 | 0.75 | 5.0      | 6.0  | —         | —                | 0.57 | 31                      | 40              |       |         |
|                          |                                     |                  |      |            |      |       |      |     |      |          |      | 2.1       | 4.8              | 0.57 | 34                      | 45              |       |         |

### LEGEND

|      |   |                                             |
|------|---|---------------------------------------------|
| FLA  | — | Full Load Amps                              |
| HACR | — | Heating, Air Conditioning and Refrigeration |
| IFM  | — | Indoor (Evaporator) Fan Motor               |
| LRA  | — | Locked Rotor Amps                           |
| MCA  | — | Minimum Circuit Amps                        |
| MOCP | — | Maximum Overcurrent Protection              |
| NEC  | — | National Electrical Code                    |
| OFM  | — | Outdoor (Condenser) Fan Motor               |
| RLA  | — | Rated Load Amps                             |

\*Fuse or HACR circuit breaker.



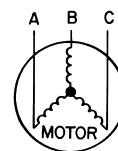
### NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- Unbalanced 3-Phase Supply Voltage**  
*Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.*

% Voltage Imbalance

$$= 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



AB = 452 v  
BC = 464 v  
AC = 455 v

$$\text{Average Voltage} = \frac{452 + 464 + 455}{3}$$

$$= \frac{1371}{3}$$

$$= 457$$

Determine maximum deviation from average voltage.

(AB) 457 – 452 = 5 v  
(BC) 464 – 457 = 7 v  
(AC) 457 – 455 = 2 v

Maximum deviation is 7 v.

Determine percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{7}{457}$$

$$= 1.53\%$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

# ELECTRICAL DATA — 581A (cont)

## ELECTRICAL DATA — 581A210-300 WITHOUT CONVENIENCE OUTLET

| UNIT<br>581A | NOMINAL<br>VOLTAGE<br>(3 Ph,<br>60 Hz) | VOLTAGE<br>RANGE |     | COMPRESSOR |     |       |     |       |     | OFM |      |             | IFM |           | POWER<br>EXHAUST |    |             | COMBUSTION<br>FAN MOTOR | POWER SUPPLY |         | DISCONNECT<br>SIZE |
|--------------|----------------------------------------|------------------|-----|------------|-----|-------|-----|-------|-----|-----|------|-------------|-----|-----------|------------------|----|-------------|-------------------------|--------------|---------|--------------------|
|              |                                        |                  |     | No. 1      |     | No. 2 |     | No. 3 |     |     |      |             |     |           | Qty              | Hp | FLA<br>(ea) |                         | Hp           | FLA     | FLA<br>(ea)        |
|              |                                        | Min              | Max | RLA        | LRA | RLA   | LRA | RLA   | LRA | Qty | Hp   | FLA<br>(ea) | Hp  | FLA       | Qty              | Hp | FLA<br>(ea) | FLA                     | MCA          | MOCP*   | FLA                |
| 210          | 208/230                                | 187              | 253 | 16.7       | 130 | 16.7  | 130 | 22.4  | 184 | 4   | 0.25 | 1.5         | 3.7 | 10.6/ 9.6 | —                | —  | —           | 0.5                     | 78/ 77       | 100/ 90 | 83/ 82             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 16.7/15.2 | 2                | 1  | 5.9         |                         | 90/ 89       | 100/100 | 97/ 96             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 24.2/22   | 2                | 1  | 5.9         |                         | 84/ 83       | 100/100 | 90/ 89             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 30.8/28   | 2                | 1  | 5.9         |                         | 96/ 94       | 100/100 | 104/102            |
|              | 460                                    | 414              | 506 | 9          | 70  | 9     | 70  | 10.7  | 90  | 4   | 0.25 | 0.7         | 3.7 | 4.8       | —                | —  | —           | 0.3                     | 104/101      | 125/110 | 112/110            |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 7.6       | 2                | 1  | 3.1         |                         | 39           | 45      | 42                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 11        | 2                | 1  | 3.1         |                         | 45           | 50      | 49                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 14        | 2                | 1  | 3.1         |                         | 42           | 50      | 45                 |
|              | 575                                    | 518              | 633 | 7          | 55  | 7     | 55  | 9.3   | 73  | 4   | 0.25 | 0.7         | 3   | 3.9       | —                | —  | —           | 0.24                    | 48           | 50      | 52                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 6.1       | 2                | 1  | 2.4         |                         | 45           | 50      | 49                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 9         | 2                | 1  | 2.4         |                         | 51           | 60      | 56                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 11        | 2                | 1  | 2.4         |                         | 32           | 40      | 35                 |
| 240          | 208/230                                | 187              | 253 | 22.4       | 184 | 22.4  | 184 | 22.4  | 184 | 4   | 0.25 | 1.5         | 3.7 | 10.6/ 9.6 | —                | —  | —           | 0.5                     | 37           | 45      | 40                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 16.7/15.2 | 2                | 1  | 5.9         |                         | 35           | 40      | 37                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 24.2/22   | 2                | 1  | 5.9         |                         | 39           | 45      | 43                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 30.8/28   | 2                | 1  | 5.9         |                         | 37           | 45      | 40                 |
|              | 460                                    | 414              | 506 | 10.7       | 90  | 10.7  | 90  | 10.7  | 90  | 4   | 0.25 | 0.7         | 3.7 | 4.8       | —                | —  | —           | 0.3                     | 42           | 50      | 46                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 7.6       | 2                | 1  | 3.1         |                         | 49           | 50      | 53                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 11        | 2                | 1  | 3.1         |                         | 45           | 50      | 49                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 14        | 2                | 1  | 3.1         |                         | 51           | 60      | 56                 |
|              | 575                                    | 518              | 633 | 9.3        | 73  | 9.3   | 73  | 9.3   | 73  | 4   | 0.25 | 0.7         | 5   | 6.1       | —                | —  | —           | 0.24                    | 49           | 50      | 53                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 9         | 2                | 1  | 2.4         |                         | 55           | 60      | 60                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 11        | 2                | 1  | 2.4         |                         | 52           | 60      | 56                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 15  | 16.7/15.2 | 2                | 1  | 5.9         |                         | 59           | 60      | 63                 |
| 300          | 208/230                                | 187              | 253 | 47.1       | 245 | 47.1  | 245 | —     | —   | 6   | 0.25 | 1.5         | 5   | 16.7/15.2 | —                | —  | —           | 0.5                     | 42           | 50      | 46                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 24.2/22   | 2                | 1  | 5.9         |                         | 49           | 50      | 53                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 30.8/28   | 2                | 1  | 5.9         |                         | 45           | 50      | 42                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 15  | 16.7/15.2 | 2                | 1  | 5.9         |                         | 44           | 50      | 48                 |
|              | 460                                    | 414              | 506 | 19.6       | 125 | 19.6  | 125 | —     | —   | 6   | 0.25 | 0.7         | 5   | 7.6       | —                | —  | —           | 0.3                     | 42           | 50      | 46                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 11        | 2                | 1  | 3.1         |                         | 49           | 50      | 53                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 14        | 2                | 1  | 3.1         |                         | 55           | 60      | 60                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 15  | 16.7/15.2 | 2                | 1  | 5.9         |                         | 52           | 60      | 56                 |
|              | 575                                    | 518              | 633 | 15.8       | 100 | 15.8  | 100 | —     | —   | 6   | 0.25 | 0.7         | 5   | 6.1       | —                | —  | —           | 0.24                    | 59           | 60      | 63                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 9         | 2                | 1  | 2.4         |                         | 66           | 80      | 70                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 11        | 2                | 1  | 2.4         |                         | 62           | 80      | 66                 |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 15  | 16.7/15.2 | 2                | 1  | 5.9         |                         | 69           | 80      | 73                 |

### LEGEND

|      |   |                                             |      |   |                                |
|------|---|---------------------------------------------|------|---|--------------------------------|
| FLA  | — | Full Load Amps                              | MCA  | — | Minimum Circuit Amps           |
| HACR | — | Heating, Air Conditioning and Refrigeration | MOCP | — | Maximum Overcurrent Protection |
| IFM  | — | Indoor (Evaporator) Fan Motor               | NEC  | — | National Electrical Code       |
| LRA  | — | Locked Rotor Amps                           | OFM  | — | Outdoor (Condenser) Fan Motor  |
| MCA  | — | Minimum Circuit Amps                        | RLA  | — | Rated Load Amps                |

\*Fuse or HACR circuit breaker.

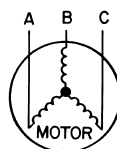


### NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- Unbalanced 3-Phase Supply Voltage**  
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

Example: Supply voltage is 460-3-60.



AB = 452 v  
BC = 464 v  
AC = 455 v

$$\begin{aligned} \text{Average Voltage} &= \frac{452 + 464 + 455}{3} \\ &= \frac{1371}{3} \\ &= 457 \end{aligned}$$

Determine maximum deviation from average voltage.

(AB) 457 - 452 = 5 v  
(BC) 464 - 457 = 7 v  
(AC) 457 - 455 = 2 v

Maximum deviation is 7 v.

Determine percent of voltage imbalance.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{7}{457} \\ &= 1.53\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

581A155-300

# ELECTRICAL DATA — 581A (cont)

## ELECTRICAL DATA — 581A210-300 WITH OPTIONAL CONVENIENCE OUTLET

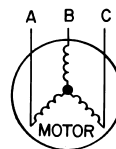
| UNIT<br>581A | NOMINAL<br>VOLTAGE<br>(3 Ph,<br>60 Hz) | VOLTAGE<br>RANGE |     | COMPRESSOR |     |       |     |       |     | OFM |      |             | IFM |           | POWER<br>EXHAUST |    | COMBUSTION<br>FAN MOTOR | POWER SUPPLY |         | DISCONNECT<br>SIZE |             |
|--------------|----------------------------------------|------------------|-----|------------|-----|-------|-----|-------|-----|-----|------|-------------|-----|-----------|------------------|----|-------------------------|--------------|---------|--------------------|-------------|
|              |                                        |                  |     | No. 1      |     | No. 2 |     | No. 3 |     |     |      |             |     |           | Qty              | Hp |                         | FLA<br>(ea)  | Qty     | Hp                 | FLA<br>(ea) |
|              |                                        | Min              | Max | RLA        | LRA | RLA   | LRA | RLA   | LRA | Qty | Hp   | FLA<br>(ea) | Hp  | FLA       | Qty              | Hp | FLA<br>(ea)             | FLA          | MCA     | MOCP*              | FLA         |
| 210          | 208/230                                | 187              | 253 | 16.7       | 130 | 16.7  | 130 | 22.4  | 184 | 4   | 0.25 | 1.5         | 3.7 | 10.6/ 9.6 | —                | —  | 0.5                     | 83/ 82       | 100/100 | 89/ 88             |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 16.7/15.2 | 2                | 1  |                         | 5.9          | 95/ 94  | 100/100            | 103/101     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 24.2/22   | 2                | 1  |                         | 5.9          | 89/ 88  | 100/100            | 96/ 94      |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 101/ 99 | 110/100            | 110/108     |
|              | 460                                    | 414              | 506 | 9          | 70  | 9     | 70  | 10.7  | 90  | 4   | 0.25 | 0.7         | 3.7 | 4.8       | —                | —  | 0.3                     | 97/ 94       | 100/100 | 105/102            |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 7.6       | 2                | 1  |                         | 3.1          | 109/106 | 125/125            | 118/116     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 11        | 2                | 1  |                         | 3.1          | 42      | 50                 | 45          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 48      | 50                 | 52          |
|              | 575                                    | 518              | 633 | 7          | 55  | 7     | 55  | 9.3   | 73  | 4   | 0.25 | 0.7         | 3   | 3.9       | —                | —  | 0.24                    | 54           | 60      | 59                 |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 6.1       | 2                | 1  |                         | 2.4          | 35      | 40                 | 38          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 9         | 2                | 1  |                         | 2.4          | 40      | 45                 | 43          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 38      | 45                 | 40          |
| 240          | 208/230                                | 187              | 253 | 22.4       | 184 | 22.4  | 184 | 22.4  | 184 | 4   | 0.25 | 1.5         | 3.7 | 10.6/ 9.6 | —                | —  | 0.5                     | 42           | 50      | 45                 |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 16.7/15.2 | 2                | 1  |                         | 5.9          | 106/105 | 125/125            | 116/115     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 24.2/22   | 2                | 1  |                         | 5.9          | 101/ 99 | 110/100            | 109/107     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 30.8/28   | 2                | 1  |                         | 5.9          | 112/111 | 125/125            | 123/121     |
|              | 460                                    | 414              | 506 | 10.7       | 90  | 10.7  | 90  | 10.7  | 90  | 4   | 0.25 | 0.7         | 3.7 | 4.8       | —                | —  | 0.3                     | 108/106      | 125/125 | 118/115            |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 5   | 7.6       | 2                | 1  |                         | 3.1          | 120/118 | 125/125            | 131/129     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 11        | 2                | 1  |                         | 3.1          | 117/113 | 125/125            | 125/122     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 14        | 2                | 1  |                         | 3.1          | 129/125 | 150/150            | 139/136     |
|              | 575                                    | 518              | 633 | 9.3        | 73  | 9.3   | 73  | 9.3   | 73  | 4   | 0.25 | 0.7         | 5   | 6.1       | —                | —  | 0.24                    | 45           | 50      | 49                 |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 9         | 2                | 1  |                         | 2.4          | 52      | 60                 | 56          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 11        | 2                | 1  |                         | 2.4          | 48      | 50                 | 52          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 54      | 60                 | 59          |
| 300          | 208/230                                | 187              | 253 | 47.1       | 245 | 47.1  | 245 | —     | —   | 6   | 0.25 | 1.5         | 5   | 16.7/15.2 | —                | —  | 0.5                     | 52           | 60      | 53                 |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 24.2/22   | 2                | 1  |                         | 5.9          | 62      | 70                 | 67          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 30.8/28   | 2                | 1  |                         | 5.9          | 42      | 50                 | 46          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 47      | 50                 | 51          |
|              | 460                                    | 414              | 506 | 19.6       | 125 | 19.6  | 125 | —     | —   | 6   | 0.25 | 0.7         | 5   | 7.6       | —                | —  | 0.3                     | 45           | 50      | 49                 |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 11        | 2                | 1  |                         | 3.1          | 50      | 50                 | 55          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 14        | 2                | 1  |                         | 3.1          | 47      | 50                 | 51          |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 52      | 60                 | 57          |
|              | 575                                    | 518              | 633 | 15.8       | 100 | 15.8  | 100 | -     | -   | 6   | 0.25 | 0.7         | 5   | 6.1       | —                | —  | 0.24                    | 137/135      | 175/175 | 144/142            |             |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 7.5 | 9         | 2                | 1  |                         | 2.4          | 148/147 | 175/175            | 157/155     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | 10  | 11        | 2                | 1  |                         | 2.4          | 144/142 | 175/175            | 152/150     |
|              |                                        |                  |     |            |     |       |     |       |     |     |      |             | —   | —         | —                | —  |                         | —            | 156/154 | 200/200            | 166/163     |

### LEGEND

|      |   |                                             |      |   |                                |
|------|---|---------------------------------------------|------|---|--------------------------------|
| FLA  | — | Full Load Amps                              | MCA  | — | Minimum Circuit Amps           |
| HACR | — | Heating, Air Conditioning and Refrigeration | MOCP | — | Maximum Overcurrent Protection |
| IFM  | — | Indoor (Evaporator) Fan Motor               | NEC  | — | National Electrical Code       |
| LRA  | — | Locked Rotor Amps                           | OFM  | — | Outdoor (Condenser) Fan Motor  |
| MCA  | — | Minimum Circuit Amps                        | RLA  | — | Rated Load Amps                |

\*Fuse or HACR circuit breaker.

Example: Supply voltage is 460-3-60.



AB = 452 v  
BC = 464 v  
AC = 455 v

$$\begin{aligned} \text{Average Voltage} &= \frac{452 + 464 + 455}{3} \\ &= \frac{1371}{3} \\ &= 457 \end{aligned}$$

Determine maximum deviation from average voltage.

(AB) 457 - 452 = 5 v  
(BC) 464 - 457 = 7 v  
(AC) 457 - 455 = 2 v

Maximum deviation is 7 v.

Determine percent of voltage imbalance.

$$\begin{aligned} \% \text{ Voltage Imbalance} &= 100 \times \frac{7}{457} \\ &= 1.53\% \end{aligned}$$

This amount of phase imbalance is satisfactory as it is below the maximum allowable 2%.

**IMPORTANT:** If the supply voltage phase imbalance is more than 2%, contact your local electric utility company immediately.

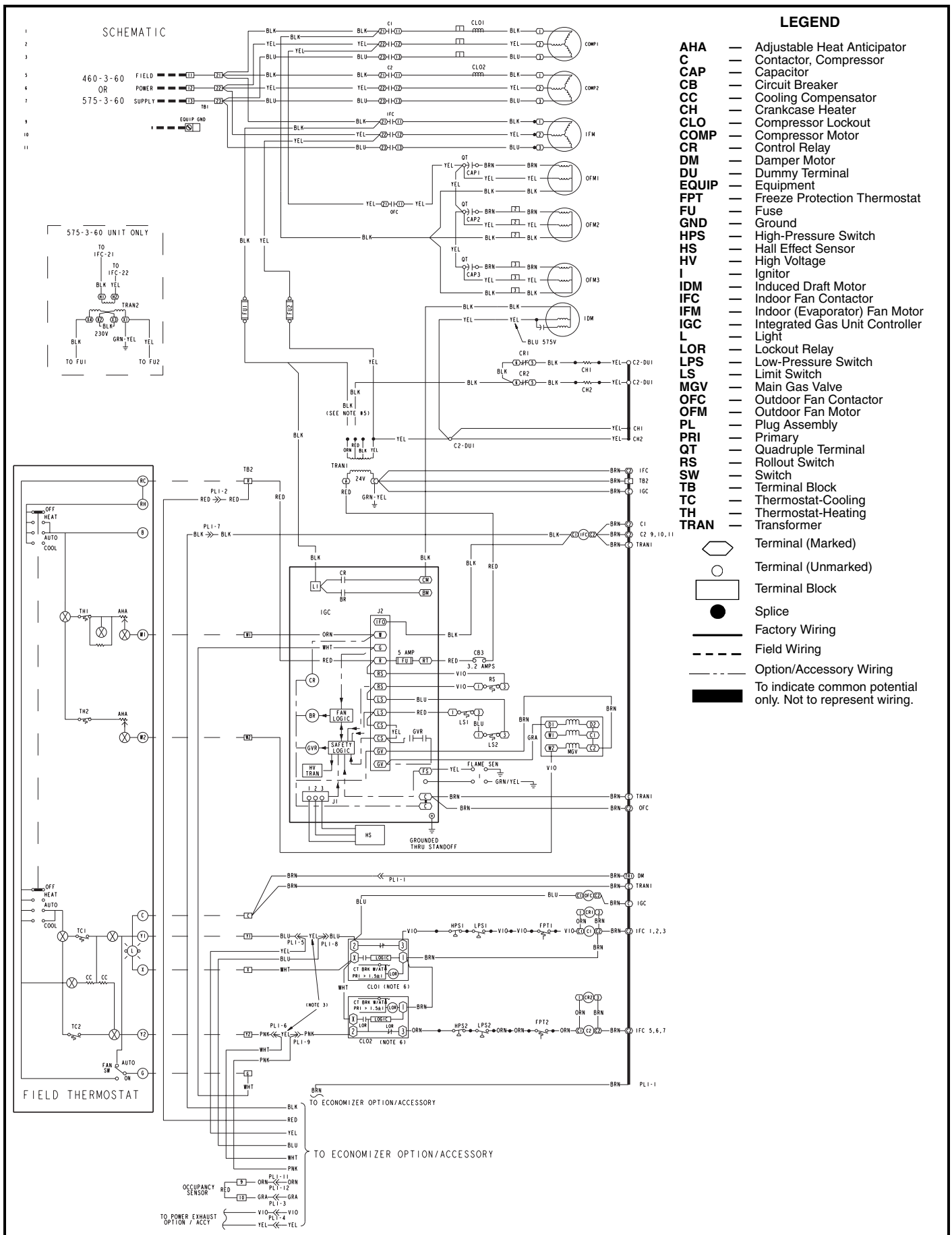
### NOTES:

- In compliance with NEC requirements for multimotor and combination load equipment (refer to NEC Articles 430 and 440), the overcurrent protective device for the unit shall be fuse or HACR breaker. Canadian units may be fuse or circuit breaker.
- Unbalanced 3-Phase Supply Voltage**  
Never operate a motor where a phase imbalance in supply voltage is greater than 2%. Use the following formula to determine the percent of voltage imbalance.

$$\% \text{ Voltage Imbalance} = 100 \times \frac{\text{max voltage deviation from average voltage}}{\text{average voltage}}$$

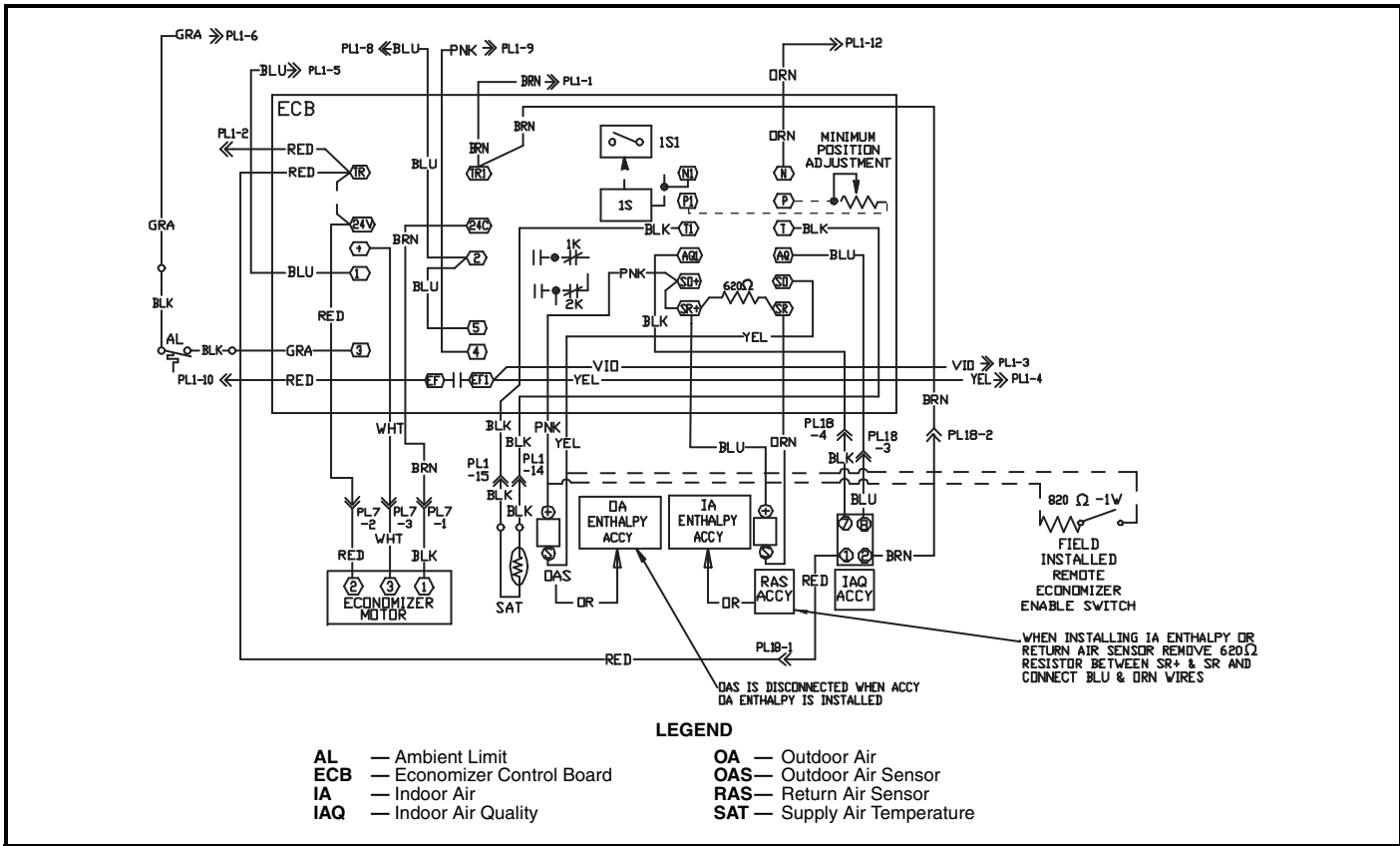


## TYPICAL WIRING SCHEMATICS — 581A

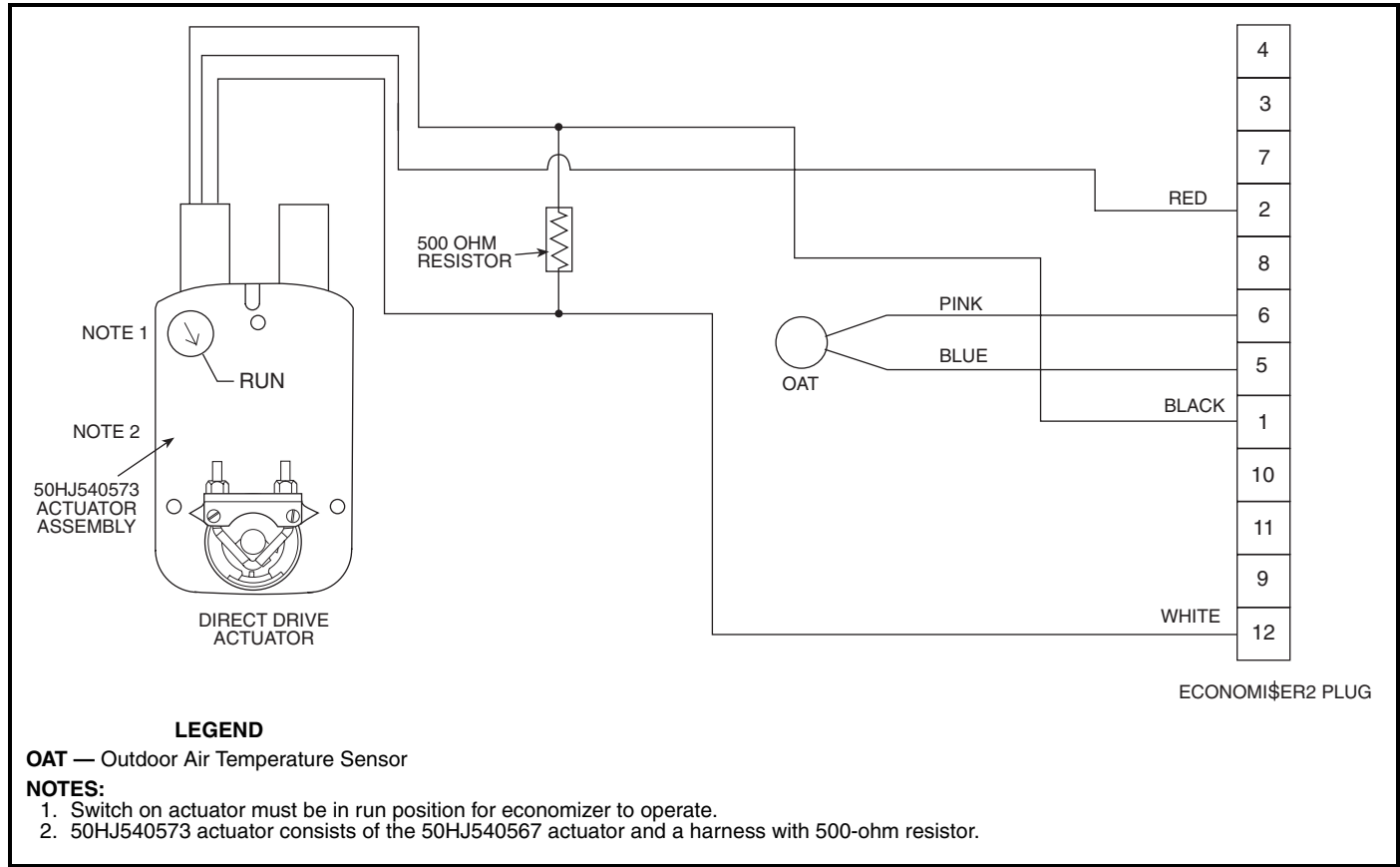




# TYPICAL WIRING SCHEMATICS — 581A

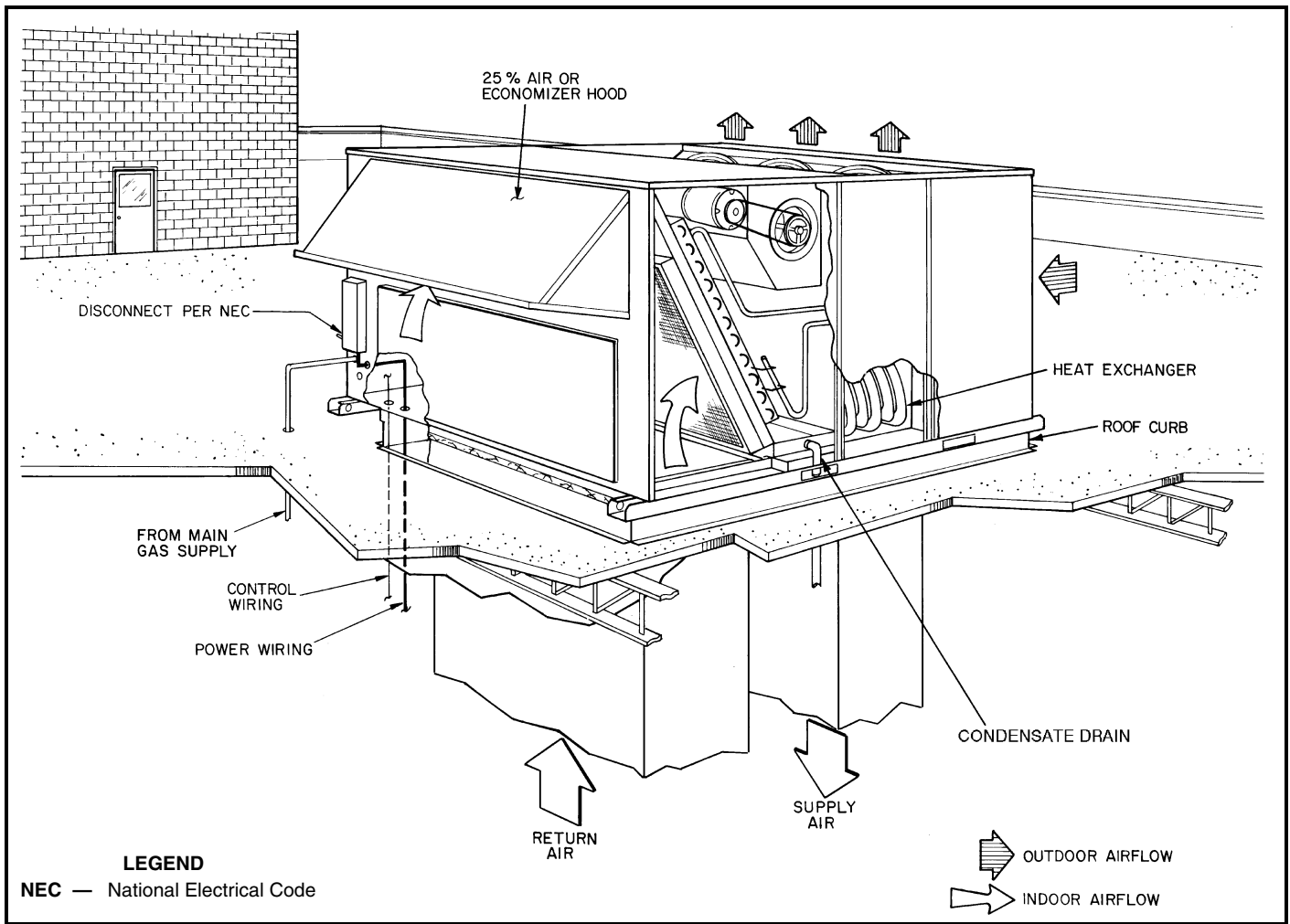


EconoMi\$er IV Wiring — 581A155,180



EconoMi\$er2 Wiring — 581A155,180

# TYPICAL PIPING AND WIRING — 581A (581A155 Shown)



## GUIDE SPECIFICATIONS — 579F/580F180-300 AND 581A155,180 SIZE UNITS

### PACKAGED ROOFTOP ELECTRIC COOLING UNIT WITH GAS HEAT — CONSTANT VOLUME APPLICATION

#### HVAC GUIDE SPECIFICATIONS

SIZE RANGE: 13 AND 15 TONS (581A), 15 TO 25 TONS (579F, 580F), NOMINAL (COOLING)

230,000 TO 360,000 BTUH, NOMINAL (INPUT HEATING) (GAS UNITS)

BRYANT MODEL NUMBERS: **580F, 579F, 581A**

#### PART 1 — GENERAL

##### 1.01 SYSTEM DESCRIPTION

Unit is an outdoor rooftop mounted, electrically controlled heating and cooling unit utilizing scroll hermetic compressors for cooling duty and gas combustion for heating duty. Supply air shall be discharged downward or horizontally (with horizontal supply/return curb adapter assembly), as shown on contract drawings. Standard unit shall include a manual outdoor-air inlet.

##### 1.02 QUALITY ASSURANCE

- A. Unit shall be rated in accordance with ARI Standards 270 and 360 and all units shall be designed in accordance with UL Standard 1995.

**NOTE:** Size 300 units are beyond the scope of ARI certification guidelines.

- B. Unit shall be designed to conform to ASHRAE 15.
- C. Unit shall be ETL and ETL, Canada tested and certified in accordance with ANSI Z21.47 Standards as a total package.
- D. Roof curb shall be designed to conform to NRCA Standards.
- E. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
- F. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- G. Unit shall be manufactured in a facility registered to ISO 9001:2000.

##### 1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

#### PART 2 — PRODUCTS

##### 2.01 EQUIPMENT (STANDARD)

###### A. General:

Each unit shall be a factory assembled, single-piece heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R-22), and special features required prior to field start-up.

###### B. Unit Cabinet:

- Constructed of galvanized steel (G90 — 1.8 oz. of zinc per square foot of sheet metal), bonderized and primer-coated on both sides and coated with a baked polyester thermosetting powdercoating finish on the outer surface.
- Indoor blower compartment interior surfaces shall be insulated with a minimum 1/2-in. thick, 1 lb density fiberglass insulation. Fiberglass insulation shall be bonded with a thermosetting resin (8 to 12% by weight nominal, phenol formaldehyde typical), and coated with an acrylic or other material that meets the NFPA 90 flame retardance requirements and has an "R" Value of 3.70. Aluminum foil-faced fiberglass insulation shall be used in the gas heat compartment.

- Cabinet panels shall be easily removable for servicing. Cabinet panels are minimum 20 gage. Panels shall have 1/2-in. thick, 1.5-lb. density insulation.
- Filters shall be accessible through an access panel.
- Holes shall be provided in the base rails (minimum 12 gage) for rigging shackles to facilitate overhead rigging.
- Unit shall contain a sloped drain pan, to prevent standing water from accumulating. Pan shall be fabricated of hot dipped zinc coated minimum spangle steel. Zinc coating shall be G90 designation according to ASTM Standard A653. Unit shall contain a factory-installed nonferrous main condensate drain connection.

###### C. Fans:

- Indoor blower (evaporator fan):
  - Fan shall be belt driven. Belt drive shall include an adjustable pulley. The standard fan drive shall have a factory-installed low-medium external static pressure capable fan drive. The alternate fan drive option shall have a factory-installed external high static pressure capable fan drive.
  - Fan wheel shall be made from steel with a corrosion-resistant finish. It shall be a dynamically balanced, double-inlet type with forward-curved blades.
- Condenser fans shall be of the direct-driven propeller type, with corrosion-resistant blades riveted to corrosion-resistant steel supports. They shall be dynamically balanced and discharge air upwards.
- Induced-draft blower shall be of the direct-driven, single inlet, forward-curved, centrifugal type. It shall be made from steel with a corrosion-resistant finish and shall be dynamically balanced.

###### D. Compressor(s):

- Fully hermetic, scroll type, internally protected.
- Factory spring-shock mounted and internally spring mounted for vibration isolation.
- On electrically and mechanically independent refrigerant circuits.
- All compressors shall have 70 W crankcase heaters.

###### E. Coils:

- Standard evaporator and condenser coils shall have aluminum plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
- Coils shall be leak tested at 150 psig and pressure tested at 450 psig.

###### F. Heating Section:

- Induced-draft combustion type with energy saving direct-spark ignition system and redundant main gas valve.
- The heat exchanger shall be of the tubular-section type constructed of a minimum of 20-gage steel coated with a nominal 1.2 mil aluminum-silicone alloy for corrosion resistance.
  - The optional stainless steel heat exchangers shall be tubular-section design and shall be constructed of a minimum 20 gage, 409 stainless steel.
- Burners shall be of the in-shot type constructed of aluminum-coated steel.

## GUIDE SPECIFICATIONS — 579F/580F180-300 AND 581A155,180 SIZE UNITS (cont)

4. All gas piping shall enter the unit at a single location.
5. Gas piping shall be capable of being routed through the roof curb directly into unit.

### G. Refrigerant Components:

Refrigerant circuit components shall include:

1. Thermostatic expansion valve (TXV).
2. Filter driers.
3. Gage port and connections on suction, discharge, and liquid lines.

### H. Filter Section:

Standard filter section shall consist of 2 sizes of factory-installed 2-in. thick throwaway fiberglass filters of commercially available sizes. Filters shall be approximately 10% efficient with an airside pressure drop of approximately 0.07 in. wg (clean).

### I. Controls and Safeties:

1. Unit Controls:
  - a. Economizer control (optional).
  - b. Capacity control (2-step).
  - c. Unit shall be complete with self-contained low-voltage control circuit.

### J. Safeties:

- a. Unit shall incorporate a solid-state compressor lockout which provides reset capability at the space thermostat, should any of the following safety devices trip and shut off compressor:
  - 1) Compressor lockout protection provided for either internal or external overload.
  - 2) Low-pressure switch.
  - 3) Dual freezestats (evaporator coil).
  - 4) High-pressure switch.
- b. Supply-air thermostat shall be located in the unit.
- c. Heating section shall be provided with the following minimum protections:
  - 1) High-temperature limit switch.
  - 2) Induced-draft motor speed sensor.
  - 3) Flame rollout switch.
  - 4) Flame proving controls.
  - 5) Redundant gas valve.

### K. Operating Characteristics:

1. Unit shall be capable of starting and running at 120 F ambient outdoor temperature per maximum load criteria of ARI Standard 360.
2. Unit with standard controls will operate in cooling down to an outdoor ambient temperature of 40 F.
3. Unit shall be provided with fan time delay to prevent cold air delivery.

### L. Electrical Requirements:

All unit power wiring shall enter unit cabinet at a single location.

### M. Motors:

1. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have line break thermal and current overload protection.
2. All fan motors shall have permanently lubricated, sealed bearings and inherent automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
3. All indoor-fan motors 5 hp and larger shall meet the minimum efficiency requirements as established by

the Energy Policy Act of 1992 (EPACT) effective October 24, 1997.

### N. Special Features:

Certain features are not applicable when the features designated \* are specified. For assistance in amending the specifications, contact your local Bryant Sales Office.

#### 1. Coils:

- a. Optional pre-coated aluminum-fin coils shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
- b. Optional copper-fin coils shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan. All copper construction shall provide protection in moderate coastal environments.
- c. E-Coated aluminum-fin coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss — 60 deg of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be aluminum fins mechanically bonded to copper tubes.
- d. E-Coated copper-fin coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss — 60 deg of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be copper fins mechanically bonded to copper tubes with copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between coil and pan.

## GUIDE SPECIFICATIONS — 579F/580F180-300 AND 581A155,180 SIZE UNITS (cont)

### 2. Roof Curbs (Horizontal and Vertical):

- a. Formed of 16-gage galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
- b. Permits installing and securing ductwork to curb prior to mounting unit on the curb.

### 3. Horizontal Adapter Roof Curb:

Includes factory-assembled adapter and internal duct and substantially improves evaporator fan static performance (static regain).

**NOTE:** Power exhaust or barometric relief must be mounted in the return ductwork when used in conjunction with this accessory.

### \* 4. Integrated Economizers:

- a. Integrated integral modulating type capable of simultaneous economizer and compressor operation.
- b. Available as a factory-installed option in vertical supply/return configuration only. (Available as a field-installed accessory for horizontal and/or vertical supply return configurations.)
- c. Includes all hardware and controls to provide cooling with outdoor air.
- d. Equipped with low-leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
- e. Capable of introducing up to 100% outdoor air.
- f. EconoMi\$er IV and EconoMi\$er2 shall be equipped with a barometric relief damper.
- g. Designed to close damper(s) during loss-of-power situations with spring return built into motor.
- h. Dry bulb outdoor-air temperature sensor shall be provided as standard. Outdoor air sensor set point is adjustable and shall range from 40 to 100 F. For the EconoMi\$er IV, the return air sensor, indoor enthalpy sensor, and outdoor enthalpy sensor shall be provided as field-installed accessories to provide enthalpy control, differential enthalpy control, and differential dry bulb temperature control. For the EconoMi\$er2, the enthalpy, differential temperature (adjustable), and differential enthalpy control shall be provided as field-installed accessories.
- i. EconoMi\$er IV controller shall use a mixed air thermistor mounted on the evaporator fan housing to control EconoMi\$er IV operation to a supply air temperature of 55 F.
- j. The EconoMi\$er IV and EconoMi\$er2 shall have a gear-driven parallel blade design.
- k. EconoMi\$er IV controller shall provide control of internal building pressure through its accessory power exhaust function. Factory set at 100%, with a range of 0% to 100%.
- l. EconoMi\$er2 shall be capable of control from a 4 to 20 mA signal through optional 4 to 20 mA design without microprocessor control (required for third party control interface).
- m. EconoMi\$er IV controller Occupied Minimum Damper Position Setting maintains the minimum airflow into the building during occupied period providing design ventilation rate for full occupancy (damper position during heating). A remote potentiometer may be used to override the set point.

n. EconoMi\$er IV controller Unoccupied Minimum Damper Position Setting — The EconoMi\$er IV dampers shall be completely closed when the unit is in the occupied mode.

o. EconoMi\$er IV controller IAQ/DCV Maximum Damper Position Setting — Setting the maximum position of the damper prevents the introduction of large amounts of hot or cold air into the space. This position is intended to satisfy the base minimum ventilation rate.

p. EconoMi\$er IV controller IAQ/DCV control modulates the outdoor-air damper to provide ventilation based on the optional 2 to 10 vdc CO<sub>2</sub> sensor input.

q. Compressor lockout sensor (opens at 35 F, closes at 50 F).

r. Actuator shall be direct coupled to economizer gear, eliminating linkage arms and rods.

#### s. Control LEDs:

1) When the outdoor air damper is capable of providing free cooling, the "Free Cool" LED shall illuminate.

2) The IAQ LED indicates when the module is on the DCV mode.

3) The EXH LED indicates when the exhaust fan contact is closed.

t. Remote Minimum Position Control — A field-installed accessory remote potentiometer allows the outdoor air damper to be opened or closed beyond the minimum position in the occupied mode for modified ventilation.

### 5. Two-Position Damper:

Two-position damper package shall include single blade damper and 24-v motor. Admits up to 25% outdoor air, and shall close upon unit shutoff. Damper shall cover 3.8-in. high by 17.75-in. wide (117.8 sq. in.) opening in return air upper panel.

### 6. Accessory Compressor Cycle Delay:

Compressor shall be prevented from restarting for a minimum of 5 minutes after shutdown.

### \* 7. Thermostats and Subbases:

To provide staged heating and cooling in addition to automatic (or manual) changeover and fan control.

### \* 8. Barometric Relief Damper Package:

a. Package shall include damper, seals, hardware, and hoods to relieve excess internal pressure.

b. Damper shall close due to gravity upon unit shutdown.

c. Damper package must be field-installed in return-air ductwork when used with optional side return connections.

### \* 9. Power Exhaust:

Package shall include an exhaust (propeller style) fan, 1/2 Hp 208-230, 460 v (factory-wired for 460 v) direct drive motor, and damper for vertical flow units with economizer to control over-pressurization of building. Power Exhaust package must be field-installed in return-air ductwork when used with optional side return connections.

### \* 10. Head Pressure Control Package:

Consists of an accessory outdoor-air package and a solid-state control with condenser coil temperature sensor for controlling condenser-fan motor speed to maintain condensing temperature between 90 F and 100 F at outdoor ambient temperature down to -20 F.

## GUIDE SPECIFICATIONS — 579F/580F180-300 AND 581A155,180 SIZE UNITS (cont)

11. Low-Ambient Kits:  
When used, allows units to operate at lower outdoor ambient temperatures. Sizes 155, 180, 210/216, and 300 will operate down to 10 F. Size 240 will operate down to 25 F.
- \* 12. Enthalpy Sensor:
  - a. For use with EconoMi\$er IV only.
  - b. Capable of comparing heat content (temperature and humidity) of outdoor air and indoor air and controlling economizer cut-in point at the most economical level.  
**NOTE:** Two accessory enthalpy sensors are required for differential enthalpy control.
- \* 13. Electronic Programmable Thermostat:  
Capable of using deluxe full-featured electronic thermostat.
14. Hot Gas Bypass Dehumidification Package:  
The dehumidification package is a factory-installed option that provides increased dehumidification by further subcooling the hot liquid refrigerant leaving the condenser coil. The package consists of a single row, 12.25 sq ft subcooling coil located on the leaving airside of the evaporator coil. The location of this coil in the indoor airstream greatly enhances the latent capacity of the unit.  
The package shall be equipped with low pressure switch(es) and TXVs. Low pressure switch(es) prevents evaporator coil freeze-up and TXVs assure a positive superheat condition. If the operation of the subcooling coil is controlled by a field-installed wall-mounted humidistat, the dehumidification circuit will then operate only when needed. Optional field connections for the humidistat are made in the low voltage compartment of the unit control box.
15. Winter Start Time-Delay Relay:  
Used in conjunction with the accessory low-ambient kit or head pressure control device, permits operation in cooling at lower outdoor ambient temperatures. See price pages for more information.
16. Liquid Propane Conversion Kit:  
Kit shall contain all the necessary hardware and instructions to convert a standard natural gas unit for use with liquefied propane gas.
17. Hinged Access Panels for the Filter, Compressors, Evaporator Fan, and Control Box Areas:  
Filter hinged access panels permit tool-less entry for changing filters. Evaporator fan hinged access panel shall be field-convertible to a tool-less entry by removing and discarding screws. Each external hinged access panel shall be permanently attached to the rooftop unit.
18. Convenience Outlet:  
Shall be factory-installed and internally mounted with an externally accessible 115-v, 15 amp. GFI, female receptacle with hinged cover. Voltage required to operate convenience outlet shall be provided by a field-installed separate branch circuit.
19. Non-Fused Disconnect Switch:  
Shall be factory-installed, internally mounted, NEC and UL approved non-fused switch shall provide unit power shutoff. The control access door shall be interlocked with the non-fused disconnect. The disconnect switch must be in the OFF position to open the control box access door. Shall be accessible from outside the unit and shall provide power off lockout capability.
20. Alternate Drive:  
Shall provide higher static drive capability to enhance evaporator-fan performance rpm range.
21. Hail Guard, Condenser Coil Grille:  
Shall protect the condenser coil from hail, flying debris, and damage by large objects without increasing unit clearances.
22. Ultraviolet Germicidal Lamps:  
Ultraviolet germicidal lamps are designed to eliminate odor causing mold and fungus that may develop in the wet area of the evaporator section of the unit. The high output, low temperature germicidal lamps are field installed in the evaporator section of the unit, aimed at the evaporator coil and condensate pan. The short wavelength ultraviolet light inhibits and kills mold, fungus and microbial growth. The lamps have an output rating at 45 F in 400 fpm air-flow of 120 microwatts/cm<sup>2</sup> at 1 meter.
23. Stainless Steel Condensate Pan:  
Stainless steel condensate pans shall be available for condensate collection.
24. Light Commercial Thermidistat™ Device:  
Shall regulate temperature and humidity from one location. Automatic humidity control adjusts indoor humidity level between 50 and 90% RH (relative humidity) based on the outdoor temperature sensor.
25. Fan/Filter Status Switch:  
Provides status of indoor (evaporator) fan (ON/OFF) or filter (CLEAN/DIRTY). Status shall be displayed over communication bus when used with direct digital controls or with an indicator light at the thermostat.
26. Manual Outdoor-Air Damper:  
Manual damper package shall consist of damper, birdscreen, and rainhood which can be preset to admit up to 50% outdoor air for year-round ventilation.
27. High-Static Motor(s) and Drive(s):  
High-static motor(s) and drive(s) shall be factory-installed to provide additional performance range.
28. Indoor Air Quality (CO<sub>2</sub>) Sensor:
  - a. Shall have the ability to provide demand ventilation indoor air quality (IAQ) control through the economizer with an IAQ sensor.
  - b. The IAQ sensor shall be available in duct mount, wall mount, and wall mount with LED display. The set point shall have adjustment capability.
29. Return Air CO<sub>2</sub> Sensor (EconoMi\$er IV):  
Sensor shall have the ability to provide demand ventilation control through the EconoMi\$er IV. The IAQ sensor shall be duct mounted. The set point shall have adjustment capability.
30. Outdoor Air Enthalpy Sensor (EconoMi\$er IV or EconoMi\$er2):  
The outdoor air enthalpy sensor shall be used to provide single enthalpy control. When used in conjunction with a return air enthalpy sensor, the controller will provide differential enthalpy control. The sensor allows the controller to determine if outside air is suitable for free cooling.

## GUIDE SPECIFICATIONS — 579F/580F180-300 AND 581A155,180 SIZE UNITS (cont)

31. Return Air Enthalpy Sensor (EconoMi\$er IV or EconoMi\$er2):

The return air enthalpy sensor shall be used with the EconoMi\$er IV or EconoMi\$er2 device. When used in conjunction with an outdoor air enthalpy sensor, the controller will provide differential enthalpy control.

32. Return Air Temperature Sensor (EconoMi\$er IV or EconoMi\$er2):

The return air temperature sensor shall be used with the EconoMi\$er IV or EconoMi\$er2 device. When used in conjunction with the standard outdoor air temperature sensor, the EconoMi\$er IV or EconoMi\$er2 device will provide differential temperature control.

33. Indoor Air Quality (CO<sub>2</sub>) Room Sensor (EconoMi\$er IV):

Sensor shall have the ability to provide demand ventilation control through the EconoMi\$er IV. The IAQ sensor shall be wall mounted with an LED display in parts per million. The set point shall have adjustment capability.

34. Humidistat:

Field-installed, wall-mounted humidistat is used to control activation of the dehumidification package. The humidistat can be set for humidity levels between 20% and 80% relative humidity.

## GUIDE SPECIFICATIONS — 581A210-300 UNITS

### PACKAGED ROOFTOP ELECTRIC COOLING UNIT WITH GAS HEAT — CONSTANT VOLUME APPLICATION

#### HVAC GUIDE SPECIFICATIONS

SIZE RANGE: 18 TO 25 TONS NOMINAL (COOLING)

250,000 TO 400,000 BTUH, NOMINAL  
(INPUT HEATING)

BRYANT MODEL NUMBERS: 581A



### PART 1 — GENERAL

#### 1.01 SYSTEM DESCRIPTION

Unit is an outdoor rooftop mounted, electrically controlled heating and cooling unit utilizing scroll hermetic compressors with crankcase heaters for cooling duty and gas combustion heat for heating duty. Supply air shall be discharged downward or horizontally, as shown on contract drawings.

#### 1.02 QUALITY ASSURANCE

- A. Unit shall well exceed the energy efficiency requirements of ASHRAE standard 90.1-2001. Unit shall be Energy Star qualified.
- B. Unit shall be rated in accordance with ARI Standards 270 and 360 and all units shall be designed in accordance with UL Standard 1995.
- C. Unit shall be designed to conform to ASHRAE 15.
- D. Unit shall be UL and UL, Canada, tested and certified in accordance with ANSI Z21.47 Standards as a total package.
- E. Roof curb shall be designed to conform to NRCA Standards.
- F. Insulation and adhesive shall meet NFPA 90A requirements for flame spread and smoke generation.
- G. Unit casing shall be capable of withstanding 500-hour salt spray exposure per ASTM B117 (scribed specimen).
- H. Unit shall be manufactured in a facility registered to ISO 9001:2000.

#### 1.03 DELIVERY, STORAGE, AND HANDLING

Unit shall be stored and handled per manufacturer's recommendations.

### PART 2 — PRODUCTS

#### 2.01 EQUIPMENT (STANDARD)

##### A. General:

The 581A unit shall be a factory assembled, single-piece heating and cooling unit. Contained within the unit enclosure shall be all factory wiring, piping, controls, refrigerant charge (R-22), and special features required prior to field start-up.

##### B. Unit Cabinet:

1. Constructed of galvanized steel (G90 — 1.8 oz. of zinc per square foot of sheet metal), bonderized and primer-coated on both sides and coated with a baked polyester thermosetting powdercoating finish on the outer surface.
2. Indoor blower compartment interior surfaces shall be insulated with a minimum 1/2-in. thick, 1 lb density

fiberglass insulation. Fiberglass insulation shall be bonded with a thermosetting resin (8 to 12% by weight nominal, phenol formaldehyde typical), and coated with an acrylic or other material that meets the NFPA 90 flame retardance requirements and has an "R" Value of 3.70. Aluminum foil-faced fiberglass insulation shall be used in the gas heat compartment.

3. Cabinet panels shall have minimum 1/2-in. thick, 1.5-lb. density insulation. Each external access panel shall be permanently attached to the rooftop unit. Panels shall also include tiebacks.
4. Filters shall be accessible through an access panel.
5. Holes shall be provided in the base rails (minimum 14 gage) for rigging shackles and level travel and movement during overhead rigging operations.
6. Fork lift slots shall be available from two sides of the unit (end and side).
7. Unit shall contain a sloped drain pan, to prevent standing water from accumulating. Pan shall be fabricated of epoxy powder coated steel.

##### C. Fans:

1. Indoor blower (evaporator fan):
  - a. Centrifugal supply air blower shall have pillow-block ball bearings and adjustable belt drive. Blower assembly shall slide out of unit for servicing.
  - b. Fan wheel shall be made from steel with a corrosion resistant finish. It shall be a dynamically balanced, double-inlet type with forward-curved blades.
  - c. The indoor fan system (blower wheels, motors, belts, and both bearings) shall slide out for easy access.
2. Condenser fans shall be of the direct-driven propeller type, with corrosion-resistant blades riveted to corrosion-resistant steel supports. They shall be dynamically balanced and discharge air upwards. Condenser fan motors shall be totally enclosed and be of a shaft down design.
3. Induced-draft blower shall be of the direct-driven, single inlet, forward-curved, centrifugal type. It shall be made from steel with a corrosion-resistant finish and shall be dynamically balanced.

##### D. Compressor(s):

1. Fully hermetic, scroll type, internally protected.
2. Factory spring-shock mounted and internally spring mounted for vibration isolation.
3. On electrically and mechanically independent refrigerant circuits.
4. Reverse rotation protection capability.
5. Crankcase heaters shall only be activated during compressor OFF mode.

##### E. Coils:

1. Standard evaporator and condenser coils shall have copper or aluminum plate fins mechanically bonded to seamless internally grooved copper tubes with all joints brazed.
2. Coils shall be leak tested at 150 psig (1034 kPa) and pressure tested at 450 psig (3103 kPa).



## GUIDE SPECIFICATIONS — 581A210-300 UNITS (cont)

3. Optional pre-coated aluminum-fin coils shall have a durable epoxy-phenolic coating to provide protection in mildly corrosive coastal environments. Coating shall be applied to the aluminum fin stock prior to the fin stamping process to create an inert barrier between the aluminum fin and copper tube. Epoxy-phenolic barrier shall minimize galvanic action between dissimilar metals.
4. Copper-fin coils shall be constructed of copper fins mechanically bonded to copper tubes and copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting the sheet metal coil pan to minimize potential for galvanic corrosion between coil and pan. All copper construction shall provide protection in moderate coastal environments.
5. E-Coated aluminum-fin coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss — 60 deg of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be aluminum fins mechanically bonded to copper tubes.
6. E-Coated copper-fin coils shall have a flexible epoxy polymer coating uniformly applied to all coil surface areas without material bridging between fins. Coating process shall ensure complete coil encapsulation. Color shall be high gloss black with gloss — 60 deg of 65 to 90% per ASTM D523-89. Uniform dry film thickness from 0.8 to 1.2 mil on all surface areas including fin edges. Superior hardness characteristics of 2H per ASTM D3363-92A and cross-hatch adhesion of 4B-5B per ASTM D3359-93. Impact resistance shall be up to 160 in./lb (ASTM D2794-93). Humidity and water immersion resistance shall be up to minimum 1000 and 250 hours respectively (ASTM D2247-92 and ASTM D870-92). Corrosion durability shall be confirmed through testing to be no less than 1000 hours salt spray per ASTM B117-90. Coil construction shall be copper fins mechanically bonded to copper tubes with copper tube sheets. Galvanized steel tube sheets shall not be acceptable. A polymer strip shall prevent coil assembly from contacting sheet metal coil pan to maintain coating integrity and minimize corrosion potential between coil and pan.

### F. Heating Section:

1. Induced-draft combustion type with energy saving direct-spark ignition system and redundant main gas valve with 2-stage capability.
2. The heat exchanger shall be of the tubular-section type constructed of a minimum of 20-gage steel coated with a nominal 1.2 mil aluminum-silicone alloy for corrosion resistance.
3. Burners shall be of the in-shot type constructed of aluminum-coated steel.

4. All gas piping shall enter the unit at a single location.

5. Stainless steel heat exchanger shall be available.

### G. Refrigerant Components:

Each refrigerant circuit shall include:

1. Thermostatic expansion valve (TXV) with removable power element.
2. Filter driers.
3. Gage port and connections on suction and discharge.

### H. Filter Section:

Standard filter section shall consist of factory-installed 2-in. thick throwaway fiberglass filters.

### I. Controls and Safeties:

#### 1. Electro-Mechanical Control:

- a. Economizer control (optional).
- b. Capacity control (2-step).
- c. Unit shall be complete with self-contained low-voltage control circuit.

#### 2. Safeties:

- a. Unit shall incorporate a solid-state compressor lockout which provides optional reset capability at the space thermostat, should any of the following safety devices trip and shut off compressor:

- 1) Compressor lockout protection provided for either internal or external overload.
- 2) Low-pressure protection.
- 3) Freeze protection (evaporator coil).
- 4) High-pressure protection (high pressure switch or internal).

- b. Induced draft heating section shall be provided with the following minimum protections:

- 1) High-temperature limit switch.
- 2) Induced-draft motor speed sensor.
- 3) Flame rollout switch.
- 4) Flame proving controls.
- 5) Redundant gas valve.

### J. Operating Characteristics:

1. Unit shall be capable of starting and running at 125 F ambient outdoor temperature per maximum load criteria of ARI Standard 360.
2. Unit with standard controls will operate in cooling down to an outdoor ambient temperature of 40 F.
3. Size 18 and 20 ton units shall have 3 fully independent refrigerant circuits to allow for 33% capacity per circuit.

### K. Electrical Requirements:

All unit power wiring shall enter unit cabinet at a single location.

### L. Motors:

1. Compressor motors shall be cooled by refrigerant gas passing through motor windings and shall have line break thermal and current overload protection.
2. All fan motors shall have permanently lubricated, sealed bearings and inherent automatic-reset thermal overload protection or manual reset calibrated circuit breakers.
3. All indoor-fan motors 5 hp and larger shall meet the minimum efficiency requirements as established by the Energy Policy Act of 1992 (EPACT), effective October 24, 1997.

## GUIDE SPECIFICATIONS — 581A210-300 UNITS (cont)

### M. Special Features:

Certain features are not applicable when the features designated \* are specified. For assistance in amending the specifications, contact your local Bryant Sales Office.

#### 1. Full Perimeter Roof Curbs (Horizontal and Vertical):

- a. Formed of 14-gage galvanized steel with wood nailer strip and shall be capable of supporting entire unit weight.
- b. Permits installing and securing ductwork to curb prior to mounting unit on the curb.
- c. Retrofit roof curb kit shall be available for fit up to existing Bryant roof curbs.

#### \* 2. Integrated Economizer:

- a. Integrated integral modulating type capable of simultaneous economizer and compressor operation.
- b. Available as a factory-installed option in vertical supply/return configuration only. (Available as a field-installed accessory for dedicated horizontal and/or vertical supply return configurations.)
- c. Includes all hardware and controls to provide cooling with outdoor air.
- d. Equipped with low-leakage dampers, not to exceed 2% leakage at 1 in. wg pressure differential.
- e. Capable of introducing up to 100% outdoor air.
- f. EconoMi\$er IV shall be equipped with a barometric relief damper.
- g. Designed to close damper(s) during loss-of-power situations with spring return built into motor.
- h. Dry bulb outdoor-air temperature sensor shall be provided as standard. Outdoor air sensor set point is adjustable and shall range from 40 to 100 F. For the EconoMi\$er IV, the return air sensor, indoor enthalpy sensor, and outdoor enthalpy sensor shall be provided as field-installed accessories to provide enthalpy control, differential enthalpy control, and differential dry bulb temperature control.
- i. EconoMi\$er IV controller shall use a mixed air thermistor mounted on the evaporator fan housing to control EconoMi\$er IV operation to a supply air temperature of 55 F.
- j. The EconoMi\$er IV shall have a gear-driven parallel blade design.
- k. EconoMi\$er IV controller shall provide control of internal building pressure through its accessory power exhaust function. Factory set at 100%, with a range of 0% to 100%.
- l. EconoMi\$er IV controller Occupied Minimum Damper Position Setting maintains the minimum airflow into the building during occupied period providing design ventilation rate for full occupancy (damper position during heating). A remote potentiometer may be used to override the set point.
- m. EconoMi\$er IV controller Unoccupied Minimum Damper Position Setting — The EconoMi\$er IV dampers shall be completely closed when the unit is in the occupied mode.
- n. EconoMi\$er IV controller IAQ/DCV control modulates the outdoor-air damper to provide ventilation based on the optional 2 to 10 vdc CO<sub>2</sub> sensor input.

- o. Compressor lockout sensor (opens at 35 F, closes at 50 F).
- p. Actuator shall be direct coupled to economizer gear, eliminating linkage arms and rods.

#### q. Control LEDs:

- 1) When the outdoor air damper is capable of providing free cooling, the "Free Cool" LED shall illuminate.
- 2) The IAQ LED indicates when the module is on the DCV mode.
- 3) The EXH LED indicates when the exhaust fan contact is closed.

- r. Remote Minimum Position Control — A field-installed accessory remote potentiometer allows the outdoor air damper to be opened or closed beyond the minimum position in the occupied mode for modified ventilation.

#### \* 3. Barometric Relief Damper Package:

- a. Package shall include damper, seals, hardware, and hoods to relieve excess internal pressure.
- b. Damper shall close due to gravity upon unit shutdown.

#### \* 4. Power Exhaust:

Package shall include an exhaust (centrifugal style) fan, 1 Hp 208-230, 460 v (factory-wired for 460 v) direct-drive motor, and damper for vertical flow units with economizer to control over-pressurization of building.

#### \* 5. Thermostats and Subbases:

Units shall provide staged heating and cooling in addition to automatic (or manual) changeover and fan control.

#### \* 6. Electronic Programmable Thermostat:

Thermostat shall be capable of using deluxe full-featured electronic thermostat.

#### 7. Liquefied Propane Conversion Kit:

Kit shall contain all the necessary hardware and instructions to convert a standard natural gas unit for use with liquefied propane gas.

#### 8. Convenience Outlet:

Outlet shall be factory-installed and internally mounted with an externally accessible 115-v, 15 amp GFI, female receptacle with hinged cover. A step down transformer shall be included so no additional wiring is necessary.

#### 9. Non-Fused Disconnect Switch:

Switch shall be factory-installed, internally mounted, NEC and UL approved. Non-fused switch shall provide unit power shutoff. Shall be accessible from outside the unit and shall provide power off lockout capability.

#### 10. Hail Guard, Condenser Coil Grille:

Grille shall protect the condenser coil from hail, flying debris, and damage by large objects without increasing unit clearances.

#### 11. Horizontal Kit:

Horizontal kit shall contain all the necessary hardware to convert a vertical airflow unit to a horizontal airflow unit.

The unit shall also be available as a horizontal airflow unit directly from the factory.

## GUIDE SPECIFICATIONS — 581A210-300 UNITS (cont)

12. Return Air Smoke Detector:

The smoke detector shall send input to the controller to shut down the unit in case smoke is detected. The smoke detector shall be factory installed in the return air section or shall be available as a field-installed accessory.
13. Two-Position Damper:

The damper shall admit up to 25% outdoor air and shall close upon shutdown. The package shall include a single-blade damper and motor.
14. Manual Damper:

The damper shall have a manually adjustable outside air intake for up to 33% outside air.
15. 30% Filters:

The filters shall be 30% efficient. The filters shall be 2-in., pleated filters.
16. Standard Motor with Alternate Drive:

The alternate drive shall provide high-static drive capability to enhance evaporator fan performance.
17. Alternate Motor with Standard Drive:

The alternate motor shall provide high-static motor capability to enhance evaporator fan performance.
18. Alternate Motor with Optional Drive:

The alternate motor and optional drive shall provide high-static motor and drive capability to enhance evaporator fan performance.
19. Four-in. Filter Capability:

The unit shall be capable of accepting 4-in. filters by removal of the factory-supplied 2-in. filters and filter rack and installation of a specially designed filter bracket.
20. Supply Air Smoke Detector:

The smoke detector shall send input to the controller to shut down the unit in case smoke is detected. The smoke detector shall be factory installed in the supply air section or shall be available as a field-installed accessory.
21. Supply and Return Air Smoke Detector:

The smoke detector shall send input to the controller to shut down the unit in case smoke is detected. The smoke detector shall be factory installed in the supply and return air sections or shall be available as a field-installed accessory.
22. HACR Breaker:

The HACR circuit breaker shall be factory installed.
23. Thru-the-Curb Utility Connectors:

Kit shall provide connectors to permit gas and electrical connections to be brought to the unit through the roof curb.
24. Condensate Overflow Switch:

The condensate overflow switch shall close when the condensate level in the pan rises above switch.
25. Outdoor Air Enthalpy Sensor (EconoMi\$er IV):

The outdoor air enthalpy sensor is used to sense outdoor air enthalpy for the EconoMi\$er IV device. The outdoor air humidity sensor, in conjunction with the standard outdoor air temperature sensor, shall be used with the EconoMi\$er IV device to provide outdoor enthalpy. Outdoor air enthalpy shall be calculated by the EconoMi\$er IV device from the outdoor air temperature and enthalpy readings. When the outdoor air enthalpy sensor is installed, the EconoMi\$er IV can perform Outdoor Air Enthalpy control. With the additional installation of an accessory return air temperature sensor and return air enthalpy sensor, differential enthalpy control can also be performed.
26. Return Air Enthalpy Sensor (EconoMi\$er IV):

The return air enthalpy sensor is used to sense return air enthalpy for the EconoMi\$er IV device. The return air enthalpy sensor, in conjunction with the accessory return air temperature sensor, shall be used with the EconoMi\$er IV device to provide return air enthalpy. Return air enthalpy shall be calculated by the EconoMi\$er IV device from the return air temperature and humidity readings. With the additional installation of an accessory return air temperature sensor and outdoor air enthalpy sensor, differential enthalpy control can also be performed.
27. Return Air Temperature Sensor (EconoMi\$er IV):

The return air temperature sensor is used to sense return air temperature for the EconoMi\$er IV device. When the return air temperature sensor is installed, the EconoMi\$er IV can perform Differential Temperature control. The return air temperature sensor, in conjunction with the accessory return air humidity sensor, shall be used with the EconoMi\$er IV device to provide return air enthalpy. Return air enthalpy shall be calculated by the EconoMi\$er IV device from the return air temperature and humidity readings. With the additional installation of an accessory return air enthalpy sensor and outdoor air humidity sensor, differential enthalpy control can also be performed.
28. Indoor Air Quality (CO<sub>2</sub>) Room Sensor (EconoMi\$er IV):

Sensor shall have the ability to provide demand ventilation control through the EconoMi\$er IV. The IAQ sensor shall be wall mounted with an LED display in parts per million. The set point shall have adjustment capability.
29. Return Air CO<sub>2</sub> Sensor (EconoMi\$er IV):

Sensor shall have the ability to provide demand ventilation control through the EconoMi\$er IV. The IAQ sensor shall be duct mounted. The set point shall have adjustment capability.

## CONTROLS

### OPERATING SEQUENCE, SIZE 036-151 UNITS

**Cooling, Units Without Economizer** — When thermostat calls for cooling, terminals G and Y1 are energized. The indoor-fan contactor (IFC) and compressor contactor are energized and indoor-fan motor, compressor, and outdoor fan starts. The outdoor-fan motor runs continuously while unit is cooling.

For units with 2 stages of cooling, if the thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

**Heating, Units Without Economizer** — When the thermostat calls for heating, terminal W1 is energized. To prevent thermostat short-cycling, the unit is locked into the Heating mode for at least 1 minute when W1 is energized. The induced-draft motor is energized and the burner ignition sequence begins. The indoor (evaporator) fan motor (IFM) is energized 45 seconds after a flame is ignited. On units equipped for two stages of heat, when additional heat is needed, W2 is energized and the high-fire solenoid on the main gas valve (MGV) is energized. When the thermostat is satisfied and W1 is deenergized, the IFM stops after a 45-second time-off delay.

**Cooling, Units With EconoMi\$er IV** — When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the EconoMi\$er IV control to provide a 50 to 55 F mixed-air temperature into the zone. As the mixed-air temperature fluctuates above 55 or below 50 F, the dampers will be modulated (open or close) to bring the mixed-air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45 F, then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48 F.

If optional power exhaust is installed, as the outdoor-air damper opens and closes, the power exhaust fans will be energized and deenergized.

If field-installed accessory CO<sub>2</sub> sensors are connected to the EconoMi\$er IV control, a demand controlled ventilation strategy will begin to operate. As the CO<sub>2</sub> level in the zone increases above the CO<sub>2</sub> set point, the minimum position of the damper will be increased proportionally. As the CO<sub>2</sub> level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed.

For EconoMi\$er IV operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed when the thermostat is satisfied.

When the EconoMi\$er IV control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi\$er IV damper to the minimum position.

On the initial power to the EconoMi\$er IV control, it will take the damper up to 2 $\frac{1}{2}$  minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1 $\frac{1}{2}$  and 2 $\frac{1}{2}$  minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed-air temperature set point at 50 to 55 F.

If there is a further demand for cooling (cooling second stage — Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed-air temperature set point. The EconoMi\$er IV damper will be open at maximum position. EconoMi\$er IV operation is limited to a single compressor.

### Heating, Units With Economizer

**NOTE:** The units have 2 stages of heat.

When the thermostat calls for heating, power is sent to W1 on the IGC (integrated gas unit controller) board. An LED (light-emitting diode) on the IGC board will be on during normal operation. A check is made to ensure that the rollout switch and limit switch are closed and the induced-draft motor is running. The induced-draft motor is then energized, and when speed is proven with the hall effect sensor on the motor, the ignition activation period begins. The burners will ignite within 5 seconds.

If the burners do not light, there is a 22-second delay before another 5-second attempt. If the burners still do not light, this sequence is repeated for 15 minutes. After the 15 minutes have elapsed, if the burners still have not lit, heating is locked out. To reset the control, break 24-v power to the thermostat.

When ignition occurs the IGC board will continue to monitor the condition of the rollout and limit switches, the hall effect sensor, as well as the flame sensor. If the unit is controlled through a room thermostat set for fan auto., 45 seconds after ignition occurs, the indoor-fan motor will be energized (and the outdoor-air dampers will open to their minimum position). If for some reason the overtemperature limit opens prior to the start of the indoor fan blower, on the next attempt, the 45-second delay will be shortened to 5 seconds less than the time from initiation of heat to when the limit tripped. Gas will not be interrupted to the burners and heating will continue. Once modified, the fan on delay will not change back to 45 seconds unless power is reset to the control.

When additional heat is required, W2 closes and initiates power to the second stage of the main gas valve. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the call for W1 lasted less than 1 minute, the heating cycle will not terminate until 1 minute after W1 became active. If the unit is controlled through a room thermostat set for fan auto., the indoor-fan motor will continue to operate for an additional 45 seconds then stop (and the outdoor-air dampers will close). If the overtemperature limit opens after the indoor motor is stopped within 10 minutes of W1 becoming inactive, on the next cycle the time will be extended by 15 seconds. The maximum delay is 3 minutes. Once modified, the fan off delay will not change back to 45 seconds unless power is reset to the control.

When the thermostat is satisfied and W1 and W2 are deenergized, the IFM continues to run and the economizer damper then moves to the minimum position.

### OPERATING SEQUENCE, 580F180-300, 579F150-300 AND 581A155,180

**Cooling, Units Without Economizer** — When thermostat calls for cooling, terminals G and Y1 are energized. The indoor (evaporator) fan contactor (IFC) and compressor contactor no. 1 (C1) are energized, and evaporator-fan motor (IFM), compressor no. 1 and condenser fan(s) start. The condenser-fan motor(s) runs continuously while unit is cooling. When the thermostat calls for a second stage of cooling by energizing Y2, compressor contactor no. 2 (C2) is energized and compressor no. 2 starts.

## CONTROLS (cont)

**Heating, Units Without Economizer** — When the thermostat calls for heating, power is sent to W on the IGC (integrated gas unit controller) board. An LED (light-emitting diode) on the IGC board will be on during normal operation. A check is made to ensure that the rollout switch and limit switch are closed. The induced-draft motor is then energized, and when speed is proven with the hall effect sensor on the motor, the ignition activation period begins. The burners will ignite within 5 seconds.

If the burners do not light, there is a 22-second delay before another 5-second attempt. If the burners still do not light, this sequence is repeated for 15 minutes. After the 15 minutes have elapsed, if the burners still have not lit, heating is locked out. To reset the control, break 24-v power to the thermostat.

When ignition occurs the IGC board will continue to monitor the condition of the rollout and limit switches, the hall effect sensor, as well as the flame sensor. If the unit is controlled through a room thermostat set for fan auto., 45 seconds after ignition occurs, the indoor-fan motor will be energized. If for some reason the overtemperature limit opens prior to the start of the indoor fan blower, on the next attempt, the 45-second delay will be shortened to 5 seconds less than the time from initiation of heat to when the limit tripped. Gas will not be interrupted to the burners and heating will continue. Once modified, the fan on delay will not change back to 45 seconds unless power is reset to the control.

When additional heat is required, W2 closes and initiates power to the second stage of the main gas valve. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the call for W1 lasted less than 1 minute, the heating cycle will not terminate until 1 minute after W1 became active. If the unit is controlled through a room thermostat set for fan auto., the indoor-fan motor will continue to operate for an additional 45 seconds then stop. If the overtemperature limit opens after the indoor motor is stopped within 10 minutes of W1 becoming inactive, on the next cycle the time will be extended by 15 seconds. The maximum delay is 3 minutes. Once modified, the fan off delay will not change back to 45 seconds unless power is reset to the control.

An LED indicator is provided on the IGC to monitor operation. The IGC is located by removing the side panel and viewing the IGC through the view port located in the control box access panel. During normal operation, the LED is continuously on.

**Cooling, Units With EconoMi\$er IV** — When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the EconoMi\$er IV control to provide a 50 to 55 F mixed-air temperature into the zone. As the mixed-air temperature fluctuates above 55 or below 50 F, the dampers will be modulated (open or close) to bring the mixed-air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45 F, then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48 F.

If optional power exhaust is installed, as the outdoor-air damper opens and closes, the power exhaust fans will be energized and deenergized.

If field-installed accessory CO<sub>2</sub> sensors are connected to the EconoMi\$er IV control, a demand controlled ventilation strategy will begin to operate. As the CO<sub>2</sub> level in the zone increases above the CO<sub>2</sub> set point, the minimum position of the damper will be increased proportionally. As the CO<sub>2</sub> level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed.

For EconoMi\$er IV operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

When the EconoMi\$er IV control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi\$er IV damper to the minimum position.

On the initial power to the EconoMi\$er IV control, it will take the damper up to 2½ minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1½ and 2½ minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed-air temperature set point at 50 to 55 F.

If there is a further demand for cooling (cooling second stage — Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed-air temperature set point. The EconoMi\$er IV damper will be open at maximum position. EconoMi\$er IV operation is limited to a single compressor.

### Heating, Units With Economizer

**NOTE:** The units have 2 stages of heat.

When the thermostat calls for heating, power is sent to W1 on the IGC (integrated gas unit controller) board. An LED (light-emitting diode) on the IGC board will be on during normal operation. A check is made to ensure that the rollout switch and limit switch are closed and the induced-draft motor is running. The induced-draft motor is then energized, and when speed is proven with the hall effect sensor on the motor, the ignition activation period begins. The burners will ignite within 5 seconds.

If the burners do not light, there is a 22-second delay before another 5-second attempt. If the burners still do not light, this sequence is repeated for 15 minutes. After the 15 minutes have elapsed, if the burners still have not lit, heating is locked out. To reset the control, break 24-v power to the thermostat.

When ignition occurs the IGC board will continue to monitor the condition of the rollout and limit switches, the hall effect sensor, as well as the flame sensor. If the unit is controlled through a room thermostat set for fan auto., 45 seconds after ignition occurs, the indoor-fan motor will be energized (and the outdoor-air dampers will open to their minimum position). If for some reason the overtemperature limit opens prior to the start of the indoor fan blower, on the next attempt, the 45-second delay will be shortened to 5 seconds less than the time from initiation of heat to when the limit tripped. Gas will not be interrupted to the burners and heating will continue. Once modified, the fan on delay will not change back to 45 seconds unless power is reset to the control.

When additional heat is required, W2 closes and initiates power to the second stage of the main gas valve. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the call for W1 lasted less than 1 minute, the heating cycle will not terminate until 1 minute after W1 became active. If the unit is controlled through a room thermostat set for fan auto., the indoor-fan motor will continue to operate for an additional 45 seconds then stop (and the outdoor-air dampers will close). If the overtemperature limit opens after the indoor motor is stopped within 10 minutes of W1 becoming inactive, on the next cycle the time will be extended by 15 seconds. The maximum delay is 3 minutes. Once modified, the fan off delay will not change back to 45 seconds unless power is reset to the control.

## CONTROLS (cont)

When the thermostat is satisfied and W1 and W2 are deenergized, the IFM continues to run and the economizer damper then moves to the minimum position.

**Units With Hot Gas Bypass Dehumidification Package —** When thermostat calls for cooling, terminals G and Y1 and Y2 and the compressor contactors C1 and C2 are energized. The indoor (evaporator) fan motor (IFM), compressor, and outdoor (condenser) fan motor (OFM) start. The OFM runs continuously while the unit is in cooling. As shipped from the factory, hot gas bypass dehumidification circuit is always energized. If hot gas bypass circuit modulation is desired, a field-installed, wall-mounted humidistat is required.

If the hot gas bypass humidistat is installed and calls for the hot gas bypass subcooler coil to operate, the humidistat internal switch closes. This energizes and closes the liquid line solenoid valve coil (LLSV) of the hot gas bypass circuit, forcing the hot liquid refrigerant of the liquid line to enter the subcooler coil. As the hot liquid passes through the subcooler coil, it is exposed to the cold supply airflow coming off from the evaporator coil and the liquid is further cooled to a temperature approaching the evaporator coil leaving-air temperature. The state of the refrigerant leaving the subcooler coil is a highly subcooled liquid refrigerant. The liquid then enters a thermostatic expansion valve (TXV) where the liquid is dropped to a lower pressure. The TXV does not have a pressure drop great enough to change the liquid to a 2-phase fluid. The TXV can throttle the pressure drop of the liquid refrigerant and maintain proper conditions at the compressor suction valve over a wide range of operating conditions. The liquid then enters a second fixed restrictor expansion device for a second pressure drop to a 2-phase fluid. The liquid proceeds to the evaporator coil at a temperature lower than normal cooling operation. This lower temperature is what increases the latent capacity of the rooftop. The 2-phase refrigerant passes through the evaporator and is changed into a vapor. The air passing over the evaporator coil will become colder than during normal operation as a result of the colder refrigerant temperatures. However, as it passes over the subcooler coil, the air will be warmed slightly.

As the refrigerant leaves the evaporator, the refrigerant passes a low-pressure switch in the suction line. This low-pressure switch will de-activate the hot gas bypass package when the suction pressure reaches 60 psig. The low-pressure switch is an added safety device to protect against evaporator coil freeze-up. The low-pressure switch will only de-activate and open the liquid line solenoid valve in the hot gas bypass circuit. The compressors will continue to run as long as there is a call for cooling, regardless of the position of the low-pressure switch. The solenoid valve and the hot gas bypass package will be re-activated only when the call for cooling has been satisfied, the low-pressure switch has closed, and a new call for cooling exists. The crankcase heaters on the scroll compressor provide additional protection for the compressor due to the additional refrigerant charge in the subcooler.

When the humidistat is satisfied, the humidistat internal switch opens cutting power to and opening the LLSV. The refrigerant is routed back through the evaporator and the subcooler coil is removed from the refrigerant loop.

When the thermostat is satisfied, C1 and C2 are deenergized and the compressor and OFM shut off. After a 30-second delay, the IFM shuts off. If the thermostat fan selector switch is in the ON position, the IFM will run continuously.

### OPERATING SEQUENCE, 581A210-300

**Cooling, Units Without Economizer —** When thermostat calls for cooling, terminals G and Y1 are energized. The indoor-fan contactor (IFC) and compressor contactors A1 and B1 (except 300 units) are energized and indoor-fan motor, compressor, and outdoor fan starts. The outdoor fan motor runs continuously while unit is cooling. If further cooling is required, the Y2 output

from the thermostat energizes compressor contactor C1 (B1 on 300 units).

### Heating, Units Without Economizer

**NOTE:** The 581A210-300 units have 2 stages of heat.

When the thermostat calls for heating, power is sent to W on the IGC (integrated gas unit controller) board. An LED (light-emitting diode) on the IGC board will be on during normal operation. A check is made to ensure that the rollout switch and limit switch are closed and the induced-draft motor is running. The induced-draft motor is then energized, and when speed is proven with the hall effect sensor on the motor, the ignition activation period begins. The burners will ignite within 5 seconds.

If the burners do not light, there is a 22-second delay before another 5-second attempt. If the burners still do not light, this sequence is repeated for 15 minutes. After the 15 minutes have elapsed, if the burners still have not lit, heating is locked out. To reset the control, break 24-v power to the thermostat. When ignition occurs the IGC board will continue to monitor the condition of the rollout and limit switches, the hall effect sensor, as well as the flame sensor. If the unit is controlled through a room thermostat set for fan auto., 45 seconds after ignition occurs, the indoor-fan motor will be energized (and the outdoor-air dampers will open to their minimum position). If for some reason the overtemperature limit opens prior to the start of the indoor fan blower, on the next attempt, the 45-second delay will be shortened to 5 seconds less than the time from initiation of heat to when the limit tripped. Gas will not be interrupted to the burners and heating will continue.

Once modified, the fan on delay will not change back to 45 seconds unless power is reset to the control.

When additional heat is required, W2 closes and initiates power to the second stage of the main gas valve. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the call for W1 lasted less than 1 minute, the heating cycle will not terminate until 1 minute after W1 became active. If the unit is controlled through a room thermostat set for fan auto., the indoor-fan motor will continue to operate for an additional 45 seconds then stop (and the outdoor-air dampers will close).

If the overtemperature limit opens after the indoor motor is stopped within 10 minutes of W1 becoming inactive, on the next cycle the time will be extended by 15 seconds. The maximum delay is 3 minutes. Once modified, the fan off delay will not change back to 45 seconds unless power is reset to the control.

A LED indicator is provided on the IGC to monitor operation. The IGC is located by removing the side panel and viewing the IGC through the view port located in the control box access panel. During normal operation, the LED is continuously on.

**Cooling, Units With EconoMi\$er IV —** When free cooling is not available, the compressors will be controlled by the zone thermostat. When free cooling is available, the outdoor-air damper is modulated by the EconoMi\$er IV control to provide a 50 to 55 F mixed-air temperature into the zone. As the mixed-air temperature fluctuates above 55 or below 50 F, the dampers will be modulated (open or close) to bring the mixed-air temperature back within control.

If mechanical cooling is utilized with free cooling, the outdoor-air damper will maintain its current position at the time the compressor is started. If the increase in cooling capacity causes the mixed-air temperature to drop below 45 F, then the outdoor-air damper position will be decreased to the minimum position. If the mixed-air temperature continues to fall, the outdoor-air damper will close. Control returns to normal once the mixed-air temperature rises above 48 F.

If optional power exhaust is installed, as the outdoor-air damper opens and closes, the power exhaust fans will be energized and deenergized.

## CONTROLS (cont)

If field-installed accessory CO<sub>2</sub> sensors are connected to the EconoMi\$er IV control, a demand controlled ventilation strategy will begin to operate. As the CO<sub>2</sub> level in the zone increases above the CO<sub>2</sub> set point, the minimum position of the damper will be increased proportionally. As the CO<sub>2</sub> level decreases because of the increase in fresh air, the outdoor-air damper will be proportionally closed.

For EconoMi\$er IV operation, there must be a thermostat call for the fan (G). If the unit is occupied and the fan is on, the damper will operate at minimum position. Otherwise, the damper will be closed.

When the EconoMi\$er IV control is in the occupied mode and a call for cooling exists (Y1 on the thermostat), the control will first check for indoor fan operation. If the fan is not on, then cooling will not be activated. If the fan is on, then the control will open the EconoMi\$er IV damper to the minimum position.

On the initial power to the EconoMi\$er IV control, it will take the damper up to 2<sup>1</sup>/<sub>2</sub> minutes before it begins to position itself. Any change in damper position will take up to 30 seconds to initiate. Damper movement from full closed to full open (or vice versa) will take between 1<sup>1</sup>/<sub>2</sub> and 2<sup>1</sup>/<sub>2</sub> minutes.

If free cooling can be used as determined from the appropriate changeover command (switch, dry bulb, enthalpy curve, differential dry bulb, or differential enthalpy), then the control will modulate the dampers open to maintain the mixed-air temperature set point at 50 to 55 F.

If there is a further demand for cooling (cooling second stage — Y2 is energized), then the control will bring on compressor stage 1 to maintain the mixed-air temperature set point. The EconoMi\$er IV damper will be open at maximum position. EconoMi\$er IV operation is limited to a single compressor.

### Heating, Units With Economizer

**NOTE:** The units have 2 stages of heat.

When the thermostat calls for heating, power is sent to W1 on the IGC (integrated gas unit controller) board. An LED (light-emitting diode) on the IGC board will be on during normal operation. A check is made to ensure that the rollout switch and limit switch are closed and the induced-draft motor is running. The

induced-draft motor is then energized, and when speed is proven with the hall effect sensor on the motor, the ignition activation period begins. The burners will ignite within 5 seconds.

If the burners do not light, there is a 22-second delay before another 5-second attempt. If the burners still do not light, this sequence is repeated for 15 minutes. After the 15 minutes have elapsed, if the burners still have not lit, heating is locked out. To reset the control, break 24-v power to the thermostat.

When ignition occurs the IGC board will continue to monitor the condition of the rollout and limit switches, the hall effect sensor, as well as the flame sensor. If the unit is controlled through a room thermostat set for fan auto., 45 seconds after ignition occurs, the indoor-fan motor will be energized (and the outdoor-air dampers will open to their minimum position). If for some reason the overtemperature limit opens prior to the start of the indoor fan blower, on the next attempt, the 45-second delay will be shortened to 5 seconds less than the time from initiation of heat to when the limit tripped. Gas will not be interrupted to the burners and heating will continue. Once modified, the fan on delay will not change back to 45 seconds unless power is reset to the control.

When additional heat is required, W2 closes and initiates power to the second stage of the main gas valve. When the thermostat is satisfied, W1 and W2 open and the gas valve closes, interrupting the flow of gas to the main burners. If the call for W1 lasted less than 1 minute, the heating cycle will not terminate until 1 minute after W1 became active. If the unit is controlled through a room thermostat set for fan auto., the indoor-fan motor will continue to operate for an additional 45 seconds then stop (and the outdoor-air dampers will close). If the overtemperature limit opens after the indoor motor is stopped within 10 minutes of W1 becoming inactive, on the next cycle the time will be extended by 15 seconds. The maximum delay is 3 minutes. Once modified, the fan off delay will not change back to 45 seconds unless power is reset to the control.

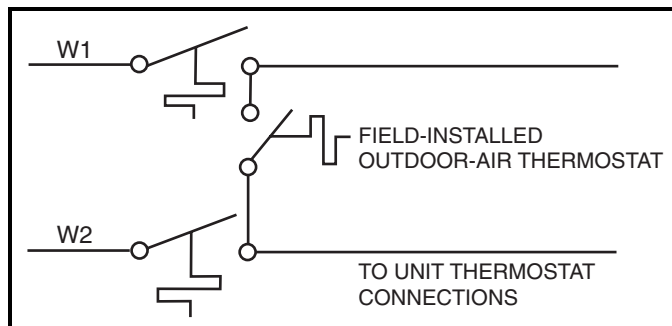
When the thermostat is satisfied and W1 and W2 are deenergized, the IFM continues to run and the economizer damper then moves to the minimum position.

## APPLICATION DATA

1. **CONDENSATE DRAIN PAN** — A sloped condensate drain pan is supplied on all units. The condensate pan must be externally trapped. Condensate drains are located on both the bottom and end of the unit.
2. **DUCTWORK** — All ductwork must be attached to flanges. If no flanges are present, they must be field supplied. Secure vertical discharge ductwork to roof curb. For horizontal discharge applications, attach ductwork to flanges. Field-supplied flanges can be attached to horizontal discharge openings and all ductwork attached to flanges.
3. **THERMOSTAT** — Use of 2-stage cooling thermostat is recommended for all units equipped with economizer. A 2-stage cooling thermostat is required for size 090-300 units with integrated economizer.
4. **HEATING-TO-COOLING CHANGEOVER** — All units are automatic changeover from heating to cooling when automatic changeover thermostat and subbase are used.
5. **AIRFLOW** — Units are draw-thru on cooling and blow-thru on heating.
6. **MAXIMUM AIRFLOW** — To minimize possibility of condensate blow-off from evaporator, airflow through units should not exceed 500 cfm/ton (sizes 036-240) and 11,250 cfm (size 300).
7. **MINIMUM AIRFLOW** — Minimum airflow for cooling is 300 cfm/ton (sizes 036-240) and 280 cfm/ton (300 units). Refer to Heating Capacities and Efficiencies table for minimum heating airflow.
8. **MINIMUM AMBIENT OPERATING TEMPERATURE** — Minimum ambient operating temperature for size 036-150 standard units is 25 F. With accessory Motormaster® I, II, or IV units can operate at outdoor temperatures down to -20 F. Unit sizes 155-300 are designed to operate at outdoor temperatures down to 40 F. With accessory Motormaster I or Motormaster V control, units can operate at outdoor temperatures down to -20 F.  
**NOTE:** Under most application circumstances, if the rooftop unit is equipped with an economizer, low ambient controls are not required. Unless the outdoor air is unsatisfactory for free cooling due to high temperature, excessive humidity, or poor air quality, outdoor air should be used.
9. **MAXIMUM OPERATING OUTDOOR-AIR TEMPERATURE** — Maximum outdoor operating temperature for cooling is shown below (60 Hz):
 

|                            |       |
|----------------------------|-------|
| 580F/581B036-091, 120, 121 | 115 F |
| 580F/581B103, 150, 151     | 125 F |
| 579F/580F180-240           | 120 F |
| 579F/580F300               | 125 F |
| 581A036-155                | 125 F |
| 581A180                    | 120 F |
| 581A210                    | 125 F |
| 581A240                    | 125 F |
| 581A300                    | 125 F |
10. **HIGH ALTITUDES** — These may require a change to the gas orifice. Refer to Altitude Compensation tables.
11. **MINIMUM HEATING ENTERING AIR TEMPERATURE** — The minimum temperature of air entering the dimpled heat exchanger is 50 F continuous and 45 F intermittent for aluminum heat exchangers and 40 F continuous and 35 F intermittent for stainless steel heat exchangers. To operate at lower mixed-air temperatures, a field-supplied outdoor-air thermostat must be used to initiate both stages of heat when the temperature is below the minimum required temperature to ensure full fire operation. Wire the outdoor-air thermostat (part no. HH22AG106) in series with the second stage gas valve as shown below. Set the outdoor-air thermostat at 35 F for stainless steel heat exchangers or

45 F for aluminum heat exchangers. This temperature setting will bring on the second stage of heat whenever the ambient temperature is below the thermostat set point. Indoor comfort may be compromised when heating is initiated using low entering air temperatures with insufficient heating temperature rise.

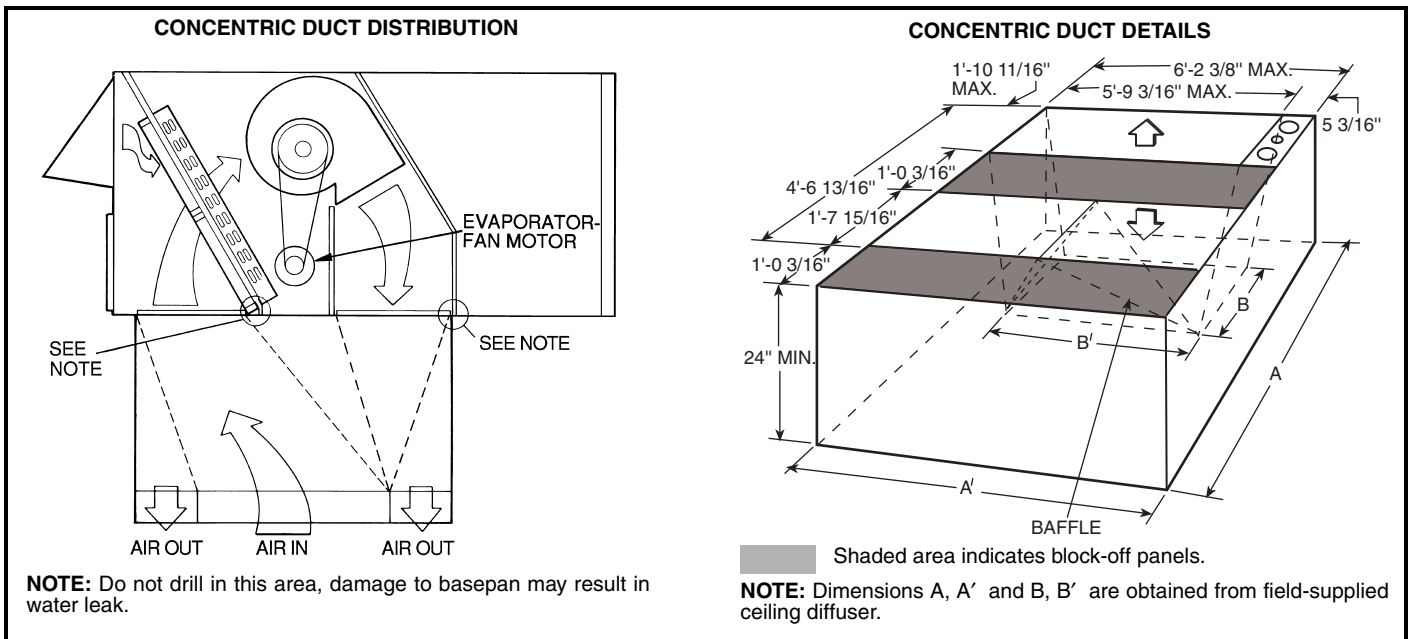


**Wiring of Outdoor-Air Thermostat**

12. **MOTOR DATA** — Due to Bryant's internal unit design (draw-thru over the motor), air path, and specially designed motors, the full horsepower (maximum continuous bhp) listed in the Physical Data tables and the notes following each Fan Performance table can be utilized with extreme confidence.  
Using Bryant motors to the values listed in the Physical Data, Fan Performance, and Evaporator-Fan Motor Data tables *will not* result in nuisance tripping or premature motor failure. In addition, the unit warranty will not be affected.
13. **THRU-THE-BOTTOM CONNECTIONS** — The accessory thru-the-bottom connections are needed to ensure proper connections when routing wiring and piping through the basepan and roof curb. This accessory is used for electric and control power only or electric, control power, and gas piping depending on which accessory is selected.
14. **FIELD-SUPPLIED FAN DRIVES** — If the factory drive sets must be changed to obtain other wheel speeds, consult the nearest Browning Manufacturing Co. sales office with the required new wheel speed and the data from Physical Data tables (center distances, motor and fan shaft diameters, motor horsepower) for a modified drive set selection. For minor speed changes, the fan sheave size should be changed. (Do not reduce the size of the motor sheave; this will result in reduced belt horse-power ratings and reduced belt life.) All indoor fan pulleys are adjustable. See physical data tables for rpm adjustment ranges.
15. **CONDENSER COIL PROTECTION**
  - a. **PRE-COATED ALUMINUM FIN COILS** have a durable epoxy-phenolic coating applied to the fin prior to the fin stamping process to provide protection in mildly corrosive coastal environments. Pre-coated coils have an inert barrier between the aluminum fin and copper tube. This barrier electrically disconnects the dissimilar metals to minimize the potential for galvanic corrosion. This economical option provides substantial corrosion protection beyond the standard uncoated coil construction.
  - b. **COPPER-FIN COILS** provide increased corrosion resistance in moderate coastal environments where industrial air pollution is not present. All copper coils eliminate bi-metallic construction to eliminate the potential for galvanic corrosion. Application in industrial environments is not recommended due to potential attack from sulfur, sulfur oxide, nitrogen oxides, carbon and several other industrial airborne contaminants. In moderate seacoast environments, copper-fin coils have extended life compared to standard or pre-coated aluminum-fin coils.



## APPLICATION DATA (cont)



### Concentric Duct Details

- c. **E-COATED ALUMINUM FIN** coils undergo a precisely controlled scientific process that bonds an impermeable epoxy coating to the specially prepared fin coil surface. E-Coating produces a smooth, consistent coating that is less brittle, more resilient and more durable than previous postcoating processes. E-Coated aluminum-fin coils offer economical protection and improved coil life in many contaminated environments.
- d. **E-COATED COPPER-FIN COILS** provide maximum protection in virtually all environments, this option combines the continuous, impenetrable barrier of the E-Coating process with the natural resistance of an all-copper construction. E-Coated copper-fin coil assemblies ensure long life, even in environments that combine harsh coastal conditions with industrial contamination.
16. **ECONOMISER IV** — The EconoMi\$er IV factory-installed economizer package includes a gear-driven damper system that modulates the return air and outdoor air supply to the rooftop unit in order to take advantage of “free cooling” with outdoor air when conditions are suitable. The system utilizes industry proven technology available for integrating the use of outdoor air for cooling with mechanical cooling for 3 through 25-ton rooftop units. The intuitive EconoMi\$er IV microprocessor-based controller optimizes

and enhances rooftop operation through reduced energy consumption, optimal zone comfort, and efficient equipment cycling. This is accomplished by operating the compressors when the outdoor air temperature is too warm, integrating the compressors with outdoor air when free cooling is available, and locking out the compressor when outdoor air temperature is too cold. The detailed sequence of operation is described in the Controls section with a brief description of selected application items here.

- a. **THERMOSTAT INTERFACE** — The EconoMi\$er IV control was designed to work with conventional thermostats that have Y1 (cooling stage 1), Y2 (cooling stage 2), W1 (heat stage 1), W2 (heat stage 2), and G (fan). In addition, the EconoMi\$er IV will support an occupied/unoccupied switch (typically integrated into the thermostat or Thermidistat™ device). When the switch is closed, it provides a 24-vac signal to the unit for occupied mode, and provides no signal to indicate unoccupied mode. The EconoMi\$er IV control can be configured to allow different minimum economizer damper positions and to allow the use of mechanical cooling in the occupied mode.

### CONDENSER COIL PROTECTION APPLICATIONS

| DESCRIPTION<br>(Dura-Shield Option) | ENVIRONMENT             |              |                |            |                                 |
|-------------------------------------|-------------------------|--------------|----------------|------------|---------------------------------|
|                                     | Standard, Non-Corrosive | Mild Coastal | Severe Coastal | Industrial | Combined Coastal and Industrial |
| Standard, Al/Cu                     | X                       |              |                |            |                                 |
| Pre-Coated Al/Cu                    |                         | X            |                |            |                                 |
| Cu/Cu                               |                         | X            |                |            |                                 |
| E-Coated Al/Cu                      |                         |              |                | X          | X                               |
| E-Coated Cu/Cu                      |                         |              | X              |            |                                 |

#### LEGEND

Al/Cu — Aluminum Fin with Copper Tube Coil  
 Cu/Cu — Copper Fin with Copper Tube Coil  
 Dura-Shield — Family of Coil Protection Options

E-Coated — Extremely Flexible and Durable Epoxy Coating Uniformly Applied to the Coil Surfaces  
 Pre-Coated — Epoxy Coating Applied to Fin Stock Material

## APPLICATION DATA (cont)

- b. **CONTROL FEATURES** — The EconoMi\$er IV controller provides superior functionality for rooftop unit operation. EconoMi\$er IV control features are included as follows:

Remote Minimum Position — The EconoMi\$er IV controller can be used with a field-supplied and field-installed remote minimum position control switch that will enable and disable the EconoMi\$er IV to open or close the damper beyond the minimum position for modified ventilation, providing 2 to 10 vdc output.

**NOTE:** Minimum position signal takes priority over the DCV (demand control ventilation) maximum position signal.

Demand Control Ventilation (DCV) — The EconoMi\$er IV has DCV capability when using an IAQ sensor. This sensor is typically installed in the return duct or occupied space. When implementing a DCV control scheme with the EconoMi\$er IV, the control algorithm will modulate the position of the damper between two user-configured damper positions, Maximum DCV Position and Minimum Occupied position. Design airflow rates for these two damper positions should be such that when the damper is at the Maximum DCV position, enough fresh ventilation air will be brought in to remove contaminants and CO<sub>2</sub> generated by sources other than people (i.e., since in unoccupied mode). The Maximum DCV position is intended to satisfy the IAQ “Base Ventilation Rate.” The Minimum Occupied position design airflow rate should be sufficient to satisfy ventilation requirements for removing CO<sub>2</sub> from all sources including people at the maximum occupancy.

IAQ Sensors — EconoMi\$er IV can be utilized with any IAQ (CO<sub>2</sub>) sensor that provides a 2 to 10 vdc output. The controller will modulate the outdoor air damper to provide ventilation based on the sensor output and the IAQ setting of the controller. When used, an IAQ sensor will modulate the damper from the minimum position (base ventilation rate based on CO<sub>2</sub> levels) to maximum position (full occupancy ventilation rate).

Damper Operation — The EconoMi\$er IV allows the damper to be configured for two adjustable damper positions including maximum position and occupied minimum positions. The two (2) position damper capability is a unique feature of EconoMi\$er IV and includes operational flexibility as follows:

1. Minimum Occupied Position: This adjustable position allows a minimum ventilation (base ventilation rate) airflow rate through the unit during occupied periods.
2. Demand Control Ventilation (DCV) Maximum Position: A DCV maximum occupied position is provided when using an IAQ sensor for DCV. See DCV and Control sections for sequence. The DCV Maximum Position limits outdoor airflow into the rooftop when the DCV routine overrides the mixed air sensor. Setting the DCV Maximum Position of the outdoor air damper prevents large amounts of hot or cold air into the space.

**IMPORTANT:** When the DCV Maximum Position is set below the minimum position, the minimum position overrides the maximum position, negating most DCV functions.

Power Exhaust — The EconoMi\$er IV has the capability to control one stage of power exhaust for maintaining air balance and pressurization. Control is activated based on outdoor air damper position (adjustable); factory-set at the “middle” position (dampers halfway open).

Compressor Staging — The EconoMi\$er IV is an integrated economizer and has the ability to utilize simultaneous outdoor air and compressors. The EconoMi\$er IV can be configured to support economizer and compressor operation. Only one or two compressor operation is available with 3 to 12½ ton units.

- c. **CHANGEOVER STRATEGIES** — The EconoMi\$er IV controller can be configured to accommodate all available economizer control strategies that place the rooftop unit in economizer mode including:

Remote Minimum Position — Used when a remote signal from a remote minimum position control will enable and disable the EconoMi\$er IV (remote enable control).

Outdoor Dry Bulb — EconoMi\$er IV will be enabled based on the outdoor-air temperature. This is provided standard with the EconoMi\$er IV.

Differential Dry Bulb — EconoMi\$er IV will be enabled whenever the outdoor-air temperature is lower than the return-air temperature.

Outside Air Enthalpy — EconoMi\$er IV will be enabled based on the outside air enthalpy curves as shown in the EconoMi\$er IV Changeover diagram below. The A, B, C, and D curves shown have been in use for many years and have been included as part of the latest ASHRAE 90.1 energy efficiency code. The curves are designed to take into consideration both outdoor temperature and humidity. These curves are used to set up the EconoMi\$er IV controller to use the EconoMi\$er IV for free cooling when the conditions to the left of the curve exist. When the conditions are to the right of the curve, then outdoor air cooling will not be used and the outdoor air damper position will be set at the minimum position.

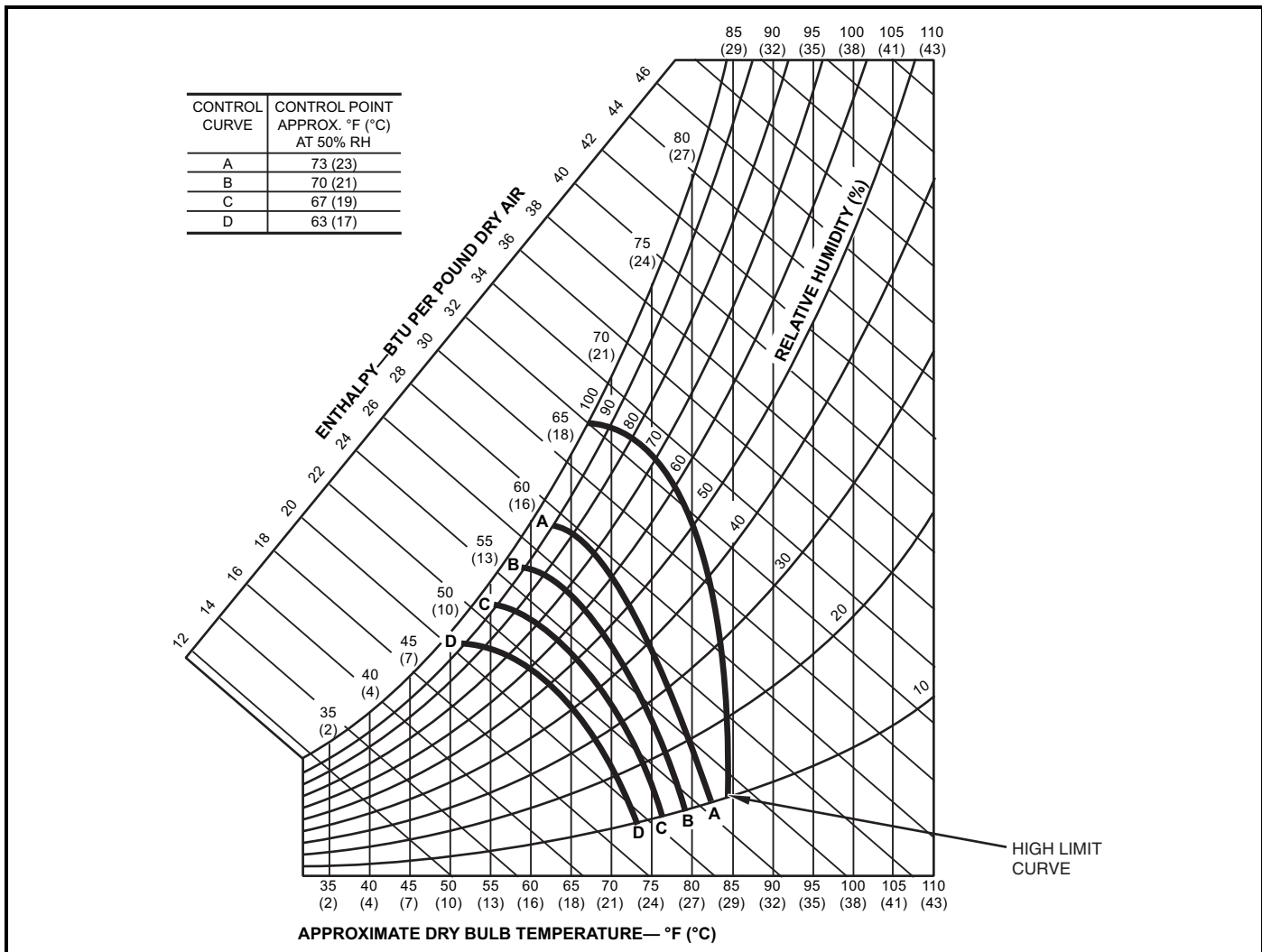
Deciding which curve is used is a function of the outdoor climate and the type of economizer utilized. Since EconoMi\$er IV is a fully integrated economizer, the range where outdoor air can be utilized for free cooling is expanded and the A and B curves may be used. The control point table in the EconoMi\$er IV Changeover diagram below provides assistance for whether the A and B curves will be suitable. In general terms, a hot and humid climate may be a reason not to use the A curve, while a cooler climate might be more applicable for using the A or B curve.

The EconoMi\$er IV has expanded outdoor air capability. For a changeover economizer which cannot utilize simultaneous economizer and compression, both A and B curves would potentially be undesirable since the temperature and humidity levels are too high without compression assistance to provide effective cooling. Therefore, most changeover economizers utilize the D curve.

Differential Enthalpy — The EconoMi\$er IV will be enabled based on the comparison of the enthalpy of the return air and outside air. When the outside air enthalpy is lower than the return side, the unit will be in economizer mode.

Using the EconoMi\$er IV controller for implementing different control changeover strategies requires the use of different combinations of dry bulb and humidity sensors as outlined in the EconoMi\$er IV Sensor Usage table.

## APPLICATION DATA (cont)



**Economizer Changeover Curves**

## ECONOMIZER IV SENSOR USAGE CHART

| APPLICATION                                                                 | ECONOMIZER IV WITH OUTDOOR AIR DRY BULB SENSOR              | ECONOMIZER IV WITH SINGLE ENTHALPY SENSOR              |
|-----------------------------------------------------------------------------|-------------------------------------------------------------|--------------------------------------------------------|
|                                                                             | Accessories Required                                        | Accessories Required                                   |
| Outdoor Air Dry Bulb                                                        | None. The outdoor air dry bulb sensor is factory installed. | CRTEMPSN002A00*                                        |
| Differential Dry Bulb                                                       | CRTEMPSN002A00*                                             | (2) CRTEMPSN002A00*                                    |
| Single Enthalpy                                                             | HH57AC078                                                   | None. The single enthalpy sensor is factory installed. |
| Differential Enthalpy                                                       | HH57AC078 and CRENTDIF004A00*                               | CRENTDIF004A00*                                        |
| CO <sub>2</sub> for DCV Control using a Wall-Mounted CO <sub>2</sub> Sensor | CGCDXSEN004A00                                              |                                                        |
| CO <sub>2</sub> for DCV Control using a Duct-Mounted CO <sub>2</sub> Sensor | CGCDXSEN004A00† and CGCDXASP001A00**                        |                                                        |

\*CRENTDIF004A00 and CRTEMPSN002A00 accessories are used on many different base units. As such, these kits may contain parts that will not be needed for installation.

†CGCDXSEN004A00 is an accessory CO<sub>2</sub> sensor.

\*\*CGCDXASP001A00 is an accessory aspirator box required for duct-mounted applications.

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SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE  
UNIT MUST BE INSTALLED IN ACCORDANCE  
WITH INSTALLATION INSTRUCTIONS