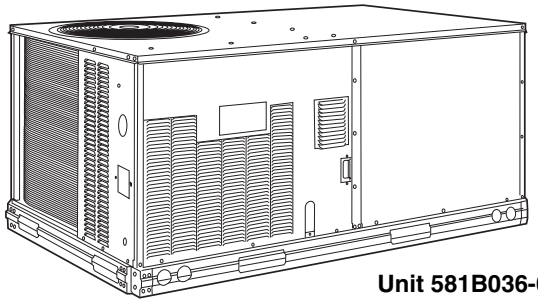
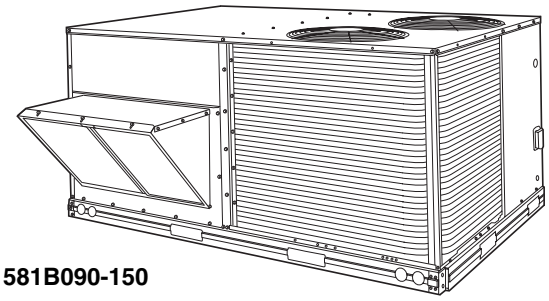
COMMERCIAL SINGLE PACKAGE ROOFTOP GAS HEAT/ELECTRIC COOLING UNITS

Model 581B
Dura*Pac* Plus Series
Sizes 036-150
3 to 12½ Tons

Perfect Humidity™



Unit 581B036-072



Unit 581B090-150

Bryant has designed the DuraPac Plus series based on customer needs and requests to be the most efficient and reliable ever.

FEATURES/BENEFITS

- Efficient rooftop line for cooling using scroll compressor technology
- Efficient rooftop line for heating using dimpled heat exchangers
- High reliability — non-corrosive condensate pans, prepainted cabinets and primed interior panels, and all units are fully protected by internal safeties
- Quiet operation — isolated compressor plate. All compressors mounted on independent vibration isolators. Standard, belt-driven evaporator fan motors on all units
- Ease of maintenance achieved by self diagnostics on the Integrated Gas Controller (IGC), standard size filters, no tool filter access, simple compressor access, permanently lubricated fan motors, optional disconnect switch, optional hinged access panels, and optional 115-v convenience outlet
- Performance and comfort enhancing options — High-static motors and Perfect Humidity™ dehumidification package.

BRYANT MEANS TOP QUALITY AND RELIABILITY — Each component utilized in the DuraPac Plus series is designed and tested for a minimum of 15 years operation under the harshest conditions.

Every unit is thoroughly run tested at the factory in each operating mode and evacuated prior to final charging. Every coil is leak-tested with helium particles. Automated run testing allows accurate undisputed tests and measurements which are second to none in the industry.

Each unit contains a factory printout indicating tested pressures, amperages, dates, and inspectors, providing certification of the unit's status at the time of manufacture.

Units are equipped with valuable safety controls designed to monitor and protect for the life of the unit. The standard safeties include:

- low-pressure/loss-of-charge switch
- high-pressure switch
- freeze-protection thermostat
- internal compressor overload
- exclusive Cycle-LOC™ circuit board that prevents compressor cycling
- refrigerant filter drier

The cabinet is constructed of galvanized steel, bonderized and coated with a prepainted baked enamel finish. The paint finish is a non-chalking type, and is capable of exceeding Federal Test Method Standard No. 141 (Method 6061) 500-Hour Salt Spray Test. In addition, all cabinet interior surfaces are primed, allowing the entire unit to have a longer life and more attractive appearance.

EASY MAINTENANCE AND INSTALLATION

All Units are Factory Shipped in the Vertical Discharge Configuration for fit-up to standard roof curbs. (One accessory curb fits sizes 036-072; another accessory curb fits sizes 090-150.) Contractors can order and install the roof curbs early in the construction stage, before decisions on size requirements have been made.

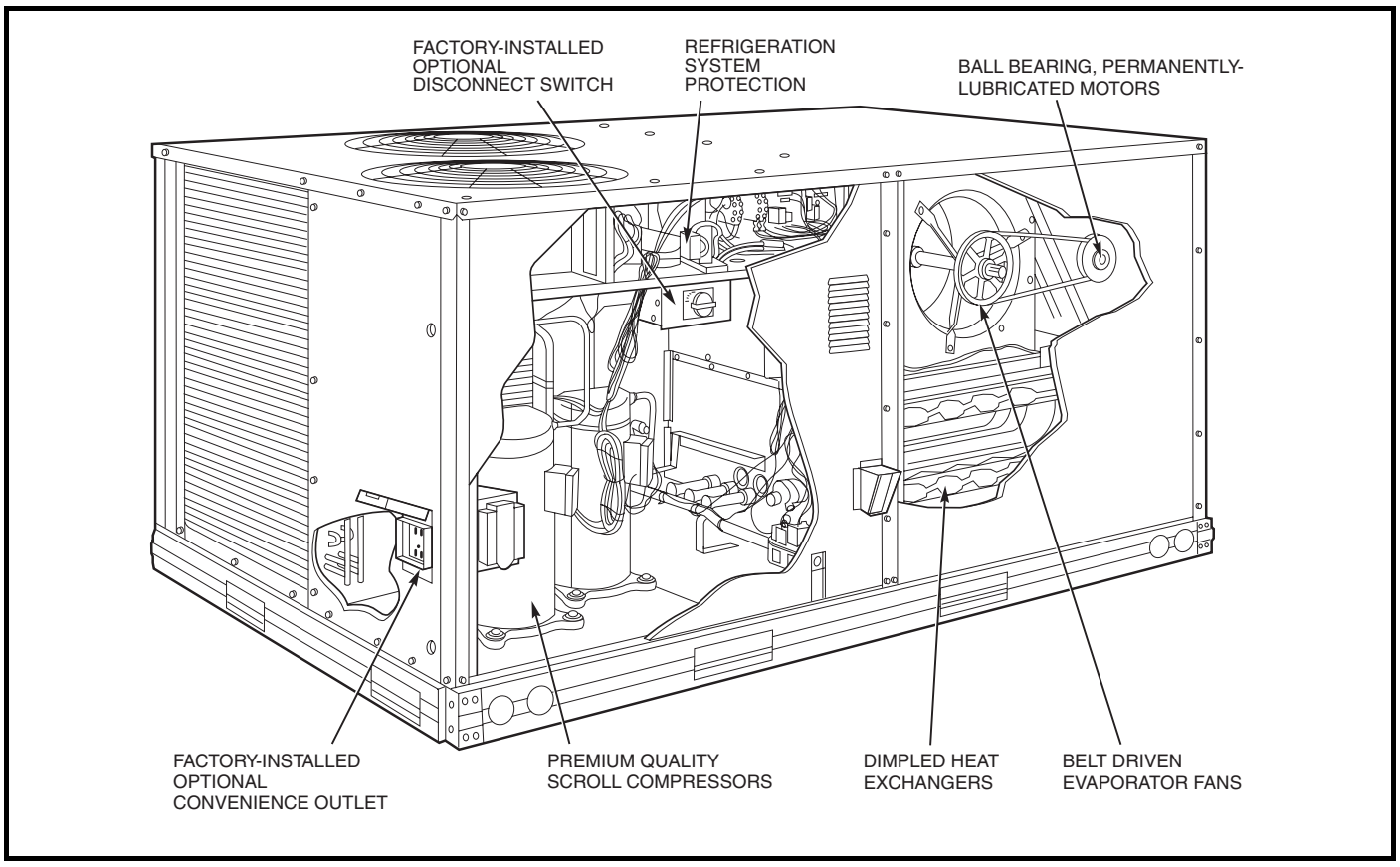
All Units Feature Heavy-Gage Roll-Formed Baserail design with forklift slots on 3 sides of the unit and rigging holes for easier maneuvering and installation. Stretch-wrap packaging protects the unit during shipment and storage.

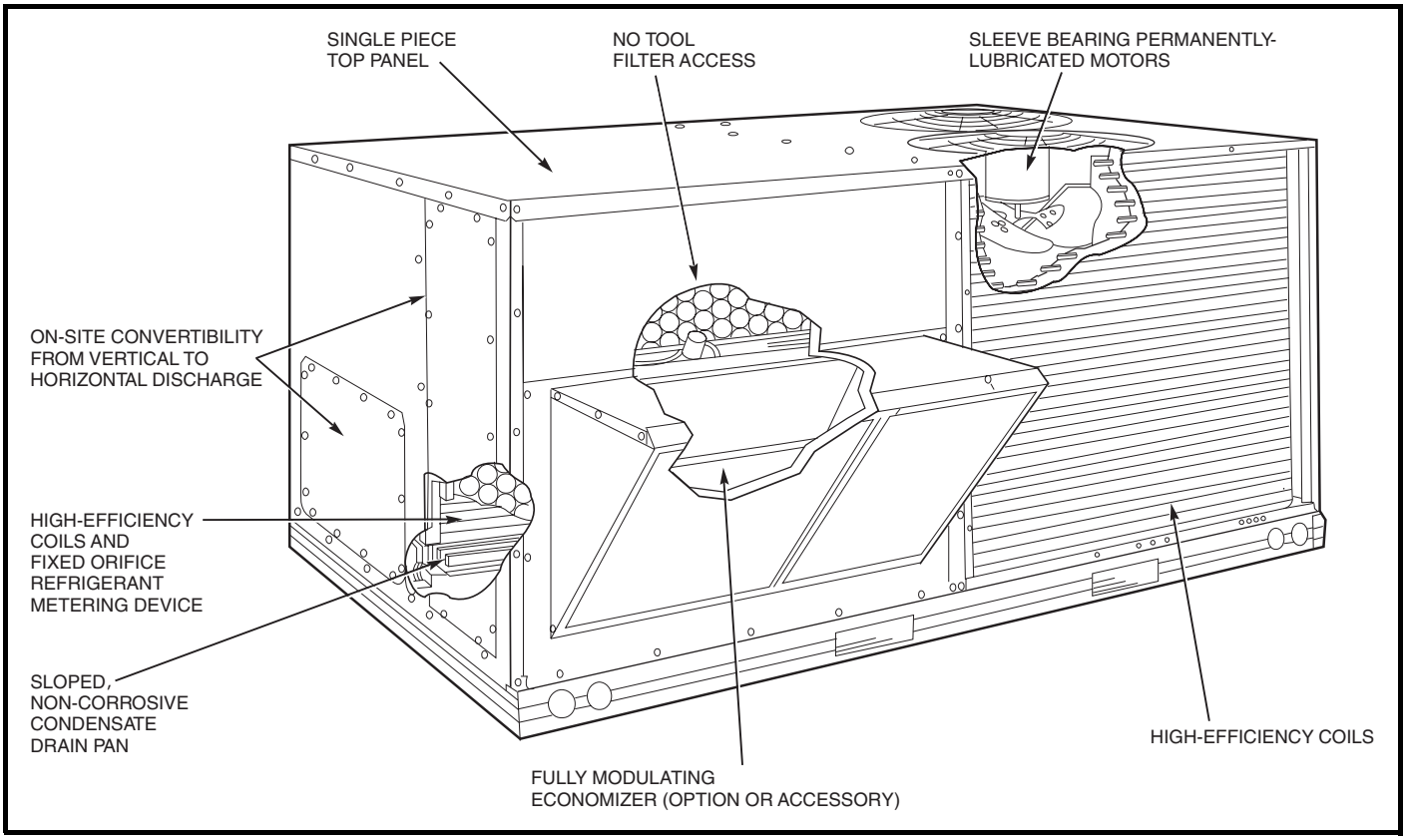
Units are Easily Converted from vertical to horizontal applications to make retrofit and add-on jobs easier. To convert from vertical to horizontal discharge, simply relocate 2 panels. The same basic unit can be used for a variety of applications and can be quickly modified at the jobsite.

Standard high-performance, belt-driven, evaporator-fan motors enable 581B036-150 units to operate in most ductwork configurations.

Ductwork Connections are Made Easy by the logical 2 to 1 aspect ratio. On vertical discharge units, ductwork attaches directly to the roof curb.

FEATURES/BENEFITS (cont)





FEATURES/BENEFITS (cont)

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

The Non-Corrosive, Sloped, Condensate Drain Pan is standard and in conformance with ASHRAE (American Society of Heating, Refrigeration, and Air Conditioning Engineers) Standard 62 to meet many Indoor Air Quality (IAQ) specifications. The condensate drain pan offers both bottom and end drain capability to minimize roof penetrations. The bottom drain can be used in conjunction with thru-the-bottom connections. An external trap must be field supplied.

Standard 2-in. Throwaway Filters are easily accessed through an easily removable filter access panel located directly above the air intake hood; no tools are required to change the filters.

All Units are Designed with a Single Continuous Top Piece to eliminate leaking at the seams or gasketing, which tends to deteriorate over time and shift during rigging procedures.

Belt-Driven Evaporator-Fan Motors allow maximum on-site flexibility without changing motors or drives.

Low-Voltage Wiring Connections are easily made due to the large terminal board which is conveniently located for quick, simple access.

QUIET, EFFICIENT OPERATION AND DEPENDABLE PERFORMANCE

All Units are Equipped With Scroll Compressors which are fully hermetic with internal vibration isolators for extremely quiet operation. The scroll compressors are quieter and more reliable than reciprocating designs. Compressors are mounted on an independent plate for additional sound integrity and structural support. Efficient condenser fan and motor design permits operation at low sound levels.

Totally Enclosed Condenser-Fan Motors and permanently lubricated bearings provide additional dependability.

All Coils Use State-of-the-Art Internally Enhanced Copper Tubing — Coils are thoroughly tested with helium particles as well as pressure tested at the factory. Condenser coils have louvered, aluminum lanced fins to provide maximum heat transfer for optimum efficiency and easy cleaning.

Exclusive Dimpled 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. In addition, dimpled heat exchanger tubes act as baffles, forcing the hot gases to stay in close contact with the cell walls to maximize heat transfer and efficiency.

The California Air Quality Management NOx requirement of 40 nanograms/joule or less is met with Low kit NOx models in 036-060 sizes.

The Induced Draft Combustion System eliminates the unsightly appearance of flue stacks, and diminishes the effects of winds on heating operation. The inducer fan draws hot combustion gas through the heat exchanger at the optimum rate for the most effective heat transfer. The induced draft (negative pressure) also prevents contaminants from entering the supply air if a leak in the heat exchanger occurs.

The Direct Spark Ignition System saves operating expense when compared to old-style pilot ignition systems. No crossover tube is required, therefore no sooting or pilot fouling problems can occur.

LP (Liquid Propane) Conversion Kit — Standard units are designed for natural gas. An LP Conversion Kit is available as an accessory, if required. Installation of the accessory LP kit simply involves changing the gas orifices to accommodate liquid propane gas.

Refrigerant Circuit Protection assures dependability. All units have standard:

1) loss-of-charge/low-pressure protection switch which allows operation at lower ambient conditions while protecting against low-charge operation
2) freeze-protection thermostat, which protects against evaporator coil frost build-up
3) high-pressure switch, which protects against above normal operating pressure
4) filter driers, which trap moisture and debris in the refrigeration system.
5) Bryant's exclusive fixed orifice metering device, which precisely controls refrigerant flow, preventing slugging and floodback, while maintaining optimum unit performance by metering the circuits individually.

Two Independent Compressor Circuits (all $7^1/_2$ to $12^1/_2$ ton units) provide pinpoint comfort control, improved efficiency, and back-up capability.

The Standard Control System is readily adaptable to all conventional thermostats.

Integrated Gas Unit Controller (IGC) — All ignition components are contained in the compact Integrated Gas Controller (IGC) that is easily accessible for service. The IGC provides built in diagnostic capabilities. An LED simplifies troubleshooting by providing visual fault notification and system status information. The IGC board provides exclusive anti-cycle protection for its gas heat operation. The IGC also contains burner control logic for dependable heating operation. The LED is visible without removing the unit control box access panel. The 581B units maximize heating efficiency through the IGC's control of evaporator fan ON/OFF delays. The IGC helps make 581B units reliable for many years.

Patented Cycle-LOC™ Protection System provides protection against compressor cycling by monitoring compressor current draw. When lack of compressor current exists, the Cycle-LOC circuit board locks out the compressors. The Cycle-LOC board may be manually reset by simply switching thermostat to OFF, and then back to the Cooling or AUTO modes. No manipulation of the unit disconnect switch is needed.

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FEATURES/BENEFITS (cont)

INDOOR AIR QUALITY (IAQ)

The Quality of Building Air is Improved as the DuraPac Plus series utilizes certain key features that assist in improving indoor air quality. A sloped condensate pan eliminates possible biological growth in the rooftop unit. A face-split evaporator coil (090-150 sizes) design proves effective in removing additional moisture from the supply air. Two-in. filters are standard in all rooftop units and an optional filter status sensor is available.

SERVICEABILITY

Standardized Components for the complete DuraPac Plus line of products are found in all safety devices, condenser-fan motors, evaporator-fan motors, and control boards, while the gas sections use common inducer motors, limit switches, and rollout switches. This allows for greater inventory control, familiarity of parts, and fewer stocked parts.

Easily Accessible Refrigerant Access Ports on all discharge, suction, and liquid lines permit easy and accurate measurements as well as simple accessibility.

Resettable 24-v Circuit Breaker On 581B090-150 Units allows room for error without replacing transformers or fuses.

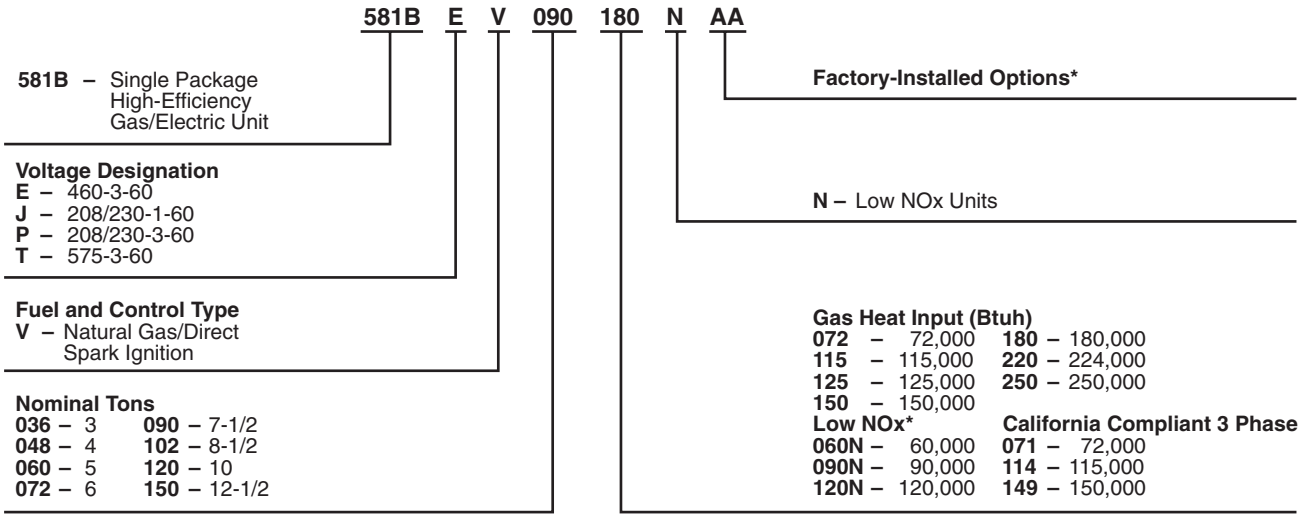
Single-Side Utility Connections provide easy access to perform any necessary service.

Color-Coded Wires permit easy tracing and diagnostics.

Belt-Driven Motors are accessible through a single access door to facilitate servicing and adjusting after installation.

Compressors and Safety Switches are Easily Accessible for troubleshooting and system analysis.

MODEL NUMBER NOMENCLATURE



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

ARI* CAPACITIES

UNIT 581B	NOMINAL TONS	STANDARD CFM	COOLING (Btuh)	TOTAL kW	SEER†	EER	SOUND RATING (dB)	IPLV**
036	3	1200	36,000	3.21	13.00	11.20	76	—
048	4	1450	47,000	4.25	13.00	11.05	76	—
060	5	1750	60,000	5.55	13.00	11.00	80	—
072	6	2100	74,000	6.70	—	11.00	80	—
090	7 1/2	3000	90,000	8.18	—	11.00	82	11.6
102	8 1/2	3000	102,000	9.44	—	10.80	82	10.9
120	10	3200	120,000	10.91	—	11.00	84	9.7
150	12 1/2	4300	140,000	14.04	—	9.50	86	9.8

LEGEND

dB — Decibels
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 (size 036-120 units) or 360 (size 150 units) and 270 (size 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.

Sizes 036-120 Only

Size 150 Only

HEATING CAPACITIES AND EFFICIENCIES

SIZE 581B	HEATING INPUT (Btuh) Stage 2/Stage 1	OUTPUT CAPACITY (Btuh)	TEMPERATURE RISE	AFUE (%)	STEADY-STAGE EFFICIENCY (%)
036071*	—/ 72,000	—/ 59,040	15-45	82	82
036072†	72,000/ 50,000	59,040/ 41,000	15-45	82	82
036114*	—/115,000	—/ 92,000	55-85	80	80
036115†	115,000/ 82,000	92,000/ 65,600	55-85	80	82
036060N**	—/ 60,000	—/ 50,000	20-50	81	81
036090N**	— 90,000	—/ 74,000	30-60	81	81
048071*	—/ 72,000	—/ 59,040	15-45	82	82
048072†	72,000/ 50,000	59,040/ 41,000	15-45	82	82
048114*	—/115,000	—/ 92,000	35-65	81	81
048115†	115,000/ 82,000	93,150/ 66,420	35-65	81	81
048149*	—/150,000	—/120,000	50-80	80	80
048150†	150,000/120,000	120,000/ 96,000	50-80	80	80
048060N**	—/ 60,000	—/ 50,000	20-50	81	81
048090N**	—/ 90,000	—/ 74,000	30-60	81	81
048120N**	—/120,000	—/101,000	40-70	82	82
060071*	—/ 72,000	—/ 59,040	15-45	82	82
060072†	72,000/ 50,000	59,040/ 41,000	15-45	82	82
060114*	—/115,000	—/ 93,150	35-65	81	81
060115†	115,000/82,000	93,150/ 66,420	35-65	81	81
060149*	—/150,000	—/120,000	50-80	80	80
060150†	150,000/120,000	120,000/ 96,000	50-80	80	80
060060N**	—/ 60,000	—/ 50,000	20-50	81	81
060090N**	—/ 90,000	—/ 74,000	30-60	81	81
060120N**	—/120,000	—/101,000	40-70	82	82
072072	72,000/ 50,000	59,040/ 41,000	15-45	82	82
072115	115,000/ 82,000	93,150/ 66,420	35-65	81	81
072150	150,000/120,000	120,000/ 96,000	50-80	80	80
090125	125,000/ 90,000	102,500/ 72,900	20-50	82	82
090180	180,000/120,000	147,600/ 98,400	35-65	82	82
090224	224,000/180,000	183,700/147,600	45-75	82	82
102125	125,000/ 90,000	102,500/ 72,900	20-50	82	82
102180	180,000/120,000	147,600/ 98,400	35-65	82	82
102224	224,000/180,000	183,700/147,600	45-75	82	82
120180	180,000/120,000	147,600/ 98,400	35-65	82	82
120224	224,000/180,000	183,700/147,600	45-75	82	82
120250	250,000/200,000	200,000/160,000	40-70	80	80
150224	224,000/180,000	183,700/147,600	45-75	82	82
150250	250,000/200,000	200,000/160,000	40-70	80	80

LEGEND

AFUE — Annual Fuel Utilization Efficiency

*California rated three-phase models.
†Three-phase standard models have heating input values as shown. Single-phase standard models have one-stage heating with heating input values as follows:
581BJV036-060072, 72,000 Btuh
581BJV036-060115, 115,000 Btuh
581BJV048-060150, 150,000 Btuh
**California SCAQMD compliant Low NOx models have combustion products that are controlled to 40 nanograms per joule or less.

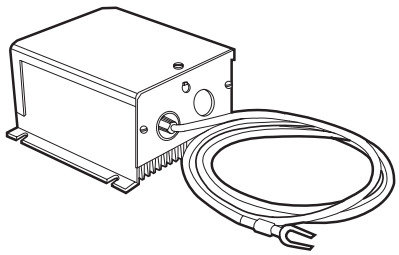
OPTIONS AND ACCESSORIES

ITEM	OPTION*	ACCESSORY†
Perfect Humidity™ Dehumidification Package	X	
Integrated Economizer — Durablade	X	X
Integrated Economizer — EconoMi$er (gear driven)	X	X
EconoMi$er with Power Exhaust (Vertical Only)		X
Power Exhaust for EconoMi$er		X
High-Static Motor (except 150)	X	
Hinged Access Panels	X	
25% Manual Outdoor-Air Damper	X	X
50% Manual Outdoor-Air Damper		X
Convenience Outlet	X	
Unit Mounted Disconnect	X	
Two-Position Damper (25% Open)		X
Two-Position Damper (100% Open)		X
Roof Curb (14 in.)		X
Roof Curb (24 in.)		X
Thru-the-Bottom Service Connections		X
Thermostat and Subbase		X
Light Commercial Thermostat		X
Light Commercial Thermidistat		X
Time Guard® II Control Circuit (3-Phase Units Only)		X
Motormaster® Low Ambient Control		X
Motormaster II Low Ambient Control		X
Motormaster IV Low Ambient Control		X
Accusensor™ II Enthalpy Control		X
Accusensor III Differential Enthalpy Sensor		X
Liquid Propane Conversion Kit		X
Flue Discharge Deflector		X
Flue-Hood Protector Assembly		X
Coil Guard Grille		X
Condenser Coil Hail Guard		X
Fan/Filter Status Switch		X
Corrosion Resistant Coils	X	

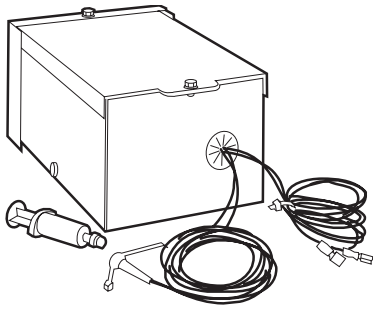
*Indicates a factory-installed option.
†Indicates a field-installed accessory.

LOW AMBIENT CONTROLS

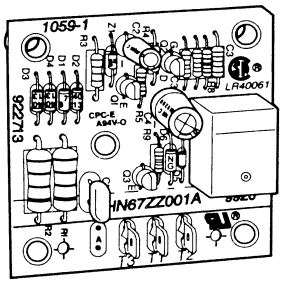
The 581B036-150 standard units are designed to operate in cooling at outdoor temperatures down to 25 F. With accessory Motormaster control (condenser-fan speed modulation), or Motormaster II control (condenser-fan cycling), units can operate at outdoor temperatures down to –20 F. The head pressure controls, which mount in the condenser section, control the condenser-fan motor to maintain correct condensing temperature.



MOTORMASTER I



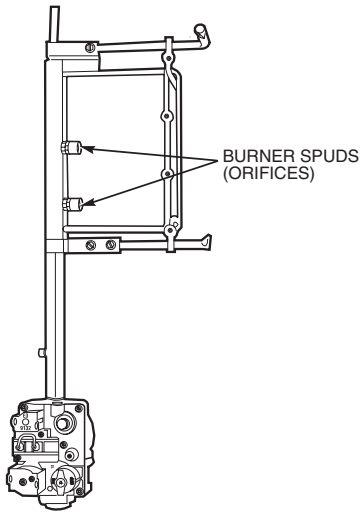
MOTORMASTER II



TIME GUARD II CONTROL

Time Guard II Control automatically prevents compressor from restarting for at least 5 minutes after a shutdown. Field-installed accessory prevents short cycling of compressor if thermostat is rapidly changed. Time Guard II device mounts in the control compartment of unit. The Time Guard II device is not required when a programmable thermostat is applied.

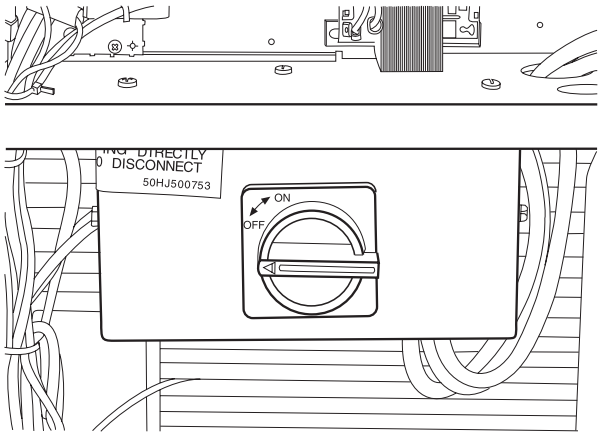
LIQUID PROPANE CONVERSION KIT



Liquid propane conversion kit allows the unit to utilize a liquid propane fuel supply in areas where natural gas is not available. (Kit shown is for sizes 036-072.)

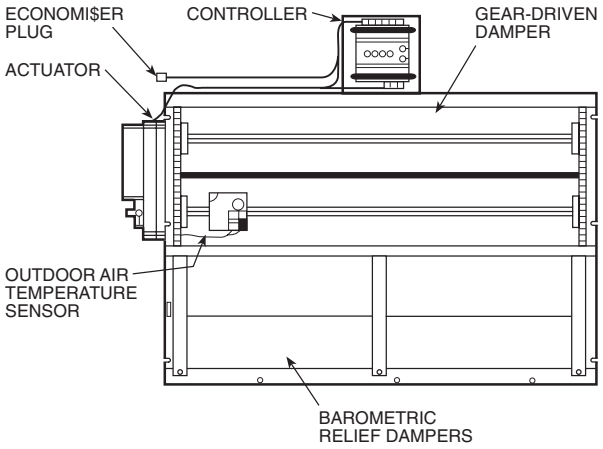
OPTIONS AND ACCESSORIES (cont)

UNIT MOUNTED DISCONNECT



Factory-installed, internally-mounted, NEC (National Electrical Code) and UL (Underwriters' Laboratories) approved non-fused switch provides unit power shutoff with disconnect lockout protection capability. The switch is accessible from outside the unit.

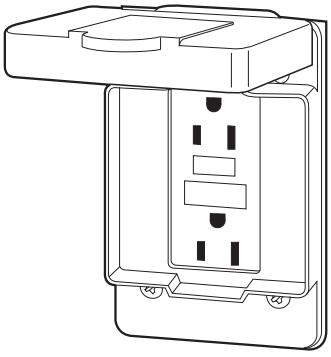
ECONOMI$ER



Factory-installed EconoMi$er utilizes a microprocessor-based control, gear drive damper system, low pressure drop characteristics, built-in spring return (for close upon power loss), and an integral barometric damper.

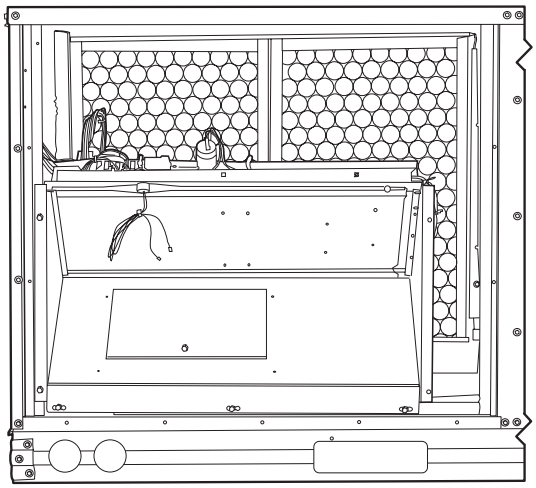
NOTE: EconoMi$er is only available for vertical ductwork applications and can be field or factory installed.

CONVENIENCE OUTLET

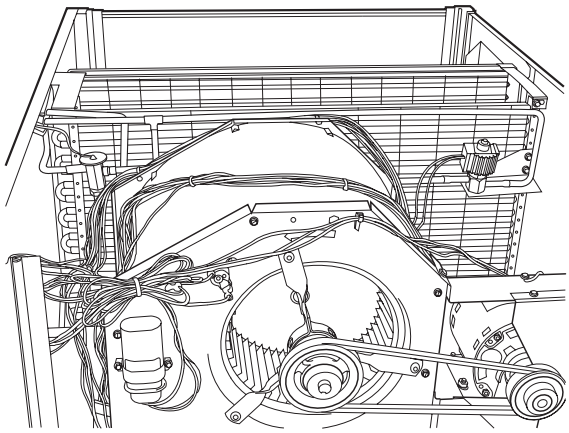


Factory-installed, internally mounted and externally accessible 115-v female receptacle. Includes 15-amp GFI (Ground Fault Interrupter) receptacle with independent fuse protection. Voltage required to operate convenience outlet is provided by a factory-installed transformer.

DURABLADE ECONOMIZER



Exclusive Durablade economizer damper design saves energy while providing economical and reliable cooling. A sliding plate on the face of the economizer controls the amount of outdoor air entering the system. When the sliding plate is closed, it provides a leakproof seal which prevents ambient air from seeping in or conditioned air from seeping out. It can be easily adjusted for 100% outdoor air or any proportions of mixed air. Equipped with standard controls and 30% barometric relief capabilities.

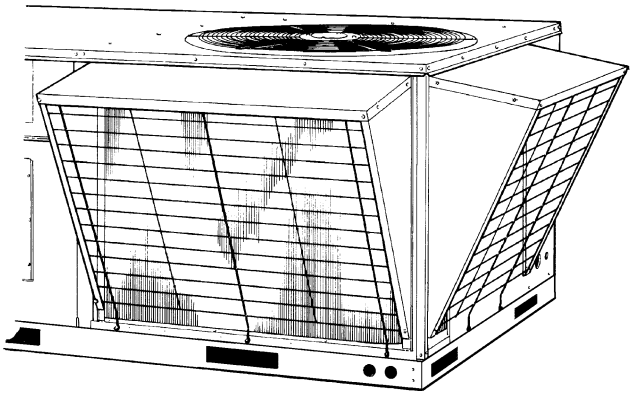


PERFECT HUMIDITY™ DEHUMIDIFICATION PACKAGE

The Perfect Humidity dehumidification package is a factory-installed option that provides increased dehumidification by cooling the hot liquid refrigerant leaving the condenser coil. The package consists of a subcooling coil located on the leaving-air side of the evaporator coil. The location of this coil in the indoor-air stream enhances the latent capacity of the 581B units by as much as 40%. The Perfect Humidity package includes crankcase heater(s) and low-pressure switch(es) and operation can be controlled by a field-installed, wall-mounted humidistat or light commercial thermidistat.

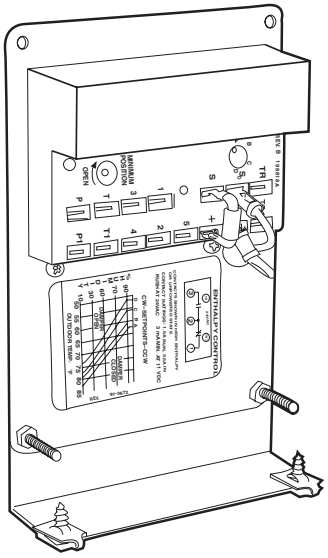
OPTIONS AND ACCESSORIES (cont)

HAIL GUARD

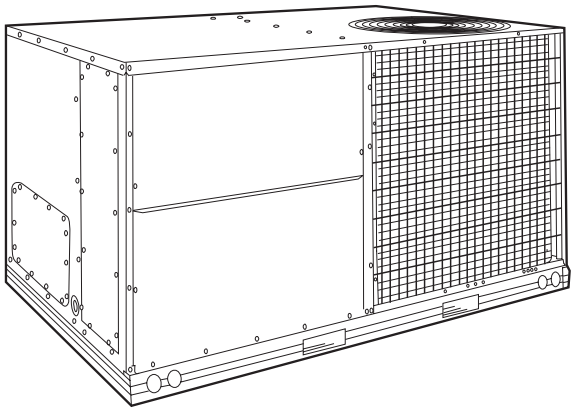


Hail guard accessory (field installed) protects condenser coils against damage from hail and other flying debris.

ACCUSENSOR™ II ENTHALPY CONTROL

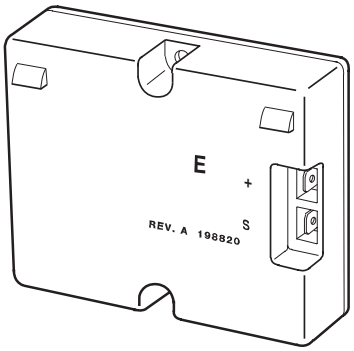


COIL GUARD GRILLE



Coil guard grille protects coils against large objects and vandalism.

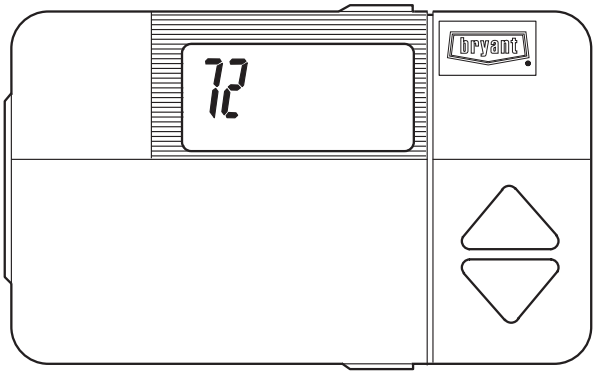
ACCUSENSOR III DIFFERENTIAL ENTHALPY



Accusensor economizer controls help provide efficient, economical economizer operation. The Accusensor I dry-bulb sensor measures outdoor temperature and is standard with the Durablade economizer.

The accessory Accusensor II solid-state enthalpy control senses both dry and wet bulb of the outdoor air to provide an accurate enthalpy reading. Accusensor II control is available as a field-installed accessory for the Durablade economizer.

The accessory Accusensor III differential enthalpy sensor control compares outdoor temperature and humidity to return-air temperature and humidity and determines the most economical mixture of air. Accusensor III is available for Durablade economizers.



BRYANT COMMERCIAL PROGRAMMABLE THERMOSTAT

Designed specifically for use with Bryant commercial systems, this Bryant programmable thermostat features LED occupied/unoccupied displays and setback mode which can override continuous fan operation.

BRYANT LIGHT COMMERCIAL THERMIDISTAT

The light commercial thermidistat combines temperature and dehumidification control in one device and provides continuous fan operation in occupied mode. Recommended for use with the Perfect Humidity™ package.

PHYSICAL DATA

UNIT SIZE 581B		036	048	060	072
NOMINAL CAPACITY		3	4	5	6
OPERATING WEIGHT (lb)					
Unit		530	540	560	615
With Durablade Economizer		564	574	594	649
With EconoMi$er		577	587	607	662
With Perfect Humidity™ Dehumidification Package		548	558	578	633
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	8-6	10- 0	9-10
Unit With Perfect Humidity Dehumidification Package		8-13	11-2	12-13	13- 6
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		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 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	Std	1.20	1.20	1.30/2.40*	2.40
	Hi-Static	2.40	2.40	2.90	2.90
Motor Frame Size	Std	48	48	48/56*	56
	Hi-Static	56	56	56	56
Fan Rpm Range	Std	760-1090	840-1185	1020-1460/1120-1585*	1120-1585
	Hi-Static	1075-1455	1075-1455	1300-1685	1300-1685
Motor Bearing Type		Ball	Ball	Ball	Ball
Maximum Fan Rpm		2100	2100	2100	2100
Motor Pulley Pitch Diameter	Std	1.9/2.9	1.9/2.0	2.4/3.4	2.4/3.4
A/B (in.)	Hi-Static	2.8/3.8	2.8/3.8	3.4/4.4	3.4/3.4
Nominal Motor Shaft Diameter (in.)	Std	1/2	1/2	5/8	5/8
	Hi-Static	5/8	5/8	5/8	5/8
Fan Pulley Pitch Diameter (in.)	Std	4.5	4.0	4.0	4.0
	Hi-Static	4.5	4.0	4.5	4.5
Belt — Type...Length (in.)	Std	1...A...33	1...A...33	1....4...40	1...A...38
	Hi-Static	1...A...39	1...A...39	1...A...40	1...A...40
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	Std	65	70	75	95
Movable Pulley Flange (rpm)	Hi-Static	65	65	60	60
Movable Pulley Maximum Full	Std	5	5	6	5
Turns from Closed Position	Hi-Static	6	6	5	5
Factory Setting — Full Turns Open	Std	3	3	3	3
	Hi-Static	3 1/2	3 1/2	3 1/2	3 1/2
Factory Speed Setting (rpm)	Std	890	980	1240	1304
	Hi-Static	1233	1233	1396	1396
Fan Shaft Diameter at Pulley (in.)		5/8	5/8	5/8	5/8
EVAPORATOR COIL		Enhanced Copper Tubes, Aluminum Double-Wavy Fins, Fixed Orifice 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

LEGEND

Bhp — Brake Horsepower

*Single phase/three phase.
†Indicates automatic reset.
**581B 072 unit size 036-072 (72,000 Btu heat input) have 2 burners.
581B 115 unit size 036-072 (115,000 Btu heat input) have 3 burners.
581B 150 unit size 048-072 (150,000 Btu heat input) have 3 burners.
††An LP kit is available as an accessory.
‖California compliant three-phase models.
***Three-phase standard models have heating inputs as shown. Single-phase standard models have one-stage heating with heating input values as follows:
581BJV036-060072, 72,000 Btuh
581BJV036-060115, 115,000 Btuh
581BJV048-060150, 150,000 Btuh
†††California SCAQMD compliant Low NO_x models have combustion products that are controlled to 40 nanograms per joule or less.

PHYSICAL DATA (cont)

UNIT SIZE 581B		036	048	060	072
FURNACE SECTION					
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
	060N	.082...45	.082...45	.082...45	—
	090N	.082...45	.082...45	.082...45	—
	120N	—	.094...42	.094...42	—
Thermostat Heat Anticipator Setting (amps) (208/230/460/575 V)		.14	.14	.14	.14
Gas Input (Btuh)					
First Stage/Second Stage	071II	—/ 72,000	—/ 72,000	—/ 72,000	—
	114II	—/115,000	—/115,000	—/115,000	—
	149II	—	—/150,000	—/150,000	—
	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
	060N†††	—/ 60,000	—/ 60,000	—/ 60,000	—
	090N†††	—/ 90,000	—/ 90,000	—/ 90,000	—
	120N†††	—	—/120,000	—/120,000	—
Efficiency (Thermal) (%)	071	82	82	82	—
	114	80	81	81	—
	149	—	80	80	—
	072	82	82	82	82
	115	80	81	81	81
	150	—	80	80	80
	060N	81	81	81	—
	090N	81	81	81	—
	120N	—	82	82	—
Temperature Rise Range	071	15-45	15-45	15-45	—
	114	55-85	35-65	35-65	—
	149	—	50-80	50-80	—
	072	15-45	15-45	15-45	15-45
	115	55-85	35-65	35-65	35-65
	150	—	50-80	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
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 ± 5			
FREEZE PROTECTION THERMOSTAT					
Opens (F)		30 ± 5			
Closes (F)		45 ± 5			
OUTDOOR-AIR INLET SCREENS		Cleanable			
Quantity...Size (in.)		1...20 x 24 x 1			
RETURN-AIR FILTERS		Throwaway			
Quantity...Size (in.)		2...16 x 25 x 2			

LEGEND

Bhp — Brake Horsepower

*Single phase/three phase.
†Indicates automatic reset.
**581B 072 unit size 036-072 (72,000 Btu heat input) have 2 burners.
581B 115 unit size 036-072 (115,000 Btu heat input) have 3 burners.
581B 150 unit size 048-072 (150,000 Btu heat input) have 3 burners.
††An LP kit is available as an accessory.
llCalifornia compliant three-phase models.
***Three-phase standard models have heating inputs as shown. Single-phase standard models have one-stage heating with heating input values as follows:
581BJV036-060072, 72,000 Btuh
581BJV036-060115, 115,000 Btuh
581BJV048-060150, 150,000 Btuh
†††California SCAQMD compliant Low NO_x models have combustion products that are controlled to 40 nanograms per joule or less.

PHYSICAL DATA (cont)

UNIT SIZE 581B		090	102	120	150
NOMINAL CAPACITY (tons)		7 1/2	8 1/2	10	12 1/2
OPERATING WEIGHT (lb)					
Unit		870	880	1035	1050
With Durablade Economizer		914	924	1079	1094
With EconoMi$er		932	942	1097	1112
With Perfect Humidity™ Dehumidification Package		899	909	1068	1083
Roof Curb*		143	143	143	143
COMPRESSOR		Scroll			
Quantity		2	2	2	2
Oil (oz) (each compressor)		53	53	50	60
REFRIGERANT TYPE		R-22			
Operating Charge (lb-oz)					
Standard Unit					
Circuit 1		7-10	7-14	9-10	9-8
Circuit 2		8- 2	8- 5	10-10	9-5
Unit With Perfect Humidity Dehumidification Package					
Circuit 1		10-10	10-11	13- 0	12-6
Circuit 2		12- 8	10-10	13- 5	12-2
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		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	20.5	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	6.3	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	Std	2.90	2.90	3.70	5.25
	Hi-Static	4.20	4.20	5.25	—
Motor Frame		56	56	56	56
Fan Rpm Range	Std	840-1085	840-1085	860-1080	900-1260
	Hi-Static	860-1080	860-1080	830-1130	—
Motor Bearing Type		Ball	Ball	Ball	Ball
Maximum Fan Rpm		2100	2100	2100	2100
Motor Pulley Pitch Diameter	Std	3.4/4.4	3.4/4.4	4.0/5.0	2.8/3.8
A/B (in.)	Hi-Static	4.0/5.0	4.0/5.0	2.8/3.8	—
Nominal Motor Shaft Diameter (in.)		7/8	7/8	7/8	7/8
Fan Pulley Pitch Diameter (in.)	Std	7.0	7.0	8.0	5.8
	Hi-Static	8.0	8.0	5.8	—
Belt — Type...Length (in.)	Std	A...51	A...51	A...51	BX...46
	Hi-Static	A...55	A...55	BX...46	—
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	50	45	60
Movable Pulley Flange (rpm)	Hi-Static	60	60	60	—
Movable Pulley Maximum Full	Std	5	5	5	6
Turns from Closed Position	Hi-Static	5	5	6	—
Factory Setting — Full Turns Open	Std	5	5	5	5
	Hi-Static	5	5	5	—
Factory Speed Setting (rpm)	Std	840	840	860	960
	Hi-Static	860	860	890	—
Fan Shaft Diameter at Pulley (in.)		1	1	1	1
EVAPORATOR COIL		Enhanced Copper Tubes, Aluminum Double-Wavy Fins			
Rows...Fins/in.		3...15	3...15	4...15	4...15
Total Face Area (sq ft)		8.9	8.9	11.1	11.1

LEGEND

Bhp — Brake Horsepower

*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.

PHYSICAL DATA (cont)

UNIT SIZE 581B		HEAT	090	102	120	150
FURNACE SECTION						
Rollout Switch Cutout Temp†			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	Accy	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)						
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) Stage1/Stage 2		Lo	125,000/—	125,000/—	120,000/180,000	180,000/224,000
		Med	120,000/180,000	120,000/180,000	180,000/224,000	200,000/250,000
		Hi	180,000/224,000	180,000/224,000	200,000/250,000	—/—
Efficiency (Steady State) (%)			82	82	82, 80 (in 250,000 Btuh heat range)	82, 80 (in 250,000 Btuh heat range)
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	Accy		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.)		Lo	1/2	1/2	3/4	3/4
		Med	3/4	3/4	3/4	3/4
		Hi	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
LOSS-OF-CHARGE (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			Cleanable			
Quantity...Size (in.)			1...20 x 24 x 1 1...16 x 25 x 1			
RETURN-AIR FILTERS			Throwaway			
Quantity...Size (in.)			4...16 x 20 x 2	4...16 x 20 x 2	4...20 x 20 x 2	4...20 x 20 x 2

LEGEND

Bhp — Brake Horsepower

*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.

BASE UNIT DIMENSIONS

UNIT 581B	STANDARD UNIT WEIGHT		DURABLADE ECONOMIZER WEIGHT		ECONOMI$ER WEIGHT		CORNER WEIGHT (A)		CORNER WEIGHT (B)		CORNER WEIGHT (C)		CORNER WEIGHT (D)	
	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg	Lb	Kg
036	530	240	34	15.4	47	21.3	127	57.6	122	55.3	138	62.6	143	64.9
048	540	245	34	15.4	47	21.3	129	58.5	124	56.2	141	64.0	146	66.2
060	560	254	34	15.4	47	21.3	134	60.8	129	58.5	146	66.2	151	68.5
072	615	279	34	15.4	47	21.3	147	66.7	142	64.4	160	72.6	166	75.3

	CONNECTION SIZES
A	1 3/8″ Dia [35] Field Power Supply Hole
B	2″ Dia [51] Power Supply Knockout
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 Knockout

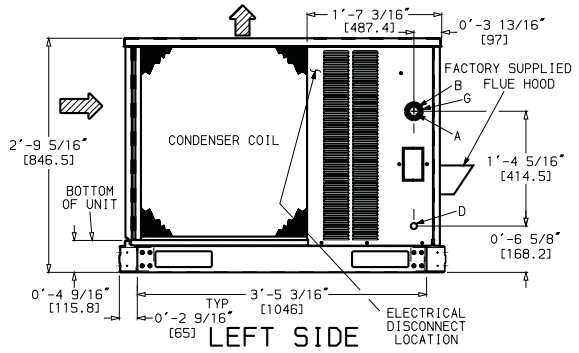
BOTTOM POWER CHART, THESE HOLES REQUIRED FOR USE WITH ACCESSORY PACKAGES — CRBTMPWR001A00, 3A00 (1/2″, 3/4″) OR CRBTMPWR002A00, 4A00 (1/2″, 1 1/4″)

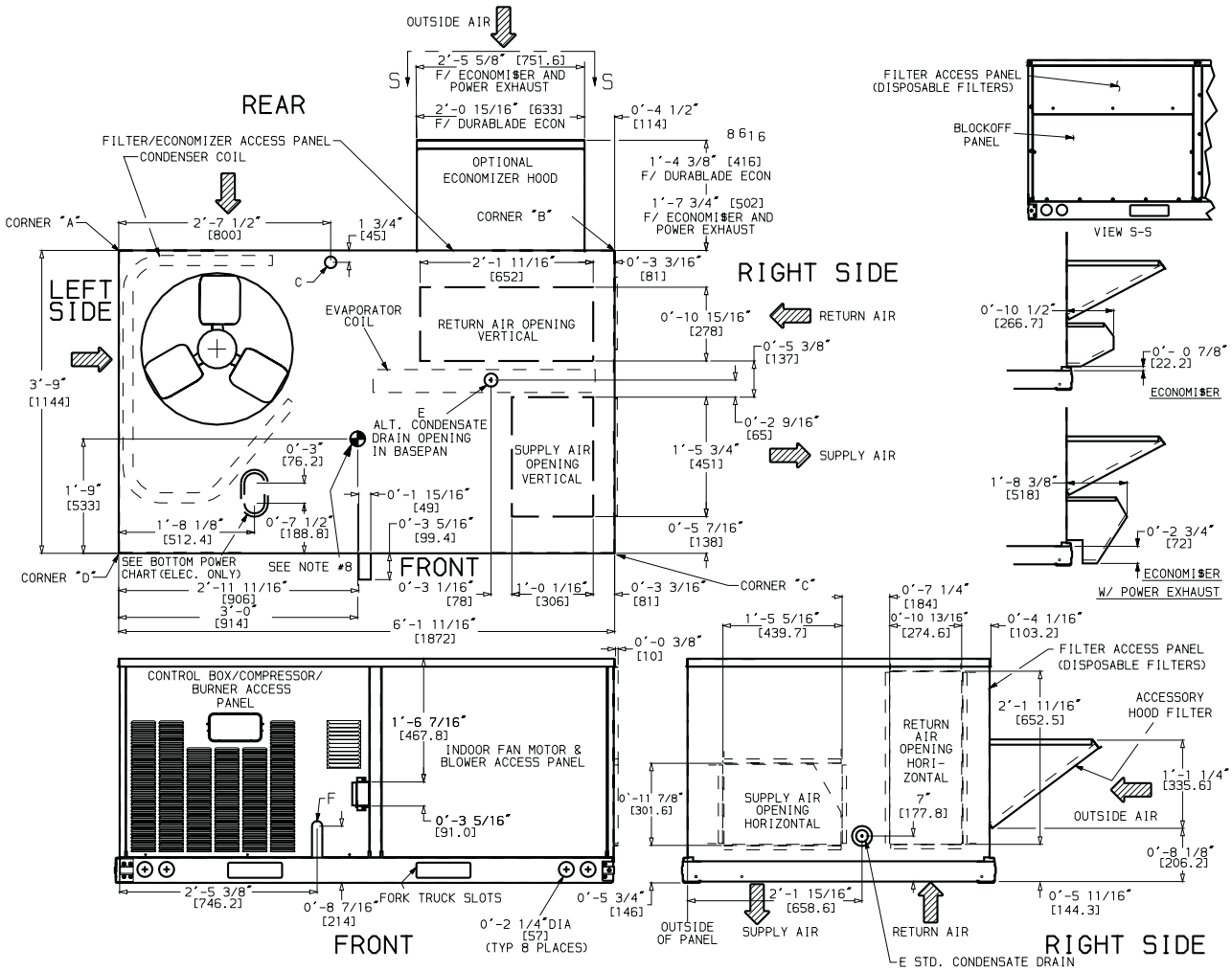
THREADED CONDUIT SIZE	WIRE USE	REQURED HOLE SIZES (MAX.)
1/2″	24 V	7/8″ [22.2]
3/4″	Power*	1 1/8″ [28.4]
1 1/4″	Power*	1 3/4″ [44.4]
(003) 1/2″ FPT	Gas	1 1/4″ [31.8]
(004) 3/4″ FPT	Gas	1 5/8″ [41.3]

*Select either 3/4″ or 1 1/4″ for power, depending on wire size.

NOTES:

1. Dimensions in [ ] are in millimeters.
2. Center of gravity.
3. Direction of airflow.
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 prevail):
   a. Between unit, flue side and combustible surfaces, 48 inches.
   b. Bottom of unit to combustible surfaces (when not using curb), 1 inch. Bottom of base rail to combustible surfaces (when not using curb) 0 inches.
   c. Condenser coil, for proper airflow, 36 in. one side, 12 in. the other. The side getting the greater clearance is optional.
   d. Overhead, 60 in. to assure proper condenser fan operation.
   e. Between units, control box side, 42 in. per NEC (National Electrical Code).
   f. Between unit and ungrounded surfaces, control box side, 36 in. per NEC.
   g. Between unit and block or concrete walls and other grounded surfaces, control box side, 42 in. per NEC.
   h. Horizontal supply and return end, 0 inches.
6. With the exception of the clearance for the condenser coil and combustion side as stated in notes 5a, b and c, a removable fence or barricade requires no clearance.
7. Units may be installed on combustible floors made from wood or Class A, B, or C roof covering material if set on base rail.
8. The vertical center of gravity is 1′-6″ [457] up from the bottom of the base rail.





581B036-072

BASE UNIT DIMENSIONS (cont)

UNIT 581B	STANDARD UNIT WEIGHT		DURABLADE ECONOMIZER WEIGHT		ECONOMI$ER 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	ft-in.	mm	ft-in.	mm	ft-in.	mm	ft-in.	mm	ft-in.	mm
090	870	395	44	20	62	28.1	189	86	161	73	239	109	280	127	2-0 7/8	632	3-5 5/16	1050	2-9 11/16	856	2- 2 7/16	672
102	880	399	44	20	62	28.1	191	87	163	74	242	110	284	129	1-2 7/8	378	3-5 5/16	1050	2-9 11/16	856	2- 2 7/16	672
120	1035	469	44	20	62	28.1	225	102	192	87	285	129	333	151	1-2 7/8	378	4-1 5/16	1253	3-0 3/8	924	2-10 7/16	875
150	1050	476	44	20	62	28.1	228	103	195	88	289	131	338	153	1-2 7/8	378	4-1 5/16	1253	3-0 3/8	924	2-10 7/16	875

	CONNECTION SIZES
A	1 3/8" Dia [35] Field Power Supply Hole
B	2 1/2" Dia [64] Power Supply Knockout
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 Conn. — 581B090 & 102 —125 Heat 3/4"-14 NPT Gas Conn. — 581B090 to 120 — 180 Heat 581B 090 to 150 — 224 Heat, 581B120 & 150 — 250 Heat
G	2" Dia [51] Power Supply Knockout

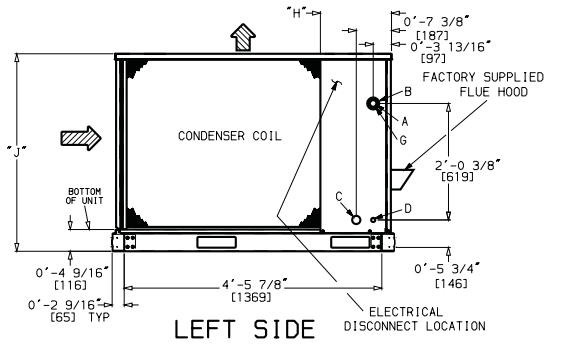
BOTTOM POWER CHART, THESE HOLES REQUIRED FOR USE WITH ACCESSORY PACKAGES — CRBTMPWR001A00, 2A00 (1/2", 3/4") OR CRBTMPWR002A00, 4A00 (1/2", 1 1/4")

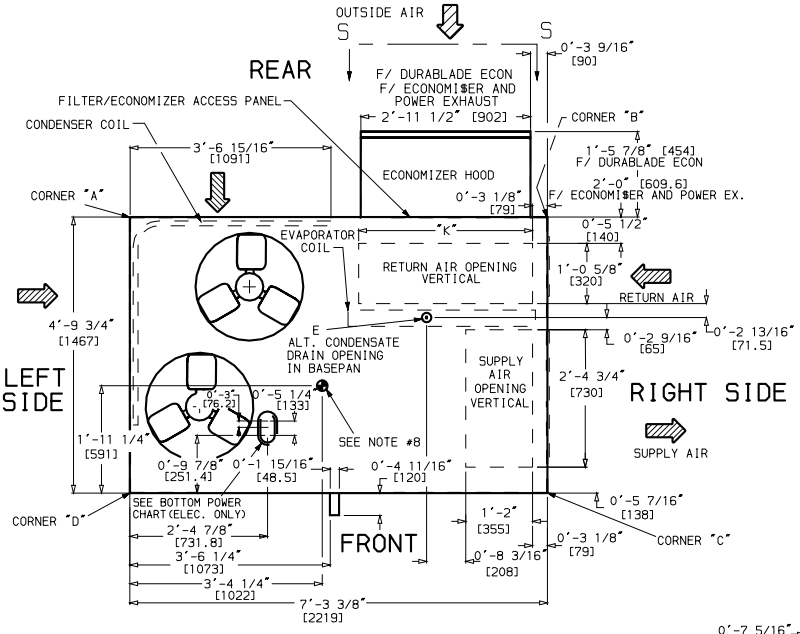
THREADED CONDUIT SIZE	WIRE USE	REQUIRED HOLE SIZES (MAX.)
1/2"	24 V	7/8" [22.2]
3/4"	Power*	1 1/8" [28.4]
1 1/4"	Power*	1 3/4" [44.4]
(003) 1/2" FPT	Gas	1 1/4" [31.8]
(004) 3/4" FPT	Gas	1 5/8" [41.3]

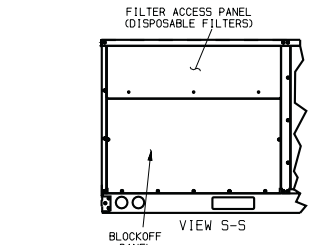
*Select either 3/4" or 1 1/4" for power, depending on wire size.

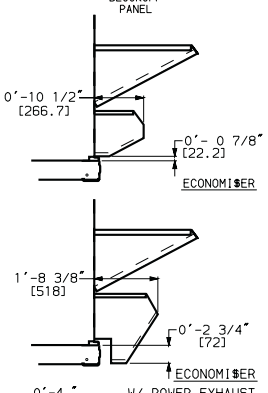
NOTES:

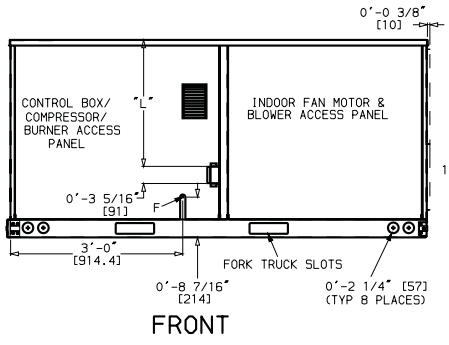
1. Dimensions in [ ] are in millimeters.
2. Center of gravity.
3. Direction of airflow.
4. On vertical discharge units, ductwork to be attached to accessory roof curb only. For horizontal discharge units, field-supplied flanges should be attached to horizontal discharge openings, and all ductwork should be attached to the flanges.
5. Minimum clearance (local codes or jurisdiction may prevail):
   a. Between unit, flue side and combustible surfaces, 48 inches.
   b. Bottom of unit to combustible surfaces (when not using curb), 1 inch. Bottom of base rail to combustible surfaces (when not using curb) 0 inches.
   c. Condenser coil, for proper airflow, 36 in. one side, 12 in. the other. The side getting the greater clearance is optional.
   d. Overhead, 60 in. to assure proper condenser fan operation.
   e. Between units, control box side, 42 in. per NEC (National Electrical Code).
   f. Between unit and ungrounded surfaces, control box side, 36 in. per NEC.
   g. Between unit and block or concrete walls and other grounded surfaces, control box side, 42 in. per NEC.
   h. Horizontal supply and return end, 0 inches.
6. With the exception of the clearance for the condenser coil and combustion side as stated in notes 5a, b and c, a removable fence or barricade requires no clearance.
7. Units may be installed on combustible floors made from wood or Class A, B, or C roof covering material if set on base rail.
8. The vertical center of gravity is 1'-7" [483] for 090 and 102, 1'-11" [584] for 120 and 150 up from the bottom of the base rail.

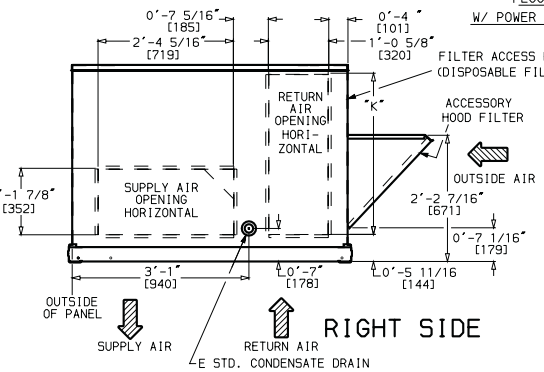








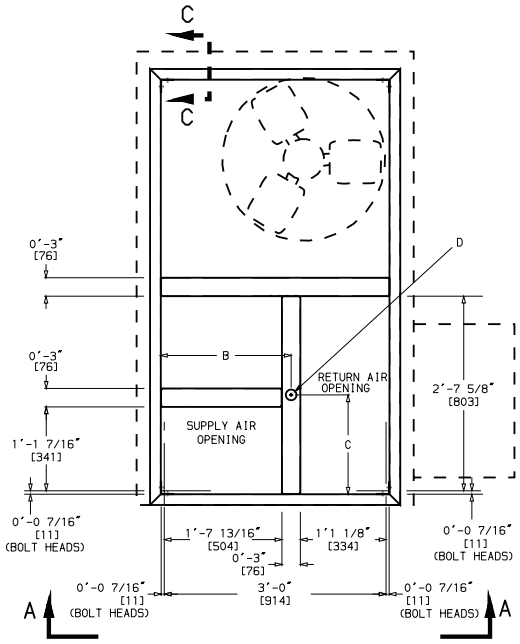




ACCESSORY DIMENSIONS — 581B036-072

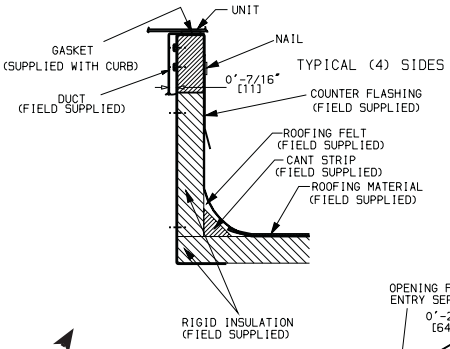
UNIT SIZE 581B	"A"	ROOF CURB ACCESSORY
036-072	1′-2″ [356]	CRRFCURB001A00
	2′-0″ [610]	CRRFCURB002A00

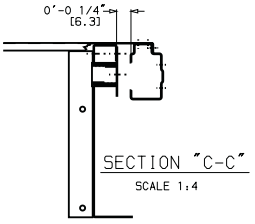
UNIT SIZE 581B	B	C	D ALT DRAIN HOLE	"E" GAS	"F" POWER	"G" CONTROL	CONNECTOR PKG. ACCY.
036-072	1′-9 11/16″ [551]	1′-4″ [406]	1 3/4″ [44.5]	3/4″ [19] NPT	3/4″ [19] NPT	1/2″ [12.7] NPT	CRBTMPWR001A00
					1 1/4″ [31.7]		CRBTMPWR002A00
				1/2″ [12.7] NPT	3/4″ [19] NPT	1/2″ [12.7] NPT	CRBTMPWR003A00
				3/4″ [19] NPT	1 1/4″ [31.7]		CRBTMPWR004A00

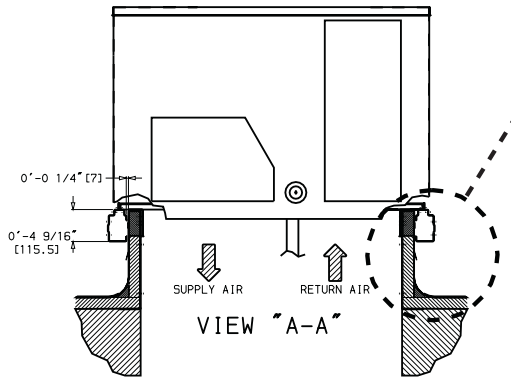


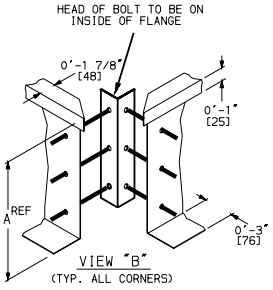
NOTES:

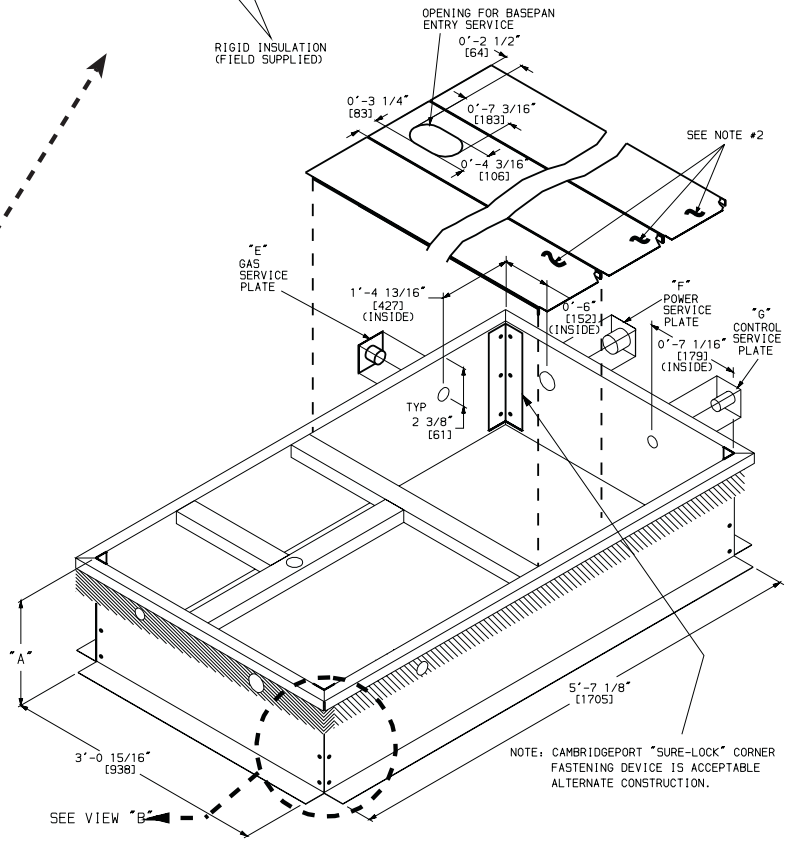
1. Roof curb accessory is shipped disassembled.
2. Insulated panels.
3. Dimensions in [ ] are in millimeters.
4. Roof curb: galvanized steel.
5. Attach ductwork to curb (flanges of duct rest on curb).
6. Service clearance 4 ft on each side.
7. Direction of airflow.
8. Connector packages CRBTMPWR001A00 and 002A00 are for thru-the-curb connections. Packages CRBTMP003A00 and 004A00 are for thru-the-bottom connections.









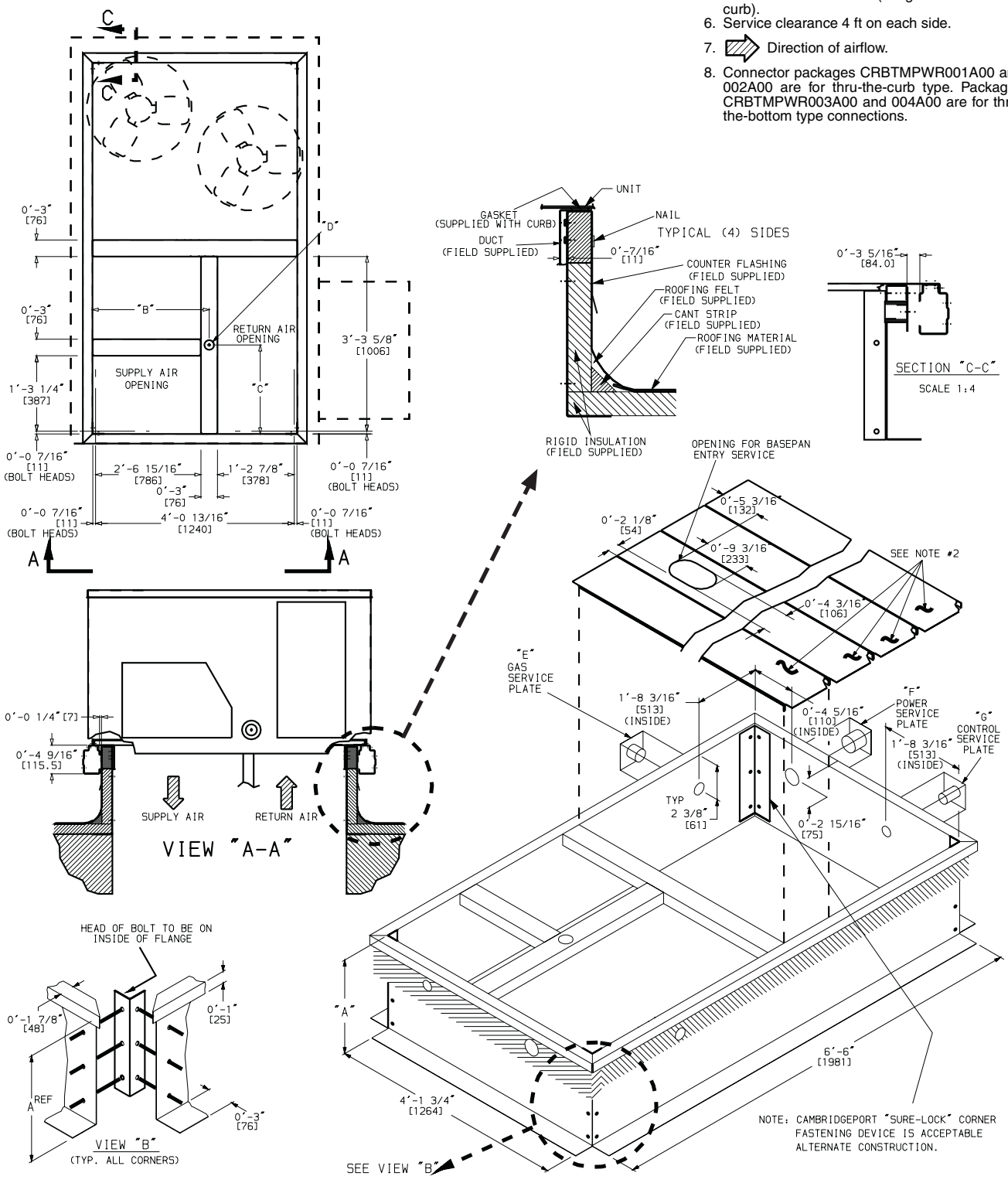


ACCESSORY DIMENSIONS — 581B090-150

CONNECTOR PKG. ACCY.	B	C	D ALT DRAIN HOLE	"E" GAS	"F" POWER	"G" CONTROL
CRBTMPWR001A00	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]
CRBTMPWR002A00					1 1/4″ [31.7]	
CRBTMPWR003A00				1/2″ [12.7] NPT	3/4″ [19] NPT	1/2″ [12.7]
CRBTMPWR004A00				3/4″ [19] NPT	1 1/4″ [31.7]	

ROOF CURB ACCESSORY	"A"	UNIT SIZE 581B
CRRFCURB003A00	1′-2″ [356]	090-150
CRRFCURB004A00	2′-0″ [610]	

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 CRBTMPWR001A00 and 002A00 are for thru-the-curb type. Packages CRBTMPWR003A00 and 004A00 are for thru-the-bottom type connections.



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 18) 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:

Correction factor = 1.10 x (1 – .21) x (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 5) note that unit 581B--048115 will provide output capacity of 92,000 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 Pressure Drop tables (page 40), find:

External static pressure .75 in. wg
Durablade economizer .05 in. wg
Total static pressure = .80 in. wg

Enter the Fan Performance table for 581B--048115 vertical discharge unit on page 27. At 1600 cfm, the standard motor will deliver 1.1 in. wg static pressure and 1.17 Bhp. This will adequately handle the job requirements.

Using evaporator-fan motor efficiency table and formula on page 40, determine watts.

$$\text{Watts} = \frac{1.17\ (746)}{.75}$$

Watts = 1164

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:

Net capacity = gross capacity – IFM heat
= 48,900 Btuh – 1164 Watts $\left(3.413\ \frac{\text{Btuh}}{\text{Watts}}\right)$
= 48,900 Btuh – 3972 Btuh
Net capacity = 44,928 Btuh

Net sensible capacity = 37,481 Btuh – 3972 Btuh
= 33,509 Btuh

PERFORMANCE DATA

COOLING CAPACITIES

581B036 (3 TONS)										
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF								
		900/0.14			1200/0.17			1500/0.20		
		Temp (F) 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) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		1200/0.17			1450/0.19			1600/0.21			2000/0.24		
		Temp (F) 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

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:

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

t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving indoor coil (h_{lwb})

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

Where h_{ewb} = Enthalpy of air entering indoor coil.

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

PERFORMANCE DATA (cont)

COOLING CAPACITIES (cont)

581B060 (5 TONS)

Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		1500/0.08			1750/0.09			2000/0.11			2500/0.13		
		Temp (F) 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

581B072 (6 TONS)

Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		1800/0.05			2100/0.06			2400/0.06			3000/0.08		
		Temp (F) 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

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:

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

t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving indoor coil (h_{lwb})

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

Where h_{ewb} = Enthalpy of air entering indoor coil.

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

PERFORMANCE DATA (cont)

COOLING CAPACITIES (cont)

581B090 (7 1/2 TONS)										
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF								
		2250/0.10			3000/0.11			3750/0.14		
		Temp (F) Air Entering Evaporator — Ewb								
		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 (8 1/2 TONS)													
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		2550/0.08			3000/0.09			3400/0.11			4250/0.13		
		Temp (F) Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	119.5	105.7	94.8	123.1	109.1	98.7	124.8	110.7	100.2	126.3	112.8	103.4
	SHC	56.5	65.7	77.8	60.2	71.7	86.3	62.2	75.8	92.8	67.8	83.3	101.2
	kW	5.92	5.84	5.77	5.95	5.88	5.81	5.96	5.89	5.83	5.99	5.91	5.85
85	TC	115.5	101.9	90.6	119.7	105.4	94.8	121.4	106.9	96.1	124.0	109.1	98.7
	SHC	55.1	64.3	76.1	58.9	70.5	85.1	61.3	74.5	90.5	66.2	82.9	98.5
	kW	6.77	6.69	6.61	6.83	6.74	6.67	6.85	6.76	6.67	6.88	6.79	6.71
95	TC	111.3	97.7	86.6	115.0	101.2	90.6	117.2	102.6	91.7	120.1	104.8	94.5
	SHC	53.7	62.8	74.2	57.4	68.9	82.9	60.0	73.0	88.6	65.0	81.5	94.5
	kW	7.71	7.62	7.52	7.76	7.68	7.59	7.80	7.69	7.58	7.84	7.74	7.66
105	TC	107.2	93.5	82.5	110.5	96.7	85.9	112.1	97.9	87.6	114.9	99.9	90.5
	SHC	52.2	61.3	72.7	56.0	67.4	81.2	58.4	71.4	86.6	63.5	79.5	90.5
	kW	8.75	8.64	8.54	8.80	8.70	8.61	8.82	8.71	8.62	8.86	8.75	8.67
115	TC	101.9	89.2	78.0	104.7	91.8	81.5	106.7	93.1	83.3	109.2	94.9	86.3
	SHC	50.2	59.5	70.7	53.7	65.7	79.5	56.6	69.5	83.1	61.5	77.8	86.3
	kW	9.80	9.73	9.64	9.86	9.79	9.72	9.90	9.79	9.71	9.95	9.84	9.75
125	TC	97.3	84.3	73.1	100.0	86.8	76.0	101.3	87.9	78.7	102.9	89.5	81.9
	SHC	48.7	57.7	68.5	52.4	63.9	76.0	54.8	67.9	78.7	59.1	75.7	81.9
	kW	11.03	10.90	10.70	11.08	10.96	10.81	11.11	10.99	10.88	11.14	11.03	10.93

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:

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

t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving indoor coil (h_{lwb})

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

Where h_{ewb} = Enthalpy of air entering indoor coil.

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

PERFORMANCE DATA (cont)

COOLING CAPACITIES (cont)

581B120 (10 TONS)

Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		3000/0.03			3200/0.03			4000/0.04			5000/0.04		
		Temp (F) 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 (12$^1/_2$ TONS)

Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		3750/0.08			4300/0.09			5000/0.11			6250/0.13		
		Temp (F) Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	164.3	154.8	132.8	168.5	157.7	143.6	171.7	160.6	148.3	174.7	164.6	153.5
	SHC	91.0	107.5	111.6	95.7	114.1	121.0	101.6	121.5	129.7	49.4	110.6	142.3
	kW	9.56	9.43	9.18	9.67	9.44	9.26	9.75	9.51	9.25	9.83	9.61	9.38
85	TC	159.5	149.4	125.8	163.8	152.7	136.6	166.8	155.6	143.6	170.2	159.5	149.4
	SHC	78.3	102.0	116.4	82.8	108.2	128.8	86.7	116.1	140.0	93.3	130.0	149.3
	kW	10.60	10.50	10.19	10.47	10.49	10.27	10.81	10.57	10.33	10.92	10.69	10.43
95	TC	154.0	143.2	118.0	157.7	146.7	128.8	161.1	149.6	137.5	164.4	153.6	144.3
	SHC	76.6	99.5	112.5	80.5	106.1	124.8	85.1	114.4	136.3	75.5	112.1	135.8
	kW	11.59	11.62	11.41	11.64	11.71	11.49	11.78	11.80	11.56	12.08	11.90	11.69
105	TC	148.0	134.1	110.7	151.5	139.5	120.6	153.9	142.4	128.3	157.0	145.8	138.7
	SHC	74.4	95.9	108.6	78.9	104.0	119.9	83.2	111.6	128.3	89.3	125.2	138.7
	kW	12.94	12.69	12.36	13.04	12.77	12.45	13.10	12.84	12.57	13.18	12.93	12.76
115	TC	139.1	120.4	103.2	143.0	125.0	110.6	146.1	128.8	118.2	148.9	135.7	129.5
	SHC	71.3	90.5	103.2	76.0	98.1	110.5	80.5	107.0	118.2	87.2	122.1	129.5
	kW	14.12	13.83	13.50	14.20	13.93	13.63	14.29	14.03	13.78	14.37	14.14	13.97
125	TC	127.1	106.2	97.5	131.6	108.7	100.7	136.1	112.0	105.7	139.5	118.4	116.4
	SHC	67.2	85.1	97.4	72.4	91.9	100.3	77.6	100.4	105.6	84.6	114.2	116.3
	kW	15.31	14.99	14.65	15.42	15.08	14.85	15.51	15.18	15.03	15.60	15.28	15.22

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:

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

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

t_{lwb} = wet-bulb temperature corresponding to enthalpy of air leaving indoor coil (h_{lwb})

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

Where h_{ewb} = Enthalpy of air entering indoor coil.

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

PERFORMANCE DATA (cont)

COOLING CAPACITIES, UNITS WITH PERFECT HUMIDITY™ OPTION

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

581B048 (4 TONS)													
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		1200/0.17			1450/0.19			1600/0.21			2000/0.24		
		Temp (F) Air Entering Evaporator — Ewb											
		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

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:

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

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.

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 x (1 – BF) x (edb – 80).

PERFORMANCE DATA (cont)

COOLING CAPACITIES, UNITS WITH PERFECT HUMIDITY™ OPTION (cont)

581B060 (5 TONS)													
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		1500/0.08			1750/0.09			2000/0.11			2500/0.13		
		Temp (F) Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	69.9	62.7	56.2	74.7	67.3	61.0	78.5	71.2	64.8	81.7	75.5	69.3
	SHC	29.0	36.9	43.9	31.7	40.5	51.2	34.5	44.2	55.4	37.8	52.0	62.8
	kW	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	65.9	59.1	51.7	70.6	63.2	56.3	75.5	66.8	60.7	78.1	70.8	65.1
	SHC	25.3	34.0	41.9	27.5	37.6	48.0	30.7	41.6	52.0	33.8	47.4	58.0
	kW	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	61.9	55.2	47.7	66.5	58.8	51.3	70.4	61.9	55.7	74.2	65.9	60.6
	SHC	21.6	31.1	40.0	23.5	34.5	44.6	26.0	38.6	47.9	30.0	42.8	52.6
	kW	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	57.7	51.1	44.9	61.8	54.5	47.7	65.1	57.2	50.8	68.4	60.3	56.1
	SHC	18.1	27.8	35.7	20.0	31.2	40.1	22.1	34.3	43.5	26.1	38.9	48.5
	kW	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	53.4	47.2	42.0	56.6	50.0	44.2	59.6	52.5	46.2	62.6	54.9	51.6
	SHC	14.7	24.6	31.5	16.5	27.8	35.7	18.2	30.0	39.0	22.1	34.9	44.3
	kW	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	48.7	42.0	36.9	51.3	45.0	39.0	54.1	46.8	40.9	56.9	49.2	45.9
	SHC	10.9	19.6	28.0	12.5	22.2	31.5	13.5	24.0	34.0	16.5	28.0	38.8
	kW	6.26	6.12	6.02	6.28	6.18	6.09	6.33	6.18	6.13	6.33	6.27	6.22

581B072 (6 TONS)													
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		1800/0.05			2100/0.06			2400/0.06			3000/0.08		
		Temp (F) Air Entering Evaporator — Ewb											
		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

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:

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

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.

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 x (1 – BF) x (edb – 80).

PERFORMANCE DATA (cont)

COOLING CAPACITIES, UNITS WITH PERFECT HUMIDITY™ OPTION (cont)

581B090 (7 1/2 TONS)

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

581B102 (8 1/2 TONS)

Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		2550/0.08			3000/0.09			3400/0.11			4250/0.13		
		Temp (F) Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	112.4	102.2	92.6	115.2	106.4	96.4	119.6	110.3	101.3	127.6	117.6	108.0
	SHC	49.1	62.4	75.0	52.9	68.5	82.3	56.2	73.3	89.5	62.8	83.3	101.7
	kW	6.10	5.96	5.86	6.18	6.05	5.95	6.18	6.05	5.95	6.18	6.10	6.00
85	TC	105.7	95.7	86.5	110.0	100.6	91.0	114.0	103.7	94.6	118.2	110.9	101.2
	SHC	43.6	57.1	69.9	47.8	62.8	76.9	50.7	67.9	82.8	74.7	77.7	94.8
	kW	6.92	6.78	6.63	6.97	6.90	6.75	7.01	6.85	6.75	7.01	6.91	6.80
95	TC	98.9	89.1	80.4	104.7	94.8	85.5	108.4	97.0	87.9	108.8	104.1	94.3
	SHC	38.0	51.7	64.8	42.7	57.0	71.4	45.2	62.4	76.2	86.5	72.0	87.9
	kW	7.73	7.59	7.40	7.75	7.75	7.56	7.84	7.65	7.54	7.84	7.71	7.60
105	TC	91.8	82.3	73.8	97.3	87.6	78.6	100.4	89.8	80.8	102.3	95.3	85.8
	SHC	32.6	46.3	59.5	37.0	51.9	66.8	39.3	56.7	70.0	68.6	65.5	80.9
	kW	8.80	8.64	8.47	8.80	8.76	8.58	8.89	8.69	8.59	8.93	8.77	8.67
115	TC	84.7	75.5	67.3	89.8	80.5	71.7	92.5	82.5	73.8	95.8	86.6	77.4
	SHC	27.2	40.9	54.2	31.4	46.9	62.2	33.4	51.0	63.8	50.6	59.1	73.9
	kW	9.86	9.69	9.53	9.86	9.77	9.61	9.95	9.74	9.65	10.01	9.84	9.75
125	TC	77.6	68.7	60.7	82.4	73.3	64.8	84.5	75.3	66.7	89.3	77.8	68.9
	SHC	21.8	35.5	48.9	25.7	41.8	57.6	27.5	45.3	57.6	32.7	52.6	66.9
	kW	10.93	10.74	10.60	10.91	10.78	10.64	11.00	10.78	10.70	11.10	10.90	10.82

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:

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

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.

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 x (1 – BF) x (edb – 80).

PERFORMANCE DATA (cont)

COOLING CAPACITIES, UNITS WITH PERFECT HUMIDITY™ OPTION (cont)

581B120 (10 TONS)													
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		3000/0.03			3200/0.03			4000/0.04			5000/0.04		
		Temp (F) Air Entering Evaporator — Ewb											
		72	67	62	72	67	62	72	67	62	72	67	62
75	TC	134.3	122.5	111.4	135.8	124.3	113.0	138.4	129.5	123.5	143.3	136.5	130.2
	SHC	60.0	76.1	93.7	61.3	79.1	97.4	68.0	89.5	109.4	75.2	100.9	123.3
	kW	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	127.6	115.4	104.6	128.9	118.1	107.0	132.5	121.5	116.6	137.2	128.0	122.9
	SHC	51.5	68.8	87.2	53.9	72.0	91.2	61.0	82.7	102.4	68.6	93.6	115.9
	kW	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	120.9	108.3	97.8	121.9	111.8	101.0	126.5	113.4	109.7	131.1	119.4	115.5
	SHC	43.0	61.5	80.6	46.5	64.8	84.9	53.9	75.9	95.4	62.0	86.2	108.4
	kW	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	112.0	99.9	90.4	113.1	103.2	93.4	117.2	105.0	100.7	122.1	110.5	105.9
	SHC	36.1	54.1	73.8	38.8	57.8	78.9	45.6	68.2	86.8	53.0	78.3	99.7
	kW	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	103.0	91.5	83.1	104.3	94.6	85.9	107.8	96.7	91.7	113.0	101.6	96.4
	SHC	29.2	46.7	66.9	31.2	50.7	72.9	37.3	60.6	78.3	44.0	70.3	90.9
	kW	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	94.1	83.1	75.7	95.5	86.0	78.3	98.5	88.3	82.7	104.0	92.7	86.8
	SHC	22.3	39.3	60.1	23.5	43.7	66.8	29.0	52.9	69.7	35.0	62.4	82.2
	kW	12.35	12.15	11.94	12.38	12.13	11.92	12.48	12.27	12.25	12.53	12.30	12.28

581B150 (12 1/2 TONS)													
Temp (F) Air Ent Condenser (Edb)		Temp (F) Air Entering Evaporator — Cfm/BF											
		3750/0.08			4300/0.09			5000/0.11			6250/0.13		
		Temp (F) Air Entering Evaporator — Ewb											
		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

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:

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

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.

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 x (1 – BF) x (edb – 80).

PERFORMANCE DATA (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS

581B036 (3 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)											
	0.1		0.2		0.3		0.4		0.5		0.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	**581**	**0.12**	**673**	**0.18**	**736**	**0.22**	805	0.25	865	0.29	911	0.34
1000	**644**	**0.19**	**709**	**0.22**	782	0.28	835	0.30	900	0.35	937	0.38
1100	**687**	**0.22**	**746**	**0.26**	806	0.30	867	0.35	929	0.40	964	0.40
1200	**733**	**0.26**	785	0.32	843	0.35	903	0.41	960	0.47	994	0.50
1300	**754**	**0.29**	826	0.38	891	0.43	942	0.48	991	0.53	1047	0.60
1400	810	0.35	868	0.45	937	0.51	984	0.57	1032	0.62	1067	0.67
1500	841	0.42	911	0.53	985	0.61	1029	0.66	1073	0.72	**1109**	**0.77**

581B036 (3 TONS) — STANDARD MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)											
	0.7		0.8		0.9		1.0		1.1		1.2	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	957	0.39	988	0.43	1039	0.47	1061	0.51	1083	0.54	**1105**	**0.58**
1000	992	0.44	1039	0.49	1061	0.55	1088	0.60	**1111**	**0.66**	**1136**	**0.72**
1100	1013	0.49	1068	0.55	**1091**	**0.61**	**1109**	**0.66**	**1127**	**0.73**	**1145**	**0.80**
1200	1045	0.56	1090	0.64	**1109**	**0.68**	**1156**	**0.73**	**1203**	**0.81**	**1250**	**0.86**
1300	1075	0.64	**1122**	**0.70**	**1152**	**0.76**	**1190**	**0.82**	**1228**	**0.87**	**1266**	**0.94**
1400	**1110**	**0.73**	**1160**	**0.78**	**1181**	**0.83**	**1237**	**0.88**	**1293**	**0.94**	**1349**	**0.99**
1500	**1150**	**0.78**	**1190**	**0.84**	**1225**	**0.89**	**1271**	**0.95**	**1371**	**1.00**	**1383**	**1.05**

581B036 (3 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	**673**	**0.18**	**805**	**0.25**	**911**	**0.34**	**988**	**0.43**	**1061**	**0.47**
1000	**709**	**0.22**	**835**	**0.30**	**937**	**0.38**	**1039**	**0.49**	1086	0.55
1100	**746**	**0.28**	**867**	**0.35**	**964**	**0.40**	**1068**	**0.55**	1109	0.61
1200	**785**	**0.32**	**903**	**0.41**	**994**	**0.50**	1090	0.64	1156	0.68
1300	**826**	**0.38**	**942**	**0.48**	**1047**	**0.60**	1122	0.70	1190	0.76
1400	**868**	**0.45**	**984**	**0.57**	1087	0.67	1160	0.84	1237	0.85
1500	**911**	**0.53**	**1029**	**0.66**	1109	0.77	1190	1.00	1271	0.95

581B036 (3 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	1105	0.57	1140	0.63	1170	0.68	1198	0.73	1224	0.77
1000	1136	0.63	1172	0.69	1203	0.75	1232	0.80	1258	0.86
1100	1145	0.67	1181	0.73	1213	0.80	1242	0.85	1268	0.91
1200	1210	0.74	1248	0.81	1282	0.88	1312	0.94	1340	1.01
1300	1266	0.84	1306	0.92	1341	1.00	1373	1.07	1402	1.14
1400	1349	0.93	1391	1.02	1429	1.11	**1463**	**1.19**	**1494**	**1.26**
1500	1363	1.05	1406	1.15	**1465**	**1.25**	**1500**	**1.34**	**1532**	**1.43**

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. **Boldface** indicates field-supplied drive required. (See Note 2.)
2. Motor drive range is 760 to 1090 rpm for standard motor; 1075 to 1455 rpm for high-static motor. All other rpms require a field-supplied drive.
3. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
4. Maximum continuous bhp is 1.20 for standard motor, 2.40 for high-static motor. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
5. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
6. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

581B048 (4 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)													
	0.1		0.2		0.3		0.4		0.6		0.7		0.8	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	**596**	**0.20**	**665**	**0.25**	**722**	**0.31**	**779**	**0.36**	872	0.48	915	0.54	957	0.60
1300	**633**	**0.24**	**699**	**0.30**	**754**	**0.36**	**809**	**0.42**	902	0.55	943	0.61	984	0.67
1400	**672**	**0.30**	**735**	**0.36**	**788**	**0.42**	840	0.48	933	0.62	972	0.69	1011	0.75
1500	**711**	**0.35**	**770**	**0.42**	**822**	**0.49**	873	0.55	963	0.69	1002	0.77	1041	0.84
1600	**751**	**0.42**	**835**	**0.49**	871	0.56	907	0.63	993	0.77	1033	0.85	1072	0.93
1700	**791**	**0.49**	873	0.57	907	0.65	941	0.72	1024	0.87	1064	0.96	1103	1.04
1800	**831**	**0.58**	881	0.66	929	0.74	976	0.81	1057	0.97	1095	1.06	1132	1.14
1900	872	0.67	919	0.75	965	0.84	1011	0.92	1091	1.08	1127	1.17	1162	1.25
2000	913	0.77	958	0.86	1002	0.95	1046	1.03	1125	1.21	1160	1.30	1195	1.38

581B048 (4 TONS) — STANDARD MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)													
	0.9		1.0		1.1		1.2		1.4		1.6		1.8	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	993	0.65	1028	0.69	1056	0.72	1083	0.74	1134	0.80	1185	0.88	**1231**	**0.99**
1300	1021	0.74	1058	0.80	1090	0.85	1121	0.89	1171	0.94	**1219**	**1.00**	**1268**	**1.10**
1400	1049	0.82	1086	0.89	1120	0.96	1153	1.00	**1210**	**1.12**	**1257**	**1.17**	1307	1.25
1500	1077	0.92	1113	0.99	1147	1.06	1180	1.13	1241	1.27	1295	1.37	1339	1.43
1600	1107	1.00	1141	1.09	1174	1.17	1207	1.25	1269	1.40	1326	1.54	1376	1.65
1700	1137	1.12	1171	1.20	1203	1.29	1235	1.37	1296	1.53	1354	1.70	1407	1.84
1800	1167	1.23	1202	1.32	1233	1.41	1263	1.49	1323	1.67	1381	1.85	1436	2.02
1900	1197	1.35	1232	1.45	1263	1.54	1294	1.63	1351	1.81	1408	2.00	1463	2.19
2000	1229	1.48	1262	1.58	1294	1.68	1325	1.78	1362	1.97	1436	2.16	1489	2.36

581B048 (4 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	**665**	**0.25**	**779**	**0.36**	**872**	**0.48**	**957**	**0.60**	**1028**	**0.69**
1300	**699**	**0.30**	**809**	**0.42**	**902**	**0.55**	**984**	**0.67**	**1058**	**0.80**
1400	**735**	**0.36**	**840**	**0.48**	**933**	**0.62**	**1011**	**0.75**	1086	0.89
1500	**770**	**0.42**	**873**	**0.55**	**963**	**0.69**	**1041**	**0.84**	1113	0.99
1600	**835**	**0.49**	**907**	**0.63**	**993**	**0.77**	**1072**	**0.93**	1141	1.09
1700	**873**	**0.57**	**941**	**0.72**	**1024**	**0.87**	1103	1.04	1171	1.20
1800	**881**	**0.66**	**976**	**0.81**	**1057**	**0.97**	1132	1.14	1202	1.32
1900	**919**	**0.75**	**1011**	**0.92**	1091	1.08	1162	1.25	1232	1.45
2000	**958**	**0.86**	**1046**	**1.03**	1125	1.21	1195	1.38	1262	1.58

581B048 (4 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	1083	0.74	1134	0.80	1185	0.88	1331	0.99	1374	1.09
1300	1121	0.89	1171	0.94	1219	1.00	1268	1.10	1309	1.21
1400	1153	1.00	1210	1.12	1257	1.17	1307	1.25	1349	1.37
1500	1180	1.13	1241	1.27	1295	1.37	1339	1.43	1382	1.57
1600	1207	1.25	1269	1.40	1326	1.54	1376	1.65	1420	1.81
1700	1235	1.37	1296	1.53	1354	1.70	1407	1.84	1452	2.02
1800	1263	1.49	1323	1.67	1381	1.85	1436	2.02	**1482**	**2.22**
1900	1294	1.63	1351	1.81	1408	2.00	**1463**	**2.19**	—	—
2000	1325	1.78	1362	1.97	1436	2.16	**1489**	**2.36**	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▒ indicates field-supplied motor and drive required.
3. Motor drive range is 840 to 1185 rpm for standard motor; 1075 to 1455 rpm for high-static motor. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 1.2 for standard motor, 2.4 for high-static motor. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA — (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

581B060 (5 TONS) — STANDARD MOTOR — SINGLE-PHASE UNITS

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.1		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	**771**	**0.37**	**828**	**0.44**	**935**	**0.58**	1027	0.73	1107	0.88	1185	1.04	1257	1.20	1330	1.38	1411	1.59
1600	**816**	**0.45**	**869**	**0.51**	**968**	**0.66**	1056	0.81	1127	0.97	1215	1.14	1286	1.31	1353	1.49	1421	1.68
1700	**902**	**0.61**	**940**	**0.60**	**1007**	**0.75**	1094	0.91	1175	1.09	1245	1.26	1315	1.44	1381	1.52	1443	1.69
1800	**942**	**0.70**	**978**	**0.66**	1063	0.82	1147	0.97	1248	1.20	1322	1.33	1395	1.46	1475	1.56	1542	1.71
1900	**982**	**0.80**	1023	0.78	1097	0.91	1175	1.11	1266	1.29	1356	1.47	1430	1.58	1504	1.69	1556	1.82
2000	1022	0.91	1068	0.90	1132	1.01	1218	1.23	1303	1.41	1397	1.52	1459	1.67	1532	1.82	1588	1.97
2100	1063	0.99	1115	1.00	1180	1.17	1261	1.35	1340	1.53	1428	1.66	1489	1.80	1567	1.99	1626	2.16
2200	1104	1.13	1159	1.15	1214	1.28	1310	1.52	1375	1.63	1459	1.80	1528	1.95	1603	2.17	1666	2.37
2300	1130	1.26	1202	1.29	1248	1.38	1358	1.69	1410	1.72	1488	1.93	1561	2.13	1637	2.35	1710	2.54
2400	1174	1.37	1237	1.41	1292	1.55	1392	1.81	1460	1.90	1532	2.14	1584	2.28	1671	2.55	1756	2.70
2500	1201	1.48	1272	1.53	1335	1.71	1427	1.94	1518	2.16	1575	2.35	1633	2.53	1698	2.72	—	—

581B060 (5 TONS) — STANDARD MOTOR — THREE-PHASE UNITS

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.1		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	**771**	**0.37**	**828**	**0.44**	**935**	**0.58**	**1027**	**0.73**	**1107**	**0.88**	1185	1.04	1257	1.20	1330	1.38	1411	1.59
1600	**816**	**0.45**	**869**	**0.51**	**968**	**0.66**	**1056**	**0.81**	1127	0.97	1215	1.14	1286	1.31	1353	1.49	1421	1.68
1700	**902**	**0.61**	**940**	**0.60**	**1007**	**0.75**	**1094**	**0.91**	1175	1.09	1245	1.26	1315	1.44	1381	1.52	1443	1.69
1800	**942**	**0.70**	**978**	**0.66**	**1063**	**0.82**	1147	0.97	1248	1.20	1322	1.33	1395	1.46	1475	1.56	1542	1.71
1900	**982**	**0.80**	**1023**	**0.78**	**1097**	**0.91**	1175	1.11	1266	1.29	1356	1.47	1430	1.58	1504	1.69	1556	1.82
2000	**1022**	**0.91**	**1068**	**0.90**	1132	1.01	1218	1.23	1303	1.41	1397	1.52	1459	1.67	1532	1.82	**1588**	**1.97**
2100	**1063**	**0.99**	1115	1.00	1180	1.17	1261	1.35	1340	1.53	1428	1.66	1489	1.80	1567	1.99	**1626**	**2.16**
2200	**1104**	**1.13**	1159	1.15	1214	1.28	1310	1.52	1375	1.63	1459	1.80	1528	1.95	**1603**	**2.17**	**1666**	**2.37**
2300	1130	1.26	1202	1.29	1248	1.38	1358	1.69	1410	1.72	1488	1.93	1561	2.13	**1637**	**2.35**	1710	2.54
2400	1174	1.37	1237	1.41	1292	1.55	1392	1.81	1460	1.90	1532	2.14	1584	2.28	1671	2.55	1756	2.70
2500	1201	1.48	1272	1.53	1335	1.71	1427	1.94	1518	2.16	1575	2.35	1633	2.53	1698	2.72	—	—

581B060 (5 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	**808**	**0.42**	**914**	**0.56**	**1001**	**0.69**	**1084**	**0.85**	**1168**	**1.01**
1600	**846**	**0.49**	**950**	**0.64**	**1034**	**0.78**	**1111**	**0.94**	**1194**	**1.11**
1700	**884**	**0.57**	**983**	**0.72**	**1068**	**0.88**	**1145**	**1.03**	**1218**	**1.21**
1800	**924**	**0.66**	**1018**	**0.82**	**1105**	**0.98**	**1179**	**1.13**	**1246**	**1.32**
1900	**965**	**0.76**	**1057**	**0.92**	**1143**	**1.10**	**1212**	**1.26**	**1280**	**1.43**
2000	**1008**	**0.87**	**1096**	**1.04**	**1177**	**1.22**	**1247**	**1.40**	1300	1.57
2100	**1051**	**0.99**	**1136**	**1.17**	**1210**	**1.35**	**1284**	**1.54**	1347	1.72
2200	**1095**	**1.12**	**1173**	**1.30**	**1245**	**1.49**	1322	1.70	1380	1.89
2300	**1140**	**1.26**	**1210**	**1.47**	**1284**	**1.65**	1356	1.80	1418	2.07
2400	**1185**	**1.41**	**1249**	**1.61**	1323	1.80	1389	2.03	1456	2.26
2500	**1231**	**1.57**	**1289**	**1.78**	1363	2.00	1424	2.22	1500	2.45

581B060 (5 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	**1199**	**1.19**	1126	1.46	1250	1.69	1301	1.91	1349	2.12
1600	**1263**	**1.28**	1275	1.49	1299	1.78	1352	2.01	1401	2.23
1700	**1295**	**1.39**	1351	1.58	1352	1.80	1407	2.03	1459	2.26
1800	1319	1.52	1389	1.71	1435	1.91	1494	2.15	1548	2.40
1900	1343	1.64	1415	1.80	1478	2.05	1538	2.31	1594	2.57
2000	1374	1.77	1438	1.99	1505	2.21	1566	2.49	1624	2.77
2100	1409	1.91	1465	2.14	1533	2.45	1596	2.77	1654	3.08
2200	1442	2.08	1498	2.30	1568	2.64	1632	2.97	1691	3.31
2300	1475	2.26	1554	2.64	1627	3.03	1693	3.42	1755	3.81
2400	1565	2.47	1649	2.89	1726	3.31	—	—	—	—
2500	1596	2.95	1682	3.45	1760	3.96	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 1020 to 1460 rpm for single-phase standard motors, 1120 to 1585 for 3-phase standard motors, and 1300 to 1685 for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 1.30 for single-phase standard motors, 2.40 for 3-phase standard motors, and 2.90 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

581B072 (6 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.1		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	**942**	**0.70**	**978**	**0.66**	**1063**	**0.82**	1147	0.97	1248	1.20	1322	1.33	1395	1.46	1475	1.56	1542	1.71
1900	**982**	**0.80**	**1023**	**0.78**	**1097**	**0.91**	1175	1.11	1266	1.29	1356	1.47	1430	1.58	1504	1.69	1556	1.82
2000	**1022**	**0.91**	**1068**	**0.90**	1132	1.01	1218	1.23	1303	1.41	1397	1.52	1459	1.67	1532	1.82	**1588**	**1.97**
2100	**1063**	**0.99**	**1115**	**1.00**	1180	1.17	1261	1.35	1340	1.53	1428	1.66	1489	1.80	1567	1.99	**1626**	**2.16**
2200	**1104**	**1.13**	1159	1.15	1214	1.28	1310	1.52	1375	1.63	1459	1.80	1528	1.95	**1603**	**2.17**	**1666**	**2.37**
2300	1130	1.26	1202	1.29	1248	1.38	1358	1.69	1410	1.72	1488	1.93	1561	2.13	**1637**	**2.35**	1710	2.54
2400	1174	1.37	1237	1.41	1292	1.55	1392	1.81	1460	1.90	1532	2.14	1584	2.28	1671	2.55	1756	2.70
2500	1201	1.48	1272	1.53	1335	1.71	1427	1.94	1518	2.16	1575	2.35	1633	2.53	1698	2.72	—	—
2600	1246	1.62	1320	1.68	1368	1.81	1458	2.06	1562	2.42	1620	2.59	1675	2.77	—	—	—	—
2700	1285	1.75	1361	1.82	1400	1.91	1490	2.19	1602	2.64	1666	2.85	—	—	—	—	—	—
2800	1304	1.87	1402	1.95	1439	2.08	1543	2.43	1642	2.86	—	—	—	—	—	—	—	—
2900	1345	2.07	1446	2.16	1477	2.16	1585	2.65	—	—	—	—	—	—	—	—	—	—
3000	1378	2.26	1489	2.36	1529	2.52	1598	2.73	—	—	—	—	—	—	—	—	—	—

581B072 (6 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	**978**	**0.66**	**1063**	**0.82**	**1147**	**0.97**	**1248**	**1.20**	1322	1.33
1900	**1023**	**0.78**	**1097**	**0.91**	**1175**	**1.11**	**1266**	**1.29**	1356	1.47
2000	**1068**	**0.90**	**1132**	**1.01**	**1218**	**1.23**	1303	1.41	1397	1.52
2100	**1115**	**1.00**	**1180**	**1.17**	**1261**	**1.35**	1340	1.53	1428	1.66
2200	**1159**	**1.15**	**1214**	**1.28**	1310	1.52	1375	1.63	1459	1.80
2300	**1202**	**1.29**	**1248**	**1.38**	1358	1.69	1410	1.72	1488	1.93
2400	**1237**	**1.41**	**1292**	**1.55**	1392	1.81	1460	1.90	1532	2.14
2500	**1272**	**1.53**	1335	1.71	1427	1.94	1518	2.16	1575	2.35
2600	1320	1.68	1368	1.81	1458	2.06	1562	2.42	1620	2.59
2700	1361	1.82	1400	1.91	1490	2.19	1602	2.64	1666	2.85
2800	1402	1.95	1439	2.08	1543	2.43	1642	2.86	1775	3.62
2900	1446	2.16	1477	2.16	1585	2.65	1753	3.58	—	—
3000	1489	2.36	1529	2.52	1598	2.73	1767	3.69	—	—

581B072 (6 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	1395	1.46	1475	1.56	1542	1.71	1607	1.94	1667	2.16
1900	1430	1.58	1504	1.69	1556	1.82	1621	2.06	1682	2.30
2000	1459	1.67	1532	1.82	1588	1.97	1655	2.23	**1717**	**2.49**
2100	1489	1.80	1567	1.99	1626	2.16	**1694**	**2.44**	**1758**	**2.73**
2200	1528	1.95	1603	2.17	1666	2.37	**1736**	**2.68**	—	—
2300	1561	2.13	1637	2.35	**1710**	**2.54**	**1782**	**2.87**	—	—
2400	1584	2.28	1671	2.55	**1756**	**2.70**	—	—	—	—
2500	1633	2.53	**1698**	**2.72**	1779	3.13	—	—	—	—
2600	1675	2.77	1768	3.26	—	—	—	—	—	—
2700	1776	3.45	—	—	—	—	—	—	—	—
2800	—	—	—	—	—	—	—	—	—	—
2900	—	—	—	—	—	—	—	—	—	—
3000	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 1120 to 1585 rpm for standard motors, 1300 to 1685 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 2.40 for standard motors, 2.90 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

581B090 (7½ TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)															
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	**506**	**0.52**	**586**	**0.72**	**656**	**0.95**	**718**	**1.18**	**776**	**1.43**	**838**	**1.78**	898	2.21	935	2.58
2250	**514**	**0.55**	**593**	**0.76**	**662**	**0.99**	**724**	**1.22**	**781**	**1.78**	841	1.81	902	2.25	939	2.60
2300	**521**	**0.57**	**600**	**0.79**	**668**	**1.02**	**730**	**1.26**	**786**	**1.50**	843	1.83	905	2.28	943	2.62
2400	**536**	**0.63**	**613**	**0.85**	**680**	**1.09**	**741**	**1.34**	**796**	**1.59**	849	1.88	910	2.31	952	2.74
2500	**551**	**0.69**	**626**	**0.93**	**693**	**1.17**	**753**	**1.43**	**808**	**1.69**	859	1.96	912	2.31	963	2.81
2550	**559**	**0.72**	**634**	**0.97**	**700**	**1.21**	**759**	**1.48**	**814**	**1.74**	864	2.01	915	2.34	968	2.81
2600	**567**	**0.75**	**641**	**1.00**	**706**	**1.25**	**764**	**1.52**	**819**	**1.79**	869	2.06	918	2.37	973	2.81
2700	**582**	**0.83**	**655**	**1.08**	**719**	**1.34**	**776**	**1.61**	**831**	**1.89**	880	2.17	927	2.47	976	2.84
2800	**598**	**0.90**	**670**	**1.17**	**732**	**1.43**	**789**	**1.71**	842	2.00	892	2.29	938	2.58	983	2.92
2900	**614**	**0.98**	**684**	**1.25**	**745**	**1.53**	**802**	**1.81**	854	2.11	903	2.42	949	2.71	993	3.03
3000	**630**	**1.07**	**699**	**1.35**	**759**	**1.63**	**815**	**1.92**	866	2.23	915	2.54	961	2.85	1003	3.17
3100	**646**	**1.16**	**714**	**1.45**	**773**	**1.74**	**828**	**2.04**	878	2.35	926	2.67	972	3.00	1015	3.32
3200	**662**	**1.26**	**729**	**1.55**	**787**	**1.86**	841	2.16	891	2.48	938	2.81	983	3.14	1026	3.47
3300	**679**	**1.36**	**744**	**1.66**	**801**	**1.98**	854	2.29	904	2.61	950	2.95	995	3.30	—	—
3400	**695**	**1.47**	**759**	**1.78**	**816**	**2.10**	867	2.42	917	2.75	963	3.10	1007	3.45	—	—
3500	**712**	**1.59**	**774**	**1.90**	**830**	**2.23**	881	2.56	930	2.90	976	3.25	—	—	—	—
3600	**729**	**1.71**	**790**	**2.03**	845	2.37	895	2.71	943	3.05	988	3.41	—	—	—	—
3700	**745**	**1.84**	**805**	**2.17**	860	2.52	909	2.87	956	3.22	—	—	—	—	—	—
3750	**754**	**1.91**	**813**	**2.24**	868	2.59	917	2.95	963	3.30	—	—	—	—	—	—

581B090 (7½ TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	**506**	**0.52**	**586**	**0.72**	**656**	**0.95**	**718**	**1.18**	**776**	**1.43**
2250	**514**	**0.55**	**593**	**0.76**	**662**	**0.99**	**724**	**1.22**	**781**	**1.48**
2300	**521**	**0.57**	**600**	**0.79**	**668**	**1.02**	**730**	**1.26**	**786**	**1.50**
2400	**536**	**0.63**	**613**	**0.85**	**680**	**1.09**	**741**	**1.34**	**796**	**1.59**
2500	**551**	**0.69**	**626**	**0.93**	**693**	**1.17**	**753**	**1.43**	**808**	**1.69**
2550	**559**	**0.72**	**634**	**0.97**	**700**	**1.21**	**759**	**1.48**	**814**	**1.74**
2600	**567**	**0.75**	**641**	**1.00**	**706**	**1.25**	**764**	**1.52**	**819**	**1.79**
2700	**582**	**0.83**	**655**	**1.08**	**719**	**1.34**	**776**	**1.61**	**831**	**1.89**
2800	**598**	**0.90**	**670**	**1.17**	**732**	**1.43**	**789**	**1.71**	**842**	**2.00**
2900	**614**	**0.98**	**684**	**1.25**	**745**	**1.53**	**802**	**1.81**	**854**	**2.11**
3000	**630**	**1.07**	**699**	**1.35**	**759**	**1.63**	**815**	**1.92**	866	2.23
3100	**646**	**1.16**	**714**	**1.45**	**773**	**1.74**	**828**	**2.04**	878	2.35
3200	**662**	**1.26**	**729**	**1.55**	**787**	**1.86**	**841**	**2.16**	891	2.48
3300	**679**	**1.36**	**744**	**1.66**	**801**	**1.98**	**854**	**2.29**	904	2.61
3400	**695**	**1.47**	**759**	**1.78**	**816**	**2.10**	867	2.42	917	2.75
3500	**712**	**1.59**	**774**	**1.90**	**830**	**2.23**	881	2.56	930	2.90
3600	**729**	**1.71**	**790**	**2.03**	**845**	**2.37**	895	2.71	943	3.05
3700	**745**	**1.84**	**805**	**2.17**	**860**	**2.52**	909	2.87	956	3.22
3750	**754**	**1.91**	**813**	**2.24**	868	2.59	917	2.95	963	3.30

581B090 (7½ TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	**838**	**1.78**	898	2.21	935	2.58	974	2.92	1011	3.26
2250	**841**	**1.81**	902	2.25	939	2.60	979	2.94	1015	3.29
2300	**843**	**1.83**	905	2.28	943	2.62	983	2.96	1020	3.31
2400	**849**	**1.88**	910	2.31	952	2.74	992	3.10	1029	3.46
2500	**859**	**1.96**	912	2.31	963	2.81	1004	3.18	1041	3.55
2550	864	2.01	915	2.34	968	2.81	1009	3.18	1047	3.55
2600	869	2.06	918	2.37	973	2.81	1014	3.18	1052	3.55
2700	880	2.17	927	2.47	976	2.84	1017	3.21	1055	3.59
2800	892	2.29	938	2.58	983	2.92	1024	3.30	1063	3.69
2900	903	2.42	949	2.71	993	3.03	1035	3.43	1074	3.83
3000	915	2.54	961	2.85	1003	3.17	1045	3.59	**1084**	**4.01**
3100	926	2.67	972	3.00	1015	3.32	1058	3.76	1097	4.20
3200	938	2.81	983	3.14	1026	3.47	1069	3.93	1109	4.39
3300	950	2.95	995	3.30	1043	3.80	1086	4.30	1127	4.80
3400	963	3.10	1007	3.45	1055	3.97	1100	4.49	1141	5.02
3500	976	3.25	1030	3.82	1079	4.40	1125	4.97	1167	5.56
3600	988	3.41	1043	4.01	1093	4.61	1139	5.22	1181	5.83
3700	1019	3.90	1075	4.58	1127	5.27	1174	5.97	1218	6.67
3750	1026	4.00	1083	4.70	1135	5.41	1183	6.12	1227	6.83

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 840 to 1085 rpm for standard motors; 860 to 1080 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 2.90 for standard motors, 4.20 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

581B102 (8 1/2 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)															
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2550	**559**	**0.72**	**634**	**0.97**	**700**	**1.21**	**759**	**1.48**	**814**	**1.74**	864	2.01	915	2.34	968	2.81
2600	**567**	**0.75**	**641**	**1.00**	**706**	**1.25**	**764**	**1.52**	**819**	**1.79**	869	2.06	918	2.37	973	2.81
2700	**582**	**0.83**	**655**	**1.08**	**719**	**1.34**	**776**	**1.61**	**831**	**1.89**	880	2.17	927	2.47	976	2.84
2800	**598**	**0.90**	**670**	**1.17**	**732**	**1.43**	**789**	**1.71**	842	2.00	892	2.29	938	2.58	983	2.92
2900	**614**	**0.98**	**684**	**1.25**	**745**	**1.53**	**802**	**1.81**	854	2.11	903	2.42	949	2.71	993	3.03
3000	**630**	**1.07**	**690**	**1.35**	**759**	**1.63**	**815**	**1.92**	866	2.23	915	2.54	961	2.85	1003	3.17
3100	**646**	**1.16**	**714**	**1.45**	**773**	**1.74**	**828**	**2.04**	878	2.35	926	2.67	972	3.00	1016	3.32
3200	**662**	**1.26**	**729**	**1.55**	**787**	**1.86**	841	2.16	891	2.48	938	2.81	983	3.14	1026	3.47
3300	**679**	**1.36**	**744**	**1.66**	**801**	**1.98**	854	2.29	904	2.61	950	2.95	995	3.30	—	—
3400	**695**	**1.47**	**759**	**1.78**	**816**	**2.10**	867	2.42	917	2.75	963	3.10	1007	3.45	—	—
3500	**712**	**1.59**	**774**	**1.90**	**830**	**2.23**	881	2.56	930	2.90	976	3.25	—	—	—	—
3600	**729**	**1.71**	**790**	**2.03**	845	2.37	895	2.71	943	3.05	988	3.41	—	—	—	—
3700	**745**	**1.84**	**805**	**2.17**	860	2.52	909	2.87	956	3.22	—	—	—	—	—	—
3750	**754**	**1.91**	**813**	**2.24**	868	2.59	917	2.95	963	3.30	—	—	—	—	—	—
3800	**762**	**1.98**	**821**	**2.31**	875	2.66	924	3.03	970	3.38	—	—	—	—	—	—
3900	**779**	**2.12**	**836**	**2.46**	890	2.82	938	3.19	—	—	—	—	—	—	—	—
4000	**796**	**2.27**	852	2.61	905	2.98	953	3.37	—	—	—	—	—	—	—	—
4100	**813**	**2.42**	868	2.78	920	3.15	—	—	—	—	—	—	—	—	—	—
4200	**830**	**2.59**	884	2.95	935	3.33	—	—	—	—	—	—	—	—	—	—
4250	**839**	**2.68**	890	3.04	—	—	—	—	—	—	—	—	—	—	—	—
4300	847	2.76	900	3.13	—	—	—	—	—	—	—	—	—	—	—	—

581B102 (8 1/2 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2550	**559**	**0.72**	**634**	**0.97**	**700**	**1.21**	**759**	**1.48**	**814**	**1.74**
2600	**567**	**0.75**	**641**	**1.00**	**706**	**1.25**	**764**	**1.52**	**819**	**1.79**
2700	**582**	**0.83**	**655**	**1.08**	**719**	**1.34**	**776**	**1.61**	**831**	**1.89**
2800	**598**	**0.90**	**670**	**1.17**	**732**	**1.43**	**789**	**1.71**	**842**	**2.00**
2900	**614**	**0.98**	**684**	**1.25**	**745**	**1.53**	**802**	**1.81**	**854**	**2.11**
3000	**630**	**1.07**	**690**	**1.35**	**759**	**1.63**	**815**	**1.92**	866	2.23
3100	**646**	**1.16**	**714**	**1.45**	**773**	**1.74**	**828**	**2.04**	878	2.35
3200	**682**	**1.26**	**729**	**1.55**	**787**	**1.86**	**841**	**2.16**	891	2.48
3300	**679**	**1.36**	**744**	**1.66**	**801**	**1.98**	**854**	**2.29**	904	2.61
3400	**695**	**1.47**	**759**	**1.78**	**816**	**2.10**	867	2.42	917	2.75
3500	**712**	**1.59**	**774**	**1.90**	**830**	**2.23**	881	2.56	930	2.90
3600	**729**	**1.71**	**790**	**2.03**	**845**	**2.37**	895	2.71	943	3.05
3700	**745**	**1.84**	**805**	**2.17**	860	2.52	909	2.87	956	3.22
3750	**754**	**1.91**	**813**	**2.24**	868	2.59	917	2.95	963	3.30
3800	**762**	**1.98**	**821**	**2.31**	875	2.66	924	3.03	970	3.38
3900	**779**	**2.12**	**836**	**2.46**	890	2.82	938	3.19	981	3.65
4000	**796**	**2.27**	**852**	**2.61**	905	2.98	953	3.37	996	3.85
4100	**813**	**2.42**	868	2.78	920	3.15	974	3.74	1019	4.28
4200	**830**	**2.59**	884	2.95	935	3.33	990	3.96	1036	4.52
4250	**839**	**2.68**	890	3.04	965	3.88	1022	4.61	1069	5.27
4300	**847**	**2.76**	900	3.13	976	3.99	1034	4.74	1081	5.42

581B102 (8 1/2 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2550	864	2.01	915	2.34	968	2.81	991	3.02	1012	3.21
2600	869	2.06	918	2.37	973	2.81	996	3.02	1017	3.21
2700	880	2.17	927	2.47	976	2.84	999	3.05	1021	3.25
2800	892	2.29	938	2.58	983	2.92	1006	3.13	1028	3.34
2900	903	2.42	949	2.71	993	3.03	1017	3.25	1038	3.46
3000	915	2.54	961	2.85	1003	3.17	1027	3.40	1049	3.62
3100	926	2.67	972	3.00	1016	3.32	1040	3.56	1062	3.80
3200	938	2.81	983	3.14	1026	3.47	1050	3.72	1073	3.97
3300	950	2.95	995	3.30	1022	3.58	1046	3.84	1069	4.09
3400	963	3.10	1007	3.45	1034	3.74	1059	4.01	1081	4.27
3500	976	3.25	1007	3.56	1034	3.86	1058	4.15	1081	4.42
3600	988	3.41	1019	3.74	1047	4.05	1071	4.35	1094	4.63
3700	992	3.59	1023	3.94	1050	4.27	1075	4.58	1098	4.88
3750	999	3.68	1030	4.04	1058	4.38	1083	4.70	1106	5.00
3800	1006	3.77	1038	4.14	1066	4.48	1091	4.81	1114	5.12
3900	1017	4.07	1049	4.46	1077	4.84	1103	5.19	1127	5.53
4000	1034	4.30	1066	4.71	1095	5.11	1121	5.48	1145	5.84
4100	1057	4.77	1090	5.24	1119	5.67	1146	6.09	1170	6.49
4200	1074	5.05	1108	5.54	1138	6.00	1165	6.44	1190	6.86
4250	1109	5.88	1143	6.45	1174	6.98	1202	7.50	1228	7.98
4300	1121	6.05	1156	6.64	1188	7.19	1216	7.72	1242	8.22

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 840 to 1085 rpm for standard motors, 860 to 1080 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 2.90 for standard motors, 4.20 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — VERTICAL DISCHARGE UNITS (cont)

581B120 (10 TONS) — STANDARD AND HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3000	**556**	**0.65**	**624**	**0.81**	**682**	**0.95**	**737**	**0.99**	**745**	**1.04**	**750**	**1.12**	**809**	**1.24**	875	1.40	899	1.56	950	1.92
3100	**569**	**0.70**	**636**	**0.87**	**693**	**1.01**	**748**	**1.08**	**755**	**1.12**	**757**	**1.20**	862	1.38	903	1.53	943	1.88	971	2.21
3200	**583**	**0.76**	**649**	**0.94**	**705**	**1.08**	**758**	**1.17**	**787**	**1.30**	**769**	**1.36**	905	1.52	971	1.86	982	2.19	992	2.41
3300	**597**	**0.83**	**662**	**1.00**	**717**	**1.16**	**770**	**1.29**	**815**	**1.37**	**780**	**1.43**	965	1.82	991	2.10	1000	2.40	1025	2.59
3400	**611**	**0.90**	**675**	**1.08**	**730**	**1.23**	**781**	**1.41**	830	1.50	838	1.63	992	2.11	1015	2.43	1030	2.62	1050	2.72
3500	**625**	**0.97**	**688**	**1.15**	**742**	**1.32**	**792**	**1.49**	840	1.64	860	1.85	1011	2.45	1028	2.62	1072	2.74	1099	2.90
3600	**639**	**1.04**	**701**	**1.23**	**755**	**1.41**	**803**	**1.57**	850	1.87	890	2.21	1026	2.55	1063	2.75	1095	2.89	1119	3.08
3700	**729**	**1.36**	**790**	**1.58**	847	1.79	902	2.06	955	2.29	1008	2.55	1060	2.80	1108	3.05	**1152**	**3.27**	**1190**	**3.46**
3800	**745**	**1.46**	**805**	**1.69**	861	1.89	915	2.17	967	2.41	1019	2.67	1070	2.94	1118	3.19	**1163**	**3.44**	**1203**	**3.65**
3900	**761**	**1.56**	**820**	**1.80**	875	2.01	928	2.29	979	2.55	1029	2.80	1079	3.07	1128	3.34	**1173**	**3.60**	**1214**	**3.83**
4000	**777**	**1.67**	836	1.92	889	2.14	941	2.40	991	2.68	1040	2.94	1089	3.22	**1137**	**3.49**	**1183**	**3.76**	**1225**	**4.00**
4100	**793**	**1.79**	851	2.05	904	2.27	955	2.52	1004	2.82	1052	3.08	1100	3.36	**1147**	**3.65**	**1193**	**3.93**	**1236**	**4.19**
4200	**810**	**1.91**	867	2.18	918	2.41	968	2.65	1017	2.96	1064	3.23	1110	3.51	**1157**	**3.81**	**1202**	**4.09**	**1245**	**4.38**
4300	**826**	**2.04**	883	2.32	933	2.55	982	2.79	1030	3.11	1076	3.40	1121	3.67	**1167**	**3.97**	**1212**	**4.27**	**1255**	**4.56**
4400	842	2.17	898	2.46	948	2.70	996	2.93	1043	3.25	1088	3.56	**1133**	**3.84**	**1178**	**4.14**	**1222**	**4.44**	**1265**	**4.74**
4500	859	2.31	914	2.60	962	2.85	1010	3.09	1056	3.40	1101	3.73	**1144**	**4.00**	**1188**	**4.31**	**1232**	**4.62**	**1274**	**4.93**
4600	876	2.45	930	2.76	977	3.01	1024	3.26	1070	3.55	1114	3.90	**1157**	**4.19**	**1199**	**4.49**	**1242**	**4.81**	**1284**	**5.13**
4700	892	2.60	945	2.91	992	3.18	1039	3.43	1083	3.71	1126	4.07	**1169**	**4.38**	**1210**	**4.68**	**1252**	**5.00**	—	—
4800	909	2.77	961	3.07	1008	3.36	1053	3.61	1097	3.88	**1140**	**4.25**	**1181**	**4.58**	**1222**	**4.87**	**1263**	**5.20**	—	—
4900	926	2.93	977	3.24	1024	3.54	1068	3.80	1111	4.06	**1153**	**4.41**	**1194**	**4.77**	**1234**	**5.09**	—	—	—	—
5000	942	3.11	993	3.41	1039	3.73	1080	3.99	1125	4.25	**1166**	**4.59**	**1207**	**4.97**	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▒ indicates high static motor and drive required.
3. Motor drive range is 860 to 1080 rpm for standard motors; 830 to 1130 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 3.70 for standard motors, 5.25 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.

581B150 (12 1/2 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3700	—	—	—	—	—	—	902	2.06	955	2.29	1008	2.55	1060	2.80	1108	3.05	1152	3.27	1190	3.46
3800	—	—	—	—	**861**	**1.89**	915	2.17	967	2.41	1019	2.67	1070	2.94	1118	3.19	1163	3.44	1203	3.65
3900	—	—	—	—	**875**	**2.01**	928	2.29	979	2.55	1029	2.80	1079	3.07	1128	3.34	1173	3.60	1214	3.83
4000	—	—	—	—	**889**	**2.14**	941	2.40	991	2.68	1040	2.94	1089	3.22	1137	3.49	1183	3.76	1225	4.00
4100	—	—	—	—	904	2.27	955	2.52	1004	2.82	1052	3.08	1100	3.36	1147	3.65	1193	3.93	1236	4.19
4200	—	—	**867**	**2.18**	918	2.41	968	2.65	1017	2.96	1064	3.23	1110	3.51	1157	3.81	1202	4.09	1245	4.38
4300	—	—	**883**	**2.32**	933	2.55	982	2.79	1030	3.11	1076	3.40	1121	3.67	1167	3.97	1212	4.27	1255	4.56
4400	—	—	**898**	**2.46**	948	2.70	996	2.93	1043	3.25	1088	3.56	1133	3.84	1178	4.14	1222	4.44	**1265**	**4.74**
4500	—	—	914	2.60	962	2.85	1010	3.09	1056	3.40	1101	3.73	1144	4.00	1188	4.31	1232	4.62	**1274**	**4.93**
4600	**876**	**2.45**	930	2.76	977	3.01	1024	3.26	1070	3.55	1114	3.90	1157	4.19	1199	4.49	1242	4.81	**1284**	**5.13**
4700	**892**	**2.60**	945	2.91	992	3.18	1039	3.43	1083	3.71	1126	4.07	1169	4.38	1210	4.68	1252	5.00	—	—
4800	909	2.77	961	3.07	1008	3.36	1053	3.61	1097	3.88	1140	4.25	1181	4.58	1222	4.87	**1263**	**5.20**	—	—
4900	926	2.93	977	3.24	1024	3.54	1068	3.80	1111	4.06	1153	4.41	1194	4.77	1234	5.09	—	—	—	—
5000	942	3.11	993	3.41	1039	3.73	1080	3.99	1125	4.25	1166	4.59	1207	4.97	—	—	—	—	—	—
5100	959	3.29	1009	3.60	1055	3.92	1097	4.19	1139	4.46	1180	4.78	1220	5.18	—	—	—	—	—	—
5200	976	3.47	1025	3.78	1071	4.12	1112	4.40	1153	4.67	1194	4.98	—	—	—	—	—	—	—	—
5300	993	3.67	1041	3.98	1086	4.33	1127	4.61	1168	4.90	1208	5.19	—	—	—	—	—	—	—	—
5400	1010	3.87	1057	4.18	1102	4.54	1142	4.84	1182	5.13	—	—	—	—	—	—	—	—	—	—
5500	1027	4.07	1073	4.39	1118	4.76	1157	5.07	—	—	—	—	—	—	—	—	—	—	—	—
5600	1043	4.29	1090	4.61	1133	4.99	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5700	1060	4.51	1106	4.83	1149	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5800	1077	4.74	1122	5.07	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
5900	1094	4.98	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000	1111	5.22	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6100	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 2.)
2. Standard drive range is 900 to 1260 rpm.
3. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
4. Maximum continuous bhp is 5.25 for standard motor. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data table on pages 41 and 42 for additional information.
5. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
6. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS

581B036 (3 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)											
	0.1		0.2		0.3		0.4		0.5		0.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	**526**	**0.06**	**584**	**0.08**	**656**	**0.12**	**734**	**0.22**	818	0.25	875	0.27
1000	**570**	**0.09**	**627**	**0.13**	**738**	**0.19**	800	0.26	848	0.29	895	0.31
1100	**614**	**0.13**	**670**	**0.16**	**758**	**0.23**	812	0.29	863	0.32	914	0.35
1200	**658**	**0.16**	**710**	**0.23**	780	0.28	840	0.32	889	0.36	938	0.40
1300	**703**	**0.20**	**752**	**0.27**	808	0.32	868	0.37	916	0.41	963	0.45
1400	**725**	**0.29**	776	0.31	845	0.38	891	0.42	937	0.47	983	0.51
1500	**755**	**0.33**	816	0.38	870	0.43	924	0.48	969	0.53	1014	0.58

581B036 (3 TONS) — STANDARD MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)											
	0.7		0.8		0.9		1.0		1.1		1.2	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	924	0.32	953	0.35	989	0.38	1028	0.42	1074	0.45	**1120**	**0.50**
1000	936	0.35	977	0.39	1020	0.44	1064	0.48	**1124**	**0.52**	**1185**	**0.55**
1100	960	0.39	1005	0.43	1052	0.49	**1100**	**0.52**	**1163**	**0.56**	**1225**	**0.60**
1200	988	0.45	1038	0.50	1076	0.53	**1136**	**0.59**	**1201**	**0.61**	**1266**	**0.64**
1300	1012	0.51	1061	0.56	**1094**	**0.61**	**1172**	**0.65**	**1239**	**0.69**	**1306**	**0.72**
1400	1027	0.56	1071	0.60	**1108**	**0.67**	**1208**	**0.70**	**1278**	**0.75**	**1347**	**0.79**
1500	1056	0.63	**1097**	**0.68**	**1117**	**0.70**	**1245**	**0.74**	**1315**	**0.80**	**1385**	**0.85**

581B036 (3 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	**584**	**0.08**	**734**	**0.22**	**875**	**0.27**	**953**	**0.36**	**1028**	**0.42**
1000	**627**	**0.13**	**800**	**0.26**	**895**	**0.31**	**977**	**0.39**	**1064**	**0.48**
1100	**670**	**0.16**	**812**	**0.29**	**914**	**0.35**	**1005**	**0.43**	1100	0.52
1200	**710**	**0.23**	**840**	**0.32**	**938**	**0.40**	**1038**	**0.50**	1136	0.59
1300	**752**	**0.27**	**868**	**0.37**	**963**	**0.45**	**1061**	**0.56**	1172	0.65
1400	**776**	**0.31**	**891**	**0.42**	**983**	**0.51**	**1071**	**0.60**	1208	0.70
1500	**816**	**0.38**	**924**	**0.48**	**1014**	**0.58**	1097	0.68	1245	0.74

581B036 (3 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
900	1120	0.54	1155	0.59	1186	0.64	1215	0.69	1240	0.73
1000	1185	0.60	1222	0.66	1255	0.71	1285	0.77	1312	0.82
1100	1225	0.65	1263	0.71	1298	0.77	1328	0.83	1357	0.88
1200	1266	0.72	1306	0.79	1341	0.86	1373	0.92	1402	0.98
1300	1306	0.79	1347	0.87	1383	0.94	1416	1.01	1446	1.07
1400	1347	0.87	1389	0.95	1427	1.03	**1461**	**1.11**	**1492**	**1.18**
1500	1385	0.96	1428	1.05	**1467**	**1.14**	**1502**	**1.22**	**1534**	**1.30**

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. Motor drive range is 760 to 1090 rpm for standard motors; 1075 to 1455 rpm for high-static motors. All other rpms require a field-supplied drive.
3. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
4. Maximum continuous bhp is 1.20 for standard motors; 2.40 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
5. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
6. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B048 (4 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)													
	0.1		0.2		0.3		0.4		0.6		0.7		0.8	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	**569**	**0.18**	**641**	**0.23**	**701**	**0.29**	**761**	**0.34**	859	0.46	901	0.52	943	0.58
1300	**604**	**0.22**	**673**	**0.28**	**731**	**0.34**	**788**	**0.39**	887	0.52	928	0.59	968	0.65
1400	**640**	**0.27**	**705**	**0.33**	**761**	**0.39**	**817**	**0.45**	914	0.59	955	0.66	996	0.72
1500	**676**	**0.32**	**738**	**0.38**	**793**	**0.45**	847	0.51	940	0.65	982	0.73	1024	0.81
1600	**713**	**0.38**	**772**	**0.44**	**825**	**0.51**	877	0.58	967	0.73	1009	0.81	1051	0.89
1700	**750**	**0.45**	**806**	**0.51**	857	0.59	908	0.66	997	0.81	1037	0.90	1077	1.01
1800	**788**	**0.52**	841	0.59	890	0.67	939	0.75	1026	0.91	1065	1.01	1104	1.07
1900	**826**	**0.60**	876	0.68	924	0.76	971	0.84	1056	1.01	1094	1.10	1132	1.18
2000	864	0.70	912	0.77	958	0.86	1004	0.94	1087	1.12	1125	1.21	1162	1.30

581B048 (4 TONS) — STANDARD MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)													
	0.9		1.0		1.1		1.2		1.4		1.6		1.8	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	987	0.64	1030	0.70	1068	0.79	1106	0.87	1134	0.98	**1189**	**1.12**	1245	1.21
1300	1006	0.71	1044	0.77	1086	0.84	1128	0.91	1183	1.10	1226	1.23	1297	1.35
1400	1033	0.79	1069	0.86	1104	0.93	1139	1.01	**1218**	**1.14**	1286	1.34	1320	1.48
1500	1060	0.88	1095	0.95	1129	1.02	1162	1.09	1228	1.24	1303	1.40	1343	1.60
1600	1087	1.01	1123	1.05	1156	1.13	1185	1.20	1250	1.35	1319	1.51	1382	1.68
1700	1114	1.07	1151	1.15	1183	1.23	1215	1.31	1276	1.48	1334	1.64	1398	1.80
1800	1141	1.17	1178	1.26	1211	1.35	1243	1.43	1303	1.61	1359	1.78	1418	1.95
1900	1168	1.28	1204	1.37	1238	1.47	1271	1.56	1330	1.74	1386	1.93	1439	2.11
2000	1197	1.39	1231	1.48	1265	1.59	1298	1.69	1358	1.89	1413	2.08	1466	2.27

581B048 (4 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	**641**	**0.23**	**761**	**0.34**	**859**	**0.46**	**943**	**0.58**	**1030**	**0.70**
1300	**673**	**0.28**	**788**	**0.39**	**887**	**0.52**	**968**	**0.65**	**1044**	**0.77**
1400	**705**	**0.33**	**817**	**0.45**	**914**	**0.59**	**996**	**0.72**	**1069**	**0.86**
1500	**738**	**0.38**	**847**	**0.51**	**940**	**0.65**	**1024**	**0.81**	1095	0.95
1600	**772**	**0.44**	**877**	**0.58**	**967**	**0.73**	**1051**	**0.89**	1123	1.05
1700	**806**	**0.51**	**908**	**0.66**	**997**	**0.81**	1077	1.01	1151	1.15
1800	**841**	**0.59**	**939**	**0.75**	**1026**	**0.91**	1104	1.07	1178	1.26
1900	**876**	**0.68**	**971**	**0.84**	**1056**	**1.01**	1132	1.18	1204	1.37
2000	**912**	**0.77**	**1004**	**0.94**	1087	1.12	1162	1.30	1231	1.48

581B048 (4 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1200	1106	0.87	1134	0.98	1189	1.12	1245	1.21	1292	1.35
1300	1128	0.91	1183	1.10	1226	1.23	1297	1.35	1346	1.51
1400	1139	1.01	1218	1.14	1286	1.34	1320	1.48	1370	1.65
1500	1162	1.09	1228	1.24	1303	1.40	1343	1.60	1393	1.79
1600	1185	1.20	1250	1.35	1319	1.51	1382	1.68	1434	1.88
1700	1215	1.31	1276	1.48	1334	1.64	1398	1.80	1451	2.01
1800	1243	1.43	1303	1.61	1359	1.78	1418	1.95	**1471**	**2.18**
1900	1271	1.56	1330	1.74	1386	1.93	1439	2.11	**1493**	**2.36**
2000	1298	1.69	1358	1.89	1413	2.08	**1466**	**2.27**	1521	2.54

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 840 to 1185 rpm for standard units; 1075 to 1455 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 1.20 for standard motors; 2.40 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B060 (5 TONS) — STANDARD MOTOR — SINGLE-PHASE UNITS

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.1		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm
1500	**741**	**0.38**	**798**	**0.43**	**895**	**0.54**	**990**	**0.67**	1073	0.80	1154	0.95	1218	1.12	1295	1.36	1360	1.40
1600	**783**	**0.45**	**838**	**0.51**	**933**	**0.63**	**1016**	**0.75**	1102	0.90	1182	1.04	1251	1.20	1310	1.40	1385	1.49
1700	**825**	**0.53**	**878**	**0.60**	**969**	**0.72**	1049	0.84	1134	1.00	1206	1.14	1281	1.31	1342	1.48	1398	1.53
1800	**885**	**0.63**	**942**	**0.73**	1047	0.90	1139	1.05	1193	1.14	1276	1.30	1341	1.40	1413	1.55	1474	1.58
1900	**928**	**0.73**	**982**	**0.83**	1084	1.02	1160	1.11	1223	1.24	1301	1.38	1374	1.53	1437	1.62	1490	1.67
2000	**971**	**0.84**	1022	0.94	1121	1.12	1188	1.22	1254	1.36	1329	1.44	1396	1.66	1460	1.68	1509	1.77
2100	**1015**	**0.97**	1063	1.10	1140	1.18	1196	1.27	1272	1.45	1354	1.58	1413	1.75	1475	1.73	1529	1.92
2200	1060	1.10	1104	1.20	1159	1.23	1229	1.41	1306	1.53	1363	1.70	1434	1.81	1487	1.85	1554	2.07
2300	1104	1.25	1130	1.27	1196	1.37	1264	1.56	1340	1.66	1397	1.86	1459	1.88	1520	2.07	1576	2.24
2400	1138	1.30	1174	1.37	1245	1.57	1305	1.63	1373	1.84	1440	1.95	1502	2.06	1552	2.24	1604	2.42
2500	1183	1.43	1201	1.50	1284	1.65	1338	1.75	1402	1.99	1469	2.04	1524	2.24	1585	2.42	1638	2.60

581B060 (5 TONS) — STANDARD MOTOR — 3-PHASE UNITS

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.1		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm
1500	**741**	**0.38**	**798**	**0.43**	**895**	**0.54**	**990**	**0.67**	**1073**	**0.80**	1154	0.95	1218	1.12	1295	1.36	1360	1.40
1600	**783**	**0.45**	**838**	**0.51**	**933**	**0.63**	**1016**	**0.75**	**1102**	**0.90**	1182	1.04	1251	1.20	1310	1.40	1385	1.49
1700	**825**	**0.53**	**878**	**0.60**	**969**	**0.72**	**1049**	**0.84**	1134	1.00	1206	1.14	1281	1.31	1342	1.48	1398	1.53
1800	**885**	**0.63**	**942**	**0.73**	**1047**	**0.90**	1139	1.05	1193	1.14	1276	1.30	1341	1.40	1413	1.55	1474	1.58
1900	**928**	**0.73**	**982**	**0.83**	**1084**	**1.02**	1160	1.11	1223	1.24	1301	1.38	1374	1.53	1437	1.62	1490	1.67
2000	**971**	**0.84**	**1022**	**0.94**	1121	1.12	1188	1.22	1254	1.36	1329	1.44	1396	1.66	1460	1.68	1509	1.77
2100	**1015**	**0.97**	**1063**	**1.10**	1140	1.18	1196	1.27	1272	1.45	1354	1.58	1413	1.75	1475	1.73	1529	1.92
2200	**1060**	**1.10**	**1104**	**1.20**	1159	1.23	1229	1.41	1306	1.53	1363	1.70	1434	1.81	1487	1.85	1554	2.07
2300	**1104**	**1.25**	1130	1.27	1196	1.37	1264	1.56	1340	1.66	1397	1.86	1459	1.88	1520	2.07	1576	2.24
2400	1138	1.30	1174	1.37	1245	1.57	1305	1.63	1373	1.84	1440	1.95	1502	2.06	1552	2.24	1604	2.42
2500	1183	1.43	1201	1.50	1284	1.65	1338	1.75	1402	1.99	1469	2.04	1524	2.24	1585	2.42	1638	2.60

581B060 (5 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	0.2		0.4		0.6		0.8		1.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	**789**	**0.40**	**896**	**0.53**	**990**	**0.67**	**1072**	**0.83**	**1153**	**1.00**
1600	**826**	**0.46**	**931**	**0.61**	**1020**	**0.75**	**1101**	**0.91**	**1178**	**1.09**
1700	**865**	**0.54**	**966**	**0.69**	**1051**	**0.84**	**1133**	**1.01**	**1205**	**1.18**
1800	**905**	**0.62**	**1002**	**0.78**	**1084**	**0.93**	**1163**	**1.10**	**1235**	**1.29**
1900	**945**	**0.72**	**1037**	**0.88**	**1119**	**1.04**	**1194**	**1.21**	**1266**	**1.40**
2000	**984**	**0.82**	**1072**	**0.98**	**1154**	**1.16**	**1226**	**1.33**	**1297**	**1.53**
2100	**1024**	**0.93**	**1108**	**1.10**	**1192**	**1.29**	**1259**	**1.47**	1327	1.66
2200	**1064**	**1.05**	**1145**	**1.22**	**1225**	**1.43**	**1294**	**1.62**	1359	1.80
2300	**1104**	**1.18**	**1183**	**1.36**	**1260**	**1.57**	1330	1.78	1392	1.97
2400	**1145**	**1.32**	**1222**	**1.45**	**1296**	**1.73**	1365	1.94	1426	2.15
2500	**1186**	**1.48**	**1262**	**1.68**	1331	1.89	1400	2.12	1461	2.34

581B060 (5 TONS) — HIGH-STATIC MOTOR (cont)

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)									
	1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1500	**1221**	**1.17**	**1256**	**1.30**	1283	1.32	1303	1.22	1345	1.34
1600	**1252**	**1.27**	1311	1.45	1340	1.58	1330	1.61	1373	1.77
1700	**1278**	**1.37**	1345	1.57	1397	1.76	1424	1.89	1470	2.08
1800	1303	1.48	1371	1.69	1433	1.90	1480	2.09	1528	2.30
1900	1330	1.59	1396	1.80	1460	2.03	1517	2.25	1566	2.47
2000	1362	1.73	1422	1.94	1485	2.16	1544	2.40	1594	2.64
2100	1393	1.87	1452	2.08	1510	2.31	1570	2.55	1620	2.80
2200	1423	2.02	1483	2.24	1538	2.46	1594	2.71	1645	2.98
2300	1454	2.18	1515	2.41	1571	2.64	1623	2.88	1676	3.17
2400	1485	2.36	1544	2.59	1604	2.84	1657	3.07	1710	3.38
2500	1518	2.55	1574	2.78	1633	3.03	1692	3.28	1746	3.61

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 1020 to 1460 rpm for single-phase standard units, 1120 to 1585 for 3-phase standard units, and 1300 to 1685 for high-static units. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 1.30 for single-phase standard units, 2.40 for 3-phase standard motors, and 2.90 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B072 (6 TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.1		0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	**885**	**0.63**	**942**	**0.73**	**1047**	**0.90**	1139	1.05	1193	1.14	1276	1.30	1341	1.40	1413	1.55	1474	1.58
1900	**928**	**0.73**	**982**	**0.83**	**1084**	**1.02**	1160	1.11	1223	1.24	1301	1.38	1374	1.53	1437	1.62	1490	1.67
2000	**971**	**0.84**	**1022**	**0.94**	1121	1.12	1188	1.22	1254	1.36	1329	1.44	1396	1.66	1460	1.68	1509	1.77
2100	**1015**	**0.97**	**1063**	**1.10**	1140	1.18	1196	1.27	1272	1.45	1354	1.58	1413	1.75	1475	1.73	1529	1.92
2200	**1060**	**1.10**	**1104**	**1.20**	1159	1.23	1229	1.41	1306	1.53	1363	1.70	1434	1.81	1487	1.85	1554	2.07
2300	**1104**	**1.25**	1130	1.27	1196	1.37	1264	1.56	1340	1.66	1397	1.86	1459	1.88	1520	2.07	1576	2.24
2400	1138	1.30	1174	1.37	1245	1.57	1305	1.63	1373	1.84	1440	1.95	1502	2.06	1552	2.24	1604	2.42
2500	1183	1.43	1201	1.50	1284	1.65	1338	1.75	1402	1.99	1469	2.04	1524	2.24	1585	2.42	1638	2.60
2600	1210	1.58	1243	1.67	1312	1.76	1366	1.96	1435	2.10	1494	2.19	1552	2.40	1616	2.63	1671	2.80
2700	1254	1.76	1285	1.80	1354	1.95	1403	2.14	1474	2.21	1536	2.46	1584	2.61	1646	2.83	1706	2.97
2800	1274	1.82	1304	1.85	1374	2.12	1459	2.25	1514	2.42	1570	2.66	1624	2.85	1677	2.99	—	—
2900	1318	1.95	1345	2.05	1412	2.32	1496	2.45	1529	2.61	1603	2.87	1671	3.03	—	—	—	—
3000	1362	2.20	1378	2.30	1451	2.40	1534	2.66	1560	2.81	1611	3.01	—	—	—	—	—	—

581B072 (6 TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
1800	**942**	**0.73**	**1047**	**0.90**	**1139**	**1.05**	**1193**	**1.14**	**1276**	**1.30**	1341	1.40	1413	1.55	1474	1.58	1522	1.74	1566	1.89
1900	**982**	**0.83**	**1084**	**1.02**	**1160**	**1.11**	**1223**	**1.24**	1301	1.38	1374	1.53	1437	1.62	1490	1.67	1538	1.84	1583	2.00
2000	**1022**	**0.94**	**1121**	**1.12**	**1188**	**1.22**	**1264**	**1.36**	1329	1.44	1396	1.66	1460	1.68	1509	1.77	1558	1.95	1603	2.12
2100	**1063**	**1.10**	**1140**	**1.18**	**1196**	**1.27**	**1272**	**1.45**	1354	1.58	1413	1.75	1475	1.73	1529	1.92	1578	2.11	1624	2.30
2200	**1104**	**1.20**	**1159**	**1.23**	**1229**	**1.41**	1306	1.53	1363	1.70	1434	1.81	1487	1.85	1554	2.07	1604	2.28	1651	2.48
2300	**1130**	**1.27**	**1196**	**1.37**	**1264**	**1.56**	1340	1.66	1397	1.86	1459	1.88	1520	2.07	1576	2.24	1627	2.46	1674	2.68
2400	**1174**	**1.37**	**1245**	**1.57**	1305	1.63	1373	1.84	1440	1.95	1502	2.06	1552	2.24	1604	2.42	1656	2.66	**1704**	**2.90**
2500	**1201**	**1.50**	**1284**	**1.65**	1338	1.75	1402	1.99	1469	2.04	1524	2.24	1585	2.42	1638	2.60	**1691**	**2.86**	1740	3.12
2600	**1246**	**1.67**	1312	1.76	1366	1.96	1435	2.10	1494	2.19	1552	2.40	1616	2.63	1671	2.80	1726	3.09	1775	3.35
2700	**1285**	**1.80**	1354	1.95	1403	2.14	1474	2.21	1536	2.46	1584	2.61	1646	2.83	1706	2.97	1761	3.27	—	—
2800	1304	1.85	1374	2.12	1459	2.25	1514	2.42	1570	2.66	1624	2.85	1677	2.99	1739	3.33	1795	3.67	—	—
2900	1345	2.05	1412	2.32	1496	2.54	1529	2.61	1603	2.87	1671	3.03	1742	3.43	—	—	—	—	—	—
3000	1378	2.30	1451	2.40	1534	2.66	1560	2.81	1611	3.01	1692	3.49	1764	3.95	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 1120 to 1585 rpm for standard motors; 1300 to 1685 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 2.4 for standard motors; 2.9 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B090 (7½ TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.2		0.4		0.6		0.8		0.9		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	**499**	**0.50**	**580**	**0.70**	**652**	**0.94**	**717**	**1.17**	**748**	**1.30**	**779**	**1.43**	**839**	**1.78**	905	2.21	951	2.57
2250	**507**	**0.53**	**586**	**0.73**	**658**	**0.97**	**722**	**1.22**	**752**	**1.34**	**783**	**1.46**	843	1.81	908	2.25	955	2.59
2300	**513**	**0.55**	**592**	**0.76**	**663**	**1.00**	**727**	**1.26**	**756**	**1.38**	**786**	**1.49**	846	1.84	910	2.25	959	2.61
2400	**528**	**0.60**	**606**	**0.83**	**674**	**1.06**	**738**	**1.34**	**766**	**1.46**	**795**	**1.58**	853	1.88	912	2.31	967	2.68
2500	**542**	**0.66**	**619**	**0.90**	**686**	**1.13**	**748**	**1.41**	**777**	**1.55**	**806**	**1.68**	859	1.94	919	2.37	971	2.73
2550	**550**	**0.69**	**627**	**0.94**	**692**	**1.17**	**754**	**1.45**	**783**	**1.60**	**812**	**1.74**	864	1.99	920	2.39	974	2.76
2600	**557**	**0.72**	**634**	**0.97**	**698**	**1.21**	**759**	**1.49**	**787**	**1.64**	**816**	**1.79**	868	2.04	921	2.41	976	2.78
2700	**573**	**0.79**	**648**	**1.05**	**711**	**1.29**	**770**	**1.58**	**798**	**1.73**	**827**	**1.88**	878	2.16	928	2.45	983	2.88
2800	**588**	**0.86**	**662**	**1.13**	**723**	**1.38**	**782**	**1.66**	**809**	**1.82**	**837**	**1.98**	889	2.29	937	2.57	986	2.91
2900	**604**	**0.94**	**676**	**1.21**	**737**	**1.48**	**794**	**1.76**	**821**	**1.92**	848	2.08	900	2.41	947	2.70	993	3.01
3000	**620**	**1.02**	**690**	**1.30**	**750**	**1.58**	**806**	**1.86**	**832**	**2.02**	849	2.18	910	2.52	958	2.85	1002	3.15
3100	**636**	**1.11**	**704**	**1.39**	**764**	**1.69**	**818**	**1.97**	844	2.13	870	2.29	920	2.64	968	2.99	1012	3.30
3200	**652**	**1.21**	**718**	**1.49**	**778**	**1.80**	**831**	**2.09**	856	2.25	882	2.40	931	2.76	979	3.13	1023	3.47
3300	**668**	**1.31**	**732**	**1.59**	**793**	**1.92**	844	2.21	869	2.37	894	2.53	942	2.89	989	3.26	1034	3.63
3400	**684**	**1.41**	**747**	**1.70**	**807**	**2.04**	857	2.35	882	2.51	907	2.66	954	3.02	1000	3.40	1044	3.79
3500	**701**	**1.53**	**762**	**1.82**	**821**	**2.16**	871	2.48	895	2.64	919	2.80	966	3.15	1011	3.55	1054	3.94
3600	**717**	**1.65**	**777**	**1.94**	**835**	**2.29**	885	2.63	908	2.79	932	2.95	978	3.30	1022	3.69	1065	4.10
3700	**733**	**1.77**	**792**	**2.07**	849	2.42	899	2.78	922	2.95	945	3.11	990	3.45	1034	3.84	1076	4.26
3750	**742**	**1.84**	**800**	**2.14**	856	2.49	907	2.86	929	3.03	952	3.20	997	3.54	1040	3.93	1082	5.27

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 840 to 1085 rpm for standard motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 2.9 for standard motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

581B090 (7½ TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2200	**499**	**0.50**	**580**	**0.70**	**652**	**0.94**	**717**	**1.17**	**779**	**1.43**	**839**	**1.78**	905	2.21	951	2.57	986	2.87	1019	3.16
2250	**507**	**0.53**	**586**	**0.73**	**658**	**0.97**	**722**	**1.22**	**783**	**1.46**	**843**	**1.81**	908	2.25	955	2.59	991	2.89	1023	3.19
2300	**513**	**0.55**	**592**	**0.76**	**663**	**1.00**	**727**	**1.26**	**786**	**1.49**	**846**	**1.84**	910	2.25	959	2.61	995	2.91	1028	3.21
2400	**528**	**0.60**	**606**	**0.83**	**674**	**1.06**	**738**	**1.34**	**795**	**1.58**	**853**	**1.88**	912	2.31	967	2.68	1003	2.99	1036	3.30
2500	**542**	**0.66**	**619**	**0.90**	**686**	**1.13**	**748**	**1.41**	**806**	**1.68**	**859**	**1.94**	919	2.37	971	2.73	1007	3.05	1041	3.36
2550	**550**	**0.69**	**627**	**0.94**	**692**	**1.17**	**754**	**1.45**	**812**	**1.74**	864	1.99	920	2.39	974	2.76	1010	3.08	1044	3.40
2600	**557**	**0.72**	**634**	**0.97**	**698**	**1.21**	**759**	**1.49**	**816**	**1.79**	868	2.04	921	2.41	976	2.78	1012	3.10	1046	3.42
2700	**573**	**0.79**	**648**	**1.05**	**711**	**1.29**	**770**	**1.58**	**827**	**1.88**	878	2.16	928	2.45	983	2.88	1020	3.21	1053	3.54
2800	**588**	**0.86**	**662**	**1.13**	**723**	**1.38**	**782**	**1.66**	**837**	**1.98**	889	2.29	937	2.57	986	2.91	1023	3.25	1057	3.58
2900	**604**	**0.94**	**676**	**1.21**	**737**	**1.48**	**794**	**1.76**	**848**	**2.08**	900	2.41	947	2.70	993	3.01	1030	3.36	1064	3.70
3000	**620**	**1.02**	**690**	**1.30**	**750**	**1.58**	**806**	**1.86**	**849**	**2.18**	910	2.52	958	2.85	1002	3.15	1039	3.51	1074	3.88
3100	**636**	**1.11**	**704**	**1.39**	**764**	**1.69**	**818**	**1.97**	870	2.29	920	2.64	968	2.99	1012	3.30	1050	3.69	**1084**	**4.06**
3200	**652**	**1.21**	**718**	**1.49**	**778**	**1.80**	**831**	**2.09**	882	2.40	931	2.76	979	3.13	1023	3.47	1061	3.87	1096	4.27
3300	**668**	**1.31**	**732**	**1.59**	**793**	**1.92**	**844**	**2.21**	894	2.53	942	2.89	989	3.26	1034	3.63	1072	4.05	1108	4.47
3400	**684**	**1.41**	**747**	**1.70**	**807**	**2.04**	**857**	**2.35**	907	2.66	954	3.02	1000	3.40	1044	3.79	1083	4.23	1119	4.66
3500	**701**	**1.53**	**762**	**1.82**	**821**	**2.16**	871	2.48	919	2.80	966	3.15	1011	3.55	1054	3.94	1093	4.40	1129	4.85
3600	**717**	**1.65**	**777**	**1.94**	**835**	**2.29**	885	2.63	932	2.95	978	3.30	1022	3.69	1065	4.10	1105	4.57	1141	5.05
3700	**733**	**1.77**	**792**	**2.07**	**849**	**2.42**	899	2.78	945	3.11	990	3.45	1034	3.84	1076	4.26	1116	4.75	1153	5.24
3750	**742**	**1.84**	**800**	**2.14**	**856**	**2.49**	907	2.86	952	3.20	997	3.54	1040	3.93	1082	4.27	1122	4.78	1159	5.25

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 860 to 1080 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 4.2 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B102 (8½ TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																	
	0.2		0.4		0.6		0.8		0.9		1.0		1.2		1.4		1.6	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2550	**550**	**0.69**	**627**	**0.94**	**692**	**1.17**	**754**	**1.45**	**783**	**1.60**	**812**	**1.74**	864	1.99	920	2.39	974	2.76
2600	**557**	**0.72**	**634**	**0.97**	**698**	**1.21**	**759**	**1.49**	**787**	**1.64**	**816**	**1.79**	868	2.04	921	2.41	976	2.78
2700	**573**	**0.79**	**648**	**1.05**	**711**	**1.29**	**770**	**1.58**	**798**	**1.73**	**827**	**1.88**	878	2.16	928	2.45	983	2.88
2800	**588**	**0.86**	**662**	**1.13**	**723**	**1.38**	**782**	**1.66**	**809**	**1.82**	**837**	**1.98**	889	2.29	937	2.57	986	2.91
2900	**604**	**0.94**	**676**	**1.21**	**737**	**1.48**	**794**	**1.76**	**821**	**1.92**	848	2.08	900	2.41	947	2.70	993	3.01
3000	**620**	**1.02**	**690**	**1.30**	**750**	**1.58**	**806**	**1.86**	**832**	**2.02**	849	2.18	910	2.52	958	2.85	1002	3.15
3100	**636**	**1.11**	**704**	**1.39**	**764**	**1.69**	**818**	**1.97**	844	2.13	870	2.29	920	2.64	968	2.99	1012	3.30
3200	**652**	**1.21**	**718**	**1.49**	**778**	**1.80**	**831**	**2.09**	856	2.25	882	2.40	931	2.76	979	3.13	1023	3.47
3300	**668**	**1.31**	**732**	**1.59**	**793**	**1.92**	844	2.21	869	2.37	894	2.53	942	2.89	989	3.26	1034	3.63
3400	**684**	**1.41**	**747**	**1.70**	**807**	**2.04**	857	2.35	882	2.51	907	2.66	954	3.02	1000	3.40	1044	3.79
3500	**701**	**1.53**	**762**	**1.82**	**821**	**2.16**	871	2.48	895	2.64	919	2.80	966	3.15	1011	3.55	1054	3.94
3600	**717**	**1.65**	**777**	**1.94**	**835**	**2.29**	885	2.63	908	2.79	932	2.95	978	3.30	1022	3.69	1065	4.10
3700	**733**	**1.77**	**792**	**2.07**	849	2.42	899	2.78	922	2.95	945	3.11	990	3.45	1034	3.84	1076	4.26
3750	**742**	**1.84**	**800**	**2.14**	856	2.49	907	2.86	929	3.03	952	3.20	997	3.54	1040	3.93	1082	4.27
3800	**750**	**1.90**	**807**	**2.21**	863	2.56	914	2.93	936	3.11	958	3.28	1003	3.62	1045	4.01	1087	4.43
3900	**767**	**2.04**	**822**	**2.35**	877	2.71	928	3.09	950	3.27	972	3.45	1015	3.80	1057	4.18	1098	4.60
4000	**783**	**2.18**	**838**	**2.50**	891	2.86	942	3.26	964	3.45	986	3.63	1028	3.99	1070	4.36	1110	4.78
4100	**800**	**2.34**	854	2.66	905	3.02	956	3.43	978	3.62	1000	3.81	1042	4.18	1082	4.56	1122	4.97
4200	**817**	**2.49**	869	2.82	920	3.19	970	3.60	992	3.80	1015	4.00	1055	4.38	1095	4.76	1134	5.16
4250	**826**	**2.58**	877	2.91	928	3.28	977	3.69	999	3.90	1022	4.10	1062	4.49	1102	4.87	—	—
4300	**834**	**2.66**	885	3.00	935	3.37	984	3.78	1006	3.99	1029	4.20	1069	4.59	1108	4.98	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. Boldface indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 840 to 1085 rpm for standard motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 2.9 for standard motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.

581B102 (8½ TONS) — HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
2550	**550**	**0.69**	**627**	**0.94**	**692**	**1.17**	**754**	**1.45**	**812**	**1.74**	864	1.99	920	2.39	974	2.76	1005	3.04	1034	3.31
2600	**557**	**0.72**	**634**	**0.97**	**698**	**1.21**	**759**	**1.49**	**816**	**1.79**	868	2.04	921	2.41	976	2.78	1008	3.06	1037	3.33
2700	**573**	**0.79**	**648**	**1.05**	**711**	**1.29**	**770**	**1.58**	**827**	**1.88**	878	2.16	928	2.45	983	2.88	1015	3.17	1044	3.45
2800	**588**	**0.86**	**662**	**1.13**	**723**	**1.38**	**782**	**1.66**	**837**	**1.98**	889	2.29	937	2.57	986	2.91	1018	3.20	1047	3.49
2900	**604**	**0.94**	**676**	**1.21**	**737**	**1.48**	**794**	**1.76**	**848**	**2.08**	900	2.41	947	2.70	993	3.01	1025	3.31	1055	3.61
3000	**620**	**1.02**	**690**	**1.30**	**750**	**1.58**	**806**	**1.86**	**849**	**2.18**	910	2.52	958	2.85	1002	3.15	1034	3.47	1064	3.77
3100	**636**	**1.11**	**704**	**1.39**	**764**	**1.69**	**818**	**1.97**	870	2.29	920	2.64	968	2.99	1012	3.30	1045	3.63	1075	3.95
3200	**652**	**1.21**	**718**	**1.49**	**778**	**1.80**	**831**	**2.09**	882	2.40	931	2.76	979	3.13	1023	3.47	1056	3.82	**1087**	**4.16**
3300	**668**	**1.31**	**732**	**1.59**	**793**	**1.92**	**844**	**2.21**	894	2.53	942	2.89	989	3.26	1034	3.63	1067	3.99	1098	4.35
3400	**684**	**1.41**	**747**	**1.70**	**807**	**2.04**	**857**	**2.35**	907	2.66	954	3.02	1000	3.40	1044	3.79	1078	4.17	1109	4.54
3500	**701**	**1.53**	**762**	**1.82**	**821**	**2.16**	871	2.48	919	2.80	966	3.15	1011	3.55	1054	3.94	1088	4.33	1119	4.72
3600	**717**	**1.65**	**777**	**1.94**	**835**	**2.29**	885	2.63	932	2.95	978	3.30	1022	3.69	1065	4.10	1099	4.51	1131	4.91
3700	**733**	**1.77**	**792**	**2.07**	**849**	**2.42**	899	2.78	945	3.11	990	3.45	1034	3.84	1076	4.26	1111	4.69	1143	5.10
3750	**742**	**1.84**	**800**	**2.14**	**856**	**2.49**	907	2.86	952	3.20	997	3.54	1040	3.93	1082	4.27	1117	4.70	1149	5.12
3800	**750**	**1.90**	**807**	**2.21**	863	2.56	914	2.93	958	3.28	1003	3.62	1045	4.01	1087	4.43	1122	4.87	1155	5.31
3900	**767**	**2.04**	**822**	**2.35**	877	2.71	928	3.09	972	3.45	1015	3.80	1057	4.18	1098	4.60	1133	5.06	1166	5.51
4000	**783**	**2.18**	**838**	**2.50**	891	2.86	942	3.26	986	3.63	1028	3.99	1070	4.36	1110	4.78	1146	5.26	1179	5.73
4100	**800**	**2.34**	**854**	**2.66**	905	3.02	956	3.43	1000	3.81	1042	4.18	1082	4.56	1122	4.97	1158	5.47	1192	5.95
4200	**817**	**2.49**	869	2.82	920	3.19	970	3.60	1015	4.00	1055	4.38	1095	4.76	1134	5.16	1171	5.68	1204	6.18
4250	**826**	**2.58**	877	2.91	928	3.28	977	3.69	1022	4.10	1062	4.49	1102	4.87	1140	5.27	1177	5.80	1211	6.31
4300	**834**	**2.66**	885	3.00	935	3.37	984	3.78	1029	4.20	1069	4.59	1108	4.98	1147	5.38	1184	5.92	1218	6.45

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:
1. Boldface indicates field-supplied drive required. (See Note 3.)
2. ▭ indicates field-supplied motor and drive required.
3. Motor drive range is 860 to 1080 rpm for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 4.2 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
7. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

FAN PERFORMANCE — HORIZONTAL DISCHARGE UNITS (cont)

581B120 (10 TONS) — STANDARD AND HIGH-STATIC MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3000	**478**	**0.57**	**658**	**0.92**	**721**	**1.08**	**796**	**1.23**	851	1.50	898	1.78	942	2.01	983	2.17	1023	2.46	1063	2.61
3100	**500**	**0.62**	**669**	**0.97**	**731**	**1.16**	**808**	**1.30**	861	1.57	907	1.86	951	2.09	992	2.24	1031	2.51	1070	2.75
3200	**519**	**0.69**	**680**	**1.03**	**741**	**1.23**	**818**	**1.38**	873	1.65	916	1.95	960	2.18	1000	2.32	1039	2.58	1077	2.88
3300	**537**	**0.77**	**692**	**1.10**	**751**	**1.30**	**828**	**1.47**	884	1.72	925	2.03	969	2.27	1009	2.41	1048	2.66	1086	2.95
3400	**561**	**0.86**	**704**	**1.17**	**761**	**1.37**	837	1.57	896	1.82	934	2.12	978	2.36	1018	2.51	1057	2.75	1094	3.02
3500	**592**	**0.98**	**715**	**1.24**	**773**	**1.45**	847	1.66	907	1.92	945	2.22	987	2.46	1027	2.60	1066	2.85	1102	3.12
3600	**632**	**1.12**	**727**	**1.32**	**784**	**1.54**	857	1.76	917	2.03	957	2.32	996	2.55	1036	2.71	1075	2.96	1111	3.22
3700	**677**	**1.20**	**748**	**1.43**	**810**	**1.65**	869	1.89	928	2.17	984	2.43	1036	2.68	1080	2.90	1114	3.07	**1135**	**3.17**
3800	**691**	**1.28**	**761**	**1.52**	**822**	**1.75**	880	1.98	937	2.28	993	2.55	1046	2.81	1092	3.05	1129	3.25	**1156**	**3.39**
3900	**705**	**1.37**	**773**	**1.62**	834	1.86	891	2.08	947	2.39	1002	2.66	1055	2.94	1102	3.20	**1143**	**3.42**	**1174**	**3.59**
4000	**720**	**1.47**	**786**	**1.71**	847	1.97	902	2.19	957	2.50	1011	2.79	1064	3.07	1112	3.34	**1155**	**3.59**	**1190**	**3.80**
4100	**734**	**1.56**	**800**	**1.82**	860	2.09	914	2.31	967	2.60	1021	2.91	1072	3.20	1121	3.49	**1165**	**3.76**	**1203**	**3.99**
4200	**749**	**1.66**	**813**	**1.92**	873	2.21	926	2.44	978	2.71	1030	3.04	1081	3.34	1130	3.64	**1175**	**3.92**	**1215**	**4.18**
4300	**764**	**1.77**	**826**	**2.04**	886	2.33	938	2.57	989	2.83	1040	3.18	1090	3.48	**1139**	**3.79**	**1185**	**4.08**	**1226**	**4.36**
4400	**779**	**1.88**	840	2.16	899	2.46	951	2.71	1000	2.96	1050	3.31	1100	3.63	**1148**	**3.94**	**1194**	**4.25**	**1236**	**4.54**
4500	**793**	**1.99**	854	2.28	912	2.59	963	2.86	1012	3.09	1061	3.43	1109	3.78	**1157**	**4.09**	**1203**	**4.42**	**1246**	**4.72**
4600	**808**	**2.11**	868	2.42	925	2.73	975	3.00	1024	3.25	1071	3.56	1119	3.93	**1166**	**4.26**	**1212**	**4.58**	**1255**	**4.91**
4700	**822**	**2.24**	882	2.56	937	2.86	988	3.16	1036	3.42	1082	3.70	1129	4.09	**1175**	**4.43**	**1221**	**4.76**	**1264**	**5.09**
4800	837	2.37	896	2.71	950	3.00	1001	3.32	1048	3.59	1093	3.86	**1139**	**4.24**	**1185**	**4.60**	**1230**	**4.93**	—	—
4900	852	2.51	910	2.86	963	3.15	1014	3.48	1060	3.76	1105	4.02	**1150**	**4.38**	**1194**	**4.77**	**1239**	**5.12**	—	—
5000	867	2.65	924	3.01	977	3.30	1027	3.65	1073	3.94	1117	4.20	**1161**	**4.54**	**1204**	**4.95**	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 3.)
2. ▒▒▒ indicates high static motor and drive required.
3. Motor drive range is 860 to 1080 rpm for standard motors and 830 to 1130 for high-static motors. All other rpms require a field-supplied drive.
4. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
5. Maximum continuous bhp is 3.70 for standard motors and 5.25 for high-static motors. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data tables on pages 41 and 42 for additional information.
6. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.

581B150 (12½ TONS) — STANDARD MOTOR

AIRFLOW (Cfm)	EXTERNAL STATIC PRESSURE (in. wg)																			
	0.2		0.4		0.6		0.8		1.0		1.2		1.4		1.6		1.8		2.0	
	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp	Rpm	Bhp
3700	—	—	—	—	—	—	**869**	**1.89**	928	2.17	984	2.43	1036	2.68	1080	2.90	1114	3.07	1135	3.17
3800	—	—	—	—	—	—	**880**	**1.98**	937	2.28	993	2.55	1046	2.81	1092	3.05	1129	3.25	1156	3.39
3900	—	—	—	—	—	—	**891**	**2.08**	947	2.39	1002	2.66	1055	2.94	1102	3.20	1143	3.42	1174	3.59
4000	—	—	—	—	—	—	902	2.19	957	2.50	1011	2.79	1064	3.07	1112	3.34	1155	3.59	1190	3.80
4100	—	—	—	—	**860**	**2.09**	914	2.31	967	2.60	1021	2.91	1072	3.20	1121	3.49	1165	3.76	1203	3.99
4200	—	—	—	—	**873**	**2.21**	926	2.44	978	2.71	1030	3.04	1081	3.34	1130	3.64	1175	3.92	1215	4.18
4300	—	—	—	—	**886**	**2.33**	938	2.57	989	2.83	1040	3.18	1090	3.48	1139	3.79	1185	4.08	1226	4.36
4400	—	—	—	—	**899**	**2.46**	951	2.71	1000	2.96	1050	3.31	1100	3.63	1148	3.94	1194	4.25	1236	4.54
4500	—	—	—	—	912	2.59	963	2.86	1012	3.09	1061	3.43	1109	3.78	1157	4.09	1203	4.42	1246	4.72
4600	—	—	**868**	**2.42**	925	2.73	975	3.00	1024	3.25	1071	3.56	1119	3.93	1166	4.26	1212	4.58	1255	4.91
4700	—	—	**882**	**2.56**	937	2.86	988	3.16	1036	3.42	1082	3.70	1129	4.09	1175	4.43	1221	4.76	1264	5.09
4800	—	—	**896**	**2.71**	950	3.00	1001	3.32	1048	3.59	1093	3.86	1139	4.24	1185	4.60	1230	4.93	—	—
4900	—	—	910	2.86	963	3.15	1014	3.48	1060	3.76	1105	4.02	1150	4.38	1194	4.77	1239	5.12	—	—
5000	**867**	**2.65**	924	3.01	977	3.30	1027	3.65	1073	3.94	1117	4.20	1161	4.54	1204	4.95	—	—	—	—
5100	**882**	**2.79**	938	3.17	990	3.46	1040	3.82	1085	4.12	1129	4.40	1172	4.71	1214	5.13	—	—	—	—
5200	**896**	**2.95**	952	3.33	1003	3.63	1053	4.00	1098	4.30	1141	4.60	1183	4.91	—	—	—	—	—	—
5300	911	3.11	967	3.50	1017	3.80	1066	4.18	1111	4.50	1153	4.80	1194	5.08	—	—	—	—	—	—
5400	926	3.27	981	3.68	1030	3.98	1079	4.35	1124	4.70	1166	5.01	—	—	—	—	—	—	—	—
5500	940	3.44	995	3.86	1044	4.17	1092	4.54	1137	4.91	1178	5.22	—	—	—	—	—	—	—	—
5600	955	3.62	1010	4.04	1058	4.38	1105	4.73	1150	5.12	—	—	—	—	—	—	—	—	—	—
5700	970	3.80	1024	4.23	1072	4.59	1118	4.93	—	—	—	—	—	—	—	—	—	—	—	—
5800	985	3.99	1039	4.42	1086	4.80	1131	5.14	—	—	—	—	—	—	—	—	—	—	—	—
5900	1000	4.18	1053	4.62	1100	5.02	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6000	1015	4.39	1068	4.83	1114	5.25	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6100	1030	4.59	1083	5.04	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—
6200	1046	4.81	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—	—

LEGEND

Bhp — Brake Horsepower Input to Fan
FIOP — Factory-Installed Option

NOTES:

1. **Boldface** indicates field-supplied drive required. (See Note 2.)
2. Standard drive range is 900 to 1260 rpm.
3. Values include losses for filters, unit casing, and wet coils. See page 40 for accessory/FIOP static pressure information.
4. Maximum continuous bhp is 5.25 for the standard motor. Extensive motor and electrical testing on these units ensures that the full range of the motor can be utilized with confidence. Using your fan motors up to the ratings shown will not result in nuisance tripping or premature motor failure. Unit warranty will not be affected. See Evaporator-Fan Motor Data table on pages 41 and 42 for additional information.
5. Use of a field-supplied motor may affect wire sizing. Contact your Bryant representative to verify.
6. Interpolation is permissible. Do not extrapolate.

PERFORMANCE DATA (cont)

OUTDOOR SOUND POWER (TOTAL UNIT)

UNIT 581B	ARI RATING (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

ARI — Air Conditioning and Refrigeration Institute
dB — Sound Levels (decibels)

ECONOMIZER STATIC PRESSURE DROP (in. wg) 581B036-072

UNIT	CFM								
	900	1200	1400	1600	1800	2000	2200	2400	2600
Durablade	.05	.05	.05	.05	.05	.05	.05	.05	.05
EconoMi$er	—	.09	.12	.15	.19	.24	.29	.35	—

ECONOMIZER STATIC PRESSURE DROP (in. wg) 581B090-150

ECONOMIZER	CFM								
	2200	2500	3000	3500	4000	4500	5000	5500	6000
Durablade	.02	.02	.030	.040	.05	.06	.07	.08	.09
EconoMi$er	—	—	.125	.180	.27	.34	.40	—	—

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.

NOTE: Convert bhp to watts using the following formula:

$$\text{watts} = \frac{\text{bhp (746)}}{\text{motor efficiency}}$$

FIOP PERFECT HUMIDITY™ DEHUMIDIFICATION PACKAGE STATIC PRESSURE DROP (in. wg)

UNIT SIZE 581B	UNIT NOMINAL TONS	CFM PER TON		
		300	400	500
036	3	.04	.07	.09
048	4	.07	.12	.15
060	5	.09	.15	.21
072	6	.12	.20	.28
090	7 1/2	.08	.13	.18
102	8 1/2	.10	.15	.22
120	10	.08	.13	.18
150	12 1/2	.11	.18	.26

LEGEND

FIOP — Factory-Installed Option

PERFORMANCE DATA (cont)

581B FAN RPM AT MOTOR PULLEY SETTING WITH STANDARD MOTOR

STANDARD MOTOR													
Unit 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	1090	1055	1025	990	960	925	890	860	825	795	760	—	—
048	1185	1150	1115	1080	1045	1015	980	945	910	875	840	—	—
060 (single-phase)	1460	1425	1385	1350	1315	1275	1240	1205	1165	1130	1095	1055	1020
060 (3-phase) and 072	1585	1540	1490	1445	1400	1350	1305	1260	1210	1165	1120	—	—
090,102	1085	1060	1035	1010	985	960	935	910	890	865	840	—	—
120	1080	1060	1035	1015	990	970	950	930	905	885	860	—	—
150	1260	1220	1185	1155	1130	1100	1075	1045	1015	990	960	930	900

581B FAN RPM AT MOTOR PULLEY SETTING WITH HIGH-STATIC MOTOR

HIGH-STATIC MOTOR													
Unit 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

EVAPORATOR-FAN MOTOR DATA — STANDARD MOTOR

UNIT 581B	UNIT PHASE	MAXIMUM CONTINUOUS BHP*	MAXIMUM OPERATING WATTS*	UNIT VOLTAGE	MAXIMUM AMP DRAW
036	Single	1.20	1000	208/230	4.9
	Three	1.20	1000	208/230	4.9
				460	2.2
				575	2.2
048	Single	1.20	1000	208/230	4.9
	Three	1.20	1000	208/230	4.9
				460	2.2
				575	2.2
060	Single	1.30	1650	208/230	10.1
	Three	2.40	2120	208/230	6.7
				460	3.0
				575	3.0
072	Three	2.40	2120	208/230	6.7
				460	3.0
				575	3.0
090,102	Three	2.90	2615	208/230	8.6
				460	3.9
				575	3.9
120	Three	3.70	3775	208/230	12.2
				460	5.5
				575	5.5
150	Three	5.25	4400	208/230	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 your 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.

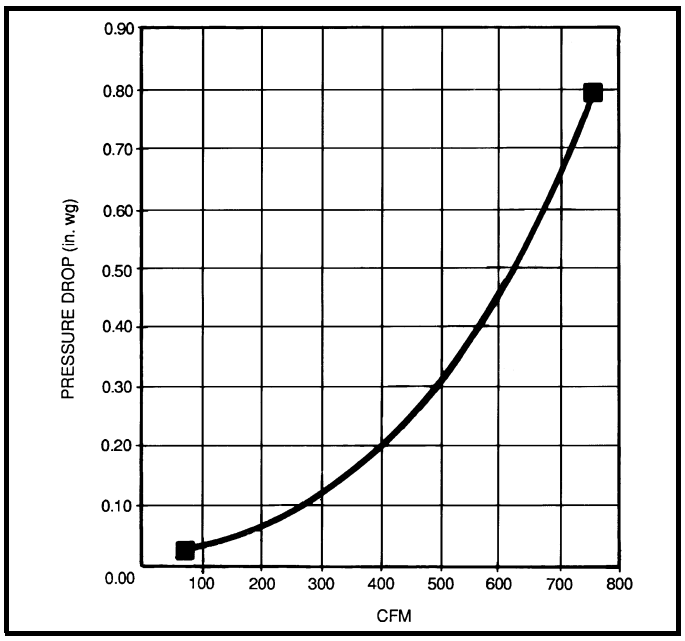
PERFORMANCE DATA (cont)

EVAPORATOR-FAN MOTOR DATA — HIGH-STATIC MOTORS

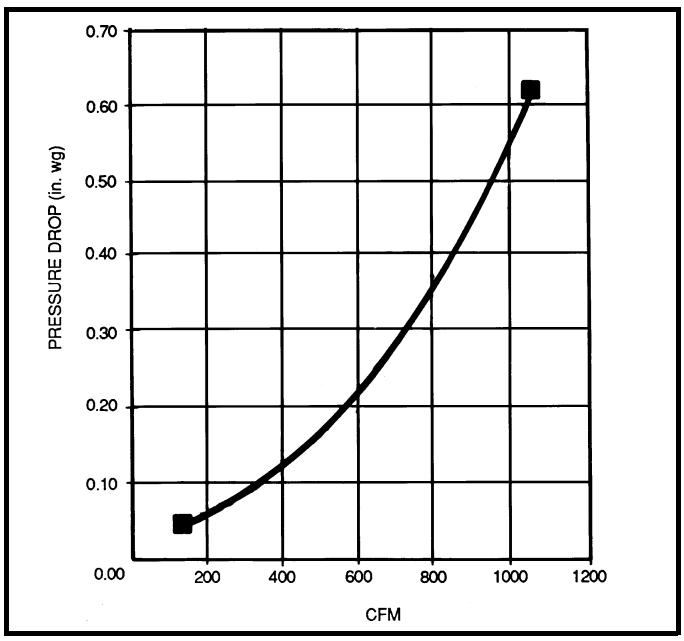
UNIT 581B	UNIT PHASE	MAXIMUM CONTINUOUS BHP*	MAXIMUM OPERATING WATTS*	UNIT VOLTAGE	MAXIMUM AMP DRAW
036	Three	2.40	2120	208/230	6.7
				460	3.0
				575	3.0
046	Three	2.40	2120	208/230	6.7
				460	3.0
				575	3.0
060	Three	2.90	2615	208/230	8.6
				460	3.9
				575	3.9
072	Three	2.90	2615	208/230	8.6
				460	3.9
				575	3.9
090,102	Three	4.20	3775	208/230	12.2
				460	5.5
				575	5.5
120	Three	5.25	4400	208/230	17.5
				460	8.5
				575	8.5

LEGEND
Bhp — Brake Horsepower

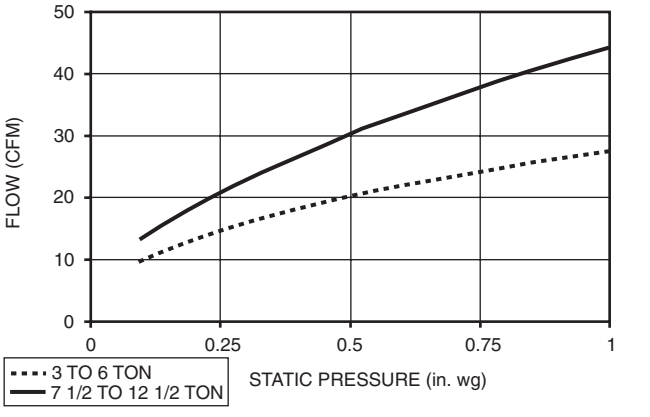
*Extensive motor and electrical testing on these units ensures that the full horsepower and watts range of the motors can be utilized with confidence. Using your fan motors up to the ratings shown in this table will not result in nuisance tripping or premature motor failure. Unit warranty will not be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



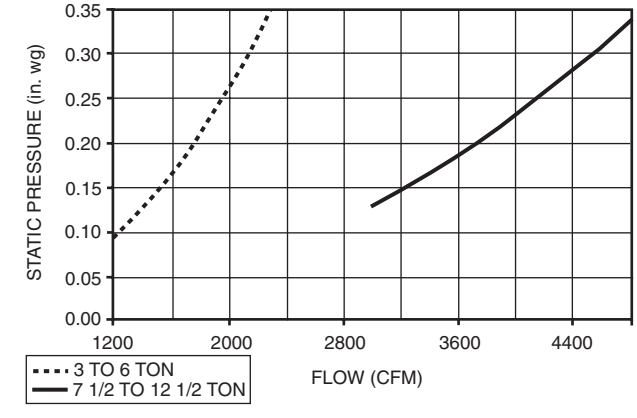
Durablade Economizer Barometric Relief Damper Characteristics — 581B036-072



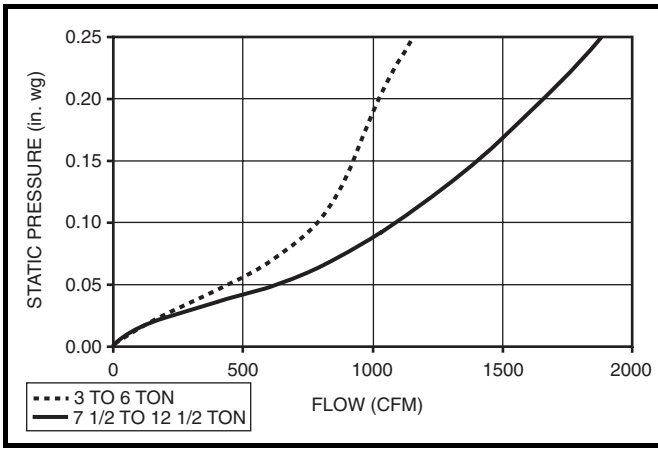
Durablade Economizer Barometric Relief Damper Characteristics — 581B090-150



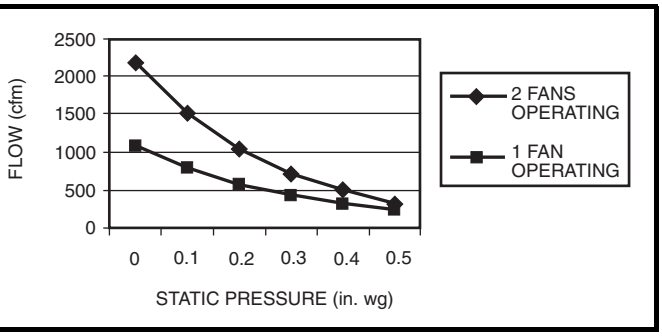
EconoMi$er Outdoor-Air Leakage



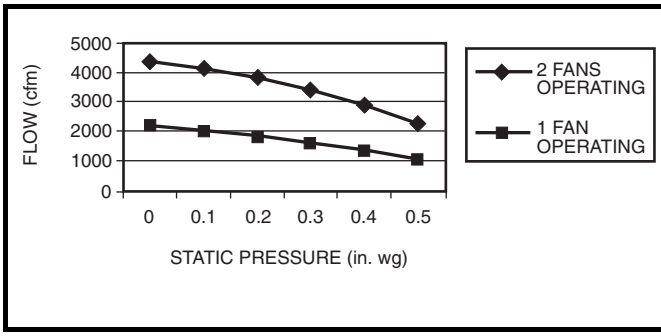
EconoMi$er Return-Air Pressure Drop



EconoMi$er Barometric Relief Damper Characteristics



EconoMi$er Power Exhaust Performance (581B036-072)



EconoMi$er Power Exhaust Performance (581B090-150)

PERFORMANCE DATA (cont)

ALTITUDE COMPENSATION*
581B036-072

ELEVATION (ft)	72,000 AND 115,000/ 60,000 and 90,000 BTUH NOMINAL INPUT*		150,000/120,000 BTUH NOMINAL INPUT	
	Natural Gas Orifice Size†	Liquid Propane Orifice Size†	Natural Gas Orifice Size†	Liquid Propane Orifice Size†
0-2,000	33/38	43/45	30/32	38/42
2,000	34/39	43/46	30/33	39/42
3,000	35/40	44/47	31/34	40/43
4,000	36/41	44/47	32/35	41/43
5,000	36/41	44/48	33/35	42/43
6,000	37/42	45/48	34/36	43/44
7,000	37/42	45/49	35/37	43/44
8,000	38/43	46/49	36/37	44/45
9,000	39/43	47/50	37/38	44/46
10,000	41/44	48/50	38/40	45/47
11,000	43/45	48/51	39/41	45/48
12,000	44/45	49/51	40/42	46/49
13,000	44/46	49/52	41/43	47/49
14,000	45/47	50/52	42/43	47/50

*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 Bryant distributor.

ALTITUDE COMPENSATION*
581B090-150

ELEVATION (ft)	125,000-224,000 BTUH NOMINAL INPUT		250,000 BTUH NOMINAL INPUT	
	Natural Gas Orifice Size†	Liquid Propane Orifice Size†	Natural Gas Orifice Size†	Liquid Propane 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 DERATING FACTOR*
581B036-150

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 sea level. 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.

ELECTRICAL DATA

581B036-072 STANDARD MOTOR (Units Without Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY WITH OUTLET		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	FLA	MCA	MOCP†	FLA	LRA
036 (3 Tons)	208/230-1-60	187	254	16.0	88.0	0.7	4.9	.57	25.6/25.6	35/35	25/25	101/101
	208/230-3-60	187	254	10.3	77.0	0.7	4.9	.57	18.5/18.5	25/25	18/18	90/ 90
	460-3-60	414	508	5.1	39.0	0.4	2.2	.30	9.0	15	9	46
	575-3-60	518	632	4.2	31.0	0.4	2.2	.30	7.3	15	7	36
048 (4 Tons)	208/230-1-60	187	254	23.7	129.0	0.7	4.9	.57	35.2/35.2	45/45	34/34	142/142
	208/230-3-60	187	254	13.5	99.0	0.7	4.9	.57	22.5/22.5	30/30	22/22	112/112
	460-3-60	414	508	7.4	49.5	0.4	2.2	.30	11.9	15	12	56
	575-3-60	518	632	5.8	40.0	0.4	2.2	.30	9.3	15	9	45
060 (5 Tons)	208/230-1-60	187	254	28.8	169.0	1.5	8.8	.57	46.3/46.3	60/60	45/45	216/216
	208/230-3-60	187	254	17.3	123.0	1.5	5.8	.57	28.9/28.9	35/35	28/28	168/168
	460-3-60	414	508	9.0	62.0	0.8	2.6	.30	14.7	20	14	84
	575-3-60	518	632	7.1	50.0	0.8	2.6	.30	11.6	15	11	67
072 (6 Tons)	208/230-3-60	187	254	20.5	156.0	1.4	5.8	.57	32.8/32.8	40/40	32/32	200/200
	460-3-60	414	508	9.6	70.0	0.6	2.6	.30	15.2	20	15	92
	575-3-60	518	632	7.7	56.0	0.6	2.6	.30	12.2	15	13	78

581B036-072 STANDARD MOTOR (Units With Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY WITH OUTLET		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	FLA	MCA	MOCP†	FLA	LRA
036 (3 Tons)	208/230-1-60	187	254	16.0	88.0	0.7	4.9	.57	31.6/31.6	40/40	30/30	106/106
	208/230-3-60	187	254	10.3	77.0	0.7	4.9	.57	24.5/24.5	30/30	24/24	95/95
	460-3-60	414	508	5.1	39.0	0.4	2.2	.30	11.7	15	11	48
	575-3-60	518	632	4.2	31.0	0.4	2.2	.30	9.5	15	9	38
048 (4 Tons)	208/230-1-60	187	254	23.7	129.0	0.7	4.9	.57	41.2/41.2	50/50	39/39	147/147
	208/230-3-60	187	254	13.5	99.0	0.7	4.9	.57	28.5/28.5	35/35	27/27	117/117
	460-3-60	414	508	7.4	49.5	0.4	2.2	.30	14.6	20	14	58
	575-3-60	518	632	5.8	40.0	0.4	2.2	.30	11.5	15	11	47
060 (5 Tons)	208/230-1-60	187	254	28.8	169.0	1.5	8.8	.57	52.3/52.3	60/60	50/50	221/221
	208/230-3-60	187	254	17.3	123.0	1.5	5.8	.57	34.9/34.9	40/40	34/34	173/173
	460-3-60	414	508	9.0	62.0	0.8	2.6	.30	17.4	20	17	86
	575-3-60	518	632	7.1	50.0	0.8	2.6	.30	13.8	20	13	69
072 (6 Tons)	208/230-3-60	187	254	20.5	156.0	1.4	5.8	.57	38.8/38.8	45/45	37/37	205/205
	460-3-60	414	508	9.6	70.0	0.6	2.6	.30	17.9	20	17	94
	575-3-60	518	632	7.7	56.0	0.6	2.6	.30	14.3	20	15	79

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
UL — Underwriters' Laboratories

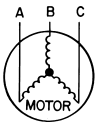
*Used to determine minimum disconnect per NEC.
†Fuse or HACR circuit breaker.

NOTES:

1. 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. UL, Canada 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.

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

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 (cont)

581B036-072 HIGH-STATIC MOTOR (Units Without Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR (each)		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	RLA	MCA	MOCP†	FLA	LRA
036	208/230-3-60	187	254	10.3	77.0	0.7	5.8	0.6	19.4/19.4	25/25	19/19	120/120
	460-3-60	414	508	5.1	39.0	0.4	2.6	0.3	9.4	15	9	60
	575-3-60	518	632	4.2	31.0	0.4	2.6	0.3	7.7	15	8	48
048	208/230-3-60	187	254	13.5	99.0	0.7	5.8	0.6	23.4/23.4	30/30	23/23	142/142
	460-3-60	414	508	7.4	49.5	0.4	2.6	0.3	12.3	15	12	71
	575-3-60	518	632	5.8	40.0	0.4	2.6	0.3	9.7	15	9	57
060	208/230-3-60	187	254	17.3	123.0	1.5	7.5	0.6	30.6/30.6	35/35	30/30	187/187
	460-3-60	414	508	9.0	62.0	0.8	3.4	0.3	15.5	20	15	94
	575-3-60	518	632	7.1	50.0	0.8	3.4	0.3	12.2	15	12	76
072	208/230-3-60	187	254	20.5	156.0	1.4	7.5	0.6	30.6/30.6	35/35	30/30	187/187
	460-3-60	414	508	9.6	70.0	0.6	3.4	0.3	15.5	20	15	94
	575-3-60	518	632	7.7	56.0	0.6	3.4	0.3	12.2	15	12	76

581B036-072 HIGH-STATIC MOTOR (Units With Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR (each)		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	RLA	MCA	MOCP†	FLA	LRA
036	208/230-3-60	187	254	10.3	77.0	0.7	5.8	0.6	25.4/25.4	30/30	25	124/124
	460-3-60	414	508	5.1	39.0	0.4	2.6	0.3	12.1	15	12	63
	575-3-60	518	632	4.2	31.0	0.4	2.6	0.3	9.8	15	10	50
048	208/230-3-60	187	254	13.5	99.0	0.7	5.8	0.6	29.4/29.4	35/35	29	146/146
	460-3-60	414	508	7.4	49.5	0.4	2.6	0.3	15.0	20	14	73
	575-3-60	518	632	5.8	40.0	0.4	2.6	0.3	11.8	15	11	59
060	208/230-3-60	187	254	17.3	123.0	1.5	7.5	0.6	36.6/36.6	40/40	36	192/192
	460-3-60	414	508	9.0	62.0	0.8	3.4	0.3	18.2	20	18	96
	575-3-60	518	632	7.1	50.0	0.8	3.4	0.3	14.4	20	14	77
072	208/230-3-60	187	254	20.5	156.0	1.4	7.5	0.6	40.5/40.5	45/45	39	224/224
	460-3-60	414	508	9.6	70.0	0.6	3.4	0.3	18.7	25	18	104
	575-3-60	518	632	7.7	56.0	0.6	3.4	0.3	15.0	20	15	89

LEGEND

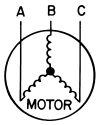
FLA — Full Load Amps
HACR — Heating, Air Conditioning and Refrigeration
IFM — Indoor (Evaporator) Fan Motor
LRA — Locked Rotor Amps
MCA — Minimum Circuit Amps
MOCP — Maximum Overcurrent Protection
NEC — National Electrical Code
OFM — Outdoor (Condenser) Fan Motor
RLA — Rated Load Amps
UL — Underwriters'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

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

NOTES:
1. 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. UL, Canada 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.

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

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 (cont)

581B090-150 STANDARD MOTOR (Units Without Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY WITH OUTLET		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	FLA	MCA	MOCP	FLA	LRA
090	208/230-3-60	187	254	12.4	88.0	1.4	7.5	.57	38.2/38.2	45/45†	40/40	242/242
	460-3-60	414	508	6.4	44.0	0.7	3.4	.30	19.2	25†	20	121
	575-3-60	518	632	4.8	34.0	0.7	3.4	.30	14.6	20†	16	95
102	208/230-3-60	187	254	15.0	99.0	1.4	7.5	.57	44.1/44.1	50/50†	46/46	264/264
	460-3-60	414	508	8.2	49.5	0.7	3.4	.30	23.3	30†	24	132
	575-3-60	518	632	5.8	40.0	0.7	3.4	.30	16.9	20†	18	107
120	208/230-3-60	187	254	18.9	125.0	1.4	10.6	.57	55.9/55.9	60/60†	59/59	341/341
	460-3-60	414	508	9.0	62.5	0.7	4.8	.30	26.5	30†	28	171
	575-3-60	518	632	7.1	50.0	0.7	4.8	.30	20.9	25†	22	136
150	208/230-3-60	187	254	19.0	156.0	1.4	15.0	.57	60.6/60.6	70/70	64/64	426/426
	460-3-60	414	508	9.0	70.0	0.7	7.4	.30	29.1	35†	31	197
	575-3-60	518	632	7.4	54.0	0.7	7.4	.30	23.7	30†	25	154

581B090-150 STANDARD MOTOR (Units With Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY WITH OUTLET		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	FLA	MCA	MOCP	FLA	LRA
090	208/230-3-60	187	254	12.4	88.0	1.4	7.5	.57	44.2/44.2	50/50†	46/46	247/247
	460-3-60	414	508	6.4	44.0	0.7	3.4	.30	21.9	25†	23	124
	575-3-60	518	632	4.8	34.0	0.7	3.4	.30	16.8	20†	18	97
102	208/230-3-60	187	254	15.0	99.0	1.4	7.5	.57	50.1/50.1	60/60†	52/52	269/269
	460-3-60	414	508	8.2	49.5	0.7	3.4	.30	26.0	30†	27	135
	575-3-60	518	632	5.8	40.0	0.7	3.4	.30	19.1	25†	20	109
120	208/230-3-60	187	254	18.9	125.0	1.4	10.6	.57	61.9/61.9	70/70	64/64	345/345
	460-3-60	414	508	9.0	62.5	0.7	4.8	.30	29.2	35†	30	173
	575-3-60	518	632	7.1	50.0	0.7	4.8	.30	23.1	25†	24	139
150	208/230-3-60	187	254	19.0	156.0	1.4	15.0	.57	66.6/66.6	80/70	70/70	430/430
	460-3-60	414	508	9.0	70.0	0.7	7.4	.30	31.8	35†	33	199
	575-3-60	518	632	7.4	54.0	0.7	7.4	.30	25.9	30†	27	156

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
UL — Underwriters' Laboratories

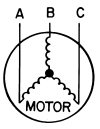
*Used to determine minimum disconnect per NEC.
†Fuse or HACR circuit breaker per NEC.

NOTES:
1. 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, Canadian approved 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.

ELECTRICAL DATA (cont)

581B090-120 HIGH-STATIC MOTOR (Units Without Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR (each)		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	RLA	MCA	MOCP	FLA	LRA
090	208/230-3-60	187	254	12.4	88.0	1.4	10.6	0.6	41.3	45†	44	267
	460-3-60	414	508	6.4	44.0	0.7	4.8	0.3	20.6	25†	22	134
	575-3-60	518	632	4.8	34.0	0.7	4.8	0.3	15.8	20†	17	95
102	208/230-3-60	187	254	15.0	99.0	1.4	10.6	0.6	47.2	60†	50	264
	460-3-60	414	508	8.2	49.5	0.7	4.8	0.3	24.7	30†	26	132
	575-3-60	518	632	5.8	40.0	0.7	4.8	0.3	18.0	20†	19	107
120	208/230-3-60	187	254	17.3	125.0	1.4	15.0	0.6	56.7	70	61	360
	460-3-60	414	508	9.0	62.0	0.7	7.4	0.3	29.1	35†	29	181
	575-3-60	518	632	7.1	50.0	0.7	7.4	0.3	23.0	25†	23	136

581B090-120 HIGH-STATIC MOTOR (Units With Electrical Convenience Outlet)

UNIT 581B	NOMINAL VOLTAGE (V-Ph-Hz)	VOLTAGE RANGE		COMPRESSOR (each)		OFM	IFM	COMBUSTION FAN MOTOR	POWER SUPPLY		MINIMUM UNIT DISCONNECT SIZE*	
		Min	Max	RLA	LRA	FLA	FLA	RLA	MCA	MOCP	FLA	LRA
090	208/230-3-60	187	254	12.4	88.0	1.4	10.6	0.6	47.3	50†	49	267
	460-3-60	414	508	6.4	44.0	0.7	4.8	0.3	23.3	25†	24	134
	575-3-60	518	632	4.8	34.0	0.7	4.8	0.3	18.5	20†	19	95
102	208/230-3-60	187	254	15.0	99.0	1.4	10.6	0.6	53.2	60†	55	264
	460-3-60	414	508	8.2	49.5	0.7	4.8	0.3	27.4	30†	28	132
	575-3-60	518	632	5.8	40.0	0.7	4.8	0.3	20.7	25†	21	107
120	208/230-3-60	187	254	17.3	125.0	1.4	15.0	0.6	62.7	70	66	360
	460-3-60	414	508	9.0	62.0	0.7	7.4	0.3	31.8	35†	32	181
	575-3-60	518	632	7.1	50.0	0.7	7.4	0.3	25.7	30†	25	147

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
UL — Underwriters' Laboratories

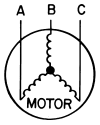
*Used to determine minimum disconnect per NEC.
†Fuse or HACR circuit breaker per NEC.

NOTES:
1. 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 approved 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.

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. **TO CONVERT FROM VERTICAL DISCHARGE TO HORIZONTAL DISCHARGE (Durablade Economizer Only):**
   a. Remove economizer/two-position damper to gain access to return duct opening.
   b. Move the horizontal-discharge duct opening covers to the vertical discharge openings.
   c. Rotate economizer 90 degrees (until the economizer/two-position damper motor faces the condenser section).
   d. Rotate the barometric relief damper 90 degrees.
   e. Install block-off plate over the opening on the access panel.
4. **THERMOSTAT —** Use of 2-stage cooling thermostat is recommended for all size 036-072 units equipped with economizer.
5. **HEATING-TO-COOLING CHANGEOVER —** All units are automatic changeover from heating to cooling when automatic changeover thermostat and subbase are used.
6. **AIRFLOW —** Units are draw-thru on cooling and blow-thru on heating.
7. **MAXIMUM AIRFLOW —** To minimize possibility of condensate blow-off from evaporator, airflow through units should not exceed 500 cfm/ton.
8. **MINIMUM AIRFLOW —** Minimum airflow for cooling is 300 cfm/ton.
9. **MINIMUM AMBIENT OPERATING TEMPERATURE —** Minimum ambient operating temperature for size 036-150 standard units is 25 F. With accessory Motormaster® or Motormaster II control, units can operate at outdoor temperatures down to –20 F.
10. **MAXIMUM OPERATING OUTDOOR-AIR TEMPERATURE —** Maximum outdoor-air operating temperature for cooling is 125 F.
11. **HIGH ALTITUDES —** These may require a change to the gas orifice. Refer to Altitude Compensation tables on page 43.
12. **MINIMUM TEMPERATURE —** Minimum temperature of air entering the dimpled heat exchanger is 50 F continuous and 45 F intermittent.
13. **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 table 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.
14. **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.
15. **PERFECT HUMIDITY™ DEHUMIDIFICATION PACKAGE —** This option provides greater dehumidification by further subcooling the hot liquid refrigerant leaving the condenser coil. The Perfect Humidity package consists of a subcooling coil located on the leaving-air side of the evaporator coil. The location of the coil in the indoor airstream enhances the latent capacity of the 581B rooftop units by up to 40%.

    Many buildings suffer damage or have poor indoor-air quality due to overly humid conditions. Building humidity must be controlled for the following reasons:
    a. **INDOOR-AIR QUALITY —** Humidity is a major factor in the growth and propagation of mold and mildew in a building. The mold and mildew can spread quickly and grow in carpets and ductwork and on walls, and often causes cases of sick building syndrome. This syndrome can lead to employee absenteeism due to illness, lower worker productivity, and increased health care costs. The American Society of Heating, Refrigeration, and Air Conditioning Engineers (ASHRAE) recommends that relative humidity levels in buildings be maintained below 70%.
    b. **COMFORT LEVELS —** High humidity levels cause the occupied space to become uncomfortable, because humidity interferes with the body's natural cooling process (evaporation at the skin surface).
    c. **HUMIDITY DAMAGE —** Humidity causes property damage, such as stained wallpaper and ceiling tiles. Humidity can also damage books and artwork, and create strong odors in carpets. In addition, humidity can contribute to unacceptable product quality in industrial processes.
    d. **IMPROPER VENTILATION —** Buildings in hot and humid geographical areas cannot be properly ventilated due to high humidity levels outdoors, resulting in poor indoor-air quality.
    e. **EQUIPMENT INEFFICIENCY —** Humidity can cause inefficient operation of refrigerators and freezers.
    f. **INCREASED ENERGY COSTS —** Because of high humidity levels and less comfortable conditions, thermostat set points are lowered to force the HVAC (heating, ventilation, and air conditioning) equipment to run longer and work harder to lower the humidity levels. Also, in an attempt to control humidity, system designers typically oversize HVAC equipment and add reheat capability to get the desired latent capacity. This results in higher initial equipment costs, as well as increased energy expenses throughout the life of the unit.

    Applications

    There are many different rooftop unit applications that are susceptible to problems caused by high humidity levels. Some common applications include:
    a. **RESTAURANTS —** The kitchen areas of restaurants have many humidity-producing activities, such as dish washing and cooking.
    b. **SUPERMARKETS —** High humidity levels cause inefficiency in operation of refrigeration and freezer systems.
    c. **MUSEUMS AND LIBRARIES —** Humidity can damage books and artwork.
    d. **GYMNASIUMS, LOCKER ROOMS, AND HEALTH CLUBS —** Shower areas and human perspiration cause uncomfortable occupied space conditions.
    e. **HOT AND HUMID CLIMATES —** The southeastern United States is a good example of this application. The Perfect Humidity dehumidification package becomes particularly useful when increased amounts of the hot and humid outdoor air need to be brought into the building for proper ventilation.
16. **PERFECT HUMIDITY DEHUMIDIFICATION PACKAGE DESIGN EFFECTS —** To fully understand the operation of the Perfect Humidity dehumidification package, refer to the pressure enthalpy curve, and analyze the Perfect Humidity package effects on the refrigerant in the rooftop unit. The pressure enthalpy curve shows the refrigerant cycle for a 581B rooftop unit.

Standard Unit Refrigerant Cycle

At point no. 1 in the pressure enthalpy curve, vapor leaving the compressor at a high pressure and a high temperature enters the condenser. The condenser removes heat from the refrigerant, lowers its temperature, and changes it to a liquid. At point no. 2, the liquid leaves the condenser and enters a fixed expansion device that lowers the pressure of the refrigerant. At point no. 3, the liquid enters the evaporator coil, where the refrigerant increases in temperature and changes back to a vapor. At point no. 4, the vapor leaves the evaporator and reenters the compressor.

Refrigerant Cycle Using Perfect Humidity™ Dehumidification Package

When a subcooler coil is added to the rooftop unit, the refrigerant is affected in such a way that the unit latent capacity is increased. The refrigerant cycle follows the same path from point no. 1 to point no. 2 as the standard refrigerant cycle without a subcooler (see the pressure enthalpy curve). However, at point no. 2, the liquid refrigerant enters the subcooler coil where the temperature is lowered further. At point no. 2A, this subcooled liquid enters the TXV, which drops the pressure of the liquid. At point no. 2B, the liquid enters the fixed orifice metering device. The refrigerant leaves this device as a saturated vapor and enters the evaporator at point no. 2C. The improved refrigeration effect can now be seen between point no. 2C and point no. 3. The increase in the total refrigeration effect is the additional enthalpy gained from point no. 2C to point no. 3. However, the subcooler coil rejects this added refrigeration effect to the air downstream of the evaporator coil, thus maximizing the overall latent effect. This improved latent effect is a direct result of the addition of the Perfect Humidity subcooler coil to the refrigerant cycle.

Latent Capacity Effects

Refer to the psychrometric chart to see how the sensible heat factor decreases when the optional Perfect Humidity dehumidification package is installed. This chart contains data for the 5-ton 581B unit operation, both with and without the Perfect Humidity package, at 1750 cfm. Point no. 1 on the chart represents the return-air dry bulb (80 F) and wet bulb (67 F) conditions. Point no. 2 represents the supply-air conditions for a standard 581B rooftop unit without the Perfect Humidity dehumidification package. Point no. 3 represents the supply-air conditions for a 581B rooftop unit with the Perfect Humidity package. By connecting point no. 1 and point no. 2 on the chart and finding the intersection on the sensible heat factor scale, the sensible heat factor is 0.73. Connect point no. 1 and point no. 3, and see that the sensible heat factor is 0.58. This is a 17.5% increase in latent capacity for the given conditions. This increase in latent capacity allows the 581B rooftop units to remove more moisture from the conditioned space; thus lowering the humidity levels.

Dehumidification Effects

Further evidence of dehumidification can be seen by analyzing the pounds of water per pound of dry air found in the supply air. At point no. 2 in the psychrometric chart, there are 65 grains (0.0092 lb) of moisture per pound of dry air. At point no. 3, there are 58 grains (0.0083 lb) of moisture per pound of dry air. This is a 12.1% decrease in the amount of water in the supply air.

17. **PERFECT HUMIDITY DEHUMIDIFICATION PACKAGE OPERATING PERFORMANCE —** Perfect Humidity dehumidification package operation does not affect the electrical data. The electrical data remains the same either with or without the Perfect Humidity package.

    The operating and shipping weights will be slightly increased with the addition of the Perfect Humidity subcooler. See the Physical Data table for added base unit weight with this option.

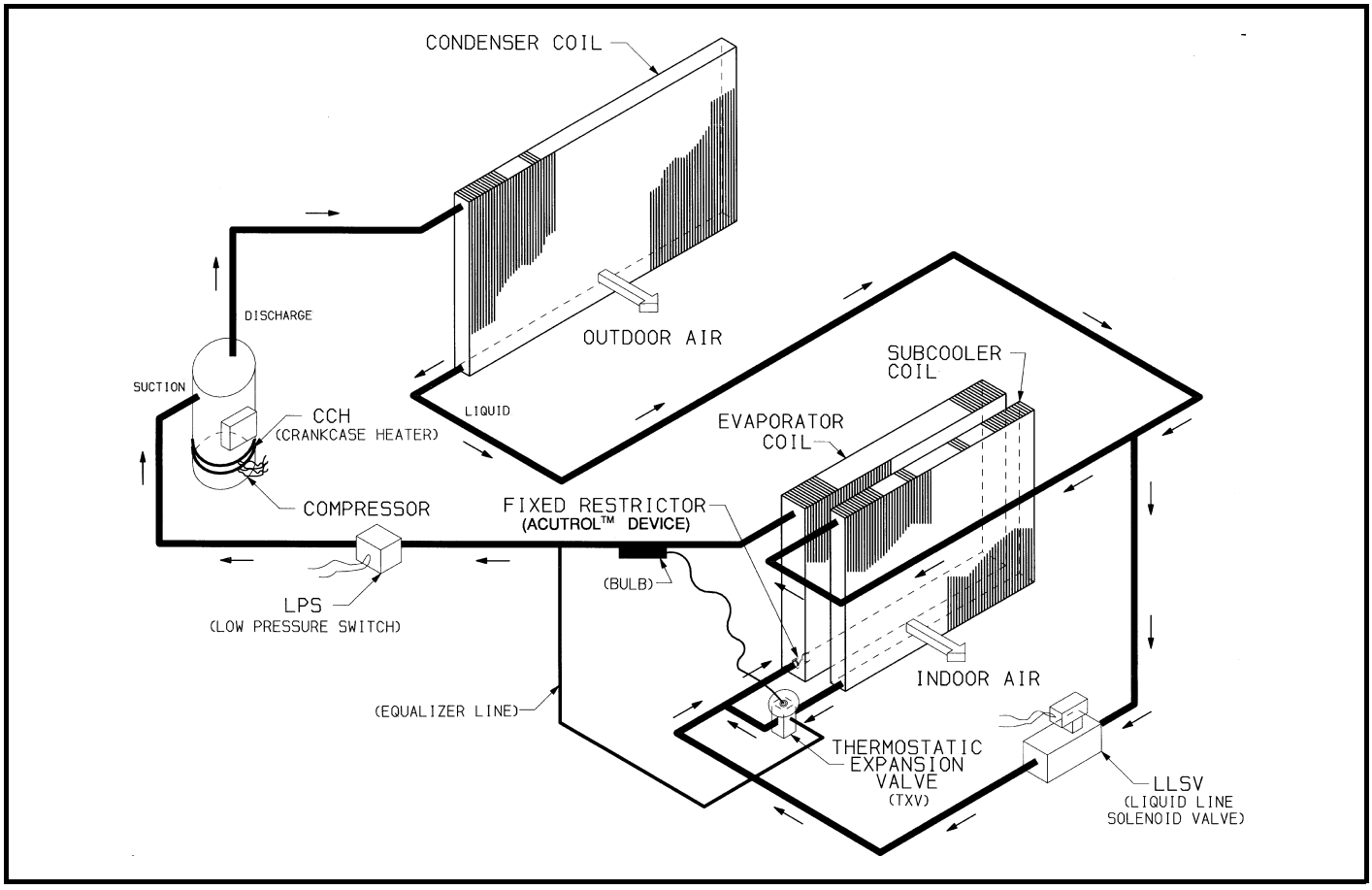
    Refer to cooling performance data, both with and without the Perfect Humidity dehumidification package. Note the greatly improved latent capacity with the Perfect Humidity dehumidification package.

    Static pressure is also slightly affected by the addition of the Perfect Humidity dehumidification package. See Static Pressure Drop table on page 40 when using this option.

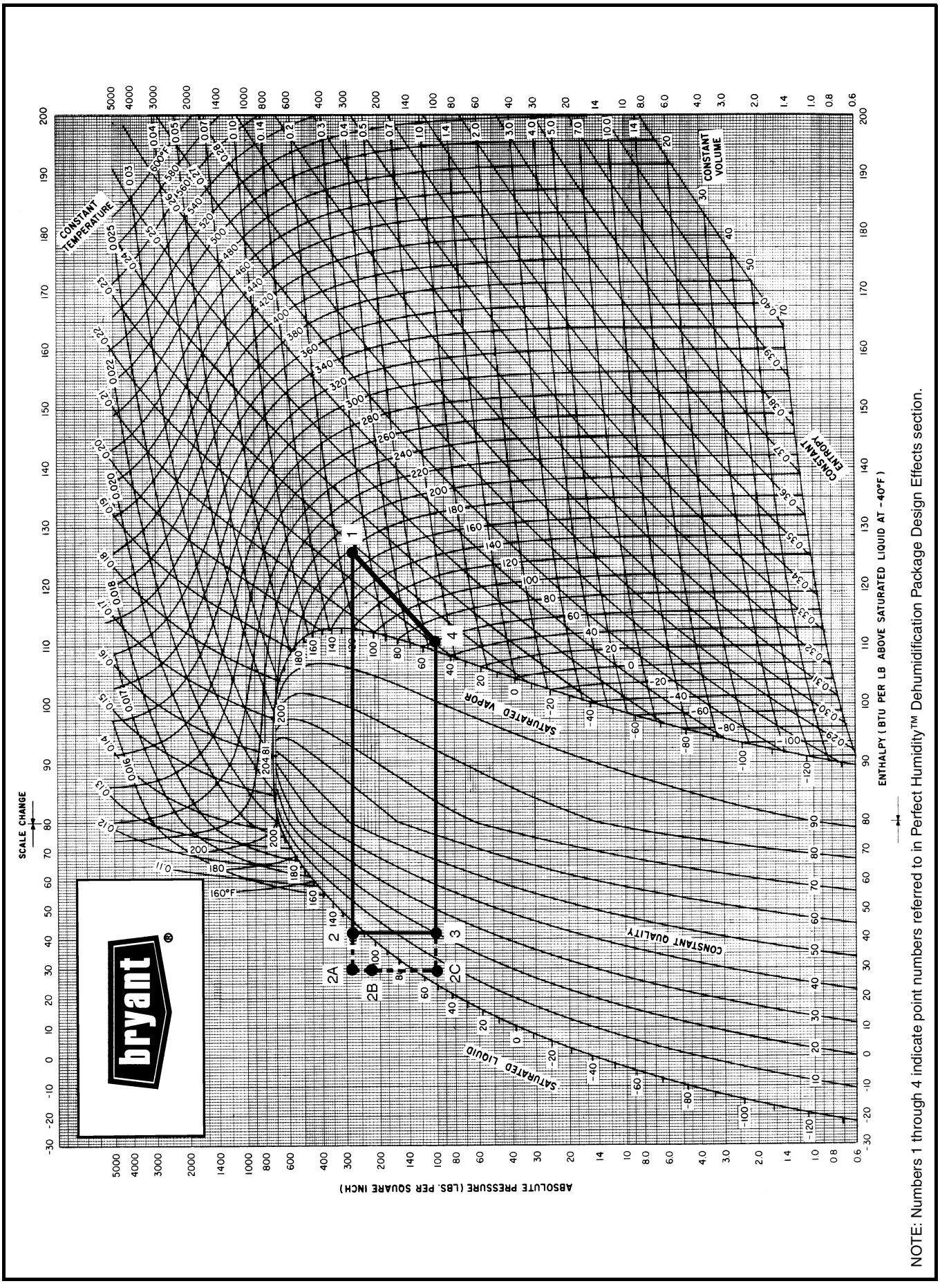
18. **PERFECT HUMIDITY DEHUMIDIFICATION PACKAGE FEATURES AND BENEFITS**

- The Perfect Humidity dehumidification package can improve the humidity control of your rooftop equipment by up to 40%. This greatly reduces the risk of sick building syndrome by reducing biological growth in both ductwork and the rest of the building.
- The Perfect Humidity dehumidification package improves comfort levels in the building by better controlling the humidity. This improved comfort level allows building tenants to raise the cooling set point on the thermostats for accumulated energy savings.
- Better humidity control lowers the risk of humidity-induced property damage.
- The Perfect Humidity dehumidification package permits building refrigerators and freezers to operate more efficiently due to lower relative humidity levels. This is the perfect solution for supermarket applications.
- The Perfect Humidity subcooling circuit can be operated by a humidity sensor. If the sensor is used, the Perfect Humidity circuit will then only operate when needed. If the humidity levels in the occupied space are acceptable (such as in the spring and fall seasons), the Perfect Humidity circuit will not operate. The rooftop unit is then able to operate to its full sensible potential, which provides more efficient performance and energy savings.
- At lower outdoor temperatures, rooftop units with dehumidification devices are subject to low suction pressure conditions. The Perfect Humidity dehumidification package contains a low-pressure switch that deactivates the Perfect Humidity dehumidification package under low suction pressure conditions without deactivating the compressors.
- Improved humidity control allows increased outdoor-air ventilation in hot and humid geographical areas. Humidity control also helps to improve the indoor-air quality of the building.
- The Perfect Humidity dehumidification package is factory installed. There are no additional field installation costs. There is also no need to purchase a roof curb from another manufacturer, as standard Bryant roof curbs will accommodate the 581B rooftop units which have the Perfect Humidity dehumidification package option installed.
- The Perfect Humidity dehumidification package is engineered and manufactured by Bryant for Bryant rooftop units. All application support, service, and warranty issues can therefore be handled through one company.
- The slightly lower sensible capacities obtained when using the Perfect Humidity dehumidification package allow the unit to operate for an extended period of time. The more the unit operates, the more air is exposed to the subcooling coil. This rooftop unit increased latent capacity results in lower relative humidity levels in the occupied space.
- It is no longer necessary to oversize equipment and add reheat devices to properly dehumidify your building. In a typical scenario, a building owner may need 39,000 Btuh of sensible capacity and 23,000 Btuh of latent capacity (62,000 total Btuh). To accomplish this without the Perfect Humidity dehumidification package, a $7^1/_2$-ton unit with a reheat device would be necessary to attain the higher latent capacity required. This results in a large up-front expense to oversize the equipment from a standard 5-ton to a $7^1/_2$-ton unit.

  The building owner can now purchase a 5-ton unit with the Perfect Humidity dehumidification package for a small additional up-front charge, and no reheat device will be necessary to satisfy the cooling requirements. This reduces both installation costs and operating costs throughout the life of the product.

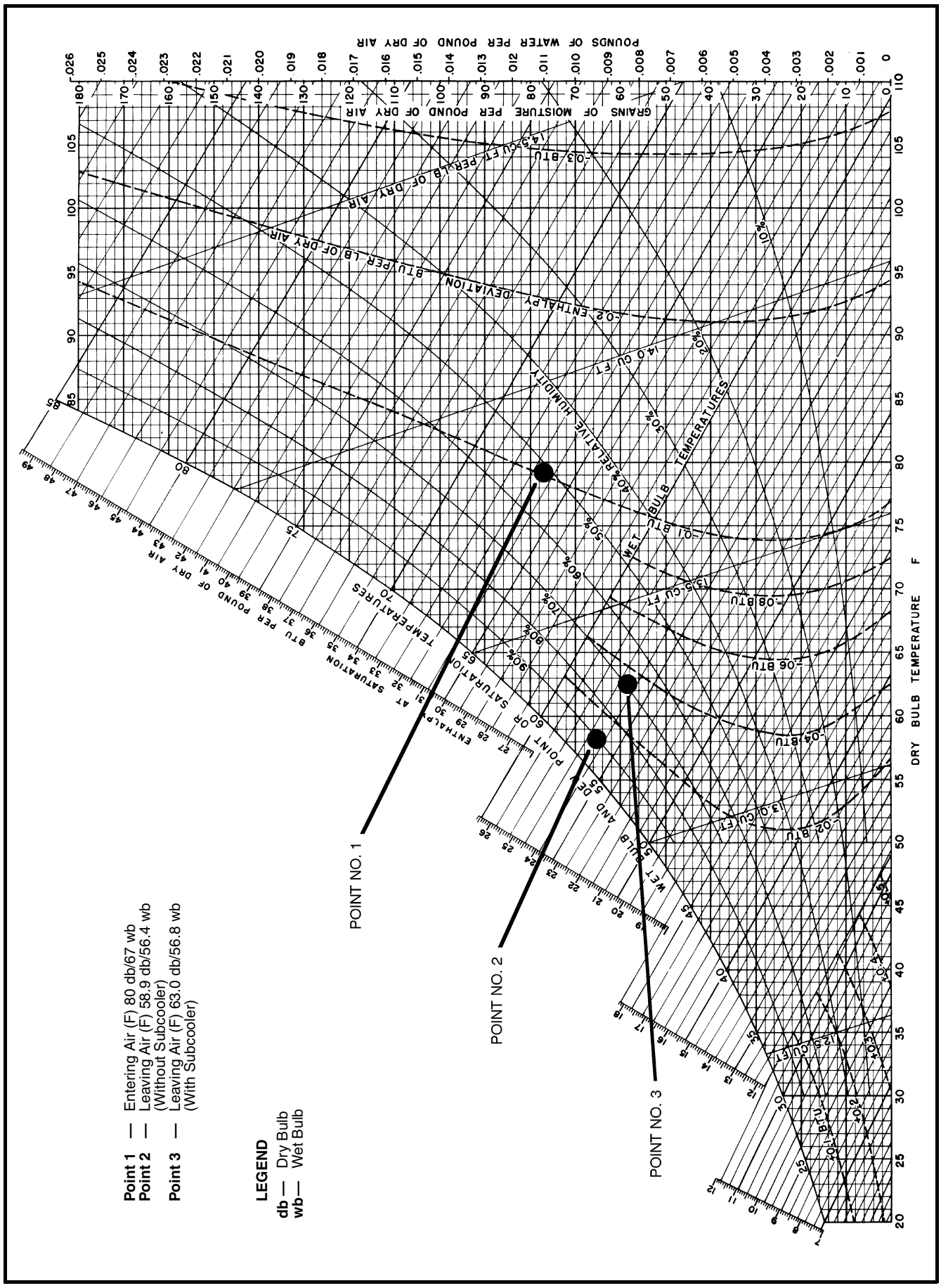


Perfect Humidity™ Dehumidification Option



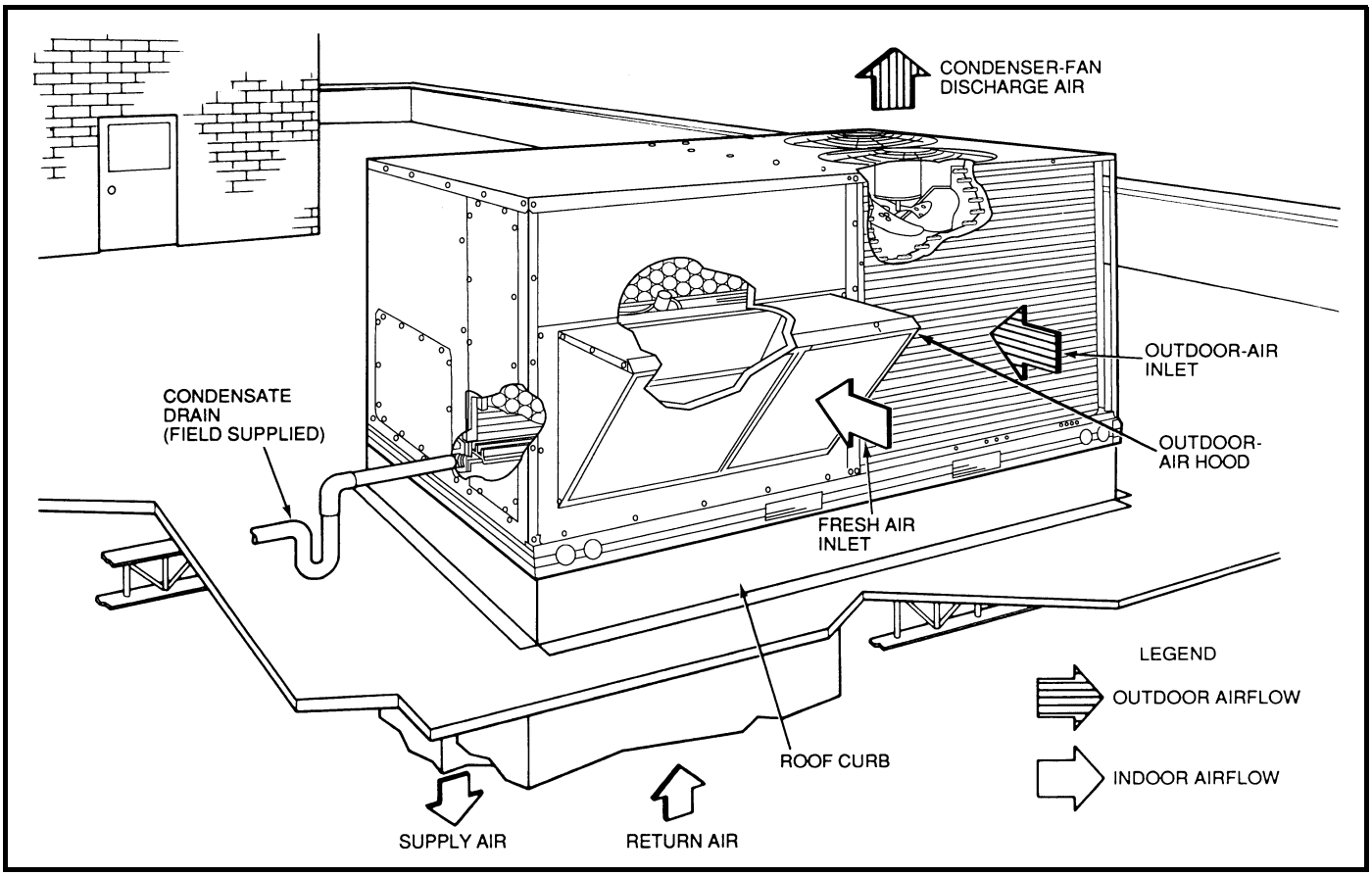
NOTE: Numbers 1 through 4 indicate point numbers referred to in Perfect Humidity™ Dehumidification Package Design Effects section.

Pressure Enthalpy Curve

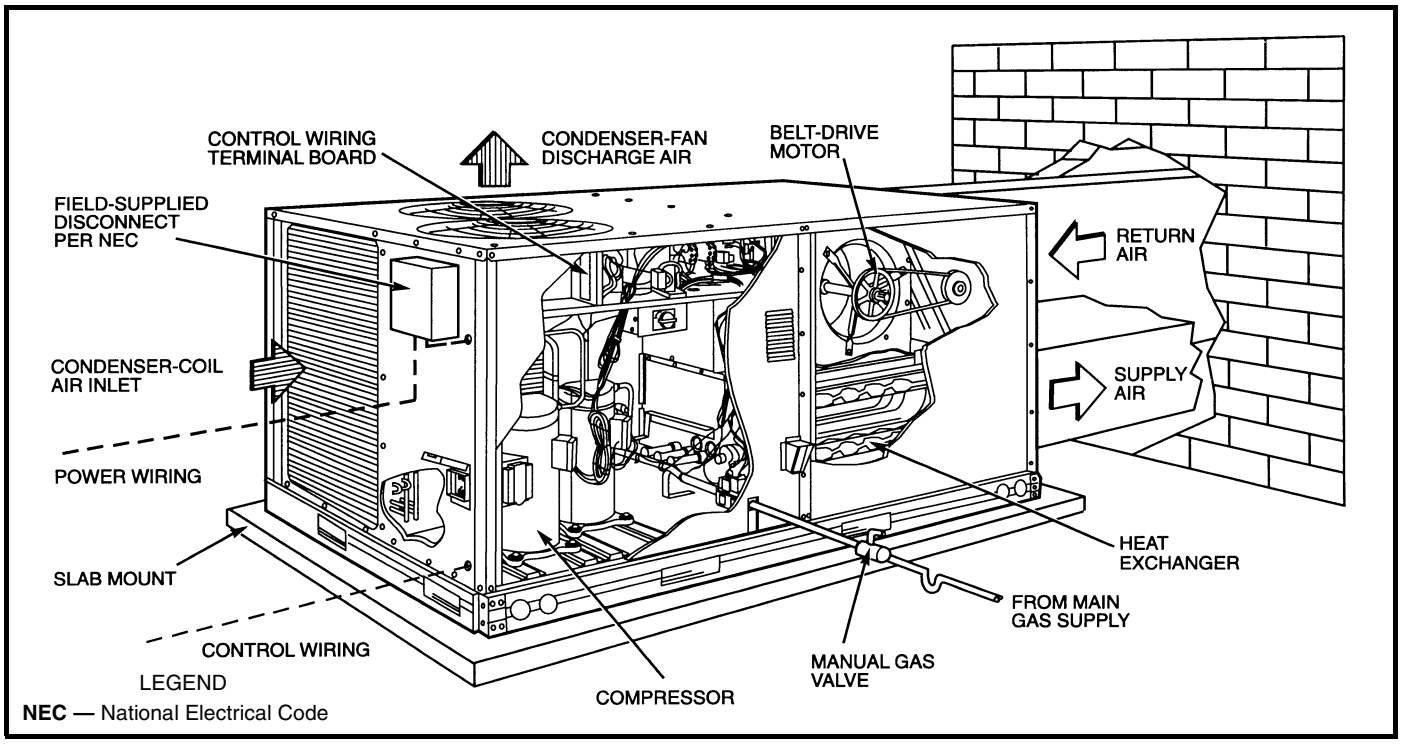


Psychrometric Chart (581B072 Shown)

TYPICAL PIPING AND WIRING

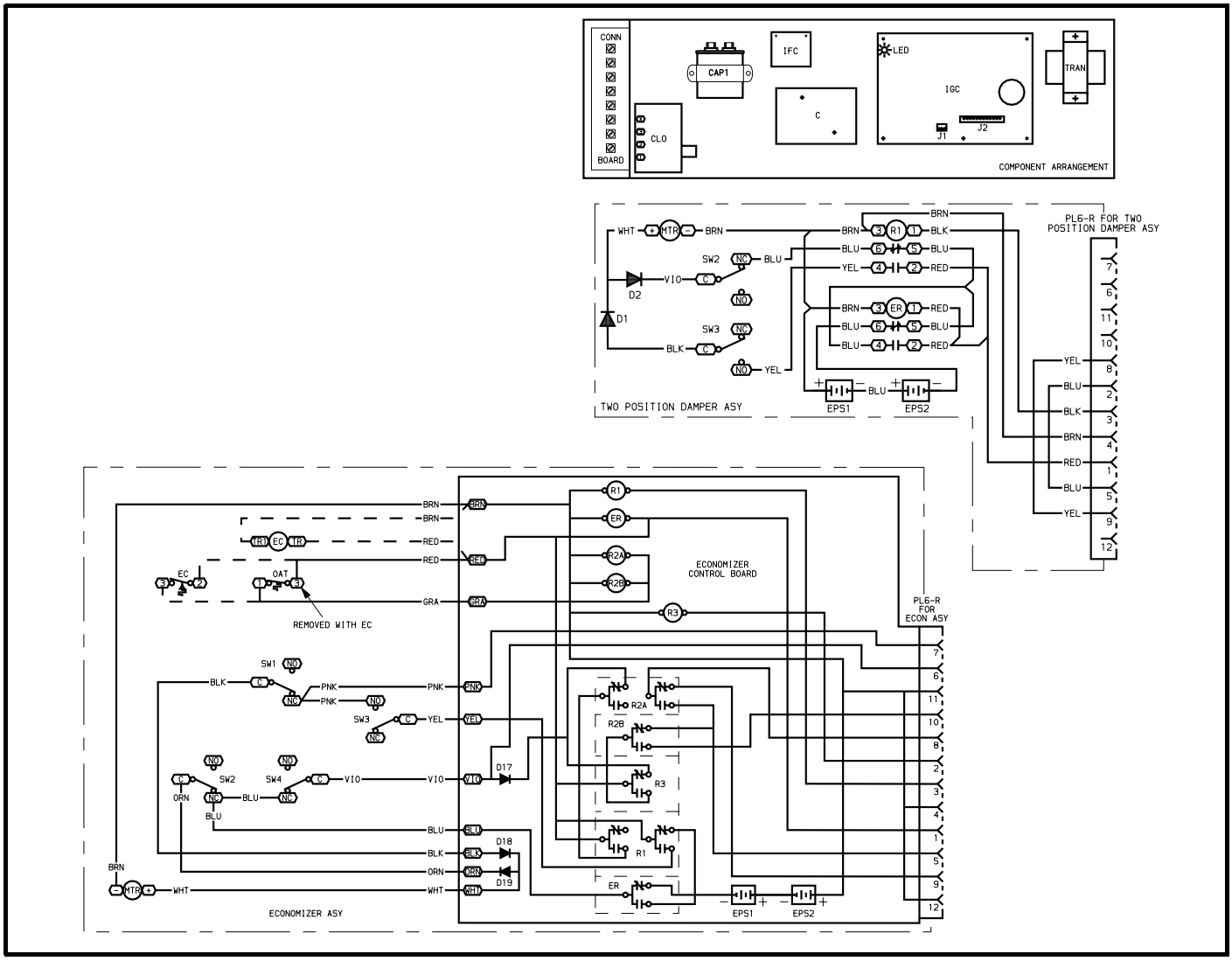


Vertical Discharge



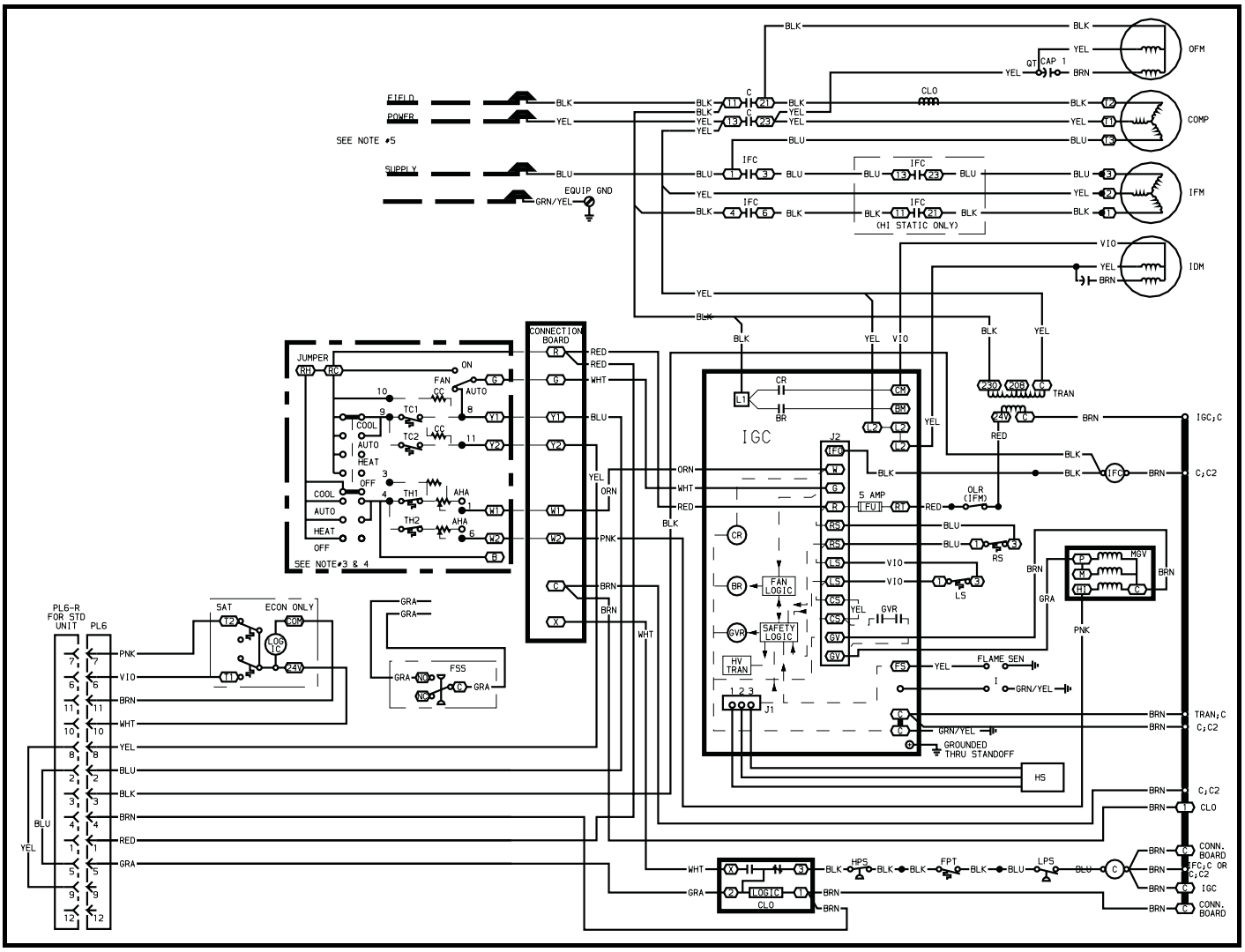
Horizontal Discharge

TYPICAL WIRING SCHEMATIC



581B036-072 Typical Wiring Schematic and Component Arrangement (208/230 V 3-Phase Unit Shown)

TYPICAL WIRING SCHEMATIC (cont)



581B036-072 Typical Wiring Schematic and Component Arrangement (208/230 V 3-Phase Unit Shown) (cont)

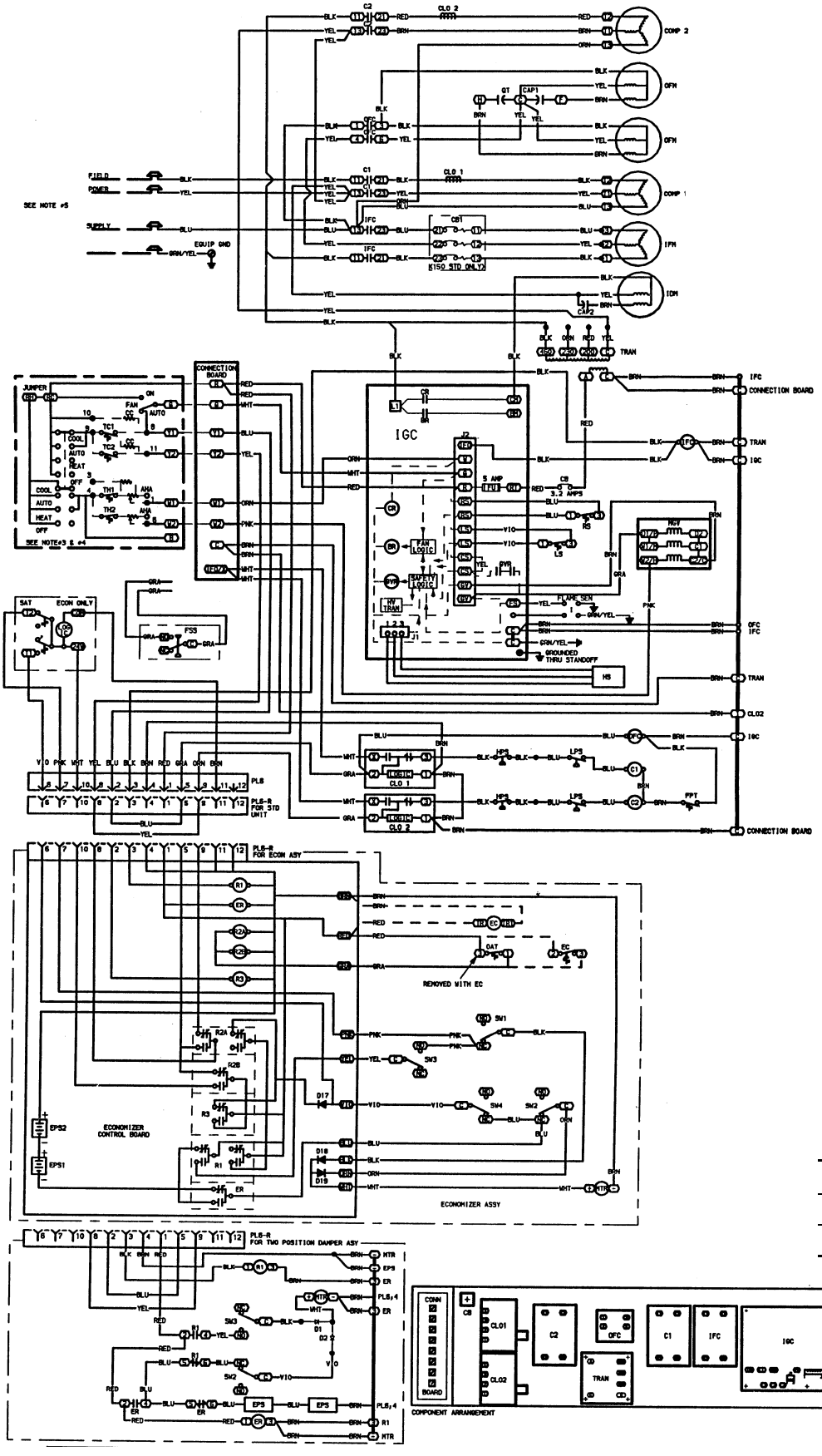
LEGEND

AHA — Adjustable Heat Anticipator
C — Contactor, Compressor
CAP — Capacitor
CC — Cooling Compensator
CLO — Compressor Lockout
COMP — Compressor Motor
D — Diode
EC — Enthalpy Control
ECON — Economizer
EPS — Emergency Power Supply
EQUIP — Equipment
ER — Economizer Relay
FPT — Freeze-Protection Thermostat
FSS — Filter-Status Switch
FU — Fuse
GND — Ground
GVR — Gas Valve Relay
HPS — High-Pressure Switch
HS — Hall-Effect Sensor
HV — High Voltage
I — Ignitor
IDM — Induced-Draft Motor
IFC — Indoor (Evaporator) Fan Contactor
IFM — Indoor (Evaporator) Fan Motor
IGC — Integrated Gas Unit Controller
LED — Light-Emitting Diode
LPS — Low-Pressure/Loss-of-Charge Switch
LS — Limit Switch
MGV — Main Gas Valve
MTR — Motor
OAT — Outdoor-Air Thermostat
OFM — Outdoor (Condenser) Fan Motor
OLR — Overload
P — Plug
PL — Plug Assembly
QT — Quadruple Terminal
R — Relay
RS — Rollout Switch
SAT — Supply-Air Thermostat
SEN — Sensor
SW1 — Switch Fully Open
SW2 — Switch Fully Closed
SW3 — Switch Minimum Vent Position
SW4 — Switch Maximum Vent Position
TC — Thermostat-Cooling
TH — Thermostat-Heating
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.

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. Thermostats: HH07AT170, 172
   Subbase: HH93AZ176, 177, 178 and 179
4. Set heat anticipator at .14 amp for first stage and .14 amp for second stage.
5. Use copper conductors only.
6. TRAN is wired for 230 v unit. If unit is to be run with 208 v power supply, disconnect BLK wire from 230 v tap and connect to 208 v tap (RED). Insulate end of 230 v tap.

TYPICAL WIRING SCHEMATIC (cont)



LEGEND

AHA	—	Adjustable Heat Anticipator
BR	—	Burner Relay
C	—	Contactor, Compressor
CAP	—	Capacitor
CB	—	Circuit Breaker
CC	—	Cooling Compensator
CLO	—	Compressor Lockout
COMP	—	Compressor Motor
CONN	—	Connection
CR	—	Control Relay
D	—	Diode
EC	—	Enthalpy Control
ECON	—	Economizer
EPS	—	Emergency Power Supply
EQUIP	—	Equipment
ER	—	Economizer Relay
FPT	—	Freeze-Protection Thermostat
FS	—	Flame Sensor
FSS	—	Filter Status Switch
FU	—	Fuse
GND	—	Ground
GVR	—	Gas Valve Relay
HPS	—	High-Pressure Switch
HS	—	Hall Effect Sensor
HV	—	High Voltage
I	—	Ignitor
IDM	—	Induced-Draft Motor
IFC	—	Indoor (Evaporator) Fan Contactor
IFM	—	Indoor (Evaporator) Fan Motor
IFMOVL	—	Indoor-Fan Motor Overload Switch
IGC	—	Integrated Gas Unit Controller
LPS	—	Low-Pressure/Loss-of-Charge Switch
LS	—	Limit Switch
MGV	—	Main Gas Valve
MTR	—	Motor
NC	—	Normally Closed
NO	—	Normally Open
OAT	—	Outdoor-Air Thermostat
OFC	—	Outdoor (Condenser) Fan Contactor
OFM	—	Outdoor (Condenser) Fan Motor
P	—	Plug
PL	—	Plug Assembly
QT	—	Quadruple Terminal
R	—	Relay
RS	—	Rollout Switch
SAT	—	Supply-Air Thermostat
SEN	—	Sensor
SW1	—	Switch Fully Open
SW2	—	Switch Fully Closed
SW3	—	Switch Minimum Vent Position
SW4	—	Switch Maximum Vent Position
TC	—	Thermostat-Cooling
TH	—	Thermostat-Heating
TRAN	—	Transformer

Field Splice
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.

CIRCUIT BREAKER	VOLTS	MFG. PT. NO.		MUST TRIP AMPS
CB	24 V	Potter & Brumfield		3.2
		W2BX-1024-3.2		
CB1 (150 Std)	208/230-3-60	Heinemann	Airpax	17.3
		CF3-2204-15	209-3-2599-485	

581B090-150 Typical Wiring Schematic

OPERATING SEQUENCE FOR 581B036-072 UNITS

Cooling, Units Without Economizer — When thermostat calls for cooling, terminals G and Y1 and the compressor contactor (C) 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. When the thermostat is satisfied, C is 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 evaporator motor will run continuously.

Cooling, Units With Durablade Economizer — When the outdoor-air temperature is above the outdoor-air temperature (OAT) setting and the room thermostat calls for cooling, the compressor contactor is energized to start the compressor and outdoor (condenser) fan motor (OFM). The indoor (evaporator) fan motor (IFM) is energized and the economizer damper moves to the minimum position. After the thermostat is satisfied, the damper moves to the fully closed position when IFM is deenergized.

When the outdoor-air temperature is below the OAT setting and the thermostat calls for Y1 and G, the economizer damper moves to the minimum position when the evaporator fan starts. The first stage of cooling is provided by the economizer. If the supply-air temperature is above 57 F, a switch on the supply-air thermostat is closed between the T2 terminal and the 24 vac terminal. This causes the damper to continue to modulate open until the supply-air temperature falls below 55 F or the damper reaches the fully open position.

When the supply-air temperature is between 55 F and 52 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals and between the T1 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the supply-air temperature falls below 52 F, a switch on the supply-air thermostat is closed between the T1 terminal and the 24 vac terminal. This causes the damper to modulate closed until the supply-air temperature rises above 55 F or the damper reaches the minimum position.

When the supply-air temperature is between 55 F and 57 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the outdoor air alone cannot satisfy the cooling requirements of the conditioned space, economizer cooling is integrated with mechanical cooling, providing second stage cooling. The compressor and condenser fan will be energized and the position of the economizer damper will be determined by the supply-air temperature.

When the second stage of cooling is satisfied, the compressor and condenser-fan motor will be deenergized. The damper position will be determined by the supply-air temperature.

When the first stage of cooling is satisfied, the IFM shuts off after a 30-second delay. The damper then moves to fully closed position.

**Cooling, Units With EconoMi$er —** When the outdoor-air temperature (OAT) is above the ECON SP set point and the room thermostat calls for Stage 1 cooling (R to G +Y1), the indoor-fan motor (IFM) is energized and the EconoMi$er damper modulates to minimum position. The compressor contactor is energized starting the compressor and outdoor-fan motor (OFM). After the thermostat is satisfied, the damper modulates to the fully closed position when the IFM is deenergized.

When the OAT is below the ECON SP set point and the room thermostat calls for Stage 1 cooling (R to G + Y1), the EconoMi$er modulates to the minimum position when the IFM is energized. The EconoMi$er provides Stage 1 of cooling by modulating the return and outdoor air dampers to maintain a 55 F supply air set point. If the supply-air temperature (SAT) is greater than 57 F, the EconoMi$er modulates open, allowing a greater amount of outdoor air to enter the unit. If the SAT drops below 53 F, the outdoor-air damper modules closed to reduce the amount of outdoor air. When the SAT is between 53 and 57 F, the EconoMi$er maintains its position.

Heating, Units Without Economizer — When the thermostat calls for heating, terminal 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.

Heating, Units With Economizer or Two-Position Damper — When the thermostat calls for heating, terminal 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 and the damper moves to the minimum position. If the accessory two-position damper is used, the outdoor-air damper opens to the minimum position whenever the evaporator fan runs. 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. The economizer damper then moves to the fully closed position. When using continuous fan, the damper will remain in the minimum position.

OPERATING SEQUENCE FOR 581B090-150 UNITS

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, compressor no. 1, and condenser fans start. The condenser-fan motors run 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.

When the thermostat is satisfied, C1 and C2 are deenergized and the compressors and outdoor (condenser) fan motors (OFM) shut off. After a 30-second delay, the indoor (evaporator) fan motor (IFM) shuts off. If the thermostat fan selector switch is in the ON position, the evaporator motors will run continuously.

Cooling, Units With Durablade Economizer — When the outdoor-air temperature (OAT) is above the OAT setting and the room thermostat calls for cooling, the compressor contactor no. 1 is energized to start compressor no. 1 and outdoor (condenser) fan motors (OFM). The indoor (evaporator) fan motor (IFM) is energized and the economizer damper moves to the minimum position. Upon a further call for cooling, compressor contactor no. 2 will be energized, starting compressor no. 2. After the thermostat is satisfied and the IFM is deenergized, the damper moves to the fully closed position.

When the outdoor-air temperature is below the OAT setting and the thermostat calls for Y1 and G, the economizer damper moves to the minimum position when the evaporator fan starts. The first stage of cooling is provided by the economizer. If the supply-air temperature is above 57 F, a switch on the supply-air thermostat is closed between the T2 terminal and the 24 vac terminal. This causes the damper to continue to modulate open until the supply-air temperature falls below 55 F or the damper reaches the fully open position.

When the supply-air temperature is between 55 F and 52 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals and between the T1 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the supply-air temperature falls below 52 F, a switch on the supply-air thermostat is closed between the T1 terminal and the 24 vac terminal. This causes the damper to modulate closed until the supply-air temperature rises above 55 F or the damper reaches the minimum position.

When the supply-air temperature is between 55 F and 57 F, the supply-air thermostat has open switches between the T2 and 24 vac terminals. This causes the economizer damper to remain in an intermediate open position.

If the outdoor air alone cannot satisfy the cooling requirements of the conditioned space, economizer cooling is integrated with mechanical cooling, providing second stage cooling. Compressor no. 1 and condenser fan will be energized, and the position of the economizer damper will be determined by the supply-air temperature. Compressor no. 2 is locked out.

When the second stage of cooling is satisfied, the compressor and condenser fan motors will be deenergized. The damper position will be determined by the supply-air temperature.

When the first stage of cooling is satisfied, the IFM shuts off after a 30-second delay. The damper then moves to fully closed position.

**Cooling, Units With EconoMi$er —** When the outdoor-air temperature (OAT) is above the ECON SP set point and the room thermostat calls for Stage 1 cooling (R to G +Y1), the indoor-fan motor (IFM) is energized and the EconoMi$er damper modulates to minimum position. The compressor contactor is energized starting the compressor and outdoor-fan motor (OFM). After the thermostat is satisfied, the damper modulates to the fully closed position when the IFM is deenergized.

When the OAT is below the ECON SP set point and the room thermostat calls for Stage 1 cooling (R to G + Y1), the EconoMi$er modulates to the minimum position when the IFM is energized. The EconoMi$er provides Stage 1 of cooling by modulating the return and outdoor air dampers to maintain a 55 F supply air set point. If the supply-air temperature (SAT) is greater than 57 F, the EconoMi$er modulates open, allowing a greater amount of outdoor air to enter the unit. If the SAT drops below 53 F, the outdoor-air damper modules closed to reduce the amount of outdoor air. When the SAT is between 53 and 57 F, the EconoMi$er maintains its position.

Heating, Units Without Economizer — When the thermostat calls for heating, terminal W1 is energized. In order 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 (IDM) is then energized and the burner ignition sequence begins. The indoor (evaporator) fan motor (IFM) is energized 45 seconds after a flame is ignited. 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 and W2 are deenergized, the IFM stops after a 45-second time-off delay.

Heating, Units With Economizer or Two-Position Damper — When the thermostat calls for heating, terminal W1 is energized. In order 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 then energized and the burner ignition sequence begins. The indoor (evaporator) fan motor (IFM) is energized 45 seconds after a flame is ignited and the damper moves to the minimum position. If the accessory two-position damper is used, the outdoor-air damper opens to the minimum position whenever the evaporator fan runs. 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 and W2 are deenergized, the IFM stops after a 45-second time-off delay. The economizer damper then moves to the fully closed position. When using continuous fan, the damper will remain in the minimum position.

OPERATING SEQUENCE FOR 581B036-150 SIZE UNITS

Units With Perfect Humidity™ Dehumidification Package — When thermostat calls for cooling, terminals G and Y1 is energized. The indoor (evaporator) fan motor (IFM), compressor (C), and outdoor (condenser) fan motor (OFM) start. The OFM runs continuously while the unit is in cooling. As shipped from the factory, Perfect Humidity dehumidification circuit is always energized. If Perfect Humidity circuit modulation is desired, a field-installed, wall-mounted LC Thermidistat or humidistat are required.

If the Perfect Humidity humidistat is installed and calls for the Perfect Humidity subcooler coil to operate, the humidistat internal switch closes. This energizes and closes the liquid line solenoid valve coil (LLSV) of the Perfect Humidity 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 deactivate the Perfect Humidity 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 deactivate and open the liquid line solenoid valve in the Perfect Humidity 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 Perfect Humidity 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 is 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.

GUIDE SPECIFICATIONS

PACKAGED ROOFTOP COOLING UNIT WITH GAS HEAT — CONSTANT VOLUME APPLICATION

HVAC GUIDE SPECIFICATIONS

SIZE RANGE: 3 TO 12 1/2 TONS, NOMINAL COOLING
72,000 TO 250,000 BTUH,
NOMINAL INPUT HEATING

BRYANT MODEL NUMBER: 581B

PART 1 — GENERAL

1.01 SYSTEM DESCRIPTION

Outdoor rooftop- or slab-mounted, electrically controlled heating and cooling utilizing a scroll compressor 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 shall be rated in accordance with ARI Standards 210/240 or 360 and 270.

B. Unit shall be designed to conform to ASHRAE 15, latest revision, and in accordance with UL 1995.

C. Unit shall be UL tested and certified in accordance with ANSI Z21.47 Standard and UL listed and certified under Canadian Standards as a total package for safety requirements.

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 exceeding Federal Test Method Standard No. 141 (Method 6061) 500-hour Salt Spray Test.

G. Each 581B unit is subjected to completely automated run testing on the assembly line. Each unit contains a factory-supplied printout indicating tested pressures, amperages, data, and inspectors; providing certification of the unit status at the time of manufacture.

1.03 DELIVERY, STORAGE, AND HANDLING

Unit(s) 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, bonderized and coated with a baked enamel finish on all externally exposed surfaces, and have primer-coated interior surfaces on all panels.
2. Evaporator-fan cabinet interior shall be insulated with a minimum 1/2-in. thick flexible fiberglass insulation coated on the air side. Aluminum foil-faced fiberglass insulation shall be used in the heating compartment.
3. Cabinet panels shall be easily removable for servicing.
4. Holes shall be provided in the base rails for rigging shackles to facilitate overhead rigging, and forklift slots shall be provided to facilitate maneuvering.
5. Unit shall have a factory-installed, sloped condensate drain pan made of a non-corrosive material, providing a minimum 3/4-in. connection with both vertical and horizontal drains and shall comply with ASHRAE 62.
6. Unit shall have factory-installed filter access panel to provide filter access with tool-less removal.
7. Unit shall have standard thru-the-bottom power connection capability.

C. Fans:

1. Indoor blower (evaporator fan) shall be of the belt-driven, double inlet, forward-curved centrifugal type. Belt drive shall include an adjustable-pitch motor pulley.
2. Indoor blower (evaporator fan) shall be made from steel with a corrosion-resistant finish and shall be dynamically balanced.
3. Bearings shall be of the sealed, permanently lubricated, ball-bearing type for longer life and lower maintenance.
4. Condenser fan shall be of the direct-driven propeller type and shall discharge air vertically upward.
5. Condenser fan shall have aluminum blades riveted to corrosion-resistant steel spiders and shall be dynamically balanced.
6. Condenser-fan motor shall be totally enclosed.
7. Induced draft blower shall be of the direct-driven, single inlet, forward curved, centrifugal type, 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 rubber-shock mounted and internally spring mounted for vibration isolation.
3. On independent circuits (sizes 090-150).

E. Coils:

1. Evaporator and condenser coils shall have aluminum plate fins mechanically bonded to enhanced copper tubes with all joints brazed.
2. Tube sheet openings shall be belled to prevent tube wear.
3. Evaporator coil shall be of the face-split design.

F. Heating Section:

1. Induced draft combustion type with energy saving direct spark ignition system, redundant main gas valve.
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 cabinet at a single location.
5. The Integrated Gas Control (IGC) board shall provide timed control of evaporator fan functioning and burner ignition. An LED (light-emitting diode) shall provide diagnostic information. The LED shall be visible without removing the control box access panel.
6. IGC board contains anti-cycle protection for gas heat operation (after 4 continuous cycles on high temperature limit switch and one cycle on the flame rollout switch).

G. Refrigerant Components:

Refrigerant circuit components shall include:

1. Fixed-orifice type feed system.
2. Refrigerant strainer.
3. Service gage connections on suction, discharge, and liquid lines.
4. Filter drier.
5. Ability to route gage hoses through unit top cover (unit sizes 036-072 only).

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 300 fpm at nominal airflows.
3. Filter section shall 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.

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.

      The lockout protection shall be easily disconnected at the control board, if necessary.

   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 ±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 passing through motor windings and shall have line break thermal and current overload protection.
2. Indoor blower (evaporator-fan) motor shall have permanently lubricated bearings and inherent automatic-reset thermal overload protection.
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 by * are specified. For assistance in amending the specifications, contact your local sales office.

1. Roof Curbs:

   a. Formed galvanized steel with wood nailer strip and capable of supporting entire unit weight.
   b. Allows for installing and securing 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.
   b. Includes all hardware and controls to provide cooling with outdoor air.
   c. Equipped with low-leakage dampers not to exceed 3% leakage, at 1 in. wg pressure differential (Durablade economizer).
   d. Capable of introducing up to 100% outdoor air in both minimum and fully open positions.
   e. Equipped with a gravity relief sliding plate damper (Durablade economizer). Damper shall close upon unit shutoff.
   f. EconoMi$er shall be equipped with a barometric relief damper with up to 100% of return air (036-072) or 90% of return air (090-150) relief. The Durablade economizer is equipped with 30% of return-air relief (036-150).
   g. Designed to close damper during loss-of-power situations with emergency power supply (Durablade economizer) or spring return built into motor (EconoMi$er).
   h. Dry bulb outdoor-air thermostat protection shall be provided as standard.
   i. Durablade economizer is a guillotine-style damper, and the EconoMi$er is a parallel blade design.

3. 50% 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. 25% Manual Outdoor-Air Damper:

   Manual damper package shall consist of damper, birdscreen, and rainhood which can be preset to admit up to 25% outdoor air for year-round ventilation.

5. 100% Two-Position Damper:

   a. Two-position damper package shall include single blade damper and motor. Admits up to 100% outdoor air.
   b. Damper shall close upon indoor (evaporator) fan shutoff.
   c. Designed to close damper during loss of power situations.
   d. Equipped with 15% barometric relief damper.

6. 25% Two-Position Damper:

   a. Two-position damper package shall include single blade damper and motor. Admits up to 25% outdoor air.
   b. Damper shall close upon indoor (evaporator) fan shutoff.

*7. Solid-State Enthalpy Control:

   a. For use with variable sliding economizer package only.
   b. Capable of sensing outdoor-air enthalpy content (temperature and humidity) and controlling economizer cut-in point to have minimum heat content air passing over the evaporator coil for most efficient system operation.

*8. Differential Enthalpy Sensor:

   a. For use with economizer only.
   b. Capable of comparing enthalpy content (temperature and humidity) of outdoor and indoor air and controlling economizer cut-in point at the most economical level.

9. Outdoor-Air Enthalpy Sensor:

   The outdoor-air enthalpy sensor shall be used with the EconoMi$er device to provide single enthalpy control. When used in conjunction with a return-air enthalpy sensor, the EconoMi$er device will provide differential enthalpy control. The sensor allows the EconoMi$er controller to determine if outside air is suitable for free cooling.

10. Return-Air Enthalpy Sensor:

    The return-air enthalpy sensor shall be used with the EconoMi$er device. When used in conjunction with an outdoor-air enthalpy sensor, the EconoMi$er device will provide differential enthalpy control.

GUIDE SPECIFICATIONS (cont)

11. Return-Air Temperature Sensor:
    The return-air temperature sensor shall be used with the EconoMi$er device. When used in conjunction with an outdoor-air temperature sensor, the EconoMi$er device will provide differential temperature control.
12. Indoor-Air Quality (CO_2) Sensor:
    Shall have the ability to provide demand ventilation indoor-air quality (IAQ) control through the EconoMi$er 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.

*13. Low Ambient Control Packages:
    Each 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.

*14. Thermostat and Subbase:
    Provides staged cooling and heating automatic (or manual) changeover, fan control, and indicator light.

15. Thru-The-Bottom Service Connection:
    Kit shall provide connectors to permit electrical connections to be brought to the unit through the basepan.
16. Condenser Coil Hail Guard Assembly:
    Hail guard shall protect against damage from hail and flying debris.
17. Condenser Coil Guard 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 a minimum of 5 min. after shutdown.
19. Fan/Filter Status Switch:
    Provides status of evaporator fan (ON/OFF) or indoor-air filter (CLEAN/DIRTY). Status shall be displayed over communication bus when used with direct digital controls or with an indicator light at the thermostat.
20. Unit-Mounted, Non-Fused Disconnect 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.
21. Convenience 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.
22. High-Static Motor and Drive:
    High-static motor and drive shall be factory-installed to provide additional performance range.
23. EconoMi$er and Power Exhaust:
    Package shall provide control of internal building pressure. The system shall exhaust up to 100% of return air.
24. Power Exhaust for Accessory EconoMi$er:
    Two two-stage power exhausts shall be used in conjunction with EconoMi$er to provide the system with the capability to exhaust up to 100% of return air. The power exhaust is a field-installed accessory for vertical and horizontal applications.
25. Flue Hood Protector Assembly:
    Provides protection from the hot sides of the gas flue hood.
26. Liquid Propane Kit:
    Package shall contain all the necessary hardware and instructions to convert a standard natural gas unit for use with liquefied propane.
27. NOx Reduction Unit:
    Unit shall have reduced nitrous oxide (NOx) emissions to meet the California Air Quality Management NOx requirement of 40 nanograms/joule or less on 036-060 sizes.
28. Flue Discharge Deflector:
    Package shall contain single-piece deflector and hardware to exhaust the flue discharge up and away from unit. The flue discharge deflector shall allow minimum flue side clearances to combustibles to be reduced to 18 inches.
29. 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 subcooling coil located on the leaving-air side of the evaporator coil. The location of this coil in the indoor airstream greatly enhances the latent capacity of the units.
    The package shall be equipped with crankcase heater(s), low pressure switch(es), and thermostatic expansion valve(s) (TXV). Low pressure switch(es) prevents evaporator coil freeze up and TXV(s) assure a positive superheat condition. If the operation of the subcooling coil is controlled by a field-installed, wall-mounted humidistat or LC Thermidistat, 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.
30. Light Commercial Thermidistat:
    Field-installed, wall mounted thermidistat is used to control temperature and activation of Perfect Humidity™ package. The thermidistat can be set for humidity settings from 50% to 90% relative humidity.
31. Electronic Programmable Thermostat:
    Capable of using deluxe full-featured electronic thermostat. Shall use built-in compressor cycle delay control for both heating and cooling duty.
32. 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.
33. 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.

SPECIFICATIONS SUBJECT TO CHANGE WITHOUT NOTICE

UNIT MUST BE INSTALLED IN ACCORDANCE
WITH INSTALLATION INSTRUCTIONS

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