



10EER W090-W180 Series MEGA-TEC®

Bard Manufacturing's revolutionary MEGA-TEC® WALL-MOUNT sets the industry standard for flexibility. Engineered to cool virtually any equipment building or shelter, the PLC technology inside the unit and controller provides unmatched cooling and unparalleled control over your critical application. The MEGA-TEC® is AHRI certified, meets or exceeds DOE efficiency requirements, and delivers industrial grade service at the highest possible level of efficiency. The MEGA-TEC® moves seamlessly between three different compressor cooling capacities based on need and peak efficiency, and thanks to our Programmable Logic Control (PLC) technology, you'll be able to control up to fourteen units with a single controller.

- Complies with efficiency requirements of ASHRAE/IESNA 90.1-2016
- Certified to ASNI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units)
- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05 Fourth Edition
- Commercial Product - Not intended for residential application
- Bard is an ISO 9001:2015 Certified Manufacturer
- The AHRI Certified® mark indicates Bard Manufacturing Company participation in the AHRI Certification program. For verification of individual certified products, go to www.ahridirectory.org.

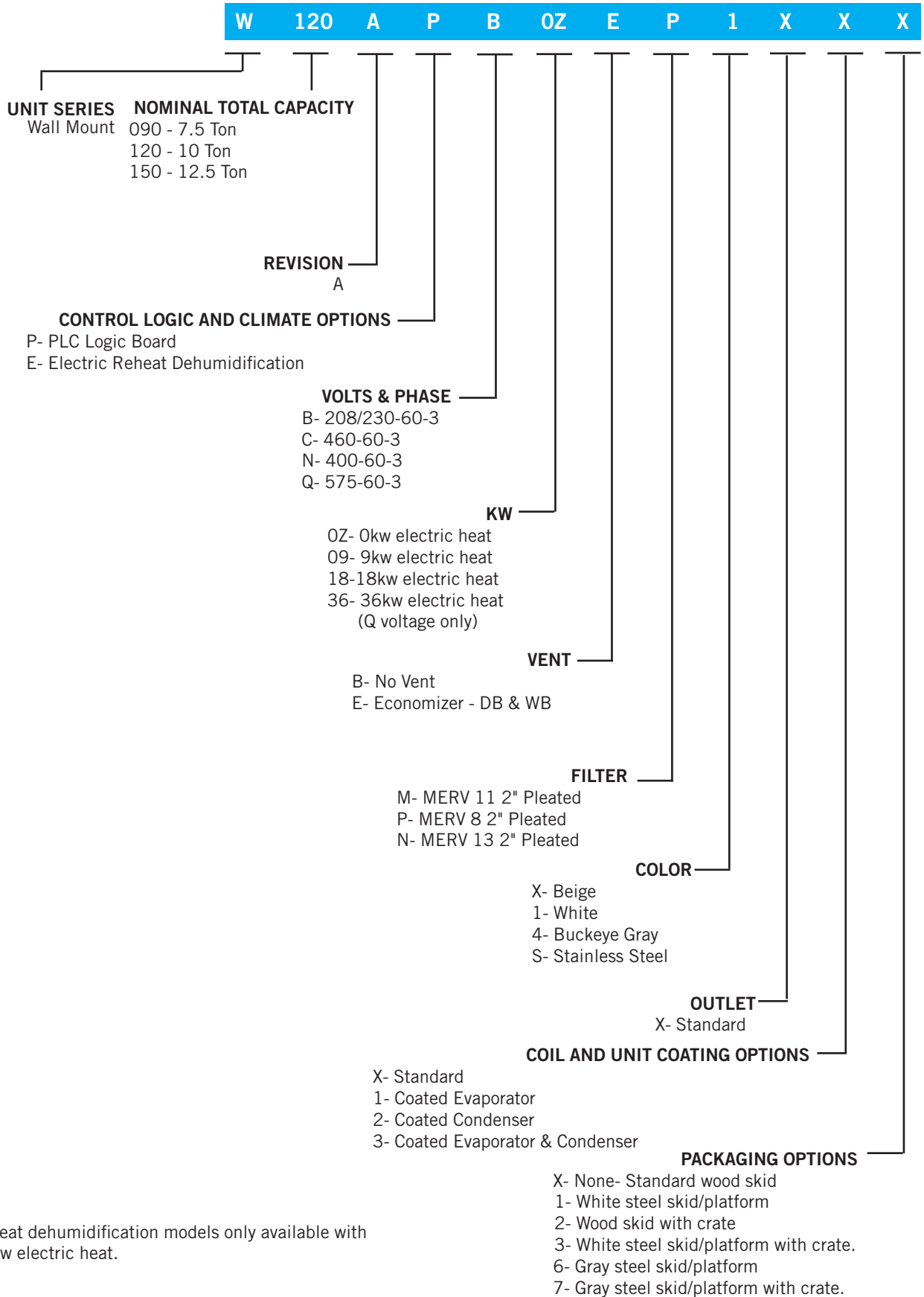


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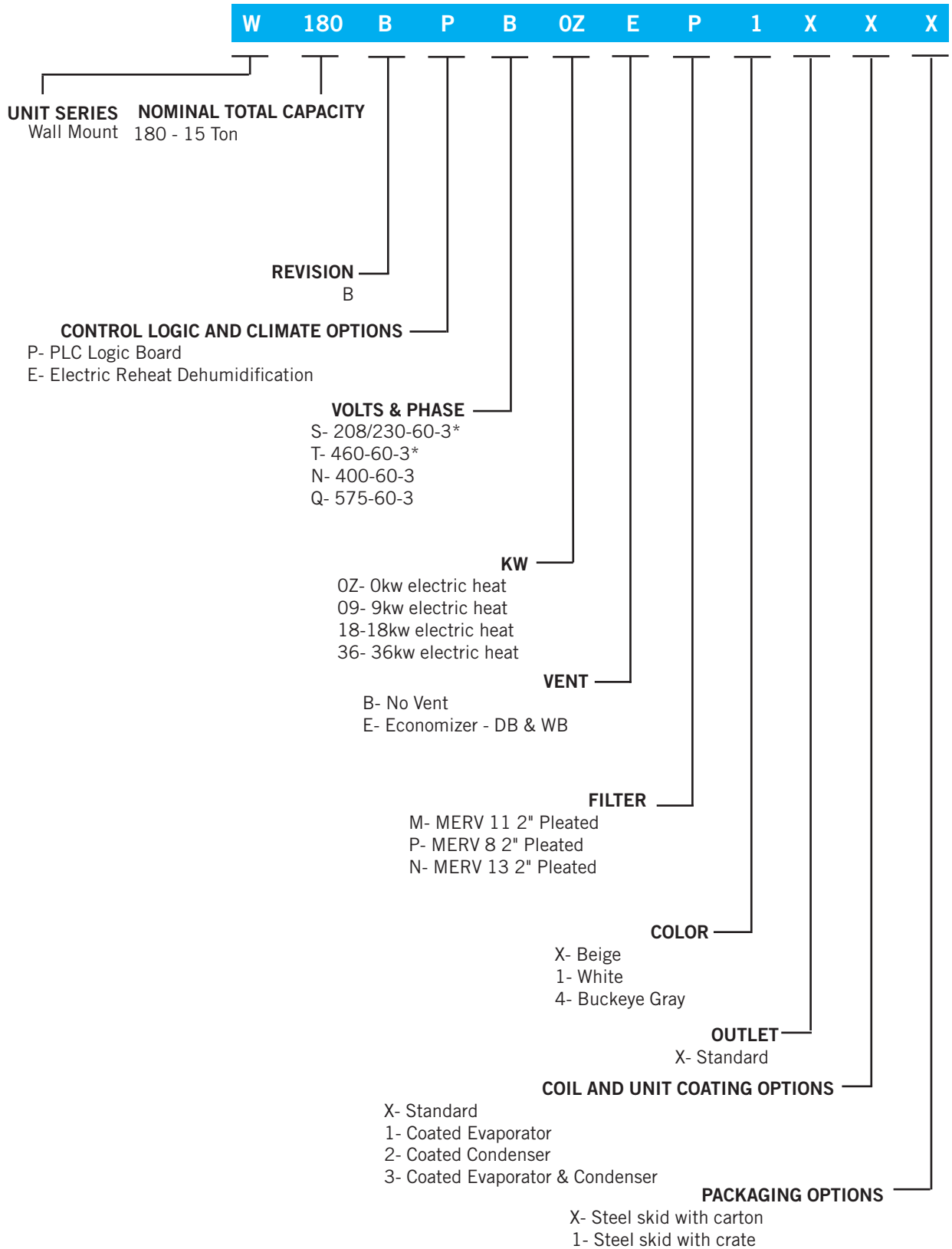


///// WALL-MOUNT W090 THRU W150 NOMENCLATURE



* Reheat dehumidification models only available with 18kw electric heat.

///// WALL-MOUNT W180 NOMENCLATURE

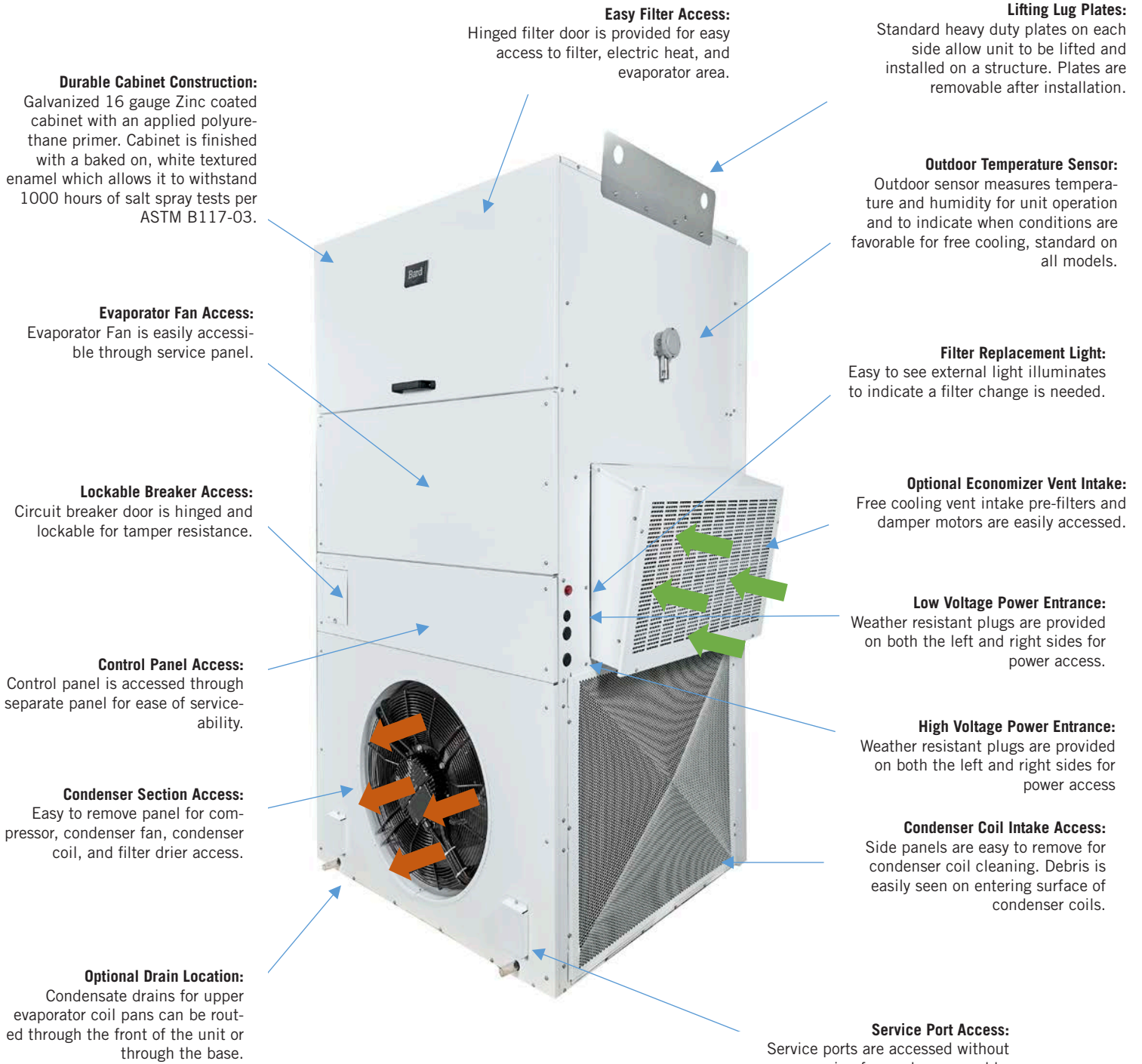


* See unit specifications on page 10 for 50hz operation.

* Reheat dehumidification models only available with 18kw electric heat.

///// ENGINEERED FEATURES - EXTERIOR

The exterior of the MEGA-TEC® provides installation features including lifting lugs. Cabinet construction uses 16 gauge and 14 gauge components for strength and durability. Service features includes exterior service ports, a filter replacement light, and hinged upper filter access door.



W120 model shown

ENGINEERED FEATURES - INTERIOR

The interior of the MEGA-TEC® provides easily serviceable areas for routine maintenance and is designed for years of trouble free service. A hinged upper filter access door and slide out condenser fan assembly are a few of the features that make the MEGA-TEC® easy to service. Industrial grade fans and components provide dependable service in outdoor work environments. Electronic expansion valves and Modbus controls use the latest technology to provide the best indoor environment for electronics and industrial equipment.

Note: Circuit 1 two-stage on left. Circuit 2 single-stage on right facing front.

Non-fiberglass Insulation:

Extremely durable closed cell foam insulation used throughout the product.

Enhanced Latent and High Sensible Cooling Modes:

PLC Logic is used for high sensible cooling where humidity inside the area is at average or low conditions. Balanced Climate operation allows for additional humidity to be removed when moisture levels are high in the area being conditioned.

Industrial Grade Evaporator Fan:

Evaporator Fan uses ECM technology for efficient, dependable service. Modbus communication used for motor feedback.

(2) Refrigeration Circuits:

Separate refrigeration circuits use individual compressors for serviceability and reliability

Industrial Grade Controls:

Control panel is clean, organized, and easy to service.

Optional Free Cooling:

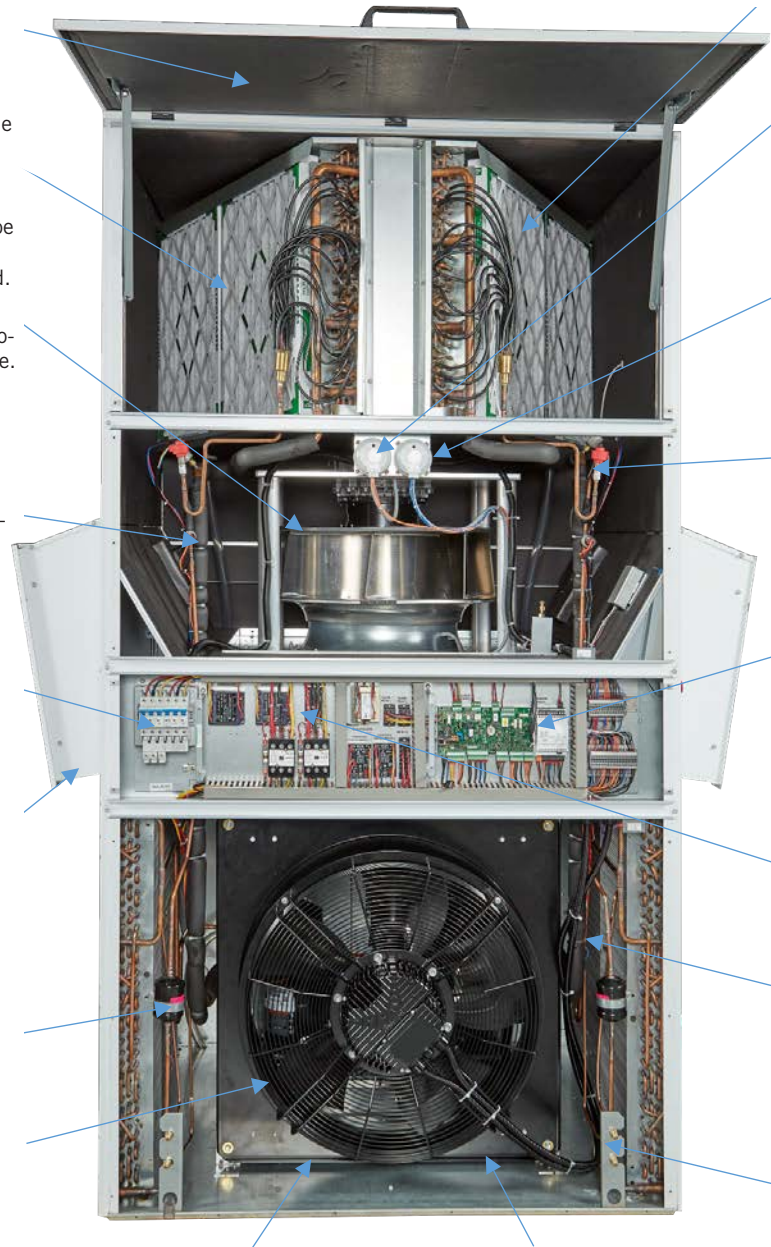
Economizer option allows for free cooling utilizing outdoor air when conditions are acceptable.

Liquid Line Filter/Drier:

Filter driers protect refrigeration equipment and are standard in all models.

Industrial Grade Outdoor Fan:

Outdoor fan uses ECM technology for efficient, dependable service. Modbus communication used for motor feedback.



2" Pleated Filter:

Large filter area and 2" pleated design allow for better unit indoor airflow.

Dirty Filter Indicator:

Filter pressure switch with filter change indicator light standard on all models.

Fan Pressure Switch:

Fan pressure switch to indicate blower failure standard on all models

Electronic Expansion Valves:

Electronic expansion valves are used in all models for precise superheat control.

PLC Technology:

Control board uses Modbus to communicate with components and controller.

Phase Rotation Monitor:

Protects against compressor reverse rotation. Standard on all 3 phase models.

Pressure Transducers:

High and low side system pressures are monitored to provide refrigeration data including superheat.

Service Port Access:

Service ports are accessed without removing fan or door assembly.

Slide-out Fan Assembly:

Slide out condenser fan assembly allows fan to be pulled forward. Hinges allow fan to be rotated out of the way for compressor access.

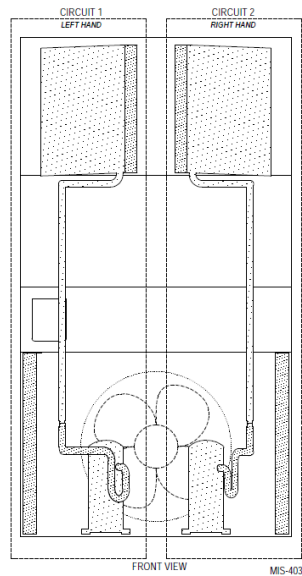
Scroll Compressors:

Each refrigeration circuit uses a separate scroll compressor. Three cooling stages provide efficient capacity control for applications with lower heat loads.

W120 model shown

UNIT MODES OF OPERATION

Cooling Operation: The Bard MEGA-TEC® Series products offer three stage cooling operation using R410A refrigerant. Cooling is achieved by two independent cooling circuits containing independent scroll compressors (one single stage, one two stage), filter driers, electronic expansion valves (EEV's), condenser coils and evaporator coils. The unit PLC monitors indoor humidity levels, and uses high sensible cooling operation to increase unit airflow when moisture levels do not require an average or substantial amount of latent capacity.



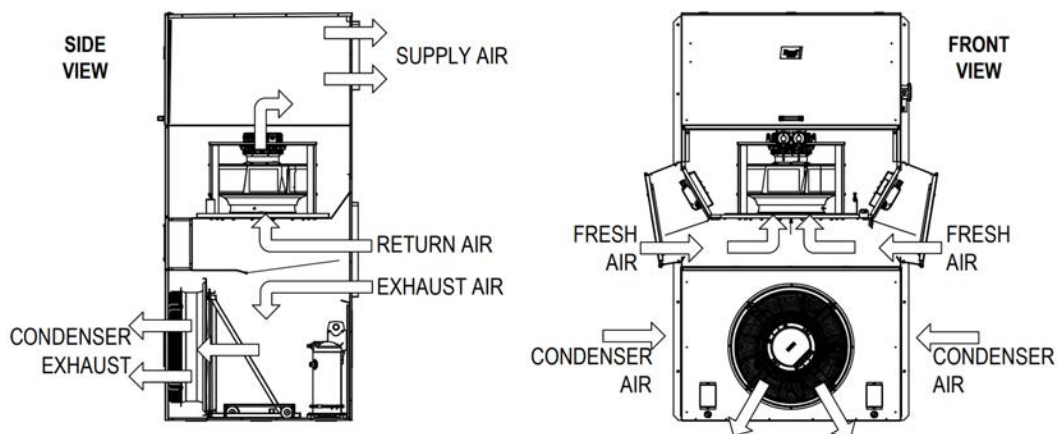
Heating Operation: The Bard MEGA-TEC® Series products offer optional two stage heating operation using resistance heaters. Circuit breaker disconnect protection is standard in all 208V to 230V units equipped with electric heat.



Electric Reheat Dehumidification Operation: The Bard MEGA-TEC® Series products offer optional electric reheat dehumidification operation that removes moisture from air leaving the unit. The electric heat reheats the cooled supply air after it passes over the evaporator coils. This results in extended compressor runtime and lowering of high indoor humidity levels.



Economizer Free Cooling Operation: The Bard MEGA-TEC® Series products offer optional economizer ventilation operation that can achieve extremely high cooling efficiencies by taking advantage of cooler outdoor conditions. Outdoor air is brought into the structure when conditions are acceptable for free cooling through hoods located on both sides of the unit. A large room exhaust path allows room air to be vented outdoors when fresh air is being brought into the structure. Minimum ventilation amounts are user selectable for continuous outdoor intake. Economizer operation allows for free cooling at outdoor temperatures down to -40°F. Emergency cooling and ventilation are safety features that are available with the optional economizer.



Balanced Climate™ Operation: Balanced Climate™ is a great moisture removal feature that operates during cooling operation when moisture levels inside the room are high. By reducing unit airflow and running in compressor cooling operation, latent capacity is increased and additional moisture is removed from the air being conditioned. Balanced Climate™ is a standard feature for all MEGA-TEC® products.



CAPACITY AND EFFICIENCY RATINGS

MODELS	W090A	W120A	W150A	W180B
3rd Stage Cooling Capacity BTUH	90,000 BTUH	123,000 BTUH	146,000 BTUH	178,000 BTUH
3rd Stage Cooling Capacity EER	10.2 EER	10.0 EER	10.0 EER	10.0 EER
2nd Stage Cooling Capacity BTUH	80,000 BTUH	114,000 BTUH	122,000 BTUH	150,000 BTUH
1st Stage Cooling Capacity BTUH	30,000 BTUH	42,000 BTUH	44,000 BTUH	58,000 BTUH
IPLV (Integrated Part Load Value)	11.7	12.3	10.6	12.6

Note 1: Capacity is certified in accordance with ANSI/ARI Standard 390-2003. Meets or exceeds 10 EER DOE requirements.

Note 2: EER = Energy Efficiency Ratio and is certified in accordance with ANSI/ARI Standard 390-2003. All ratings based on fresh air intake being 100% closed (no outside air introduction).

Note 3: IPLV = Integrated Part Load Value (IPLV) is a BTU/WATT efficiency measurement that combines staged cooling.

W090A 7.5 TON UNIT SPECIFICATIONS

MODELS	W090APB	W090AEB	W090APC	W090AEC	W090APQ
Electrical Rating - 60hz	230/208V-60hz-3ph	230/208V-60hz-3ph	460V-60hz-3ph	460V-60hz-3ph	575V-60hz-3ph
Operating Voltage Range ¹	197V - 253V	197V - 253V	414V - 506V	414V - 506V	520V - 630V
Branch Circuit Selection Current (BCSC)	27.9A	27.9A	17.3A	17.3A	9.5A
Short Circuit Current (SCC)	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.
Balanced Climate Humidity Removal	Yes	Yes	Yes	Yes	Yes
Electric Reheat Dehumidification	No	Yes	No	Yes	No
Electric Heat Options (Kw)	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw
Disconnect Used	Circuit Breaker	Circuit Breaker	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect
Compressor 1 - Cooling Circuit A					
Compressor Stages	2	2	2	2	2
Voltage (V)	230V / 208V	230V / 208V	460V	460V	575V
Rated Load Amps (RLA)	10.0A / 11.0A	10.0A / 11.0A	7.5A	7.5A	4.6A
Locked Rotor Amps (LRA) ²	83.1A	83.1A	41A	41A	33A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve
R410A Refrigerant	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)
Compressor 2 - Cooling Circuit B					
Compressor Stages	1	1	1	1	1
Voltage (V)	230V / 208V	230V / 208V	460V	460V	575V
Rated Load Amps (RLA)	10.0A / 11.0A	10.0A / 11.0A	7.3A	7.3A	4.8A
Locked Rotor Amps (LRA) ²	83.1A	83.1A	41A	41A	33A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	DC Output	DC Output	DC Output	DC Output	DC Output
R410A Refrigerant	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)
Outdoor Condenser Fan and Motor					
Fan Motor - HP - Max RPM ³	3 HP(2.3Kw) - 1450RPM	3 HP(2.3Kw) - 1450RPM	3 HP(2.3Kw) - 1450	3 HP(2.3Kw) - 1450	3 HP(2.3Kw) - 1450
Fan Motor - Amps	7.2A	7.2A	2.5A	2.5A	2.5A
Fan Type	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM
Condenser Fan - DIA. - CFM	28"(71CM) - 6200CFM	28"(71CM) - 6200CFM	28"(71CM) - 6200CFM	28"(71CM) - 6200CFM	28"(71CM) - 6200CFM
Indoor Evaporator Fan and Motor					
Indoor Fan Motor - HP - Max RPM ³	2 HP(1.5Kw) - 1500RPM	2 HP(1.5Kw) - 1500RPM	2 HP(1.5Kw) - 1500RPM	2 HP(1.5Kw) - 1500RPM	2 HP(1.5Kw) - 1500RPM
Indoor Fan Motor - Amps	3.6A	3.6A	1.9A	1.9A	1.9A
Motor Type	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM
Cooling CFM - "WC Rated Static ⁴	2850 CFM - .25 ESP	2850 CFM - .25 ESP	2850 CFM - .25 ESP	2850 CFM - .25 ESP	2850 CFM - .25 ESP
Standard Filter Sizes - No. Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.
Unit Weight					
Basic Unit Weight ⁵	1170 lbs (530.70 kg)	1170 lbs (530.70 kg)	1170 lbs (530.70 kg)	1170 lbs (530.70 kg)	1250 lbs (567.00 kg)
Skid and Packaging Materials	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)
Crate and Packaging Materials	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)
Vent Option Installed in Unit					
Economizer	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)

Note 1: It is important to have a clean, reliable, consistent source of power for proper unit operation. Unit voltage must be maintained within the operating range.

Note 2: LRA is power draw if rotor is locked in place. This value must also be considered when the compressor first starts. A generator must be sized appropriately to overcome the split second Amp draw of the compressor starting.

Note 3: Be sure to reference Bard part numbers printed on the motor serial plate. Replacement motor ratings may vary depending on motor supplier.

Note 4: Sensible and latent capacity data provided in the cooling application chart is at rated static pressure.

Note 5: Basic unit weight provided is without packaging and ventilation options.

W120A 10 TON UNIT SPECIFICATIONS

MODELS	W120APB	W120AEB	W120APC	W120AEC	W120APN	W120AEN	W120APQ
Electrical Rating - 60hz	230/208V-60hz-3ph	230/208V-60hz-3ph	460V-60hz-3ph	460V-60hz-3ph	400V-60hz-3ph	400V-60hz-3ph	575V-60hz-3ph
Operating Voltage Range ¹	197V - 253V	197V - 253V	414V - 506V	414V - 506V	380V - 420V	380V - 420V	520V - 630V
Branch Circuit Selection Current (BCSC)	36.9A	36.9A	17.3A	17.3A	20.6A	20.6A	13.2A
Short Circuit Current (SCC)	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.
Balanced Climate Humidity Removal	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electric Reheat Dehumidification	No	Yes	No	Yes	No	Yes	No
Electric Heat Options (Kw)	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw	0Kw, 9Kw, 18Kw	0Kw, 9Kw, 18Kw
Disconnect Used	Circuit Breaker	Circuit Breaker	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect
Compressor 1 - Cooling Circuit A							
Compressor Stages	2	2	2	2	1	1	2
Voltage (V)	230V / 208V	230V / 208V	460V	460V	400V	400V	575V
Rated Load Amps (RLA)	15.0A / 16.3A	15.0A / 16.3A	7.9A	7.9A	10.3A	10.3A	6.1A
Locked Rotor Amps (LRA) ²	136A	136A	66.1A	66.1A	83A	83A	55.3A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve
R410A Refrigerant	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)
Compressor 2 - Cooling Circuit B							
Compressor Stages	1	1	1	1	1	1	1
Voltage (V)	230V / 208V	230V / 208V	460V	460V	400V	400V	575V
Rated Load Amps (RLA)	14.5A / 16.0A	14.5A / 16.0A	7.3A	7.3A	10.3A	10.3A	6.2A
Locked Rotor Amps (LRA) ²	136A	136A	66.1A	66.1A	83A	83A	55.3A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	DC Output	DC Output	DC Output	DC Output	DC Output	DC Output	DC Output
R410A Refrigerant	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)	8.44 lbs (3.83 kg)
Outdoor Condenser Fan and Motor							
Fan Motor - HP	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)
Fan Motor - Max RPM ³	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM
Fan Motor - Amps	5.5A	5.5A	2.7A	2.7A	2.7A	2.7A	2.7A
Fan Type	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM
Condenser Fan - DIA.	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)
Condenser Fan - CFM	7700CFM	7700CFM	7700CFM	7700CFM	7700CFM	7700CFM	7700CFM
Indoor Evaporator Fan and Motor							
Indoor Fan Motor - HP	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)
Indoor Fan Motor - Max RPM ³	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM
Indoor Fan Motor - Amps	3.6A	3.6A	1.7A	1.7A	1.7A	1.7A	1.7A
Motor Type	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM
Cooling CFM - "WC Rated Static ⁴	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP
Standard Filter Sizes - No. Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.
Unit Weight							
Basic Unit Weight ⁵	1190 lbs (539.77kg)	1190 lbs (539.77kg)	1190 lbs (539.77kg)	1190 lbs (539.77kg)	1190 lbs (539.77kg)	1190 lbs (539.77kg)	1270 lbs (576.06 kg)
Skid and Packaging Materials	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)
Crate and Packaging Materials	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)
Vent Option Installed in Unit							
Economizer	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)

Note 1: It is important to have a clean, reliable, consistent source of power for proper unit operation. Unit voltage must be maintained within the operating range.

Note 2: LRA is power draw if rotor is locked in place. This value must also be considered when the compressor first starts. A generator must be sized appropriately to overcome the split second Amp draw of the compressor starting.

Note 3: Be sure to reference Bard part numbers printed on the motor serial plate. Replacement motor ratings may vary depending on motor supplier.

Note 4: Sensible and latent capacity data provided in the cooling application chart is at rated static pressure.

Note 5: Basic unit weight provided is without packaging and ventilation options.

W150A 12.5 TON UNIT SPECIFICATIONS

MODELS	W150APB	W150AEB	W150APC	W150AEC	W150APN	W150AEN	W150APQ
Electrical Rating - 60hz	230/208V-60hz-3ph	230/208V-60hz-3ph	460V-60hz-3ph	460V-60hz-3ph	400V-60hz-3ph	400V-60hz-3ph	575V-60hz-3ph
Operating Voltage Range ¹	197V - 253V	197V - 253V	414V - 506V	414V - 506V	380V - 420V	380V - 420V	520V - 630V
Branch Circuit Selection Current (BCSC)	36.9A	36.9A	17.3A	17.3A	17.3A	17.3A	15.4
Short Circuit Current (SCC)	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.
Balanced Climate Humidity Removal	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electric Reheat Dehumidification	No	Yes	No	Yes	No	No	No
Electric Heat Options (Kw)	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw	18Kw	0Kw, 9Kw, 18Kw
Disconnect Used	Circuit Breaker	Circuit Breaker	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect
Compressor 1 - Cooling Circuit A							
Compressor Stages	2	2	2	2	1	1	2
Voltage (V)	230V / 208V	230V / 208V	460V	460V	400V	400V	575V
Rated Load Amps (RLA)	17.4A / 19.2A	17.4A / 19.2A	9.4A	9.4A	9.4A	9.4A	7.6A
Locked Rotor Amps (LRA) ²	167A	167A	69A	69A	69A	69A	55A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve
R410A Refrigerant	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)
Compressor 2 - Cooling Circuit B							
Compressor Stages	1	1	1	1	1	1	1
Voltage (V)	230V / 208V	230V / 208V	460V	460V	400V	400V	575V
Rated Load Amps (RLA)	17.9A / 19.3A	17.9A / 19.3A	9.1A	9.1A	9.1A	9.1A	7.7A
Locked Rotor Amps (LRA) ²	149A	149A	75A	75A	75A	75A	54A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	DC Output	DC Output	DC Output	DC Output	DC Output	DC Output	DC Output
R410A Refrigerant	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)
Outdoor Condenser Fan and Motor							
Fan Motor - HP	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)	3 HP(2.3Kw)
Fan Motor - Max RPM ³	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM
Fan Motor - Amps	7.2A	7.2A	3.5A	3.5A	3.5A	3.5A	3.5A
Fan Type	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM
Condenser Fan - DIA.	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)
Condenser Fan - CFM	7400CFM	7400CFM	7400CFM	7400CFM	7400CFM	7400CFM	7400CFM
Indoor Evaporator Fan and Motor							
Indoor Fan Motor - HP	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)	2 HP(1.5Kw)
Indoor Fan Motor - Max RPM ³	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM
Indoor Fan Motor - Amps	5.5A	5.5A	2.7A	2.7A	2.7A	2.7A	2.7A
Motor Type	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM
Cooling CFM - "WC Rated Static ⁴	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP	4650 CFM - .35 ESP
Standard Filter Sizes - No. Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.	20" x 24", 4 Req'd.
Unit Weight							
Basic Unit Weight ⁵	1220 lbs (553.38 kg)	1220 lbs (553.38 kg)	1220 lbs (553.38 kg)	1220 lbs (553.38 kg)	1220 lbs (553.38 kg)	1220 lbs (553.38 kg)	1300 lbs (589.67 kg)
Skid and Packaging Materials	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)
Crate and Packaging Materials	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)	300 lbs (136.08 kg)
Vent Option Installed in Unit							
Economizer	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)	100 lbs (45.36 kg)

Note 1: It is important to have a clean, reliable, consistent source of power for proper unit operation. Unit voltage must be maintained within the operating range.

Note 2: LRA is power draw if rotor is locked in place. This value must also be considered when the compressor first starts. A generator must be sized appropriately to overcome the split second Amp draw of the compressor starting.

Note 3: Be sure to reference Bard part numbers printed on the motor serial plate. Replacement motor ratings may vary depending on motor supplier.

Note 4: Sensible and latent capacity data provided in the cooling application chart is at rated static pressure.

Note 5: Basic unit weight provided is without packaging and ventilation options.

W180B 15 TON UNIT SPECIFICATIONS

MODELS	W180BPS	W180BES	W180BPT	W180BET	W180BPN	W180BEN	W180BPQ
60hz Electrical Rating	230/208V-60hz-3ph	230/208V-60hz-3ph	460V-60hz-3ph	460V-60hz-3ph	400V-60hz-3ph	400V-60hz-3ph	575V-60hz-3ph
60hz Operating Voltage Range ¹	197V - 253V	197V - 253V	414V - 506V	414V - 506V	380V - 420V	380V - 420V	520V - 630V
50hz Electrical Rating	220/200V-50hz-3ph	220/200V-50hz-3ph	400V-50hz-3ph	400V-50hz-3ph	N/A	N/A	N/A
50hz Operating Voltage Range ¹	180V - 240V	180V - 240V	380V - 440V	380V - 440V	N/A	N/A	N/A
Branch Circuit Selection Current (BCSC)	51.9A	51.9A	24.3A	24.3A	28.4A	28.4A	18.0A
Short Circuit Current (SCC)	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.	5KA RMS SYM.
Electrical Wiring System	3-Wire with Ground	3-Wire with Ground	3-Wire with Ground	3-Wire with Ground	3-Wire with Ground	3-Wire with Ground	3-Wire with Ground
Balanced Climate Humidity Removal	Yes	Yes	Yes	Yes	Yes	Yes	Yes
Electric Reheat Dehumidification	No	Yes	No	Yes	No	Yes	No
Electric Heat Options (Kw)	0Kw, 9Kw, 18Kw, 36Kw	18Kw	0Kw, 9Kw, 18Kw, 36Kw	18Kw	0Kw, 9Kw, 18Kw, 36Kw	18Kw	0Kw, 9Kw, 18Kw, 36Kw
Disconnect Used	Circuit Breaker	Circuit Breaker	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect	Toggle Disconnect
Compressor 1 - Cooling Circuit A							
Compressor Stages	2	2	2	2	2	2	2
Rated Load Amps (RLA)	21.1A / 22.4A	21.1A / 22.4A	10.5A	10.5A	12.3A	12.3A	7.8A
Locked Rotor Amps (LRA) ²	164A	164A	94A	94A	94A	94A	65A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve
R410A Refrigerant	11 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)	10.25 lbs (4.65 kg)
Compressor 2 - Cooling Circuit B							
Compressor Stages	1	1	1	1	1	1	1
Rated Load Amps (RLA)	22.1A / 23.3A	21.1A / 22.3A	11.0A	11.0A	12.8A	12.8A	8.1A
Locked Rotor Amps (LRA) ²	164A	164A	100A	100A	94.3A	94.3A	78A
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Expansion Device	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)	Electronic (EEV)
High/Low Pressure Transducer	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve	10K - J Curve
R410A Refrigerant	11 lbs (4.99 kg)	11 lbs (4.99 kg)	11 lbs (4.99 kg)	11 lbs (4.99 kg)	11 lbs (4.99 kg)	11 lbs (4.99 kg)	11 lbs (4.99 kg)
Outdoor Condenser Fan and Motor							
Fan Motor - HP	3.2 HP (2.4Kw)	3.2 HP(2.4Kw)	3.2 HP(2.4Kw)	3.2 HP(2.4Kw)	3.2 HP(2.4Kw)	3.2 HP(2.4Kw)	3.2 HP(2.4Kw)
Fan Motor - Max RPM ³	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM	1450RPM
Fan Motor - Amps	7.5A	7.5A	3.6A	3.6A	4.2A	4.2A	3.6A
Fan Type	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM	Axial Fan ECM
Condenser Fan - DIA.	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)	28"(71CM)
Condenser Fan - CFM	7700CFM	7700CFM	7700CFM	7700CFM	7700CFM	7700CFM	7700CFM
Indoor Evaporator Fan and Motor							
Indoor Fan Motor - HP	1.2 HP(.9Kw)	1.2 HP(.9Kw)	1.1 HP(0.9Kw)	1.1 HP(0.9Kw)	1.1 HP(0.9Kw)	1.1 HP(0.9Kw)	1.1 HP(0.9Kw)
Indoor Fan Motor - Max RPM ³	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM	1500RPM
Indoor Fan Motor - Amps	2.5A	2.5A	1.2A	1.2A	1.4A	1.4A	1.2A
Motor Type	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM	Backward Curve ECM
Cooling CFM - "WC Rated Static ⁴	5400 CFM - .35 ESP	5400 CFM - .35 ESP	5400 CFM - .35 ESP	5400 CFM - .35 ESP	5400 CFM - .35 ESP	5400 CFM - .35 ESP	5400 CFM - .35 ESP
Standard Filter Sizes - No. Req'd.	16" x 25", 6 Req'd.	16" x 25", 6 Req'd.	16" x 25", 6 Req'd.	16" x 25", 6 Req'd.	16" x 25", 6 Req'd.	16" x 25", 6 Req'd.	16" x 25", 6 Req'd.
Unit Weight							
Basic Unit Weight ⁵	1955 lbs (886.78 kg)	1955 lbs (886.78 kg)	1955 lbs (886.78 kg)	1955 lbs (886.78 kg)	1955 lbs (886.78 kg)	1955 lbs (886.78 kg)	2055 lbs (932.14 kg)
Skid and Packaging Materials	145 lbs (65.77 kg)	145 lbs (65.77 kg)	145 lbs (65.77 kg)	145 lbs (65.77 kg)	145 lbs (65.77 kg)	145 lbs (65.77 kg)	145 lbs (65.77 kg)
Crate and Packaging Materials	380 lbs (172.37 kg)	380 lbs (172.37 kg)	380 lbs (172.37 kg)	380 lbs (172.37 kg)	380 lbs (172.37 kg)	380 lbs (172.37 kg)	380 lbs (172.37 kg)
Vent Option Installed in Unit							
Economizer	140 lbs (63.50 kg)	140 lbs (63.50 kg)	140 lbs (63.50 kg)	140 lbs (63.50 kg)	140 lbs (63.50 kg)	140 lbs (63.50 kg)	140 lbs (63.50 kg)

Note 1: It is important to have a clean, reliable, consistent source of power for proper unit operation. Unit voltage must be maintained within the operating range.

Note 2: LRA is power draw if rotor is locked in place. This value must also be considered when the compressor first starts. A generator must be sized appropriately to overcome the split second Amp draw of the compressor starting.

Note 3: Be sure to reference Bard part numbers printed on the motor serial plate. Replacement motor ratings may vary depending on motor supplier.

Note 4: Sensible and latent capacity data provided in the cooling application chart is at rated static pressure.

Note 5: Basic unit weight provided is without packaging and ventilation options.

STANDARD COOLING BTU APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE F° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY AT OUTDOOR TEMP.	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F	131°F
W090A Stage 3 (Full Load)	75/62	Total Cooling	90,600	87,300	84,100	81,200	78,300	75,800	73,300	71,000	68,800	66,700	64,700	62,500
		Sensible Cooling	74,000	71,800	69,900	68,100	66,600	65,200	64,100	63,200	62,400	61,900	61,400	61,300
	80/67	Total Cooling	96,700	95,100	93,400	91,800	90,000	88,300	86,500	84,700	82,800	80,900	78,900	76,500
		Sensible Cooling	71,800	70,400	69,200	68,100	67,200	66,400	65,800	65,300	64,900	64,800	64,700	64,900
	85/72	Total Cooling	115,200	111,200	107,200	103,600	100,000	96,600	93,200	90,100	87,000	84,000	81,100	77,800
		Sensible Cooling	73,500	71,400	69,500	67,600	65,900	64,200	62,700	61,200	59,800	58,500	57,200	55,900
W090A Stage 2	75/62	Total Cooling	79,200	76,900	74,600	72,200	69,600	67,200	64,600	61,900	59,200	56,500	53,700	50,100
		Sensible Cooling	68,300	66,700	65,300	63,900	62,500	61,100	59,800	58,500	57,300	56,100	55,000	54,000
	80/67	Total Cooling	84,600	83,800	82,800	81,600	80,000	78,300	76,200	73,900	71,300	68,500	65,400	61,300
		Sensible Cooling	66,200	65,400	64,700	63,900	63,100	62,200	61,400	60,500	59,600	58,700	57,800	56,600
	85/72	Total Cooling	100,800	98,000	95,100	92,100	88,900	85,600	82,200	78,600	74,900	71,200	67,300	62,400
		Sensible Cooling	67,800	66,400	65,000	63,500	61,900	60,200	58,500	56,700	54,900	53,000	51,100	48,700
W090A Stage 1	75/62	Total Cooling	29,400	28,800	28,000	27,100	26,100	25,200	24,100	22,800	21,600	20,200	18,800	17,000
		Sensible Cooling	24,600	23,900	23,300	22,600	21,900	21,300	20,800	20,300	19,600	19,100	18,600	17,000
	80/67	Total Cooling	31,400	31,300	31,100	30,600	30,000	29,300	28,400	27,200	26,000	24,500	22,900	20,700
		Sensible Cooling	23,800	23,400	23,000	22,600	22,100	21,700	21,300	20,900	20,400	20,000	19,500	19,000
	85/72	Total Cooling	37,400	36,600	35,700	34,600	33,400	32,100	30,600	29,000	27,300	25,500	23,600	21,100
		Sensible Cooling	24,400	23,800	23,100	22,500	21,700	21,000	20,300	19,600	18,800	18,100	17,300	16,400
W120A Stage 3 (Full Load)	75/62	Total Cooling	139,100	129,500	121,100	113,700	107,100	101,500	96,700	92,800	89,500	87,100	85,300	84,200
		Sensible Cooling	109,800	103,900	98,800	94,400	90,600	87,500	85,100	83,200	81,800	81,100	81,000	81,700
	80/67	Total Cooling	148,500	141,200	134,500	128,500	123,000	118,300	114,200	110,700	107,800	105,600	104,000	103,000
		Sensible Cooling	106,500	101,900	97,900	94,400	91,500	89,100	87,300	86,000	85,200	85,000	85,300	86,500
	85/72	Total Cooling	176,800	165,000	154,400	145,000	136,600	129,400	123,100	117,700	113,200	109,700	106,900	104,800
		Sensible Cooling	109,000	103,400	98,300	93,700	89,700	86,200	83,200	80,600	78,400	76,800	75,400	74,400
W120A Stage 2	75/62	Total Cooling	122,400	116,100	110,100	104,500	99,200	94,400	89,800	85,500	81,400	77,600	74,100	70,100
		Sensible Cooling	100,300	97,200	94,200	91,300	88,600	86,000	83,600	81,300	79,200	77,100	74,100	70,100
	80/67	Total Cooling	130,700	126,500	122,300	118,200	114,000	110,000	106,000	102,000	98,000	94,100	90,300	85,700
		Sensible Cooling	97,300	95,300	93,300	91,300	89,400	87,600	85,800	84,100	82,400	80,800	79,300	77,500
	85/72	Total Cooling	155,600	147,900	140,400	133,400	126,600	120,300	114,300	108,500	102,900	97,700	92,800	87,200
		Sensible Cooling	99,600	96,700	93,700	90,700	87,700	84,700	81,700	78,800	75,900	73,000	70,100	66,700
W120A Stage 1	75/62	Total Cooling	51,500	47,000	43,100	39,700	36,600	34,100	32,000	30,300	28,900	28,000	27,300	27,100
		Sensible Cooling	38,400	35,800	33,500	31,500	29,800	28,400	27,200	26,200	25,600	25,100	24,900	24,900
	80/67	Total Cooling	55,000	51,200	47,800	44,800	42,000	39,700	37,700	36,100	34,800	33,900	33,300	33,100
		Sensible Cooling	37,200	35,100	33,200	31,500	30,100	28,900	27,900	27,100	26,600	26,300	26,200	26,300
	85/72	Total Cooling	65,500	59,900	54,900	50,600	46,700	43,400	40,700	38,400	36,600	35,200	34,300	33,700
		Sensible Cooling	38,100	35,600	33,400	31,300	29,500	28,000	26,600	25,400	24,500	23,800	23,200	22,700
W150A Stage 3 (Full Load)	75/62	Total Cooling	148,800	143,000	137,400	132,100	127,100	122,300	117,700	113,300	109,000	105,000	101,000	96,600
		Sensible Cooling	116,700	113,800	110,900	108,300	105,600	103,000	100,500	98,200	95,800	93,600	91,300	88,700
	80/67	Total Cooling	158,900	155,900	152,700	149,400	146,000	142,500	138,900	135,200	131,300	127,300	123,200	118,200
		Sensible Cooling	113,200	111,600	109,900	108,300	106,600	104,900	103,200	101,500	99,700	98,000	96,200	94,000
	85/72	Total Cooling	189,200	182,200	175,300	168,600	162,100	155,800	149,700	143,800	137,900	132,200	126,700	120,200
		Sensible Cooling	115,900	113,200	110,400	107,500	104,500	101,400	98,300	95,100	91,800	88,500	85,100	80,900
W150A Stage 2	75/62	Total Cooling	127,200	121,400	116,000	111,000	106,200	101,800	97,700	93,800	90,100	86,700	83,500	80,000
		Sensible Cooling	102,200	99,000	96,100	93,300	90,600	88,200	85,800	83,700	81,600	79,600	74,100	70,100
	80/67	Total Cooling	135,800	132,300	128,900	125,500	122,000	118,600	115,300	111,900	108,500	105,200	101,800	97,900
		Sensible Cooling	99,100	97,100	95,200	93,300	91,500	89,800	88,100	86,500	84,900	83,400	82,000	80,400
	85/72	Total Cooling	161,700	154,600	148,000	141,600	135,500	129,700	124,300	119,000	114,000	109,300	104,700	99,600
		Sensible Cooling	101,500	98,500	95,600	92,600	89,700	86,800	83,900	81,100	78,200	75,300	72,500	69,200
W150A Stage 1	75/62	Total Cooling	45,800	43,900	42,000	40,100	38,300	36,700	35,000	33,400	31,800	30,200	28,700	26,900
		Sensible Cooling	33,300	32,500	31,500	30,400	29,400	28,200	26,900	25,700	24,300	22,900	21,500	19,700
	80/67	Total Cooling	48,900	47,800	46,600	45,300	44,000	42,700	41,300	39,800	38,200	36,600	35,000	32,900
		Sensible Cooling	32,300	31,800	31,200	30,400	29,600	28,700	27,600	26,500	25,300	24,000	22,600	20,800
	85/72	Total Cooling	58,300	55,900	53,500	51,200	48,900	46,700	44,500	42,400	40,200	38,000	36,000	33,500
		Sensible Cooling	33,100	32,300	31,400	30,200	29,100	27,800	26,300	24,900	23,300	21,700	20,000	17,900

- ① Low outdoor ambient programming allows for compressor operation down to -30°F.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °F.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow	-10%	Rated	+10%
	Total BTUH	0.975	1.0
	Sensible BTUH	0.950	1.0

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

////// STANDARD COOLING KW APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE C° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	23.8°C	26.6°C	29.4°C	32.2°C	35°C	37.7°C	40.5°F	43.3°C	46.1°C	48.8°C	51.6°C	55°C
W090A Stage 3 (Full Load)	23.8/16.6	Total Cooling	26.22 kW	25.58 kW	24.88 kW	24.17 kW	23.47 kW	22.77 kW	22.03 kW	21.3 kW	20.51 kW	19.75 kW	18.96 kW	17.99 kW
		Sensible Cooling	21.45 kW	21.04 kW	20.69 kW	20.3 kW	19.95 kW	19.6 kW	19.25 kW	18.93 kW	18.61 kW	18.28 kW	17.99 kW	17.67 kW
	26.6/19.4	Total Cooling	28.01 kW	27.86 kW	27.63 kW	27.34 kW	26.96 kW	26.52 kW	25.99 kW	25.4 kW	24.7 kW	23.94 kW	23.12 kW	22 kW
		Sensible Cooling	20.8 kW	20.63 kW	20.48 kW	20.3 kW	20.13 kW	19.95 kW	19.75 kW	19.57 kW	19.37 kW	19.16 kW	18.96 kW	18.72 kW
	29.4/22.2	Total Cooling	33.37 kW	32.58 kW	31.73 kW	30.85 kW	29.94 kW	29.01 kW	28.01 kW	27.01 kW	25.96 kW	24.88 kW	23.76 kW	22.39 kW
		Sensible Cooling	21.3 kW	20.92 kW	20.57 kW	20.16 kW	19.75 kW	19.31 kW	18.81 kW	18.34 kW	17.84 kW	17.32 kW	16.76 kW	16.12 kW
W090A Stage 2	23.8/16.6	Total Cooling	23.21 kW	22.53 kW	21.86 kW	21.15 kW	20.39 kW	19.69 kW	18.93 kW	18.14 kW	17.35 kW	16.55 kW	15.73 kW	14.68 kW
		Sensible Cooling	20.01 kW	19.54 kW	19.13 kW	18.72 kW	18.31 kW	17.9 kW	17.52 kW	17.14 kW	16.79 kW	16.44 kW	15.73 kW	14.68 kW
	26.6/19.4	Total Cooling	24.79 kW	24.55 kW	24.26 kW	23.91 kW	23.44 kW	22.94 kW	22.33 kW	21.65 kW	20.89 kW	20.07 kW	19.16 kW	17.96 kW
		Sensible Cooling	19.4 kW	19.16 kW	18.96 kW	18.72 kW	18.49 kW	18.22 kW	17.99 kW	17.73 kW	17.46 kW	17.2 kW	16.94 kW	16.58 kW
	29.4/22.2	Total Cooling	29.53 kW	28.71 kW	27.86 kW	26.99 kW	26.05 kW	25.08 kW	24.08 kW	23.03 kW	21.95 kW	20.86 kW	19.72 kW	18.28 kW
		Sensible Cooling	19.87 kW	19.46 kW	19.05 kW	18.61 kW	18.14 kW	17.64 kW	17.14 kW	16.61 kW	16.09 kW	15.53 kW	14.97 kW	14.27 kW
W090A Stage 1	23.8/16.6	Total Cooling	8.61 kW	8.44 kW	8.2 kW	7.94 kW	7.65 kW	7.38 kW	7.06 kW	6.68 kW	6.33 kW	5.92 kW	5.51 kW	4.98 kW
		Sensible Cooling	7.21 kW	7 kW	6.83 kW	6.62 kW	6.42 kW	6.24 kW	6.09 kW	5.95 kW	5.74 kW	5.6 kW	5.45 kW	4.98 kW
	26.6/19.4	Total Cooling	9.2 kW	9.17 kW	9.11 kW	8.97 kW	8.79 kW	8.58 kW	8.32 kW	7.97 kW	7.62 kW	7.18 kW	6.71 kW	6.07 kW
		Sensible Cooling	6.97 kW	6.86 kW	6.74 kW	6.62 kW	6.48 kW	6.36 kW	6.24 kW	6.12 kW	5.98 kW	5.86 kW	5.71 kW	5.57 kW
	29.4/22.2	Total Cooling	10.96 kW	10.72 kW	10.46 kW	10.14 kW	9.79 kW	9.41 kW	8.97 kW	8.5 kW	8 kW	7.47 kW	6.91 kW	6.18 kW
		Sensible Cooling	7.15 kW	6.97 kW	6.77 kW	6.59 kW	6.36 kW	6.15 kW	5.95 kW	5.74 kW	5.51 kW	5.3 kW	5.07 kW	4.81 kW
W120A Stage 3 (Full Load)	23.8/16.6	Total Cooling	40.76 kW	37.94 kW	35.48 kW	33.31 kW	31.38 kW	29.74 kW	28.33 kW	27.19 kW	26.22 kW	25.52 kW	24.99 kW	24.67 kW
		Sensible Cooling	32.17 kW	30.44 kW	28.95 kW	27.66 kW	26.55 kW	25.64 kW	24.93 kW	24.38 kW	23.97 kW	23.76 kW	23.73 kW	23.94 kW
	26.6/19.4	Total Cooling	43.51 kW	41.37 kW	39.41 kW	37.65 kW	36.04 kW	34.66 kW	33.46 kW	32.44 kW	31.59 kW	30.94 kW	30.47 kW	30.18 kW
		Sensible Cooling	31.2 kW	29.86 kW	28.68 kW	27.66 kW	26.81 kW	26.11 kW	25.58 kW	25.2 kW	24.96 kW	24.91 kW	24.99 kW	25.34 kW
	29.4/22.2	Total Cooling	51.8 kW	48.35 kW	45.24 kW	42.49 kW	40.02 kW	37.91 kW	36.07 kW	34.49 kW	33.17 kW	32.14 kW	31.32 kW	30.71 kW
		Sensible Cooling	31.94 kW	30.3 kW	28.8 kW	27.45 kW	26.28 kW	25.26 kW	24.38 kW	23.62 kW	22.97 kW	22.5 kW	22.09 kW	21.8 kW
W120A Stage 2	23.8/16.6	Total Cooling	35.86 kW	34.02 kW	32.26 kW	30.62 kW	29.07 kW	27.66 kW	26.31 kW	25.05 kW	23.85 kW	22.74 kW	21.71 kW	20.54 kW
		Sensible Cooling	29.39 kW	28.48 kW	27.6 kW	26.75 kW	25.96 kW	25.2 kW	24.49 kW	23.82 kW	23.21 kW	22.59 kW	21.71 kW	20.54 kW
	26.6/19.4	Total Cooling	38.3 kW	37.06 kW	35.83 kW	34.63 kW	33.4 kW	32.23 kW	31.06 kW	29.89 kW	28.71 kW	27.57 kW	26.46 kW	25.11 kW
		Sensible Cooling	28.51 kW	27.92 kW	27.34 kW	26.75 kW	26.19 kW	25.67 kW	25.14 kW	24.64 kW	24.14 kW	23.67 kW	23.23 kW	22.71 kW
	29.4/22.2	Total Cooling	45.59 kW	43.33 kW	41.14 kW	39.09 kW	37.09 kW	35.25 kW	33.49 kW	31.79 kW	30.15 kW	28.63 kW	27.19 kW	25.55 kW
		Sensible Cooling	29.18 kW	28.33 kW	27.45 kW	26.58 kW	25.7 kW	24.82 kW	23.94 kW	23.09 kW	22.24 kW	21.39 kW	20.54 kW	19.54 kW
W120A Stage 1	23.8/16.6	Total Cooling	15.09 kW	13.77 kW	12.63 kW	11.63 kW	10.72 kW	9.99 kW	9.38 kW	8.88 kW	8.47 kW	8.2 kW	8 kW	7.94 kW
		Sensible Cooling	11.25 kW	10.49 kW	9.82 kW	9.23 kW	8.73 kW	8.32 kW	7.97 kW	7.68 kW	7.5 kW	7.35 kW	7.3 kW	7.3 kW
	26.6/19.4	Total Cooling	16.12 kW	15 kW	14.01 kW	13.13 kW	12.31 kW	11.63 kW	11.05 kW	10.58 kW	10.2 kW	9.93 kW	9.76 kW	9.7 kW
		Sensible Cooling	10.9 kW	10.28 kW	9.73 kW	9.23 kW	8.82 kW	8.47 kW	8.17 kW	7.94 kW	7.79 kW	7.71 kW	7.68 kW	7.71 kW
	29.4/22.2	Total Cooling	19.19 kW	17.55 kW	16.09 kW	14.83 kW	13.68 kW	12.72 kW	11.93 kW	11.25 kW	10.72 kW	10.31 kW	10.05 kW	9.87 kW
		Sensible Cooling	11.16 kW	10.43 kW	9.79 kW	9.17 kW	8.64 kW	8.2 kW	7.79 kW	7.44 kW	7.18 kW	6.97 kW	6.8 kW	6.65 kW
W150A Stage 3 (Full Load)	23.8/16.6	Total Cooling	43.6 kW	41.9 kW	40.26 kW	38.71 kW	37.24 kW	35.83 kW	34.49 kW	33.2 kW	31.94 kW	30.77 kW	29.59 kW	28.3 kW
		Sensible Cooling	34.19 kW	33.34 kW	32.49 kW	31.73 kW	30.94 kW	30.18 kW	29.45 kW	28.77 kW	28.07 kW	27.42 kW	26.75 kW	25.99 kW
	26.6/19.4	Total Cooling	46.56 kW	45.68 kW	44.74 kW	43.77 kW	42.78 kW	41.75 kW	40.7 kW	39.61 kW	38.47 kW	37.3 kW	36.1 kW	34.63 kW
		Sensible Cooling	33.17 kW	32.7 kW	32.2 kW	31.73 kW	31.23 kW	30.74 kW	30.24 kW	29.74 kW	29.21 kW	28.71 kW	28.19 kW	27.54 kW
	29.4/22.2	Total Cooling	55.44 kW	53.38 kW	51.36 kW	49.4 kW	47.5 kW	45.65 kW	43.86 kW	42.13 kW	40.4 kW	38.73 kW	37.12 kW	35.22 kW
		Sensible Cooling	33.96 kW	33.17 kW	32.35 kW	31.5 kW	30.62 kW	29.71 kW	28.8 kW	27.86 kW	26.9 kW	25.93 kW	24.93 kW	23.7 kW
W150A Stage 2	23.8/16.6	Total Cooling	37.27 kW	35.57 kW	33.99 kW	32.52 kW	31.12 kW	29.83 kW	28.63 kW	27.48 kW	26.4 kW	25.4 kW	24.47 kW	23.44 kW
		Sensible Cooling	29.94 kW	29.01 kW	28.16 kW	27.34 kW	26.55 kW	25.84 kW	25.14 kW	24.52 kW	23.91 kW	23.32 kW	21.71 kW	20.54 kW
	26.6/19.4	Total Cooling	39.79 kW	38.76 kW	37.77 kW	36.77 kW	35.75 kW	34.75 kW	33.78 kW	32.79 kW	31.79 kW	30.82 kW	29.83 kW	28.68 kW
		Sensible Cooling	29.04 kW	28.45 kW	27.89 kW	27.34 kW	26.81 kW	26.31 kW	25.81 kW	25.34 kW	24.88 kW	24.44 kW	24.03 kW	23.56 kW
	29.4/22.2	Total Cooling	47.38 kW	45.3 kW	43.36 kW	41.49 kW	39.7 kW	38 kW	36.42 kW	34.87 kW	33.4 kW	32.02 kW	30.68 kW	29.18 kW
		Sensible Cooling	29.74 kW	28.86 kW	28.01 kW	27.13 kW	26.28 kW	25.43 kW	24.58 kW	23.76 kW	22.91 kW	22.06 kW	21.24 kW	20.28 kW
W150A Stage 1	23.8/16.6	Total Cooling	13.42 kW	12.86 kW	12.31 kW	11.75 kW	11.22 kW	10.75 kW	10.26 kW	9.79 kW	9.32 kW	8.85 kW	8.41 kW	7.88 kW
		Sensible Cooling	9.76 kW	9.52 kW	9.23 kW	8.91 kW	8.61 kW	8.26 kW	7.88 kW	7.53 kW	7.12 kW	6.71 kW	6.3 kW	5.77 kW
	26.6/19.4	Total Cooling	14.33 kW	14.01 kW	13.65 kW	13.27 kW	12.89 kW	12.51 kW	12.11 kW	11.66 kW	11.19 kW	10.72 kW	10.26 kW	9.64 kW
		Sensible Cooling	9.46 kW	9.32 kW	9.14 kW	8.91 kW	8.67 kW	8.41 kW	8.09 kW	7.76 kW	7.41 kW	7.03 kW	6.62 kW	6.09 kW
	29.4/22.2	Total Cooling	17.08 kW	16.38 kW	15.68 kW	15 kW	14.33 kW	13.68 kW	13.04 kW	12.42 kW	11.78 kW	11.13 kW	10.55 kW	9.82 kW
		Sensible Cooling	9.7 kW	9.46 kW	9.2 kW	8.85 kW	8.53 kW	8.15 kW	7.71 kW	7.3 kW	6.83 kW	6.36 kW	5.86 kW	5.24 kW

- ① Low outdoor ambient programming allows for compressor operation down to -34°C.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °C.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow	-10%	Rated	+10%
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

////// HIGH SENSIBLE COOLING BTU APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE F° ① ②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
W090A Stage 3 (Full Load)	75/61.1	Total Cooling	87,700	87,700	87,700	87,700	87,700	86,300	85,000	83,600	82,200	80,800	79,500
		Sensible Cooling	79,800	79,700	79,600	79,500	79,300	78,800	78,200	77,700	77,100	76,600	76,000
	80/62.9	Total Cooling	97,600	97,600	97,600	97,600	97,600	95,400	93,200	91,000	88,700	86,500	84,300
		Sensible Cooling	92,400	92,200	92,100	91,900	91,800	89,600	87,300	85,100	82,900	80,600	78,400
	85/64.7	Total Cooling	102,900	102,800	102,700	102,600	102,500	100,200	97,800	95,500	93,200	90,800	88,500
		Sensible Cooling	98,400	98,000	97,600	97,200	96,800	94,400	92,100	89,700	87,300	85,000	82,600
W090A Stage 2	75/61.1	Total Cooling	76,100	75,700	75,300	74,900	74,500	73,500	72,400	71,400	70,300	69,300	68,200
		Sensible Cooling	69,800	69,300	68,700	68,100	67,600	67,300	66,900	66,600	66,300	66,000	65,700
	80/62.9	Total Cooling	86,900	86,400	86,000	85,500	85,000	83,000	81,000	79,000	77,000	75,000	73,000
		Sensible Cooling	83,300	82,600	81,900	81,300	80,600	78,300	76,100	73,800	71,600	69,300	67,100
	85/64.7	Total Cooling	92,900	92,600	92,200	91,900	91,500	89,400	87,200	85,100	82,900	80,700	78,600
		Sensible Cooling	87,700	87,100	86,500	85,900	85,300	82,900	80,500	78,200	75,800	73,400	71,000
W090A Stage 1	75/61.1	Total Cooling	29,100	29,100	29,000	29,000	29,000	28,000	27,100	26,200	25,300	24,300	23,400
		Sensible Cooling	27,500	27,200	26,900	26,600	26,300	25,700	25,200	24,600	24,100	23,500	23,000
	80/62.9	Total Cooling	31,900	31,800	31,800	31,700	31,700	30,600	29,400	28,200	27,100	25,900	24,700
		Sensible Cooling	30,900	30,500	30,200	29,800	29,500	28,600	27,700	26,800	25,900	24,900	24,000
	85/64.7	Total Cooling	34,800	34,700	34,600	34,500	34,400	33,100	31,900	30,600	29,400	28,100	26,900
		Sensible Cooling	32,200	32,000	31,800	31,500	31,300	30,300	29,400	28,400	27,400	26,500	25,500
W120A Stage 3 (Full Load)	75/61.1	Total Cooling	131,700	128,900	126,000	123,100	120,300	116,100	112,000	107,900	103,800	99,700	95,500
		Sensible Cooling	115,000	113,300	111,600	109,900	108,200	105,700	103,200	100,700	98,200	95,800	93,300
	80/62.9	Total Cooling	133,600	130,700	127,800	124,900	122,000	119,700	117,500	115,200	113,000	110,700	108,400
		Sensible Cooling	123,500	121,700	119,900	118,000	116,200	113,600	111,000	108,400	105,800	103,300	100,700
	85/64.7	Total Cooling	140,400	138,700	136,900	135,200	133,400	130,900	128,500	126,000	123,500	121,100	118,600
		Sensible Cooling	132,100	130,300	128,500	126,600	124,800	122,000	119,300	116,500	113,700	110,900	108,100
W120A Stage 2	75/61.1	Total Cooling	113,400	111,200	109,000	106,800	104,700	101,200	97,800	94,300	90,900	87,400	84,000
		Sensible Cooling	98,700	97,400	96,200	94,900	93,700	91,500	89,300	87,100	84,900	82,600	80,400
	80/62.9	Total Cooling	114,900	112,700	110,500	108,300	106,000	103,900	101,700	99,500	97,400	95,200	93,000
		Sensible Cooling	105,900	104,500	103,200	101,800	100,500	98,400	96,200	94,100	92,000	89,900	87,700
	85/64.7	Total Cooling	123,000	120,900	118,800	116,800	114,700	112,300	110,000	107,600	105,300	102,900	100,600
		Sensible Cooling	113,800	112,400	110,900	109,500	108,100	105,800	103,600	101,300	99,000	96,700	94,400
W120A Stage 1	75/61.1	Total Cooling	48,400	47,200	45,900	44,600	43,400	42,300	41,200	40,000	38,900	37,800	36,700
		Sensible Cooling	42,200	41,500	40,700	40,000	39,200	38,300	37,400	36,500	35,600	34,700	33,900
	80/62.9	Total Cooling	51,400	50,100	48,700	47,400	46,100	44,900	43,700	42,600	41,400	40,300	39,100
		Sensible Cooling	46,300	45,500	44,700	43,800	43,000	42,100	41,200	40,300	39,400	38,500	37,500
	85/64.7	Total Cooling	54,700	53,300	51,900	50,500	49,100	47,900	46,600	45,400	44,200	42,900	41,700
		Sensible Cooling	49,800	48,800	47,900	47,000	46,100	45,100	44,100	43,200	42,200	41,200	40,200
W150A Stage 3 (Full Load)	75/61.1	Total Cooling	145,000	143,700	142,400	141,100	139,800	137,000	134,200	131,400	128,600	125,800	123,000
		Sensible Cooling	131,600	130,300	128,900	127,600	126,200	123,700	121,100	118,600	116,100	113,600	111,000
	80/62.9	Total Cooling	162,700	161,200	159,700	158,300	156,800	152,500	148,100	143,700	139,400	135,000	130,700
		Sensible Cooling	145,100	143,600	142,100	140,600	139,100	135,600	132,000	128,400	124,800	121,200	117,600
	85/64.7	Total Cooling	173,600	171,800	169,900	168,000	166,100	161,500	156,900	152,300	147,700	143,000	138,400
		Sensible Cooling	155,100	153,300	151,500	149,700	147,900	144,100	140,300	136,500	132,700	128,900	125,100
W150A Stage 2	75/61.1	Total Cooling	125,100	123,700	122,200	120,800	119,300	116,700	114,000	111,300	108,600	105,900	103,300
		Sensible Cooling	112,000	110,800	109,600	108,300	107,100	104,600	102,100	99,600	97,000	94,500	92,000
	80/62.9	Total Cooling	136,200	134,700	133,100	131,500	130,000	127,000	124,000	121,000	118,000	115,000	112,000
		Sensible Cooling	123,200	121,800	120,500	119,100	117,800	114,600	111,500	108,300	105,100	102,000	98,800
	85/64.7	Total Cooling	143,200	142,100	140,900	139,700	138,500	135,400	132,200	129,000	125,800	122,600	119,400
		Sensible Cooling	131,000	129,800	128,600	127,400	126,200	122,800	119,400	116,000	112,700	109,300	105,900
W150A Stage 1	75/61.1	Total Cooling	46,400	45,800	45,200	44,600	44,100	43,900	43,700	43,500	43,400	43,200	43,000
		Sensible Cooling	41,700	41,200	40,700	40,200	39,700	38,900	38,100	37,300	36,500	35,700	34,900
	80/62.9	Total Cooling	53,100	52,500	51,800	51,100	50,500	49,600	48,700	47,800	46,900	46,000	45,100
		Sensible Cooling	46,600	46,000	45,400	44,800	44,300	43,000	41,800	40,600	39,300	38,100	36,900
	85/64.7	Total Cooling	59,000	58,200	57,400	56,700	55,900	54,900	53,900	52,900	51,900	50,900	49,900
		Sensible Cooling	50,000	49,300	48,700	48,100	47,500	46,200	44,800	43,500	42,200	40,900	39,600

- ① Low outdoor ambient programming allows for compressor operation down to 0°F
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °F.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow Total BTUH Sensible BTUH	-10%	Rated	+10%
	0.975	1.0	1.02
	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

HIGH SENSIBLE COOLING KW APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE C° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	23.8°C	26.6°C	29.4°C	32.2°C	35°C	37.7°C	40.5°F	43.3°C	46.1°C	48.8°C	51.6°C
W090A Stage 3 (Full Load)	23.8/16.2	Total Cooling	25.7 kW	25.7 kW	25.7 kW	25.7 kW	25.7 kW	25.29 kW	24.91 kW	24.49 kW	24.08 kW	23.67 kW	23.29 kW
		Sensible Cooling	23.38 kW	23.35 kW	23.32 kW	23.29 kW	23.23 kW	23.09 kW	22.91 kW	22.77 kW	22.59 kW	22.44 kW	22.27 kW
	26.6/17.2	Total Cooling	28.6 kW	28.6 kW	28.6 kW	28.6 kW	28.6 kW	27.95 kW	27.31 kW	26.66 kW	25.99 kW	25.34 kW	24.7 kW
		Sensible Cooling	27.07 kW	27.01 kW	26.99 kW	26.93 kW	26.9 kW	26.25 kW	25.58 kW	24.93 kW	24.29 kW	23.62 kW	22.97 kW
	29.4/18.2	Total Cooling	30.15 kW	30.12 kW	30.09 kW	30.06 kW	30.03 kW	29.36 kW	28.66 kW	27.98 kW	27.31 kW	26.6 kW	25.93 kW
		Sensible Cooling	28.83 kW	28.71 kW	28.6 kW	28.48 kW	28.36 kW	27.66 kW	26.99 kW	26.28 kW	25.58 kW	24.91 kW	24.2 kW
W090A Stage 2	23.8/16.2	Total Cooling	22.3 kW	22.18 kW	22.06 kW	21.95 kW	21.83 kW	21.54 kW	21.21 kW	20.92 kW	20.6 kW	20.3 kW	19.98 kW
		Sensible Cooling	20.45 kW	20.3 kW	20.13 kW	19.95 kW	19.81 kW	19.72 kW	19.6 kW	19.51 kW	19.43 kW	19.34 kW	19.25 kW
	26.6/17.2	Total Cooling	25.46 kW	25.32 kW	25.2 kW	25.05 kW	24.91 kW	24.32 kW	23.73 kW	23.15 kW	22.56 kW	21.98 kW	21.39 kW
		Sensible Cooling	24.41 kW	24.2 kW	24 kW	23.82 kW	23.62 kW	22.94 kW	22.3 kW	21.62 kW	20.98 kW	20.3 kW	19.66 kW
	29.4/18.2	Total Cooling	27.22 kW	27.13 kW	27.01 kW	26.93 kW	26.81 kW	26.19 kW	25.55 kW	24.93 kW	24.29 kW	23.65 kW	23.03 kW
		Sensible Cooling	25.7 kW	25.52 kW	25.34 kW	25.17 kW	24.99 kW	24.29 kW	23.59 kW	22.91 kW	22.21 kW	21.51 kW	20.8 kW
W090A Stage 1	23.8/16.2	Total Cooling	8.53 kW	8.53 kW	8.5 kW	8.5 kW	8.5 kW	8.2 kW	7.94 kW	7.68 kW	7.41 kW	7.12 kW	6.86 kW
		Sensible Cooling	8.06 kW	7.97 kW	7.88 kW	7.79 kW	7.71 kW	7.53 kW	7.38 kW	7.21 kW	7.06 kW	6.89 kW	6.74 kW
	26.6/17.2	Total Cooling	9.35 kW	9.32 kW	9.32 kW	9.29 kW	9.29 kW	8.97 kW	8.61 kW	8.26 kW	7.94 kW	7.59 kW	7.24 kW
		Sensible Cooling	9.05 kW	8.94 kW	8.85 kW	8.73 kW	8.64 kW	8.38 kW	8.12 kW	7.85 kW	7.59 kW	7.3 kW	7.03 kW
	29.4/18.2	Total Cooling	10.2 kW	10.17 kW	10.14 kW	10.11 kW	10.08 kW	9.7 kW	9.35 kW	8.97 kW	8.61 kW	8.23 kW	7.88 kW
		Sensible Cooling	9.43 kW	9.38 kW	9.32 kW	9.23 kW	9.17 kW	8.88 kW	8.61 kW	8.32 kW	8.03 kW	7.76 kW	7.47 kW
W120A Stage 3 (Full Load)	23.8/16.2	Total Cooling	38.59 kW	37.77 kW	36.92 kW	36.07 kW	35.25 kW	34.02 kW	32.82 kW	31.61 kW	30.41 kW	29.21 kW	27.98 kW
		Sensible Cooling	33.7 kW	33.2 kW	32.7 kW	32.2 kW	31.7 kW	30.97 kW	30.24 kW	29.51 kW	28.77 kW	28.07 kW	27.34 kW
	26.6/17.2	Total Cooling	39.14 kW	38.3 kW	37.45 kW	36.6 kW	35.75 kW	35.07 kW	34.43 kW	33.75 kW	33.11 kW	32.44 kW	31.76 kW
		Sensible Cooling	36.19 kW	35.66 kW	35.13 kW	34.57 kW	34.05 kW	33.28 kW	32.52 kW	31.76 kW	31 kW	30.27 kW	29.51 kW
	29.4/18.2	Total Cooling	41.14 kW	40.64 kW	40.11 kW	39.61 kW	39.09 kW	38.35 kW	37.65 kW	36.92 kW	36.19 kW	35.48 kW	34.75 kW
		Sensible Cooling	38.71 kW	38.18 kW	37.65 kW	37.09 kW	36.57 kW	35.75 kW	34.95 kW	34.13 kW	33.31 kW	32.49 kW	31.67 kW
W120A Stage 2	23.8/16.2	Total Cooling	33.23 kW	32.58 kW	31.94 kW	31.29 kW	30.68 kW	29.65 kW	28.66 kW	27.63 kW	26.63 kW	25.61 kW	24.61 kW
		Sensible Cooling	28.92 kW	28.54 kW	28.19 kW	27.81 kW	27.45 kW	26.81 kW	26.16 kW	25.52 kW	24.88 kW	24.2 kW	23.56 kW
	26.6/17.2	Total Cooling	33.67 kW	33.02 kW	32.38 kW	31.73 kW	31.06 kW	30.44 kW	29.8 kW	29.15 kW	28.54 kW	27.89 kW	27.25 kW
		Sensible Cooling	31.03 kW	30.62 kW	30.24 kW	29.83 kW	29.45 kW	28.83 kW	28.19 kW	27.57 kW	26.96 kW	26.34 kW	25.7 kW
	29.4/18.2	Total Cooling	36.04 kW	35.42 kW	34.81 kW	34.22 kW	33.61 kW	32.9 kW	32.23 kW	31.53 kW	30.85 kW	30.15 kW	29.48 kW
		Sensible Cooling	33.34 kW	32.93 kW	32.49 kW	32.08 kW	31.67 kW	31 kW	30.35 kW	29.68 kW	29.01 kW	28.33 kW	27.66 kW
W120A Stage 1	23.8/16.2	Total Cooling	14.18 kW	13.83 kW	13.45 kW	13.07 kW	12.72 kW	12.39 kW	12.07 kW	11.72 kW	11.4 kW	11.08 kW	10.75 kW
		Sensible Cooling	12.36 kW	12.16 kW	11.93 kW	11.72 kW	11.49 kW	11.22 kW	10.96 kW	10.69 kW	10.43 kW	10.17 kW	9.93 kW
	26.6/17.2	Total Cooling	15.06 kW	14.68 kW	14.27 kW	13.89 kW	13.51 kW	13.16 kW	12.8 kW	12.48 kW	12.13 kW	11.81 kW	11.46 kW
		Sensible Cooling	13.57 kW	13.33 kW	13.1 kW	12.83 kW	12.6 kW	12.34 kW	12.07 kW	11.81 kW	11.54 kW	11.28 kW	10.99 kW
	29.4/18.2	Total Cooling	16.03 kW	15.62 kW	15.21 kW	14.8 kW	14.39 kW	14.03 kW	13.65 kW	13.3 kW	12.95 kW	12.57 kW	12.22 kW
		Sensible Cooling	14.59 kW	14.3 kW	14.03 kW	13.77 kW	13.51 kW	13.21 kW	12.92 kW	12.66 kW	12.36 kW	12.07 kW	11.78 kW
W150A Stage 3 (Full Load)	23.8/16.2	Total Cooling	42.49 kW	42.1 kW	41.72 kW	41.34 kW	40.96 kW	40.14 kW	39.32 kW	38.5 kW	37.68 kW	36.86 kW	36.04 kW
		Sensible Cooling	38.56 kW	38.18 kW	37.77 kW	37.39 kW	36.98 kW	36.24 kW	35.48 kW	34.75 kW	34.02 kW	33.28 kW	32.52 kW
	26.6/17.2	Total Cooling	47.67 kW	47.23 kW	46.79 kW	46.38 kW	45.94 kW	44.68 kW	43.39 kW	42.1 kW	40.84 kW	39.56 kW	38.3 kW
		Sensible Cooling	42.51 kW	42.07 kW	41.64 kW	41.2 kW	40.76 kW	39.73 kW	38.68 kW	37.62 kW	36.57 kW	35.51 kW	34.46 kW
	29.4/18.2	Total Cooling	50.86 kW	50.34 kW	49.78 kW	49.22 kW	48.67 kW	47.32 kW	45.97 kW	44.62 kW	43.28 kW	41.9 kW	40.55 kW
		Sensible Cooling	45.44 kW	44.92 kW	44.39 kW	43.86 kW	43.33 kW	42.22 kW	41.11 kW	39.99 kW	38.88 kW	37.77 kW	36.65 kW
W150A Stage 2	23.8/16.2	Total Cooling	36.65 kW	36.24 kW	35.8 kW	35.39 kW	34.95 kW	34.19 kW	33.4 kW	32.61 kW	31.82 kW	31.03 kW	30.27 kW
		Sensible Cooling	32.82 kW	32.46 kW	32.11 kW	31.73 kW	31.38 kW	30.65 kW	29.92 kW	29.18 kW	28.42 kW	27.69 kW	26.96 kW
	26.6/17.2	Total Cooling	39.91 kW	39.47 kW	39 kW	38.53 kW	38.09 kW	37.21 kW	36.33 kW	35.45 kW	34.57 kW	33.7 kW	32.82 kW
		Sensible Cooling	36.1 kW	35.69 kW	35.31 kW	34.9 kW	34.52 kW	33.58 kW	32.67 kW	31.73 kW	30.79 kW	29.89 kW	28.95 kW
	29.4/18.2	Total Cooling	41.96 kW	41.64 kW	41.28 kW	40.93 kW	40.58 kW	39.67 kW	38.73 kW	37.8 kW	36.86 kW	35.92 kW	34.98 kW
		Sensible Cooling	38.38 kW	38.03 kW	37.68 kW	37.33 kW	36.98 kW	35.98 kW	34.98 kW	33.99 kW	33.02 kW	32.02 kW	31.03 kW
W150A Stage 1	23.8/16.2	Total Cooling	13.6 kW	13.42 kW	13.24 kW	13.07 kW	12.92 kW	12.86 kW	12.8 kW	12.75 kW	12.72 kW	12.66 kW	12.6 kW
		Sensible Cooling	12.22 kW	12.07 kW	11.93 kW	11.78 kW	11.63 kW	11.4 kW	11.16 kW	10.93 kW	10.69 kW	10.46 kW	10.23 kW
	26.6/17.2	Total Cooling	15.56 kW	15.38 kW	15.18 kW	14.97 kW	14.8 kW	14.53 kW	14.27 kW	14.01 kW	13.74 kW	13.48 kW	13.21 kW
		Sensible Cooling	13.65 kW	13.48 kW	13.3 kW	13.13 kW	12.98 kW	12.6 kW	12.25 kW	11.9 kW	11.51 kW	11.16 kW	10.81 kW
	29.4/18.2	Total Cooling	17.29 kW	17.05 kW	16.82 kW	16.61 kW	16.38 kW	16.09 kW	15.79 kW	15.5 kW	15.21 kW	14.91 kW	14.62 kW
		Sensible Cooling	14.65 kW	14.44 kW	14.27 kW	14.09 kW	13.92 kW	13.54 kW	13.13 kW	12.75 kW	12.36 kW	11.98 kW	11.6 kW

- ① Low outdoor ambient programming allows for compressor operation down to -34°C.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °C.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow Total BTUH Sensible BTUH	-10%	Rated	+10%
	0.975	1.0	1.02
	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

/////// BALANCED CLIMATE BTU APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE F° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	65°F	70°F	75°F	80°F	85°F	90°F	95°F	100°F	105°F
W090A Stage 3 (Full Load)	75/68	Total Cooling BTUH	94,500	93,800	90,700	91,900	91,600	90,800	89,900	88,900	87,900
		Latent BTUH	46,300	45,900	43,800	44,700	44,700	44,300	43,900	43,300	42,800
		Lbs. H2O/hr.	43.7	43.3	41.3	42.2	42.2	41.8	41.4	40.8	40.4
	80/68	Total Cooling BTUH	96,700	96,000	92,900	94,100	93,800	93,000	92,100	91,100	90,100
		Latent BTUH	37,900	37,500	35,400	36,300	36,400	36,000	35,500	34,900	34,400
		Lbs. H2O/hr.	35.8	35.4	33.4	34.2	34.3	34	33.5	32.9	32.5
W090A Stage 2	75/68	Total Cooling BTUH	82,200	81,700	80,100	80,400	79,700	78,900	77,900	77,000	75,900
		Latent BTUH	38,900	38,600	37,300	37,900	37,500	37,100	36,500	36,100	35,500
		Lbs. H2O/hr.	36.7	36.4	35.2	35.8	35.4	35	34.4	34.1	33.5
	80/68	Total Cooling BTUH	83,400	82,900	81,300	81,700	80,900	80,100	79,200	78,200	77,100
		Latent BTUH	30,000	29,800	28,500	29,100	28,700	28,200	27,800	27,200	26,600
		Lbs. H2O/hr.	28.3	28.1	26.9	27.5	27.1	26.6	26.2	25.7	25.1
W090A Stage 1	75/68	Total Cooling BTUH	29,900	29,600	28,900	29,000	28,600	28,300	28,000	27,700	27,400
		Latent BTUH	14,300	14,300	14,000	14,100	13,900	13,900	13,800	13,700	13,600
		Lbs. H2O/hr.	13.5	13.5	13.2	13.3	13.1	13.1	13	12.9	12.8
	80/68	Total Cooling BTUH	30,800	30,400	29,700	29,800	29,500	29,200	28,800	28,500	28,200
		Latent BTUH	11,500	11,300	11,100	11,200	11,100	11,100	10,900	10,800	10,600
		Lbs. H2O/hr.	10.8	10.7	10.5	10.6	10.5	10.5	10.3	10.2	10
W120A Stage 3 (Full Load)	75/68	Total Cooling BTUH	129,800	129,400	121,800	123,600	124,600	121,800	118,400	114,500	110,000
		Latent BTUH	64,300	64,100	59,500	60,300	61,600	60,100	58,300	56,200	53,900
		Lbs. H2O/hr.	60.7	60.5	56.1	56.9	58.1	56.7	55	53	50.8
	80/68	Total Cooling BTUH	134,300	133,900	126,300	128,100	129,100	126,300	123,000	119,000	114,500
		Latent BTUH	54,200	54,000	49,400	50,200	51,500	50,000	48,300	46,100	43,800
		Lbs. H2O/hr.	51.1	50.9	46.6	47.4	48.6	47.2	45.6	43.5	41.3
W120A Stage 2	75/68	Total Cooling BTUH	108,900	108,700	108,400	110,000	111,500	109,800	107,100	103,700	99,800
		Latent BTUH	51,600	51,400	51,400	52,100	53,500	52,800	51,400	49,500	47,500
		Lbs. H2O/hr.	48.7	48.5	48.5	49.2	50.5	49.8	48.5	46.7	44.8
	80/68	Total Cooling BTUH	112,800	112,600	112,300	113,900	115,400	113,700	111,000	107,600	103,700
		Latent BTUH	41,400	41,300	41,200	41,900	43,300	42,600	41,200	39,400	37,300
		Lbs. H2O/hr.	39.1	39	38.9	39.5	40.8	40.2	38.9	37.2	35.2
W120A Stage 1	75/68	Total Cooling BTUH	48,200	47,900	47,300	46,500	45,400	44,100	42,600	40,800	38,800
		Latent BTUH	24,400	24,500	24,600	24,000	23,500	23,000	22,300	21,400	20,400
		Lbs. H2O/hr.	23	23.1	23.2	22.6	22.2	21.7	21	20.2	19.2
	80/68	Total Cooling BTUH	51,100	50,700	50,100	49,300	48,300	47,000	45,400	43,600	41,600
		Latent BTUH	17,100	17,000	17,200	16,500	16,100	15,600	14,800	13,900	13,000
		Lbs. H2O/hr.	16.1	16	16.2	15.6	15.2	14.7	14	13.1	12.3
W150A Stage 3 (Full Load)	75/68	Total Cooling BTUH	149,400	148,600	147,200	146,000	144,200	142,000	139,500	136,700	133,500
		Latent BTUH	73,000	72,600	71,800	71,400	70,500	69,300	68,000	66,500	64,800
		Lbs. H2O/hr.	68.9	68.5	67.7	67.4	66.5	65.4	64.2	62.7	61.1
	80/68	Total Cooling BTUH	150,400	149,600	148,200	147,000	145,200	143,000	140,500	137,700	134,500
		Latent BTUH	58,600	58,300	57,400	57,100	56,100	55,000	53,600	52,200	50,400
		Lbs. H2O/hr.	55.3	55	54.2	53.9	52.9	51.9	50.6	49.2	47.5
W150A Stage 2	75/68	Total Cooling BTUH	129,700	128,100	127,500	124,900	123,300	121,700	120,100	118,500	116,900
		Latent BTUH	63,000	62,000	60,900	60,200	59,300	58,400	57,600	56,700	55,900
		Lbs. H2O/hr.	59.4	58.5	57.5	56.8	55.9	55.1	54.3	53.5	52.7
	80/68	Total Cooling BTUH	130,900	129,300	128,600	126,100	124,500	122,900	121,300	119,700	118,100
		Latent BTUH	50,600	49,700	48,400	47,900	47,000	46,100	45,200	44,400	43,500
		Lbs. H2O/hr.	47.7	46.9	45.7	45.2	44.3	43.5	42.6	41.9	41
W150A Stage 1	75/68	Total Cooling BTUH	48,500	46,100	45,900	47,100	46,500	45,500	44,400	43,100	41,600
		Latent BTUH	24,100	22,700	22,500	23,500	23,300	22,800	22,300	21,600	20,900
		Lbs. H2O/hr.	22.7	21.4	21.2	22.2	22	21.5	21	20.4	19.7
	80/68	Total Cooling BTUH	50,900	48,500	48,400	49,500	48,900	48,000	46,800	45,500	44,000
		Latent BTUH	20,500	19,100	19,000	19,900	19,700	19,300	18,700	18,000	17,300
		Lbs. H2O/hr.	19.3	18	17.9	18.8	18.6	18.2	17.6	17	16.3

① Low ambient operation disables Balanced Climate Operation.
 ② Outdoor temperatures shown are measured at the condenser section air inlet.
 ③ Return air temperature °F.

/////// **BALANCED CLIMATE KW APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE C°** ①②

MODEL STAGE	RETURN RETURN AIR (DB/WB)	COOLING CAPACITY	18.3°C	21.1°C	23.8°C	26.6°C	29.4°C	32.2°C	35°C	37.7°C	40.5°C
W090A Stage 3 (Full Load)	23.8/20	Total Cooling kW	27.69 kW	27.48 kW	26.58 kW	26.93 kW	26.84 kW	26.6 kW	26.34 kW	26.05 kW	25.75 kW
		Latent kW	13.57 kW	13.45 kW	12.83 kW	13.1 kW	13.1 kW	12.98 kW	12.86 kW	12.69 kW	12.54 kW
		Kg H2O/hr.	19.82 kg	19.64 kg	18.73 kg	19.14 kg	19.14 kg	18.96 kg	18.77 kg	18.5 kg	18.32 kg
	26.6/20	Total Cooling kW	28.33 kW	28.13 kW	27.22 kW	27.57 kW	27.48 kW	27.25 kW	26.99 kW	26.69 kW	26.4 kW
		Latent kW	11.1 kW	10.99 kW	10.37 kW	10.64 kW	10.67 kW	10.55 kW	10.4 kW	10.23 kW	10.08 kW
		Kg H2O/hr.	16.24 kg	16.05 kg	15.15 kg	15.51 kg	15.56 kg	15.42 kg	15.19 kg	14.92 kg	14.74 kg
W090A Stage 2	23.8/20	Total Cooling kW	24.08 kW	23.94 kW	23.47 kW	23.56 kW	23.35 kW	23.12 kW	22.82 kW	22.56 kW	22.24 kW
		Latent kW	11.4 kW	11.31 kW	10.93 kW	11.1 kW	10.99 kW	10.87 kW	10.69 kW	10.58 kW	10.4 kW
		Kg H2O/hr.	16.64 kg	16.51 kg	15.96 kg	16.24 kg	16.05 kg	15.87 kg	15.6 kg	15.46 kg	15.19 kg
	26.6/20	Total Cooling kW	24.44 kW	24.29 kW	23.82 kW	23.94 kW	23.7 kW	23.47 kW	23.21 kW	22.91 kW	22.59 kW
		Latent kW	8.79 kW	8.73 kW	8.35 kW	8.53 kW	8.41 kW	8.26 kW	8.15 kW	7.97 kW	7.79 kW
		Kg H2O/hr.	12.83 kg	12.74 kg	12.2 kg	12.47 kg	12.29 kg	12.06 kg	11.88 kg	11.65 kg	11.38 kg
W090A Stage 1	23.8/20	Total Cooling kW	8.76 kW	8.67 kW	8.47 kW	8.5 kW	8.38 kW	8.29 kW	8.2 kW	8.12 kW	8.03 kW
		Latent kW	4.19 kW	4.19 kW	4.1 kW	4.13 kW	4.07 kW	4.07 kW	4.04 kW	4.01 kW	3.98 kW
		Kg H2O/hr.	6.12 kg	6.12 kg	5.99 kg	6.03 kg	5.94 kg	5.94 kg	5.9 kg	5.85 kg	5.8 kg
	26.6/20	Total Cooling kW	9.02 kW	8.91 kW	8.7 kW	8.73 kW	8.64 kW	8.56 kW	8.44 kW	8.35 kW	8.26 kW
		Latent kW	3.37 kW	3.31 kW	3.25 kW	3.28 kW	3.25 kW	3.25 kW	3.19 kW	3.16 kW	3.11 kW
		Kg H2O/hr.	4.9 kg	4.85 kg	4.76 kg	4.81 kg	4.76 kg	4.76 kg	4.67 kg	4.63 kg	4.54 kg
W120A Stage 3 (Full Load)	23.8/20	Total Cooling kW	38.03 kW	37.91 kW	35.69 kW	36.21 kW	36.51 kW	35.69 kW	34.69 kW	33.55 kW	32.23 kW
		Latent kW	18.84 kW	18.78 kW	17.43 kW	17.67 kW	18.05 kW	17.61 kW	17.08 kW	16.47 kW	15.79 kW
		Kg H2O/hr.	27.53 kg	27.44 kg	25.44 kg	25.8 kg	26.35 kg	25.71 kg	24.94 kg	24.04 kg	23.04 kg
	26.6/20	Total Cooling kW	39.35 kW	39.23 kW	37.01 kW	37.53 kW	37.83 kW	37.01 kW	36.04 kW	34.87 kW	33.55 kW
		Latent kW	15.88 kW	15.82 kW	14.47 kW	14.71 kW	15.09 kW	14.65 kW	14.15 kW	13.51 kW	12.83 kW
		Liters H2O/hr.	23.17 kg	23.08 kg	21.13 kg	21.5 kg	22.04 kg	21.41 kg	20.68 kg	19.73 kg	18.73 kg
W120A Stage 2	23.8/20	Total Cooling kW	31.91 kW	31.85 kW	31.76 kW	32.23 kW	32.67 kW	32.17 kW	31.38 kW	30.38 kW	29.24 kW
		Latent kW	15.12 kW	15.06 kW	15.06 kW	15.27 kW	15.68 kW	15.47 kW	15.06 kW	14.5 kW	13.92 kW
		Kg H2O/hr.	22.09 kg	21.99 kg	21.99 kg	22.31 kg	22.9 kg	22.58 kg	21.99 kg	21.18 kg	20.32 kg
	26.6/20	Total Cooling kW	33.05 kW	32.99 kW	32.9 kW	33.37 kW	33.81 kW	33.31 kW	32.52 kW	31.53 kW	30.38 kW
		Latent kW	12.13 kW	12.1 kW	12.07 kW	12.28 kW	12.69 kW	12.48 kW	12.07 kW	11.54 kW	10.93 kW
		Kg H2O/hr.	17.73 kg	17.69 kg	17.64 kg	17.91 kg	18.5 kg	18.23 kg	17.64 kg	16.87 kg	15.96 kg
W120A Stage 1	23.8/20	Total Cooling kW	14.12 kW	14.03 kW	13.86 kW	13.62 kW	13.3 kW	12.92 kW	12.48 kW	11.95 kW	11.37 kW
		Latent kW	7.15 kW	7.18 kW	7.21 kW	7.03 kW	6.89 kW	6.74 kW	6.53 kW	6.27 kW	5.98 kW
		Kg H2O/hr.	10.43 kg	10.48 kg	10.52 kg	10.25 kg	10.07 kg	9.84 kg	9.52 kg	9.16 kg	8.71 kg
	26.6/20	Total Cooling kW	14.97 kW	14.86 kW	14.68 kW	14.44 kW	14.15 kW	13.77 kW	13.3 kW	12.77 kW	12.19 kW
		Latent kW	5.01 kW	4.98 kW	5.04 kW	4.83 kW	4.72 kW	4.57 kW	4.34 kW	4.07 kW	3.81 kW
		Kg H2O/hr.	7.3 kg	7.26 kg	7.35 kg	7.07 kg	6.89 kg	6.67 kg	6.35 kg	5.94 kg	5.58 kg
W150A Stage 3 (Full Load)	23.8/20	Total Cooling kW	43.77 kW	43.54 kW	43.13 kW	42.78 kW	42.25 kW	41.61 kW	40.87 kW	40.05 kW	39.12 kW
		Latent kW	21.39 kW	21.27 kW	21.04 kW	20.92 kW	20.66 kW	20.3 kW	19.92 kW	19.48 kW	18.99 kW
		Kg H2O/hr.	31.25 kg	31.06 kg	30.7 kg	30.57 kg	30.16 kg	29.66 kg	29.11 kg	28.43 kg	27.71 kg
	26.6/20	Total Cooling kW	44.07 kW	43.83 kW	43.42 kW	43.07 kW	42.54 kW	41.9 kW	41.17 kW	40.35 kW	39.41 kW
		Latent kW	17.17 kW	17.08 kW	16.82 kW	16.73 kW	16.44 kW	16.12 kW	15.7 kW	15.29 kW	14.77 kW
		Kg H2O/hr.	25.08 kg	24.94 kg	24.58 kg	24.44 kg	23.99 kg	23.54 kg	22.95 kg	22.31 kg	21.54 kg
W150A Stage 2	23.8/20	Total Cooling kW	38 kW	37.53 kW	37.36 kW	36.6 kW	36.13 kW	35.66 kW	35.19 kW	34.72 kW	34.25 kW
		Latent kW	18.46 kW	18.17 kW	17.84 kW	17.64 kW	17.37 kW	17.11 kW	16.88 kW	16.61 kW	16.38 kW
		Kg H2O/hr.	26.94 kg	26.53 kg	26.08 kg	25.76 kg	25.35 kg	24.99 kg	24.63 kg	24.26 kg	23.9 kg
	26.6/20	Total Cooling kW	38.35 kW	37.88 kW	37.68 kW	36.95 kW	36.48 kW	36.01 kW	35.54 kW	35.07 kW	34.6 kW
		Latent kW	14.83 kW	14.56 kW	14.18 kW	14.03 kW	13.77 kW	13.51 kW	13.24 kW	13.01 kW	12.75 kW
		Kg H2O/hr.	21.63 kg	21.27 kg	20.72 kg	20.5 kg	20.09 kg	19.73 kg	19.32 kg	19 kg	18.59 kg
W150A Stage 1	23.8/20	Total Cooling kW	14.21 kW	13.51 kW	13.45 kW	13.8 kW	13.62 kW	13.33 kW	13.01 kW	12.63 kW	12.19 kW
		Latent kW	7.06 kW	6.65 kW	6.59 kW	6.89 kW	6.83 kW	6.68 kW	6.53 kW	6.33 kW	6.12 kW
		Kg H2O/hr.	10.29 kg	9.7 kg	9.61 kg	10.07 kg	9.98 kg	9.75 kg	9.52 kg	9.25 kg	8.93 kg
	26.6/20	Total Cooling kW	14.91 kW	14.21 kW	14.18 kW	14.5 kW	14.33 kW	14.06 kW	13.71 kW	13.33 kW	12.89 kW
		Latent kW	6.01 kW	5.6 kW	5.57 kW	5.83 kW	5.77 kW	5.65 kW	5.48 kW	5.27 kW	5.07 kW
		Kg H2O/hr.	8.75 kg	8.16 kg	8.12 kg	8.53 kg	8.44 kg	8.25 kg	7.98 kg	7.71 kg	7.39 kg

① Low ambient operation disables Balanced Climate Operation.
 ② Outdoor temperatures shown are measured at the condenser section air inlet.
 ③ Return air temperature °C.

////// STANDARD COOLING BTU APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE F° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY AT OUTDOOR TEMP.	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F	131°F
W180B Stage 3 (Full Load)	75/62	Total Cooling	189,800	179,900	170,800	162,500	154,900	148,100	142,000	136,400	131,400	127,000	123,200	119,300
		Sensible Cooling	148,400	143,500	139,000	134,700	130,900	127,500	124,300	121,500	119,000	116,800	115,000	113,100
	80/67	Total Cooling	202,700	196,100	189,800	183,800	178,000	172,700	167,600	162,800	158,300	154,100	150,200	146,000
		Sensible Cooling	144,000	140,700	137,700	134,800	132,200	129,800	127,600	125,700	123,900	122,400	121,100	119,800
	85/72	Total Cooling	241,400	229,200	217,900	207,400	197,600	188,800	180,600	173,100	166,300	160,000	154,400	148,500
		Sensible Cooling	147,400	142,700	138,300	133,800	129,600	125,500	121,500	117,800	114,000	110,500	107,100	103,100
W180B Stage 2	75/62	Total Cooling	160,400	151,300	143,300	136,500	130,500	125,800	121,900	118,900	116,800	115,600	115,200	115,900
		Sensible Cooling	135,000	130,500	126,500	122,900	119,800	117,200	115,000	113,300	112,000	111,200	110,700	110,700
	80/67	Total Cooling	171,300	164,900	159,200	154,300	150,000	146,600	143,900	141,900	140,700	140,200	140,500	141,800
		Sensible Cooling	131,000	128,000	125,300	123,000	121,000	119,400	118,100	117,200	116,600	116,500	116,600	117,300
	85/72	Total Cooling	204,000	192,700	182,800	174,100	166,600	160,300	155,100	150,900	147,800	145,600	144,400	144,200
		Sensible Cooling	134,100	129,800	125,800	122,100	118,600	115,500	112,500	109,800	107,300	105,200	103,100	100,900
W180B Stage 1	75/62	Total Cooling	65,400	61,000	57,100	53,600	50,500	47,800	45,500	43,400	41,800	40,300	39,200	38,400
		Sensible Cooling	49,900	47,500	45,400	43,500	41,800	40,400	39,100	38,000	37,100	36,400	35,800	35,400
	80/67	Total Cooling	69,800	66,500	63,400	60,600	58,000	55,700	53,700	51,800	50,300	48,900	47,800	46,900
		Sensible Cooling	48,400	46,600	45,000	43,500	42,200	41,100	40,100	39,300	38,600	38,100	37,700	37,500
	85/72	Total Cooling	83,100	77,800	72,800	68,400	64,400	60,900	57,900	55,100	52,900	50,800	49,200	47,700
		Sensible Cooling	49,600	47,300	45,200	43,200	41,400	39,800	38,200	36,900	35,600	34,400	33,400	32,300

- ① Low outdoor ambient programming allows for compressor operation down to -30°F.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °F.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow	-10%	Rated	+10%
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

////// STANDARD COOLING KW APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE C° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	23.8°C	26.6°C	29.4°C	32.2°C	35°C	37.7°C	40.5°F	43.3°C	46.1°C	48.8°C	51.6°C	55°C
W180B Stage 3 (Full Load)	23.8/16.6	Total Cooling	55.61 kW	52.71 kW	50.04 kW	47.61 kW	45.39 kW	43.39 kW	41.61 kW	39.97 kW	38.5 kW	37.21 kW	36.1 kW	34.95 kW
		Sensible Cooling	43.48 kW	42.05 kW	40.73 kW	39.47 kW	38.35 kW	37.36 kW	36.42 kW	35.6 kW	34.87 kW	34.22 kW	33.7 kW	33.14 kW
	26.6/19.4	Total Cooling	59.39 kW	57.46 kW	55.61 kW	53.85 kW	52.15 kW	50.6 kW	49.11 kW	47.7 kW	46.38 kW	45.15 kW	44.01 kW	42.78 kW
		Sensible Cooling	42.19 kW	41.23 kW	40.35 kW	39.5 kW	38.73 kW	38.03 kW	37.39 kW	36.83 kW	36.3 kW	35.86 kW	35.48 kW	35.1 kW
	29.4/22.2	Total Cooling	70.73 kW	67.16 kW	63.84 kW	60.77 kW	57.9 kW	55.32 kW	52.92 kW	50.72 kW	48.73 kW	46.88 kW	45.24 kW	43.51 kW
		Sensible Cooling	43.19 kW	41.81 kW	40.52 kW	39.2 kW	37.97 kW	36.77 kW	35.6 kW	34.52 kW	33.4 kW	32.38 kW	31.38 kW	30.21 kW
W180B Stage 2	23.8/16.6	Total Cooling	47 kW	44.33 kW	41.99 kW	39.99 kW	38.24 kW	36.86 kW	35.72 kW	34.84 kW	34.22 kW	33.87 kW	33.75 kW	33.96 kW
		Sensible Cooling	39.56 kW	38.24 kW	37.06 kW	36.01 kW	35.1 kW	34.34 kW	33.7 kW	33.2 kW	32.82 kW	32.58 kW	32.44 kW	32.44 kW
	26.6/19.4	Total Cooling	50.19 kW	48.32 kW	46.65 kW	45.21 kW	43.95 kW	42.95 kW	42.16 kW	41.58 kW	41.23 kW	41.08 kW	41.17 kW	41.55 kW
		Sensible Cooling	38.38 kW	37.5 kW	36.71 kW	36.04 kW	35.45 kW	34.98 kW	34.6 kW	34.34 kW	34.16 kW	34.13 kW	34.16 kW	34.37 kW
	29.4/22.2	Total Cooling	59.77 kW	56.46 kW	53.56 kW	51.01 kW	48.81 kW	46.97 kW	45.44 kW	44.21 kW	43.31 kW	42.66 kW	42.31 kW	42.25 kW
		Sensible Cooling	39.29 kW	38.03 kW	36.86 kW	35.78 kW	34.75 kW	33.84 kW	32.96 kW	32.17 kW	31.44 kW	30.82 kW	30.21 kW	29.56 kW
W180B Stage 1	23.8/16.6	Total Cooling	19.16 kW	17.87 kW	16.73 kW	15.7 kW	14.8 kW	14.01 kW	13.33 kW	12.72 kW	12.25 kW	11.81 kW	11.49 kW	11.25 kW
		Sensible Cooling	14.62 kW	13.92 kW	13.3 kW	12.75 kW	12.25 kW	11.84 kW	11.46 kW	11.13 kW	10.87 kW	10.67 kW	10.49 kW	10.37 kW
	26.6/19.4	Total Cooling	20.45 kW	19.48 kW	18.58 kW	17.76 kW	16.99 kW	16.32 kW	15.73 kW	15.18 kW	14.74 kW	14.33 kW	14.01 kW	13.74 kW
		Sensible Cooling	14.18 kW	13.65 kW	13.19 kW	12.75 kW	12.36 kW	12.04 kW	11.75 kW	11.51 kW	11.31 kW	11.16 kW	11.05 kW	10.99 kW
	29.4/22.2	Total Cooling	24.35 kW	22.8 kW	21.33 kW	20.04 kW	18.87 kW	17.84 kW	16.96 kW	16.14 kW	15.5 kW	14.88 kW	14.42 kW	13.98 kW
		Sensible Cooling	14.53 kW	13.86 kW	13.24 kW	12.66 kW	12.13 kW	11.66 kW	11.19 kW	10.81 kW	10.43 kW	10.08 kW	9.79 kW	9.46 kW

- ① Low outdoor ambient programming allows for compressor operation down to -34°C.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °C.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow	-10%	Rated	+10%
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

////// HIGH SENSIBLE COOLING BTU APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE F° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
W180B Stage 3 (Full Load)	75/62	Total Cooling	195,100	183,900	173,800	164,800	156,600	149,500	143,200	137,800	133,200	129,300	126,100
		Sensible Cooling	157,100	151,900	147,200	142,900	139,000	135,500	132,400	129,700	127,300	125,200	123,500
	80/67	Total Cooling	208,400	200,500	193,100	186,300	180,000	174,300	169,100	164,500	160,400	156,900	153,800
		Sensible Cooling	152,400	149,000	145,900	143,000	140,400	138,000	135,900	134,100	132,500	131,200	130,100
	85/72	Total Cooling	248,200	234,300	221,700	210,200	199,900	190,600	182,200	174,900	168,500	162,900	158,100
		Sensible Cooling	156,000	151,100	146,500	142,000	137,600	133,400	129,400	125,600	122,000	118,400	115,000
W180B Stage 2	75/62	Total Cooling	164,400	155,100	146,700	139,100	132,300	126,300	120,900	116,100	112,100	108,600	105,600
		Sensible Cooling	143,100	138,700	134,500	130,600	127,100	123,600	120,500	116,100	112,100	108,600	105,600
	80/67	Total Cooling	175,600	169,100	163,000	157,300	152,000	147,200	142,700	138,600	135,000	131,700	128,800
		Sensible Cooling	138,800	136,000	133,300	130,700	128,300	125,900	123,700	121,600	119,600	117,700	116,000
	85/72	Total Cooling	209,100	197,600	187,100	177,500	168,800	161,000	153,800	147,400	141,800	136,800	132,400
		Sensible Cooling	142,100	138,000	133,800	129,800	125,800	121,700	117,800	113,900	110,100	106,300	102,600
W180B Stage 1	75/62	Total Cooling	67,700	63,400	59,600	56,200	53,100	50,600	48,200	46,300	44,700	43,400	42,400
		Sensible Cooling	56,000	53,900	51,900	50,200	48,600	47,200	45,900	44,800	43,800	43,100	42,400
	80/67	Total Cooling	72,300	69,100	66,200	63,500	61,000	58,900	56,900	55,200	53,800	52,600	51,600
		Sensible Cooling	54,300	52,800	51,400	50,200	49,000	48,000	47,100	46,300	45,600	45,100	44,600
	85/72	Total Cooling	86,100	80,800	76,000	71,700	67,800	64,400	61,400	58,700	56,500	54,700	53,100
		Sensible Cooling	55,600	53,600	51,600	49,900	48,100	46,400	44,900	43,400	42,000	40,700	39,500

- ① Low outdoor ambient programming allows for compressor operation down to 0°F
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °F.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow	-10%	Rated	+10%
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

////// HIGH SENSIBLE COOLING KW APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE C° ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	23.8°C	26.6°C	29.4°C	32.2°C	35°C	37.7°C	40.5°F	43.3°C	46.1°C	48.8°C	51.6°C
W180B Stage 3 (Full Load)	23.8/16.6	Total Cooling	57.16 kW	53.88 kW	50.92 kW	48.29 kW	45.88 kW	43.8 kW	41.96 kW	40.38 kW	39.03 kW	37.88 kW	36.95 kW
		Sensible Cooling	46.03 kW	44.51 kW	43.13 kW	41.87 kW	40.73 kW	39.7 kW	38.79 kW	38 kW	37.3 kW	36.68 kW	36.19 kW
	26.6/19.4	Total Cooling	61.06 kW	58.75 kW	56.58 kW	54.59 kW	52.74 kW	51.07 kW	49.55 kW	48.2 kW	47 kW	45.97 kW	45.06 kW
		Sensible Cooling	44.65 kW	43.66 kW	42.75 kW	41.9 kW	41.14 kW	40.43 kW	39.82 kW	39.29 kW	38.82 kW	38.44 kW	38.12 kW
	29.4/22.2	Total Cooling	72.72 kW	68.65 kW	64.96 kW	61.59 kW	58.57 kW	55.85 kW	53.38 kW	51.25 kW	49.37 kW	47.73 kW	46.32 kW
		Sensible Cooling	45.71 kW	44.27 kW	42.92 kW	41.61 kW	40.32 kW	39.09 kW	37.91 kW	36.8 kW	35.75 kW	34.69 kW	33.7 kW
W180B Stage 2	23.8/16.6	Total Cooling	48.17 kW	45.44 kW	42.98 kW	40.76 kW	38.76 kW	37.01 kW	35.42 kW	34.02 kW	32.85 kW	31.82 kW	30.94 kW
		Sensible Cooling	41.93 kW	40.64 kW	39.41 kW	38.27 kW	37.24 kW	36.21 kW	35.31 kW	34.02 kW	32.85 kW	31.82 kW	30.94 kW
	26.6/19.4	Total Cooling	51.45 kW	49.55 kW	47.76 kW	46.09 kW	44.54 kW	43.13 kW	41.81 kW	40.61 kW	39.56 kW	38.59 kW	37.74 kW
		Sensible Cooling	40.67 kW	39.85 kW	39.06 kW	38.3 kW	37.59 kW	36.89 kW	36.24 kW	35.63 kW	35.04 kW	34.49 kW	33.99 kW
	29.4/22.2	Total Cooling	61.27 kW	57.9 kW	54.82 kW	52.01 kW	49.46 kW	47.17 kW	45.06 kW	43.19 kW	41.55 kW	40.08 kW	38.79 kW
		Sensible Cooling	41.64 kW	40.43 kW	39.2 kW	38.03 kW	36.86 kW	35.66 kW	34.52 kW	33.37 kW	32.26 kW	31.15 kW	30.06 kW
W180B Stage 1	23.8/16.6	Total Cooling	19.84 kW	18.58 kW	17.46 kW	16.47 kW	15.56 kW	14.83 kW	14.12 kW	13.57 kW	13.1 kW	12.72 kW	12.42 kW
		Sensible Cooling	16.41 kW	15.79 kW	15.21 kW	14.71 kW	14.24 kW	13.83 kW	13.45 kW	13.13 kW	12.83 kW	12.63 kW	12.42 kW
	26.6/19.4	Total Cooling	21.18 kW	20.25 kW	19.4 kW	18.61 kW	17.87 kW	17.26 kW	16.67 kW	16.17 kW	15.76 kW	15.41 kW	15.12 kW
		Sensible Cooling	15.91 kW	15.47 kW	15.06 kW	14.71 kW	14.36 kW	14.06 kW	13.8 kW	13.57 kW	13.36 kW	13.21 kW	13.07 kW
	29.4/22.2	Total Cooling	25.23 kW	23.67 kW	22.27 kW	21.01 kW	19.87 kW	18.87 kW	17.99 kW	17.2 kW	16.55 kW	16.03 kW	15.56 kW
		Sensible Cooling	16.29 kW	15.7 kW	15.12 kW	16.62 kW	14.09 kW	13.6 kW	13.16 kW	12.72 kW	12.31 kW	11.93 kW	11.57 kW

- ① Low outdoor ambient programming allows for compressor operation down to -34°C.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °C.

AIRFLOW CAPACITY MULTIPLIER FACTORS			
% of Rated Airflow	-10%	Rated	+10%
Total BTUH	0.975	1.0	1.02
Sensible BTUH	0.950	1.0	1.05

Airflow capacity multipliers are provided to adjust capacity amounts based on actual unit airflow. Capacity amounts in the table are at rate airflow and static amounts provided in the Cooling CFM - Inches Water Column Rated Static data row of the Unit Specification Data. Actual airflow amounts are provided per static pressure amount in the Indoor Fan Performance Chart. Compare the Indoor Rated Airflow to the Actual Unit Airflow Per Static Pressure amounts to calculate the % of rated airflow.

////// **BALANCED CLIMATE BTU APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE F°** ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	75°F	80°F	85°F	90°F	95°F	100°F	105°F
W180B Stage 3 (Full Load)	75/62	Total Cooling BTUH	172,400	163,300	155,100	147,700	141,000	135,200	130,000
		Latent BTUH	55,100	114,000	110,800	107,900	105,000	102,300	99,700
		Lbs. H2O/hr.	51.84	46.38	41.68	37.45	33.87	30.95	28.51
	80/67	Total Cooling BTUH	184,100	178,000	172,300	167,000	162,000	157,600	153,500
		Latent BTUH	70,300	111,800	109,800	107,900	106,000	104,200	102,300
		Lbs. H2O/hr.	66.32	62.45	58.96	55.75	52.83	50.38	48.30
	85/72	Total Cooling BTUH	219,200	208,000	197,800	188,500	179,900	172,300	165,400
		Latent BTUH	102,700	113,400	110,300	107,100	103,900	100,800	97,400
		Lbs. H2O/hr.	97.14	89.48	82.76	76.99	71.89	67.63	64.32
W180B Stage 2	75/62	Total Cooling BTUH	147,900	139,900	132,600	126,000	120,100	114,900	110,200
		Latent BTUH	41,500	36,800	32,500	28,700	25,500	22,900	20,600
		Lbs. H2O/hr.	39.04	34.62	30.58	27.00	23.99	21.55	19.38
	80/67	Total Cooling BTUH	157,900	152,500	147,300	142,500	138,000	133,900	130,100
		Latent BTUH	54,700	51,400	48,100	45,200	42,500	40,200	38,100
		Lbs. H2O/hr.	51.60	48.49	45.38	42.64	40.09	37.92	35.94
	85/72	Total Cooling BTUH	188,000	178,200	169,100	160,800	153,200	146,400	140,200
		Latent BTUH	82,400	75,600	69,500	64,200	59,600	55,800	52,600
		Lbs. H2O/hr.	77.94	71.51	65.74	60.72	56.37	52.78	49.75
W180B Stage 1	75/62	Total Cooling BTUH	53,200	49,900	46,800	44,200	41,800	39,800	38,200
		Latent BTUH	17,900	16,300	14,800	13,600	12,400	11,500	10,900
		Lbs. H2O/hr.	16.84	15.34	13.92	12.80	11.67	10.82	10.26
	80/67	Total Cooling BTUH	56,800	54,300	52,000	49,900	48,000	46,400	45,000
		Latent BTUH	22,600	21,400	20,300	19,300	18,400	17,600	17,000
		Lbs. H2O/hr.	21.32	20.19	19.15	18.21	17.36	16.60	16.04
	85/72	Total Cooling BTUH	67,700	63,500	59,700	56,300	53,300	50,800	48,500
		Latent BTUH	32,700	30,100	27,800	25,900	24,200	22,900	21,800
		Lbs. H2O/hr.	30.93	28.47	26.30	24.50	22.89	21.66	20.62

- ① Low ambient operation disables Balanced Climate Operation.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °F.

////// **BALANCED CLIMATE KW APPLICATION DATA - INDOOR/OUTDOOR TEMPERATURE C°** ①②

MODEL STAGE	RETURN AIR (DB/WB)	COOLING CAPACITY	23.8°C	26.6°C	29.4°C	32.2°C	35°C	37.7°C	40.5°C
W180B Stage 3 (Full Load)	23.8/16.6	Total Cooling kW	50.51 kW	47.85 kW	45.44 kW	43.28 kW	41.31 kW	39.61 kW	38.09 kW
		Latent kW	16.14 kW	33.4 kW	32.46 kW	31.61 kW	30.77 kW	29.97 kW	29.21 kW
		Kg H2O/hr.	23.51 kg	21.03 kg	18.9 kg	16.98 kg	15.36 kg	14.04 kg	12.93 kg
	26.6/19.4	Total Cooling kW	53.94 kW	52.15 kW	50.48 kW	48.93 kW	47.47 kW	46.18 kW	44.98 kW
		Latent kW	20.6 kW	32.76 kW	32.17 kW	31.61 kW	31.06 kW	30.53 kW	29.97 kW
		Kg H2O/hr.	30.08 kg	28.32 kg	26.74 kg	25.28 kg	23.96 kg	22.85 kg	21.9 kg
	29.4/22.2	Total Cooling kW	64.23 kW	60.94 kW	57.96 kW	55.23 kW	52.71 kW	50.48 kW	48.46 kW
		Latent kW	30.09 kW	33.23 kW	32.32 kW	31.38 kW	30.44 kW	29.53 kW	28.54 kW
		Kg H2O/hr.	44.05 kg	40.58 kg	37.53 kg	34.92 kg	32.6 kg	30.67 kg	29.17 kg
W180B Stage 2	23.8/16.6	Total Cooling kW	43.33 kW	40.99 kW	38.85 kW	36.92 kW	35.19 kW	33.67 kW	32.29 kW
		Latent kW	12.16 kW	10.78 kW	9.52 kW	8.41 kW	7.47 kW	6.71 kW	6.04 kW
		Kg H2O/hr.	17.71 kg	15.7 kg	13.87 kg	12.25 kg	10.88 kg	9.77 kg	8.79 kg
	26.6/19.4	Total Cooling kW	46.26 kW	44.68 kW	43.16 kW	41.75 kW	40.43 kW	39.23 kW	38.12 kW
		Latent kW	16.03 kW	15.06 kW	14.09 kW	13.24 kW	12.45 kW	11.78 kW	11.16 kW
		Kg H2O/hr.	23.4 kg	21.99 kg	20.58 kg	19.34 kg	18.18 kg	17.2 kg	16.3 kg
	29.4/22.2	Total Cooling kW	55.08 kW	52.21 kW	49.55 kW	47.11 kW	44.89 kW	42.9 kW	41.08 kW
		Latent kW	24.14 kW	22.15 kW	20.36 kW	18.81 kW	17.46 kW	16.35 kW	15.41 kW
		Kg H2O/hr.	35.35 kg	32.43 kg	29.81 kg	27.54 kg	25.57 kg	23.94 kg	22.56 kg
W180B Stage 1	23.8/16.6	Total Cooling kW	15.59 kW	14.62 kW	13.71 kW	12.95 kW	12.25 kW	11.66 kW	11.19 kW
		Latent kW	5.24 kW	4.78 kW	4.34 kW	3.98 kW	3.63 kW	3.37 kW	3.19 kW
		Kg H2O/hr.	7.64 kg	6.95 kg	6.31 kg	5.8 kg	5.29 kg	4.91 kg	4.65 kg
	26.6/19.4	Total Cooling kW	16.64 kW	15.91 kW	15.24 kW	14.62 kW	14.06 kW	13.6 kW	13.19 kW
		Latent kW	6.62 kW	6.27 kW	5.95 kW	5.65 kW	5.39 kW	5.16 kW	4.98 kW
		Kg H2O/hr.	9.67 kg	9.16 kg	8.68 kg	8.26 kg	7.87 kg	7.53 kg	7.27 kg
	29.4/22.2	Total Cooling kW	19.84 kW	18.61 kW	17.49 kW	16.5 kW	15.62 kW	14.88 kW	14.21 kW
		Latent kW	9.58 kW	8.82 kW	8.15 kW	7.59 kW	7.09 kW	6.71 kW	6.39 kW
		Kg H2O/hr.	14.03 kg	12.91 kg	11.92 kg	11.11 kg	10.38 kg	9.82 kg	9.35 kg

- ① Low ambient operation disables Balanced Climate Operation.
- ② Outdoor temperatures shown are measured at the condenser section air inlet.
- ③ Return air temperature °C.

////// INDOOR AIRFLOW CFM @ STATIC PRESSURES - EC EVAPORATOR FAN MOTOR WITH MODBUS CONTROL

Standard Cooling Mode CFM								
MODELS	W090A		W120A		W150A		W180B	
Static Pressure in H2O	Dry Coil CFM	Wet Coil CFM	Dry Coil CFM	Wet Coil CFM	Dry Coil CFM	Wet Coil CFM	Dry Coil CFM	Wet Coil CFM
0	3390	3260	4520	4320	5000	4850	NA	NA
0.1	3230	3100	4400	4220	4900	4740	6150	5910
0.2	3070	2940	4300	4100	4780	4640	5960	5730
0.3	2890	2760	4160	3980	4680	4520	5770	5540
0.4	2700	2570	4030	3850	4570	4400	5560	5340
0.5	2480	2350	3900	3700	4440	4280	5350	5140
0.6	2260	2130	3770	3540	4310	4160	5140	4940
0.7	2010	1880	3610	3380	4170	4010	4920	4730
0.8	1580	1450	3410	3220	4020	3860	4700	4510
0.9	NA	NA	3220	3050	3860	3710	NA	NA

MODELS	W090A	W120A	W150A	W180B
Balanced Climate Multiplier	.94	.92	.70	0.57
Standard Airflow	1.0	1.0	1.0	1.0
High Sensible Multiplier	1.23	1.13	1.23	1.13

Airflow capacity multipliers are provided to estimate blower performance during different modes of operation.

////// STANDARD UNIT ELECTRICAL SPECIFICATIONS — W***AP SERIES

Voltage-Phase	60Hz Unit Model	Heater Package	Number of Power Circuits	Single Circuit				Dual Circuit							
				Min. Circuit Ampacity (MCA)	Max. Operating Circuit Protection (MOCP)	Field Power Wire Size Per UL1995	Ground Wire Size Per UL1995	Min. Circuit Ampacity (MCA)		Max. Operating Circuit Protection (MOCP)		Field Power Wire Size Per UL1995		Ground Wire Size Per UL1995	
								Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B
208/230V-3	W090APB	OZ	1 or 2	46	60	6	10	29	18	35	30	8	10	10	10
		09	1 or 2	46	60	6	10	29	28	35	30	8	10	10	10
		18	1	59	60	6	10								
460V-3	W090APC	OZ	1	21	30	10	10								
		09	1	21	30	10	10								
		18	1	30	35	8	10								
575V-3	W090APQ	OZ	1	19	25	10	10								
		09	1	19	25	10	10								
		18	1	25	30	8	10								
208/230V-3	W120APB	OZ	1 or 2	56	70	6	8	32	25	40	40	8	8	10	10
		09	1 or 2	56	70	6	8	32	28	40	40	8	8	10	10
		18	1 or 2	59	70	6	8	32	28	40	40	8	8	10	10
400V-3	W120APN	OZ	1	32	40	8	10								
		09	1	32	40	8	10								
		18	1	32	40	8	10								
460V-3	W120APC	OZ	1	27	40	8	10								
		09	1	27	40	8	10								
		18	1	30	40	8	10								
575V-3	W120APQ	OZ	1	24	35	8	10								
		09	1	24	35	8	10								
		18	1	27	35	8	10								
208/230V-3	W150APB	OZ	1 or 2	67	80	4	8	39	34	50	40	8	8	10	10
		09	1 or 2	67	80	4	8	39	34	50	40	8	8	10	10
		18	1 or 2	67	80	4	8	39	34	50	40	8	8	10	10
460V-3	W150APC	OZ	1	32	40	8	10								
		09	1	32	40	8	10								
		18	1	32	40	8	10								
400V-3	W150APN	OZ	1	34	40	8	10								
		09	1	34	40	8	10								
		18	1	34	40	8	10								
575V-3	W150APQ	OZ	1	24	35	8	10								
		09	1	24	35	8	10								
		18	1	30	35	8	10								

① Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.

② Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.

③ The "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing.

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to Note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three current carrying conductors are in a raceway.

IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all local codes.

////// STANDARD UNIT ELECTRICAL SPECIFICATIONS — W***BP SERIES

Voltage-Phase	60hz Unit Model	Heater Package	Number of Power Circuits	Single Circuit				Dual Circuit											
				Min. Circuit Ampacity (MCA)	Max. Operating Circuit Protection (MOCP)	Field Power Wire Size Per UL1995	Ground Wire Size Per UL1995	Min. Circuit Ampacity (MCA)			Max. Operating Circuit Protection (MOCP)			Field Power Wire Size Per UL1995			Ground Wire Size Per UL1995		
								Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C
208/230V-3	W180BPS	0Z	1 or 2	85	100	4	8	54	32		60	50		6	8		10	10	
		09	1 or 2	85	100	4	8	54	32		60	50		6	8		10	10	
		18	1 or 2	85	100	4	8	54	32		60	50		6	8		10	10	
		36	1 or 3	115	125	2	6	54	55	55	60	60	60	6	6	6	10	10	10
460/415V-3	W180BPT	0Z	1	40	60	8	10												
		09	1	40	60	8	10												
		18	1	40	60	8	10												
		36	1	58	60	6	10												
400V-3	W180BPN	0Z	1	47	60	8	10												
		09	1	47	60	8	10												
		18	1	47	60	8	10												
		36	1	51	60	6	10												
575V-3	W180BPQ	0Z	1	31	45	8	10												
		09	1	31	45	8	10												
		18	1	31	45	8	10												
		36	1	48	50	8	10												

////// **ELECTRIC REHEAT UNIT ELECTRICAL SPECIFICATIONS — W***AE SERIES**

Voltage-Phase	60hz Reheat Unit Model	Heater Package	Number of Power Circuits	Single Circuit				Dual Circuit							
				Min. Circuit Ampacity (MCA)	Max. Operating Circuit Protection (MOCP)	Field Power Wire Size Per UL1995	Ground Wire Size Per UL1995	Min. Circuit Ampacity (MCA)		Max. Operating Circuit Protection (MOCP)		Field Power Wire Size Per UL1995		Ground Wire Size Per UL1995	
								Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B
208/230V-3	W090AEB	18	1 or 2	100	100	1	6	56	46	60	50	6	6	10	10
460V-3	W090AEC	18	1	53	60	6	10								
208/230V-3	W120AEB	18	1 or 2	110	120	1	6	59	52	60	60	4	6	10	10
460V-3	W120AEC	18	1	54	60	6	10								
400V-3	W120AEN	18	1	45	50	6	10								
208/230V-3	W150AEB	18	1 or 2	120	120	1	6	59	55	60	60	4	6	10	10
460V-3	W150AEC	18	1	54	60	6	10								
400V-3	W150AEN	18	1	54	60	6	10								

① Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.
 ② Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.
 ③ The "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing.

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to Note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three current carrying conductors are in a raceway.

IMPORTANT: While this electrical data is presented as a guide, it is important to electrically connect properly sized fuses and conductor wires in accordance with the National Electrical Code and all local codes.

////// ELECTRIC REHEAT UNIT ELECTRICAL SPECIFICATIONS — W***BE SERIES

Voltage-Phase	60hz Unit Model	Heater Package	Number of Power Circuits	Single Circuit				Dual Circuit											
				Min. Circuit Ampacity (MCA)	Max. Operating Circuit Protection (MOCP)	Field Power Wire Size Per UL1995	Ground Wire Size Per UL1995	Min. Circuit Ampacity (MCA)			Max. Operating Circuit Protection (MOCP)			Field Power Wire Size Per UL1995			Ground Wire Size Per UL1995		
								Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C	Ckt. A	Ckt. B	Ckt. C
208/230V-3	W180BES	18	1 or 3	140	150	1/0	6	54	59	28	60	60	30	6	6	10	10	10	10
460/415V-3	W180BET	18	2	67	80	4	8	54	14		60	20		6	12		10	12	
400V-3	W180BEN	18	2	71	90	4	8	59	12		60	20		6	12		10	12	

///// **ELECTRIC HEAT TABLE - REFER TO ELECTRICAL SPECIFICATIONS FOR AVAILABILITY BY UNIT MODEL**

Nominal Heater Kw Listed Per Unit Model	Actual Unit Voltage																	
	AT 208V-3ph-60hz.			AT 240V-3ph-60hz.			AT 400V-3ph-60hz.			AT 460V-3ph-60hz.			AT 480V-3ph-60hz.			AT 575V-3ph-60hz.		
	KW	AMPS	BTUH	KW	AMPS	BTUH	KW	AMPS	BTUH	KW	AMPS	BTUH	KW	AMPS	BTUH	KW	AMPS	BTUH
9.00	6.75	18.70	23,038	9.00	21.70	30,717	7.50	9.00	25,598	8.28	10.40	28,260	9.00	10.80	30,717	9.00	9.02	30,717
18.00	13.50	37.50	46,076	18.00	43.30	61,434	15.00	18.08	51,195	16.56	20.80	56,519	18.00	21.70	61,434	18.00	18.11	61,434
36.00	27.00	75.00	92,152	36.00	86.60	122,868	30.00	36.17	102,390	33.12	41.60	113,038	36.00	43.40	122,868	36.00	36.23	122,868

Nominal Heater Kw Listed Per Unit Model	Actual Unit Voltage											
	AT 200V-3ph-50hz.			AT 220V-3ph-50hz.			AT 380V-3ph-50hz.			AT 415V-3ph-50hz.		
	KW	AMPS	BTUH	KW	AMPS	BTUH	KW	AMPS	BTUH	KW	AMPS	BTUH
9.00	6.49	17.98	22,152	8.25	19.89	28,157	7.13	8.55	24,318	7.47	9.38	25,495
18.00	12.98	36.06	44,304	16.50	39.69	56,315	14.25	17.18	48,635	14.94	18.77	50,990
36.00	25.96	72.12	88,608	33.00	79.38	112,629	28.50	34.36	97,271	29.88	37.53	101,980

///// **MEGA-TEC SERIES WALL MOUNT™ VENTILATION OPTION SELECTION CHART**

Vent Code	Vent Type	Description
B	No Ventilation	Unit does not include intake or exhaust openings for ventilation.
E	Economizer	Free flow economizer. Enthalpy, Dew Point, or Dry Bulb economizing settings. A field installed 7" hood is required on each side of the unit. The economizer is not a field installed option.

* Note: Ventilation options are not field installable.

////// WALL MOUNT™ VENTILATION OPTIONS SPECIFICATIONS

“B” Vent Code Option – No Vent

This unit is constructed without the economizer vent option and the air intake and exhaust openings are removed. The no vent option may be utilized when outside air intake is not desired or required by local codes.

“E” Vent Code Option – Free Cooling Economizer

The free cooling economizer uses multiple 2-10V High torque actuators to independently control each intake and exhaust damper. Outdoor intake air enters the left and right sides of the unit through intake hoods. Intake air is pre-filtered before entering the unit. Room air is exhausted using one or more separate dampers into the condenser section partition of the unit. A large exhaust air path is provided to reduce room pressure to slight positive pressurization during economizer operation. All dampers include rubber seals for positive shutoff when the economizer is not being operated.

All operation is controlled by the unit logic board. Magnetic proximity sensors attached to each economizer blade indicate a damper failure. A dust sensor is provided to monitor particulates in the outdoor air being brought into the structure, and disable economizer use when the particulate level is too high. Outdoor temperature/humidity conditions are monitored through a sensor located on the side of the unit.

Unit Software Economizer Features:

- Standard dry bulb outdoor temperature control of economizer operation.
- Optional wet bulb outdoor enthalpy control of economizer operation. Enthalpy measured in either %RH or Dew point.
- Passive Dehum: Economizer operation can be disabled if humidity levels measured by the LC6000 reach the indoor maximum humidity set point. The default passive indoor humidity set point is 70%RH*.
- Emergency Vent: When NO/NC* contacts are energized in the LC6000, the economizer blades are fully opened and the evaporator Fan is activated.
- Emergency Off: When NO/NC* contacts are energized in the LC6000, the economizer blades are closed, and unit operation is disabled.
- Emergency Cool: When high temp alarm 2 is active in the LC6000 due to a High temperature event in a zone, the economizer blades are fully opened and the Evaporator Fan is activated.

*Default setting.

Note: Fire suppression systems that use gases to flood an area may require economizer shutdown within 30 seconds of a smoke/fire event. A signal from the LC6000 controller to close all dampers and disable unit operation can take over a minute (time will vary based on daisy chain connections). A relay must be installed to break the 24VAC power supply output from the low voltage transformer in each unit in order to shorten the blade closure time and disable unit operation.

////// CABINET OPTIONS

Cabinet Finish Options

Unit models are available in Beige, White, Buckeye Gray, and Stainless Steel (W090, W120, W150 only). Painted cabinet construction is comprised of 16 gauge Zinc coated steel. Parts are cleaned, rinsed, sealed, and dried before a polyurethane primer is applied. The cabinet coating is completed with a baked on textured enamel. The resulting finish is designed to withstand 1000 hours of salt spray tests per ASTM B117-03. Stainless steel external cabinet construction is comprised of 316 grade materials. Stainless steel screws and fasteners are used in all externally exposed areas. A corrosion resistant coated fan blade and stainless steel condenser motor mount is provided.



////// EVAPORATOR AND CONDENSER COIL COATING OPTIONS

Green Fin Hydrophilic Evaporator Coils Standard On All Units

Bard WALL MOUNT products include a green protective coating applied to the aluminum fin stock used for the evaporator coil. The evaporator coil coating is hydrophilic (attracts water) and allows for proper condensate drainage along with mild corrosion protection. Resistance to corrosive agents include ammonia, sodium hydroxide, sodium chloride, acidic solutions and solvents.



*Hydrophilic Green Coil
(standard)*

Evaporator and Condenser Coil Technicoat Coating Options

Bard now offers TECHNICOAT AA, a robust dipped coating option for the evaporator and condenser coil. TECHNICOAT AA has passed all HVAC accelerated tests like salt spray, flexibility and SWAAT 3,000+ hours. It has been tested in the field in the most severe industrial exposure conditions, such as a coastal refinery in Saudi Arabia, mining facilities in central Africa, and various Pacific islands. TECHNICOAT AA did not show any deterioration after multiple years of function with coils directly exposed to such harsh environmental conditions. The TECHNICOAT AA coating system is based on modified acrylic waterborne binders with high elongation properties. Aluminum pigmentation has been added to establish exceptional heat transfer, chemical resistance, and UV blocking properties. Corrosion resistance reaches >10,000+ hours in ASTM B-117 and >3,120 hours in SWAAT testing. Coating is gray in color.



*TechniCoat
(optional)*

////// W090A - W120A PACKAGING OPTIONS INCLUDING SHIPPING SKIDS, PLATFORMS, AND CRATES

The MEGA-TEC® unit can be shipped using a standard wood skid, or can be ordered with a metal platform under the unit. The metal platform supports the unit resting on the ground after wall attachment. Platform construction is 16ga. primered painted steel. Platform size is 55" wide by 48" deep (45" without bumper) and is a height of 3.75".

Optional crates are available to help protect your valuable MEGA-TEC® investment during shipping. Constructed from OSB sheathing with steel corner posts, and sized for standard truck transportation. Treated for pests in accordance with the International Plant Protection Convention, Publication 15, Annex 1. Packaging is acceptable for international shipments.

Packaging Code	Packaging Type	Description
X	Wood Skid and Standard Packaging.	Unit ships on standard wood skid with stretch wrap, cardboard corners and top cap. The wood skid is 5" in height.
1	White Metal Platform and Standard Packaging.	Unit ships on a White 16 Ga. painted metal platform with stretch wrap, cardboard corners and top cap. The platform is 3.75" in height.
2	Wood Skid and Crate.	Unit ships on standard wood skid. A wood crate is installed over the standard packaging to protect the sides and top of the unit. The wood skid is 5" in height.
3	White Metal Platform and Crate.	Unit ships on a White 16 Ga. painted metal platform. A wood crate is installed over the standard packaging to protect the sides and top of the unit. The platform is 3.75" in height.
6	Gray Metal Platform and Standard Packaging.	Unit ships on a Gray 16 Ga. painted metal platform with stretch wrap, cardboard corners and top cap. The platform is 3.75" in height.
7	Gray Metal Platform and Crate.	Unit ships on a Gray 16 Ga. painted metal platform. A wood crate is installed over the standard packaging to protect the sides and top of the unit. The platform is 3.75" in height.

////// W180B PACKAGING OPTIONS INCLUDING SHIPPING SKIDS, PLATFORMS, AND CRATES

The MEGA-TEC® unit can be shipped using a standard metal platform under the unit. The metal platform supports the unit resting on the ground after wall attachment. Platform construction is 16ga. primed painted steel. Platform size is 78" wide by 56" deep (53" without bumper) and is 4.5" high.

Optional crates are available to help protect your valuable MEGA-TEC® investment during shipping. Constructed from OSB sheathing with steel corner posts, and sized for standard truck transportation. Treated for pests in accordance with the International Plant Protection Convention, Publication 15, Annex 1. Packaging is acceptable for international shipments.

Packaging Code	Packaging Type	Description
X	Metal Skid and Standard Packaging.	Unit ships on galvanized metal skid with stretch wrap, cardboard corners and top cap. The galvanized metal is 4.5" in height.
1	Metal Skid and Crate.	Unit ships on a 16 Ga. galvanized metal platform. A wood crate is installed over the standard packaging to protect the sides and top of the unit. The platform is 4.5" in height.

////// FACTORY SUPPLIED STANDARD UNIT COMPONENTS

Refrigerant Components	Function	Description
Compressor Refrigeration Left Circuit A	2 Stage R410A compressor	Scroll compressor used for left refrigeration circuit capable of running at 66% or 100% of compressor capacity.
Compressor Refrigeration Right Circuit B	1 Stage R410A compressor	Scroll compressor used for right refrigeration circuit capable of running at 100% of compressor capacity.
Crankcase Heater (CCH)	Compressor heating device	The heater is a belly band that is installed around the base of the compressor that applies heat when the refrigeration system is not operational. This heat is meant to prevent refrigerant oil migration when the unit is not running.
Electronic Expansion Valve (EEV)	Electronic Expansion Valve refrigerant metering device	The EEV precisely controls the flow of refrigerant by using programmed logic inside the PLC board. The PLC board monitors low side system pressure and temperature (superheat) to adjust the EEV to best position using over 480 control steps. Electronic Expansion Valves typically outperform standard expansion devices due to the programmable logic used to control refrigerant flow and maintain the designed superheat performance. The top electrical coil is removable and can be replaced without refrigerant removal. During refrigerant system maintenance, the EEV metering device can be opened or closed through the unit software or with an optional manual adjustment tool.
High Pressure Transducer (HPT)	Measure liquid line (high side) pressure	High side pressure is measured in the liquid line between the condenser and the evaporator coil. High side pressure is used by the PLC to monitor and control unit functionality including subcooling and condenser fan speed during elevated outdoor temperatures. By modulating the condenser fan speed based on high side system pressure, outdoor sound levels are reduced. High side system pressure and subcooling can be viewed through the unit or LC6000 software.
Low Pressure Transducer (LPT)	Measure suction line (low side) pressure	Low side pressure is measured in the suction line between the evaporator coil and compressor. Low side pressure is used by the PLC to monitor and control unit functionality including superheat and condenser fan speed during low outdoor temperatures. By modulating the condenser fan speed based on low side system pressure, compressor cooling can occur during low outdoor temperatures. Low side system pressure and superheat can be viewed through the unit or LC6000 software.
High Pressure Control Switch (HPC)	Refrigerant pressure safety device	The high pressure control provides a means of protecting each individual refrigeration circuit when extremely high system pressures occur. It is a auto-reset device that is connected to the Compressor Control Module.
Temperature Sensors	Function	Description
Discharge (Supply) Air Sensor (SAT)	Measure air temperature leaving unit	The discharge air sensor provides a temperature reading of the supply air leaving the unit. The sensor is a 10K OHM @ 77°F measuring device. It is installed in the return airstream after the evaporator coils.
Return Air Temperature Sensor (RAT)	Measuring air temperature entering unit	The return air sensor provides a temperature reading of the room air entering the unit. The sensor is a 10K OHM @ 77°F measuring device. It is installed in the return airstream behind the return grille.
Mixed Air Temperature Sensor (MAT)	Measure air temperature entering evaporator area	The mixed air sensor provides a temperature reading of the room air entering the unit after it is mixed with outdoor air entering the economizer. The sensor is a 10K OHM @ 77°F measuring device. It is installed in the Evaporator Fan area.
Freeze Sensor (FS)	Measure evaporator coil temperature	The 10K freeze sensor provides a way to monitor the evaporator coil temperatures, and help protect the system from a evaporator frost buildup/freeze event. Each evaporator coil has a sensor attached to the coldest location of the coil circuitry.
Outdoor Air Temp/Humidity Sensor (OAT) (OAH)	Measure outdoor temperature and humidity	The outdoor sensor measures outdoor temperature and humidity. This information is used for economizer and unit operation. It is located on the upper right side of the unit.
Air Pressure Sensors	Function	Description
Evaporator Fan Airflow Switch (AFS)	Verify indoor fan operation	The airflow switch measures the pressure differential between the Evaporator Fan inlet and outlet. A signal is sent to the PLC to indicate if the Evaporator Fan is not functioning.
Dirty Filter Switch Indicator (DFS)	Indicate indoor filter replacement needed	The switch is adjustable and measures pressure drop across the unit filter surface. When pressure drop is Higher than the switch setting a signal is sent to the PLC to indicate a filter change is necessary. A light is located on the exterior of the unit to indicate filters need to be replaced.

////// FACTORY SUPPLIED STANDARD UNIT COMPONENTS

Electrical Components	Function	Description
Programmable Logic Board (PLC)	Control unit operation and communicate with main controlling device.	Each unit uses a programmable logic board located in the unit control panel to communicate with the LC6000 or other controlling device. By using a 2-wire connection, alarm functionality and unit operational commands are communicated. If communication is lost, the unit is able to provide cooling and heating by using the logic in the unit controller in orphan mode.
Compressor Control Module (CCM)	High system pressure and voltage brownout compressor protection	Each refrigerant circuit uses an individual compressor control module. The compressor control module locks out compressor operation to protect the refrigeration system based on signals from the High pressure switch. It provides diagnostics to indicate when a refrigerant pressure event occurs, and also sends a signal to the PLC. Low incoming voltage protection suspends compressor operation when incoming voltage is too low. Suspending compressor operation avoids reverse scroll operation. The voltage protection feature includes adjustable timing. An adjustable delay on break timer is provided. Delay on make is 2 mins. plus 10% of delay on break setting.
Phase Monitor (PM)	3 phase compressor phasing protection	Compressor protection device for 3 phase units. It monitors incoming power on a call for cooling and will not allow compressor operation if phasing is reversed, lost, or unbalanced. LED indicates phase monitor is on or registers fault code during a call for cooling from the unit PLC.
Compressor Contactor (CC)	Supplies power to compressor during a call for cooling.	The compressor contactor is energized during a call for cooling. When energized, it supplies power to components during the cooling cycle including the compressor. The compressor contactor is designed to carry the Amp load required for compressor operation. It is also rated for the many cycles needed to provide cooling to the conditioned area.
Circuit Breaker (CB)	Provides a means of disconnecting unit power and circuit protection for 200V to 240V units.	Circuit Breakers are provided for all units within a 200V to 240V incoming power range. Circuit Breakers are sized to meet the electrical requirements of the product including electric heater options, and provide a means to disconnect power at the unit. See Electrical Specifications Charts for electrical information. It is important to review and follow all electrical codes that apply to the application, and the electrical information provided in the specifications and installation instructions.
Toggle Disconnect (TD)	Provides a means of disconnecting unit power for 380V to 575V units.	Toggle disconnects are provided for all units within a 380V to 575V incoming power range. The toggle disconnect provides a means to disconnect power at the unit. See Electrical Specifications Charts for electrical information. It is important to review and follow all electrical codes that apply to the application, and the electrical information provided in the specifications and installation instructions.
Indoor and Outdoor Fans	Function	Description
Indoor Fan Assembly (IFM)	Provides indoor evaporator airflow	A backwards inclined industrial grade fan assembly is used to supply indoor airflow to the conditioned space. The fan is powered by a direct drive ECM fan motor that communicates with the PLC using Modbus.
Outdoor Fan Assembly (OFM)	Provides outdoor condenser airflow	An axial industrial grade fan assembly is used to supply outdoor airflow to the condenser coils. The fan is powered by a direct drive ECM fan motor that communicates with the PLC using Modbus.
Electric Heat Components	Function	Description
Heat Strip (HS)	Provides heat to area being conditioned	A rust resistant wire heating element that provides the listed BTUH amount in the Electric Heat Table. Electric heating elements are shipped with properly sized limit controls and breakers or disconnects. See Electrical Specifications Charts for electrical information.
Heat Contactor (HC)	Supplies power to heat strips during a call for heating.	The heat contactor is energized during a call for heating. When energized, it supplies power to components during the heating cycle including the heat strips. The heat contactor is designed to carry the Amp load required for heating operation. It is also rated for the many cycles needed to provide heating to the conditioned area.

CONDENSER SECTION ACCESS FEATURE

Access to compressors, filter-driers, the economizer exhaust damper motor/linkage, and evaporator drain hoses are behind the condenser fan. Access to the interior condenser section is also recommended for condenser coil cleaning. The condenser fan is on a sliding carriage for easy access to the interior of the condenser section. A safety switch is also installed in the condenser section. Follow all safety instructions provided in the unit installation and service manual provided with the MEGA-TEC®.



Slide out Condenser Fan

CONDENSER FAN SPECIFICATIONS

The EC outdoor industrial fan assembly maintains its high efficiency across a wide operating range. Modbus allows accurate fan control by the unit logic board. The result is a significant reduction in energy use when the motor is ran at reduced speeds. The motor contains reverse polarity and locked motor protection. Aluminum blade sprayed with PP plastic. Steel grille coated with PP plastic. Fan has a black gloss paint finish.

SPECIFICATION	DESCRIPTION
DEGREE OF PROTECTION	IP55
MOISTURE/ENV. CLASS	F4-1
INSULATION CLASS	F
PROTECTION CLASS	1
EMC IMMUNITY	EN61000-6-2
WEIGHT	89lbs (40.2kg)



Condenser Fan

EVAPORATOR FAN SPECIFICATIONS

The EC indoor industrial fan assembly maintains its high efficiency across a wide operating range. Modbus allows accurate fan control by the unit logic board. The result is a significant reduction in energy use when the motor is operating at reduced speeds. The motor uses ball bearing construction, temperature protection, soft start, and an integrated PID controller. Aluminum impeller with steel frame construction for strength.

SPECIFICATION	DESCRIPTION
DEGREE OF PROTECTION	IP55
MOISTURE/ENV. CLASS	F4-1
INSULATION CLASS	F
PROTECTION CLASS	1
EMC IMMUNITY	EN61000-6-2
WEIGHT	66lbs. (30kg)

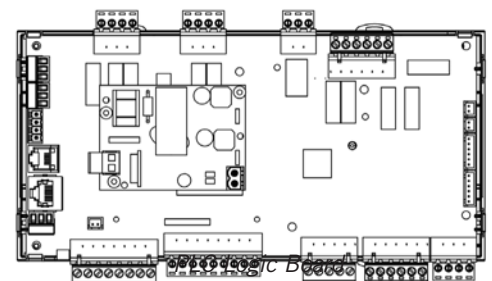


Evaporator Fan

PLC LOGIC BOARD SPECIFICATIONS

Each unit uses a programmable logic board located in the unit control panel to communicate with the LC controller. By using a 2-wire connection, alarm functionality and unit operational commands are communicated. If communication is lost, the unit is able to run by using the logic in the unit controller in orphan mode.

SPECIFICATION	DESCRIPTION
POWER SUPPLY SPECS.	24Vac/Vdc +10%/-15% 50/60 Hz
MAX. POWER INPUT	28 VA
BATTERY TYPE	Lithium Battery, BR2032, 3VDC
BATTERY LIFE, USE	Minimum 8 years, Used for Date/Time Storage
TEC-EYE CONNECTION	J10 Telephone Connector
ETHERNET CONNECTION	CAT5 Connector, 325ft. (100m) Max. Wire Length
STORAGE CONDITIONS	-40°F to 158°F (-40°C to 70°C) 90%RH non-condensing
OPERATING CONDITIONS	-40°F to 140°F (-40°C to 60°C) 90%RH non-condensing



MEGA-TEC CONTROLLER OPTIONS

CONTROLLER	FEATURES							
	NO OF UNITS	HI SENSIBLE	B. CLIMATE	E. REHEAT	MODBUS	WEBPAGES	LOCAL ALARMS	WIRED ALARMS
PGD	1	NO	NO	NO	NO	NO	YES	NO
PGDx	1	YES	YES	YES	NO	NO	YES	NO
LC6000	1 TO 14	YES	YES	YES	YES	YES	YES	YES

PGD TEMPERATURE CONTROLLER

The PGD controller offers simple single unit control with temperature monitoring. Setup is through a 6 button keypad, and the controller uses a backlit display. Two kits are available to control a single MEGA-TEC® unit.

Features of the PGD:

- Temperature control of single zone area.
- Unit setup through PGD display.
- Industrial grade plastic enclosure.
- Easy installation with included wire using phone jack connectors.
- Can either use return sensor or remote sensor to monitor zone temperature.
- local alarming displayed and logged through PGD display screen.



PGD Display

KIT PART NUMBER	KIT PART NAME	KIT DESCRIPTION
8620-306	PGD Display Kit	The PGD Display kit includes the PGD display, an enclosure box, and 25ft (7.62M) of cable with phone jack connectors to connect the display to the unit. Room temperature is monitored through the use of the return sensor.
8620-307	PGD Display Kit with Remote Temperature Sensor	The PGD Display kit includes the PGD display, a enclosure box, and 25ft (7.62M) of cable with phone jack connectors to connect the display to the unit. It also contains a remote mount 10k type 2 sensor in a plastic enclosure. Room temperature is monitored using the wall mounted remote sensor instead of a return air sensor. Wire for the remote mounted sensor is field supplied 22ga to 18ga copper conductors.

PGDx TEMPERATURE AND HUMIDITY CONTROLLER

The PGDx controller offers simple single unit control with temperature and humidity monitoring. Operation and setup is through the color touch screen display.

Features of the PGDx:

- Temperature and humidity control of single zone area.
- Unit setup through the color PGDx display.
- Industrial grade plastic enclosure.
- Easy installation and setup.
- Uses a temperature and humidity sensor built into the display.
- local alarming displayed and logged through PGDx display screen.



PGDx Display

KIT PART NUMBER	KIT PART NAME	KIT DESCRIPTION
8620-308	PGDx Display Kit	The PGDx display kit includes the PGDx 4.3" touchscreen with built-in temperature/humidity sensors, enclosure, instructions and 24VDC power supply. 4-wire 22 gauge shielded cable is field supplied for connecting the PGDx to the MEGATEC® unit (not supplied with the kit). A PGD display (Bard P/N 8301-053) or TECEYE™ diagnostic tool (Bard P/N 8301-059) will be needed to commission the MEGA-TEC® wall unit. Neither are included with the 8620-308 PGDx display kit.

LC6000 MULTI-UNIT MULTI-ZONE TEMPERATURE AND HUMIDITY CONTROLLER

The LC6000 controller allows for control of up to 14 units with 3 zones of operation. Special features including emergency vent, continuous ventilation, generator monitoring, and emergency off are standard features. Alarming, remote monitoring, and Modbus control give the technician piece of mind that units are operating efficiently and the air is conditioned inside the building.



LC6000

Features of the LC6000:

- Temperature and humidity control of 1 to 3 zones.
- Controls 1 to 14 units.
- Webpages for remote system monitoring.
- Modbus remote alarming, monitoring, and control functionality.
- Wired alarming to a NOC or remote monitoring system.
- Comfort mode allows for temporary temperature settings while technicians are in the building.
- Emergency ventilation, emergency cooling, and emergency off features.

LC6000 CONTROLLER WITH SHIPPED ACCESSORIES

PART NUMBER	PART NAME	DESCRIPTION
LC6000	Multi-unit Controller	The LC6000 controller includes (2) EMI filters part #8301-055, (1) remote temperature and humidity sensor part #8403-079 with 35' of 18ga. 5-wire shielded cable with drain, and (1) TEC-EYE™ service tool with 5ft communication cable part #8301-059. Multiple zone operation will require purchase of a remote sensor for each zone that will be connected to the LC6000.

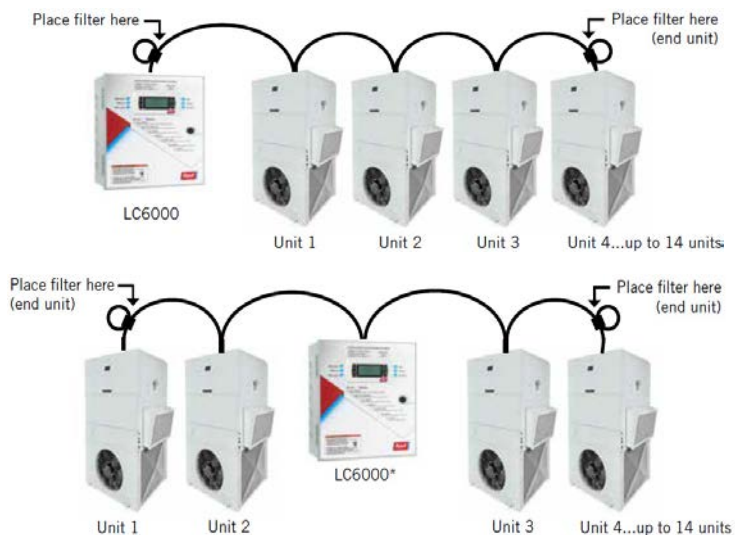
LC6000 CONTROLLER OPTIONAL ACCESSORIES

PART NUMBER	PART NAME	DESCRIPTION
8403-079	Zone Temperature/Humidity Sensor	A temperature/humidity sensor is required for each zone of operation. (1) temperature/humidity sensor is included with the LC6000. The remote temperature/humidity sensor requires 18ga. 5-wire shielded cable with drain.
8301-058	Zone Temperature Sensor	An additional temperature sensor is optional for zone 1 temperature monitoring. Remote temperature sensors may be used in zones 2 and 3 instead of remote temperature/humidity sensors if humidity monitoring is not required in the zone. The remote temperature sensor is sold separately and requires 18ga. 2-wire shielded cable with drain.
8301-059	TEC-EYE™ Service Tool	The TEC-EYE™ service tool with 5 ft. communication cable is used to access software functions in the unit PLC board. The TEC-EYE™ is required for unit setup. (1) TEC-EYE™ service tool with 5 ft. communication cable is included with the LC6000 controller.
8301-053	Large Backlit Service Tool	The large backlit service tool is used to access software functions in the unit PLC board. Operation of the service tool is identical to the TEC-EYE™, but provides a large display area (2.8"x1.4") and mechanical entry keys. The large backlit service tool is sold separately.
8301-055	EMI Ferrite Filter	(1) EMI Ferrite filter is required on each end of the daisy chain connection between the units and the LC6000 controller. (2) EMI Ferrite filters are included with the LC6000 controller.
2151-021	EEV manual adjustment tool	The EEV manual adjustment tool allows for adjustment of the EEV (Electronic Expansion Valve) without the use of the unit logic board. The service technician can use this tool by removing the electronic head of the valve and attaching the adjustment tool. The tool houses magnets that interact with the valve to open or close the EEV for charging or evacuating the system without system power. The EEV manual adjustment tool is sold separately.

DAISY CHAIN LC6000 AND MEGA-TEC CONNECTION

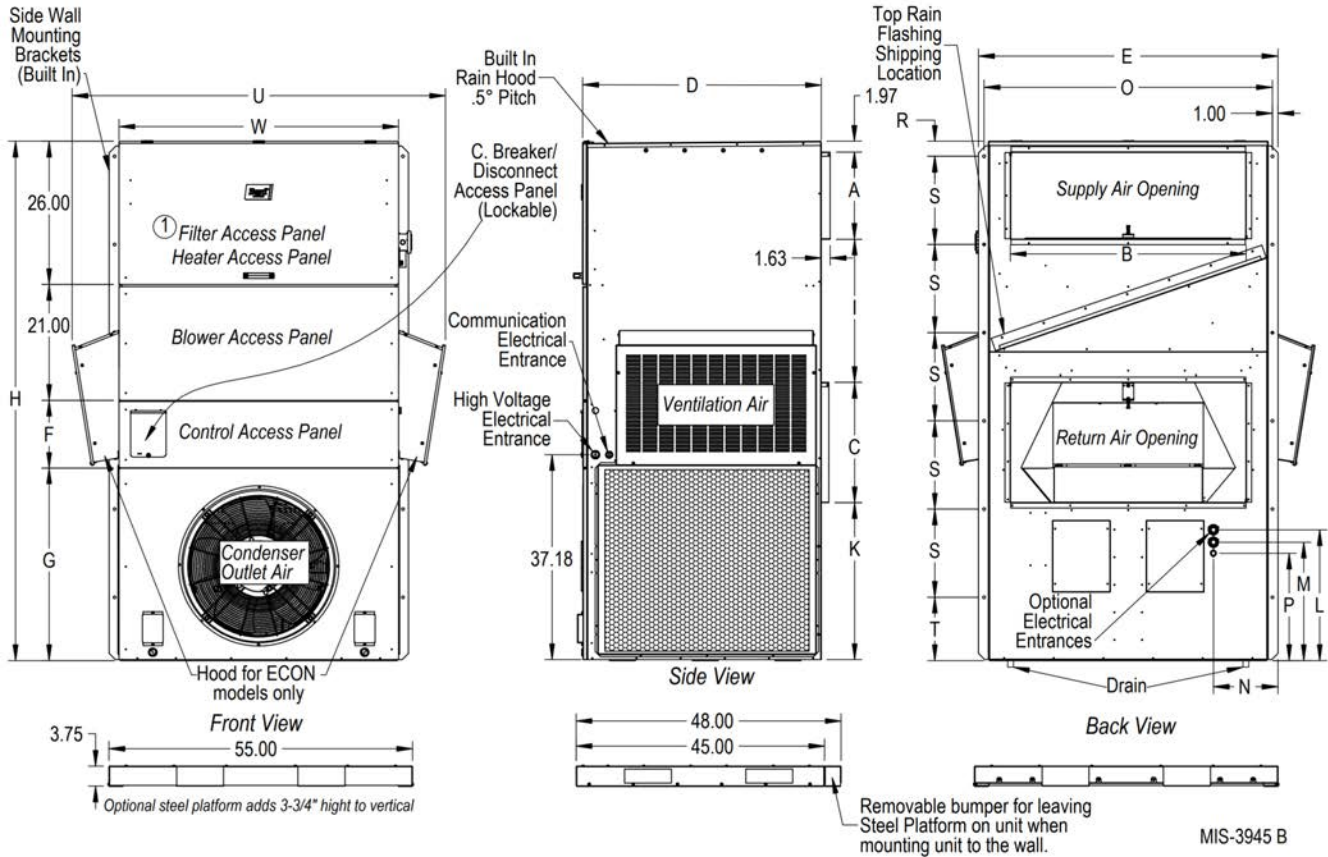
The MEGA-TEC® uses Modbus control to communicate between the logic board in the units and the logic board in the LC6000. Units and controller are connected using a shielded 2-wire daisy chain connection with a drain. Wires are polarity sensitive. The drain is connected to the LC6000 terminal block.

The LC6000 can be connected anywhere in the daisy chain. EMI line filters are used on the ends of the daisy chain. Only (2) EMI filters are required for the daisy chain, and are supplied with the LC6000 controller.

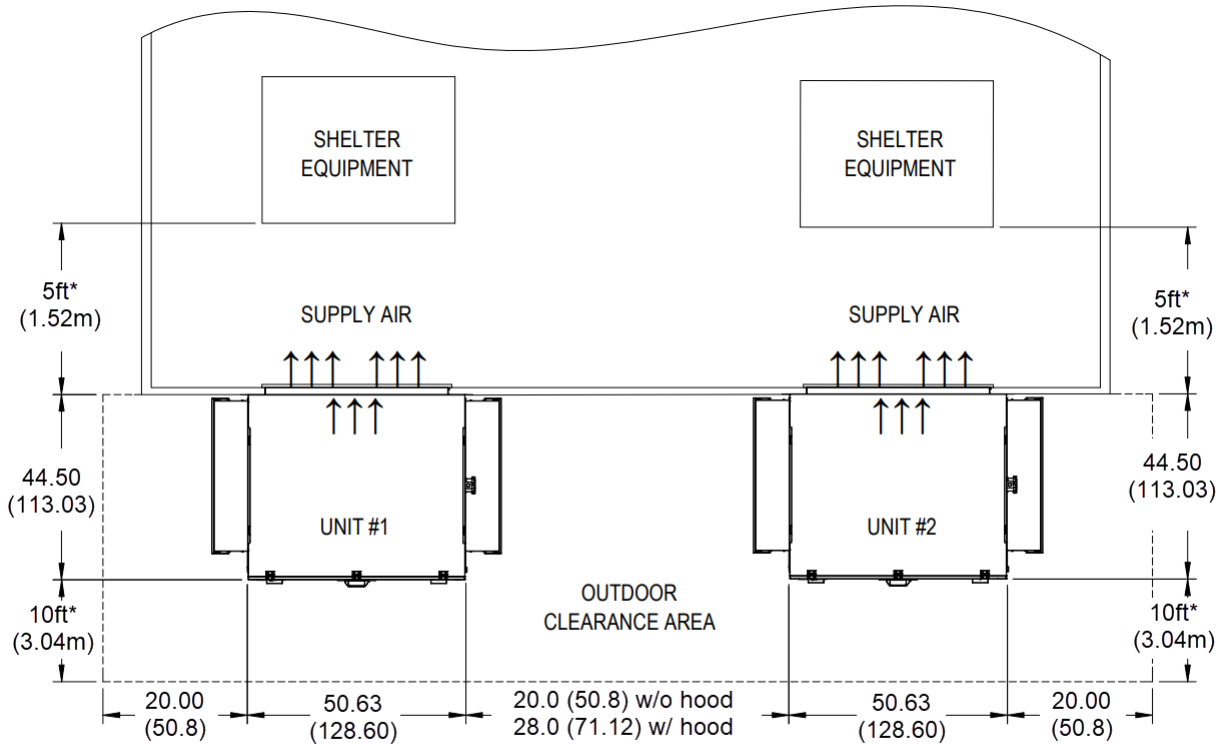


////// CABINET DIMENSIONS - W090A, W120A, AND W150A SERIES UNITS

Units	Cabinet Width (W)	Cabinet Depth (D)	Cabinet Height (H)	Supply Height (A)	Supply Width (B)	Return Height (C)	Return Width (B)	E	F	G	I	K	L	M	N	O	P	R	S	T	U
Inches	50.64	43.19	94.22	15.81	42.74	21.82	42.74	54.24	12.27	34.95	25.98	28.65	23.73	21.48	11.68	52.24	19.48	2.73	16.00	11.49	67.65
cm	128.63	109.70	239.32	40.16	108.56	55.42	108.56	137.77	31.17	88.77	65.99	72.77	60.27	54.56	29.67	132.69	49.48	6.93	40.64	29.18	171.83



////// CLEARANCE DIMENSIONS - W090A, W120A, AND W150A SERIES UNITS

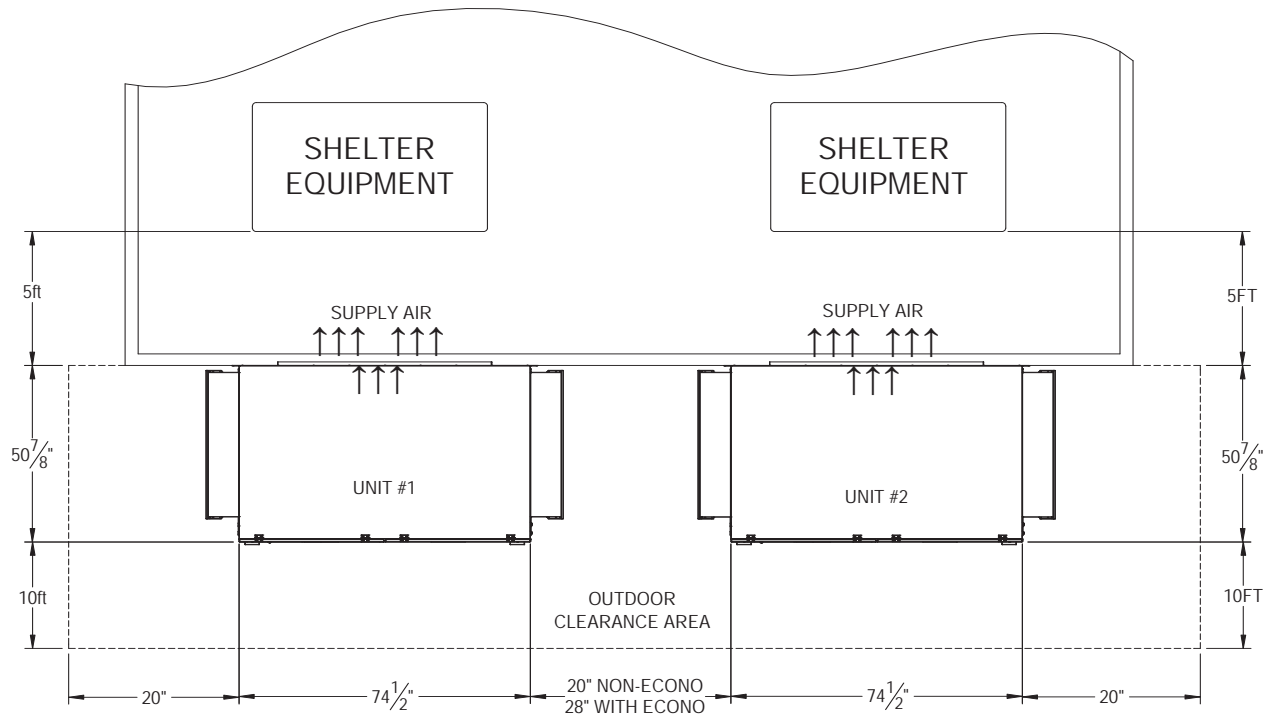


* Recommended distance between supply and return air opening and equipment in room. Airstream must be able to provide adequate air circulation throughout the room.

MIS-3962

All national, state and local codes must be observed and followed during installation.

////// CLEARANCE DIMENSIONS - W180B SERIES UNITS



* Recommended distance between supply and return air opening and equipment in room. Airstream must be able to provide adequate air circulation throughout the room.

MIS-4255

All national, state and local codes must be observed and followed during installation.

MEGA-TEC PLC UNIT SOFTWARE FEATURES

FEATURE	DESCRIPTION
Standard Cooling Mode	Standard Cooling mode provides sensible cooling capacity to lower the room temperature, and also provides latent capacity to reduce moisture content in the air. Standard Cooling mode is enabled by the LC6000 when humidity levels are normal in the area being conditioned, and provides a balance of sensible cooling operation and humidity control. Default standard cooling mode is 70%RH zone humidity and below. Default LC6000 cooling set point is 77°F.
High Sensible Cooling Mode	High Sensible Cooling mode offers a way to increase sensible capacity when moisture control does not require additional latent capacity. During High Sensible Cooling mode, the indoor blower CFM is increased to provide additional sensible cooling capacity inside the structure. High Sensible Cooling mode is enabled by the LC6000 when humidity levels are low in the area being conditioned. High Sensible Mode is selectable for each zone of operation. High sensible mode is not enabled by default, and is enabled through the LC6000 controller. Default High Sensible Cooling mode (humidity control off) setting is 60%RH zone humidity and below.
Balanced Climate Cooling Mode	Balanced Climate mode offers a way to help control humidity in an area and reduce the need for electric reheat dehumidification which saves energy costs. During Balanced Climate mode, the indoor blower CFM is reduced to remove moisture inside the structure. Balanced climate operation is operated by the LC6000 when humidity levels are High in the area being conditioned. Balanced Climate is enabled by default, and operates during active dehumidification mode. Default LC6000 Balanced Climate (active dehumidification) set point is 70%RH zone humidity and above.
Compressor Cooling Staging	Three stages of cooling capacity are available in the MEGA-TEC unit. By using a 2 stage compressor in circuit 1 and a 1 stage compressor in circuit 2, 3 total cooling stages are available. Stage 3 provides full 100% cooling capacity. Stage 2 provides approximately 80% cooling capacity. Stage 1 provides approximately 33% cooling capacity. Unit staging is based on cooling capacity needs inside the zone. Standard, High Sensible, and Balanced Climate cooling operation is available in all compressor cooling stages.
Free Cooling Mode (Optional)	Free Cooling mode uses an optional economizer to take advantage of cooler temperature outdoor conditions to provide cooling in the zone. When the economizer is operational, total energy use of the unit during cooling is reduced significantly. Settings are provided to limit economizer use to outdoor conditions the user feels are acceptable for bringing in outdoor air. Sensors for outdoor temperature, humidity, and dust are provided for monitoring outdoor conditions. Economizer use also provides emergency ventilation options (see economizer section on page 12). Default LC6000 economizer operation is temp/humidity settings of 70°F, 80%RH. Default dew point setting is 55°F if used instead of %RH.
Heating Mode (Optional)	Heating mode uses optional 2 stage electric heat to warm the zone being conditioned when needed. By installing properly sized electric heat options, a zone can be heated when equipment or other heat sources inside the area are not producing enough heating capacity to overcome cold outdoor conditions. Default LC6000 heating set point is 60°F.
Electric Reheat Dehumidification Mode (Optional)	Optional Electric Reheat Dehumidification mode offers an additional way to help control humidity in an area by allowing concurrent compressor and electric heat operation. By warming the supply air during compressor cooling mode, the unit can run for an extended period of time reducing humidity in the area. Electric Reheat operation is enabled by the LC6000 when humidity levels are High in the area being conditioned. Power requirements are increased in order to use Electric Reheat Dehumidification. Be sure to follow all electrical guidelines in the installation instructions and provide incoming power for concurrent heating and cooling operation. Default LC6000 electric reheat dehumidification set point is 80%RH zone humidity and above.
Emergency Cooling Mode	Emergency cooling provides a way to use economizer ventilation air for cooling, along with all available units on in compressor cooling mode when excessive heat is present in the zone. Optional economizers must be present in at least one of the units for outdoor air to be used for emergency cooling. Emergency cooling mode operates when the high temperature 2 alarm is present in the LC6000 controller. The default LC6000 high temperature 2 alarm setting is 90°F.
Stand Alone Mode	Stand Alone mode allows the MEGA-TEC® unit to cool the structure if a LC6000 is not used. Setpoints are adjustable in the unit PLC for stand alone mode through the use of the TEC-EYE™. The unit will use the return air temperature sensor to monitor indoor temperature conditions. The Evaporator Fan will run in continuous fan mode to provide room air circulation and allow the return air temperature sensor to monitor indoor room temperature. Room humidity is not monitored during stand alone mode operation, and balanced climate mode will not occur. Optional electric reheat operation is not available in this mode of operation.
Orphan Mode	Orphan mode allows the MEGA-TEC® unit to continue to cool the structure if communication with the LC6000 is not available. Setpoints are adjustable in the unit PLC for orphan mode through the use of the TEC-EYE™. The unit will use the return air temperature sensor to monitor indoor temperature conditions. The Evaporator Fan will run in continuous fan mode to provide room air circulation and allow the return air temperature sensor to monitor indoor room temperature. Room humidity is not monitored during orphan mode operation, and balanced climate mode or optional electric reheat operation will not occur until communication with the LC6000 controller is restored.
Alarm Logging	The MEGA-TEC® logs alarms that occur in the unit for diagnostic and maintenance purposes. Alarm logs can be displayed by connecting the TEC-EYE™ to the unit PLC board, or can be downloaded to a computer using a MicroUSB cable.
Software Updates	The MEGA-TEC® unit software can be upgraded by using a computer and connecting to the unit PLC board with a MicroUSB cable. Software updates are accessible from the Bard website: www.bardhvac.com .
Self Test Operation	MEGA-TEC® startup commissioning and diagnostic troubleshooting features include a self test that is available through the unit PLC menu. During the self test, staged cooling operation of Circuit 1 and Circuit 2 can be energized for an adjustable time period. Economizer damper operation can be observed and verified, along with electric heat operation. Indoor and outdoor fan operation can also be verified.
A/C Circuit Monitoring	MEGA-TEC® startup commissioning and diagnostic troubleshooting features include A/C circuit monitoring that is available through the unit PLC menu. During A/C circuit monitoring, staged cooling operational pressures of Circuit 1 and Circuit 2 can be observed. High pressure, low pressure, superheat and subcooling information is displayed for both circuits.
Model and Serial Number	The MEGA-TEC® unit software saves the unit model and serial number for display inside the LC6000 controller software. Model number nomenclature of the unit is used by the LC6000 to identify the features available in the unit.

MEGA-TEC LC6000 SOFTWARE FEATURES

FEATURE	DESCRIPTION
1 to 14 Unit Operation	A single LC6000 controller can operate 1 to 14 PLC controlled units. Units connected to the LC6000 can include the MEGA-TEC®, MULTI-TEC®, and FUSION-TEC® products in individual zones. Connection between the LC6000 and units is made with a 2-wire shielded cable with drain in a Daisy Chain configuration.
3 Zones of Operation	A single LC6000 controller can operate 1 to 3 zones with individual climate setpoints. Each zone can contain 1 to 14 units (cannot exceed a total of 14 units). MEGA-TEC® products can be used in individual zones, but cannot be combined in one zone. Applications for zoning include separate battery rooms, offices for occupants, switch rooms, pump house equipment rooms, VFD areas, and large open floor plan structures.
Temperature and Humidity Measurement	Zone temperature measurement can be done using the return air sensors in the units and the remote sensors connected to the LC6000, or can be measured just using the remote LC sensors. An average temperature of all the unit and remote LC sensors (default), only the units in continuous fan mode and the remote LC sensors, or the remote LC sensors only can be used to control cooling and heating functionality. Zone 1 can contain (1) remote temperature/humidity sensor and (1) remote temperature sensor for a total of (2) remote sensors. Zone 2 and Zone 3 can contain (1) remote temperature/humidity sensor in each zone. The LC6000 controller ships with 1 temperature and humidity remote sensor. Additional zone temperature and humidity sensors must be purchased separately. Remote temperature/humidity sensors require 5-wire with drain shielded cable. Remote temperature sensors require 2-wire with drain shielded cable.
Lead/Lag Staging Operation	Lead/Lag allows for staged unit operation to help control heating and cooling capacity inside a zone. Staging is necessary to help save energy and reduce unit short cycling. Three staging strategies are available. First In First Out (FIFO) allows the first unit activated in cooling or heating to be the first one de-activated as conditions reach set point. First In Last Out (FILO) allows the first unit activated in cooling or heating to be the last one de-activated as conditions reach set point. Demand Staging (DS) allows the unit sensing the Highest return air temperature to operate first in cooling mode or the lowest return air temperature unit to operate in heat mode. Default setting is FIFO.
Lead/Lag Unit Rotation	Units in each zone of operation can use a rotational schedule to change the lead and lag unit priority. This feature, when used, will allow run time for all of the units to be similar in the zone. A time period of 0 to 30 days can be selected in the LC6000 controller to adjust the lead/lag unit priority. When set to 0, lead/lag priority will stay the same and the unit rotation schedule will be disabled. Default setting is 7 days.
Maximum Units Running	The maximum units running setting allows for a limitation of the number of units that run in free cooling, cooling, or heating operation. By using this feature, cooling and heating capacity can be limited by not allowing all units installed to operate in heating and cooling. Typical applications do not require the use of this feature, as units will normally stage up and down to meet heat load capacity needs. Default setting is 14 units.
Comfort Mode Operation	Comfort Mode is used to change room conditions inside a zone to comfortable temperature temporarily while technicians, contractors, or other occupants are in the area. Comfort mode is easily activated from the LC6000. Once activated, a user selectable time period limits the amount of time the zone is conditioned to the user selected set point. The default set point is 72°F for 30 mins.
Humidifier Operation (Optional)	A field supplied humidifier can be connected to the LC6000 and used in each zone for a total of (3) humidifiers. A humidification set point can be used to increase humidity levels in each zone of operation when moisture levels are too low. ON/OFF relay connections are provided, or a communicating Carel Humidifier can be used. The default humidification set point is 45%RH.
Continuous Blower Operation	Continuous fan operation can be set for individual units in a zone. The available settings are None, Lead unit only, All units, or Custom. The custom command allows for fan selection of each individual unit. Default is None.
Remote Unit and Zone Monitoring	It is very important to monitor site conditions remotely when critical electronics, batteries, and other important equipment requires specific indoor conditions. The LC6000 contains many remote monitoring features that allow a technician or call center to remotely view the status of all zones and equipment being used. Wired alarm inputs allow for connecting generators and other equipment for remote monitoring. Wired alarm outputs allow for direct connection to a Network Operations Center (NOC). Modbus control and webpages are also provided via Ethernet connection. See Remote monitoring features section.
Alarm Logging	The LC6000 logs alarms that occur in the unit and events including generator and smoke/fire alarms for diagnostic, maintenance, and remote monitoring purposes. Alarm logs can be displayed through remote monitoring, on the LC6000 display, or exported using a computer and MicroUSB cable.
Password Protection	User, Technician, and Factory passwords can be set and used in the controller. The user password allows viewing of controller operation. The technician password allows viewing and set point adjustment. The factory password allows access to all functionality.
Software Updates	The LC6000 software can be upgraded by using a computer and connecting to the controller PLC board with a MicroUSB cable. Software updates are accessible from the Bard website: www.bardhvac.com .

MEGA-TEC LC6000 WIRED INPUTS FOR SITE EQUIPMENT

FEATURE	DESCRIPTION
Emergency Off Input	Wired NO/NC* contact inputs are provided for connection to field supplied equipment. During an emergency off input event, a Modbus command to shut off unit operation is sent to units connected and communicating through the daisy chain. A emergency off event can be monitored remotely through a wired output and Ethernet connection. It is important to follow all guidelines, codes, and requirements of smoke/fire suppression systems including the need to break power to the unit and close economizer dampers within a certain time period. Additional relays, wiring, or field supplied accessories may need to be added to the units and equipment to achieve all requirements for the use of a smoke/fire suppression system.
Emergency Vent Input	Wired NO/NC* contact inputs are provided for connection to field supplied equipment. During an emergency vent input event, a Modbus command to open all unit economizer dampers is sent to units connected and communicating through the daisy chain. A emergency vent event can be monitored remotely through a wired output and Ethernet connection. It is important to follow all guidelines, codes, and requirements of hydrogen monitoring systems including the use of a separate ventilation fan system when necessary.
Generator Run Input	Wired NO/NC* contact inputs are provided for connection to a field supplied generator. During an generator input event, a Modbus command to limit the number of units that can be operated is sent to units connected and communicating through the daisy chain. A generator event can be monitored remotely through a wired output and Ethernet connection. It is important to set the limitation of how many units can run during a generator event when using the generator run input (defaults to 0 units). Individual unit operation is selectable for a generator event.
Bard Guard Input	Wired contact inputs are provided for connection to a Bard Guard anti-theft security option. During an Bard Guard input event, an audible alarm is activated. A Bard Guard vent can be monitored remotely through a wired output and Ethernet connection. The Bard Guard security option is not currently available for the MEGA-TEC® product. *Currently available for FUSION-TEC® products ONLY.
Indoor Space Pressure	For future use only.
Outdoor Thermostat Input	For future use only.
Outdoor Humidistat Input	For future use only.

MEGA-TEC LC6000 WIRED ALARM OUTPUTS FOR REMOTE SITE MONITORING

FEATURE	DESCRIPTION
Emergency Off Alarm	Wired NO*/NC contact outputs are provided. During an emergency off input event, an alarm is sent to the contact output.
Emergency Vent Alarm	Wired NO*/NC contact outputs are provided. During an emergency vent input event, an alarm is sent to the contact output.
Generator Run Alarm	Wired NO*/NC contact outputs are provided. During an generator run input event, an alarm is sent to the contact output.
Bard Guard Alarm	Wired NO*/NC contact outputs are provided. During an Bard Guard input event, an alarm is sent to the contact output.
Indoor Humidity Alarm	Wired NO*/NC contact outputs are provided. During a high humidity event where humidity levels have exceeded the maximum humidity alarm setting in any zone of operation, an alarm is sent to the contact output. The default low humidity alarm setting is 20%. The default High humidity alarm setting is 85%.
High Indoor Temperature Alarm	Wired NO*/NC contact outputs are provided. During a high temperature event where indoor temperature has exceeded the High temperature alarm setting in any zone of operation, an alarm is sent to the contact output. The high temperature 2 alarm is set to 90°F by default.
Low Indoor Temperature Alarm	Wired NO*/NC contact outputs are provided. During a low temperature event where indoor temperature is below the low temperature alarm setting in any zone of operation, an alarm is sent to the contact output. The low temperature alarm is set to 45°F by default.
Zone 1 Unit Alarm	Wired NO*/NC contact outputs are provided. This feature allows the user to configure what unit alarm conditions are going to be sent to the alarm contacts for Zone 1. A zone unit alarm can contain any of the following unit alarms: Blower Failure, Dirty Condenser Coil, Economizer Dust Alarm, Economizer Fail, EEV Failure, Dirty Filter Alarm, Freezestat Active, High Refrigerant Pressure, Low Refrigerant Pressure, Return Air High/Low Alarm, Sensor Fail Alarm, Supply Air High/Low Alarm, and Unit Power Loss Alarm. The default configuration is to alarm on a unit high or low pressure event.
Zone 2 Unit Alarm	Wired NO*/NC contact outputs are provided. This feature allows the user to configure what unit alarm conditions are going to be sent to the alarm contacts for Zone 2. A zone unit alarm can contain any of the following unit alarms: Blower Failure, Dirty Condenser Coil, Economizer Dust Alarm, Economizer Fail, EEV Failure, Dirty Filter Alarm, Freezestat Active, High Refrigerant Pressure, Low Refrigerant Pressure, Return Air High/Low Alarm, Sensor Fail Alarm, Supply Air High/Low Alarm, and Unit Power Loss Alarm. The default configuration is to alarm on a unit high or low pressure event.
Zone 3 Unit Alarm	Wired NO*/NC contact outputs are provided. This feature allows the user to configure what unit alarm conditions are going to be sent to the alarm contacts for Zone 3. A zone unit alarm can contain any of the following unit alarms: Blower Failure, Dirty Condenser Coil, Economizer Dust Alarm, Economizer Fail, EEV Failure, Dirty Filter Alarm, Freezestat Active, High Refrigerant Pressure, Low Refrigerant Pressure, Return Air High/Low Alarm, Sensor Fail Alarm, Supply Air High/Low Alarm, and Unit Power Loss Alarm. The default configuration is to alarm on a unit high or low pressure event.

* Default Setting

MEGA-TEC LC6000 ETHERNET FEATURES FOR REMOTE SITE MONITORING

FEATURE	DESCRIPTION
Ethernet Connection	Ethernet access to all connected equipment is available through the LC6000 controller. A integrated Ethernet port is located on the programmable logic board located inside the LC6000. When connected to a network, the connection allows for remote monitoring using software from a remote location. The Ethernet connection uses Internet Protocol Version 4 (IPV4). When using the Ethernet connection, it is important for the user to provide appropriate Ethernet network security measures.
Modbus Remote Access	By using the ethernet connection, the controller will respond to Modbus commands allowing access to set points, alarms, temperature measurements and humidity measurements for each zone. The measurement units (English/Metric) retrieved during communication are determined by the controller unit of measure setting. This is configured on-site and cannot be changed remotely. For more information about setting measurement units, please refer to the latest version of the 2100-669 LC6000 Service Instructions manual. Modbus addressing instructions and register points are available in the latest version of the Modbus Supplemental Manual 7960-791.
Webpage Remote Access	Webpages allow controller access with a computer using a standard web browser. The web browser graphical interface provides a visual look at unit operation, viewing and adjustment of zone indoor conditions, alarm events, data trending, and a virtual interface of the display/buttons used on the LC6000 controller. By using the Ethernet connection, the controller can be accessed through webpages.

NON-DUCTED SUPPLY AND RETURN GRILLES

Supply and return louver grilles are of a brushed aluminum or white finish. 2" flange versions are recommended for standard installations to allow grille attachment when large wall openings are present.

GRILLE NO.	UNITS USING GRILLE	DESCRIPTION OF LOUVER GRILLE	WEIGHT
SG-10W	W090A, W120A, W150A	16" x 43" with 2" Flange 4 way deflection supply grille. Use for standard installations. Brushed Aluminum finish.	6LBS (2.72KG)
RG-10W	W090A, W120A, W150A	22" x 43" with 2" Flange return grille with open egg-crate design. Use for standard installations. Brushed Aluminum finish.	12LBS (5.44KG)
SG-10W-W	W090A, W120A, W150A	16" x 43" with 2" Flange 4 way deflection supply grille. Use for standard installations. White finish.	6LBS (2.72KG)
RG-10W-W	W090A, W120A, W150A	22" x 43" with 2" Flange return grille with open egg-crate design. Use for standard installations. White finish.	12LBS (5.44KG)
SG-15W	W180A	16" x 55" with 2" Flange 4 way deflection supply grille. Use for standard installations. Brushed Aluminum finish.	9LBS (4.08KG)
RG-15W	W180A	22" x 55" with 2" Flange return with open egg-crate design. Use for standard installations. Brushed Aluminum finish.	18LBS (8.16KG)

NON-DUCTED SUPPLY GRILLES - SPREAD AND THROW CHARACTERISTICS

One of the most important setup procedures for non-ducted supply applications is to adjust the 4 way supply grille blade positions. Placement of equipment, occupants, the thermostat, and room size can all play an important role in deciding how the conditioned supply air must be directed in an indoor area. The chart below may be used as a reference tool to help with this process.

SUPPLY GRILLE	AIRFLOW CFM	DEFLECTION	AK FACTOR	TOTAL PRESSURE	MAX. THROW
SG-10W	2682 CFM	0°	3.49	.044" WC	85 ft. (25.9m)
		22.5°	3.35	.049" WC	68 ft. (20.7m)
		45°	3.04	.074" WC	43 ft. (13.1m)
	3129 CFM	0°	3.49	.060" WC	91 ft. (27.7m)
		22.5°	3.35	.067" WC	73 ft. (22.3m)
		45°	3.04	.101" WC	46 ft. (14.0m)
	3576 CFM	0°	3.49	.078" WC	98 ft. (29.9m)
		22.5°	3.35	.087" WC	78 ft. (23.8m)
		45°	3.04	.132" WC	45 ft. (13.7m)
	4470 CFM	0°	3.49	.122" WC	109 ft. (33.2m)
		22.5°	3.35	.136" WC	87 ft. (26.5m)
		45°	3.04	.207" WC	55 ft. (16.76m)
	5364 CFM	0°	3.49	.175" WC	120 ft. (36.6m)
		22.5°	3.35	.196" WC	96 ft. (29.3m)
		45°	3.04	.298" WC	60 ft. (18.3m)

////// NON-DUCTED SUPPLY GRILLES - SPREAD AND THROW CHARACTERISTICS

One of the most important setup procedures for non-ducted supply applications is to adjust the 4 way supply grille blade positions. Placement of equipment, occupants, the thermostat, and room size can all play an important role in deciding how the conditioned supply air must be directed in an indoor area. The chart below may be used as a reference tool to help with this process.

SUPPLY GRILLE	AIRFLOW CFM	DEFLECTION	AK FACTOR	TOTAL PRESSURE	MAX. THROW
SG-15W	5,740 CFM	0°	4.48	.122" WC	124 ft. (37.7m)
		22.5°	4.31	.136" WC	99 ft. (30.1m)
		45°	3.9	.207" WC	62 ft. (18.8m)
	6,888 CFM	0°	4.48	.175" WC	137 ft. (41.7m)
		22.5°	4.31	.196" WC	110 ft. (33.5m)
		45°	3.9	.298" WC	69 ft. (21.0m)
	8,036 CFM	0°	4.48	.238" WC	148 ft. (45.1m)
		22.5°	4.31	.267" WC	118 ft. (35.9m)
		45°	3.9	.406" WC	74 ft. (22.5m)
	9,184 CFM	0°	4.48	.288" WC	153 ft. (46.6m)
		22.5°	4.31	.337" WC	123 ft. (37.4m)
		45°	3.9	.474" WC	80 ft. (24.3m)
	10,332 CFM	0°	4.48	.366" WC	158 ft. (48.1m)
		22.5°	4.31	.454" WC	128 ft. (39.0m)
		45°	3.9	.542" WC	86 ft. (26.2m)

////// MEGA-TEC® UNIT NOTES:



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Due to our continuous product improvement policy, all specifications subject to change without notice.