BARD WALL-MOUNT™ Single Stage Heat Pumps 1.5 to 5 Ton Capacity
W18H - W60H Unit Models 208V - 460V Single and Three Phase 60hz

WH Series WALL-MOUNT™

The Bard WH Series Wall-Mount Heat Pump is an energy efficient self contained system that is designed to offer maximum indoor temperature control. Installed on an exterior wall surface, the WH Series provides cooling and heating without using valuable indoor floor space or outside ground space. This unit is the ideal product for versatile applications such as: modular buildings, light commercial, mobile buildings, schools, mining, petro-chemical, telecom, industrial, energy storage, and data centers. Factory or field installed accessories are available to meet specific job requirements for your unique application.

WH Series Features:

- 1.5 to 5 ton cooling capacity uses energy efficient components including today's newest compressor designs. Heat is provided using the refrigeration system to save energy costs.
- Multi-speed Electronically commutated indoor motor (ECM) technology.
- Enclosed outdoor fan motor with ball bearing construction.
- Copper/Aluminum finned coils, and refrigerant system includes filter drier. Evaporator coil includes green fin coil protection.
- R-454B A2L Refrigerant that meets the global objectives outlined in the Montreal Protocol and the Kigali Amendment.
- Factory or field installed ventilation options including economizers and energy recovery ventilators.
- Multiple cabinet finishes including stainless steel and aluminum.
- Coil and cabinet coating options for additional corrosion protection.
- Optional factory or field installed electric heater options from 4kw up to 15kw.
- Optional Circuit breakers for 208/230V single and three phase units.
- Filter options up to MERV13.
- Indoor air quality options including UVC-LED and NPBI devices.
- Controls include short cycle protection and phase monitoring. Hi and low pressure switch refrigerant system protection standard.
- Optional hot gas reheat dehumidification is available for most models.

WH Series Compliance:

- Complies with efficiency requirements of ANSI/ASHRAE/IES 90.1-2019.
- Certified to ANSI/AHRI Standard 390-2021 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety of Household and Similar Electrical Appliances ANSI/UL STD 60335-1 & ANSI/ UL STD 60335-2-40/CSA STD C22.2 No. 60335-1 & CSA STD C22.2 No. 60335-2-40 Fourth Edition.
- Commercial Product - Not intended for residential applications.
- 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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Globally Recognized. Industry Respected.

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www.BardHVAC.com

FORM NO. S3659-0725

/////// ENGINEERED FEATURES W18 THROUGH W36 UNIT MODELS

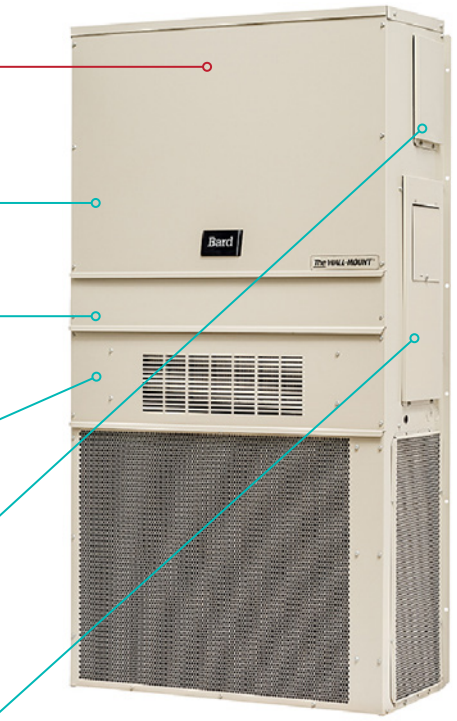
Insulation
Non-Fiberglass Foil Faced Insulation: High R-value recycled denim and cotton insulation with FSK foil facing for durability and cleanability.

Cabinet
Durable Cabinet Construction: Multiple construction options available based on environmental requirements. Optional specialized coatings for extreme conditions. Refer to cabinet finish section for specifications.

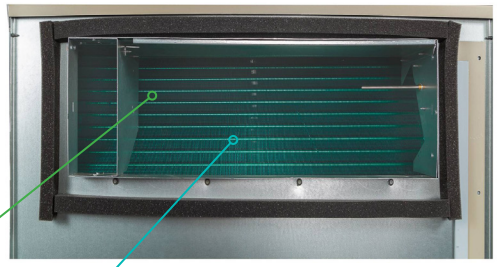
Maintenance Features
Easy Filter Access: Dedicated filter door for simplified maintenance. Compatible with 1" and 2" filters up to MERV13 rating. See filter specifications for details.

Ventilation And Indoor Air Quality Options
Field or Factory Installed Vents: Multiple ventilation configurations available for outdoor air intake and energy optimization. Can be installed pre-delivery or on-site. NPBI and LED UVC devices available from the factory or field installation.

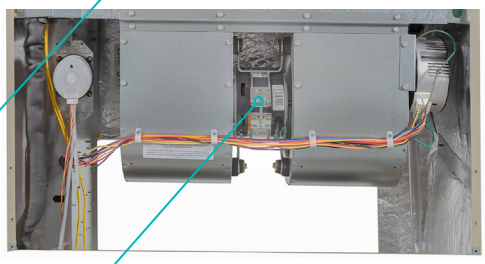
Supplemental Electric Heat
Electric Strip Heat: High-reliability heating elements with automatic limiting and thermal safety cutoffs. Available as factory or field installation. See heating section for specifications.



Electrical
Built-in Circuit Protection: Circuit breakers standard on all 208/230V single-phase and three-phase models. Toggle disconnects standard on 460V three-phase models with electric heat.
Control Panel Access: Two access options (left/right) with lockable hinged cover. Phase rotation monitoring on all 3-phase units. Adjustable compressor timing with diagnostic LEDs. Multiple electrical entry points via back and side.



Heat Exchange
Green Fin Hydrophilic Evaporator Coil: Enhanced wettability coating prevents mold formation, improves condensate drainage, and provides protection against corrosive airborne particulates.
Copper/Aluminum Condenser Coil: Rifled copper tubing for encreased efficiency and aluminum fins for easy cleaning and servicability.



Climate Control
Balanced Climate Technology: Superior humidity control with 35% greater latent capacity than market alternatives when paired with 2-stage thermostat or controller. Bard Balanced Climate™ technology standard on all models.
Optional Mechanical Dehumidification: Available with hot gas reheat dehumidification for energy-efficient moisture removal. Electronic Expansion Valves included standard on all dehumidification models.

Air Delivery
ECM Indoor Motor Technology: 5-speed dual shaft motor with twin blower assembly for quiet operation. Motor overload protection standard on all units.
Enclosed Condenser Motor: Ball-bearing condenser motor in sealed enclosure for reliable operation and extended service life. Standard on all units.

Cooling and Heating Refrigeration System
High Efficiency Cooling and Heating: Scroll compressors deliver quiet, efficient performance. R-454B refrigerant (GWP of 466, 78% lower than R-410A) provides excellent efficiency while meeting environmental regulations. This next-generation A2L refrigerant offers improved thermodynamic properties with lower flammability and greatly reduced global warming potential. Liquid line filter-drier standard on all units for system protection against moisture.

/////// ENGINEERED FEATURES - W42 THROUGH W60 UNIT MODELS

Insulation
Non-Fiberglass Foil Faced Insulation: High R-value recycled denim and cotton insulation with FSK foil facing for durability and cleanability.

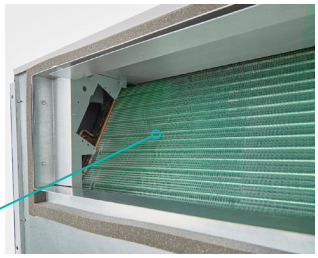
Cabinet
Durable Cabinet Construction: Multiple construction options available based on environmental requirements. Optional specialized coatings for extreme conditions. Refer to cabinet finish section for specifications.

Maintenance Features
Easy Filter Access: Dedicated filter door for simplified maintenance. Compatible with 1" and 2" filters up to MERV13 rating. See filter specifications for details.

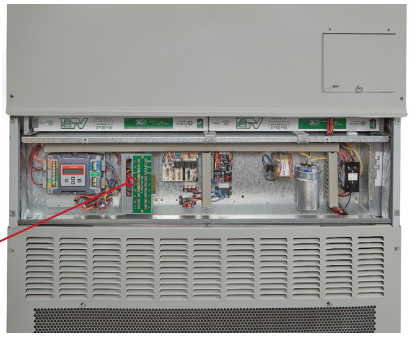
Ventilation And Indoor Air Quality Options
Field or Factory Installed Vents: Multiple ventilation configurations available for outdoor air intake and energy optimization. Can be installed pre-delivery or on-site. NPBI and LED UVC devices available from the factory or field installation.

Supplemental Electric Heat
Electric Strip Heat: High-reliability heating elements with automatic limiting and thermal safety cutoffs. Available as factory or field installation. See heating section for specifications.

Electrical
Built-in Circuit Protection: Circuit breakers standard on all 208/230V single-phase and three-phase models. Toggle disconnects standard on 460V three-phase models with electric heat.
Control Panel Access: Front location with lockable hinged cover. Phase rotation monitoring on all 3-phase units. Adjustable compressor timing with diagnostic LEDs. Multiple electrical entry points via back and side.

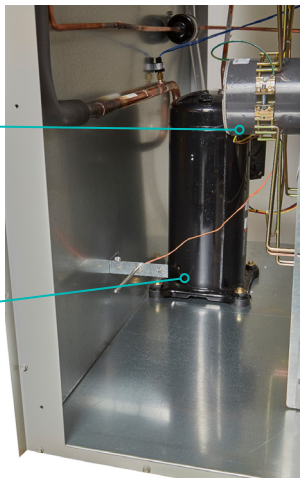


Heat Exchange
Standard Green Fin Hydrophilic Evaporator Coil: Enhanced wettability coating prevents mold formation, improves condensate drainage, and provides protection against corrosive airborne particulates.
Standard Copper/Aluminum Condenser Coil: Rifled copper tubing for encreased efficiency and aluminum fins for easy cleaning and servicability.



Climate Control
Balanced Climate Technology: Superior humidity control with 35% greater latent capacity than market alternatives when paired with 2-stage thermostat or controller. Bard Balanced Climate™ technology standard on all models.
Optional Mechanical Dehumidification: Available with hot gas reheat dehumidification for energy-efficient moisture removal. Electronic Expansion Valves included standard on all dehumidification models.

Air Delivery
ECM Indoor Motor Technology: 5-speed dual shaft motor with twin blower assembly for quiet operation. Motor overload protection standard on all units.
Enclosed Condenser Motor: Ball-bearing condenser motor in sealed enclosure for reliable operation and extended service life. Standard on all units.



Cooling and Heating Refrigeration System
High Efficiency Cooling: Scroll compressors deliver quiet, efficient performance. R-454B refrigerant (GWP of 466, 78% lower than R-410A) provides excellent efficiency while meeting environmental regulations. Liquid line filter-drier standard on all units for system protection against moisture.

/////// WALL-MOUNT W18H (1.5 TON) TO W60H (5 TON) HEAT PUMP NOMENCLATURE

MODEL #	W	36	H	F	-	A	OZ	X	P	X	X	X	J
DIGIT #	1	2,3	4	5	6	7	8,9	10	11	12	13	14	15

1

1. Series - Single Stage Compressor	
W	Bard Exterior **W**all-Mount

2,3

2-3. Nominal Capacity			
18	1.5 Ton	42	3.5 Ton
24	2.0 Ton	48	4.0 Ton
30	2.5 Ton	60	5.0 Ton
36	3.0 Ton		

4

4. Unit Type - Controls Location		Units
H	Heat Pump	W18-W60

5

5. Revision	
F	Revision (R-454B Refrigerant)

6

6. Special Feature Placeholder		Units
-	Standard Unit	W18-W60
D	HGR Dehumidification	W24-W60
L	Low Ampacity and HGR	W24-W60

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7. Voltage		Ph.	Hz.	Units
A	208/230VAC	1	60	W18-W60
B	208/230VAC	3	60	W24-W60
C	460VAC	3	60	W24-W60

8,9

8-9. Electric Heater Options	
00	0Kw with Lug Connections
0Z	0Kw with Breaker or Disconnect
04-15	4-15Kw Heat w/breaker or Disconnect

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10. Ventilation Package Options		Units
X	Barometric Air Damper (Intake)	W18-W60
A	Bar. Air Damper (Intake+Exh)	W18-W60
B	Block Off Plate (No Vent)	W18-W60
M	Powered Comm. Vent, On/Off	W18-W60
V	Powered Comm. Vent, On/Off/ Mod.	W18-W60
D	Econ, Field Supplied Controls	W18-W60
Y	Economizer, JADE, Dry Bulb	W18-W60
Z	Economizer, JADE, Enthalpy	W18-W60
R	Energy Recovery Ventilator	W18-W60
S	Partial Flow Econ, JADE, Enthalpy	W18-W36

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11. Filter and IAQ Options		Units
X	Standard 1" MERV2 Disposable Filter.	W18-W60
W	1" MERV2 Washable Filter.	W18-W60
P	2" MERV8 Disposable Filter.	W18-W60
M	2" MERV11 Disposable Filter.	W18-W60
N	2" MERV13 Disposable Filter.	W18-W60
A	2" MERV13 Filter with UVC-LED Light.	W18-W60
B	2" MERV13 Filter with NPBI Device.	W18-W60
C	2" MERV8 Filter with NPBI Device.	W18-W60

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12. Cabinet Color and Finish		Units
X	Standard Beige Enamel Painted Steel.	W18-W60
1	White Enamel Painted Steel.	W18-W60
4	Buckeye Gray Enamel Painted Steel.	W18-W60
5	Desert Brown Enamel Painted Steel.	W18-W60
8	Dark Bronze Enamel Painted Steel.	W18-W60
S	316 Stainless Steel Exterior Finish.	W18-W60
A	Stucco Textured Aluminum Exterior Finish	W18-W60

13

13. Cabinet Style		Units
X	Standard Cabinet	W18-W60
J	Recessed Cabinet Top for Overhangs	W42-W60 (No Dehum)

14

14. Coil and Cabinet Coatings		Units
X	Standard Copper/Aluminum evap and cond coils.	W18-W60
1	Coated indoor evap coil, std outdoor cond. coil.	W18-W60
2	Coated outdoor cond coil, std indoor evap coil.	W18-W60
3	Coated indoor evap and outdoor cond coil.	W18-W60
4	Coated coils and unit cabinet condenser area.	W18-W60
5	Coated coils and interior/exterior cabinet.	W18-W60

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15. Unit Mounted Controls Options Standard: Hi/Lo Pressure and Ref. Leak (RDS) Sensor		Units
X	Standard Controls	W18-W60
E	X + Low Ambient Control (LAC)	W18-W60
J	X + LAC and Alarm Relay (ALR)	W18-W60
F	X + LAC, ALR, and Filter Switch (FS)	W42-W60
Q	X + Outdoor Thermostat	W18-W60
R	X + LAC, Outdoor Thermostat	W18-W60
T	X + LAC, Outdoor Thermostat, Hard Start Kit	W18-W60

* Low Ampacity models for non-concurrent electric heat and heat pump operation are available for HGR Dehumidification models. Please contact Bard for more information.

/////// WH SERIES AHRI CAPACITY AND EFFICIENCY RATINGS

MODELS	W18HF	W24HF	W30HF	W36HF	W42HF	W48HF	W60HF
Cooling Capacity BTUH①	18,000	23,000	29,400	36,000	41,500	48,000	57,000
Unit Cooling efficiency EER	11.3	11.0	11.4	11.4	11.4	11.6	11.0
Heating Capacity BTUH①	16,000	22,800	27,000	33,000	38,000	43,500	54,000
Unit Heating efficiency COP	3.3	3.3	3.4	3.3	3.3	3.3	3.3

① Capacity is certified in accordance with ANSI/ARI Standard 390-2021.

EER and COP = Energy Efficiency Ratio (EER) and Coefficient of Performance (COP) are certified in accordance with ANSI/ARI Standard 390-2021. All ratings based on no outside air introduction.

/////// UNIT COOLING CAPACITY AT VARIOUS INDOOR AND OUTDOOR CONDITIONS, W18H TO W48H UNITS

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA										
			75°F 23.9°C	80°F 26.6°C	85°F 29.4°C	90°F 32.2°C	95°F 35°C	100°F 37.8°C	105°F 40.5°C	110°F 43.3°C	115°F 46.1°C	120°F 48.8°C	125°F 51.6°C
W18HF	75/62	Total Cooling	20200	18900	17800	16800	15700	14800	14000	13200	12400	11800	11100
		Sensible Cooling	16000	15200	14500	13900	13400	12900	12500	12200	12100	11800	11100
	80/67	Total Cooling	21500	20600	19700	18900	18000	17200	16500	15700	14900	14200	13500
		Sensible Cooling	15500	14900	14300	13900	13500	13100	12800	12600	12500	12400	12400
	85/72	Total Cooling	25600	24100	22700	21400	20000	18900	17800	16700	15700	14800	13900
		Sensible Cooling	15900	15200	14400	13800	13300	12700	12200	11900	11600	11200	11000
W24HF	75/62	Total Cooling	25500	24000	22500	21300	20100	19100	18200	17400	16700	16100	15700
		Sensible Cooling	14200	15300	16200	16800	17300	17400	17500	17300	16700	16100	15500
	80/67	Total Cooling	27200	26100	25000	24000	23000	22200	21400	20700	20100	19500	19100
		Sensible Cooling	13700	15000	16000	16800	17400	17700	17900	17800	17500	17000	16300
	85/72	Total Cooling	32400	30500	28700	27100	25600	24300	23100	22100	21200	20300	19700
		Sensible Cooling	14100	15300	16100	16700	17100	17200	17100	16700	16200	15400	14500
W30HF	75/62	Total Cooling	31400	29800	28300	26900	25600	24500	23500	22500	21600	20900	20100
		Sensible Cooling	25300	24500	23800	23000	22400	21900	21500	21000	20700	20400	20100
	80/67	Total Cooling	33500	32400	31400	30400	29400	28500	27700	26800	26000	25300	24500
		Sensible Cooling	24500	24000	23500	23000	22600	22300	22000	21700	21500	21300	21100
	85/72	Total Cooling	39900	37900	36100	34300	32700	31200	29900	28500	27300	26300	25200
		Sensible Cooling	25100	24400	23600	22900	22200	21600	21000	20400	19800	19300	18700
W36HF	75/62	Total Cooling	39000	36800	34900	33100	31400	29900	28400	27100	25900	24700	23700
		Sensible Cooling	29700	28600	27500	26500	25600	24700	24000	23200	22700	22100	21700
	80/67	Total Cooling	41600	40100	38700	37400	36000	34800	33500	32300	31100	29900	28800
		Sensible Cooling	28800	28000	27200	26500	25800	25100	24600	24000	23600	23100	22800
	85/72	Total Cooling	49600	46900	44500	42200	40000	38100	36100	34400	32700	31100	29600
		Sensible Cooling	29500	28400	27400	26300	25300	24300	23500	22500	21800	20900	20200
W42HF	75/62	Total Cooling	44500	42300	40300	38200	36200	34300	32300	30500	28600	26800	24900
		Sensible Cooling	35700	34500	33200	32200	31100	30100	29200	28300	27400	26600	24900
	80/67	Total Cooling	47500	46100	44700	43200	41500	39900	38100	36300	34400	32400	30300
		Sensible Cooling	34600	33800	32900	32200	31400	30600	29900	29200	28500	27800	27200
	85/72	Total Cooling	56600	53900	51400	48800	46100	43700	41100	38600	36200	33700	31200
		Sensible Cooling	35500	34300	33100	32000	30800	29600	28500	27400	26300	25100	24100
W48HF	75/62	Total Cooling	52900	49800	46900	44300	41800	39700	37600	35800	34200	32800	31400
		Sensible Cooling	41200	39300	37600	36100	34800	33600	32700	31900	31300	30900	30600
	80/67	Total Cooling	56500	54200	52100	50000	48000	46200	44400	42700	41200	39700	38300
		Sensible Cooling	39900	38500	37200	36100	35100	34200	33500	33000	32600	32300	32200
	85/72	Total Cooling	67300	63400	59800	56500	53300	50600	47900	45400	43300	41300	39400
		Sensible Cooling	40900	39100	37400	35900	34400	33100	31900	31000	30000	29200	28500

/////// UNIT COOLING CAPACITY AT VARIOUS INDOOR AND OUTDOOR CONDITIONS, W60H UNITS

MODEL	INDOOR RETURN AIR (DB/WB)	COOLING CAPACITY (BTUH)	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA										
			75°F 23.9°C	80°F 26.6°C	85°F 29.4°C	90°F 32.2°C	95°F 35°C	100°F 37.8°C	105°F 40.5°C	110°F 43.3°C	115°F 46.1°C	120°F 48.8°C	125°F 51.6°C
W60HF	75/62	Total Cooling	60600	57600	54800	52200	49600	47300	45200	43100	41100	39300	37600
		Sensible Cooling	47500	46000	44600	43300	42000	40900	39900	38900	38000	37200	36500
	80/67	Total Cooling	64700	62800	60900	59000	57000	55100	53300	51400	49500	47600	45800
		Sensible Cooling	46100	45100	44200	43300	42400	41600	40900	40200	39500	38900	38400
	85/72	Total Cooling	77100	73400	69900	66600	63300	60300	57500	54700	52000	49500	47100
		Sensible Cooling	47200	45800	44400	43000	41600	40300	39000	37700	36400	35200	34000

Notes:
- Unit compressor cooling operation below 60°F requires a Low Ambient Control (LAC).
- 1000 BTUH = .29307 kW
- Outdoor air temperatures provided are an average of the condenser inlet air temperature.

Capacity Multiplier Factors							
% of Rated Airflow	-30%	-20%	-10%	Rated	+10%	+20%	+30%
Total BTUH	0.93	0.95	0.97	1	1.01	1.02	1.04
Sensible BTUH	0.90	0.93	0.95	1	1.02	1.05	1.09

/////// UNIT HEAT PUMP HEATING CAPACITY AT VARIOUS OUTDOOR CONDITIONS, W18H TO W60H UNITS

MODEL	UNITS	DRY BULB OUTDOOR AIR TEMPERATURE ENTERING UNIT CONDENSER AREA													
		0°F -17.7°C	5°F -15°C	10°F -12.2°C	15°F -9.4°C	20°F -6.6°C	25°F -3.8°C	30°F -1.1°C	35°F 1.6°C	40°F 4.4°C	45°F 7.2°C	50°F 10°C	55°F 12.7°C	60°F 15.5°C	65°F 18.3°C
W18HF	BTUH	7100	7700	8400	9200	10000	11000	12000	13100	14300	15500	16900	18300	19800	21400
	WATTS	1270	1290	1300	1310	1330	1340	1360	1370	1390	1410	1430	1440	1460	1480
	COP	1.6	1.7	1.9	2.1	2.2	2.4	2.6	2.8	3.0	3.2	3.5	3.7	4.0	4.2
W24HF	BTUH	8300	9800	11300	12800	14300	15800	17400	19000	20600	22200	23800	25500	27200	28900
	WATTS	1700	1720	1740	1760	1790	1810	1840	1860	1890	1920	1950	1980	2010	2040
	COP	1.4	1.7	1.9	2.1	2.3	2.6	2.8	3.0	3.2	3.4	3.6	3.8	4.0	4.2
W30HF	BTUH	11600	13000	14400	15900	17500	19100	20800	22600	24400	26300	28200	30200	32300	34400
	WATTS	1950	1990	2020	2050	2080	2110	2140	2170	2190	2220	2250	2280	2300	2330
	COP	1.7	1.9	2.1	2.3	2.5	2.7	2.8	3.1	3.3	3.5	3.7	3.9	4.1	4.3
W36HF	BTUH	10900	12500	14200	15900	17600	19300	21100	22900	24800	26700	28600	30600	32500	34600
	WATTS	1980	2000	2030	2050	2080	2100	2130	2160	2180	2210	2240	2270	2300	2320
	COP	1.61	1.83	2.05	2.27	2.48	2.69	2.90	3.11	3.33	3.54	3.74	3.95	4.14	4.37
W42HF	BTUH	16800	18700	20600	22600	24800	27000	29400	31800	34300	37000	39700	42500	45500	48500
	WATTS	2830	2870	2910	2950	3000	3040	3080	3130	3180	3230	3280	3330	3380	3440
	COP	1.7	1.9	2.1	2.2	2.4	2.6	2.8	3.0	3.2	3.4	3.5	3.7	3.9	4.1
W48HF	BTUH	21000	22800	24800	26900	29100	31500	34000	36600	39400	42300	45400	48600	51900	55400
	WATTS	3370	3410	3460	3510	3550	3600	3660	3710	3760	3820	3880	3940	4000	4060
	COP	0.7	1.0	1.4	1.7	2.0	2.3	2.5	2.8	3.0	3.2	3.5	3.6	3.8	4.0
W60HF	BTUH	25800	28300	30900	33700	36500	39500	42600	45800	49200	52600	56200	59900	63800	67700
	WATTS	3790	3940	4080	4210	4340	4450	4570	4670	4770	4860	4940	5020	5090	5150
	COP	2.0	2.1	2.2	2.3	2.5	2.6	2.7	2.9	3.0	3.2	3.3	3.5	3.7	3.9

Notes:
- Performance given for 70°F DB indoor return air at rated CFM. Data includes defrost operation below 45° outdoor temperature.
- Supplemental Electric heaters are recommended for applications requiring heating below a 15°F outdoor temperature.
- 1000 BTUH = .29307 kW
- Outdoor air temperatures provided are an average of the condenser inlet air temperature.

Capacity Multiplier Factors							
% of Rated Airflow	-30%	-20%	-10%	Rated	+10%	+20%	+30%
Total BTUH	0.93	0.95	0.97	1	1.01	1.02	1.04

1.5 TON W18H (18,000 BTUH) TO 3 TON W36H (36,000 BTUH) RIGHT SIDE CONTROLS CABINET DIMENSIONS

DIMENSIONS OF BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS (NOMINAL)																							
MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN		UNIT CABINET															
				A	B	C	D	E	F	G	I	J	K	L	M	N	O	P	Q	R	S	T	
W18H W24H	33.30	17.13	74.56	7.88	19.88	11.88	19.88	35.00	10.88	29.75	20.56	30.75	32.06	33.25	31	2.63	34.13	26.06	10.55	3.94	12	9	
W30H W36H	38.20	17.13	74.56	7.88	27.88	13.88	27.88	40.00	10.88	29.75	17.93	30.75	32.75	33.25	31	2.75	39.13	26.75	9.14	3.94	12	9	

CLEARANCES REQUIRED FOR SERVICE AND CONDENSER AIRFLOW			
MODELS	LEFT SIDE	RIGHT SIDE	FRONT
W18H, W24H W30H, W36H	15"	20"	10'

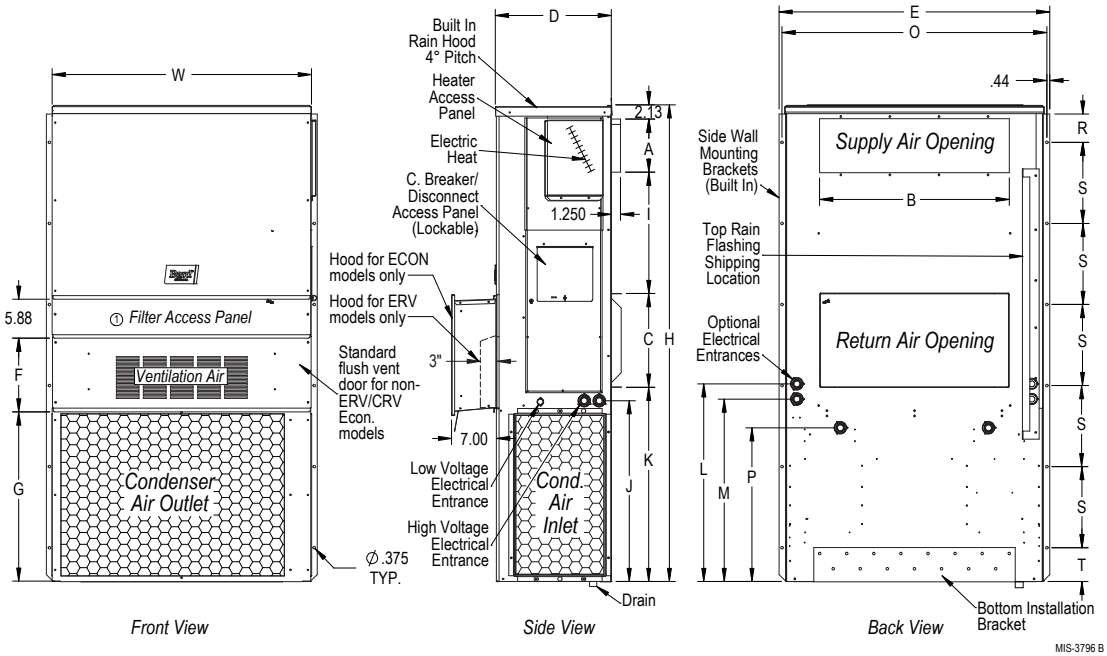
MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS		
MODELS ①	SUPPLY AIR DUCT FIRST 3 FT.	CABINET
W18H, W24H	0"	0"
W30H, W36H	1/4"	0"

① Refer to the Installation Manual for more detailed information.

Notes:

Opposing units that face each other require 15' clearance between condenser outlets.

4" clearance recommended between unit base and ground level for defrost water drainage.



MIS-3796 B

3.5 TON W42H (42,000 BTUH) TO 5 TON W60H (60,000 BTUH) CENTER CONTROLS CABINET DIMENSIONS

DIMENSIONS OF BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS (NOMINAL)																								
MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN		UNIT CABINET																
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	R	S	T	U	V		
W42H W48H	42	25.52	84.88	9.88	29.88	15.88	29.88	43.88	12.63	39.06	30	53.75	26.94	55.59	52.59	8.82	43	1.438	16	1.88	10.50	12.00		
W60H	42	25.52	93.00	9.88	29.88	15.88	29.88	43.88	12.63	45	30	59.75	35.06	61.72	58.72	8.82	43	1.438	16	10	13.88	15.43		

CLEARANCES REQUIRED FOR SERVICE AND CONDENSER AIRFLOW			
MODELS	LEFT SIDE	RIGHT SIDE	FRONT
W42H, W48H W60H	20"	20"	10'

ECONOMIZER, ERV, OR CRV VENTS REQUIRE 40" ON EITHER RIGHT OR LEFT SIDE FOR INSTALLATION OR REMOVAL. SEE INSTALLATION INSTRUCTIONS FOR MORE INFORMATION.

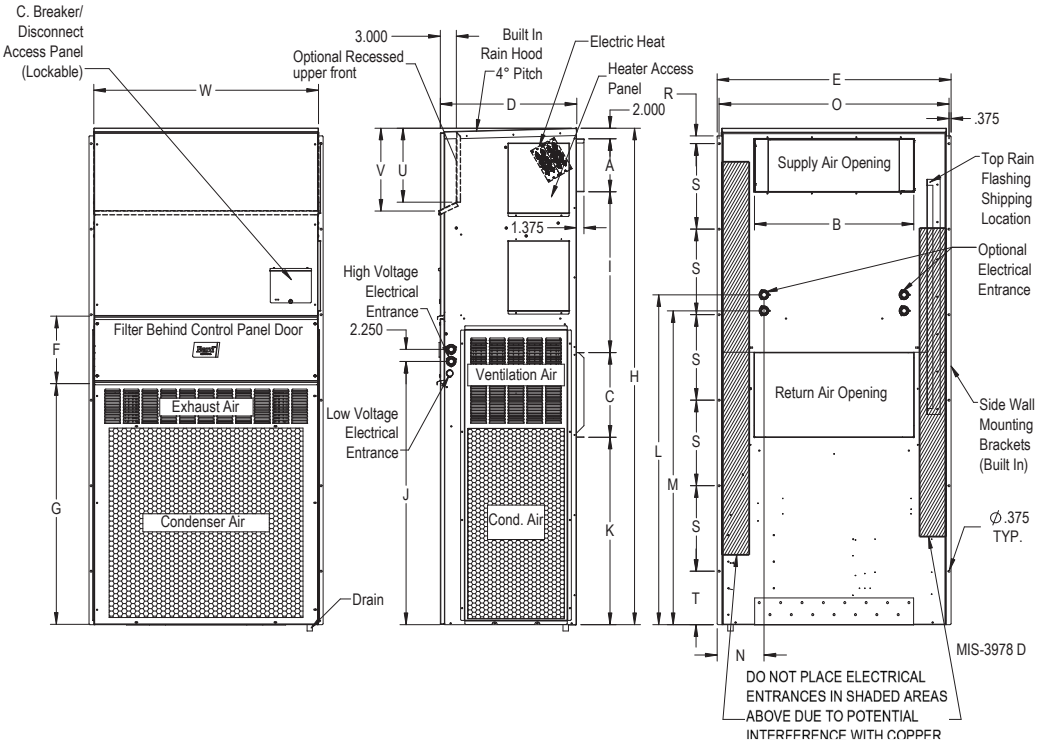
MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS		
MODELS	SUPPLY AIR DUCT FIRST 3 FT.	CABINET
W42H, W48H W60H	1/4"	0"

Refer to the Installation Manual for more detailed information.

Notes:

Opposing units that face each other require 15' clearance between condenser outlets.

4" clearance recommended between unit base and ground level for defrost water drainage.



MIS-3978 D

GENERAL UNIT ELECTRICAL SPECIFICATIONS

MODELS	CONTROL PANEL CABINET LOCATION	NOMINAL VOLTAGE VAC	PH	HZ	VOLTAGE RANGE VAC	COMPRESSOR RATED LOAD AMPS (RLA)	BRANCH CIRCUIT SELECTION CURRENT (BCSC)	LOCKED ROTOR AMPS (LRA)	INDOOR / OUTDOOR MOTOR VOLTAGE	INDOOR MOTOR AMPS	INDOOR MOTOR HP	OUTDOOR MOTOR AMPS	OUTDOOR MOTOR HP
W18HF-A	Right Side	230/208V	1	60	197-253V	7.9/9A	8.3A	45.1A	230V	1.0/1.0A	1/3	1.0/1.0A	1/5
W24HF-A	Right Side	230/208V	1	60	197-253V	10.9/12.4A	11.4A	64.4A	230V	1.6/1.7A	1/3	1.1/1.1A	1/5
W24HF-B	Right Side	230/208V	3	60	197-253V	7.4/8.4A	7.7A	59.9A	230V	1.6/1.7A	1/3	1.1/1.1A	1/5
W24HF-C	Right Side	460V	3	60	414-506V	4.2A	3.8A	32.4A	460V	.9A	1/3	.6A	1/5
W30HF-A	Right Side	230/208V	1	60	197-253V	13.4/15.1A	12.7A	75.6A	230V	1.8/1.9A	1/2	1.4/1.4A	1/5
W30HF-B	Right Side	230/208V	3	60	197-253V	10.2/11.5A	9.6A	67.7A	230V	1.8/1.9A	1/2	1.4/1.4A	1/5
W30HF-C	Right Side	460V	3	60	414-506V	5.4A	4.5A	38.1A	460V	1.0A	1/2	.7A	1/5
W36HF-A	Right Side	230/208V	1	60	197-253V	16.0/18.0A	16.7A	93.5A	230V	2.2/2.4A	1/2	1.5/1.5A	1/5
W36HF-B	Right Side	230/208V	3	60	197-253V	11.7/13.2A	12.2A	97.5A	230V	2.2/2.4A	1/2	1.5/1.5A	1/5
W36HF-C	Right Side	460V	3	60	414-506V	6.3A	5.8A	44.3A	460V	1.2A	1/2	.8A	1/5
W42HF-A	Unit Front	230/208V	1	60	197-253V	19.1/22A	18.6A	123A	230V	2.5A	1/2	2.1A	1/3
W42HF-B	Unit Front	230/208V	3	60	197-253V	13.2/15.2A	12.8A	102.8A	230V	2.5A	1/2	2.1A	1/3
W42HF-C	Unit Front	460V	3	60	414-506V	6.9A	5.8A	50A	460V	1.3A	1/2	1.1A	1/3
W48HF-A	Unit Front	230/208V	1	60	197-253V	22.1/25A	22.4A	126A	230V	3.1A	3/4	2.1A	1/3
W48HF-B	Unit Front	230/208V	3	60	197-253V	12.7/14.3A	12.8A	120.4A	230V	3.1A	3/4	2.1A	1/3
W48HF-C	Unit Front	460V	3	60	414-506V	6.8A	6.0A	49.4A	460V	1.6A	3/4	1.1A	1/3
W60HF-A	Unit Front	230/208V	1	60	197-253V	26.7/31.1A	23.7A	157A	230V	4.2A	3/4	1.8A	1/3
W60HF-B	Unit Front	230/208V	3	60	197-253V	18.1/21.1A	16.0A	156.4A	230V	4.2A	3/4	1.8A	1/3
W60HF-C	Unit Front	460V	3	60	414-506V	9.3A	7.1A	69A	460V	2.1A	3/4	.9A	1/3

Notes:

1.) The Short Circuit Current Rating (SCCR) is a critical safety rating for HVAC equipment that indicates the maximum fault current a component or assembly can withstand without creating a fire or shock hazard. All Bard equipment is SCCR rated at 5kA (5,000 amperes) Symmetrical. Consult with a qualified electrical professional regarding SCCR ratings based on application requirements.

2.) All electrical requirements must comply with relevant electrical codes (NEC, local requirements), and it is importatant to consult with a qualified electrical professional before installing HVAC products including models listed.

3.) Compressor Rated Load Amps (RLA) are provided by the compressor manufacturer and are calculated by using a formula based on compressor Maximum Continuous Current (MCC). Indoor and outdoor motor amps are based on actual motor power usage at rated static, and do not reflect the maximum amp draw of the motor listed on the motor nameplate. Amp values are provided for both 230 and 208 volt or 460 volt applications. Amp values may vary based on actual voltage applied to unit and site indoor and outdoor conditions.

3.) Efficiency ratings (such as EER) account for the relationship between energy input and cooling/heating output under standardized conditions. These industry-recognized metrics incorporate multiple performance factors including thermal transfer capabilities tested in climate controlled labs. Efficiency cannot be determined from provided electrical consumption data in this chart without additional information.

GENERAL UNIT REFRIGERANT AND MECHANICAL SPECIFICATIONS

UNIT MODEL	STANDARD UNIT WEIGHT WITH PACKAG-ING	DEHUM UNIT WEIGHT WITH PACKAG-ING	REFRIGERANT SYSTEM				INDOOR EVAPORATOR BLOWER			OUTDOOR CONDENSER FAN		
			CHARGE TYPE	STANDARD UNIT CHARGE RATE	DEHUMID-IFICATION UNIT CHARGE RATE	COM-PRESSOR TYPE	INDOOR MOTOR -SPEEDS	INDOOR FAN	INDOOR CFM - RATED ESP	OUT-DOOR MOTOR	OUTDOOR FAN	OUT-DOOR FAN CFM
W18	318 lbs.	NA	R-454B	4.00 lbs.	N/A	Scroll	ECM-5SPD	Dual Blower	600 - .10	PSC	18" Axial	1800
W24	330 lbs.	357 lbs.	R-454B	4.50 lbs.	4.56 lbs.	Scroll	ECM-5SPD	Dual Blower	800 - .10	PSC	18" Axial	1800
W30	345 lbs.	372 lbs.	R-454B	5.50 lbs.	6.00 lbs.	Scroll	ECM-5SPD	Dual Blower	950 - .15	PSC	20" Axial	2200
W36	372 lbs.	387 lbs.	R-454B	6.50 lbs.	6.50 lbs.	Scroll	ECM-5SPD	Dual Blower	1150 - .15	PSC	20" Axial	2200
W42	495 lbs.	510 lbs.	R-454B	6.81 lbs.	6.62 lbs.	Scroll	ECM-5SPD	Dual Blower	1350 - .15	PSC	24" Axial	2900
W48	505 lbs.	525 lbs.	R-454B	8.25 lbs	7.50 lbs.	Scroll	ECM-5SPD	Dual Blower	1550 - .20	PSC	24" Axial	3000
W60	540 lbs.	555 lbs.	R-454B.	9.50 lbs.	8.75 lbs.	Scroll	ECM-5SPD	Dual Blower	1750 - .20	PSC	24" Axial	3100

Notes:

1.) Rated External Static Pressure (ESP) provided is external static applied to the external supply and return duct connections during rating and unit performance tests. CFM calculations include the E.S.P. value provided, internal unit static, and the standard filter (X) listed. Additional items such as higher filtration, supply ducting, return ducting, fire dampers, and additional supply or return grilles must be calculated for a total ESP value for the application. Total ESP cannot exceed .5" W.C.

2.) Weights provided are with skid and packaging materials. On average, packaging materials will add 30lbs. to 50lbs. to overall unit weight.

3.) Unit charge rates provided are for shipping purposes only. Always consult the serial plate on the unit before performing refrigerant system service.

AVAILABLE HEATER PACKAGES AND FIELD WIRING DATA - W18H TO W36H STANDARD UNITS

UNIT MODEL	KW OPTION	RATED VOLTAGE AND PHASE (60HZ)	CONNECTION POINT	NO. OF FIELD CIRCUITS	SINGLE CIRCUIT		DUAL CIRCUIT				FIELD INSTALLED HEATER KIT PART NUMBERS. HEATERS CAN BE FACTORY OR FIELD INSTALLED.
					MINIMUM CIRCUIT AMPACITY (MCA)	MAX. OVER CURRENT PROTECTION (MOCP)	MCA		MOCP		
							CKT. A	CKT. B	CKT. A	CKT. B	
W18HF-A	00	230/208-1	LUGS	1	15	20					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	15	20					WMCB-02A
	04	230/208-1	C BREAKER	1	36	40					EHWH018A-A04
	08	230/208-1	C BREAKER	1	57	60					EHWH018A-A08
W24HF-A	00	230/208-1	LUGS	1	20	25					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	20	25					WMCB-03A
	04	230/208-1	C BREAKER	1	41	45					EHWH024A-A04
	08	230/208-1	C BREAKER	1 or 2	61	70	20	42	25	45	EHWH024A-A08
W24HF-B	00	230/208-3	LUGS	1	15	20					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	15	20					WMCB-02B
	05	230/208-3	C BREAKER	1	30	30					EHWH024A-B05
W24HF-C	00	460-3	LUGS	1	8	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	8	15					WMPD-01C
	05	460-3	DISCONNECT	1	15	15					EHWH024A-C05
W30HF-A	00	230/208-1	LUGS	1	22	25					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	22	25					WMCB-03A
	05	230/208-1	C BREAKER	1	48	50					EHWH030A-A05
	10	230/208-1	C BREAKER	1 or 2	74	80	22	52	25	60	EHWH030B-A10
W30HF-B	00	230/208-3	LUGS	1	18	20					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	18	20					WMCB-02B
	05	230/208-3	C BREAKER	1	33	35					EHWH030A-B05
	09	230/208-3	C BREAKER	1	45	45					EHWH030A-B09
W30HF-C	00	460-3	LUGS	1	9	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	9	15					WMPD-01C
	05	460-3	DISCONNECT	1	16	20					EHWH030A-C05
	09	460-3	DISCONNECT	1	22	25					EHWH030A-C09
W36HF-A	00	230/208-1	LUGS	1	27	35					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	27	35					WMCB-05A
	05	230/208-1	C BREAKER	1	53	60					EHWH036A-A05
	10	230/208-1	C BREAKER	1 or 2	79	80	27	52	35	60	EHWH036A-A10
	15	230/208-1	C BREAKER	1 or 2	84	90	32	52	35	60	EHWH036A-A15
W36HF-B	00	230/208-3	LUGS	1	22	25					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	22	25					WMCB-03B
	05	230/208-3	C BREAKER	1	37	40					EHWH036A-B05
	09	230/208-3	C BREAKER	1	49	50					EHWH036A-B09
W36HF-C	00	460-3	LUGS	1	11	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	11	15					WMPD-01C
	05	460-3	DISCONNECT	1	18	20					EHWH030A-C05
	09	460-3	DISCONNECT	1	24	25					EHWH030A-C09

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be de-rated. 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. MOCP (Maximum Over-current Protection) value listed is the maximum value as per UL 60335 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Over-current Protective Device (Circuit Breaker) in this model may be lower than the maximum UL 60335 allowable MOCP value, but still above the UL 60335 minimum calculated value or Minimum Circuit Ampacity (MCA) listed. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing. Review all wiring and safety information provided in the installation manual for the product.

////// AVAILABLE HEATER PACKAGES AND FIELD WIRING DATA - W42H TO W60H STANDARD UNITS

UNIT MODEL	KW OPTION	RATED VOLTAGE AND PHASE (60HZ)	CONNECTION POINT	NO. OF FIELD CIRCUITS	SINGLE CIRCUIT		DUAL CIRCUIT				FIELD INSTALLED HEATER KIT PART NUMBERS. HEATERS CAN BE FACTORY OR FIELD INSTALLED.
					MINIMUM CIRCUIT AMPACITY (MCA)	MAX. OVER CURRENT PROTECTION (MOCP)	MCA		MOCP		
							CKT. A	CKT. B	CKT. A	CKT. B	
W42HF-A	00	230/208-1	LUGS	1	31	35					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	31	35					WMCBC-05A
	05	230/208-1	C BREAKER	1	57	60					EHWH042A-A05
	10	230/208-1	C BREAKER	1 or 2	83	90	31	52	35	60	EHWH042B-A10
	15	230/208-1	C BREAKER	1 or 2	84	90	32	52	35	60	EHWH042B-A15
W42HF-B	00	230/208-3	LUGS	1	23	30					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	23	30					WMCBC-04B
	05	230/208-3	C BREAKER	1	38	40					EHWH042A-B05
	09	230/208-3	C BREAKER	1	50	60					EHCH042A-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH042A-B15
W42HF-C	00	460-3	LUGS	1	11	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	11	15					WMCBC-06C
	05	460-3	DISCONNECT	1	19	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	25	25					EHCH036A-C09
	15	460-3	DISCONNECT	1	26	30					EHCH036A-C15
W48HF-A	00	230/208-1	LUGS	1	36	45					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	36	45					WMCBC-07A
	04	230/208-1	C BREAKER	1	57	60					EHWH048A-A04
	05	230/208-1	C BREAKER	1 or 2	62	70	36	26	45	30	EHWH048A-A05
	10	230/208-1	C BREAKER	1 or 2	88	90	36	52	45	60	EHWH048A-A10
	15	230/208-1	C BREAKER	1 or 2	88	90	36	52	45	60	EHWH048A-A15
W48HF-B	00	230/208-3	LUGS	1	24	30					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	24	30					WMCBC-04B
	05	230/208-3	C BREAKER	1	39	40					EHWH042A-B05
	09	230/208-3	C BREAKER	1	51	60					EHCH042A-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH042A-B15
W48HF-C	00	460-3	LUGS	1	12	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	12	15					WMCBC-06C
	05	460-3	DISCONNECT	1	19	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	25	25					EHCH036A-C09
	15	460-3	DISCONNECT	1	26	30					EHCH036A-C15
W60HF-A	00	230/208-1	LUGS	1	38	45					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	38	45					WMCBC-07A
	05	230/208-1	C BREAKER	1 or 2	64	70	38	26	45	30	EHWH048A-A05
	10	230/208-1	C BREAKER	1 or 2	90	90	38	52	45	60	EHWH060A-A10
	15	230/208-1	C BREAKER	1 or 2	90	90	38	52	45	60	EHWH060A-A15
W60HF-B	00	230/208-3	LUGS	1	29	35					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	29	35					WMCBC-05B
	05	230/208-3	C BREAKER	1	44	45					EHCH042A-B05
	09	230/208-3	C BREAKER	1	56	60					EHCH042A-B09
	15	230/208-3	C BREAKER	1	56	60					EHWH060A-B15
W60HF-C	00	460-3	LUGS	1	13	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	13	15					WMCBC-06C
	05	460-3	DISCONNECT	1	21	25					EHCH036A-C05
	09	460-3	DISCONNECT	1	27	30					EHCH036A-C09
	15	460-3	DISCONNECT	1	27	30					EHCH036A-C15

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be de-rated. 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. MOCP (Maximum Over-current Protection) value listed is the maximum value as per UL 60335 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Over-current Protective Device (Circuit Breaker) in this model may be lower than the maximum UL 60335 allowable MOCP value, but still above the UL 60335 minimum calculated value or Minimum Circuit Ampacity (MCA) listed. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing. Review all wiring and safety information provided in the installation manual for the product.

AVAILABLE HEATER PACKAGES AND FIELD WIRING DATA - W24HFD TO W42HFD DEHUMIDIFICATION UNITS

UNIT MODEL	KW OPTION	RATED VOLTAGE AND PHASE (60HZ)	CONNECTION POINT	NO. OF FIELD CIRCUITS	SINGLE CIRCUIT		DUAL CIRCUIT				FIELD INSTALLED HEATER KIT PART NUMBERS. HEATERS CAN BE FACTORY OR FIELD INSTALLED.
					MINIMUM CIRCUIT AMPACITY (MCA)	MAX. OVER CURRENT PROTECTION (MOCP)	MCA		MOCP		
							CKT. A	CKT. B	CKT. A	CKT. B	
W24HFDA	00	230/208-1	LUGS	1	20	25					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	20	25					WMCB-03A
	04	230/208-1	C BREAKER	1	41	45					EHWH024A-A04
	08	230/208-1	C BREAKER	1 or 2	61	70	20	42	25	45	EHWH024A-A08
W24HFDB	00	230/208-3	LUGS	1	15	20					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	15	20					WMCB-02B
	05	230/208-3	C BREAKER	1	30	30					EHWH024A-B05
W24HFDC	00	460-3	LUGS	1	8	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	8	15					WMPD-01C
	05	460-3	DISCONNECT	1	15	15					EHWH024A-C05
W30HFDA	00	230/208-1	LUGS	1	22	25					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	22	25					WMCB-03A
	05	230/208-1	C BREAKER	1	48	50					EHWH030A-A05
	10	230/208-1	C BREAKER	1 or 2	74	80	22	52	25	60	EHWH030B-A10
W30HFDB	00	230/208-3	LUGS	1	18	25					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	18	25					WMCB-03B
	05	230/208-3	C BREAKER	1	33	35					EHWH030A-B05
	09	230/208-3	C BREAKER	1	45	45					EHWH030A-B09
W30HFDC	00	460-3	LUGS	1	9	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	9	15					WMPD-01C
	05	460-3	DISCONNECT	1	17	20					EHWH030A-C05
	09	460-3	DISCONNECT	1	23	25					EHWH030A-C09
W36HFDA	00	230/208-1	LUGS	1	28	35					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	28	35					WMCB-05A
	05	230/208-1	C BREAKER	1	54	60					EHWH036A-A05
	10	230/208-1	C BREAKER	1 or 2	80	80	28	52	35	60	EHWH036A-A10
W36HFDB	00	230/208-3	LUGS	1	22	25					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	22	25					WMCB-03B
	05	230/208-3	C BREAKER	1	37	40					EHWH036A-B05
	09	230/208-3	C BREAKER	1	49	50					EHWH036A-B09
W36HFDC	00	460-3	LUGS	1	11	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	11	15					WMPD-01C
	05	460-3	DISCONNECT	1	18	20					EHWH030A-C05
	09	460-3	DISCONNECT	1	24	25					EHWH030A-C09
W42HFDA	00	230/208-1	LUGS	1	31	35					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	31	35					WMCBC-05A
	05	230/208-1	C BREAKER	1	57	60					EHWH042A-A05
	10	230/208-1	C BREAKER	1 or 2	83	90	31	52	35	60	EHWH042B-A10
	15	230/208-1	C BREAKER	1 or 2	85	90	32	52	35	60	EHWH042B-A15
W42HFDB	00	230/208-3	LUGS	1	23	30					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	23	30					WMCBC-04B
	05	230/208-3	C BREAKER	1	38	40					EHWH042A-B05
	09	230/208-3	C BREAKER	1	51	60					EHCH042A-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH042A-B15

CAUTION: When more than one field power circuit is run through one conduit, the conductors must be de-rated. 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. MOCP (Maximum Over-current Protection) value listed is the maximum value as per UL 60335 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Over-current Protective Device (Circuit Breaker) in this model may be lower than the maximum UL 60335 allowable MOCP value, but still above the UL 60335 minimum calculated value or Minimum Circuit Ampacity (MCA) listed. Refer to the National Electrical code (latest version), Article 310 for power conductor sizing. Review all wiring and safety information provided in the installation manual for the product.

/////// AVAILABLE HEATER PACKAGES AND FIELD WIRING DATA - W42HFD TO W60HFD DEHUMIDIFICATION UNITS

UNIT MODEL	KW OPTION	RATED VOLTAGE AND PHASE (60HZ)	CONNECTION POINT	NO. OF FIELD CIRCUITS	SINGLE CIRCUIT		DUAL CIRCUIT				FIELD INSTALLED HEATER KIT PART NUMBERS. HEATERS CAN BE FACTORY OR FIELD INSTALLED.
					MINIMUM CIRCUIT AMPACITY (MCA)	MAX. OVER CURRENT PROTECTION (MOCP)	MCA		MOCP		
							CKT. A	CKT. B	CKT. A	CKT. B	
W42HFDC	00	460-3	LUGS	1	11	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	11	15					WMCBC-06C
	05	460-3	DISCONNECT	1	19	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	25	25					EHCH036A-C09
	15	460-3	DISCONNECT	1	26	30					EHCH036A-C15
W48HFDA	00	230/208-1	LUGS	1	36	45					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	36	45					WMCBC-07A
	05	230/208-1	C BREAKER	1 or 2	62	70	36	26	45	30	EHWH048A-A05
	10	230/208-1	C BREAKER	1 or 2	88	90	36	52	45	60	EHWH048A-A10
	15	230/208-1	C BREAKER	1 or 2	88	90	36	52	45	60	EHWH048A-A15
W48HFDB	00	230/208-3	LUGS	1	24	30					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	24	30					WMCBC-04B
	05	230/208-3	C BREAKER	1	39	40					EHWH042A-B05
	09	230/208-3	C BREAKER	1	51	60					EHCH042A-B09
	15	230/208-3	C BREAKER	1	53	60					EHCH042A-B15
W48HFDC	00	460-3	LUGS	1	12	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	12	15					WMCBC-06C
	05	460-3	DISCONNECT	1	19	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	25	25					EHCH036A-C09
	15	460-3	DISCONNECT	1	27	30					EHCH036A-C15
W60HFDA	00	230/208-1	LUGS	1	38	45					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	38	45					WMCBC-07A
	05	230/208-1	C BREAKER	1 or 2	64	70	38	26	45	30	EHWH048A-A05
	10	230/208-1	C BREAKER	1 or 2	90	90	38	52	45	60	EHWH060A-A10
	15	230/208-1	C BREAKER	1 or 2	90	90	38	52	45	60	EHWH060A-A15
W60HFDB	00	230/208-3	LUGS	1	29	35					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	29	35					WMCBC-05B
	05	230/208-3	C BREAKER	1	44	45					EHCH042A-B05
	09	230/208-3	C BREAKER	1	56	60					EHCH042A-B09
	15	230/208-3	C BREAKER	1	56	60					EHWH060A-B15
W60HFDC	00	460-3	LUGS	1	13	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	13	15					WMCBC-06C
	05	460-3	DISCONNECT	1	21	25					EHCH036A-C05
	09	460-3	DISCONNECT	1	27	30					EHCH036A-C09
	15	460-3	DISCONNECT	1	27	30					EHCH036A-C15

SEE ELECTRICAL NOTES ON PREVIOUS PAGE.

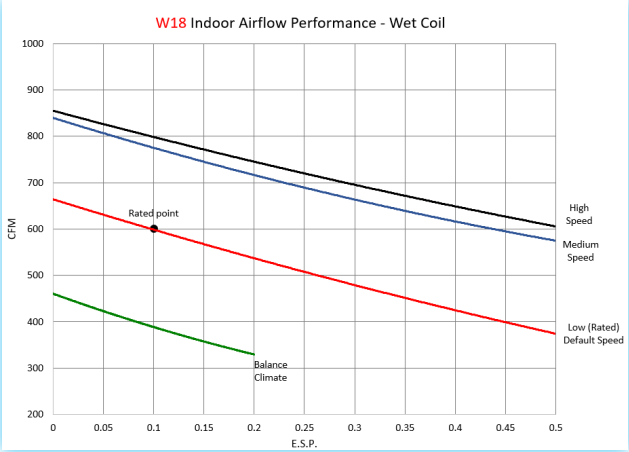
/////// ELECTRIC HEAT KW AND BTUH CHART AT FIELD SUPPLIED VOLTAGE

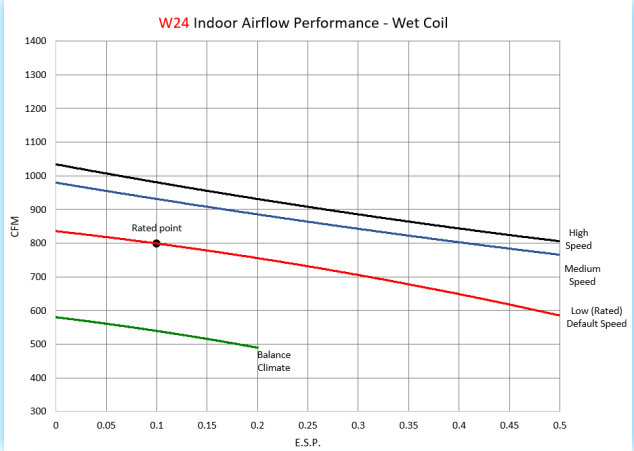
Electric Heat Nomenclature	Total KW and BTUH @ Field-Supplied Voltage										
	@ 208V				@ 230V				@ 460V		
	KW	1-PH Amps	3-PH Amps	BTUH	KW	1-PH Amps	3-PH Amps	BTUH	KW	3-PH Amps	BTUH
04	3.0	14.4		10,200	3.7	16.0		12,600			
05	3.8	18.0	10.4	12,800	4.6	20.0	11.5	15,700	4.6	5.8	15,700
08	6.0	28.8		20,500	7.4	32.0		25,100			
09	6.8		18.7	23,000	8.3		20.8	28,300	8.3	10.4	28,300
10	7.5	36.1		25,600	9.2	40.0		31,400			
15	11.3	54.1	31.2	38,400	13.8	60.0	34.6	47,100	13.8	17.3	47,100

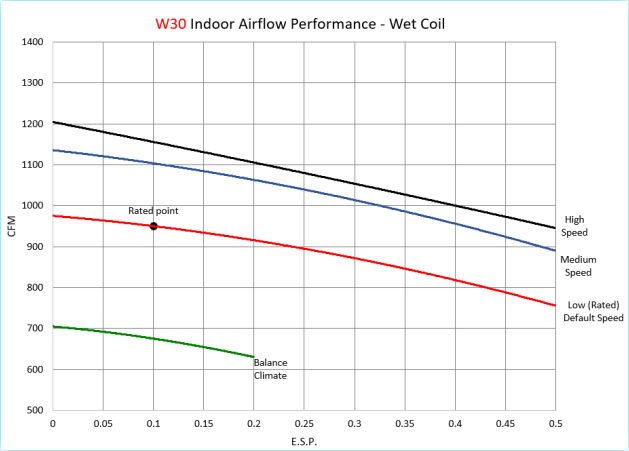
VENTILATION OPTIONS FOR OUTDOOR AIR INTAKE AND ROOM EXHAUST

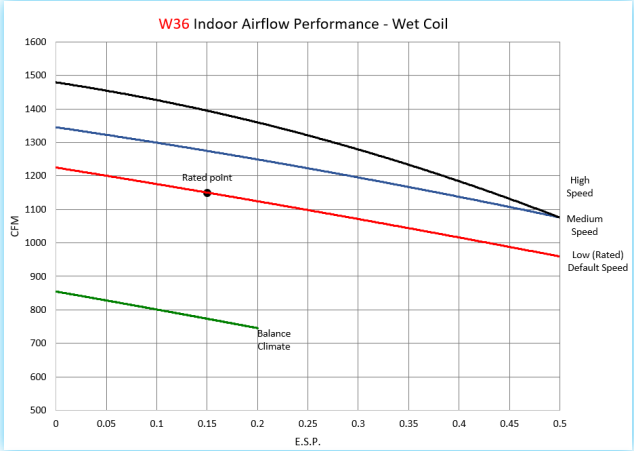
	VENT CODE	FIELD INSTALLED KIT PART NUMBER	UNIT MODEL NUMBER	INSTALLED WEIGHT	EXTERNAL FRONT HOOD DEPTH	VENTILATION OPERATION	OCCUPANCY VENTILATION INPUT SIGNAL	VENT AIRFLOW	DAMPER LEAKAGE STAN-DARD	VENT USE
Barometric Dampers	X	FAD-NE2	W18, W24	4.0 (1.8)	No Hood	Barometric	None	Up to 25% of rated intake air. No exhaust.	N/A	The Barometric Intake Damper opens when the indoor fan is operating. Pins provide an easy way to set up the damper assembly.
		FAD-NE3	W30, W36	5.0 (2.3)	No Hood	Barometric	None			
		FAD-NE5	W42, W48 W60	13 (5.9)	No Hood	Barometric	None			
	A	FAD-BE2	W18, W24	8.0 (3.6)	No Hood	Barometric	None	Up to 25% of rated intake air with room exhaust.	N/A	This damper provides the same features as the intake version with an added exhaust damper.
		FAD-BE3	W30, W36	9.0 (4.0)	No Hood	Barometric	None			
		FAD-BE5	W42, W48 W60	16 (7.3)	No Hood	Barometric	None			
No Vent	B	BOP-2	W18, W24	1.0 (.5)	No Hood	No Air path	None	None, Air paths are sealed with block off plates.	N/A	The No Vent option provides plates over the intake and exhaust ventilation openings.
		BOP-3	W30, W36	1.0 (.5)	No Hood	No Air path	None			
		BOPLATE-5	W42, W48 W60	14 (6.4)	No Hood	No Air path	None			
Commercial Ventilators	M	CRV-F2-*	W18, W24	31.0 (14.0)	No Hood	Motor,Spring Return	24VAC	Up to 50% of rated intake air with room exhaust.	10cfm/ ft2	Powered outdoor intake and room exhaust air damper. Opens when 24VAC is applied.
		CRV-F3-*	W30, W36	35.0 (15.9)	No Hood	Motor,Spring Return	24VAC			
		CRV-F5	W42, W48 W60	42 (19.1)	No Hood	Motor,Spring Return	24VAC			
	V	CRV-V2-*	W18, W24	31.0 (14.0)	No Hood	Motor,Spring Return	24VAC or 2-10VDC	Up to 50% of rated intake air with room exhaust.	4cfm/ft2	Provides outdoor intake and room exhaust air with improved damper sealing. Opens with either a 24VAC signal or DC voltage is applied.
		CRV-V3-*	W30, W36	35.0 (15.9)	No Hood	Motor,Spring Return	24VAC or 2-10VDC			
		CRV-V5A	W42, W48 W60	42 (19.1)	No Hood	Motor,Spring Return	24VAC or 2-10VDC			
Free Cooling Economizers	D	ECON-NC2A-*	W18, W24	37.0 (16.8)	7" (17.8cm)	Motor,Spring Return	2-10VDC	Full rated intake air with room exhaust.	4cfm/ft2	Economizer assembly with damper motor. Field supplied controls needed for operation.
		ECON-NC3A-*	W30, W36	37.0 (16.8)	7" (17.8cm)	Motor,Spring Return	2-10VDC			
		ECON-NC5A	W42, W48 W60	44 (20)	No Hood	Motor,Spring Return	2-10VDC			
	S	ECON-S2-*	W18, W24	37.0 (16.8)	No Hood	Motor,Spring Return	24VAC or 0-10VDC	Up to 75% of rated intake air with room exhaust.	4cfm/ft2	Economizer with JADE controller. User defined economizing based on enthalpy curves.
		ECONS3-*	W30, W36	37.0 (16.8)	No Hood	Motor,Spring Return	24VAC or 0-10VDC			
	Y	ECON-DB2A-*	W42, W48 W60	37.0 (16.8)	7" (17.8cm)	Motor,Spring Return	24VAC or 0-10VDC	Full rated intake air with room exhaust.	4cfm/ft2	Economizer with JADE controller. User defined economizing based on dry bulb temperature.
		ECON-DB3A-*	W30, W36	37.0 (16.8)	7" (17.8cm)	Motor,Spring Return	24VAC or 0-10VDC			
		ECON-DB5A	W42, W48 W60	44 (20)	No Hood	Motor,Spring Return	24VAC or 0-10VDC			
	Z	ECON-WD2A-*	W18, W24	37.0 (16.8)	7" (17.8cm)	Motor,Spring Return	24VAC or 0-10VDC	Full rated intake air with room exhaust.	4cfm/ft2	Economizer with JADE controller. User defined economizing based on enthalpy curves.
		ECON-WD3A-*	W30, W36	37.0 (16.8)	7" (17.8cm)	Motor,Spring Return	24VAC or 0-10VDC			
		ECON-WD5A	W42, W48 W60, W72	44 (20)	No Hood	Motor,Spring Return	24VAC or 0-10VDC			
Energy Recovery Vents	R (230V Units)	ERV-FA2-*	W18, W24	54.0 (24.4)	4" (10.2cm)	**208/230V** Unit Blowers	24VAC - 3 speeds	Up to 200cfm	N/A	Energy Recovery Ventilator with inde-pendently adjustable intake and exhaust fans. Heat exchange wheel used to trans-fer heat from outdoor intake and room exhaust air paths.
		ERV-FA3-*	W30, W36	54.0 (24.4)	4" (10.2cm)	**208/230V** Unit Blowers	24VAC - 3 speeds	Up to 400cfm		
		ERV-FA5	W42, W48 W60	87 (39.5)	No Hood	**208/230V** Unit Blowers	24VAC - 3 speeds	Up to 450cfm		
	R (460V Units)	ERV-FC2-*	W24	54.0 (24.4)	4" (10.2cm)	**460V** Unit Blowers	24VAC - 3 speeds	Up to 200cfm		
		ERV-FC3-*	W30, W36	54.0 (24.4)	4" (10.2cm)	**460V** Unit Blowers	24VAC - 3 speeds	Up to 400cfm		
		ERV-FC5	W42, W48 W60	100 (45.4)	No Hood	**460V** Unit Blowers	24VAC - 3 speeds	Up to 450cfm		

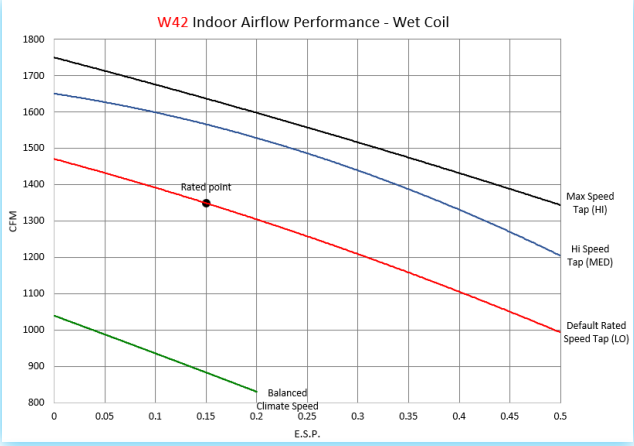
INDOOR AIRFLOW CFM @ STATIC PRESSURES AND ADJUSTABLE SPEEDS - W18 TO W60 UNITS

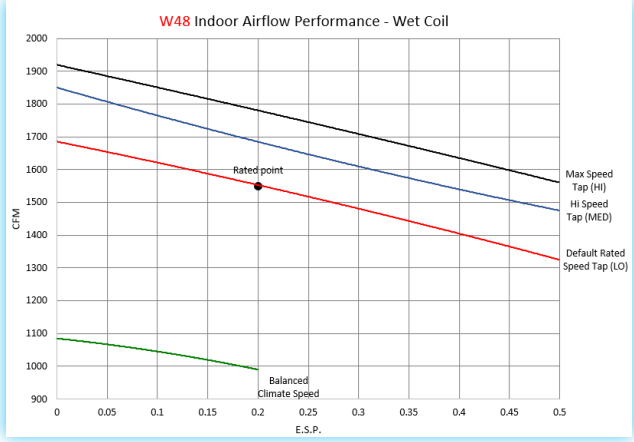


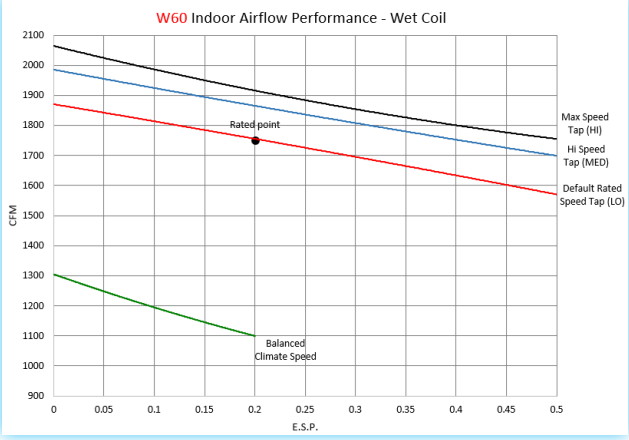












Indoor Airflow Speeds:

Balanced Climate Speed: The WH series uses this speed when the **Balanced Climate option (Y1) or mechanical dehumidification option (D)** is used. Not recommended for static levels higher that Balanced Climate airflow data provided.

LO Speed (Default): The WH series uses this speed by default when using **standard cooling (Y2) or heating operation (W1/W2)**. This speed is labeled as LO on the speed selection terminal strip inside the unit control panel. The WH series also uses this speed when **fan only (G) or ventilation operation (A)** is used. All units ship with cooling and heating operation at LO cooling and heating speed, and provides the **optimal airflow amount for normal use**.

MED Speed (User Selectable): This speed is user selectable when using **standard cooling (Y2) or heating operation (W1/W2)**. This speed is labeled as MED on the speed selection terminal strip inside the unit control panel. The MED speed tap provides an **increase in unit airflow** per the airflow performance chart. Fan only and dehumidification fan operation is not effected by using MED speed.

HI Speed (User Selectable): This speed is user selectable when using **standard cooling (Y2) or heating operation (W1/W2)**. This speed is labeled as HI on the speed selection terminal strip inside the unit control panel. The HI speed tap provides **maximum unit airflow** per the airflow performance chart. Fan only and dehumidification fan operation is not effected by using Hi speed.

/////// INDOOR AIR STREAM FILTRATION OPTIONS

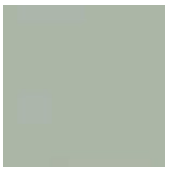
UNIT MODEL	FILTER CODE	FILTER MERV RATING	NUMBER OF FILTERS USED	BARD PART NUMBER	FILTER SIZE INCHES (CM)	FILTER ESP	FILTRATION LEVEL
W18, W24	**X**	**MERV 2**	1	7004-011	16x25x1 (41x64x3)	0" WC	Low Filtration, 1" Thickness Disposable Media.
	W	**MERV 2**	1	7003-032	16x25x1 (41x64x3)	0" WC	Low Filtration, 1" Thickness Cleanable Media.
	P	**MERV 8**	1	7004-025	16x25x2 (41x64x6)	.03" WC	Average Filtration, 2" Thickness Pleated Disposable Media.
	M	**MERV 11**	1	7004-059	16x25x2 (41x64x6)	.05" WC	Above Average Filtration, 2" Thickness Pleated Disposable Media.
	A, B, N	**MERV 13**	1	7004-061	16x25x2 (41x64x6)	.08" WC	High Filtration, 2" Thickness Pleated Disposable Media.
W30, W36	**X**	**MERV 2**	1	7004-019	16x30x1 (41x77x3)	0" WC	Low Filtration, 1" Thickness Disposable Media.
	W	**MERV 2**	1	7003-031	16x30x1 (41x77x3)	0" WC	Low Filtration, 1" Thickness Cleanable Media.
	P	**MERV 8**	1	7004-026	16x30x2 (41x77x6)	.03" WC	Average Filtration, 2" Thickness Pleated Disposable Media.
	M	**MERV 11**	1	7004-048	16x30x2 (41x77x6)	.05" WC	Above Average Filtration, 2" Thickness Pleated Disposable Media.
	A, B, N	**MERV 13**	1	7004-062	16x30x2 (41x77x6)	.08" WC	High Filtration, 2" Thickness Pleated Disposable Media.
W42, W48, W60	**X**	**MERV 2**	2	7004-012	20x20x1 (51x51x3)	0" WC	Low Filtration, 1" Thickness Disposable Media.
	W	**MERV 2**	2	7003-085	20x20x1 (51x51x3)	0" WC	Low Filtration, 1" Thickness Cleanable Media.
	P	**MERV 8**	2	7004-052	20x20x2 (51x51x6)	.03" WC	Average Filtration, 2" Thickness Pleated Disposable Media.
	M	**MERV 11**	2	7004-060	20x20x2 (51x51x6)	.05" WC	Above Average Filtration, 2" Thickness Pleated Disposable Media.
	A, B, N	**MERV 13**	2	7004-063	20x20x2 (51x51x6)	.08" WC	High Filtration, 2" Thickness Pleated Disposable Media.

/////// CABINET COLOR AND FINISH OPTIONS

UNIT MODEL	CABINET COLOR AND FINISH CODE	COLOR AND FINISH	Description
All Units	X	Beige Painted Steel	This cabinet option uses zinc coated steel panels that are cleaned, rinsed, sealed and dried before a polyurethane primer is applied. The cabinet paint coating is comprised of a textured enamel. The resulting finish is designed to withstand over 1000 hours of salt spray tests per ASTM B117-03. . Unit top, structural sides, and front service panels are constructed using 20 gauge materials. The unit base is constructed using 16 gauge galvanized steel. Cabinet components are insulated with a non-fiberglass formaldehyde free insulation that has a high "R" value, is easy to clean with a FSK foil backing, and resists delamination.
	1	White Painted Steel	
	4	Buckeye Gray Painted Steel	
	5	Desert Brown Painted Steel	
	8	Dark Bronze Painted Steel	
	S	Stainless Steel	Exterior Stainless Steel finish cabinets are often selected for corrosion and chemical resistance. The Bard stainless steel unit offers a high quality stainless steel 316 grade enclosure and fasteners for years of operation in these conditions. The exterior cabinet, sheet metal screws, washers, nuts, compressor mounting hardware and outdoor fan motor mount are stainless steel. The condenser fan is corrosion coated for additional protection.
	A	Aluminum	Aluminum external cabinet finish option "A" units are constructed of ASTM B 209 grade .06" thickness panels with a stucco appearance.


X—Beige

1—White


4—Gray


5—Desert


8—Bronze


S—Stainless


A—Aluminum

/////// ADDITIONAL CORROSION COATED EVAPORATOR COIL, CONDENSER COIL, AND CABINET OPTIONS

UNIT MODEL	COIL AND CABINET COATING OPTION	EVAPORATOR COIL	CONDENSER COIL	INTERIOR CONDENSER SECTION	EXTERIOR AND INTERIOR CABINET	DESCRIPTION
All Units	X	STANDARD	STANDARD	STANDARD	STANDARD	Standard green fin evaporator coil and copper aluminum condenser coil. Cabinet is not coated.
	1	**COATED**	STANDARD	STANDARD	STANDARD	Corrosion coated evaporator coil and copper aluminum condenser coil. Cabinet is not coated.
	2	STANDARD	**COATED**	STANDARD	STANDARD	Standard green fin evaporator coil and corrosion coated condenser coil. Cabinet is not coated.
	3	**COATED**	**COATED**	STANDARD	STANDARD	Evaporator coil and condenser coil are both corrosion coated. Cabinet is not coated.
	4	**COATED**	**COATED**	**COATED**	STANDARD	Evaporator coil and condenser coil are both corrosion coated. Cabinet interior condenser section is coated.
	5	**COATED**	**COATED**	**COATED**	**COATED**	Evaporator coil and condenser coil are both corrosion coated. Cabinet interior and exterior is coated.

/////// SOUND DATA - DBA @ 5 FT. AND 10 FT.*

UNIT	DUCT FREE INDOOR COOLING OPERATION @ 5 FT.	DUCT FREE INDOOR COOLING OPERATION @ 10 FT.	DUCTED INDOOR COOLING OPERATION @ 5 FT.	DUCTED INDOOR COOLING OPERATION @ 10 FT.	OUTDOOR @ 10 FT.
W18H	49.6	47.3	48.6	46.2	62.8
W24H	52.4	50.4	51.9	48.9	62.3
W30H	53.9	52.9	54.5	47.3	67.1
W36H	53.9	52.9	54.5	47.3	67.1
W42H	56.1	51.7	56.3	51.1	68.6
W48H	57	52.7	57.8	52.8	69
W60H	56.5	53.3	56	52.7	66.8

Published dBA numbers are 3rd octave A weighted scale. Integrated values calculated per ANSI/ASA S12.60-2009/Part 2, Section 5.2.2.1.

/////// FACTORY CONTROLS OPTIONS CHART INCLUDING SWITCHES, SENSORS, RELAYS, AND START KITS

Factory installed controls are provided by Bard to enhance a Wall-Mount product before it is shipped. All Wall-Mount products are shipped with a auto-reset high pressure switch and an auto-reset low pressure switch to help protect refrigeration components. A compressor control module with adjustable voltage protection, delay on make and break, and high/low pressure diagnostics is also standard

CONTROL CODE	MODELS	DESCRIPTION OF FACTORY INSTALLED COMPONENTS
X	**ALL MODELS**	Standard Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, and Refrigerant leak detector (RDS). These controls are standard for all models.
E	**ALL MODELS**	Standard controls **and Low Ambient Control.**
F	**W42HF-W60HF W42HFD-W60HFD**	Standard controls, **Low Ambient Control, Refrigerant Alarm Relay with NO/NC Contacts, and Dirty Filter Pressure Switch.**
J	**ALL MODELS**	Standard controls, **Low Ambient Control and Refrigerant Alarm Relay with NO/NC Contacts.**
Q	**ALL MODELS**	Standard controls and **Outdoor Thermostat.**
R	**ALL MODELS**	Standard controls, **Low Ambient Control, Outdoor Thermostat.**
T	**ALL MODELS**	Standard controls, **Low Ambient Control, Outdoor Thermostat, Hard Start Kit, 230V/208V single phase only.**

FIELD KIT CONTROLS OPTIONS CHART INCLUDING SWITCHES, SENSORS, RELAYS, AND START KITS

Field installed kits provide accessories that can be installed in the field. Required components, wires, enclosures, screws, and instructions that are needed are provided within the kit.

KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
CMH-33	W18H	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - Modulating.
CMH-34	W24H, W30H, W36H	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - fan cycling.
CMH-35	W42H, W48H, W60H	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - fan cycling.
CMC-15	W18H, W24H, W30H, W36H	PTCR Start Kit. Increases starting torque by 2 to 3x. 230V-60hz-1 phase (A voltage) only. Cannot be used in combination with SK start kit
CMC-32	W42H, W48H, W60H	PTCR Start Kit. Increases starting torque by 2 to 3x. 230V-60hz-1 phase (A voltage) only. Cannot be used in combination with SK start kit
SK111	W18H, W24H, W30H, W36H	Start Capacitor and Potential Relay Start Kit. Increases starting torque by 9x. 230V-60hz-1 phase (A voltage) only. Cannot be used in combination with CMC start kit
CMH-28	W18H, W24H, W30H, W36H	Outdoor Thermostat Kit used to disable compressor cooling below 50°F outdoor temp. Adjustable between 50° and 0°F
CMH-36	W42H, W48H, W60H	Outdoor Thermostat Kit used to disable compressor cooling below 50°F outdoor temp. Adjustable between 50° and 0°F.
CMC-34	W18H, W24H, W30H, W36H	Compressor Control Module Lockout Alarm Relay Kit.
CMC-35	W42H, W48H, W60H	Compressor Control Module Lockout Alarm Relay Kit.
CMC-36	W18H, W24H, W30H, W36H	Crank case heater kit. 230V 1-PH units only.
CMC-40	W18H, W24H, W30H, W36H	Crank case heater kit. 230V 3-PH units only.
CMC-37	W18H, W24H, W30H, W36H	Crank case heater kit. 460V 3-PH units only.
CMC-38	W42H, W48H, W60H	Crank case heater kit. 230V 1-PH units only.
CMC-41	W42H, W48H, W60H	Crank case heater kit. 230V 3-PH units only.
CMC-39	W42H, W48H, W60H	Crank case heater kit. 460V 3-PH units only.

WALL CURB ACCESSORIES

Optional wall curb accessories are available to help reduce vibration through the outer wall surface or to use existing wall openings when replacing equipment. Follow all static pressure airflow requirements, safety and installation guidelines in the instructions provided with the curb and Wall-Mount products.

CURB	UNIT MODEL	FUNCTION	DESCRIPTION
WWC2-*	W18, W24	Upgrade	Use with existing 1, 2 or 3 ton wall openings. Wall openings must provide sufficient airflow. Review all instructions in manual #7960-931.
WWC3-*	W30, W36	Upgrade	Use with existing 2, 3, or 5 ton wall openings. Wall openings must provide sufficient airflow. Review all instructions in manual #7960-568.
WWC5-*	W42, W48, W60	Upgrade	Use with existing 3 and 5 ton wall openings. Wall openings must provide sufficient airflow. Review all instructions in manual #7960-465.
CCURBF2430-*	W30, W36	Indoor Sound Reduction	Provides sound reduction using isolators between an inner and outer curb assembly. Movable back panel allows return opening of unit and wall opening to be offset. Top outlet supply for use with overhanging roof lines. Review installation manual #7960-689.
CCURBT2430-*	W30, W36	Indoor Sound Reduction	Provides sound reduction using isolators between an inner and outer curb assembly. Movable back panel allows return opening of unit and wall opening to be offset. Top outlet supply for use with overhanging roof lines. Review installation manual #7960-689.
CCURBF4860-*	W42, W48, W60	Indoor Sound Reduction	Provides sound reduction using isolators between an inner and outer curb assembly. Movable back panel allows return opening of unit and wall opening to be offset. Review installation manual #7960-689.
CCURBT4860-*	W42, W48, W60	Indoor Sound Reduction	Provides sound reduction using isolators between an inner and outer curb assembly. Movable back panel allows return opening of unit and wall opening to be offset. Top outlet supply for use with overhanging roof lines. Review installation manual #7960-689.
CFCF-53-*	W42, W48, W60	Upgrade and S. Reduction	Upgrades from W30/W36 wall openings and provides sound reduction using isolators between an inner and outer curb assembly. Movable back panel allows offset return opening. Review manual #7960-930.
CFCT-53-*	W42, W48, W60	Upgrade and Indoor Sound Reduction	Upgrades from W30/W36 wall openings and provides sound reduction using isolators between an inner and outer curb assembly. Movable back panel allows offset return opening. Top outlet supply for use with overhanging roof lines. Review installation manual #7960-930.
WAPR11A-*	All Units	Indoor Sound Reduction	Sound plenum that attaches to indoor wall for return air sound reduction. Air enters bottom of indoor sound plenum then into return area of unit. Review installation manual #7960-950.
WAPFB31-*	W30, W36	Indoor Sound Reduction	Sound plenum that attaches to indoor wall for supply air sound reduction. Supply air travels through plenum that includes perforated baffles before exiting supply grille. Review installation manual #7960-552.
WAPFB51-*	W42, W48, W60	Indoor Sound Reduction	Sound plenum that attaches to indoor wall for supply air sound reduction. Supply air travels through plenum that includes perforated baffles before exiting supply grille. Review installation manual #7960-552.

* Color Option

/////// NON-DUCTED SUPPLY AND RETURN GRILLES

Supply and return louver grilles are of a brushed aluminum finish. 2" flange versions are recommended for standard installations to allow grille attachment when large wall openings are present. Return filter grilles are available for filter access from an indoor area. Filter grilles do not include a filter, and are not recommended for unit with ventilation due to filter location. A manual damper return grille is available for all models. The manual damper is adjustable, and is only recommended for installations where increased return duct static pressure is required.

GRILLE NO.	UNITS USING GRILLE	DESCRIPTION OF LOUVER GRILLE
SG-2	W18H, W24H	8" x 20" with 1" Flange 4 way deflection supply grille.
SG-3	W30H, W36H	8" x 28" with 1" Flange 4 way deflection supply grille.
SG-5	W42H, W48H, W60H	10" x 30" with 1" Flange 4 way deflection supply grille.
RG-2	W18H, W24H	12" x 20" with 1" Flange return grille.
RG-3	W30H, W36H	12" x 28" with 1" Flange return grille.
RG-5	W42H, W48H, W60H	16" x 30" with 1" Flange return grille.
SG-2W	W18H, W24H	8" x 20" with 2" Flange 4 way deflection supply grille.
SG-3W	W30H, W36H	8" x 28" with 2" Flange 4 way deflection supply grille.
SG-5W	W42H, W48H, W60H	10" x 30" with 2" Flange 4 way deflection supply grille.
RG-2W	W18H, W24H	12" x 20" with 2" Flange return grille.
RG-3W	W30H, W36H	12" x 28" with 2" Flange return grille.
RG-5W	W42H, W48H, W60H	16" x 30" with 2" Flange return grille.
RFG-2W	W18H, W24H	12" x 20" with 2" Flange return grille with filter bracket.*
RFG-3W	W30H, W36H	12" x 28" with 2" Flange return grille with filter bracket.*
RFG-5W	W42H, W48H, W60H	16" x 30" with 2" Flange return grille with filter bracket.*
RGDK-2W	W18H, W24H	12" x 20" with 2" manual shutter style damper that is mounted in the return duct behind the return grille (sold separately). Adjustable to restrict return air from room.
RGDK-3W	W30H, W36H	12" x 28" with 2" manual shutter style damper that is mounted in the return duct behind the return grille (sold separately). Adjustable to restrict return air from room.
RGDK-5W	W42H, W48H, W60H	16" x 30" manual shutter style damper that is mounted in the return duct behind the return grille (sold separately). Adjustable to restrict return air from room.

* Not recommended to provide primary filtration with units that will bring in outdoor air.

/////// 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	VELOCITY	TOTAL PRESSURE	THROW
SG-2 SG-2W	800 CFM	0°	1053	.076" WC	37-52 ft.
		22.5°	1143	.1" WC	28-40 ft.
		45°	1428	.162" WC	20-29 ft.
	865 CFM	0°	1138	.054" WC	40-55 ft.
		22.5°	1236	.075" WC	31-42 ft.
		45°	1544	.113" WC	21-30 ft.
SG-3 SG-3W	885 CFM	0°	852	.054" WC	37-54 ft.
		22.5°	1075	.075" WC	35-49 ft.
		45°	1162	.113" WC	21-30 ft.
	1285 CFM	0°	1237	.108" WC	42-66 ft.
		22.5°	1359	.147" WC	35-50 ft.
		45°	1687	.249" WC	25-37 ft.
SG-5 SG-5W	1450 CFM	0°	968	.073" WC	51-73 ft.
		22.5°	1071	.103" WC	39-56 ft.
		45°	1331	.169" WC	28-40 ft.
	2000 CFM	0°	1336	.130" WC	61-86 ft.
		22.5°	1477	.188" WC	54-65 ft.
		45°	1835	.335" WC	33-46 ft.

/////// FIELD INSTALLED AIR QUALITY KITS

Field installed kits provide accessories that can be installed in the field. Required components, wirees, enclosures, screws, and instructions that are needed are provided within the kit.

CONTROL CODE	KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
NA	CMC-31	W18H, W24H, W30H, W36H	Dirty Filter Alarm Pressure Sensor Kit. Provides Normally Open Contacts to send an alarm signal to a thermostat or controller.
NA	CMC-33	W42H, W48H, W60H	Dirty Filter Alarm Pressure Sensor Kit. Provides Normally Open Contacts to send an alarm signal to a thermostat or controller.
NA	8620-343	W18H, W24H, W30H, W36H, W42H, W48H, W60H	LED UV-C Long Life Light Kit. 460V units only. Installed in evaporator coil entering airstream along with door safety switch. Indicator light provided to monitor LED use.
NA	8620-344	W18H, W24H, W30H, W36H, W42H, W48H, W60H	LED UV-C Long Life Light Kit. 230V units only. Installed in evaporator coil entering airstream along with door safety switch. Indicator light provided to monitor LED use.
NA	8620-370	W18H, W24H, W30H, W36H, W42H, W48H, W60H	NBPI (AIR4) kit installed in evaporator area. The kit includes wires and mounting hardware needed to install the NBPI device on or near the indoor fan.

/////// ADVANCED SENSOR OPTIONS AND KITS

Field installed kits provide accessories that can be installed in the field. Required components, wirees, enclosures, screws, and instructions that are needed are provided within the kit.

CONTROL CODE	KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
NA	8620-340	W18H, W24H, W30H, W36H	Return Air Sensor Kit for use with all economizers with the JADE controller.
NA	8620-334	W42H, W48H, W60H	Return Air Sensor Kit for use with all economizers with the JADE controller.

/////// SOUND REDUCTION ACCESSORIES

Field installed kits provide accessories that can be installed in the field. Required components, wirees, enclosures, screws, and instructions that are needed are provided within the kit.

CONTROL CODE	KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
NA	8002-012	W18H, W24H, W30H, W36H	Compressor sound cover. Weatherized vinyl insulated cover that helps reduce compressor sound level.
NA	8002-013	W42H, W48H, W60H	Compressor sound cover. Weatherized vinyl insulated cover that helps reduce compressor sound level.

/////// OPTIONAL SHIPPING CRATES

Optional crates are available to help protect your valuable Wall-Mount 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.

CRATE NO.	UNIT MODELS	DESCRIPTION
8620-263	W18H, W24H	Standard Unit Crate, all vents except economizer.
8620-275	W18H, W24H	Units with Economizer vent (Factory Installed 7" Hood).
8620-262	W30H, W36H	Standard Unit Crate, all vents except economizer
8620-276	W30H, W36H	Units with Economizer vent (Factory Installed 7" Hood).
8620-304	W42H, W48H	Standard Unit Crate, all ventilation options
8620-305	W60H	Standard Unit Crate, all ventilation options

CONTROLLER, THERMOSTAT, HUMIDISTAT AND CO2 VENTILATION CONTROL OPTIONS

Bard provides a wide variety of controllers for equipment cooling, thermostats, for equipment and comfort cooling, humidistats for dehumidification units, and CO2 sensors for ventilation control. Lockable thermostat covers are available for applications where security or supervisory control is desired.

CONTROLLER	OPERATION	DESCRIPTION
MC4002	1 to 2 Unit Lead/Lag Controller	Standard unit Lead/Lag Controller with remote alarming capability. Optional alarm board and SNMP or web page communication board. On board temperature sensor can be remote mounted. Can use up to (2) remote temperature sensors part #8612-023B (35' cable). -A includes alarm board. -B includes enhanced alarm board. -BC includes enh. alarm board and SNMP comm board. Review MC4002 installation instructions for use with heat pump models. Not recommended for heat pump models with economizer.
MC5300	1 to 3 Unit Lead/Lag Controller	Advanced multi-unit Lead/Lag Controller with remote alarming capability. All models have Modbus communication and web pages. Optional alarm board with NO/NC contacts. Standard on-board temperature and humidity sensor or optional remote temp/humidity sensor part #8408-061 (35' cable). Can use up to (2) remote temperature sensors part #8301-095A (35' cable).
MC5600	1 to 6 Unit Lead/Lag Controller	Advanced multi-unit Lead/Lag Controller with remote alarming capability. All models have Modbus communication and web pages. Optional alarm board with NO/NC contacts. Standard on-board temp/humidity sensor or optional remote temp/humidity sensor part #8408-061 (35' cable). Can use up to (2) remote temperature sensors part #8301-095A (35' cable).

THERMOSTAT	OPERATION	DESCRIPTION
8403-060	3 Heat/3 Cool	Programmable or Nonprogrammable, ventilation output, dehumidification operation.
8403-081	3 Heat/2 Cool	BrightStat with motion, BACnet/Modbus, vent output, dehum control, LUA, optional CO2 or Wi-Fi card.
8403-083	3 Heat/2 Cool	BrightStat with BACnet/Modbus, vent output, dehum control, LUA, optional CO2 or Wi-Fi card.
8403-098	3 Heat/2 Cool	BrightStat with motion, ZigBee, BACnet/Modbus, vent output, dehum control, LUA, optional CO2 or Wi-Fi card.
8403-089	1 Heat/1 Cool	Temp. Settings per Day 4, 2, 1, 0 Programs per Week 7, 5-2, 5-1-1 or Nonprogrammable. Not recommended for heat pumps with electric heat.
8403-090	2 Heat/2 Cool	Temp. Settings per Day 4, 2, 1, 0 Programs per Week 7, 5-2, 5-1-1 or Nonprogrammable.
8403-092	2 Heat/2 Cool	Programmable or Nonprogrammable, Wi-Fi with Lyric Phone application for wireless set point control.
8403-095	2 Heat/1 Cool	Temp. Settings per Day 4, 2, 1, 0 Programs per Week 7, 5-2, 5-1-1 or Nonprogrammable.

BRIGHTSTAT ACCESSORY	OPERATION	DESCRIPTION
8612-052	Expansion Card*	ZigBee Pro plug-in card, required for wireless sensors unless using 8403-098. See document S3583 for sensors.
8612-074	Expansion Card*	CO2 plug-in card for modulating ventilation when using Economizer or CRV-V vent option. ERV requires LUA script.
8612-079	Expansion Card*	Wi-Fi plug-in card for wireless Building Management System (BMS). BMS software required for communication.
8612-058	Wired Sensor	Wired wall-mounted temperature sensor. 10k. 5000ft max. wire length. Up to 3 sensors for averaging.
8612-059	Wired Sensor	Wired wall-mounted temp and occ sensor. 5000ft max. wire length. Up to 3 sensors for averaging.

* BrightStat controllers include a single expansion slot for an expansion card. More than one expansion card cannot be used with a single controller.

HUMIDISTAT	OPERATION	DESCRIPTION
8403-047	Humidity %RH	Electronic with display, lockable keypad, humidity sensor calibration (Viconics)
8403-100	Humidity %RH	Electronic with display, lockable keypad, humidity sensor calibration (Honeywell)

CO2 CONTROL	OPERATION	DESCRIPTION
S8403-096	CO2 PPM	CO2 ventilation control with digital display. On/Off or modulating (Econ or CRV-V) ventilation operation.

THERMOSTAT COVER**	SIZE	DESCRIPTION
8405-003	(Inside) 5-1/16" H x 6-1/16" W (Outside) 6-1/2" H x 7-1/2" W x 2-15/16" D	Clear acrylic with ventilation. Fits all thermostats except 8403-060
8405-005	(Inside) 5-7/8" H x 8-3/8" W (Outside) 7-1/4" H x 9-3/4" W x 3-3/8" D	Clear acrylic with ventilation. Fits all thermostats.
8405-007	(Inside) 5-7/8" H x 8-3/8" W (Outside) 7-1/8" H x 9-5/8" W x 3-1/4" D	Beige painted steel cover with ventilation. Fits all thermostats.

** Thermostat covers include ventilation, but may effect temperature control reaction time. If security control lockout is needed, the 8403-060 and BrightStat thermostat provide programming control lockout features.

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