BARD WALL-MOUNT™ Two Stage Heat Pumps 2 to 5 Ton Step Capacity C24H - C60H Unit Models 208V - 460V Single and Three Phase 60hz

CH Series WALL-MOUNT™

The Bard CH 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 CH 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.

CH Series Features:

- 2 to 5 ton cooling two stage 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 with constant CFM technology (up to approximately 1" ESP).
- 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 5kw 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.

CH Series Compliance:

- Complies with efficiency requirements of ANSI/ASHRAE/IES 90.1-2022.
- Certified to ANSI/AHRI Standard 390-2025 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.

AHRI CERTIFIED® www.ahridirectory.org Globally Recognized. Industry Respected.

ISO 9001:2015 CERTIFICATION intertek

c ETL US LISTED Intertek

Bard® SINCE 1914

FORM NO. S3660-0825

www.BardHVAC.com

ENGINEERED FEATURES C24 AND C30 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.

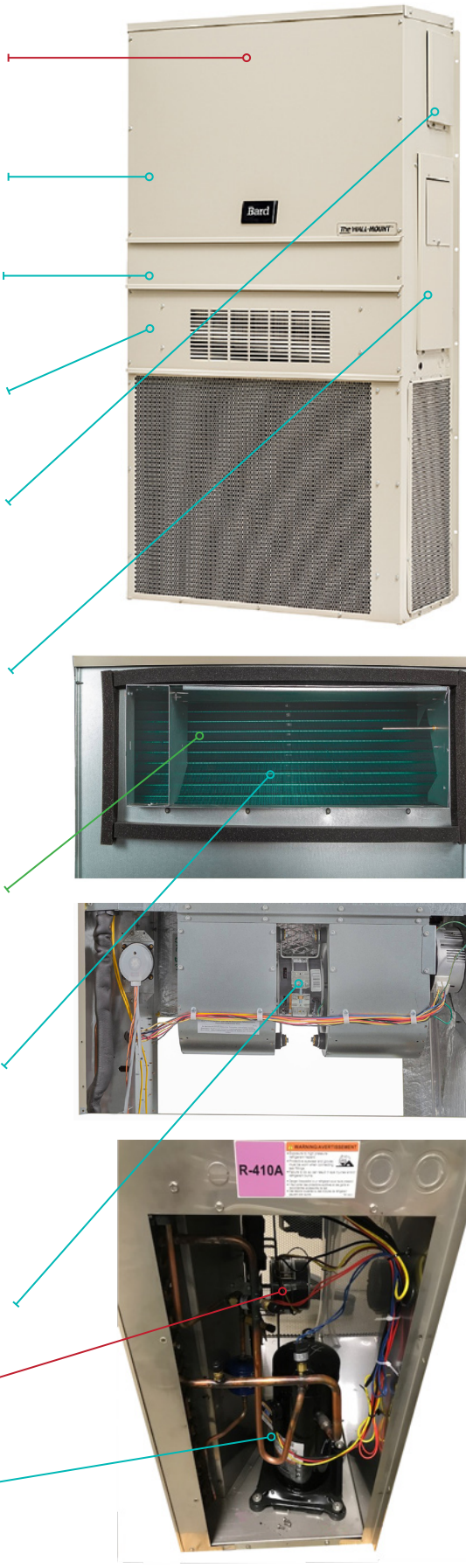
Electrical
Built-in Circuit Protection: Circuit breakers standard on all 208/230V single-phase and three-phase models. Toggle disconnects standard on 460V three-phase models with electric heat. Optional 460V circuit breakers with 0kw.
Control Panel Access: Right side access with lockable hinged cover. 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
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: Constant airflow 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: 2- stage 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. Floating compressor base, and compressor sound cover provide quiet compressor operation.



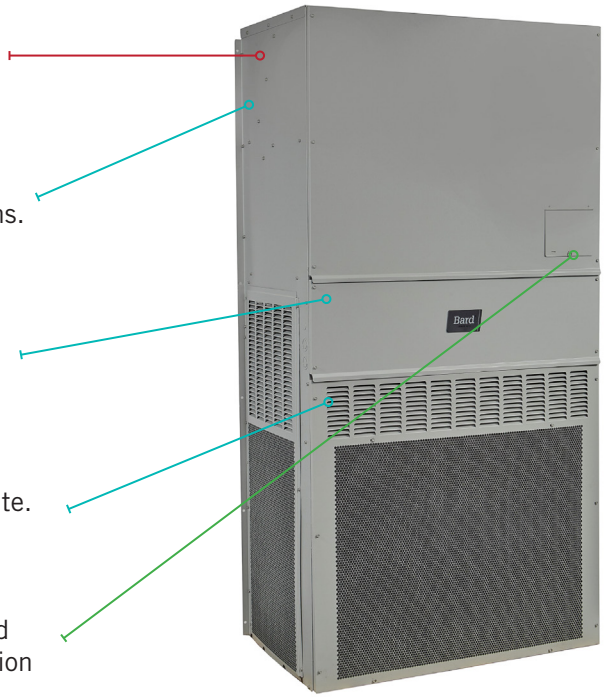
Insulation
Non-Fiberglass Foil Faced Insulation: High R-value recycled denim and cotton insulation with FSK foil facing for durability and cleanability.

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.

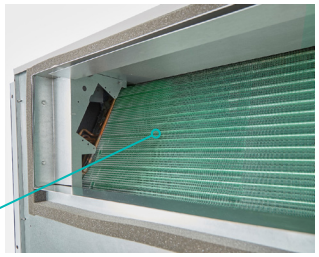
Maintenance Features
Easy Filter Access: Dedicated filter door for simplified maintenance. Compatible with 1" and 2" filters up to MERV13 rating. See filter specifications for details.

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.

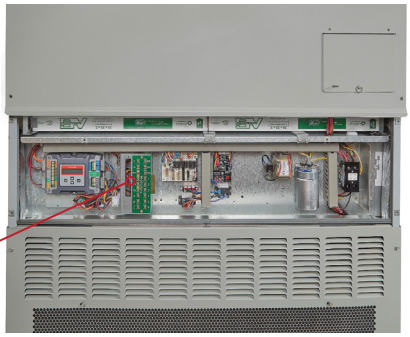
Supplemental Electric Heat
Electric Strip Heat: High-reliability heating elements with automatic limiting and thermal safety cutoffs. Available as factory or field installation. See heating section for specifications.



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. Optional 460V circuit breakers with 0kw.
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.

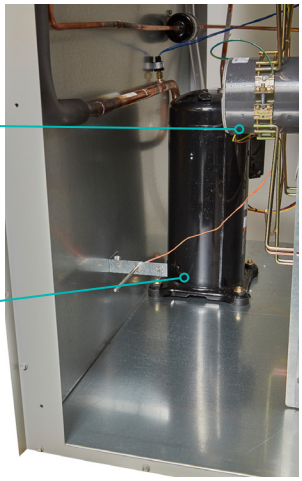


Heat Exchange
Standard Green Fin Hydrophilic Evaporator Coil: Enhanced wettability coating prevents mold formation, improves condensate drainage, and provides protection against corrosive airborne particulates.
Standard Copper/Aluminum Condenser Coil: Rifled copper tubing for encreased efficiency and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



Climate Control
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: Constant airflow 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: 2- stage 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. Discharge line muffler, floating compressor base, and compressor sound cover provide quiet compressor operation.

/////// WALL-MOUNT C24H (2 TON) TO C60H (5 TON) HEAT PUMP NOMENCLATURE

MODEL #	C	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	
C	Bard Quiet **C**limate Wall-Mount

2,3

2-3. Full Load Nominal Cooling Capacity			
24	2.0 Ton	42	3.5 Ton
30	2.5 Ton	48	4.0 Ton
36	3.0 Ton	60	5.0 Ton

4

4. Unit Type		Units
H	Heat Pump	All Models

5

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

6

6. Special Feature Placeholder		Units
-	Standard Unit	All Models
D	HGR Dehumidification	All Models

7

7. Voltage		Ph.	Hz.	Units
A	208/230VAC	1	60	All Models
B	208/230VAC	3	60	All Models
C	460VAC	3	60	All Models

8,9

8-9. Electric Heater Options		Units
00	0Kw with Lug Connections	All Models
0Z	0Kw with Breaker or Disc.	All Models
0C	0Kw 460V with C. Breaker.	C36-C60
04-20	4-20Kw w/breaker or Disc.	All Models

10

10. Ventilation Package Options		Units
X	Barometric Air Damper (Intake)	All Models
A	Bar. Air Damper (Intake+Exh)	All Models
B	Block Off Plate (No Vent)	All Models
M	Powered Comm. Vent, On/Off	All Models
V	Powered Comm. Vent, On/Off/ Modulating using 0-10VDC	All Models
D	Econ, Field Supplied Controls	All Models
Y	Economizer, JADE, Dry Bulb	All Models
Z	Economizer, JADE, Enthalpy	All Models
R	Energy Recovery Ventilator	All Models
S	Partial Flow Econ, JADE, Enth.	C24-C30

11

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

12

12. Cabinet Color and Finish		Units
X	Standard Beige Enamel Painted Steel.	All Models
1	White Enamel Painted Steel.	All Models
4	Buckeye Gray Enamel Painted Steel.	All Models
5	Desert Brown Enamel Painted Steel.	All Models
8	Dark Bronze Enamel Painted Steel.	All Models
S	316 Stainless Steel Exterior Finish.	All models except recessed cabinet.
A	Stucco Textured Aluminum Exterior Finish.	All models except recessed cabinet.

13

13. Cabinet Style		Units
X	Standard Cabinet - Blow Thru Condenser	C24-C60
J	Recessed Cabinet Top - Blow Thru Cond.	C36-C60 (No Dehum)
D	Standard Cabinet, Draw Thru Condenser	C36-C60 (No Dehum)
N	Recessed Cabinet, Draw Thru Condenser	C36-C60 (No Dehum)

14

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

15

15. Unit Mounted Controls Options Standard: Hi/Lo Pressure and Ref. Leak (RDS) Sensor		Units
X	Standard Controls	All Models
E	X + Low Ambient Control (LAC)	All Models
J	X + LAC and Alarm Relay (ALR)	All Models
F	X + LAC, ALR, and Filter Switch (FS)	C36-C60
Q	X + Outdoor Thermostat	All Models
R	X + LAC, Outdoor Thermostat	All Models
T	X + LAC, Outdoor Thermostat, Hard Start Kit	All Models

/////// CH SERIES AHRI CAPACITY AND EFFICIENCY RATINGS

MODELS	C24HF	C30HF	C36HF	C42HF	C48HF	C60HF
Cooling Capacity BTUH①	23,000	30,000	36,000	41,000	46,500	55,500
Cooling efficiency EER	11.6	11.8	11.7	11.5	11.5	11.0
Cooling efficiency IPLV	15.0	15.5	15.3	15.8	15.5	15.5
Heating Capacity BTUH①	20,600	28,200	32,600	37,000	43,000	52,500
Heating efficiency COP	3.3	3.3	3.3	3.3	3.3	3.3

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

EER = Energy Efficiency Ratio and is certified in accordance with ANSI/ARI Standard 390-2021. All ratings based on no outside air introduction).
IPLV = Integrated Part Load Value is certified in accordance with ANSI/ARI Standard 390-2021. All ratings based on no outside air introduction).
COP = Coefficient Of Performance is 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 - FULL LOAD

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
C24HF FULL LOAD 2nd STAGE	75/62	Total Cooling	27900	25500	23400	21500	20100	18900	18000	17400	17000	16800	16900
		Sensible Cooling	21900	20300	18900	17700	16800	16100	15500	15200	15100	15100	15300
	80/67	Total Cooling	29700	27700	25900	24300	23000	22000	21200	20700	20400	20300	20500
		Sensible Cooling	21200	19900	18700	17700	16900	16400	15900	15700	15700	15800	16100
	85/72	Total Cooling	35400	32400	29800	27500	25600	24100	22900	22100	21500	21100	21100
		Sensible Cooling	21700	20200	18800	17600	16600	15900	15200	14800	14500	14300	14300
C30HF FULL LOAD 2nd STAGE	75/62	Total Cooling	35400	32600	30100	28000	26100	24700	23600	22700	22200	21900	21900
		Sensible Cooling	26500	24800	23400	22100	21100	20300	19700	19300	19200	19100	19300
	80/67	Total Cooling	37800	35500	33400	31600	30000	28800	27800	27100	26700	26500	26700
		Sensible Cooling	25700	24300	23100	22100	21300	20600	20200	19900	19900	20000	20300
	85/72	Total Cooling	45100	41500	38400	35700	33400	31500	30000	28900	28100	27600	27500
		Sensible Cooling	26300	24700	23200	22000	20900	20000	19300	18700	18400	18100	18000
C36HF FULL LOAD 2nd STAGE	75/62	Total Cooling	40400	37700	35400	33300	31400	29700	28300	27000	25900	25100	24300
		Sensible Cooling	39600	32300	26400	21700	18400	16100	15100	15300	16700	19100	22600
	80/67	Total Cooling	43100	41100	39300	37600	36000	34600	33400	32200	31200	30400	29600
		Sensible Cooling	38400	31600	26100	21700	18500	16400	15500	15800	17300	20000	23800
	85/72	Total Cooling	51400	48100	45200	42500	40000	37900	36000	34300	32800	31600	30500
		Sensible Cooling	39300	32100	26200	21600	18200	15900	14800	14800	16000	18100	21100
C42HF FULL LOAD 2nd STAGE	75/62	Total Cooling	46100	43100	40400	38000	35700	33800	32100	30600	29300	28200	27300
		Sensible Cooling	35200	33800	32400	31100	29800	28600	27400	26200	25100	24000	22800
	80/67	Total Cooling	49200	46900	44800	42900	41000	39400	37900	36500	35300	34200	33300
		Sensible Cooling	34100	33100	32100	31100	30100	29100	28100	27100	26100	25100	24000
	85/72	Total Cooling	58600	54900	51500	48500	45600	43100	40900	38900	37100	35600	34300
		Sensible Cooling	34900	33600	32300	30900	29500	28200	26800	25400	24100	22700	21300
C48HF FULL LOAD 2nd STAGE	75/62	Total Cooling	50400	47600	45000	42800	40500	38600	36800	35100	33700	32400	NA
		Sensible Cooling	40300	38400	36600	35000	33600	32400	31400	30500	29800	29200	NA
	80/67	Total Cooling	53800	51900	50000	48300	46500	44900	43400	41900	40500	39200	NA
		Sensible Cooling	39100	37600	36200	35000	33900	33000	32200	31500	31000	30600	NA
	85/72	Total Cooling	64100	60700	57400	54500	51700	49100	46800	44600	42600	40700	NA
		Sensible Cooling	40100	38200	36400	34800	33300	31900	30700	29600	28600	27700	NA
C60HF FULL LOAD 2nd STAGE	75/62	Total Cooling	61600	57600	54000	50800	47900	45400	43100	41300	39600	38300	NA
		Sensible Cooling	47100	44800	42600	40800	39200	37700	36600	35500	34800	34200	NA
	80/67	Total Cooling	65800	62800	60000	57400	55000	52900	50900	49200	47700	46400	NA
		Sensible Cooling	45700	43900	42200	40800	39500	38400	37500	36700	36200	35800	NA
	85/72	Total Cooling	78400	73400	68900	64800	61100	57900	54900	52400	50100	48200	NA
		Sensible Cooling	46800	44600	42400	40500	38800	37200	35800	34400	33400	32400	NA

/////// UNIT COOLING CAPACITY AT VARIOUS INDOOR AND OUTDOOR CONDITIONS - PART LOAD

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
C24HF PART LOAD 1st STAGE	75/62	Total Cooling	18700	17800	17000	16100	15400	14500	13900	13100	12400	11800	11000
		Sensible Cooling	14700	14300	14000	13500	13200	12800	12500	12100	11800	11400	11000
	80/67	Total Cooling	19900	19300	18800	18200	17600	16900	16300	15600	14900	14200	13400
		Sensible Cooling	14200	14000	13800	13500	13300	13000	12800	12500	12200	11900	11500
	85/72	Total Cooling	23700	22600	21600	20600	19600	18500	17600	16600	15700	14800	13800
		Sensible Cooling	14600	14200	13900	13400	13100	12600	12200	11800	11300	10800	10200
C30HF PART LOAD 1st STAGE	75/62	Total Cooling	23700	22800	21900	21000	20000	19000	18000	17100	16000	15000	13800
		Sensible Cooling	17900	17600	17300	16900	16500	16000	15500	15000	14500	13900	13200
	80/67	Total Cooling	25300	24800	24300	23700	22900	22100	21200	20300	19200	18100	16800
		Sensible Cooling	17300	17200	17100	16900	16600	16300	15900	15500	15000	14500	13900
	85/72	Total Cooling	30200	29000	27900	26800	25500	24200	22900	21600	20200	18800	17300
		Sensible Cooling	17800	17500	17200	16800	16300	15800	15200	14600	13900	13100	12300
C36HF PART LOAD 1st STAGE	75/62	Total Cooling	40000	37700	35500	33600	31700	30100	28700	27400	26300	25300	24300
		Sensible Cooling	31600	29900	28400	27100	26000	25100	24300	23600	23200	22900	22600
	80/67	Total Cooling	42700	41000	39400	37900	36400	35100	33800	32700	31600	30600	29600
		Sensible Cooling	30600	29300	28100	27100	26200	25500	24900	24400	24100	23900	23800
	85/72	Total Cooling	50900	48000	45300	42800	40500	38400	36500	34800	33200	31800	30500
		Sensible Cooling	31400	29800	28300	26900	25700	24700	23800	22900	22200	21600	21100
C42HF PART LOAD 1st STAGE	75/62	Total Cooling	28400	26900	25500	24200	22900	21700	20700	19600	18700	17900	17000
		Sensible Cooling	22600	21800	21000	20300	19700	19000	18500	17900	17400	17000	16700
	80/67	Total Cooling	30300	29300	28300	27300	26300	25300	24400	23400	22500	21600	20700
		Sensible Cooling	21900	21300	20800	20300	19800	19300	18900	18500	18100	17800	17500
	85/72	Total Cooling	36100	34300	32500	30900	29200	27700	26300	24900	23700	22500	21300
		Sensible Cooling	22500	21600	20900	20200	19500	18700	18000	17400	16700	16100	15500
C48HF PART LOAD 1st STAGE	75/62	Total Cooling	33000	30800	28700	26700	24900	23300	21800	20400	19100	17900	16900
		Sensible Cooling	25000	23900	23000	22000	21100	20300	19500	18800	18100	17400	16800
	80/67	Total Cooling	35200	33500	31800	30200	28600	27100	25700	24300	23000	21700	20600
		Sensible Cooling	24200	23400	22700	22000	21300	20600	20000	19400	18800	18200	17600
	85/72	Total Cooling	42000	39200	36500	34100	31800	29700	27700	25900	24200	22600	21200
		Sensible Cooling	24800	23800	22800	21900	20900	20000	19100	18200	17300	16500	15600
C60HF PART LOAD 1st STAGE	75/62	Total Cooling	34900	33300	31900	30400	28900	27500	26000	24500	23000	21600	NA
		Sensible Cooling	27600	26800	25900	25000	24200	23400	22600	21800	21100	20300	NA
	80/67	Total Cooling	37200	36300	35400	34300	33200	32000	30700	29200	27700	26100	NA
		Sensible Cooling	26700	26200	25600	25000	24400	23800	23200	22500	21900	21200	NA
	85/72	Total Cooling	44300	42500	40700	38700	36900	35000	33100	31100	29100	27100	NA
		Sensible Cooling	27400	26600	25700	24900	24000	23100	22100	21100	20200	19200	NA

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.

/////// UNIT HEAT PUMP HEATING CAPACITY AT VARIOUS OUTDOOR CONDITIONS - FULL LOAD

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
C24HF	BTUH	12300	12400	12700	13200	13900	14800	15800	17000	18400	20000	21700	23600	25700	28000
FULL LOAD 2nd STAGE	WATTS	1650	1670	1680	1700	1720	1750	1770	1800	1820	1850	1880	1920	1950	1990
	COP	2.18	2.18	2.22	2.28	2.37	2.48	2.62	2.77	2.96	3.17	3.38	3.60	3.86	4.12
C30HF	BTUH	13200	14500	15800	17200	18700	20300	22000	23700	25600	27500	29500	31500	33700	35900
FULL LOAD 2nd STAGE	WATTS	2150	2170	2200	2230	2270	2300	2340	2380	2420	2460	2510	2550	2600	2660
	COP	1.8	1.96	2.10	2.26	2.41	2.59	2.76	2.92	3.10	3.28	3.44	3.62	3.8	3.96
C36HF	BTUH	16000	17400	18800	20400	22000	23800	25600	27600	29600	31800	34000	36400	38800	41300
FULL LOAD 2nd STAGE	WATTS	2440	2480	2530	2570	2620	2670	2710	2760	2810	2850	2900	2950	3000	3040
	COP	1.92	2.06	2.18	2.33	2.46	2.61	2.77	2.93	3.09	3.27	3.44	3.62	3.79	3.98
C42HF	BTUH	11800	14400	17100	19700	22400	25100	27800	30500	33200	36000	38700	41500	44200	47000
FULL LOAD 2nd STAGE	WATTS	2520	2600	2680	2760	2840	2910	2990	3060	3130	3200	3270	3330	3400	3460
	COP	1.40	1.60	1.90	2.10	2.30	2.50	2.70	2.90	3.10	3.30	3.50	3.70	3.80	4.00
C48HF	BTUH	20400	22200	24100	26200	28400	30800	33300	36000	38800	41800	45000	48200	51700	55300
FULL LOAD 2nd STAGE	WATTS	3130	3200	3270	3340	3420	3490	3570	3650	3730	3810	3890	3980	4060	4150
	COP	1.91	2.03	2.16	2.30	2.43	2.59	2.73	2.89	3.05	3.22	3.39	3.55	3.73	3.91
C60HF	BTUH	21900	24800	27800	30900	34100	37300	40700	44100	47500	51100	54700	58500	62300	66100
FULL LOAD 2nd STAGE	WATTS	3600	3730	3850	3970	4090	4210	4320	4430	4540	4640	4740	4840	4940	5030
	COP	1.80	1.90	2.10	2.30	2.40	2.60	2.80	2.90	3.10	3.20	3.40	3.50	3.70	3.90

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.

/////// UNIT HEAT PUMP HEATING CAPACITY AT VARIOUS OUTDOOR CONDITIONS - PART LOAD

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
C24HF	BTUH	2800	4035	5325	6630	7950	9280	10630	11990	13365	14755	16155	17575	19005	20450
PART LOAD 1st STAGE	WATTS	1530	1515	1500	1485	1475	1465	1460	1455	1450	1455	1455	1460	1470	1480
	COP	.54	.78	1.04	1.31	1.58	1.86	2.13	2.42	2.70	2.97	3.25	3.53	3.79	4.05
C30HF	BTUH	4900	6680	8420	10140	11840	13515	15175	16815	18435	20035	21610	23170	24710	26230
PART LOAD 1st STAGE	WATTS	1735	1750	1770	1785	1805	1825	1840	1860	1880	1900	1925	1945	1965	1990
	COP	.83	1.12	1.39	1.66	1.92	2.17	2.42	2.65	2.87	3.09	3.29	3.49	3.69	3.86
C36HF	BTUH	9700	10970	12280	13640	15060	16520	18050	19630	21260	22950	24690	26480	28330	30240
PART LOAD 1st STAGE	WATTS	2012	2034	2056	2076	2096	2114	2132	2148	2164	2179	2193	2205	2217	2228
	COP	1.41	1.58	1.75	1.93	2.11	2.29	2.48	2.68	2.88	3.09	3.30	3.52	3.75	3.98
C42HF	BTUH	10100	11110	12260	13540	14940	16450	18090	19850	21730	23730	25850	28090	30450	32940
PART LOAD 1st STAGE	WATTS	2213	2212	2215	2223	2235	2252	2272	2297	2326	2360	2398	2440	2486	2537
	COP	1.34	1.47	1.62	1.79	1.96	2.14	2.33	2.53	2.74	2.95	3.16	3.38	3.59	3.81
C48HF	BTUH	8000	10380	12820	15260	17710	20170	22640	25110	27590	30080	32580	35080	37590	40110
PART LOAD 1st STAGE	WATTS	3641	3479	3334	3207	3097	3005	2930	2874	2834	2813	2809	2822	2853	2902
	COP	0.64	0.88	1.13	1.40	1.68	1.97	2.26	2.56	2.85	3.13	3.40	3.64	3.86	4.05
C60HF	BTUH	15400	17710	20040	22420	24840	27320	29840	32420	35040	37710	40430	43200	46020	48880
PART LOAD 1st STAGE	WATTS	3056	3081	3108	3139	3172	3207	3246	3287	3330	3377	3426	3478	3532	3589
	COP	1.48	1.69	1.89	2.09	2.30	2.50	2.70	2.89	3.08	3.27	3.46	3.64	3.82	3.99

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.

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

Electric Heat Nomenclature	Total KW and BTUH @ Field-Supplied Voltage										
	@ 230V (1)				@ 208V (1)				@ 460V		
	KW	1-PH Amps	3-PH Amps	BTUH	KW	1-PH Amps	3-PH Amps	BTUH	KW	3-PH Amps	BTUH
04	3.7	16.0		12,600	3.0	14.4		10,200			
05	4.6	20.0	11.5	15,700	3.8	18.0	10.4	12,800	4.6	5.8	15,700
08	7.4	32.0		25,100	6.0	28.8		20,500			
09	8.3		20.8	28,300	6.8		18.7	23,000	8.3	10.4	28,300
10	9.2	40.0		31,400	7.5	36.1		25,600			
15	13.8	60.0	34.6	47,100	11.3	54.1	31.2	38,400	13.8	17.3	47,100
20	18.4	80.0		62,800	15.0	72.1		51,200			

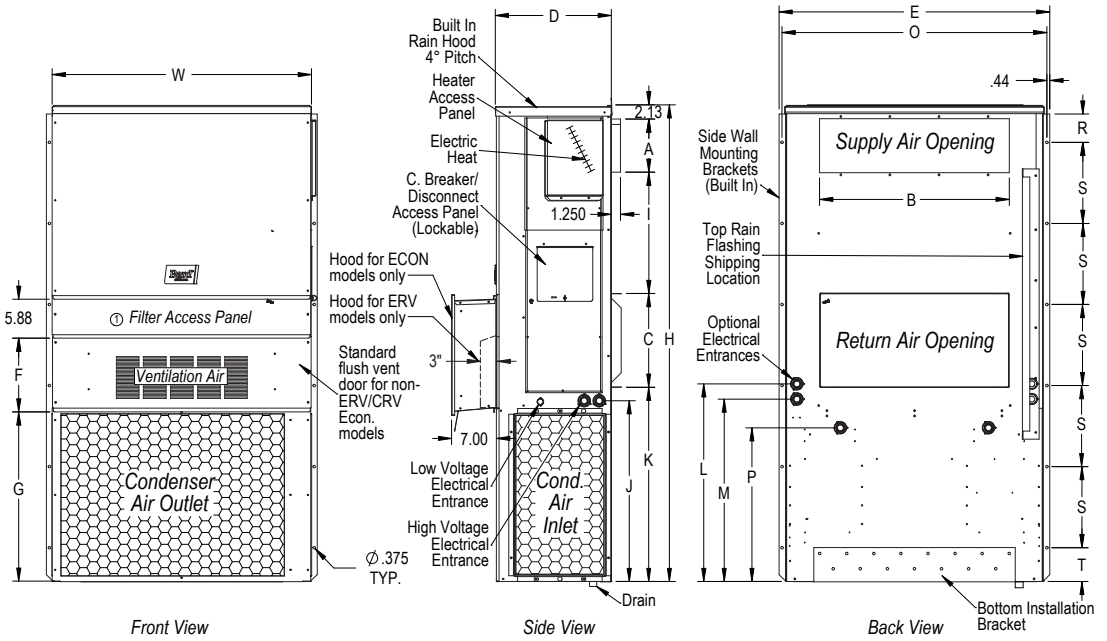
2 TON C24H TO 2.5 TON C30H RIGHT SIDE CONTROLS CABINET DIMENSIONS

DIMENSIONS OF C24 - C30 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	
C24H C30H	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
C24H, C30H	15"	20"	10'

MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS		
MODELS ①	SUPPLY AIR DUCT FIRST 3 FT.	CABINET
C24H, C30H	1/4"	0"

① Refer to the Installation Manual for more detailed information.



3 TON C36H TO 5 TON C60H CENTER CONTROLS CABINET DIMENSIONS

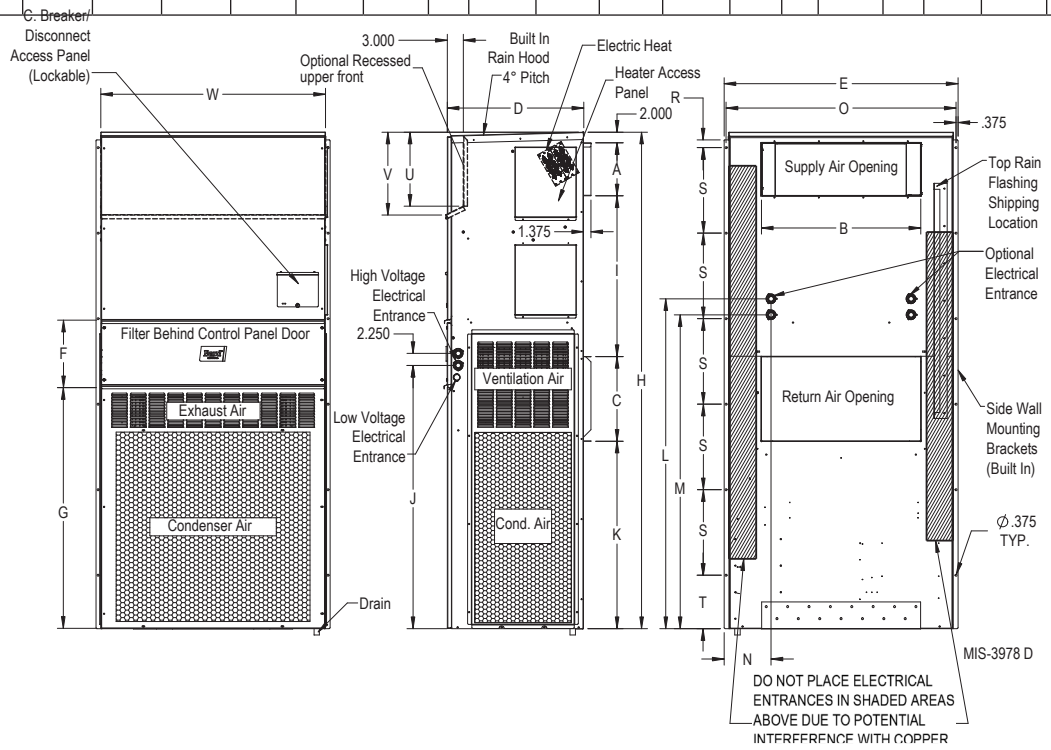
DIMENSIONS OF C36 - C60 BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS (NOMINAL)																							
MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN		UNIT CABINET															
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	R	S	T	U	V	
C36H C42H	42	25.52	84.88	9.88	29.88	15.88	29.88	43.88	12.63	39.06	30	53.75	26.94	55.59	52.59	8.82	43	1.438	16	1.88	10.50	12.00	
C48H C60H	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
C42H, C48H C60H	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
C42H, C48H C60H	1/4"	0"

Refer to the Installation Manual for more detailed information.



////// 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 MOTOR VOLTAGE	INDOOR MOTOR AMPS	IN-DOOR MOTOR HP	OUTDOOR MOTOR VOLTAGE	OUT-DOOR MOTOR AMPS	OUT-DOOR MOTOR HP
C24HF-A	Right Side	230/208V	1	60	197-253V	10/11.6	10.3	62	230/208V	1.4/1.5	1/3	230/208V	1.0/1.0	1/5
C24HF-B	Right Side	230/208V	3	60	197-253V	6.2/7.2	6.3	56	230/208V	1.4/1.5	1/3	230/208V	1.0/1.0	1/5
C24HF-C	Right Side	460V	3	60	414-506V	4.3	3.8	29	230/208V	1.5	1/3	460V	.5	1/5
C30HF-A	Right Side	230/208V	1	60	197-253V	13.2/15.3	14.6	82	230/208V	1.7/1.8	1/3	230/208V	1.0/1.1	1/5
C30HF-B	Right Side	230/208V	3	60	197-253V	7.2/8.3	7.9	66	230/208V	1.7/1.8	1/3	230/208V	1.0/1.1	1/5
C30HF-C	Right Side	460V	3	60	414-506V	5.1	4.8	39	230/208V	1.8	1/3	460V	.6	1/5
C36HF-A	Right Side	230/208V	1	60	197-253V	15.6/17.4	14.6	90	230/208V	2.3/2.5	1/2	230/208V	2.0/2.0	1/3
C36HF-B	Right Side	230/208V	3	60	197-253V	10.6/11.9	9.9	82	230/208V	2.3/2.5	1/2	230/208V	2.0/2.0	1/3
C36HF-C	Right Side	460V	3	60	414-506V	5.8	4.8	44.3	230/208V	2.5	1/2	460V	1.0	1/3
C42HF-A	Unit Front	230/208V	1	60	197-253V	18.4/21.5	18.2	106	230/208V	2.9/3.0	1/2	230/208V	1.9/1.9	1/3
C42HF-B	Unit Front	230/208V	3	60	197-253V	11.6/13.6	11.5	114	230/208V	2.9/3.0	1/2	230/208V	1.9/1.9	1/3
C42HF-C	Unit Front	460V	3	60	414-506V	7.7	6.5	56	230/208V	3.0	1/2	460V	1.0	1/3
C48HF-A	Unit Front	230/208V	1	60	197-253V	19.8/23.7	18.3	138	230/208V	3.0/3.1	3/4	230/208V	1.9/1.9	1/3
C48HF-B	Unit Front	230/208V	3	60	197-253V	12.9/15.5	11.9	112	230/208V	3.0/3.1	3/4	230/208V	1.9/1.9	1/3
C48HF-C	Unit Front	460V	3	60	414-506V	8.8	6.8	61.8	230/208V	3.1	3/4	460V	1.0	1/3
C60HF-A	Unit Front	230/208V	1	60	197-253V	23.9/27.6	25.2	147.3	230/208V	3.7/3.9	3/4	230/208V	3.8/4.0	1/2
C60HF-B	Unit Front	230/208V	3	60	197-253V	13.1/15.1	13.8	150	230/208V	3.7/3.9	3/4	230/208V	3.8/4.0	1/2
C60HF-C	Unit Front	460V	3	60	414-506V	7.6	6.9	58	230/208V	3.9	3/4	460V	2.0	1/2

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
C24	330 lbs.	357 lbs.	R-454B	6.50 lbs.	6.07 lbs.	Scroll	ECM	Dual Blower	750 - .15	PSC	20" Axial	2000
C30	345 lbs.	372 lbs.	R-454B	6.19 lbs.	5.69 lbs.	Scroll	ECM	Dual Blower	900 - .15	PSC	20" Axial	2000
C36	535 lbs.	550 lbs.	R-454B	6.81 lbs.	6.69 lbs.	Scroll	ECM	Dual Blower	1100 - .15	PSC	24" Axial	3000
C42	570 lbs.	580 lbs.	R-454B	8.75 lbs.	8.13 lbs.	Scroll	ECM	Dual Blower	1250 - .15	PSC	24" Axial	3000
C48	600 lbs.	610 lbs.	R-454B	9.75 lbs	9.25 lbs.	Scroll	ECM	Dual Blower	1450 - .20	ECM	24" Axial	3000
C60	600 lbs.	610 lbs.	R-454B	9.13 lbs.	9.13 lbs.	Scroll	ECM	Dual Blower	1650 - .20	ECM	24" Axial	3900

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.

4.) Weights provided are units that have step down transformers. Remove approximately 20 to 30lbs for "A" and "B" voltage units.

/////// AVAILABLE HEATER PACKAGES AND FIELD WIRING DATA - C24H TO C36H 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	
C24HF-A	00	230/208-1	LUGS	1	18	25					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	18	25					WMCB-03A
	04	230/208-1	C BREAKER	1	39	40					EHCH024A-A04
	08	230/208-1	C BREAKER	1	60	60					EHCH024A-A08
C24HF-B	00	230/208-3	LUGS	1	13	15					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	13	15					WMCB-01B
	05	230/208-3	C BREAKER	1	28	30					EHWH024A-B05
	09	230/208-3	C BREAKER	1	40	40					EHCH024A-B09
C24HF-C	00	460-3	DISCONNECT	1	8	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	8	15					WMPD-01C
	05	460-3	DISCONNECT	1	15	15					EHWH030A-C05
C30HF-A	00	230/208-1	LUGS	1	24	30					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	24	30					WMCB-04A
	04	230/208-1	C BREAKER	1	45	45					EHCH030A-A04
	08	230/208-1	C BREAKER	1 or 2	65	70	24	42	30	45	EHCH030A-A08
C30HF-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					EHCH030A-B05
	09	230/208-3	C BREAKER	1	43	45					EHCH030A-B09
C30HF-C	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
C36HF-A	0Z	230/208-1	C BREAKER	1	25	30					WMCBC-04A
	05	230/208-1	C BREAKER	1	51	60					EHCH042A-A05
	10	230/208-1	C BREAKER	1 or 2	77	80	25	52	30	60	EHCH036A-A10
	15	230/208-1	C BREAKER	1 or 2	84	90	32	52	35	60	EHCH036A-A15
C36HF-B	0Z	230/208-3	C BREAKER	1	20	25					WMCBC-03B
	05	230/208-3	C BREAKER	1	35	35					EHCH036A-B05
	09	230/208-3	C BREAKER	1	47	50					EHCH036B-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH042A-B15
C36HF-C	0Z	460-3	DISCONNECT	1	10	15					WMCBC-06C
	0C	460-3	C BREAKER	1	10	15					NOT AVAILABLE
	05	460-3	DISCONNECT	1	17	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	23	25					EHCH036A-C09
	15	460-3	DISCONNECT	1	26	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 - C42H TO C60H 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	
C42HF-A	0Z	230/208-1	C BREAKER	1	30	35					WMCBC-05A
	05	230/208-1	C BREAKER	1	56	60					EHCH042A-A05
	10	230/208-1	C BREAKER	1 or 2	82	90	30	52	35	60	EHCH042A-A10
	15	230/208-1	C BREAKER	1 or 2	85	90	33	52	35	60	EHCH036A-A15
C42HF-B	0Z	230/208-3	C BREAKER	1	22	25					WMCBC-03B
	05	230/208-3	C BREAKER	1	37	40					EHWH042A-B05
	09	230/208-3	C BREAKER	1	49	50					EHCH036B-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH042A-B15
C42HF-C	0Z	460-3	DISCONNECT	1	12	15					WMCBC-06C
	0C	460-3	C BREAKER	1	12	15					NOT AVAILABLE
	05	460-3	DISCONNECT	1	20	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	26	30					EHCH036A-C09
	15	460-3	DISCONNECT	1	26	30					EHCH036A-C15
C48HF-A	0Z	230/208-1	C BREAKER	1	31	35					WMCBC-05A
	05	230/208-1	C BREAKER	1	57	60					EHCH048A-A05
	10	230/208-1	C BREAKER	1 or 2	83	90	31	52	35	60	EHCH042A-A10
	15	230/208-1	C BREAKER	1 or 2	85	90	33	52	35	60	EHCH036A-A15
C48HF-B	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	50					EHCH036B-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH048A-B15
C48HF-C	0Z	460-3	DISCONNECT	1	13	15					WMCBC-06C
	0C	460-3	C BREAKER	1	13	15					NOT AVAILABLE
	05	460-3	DISCONNECT	1	20	20					EHCH048A-C05
	09	460-3	DISCONNECT	1	26	30					EHCH048A-C09
	15	460-3	DISCONNECT	1	26	30					EHCH048A-C15
C60HF-A	0Z	230/208-1	C BREAKER	1	42	50					WMCBC-08A
	05	230/208-1	C BREAKER	1 or 2	68	70	42	26	50	30	EHCH060B-A05
	10	230/208-1	C BREAKER	1 or 2	94	100	42	52	50	60	EHCH060B-A10
	15	230/208-1	C BREAKER	1 or 2	94	100	42	52	50	60	EHCH060B-A15
	20	230/208-1	C BREAKER	1 or 2	112	125	60	52	60	60	EHCH060A-A20
C60HF-B	0Z	230/208-3	C BREAKER	1	28	35					WMCBC-05B
	05	230/208-3	C BREAKER	1	43	45					EHCH048A-B05
	09	230/208-3	C BREAKER	1	55	60					EHCH060A-B09
	15	230/208-3	C BREAKER	1	55	60					EHCH060A-B15
C60HF-C	0Z	460-3	DISCONNECT	1	14	20					WMCBC-06C
	0C	460-3	C BREAKER	1	14	20					NOT AVAILABLE
	05	460-3	DISCONNECT	1	22	25					EHCH060A-C05
	09	460-3	DISCONNECT	1	28	30					EHCH060A-C09
	15	460-3	DISCONNECT	1	28	30					EHCH060A-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 - C24H TO C36H 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	
C24HFDA	00	230/208-1	LUGS	1	18	25					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	18	25					WMCB-03A
	04	230/208-1	C BREAKER	1	39	40					EHCH024A-A04
	08	230/208-1	C BREAKER	1	60	60					EHCH024A-A08
C24HFDB	00	230/208-3	LUGS	1	13	15					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	13	15					WMCB-01B
	05	230/208-3	C BREAKER	1	28	30					EHCH024A-B05
	09	230/208-3	C BREAKER	1	40	40					EHCH024A-B09
C24HFDC	00	460-3	DISCONNECT	1	8	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	8	15					WMPD-01C
	05	460-3	DISCONNECT	1	15	15					EHWH030A-C05
C30HFDA	00	230/208-1	LUGS	1	25	30					NOT NEEDED
	0Z	230/208-1	C BREAKER	1	25	30					WMCB-04A
	04	230/208-1	C BREAKER	1	46	50					EHCH030ADA04
	08	230/208-1	C BREAKER	1 or 2	67	70	25	42	30	45	EHCH030A-A08
C30HFDB	00	230/208-3	LUGS	1	17	20					NOT NEEDED
	0Z	230/208-3	C BREAKER	1	17	20					WMCB-02B
	05	230/208-3	C BREAKER	1	32	35					EHCH030ADB05
	09	230/208-3	C BREAKER	1	44	45					EHCH030A-B09
C30HFDC	00	460-3	LUGS	1	10	15					NOT NEEDED
	0Z	460-3	DISCONNECT	1	10	15					WMPD-01C
	05	460-3	DISCONNECT	1	17	20					EHWH030A-C05
	09	460-3	DISCONNECT	1	23	25					EHCH030ADC09
C36HFDA	0Z	230/208-1	C BREAKER	1	26	30					WMCBC-04A
	05	230/208-1	C BREAKER	1	52	60					EHCH042A-A05
	10	230/208-1	C BREAKER	1 or 2	78	80	26	52	30	60	EHCH036A-A10
	15	230/208-1	C BREAKER	1 or 2	85	90	33	52	35	60	EHCH036A-A15
C36HFDB	0Z	230/208-3	C BREAKER	1	20	25					WMCBC-03B
	05	230/208-3	C BREAKER	1	35	35					EHCH036A-B05
	09	230/208-3	C BREAKER	1	47	50					EHCH036B-B09
	15	230/208-3	C BREAKER	1	52	60					EHCH042A-B15
C36HFDC	0Z	460-3	DISCONNECT	1	10	15					WMCBC-06C
	0C	460-3	C BREAKER	1	10	15					NOT AVAILABLE
	05	460-3	DISCONNECT	1	18	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	24	25					EHCH036A-C09
	15	460-3	DISCONNECT	1	26	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 - C42H TO C60H 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	
C42HFDA	0Z	230/208-1	C BREAKER	1	31	40					WMCBC-06A
	05	230/208-1	C BREAKER	1	57	60					EHCH048A-A05
	10	230/208-1	C BREAKER	1 or 2	83	90	31	52	40	60	EHCH048A-A10
	15	230/208-1	C BREAKER	1 or 2	86	90	34	52	40	60	EHCH048A-A15
C42HFDB	0Z	230/208-3	C BREAKER	1	23	25					WMCBC-04B
	05	230/208-3	C BREAKER	1	38	40					EHWH042A-B05
	09	230/208-3	C BREAKER	1	50	50					EHCH036B-B09
	15	230/208-3	C BREAKER	1	53	60					EHCH042A-B15
C42HFDC	0Z	460-3	DISCONNECT	1	13	15					WMCBC-06C
	0C	460-3	C BREAKER	1	13	15					NOT AVAILABLE
	05	460-3	DISCONNECT	1	20	20					EHCH036A-C05
	09	460-3	DISCONNECT	1	26	30					EHCH036A-C09
	15	460-3	DISCONNECT	1	27	30					EHCH036A-C15
C48HFDA	0Z	230/208-1	C BREAKER	1	31	40					WMCBC-06A
	05	230/208-1	C BREAKER	1 or 2	57	60					EHCH048A-A05
	10	230/208-1	C BREAKER	1 or 2	83	90	31	52	40	60	EHCH048A-A10
	15	230/208-1	C BREAKER	1 or 2	86	90	34	52	40	60	EHCH048A-A15
C48HFDB	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	50					EHCH036B-B09
	15	230/208-3	C BREAKER	1	53	60					EHCH048A-B15
C48HFDC	0Z	460-3	DISCONNECT	1	13	15					WMCBC-06C
	0C	460-3	C BREAKER	1	13	15					NOT AVAILABLE
	05	460-3	DISCONNECT	1	20	25					EHCH048A-C05
	09	460-3	DISCONNECT	1	26	30					EHCH048A-C09
	15	460-3	DISCONNECT	1	27	30					EHCH048A-C15
C60HFDA	0Z	230/208-1	C BREAKER	1	42	50					WMCBC-08A
	05	230/208-1	C BREAKER	1 or 2	68	70	42	26	50	30	EHCH060B-A05
	10	230/208-1	C BREAKER	1 or 2	94	100	42	52	50	60	EHCH060B-A10
	15	230/208-1	C BREAKER	1 or 2	94	100	42	52	50	60	EHCH060B-A15
	20	230/208-1	C BREAKER	1 or 2	112	110	60	52	60	60	EHCH060A-A20
C60HFDB	0Z	230/208-3	C BREAKER	1	28	35					WMCBC-05B
	05	230/208-3	C BREAKER	1	43	45					EHCH048A-B05
	09	230/208-3	C BREAKER	1	55	60					EHCH060A-B09
	15	230/208-3	C BREAKER	1	55	60					EHCH060A-B15
C60HFDC	0Z	460-3	DISCONNECT	1	14	20					WMCBC-06C
	0C	460-3	C BREAKER	1	14	20					NOT AVAILABLE
	05	460-3	DISCONNECT	1	22	25					EHCH060A-C05
	09	460-3	DISCONNECT	1	28	30					EHCH060A-C09
	15	460-3	DISCONNECT	1	28	30					EHCH060A-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.

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-NE3	C24, C30	5.0 (2.3)	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-NE5	C56, C42, C48, C60	13 (5.9)	No Hood	Barometric	None			
	A	FAD-BE3	C24, C30	9.0 (4.0)	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-BE5	C36, C42, C48, C60	16 (7.3)	No Hood	Barometric	None			
No Vent	B	BOP-3	C24, C30	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.
		BOPLATE-5	C36, C42, C48, C60	14 (6.4)	No Hood	No Air path	None			
Commercial Ventilators	M	CRV-F3-*	C24, C30	35.0 (15.9)	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-F5	C36, C42, C48, C60	42 (19.1)	No Hood	Motor,Spring Return	24VAC			
	V	CRV-V3-*	C24, C30	35.0 (15.9)	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-V5A	C36, C42, C48, C60	42 (19.1)	No Hood	Motor,Spring Return	24VAC or 2-10VDC			
Free Cooling Economizers	D	ECON-NC3A-*	C24, C30	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-NC5A	C36, C42, C48, C60	44 (20)	No Hood	Motor,Spring Return	2-10VDC			
	S	ECON-S3-*	C24, C30	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.
	Y	ECON-DB3A-*	C24, C30	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-DB5A	C36, C42, C48, C60	44 (20)	No Hood	Motor,Spring Return	24VAC or 0-10VDC			
	Z	ECON-WD3A-*	C24, C30	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-WD5A	C36, C42, C48, C60	44 (20)	No Hood	Motor,Spring Return	24VAC or 0-10VDC			
Energy Recovery Vents	R (230V Units)	ERV-FA3-*	C24, C30	54.0 (24.4)	4" (10.2cm)	**208/230V** Blowers	24VAC - 3 speeds	Up to 400cfm	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-FA5	C36, C42, C48, C60	87 (39.5)	No Hood	**208/230V** Blowers	24VAC - 3 speeds	Up to 450cfm		
	R (460V Units)	ERV-FC3-*	C24, C30	54.0 (24.4)	4" (10.2cm)	**460V** Blowers	24VAC - 3 speeds	Up to 400cfm		
		ERV-FA5	C36, C42, C48, C60	87 (39.5)	No Hood	**208/230V** Blowers (uses unit 460V to 230V transformer).	24VAC - 3 speeds	Up to 450cfm		

INDOOR AIRFLOW AND STATIC INFORMATION

MODEL	RATED EXTERNAL STATIC PRESSURE (“ WC)	MAXIMUM EXTERNAL STATIC PRESSURE (“ WC)	CONTINUOUS FAN AND VENTILATION ONLY	PART LOAD COOLING AND HEATING (1ST STAGE)	FULL LOAD COOLING AND HEATING (2ND STAGE) AND DEHUMIDIFICATION
C24HF	0.15” WC	0.50” WC	545 CFM	545 CFM	750 CFM
C30HF	0.15” WC	0.50” WC	650 CFM	650 CFM	900 CFM
C36HF	0.15” WC	0.50” WC	800 CFM	800 CFM	1100 CFM
C42HF	0.15” WC	0.50” WC	800 CFM	900 CFM	1250 CFM
C48HF	0.20” WC	0.50” WC	850 CFM	1050 CFM	1450 CFM
C60HF	0.20” WC	0.50” WC	850 CFM	1150 CFM	1650 CFM

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
C24HF C30HF	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, C	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.
C36HF C42HF C48HF C60HF	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, C	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	
All Units Except Recessed Cabinet Models	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.
All Units Except Recessed Cabinet Models	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.
All Units	4	**COATED**	**COATED**	**COATED**	STANDARD	Evaporator coil and condenser coil are both corrosion coated. Cabinet interior condenser section is coated.
All Units	5	**COATED**	**COATED**	**COATED**	**COATED**	Evaporator coil and condenser coil are both corrosion coated. Cabinet interior and exterior is coated.

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	UNIT MODELS	DESCRIPTION OF FACTORY INSTALLED COMPONENTS
X	**All Units**	Standard Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, and Refrigerant leak detector (RDS).
E	**All Units**	Standard controls **and Low Ambient Control.**
F	**C36-C60**	Standard controls, **Low Ambient Control and Dirty Filter Pressure Switch.**
J	**All Units**	Standard controls, **Low Ambient Control and Refrigerant Pressure Alarm Relay with NO/NC Contacts.**
Q	**All Units**	Standard controls, **Low Ambient Control and PTCR Start Kit.**
R	**All Units**	Standard controls, **Low Ambient Control, Outdoor Thermostat.**
T	**All Units**	Standard controls, **Low Ambient Control, Outdoor Thermostat, Hard Start Kit.**

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 are provided within the kit.

KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
CMH-42	C24, C30	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - fan cycling.
CMH-40	C36, C42, C48, C60	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - fan cycling.
CMC-15	C24, C30	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	C36, C42, C48, C60	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	C24, C30, C48	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.
SK116	C42	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.
SK118	C60	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	C24, C30	Outdoor Thermostat Kit to disable comp. cooling below 50°F outdoor temp. Adjusts between 50° and 0°F.
CMH-36	C36, C42, C48, C60	Outdoor Thermostat Kit to disable comp. cooling below 50°F outdoor temp. Adjusts between 50° and 0°F.
CMC-34	C24, C30	Compressor Control Module Lockout Alarm Relay Kit.
CMC-35	C36, C42, C48, C60	Compressor Control Module Lockout Alarm Relay Kit.
CMC-36	C24, C30, C36	Crank case heater kit. 230V - 1PH units only.
CMC-40	C24, C30, C36	Crank case heater kit. 230V - 3PH units only.
CMC-37	C24, C30, C36	Crank case heater kit. 460V - 3PH units only.
CMC-38	C42, C48, C60	Crank case heater kit. 230V - 1PH units only.
CMC-41	C42, C48, C60	Crank case heater kit. 230V - 3PH units only.
CMC-39	C42, C48, C60	Crank case heater kit. 460V - 3PH units only.
CMC-31	C24, C30	Dirty Filter Alarm Pressure Sensor Kit. Provides Normally Open Contacts for thermostat or controller.
CMC-33	C36, C42, C48, C60	Dirty Filter Alarm Pressure Sensor Kit. Provides Normally Open Contacts for thermostat or controller.

C36H Series Sound Data Matrix

Distance from Unit	dBA @ 10ft.				dBA @ 5ft.			
Wall Curb	None	CCURBF	CCURBF	CCURBF	None	CCURBF	CCURBF	CCURBF
Supply Accessories	Grille	Grille	Grille	WAPFB51	Grille	Grille	Grille	WAPFB51
Return Accessories	Grille	Grille	WAPR11A	WAPR11A	Grille	Grille	WAPR11A	WAPR11A
CRV vent setting	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm
Vent only	31.9	33.7	30.0	25.6	34.4	35.3	31.3	28.7
Part Load Compressor	48.4	39.7	37.4	36.4	53.1	41.4	39.3	38.8
Full Load Compressor	48.4	40.6	39.5	37.3	53.6	43.0	41.2	40.1
Integrated dBA	***44.8***	***37.5***	***35.4***	***33.5***	***49.6***	***39.4***	***37.1***	***36.1***
Sound Power @ Full Load Comp.	58.0			44.0				
NC Curve @ Full Load Comp.	NC 45	NC 33	NC 32	NC 32	NC 51	NC 38	NC 35	NC 35
Outdoor Sound @ Full Load Comp.	63.3							

C42H Series Sound Data Matrix

Distance from Unit	dBA @ 10ft.				dBA @ 5ft.			
Wall Curb	None	CCURBF	CCURBF	CCURBF	None	CCURBF	CCURBF	CCURBF
Supply Accessories	Grille	Grille	Grille	WAPFB51	Grille	Grille	Grille	WAPFB51
Return Accessories	Grille	Grille	WAPR11A	WAPR11A	Grille	Grille	WAPR11A	WAPR11A
CRV vent setting	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm
Vent only	34.9	31.8	30.6	26.3	37.2	33.9	32.7	29.0
Part Load Compressor	47.4	40.4	37.7	36.7	51.1	41.1	39.6	38.7
Full Load Compressor	49.4	43.3	41.5	38.6	52.6	45.2	43.5	41.5
Integrated dBA	***44.8***	***38.6***	***36.6***	***34.2***	***48.2***	***40.1***	***38.6***	***36.7***
Sound Power @ Full Load Comp.	55.5			45.4				
NC Curve @ Full Load Comp.	NC 45	NC 38	NC 33	NC 33	NC 48	NC 38	NC 38	NC 35
Outdoor Sound @ Full Load Comp.	62.2							

C48H Series Sound Data Matrix

Distance from Unit	dBA @ 10ft.				dBA @ 5ft.			
Wall Curb	None	CCURBF	CCURBF	CCURBF	None	CCURBF	CCURBF	CCURBF
Supply Accessories	Grille	Grille	Grille	WAPFB51	Grille	Grille	Grille	WAPFB51
Return Accessories	Grille	Grille	WAPR11A	WAPR11A	Grille	Grille	WAPR11A	WAPR11A
CRV vent setting	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm
Vent only	32.7	29.8	28.6	26.2	35.3	32.2	30.9	28.4
Part Load Compressor	45.0	39.4	37.9	37.0	49.9	41.2	39.8	38.7
Full Load Compressor	47.2	42.3	40.7	39.2	51.1	44.1	42.7	41.3
Integrated dBA	***42.5***	***37.5***	***36.0***	***34.6***	***46.8***	***39.4***	***38.0***	***36.6***
Sound Power @ Full Load Comp.	55.8			46.2				
NC Curve @ Full Load Comp.	NC 41	NC 35	NC 33	NC 31	NC 47	NC 36	NC 36	NC 34
Outdoor Sound @ Full Load Comp.	61.0							

C60H Series Sound Data Matrix

Distance from Unit	dBA @ 10ft.				dBA @ 5ft.			
Wall Curb	None	CCURBF	CCURBF	CCURBF	None	CCURBF	CCURBF	CCURBF
Supply Accessories	Grille	Grille	Grille	WAPFB51	Grille	Grille	Grille	WAPFB51
Return Accessories	Grille	Grille	WAPR11A	WAPR11A	Grille	Grille	WAPR11A	WAPR11A
CRV vent setting	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm	450cfm
Vent only	33.6	31.4	27.7	25.4	35.8	31.8	30.4	28.2
Part Load Compressor	45.5	41.6	40.7	39.8	48.5	43.2	42.1	40.4
Full Load Compressor	50.9	46.8	45.2	41.4	53.9	48.8	46.4	44
Integrated dBA	***44.9***	***41.0***	***39.5***	***36.9***	***47.9***	***42.8***	***40.8***	***38.7***
Sound Power @ Full Load Comp.	55.5			50.7				
NC Curve @ Full Load Comp.	NC 45	NC 41	NC 40	NC 39	NC 48	NC 46	NC 41	NC 40
Outdoor Sound @ Full Load Comp.	64.7							

1. Integrated values calculated per ANSI/ASA S12.60-2009/Part 2, Section 5.2.2.1, Table 2 Triple Mode Type 3 HVAC System Duty Cycles: Ventilation 58%, Part Load 25%, Full Load 17%.

2. Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 40 dBa.

3. Results Referenced Were Recorded In The Bard Manufacturing Company, Inc. Sound Lab Facility. Actual Field Application Results May Vary With Classroom Design and Construction Methods.

/////// WALL CURB, SOUND, AND CABINET 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	UNITS USING CURB	DESCRIPTION
WWC3-*	C24, C30	Install to use with existing 2, 3, or 5 ton wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure.
WWC5-*	C36, C42, C48, C60	Install to use with existing 3 and 5 ton wall openings. Wall openings must provide sufficient airflow. Follow all instructions in curb and unit manual including clearances to combustibles and maximum duct static pressure.
CFCF-32-*	C24, C30	Upgrade from W18/W24 wall openings and Provide Sound Isolation. The supply and return are located in the curb back, and the return can be offset for additional sound reduction.
CFCT-32-*	C24, C30	Upgrade from W18/W24 wall openings and Provide Sound Isolation. The supply exits the top of the curb, then has a 90 degree adapter to enter the building under a soffit or overhang. The return can be offset for additional sound reduction.
CCURBF2430-*	C24, C30	Provides Sound Isolation and uses movable back panel with W30/W36 Wall Openings. The supply and return are located in the curb back, and the return can be offset for additional sound reduction.
CCURBT2430-*	C24, C30	Provides Sound Isolation and uses movable back panel with W30/W36 Wall Openings. The supply exits the top of the curb, then has a 90 degree adapter to enter the building under a soffit or overhang. The return can be offset for additional sound reduction.
CFCF-53-*	C36, C42, C48, C60	Upgrade from W30/W36 wall openings and Provide Sound Isolation. The supply and return are located in the curb back, and the return can be offset for additional sound reduction.
CFCT-53-*	C36, C42, C48, C60	Upgrade from W30/W36 wall openings and Provide Sound Isolation. The supply exits the top of the curb, then has a 90 degree adapter to enter the building under a soffit or overhang. The return can be offset for additional sound reduction.
CCURBF4860-*	C36, C42, C48, C60	Provides Sound Isolation and uses movable back panel with W42-W60 Wall Openings. The supply and return are located in the curb back, and the return can be offset for additional sound reduction.
CCURBT4860-*	C36, C42, C48, C60	Provide Sound Isolation uses movable back panel and W42-W60 Wall Openings. The supply exits the top of the curb, then has a 90 degree adapter to enter the building under a soffit or overhang. The return can be offset for additional sound reduction.
WAPR11A-*	All Units	Provides sound reduction inside a classroom or other indoor area. Indoor wall curb mounts to indoor wall and reduces air noise from return airstream. Movable back panel provides flexability with indoor mounting (horizontal or vertical positions). Available in White (1), Gray (4), or Beige (X).
WAPFB31-*	C24, C30	Provides sound reduction inside a classroom or other indoor area. Indoor wall curb mounts to indoor wall and reduces air noise from supply airstream. 4-way deflection grille provides directional control of supply airstream. Available in White (1), Gray (4), or Beige (X).
WAPFB51-*	C36, C42, C48, C60	
8620-367	C36, C42, C48, C60	Unit drain pan attaches to bottom of unit base to catch condensate water.

* 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 C36H through C60H 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-3	C24, C30	8" x 28" with 1" Flange 4 way deflection supply grille.
SG-5	C36, C42, C48, C60	10" x 30" with 1" Flange 4 way deflection supply grille.
RG-3	C24, C30	12" x 28" with 1" Flange return grille.
RG-5	C36, C42, C48, C60	16" x 30" with 1" Flange return grille.
SG-3W	C24, C30	8" x 28" with 2" Flange 4 way deflection supply grille.
SG-5W	C36, C42, C48, C60	10" x 30" with 2" Flange 4 way deflection supply grille.
RG-3W	C24, C30	12" x 28" with 2" Flange return grille.
RG-5W	C36, C42, C48, C60	16" x 30" with 2" Flange return grille.
RFG-3W	C24, C30	12" x 28" with 2" Flange return grille with filter bracket.*
RFG-5W	C36, C42, C48, C60	16" x 30" with 2" Flange return grille with filter bracket.*
RGDK-3W	C24, C30	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	C36, C42, C48, C60	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-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.

/////// 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
8620-262	C24, C30 - No Economizer	Standard Unit Crate for units without 7" economizer hood.
8620-276	C24, C30 - Economizer	Standard Unit Crate for units with 7" economizer hood.
8620-304	C36, C42	Standard Unit Crate - All Vent Options.
8620-305	C48, C60	Standard Unit Crate - All Vent 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.
8403-090	2 Heat/2 Cool	Temp. Settings per Day 4, 2, 1, 0 Programs per Week 7, 5-2, 5-1-1 or Nonprogrammable. Not recommended for models including electric heat. Review installation instructions for thermostat
8403-092	2 Heat/2 Cool	Programmable or Nonprogrammable, Wi-Fi with Lyric Phone application for wireless set point control.

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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