2 to 3 Ton (7.0 to 10.5 kw) 200V to 415V 50hz Air Conditioner Specifications
For Export Only

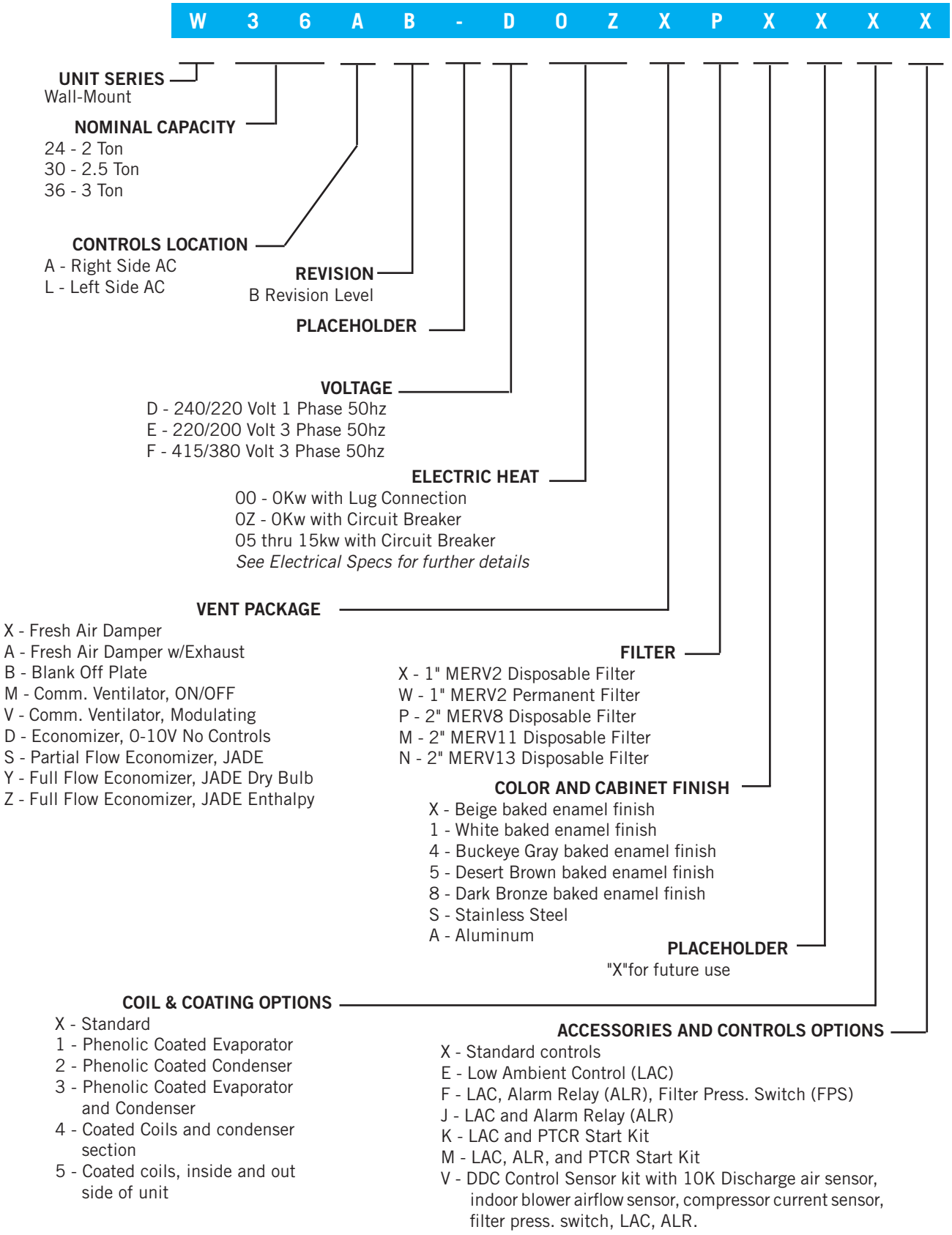
11EER W24AB-W36AB Series WALL-MOUNT™
11EER W24LB-W36LB Series WALL-MOUNT™

The Bard Wall-Mount Air Conditioner is a self contained energy efficient system, which is designed to offer maximum indoor comfort at a minimal cost without using valuable indoor floor space or outside ground space. This unit is the ideal product for versatile applications such as: new construction, modular offices, school modernization, telecommunication structures, portable structures, correctional facilities and many more. Factory or field installed accessories are available to meet specific job requirements for your unique application.

- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05 Fourth Edition
- Commercial Product - Not intended for residential application
- Bard is an ISO 9001:2015 Certified Manufacturer

Bard® SINCE 1914

/////// WALL-MOUNT NOMENCLATURE



/////// ENGINEERED FEATURES

NEW! EXCLUSIVE ***Non-Fiberglass Foil Faced Insulation:** Environmentally friendly high "R" value non-fiberglass insulation that is made with recycled denim and cotton materials used with a FSK foil face that is both durable and cleanable.

Durable Cabinet Construction: Multiple cabinet construction options are available for different outdoor conditions. Optional cabinet coatings may be ordered for extreme outdoor environments.

Easy Filter Access: A separate filter door is provided for ease of filter access during routine unit maintenance. 1" and 2" filters are available with a rating of up to MERV13.

Field or Factory Installed Vents: Multiple ventilation options are available as easily installed kits with electrical plugs, or Factory installed options that can be removed for service.

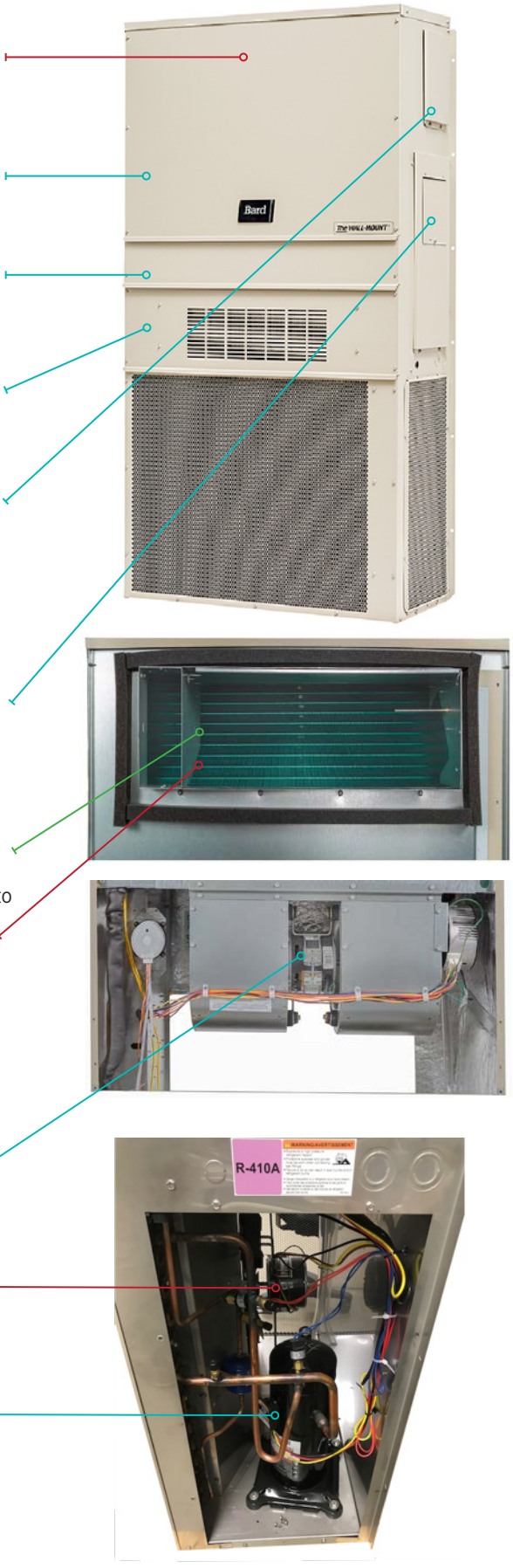
Electric Strip Heat: Reliable, comfortable heater packages feature an automatic limit and thermal cut-off safety control. Heater packages can be factory or field installed.

Built-in Circuit Breakers: Standard on all electric heat versions of single (240/220 volt) and three phase (220/200 volt) equipment. Toggle disconnects are standard on all electric heat versions of three phase (415/380 volt) equipment.

Reliable, Easy-to-Use Controls: Easily accessible through left or right control panel locations. A lockable hinged access cover to circuit protection is provided. Phase rotation monitor is standard on all 3 phase models. Adjustable compressor on/off delay timer (CCM) with diagnostic lights is standard on all models.

Green Fin Hydrophilic Evaporator Coil: Green fin stock is used to help prevent mold growth, aid with condensate drainage, and provide a limited amount of protection to corrosive particulates in the airstream.

***Balanced Climate™ Technology (patent pending):** High latent capacity humidity & sound reduction removes up to 35% more humidity than any other on the market with the use of a 2 stage thermostat or controlling device. Bard Balanced Climate™ innovation comes standard on all models.



ECM Indoor Brushless DC Motor Technology: 5 speed dual shaft motor provides quiet airflow operation when used with a twin blower assembly. Motor overload protection standard on all models.

Enclosed Condenser Motor: An enclosed casing condenser motor with ball bearings is used for reliable operation and extended motor life. Enclosed condenser motors are standard on all units.

High Efficiency Cooling: Scroll compressors for quiet, efficient cooling. Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements. A liquid line filter-drier to protect the system from moisture is standard on all units.

/////// UNIT MODES OF OPERATION

Cooling Operation: The Bard WA and WL Series WALL MOUNT products offer single stage cooling operation using R410A refrigerant. Copper tube/Aluminum green fin coils are used to provide high efficiency and easy serviceability. Scroll compressor technology delivers years of quiet, reliable operation.

Heating Operation: The Bard WA and WL Series WALL MOUNT products offer optional single or two stage heating operation using resistance heaters. Circuit breaker disconnect protection is standard in all units equipped with electric heat.

Ventilation Operation: The Bard WA and WL Series WALL MOUNT products offer optional ventilation operation that brings outdoor air into the structure. Vent options can be factory or field installed, and can be used to bring in outdoor air for occupants, save energy by using outdoor air for free cooling, or positively pressurize a structure. Exhaust air options allow room air to be vented outdoors when fresh air is being brought into the structure. Energy recovery options are also available for occupied structures which condition the air being brought in to save energy when ventilation is necessary regardless of outdoor temperature.

Balanced Climate™ Operation: The Bard WA and WL Series WALL MOUNT products offer an enhanced latent capacity stage that can be controlled by a two stage cooling thermostat. During the first cooling stage (Balanced Climate Mode), the unit will increase the amount of moisture removed during compressor operation. The second stage (standard mode) of cooling increases the sensible cooling capacity to increase the amount of heat removed from the structure during compressor operation. Available in high supply static applications. In order for Balanced Climate to be used, a jumper must be removed between Y1 and Y2. Unit is shipped with jumper in place and Balanced Climate disabled.

/////// ADVANCED FEATURE DESCRIPTIONS

ECM Indoor Blower Motor: Energy efficient indoor blower motors use EC constant torque technology with 5 pre-programmed speeds. By selecting the needed speed, the WALL MOUNT product can reduce or increase airflow. A NEMA48® frame enclosure is used. A medium and high speed tap can be user selected to offer the maximum CFM possible with the blower assembly.

- Efficient 5 speed ECM constant torque motor. 24VAC power used for speed selection.
- Fully potted electronic control module for moisture protection.
- 6000V surge protection.
- Dual shaft design with open air over (OAO) enclosure.

Outdoor Fan Motor: Outdoor fan motors use ball bearing construction and are fully enclosed for increased life expectancy.

- Single speed PSC motor.
- Totally enclosed motor housing protects motor windings and internal components from corrosion.
- Ball bearing design reduces motor wear from “windmill” affect when not in operation.

Non Fiberglass Cabinet Insulation: The WALL MOUNT products use advanced non-fiberglass insulation that is made with recycled denim materials. High "R" value, enhanced sound absorption, and reduced delamination are some of the features of this revolutionary product.

- Easy to clean and ramage resistant Foil FSK Facing.
- Fiberglass and Formaldehyde free.
- Meets ASTM E84, UL 723, NFPA 90A and 90B Standards.
- Thermal performance ASTM C518 k=.27@1” & 900gsm

CAPACITY AND EFFICIENCY RATINGS

MODELS	W24AB W24LB	W30AB W30LB	W36AB W36LB
Cooling Capacity BTUH ①	21,900	26,600	32,100
Cooling Capacity kw	6.41	7.99	9.4
EER	11.2	11.0	11.0

① Capacity is certified in accordance with ANSI/ARI Standard 390-2003.

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

SPECIFICATIONS 1-1/2 TON THROUGH 3 TON

MODELS	W24AB-D	W24AB-F W24LB-F	W30AB-D	W30AB-F W30LB-F	W36AB-D	W36AB-E	W36AB-F W36LB-F
Electrical Rating – 50 Hz	240/220 - 1	415/380 - 3①	240/220 - 1	415/380 - 3①	240/220 - 1	220/200 - 3	415/380 - 3①
Operating Voltage Range	198-254	342-456	198-254	342-456	198-254	180-242	342-456
Compressor--Circuit A							
Voltage	240/220	415/380	240/220	415/380	240/220	220/200	415/380
Rated Load Amps	8.3/9.4	5.0/5.7	9.6/10.9	6.1/6.9	11.4/13.3	7.1/8.3	4.7
Branch Circuit Selection Current	12.9	7.7	14.2	9.0	16.7	10.5	5.8
Lock Rotor Amps	58.3/58.3	55.4/55.4	73/73	58/58	79/79	73/73	38
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser							
Fan Motor--HP--RPM	1/5 - 1090	1/5 - 1090	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075
Fan Motor--Amps	1.1	1.1	1.2	1.2	1.2	1.2	0.6
Fan--DIA/CFM	18" - 1800	18" - 1800	20" - 2400	20" - 2400	20" - 2200	20" - 2200	20" - 2200
Blower Motor & Evap.							
Blower Motor—HP-SPD	1/3-5	1/3-5	1/2-5	1/2-5	1/2-5	1/2-5	1/2-5
Blower Motor—Amps	0.7	0.7	1.4	1.4	2.3	2.3	1.0
Motor Type	ECM	ECM	ECM	ECM	ECM	ECM	ECM
CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil)	800 - .1	800 - .1	950 - .15	950 - .15	1150 - .15	1150 - .15	1150 - .15
Filter Sizes (mm) STD.	405x635x25	405x635x25	405x765x25	405x765x25	405x765x25	405x765x25	405x765x25
Basic Unit Weight-LBS.	335 (151.9)	335 (151.9)	350 (158.7)	350 (158.7)	380 (172.3)	380 (172.3)	380 (172.3)
Barometric Fresh Air Damper (X)	4.0 (1.8)	4.0 (1.8)	5.0 (2.2)	5.0 (2.2)	5.0 (2.2)	5.0 (2.2)	5.0 (2.2)
Barometric Damper w/ Exhaust (A)	8.0 (3.6)	8.0 (3.6)	9.0 (4.08)	9.0 (4.08)	9.0 (4.08)	9.0 (4.08)	9.0 (4.08)
Blank-Off Plate (B)	1.0 (.45)	1.0 (.45)	1.0 (.45)	1.0 (.45)	1.0 (.45)	1.0 (.45)	1.0 (.45)
Commercial Room Ventilator (M, V)	31.0 (14.06)	31.0 (14.06)	35.0 (15.8)	35.0 (15.8)	35.0 (15.8)	35.0 (15.8)	35.0 (15.8)
Economizer (D, S, Z)	37.0 (16.7)	37.0 (16.7)	37.0 (16.7)	37.0 (16.7)	37.0 (16.7)	37.0 (16.7)	37.0 (16.7)
Energy Recovery Ventilator (R)	54.0 (24.4)	54.0 (24.4)	65.0 (29.4)	65.0 (29.4)	65.0 (29.4)	65.0 (29.4)	65.0 (29.4)

①415/380-3 electrical rating are 3-phase wye (star) systems requiring three (3) phase legs plus neutral and ground.

NOTE: The indoor & outdoor motor and 24V transformer primary are connected at 240V derived from one (1) phase leg to neutral. This is internally connected and no field wiring required.

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.	UNITS USING CRATE	DESCRIPTION
8620-263	W24A, W24L	Standard Unit Crate
8620-275	W24A, W24L	Units with "Y and Z" Economizer With Factory Installed 7" Hood
8620-262	W30A, W30L, W36A, W36L	Standard Unit Crate
8620-276	W30A, W30L, W36A, W36L	Units with "Y and Z" Economizer With Factory Installed 7" Hood

COOLING APPLICATION DATA - OUTDOOR TEMPERATURE ①②

MODEL	RETURN AIR (DB/WB)	COOLING CAPACITY	75°F (23.9°C)	85°F (29.4°C)	95°F (35.0°C)	105°F (40.6°C)	115°F (46.1°C)	125°F (51.7°C)
W24	75/62°F (23.9/16.7°C)	Total Cooling	23300 (6.82)	21200 (6.21)	19100 (5.59)	17200 (5.04)	15500 (4.54)	13900 (4.07)
		Sensible Cooling	18000 (5.27)	17100 (5.01)	16200 (4.74)	15400 (4.51)	14700 (4.31)	13900 (4.07)
	80/67°F (26.7/19.4°C)	Total Cooling	24900 (7.29)	23400 (6.85)	21900 (6.41)	20300 (5.95)	18600 (5.45)	16900 (4.95)
		Sensible Cooling	17400 (5.1)	16900 (4.95)	16300 (4.77)	15800 (4.63)	15200 (4.45)	14600 (4.28)
	85/72°F (29.4/22.2°C)	Total Cooling	29700 (8.7)	26900 (7.88)	24300 (7.12)	22000 (6.44)	19600 (5.74)	17400 (5.1)
		Sensible Cooling	17900 (5.24)	17000 (4.98)	16100 (4.72)	15100 (4.42)	14100 (4.13)	13000 (3.81)
W30	75/62°F 23.9/16.7°C)	Total Cooling	28100 (8.23)	25500 (7.47)	23300 (6.82)	21200 (6.21)	19200 (5.62)	17200 (5.04)
		Sensible Cooling	21400 (6.27)	20400 (5.97)	19500 (5.71)	18600 (5.45)	17700 (5.18)	17000 (4.98)
	80/67°F (26.7/19.4°C)	Total Cooling	29900 (8.76)	28400 (8.32)	26600 (7.79)	24900 (7.29)	23000 (6.74)	21000 (6.15)
		Sensible Cooling	20800 (6.09)	20300 (5.95)	19700 (5.77)	19100 (5.59)	18400 (5.39)	17800 (5.21)
	85/72°F (29.4/22.2°C)	Total Cooling	35600 (10.43)	32500 (9.52)	29600 (8.67)	26900 (7.88)	24200 (7.09)	21600 (6.33)
		Sensible Cooling	21300 (6.24)	20300 (5.95)	19300 (5.65)	18200 (5.33)	17000 (4.98)	15800 (4.63)
W36	75/62°F (23.9/16.7°C)	Total Cooling	34000 (9.96)	30900 (9.05)	28000 (8.2)	25300 (7.41)	22900 (6.71)	20600 (6.03)
		Sensible Cooling	26600 (7.79)	25200 (7.38)	23800 (6.97)	22600 (6.62)	21600 (6.33)	20600 (6.03)
	80/67°F (26.7/19.4°C)	Total Cooling	36300 (10.63)	34300 (10.05)	32100 (9.4)	29900 (8.76)	27500 (8.05)	25100 (7.35)
		Sensible Cooling	25800 (7.56)	25000 (7.32)	24200 (7.09)	23300 (6.82)	22500 (6.59)	21700 (6.35)
	85/72°F (29.4/22.2°C)	Total Cooling	43200 (12.65)	39400 (11.54)	35600 (10.43)	32300 (9.46)	29000 (8.49)	25800 (7.56)
		Sensible Cooling	26400 (7.73)	25100 (7.35)	23500 (6.88)	22100 (6.47)	20700 (6.06)	19300 (5.65)

① Below 65°F, unit requires a factory or field installed low ambient control.
② Outdoor temperatures shown are measured at the condenser section air inlet.
③ Return air temperature °F.

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

UNIT CHARGE RATES

UNIT	STD. UNIT - LBS.
W24AB/LB - 11 EER Right & Left A/C	4.250
W30AB/LB - 11 EER Right & Left A/C	4.125
W36AB/LB- 11 EER Right & Left A/C	4.500

BALANCED CLIMATE APPLICATION DATA (OPTIONAL, REQUIRES 2 COOLING STAGE THERMOSTAT)

MODEL	RETURN AIR (DB/WB) ②	COOLING CAPACITY	75°F (23.9°C)	85°F (29.4°C)	95°F (35.0°C)	105°F (40.6°C)	115°F (46.1°C)	125°F (51.7°C)
W24	75/62 (23.9/16.7°C)	Total Cooling	24300 (7.12)	22400 (6.56)	20400 (5.97)	18600 (5.45)	16700 (4.89)	14800 (4.33)
		Sensible Cooling	16900 (4.95)	16200 (4.74)	15400 (4.51)	14600 (4.27)	13700 (4.01)	12800 (3.75)
		Latent Cooling	7400 (2.16)	6200 (1.81)	5000 (1.46)	4000 (1.17)	3000 (0.87)	2000 (0.58)
		% Latent Increase	20%	27%	**38%**	50%	70%	100%
		Lbs. H2O per Hr.	6.981	5.849	4.717	3.774	2.83	1.887
	80/67 (26.7/19.4°C)	Total Cooling	25900 (7.59)	24800 (7.26)	23400 (6.85)	21900 (6.41)	20100 (5.89)	18000 (5.27)
		Sensible Cooling	16400 (4.80)	16000 (4.68)	15500 (4.54)	14900 (4.36)	14200 (4.16)	13400 (3.92)
		Latent Cooling	9500 (2.78)	8800 (2.57)	7900 (2.31)	7000 (2.05)	5900 (1.72)	4600 (1.34)
		% Latent Increase	14%	18%	23%	29%	37%	46%
		Lbs. H2O per Hr.	8.962	8.302	7.453	6.604	5.566	4.34
	85/72 (29.4/22.2°C)	Total Cooling	30900 (9.05)	28500 (8.35)	26000 (7.61)	23600 (6.91)	21200 (6.21)	18500 (5.42)
		Sensible Cooling	16800 (4.92)	16100 (4.71)	15200 (4.45)	14200 (4.16)	13100 (3.83)	11900 (3.48)
		Latent Cooling	14100 (4.13)	12400 (3.63)	10800 (3.16)	9400 (2.75)	8100 (2.37)	6600 (1.93)
		% Latent Increase	8%	12%	16%	19%	25%	26%
		Lbs. H2O per Hr.	13.3	11.7	10.19	8.868	7.642	6.226
W30	75/62 (23.9/16.7°C)	Total Cooling	29100 (8.52)	26700 (7.82)	24400 (7.15)	22300 (6.53)	20300 (5.94)	18300 (5.36)
		Sensible Cooling	20700 (6.06)	19500 (5.71)	18600 (5.45)	17600 (5.15)	16700 (4.89)	15800 (4.63)
		Latent Cooling	8400 (2.46)	7200 (2.11)	5800 (1.69)	4700 (1.37)	3600 (1.05)	2500 (0.73)
		% Latent Increase	13%	22%	**29%**	40%	56%	88%
		Lbs. H2O per Hr.	7.925	6.792	5.472	4.434	3.396	2.358
	80/67 (26.7/19.4°C)	Total Cooling	3100 (0.90)	29600 (8.67)	28000 (8.20)	26300 (7.70)	24400 (7.15)	22300 (6.53)
		Sensible Cooling	20000 (5.86)	19300 (5.65)	18700 (5.48)	18000 (5.27)	17300 (5.07)	16600 (4.86)
		Latent Cooling	11000 (3.22)	10300 (3.01)	9300 (2.72)	8300 (2.43)	7100 (2.08)	5700 (1.67)
		% Latent Increase	9%	14%	18%	23%	30%	39%
		Lbs. H2O per Hr.	10.38	9.717	8.774	7.83	6.698	5.377
	85/72 (29.4/22.2°C)	Total Cooling	37000 (10.84)	34000 (9.96)	31100 (9.11)	28400 (8.32)	25700 (7.53)	23000 (6.74)
		Sensible Cooling	20500 (6.00)	19400 (5.68)	18400 (5.39)	17200 (5.04)	16000 (4.68)	14700 (4.30)
		Latent Cooling	16500 (4.83)	14600 (4.27)	12700 (3.72)	11200 (3.28)	9700 (2.84)	8300 (2.43)
		% Latent Increase	5%	8%	11%	14%	19%	23%
		Lbs. H2O per Hr.	15.57	13.77	11.98	10.57	9.151	7.83
W36	75/62 (23.9/16.7°C)	Total Cooling	35200 (10.31)	32000 (9.37)	28900 (8.46)	26300 (7.70)	23800 (6.97)	21400 (6.27)
		Sensible Cooling	24700 (7.23)	23300 (6.82)	21900 (6.41)	20700 (6.06)	19500 (5.71)	18500 (5.42)
		Latent Cooling	10500 (3.07)	8700 (2.54)	7000 (2.05)	5600 (1.64)	4300 (1.26)	2900 (0.84)
		% Latent Increase	23%	28%	**34%**	46%	67%	100%
		Lbs. H2O per Hr.	9.906	8.208	6.604	5.283	4.057	2.736
	80/67 (26.7/19.4°C)	Total Cooling	37600 (11.01)	35500 (10.40)	33200 (9.72)	31000 (9.08)	28600 (8.38)	26100 (7.64)
		Sensible Cooling	23900 (7.00)	23000 (6.74)	22100 (6.47)	21200 (6.21)	20300 (5.94)	19400 (5.68)
		Latent Cooling	13700 (4.01)	12500 (3.66)	11100 (3.25)	9800 (2.87)	8300 (2.43)	6700 (1.96)
		% Latent Increase	16%	18%	20%	24%	33%	45%
		Lbs. H2O per Hr.	12.92	11.79	10.47	9.245	7.83	6.321
	85/72 (29.4/22.2°C)	Total Cooling	44800 (13.12)	40800 (11.95)	36900 (10.81)	33500 (9.81)	30100 (8.82)	26900 (7.88)
		Sensible Cooling	24500 (7.18)	23100 (6.76)	21700 (6.35)	20200 (5.92)	18700 (5.48)	17200 (5.04)
		Latent Cooling	20300 (5.94)	17700 (5.18)	15200 (4.45)	13300 (3.89)	11400 (3.34)	9700 (2.84)
		% Latent Increase	9%	11%	13%	16%	20%	26%
		Lbs. H2O per Hr.	19.15	16.7	14.34	12.55	10.75	9.151

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

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

/////// INDOOR AIRFLOW CFM @ STATIC PRESSURES - EC BLOWER CONSTANT TORQUE MOTOR WITH ADJUSTMENT SPEEDS

ESP	W18 BLOWER TAPS - DRY/WET COIL					W24 BLOWER TAPS - DRY/WET COIL CFM				
In H2O	Blower and Vent Only	Balanced Climate	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating	Blower and Vent Only	Balanced Climate	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating
0"	680/665	520/510	680/655	865/855	Not Used	890/835	630/625	890/835	1005/980	1025/1035
.1"	615/600	435/420	615/600	810/800	Not Used	825/800	580/565	825/800	960/930	990/980
.15"	585/565	395/380	585/565	785/770	Not Used	795/780	550/535	795/780	935/910	975/955
.2"	555/535	Not Used	555/535	760/745	Not Used	770/755	525/500	770/755	910/885	955/930
.3"	495/480	Not Used	495/480	710/695	Not Used	715/705	Not Used	715/705	870/840	915/885
.4"	440/425	Not Used	440/425	665/650	Not Used	670/650	Not Used	670/650	825/805	870/845
.5"	385/375	Not Used	385/375	620/605	Not Used	630/585	Not Used	630/585	785/765	825/805

ESP	W30 BLOWER TAPS - DRY/WET COIL CFM					W36 BLOWER TAPS - DRY/WET COIL CFM				
In H2O	Blower and Vent Only	Balanced Climate	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating	Blower and Vent Only	Balanced Climate	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating
0"	1050/1020	830/825	1050/1020	1170/1135	1200/1205	1255/1225	925/900	1255/1225	1365/1345	1495/1480
.1"	1000/975	765/745	1000/975	1120/1105	1170/1155	1205/1175	850/825	1205/1175	1320/1300	1445/1425
.15"	975/950	730/705	975/950	1095/1085	1150/1130	1180/1150	815/790	1180/1150	1295/1275	1415/1395
.2"	950/925	700/670	950/925	1070/1060	1130/1105	1155/1125	780/755	1155/1125	1275/1250	1385/1360
.3"	890/870	630/605	890/870	1025/1015	1085/1055	1100/1070	700/685	1100/1070	1225/1195	1313/1280
.4"	830/815	Not Used	830/815	975/955	1040/1000	1050/1015	Not Used	1050/1015	1180/1140	1225/1185
.5"	770/755	Not Used	770/755	930/980	985/945	1000/960	Not Used	1000/960	1130/1075	1130/1075

Above data is with 1" standard throwaway filter and 1" washable filter.
For optional 2" pleasted filter - reduce ESP by .15in.
See installation instructions for maximum ESP information on various KW application.

Five factory programmed speed taps (torque settings) are available for the indoor blower motor, and are selected through different unit modes of operation. These modes are energized by 24VAC signals from the low voltage terminal block located inside the control panel by a thermostat or other controlling device.

1. Blower and Ventilation Only Speed is the CFM amount for continuous fan and ventilation without a call for cooling.

2. Balanced Climate Speed is the indoor CFM amount for user selectable Balanced Climate operation and optional Mechanical De humidification. To use Balanced Climate, remove the jumper between Y1 and Y2 on the low voltage terminal strip. A 2 stage cool ing thermostat is then used to control blower airflow stages. Be sure to follow all guidelines provided in the installation manual. A controls kit that includes a low ambient control (LAC) must be used for Balanced Climate Operation if ventilation options are to be used or cooling operation will occur below a 60° outdoor temperature. Balanced Climate can be used for duct free and ducted applications below 0.20"WC ESP total static. Balanced Climate provides increased moisture removal during the cooling cycle, but is not a replacement for optional mechanical dehumidification. Optional mechanical dehumidification provides moisture removal without significantly cooling the space being conditioned. Mechanical dehumidification is highly recommended for appli cations requiring indoor humidity control for schools, public areas, agricultural, pharmaceutical, and areas with high outdoor humidity and varying indoor heat load.

3. Default LO Cooling and Heating Speed is the indoor CFM amount for cooling operation using the default blower speed tap selec tion. This speed is labeled as LO on the speed selection terminal strip inside the unit control panel. All units ship with cooling and heating operation at LO cooling and heating speed, and provides the optimal airflow amount for normal use.

4. Optional MED Cooling and Heating Speed is selected manually during unit setup and provides a higher indoor CFM for hi static duct applications and increased airflow. This speed is labeled as MED on the speed selection terminal strip inside the unit control panel.

5. Optional HI Cooling and Heating Speed is selected manually during unit setup and provides the highest allowable indoor CFM amount. Not recommended for standard unit operation. This speed is labeled as HI on the speed selection terminal strip inside the unit control panel.

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

DUCT FREE	INDOOR COOLING OPERATION @ 5 FT.			INDOOR COOLING OPERATION @ 10 FT.			OUTDOOR @ 10 FT.
Unit	Standard Grilles	With WMICF	With WMICF and WAPR-11	Standard Grilles	With WMICF	With WMICF and WAPR-11	Standard Features
W24AB/W24LB	52.4	49.7	46.9	50.4	46.9	44.8	62.3
W30AB/W30LB	53.9	52.8	50.3	52.9	50.4	48.8	67.1
W36AB/W36LB	53.9	52.8	50.3	52.9	50.4	48.8	67.1

DUCTED SUPPLY	INDOOR COOLING OPERATION @ 5 FT.			INDOOR COOLING OPERATION @ 10 FT.			OUTDOOR @ 10 FT.
Unit	Standard Grilles	With WMICF	With WMICF and WAPR-11	Standard Grilles	With WMICF	With WMICF and WAPR-11	Standard Features
W24AB/W24LB	51.9	45.4	44	48.9	42.9	41.4	62.3
W30AB/W30LB	54.5	47.3	45.6	47.3	44.7	43.2	67.1
W36AB/W36LB	54.5	47.3	51.1	47.3	44.7	48.5	67.1

Integrated values calculated per ANSI/ASA S12.60-2009/Part 2, Section 5.2.2.1, Integrated Sound Values 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 45dBa. 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.

/////// ELECTRICAL SPECIFICATIONS — W**AB AND W**LB SERIES

MODEL	Rated Volts & Phase	Operating Voltage Range	No. Field Power Circuits	② Minimum Circuit Amps	① Maximum External Fuse or Circuit Breaker
W24AB-D0Z	240/220-1	254-198	1	16	20
D05			1	28	30
D08			1	44	45
W24AB/LB-F0Z	415/380-3 ③	456-342	1	9	15
F05			1	11	15
W30AB-D0Z	240/220-1	254-198	1	19	30
D05			1	29	30
D10			1	55	60
W30AB/LB-F0Z	415/380-3③	456-342	1	10	15
F07			1	17	20
F12			1	26	30
W36AB-D0Z	240/220-1	254-198	1	24	35
D05			1	29	35
D10			1	55	60
W36AB-E0Z	230/200-3	242-180	1	21	30
E06			1	21	30
E12			1	39	40
W36AB/LB-F0Z	415/380-3③	456-342	1	13	15
F07			1	17	20
F12			1	26	30

① Maximum size of the time delay fuse or "D" rated circuit breaker for protection of field wiring conductors.
② These "Minimum Circuit Amp" values are to be used for sizing the field power conductors.
③ 415/380-3 Electrical Ratings are 3-phase wye (star) systems requiring three (3) phase legs plus neutral and ground. NOTE: The indoor and outdoor motors and 24V transformer primary are connected at 240V derived from one (1) phase leg to neutral. This is internally connected and no field wiring required.

NOTE: All wiring must conform to NIC/EIC latest edition.

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

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

Model	W24AB-D		W24AB-F W24LB-F		W30AB-D W36AB-D		W36AB-E		W30AB-F W36AB-F W36LB-F	
KW	240V-1 WATTS	220V-1 WATTS	415V-3 WATTS	380V-3 WATTS	240V-1 WATTS	220V-1 WATTS	220V-3 WATTS	200V-3 WATTS	415V-3 WATTS	380V-3 WATTS
5.0	5000	4201	4883	4095	5000	4201				
8.0	8000	6722								
10.0					10000	8403				
6.0							5042	4167		
7.0									6728	5641
12.0							10083	8333	11213	9401

HEATER PACKAGES - FIELD INSTALLED "A" SERIES RIGHT-HAND UNITS

- Designed for adding Electric Heat to 0 KW Units
- Circuit Breaker Standard on 230/208V Models
- ETL US & Canada Listed
- Toggle Disconnect Standard on 460V Models

AIR CONDITIONER MODELS	-D00 MODELS 240/220-1		-E00 MODELS 230/200-3		-F00 MODELS 415/380-3	
	HEATER MODEL #	KW	HEATER MODEL #	KW	HEATER MODEL #	KW
W24AB	WMCB-02A EHW1TAB-A05 EHW24A-A08	0Z 5 8	N/A		WMPD-01C EHWH24B-C06	0Z 5
W30AB	WMCB-03A EHW3TAB-A05 EHW3TA-A10	0Z 5 10	N/A		WMPD-01C EHW3TA-C09 EHW3TA-C15	0Z 7 12
W36AB	WMCB-03A EHW3TA-A05 EHW3TAB-A10	0Z 5 10	WMCB-04B EHW30A-B06 EHWA03-E12C	0Z 6 12	WMPD-01C EHW3TA-C09 EHW3TA-C15	0Z 7 12

① These heater packages approved for use in dehumidification versions with hot gas reheat.

HEATER PACKAGES - FIELD INSTALLED "L" SERIES LEFT-HAND UNITS

AIR CONDITIONER MODELS	-D00 MODELS 240/230-1		-E00 MODELS 230/200-3		-C00 MODELS 415/380-3	
	HEATER MODEL #	KW	HEATER MODEL #	KW	HEATER MODEL #	KW
W24LB	N/A	N/A	N/A	N/A	WMPD-01CL EHWH24B-C06L	0Z 05
W30LB	N/A	N/A	N/A	N/A	WMPD-01CL	0Z
W36LB	N/A	N/A	N/A	N/A	WMPD-01CL EHW3TA-C09L EHW3TA-C15L	0Z 7 12

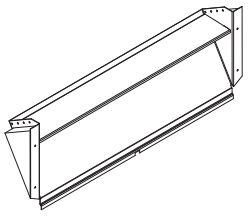
/////// WALL MOUNT™ VENTILATION OPTION SELECTION CHART

VENT CODE	FIELD INSTALL KIT	UNIT	OPERATION	DESCRIPTION
X	FAD-NE2	W24AB/LB	Barometric	Air damper provides slight positive room pressure during blower operation, No room air exhaust.
	FAD-NE3	W30AB/LB, W36AB/LB	Barometric	
A	FAD-BE2	W24AB/LB	Barometric	Air damper provides slight positive room pressure during blower operation, barometric room air exhaust.
	FAD-BE3	W30AB/LB, W36AB/LB	Barometric	
B	BOP2	W24AB/LB	No Ventilation	Insulated plates used to seal vent intake and exhaust openings.
	BOP3	W30AB/LB, W36AB/LB	No Ventilation	
M	CRV-F2-*	W24AB/LB	24V On/Off	Vent Provides motorized spring return on/off operation to bring in outdoor air and exhaust room air. No intake hood required. Replaces the motorized fresh air damper.
	CRV-F3-*	W30AB/LB, W36AB/LB	24V On/ff	
V	CRV-V2-*	W24AB/LB	24V On/Off, 0-10V	Vent provides motorized spring return 0-10V variable or on/off operation to bring in outdoor air and exhaust room air. Minimum and occupied vent blade positions. No intake hood required.
	CRV-V3-*	W30AB/LB, W36AB/LB	24V On/Off, 0-10V	
D	ECON-NC2-*	W24AB/LB	2-10V only	Full flow Economizer that uses 2-10V signal from a DDC control system or thermostat. 7" intake hood required.
	ECON-NC3-*	W30AB/LB, W36AB/LB	2-10V only	
S	ECON-S2-*	W24AB/LB	JADE Controller	Partial flow Economizer that uses the JADE controller and included sensors to operate free cooling. Enthalpy operation user adjustable. No intake hood required.
	ECON-S3-*	W30AB/LB, W36AB/LB	JADE Controller	
Y	ECON-DB2-*	W24AB/LB	JADE Controller	Full flow Economizer that uses the JADE controller and included sensors to operate free cooling. Dry Bulb operation user adjustable. 7" intake hood required.
	ECON-DB3-*	W30AB/LB, W36AB/LB	JADE Controller	
Z	ECON-WD2-*	W24AB/LB	JADE Controller	Full flow Economizer that uses the JADE controller and included sensors to operate free cooling. Enthalpy operation user adjustable. 7" intake hood required.
	ECON-WD3-*	W30AB/LB, W36AB/LB	JADE Controller	

* = Insert color to match unit (X= Beige, 1= White, 4= Buckeye Gray, 5= Desert Brown, 8= Dark Bronze)

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

"X" Vent Code Option – Standard Fresh Air Damper No Exhaust (FAD-NE)
The barometric fresh air damper without exhaust is a standard feature on all models. It is installed on the inside of the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The damper opens during blower operation and closes when the blower is off. Adjustable blade stops allow different amounts of outside air to be introduced into the building and can be easily locked closed if required. The room exhaust air path is sealed with an insulated block-off plate.

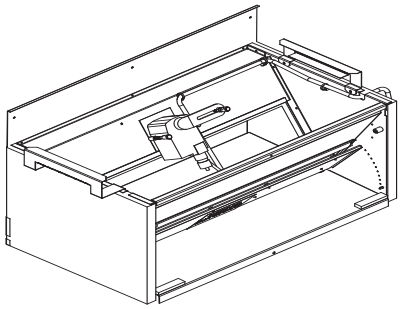


Barometric Fresh Air Damper

"A" Vent Code Option – Fresh Air Damper with Barometric Exhaust (FAD-BE)
The barometric fresh air damper with exhaust is an optional feature on all models. It is installed on the inside of the service door and allows outside ventilation air, up to 25% of the total airflow rating of the unit, to be introduced through the air inlet openings and to be mixed with the conditioned air. The damper opens during blower operation and closes when the blower is off. Adjustable blade stops allow different amounts of outside air to be introduced into the building and can be easily locked closed if required. The room exhaust air path uses a barometric damper design that relieves room pressurization during outdoor air intake. Adjustable blade stops allow room pressure adjustment by controlling the amount of exhaust air leaving the building.

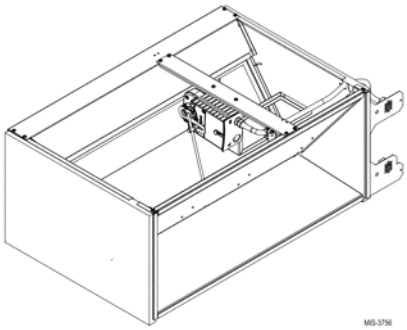
"B" Vent Code Option – Blank Off Plate (BOP)
Blank off plates are installed on the inside of the service door. The plate covers the air inlet, which restricts any outside air from entering the unit. The blank off plate option may be utilized in applications where outside air intake is not required by state or local codes.

"M" Vent Code Option – Commercial Room Ventilator with fixed blade position (CRV-F)
The built-in commercial room ventilator with fixed blade position is internally mounted behind the service door and allows outside ventilation air, up to 50% of the total airflow rating of the unit. It includes a built-in exhaust air damper for room pressurization relief. Blade stops are easily adjustable to set intake airflow. The commercial room ventilator with fixed blade position (CRV-F) is a simple and innovative approach to improving the indoor air quality by providing fresh air intake and exhaust capability. The CRV-F can be activated by indoor blower operation or independently controlled by a thermostat or controller using a 24VAC occupancy or schedule signal. Blade operation is controlled by a on/off spring return motor that closes rapidly when de-energized. Blade seals provide minimal blade leakage.



Commercial Room Ventilator-Fixed

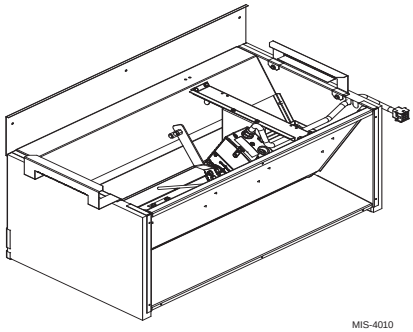
"V" Vent Code Option – Commercial Room Ventilator with Modulating Blade position (CRV-V)
The built-in commercial room ventilator with modulating blade position is internally mounted behind the service door and allows outside ventilation air, up to 50% of the total airflow rating of the unit. It includes a built-in exhaust air damper for room pressurization relief. Blade seals allow for minimal blade leakage. A ventilation control board allows multiple blade settings to adjust intake airflow. By setting multiple blade positions, pre-purge, occupied, and unoccupied airflow amounts are possible with capable thermostats and controllers. The CRV-V also allows for 0-10V or 4-20ma input for modulating ventilation control based on CO2 levels. Complies with ANSI/ASHRAE Standard 62.1 "Ventilation for Acceptable Indoor Air Quality" and other state and local ventilation codes that require outdoor air intake but not economizer operation.



Commercial Room Ventilator- Modulating

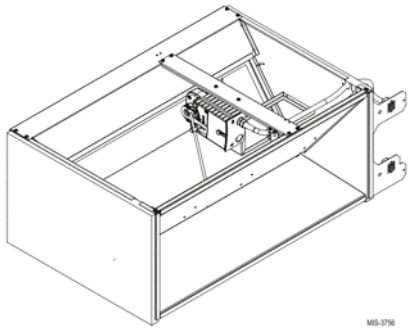
/////// WALL MOUNT™ VENTILATION OPTIONS SPECIFICATIONS (continued)

"D" Vent Code Option – Economizer without controls installed (ECON-NC)
The built-in economizer is internally mounted behind the service door and allows outside ventilation air, up to 100% of the total airflow rating of the unit. It includes a built-in exhaust air damper for room pressurization relief. The economizer is designed to provide "free cooling" when outside air conditions are cool and dry enough to satisfy cooling requirements without running the compressor. This provides lower operating costs, extended equipment life, and cooling operation at cold (-40°F) outdoor temperatures. The ECON-NC does not contain unit ventilation controls, and provides a 2-10V Belimo actuator motor with spring return. Blade seals are used to minimize blade leakage. Controls are provided by using a field supplied DDC system, or a thermostat capable of 2-10V economizer operation. Indoor and outdoor temperature sensors are not provided with the ventilation option, and must be ordered separately.



Economizer, No Controls

"S, Y and Z" Vent Code Option – Economizers with JADE® Controller (ECON-S, ECON-DB, ECON-WD)
The JADE controlled economizer is internally mounted behind the service door and allows outside ventilation air. The ECON-S allows up to 50% of the total airflow of the unit. The ECON-WD and ECON-WB allows up to 100% of the total airflow rating of the unit. Both include a built-in exhaust air damper for room pressurization relief. The economizer is designed to provide "free cooling" when outside air conditions are cool and dry enough to satisfy cooling requirements without running the compressor. This provides lower operating costs, extended equipment life, and cooling operation down to -40°F outdoor temperatures. The "S" economizer does not require an intake hood. The "Y" and "Z" economizer requires a 7" air intake hood.



Economizer, Jade Control

"S, Y and Z" Vent Code Option – (ECON-S, ECON-DB, ECON-WD) JADE® Controller Information
JADE Economizer controls provide Demand Ventilation Control, operational checkout, an easy to read LCD screen, configurable freeze protection, and LCD displayed economizer component failure alarms. Minimum vent position, occupancy ventilation, and 0-10V CO2 input is available for use with select CO2 room sensors. Economizer operation can be controlled by outdoor dry bulb (ECON-DB) or outdoor enthalpy (ECON-S, ECON-WB) measurement. When used with a Bard economizer assembly, the JADE controller is able to meet many state and local codes for economizer use.

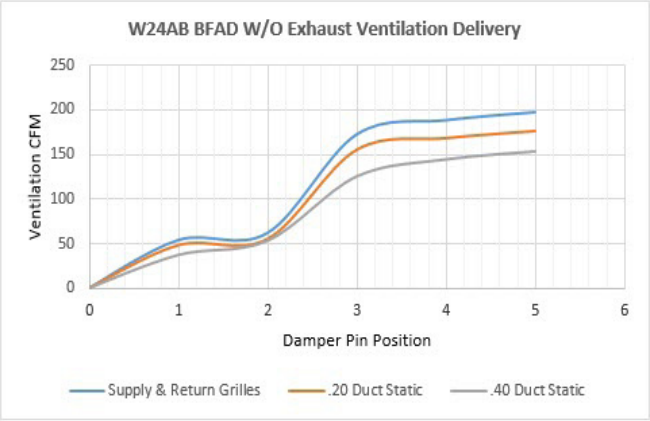

Jade Control Module

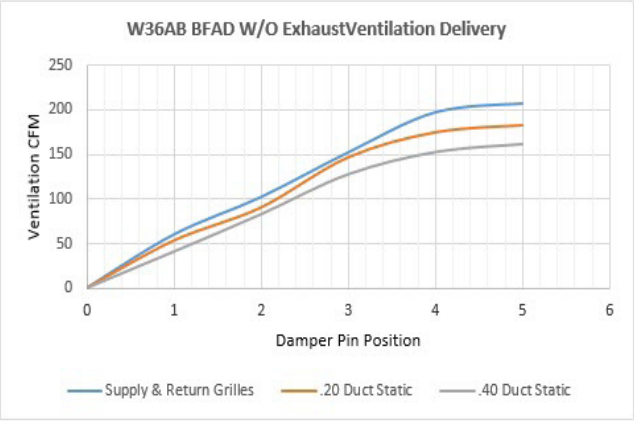
JADE Controller Specifications:

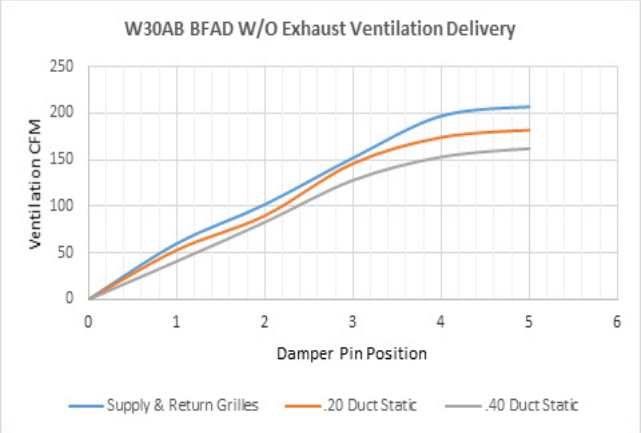
- Operating Humidity Range (% RH) 5 to 95% RH, non-condensing
- Contact Ratings 30 VAC-- 1.5 A Run, 3.5 A Inrush
- Voltage 20 to 30 VAC RMS
- Operating Temperature Range (F) -40 F to +150 F
- Operating Temperature Range (C) -40 C to +65 C
- Approvals, Federal Communications Commission Compliant
- Approvals, CE Compliant
- Complies with California Title 24
- Mixed air and Outdoor Sensor using Sylk Bus.
- Output 0-10 VDC to actuator, Sylk Bus.

////// WALL MOUNT™ BAROMETRIC DAMPER (FAD) PERFORMANCE

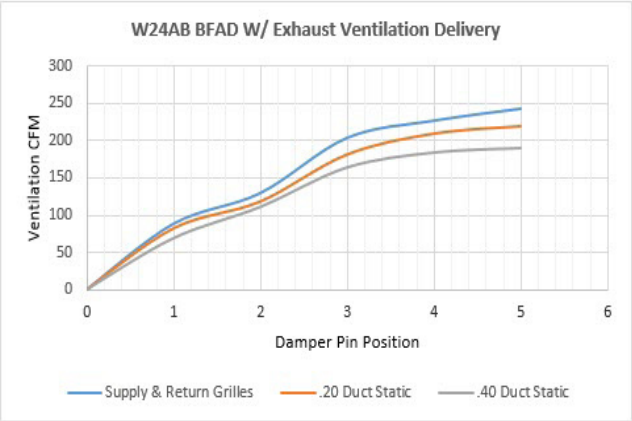
"X" (FAD-NE2 and FAD-NE3) Barometric Damper Without Exhaust Vent Code Options

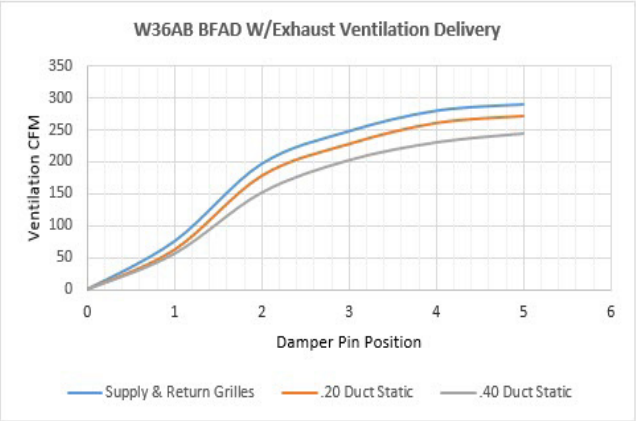


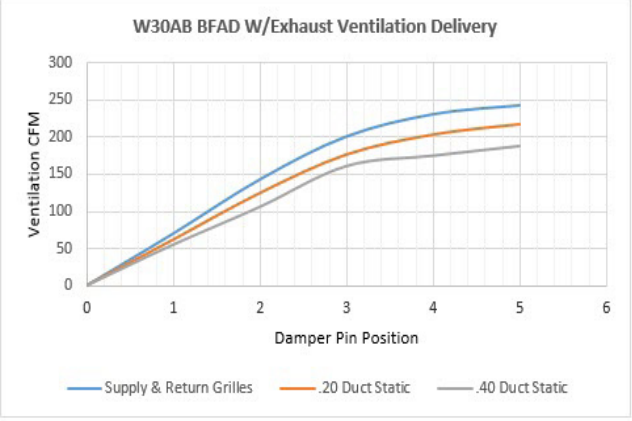




"A" (FAD-BE2 and FAD-BE3) Barometric Damper With Exhaust Vent Code Options

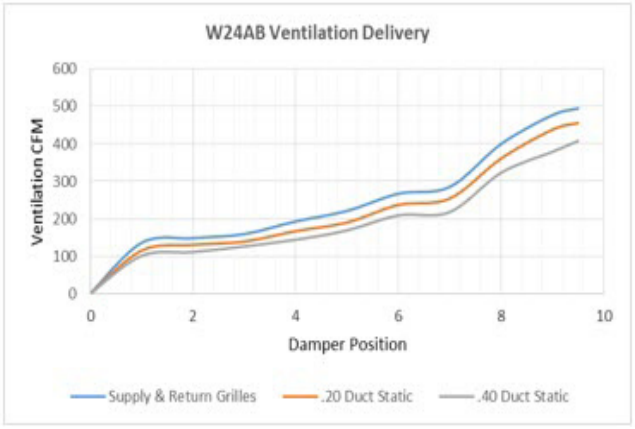


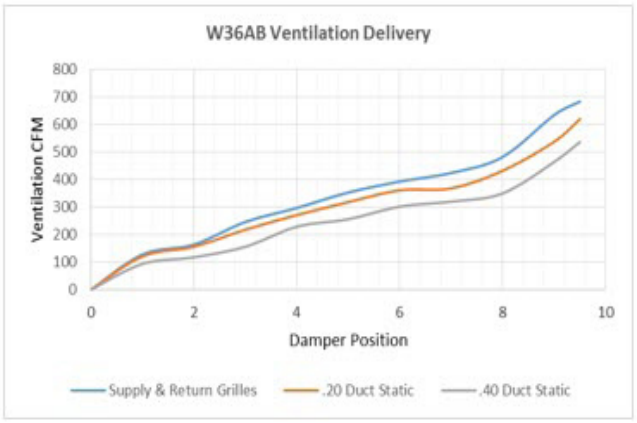


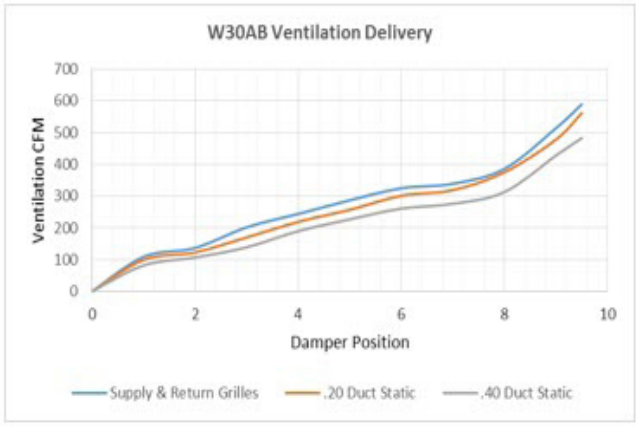


////// WALL MOUNT™ VENTILATION AIRFLOW CHARTS

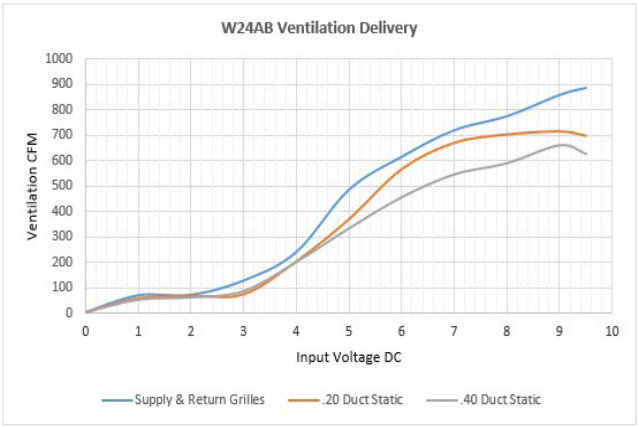
"M" (CRV-F), "V" (CRV-V), "S" (ECON-S) Vent Code Options

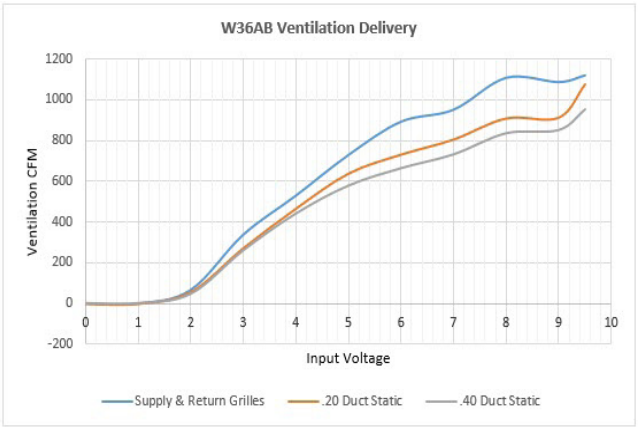


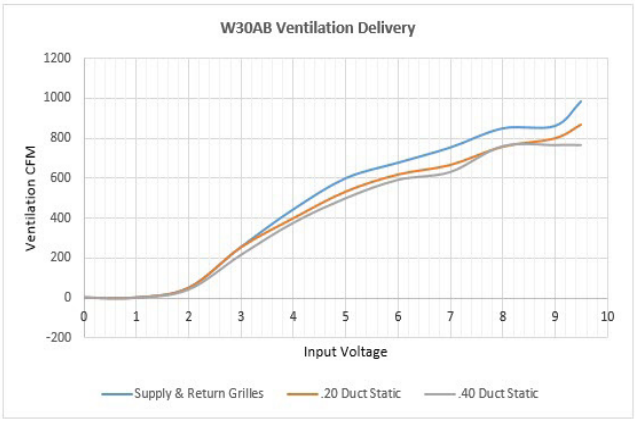




"Y" (ECON-DB) and "Z" (ECON-WD) Vent Code Options







CABINET AND COIL OPTIONS

Cabinet Finish Options

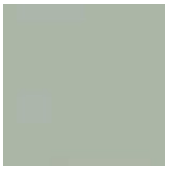
Unit models are available in Beige, White, Buckeye Gray, Desert Brown, Dark Bronze, stainless steel, and aluminum. Painted cabinet construction is comprised of 20 gauge Zinc coated steel. Parts are cleaned, rinsed, sealed, and dried before a polyurethane primer is applied. The cabinet coating is completed with a baked on textured enamel. The resulting finish is designed to withstand 1000 hours of salt spray tests per ASTM B117-03.

Stainless steel external cabinet construction is comprised of 316 grade materials. Stainless steel screws and fasteners are used in all externally exposed areas. A corrosion resistant coated fan blade and stainless steel condenser motor mount is provided.

Aluminum external cabinet construction is ASTM B 209 grade .06" thickness with a stucco appearance.

X—Beige

1—White



4—Gray

5—Desert Brown

8—Bronze

S—Stainless

A—Aluminum

Stainless Steel Cabinet Construction

Exterior Stainless Steel finish cabinets are often selected for corrosion and chemical resistance. Higher grades of stainless steel are often specified to meet the requirements of harsh environments. Units may not only be exposed to wind - blown dust, dirt, lint, and fibers but also may be exposed to corrosive agents. The Bard stainless steel unit offers a high quality stainless steel grade enclosure and fasteners for years of operation in these conditions.

Features:

- Sides, doors, grilles, back panels, and top are 316 grade stainless steel.
- Base, condenser partition, and fan shroud are 304 grade stainless steel.
- Stainless steel exterior cabinet screws, washers, nuts, and bolts, are used.
- Stainless steel outdoor motor mount and motor mount hardware.
- Compressor mounting hardware is stainless steel and hex no-spin rivet nuts are used in the unit base.
- Corrosion resistant coating is applied to fan blade.

Bard highly suggests units exposed to extremely harsh environments, high quantities, of airborne dirt and dust, or sprayed with water hose and splashing water be ordered with the Blank Off Plate (BOP) ventilation option unless codes require fresh air intake. The BOP ventilation option installs plates over the fresh air intake and exhaust openings.

Green Fin Hydrophilic Evaporator Coils Standard On All Units

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

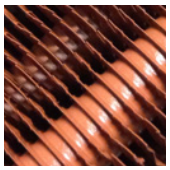
Note: The green fin hydrophilic evaporator coil is not a replacement for technicoat coil coating. Green fin stock does provide additional coil protection, but technicoatis recommended for harsh indoor environments where strong acidic or alkelichemicals are being used.

Hydrophilic Green Coil
(standard)

/////// CABINET AND COIL OPTIONS

Evaporator and Condenser Coil Technicoat Coating Options

All models utilize a copper/aluminum evaporator and condenser coil. An additional corrosion resistant TechniCoat 10-2™ coating may be ordered for the evaporator coil (option 1), condenser coil (option 2) or both evaporator and condenser coils (option 3). TechniCoat is a proprietary epoxy-modified phenolic dip coating. Total Immersion ensures complete coverage with no significant loss of thermal efficiency. The 4-step coating system consist of (1) a multi-step cleaning process, (2) chemical etch primer, (3) epoxy-modified phenolic, and (4) phenolic sealer. The result is a corrosion resistant coil that outperforms a copper finned coil, is less expensive, and is also nearly 3 times lighter. ASTM B117 salt spray tests conducted show over 4500 hours with "no fin corrosion or degradation."



AeroMarine (optional)

Cabinet Coating Options

Bard recommends unit coatings be used in applications that may be exposed to corrosive particulates in the airstream. These applications include wastewater treatment plants, gas and oil refinery operations, battery manufacturers, areas with Sulfur water, wineries, chemical plants, pulp and paper mills, and seacoast installations. Contact your Bard distributor for additional information regarding cabinet coating options.

4= Exterior Unit Cabinet & Condenser Section

The 4 option unit contains our corrosion resistance phenolic coated coils and a coated unit condenser section. By coating the condenser section, the copper tubing, motor mount, sheet metal parts, filter/drier and compressor housing in the condenser area are protected with a epoxy semi-gloss coating.

5= Exterior & Interior

The 5 option unit contains our corrosion resistance phenolic coated coils and is both internally and externally coated. By coating the interior and exterior of the unit, the copper tubing, motor mount, sheet metal parts, filter/drier, compressor housing, blower assembly, and any optional ventilation features are protected with a epoxy semi-gloss coating. This is the highest level of protection available. It is required for applications where the internal and external features of the unit are exposed to a high level of salt or corrosive chemicals.

/////// WALL MOUNT™ FACTORY INSTALLED CONTROLS OPTIONS

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	DESCRIPTION OF FACTORY INSTALLED COMPONENTS
X	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module.
E	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, **Low Ambient Control**
F	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, **Low Ambient Control, Dirty Filter Press. Switch**
J	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, **Low Ambient Control, Alarm Relay**
K	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, **Low Ambient Control, PTCR Start Kit**
M	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, **Low Ambient Control, Alarm Relay, PTCR Start Kit**
V	Hi Pressure Switch, Low Pressure Switch, Compressor Control Module, **Low Ambient Control, Alarm Relay, Discharge temperature sensor, Indoor Blower Airflow Press. Switch, Compressor Current Sensor, Dirty Filter Pressure Switch**

WALL MOUNT™ FIELD INSTALLED 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.

CONTROL CODE	KIT PART NO.	UNITS USING KIT	DESCRIPTION OF FIELD INSTALLED KIT
E	CMA-37 = 230V	W24A, W24L	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - modulating
E	CMA-38 = 460V	W24A, W24L	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - modulating
E	CMA-39	W30A, W30L,W36A, W36L	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - fan cycling
NA	CMC-15	W24A, W24L, W30A, W30L, W36A, W36L	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
V	CMA-40	W24A, W24L, W30A, W30L, W36A, W36L	Kit Includes Alarm relay, Discharge temperature sensor, Indoor Blower Airflow Press. Switch, Compressor Current Sensor, Dirty Filter Pressure Switch*
NA	SK-111	W24A, W24L, W30A, W30L, W36A, W36L	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
NA	CMA-14	W24A, W24L, W30A, W30L, W36A, W36L	Outdoor Thermostat Kit used to disable compressor cooling below 50°F outdoor temp. Adjustable between 50° and 0°F
NA	CMC-31	All small cab.	Dirty Filter Kit
NA	CMC-34	All small cab.	Alarm Relay Kit

* CMA-40 Kit does not include low ambient control. Low ambient control can be ordered separately either as factory installed or as a kit.

24VAC LOW VOLTAGE TERMINAL DESIGNATIONS

Bard WALL MOUNT products provide 24VAC power to controllers and thermostats. They also are able to receive 24VAC signals from a controlling device. The V controls option provides additional sensors for use with a field supplied DDC controls systems. The information below provides terminal designations and how they are used in the WALL MOUNT unit. More information on low voltage connections and operational sequences is provided in the unit installation manual.

Terminal	Unit	Description
R	All Units	24VAC low voltage output (HOT Terminal)
RT	All Units	RT terminal has jumper to R terminal. When jumper is removed, R and RT can be used with normally closed contacts for fire/smoke detector for unit shutdown.
C	All Units	Ground Terminal
G	All Units	Indoor fan input
Y1	All Units	1st Stage cooling input. Economizer stage when used. Balanced Climate stage when used.
Y2	All Units	2nd Stage cooling input. Compressor cooling stage when Econ or Balanced Climate is used.
B/W1	All Units	1st Stage electric heat
W2	All Units	2nd State electric heat. Jumper between W1 and W2 must be removed for staged heat
A	Vent option units only	Ventilation option input. Calls for occupied vent air intake for CRV, ERV, ECON
L	All Units	24VAC Alarm active output
1	C, J, M, V Control Opt.	Alarm relay Normally Closed Contract
2	C, J, M, V Control Opt.	Alarm relay Normally Open Contact
3	C, J, M, V Control Opt.	Alarm Relay Common Contact
9	V Controls Option ONly	Discharge Air Sensor, 10K ohm
10	V Controls Option Only	Discharge Air Sensor, 10K ohm
11	G, V Control Options	Filter Switch, Normally Open Contacts
12	G, V Control Options	Filter Switch, Normally Open Contacts
13	V Controls Option Only	Blower Airflow Switch, Normally Open Contacts
14	V Controls Option Only	Blower Airflow Switch, Normally Open Contacts
15	V Controls Option Only	Compressor Current Sensor, Normally Open Contacts
16	V Controls Option Only	Compressor Current Sensor, Normally Open Contacts

/////// OPTIONAL CONTROLS AND KIT COMPONENT DEFINITIONS

Hi Pressure Control (HPC) - The high pressure control provides a means of protecting the refrigeration circuit when high system pressures occur. It is a auto-reset device that is connected to the Compressor Control Module. When activated, the compressor is disabled until pressures reach an acceptable level. If activated twice in the same cooling call, compressor operation is locked out until the cooling call is interrupted.

Low Pressure Control (LPC) - The low pressure control provides a means of protecting the refrigeration circuit when extremely low system pressures occur. It is a auto-reset device that is connected to the Compressor Control Module. When activated, the compressor is disabled until pressures reach an acceptable level.

Compressor Control Module (CCM) - The compressor control module locks out compressor operation to protect the refrigeration system based on signals from the hi and low pressure switches. It provides diagnostics to indicate when a refrigerant pressure event occurs, and also sends a signal to the alarm relay. Low incoming unit power protection suspends compressor operation when incoming voltage is too low. Suspending compressor operation avoids reverse scroll operation. The low voltage feature is adjustable or can be disables. An adjustable delay on break timer is provided. Delay on make is 2 mins. plus 10% of delay on break setting.

Alarm Relay (ALR) - The alarm relay provides a set of NO and NC pilot duty contacts that operate when the compressor control module locks out compressor operation because of a high or low system refrigerant pressure event.

Low Ambient Control (LAC) - The low ambient control pressure sensor is attached to the suction line of the system, and monitors low side system pressure. Operation of the LAC occurs as outdoor temperatures drop below the 65°F to 50°F range. On/Off and modulating controls are used. On/Off LAC operation cycles the condenser fan operation based on outdoor temperature. Modulating LAC operation is factory adjusted and slows the condenser fan speed RPM based on outdoor temperature.

Crankcase Heater (CCH) - The heater is a belly band that is installed around the base of the compressor that applies heat when the refrigeration system is not operational. This heat is meant to prevent refrigerant oil migration when the unit is not running. Normal scroll compressor use does not require the use of the CCH, and this option is only recommended for northern areas of the US and Canada with extreme cold operation. Field Install Option Only.

Outdoor Thermostat (ODT) - The outdoor thermostat measures outdoor temperatures and includes relay contacts (NO). The relay is located on the outer control panel and the sensor bulb is mounted to the fan shroud in the outdoor condenser section. When wired into the cooling signal inside the control panel, compressor operation can be disabled when temperatures are below the adjustable setting. Adjustment range is 0°F to 50°F.

PTCR Start Kit - PTCR (Precision Temperature Coefficient Resistor) start kit includes the start device and wires needed for installation. The device is located inside the unit control panel near the compressor capacitor and provides an increase in starting torque. The PTCR Start Kit is not normally required when a clean, stable power source is available for the unit. The kit can only be used in 230 Volt single phase units.

Start Capacitor and Potential Relay Start Kit - The kit includes a start capacitor and relay that is energized during startup of the compressor. The capacitor, relay, and needed wires are provided in a metal enclosure that is field installed in the outdoor section attached to the back. The Start Capacitor Kit is not normally required when a clean, stable power source is available for the unit. The kit can only be used in 230 Volt single phase units. Start capacitor kit cannot be used with the PTCR start kit installed.

Dirty Filter Switch Indicator (DFS) - The switch is adjustable and measures pressure drop across the unit filter surface. When pressure drop is higher than the switch setting NO and NC contacts are provided to indicate the filter needs to be serviced.

Discharge Air Sensor - The discharge air sensor provides a temperature reading of the supply air leaving the unit. The sensor is a 10K OHM @ 77°F measuring device. It is installed in the supply airstream in the heater bracket.

Airflow Switch - The airflow switch measures the pressure differential between the blower inlet and outlet. It is located directly above the blower partition. Relay contacts (NO) are provided for V controls option that indicates the indoor blower assembly needs to be serviced. The F controls option has indicator light only.

Compressor Current Sensor - The compressor current sensor indicates when the compressor is operational by measuring Amp draw. It is located inside the unit control panel. Relay contacts (NO) are provided to indicate the compressor is not operating.

CABINET AND CLEARANCE DIMENSIONS - WA RIGHT SIDE CONTROL PANEL UNITS

CLEARANCES REQUIRED FOR SERVICE ACCESS AND ADEQUATE CONDENSER INLET AIRFLOW

MODELS	LEFT SIDE	RIGHT SIDE
W24AB, W30AB, W36AB	15" (38.1cm)	20" (50.8cm)

NOTE: For side-by-side installation of two (2) WA models, there must be 20" between units. This can be reduced to 15" by using a WL model (left side compressor and controls) for the left unit and WA (right side compressor and controls) for right unit.

1.) Follow all national, state, and local codes and regulations regarding the installation of heating and cooling equipment regarding Single Packaged Vertical Units (SPVU) including electrical access clearances.
2.) Field ventilation installation with the unit installed requires 40" on the left or right side of the unit.
3.) Bard recommends a minimum of 10 ft. between the unit front condenser air outlet and solid objects including fences, walls, bushes, and other airflow obstructions.
4.) Bard recommends a minimum of 15 ft. between the condenser air outlets of 2 units that are facing each other.
5.) Bard recommends a minimum clearance of 4" under the unit cabinet for condenser defrost drain age during heat pump operation.

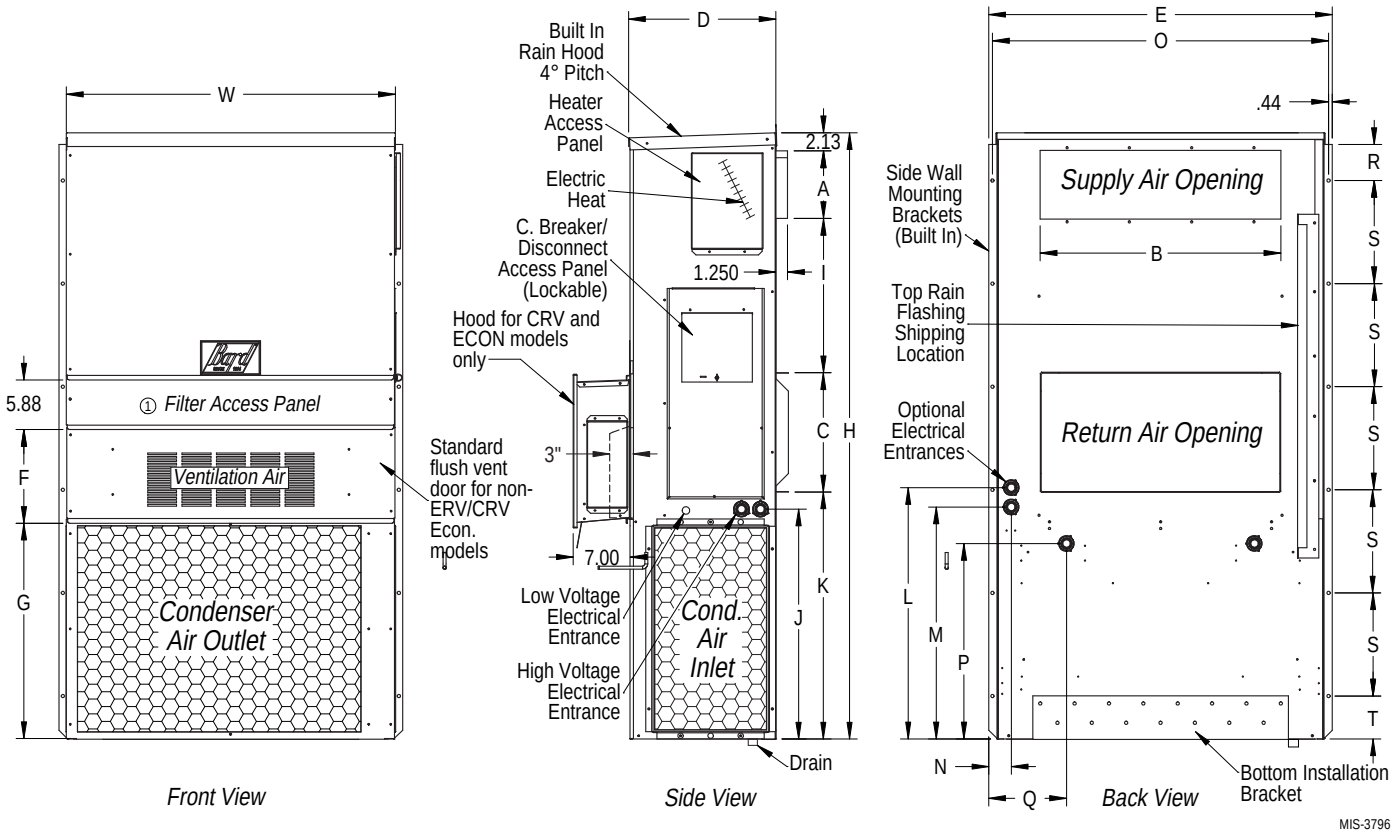
MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS

MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W24AB	0"	0"
W30AB, W36AB	1/4" (.64cm)	0"

① Refer to the Installation Manual for more detailed information.

DIMENSIONS OF W24AB-W36AB BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS - INCHES (CM)

MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN																	
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	P	Q	R	S	T	
W24AB	33.300 (84.58)	17.125 (43.49)	74.563 (189.39)	7.88 (20.01)	19.88 (50.49)	11.88 (30.17)	19.88 (50.49)	35.00 (88.9)	10.88 (27.63)	29.75 (75.5)	20.56 (52.22)	30.75 (78.10)	32.06 (81.43)	33.25 (84.45)	31.00 (78.74)	2.63 (6.68)	34.13 (86.69)	26.06 (66.19)	10.55 (26.79)	4.19 (10.64)	12.00 (30.48)	9.00 (22.86)	
W30AB W36AB	38.200 (97.02)	17.125 (43.49)	74.563 (189.39)	7.88 (20.01)	27.88 (70.81)	13.88 (35.25)	27.88 (70.81)	40.00 (101.6)	10.88 (27.63)	29.75 (75.5)	17.93 (45.54)	30.75 (78.10)	32.75 (83.18)	33.25 (84.45)	31.00 (78.74)	2.75 (6.98)	39.13 (99.39)	26.75 (67.94)	9.14 (23.21)	4.19 (10.64)	12.00 (30.48)	9.00 (22.86)	



CABINET AND CLEARANCE DIMENSIONS - WL LEFT SIDE CONTROL PANEL UNITS

CLEARANCES REQUIRED FOR SERVICE ACCESS AND ADEQUATE CONDENSER INLET AIRFLOW

MODELS	LEFT SIDE	RIGHT SIDE
W24LB, W30LB, W36LB	20" (50.8cm)	15" (38.1cm)

NOTE: For side-by-side installation of two (2) WL models, there must be 20" between units. This can be reduced to 15" by using a WL model (left side compressor and controls) for the left unit and WA (right side compressor and controls) for right unit.

1.) Follow all national, state, and local codes and regulations regarding the installation of heating and cooling equipment regarding Single Packaged Vertical Units (SPVU) including electrical access clearances.
2.) Field ventilation installation with the unit installed requires 40" on the left or right side of the unit.
3.) Bard recommends a minimum of 10 ft. between the unit front condenser air outlet and solid objects including fences, walls, bushes, and other airflow obstructions.
4.) Bard recommends a minimum of 15 ft. between the condenser air outlets of 2 units that are facing each other.
5.) Bard recommends a minimum clearance of 4" under the unit cabinet for condenser defrost drainage during heat pump operation.

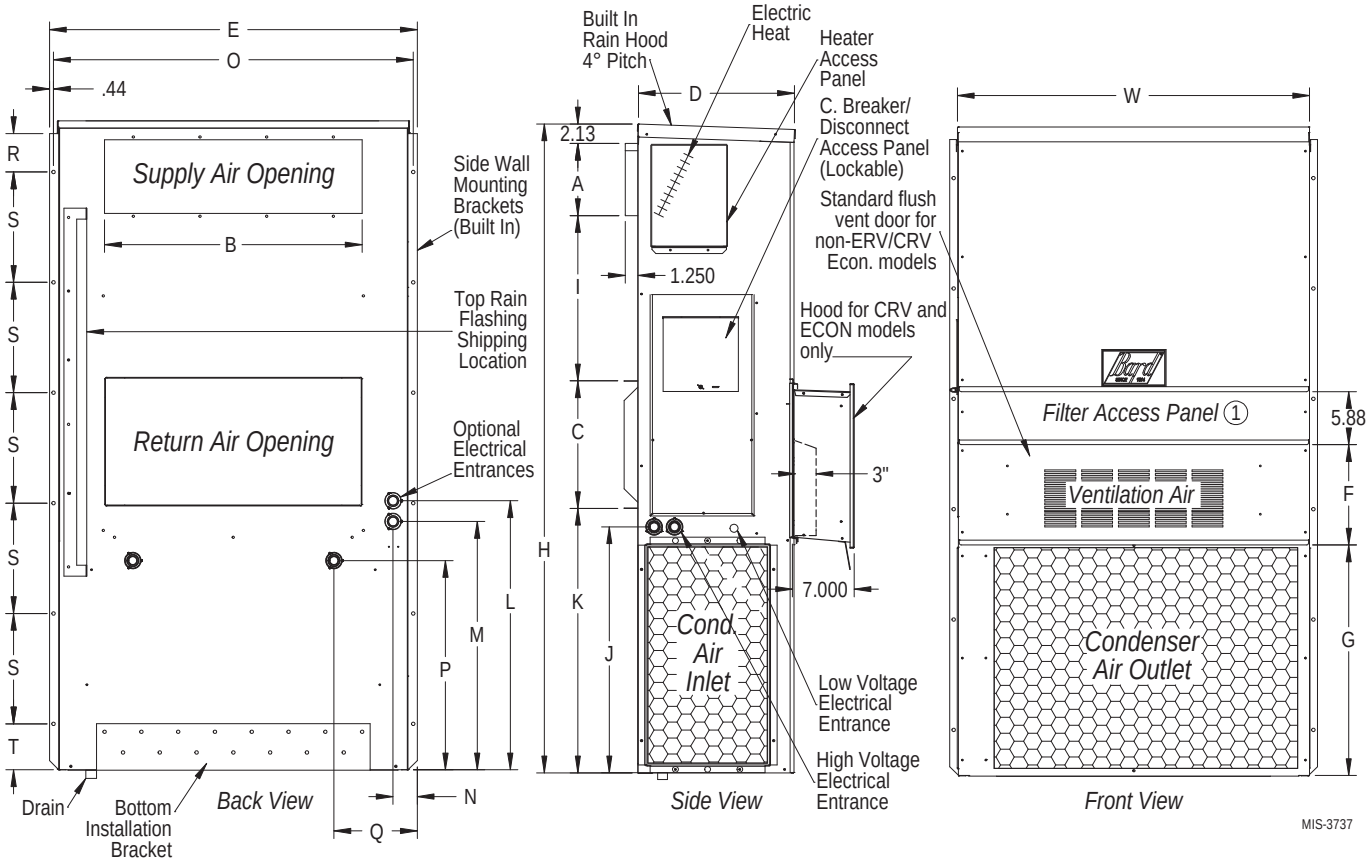
MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS

MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W24LB	0"	0"
W30LB, W36LB	1/4" (.64cm)	0"

① Refer to the Installation Manual for more detailed information.

DIMENSIONS OF W24LB-W36LB BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS - INCHES (CM)

MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN																	
				A	B	C	B	E	F	G	I	J	K	L	M	N	O	P	Q	R	S	T	
W24LB	33.300 (84.58)	17.125 (43.49)	74.563 (189.39)	7.88 (20.01)	19.88 (50.49)	11.88 (30.17)	19.88 (50.49)	35.00 (88.9)	10.88 (27.63)	29.75 (75.5)	20.56 (52.22)	30.75 (78.10)	32.06 (81.43)	33.25 (84.45)	31.00 (78.74)	2.63 (6.68)	34.13 (86.69)	26.06 (66.19)	10.55 (26.79)	4.19 (10.64)	12.00 (30.48)	9.00 (22.86)	
W30LB W36LB	38.200 (97.02)	17.125 (43.49)	74.563 (189.39)	7.88 (20.01)	27.88 (70.81)	13.88 (35.25)	27.88 (70.81)	40.00 (101.6)	10.88 (27.63)	29.75 (75.5)	17.93 (45.54)	30.75 (78.10)	32.75 (83.18)	33.25 (84.45)	31.00 (78.74)	2.75 (6.98)	39.13 (99.39)	26.75 (67.94)	9.14 (23.21)	4.19 (10.64)	12.00 (30.48)	9.00 (22.86)	



/////// 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	UNITS USING CURB	DESCRIPTION
WMICF2-*	W24A, W24L	Provides vibration isolation for reduced sound transmission through wall
WMICF3-*	W30A, W30L,W36A, W36L	Provides vibration isolation for reduced sound transmission through wall
WWC3-*	W30A, W30L, W36A, W36L	Install to use with existing wall openings. Wall openings must provide sufficient airflow

* Color Option

/////// INDOOR SOUND REDUCTION ACCESSORIES

Optional sound accessories are available to help reduce sound transmission from the supply and return openings inside the indoor area. Follow all static pressure airflow requirements, safety and installation guidelines in the instructions provided with the accessories and WALL MOUNT products.

ACCESSORY	UNITS USING ACCESS.	DESCRIPTION
WAPR11-*	W30A, W30L, W36A, W36L	Acoustical return air plenum that offsets the return air path. Air intake at floor level

* Color Option

/////// INDOOR SOUND REDUCTION ACCESSORIES

Supply and return louver grilles are of a brushed aluminum finish. 2" (5cm) 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 W30 and W36 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-2W	W24A, W24L	8" x 20" with 2" Flange 4 way deflection supply grille. (20.32cm x 50.8cm with 5.08cm) **Use for standard installation**s
SG-3W	W30A, W30L, W36A, W36L	8" x 28" with 2" Flange 4 way deflection supply grille. (20.32cm x 71.12cm with 2.54cm) **Use for standard installations**
RG-2W	W24A, W24L	12" x 20" with 2" Flange return grille. (30.48cm x 50.8cm with 5.08cm) **Use for standard installations.**
RG-3W	W30A, W30L, W36A, W36L	12" x 28" with 2" Flange return grille. (30.48cm x 71.12cm with 5.08cm) **Use for standard installations.**
RFG-3W	W30A, W30L, W36A, W36L	12" x 28" with 2" Flange returne grille with filter bracket.
RGD-3	W30A, W30L, W36A, W36L	12" x 28" with 1" Flange return grille. (30.48cm x 71.12cm with 2.54cm) Manual damper used to restrict return air

NON-DUCTED SUPPLY LOUVER 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-2W	800 CFM	0°	1053	.076" WC	37-52 ft. / 11.2-15.8m
		22.5°	1143	.1" WC	28-40 ft. / 8.53-12.19m
		45°	1428	.162" WC	20-29 ft. / 6.09-8.83m
	865 CFM	0°	1138	.054" WC	40-55 FT. / 12.19-16.76M
		22.5°	1236	.075" WC	31-42 ft. / 9.44-12.80m
		45°	1544	.113" WC	21-30 ft. / 6.40-9.14m
SG-3W	885 CFM	0°	852	.054" WC	37-54 ft. / 11.27-16.45m
		22.5°	1075	.075" WC	35-49 ft. / 10.66-14.93m
		45°	1162	.113" WC	21-30 ft. / 6.40-9.14m
	1285 CFM	0°	1237	.108" WC	42-66 ft. / 12.80-20.11m
		22.5°	1359	.147" WC	35-50 ft. / 10.66-15.24m
		45°	1687	.249" WC	25-37 ft. / 7.62-11.27m

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
MC-4002	2 Unit Lead/Lag Controller	Standard Lead/Lag Controller with remote alarming capability.
TEC40	4 Unit Controller	Easy to use 4 unit controller with staged operation.

THERMOSTAT	OPERATION	DESCRIPTION
8403-060	3 Heat/3 Cool	Programmable or Nonprogrammable, ventilation output, dehumidification operation
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
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
8403-091	1 Heat/1 Cool	Easy to use, Nonprogrammable. FEMA use
8403-092	2 Heat/2 Cool	Programmable or Nonprogrammable, ventilation output, Wi-Fi

HUMIDISTAT	OPERATION	DESCRIPTION
8403-038	Humidity %RH	Easy to use w/SPDT switching. Ratings: Pilot duty 50VA @24V, 120VA @ 120/240V
8403-047	Humidity %RH	Electronic with display, EEPROM memory, lockable keypad, humidity sensor calibration

CO2 CONTROL	OPERATION	DESCRIPTION
S8403-067	CO2 PPM	CO2 ventilation control with digital display. On/Off or modulating 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.
8405-006	(Inside) 5-1/16" H x 6-1/16" W (Outside) 6-3/8" H x 7-3/8" W x 2-7/8" D	Beige painted steel cover with ventilation. Fits all thermostats except 8403-060
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 thermostat provides input control lockout features.

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

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.