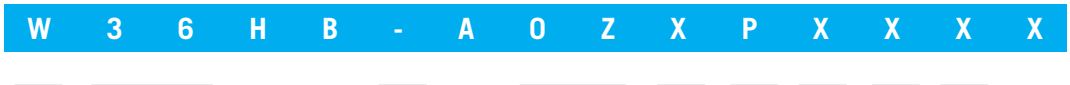
11EER W18HB-W36HB Series WALL-MOUNT™

The Bard Wall-Mount Heat Pump is a self contained energy efficient heating and cooling 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 or correctional facilities. Factory or field installed accessories are available to meet specific job requirements.

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

Bard® SINCE 1914

/////// WALL-MOUNT NOMENCLATURE



UNIT SERIES
Wall-Mount

NOMINAL CAPACITY
18- 1.5 Ton
24 - 2 Ton
30 - 2.5 Ton
36 - 3 Ton

FUNCTIONALITY
H - Heat Pump

REVISION
B Revision Level

PLACEHOLDER
-- - Standard unit.
D - Dehumidification (W30 thru W36)
L - Low Ampacity with Dehumidification*

VOLTAGE
A - 230 Volt 1 Phase 60 Hz
B - 230 Volt 3 Phase 60 Hz
C - 460 Volt 3 Phase 60 Hz

ELECTRIC HEAT
00 - 0Kw with Lug Connection
0Z - 0Kw with Circuit Breaker
05 thru 15kw with Circuit Breaker
See Electrical Specs for further details

VENT PACKAGE
X - Fresh Air Damper
A - Fresh Air Damper w/Exhaust
B - Blank Off Plate
M - Comm. Ventilator, ON/OFF
V - Comm. Ventilator, 0-10V variable
D - Economizer, 0-10V No Controls
S - Partial Flow Economizer, JADE
Y - Full Flow Economizer, JADE Dry Bulb
Z - Full Flow Economizer, JADE Enthalpy
R - Energy Recovery Vent

FILTER
X - 1" MERV2 Disposable Filter
W - 1" MERV2 Permanent Filter
P - 2" MERV8 Disposable Filter
M - 2" MERV11 Disposable Filter
N - 2" MERV13 Disposable Filter

COLOR AND CABINET FINISH
X - Beige baked enamel finish
1 - White baked enamel finish
4 - Buckeye Gray baked enamel finish
5 - Desert Brown baked enamel finish
8 - Dark Bronze baked enamel finish
S - Stainless Steel
A - Aluminum

PLACEHOLDER
"X"for future use

COIL & COATING OPTIONS
X - Standard
1 - Phenolic Coated Evaporator
2 - Phenolic Coated Condenser
3 - Phenolic Coated Evaporator and Condenser
4 - Coated Coils and condenser section
5 - Coated coils, inside and out side of unit

ACCESSORIES AND CONTROLS OPTIONS
X - Standard controls
E - Low Ambient Control (LAC)
Q – Standard controls and Outdoor Thermostat (ODT)
R - Standard controls, LAC, and Outdoor Thermostat (ODT)
S – Standard controls and PTCR Hard Start Kit.
T – Standard controls, LAC, ODT, and PTCR Hard Start Kit.
J - LAC and Alarm Relay (ALR)

*L - Low ampacity models inhibit concurrent compressor and electric heat operation which results in a lower ampacity requirement. Not recommended for normal use due to lower heating btu capability and no electric heat usage during defrost mode. Feature available with dehumidification models only. Additional order processing time may apply.

/////// 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.

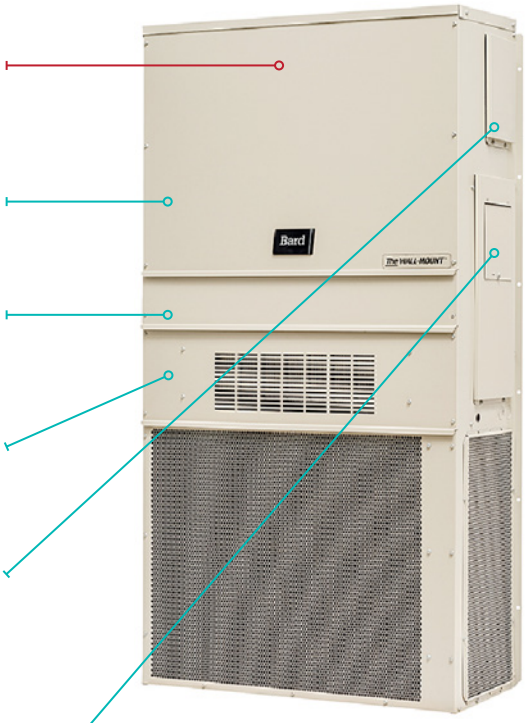
Field or Factory Installed Vents: Multiple ventilation options are available as easily installed kits with electrical plugs, or Factory installed options that can be removed for service.

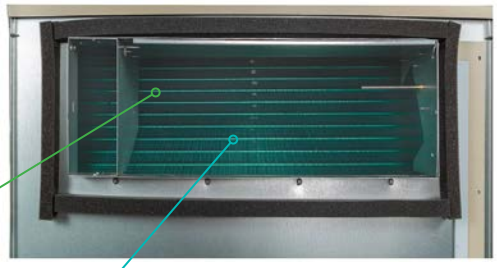
Electric Strip Heat: Reliable, comfortable heater packages feature an automatic limit and thermal cut-off safety control. Heater packages can be factory or field installed.

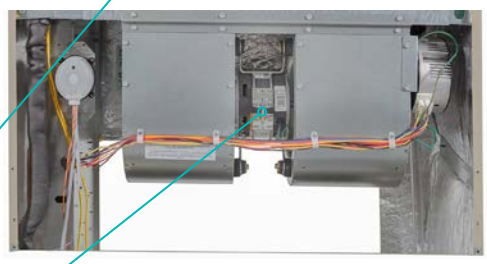
Built-in Circuit Breakers: Standard on all electric heat versions of single (230/208 volt) and three phase (230/208 volt) equipment. Toggle disconnects are standard on all electric heat versions of three phase (460 volt) equipment.

Reliable, Easy-to-Use Controls: Easily accessible through 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 enhances coil wettability to help prevent mold growth, aid with condensate drainage, and provide a limited amount of protection to corrosive particulates in the airstream.







Optional Mechanical Dehumidification: Models are available with hot gas reheat dehumidification for energy efficient humidity removal. Electronic Expansion Valves are standard for all dehumidification 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 WH Series WALL MOUNT products offer single stage cooling operation using R410A refrigerant. Copper tube/Aluminum fin coils are used to provide high efficiency and easy serviceability. Scroll compressor technology delivers years of quiet, reliable operation.

Heating Operation: The Bard WH Series WALL MOUNT products offer single stage heat pump operation and optional single or two stage heating operation using resistance heaters. Circuit breaker disconnect protection is standard in all units equipped with electric heat. The reversing valve is energized (B) for heat pump operation.

Mechanical Dehumidification Operation: The Bard WH Series WALL MOUNT products offer optional dehumidification that removes moisture from air entering the unit. A three-way valve, reheat coil, and electronic expansion valve (EEV) are standard with all models. The dehumidification circuit incorporates an independent heat exchanger coil in the supply air stream. This coil reheats the supply air after it passes over the cooling coil without requiring the electric resistance heater to be used for reheat purposes. This results in very high mechanical dehumidification capability from the air conditioner on demand without using electric resistance reheat.

Ventilation Operation: The Bard WH Series WALL MOUNT products offer optional ventilation 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.

/////// 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	W18HB	W24HB	W30HB	W36HB
Total Cooling Capacity BTUH ① EER ②	17,500 11.3	23,400 11.3	29,000 11.0	36,000 11.1
High Temp Heating (47F) BTUH ① COP ②	16,800 3.5	22,400 3.3	26,600 3.4	33,000 3.3

① Cooling and Heating Capacities are certified in accordance with ANSI/ARI Standard 390-2003.

② EER = Energy Efficiency Ratio. COP = Coefficient of Performance. Energy efficiency data is certified in accordance with ANSI/ARI Standard 390-2003.

SPECIFICATIONS 1-1/2 TON THROUGH 3 TON

MODELS	W18HB-A	W24HB-A	W24HB-B	W24HB-C	W30HB-A	W30HB-B	W30HB-C	W36HB-A	W36HB-B	W36HB-C
Electrical Rating – 60 Hz	230/208 - 1	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3	230/208 - 1	230/208 - 3	460 - 3
Operating Voltage Range	197-253	197-253	197-253	414-506	197-253	197-253	414-506	197-253	197-253	414-506
Compressor--Circuit A										
Voltage	230/208	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	6.9/8.0	8.0/9.0	5.7/6.4	3.0	9.6/11.3	6.2/7.2	3.4	12.4/14.1	7.8/8.8	4.9
Branch Circuit Selection Current	9.0	10.9	7.7	3.6	14.2	9.0	4.2	16.7	10.5	5.8
Lock Rotor Amps	56.3/56.3	61.6/61.6	55.4/55.4	28	73/73	58/58	28	79/79	73/73	38
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser										
Fan Motor--HP--RPM	1/5 - 1090	1/5 - 1090	1/5 - 1090	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075
Fan Motor--Amps	1.1	1.1	1.1	0.6	1.6	1.6	0.6	1.4	1.4	0.6
Fan--DIA/CFM	18" - 1800	18" - 1800	18" - 1800	18" - 1800	20" - 2400	20" - 2400	20" - 2400	20" - 2200	20" - 2200	20" - 2200
Blower Motor & Evap.										
Blower Motor—HP-SPD	1/3-5	1/3-5	1/3-5	1/2-5	1/2-5	1/2-5	1/3-5	1/2-5	1/2-5	1/2-5
Blower Motor—Amps	1	1.7	1.7	1.2	2.3	2.3	1.1	2.5	2.5	1.2
Motor Type	ECM	ECM	ECM	ECM	ECM	ECM	ECM	ECM	ECM	ECM
CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil)	600 - .1	800 - .1	800 - .1	800 - .1	950 - .15	950 - .15	950 - .15	1150 - .15	1150 - .15	1150 - .15
Filter Sizes (inches) STD.	16x25x1	16x25x1	16x25x1	16x25x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1
Basic Unit Weight-LBS.	325	335	335	335	350	350	350	380	380	380
Barometric Fresh Air Damper (X)	4.0	4.0	4.0	4.0	5.0	5.0	5.0	5.0	5.0	5.0
Barometric Damper w/ Exhaust (A)	8.0	8.0	8.0	8.0	9.0	9.0	9.0	9.0	9.0	9.0
Blank-Off Plate (B)	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
Commercial Room Ventilator (M, V)	31.0	31.0	31.0	31.0	35.0	35.0	35.0	35.0	35.0	35.0
Economizer (D, S, Y, Z)	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0	37.0
Energy Recovery Ventilator (R)	54.0	54.0	54.0	54.0	65.0	65.0	65.0	65.0	65.0	65.0

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	W18H, W24H	Standard Unit Crate
8620-275	W18H, W24H	Units with "Y or Z" Economizer With Factory Installed 7" Hood
8620-262	W30H, W36H	Standard Unit Crate
8620-276	W30H, W36H	Units with "Y or Z" Economizer With Factory Installed 7" Hood

COOLING APPLICATION DATA - OUTDOOR TEMPERATURE °F①②

MODEL	RETURN AIR (DB/WB)	COOLING CAPACITY	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
W18	75/62	Total Cooling	19,700	18,500	17,300	16,300	15,300	14,500	13,600	12,900	12,300	11,700	11,100
		Sensible Cooling	15,200	14,600	14,000	13,500	13,000	12,600	12,200	11,800	11,600	11,400	11,100
	80/67	Total Cooling	21,000	20,100	19,200	18,400	17,500	16,800	16,000	15,300	14,700	14,100	13,500
		Sensible Cooling	14,700	14,300	13,800	13,500	13,100	12,800	12,500	12,200	12,000	11,900	11,700
	85/72	Total Cooling	25,100	23,500	22,100	20,800	19,500	18,400	17,300	16,300	15,500	14,700	13,900
		Sensible Cooling	15,100	14,600	13,900	13,400	12,900	12,400	12,000	11,500	11,100	10,800	10,400
W24	75/62	Total Cooling	25,700	24,300	23,000	21,700	20,500	19,400	18,300	17,300	16,300	15,400	14,500
		Sensible Cooling	20,100	19,500	18,900	18,300	17,800	17,200	16,600	16,100	15,500	15,000	14,500
	80/67	Total Cooling	27,400	26,400	25,500	24,500	23,400	22,600	21,600	20,600	19,600	18,600	17,600
		Sensible Cooling	19,500	19,100	18,700	18,300	17,900	17,500	17,000	16,600	16,100	15,700	15,200
	85/72	Total Cooling	32,700	30,900	29,300	27,700	26,100	24,800	23,300	21,900	20,600	19,400	18,100
		Sensible Cooling	20,000	19,400	18,800	18,200	17,600	17,000	16,200	15,600	14,900	14,200	13,500
W30	75/62	Total Cooling	31,900	30,100	28,500	26,900	25,400	24,100	22,700	21,500	20,300	19,200	18,200
		Sensible Cooling	25,700	24,900	24,100	23,300	22,700	22,000	21,500	20,900	20,300	19,200	18,200
	80/67	Total Cooling	34,000	32,800	31,600	30,400	29,000	28,000	26,800	25,600	24,400	23,200	22,100
		Sensible Cooling	24,900	24,400	23,800	23,300	22,900	22,400	22,000	21,600	21,300	21,000	20,700
	85/72	Total Cooling	40,500	38,400	36,300	34,300	32,400	30,700	28,900	27,300	25,700	24,100	22,800
		Sensible Cooling	25,500	24,800	23,900	23,200	22,500	21,700	21,000	20,300	19,600	19,000	18,300
W36	75/62	Total Cooling	39,600	37,400	35,200	33,300	31,400	29,700	28,100	26,600	25,200	23,900	22,800
		Sensible Cooling	30,600	29,500	28,400	27,400	26,600	25,800	25,000	24,300	23,700	23,100	22,600
	80/67	Total Cooling	42,300	40,700	39,100	37,600	36,000	34,600	33,100	31,700	30,300	29,000	27,700
		Sensible Cooling	29,700	28,900	28,100	27,400	26,800	26,200	25,600	25,100	24,600	24,200	23,800
	85/72	Total Cooling	50,400	47,600	44,900	42,500	40,000	37,900	35,700	33,700	31,900	30,200	28,500
		Sensible Cooling	30,400	29,400	28,300	27,200	26,300	25,400	24,400	23,600	22,700	21,900	21,100

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

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

HEATING APPLICATION RATING AND OUTDOOR TEMPERATURE °F ①②

MODEL		0°F	5°F	10°F	15°F	20°F	25°F	30°F	35°F	40°F	45°F	47°F	50°F	55°F	60°F	65°F
W18HB	BTUH	6,005	7,062	8,140	9,240	10,362	11,506	12,672	13,859	15,069	16,301	16,800	17,554	18,830	20,127	21,447
	WATTS	1,271	1,279	1,288	1,298	1,309	1,320	1,332	1,346	1,360	1,375	1,381	1,391	1,408	1,425	1,444
	COP	1.38	1.61	1.85	2.08	2.32	2.55	2.78	3.01	3.24	3.47	3.5	3.69	3.91	4.13	4.35
W24HB	BTUH	9,277	10,509	11,779	13,089	14,437	15,823	17,248	18,712	20,215	21,756	22,383	23,336	24,954	26,611	28,306
	WATTS	1,618	1,646	1,672	1,698	1,724	1,749	1,773	1,797	1,820	1,843	1,852	1,865	1,887	1,908	1,928
	COP	1.67	1.87	2.06	2.25	2.45	2.65	2.85	3.05	3.25	3.45	3.5	3.66	3.87	4.08	4.30
W30HB	BTUH	13,230	14,201	15,267	16,426	17,680	19,029	20,471	22,009	23,640	25,366	26,083	27,186	29,101	31,110	33,213
	WATTS	2,053	2,070	2,089	2,109	2,129	2,151	2,175	2,199	2,224	2,251	2,262	2,279	2,308	2,338	2,369
	COP	1.88	2.00	2.14	2.28	2.43	2.59	2.75	2.93	3.11	3.30	3.4	3.49	3.69	3.89	4.10
W36HB	BTUH	17,423	18,331	19,383	20,580	21,922	23,407	25,037	26,812	28,731	30,794	31,660	33,001	35,353	37,849	40,490
	WATTS	2,627	2,635	2,647	2,663	2,682	2,705	2,732	2,763	2,798	2,837	2,853	2,879	2,925	2,975	3,028
	COP	1.94	2.03	2.14	2.26	2.39	2.53	2.68	2.84	3.00	3.18	3.3	3.35	3.54	3.72	3.91

Performance given for 70°F DB indoor return air at rated CFM. Data includes defrost operation below 45° outdoor temperature.
① Supplemental Electric heaters are recommended for applications requiring heating below a 15°F outdoor temperature.
② Outdoor temperatures shown are measured at the condenser section air inlet.

UNIT CHARGE RATES

UNIT	STD. UNIT - LBS.	DEHUM. UNITS - LBS.
W18HB - 11 EER Heat Pump	4.375	N/A
W24HB - 11 EER Heat Pump	5.250	N/A
W30HB - 11 EER Heat Pump	7.000	6.875
W36HB - 11 EER Heat Pump	8.000	7.500

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

ESP	W18HB BLOWER TAPS - DRY/WET COIL CFM					W24HB BLOWER TAPS - DRY/WET COIL CFM				
In H2O	Blower and Vent Only	Speed Tap 2	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating	Blower and Vent Only	Speed Tap 2	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating
0"	665/648	600/583	665/648	756/746	799/794	840/834	653/636	840/834	960/953	1115/1110
.1"	600/584	500/486	600/584	722/709	775/764	818/809	583/567	818/809	934/930	1075/1070
.15"	568/553	453/439	568/553	704/690	760/747	806/794	549/534	806/794	926/915	1058/1044
.2"	537/523	407/394	537/523	684/670	745/730	793/778	516/501	793/778	915/898	1040/1014
.3"	477/464	Not Used	477/464	643/629	708/693	758/742	Not Used	758/742	880/856	988/944
.4"	420/407	Not Used	420/407	598/586	665/652	716/701	Not Used	716/701	831/806	912/860
.5"	365/352	Not Used	365/352	549/542	616/608	664/655	Not Used	664/655	767/747	814/761

ESP	W30HB BLOWER TAPS - DRY/WET COIL CFM					W36HB BLOWER TAPS - DRY/WET COIL CFM				
In H2O	Blower and Vent Only	Speed Tap 2	Electric Heat Operation Only*	Default LO Cooling and Heating	Optional HI Cooling and Heating	Blower and Vent Only	Speed Tap 2	Default LO Cooling and Heating	Optional MED Cooling and Heating	Optional HI Cooling and Heating
0"	1083/1063	856/823	1175/1156	1083/1063	1372/1355	1175/1156	929/903	1175/1156	1372/1355	1475/1465
.1"	1053/1036	778/751	1157/1138	1053/1036	1361/1335	1157/1138	870/848	1157/1138	1361/1335	1456/1429
.15"	1035/1019	740/713	1143/1124	1035/1019	1348/1318	1143/1124	839/819	1143/1124	1348/1318	1438/1404
.2"	1016/1000	702/674	1128/1107	1016/1000	1331/1297	1128/1107	808/788	1128/1107	1331/1297	1415/1374
.3"	972/953	Not Used	1188/1065	972/953	1284/1242	1188/1065	Not Used	1188/1065	1284/1242	1352/1299
.4"	921/896	Not Used	1039/1010	921/896	1218/1169	1039/1010	Not Used	1039/1010	1218/1169	1267/1203

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. Speed Tap 2 not used.

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. Not available for use with W30H models. The W30H uses a dedicated blower speed for electric heat operation.*

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.

/////// ELECTRICAL SPECIFICATIONS - W**HB SERIES

MODEL	Rated Volts & Phase	No. Field Power Circuits	Single Circuit				Dual Circuit							
			① Minimum Circuit Ampacity	② Maximum External Fuse or Ckt. Brkr.	⑤ Field Power Wire Size	⑤ Ground Wire	① Minimum Circuit Ampacity		② Maximum External Fuse or Ckt. Breaker		⑤ Field Power Wire Size		⑤ Ground Wire Size	
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B
W18HB-A00, A0Z	230/208-1	1	16	20	12	12								
A04		1	37	40	8	10								
A08		1	57	60	6	10								
W24HB-A00, A0Z	230/208-1	1	19	25	10	10								
A04		1	41	45	8	10								
A08		1 or 2	62	70	6	8	41	21	45	25	8	10	10	10
W24HB-B00, B0Z	230/208-3	1	15	20	12	12								
B05		1	30	30	10	10								
W24HB-C00, C0Z	460-3	1	8	15	14	14								
C05		1	16	20	12	12								
W30HB-A00, A0Z	230/208-1	1	24	35	8	10								
A05		1	50	50	8	10								
A10		1 or 2	76	80	4	8	50	26	50	30	8	10	10	10
W30HB-B00, B0Z	230/208-3	1	18	25	10	10								
B05		1	34	35	8	10								
B09		1	45	45	8	10								
W30HB-C00, C0Z	460-3	1	9	15	14	14								
C05		1	18	20	12	12								
C09		1	23	25	10	10								
W36HB-A00, A0Z	230/208-1	1	27	40	8	10								
A05		1	53	60	6	10								
A10		1 or 2	79	80	4	8	53	26	60	30	6	10	10	10
④ A15		1 or 2	85	90	4	8	27	58	30	60	10	6	10	10
W36HB-B00, B0Z	230/208-3	1	20	25	10	10								
B05		1	35	40	8	10								
B09		1	47	50	8	10								
W36HB-C00, C0Z	460-3	1	11	15	14	14								
C05		1	19	20	12	12								
C09		1	25	25	10	10								

/////// ELECTRICAL SPECIFICATIONS - W**HBD DEHUM SERIES

W24HBDA00, A0Z	230/208-1	1	19	25	10	10								
A04		1	40	45	8	10								
A08		1 or 2	61	70	6	8	42	19	45	25	8	10	10	10
W24HBDB00, B0Z	230/208-3	1	15	20	12	12								
B05		1	30	30	10	10								
W24HBDC00, C0Z	460-3	1	8	15	14	14								
C05		1	16	20	12	12								
W30HBDA00, A0Z	230/208-1	1	24	35	8	10								
A05		1	50	50	8	10								
A10		1 or 2	76	80	4	8	50	26	60	30	8	10	10	10
W30HBDB00, B0Z	230/208-3	1	18	25	10	10								
B05		1	33	35	8	10								
B09		1	45	50	8	10								
W30HBDC00, C0Z	460-3	1	9	15	14	14								
C05		1	16	20	12	12								
C09		1	22	25	10	10								
W36HBDA00, A0Z	230/208-1	1	28	40	8	10								
A05		1	54	60	6	10								
A10		1 or 2	80	80	4	8	54	26	60	30	6	10	10	10
W36HBDB00, B0Z	230/208-3	1	20	25	10	10								
B05		1	35	40	8	10								
B09		1	47	50	8	10								
W36HBDC00, C0Z	460-3	1	11	15	14	14								
C05		1	19	20	12	12								
C09		1	24	25	10	10								

(1) The "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical Code (latest version), Article 310 for power conductor sizing.
CAUTION: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) conductors are in a raceway.
(2) Maximum size of the time delay fuse or circuit breaker for protection of field wiring conductors.
(3) Maximum KW that can operate with the heat pump on is 9KW. Full heat available during emergency heat mode.
(4) Maximum KW that can operate with the heat pump on is 10KW. Full heat available during emergency heat mode.
(5) Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.

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.

NOTE: MOCP (Maximum Overcurrent Protection) value listed is the maximum value as per UL 1995 calculations for MOCP (branch-circuit conductor sizes in this chart are based on this MOCP). The actual factory installed Overcurrent Protective Device (Circuit Breaker) in this model may be lower than the maximum UL 1995 allowable MOCP value, but still above the UL 1995 minimum calculated value or Minimum Circuit Ampacity (MCA) listed.

/////// 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
W18HB	49.6	47.3	45.1	47.3	45.2	42.9	62.8
W24HB	52.4	49.7	46.9	50.4	46.9	44.8	62.3
W30HB	53.9	52.8	50.3	52.9	50.4	48.8	67.1
W36HB	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
W18HB	48.6	45.5	44.9	46.2	44.0	43.1	62.8
W24HB	51.9	45.4	44	48.9	42.9	41.4	62.3
W30HB	54.5	47.3	45.6	47.3	44.7	43.2	67.1
W36HB	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 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 45 dBa. 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.

/////// HEATER PACKAGES - FIELD INSTALLED "HB" SERIES RIGHT-HAND UNITS

• Designed for adding Electric Heat to 0 KW Units			• ETL US & Canada Listed			
• Circuit Breaker Standard on 230/208V Models			• Toggle Disconnect Standard on 460V Models			
Air Conditioner Models	-A00 Models 230/208-1		-B00 Models 230/208-3		-C00 Models 460-3	
	Heater Model #	KW	Heater Model #	KW	Heater Model #	KW
W18HB	WMCB-02A EHW18H-A04 EHW18H-A08	0Z 4 8	N/A		N/A	
W24HB	WMCB-03A EHW2HB-A04 EHW2HB-A08	0Z 4 8	WMCB-02B EHW2HB-B05	0Z 5	WMPD-01C EHW2HB-C05	0Z 5
W30HB	WMCB-05A EHW30HB-A05 EHW30HB-A10	0Z 5 10	WMCB-03B EHW30HB-B05 EHW3HB-B09	0Z 5 9	WMPD-01C EHW3HB-C05 EHW3HB-C09	0Z 5 9
W36HB	WMCB-06A EHW3HB-A05 EHW3HB-A10 EHW3HB-A15	0Z 5 10 15	WMCB-03B EHW3HB-B05 EHW3HB-B09	0Z 5 9	WMPD-01C EHW3HB-C05 EHW3HB-C09	0Z 5 9

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

NOMINAL KW	AT 240V (1)				AT 208V (1)				AT 480V (2)			AT 460V (2)		
	KW	1-PH AMPS	3-PH AMPS	BTUH	KW	1-PH AMPS	3-PH AMPS	BTUH	KW	3-PH AMPS	BTUH	KW	3-PH AMPS	BTUH
4.0	4.0	16.7		13,652	3.00	14.4		10,239						
5.0	5.0	20.8	12.0	17,065	3.75	18.0		12,799						
6.0	6.0		14.4	20,478	4.50		12.5	15,359	6.0	7.2	20,478	5.52	6.9	18,840
8.0	8.0	33.3		27,304	6.00	28.8		20,478						
9.0	9.0		21.7	30,717	6.75		18.7	23,038	9.0	10.8	30,717	8.28	10.4	28,260
10.0	10.0	41.7		34,130	7.50	36.1		25,598						
15.0	15.0	62.5	36.1	51,195	11.25	54.1	31.2	38,396	15.0	18.0	51,195	13.80	17.3	47,099

(1) These electric heaters are available in 230/208V units only.
(2) These electric heaters are available in 480V units only.

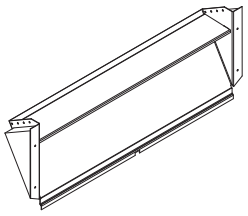
/////// WALL MOUNT™ VENTILATION OPTION SELECTION CHART

VENT CODE	FIELD INSTALL KIT	UNIT	OPERATION	DESCRIPTION
X	FAD-NE2	W18HB, W24HB	Barometric	Air damper provides slight positive room pressure during blower operation, No room air exhaust.
	FAD-NE3	W30HB, W36HB	Barometric	
A	FAD-BE2	W18HB, W24HB	Barometric	Air damper provides slight positive room pressure during blower operation, barometric room air exhaust.
	FAD-BE3	W30HB, W36HB	Barometric	
B	BOP2	W18HB, W24HB	No Ventilation	Insulated plates used to seal vent intake and exhaust openings.
	BOP3	W30HB, W36HB	No Ventilation	
M	CRV-F2-*	W18HB, W24HB	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-*	W30HB, W36HB	24V On/ff	
V	CRV-V2-*	W18HB, W24HB	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-*	W30HB, W36HB	24V On/Off, 0-10V	
D	ECON-NC2-*	W18HB, W24HB	2-10V only	Full flow Economizer that uses 2-10V signal from a DDC control system or thermostat. 7" intake hood required.
	ECON-NC3-*	W30HB, W36HB	2-10V only	
S	ECON-S2-*	W18HB, W24HB	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-*	W30HB, W36HB	JADE Controller	
Y	ECON-DB2-*	W18HB, W24HB	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-*	W30HB, W36HB	JADE Controller	
Z	ECON-WD2-*	W18HB, W24HB	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-*	W30HB, W36HB	JADE Controller	
R	ERV-FA2-*	W18HB, W24HB	24V On/Off, 3 blower speeds	208/230V Energy Recovery ventilator with energy wheel media. 3 independently selected intake and exhaust blower speeds. 3" intake hood required.
	ERV-FA3-*	W30HB, W36HB	24V On/Off, 3 blower speeds	
	ERV-FC2-*	W18HB, W24HB	24V On/Off, 3 blower speeds	460V Energy recovery ventilator with energy wheel media. 3 independently selected intake and exhaust blower speeds. 3" intake hood required.
	ERV-FC3-*	W30HB, W36HB	24V On/Off, 3 blower speeds	

* = 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.

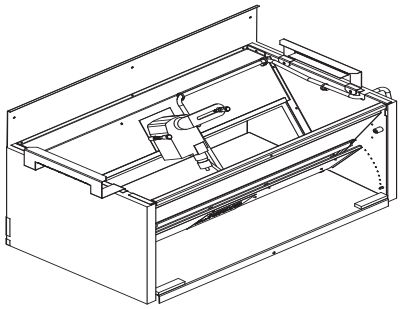


Barometric Fresh Air Damper

"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.

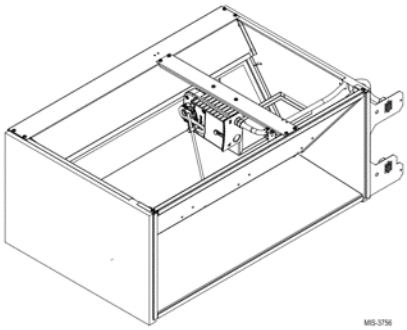
"B" Vent Code Option – Blank Off Plate (BOP)
Blank off plates are installed on the inside of the service door and over the exhaust opening in the condenser partition. The plate covers the air inlet, which restricts any outside air from entering the unit. The blank off plate option may be utilized in 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.



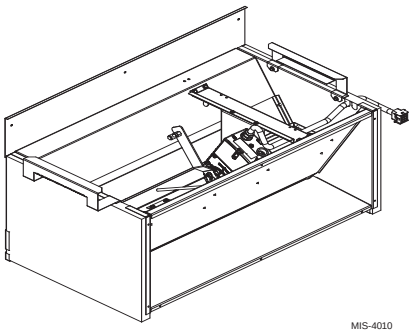
Commercial Room Ventilator-Fixed

"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 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.



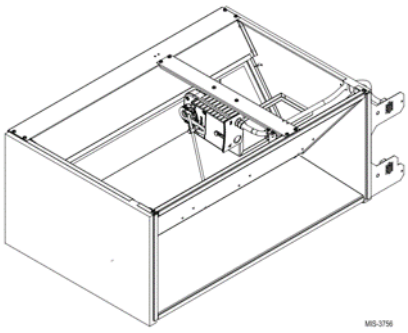
Commercial Room Ventilator- Modulating

"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

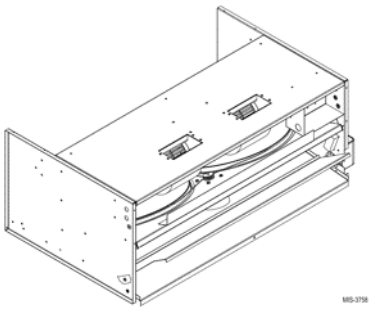
JADE Controller Specifications:

- 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.

"R" Vent Code Option – Energy Recovery Ventilator (ERV-F)

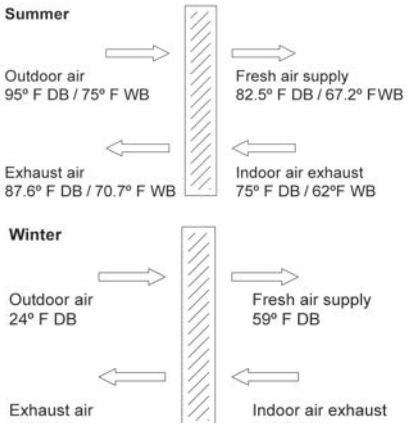
The wall-mount energy recovery ventilator (ERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The ERV allows up to 400 CFM (depending upon model) of fresh air and exhaust through the unit while maintaining superior indoor comfort and humidity levels. In most cases this can be accomplished without increasing equipment sizing or operating costs. Heat transfer efficiency is up to 67% during summer and 75% during winter conditions.

The ERV consists of a unique "rotary energy recovery cassette" that provides effective sensible and latent heat transfer capabilities during summer and winter conditions. Various control schemes are addressed including limiting ventilation during building occupancy only. The ERV is designed to be internally mounted behind the service door, and includes independent blowers for intake air and exhaust air balancing. It can be built-in at the factory (W**A only) or field installed (W**A and W**L) as an option. Wiring includes plug-in harnesses for easy vent installation and removal. A 3" intake hood with pre-filter is required for ERV installations.



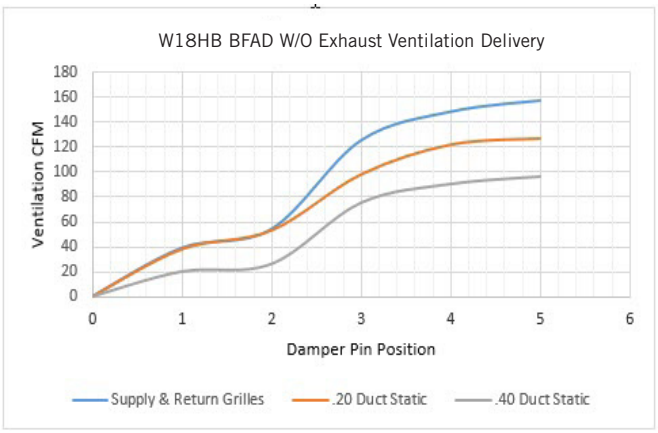
Energy Recovery Ventilator

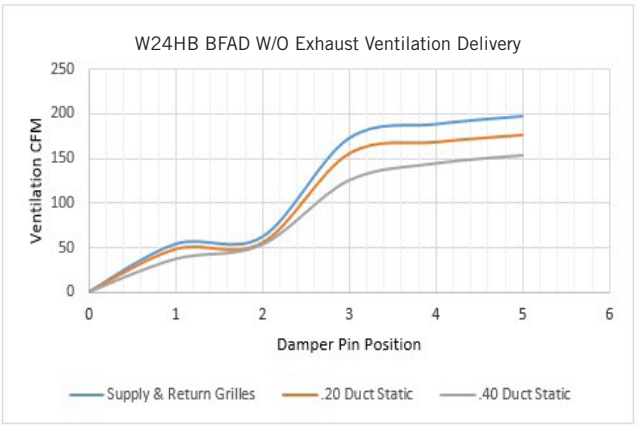
Typical load reductions for ERV-F3

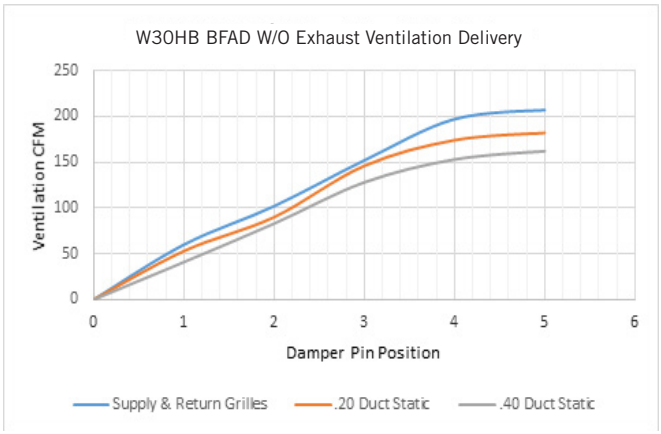


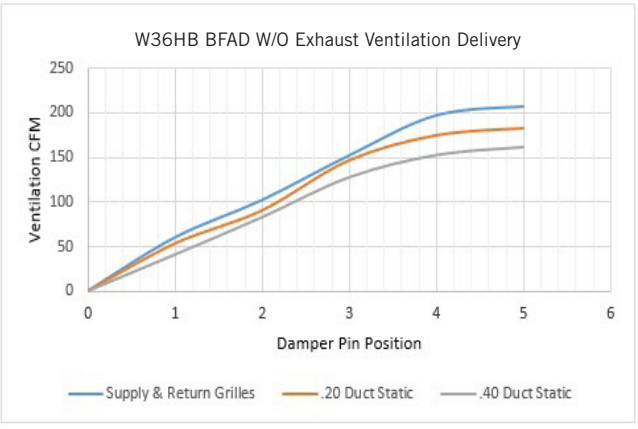
////// WALL MOUNT™ BAROMETRIC DAMPER (FAD) PERFORMANCE

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

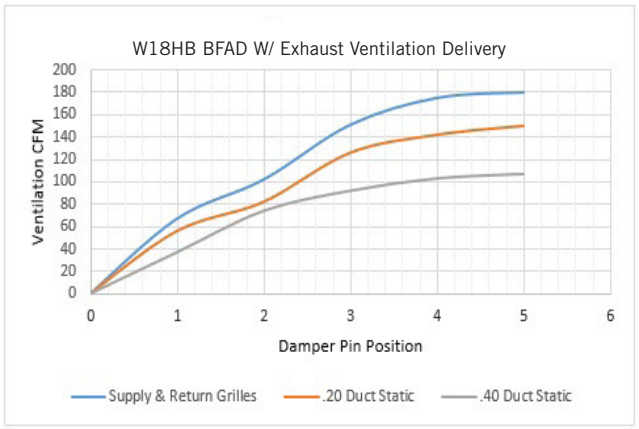


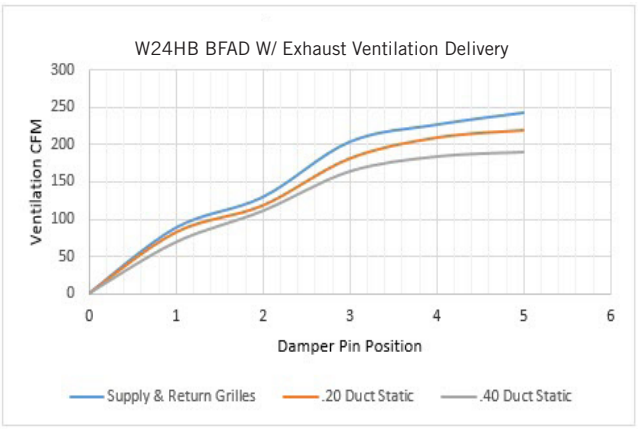


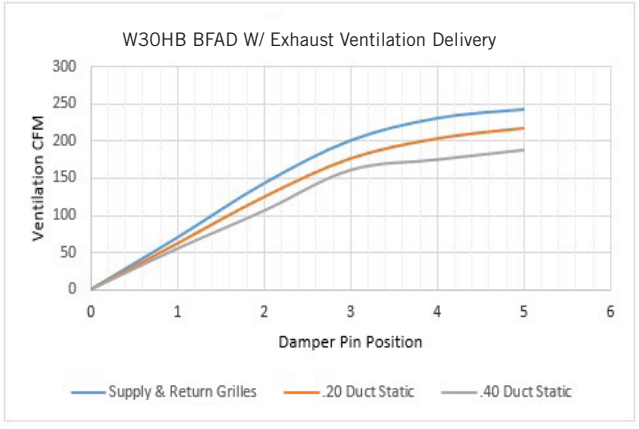


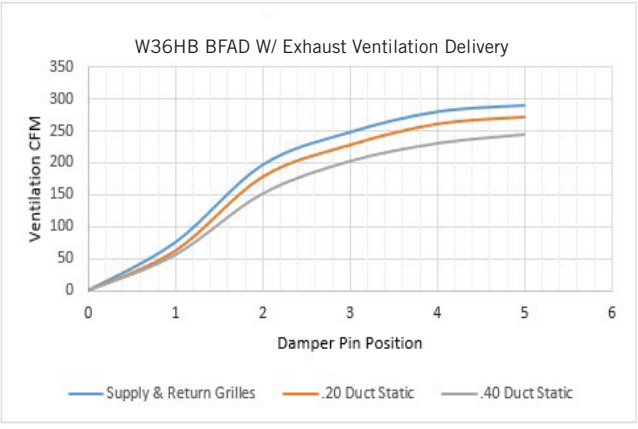


"A" (FAD-BE2 and FAD-BE3) Barometric Damper With Exhaust Vent Code Options



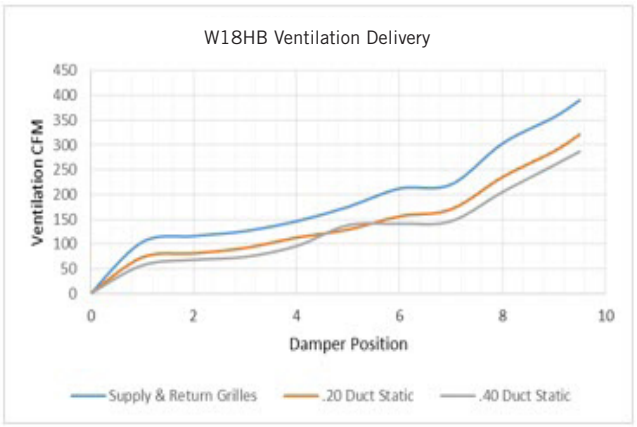


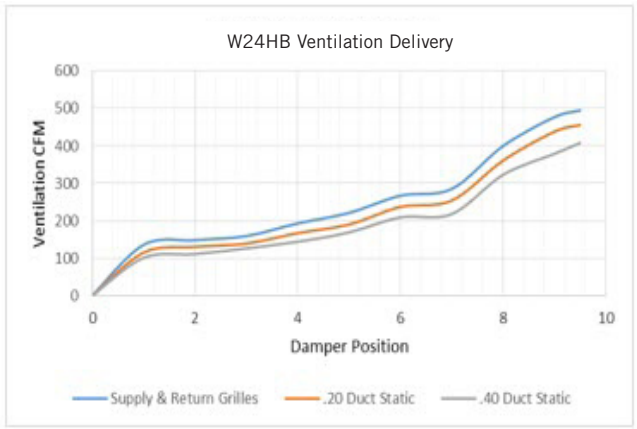


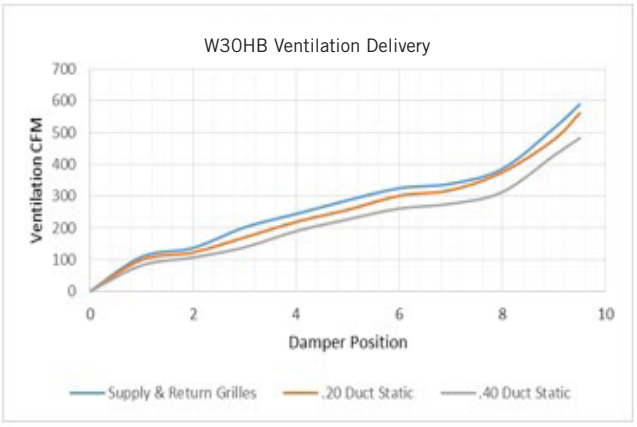


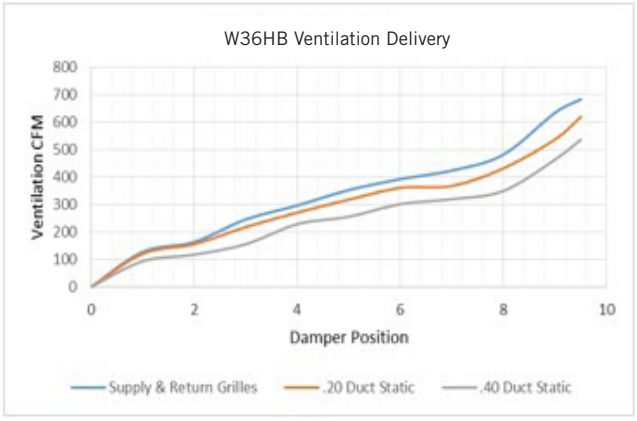
WALL MOUNT™ VENTILATION AIRFLOW CHARTS

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

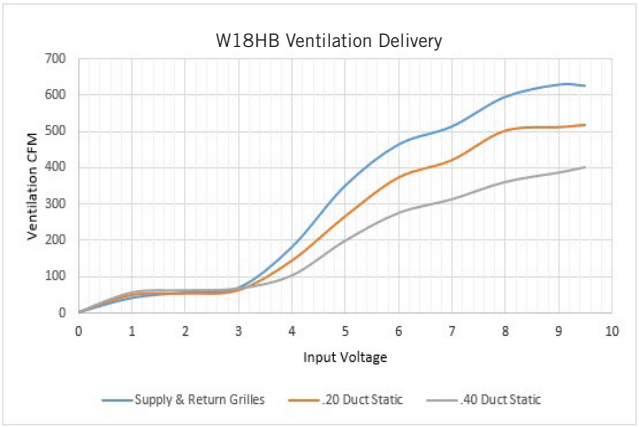


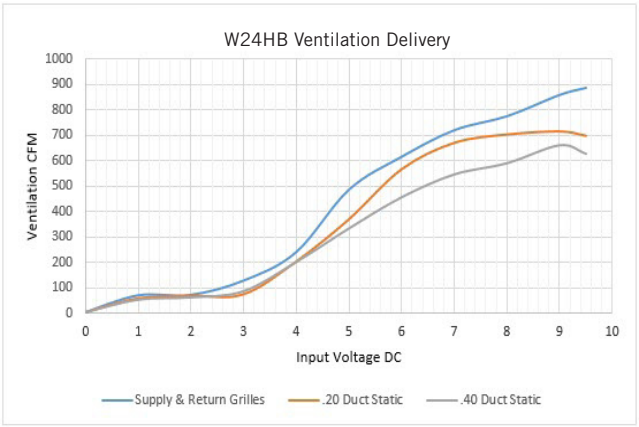


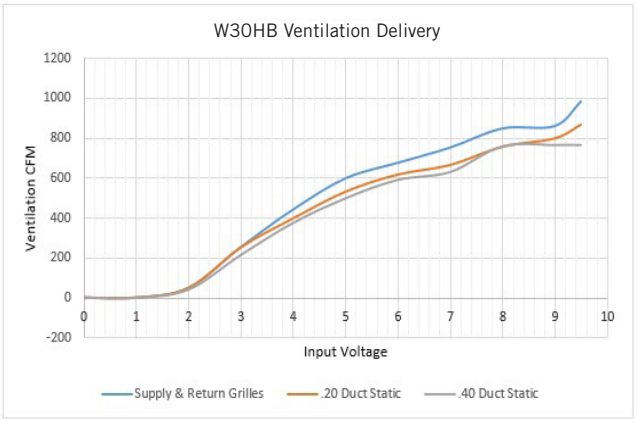


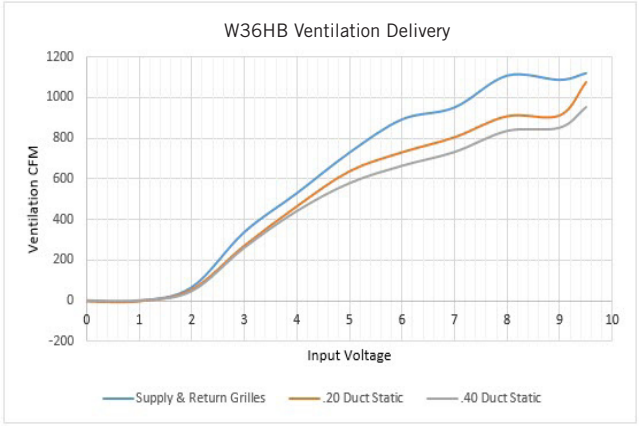


"D" (ECON-NC) "Y" (ECON-DB) and "Z" (ECON-WD) Vent Code Options









WALL MOUNT™ ENERGY RECOVERY VENTILATION (ERV) PERFORMANCE

"R" (ERV-FA2 and ERV-FC2) Vent Code Options for W18 & W24

SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°DB/62°WB)

AMBIENT O.D.		VENTILATION RATE -- 250 CFM 62% EFFICIENCY						VENTILATION RATE -- 225 CFM 63% EFFICIENCY						VENTILATION RATE -- 200 CFM 63% EFFICIENCY					
DB/WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRS	VLT	VLS	VLL	HRT	HRS	HRS
105	75	11925	8100	1325	7394	5022	822	10727	7287	3441	6758	4591	2168	9540	6480	3060	6010	4082	1928
	70	8100	8100	0	5022	5022	0	7287	7287	0	4591	4591	0	6480	6480	0	4082	4082	0
	65	8100	8100	0	5022	5022	0	7287	7287	0	4591	4591	0	6480	6480	0	4082	4082	0
100	80	17550	6750	10800	10881	4185	6696	15788	6072	9716	9946	3826	6121	14040	5400	8640	8845	3402	5443
	75	11925	6750	5175	7394	4185	3209	10727	6072	4655	6758	3826	2933	9540	5400	4140	6010	3402	2608
	70	6863	6750	113	4255	4185	70	6173	6072	101	3889	3826	64	5490	5400	90	3458	3402	56
	65	6750	6750	0	4185	4185	0	6072	6072	0	3826	3826	0	5400	5400	0	3402	3402	0
	60	6750	6750	0	4185	4185	0	6072	6072	0	3826	3826	0	5400	5400	0	3402	3402	0
95	80	17550	5400	12150	10881	3348	7533	15788	4858	10930	9946	3060	6886	14040	4320	9720	8845	2722	6124
	75	11925	5400	6525	7394	3348	4046	10727	4858	5870	6758	3060	3698	9540	4320	5220	6010	2722	3289
	70	6863	5400	1463	4255	3348	907	6173	4858	1315	3889	3060	829	5490	4320	1170	3458	2722	737
	65	5400	5400	0	3348	3348	0	4858	4858	0	3060	3060	0	4320	4320	0	2722	2722	0
	60	5400	5400	0	3348	3348	0	4858	4858	0	3060	3060	0	4320	4320	0	2722	2722	0
90	80	17550	4050	13500	10881	2511	8370	15788	3643	12145	9946	2295	7651	14040	3240	10800	8845	2041	6804
	75	11925	4050	7875	7394	2511	4883	10727	3643	7084	6758	2295	4463	9540	3240	6300	6010	2041	3969
	70	6863	4050	2813	4255	2511	1744	6173	3643	2530	3889	2295	1594	5490	3240	2250	3458	2041	1417
	65	4050	4050	0	2511	2511	0	3643	3643	0	2295	2295	0	3240	3240	0	2041	2041	0
	60	4050	4050	0	2511	2511	0	3643	3643	0	2295	2295	0	3240	3240	0	2041	2041	0
85	80	17550	2700	14850	10881	1674	9207	15788	2429	13359	9946	1530	8416	14040	2160	11880	8845	1361	7484
	75	11925	2700	9225	7394	1674	5720	10727	2429	8298	6758	1530	5228	9540	2160	7380	6010	1361	4649
	70	6863	2700	4163	4255	1674	2581	6173	2429	3744	3889	1530	2359	5490	2160	3300	3458	1361	2098
	65	2700	2700	0	1674	1674	0	2429	2429	0	1530	1530	0	2160	2160	0	1361	1361	0
	60	2700	2700	0	1674	1674	0	2429	2429	0	1530	1530	0	2160	2160	0	1361	1361	0
80	75	11925	1350	10575	7394	837	6557	10727	1214	9513	6758	765	5993	9540	1080	8460	6010	680	5330
	70	6863	1350	5513	4255	837	3418	6173	1214	4959	3889	765	3124	5490	1080	4410	3458	680	2778
	65	2363	1350	1013	1465	837	628	2125	1214	911	1339	765	547	1890	1080	810	1190	680	510
	60	1350	1350	0	837	837	0	1214	1214	0	765	765	0	1080	1080	0	680	680	0
75	70	6863	0	6863	4255	0	4255	6173	0	6173	6889	0	3889	5490	0	5490	3458	0	3458
	65	2363	0	2363	1465	0	1465	2125	0	2125	1339	0	1339	1890	0	1890	1190	0	1190
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WERVP-A2 WINTER HEATING PERFORMANCE (INDOOR DESIGN CONDITIONS 70°F DB)

AMBIENT O.D.	VENTILATION RATE					
	250 CFM 74% EFF.		225 CFM 75% EFF.		200 CFM 75% EFF.	
DB/°F	WVL	WVL	WVL	WVL	WVL	WHR
65	1350	999	1214	911	1080	810
60	2700	1998	2429	1822	2160	1620
55	4050	2997	3643	2733	3240	2430
50	5400	3996	4858	3643	4320	3240
45	6750	4995	6072	4554	5400	4050
40	8100	5994	7287	5465	6480	4860
35	9450	6993	8501	6376	7560	5670
30	10800	7992	9716	7287	8640	6480
25	12150	8991	10930	8198	9720	7290
20	13500	9990	12145	9108	10800	8100
15	14850	10989	13359	10019	11880	8910

NOTE: Sensible performance only is shown for winter application.

LEGEND:

VLT = Ventilation Load - Total
VLS = Ventilation Load - Sensible
VLL = Ventilation Load - Latent
HRT = Heat Recovery - Total
HRS = Heat Recovery - Sensible
HRL = Heat Recovery - Latent
WVL = Winter Ventilation Load
WHR = Winter Heat Recovery

////// WALL MOUNT™ ENERGY RECOVERY VENTILATION (ERV) PERFORMANCE

"R" (ERV-FA3 and ERV-FC3) Vent Code Options for W30 & W36

SUMMER COOLING PERFORMANCE (INDOOR DESIGN CONDITIONS 75°DB/62°WB)

AMBIENT O.D.		VENTILATION RATE -- 400CFM 63% EFFICIENCY						VENTILATION RATE -- 325 CFM 64% EFFICIENCY						VENTILATION RATE -- 250 CFM 65% EFFICIENCY					
DB/ WB	F	VLT	VLS	VLL	HRT	HRS	HRL	HRS	HRS	HRS	HRS	HRS	HRL	HRS	HRS	HRS	HRS	HRS	HRL
105	75	19080	12960	6120	12020	8164	3855	15502	10530	4972	9921	6739	3182	11925	8100	3825	7751	5265	2486
	70	12960	12960	0	8164	8164	0	10530	10530	0	6739	6739	0	8100	8100	0	5265	5265	0
	65	12960	12960	0	8164	8164	0	10530	10530	0	6739	6739	0	8100	8100	0	5265	5265	0
100	80	28080	10800	17280	17690	6804	10886	22815	8775	14040	14601	5616	8985	17550	6750	10800	11407	4387	7019
	75	19080	10800	8280	12020	6804	5216	15502	8775	6727	9921	5616	4305	11925	6750	5175	7751	4387	3363
	70	10980	10800	180	6717	6804	113	8921	8775	146	5709	5616	93	6862	6750	112	4460	4387	73
	65	10800	10800	0	6804	6804	0	8775	8775	0	5616	5616	0	6750	6750	0	4387	4387	0
	60	10800	10800	0	6804	6804	0	8775	8775	0	5616	5616	0	6750	6750	0	4387	4387	0
95	80	28080	8640	19440	17690	5443	12247	22815	7020	15795	14601	4492	10108	17550	5400	12150	11407	3510	7897
	75	19080	8640	10440	12020	5443	6577	15502	7020	8482	9921	4492	5428	11925	5400	6525	7751	3510	4241
	70	10980	8640	2340	6917	5443	1474	8921	7020	1901	5709	4492	1216	6862	5400	1462	4460	3510	950
	65	8640	8640	0	5443	5443	0	7020	7020	0	4492	4492	0	5400	5400	0	3510	3510	0
	60	8640	8640	0	5443	5443	0	7020	7020	0	4492	4492	0	5400	5400	0	3510	3510	0
90	80	28080	6480	21600	17690	4082	13608	22815	5265	17550	14601	3369	11232	17550	4050	13500	11407	2632	8774
	75	19080	6480	12600	12020	4082	7938	15502	5265	10237	9921	3369	6552	11925	4050	7875	7751	2632	5118
	70	10980	6480	4500	6917	4082	2835	8921	5265	3656	5709	3369	2340	6862	4050	2812	4460	2632	1828
	65	6480	6480	0	4082	4082	0	5265	5265	0	3369	3369	0	4050	4050	0	2632	2632	0
	60	6480	6480	0	4082	4082	0	5265	5265	0	3369	3369	0	4050	4050	0	2632	2632	0
85	80	28080	4320	23760	17690	2721	14968	22815	3510	19305	14601	2246	12355	17550	2700	14850	11407	1755	9652
	75	19080	4320	14760	12020	2721	9298	15502	3510	11992	9921	2246	7675	11925	2700	9225	7751	1755	5996
	70	10980	4320	6660	6917	2721	4195	8921	3510	5411	5709	2246	3463	6862	2700	4162	4460	1755	2705
	65	4320	4320	0	2721	2721	0	3510	3510	0	2246	2246	0	2700	2700	0	1755	1755	0
	60	4320	4320	0	2721	2721	0	3510	3510	0	2246	2246	0	2700	2700	0	1755	1755	0
80	75	19080	2160	16920	12020	1360	10659	15502	1755	13747	9921	1123	8798	11925	1350	10575	7751	877	6873
	70	10980	2160	8820	6917	1360	5556	8921	1755	7166	5709	1123	4586	6862	1350	5512	4460	877	3583
	65	3780	2160	1620	2381	1360	1020	3071	1755	1316	1965	1123	842	2362	1350	1012	1535	877	658
	60	2160	2160	0	1360	1360	0	1755	1755	0	1123	1123	0	1350	1350	0	877	877	0
75	70	10980	0	10980	6917	0	6917	8921	0	8921	5709	0	5709	6862	0	6862	4460	0	4460
	65	3780	0	3780	2381	0	2380	3071	0	3071	1965	0	1965	2362	0	2362	1535	0	1535
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WERVP-*3 WINTER HEATING PERFORMANCE (INDOOR DESIGN CONDITIONS 70°F DB)

AMBIENT O.D.	VENTILATION RATE					
	400 CFM 75% EFFICIENCY		325 CFM 76% EFFICIENCY		250 CFM 77% EFFICIENCY	
DB/°F	WVL	WHR	WVL	WVL	WVL	WVL
65	2160	1620	1755	1333	1350	1039
60	4320	3240	3510	2667	2700	2079
55	6480	4860	5265	4001	4050	3118
50	8640	6480	7020	5335	5400	4158
45	10800	8100	8775	6669	6750	5197
40	12960	9720	10530	8002	8100	6237
35	15120	11340	12285	9336	9450	7276
30	17280	12960	14040	10670	10800	8316
25	19440	14580	15795	12004	12150	9355
20	21600	16200	17550	13338	13500	10395
15	23760	17820	19305	14671	14850	11434

NOTE: Sensible performance only is shown for winter application.

LEGEND:

VLT = Ventilation Load - Total
VLS = Ventilation Load - Sensible
VLL = Ventilation Load - Latent
HRT = Heat Recovery - Total
HRS = Heat Recovery - Sensible
HRL = Heat Recovery - Latent
WVL = Winter Ventilation Load
WHR = Winter Heat Recovery

CABINET AND COIL OPTIONS

Cabinet Finish Options

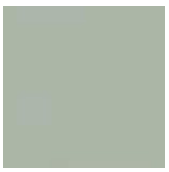
Unit models are available in Beige, White, Buckeye Gray, Desert Brown, Dark Bronze, stainless steel, and aluminum. Painted cabinet construction is comprised of 20 gauge Zinc coated steel. Parts are cleaned, rinsed, sealed, and dried before a polyurethane primer is applied. The cabinet coating is completed 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

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)

/////// OPTIONAL DIP COATED EVAPORATOR AND CONDENSER COIL

Bard now offers TECHNICOAT AA, a robust dipped coating option for the evaporator and condenser coil. TECHNICOAT AA has passed all HVAC accelerated tests like salt spray, flexibility and SWAAT 3,000+ hours. It has been tested in the field in the most severe industrial exposure conditions, such as a coastal refinery in Saudi Arabia, mining facilities in central Africa, and various Pacific islands. TECHNICOAT AA did not show any deterioration after multiple years of function with coils directly exposed to such harsh environmental conditions. The TECHNICOAT AA coating system is based on modified acrylic waterborne binders with high elongation properties. Aluminum pigmentation has been added to establish exceptional heat transfer, chemical resistance, and UV blocking properties. Corrosion resistance reaches >10,000+ hours in ASTM B-117 and >3.120 hours in SWAAT testing. Coating is gray in color.

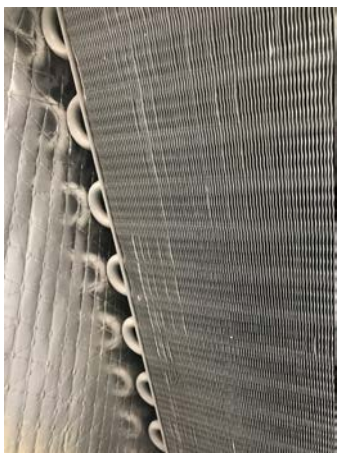
TEMPERATURE RESISTANCE:
- Maximum up to 248°F (120°C), 480°F (250°C) peak exposure
- Minimum -40°F (-40°C)

CHEMICAL RESISTANCE:
- Alkalines including Ammonaic solution, Potassium Hydroxide, Calcium Hydroxide, and Magnesium Hydroxide.
- Alcohols including Isopropanol, Butanol, Amyl Alcohol, Benzyl Alcohol, Diaceton Alcohol, Glycerine, Propanol, and Pentanol
- Aliphatic Hydrocarbons including White Spirit, Shellsol, Bitumen, Isopar G, and Paraffin.
- Amines including Triethanolamine, Aniline Sulphate, Hexamethylenetetraamine, Phenyldiamine, Triethylamine, and Methylamine.
- Inorganic Compounds including Hydrogen Carbonate, Hydrogen Sulfide, Nitrous Acid, Sulphuric Acid, and Selenic Acid.
- Aromatic Hydrocarbons including Xylene, Toluene, Asphalt, Anthracene, Benzapherene, Gumlac, Benzine, and Naphtha.
- Fuels and Oils including Diesel, Fuel Oil, Petrol, Super Petrol, Lubricating Oils, Kerosene, Spheric Oils, LPG, and Mineral Oil.
- Ethers including Enthric Oils, Vegetable Oils, Butane, Acetylene, and Methane.
- Halogenated Hydrocarbons including Amyl Acetate, Propyl Acetate, Ethyl Oxalate, Butyl Acetate, and Butyl Propionate.
- Softeners including Palatinol C, Chloraparaffine 5XX, Dioctylphosphate, Desavin, Mesamol, and Dibutylphosphate.
- Organic Compounds including Benzoic Acid, Lactic Acid, Phenols, Fatty Acids, Malic Acid, and Picric Acid.
- Salts and water solutions including Sodium, Potassium, Calcium, Aluminum, Ammonium, Barium, Copper, Lead, and Lithium.
- Many other agents including Phosphor, Zinc, Glucose Syrup, Sulfur, Urea, Menthol, Antimony, Hydrogen, Rubber, and Shellac.

Contact your local Bard distributor or representative for a list of all chemicals and chemical resistance information.

SPECIAL PROPERTIES:
- Anti-Odor
- Hydrophilic / Hydrophobic
- Anti-Corrosive

EXPOSURE CONDITIONS INCLUDE:
Food Processing & Storage, Airports, Office Buildings, Hotels, Schools, Warehouses, Water Treatment, Breweries, Paper Mills, Refineries, Power Plants, Meat Processing Industries, Automotive Industries and other locations near shorelines and salt water.



/////// 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. Heat pumps include a control board with built in time delays and diagnostic lights.

CONTROL CODE	DESCRIPTION OF FACTORY INSTALLED COMPONENTS
X	Hi Pressure Switch, Low Pressure Switch, Defrost Heat Pump Control Board.
E	Hi Pressure Switch, Low Pressure Switch, Defrost Heat Pump Control Board, **Low Ambient Control**
NA	Hi Pressure Switch, Low Pressure Switch, Defrost Heat Pump Control Board, **Low Ambient Control, Dirty Filter Press. Switch**
Q	**Hi Pressure Switch, Low Pressure Switch, Defrost Heat Pump Control Board, Outdoor Thermostat**
R	**Hi Pressure Switch, Low Pressure Switch, Defrost Heat Pump Control Board, Low Ambient Control, Outdoor Thermostat**
S	**Hi Pressure Control, Low Pressure Switch, Defrost Heat Pump Control Board, PTCR Start Kit**
T	**Hi Pressure Control, Low Pressure Switch, Compressor Control Module, Low Ambient Control, Outdoor Thermostat, PTCR Start Kit**
J	**Hi Pressure Switch, Low Pressure Switch, Defrost Heat Pump Control Board, Low Ambient Control, Alarm Relay**

/////// 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	CMH-33	W18HB	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - modulating
E	CMH-34	W24HB, W30HB, W36HB	Low Ambient Control allows compressor cooling between 0°F and 50°F outdoor temp. - fan cycling
NA	CMC-15	W18HB, W24HB, W30HB, W36HB	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
NA	TBD	W18HB, W24HB, W30HB, W36HB	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	CMH-28	W18HB, W24HB, W30HB, W36HB	Outdoor Thermostat Kit used to disable compressor cooling below 50°F outdoor temp. Adjustable between 50° and 0°F
NA	CMC-31	W18HB, W24HB, W30HB, W36HB	Dirty Filter Kit
NA	CMC-34	W18HB, W24HB, W30HB, W36HB	Alarm Relay 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 fiels 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.
Y2	All Units	2nd Stage cooling input. Compressor cooling stage when Economizer is used.
B/W1	All Units	Reversing Valve (energize for heating)
W2	All Units	1st Stage electric heat
W3	All Units	2nd State electric heat. Jumper between W2 and W3 must be removed for staged heat
A	Vent option units only	Ventilation option input. Calls for occupied vent air intake for CRV, ERV, ECON
D	Dehum. units only	Dehumidification input on units equipped with mechanical reheat dehumid-ification
L	All Units	24VAC Alarm active output
1	J Control Opt.	Alarm relay Normally Closed Contract
2	J Control Opt.	Alarm relay Normally Open Contact
3	J Control Opt.	Alarm Relay Common Contact
11	F Control Option	Filter Switch, Normally Open Contacts
12	F Control Option	Filter Switch, 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 leads to believe LAC only works to 50°F. 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 - WH UNITS

CLEARANCES REQUIRED FOR SERVICE ACCESS AND ADEQUATE CONDENSER INLET AIRFLOW

MODELS	LEFT SIDE	RIGHT SIDE
W18HB, W24HB, W30HB, W36HB	15"	20"

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.

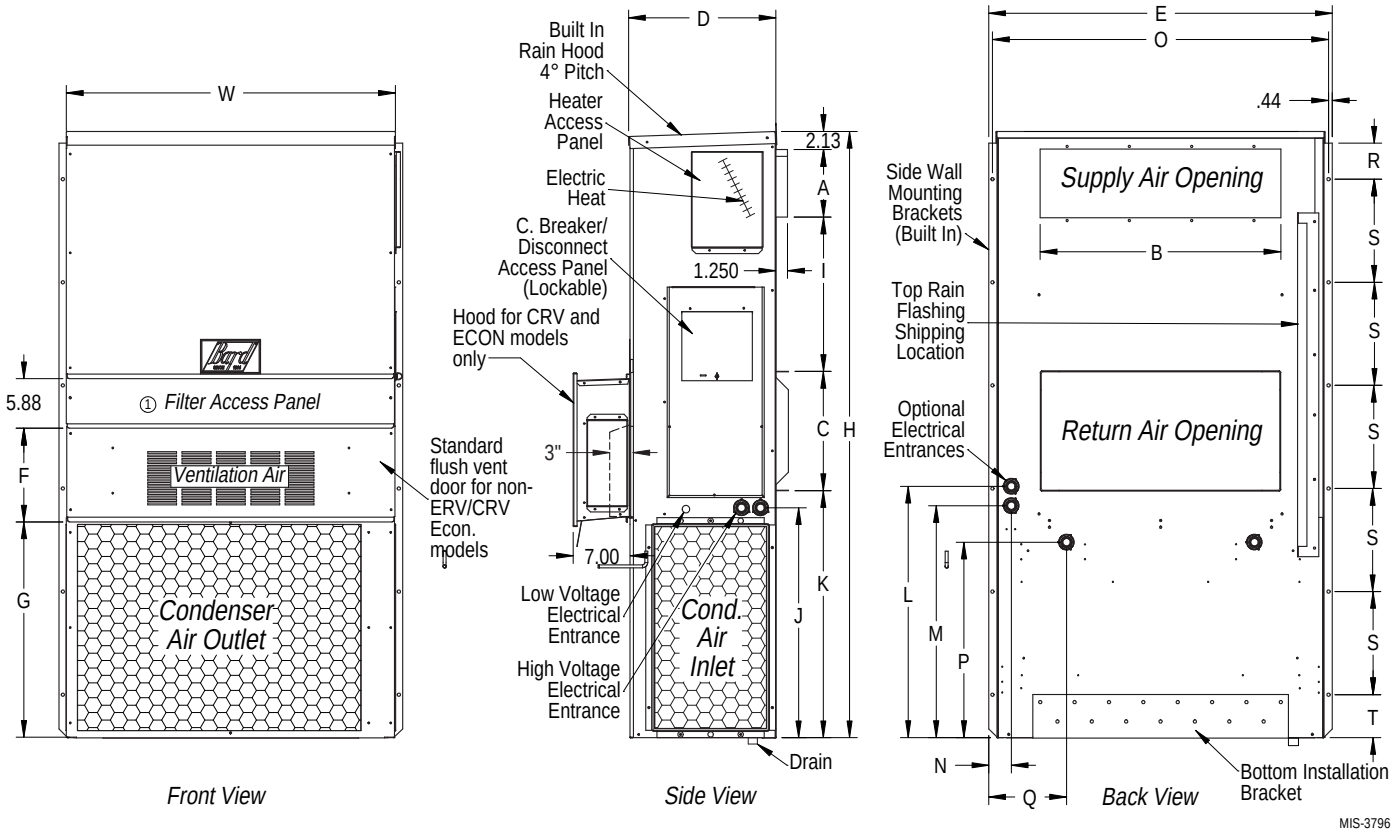
MINIMUM CLEARANCES REQUIRED TO COMBUSTIBLE MATERIALS

MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W18HB, W24HB	0"	0"
W30HB, W36HB	1/4"	0"

① Refer to the Installation Manual for more detailed information.

DIMENSIONS OF W18HB-36HB BASIC UNIT FOR ARCHITECTURAL & INSTALLATION REQUIREMENTS (NOMINAL)

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
W18HB W24HB	33.300	17.125	74.563	7.88	19.88	11.88	19.88	35.00	10.88	29.75	20.56	30.75	32.06	33.25	31.00	2.63	34.13	26.06	10.55	4.19	12.00	9.00
W30HB W36HB	38.200	17.125	74.563	7.88	27.88	13.88	27.88	40.00	10.88	29.75	17.93	30.75	32.75	33.25	31.00	2.75	39.13	26.75	9.14	4.19	12.00	9.00



/////// 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-*	W18H, W24H	Provides vibration isolation for reduced sound transmission through wall
WMICF3-*	W30H, W36H	Provides vibration isolation for reduced sound transmission through wall
WWC3-*	W30H, W36H	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-*	W18H, W24H, W30H, W36H	Acoustical return air plenum that offsets the return air path. Air intake at floor level.

* 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 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	W18H, W24H	8" x 20" with 2" Flange 4 way deflection supply grille. **Use for standard installation**s
SG-3W	W30H, W36H	8" x 28" with 2" Flange 4 way deflection supply grille. **Use for standard installations**
RG-2W	W18H, W24H	12" x 20" with 2" Flange return grille. **Use for standard installations.**
RG-3W	W30H, W36H	12" x 28" with 2" Flange return grille. **Use for standard installations.**
RFG-2W	W18H, W24H	12" x 20" with 2" Flange return grille with filter bracket.
RFG-3W	W30H, W36H	12" x 28" with 2" Flange return grille with filter bracket.
RGD-3	W30H, W36H	12" x 28" with 1" Flange return grille. Manual damper used to restrict return 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-2W	800 CFM	0°	1053	.076" WC	37-52 ft.
		22.5°	1143	.1" WC	28-40 ft.
		45°	1428	.162" WC	20-29 ft.
	865 CFM	0°	1138	.054" WC	40-55 ft.
		22.5°	1236	.075" WC	31-42 ft.
		45°	1544	.113" WC	21-30 ft.
SG-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.

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.

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
8403-092	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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