

THE WALL-MOUNT™ HEAT PUMPS - 10.0 EER, (60HZ)

Models:	W18HA to W60HA 60 Hz
Heating Capacities:	(16,500 to 56,500 Btuh)
Cooling Capacities:	(17,100 to 58,000 Btuh)

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.

Engineered Features

Aluminum Finned Copper Coils:

Grooved tubing and enhanced louvered fin for maximum heat transfer and energy efficiency.

Twin Blowers:

Move air quietly. Most models feature multispeed blower motors providing airflow adjustment for high and low static operation. Motor overload protection is standard on all models.

Heat Pump Compressor:

Scroll Compressors are standard on all 1½ to 5 ton models. Eliminates need for crankcase heater.

Phase Rotation Monitor:

Standard on all 3 phase scroll compressors. Protects against reverse rotation if power supply is not properly connected.

R-410A Refrigerant:

Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements.

Liquid Line Filter Drier:

Standard on all units. Protects system against moisture.

Galvanized 20 Gauge Zinc Coated Steel Cabinet:

Cleaned, rinsed, sealed and dried before the polyurethane primer is applied. The cabinet is handsomely finished with a baked on, beige textured enamel, which allows it to withstand 1000 hours of salt spray tests per ASTM B117-03.

Foil Faced Insulation:

Standard on all units.

Electrical Components:

Are easily accessible for routine inspection and maintenance through a right side, service panel opening. Features a lockable, hinged access cover to the circuit breaker or toggle disconnect switch.

Electric Heat Strips:

Features an automatic limit and thermal cut-off safety control. Heater packages are factory or field installed for all 1½ through 5 ton models. Features easy slide-in field assembly with various BTUH outputs.

Condenser Fan and Motor

Shroud Assembly:

Slide out for easy access.

Filter Service Door:

Separate service door provides easy access for filter change.

One Inch, Disposable Air Filters:

Are standard equipment. Optional one inch washable filters available and filter racks permit the addition of 2" pleated filter. Factory or field installed.

Solid State Electronic Heat Pump Control:

Provides efficient 30, 60 or 90 minute defrost cycle. A thermistor sensor, speed up terminal for service and 10 minute defrost override are standard on the electronic heat pump control.

High & Low Pressure Switches are Auto-Reset:

Standard on all units. Built-in lockout circuit resets from the room thermostat. Provides commercial quality protection to the compressor.

Five Minute Compressor Time Delay:

Short cycle delay on make and break timer protection is standard. Built into the heat pump control.

Emergency Heat Circuit:

Permits continuous operation of the system.

Barometric Fresh Air Damper:

Standard on all units. Allows up to 25% outside fresh air.

Built-in Circuit Breakers:

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

Slope Top:

Standard feature for water run-off.

Full Length Mounting Brackets:

Built into cabinet for improved appearance and easy installation.

NOTE: Bottom mounting bracket included to assist in installation.

Top Rain Flashing:

Standard feature on all models.

GREEN REFRIGERANT R-410A



Ventilation System Packages

All packages are designed to meet your specific ventilation requirements utilizing one of six ventilation options for the product. All assemblies can be factory installed, installed in the field at time of installation or as a retrofit system after installation.

- Standard - Barometric Fresh Air Damper
- Optional - Motorized Fresh Air Damper
- Optional - Blank off Plate
- Optional - Commercial Room Ventilator w/Exhaust
 - CRV - Spring Return
- Optional - Economizer with Exhaust, Enthalpy or Dry Bulb
- Optional - Energy Recovery Ventilator

**Intertek**

Bard is an
ISO 9001:2008
Certified Manufacturer

- Complies with efficiency requirements of ASHRAE/IESNA 90.1-2013.
- Certified to ANSI/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.

Capacity and Efficiency Ratings

MODELS	W18HA	W24HA	W30HA	W36HA	W42HA	W48HA	W60HA
Cooling BTUH ①	17,100	24,600	30,000	34,600	40,500	47,000	58,000
EER ②	10.20	10.00	10.00	10.00	10.20	10.00	10.40
High Temp Heating (47F) BTUH ①	16,500	23,400	29,800	32,000	38,500	44,000	56,500
COP ②	3.00	3.00	3.00	3.00	3.00	3.00	3.00
Low Temp Heating (17F) BTUH ①	10,200	14,600	18,800	20,000	22,500	26,000	36,500
COP ②	2.00	2.00	2.10	2.10	2.00	2.00	2.20

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

② EER = Energy Efficiency Ratio, COP = Coefficient of Performance and are certified in accordance with ANSI/ARI Standard 390-2003.

Specifications 1½ through 3 Ton

MODELS	W18HA-A	W24HA-A	W24HA-B	W24HA-C	W30HA-A	W30HA-B	W30HA-C	W36HA-A	W36HA-B	W36HA-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	5.8/8.2	10.4/12.4	6.8/8.1	5.0	11.2/12.7	7.2/8.2	5.1	14.6/16.6	10.8/12.3	5.6
Branch Circuit										
Selection Current	9.0	12.8	8.3	5.1	14.1	9.0	5.6	17.9	13.2	6.0
Lock Rotor Amps	48/48	64/64	58/58	28	77/77	71/71	38	112/112	88/88	44
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser										
Fan Motor--HP--RPM	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075
Fan Motor--Amps	1.2	1.2	1.2	0.8	1.5	1.5	0.8	1.5	1.5	0.8
Fan--DIA/CFM	18" - 1750	18" - 1700	18" - 1700	18" - 1700	20" - 2200	20" - 2200	20" - 2200	20" - 2200	20" - 2200	20" - 2200
Blower Motor & Evap.										
Blower Motor--HP-RPM-SPD	1/6-1100-2	1/6-1100-1	1/6-1100-1	1/6-1100-1	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2
Blower Motor--Amps	0.8	1.0	1.0	.45	2.6	2.6	0.8	2.6	2.6	0.8
CFM Cooling & E.S.P.										
w/Filter (Rated-Wet Coil)	600 - .2	800 - .2	800 - .2	800 - .2	1000 - .4	1000 - .4	1000 - .4	1100 - .3	1100 - .3	1100 - .3
Filter Sizes (inches) STD.	16 x 25 x 1	16 x 25 x 1	16 x 25 x 1	16 x 25 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1	16 x 30 x 1
Basic Unit Shipping Weight--LBS	335	345	345	345	375	375	375	380	380	380
+Barometric Fresh Air Damper-Lbs	3.5	3.5	3.5	3.5	4.0	4.0	4.0	4.0	4.0	4.0
+Blank-Off Plate-Lbs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
+Motorized Fresh Air Damper-Lbs	10.0	10.0	10.0	10.0	11.0	11.0	11.0	11.0	11.0	11.0
+Commercial Room Ventilator-Lbs	69.0	69.0	69.0	69.0	75.0	75.0	75.0	75.0	75.0	75.0
+Economizer-Lbs	69.0	69.0	69.0	69.0	75.0	75.0	75.0	75.0	75.0	75.0
+Energy Recovery Ventilator-Lbs	50.0	50.0	50.0	50.0	56.0	56.0	56.0	56.0	56.0	56.0

Specifications 3½ through 5 Ton

MODELS	W42HA-A	W42HA-B	W42HA-C	W48HA-A	W48HA-B	W48HA-C	W60HA-A	W60HA-B	W60HA-C
Electrical Rating – 60 Hz	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	414-506	197-253	197-253	414-506	197-253	197-253	414-506
Compressor--Circuit A									
Voltage	230/208	230/208	460	230/208	230/208	460	230/208	230/208	460
Rated Load Amps	14.3/16.5	10.8/12.5	5.6	17.8/22.3	11.2/14.1	6.4	26/30.1	15.5/17.9	9.0
Branch Circuit									
Selection Current	17.9	13.5	6.0	22.3	14.1	6.4	30.1	17.9	9.0
Lock Rotor Amps	112/112	88/88	44	117/117	83/83	41	134/134	110/110	52
Compressor Type	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser									
Fan Motor--HP--RPM-SPD	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2
Fan Motor--Amps	2.6	2.6	1.3	2.6	2.6	1.3	2.6	2.6	1.3
Fan--DIA/CFM	24" - 2950	24" - 2950	24" - 2950	24" - 2950	24" - 2950	24" - 2950	24" - 3100	24" - 3100	24" - 3100
Blower Motor & Evap.									
Blower Motor--HP-RPM-SPD	1/3-1070-2	1/3-1070-2	1/3-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	3/4-1070-3	3/4-1070-3	3/4-1070-3
Blower Motor--Amps	2.3	2.3	1.2	2.3	2.3	1.2	3.9	3.9	1.7
CFM Cooling & E.S.P.									
w/Filter (Rated-Wet Coil)	1400 - .4	1400 - .4	1400 - .4	1550 - .2	1550 - .2	1550 - .2	1700 - .2	1700 - .2	1700 - .2
Filter Sizes (inches) STD.	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1
Basic Unit Shipping Weight--LBS	480	480	480	485	485	485	530	530	530
+Barometric Fresh Air Damper-Lbs	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5	4.5
+Blank-Off Plate-Lbs	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0	1.0
+Motorized Fresh Air Damper-Lbs	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0	43.0
+Commercial Room Ventilator-Lbs	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
+Economizer-Lbs	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5	70.5
+Energy Recovery Ventilator-Lbs	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0	79.0

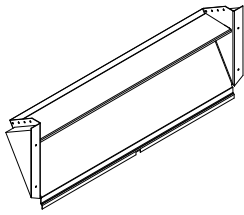
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Supersedes S3523-318

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Ventilation System Packages

Bard Wall-Mounts are designed to provide optional ventilation packages to meet all of your ventilation and indoor air quality requirements. All units are equipped with a barometric fresh air damper as the standard ventilation package. All ventilation packages can be built-in at the factory or field-installed at a later date.

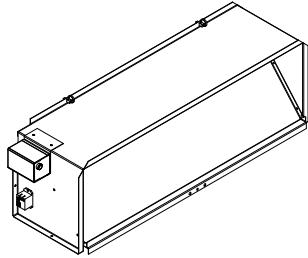


Barometric Fresh Air Damper

BAROMETRIC FRESH AIR DAMPER

The barometric fresh air damper 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.

STANDARD



Motorized Fresh Air Damper

BLANK OFF PLATE

A blank off plate is installed on the inside of the service door. It covers the air inlet openings, which restricts any outside air from entering the unit. The blank off plate should be utilized in applications where outside air is not required to be mixed with the conditioned air.

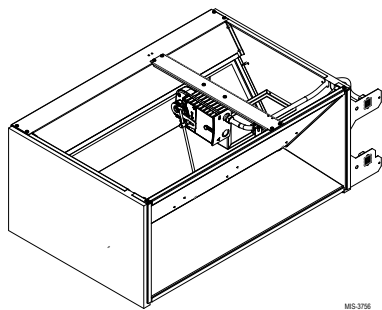
OPTIONAL

MOTORIZED FRESH AIR DAMPER

The motorized fresh air damper is internally mounted behind 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 two position damper can be fully open or closed. The damper blade is powered open by a 24VAC motor with spring return on power loss. The damper can be controlled by indoor blower operation or can be field connected to be managed based on building occupancy.

OPTIONAL

NOTE: The above vent systems are intake only without built-in exhaust capability. Building will likely require separate field installed barometric relief or mechanical exhaust elsewhere within the conditioned space. Balancing dampers in the return air grille may be required to achieve specified amount of outdoor air intake.



Commercial Room Ventilator

COMMERCIAL ROOM VENTILATOR

The built-in commercial room ventilator is internally mounted behind the service door and allows intake of outside ventilation air. It includes a built-in exhaust air damper for room pressurization relief.

OPTIONAL

The commercial room ventilator (CRV) is a simple and innovative approach to improving the indoor air quality by providing fresh air intake and exhaust capability through the CRV. The damper can be easily adjusted to control the amount of fresh air supplied into the building. The CRV can be controlled by indoor blower operation or field controlled based on room occupancy. Complies with ANSI/ASHRAE Standard 62.1 "Ventilation for Acceptable Indoor Air Quality".

Standard Features:

- Fully modulating
- Honeywell Hi-Torque Actuator with 0-10V signal input capability
- No hood required
- Simple single blade design
- Positive shut-off with non-stick gaskets
- Solid State Controller with occupancy CFM setting and modulating 4-20 mA thermostat signal input

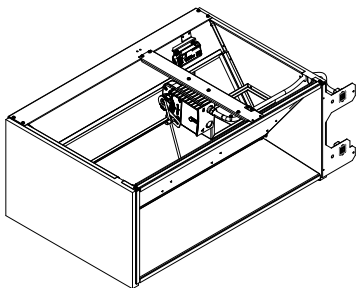
ECONOMIZER

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 in turn provides lower operating costs, while extending the life of the compressor.

OPTIONAL

Standard Features:

- Full rated outdoor intake
- Fully modulating
- Honeywell Hi-Torque Actuator
- 7" intake hood with filter
- Simple single blade design
- Positive shut-off with non-stick gaskets
- Electronic DB and/or Enthalpy sensors depending upon version
- Honeywell JADE electronic economizer module with precision settings and diagnostics
- DB or Enthalpy economizer versions available



Economizer

WALL-MOUNT ENERGY RECOVERY VENTILATOR

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 from 200 to 450 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. Intake and exhausted blowers have 3 independently selectable speeds.

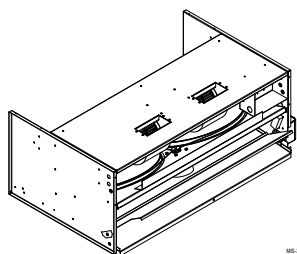
OPTIONAL

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 in the W**AA or W**LA model wall-mount units. It can be built-in at the factory (W**A only) or field installed as an option. WERVP-*3 and WERVP-*5 can be independently adjusted for intake and exhaust rates.

The ERV's have exhaust gravity shut-off dampers and motorized air intake dampers for positive shut-off.

Wiring includes plug-in harnesses for easy vent installation and removal.

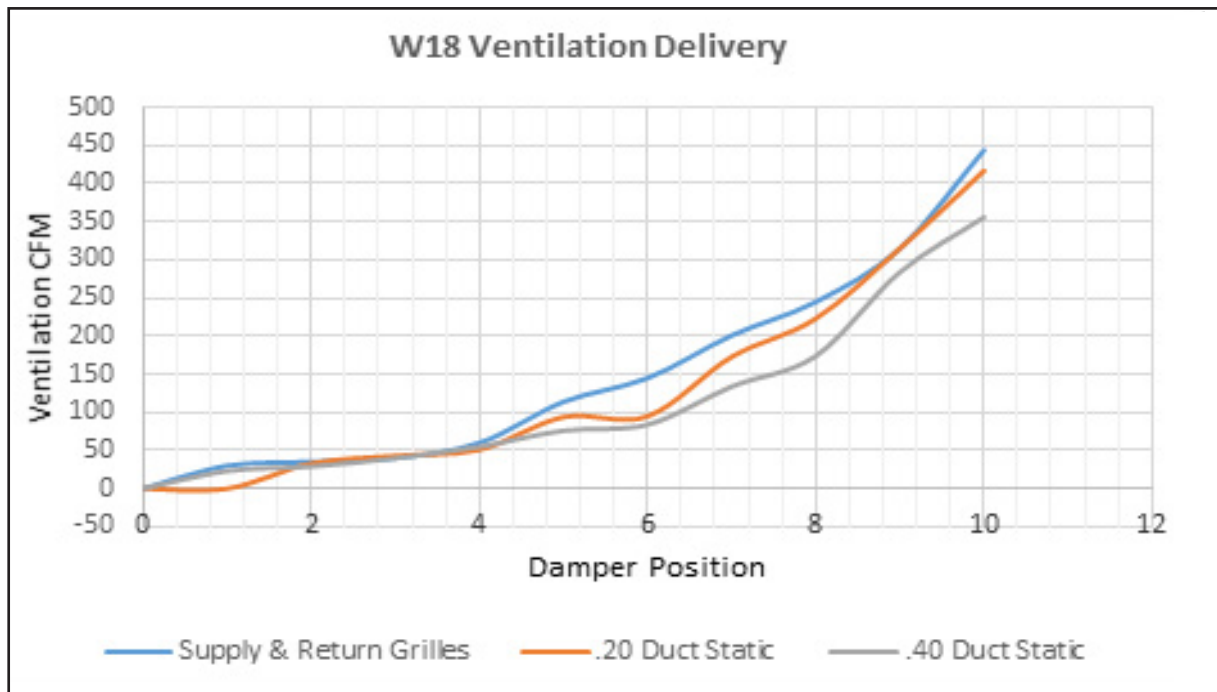


Energy Recovery Ventilator

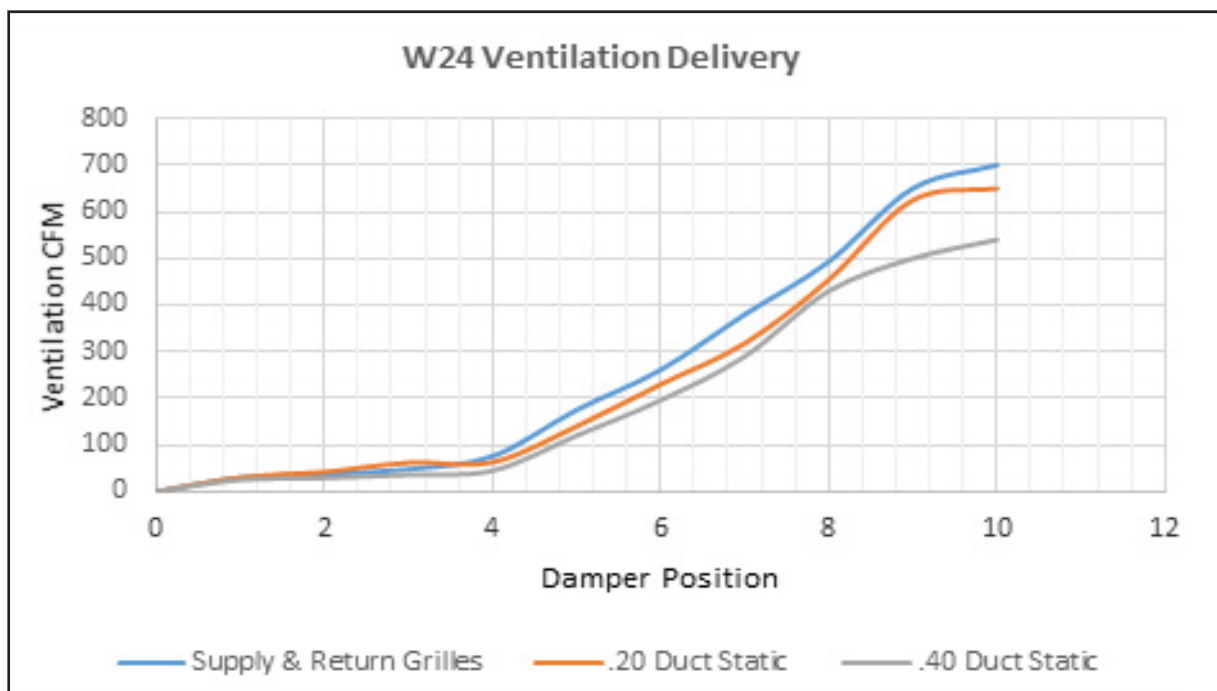
Certified FDD Product
California Title 24, Part 6
HJW10
www.energy.ca.gov

Ventilation Options Overview

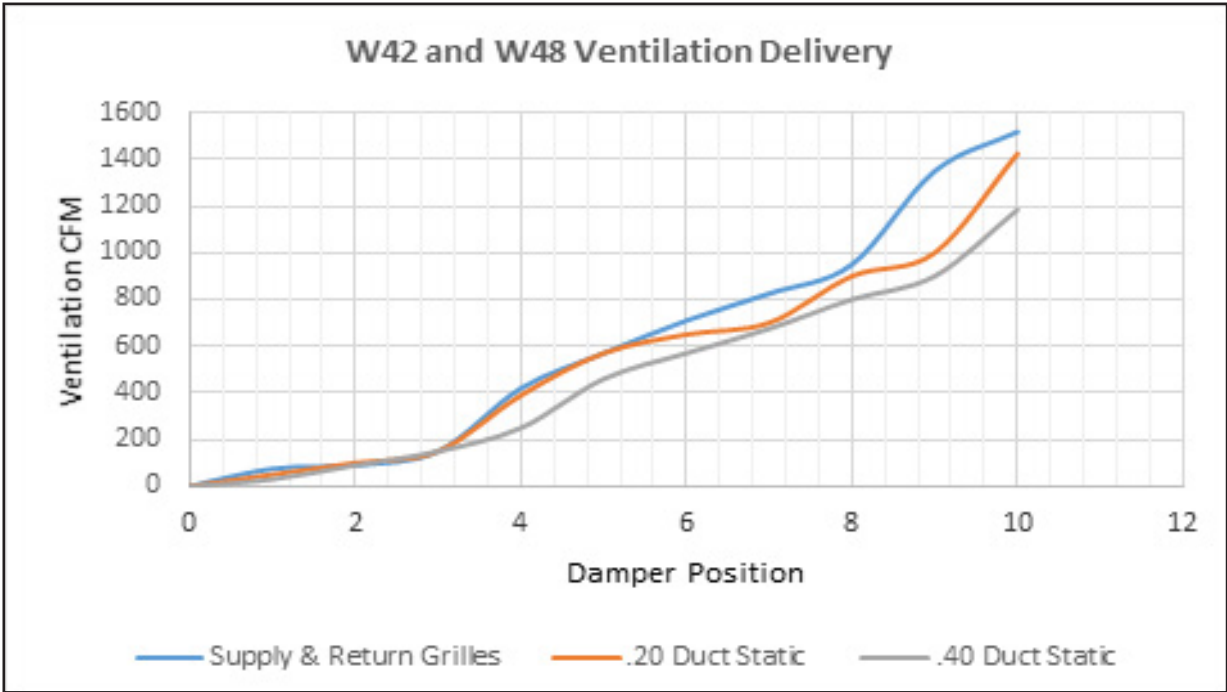
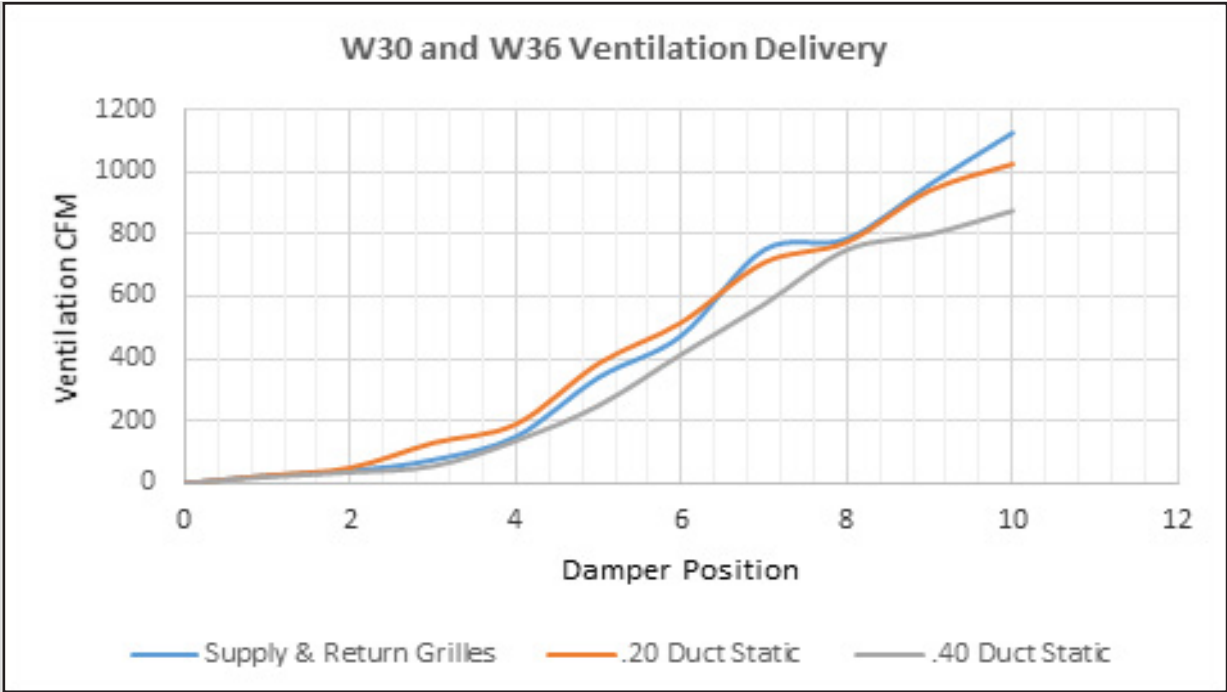
Ventilation Option	Nomenclature Code	Air Intake and Exhaust Options	Intake Hood Depths	Operation	Notes
Fresh Air Damper	X	Up to 25% of the rated unit airflow. No exhaust air.	No Hood	Damper opens when blower is on. Pins are used for blade position.	Standard Vent Option. Normally used for positive room pressurization.
Blank Off Plate	B	No Intake or exhaust air.	No Hood	Uses insulated plates to block air openings normally used for vent options.	Provides optimum cabinet sealing.
Motorized Fresh Air Damper	M	Up to 25% of the rated unit airflow intake. No exhaust air. Spring return motor.	No Hood	On/Off operation. No intake air adjustment.	Normally used for positive room pressurization.
Energy Recovery Ventilator	R	Intake and exhaust blowers with 3 selectable speeds.	3"	On/Off operation	Offers energy savings by using energy recovery wheels.
Classroom Ventilator, Partial Intake Airflow	C	Spring return motor that closes on power loss. Air intake of up to 50% rated unit CFM.	No Hood	Solid state board with min. position and adjustable On/Off occupied airflow. Optional 0-10V input.	Provides ventilation to occupied structures to meet fresh air requirements.
Economizer, Full Intake Airflow, Outdoor Temperature Sensor	Y	Spring return motor that closes on power loss. Air intake of full rated unit CFM (Full flow).	7"	JADE Controller with min. position blade setting and 0-10V CO2 sensor input. Economizes based on outdoor temp. only.	Takes advantage of cooler outdoor weather conditions to save energy costs.
Economizer, Full Intake Airflow, Outdoor Temp. and Enthalpy Sensor	Z	Spring return motor that closes on power loss. Air intake of full rated unit CFM (Full flow).	7"	JADE Controller with min. position blade setting and 0-10V CO2 sensor input. Economizes based on outdoor temp. and humidity.	Takes advantage of cooler outdoor weather conditions to save energy costs. Does not operate when humidity is high.

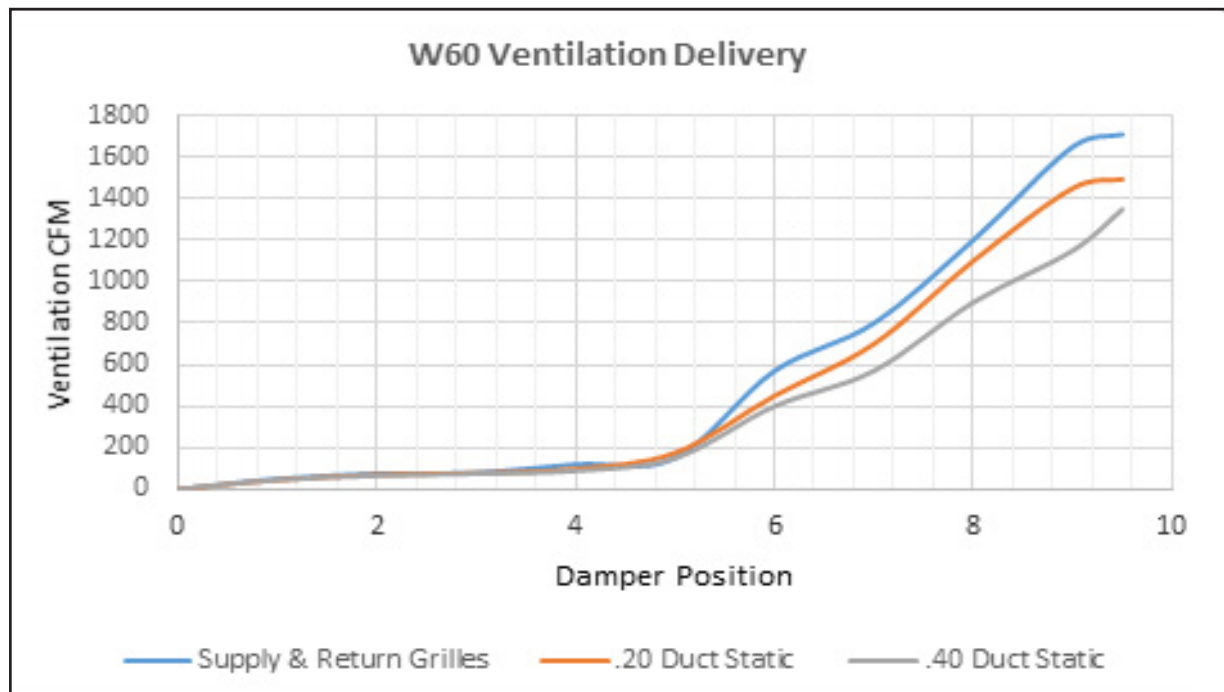


Airflow amounts less than 100 CFM may not be achievable.



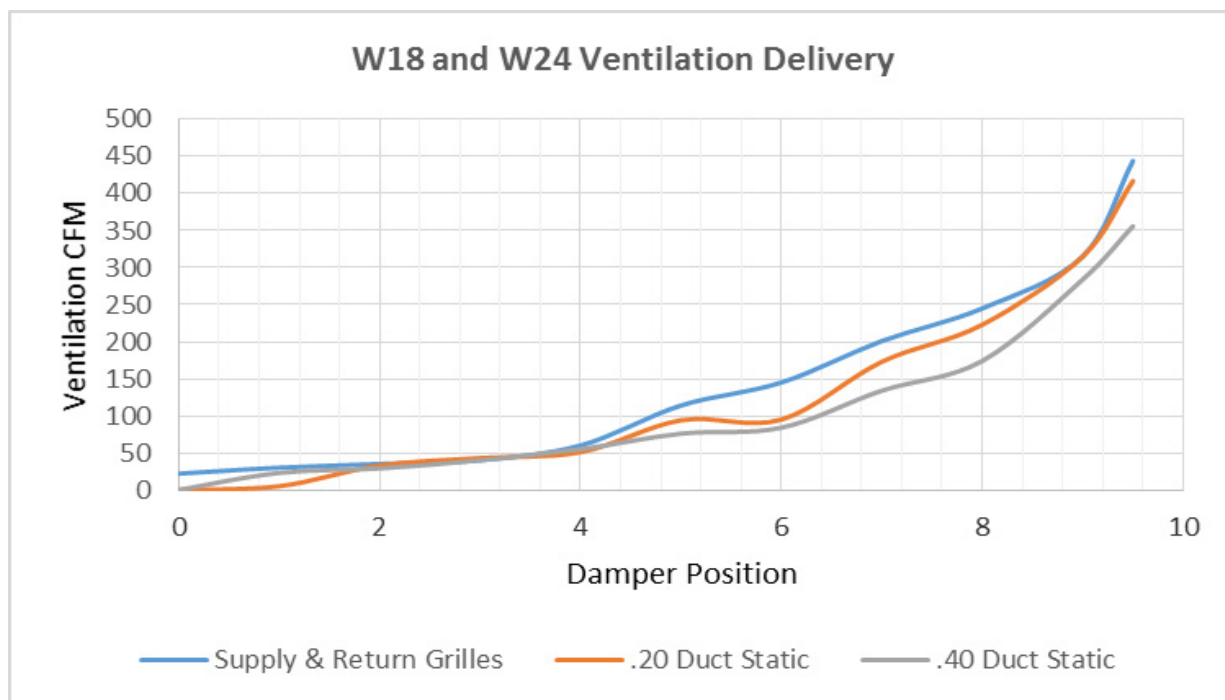
Airflow amounts less than 100 CFM may not be achievable.



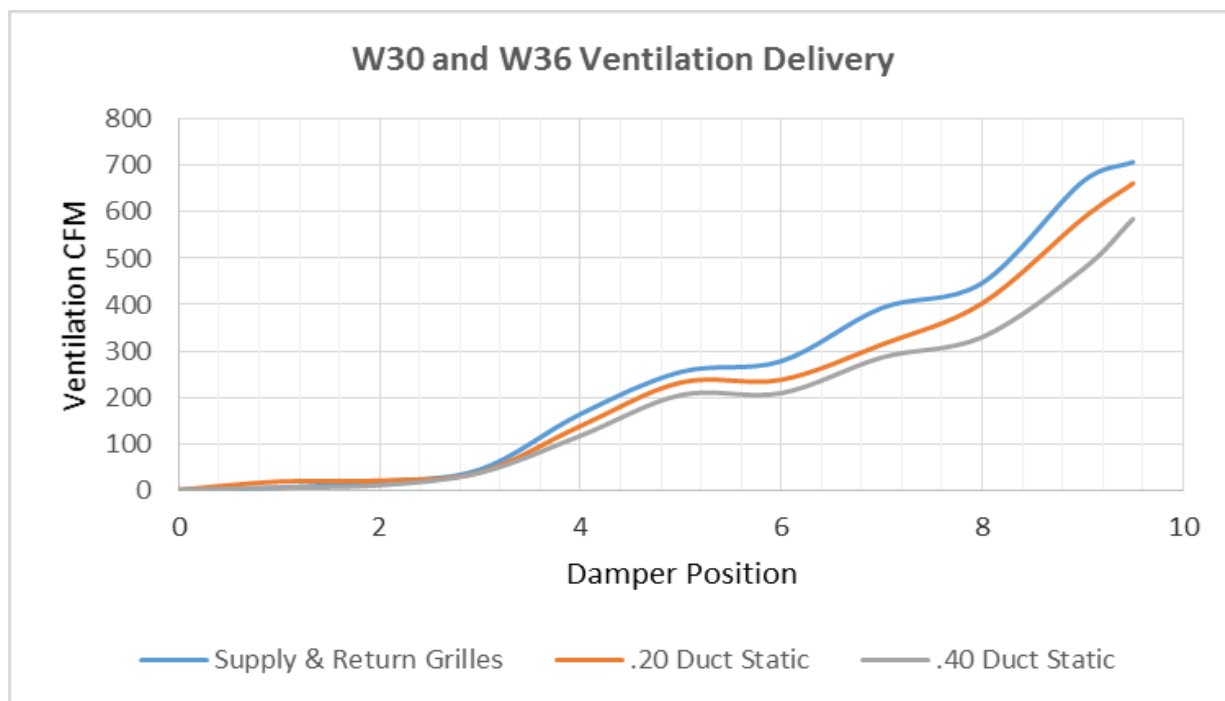


Airflow amounts less than 100 CFM may not be achievable.

Commercial Room Ventilator Performance Data - WCRVPS

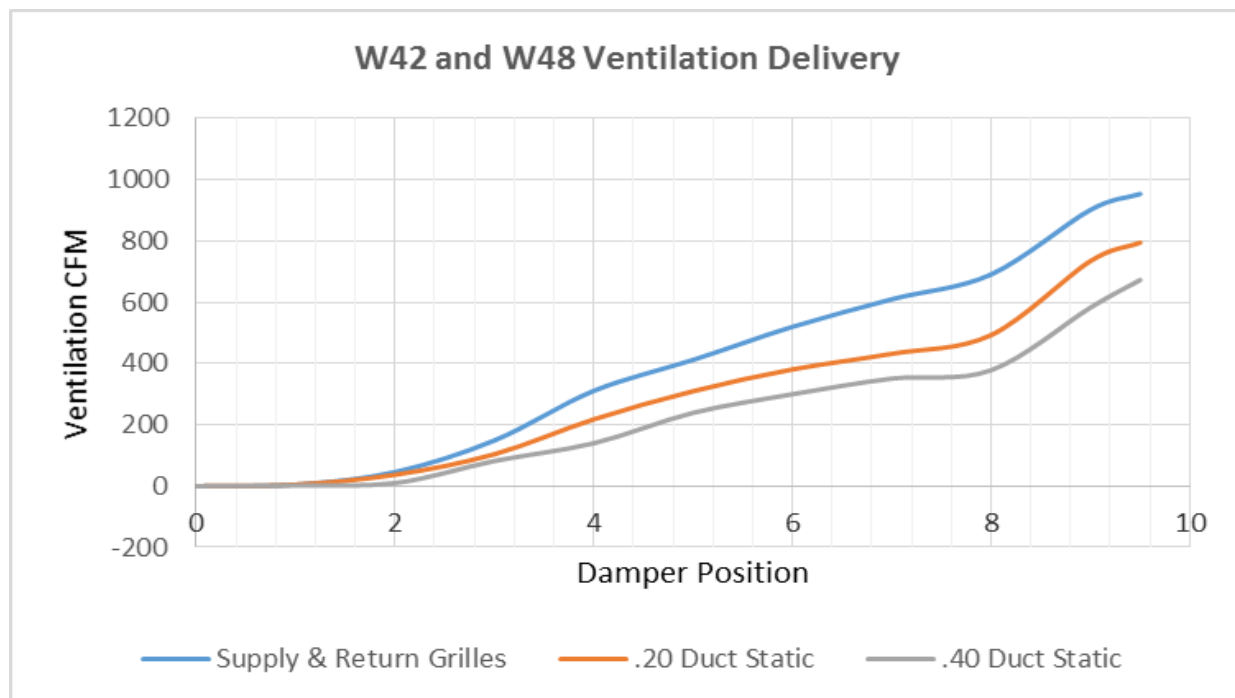


Airflow amounts less than 100 CFM may not be achievable.

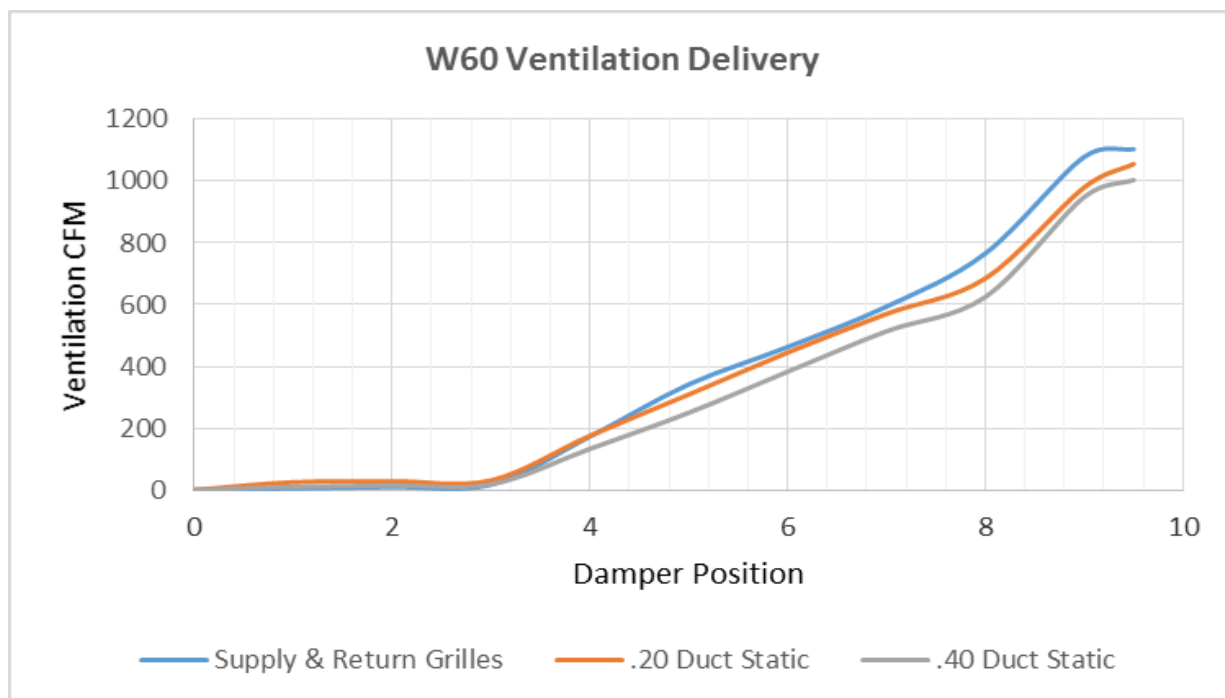


Airflow amounts less than 100 CFM may not be achievable.

Commercial Room Ventilator Performance Data - WCRVPS



Airflow amounts less than 100 CFM may not be achievable.



Airflow amounts less than 100 CFM may not be achievable.

Performance and Application Data- WERVP-*2

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	HRL	VLT	VLS	VLL	HRT	HRS	HRL
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-*2 2-Ton 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	VLT	HR	VL	VLT	HR	VL	VLT	HR	VL
65	1350	999	351	1215	911	304	1080	821	259
60	2700	1998	702	2430	1823	608	2160	1642	518
55	4050	2997	1053	3645	2734	911	3240	2462	778
50	5400	3996	1404	4860	3645	1215	4320	3283	1037
45	6750	4995	1755	6075	4556	1519	5400	4104	1296
40	8100	5994	2106	7290	5468	1823	6480	4925	1555
35	9450	6993	2457	8505	6379	2126	7560	5746	1814
30	10800	7992	2808	9720	7290	2430	8640	6566	2074
25	12150	8991	3159	10935	8201	2734	9720	7387	2333
20	13500	9990	3510	12150	9113	3038	10800	8208	2592
15	14850	10989	3861	13365	10024	3341	11880	9029	2851
10	16200	11988	4212	14580	10935	3645	12960	9850	3110
5	17550	12987	4563	15795	11846	3949	14040	10670	3370
0	18900	13986	4914	17010	12758	4253	15120	11491	3629
-5	20250	14985	5265	18225	13669	4556	16200	12312	3888
-10	21600	15984	5616	19440	14580	4860	17280	13133	4147

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

Performance and Application Data- WERVP-3*

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	HRL	VLT	VLS	VLL	HRT	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* 3-Ton Winter Heating Performance

(INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE								
	400 CFM 75% EFF.			325 CFM 76% EFF.			250 CFM 77% EFF.		
DB/°F	VLT	HR	VL	VLT	HR	VL	VLT	HR	VL
65	2160	1620	540	1755	1334	421	1350	1040	311
60	4320	3240	1080	3510	2668	842	2700	2079	621
55	6480	4860	1620	5265	4001	1264	4050	3119	932
50	8640	6480	2160	7020	5335	1685	5400	4158	1242
45	10800	8100	2700	8775	6669	2106	6750	5198	1553
40	12960	9720	3240	10530	8003	2527	8100	6237	1863
35	15120	11340	3780	12285	9337	2948	9450	7277	2174
30	17280	12960	4320	14040	10670	3370	10800	8316	2484
25	19440	14580	4860	15795	12004	3791	12150	9356	2795
20	21600	16200	5400	17550	13338	4212	13500	10395	3105
15	23760	17820	5940	19305	14672	4633	14850	11435	3416
10	25920	19440	6480	21060	16006	5054	16200	12474	3726
5	28080	21060	7020	22815	17339	5476	17550	13514	4037
0	30240	22680	7560	24570	18673	5897	18900	14553	4347
-5	32400	24300	8100	26325	20007	6318	20250	15593	4658
-10	34560	25920	8640	28080	21341	6739	21600	16632	4968

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

Performance and Application Data- WERVP-5*

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	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL
75	75			6884		9477	4475			5737		8018	3786		9720	4590	9587	6512	3075
	70			0		9477	0			0		8018	0		9720	0	6512	6512	0
	65			0		9477	0			0		8018	0		9720	0	6512	6512	0
	60																		
80	80					7897	12635					6682	10692		8100			5427	8683
	75					7897	6054					6682	5123		8100			5427	4160
	70					7897	131					6682	111		8100			5427	90
	65					7897	0					6682	0		8100			5427	0
85	60					7897	0					6682	0		8100			5427	0
	80		9720			6318	14215		8100			5345	12028		6480			4341	9768
	75		9720			6318	7634		8100			5345	6459		6480			4341	5246
	70		9720			6318	1711		8100			5345	1447		6480			4341	1175
90	65		9720			6318	0		8100			5345	0		6480			4341	0
	60		9720			6318	0		8100			5345	0		6480			4341	0
	80		7290			4738	15794		6075			4009	13365		4860			3256	10854
	75		7290			4738	9213		6075			4009	7796		4860			3256	6331
95	70		7290			4738	3290		6075			4009	2784		4860			3256	2261
	65		7290			4738	0		6075			4009	0		4860			3256	0
	60		7290			4738	0		6075			4009	0		4860			3256	0
	80		4860			3159	17374		4050			2672	14701		3240			2170	11939
85	75		4860			3159	10793		4050			2672	9132		3240			2170	7416
	70		4860			3159	4870		4050			2672	4120		3240			2170	3346
	65		4860			3159	0		4050			2672	0		3240			2170	0
	60		4860			3159	0		4050			2672	0		3240			2170	0
80	75		2430			1580	12372		2025			1336	10469		1620		9587	1085	8502
	70		2430			1580	6449		2025			1336	5457		1620		5517	1085	4432
	65		2430			1580	1184		2025			1336	1002		1620		1899	1085	814
	60		2430			1580	0		2025			1336	0		1620		1085	1085	0
75	70		0		8029	0	8029		0		6793	0	6793		8235	0	8235	5517	0
	65		0		2764	0	2764		0		2338	0	2338		2835	0	2835	1899	0
	60		0		0	0	0		0		0	0	0		0	0	0	0	0

WERVP-5* 5-Ton Winter Heating Performance

(INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE								
	450 CFM 80% EFF.			375 CFM 81% EFF.			300 CFM 82% EFF.		
DB/°F	VLT	HR	VL	VLT	HR	VL	VLT	HR	VL
65	2430	1944	486	2025	1640	385	1620	1328	292
60	4860	3888	972	4050	3281	770	3240	2657	583
55	7290	5832	1458	6075	4921	1154	4860	3985	875
50	9720	7776	1944	8100	6561	1539	6480	5314	1166
45	12150	9720	2430	10125	8201	1924	8100	6642	1458
40	14580	11664	2916	12150	9842	2309	9720	7970	1750
35	17010	13608	3402	14175	11482	2693	11340	9299	2041
30	19440	15552	3888	16200	13122	3078	12960	10627	2333
25	21870	17496	4374	18225	14762	3463	14580	11956	2624
20	24300	19440	4860	20250	16403	3848	16200	13284	2916
15	26730	21384	5346	22275	18043	4232	17820	14612	3208
10	29160	23328	5832	24300	19683	4617	19440	15941	3499
5	31590	25272	6318	26325	21323	5002	21060	17269	3791
0	34020	27216	6804	28350	22964	5387	22680	18598	4082
-5	36450	29160	7290	30375	24604	5771	24300	19926	4374
-10	38880	31104	7776	32400	26244	6156	25920	21254	4666

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

Electrical Specifications — Standard Heat Pumps

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
W18HA-A00, A0Z A04 A08	230/208-1	1 1 1	16 37 57	20 40 60	12 8 6	12 10 10								
W24HA-A00, A0Z A04 A08	230/208-1	1 1 1 or 2	21 42 63	25 45 70	10 8 6	10 10 8	42	25	45	25	8	10	10	10
W24HA-B00, B0Z B06	230/208-3	1 1	15 33	20 35	12 8	12 10								
W24HA-C00, C0Z C06	460-3	1 1	9 18	15 20	14 12	14 12								
W30HA-A00, A0Z A05 A10	230/208-1	1 1 1 or 2	24 50 76	35 50 80	8 8 4	10 10 8	50	26	50	30	8	10	10	10
W30HA-B00, B0Z B06 B09 B15	230/208-3	1 1 1	18 36 45	25 40 50	10 8 8	10 10 10								
W30HA-C00, C0Z C06 C09 ③ C15	460-3	1 1 1 1	10 19 24 25	15 20 25 30	14 12 10 10	14 12 10 10								
W36HA-A00, A0Z A05 A10 ④ A15	230/208-1	1 1 1 or 2 1 or 2	29 55 81 85	40 60 90 90	8 6 4 4	10 10 8 8	55 55	26 52	60 60	30 60	6 6	10 6	10 10	10 10
W36HA-B00, B0Z B06 B09 ③ B15	230/208-3	1 1 1 1	23 41 50 52	30 45 50 60	10 8 8 6	10 10 10 10								
W36HA-C00, C0Z C06 C09 ③ C15	460-3	1 1 1 1	11 20 24 25	15 25 25 30	14 10 10 10	14 10 10 10								
W42HA-A00, A0Z A04 A05 A10 ④ A15	230/208-1	1 1 1 1 or 2 1 or 2	30 51 56 82 82	45 60 60 90 90	8 6 6 4 4	10 10 10 8 8	30 32	52 52	45 45	60 60	8 8	6 6	10 10	10 10
W42HA-B00, B0Z B06 B09 ③ B15	230/208-3	1 1 1 1	24 42 52 52	35 50 60 60	8 8 6 6	10 10 10 10								
W42HA-C00, C0Z C06 C09 ③ C15	460-3	1 1 1 1	12 21 25 26	15 25 30 30	14 10 10 10	14 10 10 10								
W48HA-A00, A0Z A04 A05 A10 ④ A15 ④ A20	230/208-1	1 1 1 or 2 1 or 2 1 or 2 1 or 2	35 56 61 87 87 110	50 60 70 90 90 125	8 6 6 3 3 2	10 10 8 8 8 6	35 35 35 58	26 52 52 52	50 50 50 60	30 60 60 60	8 8 8 6	10 6 6 6	10 10 10 10	10 10 10 10
W48HA-B00, B0Z B06 B09 ③ B15 ③ B18	230/208-3	1 1 1 1 2	25 43 52 52 N/A	35 50 60 60 N/A	8 8 6 6 N/A	10 10 10 10 N/A	33	28	40	30	8	10	10	10
W48HA-C00, C0Z C09 ③ C15	460-3	1 1 1	12 26 26	15 30 30	14 10 10	14 10 10								
W60HA-A00, A0Z A05 A10 ④ A15 ④ A20	230/208-1	1 1 or 2 1 or 2 1 or 2 1 or 2	47 73 99 99 112	60 90 110 110 125	8 4 3 3 2	10 8 6 6 6	47 47 47 60	26 52 52 52	60 60 60 60	30 60 60 60	8 8 8 6	10 6 6 6	10 10 10 10	10 10 10 10
W60HA-B00, B0Z B09 ④ B15 ③ B18	230/208-3	1 1 1 2	32 59 59 N/A	40 60 60 N/A	8 6 6 N/A	10 10 10 N/A	35	28	40	30	8	10	10	10
W60HA-C00, C0Z C09 ③ C15	460-3	1 1 1	15 29 29	20 35 35	12 8 8	12 10 10								

- ① These "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.

Electrical Specifications — Dehumidification Models

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
W24HADA00, A0Z A04 A08	230/208-1	1 1 1 or 2	21 42 62	30 45 70	10 8 6	10 10 8	42	25	45	25	8	10	10	10
W24HADB00, B0Z B06	230/208-3	1 1	15 33	20 35	12 8	12 10								
W24HADC00, C0Z C06	460-3	1 1	9 18	15 20	14 12	14 12								
W30HADA00, A0Z A05 A10	230/208-1	1 1 1 or 2	25 51 77	35 60 80	8 6 4	10 10 8	51	26	60	30	6	10	10	10
W30HADB00, B0Z B06 B09	230/208-3	1 1 1	18 36 45	25 40 50	10 8 8	10 10 10								
W30HADC00, C0Z C06 C09	460-3	1 1 1	11 20 24	15 20 25	14 12 10	14 12 10								
W36HADA00, A0Z A05 A10	230/208-1	1 1 1 or 2	29 55 81	40 60 90	8 6 4	10 10 8	55	26	60	30	6	10	10	10
W36HADB00, B0Z B06 B09	230/208-3	1 1 1	23 41 51	30 50 60	10 8 6	10 10 10								
W36HADC00, C0Z C06 C09	460-3	1 1 1	11 20 24	15 25 25	14 10 10	14 10 10								
W42HADA00, A0Z A05 A10	230/208-1	1 1 1 or 2	31 57 83	45 60 90	8 6 4	10 10 8	31	52	45	60	8	6	10	10
W42HADB00, B0Z B06 B09	230/208-3	1 1 1	26 44 53	35 50 60	8 8 6	10 10 10								
W42HADC00, C0Z C06 C09	460-3	1 1 1	12 21 26	15 25 30	14 10 10	14 10 10								
W48HADA00, A0Z A05 A10	230/208-1	1 1 or 2 1 or 2	38 64 90	50 80 100	8 6 3	10 8 8	38 38	26 52	50 60	30 60	8 8	10 6	10 10	10 10
W48HADB00, B0Z B06 B09	230/208-3	1 1 1	27 45 54	40 50 60	8 8 6	10 10 10								
W48HADC00, C0Z C06 C09	460-3	1 1 1	13 22 27	15 25 30	14 10 10	14 10 10								
W60HADA00, A0Z A05 A10	230/208-1	1 1 or 2 1 or 2	47 73 99	60 90 110	8 4 3	10 8 6	47 47	26 52	60 60	30 60	8 8	10 6	10 10	10 10
W60HADB00, B0Z B09	230/208-3	1 1	33 60	40 60	8 6	10 10								
W60HADC00, C0Z C09	460-3	1 1	17 30	25 35	10 8	10 10								

- ① These “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 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.

Indoor Blower Performance - CFM at 230 or 460 Volts

ESP in H ₂ O	W18HA		W24HA	W30HA / W36HA		W42HA / W48HA		W60HA		
	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil	Single Speed Dry/Wet Coil	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil	High Speed Dry/Wet Coil	Low Speed Dry/Wet Coil	High Speed Dry/Wet Coil	Medium Speed Dry/Wet Coil	Low Speed Dry/Wet Coil
0.0	980/970	725/720	960/920	1435/1400	960/960	1840/1790	1655/1605	2095/1995	1910/1820	1795/1715
0.1	920/905	670/655	920/860	1400/1355	935/945	1755/1700	1565/1530	2040/1950	1850/1760	1730/1655
0.2	850/825	630/610	860/790	1300/1250	925/905	1665/1615	1490/1455	1985/1900	1790/1700	1665/1600
0.3	785/755	580/550	790/705	1230/1160	895/880	1570/1515	1410/1370	1925/1850	1735/1630	1605/1540
0.4	715/680	530/490	700/610	1125/1075	840/810	1465/1410	1320/1280	1875/1800	1675/1570	1545/1475
0.5	610/565	455/390	565/450	1010/940	765/735	1355/1280	1215/980	1820/1745	1615/1500	1475/1310

Above data is with 1" standard throwaway filter and 1" washable filter.

For optional 2" pleated filter - reduce ESP by .15 in.

See installation instructions for maximum ESP information on various KW applications.

Speeds marked "bold" above
are **Factory Connected**.

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		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
18.0	18.0		43.3	61,434	13.50		37.5	46,076	18.0	21.7	61,434	16.56	20.8	56,519
20.0	20.0	83.3		68,260	15.00	72.1		51,195						

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

(2) These electric heaters are available in 480V units only.

Heater Packages - Field Installed

• 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	-A00 Models 230/208-1		-B00 Models 230/208-3		-C00 Models 460-3	
	Heater Model #	KW	Heater Model #	KW	Heater Model #	KW
W18HA	EHW18H-A04 EHW18H-A08	4 8	N/A		N/A	
W24HA	EHW2TH-A04 EHW2TH-A08	4 8	EHWH24-B06B	6	EHWH24B-C06	6
W30HA	EHWH30-A05B EHWH30-A10B	5 10	EHWH03-B06B EHWH03-B09B EHWA37-B15B	6 9 15	EHWC03A-C06 EHWC03A-C09 EHWH03A-C15 *	6 9 15
W36HA	EHWH36-A05B EHWH36-A10B EHWH36-A15B *	5 10 15	EHW36H-B06B EHWH03-B09B EHW36H-B15B *	6 9 15	EHWC03A-C06 EHWC03A-C09 EHWH03A-C15 *	6 9 15
W42HA	EHWH04-A04B EHW4TH-A05 EHW4TH-A10 EHW4TH-A15 *	4 5 10 15	EHWH05-B06B EHWH05-B09B EHWH05-B15B *	6 9 15	EHW4TH-C06 EHW4TH-C09 EHW4TH-C15 *	6 9 15
W48HA	EHWH04-A04B EHWH42-A05B EHW4TH-A10 EHWH42-A15B * EHWH04-A20B *	4 5 10 15 20	EHWH05-B06B EHWH05-B09B EHWH05-B15B * EHW4TH-B18B *	6 9 15 18	EHW4TH-C09 EHW4TH-C15 *	9 15
W60HA	EHWH04-A05B EHW5TH-A10 EHWH04-A15B * EHWH04-A20B *	5 10 15 20	EHWH05-B09B EHWH05-B15B * EHW4TH-B18 *	9 15 18	EHW4TH-C09 EHW4TH-C15 *	9 15

NOTE: Field installed heater packages are not approved for use with top supply opening models.

* Not available for dehumidification models.

Cooling Application Data - Outdoor Temperature °F ①②

Model	Return Air (DB/WB) ③	Cooling Capacity	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F	120°F	125°F
W18HA	75/62	Total Cooling Sensible Cooling	18,300 14,400	17,400 14,000	16,500 13,700	15,700 13,300	14,800 13,000	14,100 12,700	13,400 12,500	12,800 12,200	12,200 12,000	11,500 11,500	11,000 11,000
	80/67	Total Cooling Sensible Cooling	19,500 13,900	18,900 13,700	18,300 13,500	17,700 13,300	17,100 13,100	16,400 12,900	15,800 12,800	15,200 12,600	14,600 12,400	13,900 12,200	13,300 12,000
	85/72	Total Cooling Sensible Cooling	23,300 14,300	22,100 13,900	21,100 13,600	20,000 13,200	18,900 12,900	18,000 12,500	17,100 12,200	16,200 11,900	15,400 11,500	14,500 11,100	13,700 10,700
W24HA	75/62	Total Cooling Sensible Cooling	28,500 21,700	26,500 20,600	24,600 19,600	22,900 18,700	21,500 18,000	20,200 17,300	19,000 16,800	18,000 16,300	17,100 16,000	16,400 15,800	15,700 15,600
	80/67	Total Cooling Sensible Cooling	30,400 21,000	28,800 20,200	27,300 19,400	25,900 18,700	24,600 18,100	23,500 17,600	22,400 17,200	21,400 16,800	20,600 16,600	19,800 16,500	19,100 16,400
	85/72	Total Cooling Sensible Cooling	36,200 21,500	33,700 20,500	31,400 19,500	29,300 18,600	27,400 17,800	25,700 17,100	24,200 16,400	22,800 15,800	21,700 15,300	20,600 14,900	19,700 14,500
W30HA	75/62	Total Cooling Sensible Cooling	29,600 24,200	28,800 23,900	28,000 23,600	27,100 23,200	26,100 22,900	25,200 22,500	24,200 22,100	23,100 21,600	22,000 21,100	20,800 20,700	19,600 19,600
	80/67	Total Cooling Sensible Cooling	31,600 23,400	31,400 23,400	31,100 23,300	30,600 23,200	30,000 23,100	29,300 22,900	28,500 22,600	27,500 22,300	26,400 21,900	25,200 21,600	23,900 21,100
	85/72	Total Cooling Sensible Cooling	37,700 24,000	36,700 23,800	35,700 23,400	34,600 23,100	33,400 22,700	32,100 22,200	30,800 21,600	29,300 20,900	27,800 20,200	26,200 19,500	24,600 18,700
W36HA	75/62	Total Cooling Sensible Cooling	36,100 28,500	34,500 27,700	33,000 26,900	31,500 26,100	30,000 25,500	28,600 24,800	27,200 24,200	25,800 23,600	24,500 23,100	23,200 22,600	21,900 21,900
	80/67	Total Cooling Sensible Cooling	38,500 27,600	37,600 27,100	36,600 26,600	35,600 26,100	34,600 25,700	33,300 25,200	32,100 24,800	30,800 24,400	29,500 24,000	28,100 23,600	26,600 23,200
	85/72	Total Cooling Sensible Cooling	45,900 28,300	44,000 27,500	42,100 26,700	40,200 26,000	38,200 25,200	36,400 24,400	34,600 23,700	32,800 22,900	31,000 22,100	29,200 21,300	27,400 20,600
W42HA	75/62	Total Cooling Sensible Cooling	42,700 34,700	40,900 33,700	38,900 32,700	37,100 31,800	35,300 31,000	33,600 30,200	31,900 29,500	30,300 28,800	28,600 28,100	27,100 27,100	25,500 25,500
	80/67	Total Cooling Sensible Cooling	45,600 33,600	44,500 33,000	43,200 32,400	41,900 31,800	40,500 31,300	39,100 30,700	37,600 30,200	36,100 29,700	34,400 29,200	32,800 28,700	31,000 28,300
	85/72	Total Cooling Sensible Cooling	54,300 34,400	52,000 33,500	49,600 32,600	47,300 31,600	45,000 30,700	42,800 29,700	40,600 28,800	38,400 27,900	36,200 26,900	34,100 25,900	31,900 25,100
W48HA	75/62	Total Cooling Sensible Cooling	48,800 38,900	46,800 38,000	44,900 37,100	42,900 36,200	40,900 35,400	39,100 34,500	37,200 33,600	35,300 32,800	33,400 32,000	31,600 31,200	29,700 29,700
	80/67	Total Cooling Sensible Cooling	52,100 37,700	51,000 37,200	49,800 36,700	48,500 36,200	47,000 35,700	45,500 35,100	43,900 34,500	42,100 33,900	40,200 33,300	38,300 32,600	36,200 31,900
	85/72	Total Cooling Sensible Cooling	62,100 38,600	59,600 37,800	57,200 36,900	54,800 36,000	52,200 35,000	49,800 34,000	47,300 32,900	44,800 31,800	42,300 30,700	39,800 29,500	37,300 28,200
W60HA	75/62	Total Cooling Sensible Cooling	60,800 46,400	58,100 45,200	55,500 44,100	52,900 43,000	50,500 42,000	48,200 40,900	46,000 39,900	43,900 38,900	41,800 37,900	39,900 36,900	37,800 35,900
	80/67	Total Cooling Sensible Cooling	64,900 45,000	63,300 44,300	61,600 43,700	59,800 43,000	58,000 42,400	56,200 41,600	54,300 40,900	52,300 40,200	50,300 39,400	48,300 38,600	46,100 37,800
	85/72	Total Cooling Sensible Cooling	77,300 46,100	74,000 45,000	70,700 43,900	67,500 42,700	64,400 41,600	61,500 40,300	58,600 39,000	55,600 37,700	52,900 36,300	50,200 34,900	47,400 33,500

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- R410A

UNIT	Std. Unit - Lbs.	Dehum. Units - Lbs.
W18HA - 10 EER RH Heat Pump, 60 Hz	4.25	N/A
W24HA - 10 EER RH Heat Pump, 60 Hz	4.75	4.8125
W30HA - 10 EER RH Heat Pump, 60 Hz	5.50	6.3125
W36HA - 10 EER RH Heat Pump, 60 Hz	7.0625	7.125
W42HA - 10 EER RH Heat Pump, 60 Hz	7.1875	7.9375
W48HA - 10 EER RH Heat Pump, 60 Hz	8.1875	8.50
W60HA - 10 EER RH Heat Pump, 60 Hz	8.50	8.8125

Heating Application Rating and Outdoor Temperature °F * ②																
MODEL		0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	47°	50°	55°	60°F	65°F
W18HA	BTUH	6,700	7,700	8,800	9,800	10,800	11,800	12,800	13,800	14,900	16,100	16,500	17,200	18,200	19,300	20,300
	WATTS	1,450	1,460	1,480	1,490	1,500	1,500	1,510	1,510	1,540	1,560	1,570	1,570	1,590	1,600	1,610
	COP	1.36	1.55	1.75	1.93	2.11	2.31	2.49	2.68	2.84	3.03	3.10	3.21	3.36	3.54	3.70
W24HA	BTUH	9,500	11,000	12,500	14,000	15,300	16,500	17,600	18,800	20,800	22,800	23,400	24,500	26,000	27,500	29,000
	WATTS	1,960	1,990	2,020	2,060	2,090	2,120	2,150	2,190	2,220	2,250	2,260	2,280	2,310	2,350	2,380
	COP	1.43	1.62	1.82	2.00	2.15	2.29	2.40	2.52	2.75	2.97	3.00	3.15	3.30	3.43	3.58
W30HA	BTUH	12,900	14,700	16,500	18,300	19,800	21,100	22,400	23,700	26,300	28,800	29,800	30,900	32,700	34,500	36,300
	WATTS	2,420	2,460	2,500	2,540	2,560	2,570	2,590	2,600	2,680	2,760	2,790	2,810	2,850	2,890	2,930
	COP	1.57	1.76	1.94	2.12	2.27	2.41	2.54	2.68	2.88	3.06	3.10	3.23	3.37	3.50	3.63
W36HA	BTUH	13,200	15,200	17,200	19,200	21,100	22,800	24,500	26,200	28,700	31,100	32,000	33,200	35,200	37,200	39,200
	WATTS	2,600	2,640	2,670	2,710	2,730	2,750	2,760	2,780	2,840	2,910	2,930	2,950	2,990	3,020	3,060
	COP	1.49	1.69	1.89	2.08	2.27	2.43	2.61	2.77	2.97	3.14	3.10	3.30	3.45	3.61	3.76
W42HA	BTUH	13,500	16,100	18,800	21,500	23,400	24,700	26,100	27,500	32,100	36,700	38,500	40,100	42,800	45,500	48,100
	WATTS	3,070	3,120	3,170	3,220	3,230	3,220	3,200	3,190	3,340	3,490	3,550	3,580	3,630	3,680	3,730
	COP	1.29	1.52	1.74	1.96	2.13	2.25	2.39	2.53	2.82	3.09	3.10	3.29	3.46	3.63	3.78
W48HA	BTUH	15,800	18,800	21,800	24,800	27,500	29,800	32,200	34,600	38,500	42,500	44,000	45,800	48,800	51,800	54,800
	WATTS	3,710	3,740	3,760	3,790	3,800	3,790	3,790	3,780	3,860	3,930	3,960	3,980	4,010	4,030	4,060
	COP	1.25	1.48	1.70	1.92	2.13	2.31	2.49	2.69	2.93	3.17	3.25	3.38	3.57	3.77	3.96
W60HA	BTUH	25,200	28,500	31,900	35,200	37,800	39,800	41,900	43,900	49,200	54,400	56,500	58,500	61,900	65,200	68,500
	WATTS	4,420	4,530	4,640	4,760	4,780	4,730	4,690	4,650	4,990	5,340	5,480	5,550	5,660	5,770	5,880
	COP	1.68	1.85	2.02	2.17	2.32	2.47	2.62	2.77	2.89	2.99	3.00	3.09	3.21	3.32	3.42

* 70°F DB indoor return air at rated CFM includes defrost operation below 45°.

② Outdoor temperatures shown are measured at the condenser section air inlet.

Clearances Required for Service Access and Adequate Condenser Inlet Airflow

MODELS	LEFT SIDE	RIGHT SIDE
W18HA, W24HA, W30HA, W36HA	15"	20"
W42HA, W48HA, W60HA	20"	20"

Minimum Clearances Required to Combustible Materials

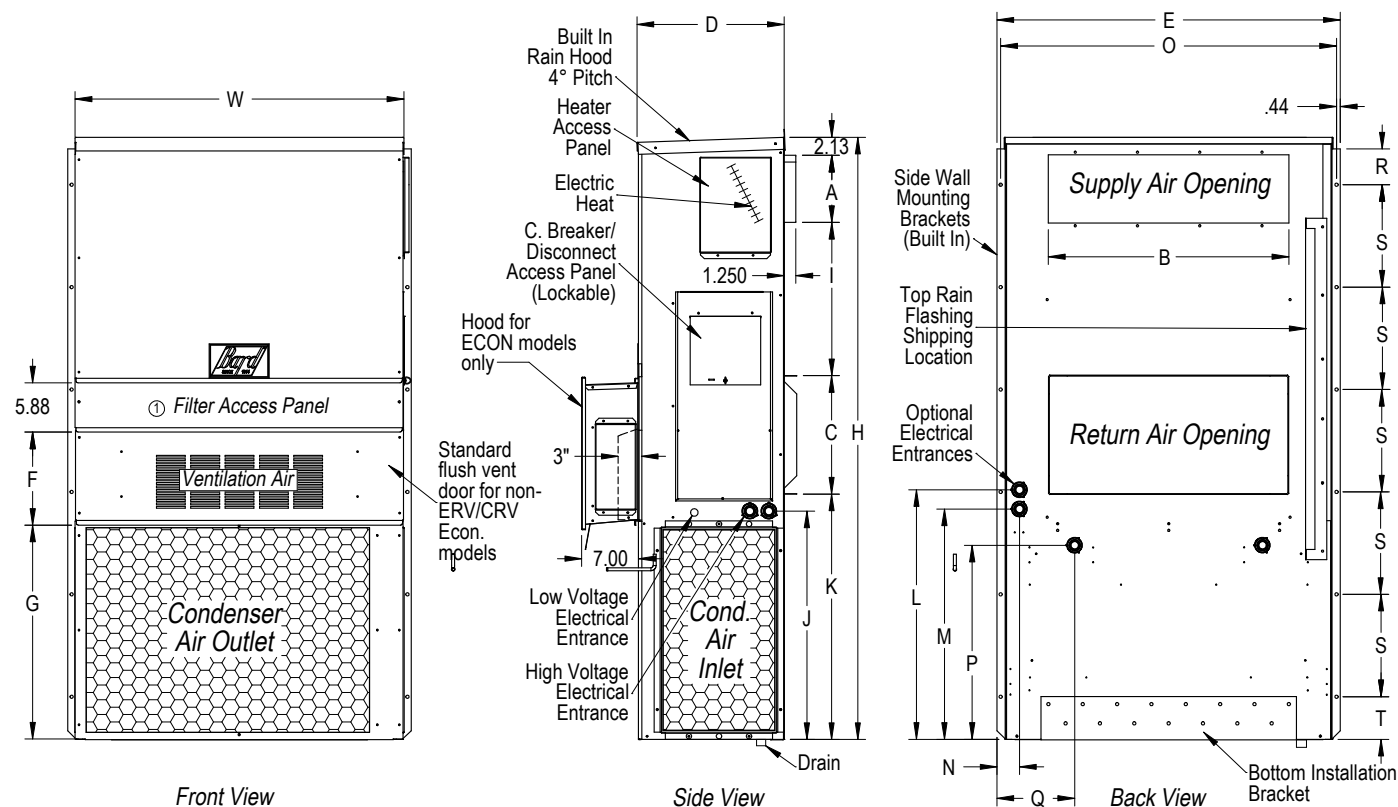
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
W18HA, W24HA	0"	0"
W30HA, W36HA	1/4"	0"
W42HA, W48HA, W60HA	1/4"	0"

① Refer to the Installation Manual for more detailed information.

Dimensions of W18-60H Basic Unit for Architectural & Installation Requirements (Nominal)

MODEL	WIDTH (W)	DEPTH (D)	HEIGHT (H)	SUPPLY		RETURN		E	F	G	I	J	K	L	M	N	O	P	Q	R	S	T
				A	B	C	B															
W18HA W24HA	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
W30HA W36HA	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
W42HA W48HA	42.075	22.432	84.875	9.88	29.88	15.88	29.88	43.88	13.56	31.66	30.00	32.68	26.94	34.69	32.43	3.37	43.00	23.88	10.00	1.44	16.00	1.88
W60HA	42.075	22.432	93.000	9.88	29.88	15.88	29.88	43.88	13.56	37.00	30.00	40.81	35.06	42.81	40.56	3.37	43.00	31.00	10.00	1.44	16.00	10.00

All dimensions are in inches. Dimensional drawings are not to scale.



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① Not used when WECOP* Economizers installed. Filter access is through the ECONWMT hood.

Bard W18HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS51-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	42.3	39.6	39.2	35.8	40.5	35.6	37.1	33.8				
Full Load	47.3	45.2	42.9	42.0	46.2	44.0	43.1	42.2				
Integrated dBA	46.2	44.0	42.0	41.1	45.0	42.5	41.8	40.7				
Outdoor @ 10 Feet				62.8								
Sound Power Full Load	55.2			49.9	55.7			49.8				
Outdoor Sound Power					68.0							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	48.7			42.1	48.3			39.6				
Full Load	49.4			44.2	49.8			42.5				
Integrated dBA	49.2			43.6	49.3			41.7				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	50.3			42.0	50.2			39.7				
Full Load	50.8			44.5	51.1			42.5				
Integrated dBA	50.6			43.8	50.8			41.7				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	51.5			41.4	50.9			40.1				
Full Load	51.9			44.3	52.4			42.3				
Integrated dBA	51.8			43.5	51.9			41.7				

Bard W18HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS51-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	42.4	39.3	38.8	37.6	40.1	37.3	37.5	35.7				
Full Load	49.6	47.3	45.1	44.0	48.6	45.5	46.6	44.9				
Integrated dBA	48.2	45.8	43.8	42.7	47.1	44.0	45.1	43.4				
Outdoor @ 5 Feet					66.2							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	51.8			43.7	51.9			42.5				
Full Load	52.3			45.8	52.5			45.2				
Integrated dBA	52.1			45.2	52.3			44.5				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	53.3			43.7	53.6			43.4				
Full Load	53.8			46.1	54.1			45.5				
Integrated dBA	53.6			45.4	53.9			44.9				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	54.5			43.9	54.3			44.1				
Full Load	55.1			46.1	55.4			45.7				
Integrated dBA	54.9			45.5	55.1			45.2				

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

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 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
8/26/2016

Bard W24HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	45.3	43.2	42.5	38.5	41.5	38.7	39.5	37.4				
Full Load	50.4	46.9	44.8	41.7	48.9	42.9	44.8	41.4				
Integrated dBA	49.2	46.0	44.1	40.9	47.5	41.9	43.6	40.4				
Outdoor @ 10 Feet				62.3								
Sound Power Full Load	58.0			49.2	57.6			48.3				
Outdoor Sound Power					71.0							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	50.6			40.3	49.3			39.4				
Full Load	51.2			41.3	50.1			41.0				
Integrated dBA	51.0			41.0	49.8			40.5				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	52.5			40.6	51.6			39.7				
Full Load	52.8			41.8	51.7			41.6				
Integrated dBA	52.7			41.4	51.7			41.0				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	53.9			41.2	53.4			40.7				
Full Load	54.1			42.0	53.4			41.9				
Integrated dBA	54.0			41.7	53.4			41.5				

Bard W24HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	48.3	46.2	44.5	44.0	44.2	40.4	41.7	39.2				
Full Load	52.4	49.7	46.9	40.3	51.9	45.4	47.5	44.0				
Integrated dBA	51.4	48.8	46.2	41.9	50.5	44.3	46.2	42.9				
Outdoor @ 5 Feet				67.1								
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	53.8			43.4	52.6			42.9				
Full Load	53.9			44.7	53.2			44.3				
Integrated dBA	53.9			44.3	53.0			43.9				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	55.7			44.0	54.9			43.2				
Full Load	55.5			44.9	55.0			44.7				
Integrated dBA	55.6			44.6	55.0			44.2				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	57.1			44.4	56.6			43.7				
Full Load	57.0			45.3	56.4			43.3				
Integrated dBA	57.0			45.0	56.5			43.4				

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

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 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
8/5/2016

Bard W30HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	51.2	48.7	48.2	43.6	46.5	42.6	45.0	42.6				
Full Load	52.9	50.4	48.8	44.6	47.3	44.7	48.5	43.2				
Integrated dBA	52.4	49.9	48.6	44.3	47.0	44.1	47.6	43.0				
Outdoor @ 10 Feet				67.1								
Sound Power Full Load	59.8			50.3	60.6			49.1				
Outdoor Sound Power					72.2							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	54.3			45.6	52.5			45.0				
Full Load	54.3			46.1	52.5			45.1				
Integrated dBA	54.3			45.9	52.5			45.1				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	55.8			46.0	54.1			45.5				
Full Load	55.5			46.2	54.0			45.2				
Integrated dBA	55.6			46.1	54.0			45.3				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	57.8			46.5	56.9			45.4				
Full Load	57.4			46.7	56.1			45.9				
Integrated dBA	57.5			46.6	56.4			45.7				

Bard W30HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	55.8	51.6	49.6	46.3	48.4	45.7	47.3	44.8				
Full Load	53.9	52.8	50.3	47.2	54.5	47.3	51.1	45.6				
Integrated dBA	54.6	52.4	50.1	46.9	53.2	46.8	50.1	45.3				
Outdoor @ 5 Feet				69.4								
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	57.6			48.9	54.5			48.3				
Full Load	57.4			49.3	55.5			48.6				
Integrated dBA	57.5			49.2	55.2			48.5				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	58.9			49.4	56.7			48.9				
Full Load	58.7			49.8	57.1			48.8				
Integrated dBA	58.8			49.7	57.0			48.8				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	60.8			50.0	59.8			49.2				
Full Load	60.6			50.3	59.2			49.8				
Integrated dBA	60.7			50.2	59.4			49.6				

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

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 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
7/27/2016

Bard W36HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	51.2	48.7	48.2	43.6	46.5	42.6	45.0	42.6				
Full Load	52.9	50.4	48.8	44.6	47.3	44.7	48.5	43.2				
Integrated dBA	52.4	49.9	48.6	44.3	47.0	44.1	47.6	43.0				
Outdoor @ 10 Feet				67.1								
Sound Power Full Load	59.8			50.3	60.6			49.1				
Outdoor Sound Power					72.2							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	54.3			45.6	52.5			45.0				
Full Load	54.3			46.1	52.5			45.1				
Integrated dBA	54.3			45.9	52.5			45.1				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	55.8			46.0	54.1			45.5				
Full Load	55.5			46.2	54.0			45.2				
Integrated dBA	55.6			46.1	54.0			45.3				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	57.8			46.5	56.9			45.4				
Full Load	57.4			46.7	56.1			45.9				
Integrated dBA	57.5			46.6	56.4			45.7				

Bard W36HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	55.8	51.6	49.6	46.3	48.4	45.7	47.3	44.8				
Full Load	53.9	52.8	50.3	47.2	54.5	47.3	51.1	45.6				
Integrated dBA	54.6	52.4	50.1	46.9	53.2	46.8	50.1	45.3				
Outdoor @ 5 Feet				69.4								
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	57.6			48.9	54.5			48.3				
Full Load	57.4			49.3	55.5			48.6				
Integrated dBA	57.5			49.2	55.2			48.5				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	58.9			49.4	56.7			48.9				
Full Load	58.7			49.8	57.1			48.8				
Integrated dBA	58.8			49.7	57.0			48.8				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	60.8			50.0	59.8			49.2				
Full Load	60.6			50.3	59.2			49.8				
Integrated dBA	60.7			50.2	59.4			49.6				

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

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 45 dBA.

Results Referenced Were Recorded In The Bard Manufacturing Company, Inc. Sound Lab Facility
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7/27/2016

Bard W42HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPS51-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV ¹	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	50.5	49.1	47.3	44.1	46.3	40.6	44.7	40.1				
Full Load	54.5	53.3	48.0	45.3	53.4	44.1	52.6	43.6				
Integrated dBA	53.5	52.3	47.8	44.9	52.0	43.2	51.1	42.7				
Outdoor @ 10 Feet				66.9								
Sound Power Full Load Outdoor	63.3			52.9	61.5			48.2				
Vent Option ERY ²	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	51.8			44.9	50.0			41.1				
Full Load	51.9			47.2	50.3			43.5				
Integrated dBA	51.9			46.5	50.2			42.8				
Vent Option ERY ²	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	52.7			45.2	50.5			41.5				
Full Load	52.6			46.5	51.7			43.6				
Integrated dBA	52.6			46.1	51.3			43.0				
Vent Option ERY ²	High	High	High	High	High	High	High	High				
Ventilation Only	53.7			46.0	52.7			42.4				
Full Load	54.1			47.1	53.0			44.4				
Integrated dBA	54.0			46.8	52.9			43.8				

Bard W42HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPS51-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV ¹	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	53.0	50.6	48.2	46.8	48.7	43.4	47.4	42.8				
Full Load	58.2	56.3	49.3	48.1	58.0	47.4	56.7	46.6				
Integrated dBA	57.0	55.1	49.0	47.7	56.5	46.4	55.2	45.6				
Outdoor @ 5 Feet				69.3								
Vent Option ERY ²	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	54.5			46.8	53.0			44.4				
Full Load	55.4			50.1	54.1			46.0				
Integrated dBA	55.1			49.2	53.8			45.5				
Vent Option ERY ²	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	55.5			48.0	54.1			44.8				
Full Load	56.1			49.4	55.8			46.7				
Integrated dBA	55.9			49.0	55.3			46.1				
Vent Option ERY ²	High	High	High	High	High	High	High	High				
Ventilation Only	57.0			49.2	56.1			45.7				
Full Load	57.5			50.2	57.1			47.5				
Integrated dBA	57.3			49.9	56.8			47.0				

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

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 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
7/18/2016

Bard W48HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	51.3	49.3	47.9	43.2	46.9	45.7	42.3	41.6				
Full Load	54.9	52.8	49.0	44.8	53.3	52.9	46.8	43.8				
Integrated dBA	54.0	51.9	48.7	44.3	52.0	51.5	45.7	43.2				
Outdoor @ 10 Feet				65.9								
Sound Power Full Load	63.2			53.1				49.6				
Outdoor Sound Power					71.6							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	52.2			50.6	49.5			41.9				
Full Load	51.9			50.7	52.3			43.5				
Integrated dBA	52.0			50.7	51.5			43.0				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	52.4			48.5	51.6			42.1				
Full Load	52.3			49.5	53.1			45.8				
Integrated dBA	52.3			49.2	52.6			44.9				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	53.4			47.1	52.8			42.6				
Full Load	53.6			47.8	54.5			44.7				
Integrated dBA	53.5			47.6	54.0			44.1				

Bard W48HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS1-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	53.9	51.0	48.2	45.7	49.6	48.2	44.4	43.8				
Full Load	58.8	57.9	49.6	47.0	58.7	57.8	50.5	47.3				
Integrated dBA	57.7	56.2	49.2	46.6	57.2	56.2	49.2	46.4				
Outdoor @ 5 Feet				68.6								
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	53.9			48.9	52.6			45.2				
Full Load	54.8			49.3	55.0			56.3				
Integrated dBA	54.5			49.2	54.3			46.0				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	55.0			50.3	54.4			45.9				
Full Load	55.5			50.7	56.1			41.4				
Integrated dBA	55.3			50.6	55.6			43.5				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	56.7			49.3	56.0			46.4				
Full Load	57.2			49.7	57.8			47.0				
Integrated dBA	57.0			49.6	57.3			46.8				

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

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 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
4/18/2016

Bard W60HA Series Sound Data Matrix (dBA @ 10 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS51-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	51.3	50.1	47.8	44.6	49.1	42.2	47.7	41.2				
Full Load	56.0	53.5	48.6	45.6	55.7	48.3	52.5	43.9				
Integrated dBA	54.9	52.6	48.3	45.3	54.4	47.0	51.4	43.2				
Outdoor @ 10 Feet				67.4								
Sound Power Full Load	63.7			54.1	63.6			50.6				
Outdoor Sound Power					76.2							
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	53.4			45.0	52.1			42.8				
Full Load	56.7			46.7	55.2			46.5				
Integrated dBA	55.8			46.2	54.4			45.6				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	54.7			45.1	53.9			43.4				
Full Load	57.6			47.5	56.8			48.5				
Integrated dBA	56.8			46.8	56.0			47.3				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	56.7			45.5	56.4			43.6				
Full Load	58.9			47.0	58.6			48.5				
Integrated dBA	58.3			46.5	58.0			47.4				

Bard W60HA Series Sound Data Matrix (dBA @ 5 feet)

	Duct Free				Ducted - Front Outlet							
Unit Mounting	Direct	WMICF5 Isolation Curb	WMICF5 Isolation Curb	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb	Direct	WMICF5 Isolation Curb				
Supply Air Treatment	Grille	Grille	Grille	WAPFB51 Free Blow Supply Plenum	Standard Supply Duct	Standard Supply Duct	Standard Supply Duct	WAPSS51-G Supply Air Silencer				
Return Air Treatment	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer	Grille	Grille	WAPR11-X Return Air Silencer	WAPR11-X Return Air Silencer				
Vent Option CRV	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM	570 CFM				
Ventilation Only	54.3	52.0	48.4	47.1	51.6	44.6	50.8	43.4				
Full Load	59.4	57.0	49.2	48.4	59.2	50.0	56.7	47.4				
Integrated dBA	58.2	55.9	48.9	48.0	57.8	48.8	55.4	46.4				
Outdoor @ 5 Feet				69.9								
Vent Option ERV	Low	Low	Low	Low	Low	Low	Low	Low				
Ventilation Only	56.1			47.9	55.3			45.5				
Full Load	59.0			48.8	58.1			48.7				
Integrated dBA	58.2			48.5	57.3			47.9				
Vent Option ERV	Med	Med	Med	Med	Med	Med	Med	Med				
Ventilation Only	57.2			48.2	57.0			46.1				
Full Load	60.1			49.0	59.7			49.8				
Integrated dBA	59.3			48.7	59.0			48.9				
Vent Option ERV	High	High	High	High	High	High	High	High				
Ventilation Only	59.5			48.8	59.8			46.6				
Full Load	61.6			49.4	61.4			50.4				
Integrated dBA	61.0			49.2	60.9			49.4				

¹ Integrated values calculated per ANSI/ASHRAE 55.2-2010/Part 2, Section 5.2.2.1, Table 2 Triple Mode Type 3 HVAC System Duty Cycles: Ventilation 58%, Part Load 25%, Full Load 17%

² Integrated Sound Vales are also applicable for use in learning spaces for LEED schools; EQ Prerequisite 3 - Minimum Acoustical Performance, OPTION 1. Using methods prescribed in ANSI S12.60, classroom must achieve a maximum background noise level of 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
4/18/2016

Standard Exterior Painted Steel Finishes

Exterior cabinets of standard Bard HVAC products are constructed with 16, 18, or 20 gauge zinc coated steel that is cleaned, rinsed, sealed and dried prior to a polyurethane primer being applied, followed by a baked on textured enamel. This coating system has been tested to 1000 hours exposure time per ASTM B 117-003 testing standards.

Exterior cabinet screws and fasteners use a Magni 550 coating system. Parts coated to this specification are capable of withstanding neutral salt spray testing for a minimum of 1000 hours with no red rust per ASTM B 117-003 testing standards.

Optional Aluminum Exterior Finish

Aluminum exterior finish cabinets are available for most unit models. The exterior sides, door panels, and service access doors are of a stucco textured Aluminum 3003 H14 material with excellent corrosion resistance.

Exterior cabinet screws and fasteners use a Magni 550 coating system. Parts coated to this specification are capable of withstanding neutral salt spray testing for a minimum of 1000 hours with no red rust per ASTM B 117-003 testing standards.

Optional Stainless Steel Exterior Finish

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 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.

Coil and Cabinet Coating Options

Evaporator and Condenser Coil Coating Options

All models use a standard aluminum fin copper hairpin evaporator and condenser coil. An additional corrosion resistant phenolic coating may be ordered for the evaporator coil, condenser coil, or both evaporator and condenser coils. Phenolic coated coils will withstand exposure to many corrosive atmospheres with the exception of strong alkalis, strong oxidizers, wet bromine, and chlorine and fluorine in concentrations greater than 100 ppm (part per million). Because the resistance is dependent upon the environment and unit application, contact Bard for job specific recommendations.

- **X Option-** All models use a standard aluminum fin copper hairpin evaporator and condenser coil. The X option unit contains our standard non-coated evaporator and condenser coils which are acceptable for typical non-corrosive environments.
- **1 Option-** The 1 option unit contains our standard phenolic coated evaporator coil and a non-coated condenser. Phenolic Coated evaporator coils are normally suggested for use in areas where indoor corrosive chemicals be present for additional coil protection.
- **2 Option-** The 2 option unit contains our resistance phenolic coated condenser coil and a standard non-coated evaporator coil. Phenolic coated condenser coils are normally suggested for use in areas where outdoor corrosive chemicals or salt may be present for additional coil protection.
- **3 Option-** The 3 option unit contains our corrosion resistance phenolic coated evaporator coil and a corrosion resistance phenolic coated condenser coil. Coated evaporator and condenser coils are normally suggested for use in areas where indoor and outdoor corrosive chemicals or salt may be present for additional coil protection.

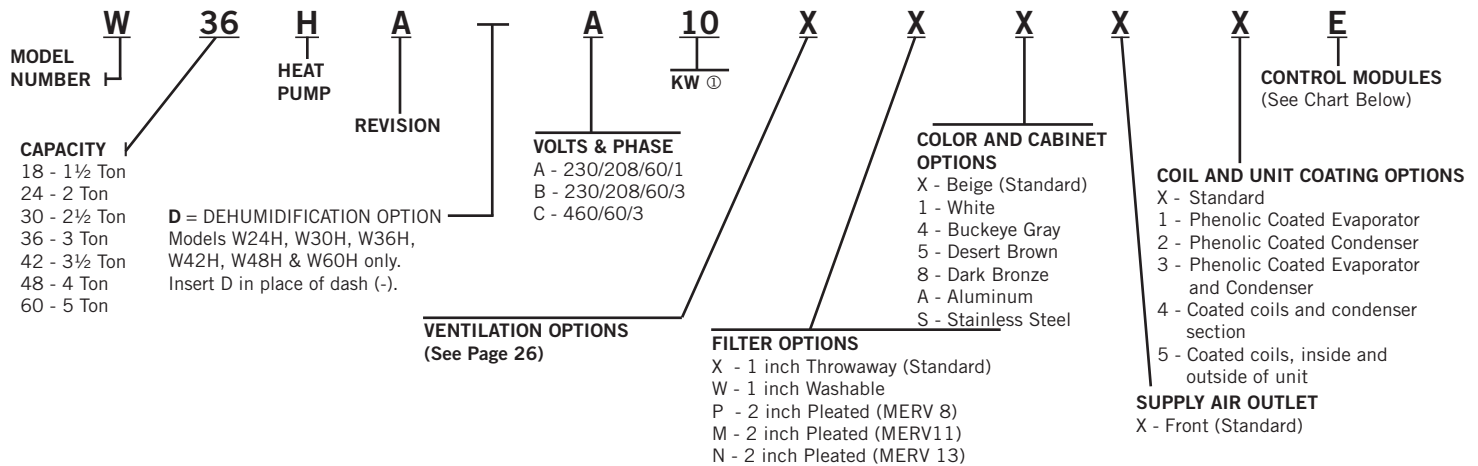
Cabinet Coating Options

Bard offers a high performance, multipurpose, surface tolerant, two-component chemically-cured epoxy semi-gloss coating for wall mount units. Two options are available to offer additional equipment protection for applications such as chemical processing, fertilizer storage areas, power plants, petroleum refineries, pulp and paper mills, water and sewage treatment plants and mining operations.

- **4 Option-** The 4 option unit contains our corrosion resistance phenolic coated evaporator and condenser 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 an epoxy semi-gloss coating.
- **5 Option-** The 5 option unit contains our corrosion resistance phenolic coated evaporator and condenser coils and unit 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 an 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.
- **Adhesion: (ASTM D 4541) - Excellent**
- **Salt Spray Resistance: (ASTM B 117) - Excellent**
- **Direct Impact Resistance: (ASTM D 2794) - Very Good**
- **Abrasion Resistance: (ASTM D 4060) - Excellent**
- **Humidity Resistance: (ASTM D 2247) - Excellent**
- **Exterior Exposure: (45° South - Lt. Industrial) - Very Good (Normal, expected loss of gloss for epoxy coatings)**
- **Chemical Resistance*: (ASTM D 1308 - 24 hr. contact) - Excellent.** Resists splash and spillage of alkalis, salts, moisture, oils, greases, food stuffs, and detergents, 50% sodium hydroxide, 28% ammonia, 5% trisodium phosphate, 25% citric acid, 25% lactic acid, 10% ammonium hydroxide, sewage, 50% ethanol, gasoline, methanol, kerosene, naphtha, xylol.

*All results based on testing of system compromised of two coats of 4 mils (100 microns) DFT per coat.

Heat Pump Wall-Mount Model Nomenclature



① For OKW and circuit breakers (230/208 volt) or toggle disconnects (460 volt) applications, insert OZ in the KW field of the model number.

Ventilation Options

Models	W18HA, W24HA		W30HA, W36HA		W42HA, W48HA, W60HA	
Description	Factory Installed Code No.	Field Installed Part No.	Factory Installed Code No.	Field Installed Part No.	Factory Installed Code No.	Field Installed Part No.
Barometric Fresh Air Damper - Standard	X	BFAD-2	X	BFAD-3	X	BFAD-5
Blank-Off Plate	B	BOP-2	B	BOP-3	B	BOP-5
Motorized Fresh Air Damper w/Plug	M	WMFADP2	M	WMFADP3	M	WMFADP5
Commercial Ventilator - Partial Flow -No hood	C	WCRVPS2-* ①	C	WCRVPS3-* ①	C	WCRVPS5-* ①
Economizer w/Plug, Temp Only ③ -7" hood	Y	WECOPT2-* ①	Y	WECOPT3-* ①	Y	WECOPT5-* ①
Economizer w/Plug, Enthalpy ③ -7" hood	Z	WECOPE2-* ①	Z	WECOPE3-* ①	Z	WECOPE5-* ①
Energy Recovery Ventilator w/Plug, 230 Volt ①	R	WERVPA2-* ①	R	WERVPA3-* ①	R	WERVPA5-* ①
Energy Recovery Ventilator w/Plug, 460 Volt ①	R	WERVPC2-* ①	R	WERVPC3-* ①	R	WERVPC5-* ①

① Insert color to match unit ("X" = Beige; "4" = Buckeye Gray; etc.)

Heat Pump Control Modules — All Models

Heat Pump Control Modules — All Models						Field Installed Part		
Low Pressure Control ①	High Pressure Control ①	Low Ambient Control and Relay ②	Start Kit ③	Start Kit ④	Outdoor Thermostat ⑤	Factory Installed Code	W18H, W24H, W30H, W36H	W42H, W48H, W60H
STD	STD					X	N/A	N/A
STD	STD	•				E	CMH-27	CMH-22
STD	STD				•	Q	CMH-28	CMH-23
STD	STD	•			•	R	CMH-29	CMH-24
STD	STD	•	•			S	CMH-30	CMH-25
STD	STD	•	•		•	T	CMH-31	CMH-26
STD	STD		•			Field Installed	CMC-15 ③	CMC-15 ③
STD	STD			•		Field Installed	SK111 ④	SK111 ④

STD = Standard Equipment

① The high & low pressure controls are auto reset. Operating circuit includes a lockout feature and is resettable from the wall thermostat. All low pressure controls use a timed bypass circuit to prevent nuisance tripping during low temperature start-up.

② The low ambient control includes an 8201-008 (fan relay) and permits cooling operation down to 0°F.

③ PTCR start kit can be used with all -A single phase models. Increases starting torque 2-3x. Not used for -B or -C three phase models. Do not use if SK111 is used.

④ Start capacitor and potential relay start kit can be used with all -A single phase models. Increases starting torque 9x. Not used for -B or -C 3-phase models. Do not use if CMC-15 is used.

⑤ The outdoor thermostat is adjustable from 0°F to 50°F. It is suitable for use as a compressor cut-off thermostat.

NOTE: Standard heat pump control board has a 5-minute compressor anti-short cycle timer.



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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.

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