THE WALL-MOUNT™ HEAT PUMPS - WH (60HZ)

WH-Series **Refrigerant 22** **60Hz**
Heating Capacities: 18,000 to 54,000 BTUH
Cooling Capacities: 18,400 to 54,000 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:
Reciprocating compressor designed to withstand higher compressor ratios and longer operation than normal air conditioning compressors. Equipped with crankcase heater and discharge muffler. Standard on all 2, 2½, 3 and 3½ ton models.

Scroll compressor designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater and suction accumulator. Standard on all 1½, 4 and 5 ton models.

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.

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 pull 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.

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 Pressure Switch:
Is built-in with a lockout circuit that resets from the room thermostat.

Five Minute Compressor Time Delay:
Short cycle protection is standard. Built into the heat pump control.

Suction Accumulator:
Protects the reciprocating compressor from refrigerant flood back and prevents damage to the compressor bearing surfaces. Not required on scroll compressor applications.

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.

Ventilation System Packages

All packages are designed to meet your specific ventilation requirements utilizing one of six ventilation options for the product. The ventilation package is mounted within the unit eliminating the need for an exterior mounted hood or damper assembly on the unit. 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
  - CRVP - Power Return
- Optional - Economizer with Exhaust
- Optional - Energy Recovery Ventilator

- Certified to ANSI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
- Commercial Product - Not intended for Residential application.

Form No. S3210-209
Supersedes S3210-1008

Capacity and Efficiency Ratings

MODELS	WH185	WH242	WH301	WH303	WH361	WH363	WH421	WH423	WH483	WH604
Cooling BTUH ①	18,400	23,600	30,000	27,600	35,600	34,000	41,500	42,000	47,000	54,000
EER ②	9.10	9.20	8.70	9.00	9.00	9.00	8.70	9.00	9.00	9.00
High Temp Heating (47F) BTUH ①	18,000	23,200	28,000	26,000	34,400	33,000	41,000	41,000	46,000	54,000
COP ②	3.00	3.00	3.00	3.00	2.90	3.00	3.00	3.00	3.00	3.00
Low Temp Heating (17F) BTUH ①	10,000	12,000	15,600	14,000	19,000	19,000	23,000	21,000	28,000	33,000
COP ②	1.80	1.90	1.90	1.90	1.90	2.00	2.00	2.00	2.10	2.00
ANSI / ASHRAE / IESNA 90.1 Compliance	⑤	⑤	④	⑤	④	⑤	④	⑤	⑤	⑤

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. All ratings based on fresh air intake being 100% closed (no outside air introduction).
④ Complies with efficiency requirements of ANSI / ASHRAE / IESNA 90.1-2004.
⑤ Complies with efficiency requirements of ANSI / ASHRAE / IESNA 90.1-2007.

Specifications 1-1/2 through 2-1/2 Ton

MODELS	WH185-A	WH242-A	WH242-B	WH242-C	WH301-A	WH301-B	WH301-C	WH303-A	WH303-B	WH303-C
Electrical Rating--60HZ	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	7.0/8.8	10.0/11.0	6.9/7.6	3.9	12.9/14.0	8.1/8.7	4.8	10.9/12.2	7.2/8.1	4.5
Branch Circuit Selection Current	10.0	11.0	8.0	4.0	14.0	10.0	5.0	12.5	10.0	5.0
Lock Rotor Amps	45/45	56/56	51/51	25	75/75	68/68	34	78/78	63/63	30
Compressor Type	Scroll	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
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	1.4	1.5	1.5	1.4	1.5	1.5	1.4
Fan--DIA/CFM	18" - 1600	18" - 1600	18" - 1600	18" - 1600	20" - 2000	20" - 2000	20" - 2000	20" - 2000	20" - 2000	20" - 2000
Motor & Evaporator										
Blower Motor--HP/RPM/SPD	1/6-1100-2	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	1/3-1100-2
Blower Motor--Amps	1.0	1.0	1.0	1.1	2.2	2.2	1.1	2.2	2.2	1.1
CFM Cooling & E.S.P. w/Filter (Rated - Wet Coil)	650 - .2	800 -. 2	800 - .2	800 - .2	1000 - .4	1000 - .4	1000 - .4	1000 - .4	1000 - .4	1000 - .4
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
Shipping Weight --LBS.	300	300	300	300	365	365	365	365	365	365

Specifications 3 through 3-1/2 Ton

MODELS	WH361-A	WH361-B	WH361-C	WH363-A	WH363-B	WH363-C	WH421-A	WH421-B	WH421-C
Electrical Rating--60HZ	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	16.3/17.0	9.8/10.5	5.2	15.6/16.7	9.8/10.5	5.2	18.3/20.4	12.2/13.1	6.1
Branch Circuit Selection Current	17.0	11.0	6.0	17.0	11.0	6.0	21.0	14.0	7.0
Lock Rotor Amps	96/96	75/75	40	96/96	75/75	40	102/102	91/91	42/42
Compressor Type	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.	Recip.
Fan Motor & Condenser									
Fan Motor--HP/RPM/SPD	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/3 - 825 - 2	1/3 - 825 - 2	1/3 - 825 - 2
Fan Motor--Amps	1.5	1.5	1.4	1.5	1.5	1.4	2.5	2.5	1.3
Fan--DIA/CFM	20" - 2000	20" - 1900	20" - 1900	20" - 2000	20" - 1900	20" - 1900	24" - 2750	24" - 2750	24" - 2750
Motor & Evaporator									
Blower Motor--HP/RPM/SPD	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/3-1100-2	1/2-1070-2	1/2-1070-2	1/2-1070-2
Blower Motor--Amps	2.2	2.2	1.1	2.2	2.2	1.1	3.3	3.3	1.9
CFM Cooling & E.S.P. w/Filter (Rated - Wet Coil)	1100 - .3	1100 - .3	1100 - .3	1100 - .3	1100 - .3	1100 - .3	1400 - .3	1400 - .3	1400 - .3
Filter Sizes (inches) STD.	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	20 x 30 x 1	20 x 30 x 1	20 x 30 x 1
Shipping Weight --LBS.	380	380	380	380	380	380	510	510	510

Specifications 3-1/2 through 5 Ton

MODELS	WH423-A	WH423-B	WH423-C	WH483-A	WH483-B	WH483-C	WH604-A	WH604-B	WH604-C
Electrical Rating--60HZ	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	18.3/20.4	12.2/13.1	6.1	20.8/21.6	12.3/12.7	6.2	25.8/30.4	15.5/18.3	8.7
Branch Circuit Selection Current	21.0	14.0	7.0	21.8	12.9	6.5	30.4	18.3	8.7
Lock Rotor Amps	102/102	91/91	42/42	131/131	91/91	46	148/148	123/123	62
Compressor Type	Recip.	Recip.	Recip.	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	2.5	2.5	1.3	2.5	2.5	1.3	2.5	2.5	1.3
Fan--DIA/CFM	24" - 2750	24" - 2750	24" - 2750	24" - 2750	24" - 2750	24" - 2750	24" - 2750	24" - 2750	24" - 2750
Motor & Evaporator									
Blower Motor--HP/RPM/SPD	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2	1/2-1070-2
Blower Motor--Amps	3.3	3.3	1.9	3.3	3.3	1.9	3.3	3.3	1.9
CFM Cooling & E.S.P. w/Filter (Rated - Wet Coil)	1400 - .3	1400 - .3	1400 - .3	1550 - .2	1550 - .2	1550 - .2	1700 - .3	1700 - .3	1700 - .3
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
Shipping Weight --LBS.	510	510	510	510	510	510	510	510	510

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.

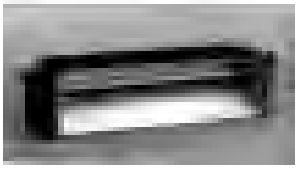
Barometric Fresh Air Damper

BAROMETRIC FRESH AIR DAMPER - BFAD **STANDARD**

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.

BLANK OFF PLATE - BOP **OPTIONAL**

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 into the unit. The blank off plate should be utilized in applications where outside air is not required to be mixed with the conditioned air.



Motorized Fresh Air Damper

MOTORIZED FRESH AIR DAMPER - MFAD **OPTIONAL**

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.

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 - CRV **OPTIONAL**

The built-in commercial room ventilator is internally mounted behind the service door and allows outside ventilation air, up to 50% of the total airflow rating of the unit, to be introduced through the air inlet openings. It includes a built-in exhaust air damper.

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. Two versions available (except on 1.5 and 2-Ton models). The CRV and CRVS are power open - spring return on power loss, and CRVP is power open and power close. Complies with ANSI/ASHRAE Standard 62.1 “Ventilation for Acceptable Indoor Air Quality.”

Economizer

ECONOMIZER - EIFM **OPTIONAL**

The built-in economizer system is internally mounted behind the service door and allows outdoor air to be introduced through the air inlet openings. The amount of outdoor air varies in response to the system controls and settings defined by the end user. It includes a built-in exhaust air damper. 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.

Standard Features:

- One Piece Construction - Easy to install with no mechanical linkage adjustment required.
- Exhaust Air Damper - Built in with positive closed position. Provides exhaust air capability to prevent pressurization of tight buildings.
- Actuator Motor - 24 volt, power open, spring return with built in torque limiting switch.
- Proportioning Type Control - for maximum “free cooling” economy and comfort.
- Moisture Eliminator & Prefilter - permanent, washable aluminum construction.
- Enthalpy Control - adjustable to monitor outdoor temperature and humidity.
- Minimum Position Potentiometer - adjustable to control minimum damper blade position for ventilation purposes.
- Mixed Air Sensor - to monitor outside and return air to automatically modulate damper position.

Energy Recovery Ventilator

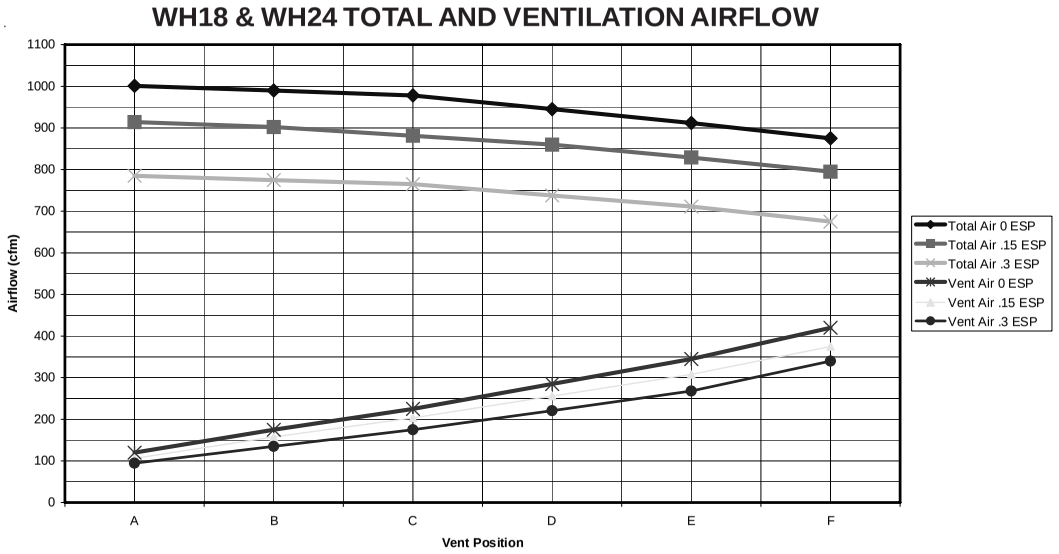
WALL-MOUNT ENERGY RECOVERY VENTILATOR - WERV **OPTIONAL**

The wall-mount energy recovery ventilator (WERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The WERV 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.

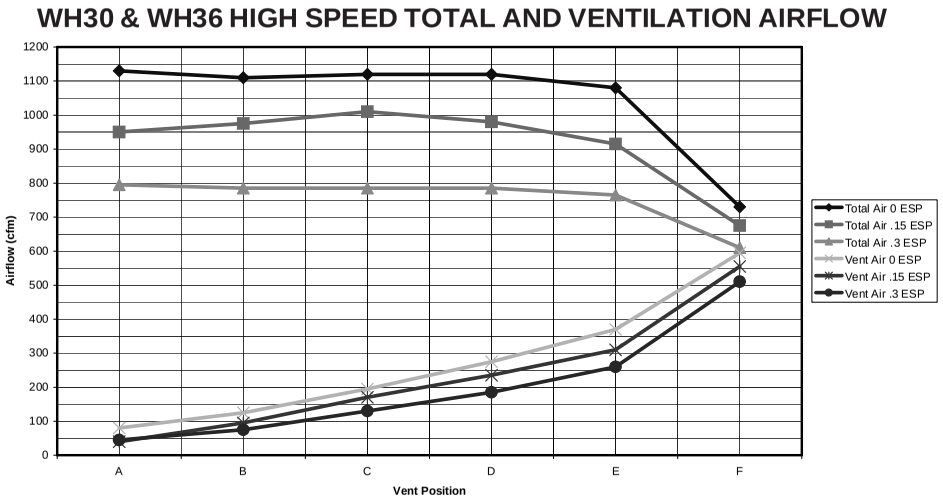
The WERV consists of a unique “rotary energy recovery cassette” that provides effective sensible and latent heat transfer capabilities during summer and winter conditions. Various control schemes are addressed including limiting ventilation during building occupancy only.

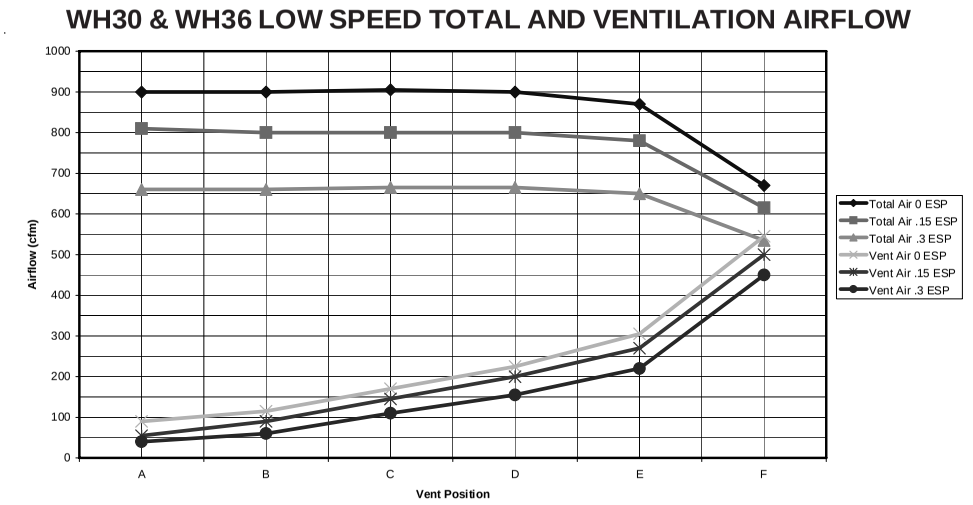
The WERV is designed to be internally mounted behind the service door in the WA, WH or WL model wall-mount units. It can be built-in at the factory or field installed as an option. WERV-*3C and WERV-*5C can be independently adjusted for intake and exhaust rates.

Commercial Room Ventilator Performance Data - CRV-2



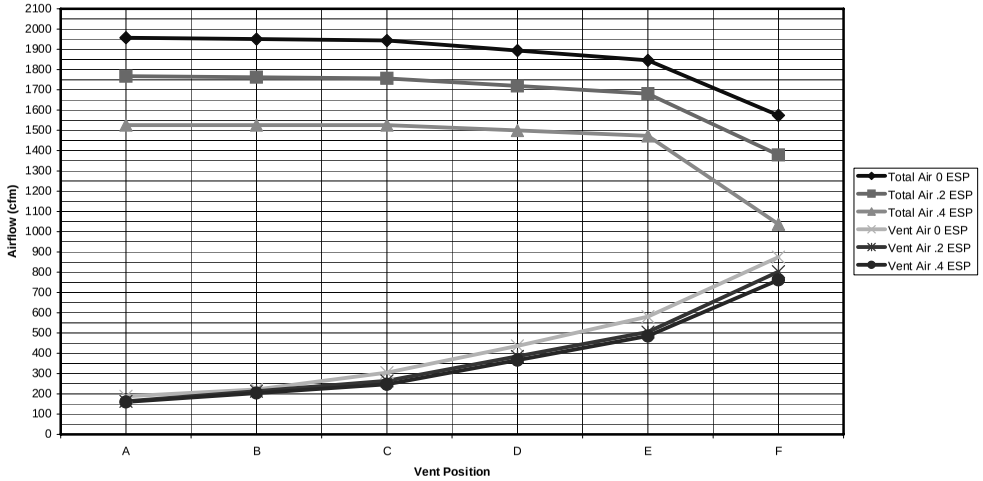
Commercial Room Ventilator Performance Data - CRVS-3 and CRVP-3



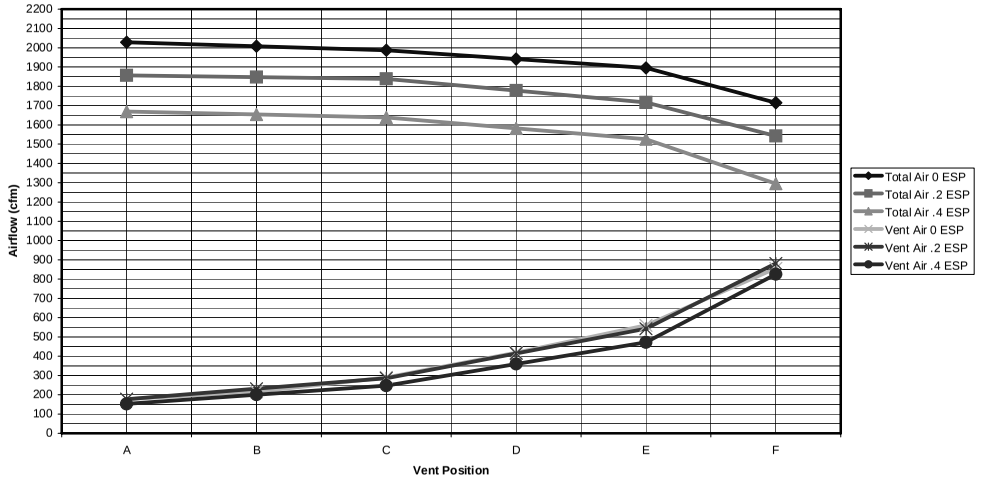


Commercial Room Ventilator Performance Data - CRVS-5 and CRVP-5

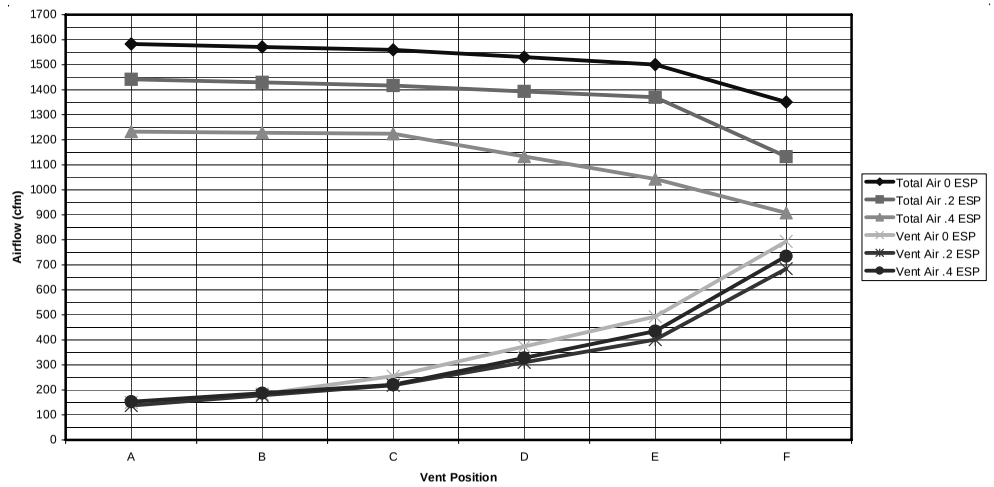
WH42 & WH48 HIGH SPEED TOTAL AND VENTILATION AIRFLOW



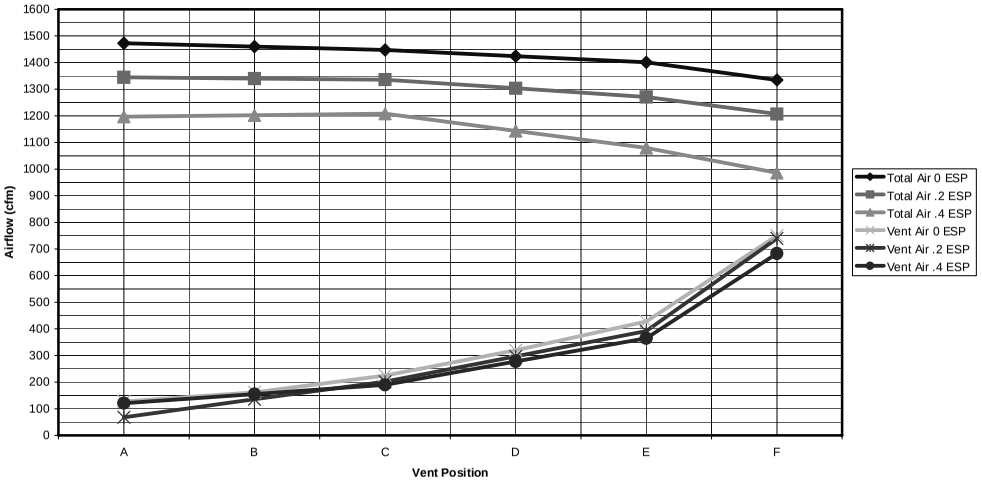
WH60 HIGH SPEED TOTAL AND VENTILATION AIRFLOW



WH42 & WH48 LOW SPEED TOTAL AND VENTILATION AIRFLOW



WH60 LOW SPEED TOTAL AND VENTILATION AIRFLOW



*Performance and Application Data- WERV-*2B*

SUMMER COOLING PERFORMANCE
0(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
	75	11925	8100	1325	7394	5022	822	10727	7287	3441	6758	4591	2168	9540	6480	3060	6010	4082	1928
105	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
	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
100	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
	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
95	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
	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
90	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
	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
85	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
	75	11925	1350	10575	7394	837	6557	10727	1214	9513	6758	765	5993	9540	1080	8460	6010	680	5330
80	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
	70	6863	0	6863	4255	0	4255	6173	0	6173	6889	0	3889	5490	0	5490	3458	0	3458
75	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

WERV-*2B 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	WHR	WVL	WHR	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

*Performance and Application Data- WERV-*3C*

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	19080	12960	6120	12020	8164	3855	15502	10530	4972	9921	6739	3182	11925	8100	3825	7751	5265	2486
105	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
	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
100	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
	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
95	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
	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
90	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
	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
85	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
	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
80	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
	70	10980	0	10980	6917	0	6917	8921	0	8921	5709	0	5709	6862	0	6862	4460	0	4460
75	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

WERV-*3C 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	WVL	WHR	WVL	WHR	WVL	WHR
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

*Performance and Application Data- WERV-*5C*

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

Ambient O.D.		VENTILATION RATE 450 CFM						VENTILATION RATE 375 CFM						VENTILATION RATE 300 CFM					
DB/ WB	F	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL	VLT	VLS	VLL	HRT	HRS	HRL
	75	21465	14580	6884	13952	9477	4475	17887	12150	5737	11805	8018	3786	14310	9720	4590	9587	6512	3075
105	70	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	0
	65	14580	14580	0	9477	9477	0	12150	12150	0	8018	8018	0	9720	9720	0	6512	6512	0
	80	31590	12150	19440	20533	7897	12635	26325	10125	16200	17374	6682	10692	21060	8100	12960	14110	5427	8683
	75	21465	12150	9314	13952	7897	6054	17887	10125	7762	11805	6682	5123	14310	8100	6210	9587	5427	4160
100	70	12352	12150	202	8029	7897	131	10293	10125	168	6793	6682	111	8235	8100	135	5517	5427	90
	65	12150	12150	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0
	60	12150	12150	0	7897	7897	0	10125	10125	0	6682	6682	0	8100	8100	0	5427	5427	0
	80	31590	9720	21870	20533	6318	14215	26325	8100	18225	17374	5345	12028	21060	6480	14580	14110	4341	9768
	75	21465	9720	11744	13952	6318	7634	17887	8100	9787	11805	5345	6459	14310	6480	7830	9587	4341	5246
95	70	12352	9720	2632	8029	6318	1711	10293	8100	2193	6793	5345	1447	8235	6480	1755	5517	4341	1175
	65	9720	9720	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0
	60	9720	9720	0	6318	6318	0	8100	8100	0	5345	5345	0	6480	6480	0	4341	4341	0
	80	31590	7290	24300	20533	4738	15794	26325	6075	20250	17374	4009	13365	21060	4860	16200	14110	3256	10854
	75	21465	7290	14175	13952	4738	9213	17887	6075	11812	11805	4009	7796	14310	4860	9450	9587	3256	6331
90	70	12352	7290	5062	8029	4738	3290	10293	6075	4218	6793	4009	2784	8235	4860	3375	5517	3256	2261
	65	7290	7290	0	4738	4738	0	6075	6075	0	4009	4009	0	4860	4860	0	3256	3256	0
	60	7290	7290	0	4738	4738	0	6075	6075	0	4009	4009	0	4860	4860	0	3256	3256	0
	80	31590	4860	26730	20533	3159	17374	26325	4050	22275	17374	2672	14701	21060	3240	17820	14110	2170	11939
	75	21465	4860	16605	13952	3159	10793	17887	4050	13837	11805	2672	9132	14310	3240	11070	9587	2170	7416
85	70	12352	4860	7492	8029	3159	4870	10293	4050	6243	6793	2672	4120	8235	3240	4995	5517	2170	3346
	65	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0
	60	4860	4860	0	3159	3159	0	4050	4050	0	2672	2672	0	3240	3240	0	2170	2170	0
	75	21465	2430	19035	13952	1579	12372	17887	2025	15862	11805	1336	10469	14310	1620	12690	9587	1085	8502
80	70	12352	2430	9922	8029	1579	6449	10293	2025	8268	6793	1336	5457	8235	1620	6615	5517	1085	4432
	65	4252	2430	1822	2764	1579	1184	3543	2025	1518	2338	1336	1002	2835	1620	1215	1899	1085	814
	60	2430	2430	0	1579	1579	0	2025	2025	0	1336	1336	0	1620	1620	0	1085	1085	0
	70	12352	0	12352	8029	0	8029	10293	0	10293	6793	0	6793	8235	0	8235	5517	0	5517
75	65	4252	0	4252	2764	0	2764	3543	0	3543	2338	0	2338	2835	0	2835	1899	0	1899
	60	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0

WERV-*5C WINTER HEATING PERFORMANCE
(INDOOR DESIGN CONDITIONS 70°F DB)

Ambient O.D.	VENTILATION RATE					
	450 CFM		375 CFM		300 CFM	
DB/°F	WVL	WHR	WVL	WHR	WVL	WHR
65	2430	1944	2025	1640	1620	1328
60	4860	3888	4050	3280	3240	2656
55	7290	5832	6075	4920	4860	3985
50	9720	7776	8100	6561	6480	5313
45	12150	9720	10125	8201	8100	6642
40	14580	11664	12150	9841	9720	7970
35	17010	13608	14175	11481	11340	9298
30	19440	15552	16200	13122	12960	10627
25	21870	17496	18225	14762	14580	11955
20	24300	19440	20250	16402	16200	13284
15	26730	21384	22275	18042	17820	14612

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

Clearances Required for Service Access and Adequate Condenser Airflow

MODELS	LEFT SIDE	RIGHT SIDE
WH18, WH24, WH30, WH36	15"	20"
WH42, WH48, WH60	20"	20"

Minimum Clearances Required to Combustible Materials

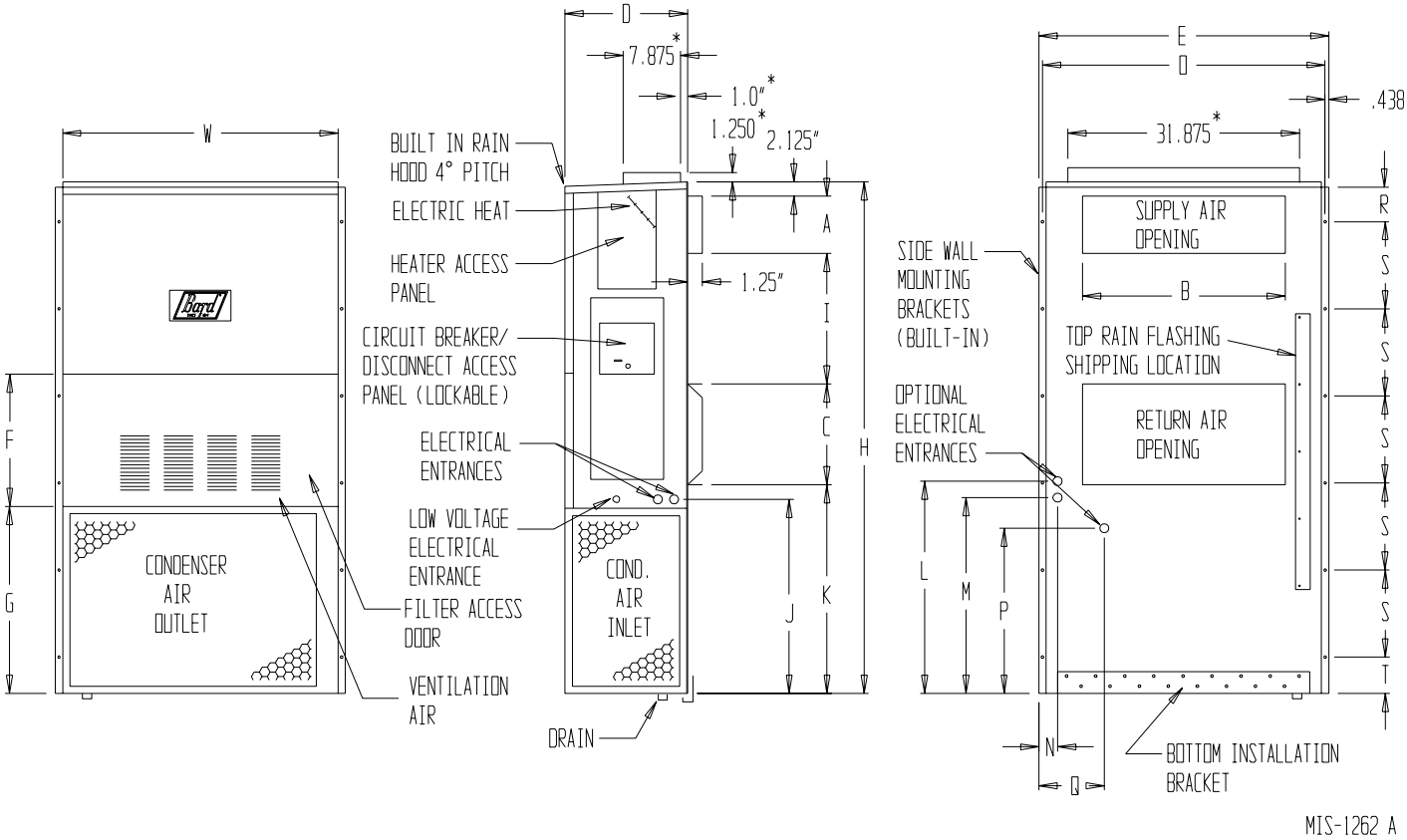
MODELS ①	SUPPLY AIR DUCT FIRST THREE FEET	CABINET
WH18, WH24	0"	0"
WH30, WH36	1/4"	0"
WH42, WH48, WH60	1/4"	0"

① Refer to the Installation Manual for more detailed information.

Dimensions of Basic Unit for Architectural and 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
WH18 WH24	33.300	17.125	70.563	7.88	19.88	11.88	19.88	35.00	18.50	25.75	20.56	26.75	28.06	29.25	27.00	2.63	34.13	22.06	10.55	4.19	12.00	5.00
WH30 WH36	38.200	17.125	70.563	7.88	27.88	13.88	27.88	40.00	18.50	25.75	17.93	26.75	28.75	29.25	27.00	2.63	39.13	22.75	9.14	4.19	12.00	5.00
WH42 WH48 WH60	42.075	22.432	84.875	9.88	29.88	15.88	29.88	43.88	19.10	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

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



FRONT VIEW **RIGHT SIDE VIEW** **BACK VIEW**

*__NOTE__: Top supply opening is optional and available factory-built only on models WH30 and WH36.

Indoor Blower Performance - CFM at 230 or 460 Volts

ESP in H_2O	WH18 WH24	WH30 WH36		WH42 WH48		WH60	
	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	Low Speed Dry/Wet Coil
0	1020/975	1395/1315	950/935	1885/1800	1650/1600	2200/2000	1600/1450
.1	960/905	1340/1270	930/915	1770/1665	1550/1500	2100/1900	1525/1375
.2	865/800	1285/1190	910/885	1635/1550	1450/1400	2000/1800	1460/1200
.3	820/735	1205/1100	855/830	1500/1400	1350/1300	1875/1700	-/-
.4	735/650	1110/1000	800/755	1370/1285	1300/1175	1775/1600	-/-
.5	615/535	1005/870	-/-	1250/1150	-/-	1650/1475	-/-

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.

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
- Toggle Disconnect Standard on 460V Models
- UL Listed
- CUL Listed

Heat Pump Models	-A00 Models 230/208-1		-B00 Models 230/208-3		-C00 Models 460-3	
	Heater Model #	KW	Heater Model #	KW	Heater Model #	KW
WH18	EHWH02A-A04 EHWH02A-A08	4 8	N/A		N/A	
WH24	EHWH02A-A04 EHWH02A-A08	4 8	EHWH24-B06	6	EHWH24B-C06	6
WH30	EHWH30-A05 EHWH30-A10	5 10	EHWH03-B06 EHWH03-B09	6 9	EHWC03A-C06 EHWC03A-C09 EHWH03A-C15 *	6 9 15
WH36	EHWH36-A05 EHWH36-A10 EHWH36-A15 *	5 10 15	EHWH03-B06 EHWH03-B09 EHWH36-B15 *	6 9 15	EHWC03A-C06 EHWC03A-C09 EHWH03A-C15 *	6 9 15
WH42	EHWH42-A05 EHWH42-A10 EHWH42-A15 *	5 10 15	EHWH05-B06 EHWH05-B09 EHWH05-B15 *	6 9 15	EHWH42-C06 EHWH05A-C09 EHWH05A-C15 *	6 9 15
WH483	EHWH04-A04 EHWH42-A05 EHWH42-A10 EHWH42-A15 * EHWH04-A20 *	4 5 10 15 20	EHWH05-B06 EHWH05-B09 EHWH05-B15 * EHWH04-B18 *	6 9 15 18	EHWH05A-C09 EHWH05A-C15 *	9 15
WH60	EHWH04-A05 EHWH04-A10 EHWH04-A15 * EHWH04-A20 *	5 10 15 20	EHWH05-B09 EHWH05-B15 * EHWH04-B18 *	9 15 18	EHWH05A-C09 EHWH05A-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 ①

Model	D.B./W.B. ②	Cooling Capacity	75°F	80°F	85°F	90°F	95°F	100°F	105°F	110°F	115°F
WH185	75/	Total Cooling	21,400	19,800	18,400	17,200	16,100	15,200	14,400	13,800	13,300
	62	Sensible Cooling	16,900	16,400	15,800	15,200	14,800	14,400	14,000	13,600	13,300
	80/	Total Cooling	22,800	21,500	20,400	19,400	18,400	17,700	17,000	16,400	16,000
	67	Sensible Cooling	16,400	16,000	15,600	15,200	14,900	14,600	14,300	14,000	13,800
	85/	Total Cooling	27,200	25,200	23,500	21,900	20,500	19,400	18,400	17,500	16,800
	72	Sensible Cooling	16,800	16,300	15,700	15,100	14,700	14,200	13,700	13,200	12,700
WH242	75/	Total Cooling	24,780	23,800	23,760	21,670	20,530	19,330	18,080	16,780	15,420
	62	Sensible Cooling	19,600	19,090	18,570	18,040	17,495	16,940	16,380	15,800	15,220
	80/	Total Cooling	26,450	25,940	25,300	24,520	23,600	22,550	21,360	20,040	18,575
	67	Sensible Cooling	19,030	18,730	18,410	18,050	17,670	17,260	16,820	16,350	15,855
	85/	Total Cooling	31,520	30,320	29,030	27,660	26,200	24,650	23,020	21,300	19,500
	72	Sensible Cooling	19,490	19,000	18,470	17,910	17,315	16,680	16,020	15,320	14,585
WH301	75/	Total Cooling	31,600	30,290	28,930	27,540	26,100	24,620	23,100	21,530	19,920
	62	Sensible Cooling	24,370	24,210	23,940	23,560	23,075	22,480	21,770	20,960	20,040
	80/	Total Cooling	33,760	33,030	32,160	31,150	30,000	28,710	27,280	25,710	24,000
	67	Sensible Cooling	24,000	23,830	23,650	23,485	23,310	22,900	22,360	21,690	20,880
	85/	Total Cooling	40,220	38,600	36,910	35,140	33,300	31,390	29,400	27,340	25,200
	72	Sensible Cooling	24,220	24,090	23,810	23,400	22,845	22,150	21,310	20,330	19,210
WH303	75/	Total Cooling	33,300	30,700	28,200	26,000	24,100	22,300	20,700	19,300	18,100
	62	Sensible Cooling	26,200	24,900	23,800	22,600	21,700	20,900	20,000	19,000	18,000
	80/	Total Cooling	35,500	33,400	31,300	29,400	27,600	26,000	24,400	23,000	21,700
	67	Sensible Cooling	25,400	24,400	23,500	22,600	21,900	21,200	20,500	20,000	19,500
	85/	Total Cooling	42,300	39,100	36,000	33,200	30,700	28,500	26,300	24,500	22,800
	72	Sensible Cooling	26,000	24,800	23,600	22,500	21,500	20,500	19,600	18,800	18,000
WH361	75/	Total Cooling	36,960	35,600	34,150	32,600	30,972	29,250	27,440	25,540	23,550
	62	Sensible Cooling	28,730	28,320	27,820	27,220	26,530	25,740	24,850	23,875	22,800
	80/	Total Cooling	39,475	38,820	37,960	36,880	35,600	34,100	32,400	30,500	28,375
	67	Sensible Cooling	27,870	27,790	27,580	27,250	26,800	26,220	25,520	24,700	23,750
	85/	Total Cooling	45,360	45,000	43,910	42,080	39,515	37,000	34,650	32,200	29,790
	72	Sensible Cooling	28,570	28,190	27,670	27,030	26,260	25,350	24,320	23,150	21850
WH363	75/	Total Cooling	38,000	35,700	33,600	31,600	29,600	27,800	26,100	24,400	22,800
	62	Sensible Cooling	28,700	27,700	26,700	25,700	24,800	23,900	23,100	22,300	21,500
	80/	Total Cooling	40,500	38,900	37,300	35,700	34,000	32,400	30,800	29,100	27,400
	67	Sensible Cooling	27,800	27,100	26,400	25,700	25,000	24,300	23,700	23,000	22,300
	85/	Total Cooling	48,300	45,500	42,900	40,300	37,800	35,500	33,200	31,000	28,800
	72	Sensible Cooling	28,500	27,500	26,500	25,600	24,500	23,500	22,600	21,600	20,600
WH421	75/	Total Cooling	46,330	43,420	40,680	38,350	36,100	33,920	31,800	29,770	27,800
	62	Sensible Cooling	36,530	34,230	33,380	32,970	32,300	31,370	30,180	28,720	27,000
	80/	Total Cooling	49,670	47,390	45,220	43,380	41,500	39,570	37,600	35,570	33,500
	67	Sensible Cooling	35,900	34,900	33,020	32,900	32,600	32,110	31,430	30,560	29,500
	85/	Total Cooling	59,150	55,450	51,740	48,590	45,600	42,770	40,090	37,570	35,200
	72	Sensible Cooling	36,750	35,400	33,100	32,600	31,900	31,000	29,900	28,600	27,100
WH423	75/	Total Cooling	46,200	43,800	41,400	39,000	36,600	34,300	31,900	29,400	27,000
	62	Sensible Cooling	35,400	34,500	33,600	32,700	31,800	30,900	29,800	28,900	26,900
	80/	Total Cooling	49,300	47,700	46,000	44,100	42,000	39,900	37,600	35,100	32,500
	67	Sensible Cooling	34,300	33,800	33,300	32,700	32,100	31,400	30,600	29,800	28,900
	85/	Total Cooling	58,700	55,800	52,800	49,800	46,700	43,700	40,600	37,400	34,200
	72	Sensible Cooling	35,100	34,300	33,500	32,500	31,500	30,400	29,200	28,000	26,600
WH483	75/	Total Cooling	50,250	47,770	45,375	43,100	40,900	38,800	36,800	34,900	33,100
	62	Sensible Cooling	39,550	38,500	37,500	36,525	35,600	34,700	33,875	33,050	32,300
	80/	Total Cooling	53,700	52,050	50,400	48,700	47,000	45,250	43,500	41,700	39,900
	67	Sensible Cooling	38,500	37,850	37,200	36,600	36,000	35,400	34,850	34,250	33,700
	85/	Total Cooling	63,800	60,800	57,840	54,980	52,200	49,500	46,890	44,350	41,900
	72	Sensible Cooling	39,250	38,300	37,300	36,325	35,300	34,250	33,200	32,100	31,000
WH604	75/	Total Cooling	58,700	55,400	52,500	49,600	47,000	44,600	42,400	40,300	38,300
	62	Sensible Cooling	44,500	43,500	42,500	41,500	40,400	39,400	38,200	37,100	35,900
	80/	Total Cooling	62,600	60,400	58,300	56,100	54,000	52,000	50,000	48,000	46,100
	67	Sensible Cooling	43,100	42,600	42,100	41,500	40,800	40,100	39,200	38,300	37,300
	85/	Total Cooling	74,600	70,600	67,000	63,300	60,000	56,900	53,900	51,100	48,500
	72	Sensible Cooling	44,200	43,200	42,300	41,200	40,000	38,800	37,400	35,900	34,400

① Below 65°F, unit requires a factory or field installed low ambient control.
② 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 **

Model		0˚	5˚	10˚	15˚	20˚	25˚	30˚	35˚	40˚	45˚	50˚	55˚	60˚	65˚
WH185	BTUH	5,500	6,800	8,200	9,500	10,400	11,000	11,700	12,300	14,700	17,100	18,800	20,200	21,500	22,800
	WATTS	1,500	1,520	1,540	1,560	1,580	1,580	1,590	1,590	1,640	1,680	1,710	1,740	1,760	1,780
	COP	1.08	1.32	1.57	1.79	1.93	2.04	2.16	2.27	2.63	2.99	3.23	3.41	3.58	3.76
WH242	BTUH	8,030	9,090	10,160	11,230	12,775	13,360	14,430	15,500	18,700	21,910	24,280	26,080	27,880	29,680
	WATTS	1,775	1,825	1,875	1,925	1,970	2,020	2,070	1,976	2,165	2,215	2,265	2,315	2,365	2,412
	COP	1.32	1.45	1.58	1.70	1.90	1.93	2.04	2.29	2.53	2.88	3.14	3.30	3.45	3.60
WH301	BTUH	9,875	11,450	13,025	14,600	16,790	17,750	19,325	20,900	23,860	26,815	29,180	31,150	33,115	35,080
	WATTS	2,165	2,230	2,290	2,350	2,400	2,470	2,530	2,662	2,650	2,710	2,770	2,830	2,890	2,952
	COP	1.33	1.50	1.66	1.82	2.05	2.10	2.23	2.30	2.63	2.89	3.08	3.22	3.57	3.48
WH303	BTUH	7,200	9,200	11,200	13,200	15,000	16,500	18,000	19,600	22,300	25,000	27,200	29,200	31,200	33,200
	WATTS	2,040	2,090	2,140	2,190	2,230	2,260	2,290	2,320	2,400	2,470	2,530	2,580	2,630	2,680
	COP	1.04	1.29	1.54	1.77	1.98	2.14	2.31	2.48	2.73	2.97	3.16	3.32	3.48	3.63
WH361	BTUH	13,970	15,445	16,920	18,400	20,900	21,830	22,825	24,303	28,510	32,720	35,820	38,180	40,550	42,920
	WATTS	2680	2,760	2,845	2,925	3,000	3,090	3,170	3,185	3,335	3,420	3,500	3,580	3,664	3,750
	COP	1.52	1.64	1.74	1.84	2.05	2.07	2.10	2.23	2.50	2.80	2.99	3.12	3.24	3.35
WH363	BTUH	11,100	13,400	15,800	18,100	19,200	19,500	19,700	20,000	25,400	30,900	34,400	36,800	39,100	41,400
	WATTS	2,310	2,400	2,490	2,580	2,630	2,650	2,670	2,700	2,890	3,070	3,200	3,290	3,380	3,470
	COP	1.41	1.64	1.86	2.06	2.14	2.16	2.17	2.18	2.58	2.95	3.15	3.28	3.39	3.50
WH421	BTUH	15,750	17,825	19,900	21,975	24,050	26,100	28,200	30,250	34,725	39,200	42,800	45,850	48,875	51,900
	WATTS	3,075	3,175	3,275	3,350	3,450	3,550	3,650	3,750	3,825	3,925	4,025	4,100	4,200	4,300
	COP	1.50	1.64	1.78	1.92	2.08	2.15	2.26	2.36	2.65	2.92	3.11	3.27	3.41	3.53
WH423	BTUH	9,700	13,000	16,400	19,700	22,500	24,800	27,200	29,600	34,400	39,100	43,000	46,400	49,700	53,000
	WATTS	2,780	2,900	3,010	3,130	3,240	3,330	3,430	3,530	3,670	3,820	3,940	4,060	4,180	4,290
	COP	1.03	1.32	1.60	1.85	2.04	2.19	2.33	2.46	2.75	3.00	3.20	3.35	3.49	3.62
WH483	BTUH	19,900	21,875	23,850	26,200	28,500	29,750	31,700	33,675	38,800	43,900	47,950	51,175	54,400	57,650
	WATTS	3,550	3,625	3,700	3,800	3,900	3,975	4,075	4,150	4,250	4,300	4,425	4,500	4,600	4,700
	COP	1.64	1.76	1.88	2.00	2.15	2.20	2.27	2.37	2.67	2.89	3.17	3.33	3.46	3.59
WH604	BTUH	21,100	24,600	28,100	31,600	34,300	36,500	38,700	40,800	46,300	51,800	56,100	59,600	63,100	66,600
	WATTS	4,190	4,330	4,460	4,600	4,700	4,780	4,870	4,950	5,160	5,370	5,540	5,670	5,800	5,940
	COP	1.48	1.67	1.85	2.02	2.14	2.24	2.33	2.42	2.63	2.83	2.97	3.08	3.19	3.29

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

Electrical Specifications

Model	Rated Volts and Phase	No. Field Power Circuits	Single Circuit				Dual Circuit							
			④ Minimum Circuit Ampacity	① Maximum External Fuse or Ckt. Brkr.	② Field Power Wire Size	② Ground Wire	④ Minimum Circuit Ampacity		① Maximum External Fuse or Ckt. Breaker		② Field Power Wire Size		② Ground Wire Size	
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B
WH185- A00, A0Z	230/208-1	1	17	25	12	12								
A04		1	38	40	8	10								
③ A08		1	59	60	6	10								
WH242- A00, A0Z	230/208-1	1	18	25	10	10								
A04		1	39	40	8	10								
③ A08		1	60	60	6	10								
WH242- B00, B0Z	230/208-3	1	15	20	12	12								
B06		1	33	35	8	10								
WH242- C00, C0Z	460-3	1	8	15	14	14								
C06		1	17	20	12	12								
WH301- A00, A0Z*	230/208-1	1	24	35	8	10								
A05*		1	50	50	8	10								
③ A10*		1 or 2	76	80	4	8	50	26	50	30	8	10	10	10
WH301- B00, B0Z*	230/208-3	1	19	25	10	10								
B06		1	37	40	8	10								
③ B09*		1	46	50	8	10								
WH301- C00, C0Z*	460-3	1	10	15	14	14								
C06		1	19	20	12	12								
③ C09*		1	24	25	10	10								
C15		1	26	30	10	10								
WH303- A00, A0Z*	230/208-1	1	22	30	8	10								
A05*		1	48	50	8	10								
③ A10*		1 or 2	74	80	4	8	48	26	50	30	8	10	10	10
WH303- B00, B0Z*	230/208-3	1	17	20	10	10								
B06		1	35	40	8	10								
③ B09*		1	44	50	8	10								
WH303- C00, C0Z*	460-3	1	10	15	14	14								
C06		1	19	20	12	12								
③ C09*		1	24	25	10	10								
C15		1	26	30	10	10								
WH361- A00, A0Z*	230/208-1	1	27	40	8	10								
A05		1	53	60	6	10								
③ A10*		1 or 2	79	80	4	8	53	26	60	30	6	10	10	10
⑤ A15		1 or 2	83	90	4	8	53	52	60	60	6	6	10	10
WH361- B00, B0Z*	230/208-3	1	20	25	10	10								
B06		1	38	40	8	10								
③ B09*		1	47	50	8	10								
⑤ B15		1	50	50	8	10								
WH361- C00, C0Z*	460-3	1	11	15	14	14								
C06		1	20	20	12	12								
③ C09*		1	25	25	10	10								
⑤ C15		1	26	30	10	10								
WH363- A00, A0Z*	230/208-1	1	27	40	8	10								
A05		1	53	60	6	10								
③ A10*		1 or 2	79	80	4	8	53	26	60	30	6	10	10	10
⑤ A15		1 or 2	83	90	4	8	53	52	60	60	6	6	10	10
WH363- B00, B0Z*	230/208-3	1	20	25	10	10								
B06		1	38	40	8	10								
③ B09*		1	47	50	8	10								
⑤ B15		1	50	50	8	10								
WH363- C00, C0Z*	460-3	1	11	15	14	14								
C06		1	20	20	12	12								
③ C09*		1	25	25	10	10								
⑤ C15		1	26	30	10	10								

① Maximum size of the time delay fuse or HACR type circuit breaker for protection of field wiring conductors.

② Based on 75˚C copper wire. All wiring must conform to the National Electrical Code and all local codes.

③ Maximum KW that can operate with the heat pump on.

④ 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.

⑤ Not available on dehumidification models.

* Available factory-built only with top outlet supply as an option.

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

Electrical Specifications

Model	Rated Volts and Phase	No. Field Power Circuits	Single Circuit				Dual Circuit							
			④ Minimum Circuit Ampacity	① Maximum External Fuse or Ckt. Brkr.	② Field Power Wire Size	② Ground Wire	④ Minimum Circuit Ampacity		① Maximum External Fuse or Ckt. Breaker		② Field Power Wire Size		② Ground Wire Size	
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B
WH421- A00, A0Z	230/208-1	1	34	50	8	10								
A05		1 or 2	60	70	6	8	34	26	50	30	8	10	10	10
③ A10		1 or 2	86	90	3	8	34	52	50	60	8	6	10	10
⑤ A15		1 or 2	86	90	3	8	34	52	50	60	8	6	10	10
WH421- B00, B0Z	230/208-3	1	26	35	8	10								
B06		1	44	50	8	10								
③ B09		1	53	60	6	10								
⑤ B15		1	53	60	6	10								
WH421- C00, C0Z	460-3	1	13	20	12	12								
C06		1	23	25	10	10								
③ C09		1	27	30	10	10								
⑤ C15		1	27	30	10	10								
WH423- A00, A0Z	230/208-1	1	34	50	8	10								
A05		1 or 2	60	70	6	8	34	26	50	30	8	10	10	10
③ A10		1 or 2	86	90	3	8	34	52	50	60	8	6	10	10
⑤ A15		1 or 2	86	90	3	8	34	52	50	60	8	6	10	10
WH423- B00, B0Z	230/208-3	1	26	35	8	10								
B06		1	44	50	8	10								
③ B09		1	53	60	6	10								
⑤ B15		1	53	60	6	10								
WH423- C00, C0Z	460-3	1	13	20	12	12								
C06		1	23	25	10	10								
③ C09		1	27	30	10	10								
⑤ C15		1	27	30	10	10								
WH483- A00, A0Z	230/208-1	1	36	50	8	10								
A04		1	57	60	6	10								
A05		1 or 2	62	70	6	8	36	26	50	30	8	10	10	10
③ A10		1 or 2	88	90	3	8	36	52	50	60	8	6	10	10
⑤ A15		1 or 2	88	90	3	8	36	52	50	60	8	6	10	10
⑤ A20		1 or 2	110	110	2	6	59	52	60	60	6	6	10	10
WH483- B00, B0Z	230/208-3	1	25	35	8	10								
B06		1	43	50	8	10								
③ B09		1	52	60	6	10								
⑤ B15		1	52	60	6	10								
⑤ B18		1	60	60	6	10								
WH483- C00, C0Z	460-3	1	13	15	14	14								
③ C09		1	26	30	10	10								
⑤ C15		1	26	30	10	10								
WH604- A00, A0Z	230/208-1	1	45	60	8	10								
A05		1 or 2	71	90	4	8	45	26	60	30	8	10	10	10
③ A10		1 or 2	97	110	3	6	45	52	60	60	8	6	10	10
⑤ A15		1 or 2	97	110	3	6	45	52	60	60	8	6	10	10
⑤ A20		1 or 2	110	110	2	6	59	52	60	60	6	6	10	10
WH604- B00, B0Z	230/208-3	1	33	45	8	10								
③ B09		1	60	60	6	10								
⑤ B15		1	60	60	6	10								
⑤ B18		1	60	60	6	10								
WH604- C00, C0Z	460-3	1	16	20	12	12								
③ C09		1	29	35	8	10								
⑤ C15		1	29	35	8	10								

① Maximum size of the time delay fuse or HACR type circuit breaker for protection of field wiring conductors.

② Based on 75°C copper wire. All wiring must conform to the National Electrical Code and all local codes.

③ Maximum KW that can operate with the heat pump on.

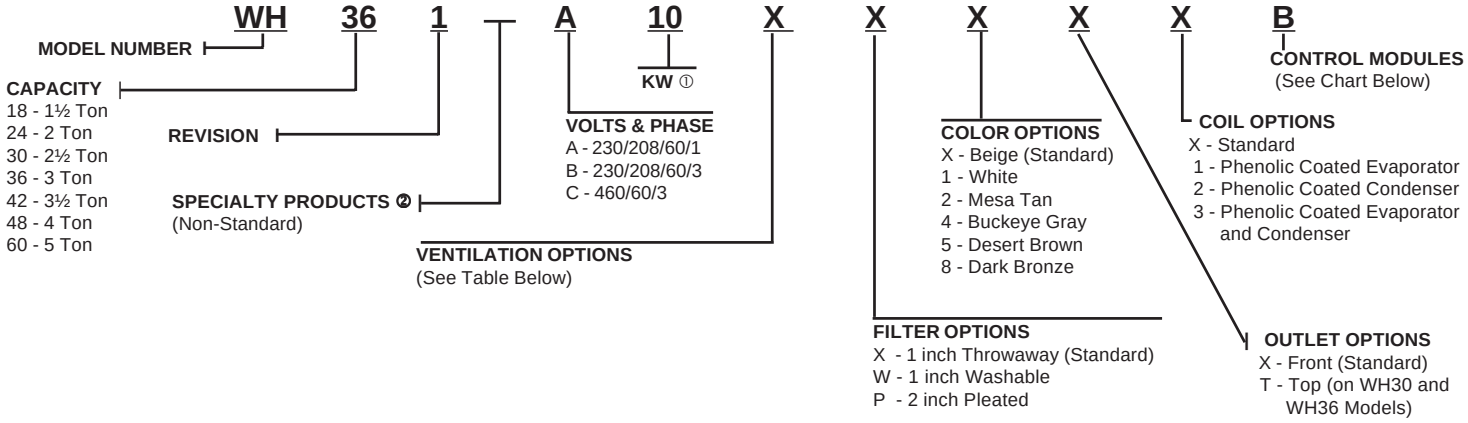
④ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electrical Code (latest version), Article 310 for power conductor sizing. Caution: When more than one field power circuit is run through one conduit, the conductors must be derated. Pay special attention to note 8 of Table 310 regarding Ampacity Adjustment Factors when more than three (3) conductors are in a raceway.

⑤ Not available on dehumidification models.

* Available factory-built only with top outlet supply as an option.

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

Heat Pump Wall-Mount Model Nomenclature



① For 0KW and circuit breakers (230/208 volt) or toggle disconnects (460 volt) applications, insert 0Z in the KW field of the model number.
② Insert "D" for dehumidification with hot gas reheat. Reference Form F1743 for complete details.

Ventilation Options

MODELS	WH18, WH24		WH30, WH36		WH42, WH48, WH60	
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	M	MFAD-2	M	MFAD-3	M	MFAD-5
Commercial Ventilator - Spring Return w/Exhaust	V	CRV-2	V	CRVS-3	V	CRVS-5
Commercial Ventilator - Power Return w/Exhaust	---	---	P	CRVP-3	P	CRVP-5
Economizer (Internal) - Fully Modulating	E	EIFM-2B	E	EIFM-3C	E	EIFM-5C
Energy Recovery Ventilator - 230 Volt	R	WERV-A2B-✳	R	WERV-A3C-✳ ①	R	WERV-A5C-✳ ①
Energy Recovery Ventilator - 460 Volt	R	WERV-C2B-✳	R	WERV-C3C-✳ ①	R	WERV-C5C-✳ ①

① Intake and exhaust can be independently adjusted.
✳ Color option must be specified to match unit (X = Beige, 4 = Buckeye Gray)

Heat Pump Control Modules

Factory Installed Code Number	Field Installed Part Number	Description			
		Low Pressure Control ①	Low Ambient Control and Relay ②	Start Kit ③	Outdoor Thermostat ④
B	CMH-3	●			
E	CMH-7		●		
O	CMH-9	●	●		
Q	CMH-14A				●
R	- - -	●	●		●
S	- - -	●	●	●	
T	- - -	●	●	●	●
P	CMC-15 ③			●	
U	- - -	●			●

① The low pressure control is auto reset. It includes a lock-out 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 For WH242-A, WH303-A, WH363-A and WH423-A models. The CMC-15 can be used with any control module combination.
NOTE: The compressor anti-cycle relay is standard on all heat pump models.
④ The outdoor thermostat is adjustable from 0°F to 50°F. It is suitable for use as a compressor cut-off thermostat.

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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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