



THE WALL-MOUNT™ - AIR CONDITIONERS - WA(60Hz)

**WA - SERIES 1.5 to 5 Ton
(Right Side Control Panel)
18,300 to 57,500 BTUH**

60Hz

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



CERTIFIED



LISTED



LISTED



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.

Air Conditioner Compressor:

Reciprocating compressors are designed for high compression ratios. Equipped with crankcase heater and dual discharge muffler. Standard on 1.5 - 3.5 ton models.

Scroll Compressors are designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater. Standard on 4 and 5 ton, and available on 2 and 3 ton models.

Phase Rotation Monitor:

Standard (effective Aug. 98) on all 3 phase scroll compressors. Protects against reverse rotation if power supply is not properly connected. Not required on reciprocating compressors.

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 textured enamel which allows it to withstand 1000 hours of salt spray exposure.

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 can be factory or field installed for all 1.5 through 5 ton models.

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.

Condenser Fan and Motor Shroud Assembly:

Slides out for easy access.

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

Rain Hood:

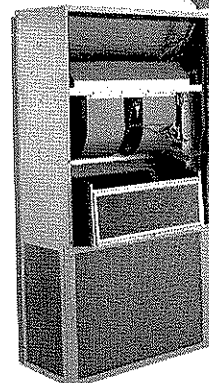
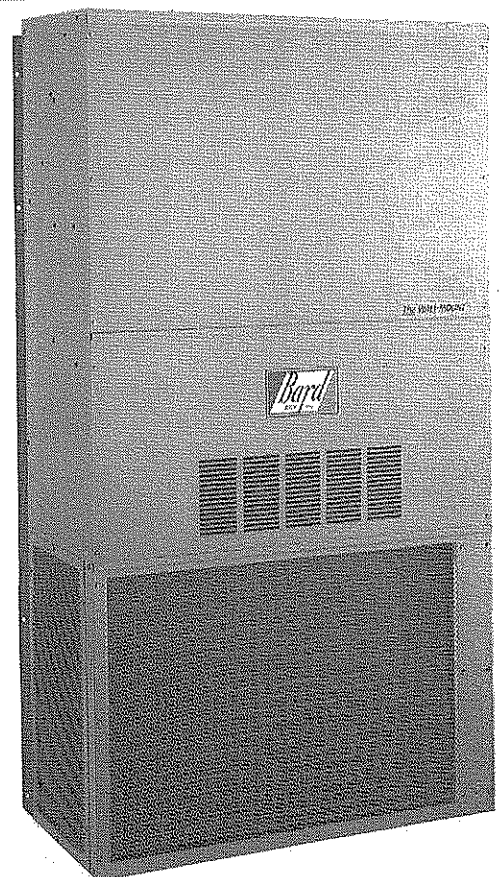
Standard built in feature on all models.

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.



Unit shown with optional Economizer.



Economizer

Ventilation System Packages

All packages are designed to meet your specific ventilation requirements utilizing one of five 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 (CRV)
- Optional - Economizer
- Optional - Energy Recovery Ventilator

Capacity and Efficiency Ratings ①

Models	WA181	WA241	WA251	WA301	WA361	WA371	WA421	WA482	WA602
Cooling Cap. BTUH	18,300	24,000	24,400	31,000	36,000	36,000	43,000	47,500	57,500
SEER	10.20	10.50	11.00	10.00	10.00	10.00	10.00	11.00	10.20

① Tested and Certified in accordance with ARI Standard 210/240-89.

All capacity, efficiency and cost of operation information is based on high speed operation with fresh air cover plate. Cover plate must be ordered separately and is recommended for use to obtain maximum energy efficiency where fresh air is not required.

Specifications 1-1/2 through 3 Ton

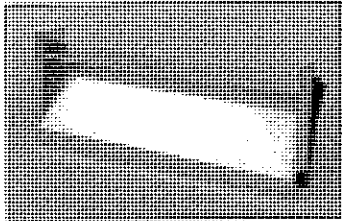
Models	WA181-A	WA241-A	WA241-B	WA251-A	WA251-B	WA301-A	WA301-B	WA301-C	WA361-A	WA361-B	WA361-C
Cooling Capacity	18,300	24,000	24,000	24,400	24,400	31,000	31,000	31,000	36,000	36,000	36,000
Heating Capacity	See Electric Heat Table										
Electrical Rating--60 Hz	230/208-1	230/208-1	230/208-1	230/208-1	230/208-3	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	197-253	197-253	197-253	197-253	414-506	197-253	197-253	414-506
Compressor--Circuit A											
Voltage	230/208	230/208	230/208	230/208	230/208	230/208	203/208	460	230/208	230/208	460
Rated Load Amps	7.0/8.0	9.5/10.0	6.6/6.9	9.8/11.3	6.2/7.1	12.6/13.7	8.2/8.5	4.8	15.7/17.0	9.9/10.7	5.2
Branch Circuit Selection Current	9.0	10.0	7.0	12.2	7.7	14.0	9.0	5.0	17.0	11.0	6.0
Lock Rotor Amps	49/49	56/56	51/51	61/61	55/55	78/78	66/66	34	96/96	75/75	40
Compressor Type	Recip.	Recip.	Recip.	Scroll	Scroll	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	1/5 - 1075
Fan Motor--Amps	1.2	1.2	1.2	1.2	1.2	1.5	1.5	1.4	1.5	1.5	1.4
Fan--DIA/CFM	18" - 1600	18" - 1600	18" - 1600	18" - 1800	18" - 1600	20" - 2100	20" - 2100	20" - 2100	20" - 1900	20" - 1900	20" - 1900
Blower Motor & Evap.											
Blower Motor--HP-RPM-SPD	1/6-1100-1	1/6-1100-1	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	1.0	1.0	1.0	1.0	1.0	2.2	2.2	1.1	2.2	2.2	1.1
CFM Cooling & E.S.P. w/Filter (Rated -Wet Coil)	650 - .40	800 - .20	800 - .20	800 - .20	800 - .20	1000 - .40	1000 - .40	1000 - .40	1100 - .30	1100 - .30	1100 - .30
Filter Sizes (inches) STD.	16x25x1	16x25x1	16x25x1	16x25x1	16x25x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1	16x30x1
Shipping Weight--LBS	300	300	300	300	300	355	355	355	355	355	355

Specifications 3 Ton continued through 5 Ton

Models	WA371-A	WA371-B	WA371-C	WA421-A	WA421-B	WA421-C	WA482-A	WA482-B	WA482-C	WA602-A	WA602-B	WA602-C
Cooling Capacity	36,000	36,000	36,000	43,000	43,000	43,000	47,500	47,500	47,500	57,500	57,500	57,500
Heating Capacity	See Electric Heat Table											
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	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	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	230/208	230/208	460
Rated Load Amps	16.5/17.3	10.5/11.0	5.2	17.5/19.7	11.6/12.6	5.8	20.8/22.7	12.7/13.9	6.6	26.0/26.6	18.1/18.4	6.8
Branch Circuit Selection Current	17.3	11.0	5.5	20.0	13.0	6.0	24.0	14.0	7.0	29.0	19.0	9.0
Lock Rotor Amps	100/100	77/77	37	102/102	91/91	42	129/129	120/120	49.5	169/169	137/137	62
Compressor Type	Scroll	Scroll	Scroll	Recip.	Recip.	Recip.	Scroll	Scroll	Scroll	Scroll	Scroll	Scroll
Fan Motor & Condenser												
Fan Motor--HP-RPM-SPD	1/5 - 1075	1/5 - 1075	1/5 - 1075	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2	1/3-850-2
Fan Motor--Amps	1.5	1.5	1.4	2.5	2.5	1.4	2.5	2.5	1.4	2.5	2.5	1.4
Fan--DIA/CFM	20" - 1900	20" - 1900	20" - 1900	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600	24" - 2600
Blower Motor & Evap.												
Blower Motor--HP-RPM-SPD	1/3-1100-2	1/3-1100-2	1/3-1100-2	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	1/2-1070-2
Blower Motor--Amps	2.2	2.2	1.1	2.5	2.5	1.4	2.5	2.5	1.4	2.5	2.5	1.4
CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil)	1100 - .30	1100 - .30	1100 - .30	1400 - .30	1400 - .30	1400 - .30	1550 - .20	1550 - .20	1550 - .20	1700 - .30	1700 - .30	1700 - .30
Filter Sizes (inches) STD.	16x30x1	16x30x1	16x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1	20x30x1
Shipping Weight--LBS	355	355	355	500	500	500	500	500	500	500	500	500

Ventilation System Packages

Bard Wall-Mounts are designed to provide optional ventilation packages to meet all of your ventilation and indoor air quality requirements. Standard on all units is the barometric fresh air damper. All packages can be ordered built-in at the factory or can be easily field installed at the time of installation of the Wall-Mount, or can be retrofitted at a later date.

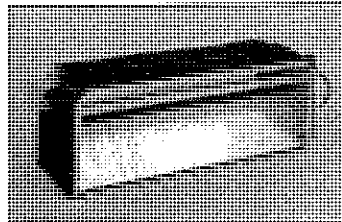


BAROMETRIC FRESH AIR DAMPER

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 up to 25% outside fresh air through the air inlet openings and is 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 or can be easily locked closed if required.



MOTORIZED FRESH AIR DAMPER

BLANK OFF PLATE - BOP

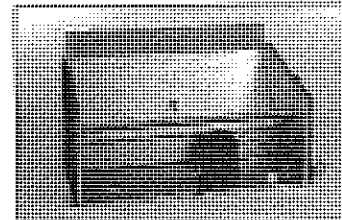
OPTIONAL

A blank off plate is installed on the inside of the service door. It covers the air inlet openings which eliminate 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 - MFAD

OPTIONAL

The motorized fresh air damper is internally mounted behind the service door and allows up to 25% outside fresh air through the air inlet openings and is mixed with the conditioned air. The two position damper can be fully open or closed. The damper blade is powered open by a 24 VAC 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.



COMMERCIAL ROOM VENTILATOR

COMMERCIAL ROOM VENTILATOR - CRV

OPTIONAL

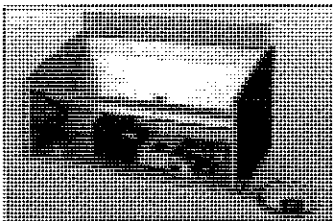
The built-in commercial room ventilator is internally mounted behind the service door and allows up to 50% outside air through the air inlet openings. It includes a built-in exhaust air damper.

The commercial room ventilator (CRV) is a simple and innovative approach to improve 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. The CRV is power open-spring return on power loss. Complies with ASHRAE Standard 62-89 "Ventilation for Acceptable Indoor Air Quality."

ECONOMIZER - EIFM

OPTIONAL

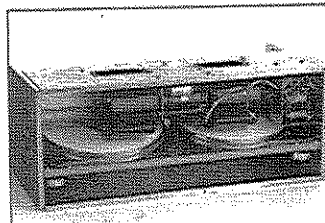
The built-in economizer system is internally mounted behind the service door and allows up to 100% outside air through the air inlet openings. It includes a built-in exhaust air damper. The economizer is designed to provide "free cooling" when the outside air temperature is cool enough to provide needed cooling without running the compressor. This in turn, provides lower operating costs, while extending the life of the compressor.



ECONOMIZER

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 with up to 100% outside air.
- 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.
- 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 ventilation requirements as established by ASHRAE Standard 62-89. The WERV allows from 200 to 450 CFM 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 sensible and latent capability providing effective heat transfer 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 or WH model wall-mount units. It can be built-in at the factory or field installed as an option. (See Form F1403 for complete performance & application details.)

Manufactured under U.S. Patent Nos.
5,485,878; 5,301,744; 5,002,116; 116; 4,924,934;
4,875,520; 4,825,936; 4,432,409

Electrical Specifications

Model	Rated Volts and Phase	Single Circuit					Dual Circuit											
		No. Field Power Circuits	① Minimum Circuit Ampacity	① Maximum External Fuse or Ckt. Brkr.	② Field Power Wire Size	② Ground Wire	③ Minimum Circuit Ampacity		③ Maximum External Fuse or Ckt. Brkr.		④ Field Power Wire Size		④ Ground Wire Size					
							Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B	Ckt. A	Ckt. B				
WA181- A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	16 30 45 56	20 30 45 60	12 10 8 6	12 10 10 10												
WA241- A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	17 30 45 56	20 30 45 60	12 10 8 6	12 10 10 10												
WA241- B00, B0Z B06	230/208-3	1 1	19 22	25 25	14 10	12 10												
WA251- A00, A0Z A05 A08 A10	230/208-1	1 1 1 1	20 30 45 56	25 30 45 60	10 10 8 6	10 10 10 10												
WA251- B00, B0Z B06	230/208-3	1 1	14 22	20 25	12 10	12 10												
WA301- A00*, A0Z* A05* A08 A10* A15	230/208-1	1 1 1 1 1 or 2	24 31 47 57 83	35 35 50 60 90	8 8 8 6 4	10 10 10 10 9	57	26	60	30	6	10	8	10				
WA301- B00*, B0Z* B06 B09* B15	230/208-3	1 1 1 1	17 23 32 50	20 25 35 50	12 10 8 8	12 10 10 10												
WA301- C00*, C0Z* C06 C09* C15	460-3	1 1 1 1	10 12 17 26	16 15 20 30	14 14 12 10	14 14 12 10												
WA361- A00*, A0Z* A05* A08 A10* A15	230/208-1	1 1 1 1 1 or 2	27 31 47 57 83	35 35 50 60 90	8 8 8 6 4	10 10 10 10 8	57	26	60	30	6	10	8	10				
WA361- B00*, B0Z* B06 B09* B15	230/208-3	1 1 1 1	20 23 32 50	25 25 35 50	10 10 8 8	10 10 10 10												
WA361- C00*, C0Z* C06 C09* C15	460-3	1 1 1 1	10 12 17 26	16 15 20 30	14 14 12 10	14 14 12 10												
WA371- A00, A0Z A05 A08 A10 A15	230/208-1	1 1 1 1 1 or 2	28 32 47 58 84	35 35 50 60 90	8 8 8 6 4	10 10 10 10 8	57	26	60	30	6	10	8	10				
WA371- B00, B0Z B06 B09 B15	230/208-3	1 1 1 1	20 24 33 51	25 25 35 60	10 10 8 6	10 10 10 10												
WA371- C00, C0Z C06 C09 C15	460-3	1 1 1 1	11 12 17 26	16 15 20 30	14 14 10 10	14 14 10 10												
WA421- A00, A0Z A05 A10 A15 A20	230/208-1	1 1 1 1 1 or 2 1 or 2	33 33 59 85 110	50 50 60 90 110	8 8 6 4 2	10 10 10 8 6	59 59	26 52	60 60	30 60	6 6	10 6	10 10	10 10				
WA421- B00, B0Z B09 B15 B18	230/208-3	1 1 1 1	24 34 52 60	35 35 60 60	8 8 6 6	10 10 10 10												
WA421- C00, C0Z C09 C15	460-3	1 1 1	12 17 26	16 20 30	14 12 10	14 12 10												
WA482- A00, A0Z A05 A10 A15 A20	230/208-1	1 1 1 1 1 or 2 1 or 2	38 38 59 85 110	50 50 60 90 110	8 8 6 4 2	10 10 10 8 6	59 59	26 52	60 60	30 60	6 6	10 6	10 10	10 10				
WA482- B00, B0Z B09 B15 B18	230/208-3	1 1 1 1	26 34 52 60	35 35 60 60	8 8 6 6	10 10 10 10												
WA482- C00, C0Z C09 C15	460-3	1 1 1	13 17 26	16 20 30	14 12 10	14 12 10												
WA602- A00, A0Z A05 A10 A15 A20	230/208-1	1 1 1 1 1 or 2 1 or 2	44 44 59 85 110	60 60 60 90 110	8 8 6 4 2	10 10 10 8 6	59 59	26 52	60 60	30 60	6 6	10 6	10 10	10 10				
WA602- B00, B0Z B09 B15 B18	230/208-3	1 1 1 1	32 34 52 60	45 45 60 60	8 8 6 6	10 10 10 10												
WA602- C00, C0Z C09 C15	460-3	1 1 1	16 17 26	20 20 30	12 12 10	12 12 10												

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

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

③ These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electric 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.

* Top outlet supply option is available only factory installed and only on the selected models.

4 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 Electric Code and all local codes.

Indoor Blower Performance - CFM at 230 Volts

ESP in H ₂ O	WA18 WA24 WA25	WA30 WA36 WA37		WA42 WA48		WA60	
	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	1465/1200
.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 application.

Electric Heat Table

Model	WA181-A WA241-A WA251-A		WA241-B WA251-B		WA301-A WA361-A WA371-A		WA361-B WA371-B		WA301-C WA361-C WA371-C	WA421-A WA482-A WA602-A		WA421-B WA482-B WA602-B		WA421-C WA482-C WA602-C
	240V-1 BTUH	208V-1 BTUH	240V-3 BTUH	208V-3 BTUH	240V-1 BTUH	208V-1 BTUH	240V-3 BTUH	208V-3 BTUH	460V-3 BTUH	240V-3 BTUH	208V-3 BTUH	240V-3 BTUH	208V-3 BTUH	460V-3 BTUH
5.0	18,000	14,000			18,000	14,000				18,840	14,300			
8.0	28,000	21,000			28,000	21,000								
10.0	34,000	26,000			35,000	26,000				35,900	27,100			
15.0					52,000	39,000				52,975	39,900			
20.0										70,035	52,700			
6.0			21,000	16,000				22,000	16,000	22,000				
9.0								32,000	24,000	29,500			32,395	24,530
15.0								52,000	39,000	48,000			52,975	40,175
18.0													63,210	47,575

Heater Packages - Field Installed

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
WA18	EHWA02-A05 EHWA02-A08 EHWA02-A10	5 8 10	N/A		N/A	
WA24 WA25	EHWA02-A05 EHWA02-A08 EHWA02-A10	5 8 10	EHWA24-B06	6	N/A	
WA30 WA36 WA37	EHWA03-A05 EHWA03-A08 EHWA03-A10 EHWA03-A15	5 8 10 15	EHWA03-B06 EHWA03-B09 EHWA03-B15	6 9 15	EHWC03A-C06 EHWC03A-C09 EHWC03A-C15	6 9 15
WA42 WA48	EHWA05-A05 EHWA05-A10 EHWA05-A15 EHWA05-A20	5 10 15 20	EHWA05-B09 EHWA05-B15 EHWA05-B18	9 15 18	EHWA05A-C09 EHWA05A-C15	9 15
WA60	EHWA05-A05 EHWA05-A10 EHWA05-A15 EHWA05-A20	5 10 15 20	EHWA60-B09 EHWA05-B15 EHWA05-B18	9 15 18	EHWA05A-C09 EHWA05A-C15	9 15

NOTE: Field installed Heater Packages are not approved for use with top supply opening models.

Cooling Application Data - Outdoor Temperature ①

Model	D.B./W.B. ②	Cooling Capacity	75F	80F	85F	90F	95F	100F	105F	110F	115F	120F	125F
WA181	75/62F	Total Cooling	19,600	18,675	17,725	16,825	15,925	15,050	14,175	13,325	12,500	11,700	11,100
		Sensible Cooling	14,825	14,700	14,475	14,190	13,830	13,390	12,880	12,300	11,640	10,700	10,150
	80/67F	Total Cooling	20,975	20,360	19,710	19,020	18,300	17,540	16,750	15,920	15,060	14,400	13,800
		Sensible Cooling	14,625	14,465	14,300	14,135	13,970	13,640	13,230	12,720	12,125	11,600	11,000
	85/72F	Total Cooling	24,950	23,780	22,620	21,460	20,315	19,180	18,050	16,930	15,815	14,700	13,600
		Sensible Cooling	14,750	14,620	14,400	14,090	13,690	13,190	12,610	11,930	11,155	10,400	9,650
WA241	75/62F	Total Cooling	24,900	23,880	22,870	21,670	20,880	19,900	18,920	17,960	17,000	16,050	15,050
		Sensible Cooling	19,900	19,530	19,140	18,720	18,275	17,800	17,300	16,770	16,215	15,300	14,300
	80/67F	Total Cooling	26,600	26,040	25,420	24,740	24,000	23,210	22,350	21,450	20,480	19,000	17,550
		Sensible Cooling	19,300	19,160	18,970	18,740	18,460	18,140	17,770	17,350	16,890	15,700	14,400
	85/72F	Total Cooling	31,300	30,350	29,260	28,020	26,640	25,110	23,440	21,620	20,600	19,475	18,400
		Sensible Cooling	19,775	19,430	19,040	18,590	18,090	17,530	16,920	16,260	15,540	14,700	13,900
WA251	75/62F	Total Cooling	25,400	24,400	23,400	22,300	21,400	20,500	19,800	18,800	18,000	17,200	16,400
		Sensible Cooling	20,000	19,400	18,900	18,400	18,000	17,500	17,100	16,800	16,400	16,100	15,800
	80/67F	Total Cooling	27,100	26,500	25,900	25,200	24,400	23,800	23,100	22,400	21,600	20,800	20,000
		Sensible Cooling	19,400	19,000	18,700	18,400	18,100	17,800	17,500	17,300	17,000	16,800	16,600
	85/72F	Total Cooling	32,300	31,000	29,600	28,500	27,200	26,100	24,900	23,900	22,700	21,600	20,600
		Sensible Cooling	19,900	19,300	18,800	18,300	17,800	17,300	16,700	16,300	15,700	15,200	14,700
WA301	75/62F	Total Cooling	32,850	31,350	29,860	28,410	26,970	25,560	24,160	22,790	21,445	20,100	18,700
		Sensible Cooling	25,740	25,370	24,920	24,410	23,815	23,150	22,410	21,600	20,715	19,400	18,000
	80/67F	Total Cooling	35,130	34,190	33,190	32,130	31,000	29,810	28,550	27,230	25,840	24,800	23,750
		Sensible Cooling	24,980	24,890	24,710	24,430	24,055	23,580	23,010	22,340	21,580	20,700	19,850
	85/72F	Total Cooling	41,800	39,940	38,090	36,250	34,410	32,580	30,760	27,940	27,130	25,350	23,700
		Sensible Cooling	25,590	25,240	24,790	24,240	23,575	22,800	21,930	20,940	19,850	18,500	17,400
WA361	75/62F	Total Cooling	37,760	36,140	34,520	32,920	31,320	29,730	28,160	26,590	25,035	23,000	22,100
		Sensible Cooling	27,690	27,150	26,590	25,990	25,375	24,730	24,060	23,360	22,635	21,250	20,000
	80/67F	Total Cooling	40,360	39,410	38,360	37,230	36,000	34,680	33,270	31,760	30,165	29,150	28,050
		Sensible Cooling	26,880	26,640	26,360	26,020	25,635	25,200	24,710	24,170	23,575	22,750	21,900
	85/72F	Total Cooling	48,050	46,050	44,030	42,000	39,960	37,910	35,840	33,770	31,575	28,750	28,000
		Sensible Cooling	27,520	27,020	26,450	25,820	25,125	24,360	23,530	22,640	21,690	20,400	19,150
WA371	75/62F	Total Cooling	37,300	35,700	34,200	32,800	31,400	30,100	28,900	27,800	26,700	25,700	24,600
		Sensible Cooling	28,100	27,700	27,300	26,800	26,400	25,800	25,200	24,500	23,800	22,900	22,100
	80/67F	Total Cooling	39,800	38,900	38,000	37,000	36,000	35,100	34,100	33,100	32,100	31,100	30,000
		Sensible Cooling	27,200	27,100	27,000	26,800	26,600	26,200	25,800	25,300	24,700	24,000	23,200
	85/72F	Total Cooling	47,400	45,500	43,700	41,800	40,000	38,400	36,800	35,200	33,800	32,300	30,900
		Sensible Cooling	27,900	27,500	27,200	26,600	26,100	25,400	24,600	23,700	22,800	21,700	20,600
WA421	75/62F	Total Cooling	46,525	44,125	41,825	39,575	37,400	35,300	33,250	31,200	29,400	27,250	25,250
		Sensible Cooling	37,200	35,975	34,800	33,700	32,675	31,700	30,800	29,975	29,200	26,700	24,700
	80/67F	Total Cooling	49,775	48,150	46,500	44,775	43,000	41,175	39,300	37,375	35,400	33,800	32,300
		Sensible Cooling	36,175	35,350	34,500	33,750	33,000	32,300	31,650	31,000	30,425	29,000	27,700
	85/72F	Total Cooling	59,250	56,275	53,350	50,500	47,725	45,000	43,350	39,750	37,200	34,500	31,700
		Sensible Cooling	37,025	35,250	34,650	33,475	32,350	31,200	30,125	29,050	28,000	26,000	23,900
WA482	75/62F	Total Cooling	48,200	46,300	44,650	43,070	41,300	39,340	37,190	34,840	32,300	30,900	29,500
		Sensible Cooling	39,120	38,520	37,680	37,510	37,000	36,130	34,910	33,330	31,400	30,000	28,700
	80/67F	Total Cooling	51,440	50,440	49,640	48,750	47,500	45,890	43,920	41,590	38,900	38,100	37,250
		Sensible Cooling	37,950	37,800	37,600	37,400	37,300	36,740	35,800	34,490	32,800	32,050	31,350
	85/72F	Total Cooling	59,900	58,650	57,240	55,350	52,700	49,700	46,700	43,800	40,850	39,100	37,450
		Sensible Cooling	38,750	38,250	37,450	37,230	36,600	35,570	34,150	32,320	30,100	28,700	27,500
WA602	75/62F	Total Cooling	60,350	57,500	54,630	52,320	50,000	47,660	45,290	42,910	40,500	N/A	N/A
		Sensible Cooling	45,170	43,700	42,180	41,110	40,000	38,840	37,640	36,390	35,100	N/A	N/A
	80/67F	Total Cooling	64,600	62,750	60,690	59,190	57,500	55,610	53,540	51,260	48,800	N/A	N/A
		Sensible Cooling	43,950	42,960	41,830	41,150	40,400	39,570	38,660	37,670	36,600	N/A	N/A
	85/72F	Total Cooling	76,800	73,300	69,610	66,740	63,800	60,780	57,700	54,530	51,300	N/A	N/A
		Sensible Cooling	44,900	43,470	41,970	40,840	39,600	38,260	36,810	35,260	33,600	N/A	N/A

① Below 65F (18.3C) unit requires a factory or field installed low ambient control.

② Return air temperature.

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

Air Conditioning Wall-Mount Model Nomenclature

MODEL NUMBER | WA 36 1 — A 10 X X X X X X

CAPACITY | 18 - 1½ Ton
24 - 2 Ton
25 - 2 Ton
30 - 2½ Ton
36 - 3 Ton
37 - 3 Ton
42 - 3½ Ton
48 - 4 Ton
60 - 5 Ton

REVISION |

KW |

VOLTS & PHASE | A - 230/208/60/1
B - 230/208/60/3
C - 460/60/3

VENTILATION OPTIONS
X - Barometric Fresh Air Damper (Standard)
B - Blank-off Plate
M - Motorized Fresh Air Damper
V - Commercial Room Ventilator-Motorized with Exhaust
E - Economizer - Fully Modulating with Exhaust
R - Energy Recover Ventilator - Motorized with Exhaust
D - Economizer - Fully Modulating with Exhaust
(For use only with "V" Control Module and TCS20 DDC Controller)

COLOR OPTIONS
X - Beige (Standard)
1 - White
2 - Mesa Tan
3 - Colonial White
4 - Buckeye Gray
5 - Desert Brown

FILTER OPTIONS
X - 1 inch Throwaway (Standard)
W - 1 inch Washable
P - 2 inch Pleated

CONTROL MODULES
(See Chart Below)

COIL OPTIONS
X - Standard
1 - Phenolic Coated Evaporator
2 - Phenolic Coated Condenser
3 - Phenolic Coated Evaporator and Condenser

OUTLET OPTIONS
X - Front (Standard)
T - Top (on WA30 and WA36 Models)

Note: For 0 KW end circuit breakers (230/208 Volt) or pull disconnects (460 Volt) applications, insert OZ in the KW field of the model number.

Ventilation Options

Models	WA181, WA241, WA251		WA301, WA361, WA371		WA421, WA482, WA602	
	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	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 - Motorized	V	CRV-2	V	CRV-3	V	CRV-5
Economizer - Fully Modulating ①	E	EIFM-2	E	EIFM-3	E	EIFM-5
Economizer - Fully Modulating ①②	D	N/A	D	N/A	D	N/A
Energy Recovery Ventilator - 230 Volt	R	WERV-A2B	R	WERV-A3B	R	WERV-A5B
Energy Recovery Ventilator - 460 Volt	N/A	N/A	R	WERV-C3B	R	WERV-C5B

① Low ambient control is required with economizer for low temperature compressor operation.
② For use only with "V" Control Module and TCS20 DDC Controller.

Air Conditioning Control Modules

AVAILABLE CONTROL OPTIONS									WA181, WA241, WA301, WA361, WA421 Models with Reciprocating Compressors	
TDR①	HPC②	LPC③	CCM④	LAC⑤	ALR⑥	SK⑦	ODT⑧	DDC⑨	Factory Installed Code	Field Installed Part
•				•					D	CMA-5
				•					E	CMA-6
	•	•	•	•					G	CMA-10A
	•	•	•	•					H	CMA-13A
•				•					I	CMA-12
	•	•	•	•	•				J	Factory Only
	•	•	•	•	•	•			K	CMA-13A & CMC-15
	•	•	•	•	•	•			M	Factory Only
									Field Install Only	CMC-15
							•		Field Install Only	CMA-14
	•	•	•	•	•			•	V⑩	Factory Only
								•	Field Install Only	CMA-23

Air Conditioning Control Modules

AVAILABLE CONTROL OPTIONS									WA251, WA371, WA482, WA602 Models with Scroll Compressors	
TDR①	HPC②	LPC③	CCM④	LAC⑤	ALR⑥	SK⑦	ODT⑧	DDC⑨	Factory Installed Code	Field Installed Part
Does Not Apply To These Models	STD	•	STD						G	CMA-16
	STD	•	STD	•					H	CMA-18
	STD		STD	•					I	CMA-6
	STD	•	STD	•	•				J	Factory Only
	STD	•	STD	•	•	•			K	CMA-13A & CMC-15
	STD	•	STD	•	•	•			M	Factory Only
	STD		STD				•		Field Install Only	CMC-15
	STD		STD					•	Field Install Only	CMA-14
	STD	•	STD	•	•				V⑩	Factory Only
								•	Field Install Only	CMA-24

STD = Standard equipment for these specified models.

- ① TDR. Time delay relay only for compressor is fixed 5-minute delay-on-break to prevent short cycling. Not needed if HPC or LPC are used. See notes ②, ③, and ④.
- ② HPC. High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ④.
- ③ LPC. Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ④.
- ④ CCM. Compressor control module has adjustable 30 second to 5 minute delay-on-break timer (which also provides a delay-on-make equal to 10% of delay-on-break setting). The module also provides the lockout feature (with 1 re-try) for high and/or low pressure controls, and a 2-minute timed bypass for low pressure control.
- ⑤ LAC. Low ambient control permits cooling operation down to 0°F
- ⑥ ALR. The alarm relay has a set of normally open and normally closed dry contacts to provide the ability to signal a condition of shutdown on either high or low pressure controls.
- ⑦ SK. Start kit can be used with all -A single phase models only. Is not used or available for -B or -C three phase models.
- ⑧ ODT. Outdoor thermostat is adjustable from 0 to 50°F. It is suitable for use as a compressor cut-off thermostat.
- ⑨ DDC. Incorporates 4 additional sensors: discharge air temperature, indoor blower airflow, compressor current, and dirty filter. These sensing devices function to input analog data such as temperature, as well as digital data such as air flow, compressor status or filter status.
- ⑩ "V" control module should be ordered in conjunction with direct digital controller (DDC) model TCS20. Refer to DDC specification sheet S3280 for more information.

Clearances Required for Service Access and Adequate Condenser Air Flow

MODELS	LEFT SIDE	RIGHT SIDE
WA18, WA24, WA25, WA36, WA37	15"	20"
WA42, WA48, WA60	15"	20"

NOTE: For side by side installation of two (2) WA models there must be 20" between units. This can be reduced to 15" by using a WL model (left side compressor and controls) for the left unit and WA (right side compressor and controls) for right unit. See WL Specifications S3279.

Minimum Clearances Required to Combustible Materials

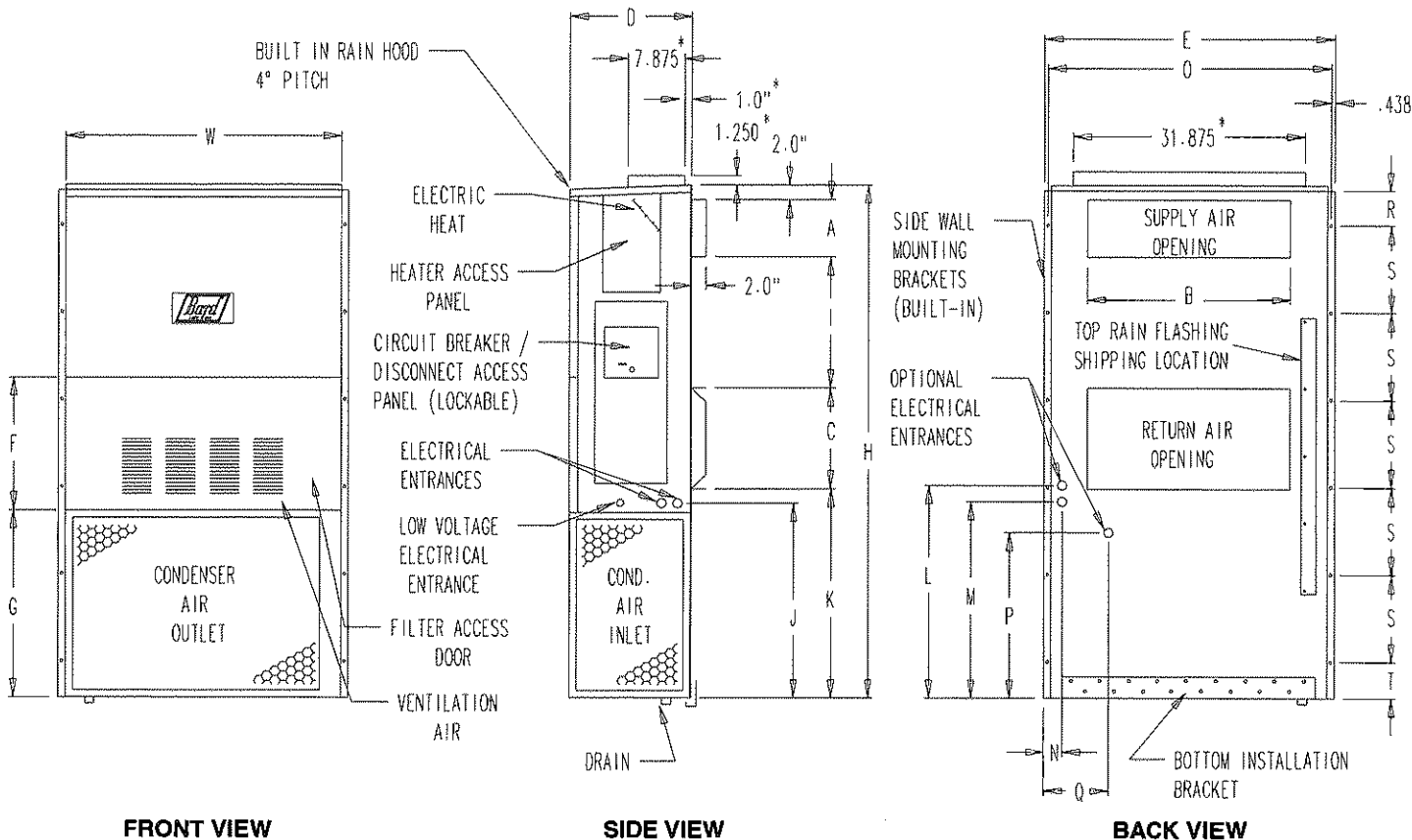
MODELS	SUPPLY AIR DUCT	
	FIRST THREE FEET	CABINET
WA18, WA24, WA25	2"	2"
WA36, WA37, WA37T	1/4"	2"
WA42, WA48, WA60	1/4"	2"

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
WA18	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
WA24																						
WA25																						
WA30	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	2.75	39.19	22.75	9.14	4.19	12.00	5.00
WA36																						
WA37																						
WA42	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	42.88	23.88	10.00	1.44	16.00	1.88
WA48																						
WA60																						

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



*Optional top outlet (factory installed only) for WA30 and WA36 models only.

MIS-1262



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S3208
August, 1998
Supersedes S3208-597