



THE WALL-MOUNT™ AIR CONDITIONERS - WA (50HZ)

**WA - SERIES 1.5 to 5 Ton
(Right Side Control Panel)
16,300 to 60,000 BTUH**

50Hz

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 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.

Air Conditioner Compressor:

Reciprocating compressors are designed for high compression ratios. Equipped with crankcase heater and dual discharge muffler. Standard on 1.5, 2.5 and 3.5-ton models, and available on 2 and 3-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 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 hand-somely finished with a baked on, beige textured enamel which allows it to withstand 1000 hours of salt spray exposure.

Rain Hood:

Standard built in feature on all models.

Top Rain Flashing:

Standard feature on all models.

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 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:

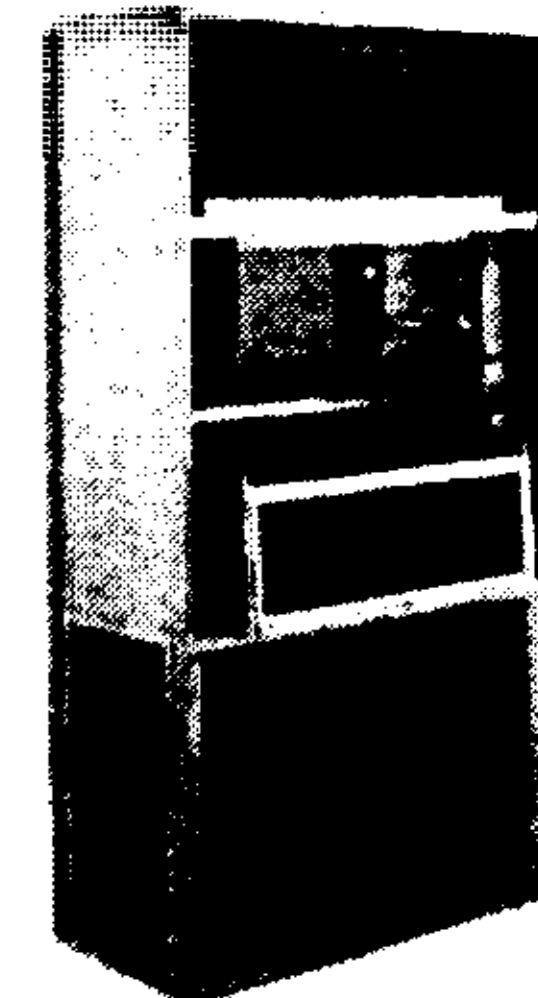
Standard on all versions of single (240/220 volt) and three phase (220/200 volt) equipment. Pull disconnects are standard on all versions of three phase (415/380 volt) equipment.

Full Length Mounting Brackets:

Built into cabinet for improved appearance and easy installation. NOTE: Bottom mounting bracket included to assist in installation.



Economizer



Unit shown with optional 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

Capacity and Efficiency Ratings

| MODELS | WA182 | WA242 | WA252 | WA301 | WA361 | WA371 | WA421 | WA482 | WA602 | WA701 |
|-----------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| Cooling Capacity BTUH | 16,300 | 21,300 | 21,900 | 27,600 | 32,000 | 32,000 | 39,000 | 42,000 | 51,000 | 60,000 |
| EER | 10.00 | 10.00 | 10.50 | 10.00 | 10.00 | 10.00 | 10.00 | 10.50 | 10.00 | 10.00 |

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 3-1/2 Ton

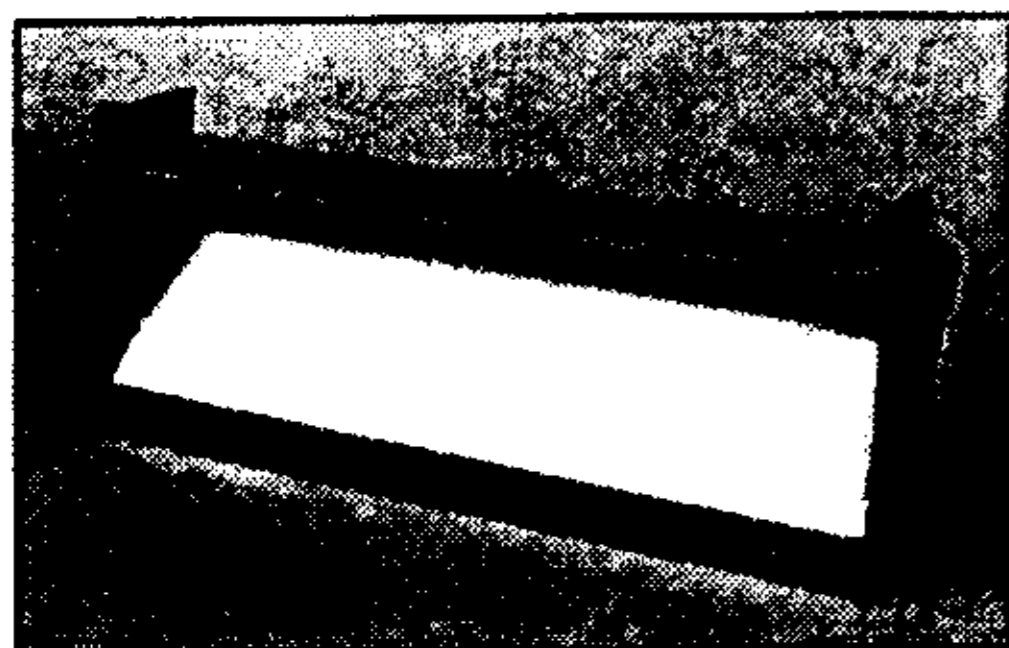
| MODELS | WA182-D | WA242-D | WA242-F | WA252-D | WA252-F | WA301-D | WA301-F | WA361-D | WA361-E | WA361-F |
|---|-------------------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|
| Cooling Capacity | 16,300 | 21,300 | 21,300 | 21,900 | 21,900 | 27,600 | 27,600 | 32,000 | 32,000 | 32,000 |
| Heating Capacity | See Electric Heat Table | | | | | | | | | |
| Electrical Rating-50 Hz | 240/220 - 1 | 240/220 - 1 | 415/380 - 3 | 240/220 - 1 | 415/380 - 3 | 240/220 - 1 | 415/380 - 3 | 240/220 - 1 | 220/200 - 3 | 415/380 - 3 |
| Operating Voltage Range | 198-254 | 198-254 | 342-456 | 198-254 | 342-456 | 198-254 | 342-456 | 198-254 | 180-242 | 342-456 |
| Compressor-Circuit A | | | | | | | | | | |
| Voltage | 240/220 | 240/220 | 415/380 | 240/220 | 415/380 | 240/220 | 415/380 | 240/220 | 220/200 | 415/380 |
| Rated Load Amps | 8.6/7.5 | 9.1/9.9 | 3.9/3.9 | 8.2/9.5 | 3.6/3.6 | 12.8/13.9 | 4.8/4.8 | 15.2/16.7 | 9.9/10.7 | 4.8/4.8 |
| Branch Circuit Selection Current | 9.0 | 10.0 | 4.0 | 10.3 | 3.9 | 14.0 | 5.0 | 17.0 | 11.0 | 5.0 |
| Lock Rotor Amps | 44/44 | 55/55 | 25/25 | 58/53 | 26/24.5 | 73/73 | 34/34 | 85/85 | 75/75 | 40/40 |
| Compressor Type | Recip. | Recip. | Recip. | Scroll | Scroll | Recip. | Recip. | Recip. | Recip. | Recip. |
| Fan Motor & Condenser | | | | | | | | | | |
| Fan Motor-HP-RMP | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 | 1/5 - 950 |
| Fan Motor-Amps | 1.0 | 1.0 | 1.0 | 1.0 | 1.0 | 1.5 | 1.5 | 1.5 | 1.5 | 1.5 |
| Fan-DIA/CFM | 18" - 1370 | 18" - 1370 | 18" - 1370 | 18" - 1370 | 18" - 1370 | 20" - 1825 | 20" - 1825 | 20" - 1825 | 20" - 1825 | 20" - 1825 |
| Blower Motor & Evap. | | | | | | | | | | |
| Blower Motor-HP-RPM-SPD | 1/5-950-1 | 1/5-950-1 | 1/5-950-1 | 1/5-950-1 | 1/5-950-1 | 1/3-950-2 | 1/3-950-2 | 1/3-950-2 | 1/3-950-2 | 1/3-950-2 |
| Blower Motor-Amps | 1.2 | 1.2 | 1.2 | 1.2 | 1.2 | 2.2 | 2.2 | 2.2 | 2.2 | 2.2 |
| CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil) | 680 - .25 | 680 - .25 | 680 - .25 | 680 - .25 | 680 - .25 | 955 - .25 | 955 - .25 | 1000 - .20 | 1000 - .20 | 1000 - .20 |
| Filter Sizes (Inches) STD. | 16x25x1 | 16x25x1 | 16x25x1 | 16x25x1 | 16x25x1 | 16x30x1 | 16x30x1 | 16x30x1 | 16x30x1 | 18x30x1 |
| Shipping Weight -LBS. | 300 | 300 | 300 | 300 | 300 | 355 | 355 | 355 | 355 | 355 |

Specifications 3-1/2 Ton continued through 5 Ton

| MODELS | WA371-D | WA371-E | WA371-F | WA421-E | WA421-F | WA482-E | WA482-F | WA602-E | WA602-F | WA701-F |
|---|-------------------------|------------|------------|------------|------------|------------|------------|------------|------------|------------|
| Cooling Capacity | 32,000 | 32,000 | 32,000 | 39,000 | 39,000 | 42,000 | 42,000 | 51,000 | 51,000 | 60,000 |
| Heating Capacity | See Electric Heat Table | | | | | | | | | |
| Electrical Rating-50 Hz | 240/220-1 | 220/200-3 | 415/380-3 | 220/200-3 | 415/380-3 | 220/200-3 | 415/380-3 | 220/200-3 | 415/380-3 | 415/380-3 |
| Operating Voltage Range | 198-254 | 180-242 | 342-456 | 180-242 | 342-456 | 180-242 | 342-456 | 180-242 | 342-456 | 342-456 |
| Compressor-Circuit A | | | | | | | | | | |
| Voltage | 240/220 | 220/200 | 415/380 | 220/200 | 415/380 | 220/200 | 415/380 | 220/200 | 415/380 | 415/380 |
| Rated Load Amps | 15.1/15.8 | 9.8/10.3 | 5.2/5.5 | 12.0/12.6 | 5.8/5.8 | 11.7/14.0 | 6.6/6.6 | 15.7/18.4 | 6.8/6.8 | 10.2/10.2 |
| Branch Circuit Selection Current | 15.8 | 10.3 | 5.5 | 13.0 | 6.0 | 14.0 | 7.0 | 19.0 | 9.0 | 10.2 |
| Lock Rotor Amps | 75/82 | 76/83 | 36/40 | 91/91 | 42/42 | 99/99 | 50/50 | 123/123 | 62/62 | 75/75 |
| Compressor Type | Scroll | Scroll | Scroll | Recip. | Recip. | Scroll | Scroll | Scroll | Scroll | Scroll |
| Fan Motor & Condenser | | | | | | | | | | |
| Fan Motor-HP-RMP | 1/5-950 | 1/5-950 | 1/5-950 | 1/3-825 | 1/3-825 | 1/3-825 | 1/3-825 | 1/3-825 | 1/3-825 | 1/3-825 |
| Fan Motor-Amps | 1.5 | 1.5 | 1.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 | 2.5 |
| Fan-DIA/CFM | 20" - 1825 | 20" - 1825 | 20" - 1825 | 24" - 2150 | 24" - 2150 | 24" - 2150 | 24" - 2150 | 24" - 2150 | 24" - 2150 | 24" - 2150 |
| Blower Motor & Evap. | | | | | | | | | | |
| Blower Motor-HP-RPM-SPD | 1/3-950-2 | 1/3-950-2 | 1/3-950-2 | 1/2-950-2 | 1/2-950-2 | 1/2-950-2 | 1/2-950-2 | 1/2-950-2 | 1/2-950-2 | 1/2-950-2 |
| Blower Motor-Amps | 2.2 | 2.2 | 2.2 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 | 3.3 |
| CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil) | 1000 - .20 | 1000 - .20 | 1000 - .20 | 1180 - .30 | 1160 - .30 | 1285 - .20 | 1285 - .20 | 1400 - .30 | 1400 - .30 | 1500 - .20 |
| Filter Sizes (Inches) STD. | 16x30x1 | 16x30x1 | 16x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 |
| Shipping Weight -LBS. | 355 | 355 | 355 | 500 | 500 | 500 | 500 | 500 | 500 | 520 |

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

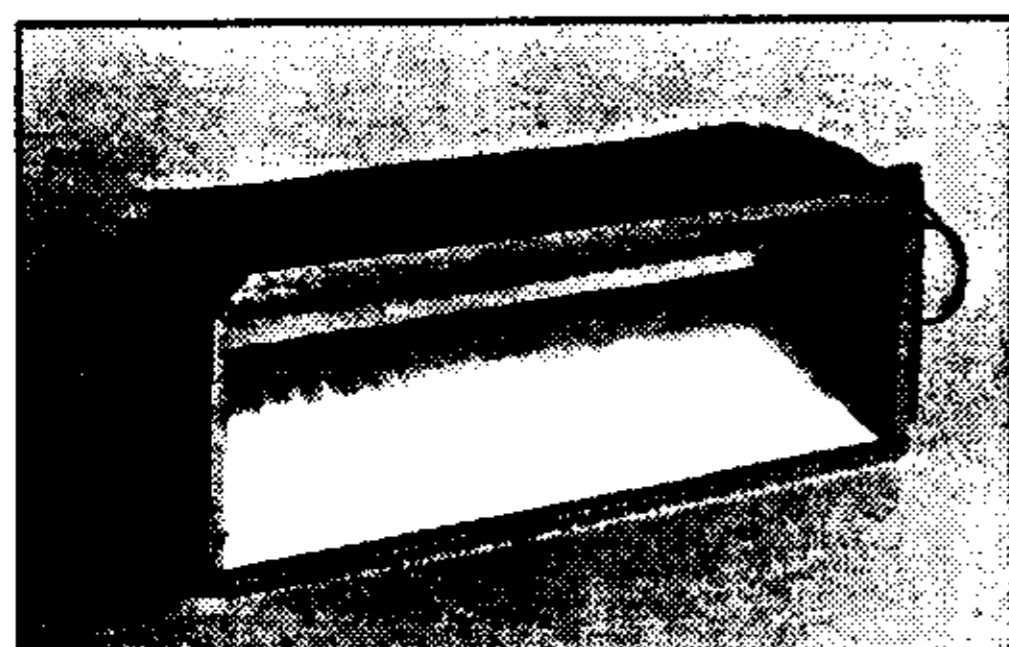
STANDARD

The barometric fresh air damper is a standard feature on all models. It is installed on the inside of the service door and allows 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 the unit. The blank off plate should be utilized in applications where outside air is not required to be mixed with the conditioned air.



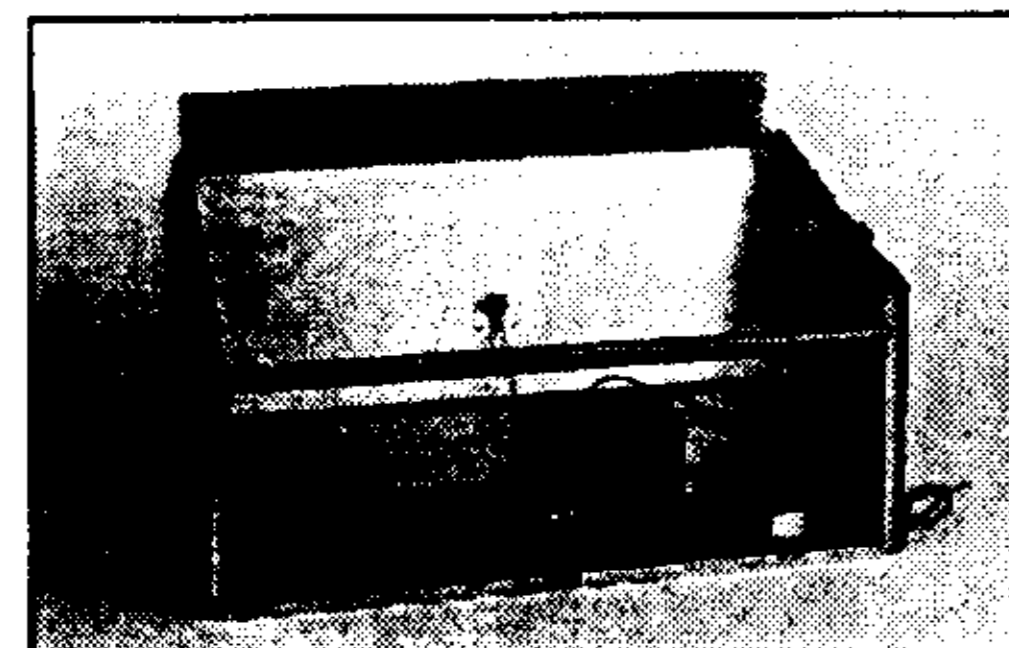
MOTORIZED FRESH AIR DAMPER

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 without exhaust capability. May require separate field installed barometric relief elsewhere within the conditioned space.



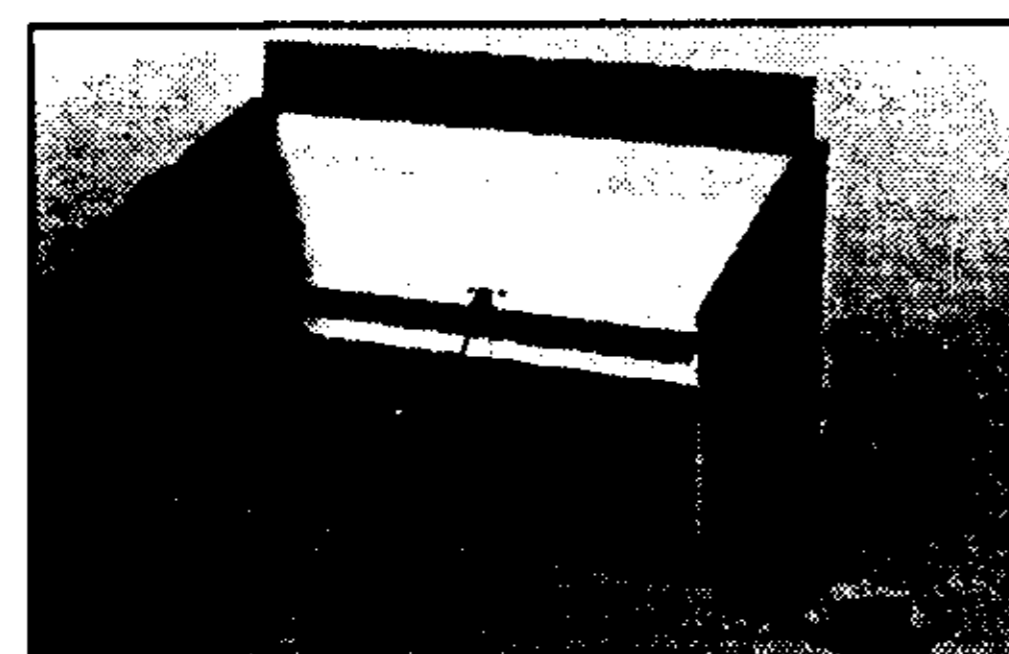
COMMERCIAL ROOM VENTILATOR

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. The CRV is power open - spring return on power loss. Complies with ASHRAE Standard 62-89 "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 Potentionmeter - adjustable to control minimum damper blade position for ventilation purposes.
- Mixed Air Sensor - to monitor outside and return air to automatically modulate damper position.

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

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, WA70 | 20" | 20" |

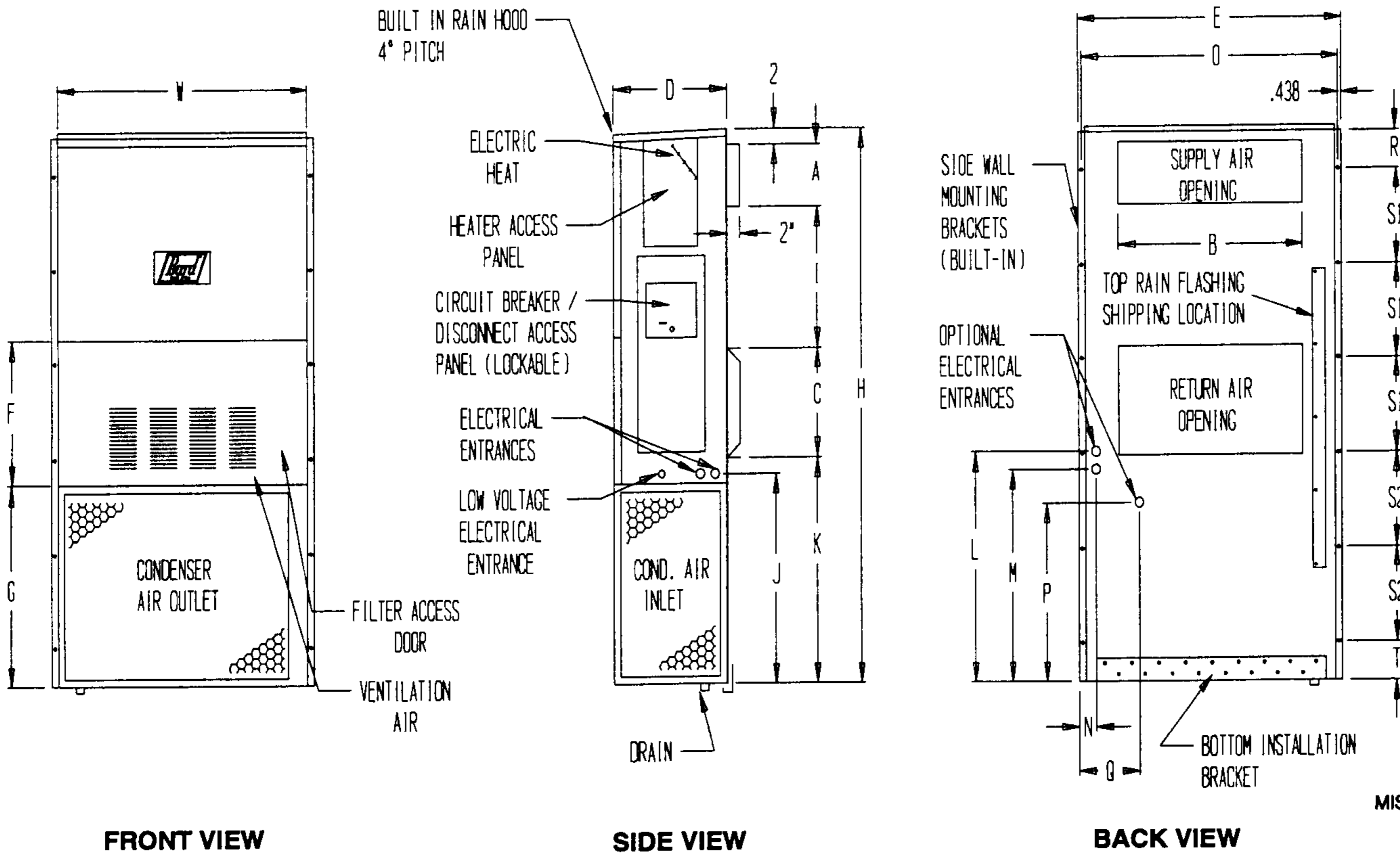
Minimum Clearances Required to Combustible Materials

| MODELS ① | SUPPLY AIR DUCT FIRST THREE FEET | CABINET |
|------------------------|----------------------------------|---------|
| WA18, WA24, WA25 | 0" | 0" |
| WA30, WA36, WA37 | 1/4" | 0" |
| WA42, WA48, WA60, WA70 | 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 | S1 | S2 | T |
| WA18 WA24 WA25 | 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 | 4.75 | 12.00 | 12.00 | 5.00 |
| WA30 WA36 WA37 | 38.200 | 17.125 | 70.563 | 7.88 | 27.88 | 13.88 | 27.88 | 40.00 | 18.50 | 25.75 | 19.73 | 26.75 | 28.75 | 29.25 | 27.00 | 2.75 | 39.19 | 22.75 | 9.14 | 4.75 | 12.00 | 12.00 | 5.00 |
| WA42 WA48 WA60 | 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 | 2.00 | 16.00 | 16.00 | 1.88 |
| WA70 | 42.075 | 22.432 | 94.875 | 9.88 | 29.88 | 15.88 | 29.88 | 43.88 | 19.10 | 41.66 | 30.00 | 42.68 | 36.94 | 44.69 | 42.43 | 3.37 | 42.88 | 33.88 | 10.00 | 2.00 | 16.00 | 21.00 | 1.88 |



MIS1395

Electrical Specifications

| Model | Rated Volts and Phase | Operating Voltage Range | No. Field Power Circuits | ① Minimum Circuit Ampacity | ① Maximum External Fuse or Ckt. Brkr. | ② Field Power Wire Size | ② Ground Wire |
|---------------------------|-----------------------|-------------------------|--------------------------|----------------------------|---------------------------------------|-------------------------|----------------|
| WA182 - D0Z D05 D08 | 240/220-1 | 198-254 | 1 1 1 | 14 28 43 | 20 30 45 | 12 10 8 | 12 10 10 |
| WA242 - D0Z D05 D08 | 240/220-1 | 198-254 | 1 1 1 | 15 28 44 | 20 30 45 | 12 10 8 | 12 10 10 |
| WA242 - F0Z F05 | 415/380-3 | 342-456 | 1 1 | 8 12 | 15 15 | 14 14 | 14 14 |
| WA252 - D0Z D05 D08 | 240/220-1 | 198-254 | 1 1 1 | 15 27 43 | 20 30 45 | 12 10 8 | 12 10 10 |
| WA252 - F0Z F05 | 415/380-3 | 342-456 | 1 1 | 7 10 | 15 15 | 14 14 | 14 14 |
| WA301 - D0Z D05 D10 | 240/220-1 | 198-254 | 1 1 1 | 22 29 55 | 35 35 60 | 8 8 6 | 10 10 10 |
| WA301 - F0Z F07 F12 | 415/380-3 | 342-456 | 1 1 1 | 9 15 23 | 15 15 25 | 14 14 10 | 14 14 10 |
| WA361 - D0Z D05 D10 | 240/220-1 | 198-254 | 1 1 1 | 25 29 55 | 35 35 60 | 8 8 6 | 10 10 10 |
| WA361 - E0Z E06 E12 | 240/220-3 | 198-254 | 1 1 1 | 18 21 39 | 25 25 40 | 10 10 8 | 10 10 10 |
| WA361 - F0Z F07 F12 | 415/380-3 | 342-456 | 1 1 1 | 9 15 23 | 15 15 25 | 14 14 10 | 14 14 10 |
| WA371 - D0Z D05 D10 | 240/220-1 | 198-254 | 1 1 1 | 24 29 55 | 35 35 60 | 8 8 6 | 10 10 10 |
| WA371 - E0Z E06 E12 | 240/220-3 | 198-254 | 1 1 1 | 17 21 39 | 25 25 40 | 10 10 8 | 10 10 10 |
| WA371 - F0Z F07 F12 | 415/380-3 | 342-456 | 1 1 1 | 11 16 25 | 15 20 25 | 14 12 10 | 14 12 10 |
| WA421 - E0Z E09 E15 | 240/220-3 | 198-254 | 1 1 1 | 22 32 50 | 35 35 50 | 8 8 8 | 10 10 10 |
| WA421 - F0Z F07 F14 | 415/380-3 | 342-456 | 1 1 1 | 11 16 30 | 15 20 30 | 14 12 10 | 14 12 10 |
| WA482 - E0Z E09 E15 | 240/220-3 | 198-254 | 1 1 1 | 24 32 50 | 35 35 50 | 8 8 8 | 10 10 10 |
| WA482 - F0Z F07 F14 | 415/380-3 | 342-456 | 1 1 1 | 12 16 30 | 15 20 30 | 14 12 10 | 14 12 10 |
| WA602 - E0Z E09 E15 | 240/220-3 | 198-254 | 1 1 1 | 30 32 50 | 45 45 50 | 8 8 8 | 10 10 10 |
| WA602 - F0Z F07 F14 | 415/380-3 | 342-456 | 1 1 1 | 15 16 30 | 20 20 30 | 12 12 10 | 12 12 10 |
| WA701 - F0Z F07 F14 | 415/380-3 | 342/456 | 1 1 1 | 19 19 32 | 25 25 35 | 10 10 8 | 10 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.

③ 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.

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 all existing local codes.

Indoor Blower Performance - CFM at 220 Volts

| ESP in H ₂ O | WA18 WA24 WA25 | WA30 WA36 WA37 | | WA42 WA48 | | WA60 WA70 | |
|-------------------------------|----------------------|----------------------------|---------------------------|----------------------------|---------------------------|----------------------------|---------------------------|
| | 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 | 800/845 | 1160/1095 | 790/780 | 4565/1500 | 1370/1330 | 1825/1660 | 1330/1200 |
| .1 | 830/780 | 1115/1060 | 775/760 | 1470/1380 | 1285/1240 | 1740/1570 | 1260/1140 |
| .2 | 780/720 | 1070/1000 | 760/740 | 1360/1285 | 1200/1160 | 1660/1500 | 1200/1000 |
| .3 | 710/640 | 1000/915 | 710/690 | 1250/1160 | 1120/1080 | 1550/1400 | -/- |
| .4 | 640/560 | 925/830 | 665/630 | 1140/1065 | 1080/975 | 1470/1330 | -/- |
| .5 | 530/460 | 835/725 | -/- | 1040/950 | -/- | 1370/1220 | -/- |

Above data is with 1" standard disposable 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.

Indoor Blower Performance - CFM at 220 Volts

| Model | WA182-D WA242-D WA252-D | | WA242-F WA252-F | | WA301-D WA361-D WA371-D | | WA361-E WA371-E | | WA301-F WA361-F WA371-F | | WA421-E WA482-E WA602-E | | WA421-F WA482-F WA602-F WA701-F | |
|-------|-------------------------------|----------------|--------------------|----------------|-------------------------------|----------------|--------------------|----------------|-------------------------------|----------------|-------------------------------|----------------|--|----------------|
| | 240V-1 BTUH | 220V-1 BTUH | 415V-3 BTUH | 380V-3 BTUH | 240V-1 BTUH | 220V-1 BTUH | 220V-3 BTUH | 200V-3 BTUH | 415V-3 BTUH | 380V-3 BTUH | 220V-3 BTUH | 200V-3 BTUH | 415V-3 BTUH | 308V-3 BTUH |
| 5.0 | 17,100 | 14,400 | 15,300 | 12,800 | 17,100 | 14,400 | | | | | | | | |
| 8.0 | 27,300 | 22,900 | | | | | | | | | | | | |
| 10.0 | | | | | 34,100 | 28,700 | | | | | | | | |
| 6.0 | | | | | | | 17,200 | 14,200 | | | | | | |
| 7.0 | | | | | | | | | 23,000 | 19,300 | | | 23,000 | 19,300 |
| 9.0 | | | | | | | | | | | 25,800 | 21,200 | | |
| 12.0 | | | | | | | 34,400 | 28,400 | 38,140 | 32,100 | | | | |
| 14.0 | | | | | | | | | | | | | 45,900 | 38,500 |
| 15.0 | | | | | | | | | | | 43,000 | 35,300 | | |

Cooling Application Data - Outdoor Temperature ①

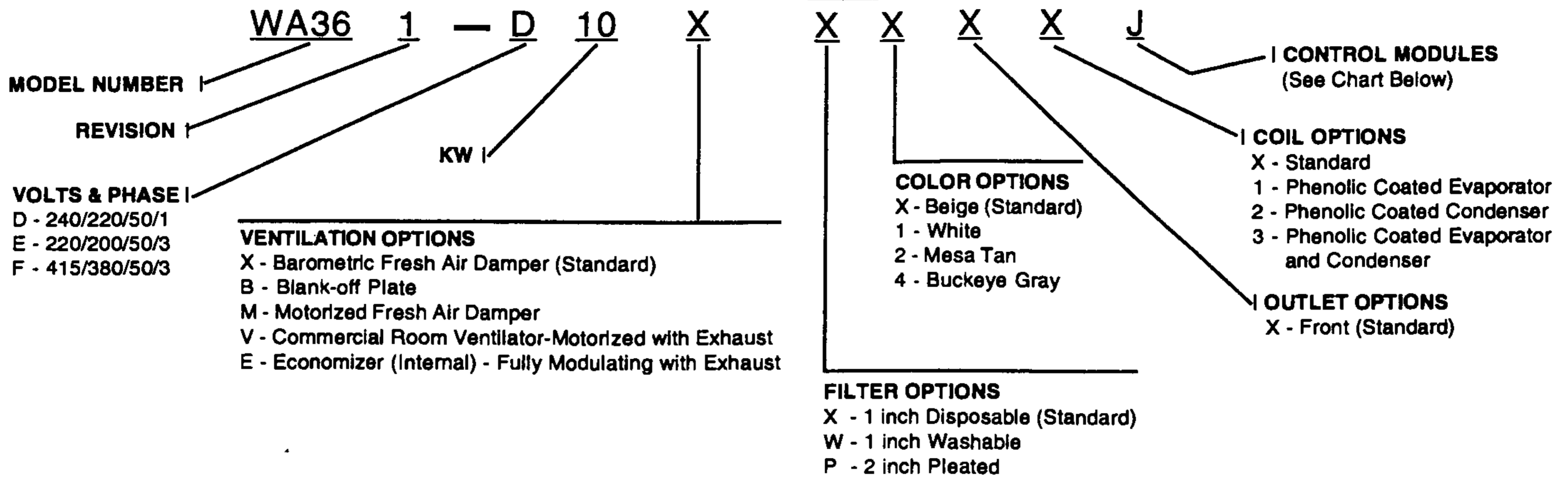
| Model | D.B./W.B. ② | Cooling Capacity | 75°F (23.9C) | 80°F (26.7C) | 85°F (29.4C) | 90°F (32.2C) | 95°F (35.0C) | 100°F (37.8C) | 105°F (40.6C) | 110°F (43.3C) | 115°F (46.1C) | 120°F (48.9C) | 125°F (51.1C) | |
|-------|------------------------|------------------|-----------------|-----------------|-----------------|-----------------|-----------------|------------------|------------------|------------------|------------------|------------------|------------------|--------|
| WA182 | 75/62F (23.9/16.7C) | Total Cooling | 17,450 | 16,650 | 15,850 | 15,000 | 14,200 | 13,400 | 12,550 | 11,700 | 11,000 | 10,300 | 9,650 | |
| | | Sensible Cooling | 13,350 | 13,100 | 12,850 | 12,600 | 12,350 | 12,100 | 11,850 | 11,600 | 11,350 | 11,100 | 10,850 | 10,600 |
| | 80/67F (26.7/19.4C) | Total Cooling | 18,700 | 18,100 | 17,500 | 16,900 | 16,300 | 15,700 | 15,100 | 14,500 | 13,900 | 13,300 | 12,750 | 12,200 |
| | | Sensible Cooling | 13,000 | 12,850 | 12,700 | 12,600 | 12,450 | 12,300 | 12,200 | 12,050 | 11,900 | 11,800 | 11,650 | 11,500 |
| | 85/72F (29.4/22.2C) | Total Cooling | 22,250 | 21,200 | 20,150 | 19,150 | 18,100 | 17,050 | 16,050 | 15,050 | 14,050 | 13,950 | 13,000 | 12,050 |
| | | Sensible Cooling | 13,250 | 13,000 | 12,750 | 12,450 | 12,200 | 11,950 | 11,750 | 11,550 | 11,350 | 11,150 | 10,950 | 10,750 |
| WA242 | 75/62F (23.9/16.7C) | Total Cooling | 22,000 | 21,150 | 20,250 | 19,400 | 18,500 | 17,600 | 16,700 | 15,800 | 15,000 | 14,150 | 13,300 | |
| | | Sensible Cooling | 17,650 | 17,300 | 16,900 | 16,550 | 16,200 | 15,800 | 15,500 | 15,200 | 14,900 | 14,600 | 14,300 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 26,200 | 25,000 | 23,750 | 22,500 | 21,300 | 20,000 | 18,800 | 17,600 | 16,350 | 15,200 | 14,000 | |
| | | Sensible Cooling | 17,200 | 17,000 | 16,800 | 16,600 | 16,400 | 16,200 | 16,000 | 15,800 | 15,600 | 15,400 | 15,200 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 28,000 | 26,950 | 25,850 | 24,750 | 23,650 | 22,550 | 21,450 | 20,350 | 19,250 | 18,200 | 17,200 | |
| | | Sensible Cooling | 17,600 | 17,200 | 16,800 | 16,400 | 16,000 | 15,750 | 15,500 | 15,250 | 15,000 | 14,750 | 14,500 | |
| WA252 | 75/62F (23.9/16.7C) | Total Cooling | 22,700 | 21,800 | 20,900 | 19,900 | 19,100 | 18,300 | 17,500 | 16,700 | 16,100 | 15,400 | 14,600 | |
| | | Sensible Cooling | 17,800 | 17,300 | 16,900 | 16,400 | 16,100 | 15,600 | 15,300 | 15,000 | 14,700 | 14,400 | 14,100 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 24,200 | 23,600 | 23,100 | 22,500 | 21,900 | 21,200 | 20,600 | 20,000 | 19,300 | 18,800 | 17,800 | |
| | | Sensible Cooling | 17,300 | 17,000 | 16,700 | 16,400 | 16,200 | 15,900 | 15,600 | 15,400 | 15,200 | 15,000 | 14,800 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 28,800 | 27,600 | 26,600 | 25,400 | 24,300 | 23,300 | 22,200 | 21,100 | 20,300 | 19,300 | 18,400 | |
| | | Sensible Cooling | 17,800 | 17,200 | 16,800 | 16,300 | 15,900 | 15,400 | 14,900 | 14,500 | 14,100 | 13,700 | 13,300 | |
| WA301 | 75/62F (23.9/16.7C) | Total Cooling | 29,650 | 28,350 | 27,050 | 25,700 | 24,400 | 23,100 | 21,750 | 20,400 | 19,200 | 18,000 | 16,750 | |
| | | Sensible Cooling | 23,200 | 22,750 | 22,300 | 21,800 | 21,350 | 20,900 | 20,400 | 20,000 | 19,550 | 19,100 | 18,650 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 31,400 | 30,440 | 29,500 | 28,550 | 27,600 | 26,650 | 25,700 | 24,750 | 23,800 | 22,850 | 21,900 | |
| | | Sensible Cooling | 22,200 | 22,000 | 21,800 | 21,600 | 21,400 | 21,200 | 21,000 | 20,800 | 20,600 | 20,400 | 20,200 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 36,850 | 35,230 | 33,600 | 32,000 | 30,350 | 28,700 | 27,100 | 25,450 | 23,850 | 22,300 | 20,850 | |
| | | Sensible Cooling | 22,750 | 22,250 | 21,750 | 21,300 | 20,800 | 20,300 | 19,850 | 19,400 | 18,950 | 18,500 | 18,050 | |
| WA361 | 75/62F (23.9/16.7C) | Total Cooling | 33,550 | 32,150 | 30,700 | 29,300 | 27,850 | 26,400 | 25,000 | 23,600 | 22,150 | 20,800 | 19,550 | |
| | | Sensible Cooling | 24,600 | 24,100 | 23,600 | 23,050 | 22,550 | 22,050 | 21,500 | 21,000 | 20,500 | 20,000 | 19,500 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 36,100 | 35,030 | 34,000 | 33,000 | 32,000 | 31,000 | 30,000 | 29,000 | 27,950 | 27,000 | 26,000 | |
| | | Sensible Cooling | 24,000 | 23,700 | 23,400 | 23,100 | 22,800 | 22,500 | 22,200 | 21,900 | 21,600 | 21,300 | 21,000 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 42,700 | 40,900 | 39,100 | 37,300 | 35,500 | 33,700 | 31,900 | 30,100 | 28,300 | 26,600 | 25,000 | |
| | | Sensible Cooling | 24,550 | 24,000 | 23,450 | 22,850 | 22,300 | 21,750 | 21,150 | 20,600 | 20,050 | 19,500 | 18,950 | |
| WA371 | 75/62F (23.9/16.7C) | Total Cooling | 33,200 | 31,800 | 30,500 | 29,200 | 28,000 | 26,800 | 25,800 | 24,600 | 23,800 | 22,900 | 21,900 | |
| | | Sensible Cooling | 25,100 | 24,700 | 24,300 | 23,900 | 23,500 | 23,000 | 22,500 | 22,100 | 21,700 | 21,300 | 20,900 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 35,500 | 34,700 | 33,900 | 33,000 | 32,000 | 31,300 | 30,400 | 29,500 | 28,600 | 27,700 | 26,700 | |
| | | Sensible Cooling | 24,300 | 24,200 | 24,100 | 23,900 | 23,700 | 23,400 | 23,000 | 22,600 | 22,200 | 21,800 | 21,400 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 42,200 | 40,500 | 38,900 | 37,300 | 35,600 | 34,200 | 32,800 | 31,400 | 30,100 | 28,800 | 27,600 | |
| | | Sensible Cooling | 24,900 | 24,500 | 24,300 | 23,700 | 23,300 | 22,700 | 21,900 | 21,100 | 20,300 | 19,400 | 18,400 | |
| WA421 | 75/62F (23.9/16.7C) | Total Cooling | 42,050 | 40,000 | 37,950 | 35,950 | 33,900 | 31,850 | 29,850 | 27,850 | 25,750 | 23,850 | 22,100 | |
| | | Sensible Cooling | 33,600 | 32,600 | 31,600 | 30,600 | 29,600 | 28,600 | 27,600 | 26,600 | 25,600 | 24,600 | 23,600 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 45,200 | 43,650 | 42,100 | 40,550 | 39,000 | 37,450 | 35,900 | 34,350 | 32,800 | 31,300 | 29,900 | |
| | | Sensible Cooling | 32,700 | 32,000 | 31,300 | 30,600 | 29,900 | 29,200 | 28,500 | 27,800 | 27,100 | 26,400 | 25,700 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 53,650 | 51,050 | 48,450 | 45,900 | 43,300 | 40,700 | 38,150 | 35,600 | 33,050 | 30,500 | 28,300 | |
| | | Sensible Cooling | 32,900 | 32,000 | 31,100 | 30,250 | 29,350 | 28,450 | 27,600 | 26,700 | 25,800 | 24,900 | 24,000 | |
| WA482 | 75/62F (23.9/16.7C) | Total Cooling | 42,350 | 40,900 | 39,450 | 37,950 | 36,500 | 35,050 | 33,550 | 32,100 | 30,650 | 29,300 | 28,000 | |
| | | Sensible Cooling | 34,450 | 34,000 | 33,550 | 33,150 | 32,700 | 32,250 | 31,850 | 31,400 | 30,950 | 30,500 | 29,900 | |
| | 80/67F (26.7/19.4C) | Total Cooling | 45,450 | 44,600 | 43,750 | 42,850 | 42,000 | 41,150 | 40,250 | 39,400 | 38,550 | 37,700 | 36,900 | |
| | | Sensible Cooling | 33,550 | 33,400 | 33,250 | 33,150 | 32,000 | 32,850 | 32,750 | 32,650 | 32,550 | 32,450 | 32,350 | |
| | 85/72F (29.4/22.2C) | Total Cooling | 53,600 | 51,850 | 50,100 | 48,350 | 46,600 | 44,850 | 43,100 | 41,350 | 39,600 | 37,900 | 36,300 | |
| | | Sensible Cooling | 34,300 | 33,800 | 33,300 | 32,850 | 32,350 | 31,850 | 31,400 | 30,900 | 30,400 | 29,900 | 29,000 | |
| WA602 | 75/62F (23.9/16.7C) | Total Cooling | 53,200 | 51,000 | 48,800 | 46,550 | 44,350 | 42,100 | 39,900 | 37,700 | 35,500 | N/A | N/A | |
| | | Sensible Cooling | 39,800 | 38,750 | 37,650 | 36,600 | 35,500 | 34,400 | 33,300 | 32,200 | 31,150 | N/A | N/A | |
| | 80/67F (26.7/19.4C) | Total Cooling | 57,200 | 55,650 | 54,100 | 52,550 | 51,000 | 49,450 | 47,900 | 46,350 | 44,800 | N/A | N/A | |
| | | Sensible Cooling | 38,850 | 38,100 | 37,300 | 36,550 | 35,800 | 35,050 | 34,250 | 33,500 | 32,750 | N/A | N/A | |
| | 85/72F (29.4/22.2C) | Total Cooling | 67,800 | 65,000 | 62,200 | 59,400 | 56,600 | 53,800 | 51,000 | 48,200 | 45,400 | N/A | N/A | |
| | | Sensible Cooling | 39,700 | 38,550 | 37,400 | 36,250 | 35,100 | 33,950 | 32,800 | 31,650 | 30,500 | N/A | N/A | |
| WA701 | 75/62F (23.9/16.7C) | Total Cooling | 62,050 | 59,450 | 56,875 | 54,375 | 51,900 | 49,440 | 47,000 | 44,560 | 42,275 | N/A | N/A | |
| | | Sensible Cooling | 52,875 | 42,725 | 41,475 | 40,325 | 39,160 | 38,100 | 37,025 | 35,950 | 34,875 | N/A | N/A | |
| | 80/67F (26.7/19.4C) | Total Cooling | 66,350 | 64,850 | 63,235 | 61,500 | 60,000 | 57,675 | 55,535 | 53,400 | 51,265 | N/A | N/A | |
| | | Sensible Cooling | 42,775 | 41,900 | 41,100 | 40,325 | 39,560 | 38,800 | 38,050 | 37,275 | 36,525 | N/A | N/A | |
| | 85/72F (29.4/22.2C) | Total Cooling | 78,950 | 75,750 | 72,575 | 69,375 | 66,200 | 63,000 | 59,850 | 56,700 | 53,540 | N/A | N/A | |
| | | Sensible Cooling | 43,750 | 42,500 | 41,250 | 40,000 | 38,760 | 37,500 | 36,225 | 35,000 | 33,700 | N/A | N/A | |

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

② Return air temperature.

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

Air Conditioning Wall-Mount Model Nomenclature



Ventilation Options

| Models | WA182, WA242, WA252 | | WA301, WA361, WA371 | | WA421, WA482, WA602, WA701 | |
|--|----------------------------|--------------------------|----------------------------|--------------------------|----------------------------|--------------------------|
| | 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 (Internal) - Fully Modulating Ⓣ | E | EIFM-2 | E | EIFM-3 | E | EIFM-5 |

Ⓣ Low ambient control is required with economizer for low temperature compressor operation.

| Air Conditioning Control Modules | | | | | | Models (Recip. Compressor) | | Models (Scroll Compressor) | |
|----------------------------------|-------|-----|-------|-------|------|-----------------------------------|----------------------|-----------------------------------|------------------------|
| AVAILABLE CONTROL OPTIONS | | | | | | WA182, WA242, WA301, WA361, WA421 | | WA252, WA371, WA482, WA602, WA701 | |
| HPC Ⓣ | LPC Ⓣ | TDR | LAC Ⓣ | ALR Ⓣ | SK Ⓣ | Factory Installed Code | Field Installed Part | Factory Installed Code | Field Installed Part |
| ● | | | | | | N/A, Order G | N/A, Use CMA-10A | HPC is Standard | |
| | ● | | | | | N/A, Order G | N/A, Use CMA-10A | G | CMA-16 |
| | ● | | ● | | | N/A, Order H | N/A, Use CMA-13A | H | CMA-18 |
| ● | ● | | | | | G | CMA-10A | G | CMA-16 |
| | | ● | | | | D Ⓣ | CMA-5 | CCM is Standard Ⓣ | |
| | | | ● | | | E | CMA-6 | I Ⓣ | CMA-6 |
| ● | ● | | ● | | | H | CMA-13A | H | CMA-18 |
| | | | ● | | | I Ⓣ | CMA-12 | I Ⓣ | CMA-6 |
| ● | ● | | ● | ● | | J | Factory Only | J | Factory Only |
| ● | ● | | ● | | ● | K Ⓣ | CMA-13A & CMC-15 | K Ⓣ | CMA-13A & CMC-15 |
| ● | ● | ● | | | ● | L Ⓣ | CMA-10A & CMC-15 | L Ⓣ | CMA-10A & CMC-15 |
| ● | ● | | ● | ● | ● | M Ⓣ | Factory Only | M Ⓣ | Factory Only |
| | | ● | ● | | ● | N Ⓣ | CMA-6 & CMC-15 Ⓣ | N Ⓣ | CMA-5 & -6, & CMC-15 Ⓣ |
| | | | | | ● | P | CMC-15 Ⓣ | P | CMC-15 Ⓣ |

N/A = Not available. Order/use the nearest replacement control module as shown.

Ⓣ HPC: High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ④.

Ⓣ LPC: Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ④.

Ⓣ 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 ①, ②, and ④.

Ⓣ CCM: Compressor control module has adjustable 30-second to 5-minute delay-on-break timer. On initial power-up, or any time the power is interrupted, the delay-on-make will be 2-minutes plus 10% of the delay-on-break setting. There is no delay-on-make during routine operation of the unit. The module also provides the lockout feature (with 1 retry) for high and/or low-pressure controls, and a 2-minute timed bypass for low-pressure control.

Ⓣ LAC: Low ambient control permits cooling operation down to 0°F

Ⓣ 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.

Ⓣ SK: Start kit can be used with all -D single phase models only. Is not used or available for -E or -F three phase models.



BARD MANUFACTURING CO.
BRYAN, OH 43506

Since 1914 ... Moving ahead,
just as planned

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.

FORM NO.
S3077
July, 2000

Supersedes S3077-699