



THE WALL-MOUNT™ “Quiet Climate” A/C – 10.0 EER

Models W38A1, W49A1, W61A1
3 to 5 Ton (35,600 to 57,500 Btuh)
Right Side Control Panel 60Hz

GREEN REFRIGERANT
R-410A

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. All models feature multispeed ECM blower motors providing airflow adjustment for high and low static operation. Motor overload protection is standard on all models.

ECM Indoor Blower Motor:

Features a variable speed motor providing super-high efficiency, low sound levels and soft-start capabilities. The motor is self-adjusting to provide the proper airflow rate for the staged capacity, and for higher static pressure in ducted installations without user adjustment or wiring changes.

Air Conditioner Compressor:

Copeland scroll compressors are designed for increased efficiency, quieter operation and improved reliability for longer life. Eliminates need for crankcase heater.

R-410A Refrigerant:

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

Phase Rotation Monitor:

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

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 tests per ASTM B117-03.

Foil Faced Insulation:

Standard on all units.

Full Length Mounting Brackets:

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

Electrical Components:

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

Electric Heat Strips:

Features an automatic limit and thermal cut-off safety control. Heater packages can be factory or field installed for all 1½ through 5 ton models.

Filter Service Door:

Separate service door provides easy access for filter change.

One Inch, Disposable Air Filters:

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

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. Optional ventilation packages available.

Built-in Circuit Breakers:

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

PTCR Start Assist:

Standard on 1-phase models.



Slope Top:

Standard feature for water run-off.

Top Rain Flashing:

Standard feature on all models.

Liquid Line Filter Drier:

Standard on all units. Protects system against moisture.

Compressor Control Module:

Standard on all units. Built-in off-delay timer adjustable from 30 seconds to 5 minutes. 2-minute on-delay if power interrupt. 120-second bypass for low pressure control, and both soft and manual lockouts for high and low pressure controls. Alarm output for alarm relay.

High & Low Pressure Switches are Auto-Reset:

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



- Complies with efficiency requirements of ANSI/ASHRAE/IESNA 90.1-2010.
- Certified to ANSI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
- Intertek ETL Listed to Standard for Safety Heating and Cooling Equipment ANSI/UL 1995/CSA 22.2 No. 236-05, Fourth Edition.
- Commercial Product - Not intended for Residential application.

Capacity and Efficiency Ratings

| MODELS | W38A1 | W49A1 | W61A1 |
|-------------------------|--------|--------|--------|
| Cooling Capacity BTUH ① | 35,600 | 46,500 | 57,500 |
| EER ② | 10.00 | 10.00 | 10.00 |

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

② EER = Energy Efficiency Ratio and is certified in accordance with ANSI/ARI Standard 390-2003.

All ratings based on fresh air intake being 100% closed (no outside air introduction).

Specifications 3 Ton through 5 Ton

| MODELS | W38A1-A | W38A1-B | W38A1-C | W49A1-A | W49A1-B | W49A1-C | W61A1-A | W61A1-B | W61A1-C |
|--|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|--------------|
| Electrical Rating--60 Hz | 230/208-1 | 230/208-3 | 460-3 | 230/208-1 | 230/208-3 | 460-3 | 230/208-1 | 230/208-3 | 460-3 |
| Operating Voltage Range | 197-253 | 197-253 | 414-506 | 197-253 | 197-253 | 414-506 | 197-253 | 197-253 | 414-506 |
| Compressor--Circuit A | | | | | | | | | |
| Voltage | 230/208 | 230/208 | 460 | 230/208 | 230/208 | 460 | 230/208 | 230/208 | 460 |
| Rated Load Amps | 14.3/15.6 | 10.6/11.6 | 5.3 | 18.9/20.4 | 13.1/14.2 | 6.3 | 24.2/26.9 | 16.5/18.4 | 8.6 |
| Branch Circuit Selection Current | 18.0 | 13.3 | 6.0 | 23.1 | 16.1 | 7.1 | 30.2 | 20.6 | 9.7 |
| Lock Rotor Amps | 112/112 | 88/88 | 44 | 134/134 | 91/91 | 46 | 158/158 | 155/155 | 75 |
| Compressor Type | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll | Scroll |
| Fan Motor & Condenser | | | | | | | | | |
| Fan Motor--HP-RPM-SPD | 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 | 2.5 | 2.5 | 1.3 | 2.5 | 2.5 | 1.3 | 2.5 | 2.5 | 1.3 |
| Fan--DIA/CFM | 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 | 1/2 Variable | 1/2 Variable | 1/2 Variable | 1/2 Variable | 1/2 Variable | 1/2 Variable | 3/4 Variable | 3/4 Variable | 3/4 Variable |
| Blower Motor--Amps | 4.5 | 4.5 | 4.5 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 | 5.0 |
| CFM Cooling & E.S.P. w/Filter (Rated-Wet Coil) | 1100 - .15 | 1100 - .15 | 1100 - .15 | 1300 - .20 | 1300 - .20 | 1300 - .20 | 1450 - .20 | 1450 - .20 | 1450 - .20 |
| Filter Sizes (inches) STD. | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 | 20x30x1 |
| Shipping Weight --LBS. | 525 | 525 | 525 | 525 | 525 | 525 | 575 | 575 | 575 |

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 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 - ECONWMT-Series

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.

- ECONWMT Equipment Building versions have extended air intake hood to deliver up to 100% of cooling rated airflow.
 - ❖ 16" for ECONWMT-E2 or T2, and E3 or T3
 - ❖ 18" for ECONWMT-E5 or T5
- ECONWMS Classroom versions have 3" air intake hood to deliver up to 75% of cooling rated airflow.

Standard Features:

- Fully modulating
- Honeywell Direct Drive Hi-Torque Actuator
- No linkage required
- Simple single blade design
- Positive shut-off with non-stick gaskets
- Electronic DB and/or Enthalpy sensors depending upon version
- Honeywell JADE electronic economizer module with precision settings and diagnostics
- DB or Enthalpy economizer versions available



Energy Recovery Ventilator

WALL-MOUNT ENERGY RECOVERY VENTILATOR - ERVF

OPTIONAL

The wall-mount energy recovery ventilator (ERV) is a highly innovative approach to meeting indoor air quality ventilation requirements as established by ANSI/ASHRAE Standard 62.1. The ERVF allows from 300 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 ERVF 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 ERVF is designed to be internally mounted behind the service door in the W**A, W**H or W**L model wall-mount units. It can be built-in at the factory or field installed as an option. ERVF-*3 and ERVF-*5 can be independently adjusted for intake and exhaust rates.

Manufactured under U.S. Patent Nos. 5,485,878; 5,301,744

Electrical Specifications

| Model | Rated Volts and Phase | No. Field Power Circuits | Single Circuit | | | | Dual Circuit | | | | | | | | |
|-------------|-----------------------|--------------------------|----------------------------|---------------------------------------|-------------------------|---------------|----------------------------|--------|---------------------------------------|--------|-------------------------|--------|--------------------|--------|--|
| | | | ③ Minimum Circuit Ampacity | ① Maximum External Fuse or Ckt. Brkr. | ② Field Power Wire Size | ② Ground Wire | ③ Minimum Circuit Ampacity | | ① Maximum External Fuse or Ckt. Brkr. | | 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 | |
| W38A1 - A0Z | 230/208-1 | 1 | 32 | 45 | 8 | 10 | | | | | | | | | |
| A05 | | 1 | 35 | 45 | 8 | 10 | | | | | | | | | |
| A08 | | 1 | 50 | 50 | 8 | 10 | | | | | | | | | |
| A10 | | 1 or 2 | 61 | 70 | 6 | 8 | 35 | 26 | 45 | 30 | 8 | 10 | 10 | 10 | |
| A15 | | 1 or 2 | 87 | 90 | 3 | 8 | 35 | 52 | 45 | 60 | 8 | 6 | 10 | 10 | |
| W38A1 - B0Z | 230/208-3 | 1 | 26 | 35 | 8 | 10 | | | | | | | | | |
| B06 | | 1 | 27 | 35 | 8 | 10 | | | | | | | | | |
| B09 | | 1 | 36 | 40 | 8 | 10 | | | | | | | | | |
| B15 | | 1 | 54 | 60 | 6 | 10 | | | | | | | | | |
| W38A1 - C0Z | 460-3 | 1 | 14 | 15 | 14 | 14 | | | | | | | | | |
| C06 | | 1 | 15 | 15 | 14 | 14 | | | | | | | | | |
| C09 | | 1 | 19 | 20 | 12 | 12 | | | | | | | | | |
| C15 | | 1 | 28 | 30 | 10 | 10 | | | | | | | | | |
| W49A1 - A0Z | 230/208-1 | 1 | 39 | 50 | 8 | 10 | | | | | | | | | |
| A05 | | 1 | 39 | 50 | 8 | 10 | | | | | | | | | |
| A08 | | 1 | 51 | 60 | 6 | 10 | | | | | | | | | |
| A10 | | 1 or 2 | 61 | 70 | 6 | 8 | 39 | 26 | 50 | 30 | 8 | 10 | 10 | 10 | |
| A15 | | 1 or 2 | 87 | 90 | 3 | 8 | 39 | 52 | 50 | 60 | 8 | 6 | 10 | 10 | |
| W49A1 - B0Z | 230/208-3 | 1 | 30 | 45 | 8 | 10 | | | | | | | | | |
| B06 | | 1 | 30 | 45 | 8 | 10 | | | | | | | | | |
| B09 | | 1 | 37 | 45 | 8 | 10 | | | | | | | | | |
| B15 | | 1 | 55 | 60 | 6 | 10 | | | | | | | | | |
| W49A1 - C0Z | 460-3 | 1 | 15 | 20 | 12 | 12 | | | | | | | | | |
| C06 | | 1 | 15 | 20 | 12 | 12 | | | | | | | | | |
| C09 | | 1 | 19 | 20 | 12 | 12 | | | | | | | | | |
| C15 | | 1 | 28 | 30 | 10 | 10 | | | | | | | | | |
| W61A1 - A0Z | 230/208-1 | 1 | 48 | 60 | 8 | 10 | | | | | | | | | |
| A05 | | 1 | 48 | 60 | 8 | 10 | | | | | | | | | |
| A08 | | 1 | 51 | 60 | 6 | 8 | | | | | | | | | |
| A10 | | 1 or 2 | 61 | 70 | 6 | 8 | 48 | 26 | 60 | 30 | 6 | 10 | 10 | 10 | |
| A15 | | 1 or 2 | 87 | 90 | 3 | 8 | 48 | 52 | 60 | 60 | 6 | 6 | 10 | 10 | |
| W61A1 - B0Z | 230/208-3 | 1 | 36 | 50 | 8 | 10 | | | | | | | | | |
| B09 | | 1 | 37 | 50 | 8 | 10 | | | | | | | | | |
| B15 | | 1 | 55 | 60 | 6 | 10 | | | | | | | | | |
| W61A1 - C0Z | 460-3 | 1 | 18 | 25 | 10 | 10 | | | | | | | | | |
| C09 | | 1 | 19 | 25 | 10 | 10 | | | | | | | | | |
| C15 | | 1 | 28 | 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 75C copper wire. All wiring must conform to the National Electrical 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 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) current carrying conductors are in a raceway.

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

Data Pending

Performance and Application Data - ERVF-*5C

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

| Ambient O.D. | VENTILATION RATE -- 450 CFM 65% EFFICIENCY | | | | | | VENTILATION RATE -- 375 CFM 66% EFFICIENCY | | | | | | VENTILATION RATE -- 300 CFM 67% EFFICIENCY | | | | | | | |
|--------------|---|---|-------|-------|-------|-------|---|-------|-------|-------|-------|-------|---|-------|-------|------|-------|-------|------|-------|
| | DB/ WB | F | VL | VLS | VLL | HRT | HRS | HRL | VL | VLS | VLL | HRT | HRS | HRL | VL | VLS | VLL | HRT | HRS | HRL |
| 105 | 75 | | 21465 | 14580 | 6884 | 13952 | 9477 | 4475 | 17887 | 12150 | 5737 | 11805 | 8018 | 3786 | 14310 | 9720 | 4590 | 9587 | 6512 | 3075 |
| | 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 |
| 100 | 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 |
| | 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 |
| 95 | 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 |
| | 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 |
| 90 | 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 |
| | 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 |
| 85 | 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 |
| | 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 |
| 80 | 75 | | 21465 | 2430 | 19035 | 13952 | 1579 | 12372 | 17887 | 2025 | 15862 | 11805 | 1336 | 10469 | 14310 | 1620 | 12690 | 9587 | 1085 | 8502 |
| | 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 |
| 75 | 70 | | 12352 | 0 | 12352 | 8029 | 0 | 8029 | 10293 | 0 | 10293 | 6793 | 0 | 6793 | 8235 | 0 | 8235 | 5517 | 0 | 5517 |
| | 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 |

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

LEGEND:

VL = 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

| Ambient O.D. | VENTILATION RATE | | | | | |
|--------------|---------------------------|-------|---------------------------|-------|---------------------------|-------|
| | 450 CFM 80% EFFICIENCY | | 375 CFM 81% EFFICIENCY | | 300 CFM 82% EFFICIENCY | |
| 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.

Indoor Blower Performance - CFM (0.00" — 0.50" H₂O) ①

| Model | Rated ESP | ① Max ESP | ② Blower Only | ③ Cooling | ③ Electric Heat |
|-------|-----------|-----------|---------------|-----------|-----------------|
| W38A | .15 | .50 | 1100 | 1100 | 1100 |
| W49A | .20 | .50 | 1300 | 1300 | 1300 |
| W61A | .20 | .50 | 1450 | 1450 | 1450 |

NOTE: These units are equipped with a variable speed (ECM) indoor motor that automatically adjusts itself to maintain approximately the same rate of indoor airflow in both heating & cooling, dry & wet coil conditions and at both 230/208 or 460 volts.

- ① Maximum ESP (inches WC) shown is with 2" thick disposable filter.
- ② Blower only CFM is the total air being circulated during continuous fan mode.
- ③ CFM output on Cooling or Electric Heat.

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 |
| 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 |

- (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
- Rotary Disconnect Standard on 460V Models
- ETL US & Canada Listed

| 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 |
| W38A1 | EHS03A-A05 | 5 | EHS03A-B06 | 6 | EHS03A-C06 | 6 |
| | EHS03A-A08 | 8 | EHS03A-B09 | 9 | EHS03A-C09 | 9 |
| | EHS03A-A10 | 10 | EHS03A-B15 | 15 | EHS03A-C15 | 15 |
| | EHS03A-A15 | 15 | | | | |
| W49A1 | EHS04A-A05 | 5 | EHS03A-B06 | 6 | EHS03A-C06 | 6 |
| | EHS04A-A08 | 8 | EHS04A-B09 | 9 | EHS04A-C09 | 9 |
| | EHS03A-A10 | 10 | EHS04A-B15 | 15 | EHS04A-C15 | 15 |
| | EHS04A-A15 | 15 | | | | |
| W61A1 | EHS05A-A05 | 5 | EHS04A-B09 | 9 | EHS04A-C09 | 9 |
| | EHS04A-A08 | 8 | EHS04A-B15 | 15 | EHS04A-C15 | 15 |
| | EHS05A-A10 | 10 | | | | |
| | EHS05A-A15 | 15 | | | | |

Cooling Application Data - Outdoor Temperature 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 | 120°F |
|------------------|---------------|------------------|--------|--------|--------|--------|--------|--------|--------|--------|--------|--------|
| W38A1 | 75/ 62 | Total Cooling | 37,700 | 35,900 | 34,200 | 32,600 | 31,000 | 29,600 | 28,200 | 26,900 | 25,700 | 24,400 |
| | | Sensible Cooling | 28,600 | 27,800 | 27,100 | 26,300 | 25,600 | 24,900 | 24,100 | 23,400 | 22,700 | 22,000 |
| | 80/ 67 | Total Cooling | 40,200 | 39,100 | 38,000 | 36,800 | 35,600 | 34,500 | 33,300 | 32,100 | 30,900 | 29,600 |
| Sensible Cooling | | 27,700 | 27,200 | 26,800 | 26,300 | 25,800 | 25,300 | 24,700 | 24,200 | 23,600 | 23,000 | |
| 85/ 72 | Total Cooling | | 47,900 | 45,700 | 43,700 | 41,600 | 39,600 | 37,800 | 35,900 | 34,200 | 32,500 | 30,800 |
| | | Sensible Cooling | 28,400 | 27,600 | 26,900 | 26,100 | 25,300 | 24,500 | 23,600 | 22,700 | 21,800 | 20,800 |
| W49A1 | 75/ 62 | Total Cooling | 48,900 | 46,500 | 44,400 | 42,400 | 40,500 | 38,800 | 37,200 | 35,600 | 34,200 | 33,000 |
| | | Sensible Cooling | 36,700 | 35,200 | 33,800 | 32,700 | 31,700 | 31,000 | 30,300 | 29,800 | 29,600 | 29,400 |
| | 80/ 67 | Total Cooling | 52,200 | 50,700 | 49,300 | 47,900 | 46,500 | 45,200 | 43,900 | 42,500 | 41,200 | 40,000 |
| Sensible Cooling | | 35,600 | 34,500 | 33,500 | 32,700 | 32,000 | 31,500 | 31,100 | 30,800 | 30,800 | 30,800 | |
| 85/ 72 | Total Cooling | | 62,200 | 59,300 | 56,600 | 54,100 | 51,700 | 49,500 | 47,300 | 45,200 | 43,300 | 41,600 |
| | | Sensible Cooling | 36,500 | 35,000 | 33,700 | 32,500 | 31,400 | 30,500 | 29,700 | 28,900 | 28,400 | 27,800 |
| W61A1 | 75/ 62 | Total Cooling | 58,900 | 56,900 | 54,900 | 53,000 | 50,900 | 49,000 | 47,000 | 45,000 | 43,000 | 41,100 |
| | | Sensible Cooling | 41,400 | 40,600 | 39,800 | 39,000 | 38,100 | 37,200 | 36,100 | 35,000 | 33,800 | 32,700 |
| | 80/ 67 | Total Cooling | 62,900 | 62,000 | 61,000 | 59,000 | 57,500 | 56,500 | 55,500 | 53,700 | 51,800 | 49,800 |
| Sensible Cooling | | 40,100 | 39,800 | 39,400 | 39,000 | 38,400 | 37,800 | 37,000 | 36,200 | 35,200 | 34,200 | |
| 85/ 72 | Total Cooling | | 74,900 | 72,500 | 70,100 | 67,600 | 65,000 | 62,500 | 59,800 | 57,100 | 54,400 | 51,800 |
| | | Sensible Cooling | 41,100 | 40,400 | 39,600 | 38,800 | 37,700 | 36,600 | 35,300 | 34,000 | 32,400 | 30,900 |

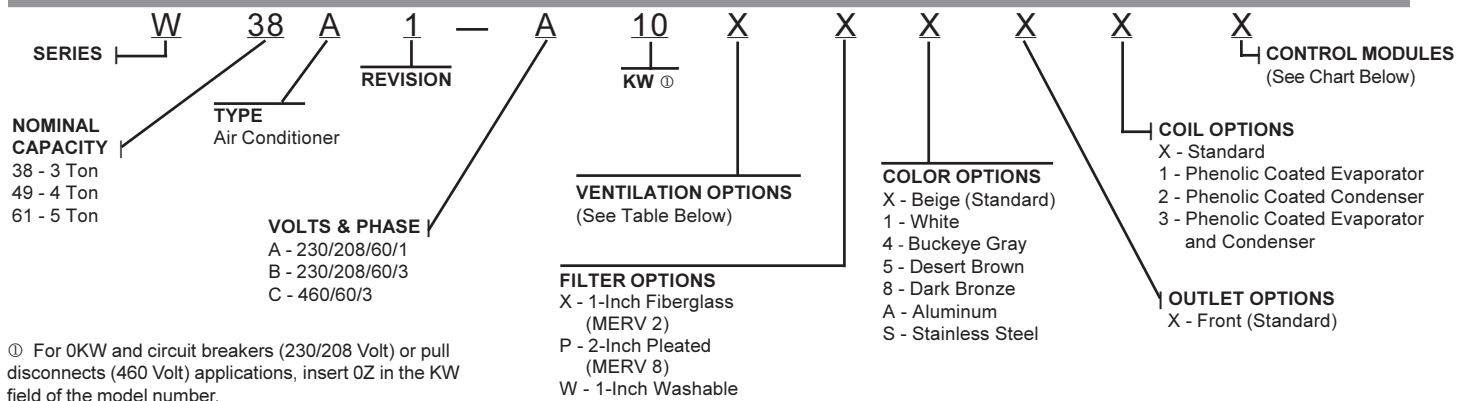
① Below 65°F (18.3C), unit requires a factory or field installed low ambient control.
 ② Return air temperature.

| 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 |

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Air Conditioning Wall-Mount Model Nomenclature



Ventilation Options

| Models | W38A1, W49A1, W61A1 | |
|---|----------------------------|--------------------------|
| | Factory Installed Code No. | Field Installed Part No. |
| Barometric Fresh Air Damper - Standard | X | BFAD-5 |
| Blank-Off Plate | B | BOP-5 |
| Motorized Fresh Air Damper | M | MFAD-5 |
| Commercial Ventilator - Spring Return w/Exhaust | V | CRVS-5 |
| Commercial Ventilator - Power Return w/Exhaust | P | CRVP-5 |
| Economizer - School Versions, Enthalpy ④ | S | ECONWMS-E5 ②③ |
| Economizer - Equipment Bldg., Enthalpy ⑤ | W | ECONWMT-E5 ② |
| Economizer - Equipment Bldg., DB Temp ⑤ | T | ECONWMT-T5 ② |
| Energy Recovery Ventilator - 230 Volt ③ | R | ERVF-A5 ① |
| Energy Recovery Ventilator - 460 Volt ③ | R | ERVF-C5 ① |
| Door Kit for ERV (Required) | N/A | WMDK5- ③ |

- ① Intake and exhaust can be independently adjusted.
- ② Insert color to match unit ("X" = Beige; "4" = Buckeye Gray; etc.)
- ③ WMDK Door Kit must be ordered in addition to ERV Assembly and ECONWMS & color matched to unit ("X" = Beige; "4" = Buckeye Gray; etc.)
- ④ Partial Full Flow (75% of Rated Cooling CFM). All ECONWMS versions have 3" deep intake hood.
- ⑤ Full Flow (100% of Rated Cooling CFM). ECONWMT*5 has 18" deep intake hood.

Air Conditioning Control Modules

| AVAILABLE CONTROL OPTIONS | | | | | | | | W38A1, W49A1, W61A1 Models with Scroll Compressors | |
|---------------------------|-------|-------|-------|-------|------|-------|-------|---|-----------------------------|
| HPC ① | LPC ② | CCM ③ | LAC ④ | ALR ⑤ | SK ⑥ | ODT ⑦ | DDC ⑧ | Factory Installed Code | Field Installed Part |
| STD | STD | STD | | | STD | | | X | N/A |
| STD | STD | STD | ● | | STD | | | E | CMA-28 |
| STD | STD | STD | ● | ● | STD | | | J | Factory Only |
| STD | STD | STD | | | STD | | | Field Installed Only | SK111 ⑩ W38A1-A, W49A1-A |
| STD | STD | STD | | | STD | | | Field Installed Only | SK113 ⑩ W61A1-A |
| STD | STD | STD | | | STD | ● | | Field Installed Only | CMA-14 |
| STD | STD | STD | ● | ● | STD | | ● | V ⑨ | Factory Only |
| STD | STD | STD | | | STD | | ● | Field Installed Only | CMA-24 |

STD = Standard equipment for these specified models.

- ① HPC High pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ③.
- ② LPC Low pressure control is auto reset. Always used with compressor control module (CCM) which is included. See note ③.
- ③ 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.
- ④ LAC Low ambient control permits cooling operation down to 0°F.
- ⑤ 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.
- ⑥ SK PTCR start kit is standard with all -A single phase models only. Increases starting torque 2-3x. Must be disconnected if SK111 or SK113 is used. Is not used or available for -B or -C three phase models.
- ⑦ Start capacitor and potential relay start kit can be used with all -A single phase models. Increases starting torque 9x. Not used for -B or -C three phase models. Do not use if CMC-15 is used. Use SK111 for W61A1-A only. Use SK113 for W38A1-A and W49A1-A only.
- ⑧ ODT. Outdoor thermostat is adjustable from 0 to 50°F. It is suitable for use as a compressor cutoff 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 w/direct digital controller (DDC) model TCS24. Refer to DDC specification sheet S3280 for more information.

Clearances Required for Service Access and Adequate Condenser Airflow

| MODELS | LEFT SIDE | RIGHT SIDE |
|---------------------|-----------|------------|
| W38A1, W49A1, W61A1 | 20" | 20" |

NOTE: For side by side installation of two (2) W**A models there must be 20" between units.

Minimum Clearances Required to Combustible Materials

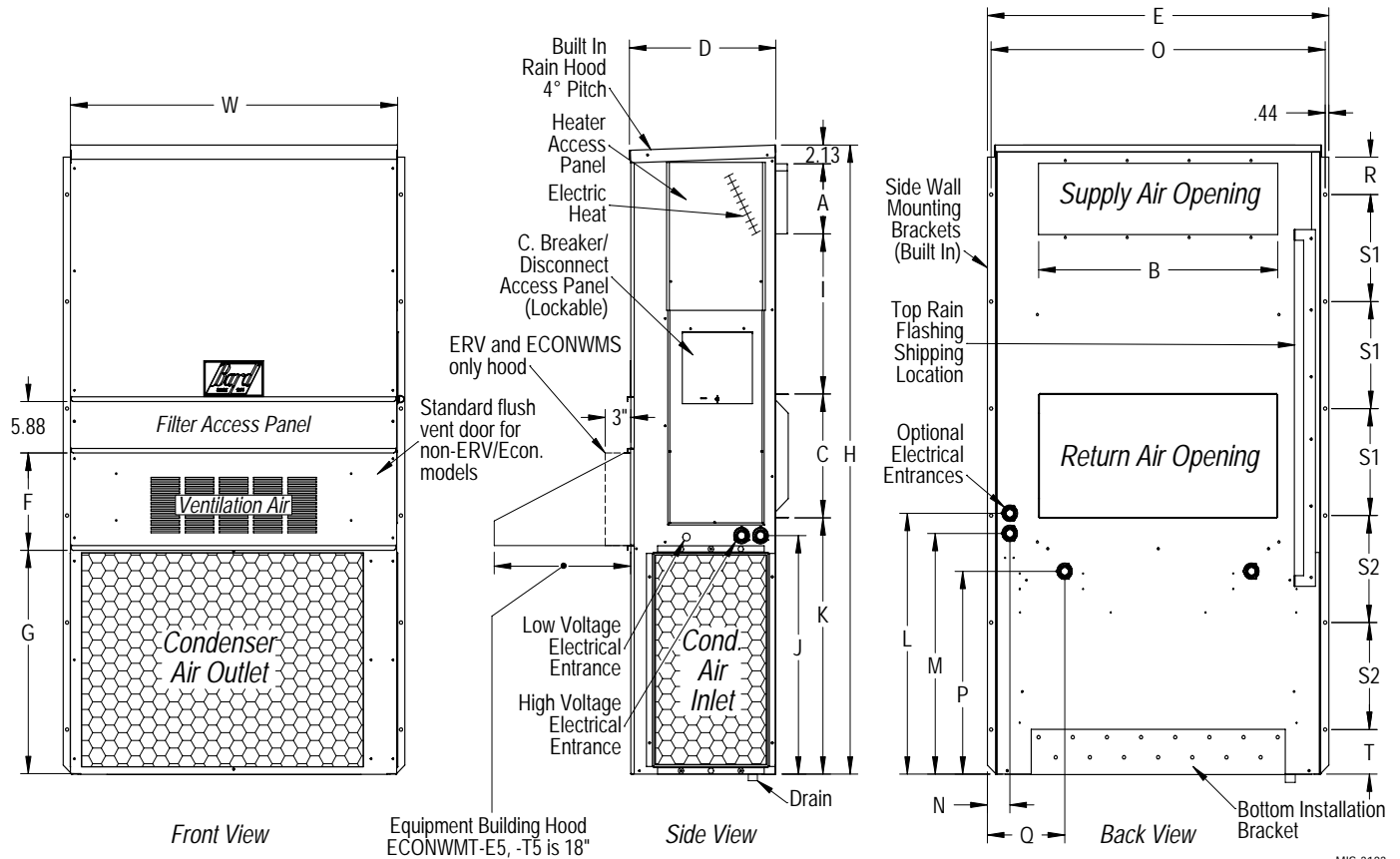
| MODELS ① | SUPPLY AIR DUCT FIRST THREE FEET | CABINET |
|---------------------|----------------------------------|---------|
| W38A1, W49A1, W61A1 | 1/4" | 0" |

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 | | E | F | G | I | J | K | L | M | N | O | P | Q | R | S1 | S2 | T |
|----------------|-----------|-----------|------------|--------|-------|--------|-------|-------|-------|-------|-------|-------|-------|-------|-------|------|-------|-------|-------|------|-------|-------|------|
| | | | | A | B | C | B | | | | | | | | | | | | | | | | |
| W38A1 W49A1 | 42.075 | 22.432 | 84.875 | 9.88 | 29.88 | 15.88 | 29.88 | 43.88 | 13.56 | 31.66 | 30.00 | 32.68 | 26.94 | 34.69 | 32.43 | 3.37 | 43.00 | 23.88 | 10.00 | 1.44 | 16.00 | 16.00 | 1.88 |
| W61A1 | 42.075 | 22.432 | 94.875 | 9.88 | 29.88 | 15.88 | 29.88 | 43.88 | 13.56 | 41.66 | 30.00 | 42.68 | 36.94 | 44.69 | 42.43 | 3.37 | 43.00 | 33.88 | 10.00 | 2.00 | 16.00 | 21.00 | 1.88 |

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



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Form No. S3412
 November, 2012

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