THE WALL-MOUNT™ ONE TON AIR CONDITIONER

The Bard Wall-Mount One Ton Air Conditioner is a self contained energy efficient heating and cooling system, which is designed to offer maximum indoor comfort at a minimal cost without using valuable indoor floor space or outside ground space. The One Ton 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 (evaporator coil only) and enhanced louvered fin for maximum heat transfer and energy efficiency.

Quiet Twin Blowers:
Designed to accept full ducted system or for non-ducted free blow installations.

High Efficiency Rotary Compressor
R-410A Refrigerant:
Designed with R-410A (HFC) non-ozone depleting refrigerant in compliance with the Montreal protocol and 2010 EPA requirements.

Liquid Line Filter Drier:
Standard on all units. Protects system against moisture.

Galvanized 20 Gauge Zinc Coated Steel Cabinet:
Cleaned, rinsed, sealed and dried before the polyurethane primer is applied. The cabinet is handsomely finished with a baked on textured enamel, which allows it to withstand 1000 hours of salt spray tests per ASTM B117-03.

Electrical Components:
Are easily accessible for routine inspection and maintenance through a right side, service panel opening.

One Inch, Disposable Air Filter:
Easily removed for replacement from the outside. Optional two-inch pleated filter, factory or field installed.

Optional Product Features

Alarm Relay:
Dry contacts for remote alarm on high or low pressure lockouts.

Low Ambient Control:
Permits operation down to 0°F outdoor ambient. Can be factory or field installed.

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.

Barometric Fresh Air Damper:
Allows up to 100 CFM of fresh air.

Automatic Condensate Disposal System:
Eliminates the need to provide a separate condensate drain. The drain valve closes at temperatures above 40° and opens when the temperature drops below 40°. Built-in slinger ring fan blade.

Full Length Mounting Flanges:
Built into cabinet for improved appearance and easy installation.

Complies with efficiency requirements of ANSI/ASHRAE/IESNA 90.1-2010.
• Certified to ANSI/ARI Standard 390-2003 for SPVU (Single Package Vertical Units).
• Commercial Product - Not intended for Residential application.
Internal circuit breakers are standard on W12A2-A models. Refer to the National Electrical Code (latest revision), article 310 for power conductor sizing. These “Minimum Circuit Ampacity” values are to be used for sizing the field power conductors. Based on 75°C copper wire. All wiring must conform to NEC and all local codes.

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

**Capacity and Efficiency Ratings**

<table>
<thead>
<tr>
<th>Models</th>
<th>Volts</th>
<th>Phase</th>
<th>Heat Strip</th>
<th>Cooling Cap. BTUH</th>
<th>EER</th>
</tr>
</thead>
<tbody>
<tr>
<td>W12A2-A0Z</td>
<td>230/208</td>
<td>1</td>
<td>NONE</td>
<td>10,800</td>
<td>9.0</td>
</tr>
<tr>
<td>W12A2-A03</td>
<td>230/208</td>
<td>1</td>
<td>3.6 kW</td>
<td>10,800</td>
<td>9.0</td>
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<tr>
<td>W12A2-A05</td>
<td>230/208</td>
<td>1</td>
<td>5.0 kW</td>
<td>10,800</td>
<td>9.0</td>
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<tr>
<td>W12A1-K00</td>
<td>115</td>
<td>1</td>
<td>NONE</td>
<td>10,800</td>
<td>9.0</td>
</tr>
<tr>
<td>W12A1-K02</td>
<td>115</td>
<td>1</td>
<td>2.2 kW</td>
<td>10,800</td>
<td>9.0</td>
</tr>
</tbody>
</table>

- Capacity is certified in accordance with ANSI/ARI Standard 390-2003.
- All ratings based on fresh air intake being 100% closed (no outside air introduction).

**Electrical Specifications**

<table>
<thead>
<tr>
<th></th>
<th></th>
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<th></th>
<th></th>
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<th></th>
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<tbody>
<tr>
<td>W12A2-A02 @</td>
<td>230/208-1</td>
<td>197-253</td>
<td>1</td>
<td>9</td>
<td>15</td>
<td>14</td>
<td>14</td>
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<td>W12A2-A03 @</td>
<td>115-1</td>
<td>104-126</td>
<td>1</td>
<td>20</td>
<td>20</td>
<td>12</td>
<td>12</td>
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<tr>
<td>W12A1-K00 @</td>
<td>115-1</td>
<td>104-126</td>
<td>1</td>
<td>20</td>
<td>30</td>
<td>10</td>
<td>10</td>
</tr>
<tr>
<td>W12A1-K02 @</td>
<td>115-1</td>
<td>104-126</td>
<td>1</td>
<td>20</td>
<td>30</td>
<td>10</td>
<td>10</td>
</tr>
</tbody>
</table>

- Maximum size of the time delay fuse or HACR type circuit breaker for protection of field wiring conductors.
- Based on 75°C copper wire. All wiring must conform to NEC and all local codes.
- These “Minimum Circuit Ampacity” values are to be used for sizing the field power conductors.
- Refer to the National Electrical Code (latest revision), article 310 for power conductor sizing.
- Internal circuit breakers are standard on W12A2-A models.

**Specifications**

<table>
<thead>
<tr>
<th>Models</th>
<th>Electrical Rating - 60 HZ</th>
<th>Compressor RLA</th>
<th>LRA</th>
<th>Outdoor Fan Motor HP-RPM-SP</th>
<th>FLA</th>
<th>Indoor Blower Motor HP-RPM-SP</th>
<th>FLA</th>
<th>CFM/ESP (Rated-WET Coil)</th>
<th>Shipping Weight</th>
</tr>
</thead>
<tbody>
<tr>
<td>W12A2-A</td>
<td>230/208-1</td>
<td>5.5/4.8</td>
<td>32.5</td>
<td>1/10-1075-1</td>
<td>.70</td>
<td>1/8-1650-2</td>
<td>.85</td>
<td>400/10</td>
<td>160 lbs.</td>
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<tr>
<td>W12A1-K</td>
<td>115-1</td>
<td>11.6</td>
<td>63.0</td>
<td>1/10-1075-1</td>
<td>1.40</td>
<td>1/8-1650-2</td>
<td>1.60</td>
<td>400/10</td>
<td>160 lbs.</td>
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**Electric Heat Table**

<table>
<thead>
<tr>
<th>KW</th>
<th>AMPS</th>
<th>BTUH</th>
<th>AMPS</th>
<th>BTUH</th>
<th>AMPS</th>
<th>BTUH</th>
<th>AMPS</th>
<th>BTUH</th>
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<tbody>
<tr>
<td>3.0</td>
<td>15.0</td>
<td>12,285</td>
<td></td>
<td>13.0</td>
<td>9,230</td>
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<tr>
<td>5.0</td>
<td>20.8</td>
<td>17,065</td>
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<td>18.1</td>
<td>12,800</td>
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<tr>
<td>2.0</td>
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<td>18.0</td>
<td>7,510</td>
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**Indoor Blower Performance - CFM at 230**

<table>
<thead>
<tr>
<th>E.S.P. IN H₂O</th>
<th>High Speed Dry/Wet Coil</th>
<th>Low Speed Dry/Wet Coil</th>
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</thead>
<tbody>
<tr>
<td>.0</td>
<td>530/500</td>
<td>465/425</td>
</tr>
<tr>
<td>.1</td>
<td>485/460</td>
<td>415/400</td>
</tr>
<tr>
<td>.2</td>
<td>440/425</td>
<td>365/350</td>
</tr>
<tr>
<td>.3</td>
<td>390/375</td>
<td>315/300</td>
</tr>
<tr>
<td>.4</td>
<td>325/300</td>
<td>300/285</td>
</tr>
</tbody>
</table>

**Cooling Application Data - Outdoor Temperature °F**

<table>
<thead>
<tr>
<th>Models</th>
<th>D.B./W.B.</th>
<th>Cooling Capacity 75°</th>
<th>80°</th>
<th>85°</th>
<th>90°</th>
<th>95°</th>
<th>100°</th>
<th>105°</th>
<th>110°</th>
<th>115°</th>
<th>120°</th>
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<tbody>
<tr>
<td>W12A</td>
<td>75°</td>
<td>Total Cooling</td>
<td>11,400</td>
<td>11,000</td>
<td>10,500</td>
<td>10,000</td>
<td>9,400</td>
<td>9,000</td>
<td>8,300</td>
<td>7,800</td>
<td>7,100</td>
</tr>
<tr>
<td></td>
<td>62</td>
<td>Sensible Cooling</td>
<td>9,100</td>
<td>8,900</td>
<td>8,800</td>
<td>8,600</td>
<td>8,400</td>
<td>8,100</td>
<td>7,800</td>
<td>7,500</td>
<td>7,100</td>
</tr>
<tr>
<td></td>
<td>80</td>
<td>Total Cooling</td>
<td>12,100</td>
<td>11,900</td>
<td>11,800</td>
<td>11,300</td>
<td>10,800</td>
<td>10,400</td>
<td>9,800</td>
<td>9,200</td>
<td>8,500</td>
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<tr>
<td></td>
<td>67</td>
<td>Sensible Cooling</td>
<td>8,800</td>
<td>8,700</td>
<td>8,700</td>
<td>8,600</td>
<td>8,400</td>
<td>8,200</td>
<td>8,000</td>
<td>7,700</td>
<td>7,300</td>
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<tr>
<td></td>
<td>85</td>
<td>Total Cooling</td>
<td>14,500</td>
<td>14,000</td>
<td>13,400</td>
<td>12,800</td>
<td>12,000</td>
<td>11,400</td>
<td>10,600</td>
<td>9,800</td>
<td>9,000</td>
</tr>
<tr>
<td></td>
<td>72</td>
<td>Sensible Cooling</td>
<td>9,100</td>
<td>8,900</td>
<td>8,800</td>
<td>8,600</td>
<td>8,300</td>
<td>8,000</td>
<td>7,700</td>
<td>7,300</td>
<td>6,800</td>
</tr>
</tbody>
</table>

- Below 55°F, unit requires a factory or field installed low ambient control.
- Return air temp. °F.
**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 — BFAD-1**

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.

**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.

**BLANK OFF PLATE — BOP-1A**

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.

**COMMERCIAL ROOM VENTILATOR — CRVS-1**

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.

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 — JIFM-1**

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:**
- Fully modulating
- Honeywell Direct Drive Hi-Torque Actuator
- No linkage required
- Simple single blade design
- Positive shut-off with non-stick gaskets
- Electronic Enthalpy sensor
- Honeywell JADE electronic economizer module with precision settings and diagnostics
- Moisture Eliminator and Prefilter – permanent, washable, aluminum construction

![Barometric Fresh Air Damper](image1)

![Commercial Room Ventilator](image2)

![Economizer](image3)
Brown/white wire must be switched from terminal X to terminal D on damper motor to attain “D” position. This will bypass potentiometer function and go to “full open” when energized.
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Bard Manufacturing Company, Inc.  
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Due to our continuous product improvement policy, all specifications subject to change without notice.

Before purchasing this appliance, read important energy cost and efficiency information available from your retailer.

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