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Getting Other Information and Publications

These publications can help you install the air conditioner or heat pump. You can usually find these at your local library or purchase them directly from the publisher. Be sure to consult current edition of each standard.

National Electrical Code ...................... ANSI/NFPA 70

Standard for the Installation ............... ANSI/NFPA 90A
of Air Conditioning and Ventilating Systems

Standard for Warm Air .................... ANSI/NFPA 90B
Heating and Air Conditioning Systems

Load Calculation for ....................... ACCA Manual J
Residential Winter and Summer Air Conditioning

Duct Design for Residential ............. ACCA Manual D
Winter and Summer Air Conditioning and Equipment Selection

FOR MORE INFORMATION, CONTACT THESE PUBLISHERS:

ACCA Air Conditioning Contractors of America
1712 New Hampshire Avenue NW
Washington, DC 20009
Telephone: (202) 483-9370
Fax: (202) 234-4721

ANSI American National Standards Institute
11 West Street, 13th Floor
New York, NY 10036
Telephone: (212) 642-4900
Fax: (212) 302-1286

ASHRAE American Society of Heating Refrigerating, and Air Conditioning Engineers, Inc.
1791 Tullie Circle, N.E.
Atlanta, GA 30329-2305
Telephone: (404) 636-8400
Fax: (404) 321-5478

NFPA National Fire Protection Association
Batterymarch Park
P.O. Box 9101
Quincy, MA 02269-9901
Telephone: (800) 344-3555
Fax: (617) 984-7057

Manufactured under the following U.S. patent numbers:
5,485,878;   5,301,744;   5,002,116;
4,924,934;   4,875,520;   4,825,936
**WALL MOUNT GENERAL INFORMATION**

**AIR CONDITIONER WALL MOUNT MODEL NOMENCLATURE**

**CAPACITIES**
- 30 - 2 1/2 Ton
- 36 - 3 Ton

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

**CONTROL MODULES**

**COIL OPTIONS**
- X - Standard
- W - One Inch Washable
- P - Two Inch Pleated

**OUTLET OPTIONS**

**FILTER OPTIONS**
- X - One Inch Throwaway
- W - One Inch Washable

**COLOR OPTIONS**
- 1 - White
- 2 - Mesa Brown
- 4 - Buckeye Gray
- 5 - Desert Brown
- 6 - Dark Bronze

**POLYester WITH EXHAUST**

**TABLE 1 ELECTRICAL SPECIFICATIONS**

<table>
<thead>
<tr>
<th>Model</th>
<th>Rated Volts &amp; Phase</th>
<th>No. Field Circuits</th>
<th>Minimum Circuit Ampacity</th>
<th>Maximum External Fuse or Circuit Breaker</th>
<th>Field Power Wire Size</th>
<th>Ground Wire Size</th>
<th>Minimum Circuit Ampacity</th>
<th>Maximum External Fuse or Circuit Breaker</th>
<th>Field Power Wire Size</th>
<th>Ground Wire Size</th>
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<td>8</td>
<td>10</td>
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<td>60</td>
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<td>B09</td>
<td>1</td>
<td>32</td>
<td>35</td>
<td>8</td>
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<tr>
<td>WA361-A00, A0Z</td>
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<td>35</td>
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<td>10</td>
<td>---</td>
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<td>10</td>
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<td>10</td>
<td>10</td>
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<td>---</td>
<td>---</td>
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</tr>
</tbody>
</table>

1. **Minimum Circuit Ampacity**
2. **Maximum Circuit Breaker**

**NOTES**
- Insert 0Z in the KW field of model number.
- Based on 75° copper wire. All wiring must conform to the National Electrical Code and all local codes.
- These "Minimum Circuit Ampacity" values are to be used for sizing the field power conductors. Refer to the National Electric Code (latest revision), Article 310 for power conductor sizing. CAUTION: When more than one field power conductor 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 conductors are in a raceway.
TABLE 2
DIMENSIONS OF BASIC UNIT (NOMINAL)

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<td>5.00</td>
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</tbody>
</table>

FIGURE 1
UNIT DIMENSIONS

* Optional top outlet (factory installed only) for WA30 and WA36 models only.
<table>
<thead>
<tr>
<th>Models</th>
<th>WA301-A</th>
<th>WA301-B</th>
<th>WA301-C</th>
<th>WA361-A</th>
<th>WA361-B</th>
<th>WA361-C</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>240V-1</td>
<td>208V-1</td>
<td>240V-3</td>
<td>208V-3</td>
<td>240V-1</td>
<td>208V-1</td>
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<td>KW</td>
<td>AMPS</td>
<td>BTUH</td>
<td>AMPS</td>
<td>BTUH</td>
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<tr>
<td>5.0</td>
<td>20.8</td>
<td>17,065</td>
<td>18.1</td>
<td>12,800</td>
<td>20.8</td>
<td>17,065</td>
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<td>8.0</td>
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<td>18.0</td>
<td>51,200</td>
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**TABLE 3**

**ELECTRIC HEAT TABLE**
**SHIPPING DAMAGE**

Upon receipt of equipment, the carton should be checked for external signs of shipping damage. If damage is found, the receiving party must contact the last carrier immediately, preferably in writing, requesting inspection by the carrier’s agent.

**GENERAL**

The equipment covered in this manual is to be installed by trained, experienced service and installation technicians.

The refrigerant system is completely assembled and charged. All internal wiring is complete.

The unit is designed for use with or without duct work. Flanges are provided for attaching the supply and return ducts.

These instructions explain the recommended method to install the air cooled self-contained unit and the electrical wiring connections to the unit.

These instructions and any instructions packaged with any separate equipment required to make up the entire air conditioning system should be carefully read before beginning the installation. Note particularly “Starting Procedure” and any tags and/or labels attached to the equipment.

While these instructions are intended as a general recommended guide, they do not supersede any national and/or local codes in any way. Authorities having jurisdiction should be consulted before the installation is made. See Page 1 for information on codes and standards.

Size of unit for a proposed installation should be based on heat loss calculation made according to methods of Air Conditioning Contractors of America (ACCA). The air duct should be installed in accordance with the Standards of the National Fire Protection Association for the Installation of Air Conditioning and Ventilating Systems of Other Than Residence Type, NFPA No. 90A, and Residence Type Warm Air Heating and Air Conditioning Systems, NFPA No. 90B. Where local regulations are at a variance with instructions, installer should adhere to local codes.

**DUCT WORK**

All duct work, supply and return, must be properly sized for the design air flow requirement of the equipment. Air Conditioning Contractors of America (ACCA) is an excellent guide to proper sizing. All duct work or portions thereof not in the conditioned space should be properly insulated in order to both conserve energy and prevent condensation or moisture damage.

Refer to Table 10 for maximum static pressure available for duct design.

Design the duct work according to methods given by the Air Conditioning Contractors of America (ACCA). When duct runs through unheated spaces, it should be insulated with a minimum of 1 inch of insulation. Use insulation with a vapor barrier on the outside of the insulation. Flexible joints should be used to connect the duct work to the equipment in order to keep the noise transmission to a minimum.

A 1/4 inch clearance to combustible material for the first 3 feet of duct attached to the outlet air frame is required. See Wall Mounting Instructions and Figures 3 and 4 for further details.

Ducts through the walls must be insulated and all joints taped or sealed to prevent air or moisture entering the wall cavity.

---

**CAUTION**

Some installations may not require any return air duct. A metallic return air grille is required with installations not requiring a return air duct. The spacing between louvers on the grille shall not be larger than 5/8 inches.

Any grille that meets the 5/8 inch louver criteria may be used. It is recommended that Bard Return Air Grille Kit RG-2 through RG-5 or RFG-2 through RFG-5 be installed when no return duct is used. Contact distributor or factory for ordering information. If using a return air filter grille, filters must be of sufficient size to allow a maximum velocity of 400 fpm.

**FILTERS**

A 1 inch throw away filter is supplied with each unit. The filter slides into position making it easy to service. This filter can be serviced from the outside by removing the service door. A 1 inch washable filter and a 2 inch pleated filter are also available as optional accessories. The internal filter brackets are adjustable to accommodate the 2 inch filter by loosening 2 screws in each bracket assembly and sliding the brackets apart to the required width and retightening the 4 screws.
**FRESH AIR INTAKE**

All units are built with fresh air inlet slots punched in the service panel.

If the unit is equipped with the fresh air damper assembly, the assembly is shipped already attached to the unit. The damper blade is locked in the closed position. To allow the damper to operate, the maximum and minimum blade position stops must be installed. See Figure 2.

All capacity, efficiency and cost of operation information as required for Department of Energy “Energyguide” Fact Sheets is based upon the fresh air blank-off plate in place and is recommended for maximum energy efficiency.

---

**CONDENSATE DRAIN**

A plastic drain hose extends from the drain pan at the top of the unit down to the unit base. There are openings in the unit base for the drain hose to pass through. In the event the drain hose is connected to a drain system of some type, it must be an open or vented type system to assure proper drainage.

---

**FIGURE 2**

**FRESH AIR DAMPER ASSEMBLY**

![Diagram of fresh air damper assembly with blade locked closed for shipping](MIS-938)
INSTALLATION INSTRUCTIONS

WALL MOUNTING INFORMATION

1. Two holes, for the supply and return air openings, must be cut through the wall as shown in Figure 3.

2. On wood-frame walls, the wall construction must be strong and rigid enough to carry the weight of the unit without transmitting any unit vibration.

3. Concrete block walls must be thoroughly inspected to insure that they are capable of carrying the weight of the installing unit.

MOUNTING THE UNIT

1. These units are secured by wall mounting brackets which secure the unit to the outside wall surface at both sides. A bottom mounting bracket is provided for ease of installation, but is not required.

2. The unit itself is suitable for “0” inch clearance, but the supply air duct flange and the first 3 feet of supply air duct require a minimum of 1/4 inch clearance to combustible material. If a combustible wall, use a minimum of 28-1/2” x 8-1/2” dimensions for sizing. However, it is generally recommended that a 1 inch clearance is used for ease of installation and maintaining the required clearance to combustible material. The supply air opening would then be 30” x 10”. See Figures 3 and 4 for details.

6. Position unit in opening and secure with 5/16 lag bolts; use 7/8 inch diameter flat washers on the lag bolts.

7. Secure rain flashing to wall and caulk across entire length of top. See Figure 3.

8. For additional mounting rigidity, the return air and supply air frames or collars can be drilled and screwed or welded to the structural wall itself (depending upon wall construction). Be sure to observe required clearance if combustible wall.

9. On side by side installations, maintain a minimum of 20 inches clearance on right side to allow access to heat strips and control panel and to allow proper airflow to the outdoor coil. Additional clearance may be required to meet local or national codes.

TOP OUTLET ONLY

1. Remove airframe angles from the back of the unit.

2. Coat angles with two 1/8” beads of silicone as shown. Silicone is shipped in the control panel. See Figure 6.

3. Secure angles to the top of the unit with 14 screws provided. Use of prepunched holes provided. Do not relocate. See Figure 6.

4. After installation duct work, seal around airframe and duct work to provide a rain tight seal.

5. It is strongly recommended, but not required, that this unit be installed under a soffit area large enough to shield the top of the unit. See Figure 7.

WIRING — MAIN POWER

Refer to the unit rating plate for wire sizing information and maximum fuse or “HACR Type” circuit breaker size. Each outdoor unit is marked with a “Minimum Circuit Ampacity”. This means that the field wiring used must be sized to carry that amount of current. Depending on the installed KW of electric heat, there may be two field power circuits required. If this is the case, the unit serial plate will so indicate. All models are suitable only for connection with copper wire. Each unit and/or wiring diagram will be marked “Use Copper Conductors Only”. These instructions must be adhered to. Refer to the National Electrical Code (NEC) for complete current carrying capacity data on the various insulation grades of wiring material. All wiring must conform to NEC and all local codes.
The electrical data lists fuse and wire sizes (75°C copper) for all models, including the most commonly used heater sizes. Also shown are the number of field power circuits required for the various models with heaters.

The unit rating plate lists a “Maximum Time Delay Relay Fuse” or “HACR Type” circuit breaker that is to be used with the equipment. The correct size must be used for proper circuit protection and also to assure that there will be no nuisance tripping due to the momentary high starting current of the compressor motor.

The disconnect access door on this unit may be locked to prevent unauthorized access to the disconnect. To convert for the locking capability, bend the tab located in the bottom left hand corner of the disconnect opening under the disconnect access panel straight out. This tab will now line up with the slot in the door. When shut, a padlock may be placed through the hole in the tab preventing entry.

### TABLE 4

**OPERATING VOLTAGE RANGE**

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<tr>
<th>TAP</th>
<th>RANGE</th>
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<tr>
<td>240V</td>
<td>253 - 216</td>
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<tr>
<td>208V</td>
<td>220 - 187</td>
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</table>

**NOTE:** The voltage should be measured at the field power connection point in the unit and while the unit is operating at full load (maximum amperage operating condition.)

Five (5) wires should be run from thermostat subbase to the 24V terminal board in the unit. A five conductor, 18 gauge copper, color-coded thermostat cable is recommended. The connection points are shown in Figure 10.

### TABLE 5

**THERMOSTAT WIRE SIZE**

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<th>FLA</th>
<th>Wire Gauge</th>
<th>Maximum Distance In Feet</th>
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<td>55</td>
<td>2.3</td>
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<td>45</td>
</tr>
<tr>
<td></td>
<td></td>
<td>18 gauge</td>
<td>60</td>
</tr>
<tr>
<td></td>
<td></td>
<td>16 gauge</td>
<td>100</td>
</tr>
<tr>
<td></td>
<td></td>
<td>14 gauge</td>
<td>160</td>
</tr>
<tr>
<td></td>
<td></td>
<td>12 gauge</td>
<td>250</td>
</tr>
</tbody>
</table>

### TABLE 6

**WALL THERMOSTAT AND SUBBASE COMBINATIONS**

<table>
<thead>
<tr>
<th>Thermostat</th>
<th>Subbase</th>
<th>Predominate Features</th>
</tr>
</thead>
<tbody>
<tr>
<td>8403-002</td>
<td>T87F3111</td>
<td>1 stage heat, 1 stage cool System: heat-off-cool Fan: auto-on</td>
</tr>
<tr>
<td>8403-041</td>
<td>T8034C</td>
<td>1 stage heat, 1 stage cool System: heat-off-cool Fan: auto-on</td>
</tr>
<tr>
<td>8403-019</td>
<td>T874C1760</td>
<td>1 stage cool, 2 stage heat System: heat-auto-cool Fan: auto-on</td>
</tr>
<tr>
<td>8403-021</td>
<td>T874D1934</td>
<td>2 stage cool, 2 stage heat System: heat-auto-cool Fan: auto-on</td>
</tr>
<tr>
<td>8403-049</td>
<td>1F93-380</td>
<td>2 stage cool, 2 stage heat Electronic 7 day programming</td>
</tr>
<tr>
<td>8403-043</td>
<td>CM-200</td>
<td>1 stage heat, 1 stage cool System: heat-off-cool Fan: auto-on</td>
</tr>
</tbody>
</table>
NOTE: It is recommended that a bead of silicone caulking be placed behind the side mounting flanges and under the top flashing at the time of installation.

WARNING

- A minimum of 1/4 inch clearance must be maintained between the supply air duct and combustible materials. This is required for the first 3 feet of ducting.
- It is important to insure that the 1/4 inch minimum spacing is maintained at all points.
- Failure to do this could result in overheating the combustible material and may result in fire.
FIGURE 5
WALL-MOUNTING INSTRUCTIONS

SEE FIGURE 3 – MOUNTING INSTRUCTIONS

FIGURE 6
WALL-MOUNTING INSTRUCTIONS

SEE UNIT DIMENSIONS, FIGURE 1, FOR ACTUAL DIMENSIONS

SEE FIGURE 1 FOR DUCT DIMENSIONS
FIGURE 7
COMMON WALL-MOUNTING INSTALLATIONS

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit

Ducted Supply
Return at Unit
FIGURE 8
LOW VOLTAGE WIRING

- Removing jumper for 2 stage electric heat on units with 15 or more kW
- Optional alarm relay provided on units with control module 'M' or 'J' installed, contact rating 24VAC ± 125VA
- Optional motorized fresh air damper suggested hook up
- Field installed per installation, connect to "A1" if available, otherwise connect to "G"

OPTIONAL ECONOMIZER LOW VOLTAGE WIRING
IMPORTANT INSTALLER NOTE

For improved start-up performance, wash the indoor coil with a dishwasher detergent.

CRANKCASE HEATERS

All units are provided with some form of compressor crankcase heat.

All single and three phase models have an insertion well-type heater located in the lower section of the compressor housing. This is a self-regulating type heater that draws only enough power to maintain the compressor at a safe temperature.

Some form of crankcase heat is essential to prevent liquid refrigerant from migrating to the compressor, causing oil pump out on compressor start up and possible valve failure due to compressing a liquid.

The decal in Figure 9 is affixed to all outdoor units detailing start up procedure. This is very important. Please read carefully.

SERVICE HINTS

1. Caution homeowner to maintain clean air filters at all times. Also, not to needlessly close off supply and return air registers. This reduces air flow through the system, which shortens equipment service life as well as increasing operating costs.

2. Check all power fuses or circuit breakers to be sure they are the correct rating.

3. Periodic cleaning of the outdoor coil to permit full and unrestricted airflow circulation is essential.

SEQUENCE OF OPERATION

Cooling—Circuit R-Y makes at thermostat pulling in compressor contactor, starting the compressor and outdoor motor. The G (indoor motor) circuit is automatically completed on any call for cooling operation or can be energized by manual fan switch on subbase for constant air circulation. On all 230 volt units there is a one minute off delay on the blower motor. 460 volt models do not have an off delay. On a call for heating, circuit R-W1 make at the thermostat pulling in heat contact for the strip heat and blower operation. On a call for second stage heat, R-W2 makes bringing on second heat contactor, if so equipped.

COMPRESSOR CONTROL MODULE

The compressor control module is optional on the models covered by this manual. The compressor control is an anti-short cycle/lockout timer with high and low pressure switch monitoring and alarm relay output.

Adjustable Delay On Make And Break Timer

On initial power up or any time power is interrupted to the unit the delay on make period begins which will be 2 minutes plus 10% of the delay on break setting. When the delay on make is complete and the high pressure switch (and low pressure switch if employed) is closed, the compressor contactor is energized. Upon shutdown the delay or break timer starts and prevents restart until the delay on break and delay on make periods have expired.

During routine operation of the unit with no power interruptions the compressor will operate on demand with no delay.

START UP LABEL

These procedures must be followed at initial start up and at any time power has been removed for 12 hours or longer.

To prevent compressor damage which may result from the presence of liquid refrigerant in the compressor crankcase:

1. Make certain the room thermostat is in the "off" position (the compressor is not to operate).

2. Apply power by closing the system disconnect switch. This energizes the compressor heater which evaporates the liquid refrigerant in the crankcase.

3. Allow 4 hours or 60 minutes per pound of refrigerant in the system as noted on the unit rating plate, whichever is greater.

4. After properly elapsed time, the thermostat may be set to operate the compressor.

5. Except as required for safety while servicing, do not open system disconnect switch.
ADJUSTMENTS

Adjustable Delay on Make and Delay on Break Timer

The potentiometer is used to select Delay on Break time from 30 seconds to 5 minutes. Delay on Make (DOM) timing on power-up and after power interruptions is equal to 2 minutes plus 10% of Delay on Break (DOB) setting:

0.5 minute (30 seconds) DOB = 123 second DOM
1.0 minute (60 seconds) DOB = 126 second DOM
2.0 minute (120 seconds) DOB = 132 second DOM
3.0 minute (180 seconds) DOB = 138 second DOM
4.0 minute (240 seconds) DOB = 144 second DOM
5.0 minute (300 seconds) DOB = 150 second DOM

During routine operation of the unit with no power interruptions the compressor will operate on demand with no delay.

Typical Settings for Dual Unit Installation:

Unit 1: DOB set at 2 minutes, and DOM is 132 seconds
Unit 2: DOB set at 4 minutes, and DOM is 144 seconds

PRESSURE SERVICE PORTS

High and low pressure service ports are installed on all units so that the system operating pressures can be observed. Pressure tables can be found later in the manual covering all models. It is imperative to match the correct pressure table to the unit by model number.
TROUBLESHOOTING

FAN BLADE SETTING DIMENSIONS

Shown in the drawing below are the correct fan blade setting dimensions for proper air delivery across the outdoor coil.

Any service work requiring removal or adjustment in the fan and/or motor area will require that the dimensions below be checked and blade adjusted in or out on the motor shaft accordingly.

REMOVAL OF FAN SHROUD

1. Disconnect all power to unit.
2. Remove the screws holding both grills, one on each side of unit, and remove grills.
3. Remove screws holding fan shroud to condenser and bottom – 9 screws.
4. Unwire condenser fan motor.
5. Slide complete motor, fan blade, and shroud assembly out the left side of the unit.
6. Service motor/fan as needed.
7. Reverse steps to reinstall.

REFRIGERANT CHARGE

The correct system R-22 charge is shown on the unit rating plate. Optimum unit performance will occur with a refrigerant charge resulting in a suction line temperature (6 inches from compressor) as shown in Table 8.

<table>
<thead>
<tr>
<th>Model</th>
<th>Rated Airflow</th>
<th>95° F OD Temp.</th>
<th>82° F OD Temp.</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA301</td>
<td>1,100</td>
<td>55 - 57</td>
<td>64 - 66</td>
</tr>
<tr>
<td>WA361</td>
<td>1,100</td>
<td>57 - 59</td>
<td>62 - 64</td>
</tr>
</tbody>
</table>

The suction line temperatures in Table 8 are based upon 80°F dry bulb/67°F wet bulb (50 percent R.H.) temperature and rated airflow across the evaporator during cooling cycle.

<table>
<thead>
<tr>
<th>E.S.P. In H₂O</th>
<th>WA301, WA361</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>High Speed</td>
</tr>
<tr>
<td></td>
<td>Dry Coil</td>
</tr>
<tr>
<td></td>
<td>.0</td>
</tr>
<tr>
<td></td>
<td>.1</td>
</tr>
<tr>
<td></td>
<td>.2</td>
</tr>
<tr>
<td></td>
<td>.3</td>
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<tr>
<td></td>
<td>.4</td>
</tr>
<tr>
<td></td>
<td>.5</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Model</th>
<th>Rated CFM</th>
<th>Rated ESP</th>
<th>Recommended Airflow Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA301</td>
<td>1,000</td>
<td>.40</td>
<td>930 - 1,300</td>
</tr>
<tr>
<td>WA361</td>
<td>1,100</td>
<td>.30</td>
<td>930 - 1,350</td>
</tr>
</tbody>
</table>

① Rated CFM and ESP on high speed tap
### TABLE 11
**MAXIMUM ESP OF OPERATION**  
**ELECTRIC HEAT ONLY**

<table>
<thead>
<tr>
<th>Model</th>
<th>Front Outlet</th>
<th>Top Outlet</th>
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<td></td>
<td>Low Speed</td>
<td>High Speed</td>
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<td>KW</td>
<td></td>
<td></td>
</tr>
<tr>
<td>A00</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>A05</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>A08</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>A10</td>
<td>0.45</td>
<td>0.50</td>
</tr>
<tr>
<td>A15</td>
<td>0.35</td>
<td>0.40</td>
</tr>
<tr>
<td>B00</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>B06</td>
<td>0.40</td>
<td>0.50</td>
</tr>
<tr>
<td>B09</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>B15</td>
<td>0.30</td>
<td>0.45</td>
</tr>
<tr>
<td>C00</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>C06</td>
<td>0.50</td>
<td>0.50</td>
</tr>
<tr>
<td>C09</td>
<td>0.40</td>
<td>0.50</td>
</tr>
<tr>
<td>C15</td>
<td>0.35</td>
<td>0.45</td>
</tr>
</tbody>
</table>

### TABLE 12
**COOLING PRESSURE – OUTDOOR TEMPERATURE °F**

<table>
<thead>
<tr>
<th>Model</th>
<th>Return Air Temperature</th>
<th>Pressure</th>
<th>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>
<th>125</th>
</tr>
</thead>
<tbody>
<tr>
<td>WA301</td>
<td>75 deg DB, 62 deg WB</td>
<td>Low Side</td>
<td>74</td>
<td>77</td>
<td>79</td>
<td>81</td>
<td>82</td>
<td>84</td>
<td>85</td>
<td>85</td>
<td>86</td>
<td>87</td>
<td>88</td>
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<td></td>
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<td>High Side</td>
<td>218</td>
<td>232</td>
<td>247</td>
<td>262</td>
<td>277</td>
<td>292</td>
<td>306</td>
<td>325</td>
<td>341</td>
<td>357</td>
<td>373</td>
</tr>
<tr>
<td></td>
<td>80 deg DB, 67 deg WB</td>
<td>Low Side</td>
<td>80</td>
<td>82</td>
<td>84</td>
<td>86</td>
<td>88</td>
<td>89</td>
<td>91</td>
<td>91</td>
<td>92</td>
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<tr>
<td></td>
<td></td>
<td>High Side</td>
<td>223</td>
<td>238</td>
<td>253</td>
<td>268</td>
<td>284</td>
<td>300</td>
<td>316</td>
<td>333</td>
<td>350</td>
<td>366</td>
<td>383</td>
</tr>
<tr>
<td></td>
<td>85 deg DB, 72 deg WB</td>
<td>Low Side</td>
<td>85</td>
<td>88</td>
<td>91</td>
<td>93</td>
<td>95</td>
<td>96</td>
<td>97</td>
<td>96</td>
<td>99</td>
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<tr>
<td></td>
<td></td>
<td>High Side</td>
<td>231</td>
<td>246</td>
<td>262</td>
<td>278</td>
<td>294</td>
<td>310</td>
<td>327</td>
<td>345</td>
<td>362</td>
<td>379</td>
<td>396</td>
</tr>
<tr>
<td>WA361</td>
<td>75 deg DB, 62 deg WB</td>
<td>Low Side</td>
<td>70</td>
<td>72</td>
<td>74</td>
<td>76</td>
<td>78</td>
<td>79</td>
<td>80</td>
<td>81</td>
<td>82</td>
<td>83</td>
<td>84</td>
</tr>
<tr>
<td></td>
<td></td>
<td>High Side</td>
<td>224</td>
<td>242</td>
<td>259</td>
<td>275</td>
<td>290</td>
<td>304</td>
<td>316</td>
<td>328</td>
<td>339</td>
<td>351</td>
<td>363</td>
</tr>
<tr>
<td></td>
<td>80 deg DB, 67 deg WB</td>
<td>Low Side</td>
<td>75</td>
<td>77</td>
<td>79</td>
<td>81</td>
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<td>85</td>
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<tr>
<td></td>
<td></td>
<td>High Side</td>
<td>229</td>
<td>248</td>
<td>265</td>
<td>272</td>
<td>297</td>
<td>311</td>
<td>325</td>
<td>337</td>
<td>348</td>
<td>360</td>
<td>373</td>
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<tr>
<td></td>
<td>85 deg DB, 72 deg WB</td>
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<td>83</td>
<td>85</td>
<td>87</td>
<td>89</td>
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<td>94</td>
<td>95</td>
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<tr>
<td></td>
<td></td>
<td>High Side</td>
<td>238</td>
<td>257</td>
<td>275</td>
<td>292</td>
<td>307</td>
<td>322</td>
<td>336</td>
<td>349</td>
<td>360</td>
<td>373</td>
<td>386</td>
</tr>
</tbody>
</table>

Low side pressure ± 2 psig  
High side pressure ± 5 psig  
Tables are based upon rated CFM (airflow) across the evaporator coil and should be found under section titled "refrigerant charge" elsewhere in manual. If there is any doubt as to correct charge being in the system, the charge should be removed, system evacuated and recharged to serial plate instructions.
### TABLE 13
**OPTIONAL ACCESSORIES**

<table>
<thead>
<tr>
<th>MODEL</th>
<th>DESCRIPTION</th>
<th>WA301-A</th>
<th>WA301-B</th>
<th>WA301-C</th>
<th>WA361-A</th>
<th>WA361-B</th>
<th>WA361-C</th>
</tr>
</thead>
<tbody>
<tr>
<td>EHWA03-A05</td>
<td>Heater Packages</td>
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<td></td>
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</tr>
<tr>
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<td></td>
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<td>EHWA03-C12</td>
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<tr>
<td>EHWA03-C15</td>
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<td></td>
<td></td>
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</tr>
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<td>BOP-3</td>
<td>Blank Off Plate</td>
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<td>X</td>
<td>X</td>
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<td>X</td>
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<td>BFAD-3</td>
<td>Barometric Fresh Air Damper</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
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<td>MFAD-3</td>
<td>Motorized Fresh Air Damper</td>
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<td>CRV-3</td>
<td>Commercial Ventilator with Exhaust</td>
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<td>Economizer with Exhaust</td>
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<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
<td>X</td>
</tr>
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<td>CMA-13</td>
<td>LPC + HPC + TDR + LAC</td>
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<td>X</td>
<td></td>
<td>X</td>
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</tr>
<tr>
<td>CMC-15</td>
<td>Start Kit</td>
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<td></td>
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<td>WMCB-05A</td>
<td>Circuit Breaker Kit</td>
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<td>WMCB-03B</td>
<td>Circuit Breaker Kit</td>
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