

**Electric
Heater Model
WAS Series
WAL Series**

**INSTALLATION
INSTRUCTIONS**

Date: 9-2-94

**Air Handler Model
Arcoaire / Comfortmaker
BYMB, BYMC, BYMD
BMCG020, BYMDG020**

GENERAL

This Warren Technology electric heater is engineered, designed, and approved to be installed in the Arcoaire/Comfortmaker BYMB, BYMC, BYMD, BMCG020, BMDG020 Series. Before proceeding, check the heater label for correct voltage and KW requirements.

Installation and servicing should be performed by trained service personnel. Before installing the heater, inspect thoroughly for shipping damage. Notify the shipper immediately if any damage is found. Check all porcelain insulators for breakage and inspect heater element wire. Clean all dirt, dust and moisture from equipment. Check for proper clearances of live parts, between phases and to ground. Make sure that all required barriers are in place. Check conductors run in multiple to insure that they are properly phased.

HEATER INSTALLATION

WARNING: Disconnect all electrical power before installation. Failure to do so may result in electrical shock.

Install heater as follows:

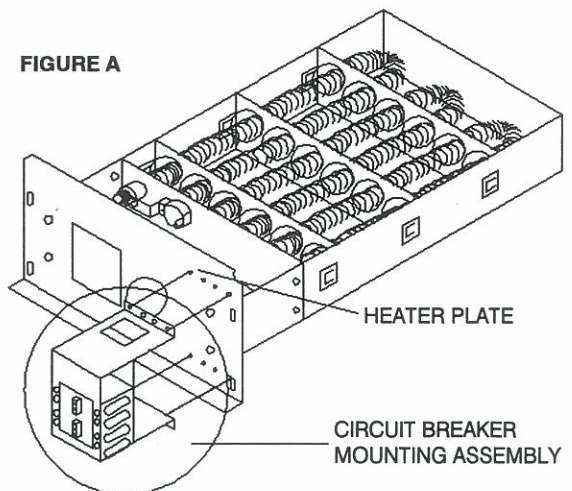
1. Refer to base unit installation instructions as required.
2. Remove access plate of air handler.
3. Remove internal heater cover plate. Save sheet metal screws.
4. Install heater assembly into the air handler access opening. Secure with sheet metal screws from cover plate.
5. Connect heater pigtail leads to receptacles in the air handler.
6. Remove the conduit knockout in blower cabinet for electrical connections. Install the appropriate size conduit connector.

HEATERS WITH HACR CIRCUIT BREAKERS:

Remove cover plate from outside door. Cut out insulation in opening.

NOTE: When applied in the horizontal left hand discharge position, some local codes may require that the circuit breakers be rotated to the up position. Refer to Figure A. Follow the procedure below:

1. Disconnect power to the unit.
2. Remove (4) four screws securing the circuit breaker mounting assembly to the heater plate.
3. Rotate the entire assembly 180 degrees.
4. Re-secure the circuit breaker mounting assembly to the heater plate with the original screws.



ELECTRICAL CONNECTIONS

Refer to air handler unit instructions for recommended wiring procedure.

All electrical connections, wire sizes and conduit sizes must comply with the requirements of State and Local codes and the National Electrical Code.

Refer to air handler unit instructions for recommended wiring procedure.

For all other heaters, the branch circuit must be protected by a fuse or a circuit breaker supplied by others.

Make all wire spliced connections inside air handler unit. Separate all wires from incoming power leads.

Check that all electrical terminal connections, clamps, screws, etc. are tight before start-up.

HEATERS WITH CIRCUIT BREAKERS ONLY

Heaters with circuit breakers that do not meet local code requirements for a unit disconnect switch must include a separate disconnect switch(es) located within sight of the unit.

All power within the cabinet will be "off" when circuit breakers are in the "off" position (except for power supply connections to the circuit breaker).

GROUNDING

Permanently ground heaters in accordance with State and Local Codes and the National Electrical Code. Connect copper conductor, supplied with heater, to ground connection. For multiple circuit models, connect a ground for each circuit.

OVERCURRENT PROTECTION

Recommended sizes for fuses or circuit breakers are listed in the ELECTRICAL DATA TABLE in the column labeled "Maximum Overcurrent Protection."

STAGING

Sequencers control the staging for the heater

elements in 10 KW increments (or less, for odd multiples of 5 KW).

The wires that control the electric heat stages are identified on the wiring diagrams. Some electronic indoor thermostats can be used to stage the heater for multiple stages of electric heat. When using an electronic indoor thermostat, refer to the wiring diagram to select wires to connect for proper staging sequence.

NOTE

When using an indoor thermostat for staging, make sure that staging occurs by breaking the 24V "common" leg and not the "hot" leg.

START-UP and CHECK-OUT

CAUTION: Before proceeding, verify that all wiring is correct per factory approved schematic. Notify factory immediately of any discrepancies.

1. Refer to base unit installation instructions as required.
2. Check for loose terminal connections.
3. Check that all fuse and circuit breaker short circuit interrupting ratings are adequate.
4. Turn on unit and heater power.
5. Set thermostat to call for heat.
6. Check operation of heater.
7. Check that air flow across heater is at or above minimum recommended fan speed. Adjust as required.
8. Any modification or repairs to this equipment without written permission from the factory will be done at the installers own risk and expense.

SERVICE

Fuses/Circuit Breaker - Malfunction will interrupt power to unit. *Check for cause of failure, correct, and replace fuses or reset circuit breaker.*

Limit Switch/Fusible Link - Malfunction prevents heating element(s) from being energized. *Replace switch if malfunction occurs.*

Sequencer - Malfunction will cause heater to not come on or shut off. *Replace faulty sequencer.*