

<p style="text-align: center;">WARREN ELECTRIC HEATER MODEL WHKD SERIES</p>	<p style="text-align: center;">INSTALLATION INSTRUCTIONS</p> <p style="text-align: center;">Date: 07/17/03</p>	<p style="text-align: center;">AIR HANDLER MODEL SPLIT SYSTEM COOLING/HEAT PUMP SERIES AR-090 AR-120 UPFLOW OR HORIZONTAL POSITION</p>
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GENERAL

This electric heater series is engineered and designed, to be installed in the Goodman AR-090-120 split system and heat pump air handlers. Before proceeding, check the heater label for correct voltage and KW requirements.

Installation and servicing of this equipment should only be performed by trained and qualified personnel. Before proceeding with the heater installation, 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 to see that none have been deformed. 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 wired. Refer to installation instructions for complete unit installation details.

WARNING

Before performing service or maintenance operations on system, turn off all main power switches. There may be more than one disconnect. Turn off accessory heater power switch if applicable. Electrical shock can cause personal injury. ***TAG DISCONNECT SWITCH(ES) WITH A SUITABLE WARNING LABEL.***

HEATER INSTALLATION

1. Refer to base unit installation instruction as required.
2. Remove the conduit knockouts in unit cabinet for electrical connections.
3. Remove the (2) heater kit electrical side panels and open the electrical box access door to obtain access to the heater mounting holes.
4. Position the heat kit facing the air handler discharge end. The control box and air handler conduit knockouts should be aligned.
5. Using supplied screws secure the heater kit to the air handler unit (see fig. 1).
6. Reinstall the heat kit side panels.

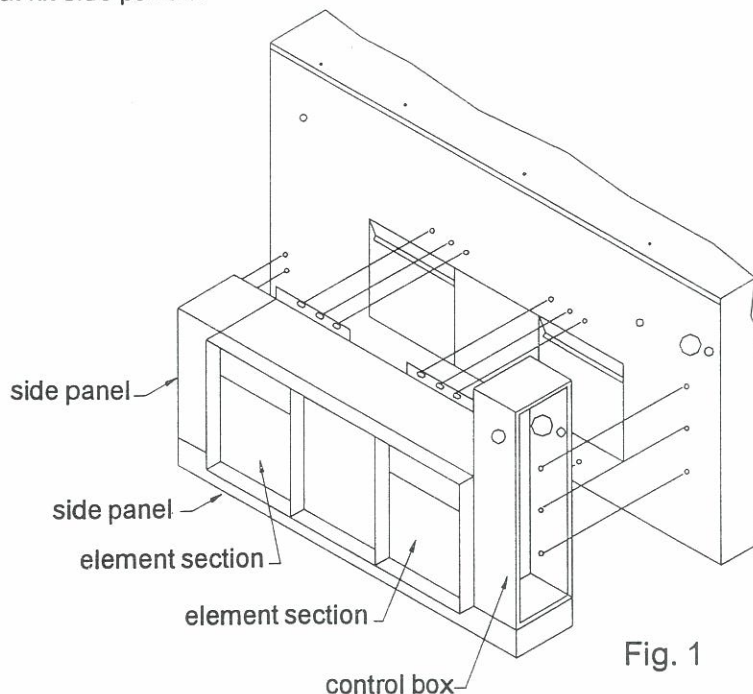


Fig. 1

ELECTRICAL CONNECTIONS

1. This unit is designed for 3-Phase operation only.
2. All electrical connections, wire sizes and type and conduit sizes shall meet the National Electric Code, State and Local Codes. Main power supply, minimum wire sizes, circuits, fusing, etc. is shown on schematic wiring diagrams.
NOTE: Use copper wire only.
3. Refer to base unit instructions for recommended wiring procedures.
4. Route supply wires through conduit knockouts to the heater kit and connect to the terminal block inside the heater control box.
5. Route the air handler supply wires and ground wires through the conduit between the air handler and heat kit and connect to the air handler contactor and ground.
6. **Low voltage connections.** Route the multi-pin plug harness through the large conduit knockout and connect to the mating plug in the air handler. Refer to air handler installation manual for wiring options for the thermostat. The room thermostat control board is located in the air handler control box.
7. Check wiring diagram supplied with heater for specific connections and information .
8. Be sure that all electrical terminal connectors, clamps, screws, etc. are tight before proceeding.
9. Check operation as described in start-up section.

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.
8. Any modification or repairs to this equipment without written permission from the factory will be done at the installer's own risk and expense.

ELECTRIC HEATER PACKAGE CONTENTS

1. Heater assembly
2. Installation Instructions
3. Installer label
4. Wiring diagram
5. (18) mounting screws