

WARREN ELECTRIC HEATER MODEL WSU SERIES	INSTALLATION INSTRUCTIONS Date: 11/20/03	FREEDOM AIR (SUNTHERM) / ICP AIR HANDLERS AHX 024-060
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GENERAL

This electric heater series is engineered, designed, and approved to be installed in the (AHX 024-060) air handlers. Before proceeding, check the heater label for correct voltage, KW requirements, and compare it to the list of approved accessories on the **AHX** Airhandler nameplate. It is the installer's responsibility that the system being installed will satisfy the building load.

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 (SIZE 024 - 036 CABINETS)

1. Refer to the base unit installation instructions as required
Affix Warren Installer label to the equipment access panel.
2. Remove blower section access panel of air handler.
3. Remove the terminal box located on the top panel to clear way for sliding the heater assembly.
4. Unplug RED and BLACK wires from the Terminal Block located inside cabinet, and move the Terminal Block aside to allow for the installation of the heater assembly.
5. Remove cover plate in front of blower assembly.
6. Installer must inspect the heating elements to verify that shipping and handling have not shorted elements to grounded metal parts. Carefully slide the heater into the unit (mounting position is important, check label for correct position). Secure heater into place with screws provided and on size 024 - 036 use **FILLER PLATE** additionally (see fig. 1).
7. For breaker models follow instructions below.
8. Secure the terminal box back to the top panel.
9. Remove the conduit knockout in unit cabinet for electrical connections. Install the appropriate size conduit connector. Complete line voltage field wiring and low voltage field wiring. See **ELECTRICAL CONNECTIONS** section.
10. Secure cabinet door and refer to **START-UP** and **CHECK-OUT** section

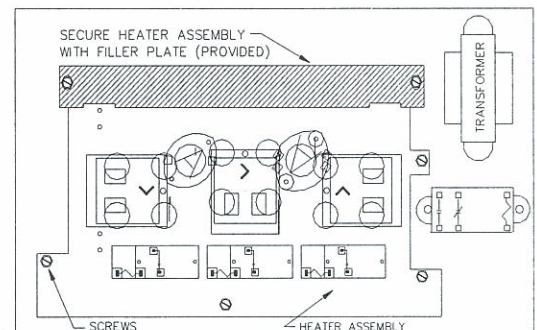


FIG. 1 - FILLER PLATE INSTALLATION (SIZE 024 - 036 CABINETS ONLY)

HEATER INSTALLATION (SIZE 048 - 060 CABINETS)

1. In order to use the heat accessory in size 048 - 060 cabinets an **ADAPTER PLATE** (provided) must be installed to the heater plate (see fig. 2), except for heat accessory model WSU2002B.
2. Proceed by following the heater installation instructions for size 024 - 036 cabinets.

BREAKER MODEL INSTALLATION

1. Remove circuit breaker knockout(s) in unit access panel as required and cut insulation in opening.
2. **BREAKERS ARE SHIPPED LOOSE ON ALL BREAKER MODELS.**
Mount breaker(s) on bracket by sliding the breaker(s) into the breaker slots of the breaker bracket.
3. **BREAKERS BRACKETS ARE SHIPPED LOOSE ON ALL BREAKER MODELS.**
Installer must install the breaker mounting bracket on the heater plate with (2) screws provided, use the lower set of mounting holes to install the breaker bracket on size 024 - 036 cabinets. For use on size 048 - 060 cabinets use the upper set of mounting holes (see fig 3).
4. Install the breaker cover around the top edge of breakers and secure it to the cabinet deck with screws provided.

ELECTRICAL CONNECTIONS

1. 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.
2. Refer to base unit instructions for recommended wiring procedures.
3. Connect the 6-pin female connector from the heater to the 6-pin male connector of the air handler. Connect ground wires to ground lug provided in unit.
4. Connect the BLACK and RED terminals removed from the terminal block to the 1/4" insulated male terminals of the heater assembly. BLACK wire must be connected to the insulated BLACK male terminal and the RED wire must be connected to the RED male terminal.
5. Separate all wires from incoming power leads.
6. Be sure that all electrical terminal connections, clamps, screws, etc. are tight before proceeding.
7. Check wiring diagram supplied with heater for specific connections and information.
8. Check operation as described in start-up and Check-out 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 and verify proper amp draw.
7. Check that air flow across heater is at or above minimum recommended blower 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.

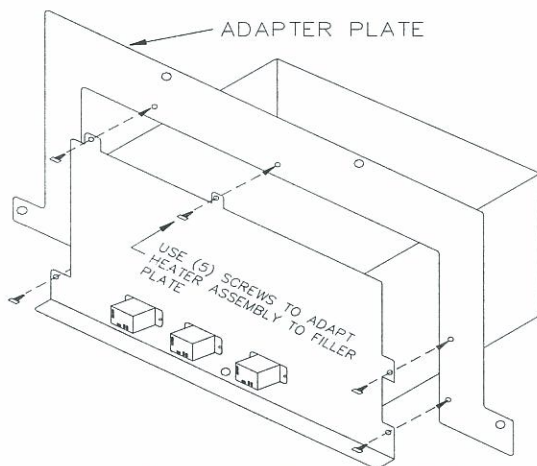


FIG. 2 - ADAPTER PLATE INSTALLATION

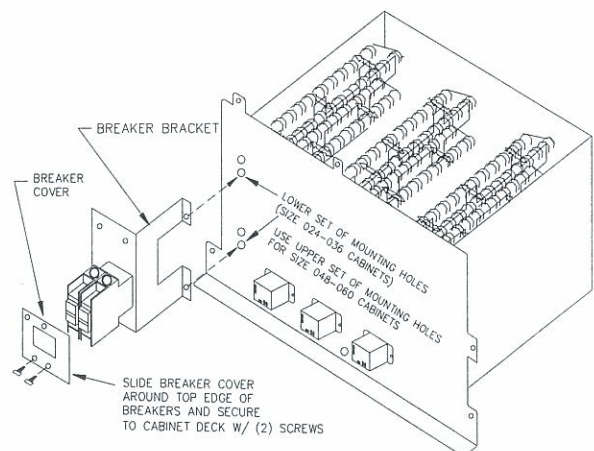


FIG. 3 - BREAKER BRACKET INSTALLATION

ELECTRIC HEATER PACKAGE CONTENTS

1. Heater assembly
2. Installation Instructions
3. Installer label
4. Wiring diagram
5. (9) Mounting screws
6. (1) Breaker cover and bracket
7. (1) adapter plate