

ACCESSORY KIT INSTALLATION INSTRUCTIONS

ELECTRIC HEATER ACCESSORY FOR USE WITH THE FOLLOWING AIR HANDLER MODELS: F*RP, F*RC, F*FP, F*FC, F*FV & N*AH, N*VS

GENERAL

This instruction covers the physical installation of the following electric heaters with F*RP/F*RC/F*FP/F*FC/F*FV single piece air handlers and N1AH/N1VS modular air handlers. Refer to unit instructions for electrical specifications.

Table 1: Models Covered

2HK06500206	2HK06501006	2HK06501025	2HK06501046
2HK16500206	2HK16501006	2HK06501525	2HK06501546
2HK06500506	2HK16501506	2HK06501825	2HK06502946
2HK16500506	2HK16501906	2HK16503025	
2HK06500806	2HK16502006		
2HK16500806	2HK16502506		
	2HK16503006		

NOTE: The 2HK*65030067 heater is not available for single piece air handlers.

The electric heat accessories are used for applications of cooling with electric heat and heat pump with electric heat. Each of the air handler unit models are approved for use with specific electric heat accessories. The installation instructions list the possible combinations and other important electrical data and limitations.

⚠ CAUTION

Unit is approved for zero clearance to combustible material and when equipped with electric heat a minimum clearance of one inch must be maintained on all sides of the supply duct and /or plenum for 3 feet as shown in detail in Figure 1.

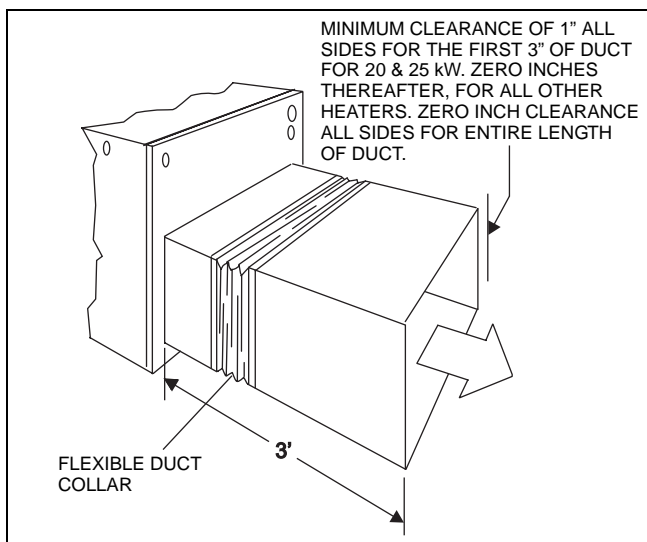


FIGURE 1: Clearances

INSTALLATION

Installation is the same for operating positions: up-flow, down-flow and horizontal left (refer to Figure 5). If unit is installed in any of these positions, proceed to step number 2. Installation of the Heater Kit should be done prior to unit installation.

If the Air Handler unit is to be operated in a horizontal right hand application (refer to Figure 5) and has a Heat Kit with circuit breakers, perform step Number 1 below, to assure circuit breaker handles will be in the up position when "On" after installation. Refer to Air Handler Installation Instructions. Modifications to this Accessory Heat Kit and installation of the Heat Kit should be done prior to unit installation.

1. If the unit is to be operated in a horizontal right hand application and has a Heat Kit with circuit breakers, it is required to rotate the circuit breakers 180° prior to installation. Otherwise proceed to step 2.

This procedure should be performed on the Heat kit before it is installed in the unit and before any field power wiring is applied or unit is placed in operation.

- a. Remove the cover and jumper bar on the circuit breakers if one is installed.
- b. If there is more than one circuit breaker, note original position of heat kit wiring. After circuit breakers have been rotated, the kit wiring must be re-attached to the same circuit breaker where it was originally attached.
- c. Remove kit wiring from circuit breakers.
- d. Remove the 3 screws that attach the circuit breaker bracket to the heat kit.
- e. If additional holes are required in brackets remove circuit breakers before drilling and do not damage any kit wiring while drilling.
- f. If there is only one circuit breaker on the heat kit; remove the center screw on the breaker bracket, slide the circuit breaker to the other side of the bracket and re-attach the center screw. If an additional hole is required in circuit breaker bracket, drill second 3/32" hole in bracket, 5/16" away from current hole.
- g. Rotate the circuit breaker(s) with bracket assembly 180° and re-attach to the heat kit with the 3 screws removed previously.

- h. Re-attach kit wiring, to the same circuit breakers where it was originally attached. Insert kit's soldered wire connections completely into breaker. With the Air Flow arrow on the heat kit pointing up, the kit wiring will be re-installed into the right hand side of the circuit breaker(s) on the heat kit.
 - i. Re-attach jumper bar and cover to circuit breakers. Insert jumper bar connections completely into breaker.
 - j. Apply 45 ft/lb torque to all wiring connections.
 - k. Verify all spade and plug wiring connections are secure.
 - l. Verify that when kit is installed in unit for horizontal application, circuit breaker handle(s) will be up when breaker is in the "On" position.
2. Remove air handler unit blower access panel. See Figure 4.
 3. Install electric heat accessory.

NOTE: Knockouts on the F2FP048,060 / N1AHC16, N1AHD20 and N1VSC16, D20 blower electric heat mounting panel must be removed to install 20 KW heaters and larger. Refer to Figure 2.

CAUTION

To prevent damage, carefully pass the accessory heating element through the rectangular opening in the discharge duct. Heating element support rod must be seated in hole on the opposite side of discharge duct.

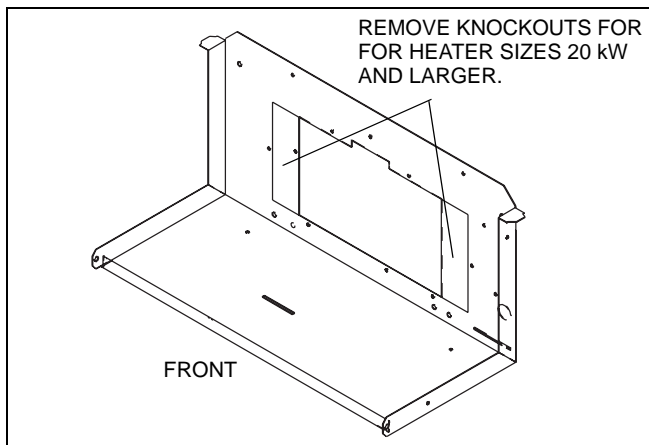


FIGURE 2: Heater Knockouts

4. Align holes and fasten the accessory to the air handler unit with 4 or 6 screws supplied in the kit.
5. **For 208/230 volt heaters:** Connect the male halves of the 4 and 6 pin socket connector to the appropriate connectors on the control board. The end terminals are "D" shaped to ensure polarization of the connector.
6. **For 460 volt heaters:** Connect the male half of the 6 pin connector to the appropriate connector on the control board. Connect the female half of the heater 2 pin socket to the male half of the connector in the unit. See Figure 3.

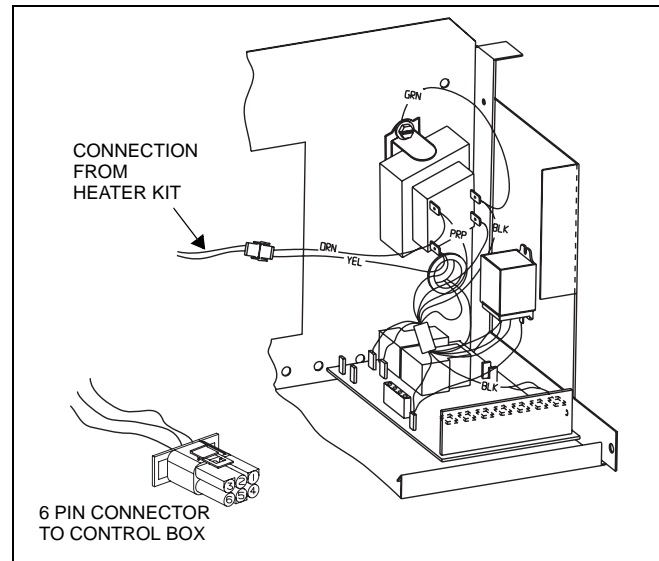


FIGURE 3: 460 Volt Control Box

7. For kits with circuit breaker installed, remove the appropriate openings in the plastic breaker plate.
8. Mark an X in the appropriate box on the indoor unit data-plate for the particular heater installed.

NOTE: Use lower opening for kits with one breaker.

NOTE: The electric heaters have a temperature limit control. If failure occurs, this limit control must be replaced with a direct replacement.

NOTE: All wiring must comply with local and national electrical code requirements. Read and heed all unit caution labels.

LINE POWER CONNECTIONS

Power may be brought into the unit through the supply air end of the unit (top left when unit is vertical) or the left side panel.

Use the hole appropriate to the unit's orientation in each installation to bring conduit from the disconnect. The power lead conduit should be terminated at the electrical control box.

ELECTRIC HEATERS & OPERATING CONTROLS

The low voltage transformer and the fan / heater control are standard on all models. The air handlers are shipped pre-wired to operate as cooling only applications.

To operate these units with electric heat, it is necessary to field install an electric heater kit (2HK). Prior to installing electric heat, it is necessary to perform the following procedure:

1. Remove the 4-pin power plug from the control board.
(See Fig. 10).

NOTE: This pin must not be used when electric heaters are installed.

2. Remove the five (5) screws from the duct cover and remove the duct cover from the air handler.

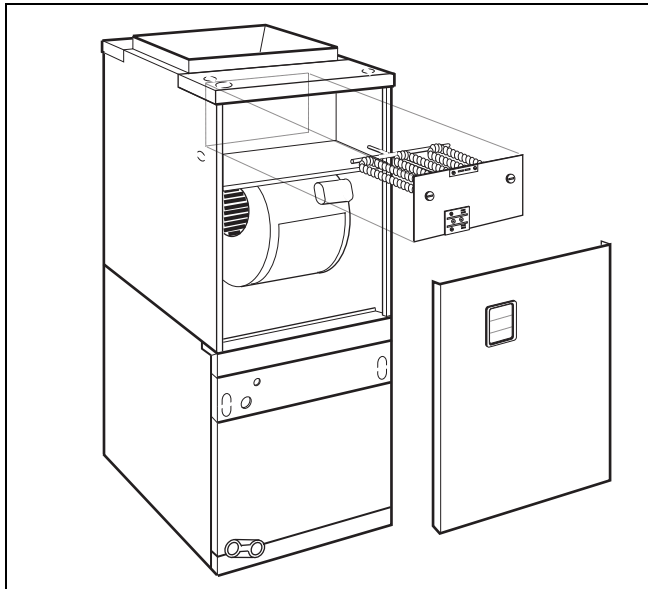


FIGURE 4: Heater Installation

LOW VOLTAGE CONTROL CONNECTIONS

The 24 volt power supply is provided by an internally wired low voltage transformer which is standard on all models.

CAUTION

If the unit is connected to a 208 volt power supply the low voltage transformer must be rewired to the 208 volt tap. See the unit wiring label.

Field supplied low voltage wiring can exit the unit on the top right hand corner or the right hand side panel.

Install the 7/8" plastic bushing supplied with the unit in the selected hole and keep low voltage wiring as short as possible inside the control box.

The field wiring is to be connected at the screw terminals of the control board.

NOTE: All wiring must comply with local and national electrical code requirements. Read and heed all unit caution labels.

NOTE: It is possible to vary the amount of electric heat turned on during the defrost cycle of a heat pump. Standard wiring will only bring on 5 - 10 KW of electric heat during defrost, depending on the size of the heater. See indoor unit installation instruction for optional heat staging.

For blower speed connections, electrical information and wiring diagrams, see indoor unit installation instructions.

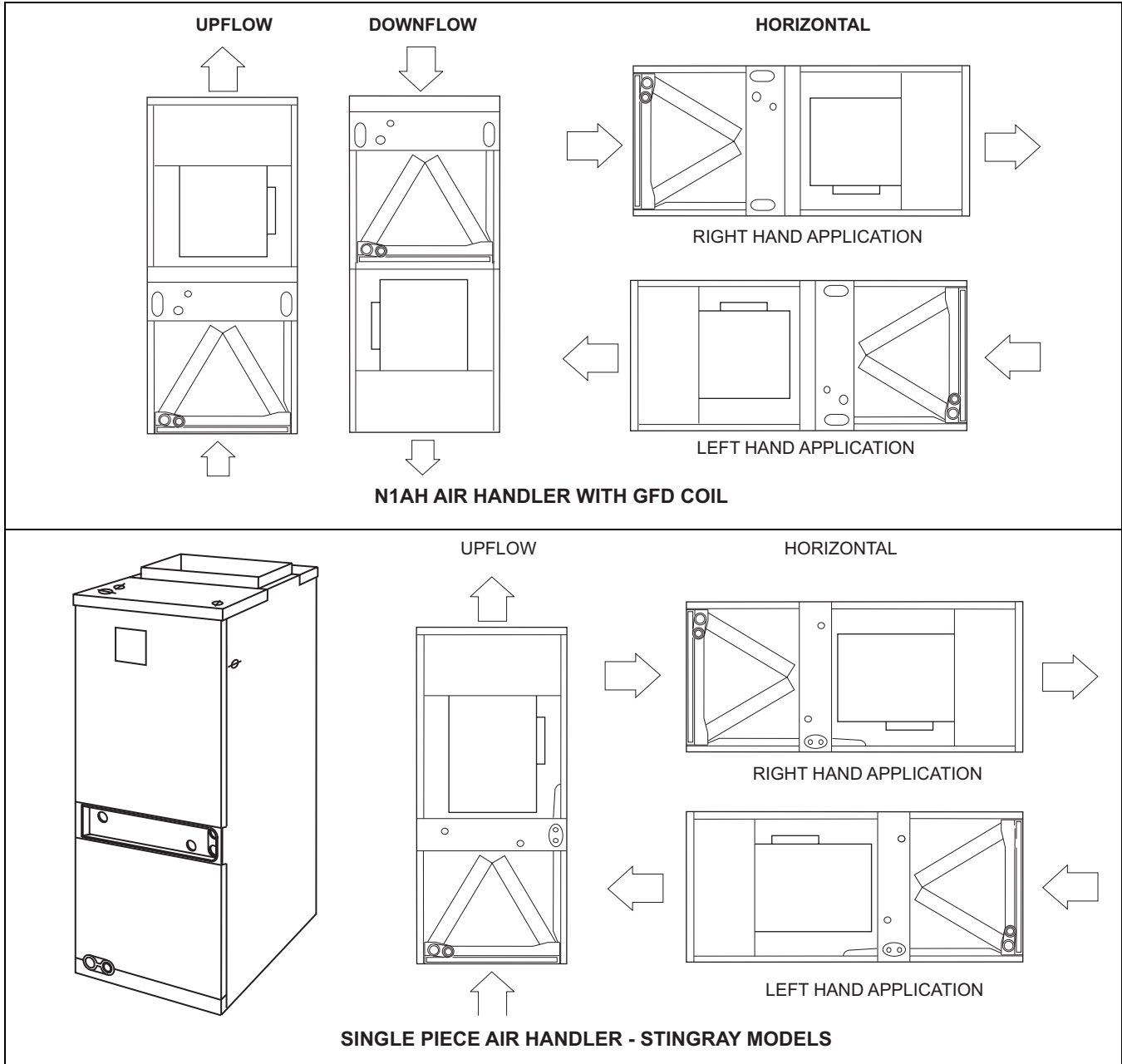


FIGURE 5: Typical Installed Application