HKR
ELECTRIC HEAT KIT
INSTALLATION INSTRUCTIONS

Attention Installing Personnel

As a professional installer, you have an obligation to know the product better than the customer. This includes all safety precautions and related items.

Prior to actual installation, thoroughly familiarize yourself with this Instruction Manual. Pay special attention to all safety warnings. Often during installation or repair, it is possible to place yourself in a position which is more hazardous than when the unit is in operation.

Remember, it is **your** responsibility to install the product safely and to know it well enough to be able to instruct a customer in its safe use.

Safety is a matter of common sense...a matter of thinking before acting. Most dealers have a list of specific good safety practices...follow them.

The precautions listed in this Installation Manual are intended as supplemental to existing practices. However, if there is a direct conflict between existing practices and the content of this manual, the precautions listed here take precedence.

Safety Precautions

The following symbols and labels are used throughout this manual to indicate immediate or potential safety hazards. It is the owner's and installer's responsibility to read and comply with all safety information and instructions accompanying these symbols. Failure to heed safety information increases the risk of personal injury, property damage, and/or product damage.

⚠ WARNING

HIGH VOLTAGE !

Disconnect ALL power before servicing. Multiple power sources may be present. Failure to dos so may cause property damage, personal injury or death.

⚠ WARNING

ONLY individuals meeting the requirements of an "Entry Level Technician" as specified by the Air Conditioning and Refrigeration Institute (ARI) may use this information. Attempting to install or repair this unit without such background may result in product damage, personal injury, or death.

⚠ WARNING

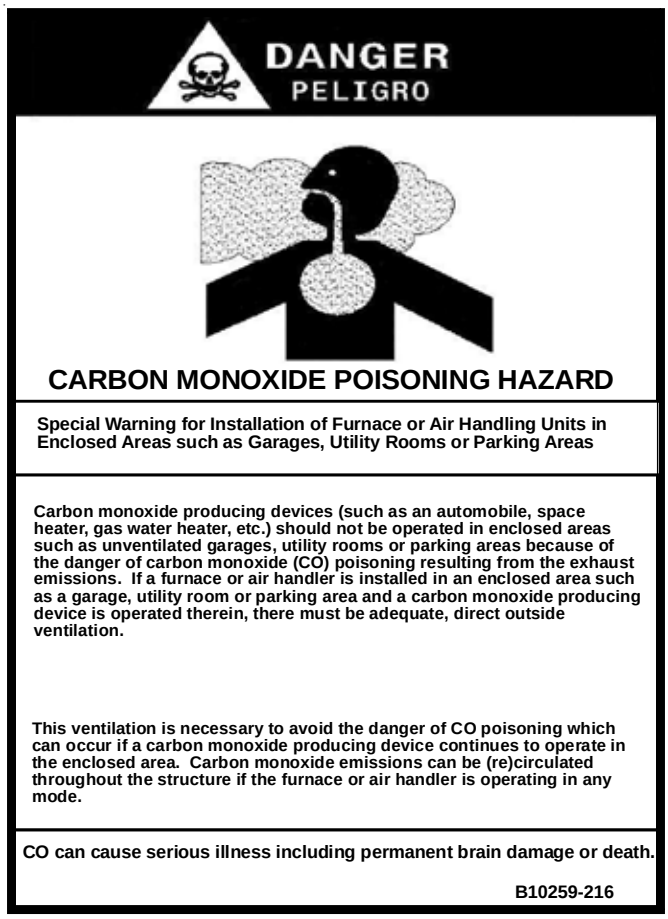
This appliance MUST be installed following the ANSI/NFPA 70 (National Electric Code) and other applicable codes.

⚠ WARNING

Failure to follow these instructions can cause fire, explosion, electrical shock, property damage, personal injury or death.

⚠ CAUTION

To avoid possible personal injury, use extreme caution is using power tools to remove the small breaker mounting brackets. The brackets may quickly rotate and cause injury. or death.



Shipping Inspection

All units are securely packed in shipping containers tested according to International Safe Transit Association specifications. The carton must be checked upon arrival for external damage. If damage is found, a request for inspection by carrier's agent must be made in writing immediately.

Inspect the kit carefully on arrival for damage and bolts or screws which may have come loose in transit. In the event of damage the consignee should:

1. Make a notation on delivery receipt of any visible damage to shipment or container.

2. Notify carrier promptly and request an inspection.
3. With concealed damage, carrier must be notified as soon as possible - preferably within five days.
4. File the claim with the following support documents within a nine month statute of limitations.

- Original or certified copy of the Bill of Lading, or indemnity bond.
- Original paid freight bill or indemnity in lieu thereof.
- Original or certified copy of the invoice, showing trade and other discounts or reductions.
- Copy of the inspection report issued by carrier's representative at the time damage is reported to carrier.

The carrier is responsible for making prompt inspection of damage and for a thorough investigation of each claim. The distributor or manufacturer will not accept claims from dealers for transportation damage.

Standard Air handler Installation

⚠ WARNING

To prevent personal injury or death when installing in a garage, the element must be at least 18" above the floor.

⚠ CAUTION

To avoid property damage or personal injury due to fire, use only copper conductors..

NOTE: When installing in a garage, the element MUST be at least 18" above the floor.

1. Remove the upper access panel from the air handler.
2. Remove the block-off plate from the air handler.
3. Slide the heater kit into the slot following the direction of airflow decal attached to the heater faceplate and secure using the screws previously removed.

Items 4 through 7 & 10 pertain to kits that contain circuit breakers.

4. Remove the circuit breaker mounting bracket, leaving the circuit breakers connected.
5. ***AR, ARUF, ARPF, AEPF, ASPF, MBE and MBR models***
   Mount the circuit breaker mounting bracket as shown using the supplied screws. Insert two of the screws through the blower deck from the blower side. Insert the remaining screws in the holes provided on the upper right side of the jacket.

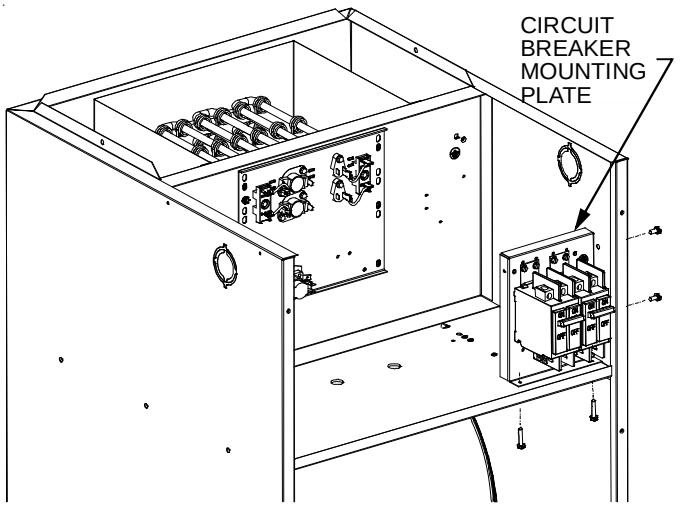


FIGURE 1

6. Insert the breaker with OFF position oriented down.

   NOTE: In the horizontal position, the direction does not matter. In some cases, it will be easier to wire the breakers before reinserting them into the mounting bracket.
7. Insert power leads into the lugs provided on the circuit breaker and tighten. **The power leads MUST be routed through a strain relief as they enter the cabinet.**

⚠ WARNING

HIGH VOLTAGE !

to avoid the risk of electrical shock, a means of strain relief and conductor protection must be provided at the supply wire entrance.

8. Remove the multi-pin connector with the jumper wire and discard. Insert the one contained in the kit. It can be inserted in one position only.
9. Insert the provided ground wire into the lug(s).
10. Break out the appropriate area of the plastic circuit breaker cover on the access panel on the air handler. Rotate if necessary.
11. Replace panel and check operation.
12. Apply the wiring diagram over the one found on the air handlers. On the " AEPF & MBE" Airhandler wiring diagram which is included, mark an "X" on the wiring diagram according to the number of Heater Element rows installed.

Three -Phase Unit Installation

1. Follow steps 1 through 4 from *"Standard Air Handler Installation"* section.
2. Using the two 1" screws provided, mount the terminal block on the right hand side of the heater panel on the airhandler (mounting holes are provided).

3. Wire the terminal block leads to the transformer as per the wiring diagram.

4. Insert single phase power leads into lugs provided on the terminal block and tighten.

5. Insert three-phase power leads into lugs provided on the contactor and tighten. **The power leads MUST be routed through a strain relief as they enter the cabinet.**

⚠ WARNING

HIGH VOLTAGE !

TO AVOID THE RISK OF ELECTRICAL SHOCK, A MEANS OF STRAIN RELIEF AND CONDUCTOR PROTECTION MUST BE PROVIDED AT THE SUPPLY WIRE ENTRANCE.

6. Follow steps 9, 10, 11 and 12 from *"Standard Air Handler Installation"* section.

GPC/GPH "H" Series Installation

NOTE: A separate power supply is required for the HKR heater kit.

⚠ WARNING

HIGH VOLTAGE !

DISCONNECT ALL POWER BEFORE SERVICING. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DOS SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

1. Disconnect all power to the unit, both indoor and outdoor.

2. Remove the control box cover and blower panel.

3. Remove cover to the electric heat kit box.

4. Break out appropriate knockout for electric heat kit based on kW of element (# of elements).

5. Slide the heater kit into the slot following the direction of airflow decal for package unit operation attached to the heater faceplate and secure with screws provided.

Items 6 thru 8 & 11 pertain to kits
that contain circuit breakers.

6. Remove the circuit breaker mounting bracket, leaving the circuit breakers connected.

7. Remove the circuit breaker mounting bracket from the heater element, leaving the circuit breakers connected.

8. Attach the circuit breaker mounting bracket inside the top left corner of the electric heat kit box (Figure 2). Ensure the breaker is oriented with OFF position to the left. Remove the two (2) sheet metal screws prior to installation and re-attach as shown in Figure 3.

NOTE: In some cases, it will be easier to wire the breakers BEFORE inserting them into the electric heat kit box.

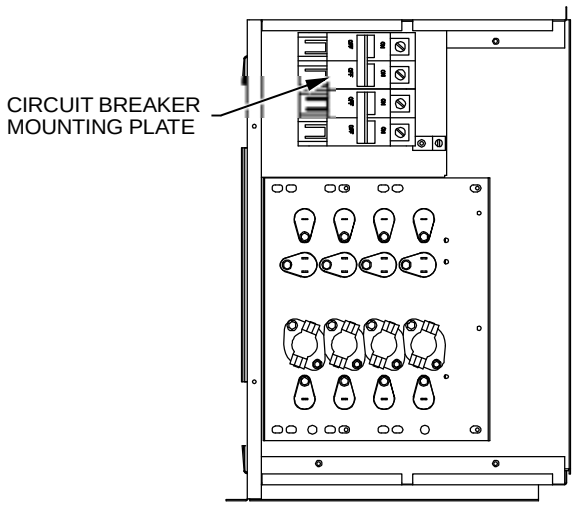


FIGURE 2

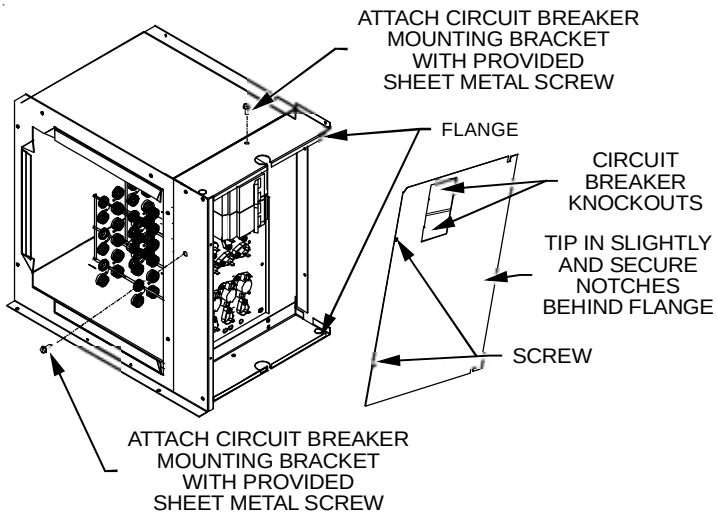


FIGURE 3

9 Insert the power leads into the lugs provided on the circuit breaker or terminal block and tighten. Ensure the power leads are routed through the outer cabinet with a watertight electrical connector, sized appropriately for the electrical power supply (see NEC, National Electric Code).

10 Remove the protection plug (male plug) and discard. Insert the one provided in the electric heat kit. It can be inserted in one position only.

11. Insert the ground wire into the lug(s) provided for that purpose.

12. Break out the appropriate area of the electric heat kit cover previously removed for the circuit breaker provided in the heater kit and replace electric heat kit cover.

NOTE: To replace the electric heat kit cover, slightly tip the cover and insert only the notches under the flanges on the top and bottom of the box. Secure with screws. See Figure 3.

13. Ensure breaker is in the ON position. Replace blower panel cover and check operation through the room thermostat.

14. RESTORE POWER.

15. Apply the provided wiring diagram for package unit models adjacent to the wiring diagram supplied on the inside of the unit control box cover.

16. When proper operation is ensured, replace the control box cover and resume normal operation.

GPH/GPC "M" Series Installations

NOTE: A separate power supply is required for the HKR heater kit.

⚠ WARNING

HIGH VOLTAGE !

DISCONNECT ALL POWER BEFORE SERVICING. MULTIPLE POWER SOURCES MAY BE PRESENT. FAILURE TO DOS SO MAY CAUSE PROPERTY DAMAGE, PERSONAL INJURY OR DEATH.

1. Disconnect all power to the unit, both indoor and outdoor.

2. Remove control box door.

3. Remove blower door.

4. Locate heater box. Remove the two screws holding the heater box cover in place.

FIGURE 4

5. Remove the two screws holding the rear mounting plate. Note the orientation of the heater box covers for reassembly.

6. ***Three-Phase HKR Kits only***

   Remove the contactor from the HKR mounting bracket, leaving the wires connected. Attach contactor to rear mounting plate as shown in Figure 5.

FIGURE 5

7. Install heater element(s) with the four (4) pointed screws included in the unit literature bag. Note the air flow direction label located on the heater element base shown in Figure 6. Orient the heating element base to match airflow direction on package unit blower assembly.

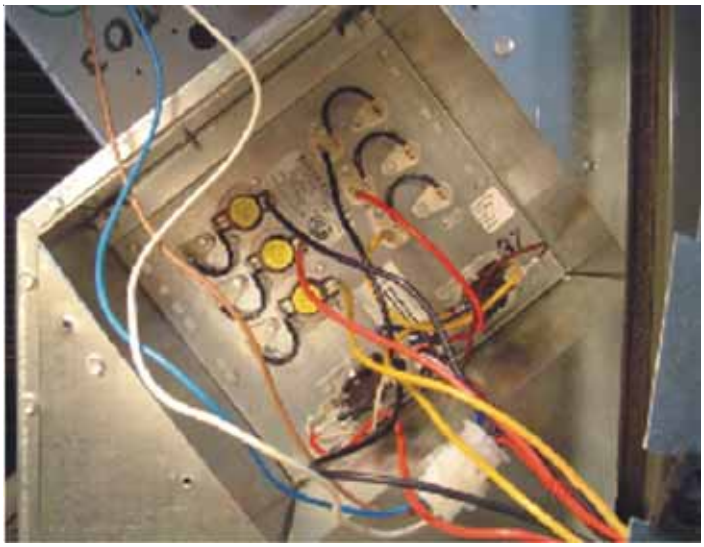


FIGURE 6

8. ***Single Phase HKR Kits only***

   Mount the breaker (or terminal block) to the rear mounting plate using the four (4) blunt tip screws included in the unit literature bag. The screw heads should all be located on the outside of the mounting plate as shown in Figure 7.

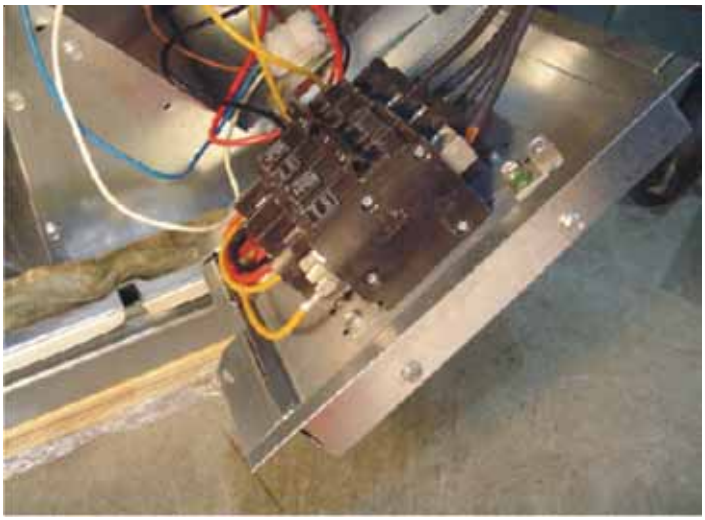


FIGURE 7

9. Locate the 9-pin harness in the unit and remove the male plug.
10. Connect the 9-pin plug from the unit to the 9-pin plug in the heater kit.
11. Feed the 9-pin harness wires through the rubber grommet, and feed the HKR wires through the plastic bushing in the rear mounting plate. See Figure 8.

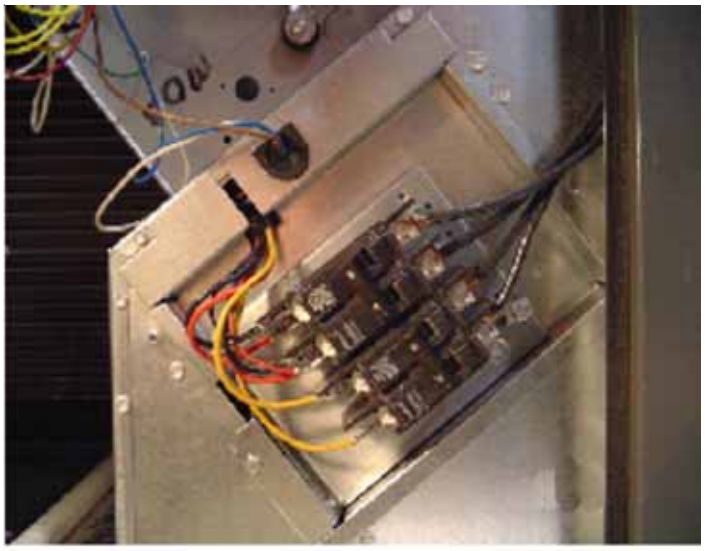


FIGURE 8

12. Install rear mounting plate with the two (2) screws removed in step 6.
13. Connect the line voltage leads to the breaker(s), terminal block, or contactor as applicable.
14. If heat kit includes breakers, remove rectangular knockout(s) from outside cover as required for access.
15. Install the cover with the two (2) screws removed in step 4, routing the line voltage wires through the rubber grommet as shown in Figure 9.

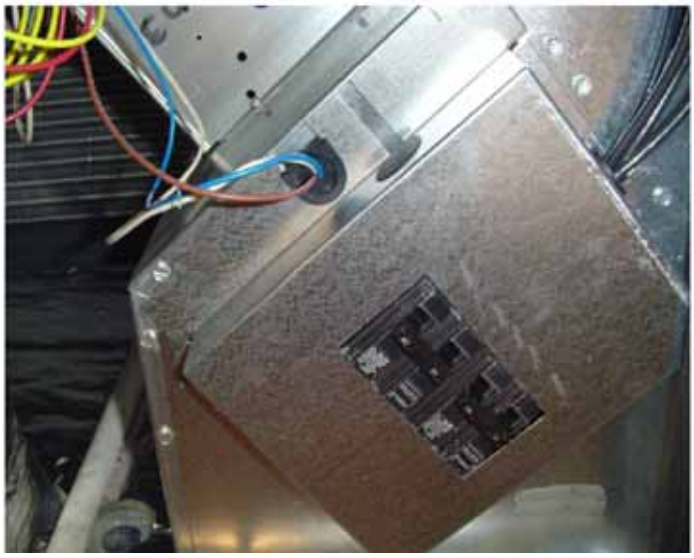


FIGURE 9

16. Install control box door and blower door.
17. Reconnect power and test.