

**ELECTRIC HEATERS  
CONVERSION KIT****INSTALLATION INSTRUCTIONS FOR CONVERSION KIT (38T15)  
FOR ELECTRIC HEATERS (24U10-25, 31B27)  
USED ON KC/KH 024-090 UNITS WITH R410A REFRIGERANT****Shipping and Packing List****Electric Heat Package Contains:**

- 1- Bag Assembly containing:
  - 1- Harness
  - 3- Wiring Diagrams
  - 1- Relay
- 2- Screws
- 5- Wire Ties

**Requirements**

Installation of electric heaters must conform with the standards of the National Fire Protection Association (NFPA) "Standard for the Installation of Air Conditioning and Ventilating Systems," NFPA No. 90A; "Standard for the Installation of Residence Type Warm Air heating and Air Conditioning Systems," NFPA No. 90B; in Canada, CSA C22.1 Canadian Electrical Code Part I and all applicable CSA requirements; manufacturer's installation instructions and local municipal building codes. Heaters are approved for clearance to combustible materials as listed on heater rating plate. Accessibility and service clearances must take precedence over fire protection clearance. All wiring must conform with local codes and the current National Electric Code (NEC) ANSI--C1 and in Canada, CSA C22.1 Canadian Electrical Code Part I and applicable CSA requirements.

**⚠ WARNING**

Improper installation, adjustment, alteration, service or maintenance can cause property damage, personal injury or loss of life. Installation and service must be performed by a licensed professional HVAC installer or equivalent, service agency, or the gas supplier.

**⚠ CAUTION**

As with any mechanical equipment, contact with sharp sheet metal edges can result in personal injury. Take care while handling this equipment and wear gloves and protective clothing.

**Application**

Electric heat kits are used as primary heaters in KC024-090 units and as a secondary heat source in KH 024-072 heat pump units. See TABLE 1 for usage.

**TABLE 1**

Unit	Electric Heat (kW)	
	208-230, 460, 575V 60 Hz	380-420V 50 Hz
024, 030	5.0, 7.5, 10	--
036, 048	7.5, 15	5.7, 11.5
060	7.5, 15, 22.5	5.7, 11.5, 17.2
072, 090	7.5, 15, 22.5, 30	5.7, 11.5, 17.2, 23

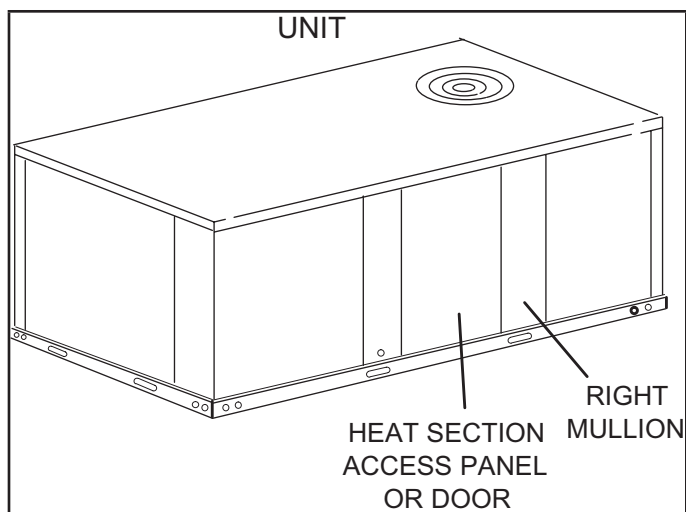
**⚠ WARNING**

To prevent serious injury or death:

- 1- Lock-out/tag-out before performing maintenance.
- 2- If system power is required (e.g., smoke detector maintenance), disable power to blower, remove fan belt where applicable, and ensure all controllers and thermostats are set to the "OFF" position before performing maintenance.
- 3- Always keep hands, hair, clothing, jewelry, tools, etc., away from moving parts.

**Electric Heat Installation**

- 1 - Disconnect all power to unit.
- 2 - Open or remove the unit heat access panel. See FIGURE 1. If the panel is hinged, remove the right mullion.
- 3 - Disconnect P2 jumper from J2 unit electric heat jack on heat section wall. See FIGURE 2.
- 4 - Remove the cover over the heat vestibule opening and retain screws
- 5 - Open electric heat assembly door.
- 6 - Attach K9 relay using 2 screws provided on the location shown in FIGURE 3.
- 7 - Install harness provided, connect J22 jack to P2 plug coming from electric heater. Leave P22 plug open to connect to J2 jack coming from the compressor divider panel. Add wire ties provided to secure added harness to electric heater wiring. See FIGURE 3 for plugs and wire ties locations.
- 8 - Close electric heat assembly door.



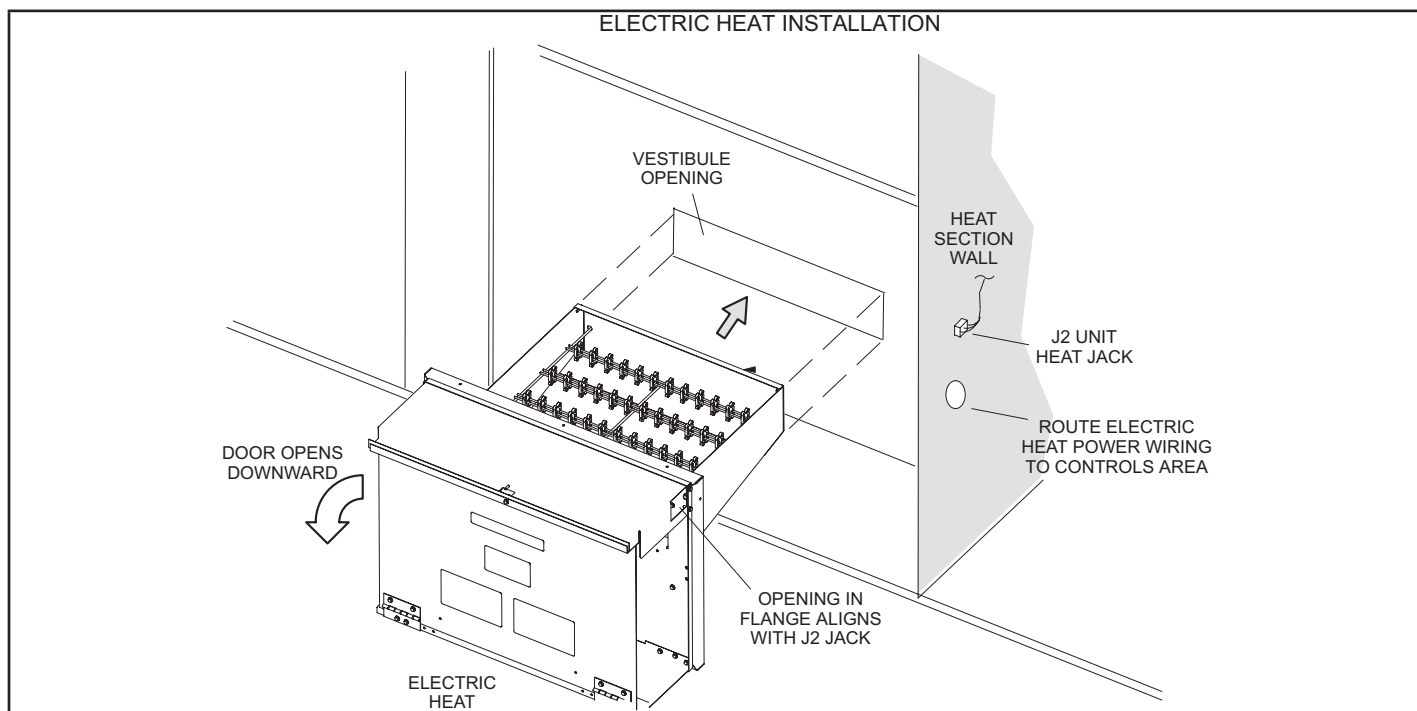
**FIGURE 1**

- 9 - Install the electric heat assembly in unit as shown in FIGURE 2.
- 10 -Open electric heat assembly door and secure assembly to the vestibule with retained screws.
- 11 -Connect P22 from electric heat assembly harness just installed to J2 in heat section wall. See FIGURE 2.
- 12 -Route power wiring through knockout in heat section wall.

## Field Wiring Connections

Wiring must conform to local codes and the current NEC/CEC. Refer closely to FIGURE 3, the field wiring diagram in this kit, and the following information: If heater is being installed in an existing unit, a change in power supply wiring may be required. Remove the original supply wires or disconnect at power source. Refer to heater nameplate for minimum circuit ampacity and maximum fuse size.

- 1 - Route power wires from electric heat assembly to control area. Connect wire to load side of TB2 terminal block. Refer to FIGURE 4.



**FIGURE 2**

### INSTALL RELAY K9 AND J22 - P22 HARNESS

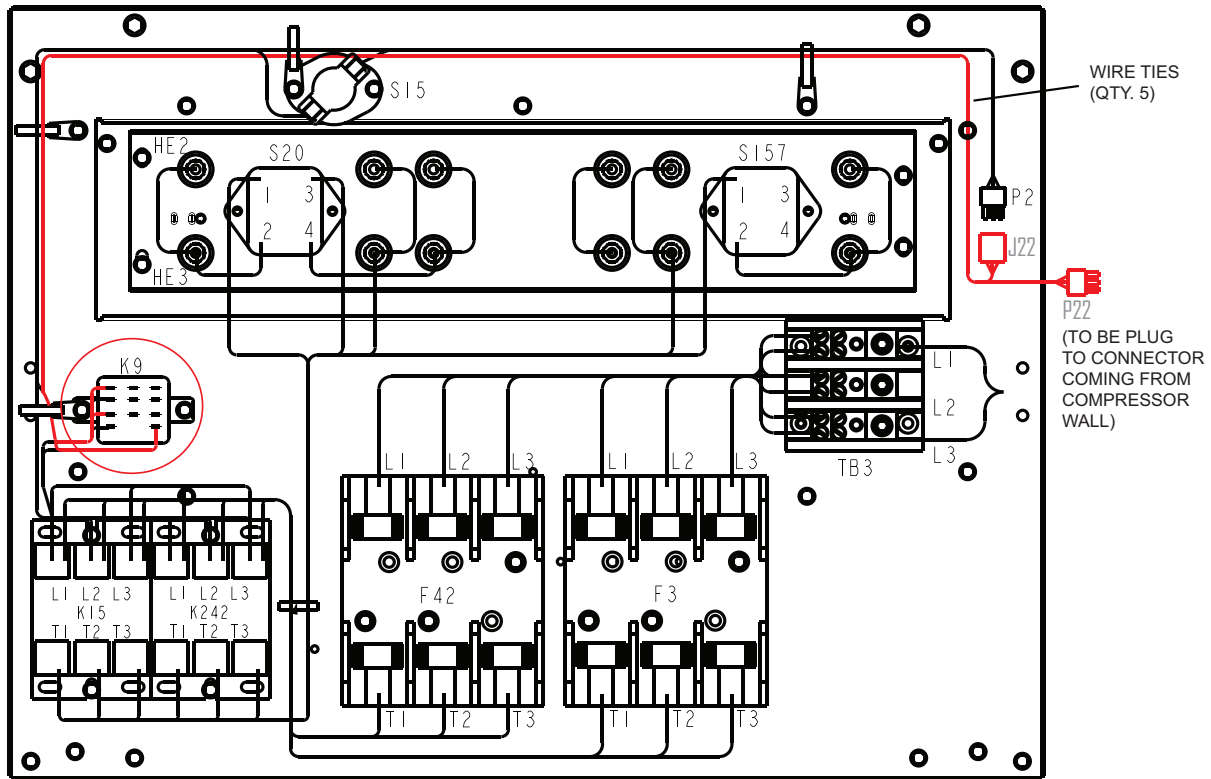


FIGURE 3

### INSTALL FUSE BLOCK AND TB2 TERMINAL BLOCK

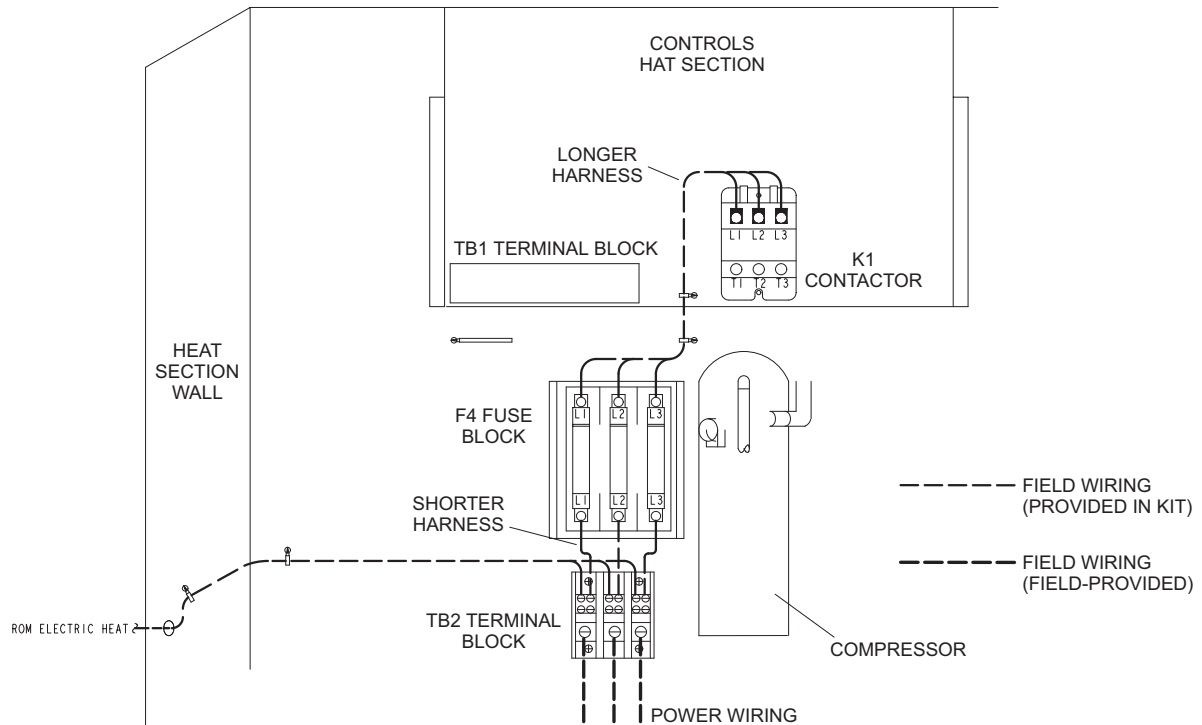


FIGURE 4

### Wiring Diagram

Place appropriate electric heat wiring diagram (provided) on the inner side of the compressor access panel. Ensure that model number matches model numbers on Wiring Diagram.

### Blower Speed Requirements

Electric heater applications require specific blower air volumes. Refer to the blower tables in the unit installation instruction for start-up.

**NOTE** - Minimum air requirements are shown in the following tables; do not set CFM lower than minimum CFM listed.

### Unit Start-Up (Heating Cycle)

Set room thermostat for proper heat or auto operation if switching subbase is used. Apply power to unit and position heat setpoint lever above room temperature. Refer to unit installation instructions for additional information on start-up operations and adjustments.

### MINIMUM AIRFLOW - KC UNITS (BELT DRIVE BLOWER)

kW	CFM	
	Downflow	Horizontal
30	1900	2000
22.5	1500	1600
15	1200	1300
7.5	1050	1200

**NOTE** - 5 & 10kW available in direct drive only.

Direct drive units with electric heat (5.0-22.5kW) can operate on low speed up to 0.6" w.g. maximum static pressure.

### MINIMUM AIRFLOW - KH UNITS WITH ELECTRIC HEAT (BELT DRIVE BLOWER)

kW	CFM	
	Downflow	Horizontal
30	2250	2050
22.5	1750	1800
15	1250	1350
7.5	1050	1200

**NOTE** - 5 & 10kW available in direct drive only.

Direct drive units with electric heat (5.0-22.5kW) can operate on low speed up to 0.6" w.g. maximum static pressure.