

PTAC F- Revision Electric Heater Kit

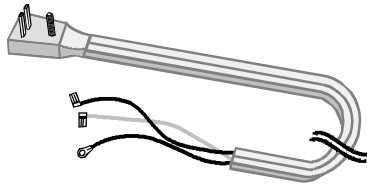
Installation Instructions

NOTE: The PTAC F-Revision Electric Heater Kit is specifically for units manufactured since May, 1998. This kit cannot be used on units manufactured before May, 1998. Refer to the unit serial data for date of manufacture.

Description

The F-revision Heater Kits are for PTAC and PTHP "A" Series with Engineering Revision B and C. They provide supplemental electric heat to heaterless models of packaged terminal air conditioners and heat pumps and are available for field installation.

Unit power cords are factory-installed for heater kits up to 15 amps on 230/208 volt units and 20 amps on 265 volt units. When a 20 (230/208 volt units), 25, or 30 amp heater kit is installed, the factory-installed power cord must be replaced with the corresponding power cord supplied with the heater kit.



| Voltage | Unit Plug | Wall or Subbase Receptacle |
|---------|-----------|----------------------------|
| 230/208 | 15 AMP | NEMA 6-15R AMP |
| 230/208 | 20 AMP | NEMA 6-20R AMP |
| 230/208 | 30 AMP | NEMA 6-30R AMP |
| 265 | 20 AMP | NEMA 7-20R AMP |
| 265 | 30 AMP | NEMA 7-30R AMP |



CAUTION

Do not install 5 Kw heater kits HK350F or HK450F into 7,000 or 9,000 BTU air conditioners or heat pumps.



WARNING

To avoid death, personal injury or property damage due to electrical shock, disconnect electrical power source before installing power cord. The unit "OFF" switch does not disconnect all power to the unit.



WARNING

To avoid death, personal injury or property damage due to electrical shock, the installer must ensure the unit is properly electrically polarized and grounded. See specific instruction.



RECOGNIZE THIS SYMBOL AS A SAFETY PRECAUTION.

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.

Unit Preparation

1. Remove the two screws securing the unit front to the chassis. (Figure 1). Tilt the bottom of the unit front outward and then up. **NOTE:** Not all installations will use these screws.

HOLES TO
SECURE FRONT

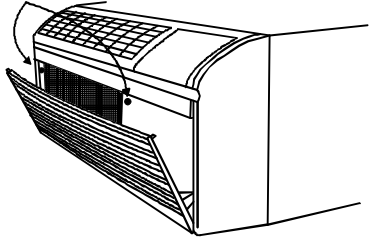


Figure 1
PTAC Unit Front Removal

2. Remove the control knobs on the control panel cover by pulling upward on the knobs. Remove the escutcheon.
3. Remove the control panel cover by removing the two screws holding the control panel cover. Tilt the control panel forward to gain access to the wires.
4. Replace the fuse on all 265 volt units. If your unit has a 5 Kw heater kit, replace the existing fuseholder and fuse with the fuseholder and fuse supplied in this kit. On all other kits, replace the fuse with the fuse supplied in the kit.

NOTE: The incoming electrical power on 230/208 volt units is not fuse protected unless a fuseholder kit has been either factory or field installed. Refer to Table 1 for correct fuse sizes if a fuseholder kit has been installed.

Power Cord Installation (HK335F, HK350F, HK450F)

WARNING

To avoid the possibility of electrical shock or death, the new power cord must be properly polarized and grounded.

WARNING

If the hot and neutral (ribbed) wires on 265 volt models are reversed, portions of the unit will remain live, even when the unit disconnect switch or overcurrent protection is opened. This will present a serious shock hazard.

NOTE: Hardwired units do not require a power cord change. However, the hardwire connection must be sufficiently sized to handle the minimum ampacity of this heater kit.

1. Remove the power cord clamp located near the bottom right of the chassis (Figure 2).

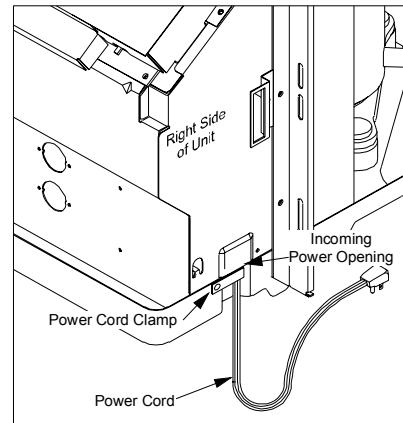


Figure 2

Incoming Power Opening

2. On 230/208 volt units, disconnect the ribbed lead from the C terminal on the capacitor and the smooth lead from LINE 2 terminal on the control board and the green ground wire from the partition panel. Discard both the cord and the cord clamp.

On 265 volt units disconnect the ribbed lead from the C terminal on the capacitor and the smooth lead from the fuseholder and the green ground wire from the partition panel. Discard both the cord and the cord clamp.

- Push about 20 inches of the power cord shipped in the kit through the incoming power opening.
- Secure the cord to the partition panel using the power cord clamp and #8 screw shipped in the kit (Figure 2).

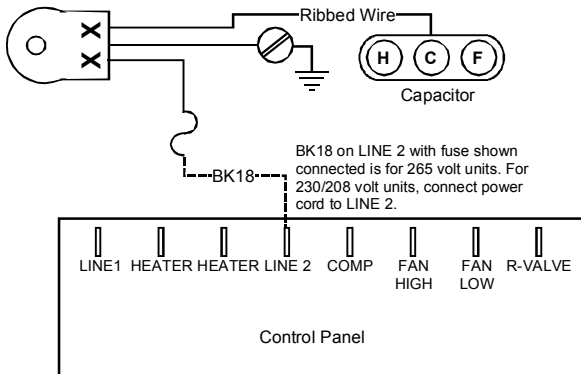


Figure 3
Power Cord Connections

- Connect the ribbed lead to the C terminal on the capacitor (Figure 3).
- On 230/208 volt units connect the smooth lead to LINE 2 terminal on the control board (Figure 3).

On 265 volt units connect the smooth lead to the fuseholder (Figure 3).

- Connect the power cord's green ground wire to the partition panel using the ground screw provided in the kit (Figure 3).
- If the unit is mounted on a subbase with a power receptacle, remove the right front cover plate of the subbase, connect the plug end of the power cord into the subbase power receptacle, and route the cord up out of the subbase through the cord slot in the right side of the subbase (Figure 4). Replace the subbase right front cover panel.

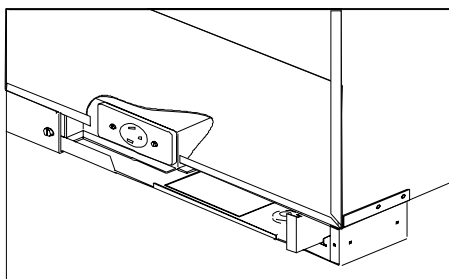


Figure 4
Subbase Power Receptacle

Electric Heater Installation

WARNING

To avoid death, personal injury or property damage due to electrical shock, disconnect electrical power source before installing the electric heater. The unit "OFF" switch does not disconnect all power to the unit.

CAUTION

To avoid cuts from sharp edges of sheet metal, use gloves.

CAUTION

Do not install 5 Kw heater kits HK350F or HK450F into 7,000 or 9,000 BTU air conditioners or heat pumps.

- Remove the two mounting screws holding the screen above the indoor coil. Remove the screen.
- Remove the two screws holding the blower inlet panel in place. Lift the blower inlet panel out of the unit and set aside (Figure 5).

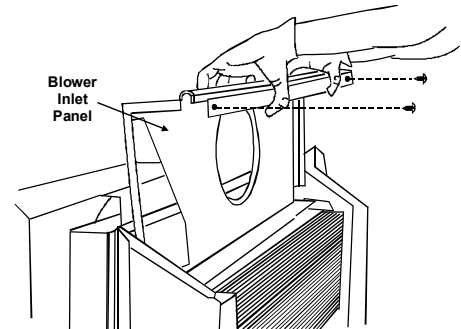
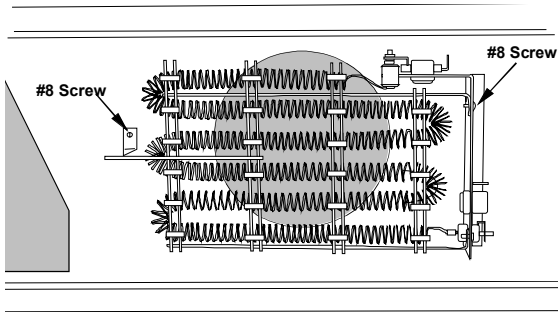


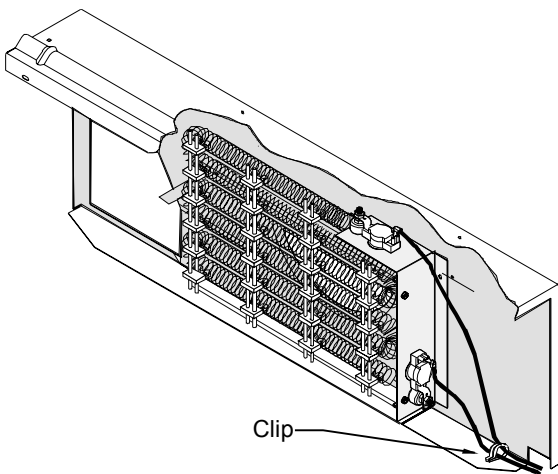
Figure 5
Blower Inlet Panel Removal

- Attach heater to the blower inlet panel with two #8 screws provided with the kit (Figure 6).

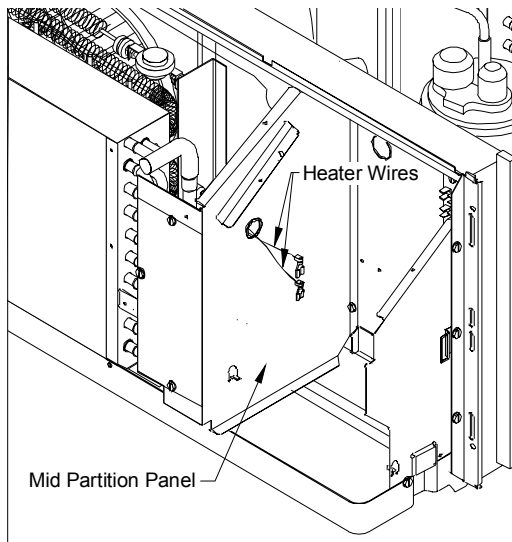


**HEATCRAFT
Figure 6
Heater Suppliers**

- Place the blower inlet panel back into the chassis, threading the heater wires through the clip (Figure 7) and into the wiring access hole (Figure 8) located on the mid partition panel.



**Figure 7
Heater Wires and Clip Location**

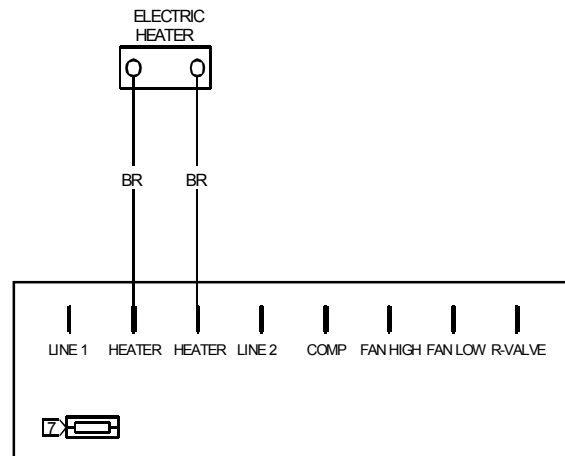


**Figure 8
Wire Access Hole**

- Secure the blower inlet panel to the chassis with the screws removed in Step 2 and replace the screen removed in Step 1.

FOR SINGLE STAGE HEATERS FOLLOW STEP 6 THEN SKIP TO STEP 16.

- Connect the two brown wires to each of the 1/4-inch terminals on the control board marked HEATER (Figure 9).

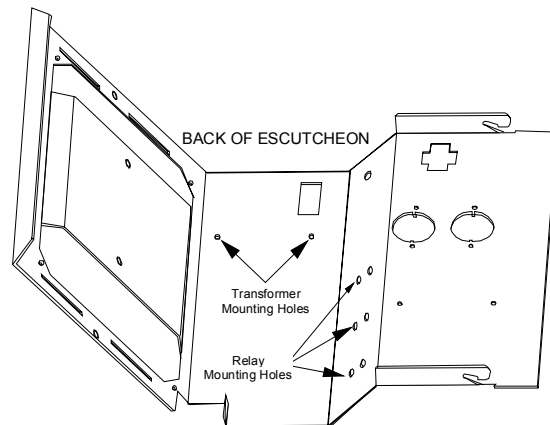


**Figure 9
Single Stage Heater Schematic**

FOR TWO STAGE HEATERS FOLLOW STEPS 7 THROUGH 15

- Mount the heater relay supplied with the heater kit to the middle section of the control panel. Place the studs on the heater relay through the respective holes on the control panel and tighten the nut onto the threaded stud (Figure 10).

NOTE: All wiring required for this kit is preconnected to the heater relay or the heater assembly.



**Figure 10
Heater Relay Location**

- After disconnecting the BK16 wire from the FAN HIGH terminal on the control board, connect it to the heater relay 3 terminal.

9. On the LINE 1 terminal of the control board:
 - a. Disconnect the RD33 wire.
 - b. Connect VT19 from the heater relay A terminal.
 - c. Reconnect the RD33 wire to the piggyback terminal of VT19.
10. Connect BR34 from the heater 34 terminal to the HEATER terminal next to the LINE 1 terminal on the control board.
11. Connect VT17 from the heater relay 6 terminal to the HEATER terminal next to the LINE 2 terminal on the control board.
12. Connect BR35 from the HEATER terminal to the piggyback terminal of VT17.
13. Connect VT18 from the heater relay B terminal (as shipped from the factory) to the FAN HIGH terminal on the control board.
14. On the LINE 2 terminal of the control board:
 - a. Disconnect the power wire (BK18 on 265 volt units, power cord on the 230/208 volt units).
 - b. Connect VT20 from the heater relay 5 terminal.
 - c. Reconnect the power wire to the piggyback terminal of VT20.

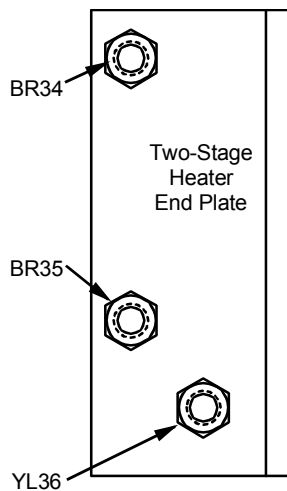


Figure 11
Two Stage Heater
Wire Connections

15. Connect wire YL36 from the heater 36 terminal to the heater relay 4 terminal.

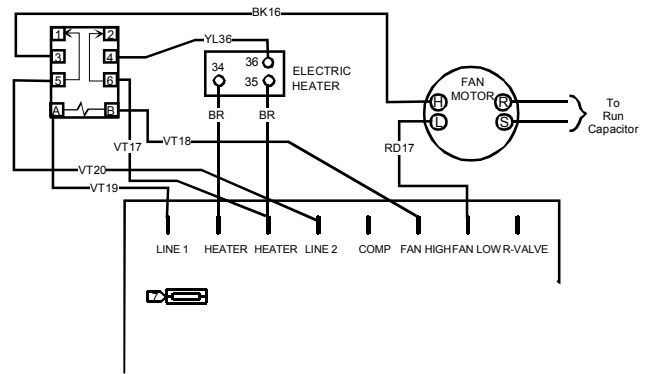


Figure 12
2 Stage Heater Schematic

16. Find the auxiliary "electric heater" data plate label on the PTAC unit near the serial plate. Check mark the appropriate box on the data plate to indicate data for the heater installed in the unit (Figures 13 and 14).
17. Replace the control panel, control panel cover, es-cutchcon plate and unit front.

CAUTION

Do not install 5 Kw heater kits HK350F or HK450F into 7,000 or 9,000 BTU air conditioners or heat pumps.

| Electric Heater | | Electrical Heater kW 230/208 V | | Heater BTU/HR | | Total Watts | | Total Amps | | Minimum Circuit | Overcurrent Protection** |
|-----------------|----------|-----------------------------------|---------|------------------|-------|----------------|------|---------------|------|--------------------|-----------------------------|
| Size (kW) | Ord. No. | Stage 1 | Stage 2 | 230V | 208V | 230V | 208V | 230V | 208V | Ampacity | |
| 1.5 | HK315F | 1.5/1.2 | - | 5100 | 4100 | 1580 | 1280 | 7.1 | 6.4 | 8.8 | 15A |
| 2.5 | HK325F | 2.5/2.0 | - | 8500 | 6800 | 2580 | 2080 | 11.5 | 10.2 | 14.2 | 15A |
| 3.5 | HK335F | 3.5/2.9 | - | 12000 | 9900 | 3580 | 2980 | 15.8 | 14.5 | 19.6 | 20A |
| 5.0* | HK350F | 3.5/2.9 | 1.5/1.2 | 17100 | 14000 | 5080 | 4180 | 22.3 | 20.3 | 27.7 | 30A |

*On two stage heater kit "High Heat" = both stages ON; "Low Heat" = stage 1 On only.

**Recommended field supplied time delay fuses or HACR type circuit breaker.

Table 1
230/208 Volt Electric Heater and Power Cord Data

| Electric Heater | | Electrical Heater kW 265 V | | Heater BTU/HR | Total Watts | Total Amps | Minimum Circuit | Overcurrent Protection** |
|-----------------|----------|-------------------------------|---------|------------------|----------------|---------------|--------------------|-----------------------------|
| Size (kW) | Ord. No. | Stage 1 | Stage 2 | 265V | 265V | 265V | Ampacity | |
| 1.5 | HK415F | 1.5 | - | 5100 | 1580 | 6.3 | 7.7 | 15A |
| 2.5 | HK425F | 2.5 | - | 8500 | 2580 | 10.0 | 12.4 | 15A |
| 3.5 | HK435F | 3.7 | - | 12600 | 3780 | 14.6 | 18.1 | 20A |
| 5.0* | HK450F | 3.5 | 1.5 | 17100 | 5080 | 19.5 | 24.2 | 25A |

*On two stage heater kit "High Heat" = both stages ON; "Low Heat" = stage 1 On only.

**Recommended field supplied time delay fuses or HACR type circuit breaker.

Table 2
265 Volt Electric Heater and Power Cord Data

| LISTED ACCESSORIES - PACKAGE TERMINAL AIR CONDITIONER (SA5810) | | | | | |
|---|--------------|---------------|-------------|-----------------------|-------------------|
| AUXILIARY HEATERS - 230/208 VOLT | | | | | |
| INSTALLER TO MARK HEATERS INSTALLED: | | | | | |
| <input type="checkbox"/> | NONE | | | | |
| <input type="checkbox"/> | HEATER KW | HEATER P/N | MAX AMPS | MIN. CIR. AMPACITY | MAX. FUSE SIZE |
| <input type="checkbox"/> | 1.5/1.2 | 20252001 | 7.1 | 8.8 | 15 |
| <input type="checkbox"/> | 2.5/2.0 | 20252002 | 11.5 | 14.2 | 15 |
| <input type="checkbox"/> | 3.5/2.9 | 20252003 | 15.8 | 19.6 | 20 |
| <input type="checkbox"/> | 5.0/4.1 | 11177801 | 22.3 | 27.8 | 30 |

Figure 13
230/208 Volt Electric Heat Auxiliary Data Label

| LISTED ACCESSORIES - PACKAGE TERMINAL AIR CONDITIONER (SA5810) | | | | | |
|---|--------------|---------------|-------------|-----------------------|-------------------|
| AUXILIARY HEATERS - 265 VOLT | | | | | |
| INSTALLER TO MARK HEATERS INSTALLED: | | | | | |
| <input type="checkbox"/> | NONE | | | | |
| <input type="checkbox"/> | HEATER KW | HEATER P/N | MAX AMPS | MIN. CIR. AMPACITY | MAX. FUSE SIZE |
| <input type="checkbox"/> | 1.5 | 20252006 | 7.7 | 15 | 15 |
| <input type="checkbox"/> | 2.5 | 20252007 | 12.4 | 15 | 15 |
| <input type="checkbox"/> | 3.7 | 20252008 | 18.5 | N/A | 20 |
| <input type="checkbox"/> | 5.0 | 11177802 | 24.2 | N/A | 25 |

Figure 14
265 Volt Electric Heat Auxiliary Data Label