



## SERVICE REFERENCE

DIVISION 4	SECTION KUH	
SALES REFERENCE	(Supersedes PF486-2)	PF486-3
161-303476-001		
DATE	AUGUST, 2004	

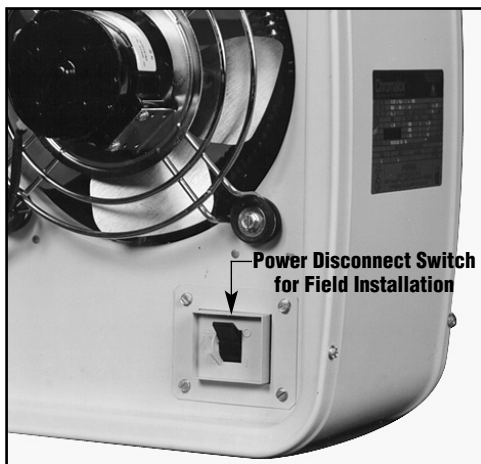
## INSTALLATION INSTRUCTIONS AND RENEWAL PARTS IDENTIFICATION

### Power Disconnect Switch Kits



3 Pole

Model	Rating	PCN
KDS-1	50 Amp for units rated 480V and less 40 Amp for units rated 500V to 600V	304434



3 Pole 600 V Rating

Model	Rating	PCN
KDS-2	80 Amp	304442
KDS-3	100 Amp	304450

Specifications – Table A

Model	Electrical Data (60Hz)				Standard Contactor Rating (Qty.)
	Volts	kW	Phase	Amps	
KUH-C-02-81	208	2.667	1	12.8	
KUH-C-02-21	208/240	2/2.667	1	11.1*	
KUH-C-02-71	277	2.667	1	9.6	
KUH-C-04-81	208	4	1	19.2	
KUH-C-04-83			3	11.2	30A (1)
KUH-C-04-21	208/240	3/4	1	16.7*	
KUH-C-04-23			3	9.6*	30A (1)
KUH-C-04-71	277	4	1	14.5	
KUH-C-04-43	480	4	3	4.8	30A (1)
KUH-C-05-81	208	5	1	24.0	
KUH-C-05-83			3	13.8	30A (1)
KUH-C-05-21	208/240	3.75/5	1	20.8*	
KUH-C-05-23			3	12.1*	30A (1)
KUH-C-05-71	277	5	1	18.2	
KUH-C-05-43	480	5	3	6.0	30A (1)
KUH-C-07-81	208	7.5	1	36.1	50A (1)
KUH-C-07-83			3	20.9	30A (1)
KUH-C-07-21	208/240	5.625/7.5	1	31.1*	30A (1)
KUH-C-07-23			3	18.1*	30A (1)
KUH-C-07-71	277	7.5	1	27.2	30A (1)
KUH-C-07-43	480	7.5	3	9.0	30A (1)
KUH-C-10-81	208	10	1	48.0	50A (1)
KUH-C-10-83			3	27.8	30A (1)
KUH-C-10-21	208/240	7.5/10	1	41.7*	30A (1)
KUH-C-10-23			3	24.0*	30A (1)
KUH-C-10-43	480	10	3	12.0	30A (1)
KUH-C-12-83	208	12.5	3	34.8	50A (1)
KUH-C-12-23	208/240	9.375/12.5	3	30.1*	50A (1)
KUH-C-12-43	480	12.5	3	15.1	30A (1)
KUH-C-15-83	208	15	3	41.8	50A (1)
KUH-C-15-23	208/240	11.25/15	3	36.2*	50A (1)
KUH-C-15-43	480	15	3	18.1	30A (1)
KUH-C-20-23	208/240	15/20	3	48.0*	50A (1)
KUH-C-20-43	480	20	3	24.0	30A (1)
KUH-C-25-43	480	25	3	30.0	50A (1)
KUH-C-30-83	208	30	3	83.4	50A (2)
KUH-C-30-23	208/240	22.5/30	3	72.2*	50A (2)
KUH-C-30-43	480	30	3	36.1	30A (2)
KUH-C-35-23	208/240	26.25/35	3	84.3*	50A (2)
KUH-C-35-43	480	35	3	42.1	30A (2)
KUH-C-40-23	208/240	30/40	3	96.0*	50A (2)
KUH-C-40-43	480	40	3	48.0	30A (2)
KUH-C-45-43	480	45	3	54.1	30A (2)

\*208V amperage is 86% of 240V value.

## GENERAL

The following procedure contains instructions for installing Power Disconnect Switches.

## WARNING

**ELECTRIC SHOCK HAZARD. Disconnect all power before installing disconnect switch. Failure to do so could result in personal injury or property damage. Disconnect switch must be installed by a qualified person in accordance with the National Electrical Code, NFPA 70.**

# INSTALLATION

1. The amperage rating of the disconnect must be equal to or greater than the amperage rating on Table A and as marked on the nameplate located on the bottom access door (Figure 1).
2. The power disconnect kit is to be installed in the rectangular knockout located in the bottom right corner on the back of the heater (Figure 2). The knockout can be removed using a hammer and chisel or other appropriate means.  
For easier access to terminal screws to wire pigtail leads supplied on the heater, it is suggested that these connections be made before installing. See Wiring Instructions.
3. The disconnect switch assembly (Figures 3 or 4) consists of a mounting bracket, disconnect switch, mounting plate cover and self tapping screws.



Figure 1

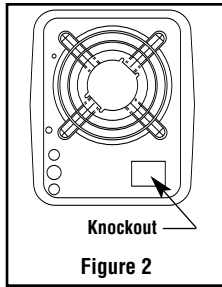


Figure 2

4. The Disconnect switch, with its mounting bracket should be inserted into the heater cabinet by opening the bottom service door and positioned behind the opening created in Step 2 (see Figure 5).

## KDS-1

5. The disconnect switch, with its mounting plate should be inserted into the heater cabinet by opening the bottom service door and positioned behind the opening created in step 2 (see Figure 5).
6. Insert the four self tapping screws into the four holes in the rear panel. They should engage the holes in the mounting plate and then be tightened until they are secure (see Figure 6).
7. Mount the switch faceplate to the switch using the two provided screws. Mount with the "OFF" position to "0" to the left and the on position "1" to the top. Slide the handle over the shaft and tighten the screw to secure.

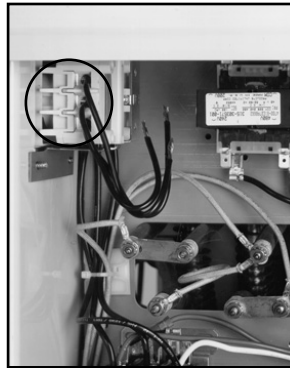


Figure 5

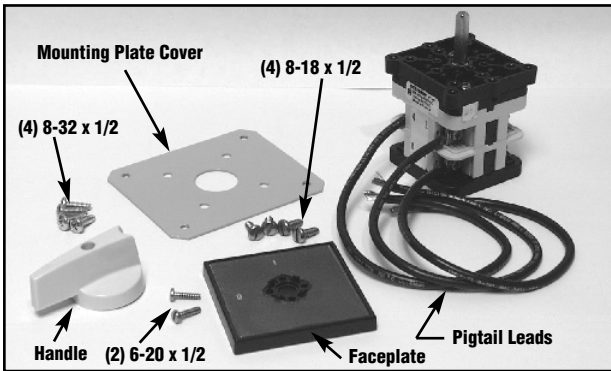


Figure 3

## 40 and 50 Amp Kits — KDS-1

The disconnect switch has a bracket for mounting the switch.

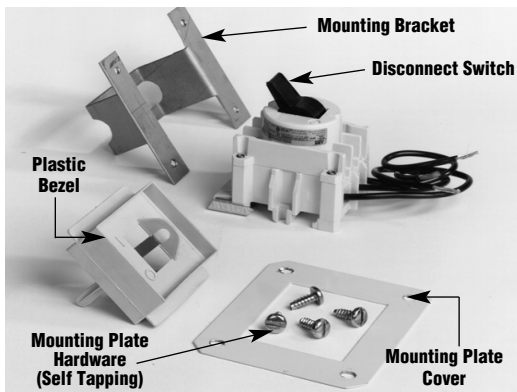


Figure 4

## 80 and 100 Amp Kit — KDS-2 and KDS-3

The disconnect switch has a bracket for mounting the switch.

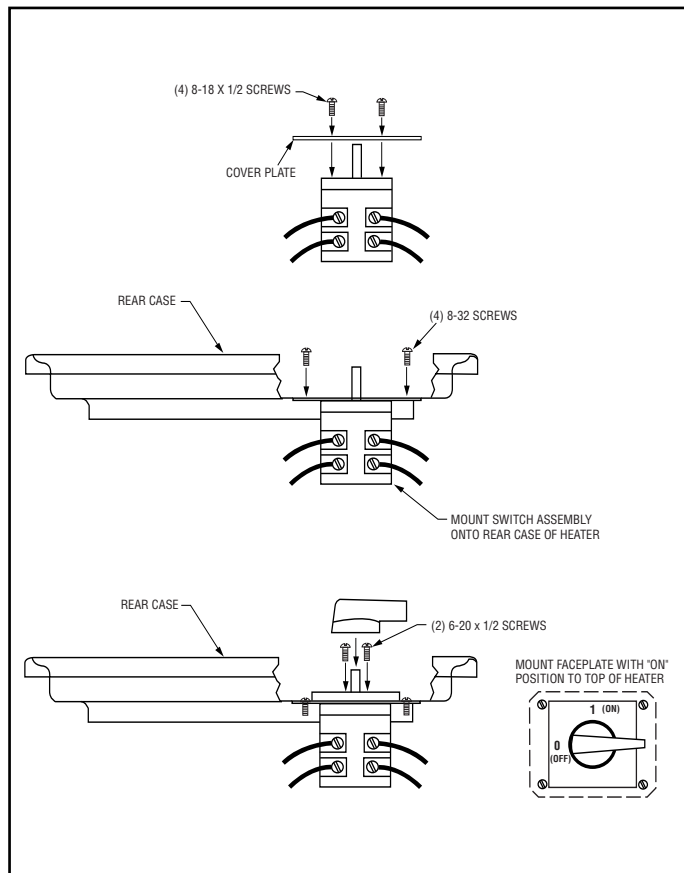


Figure 6 – KDS-1

## INSTALLATION (Cont'd)

### KDS-2 and KDS-3

8. The cover plate should be placed over the rectangular opening with its four mounting holes lined up with the four holes in the cabinet and the four holes in the mounting bracket (see Figure 7).
9. Insert the four self tapping screws into the four holes until they engage the holes in the mounting bracket and tighten until they are secure (see Figure 8).
10. Place plastic bezel over the installed switch and push towards the switch until the tabs snap into place (see Figure 9).

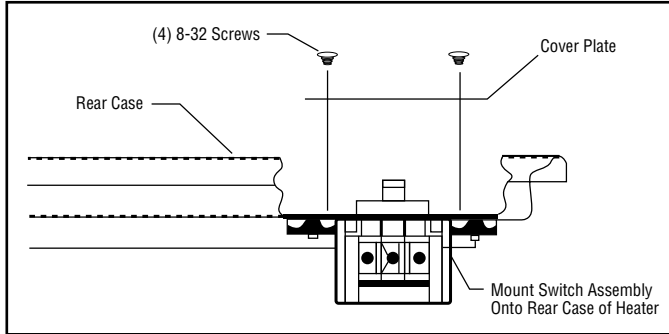


Figure 7

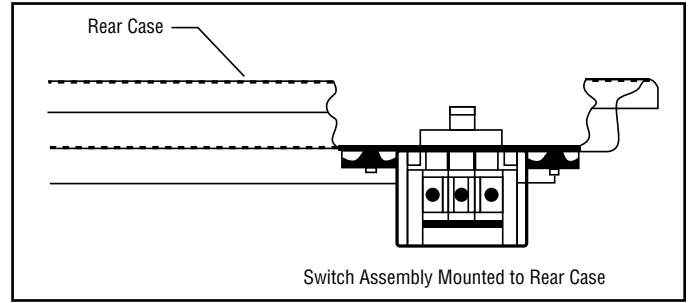


Figure 8

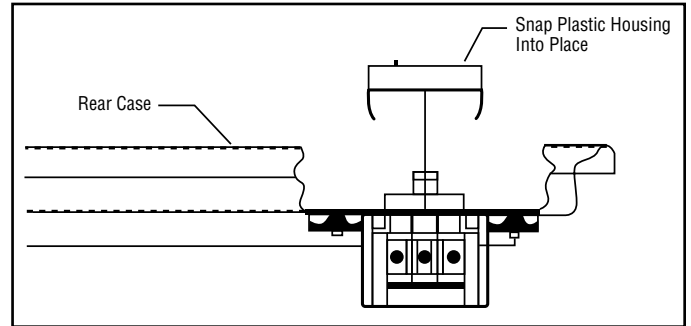
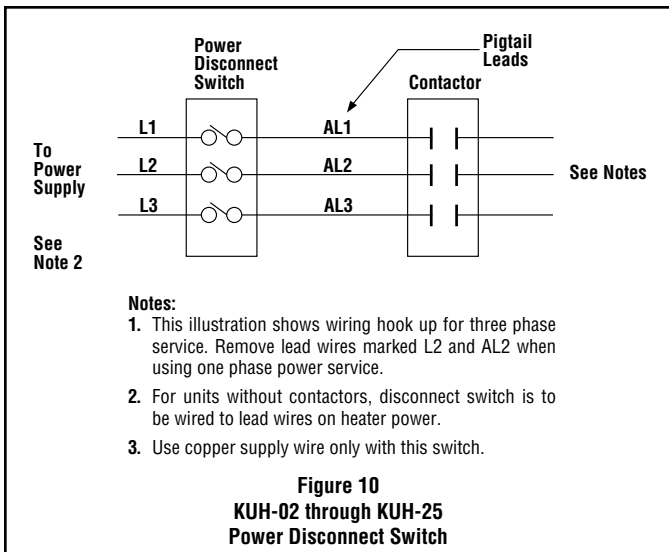


Figure 9

## WIRING

**POWER DISCONNECT SWITCH** (Available as a kit or factory installed option.) (KDS-1) This switch disconnects the power to power leads when the handle is rotated to the "0" position (left). The power is on when the switch handle is rotated to the "1" position (top) position. (KDS-2 and KDS-3) This switch disconnects power to the power leads when the handle is placed in its full lower position. The power is on when the switch handle is in its full upper position.

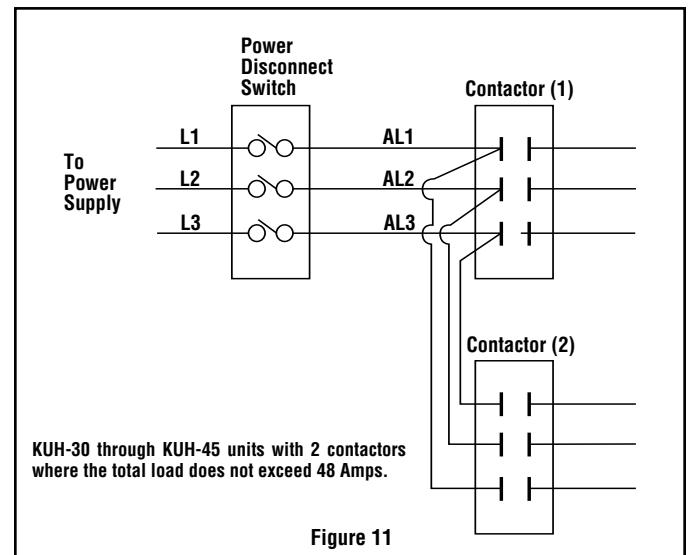
1. Use the three pigtail leads supplied with kit (40 & 80 Amp) when connecting to the power line.
  - a. Use No. 4GA Copper conductor wire only for 100 Amp disconnect when wiring to the power line.
2. The power disconnect wiring to the heater is to be made using the pigtail leads supplied on the heaters up to and including 25 kW. On larger heaters, the installer should supply 105°C type AWM 600V wire.



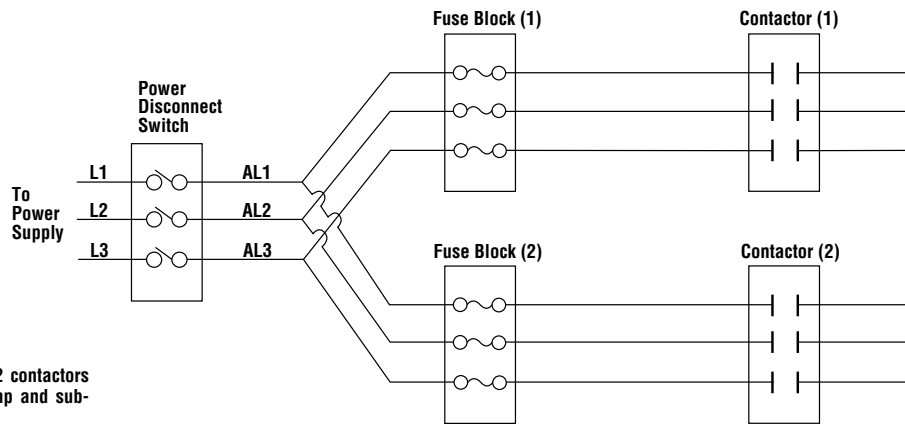
### ⚠ WARNING

**ELECTRIC SHOCK HAZARD. Disconnect all power before installing disconnect switch. Failure to do so could result in personal injury or property damage. Disconnect switch must be installed by a qualified person and must be effectively grounded in accordance with the National Electrical Code, NFPA 70.**

For future replacement parts, the model number should be modified on the nameplate to show that a disconnect kit has been field installed on the heater. A label kit (see Figure 14) (P/N 170-302788-002) has been included in the plastic envelope located in the disconnect kit. Cut off the appropriate number for the size disconnect being installed (40 Amp = 1; 80 Amp = 2; 100 Amp = 3). The label has a pressure sensitive adhesive back so that the number can be placed over the "0" as shown in Figure 14.

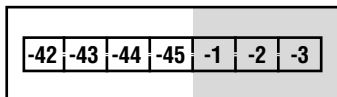


## WIRING (Cont'd)



KUH-30 through KUH-45 units with 2 contactors where the total load exceeds 48 Amp and sub-circuit fuse blocks are provided.

Figure 12



Number 1, 2 or 3 designates the Disconnect Code for Kit.  
1 = 40 Amp; 2 = 80 Amp; 3 = 100 Amp

Figure 13 — Pressure Sensitive Label

<i>HeatFlo</i>					
CATALOG NO.	KUH-C-07-43-32-00-0				DATE CODE
MFG. PART NO.	004-303375-265				
MIN. CIRC. CAP.	AMPS	MAX. CIRC. FUSE	AMPS		
RATING	KW	V.A.C. ONLY	PH	AMPS	HZ
HEATER	7.5	480V	3	9.0	60
MOTOR		480V	1	.28	60
CONT. CKT.		120V	1	10	V.A. MAX. 60
SERIAL	P/N 19F 45744-000				

Place Number at the end of the Catalog Number

Figure 14 — Nameplate

## REPLACEMENT PARTS LIST

Disconnect Size	Kit Model #	Disconnect	Cover Plate	Mounting Bracket
50 Amp	KDS-1	292-303472-001	220-303485-010	
80 Amp	KDS-2	292-303472-002	220-303485-003	220-303484-003
100 Amp	KDS-3	292-303472-008	220-303485-003	220-303484-003

### Limited Warranty:

Please refer to the Chromalox limited warranty applicable to this product at [http://www.chromalox.com/customer-service/policies/terms\\_of\\_sale.aspx](http://www.chromalox.com/customer-service/policies/terms_of_sale.aspx).

# HeatFlo

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