

king *electrical mfg. company*

9131 - 10th Avenue South Seattle Washington 98108

INSTALLATION & MAINTENANCE MANUAL

SAVE THESE INSTRUCTIONS

for KCC & KCF SERIES CABINET HEATERS



WARNING

THIS UNIT IS MANUFACTURED TO OPERATE ON A SPECIFIC CONTROL VOLTAGE IN COMPLIANCE WITH YOUR ORDER. STANDARD CONTROL VOLTAGES ARE 208 / 240 / 277 FOR 208 / 240 / 277 VOLT HEATERS. 24 VOLT CONTROL IS STANDARD ON 480 VOLT HEATERS. 208 / 240 OR 277 VOLT HEATERS MAY ALSO BE ORDERED WITH AN OPTIONAL 24 VOLT CONTROL. IT IS IMPORTANT THAT YOU VERIFY YOUR POWER SUPPLY VOLTAGE WITH THE HEATER THAT YOU HAVE CHOSEN. IMPROPER INSTALLATION OR FAILURE TO FOLLOW THE PROCEDURES AS OUTLINED IN THIS MANUAL CAN RESULT IN SERIOUS ELECTRICAL SHOCK. DISCONNECT ALL POWER FROM THE HEATER AT THE MAIN SERVICE PANEL AND LOCK BEFORE ATTEMPTING TO INSTALL OR SERVICE THIS UNIT. ALL ELECTRICAL WIRING MUST CONFORM TO LOCAL ELECTRICAL CODES. HEATER CIRCUIT MUST BE PROTECTED WITH THE PROPER SIZE FUSES OR CIRCUIT BREAKERS.

Congratulations on the purchase of your new **KING ELECTRICAL CABINET WALL HEATER**. Your new heater has been designed and built to withstand heavyduty commercial and institutional usage. KCF models feature a whisper-quiet squirrel cage blower, with permanently lubricated bearings. Both models feature long-life heating elements with aluminum plate fins for rapid heat transfer. A variety of factory installed options allow this heater to be tailored to your specific application.

Installation Instructions

WARNING

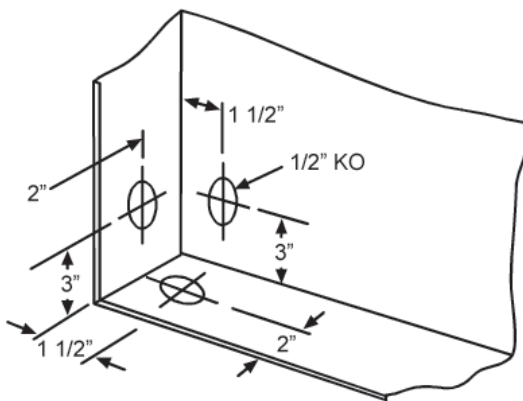
Before proceeding further with the installation of this heater, turn off the power and lock to the supply line for the heater at the main service box.

Remove the heater from the box and check for any damage. Verify that the factory installed options are correct for the application. Remove and set aside the grill.

Select power supply wire type and size to comply with local and national electric codes using heater rating given in table. Connect wire to heater as shown in wiring diagram attached to cover. Remove one of the knockouts from back of unit. Secure power supply cable with clamps (or run in conduit, if required by local codes). Also run the wiring for a remote thermostat, if required. Connect grounding conductor to the green screw.

Fasten the heater to the wall with #10 screws, as shown in the mounting diagrams. On recess models, be sure to leave enough clearance to install the grill.

Replace the grill. Test the heater for proper operation.



JUNCTION BOX

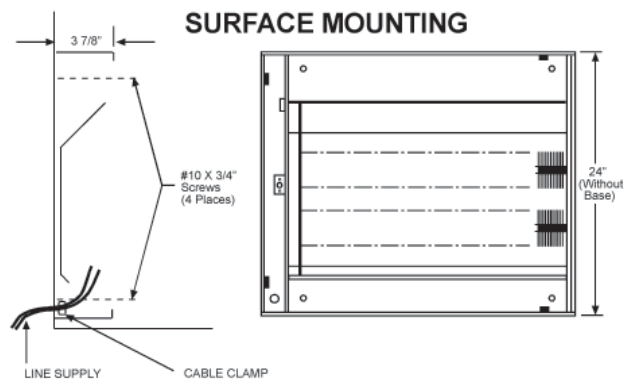
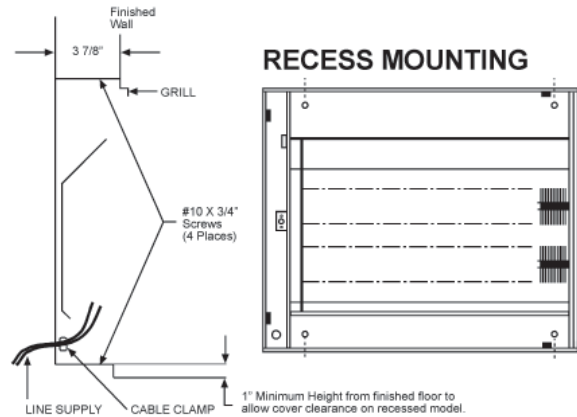
(Left side wiring only)

Maintenance

WARNING - All Power must be shut off at the main service panel before inspecting or cleaning the heater.

With proper care your electric heater should last a lifetime, however seasonal cleaning is recommended to maintain the efficiency of the heater.

To clean the heater remove the four screws that hold the grill in place and remove the grill. Remove dust or lint from the heating elements and the fan blades with a soft brush, compressed air, or a vacuum cleaner. KCF units require a few drops of SAE 20 synthetic oil on the motor shaft. Replace the grill and tighten the screws.



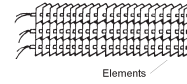
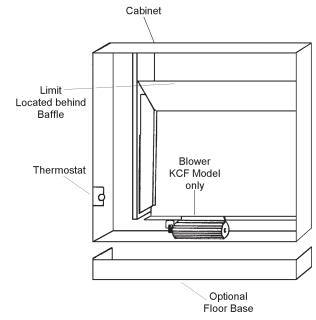
Warranty

All products covered by this instruction sheet are warranted against defects in workmanship and materials for one year from date of installation, except heating elements which are warranted against defects in workmanship and materials for five years from date of installation. This warranty does not apply to damage from accident, misuse, or alteration; nor where the connected voltage is more than 5% above the nameplate voltage; nor to equipment improperly installed, wired or maintained in violation of this instruction sheet. All claims for warranty work must be accompanied by proof of the date of installation. The customer shall be responsible for all cost incurred in the removal or reinstallation of products, including labor costs, and shipping costs incurred to return products to King Manufacturing. King Mfg. will repair or replace, at our option, at no charge to you with return freight paid by King. King Electrical Mfg. shall not be liable for consequential damages arising with respect to the product, whether based upon negligence, tort, strict liability or contract. King Manufacturing can be contacted in Seattle, Washington by phone at (206) 762-0400, by fax at (206) 763-7738 or by email at www.king-electric.com

KCC SELECTION CHART (convection cabinet heater)

CATALOG #	PHASE	WATTS	BTUH (000)	VOLTS	AMPS		CABINET SIZE	WT. (lbs.)
					1-PH	3-PH		
KCC2-2020- KCC2-2420- KCC2-2720- KCC2-4820-*	Add Suffix	2000	6.8	208	9.6	5.6	24"	30
				240	8.3	4.8		
				277	7.2	N/A		
				480	4.2	2.4		
KCC3-2030- KCC3-2430- KCC3-2730- KCC3-4830-*	1 for Single Phase	3000	10.2	208	14.4	8.3	36"	40
				240	12.5	7.2		
				277	10.3	N/A		
				480	6.5	3.6		
KCC4-2040- KCC4-2440- KCC4-2740- KCC4-4840-*	or 3 for Three Phase	4000	13.6	208	19.2	11.1	48"	50
				240	16.7	9.6		
				277	14.4	N/A		
				480	8.3	4.8		
KCC4-2050- KCC4-2450- KCC4-2750- KCC4-4850-*		5000	17	208	24	13.9	48"	50
				240	20.8	12		
				277	18	N/A		
				480	10.4	6		

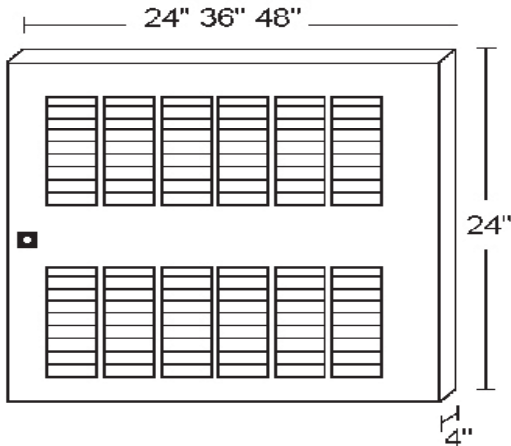
* All 480V models require neutral wire for 277V fan motor



KCF SELECTION CHART (fan-forced cabinet heater)

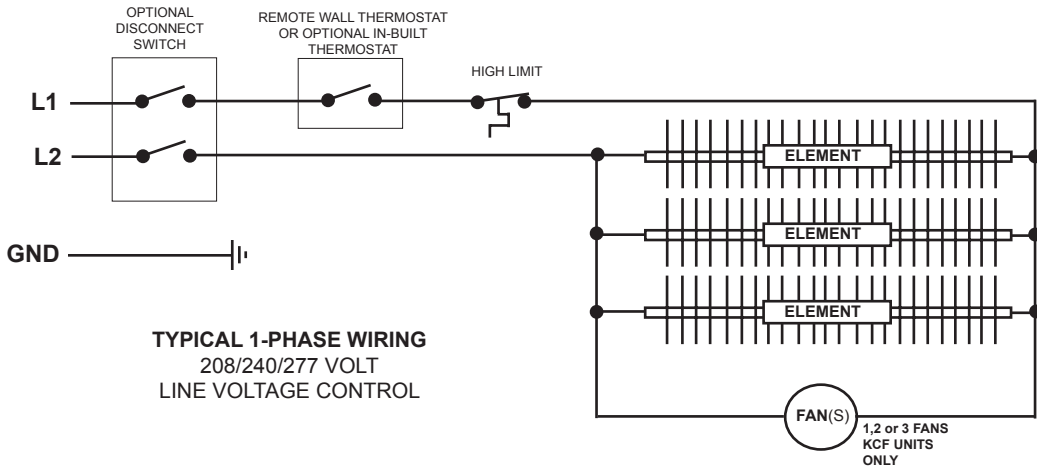
CATALOG #	PHASE	WATTS	BTUH (000)	VOLTS	AMPS		CABINET SIZE	WT. (lbs.)	# OF FANS	FAN WATTS	CFM
					1-PH	3-PH					
KCF2-2020- KCF2-2420- KCF2-2720- KCF2-4820-*	Add Suffix	2000	6.8	208	9.6	5.6	24"	35	1	34	95
				240	8.3	4.8					
				277	7.2	N/A					
				480	4.2	2.4					
KCF3-2030- KCF3-2430- KCF3-2730- KCF3-4830-*	1 for Single Phase	3000	10.2	208	14.4	8.3	36"	45	2	68	190
				240	12.5	7.2					
				277	10.3	N/A					
				480	6.5	3.6					
KCF4-2040- KCF4-2440- KCF4-2740- KCF4-4840-*	or 3 for Three Phase	4000	13.6	208	19.2	11.1	48"	55	3	102	285
				240	16.7	9.6					
				277	14.4	N/A					
				480	8.3	4.8					
KCF4-2050- KCF4-2450- KCF4-2750- KCF4-4850-*		5000	17	208	24	13.9	48"	55	4	102	285
				240	20.8	12					
				277	18	N/A					
				480	10.4	6					

* All 480V models require neutral wire for 277V fan motor

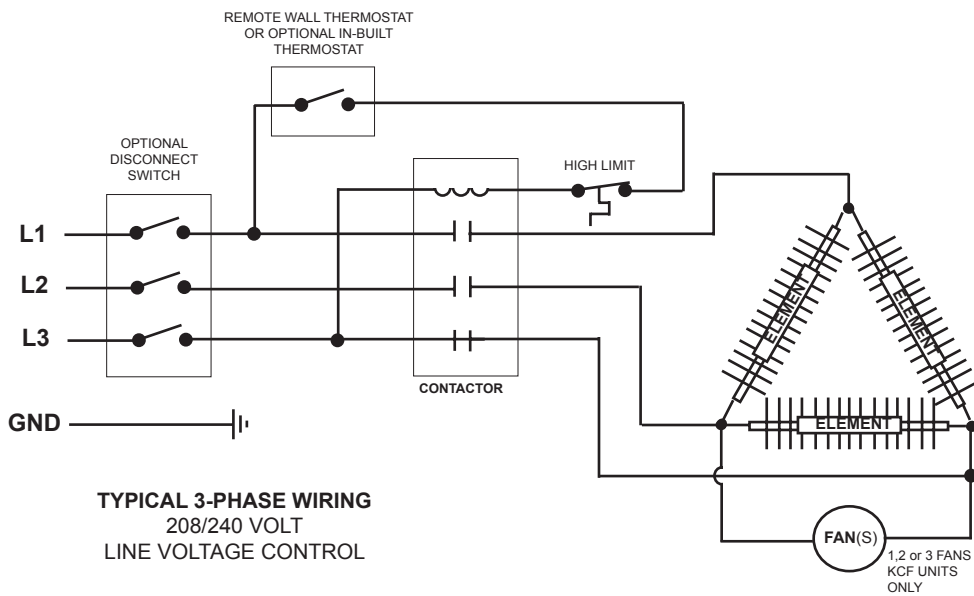


FACTORY INSTALLED OPTIONS

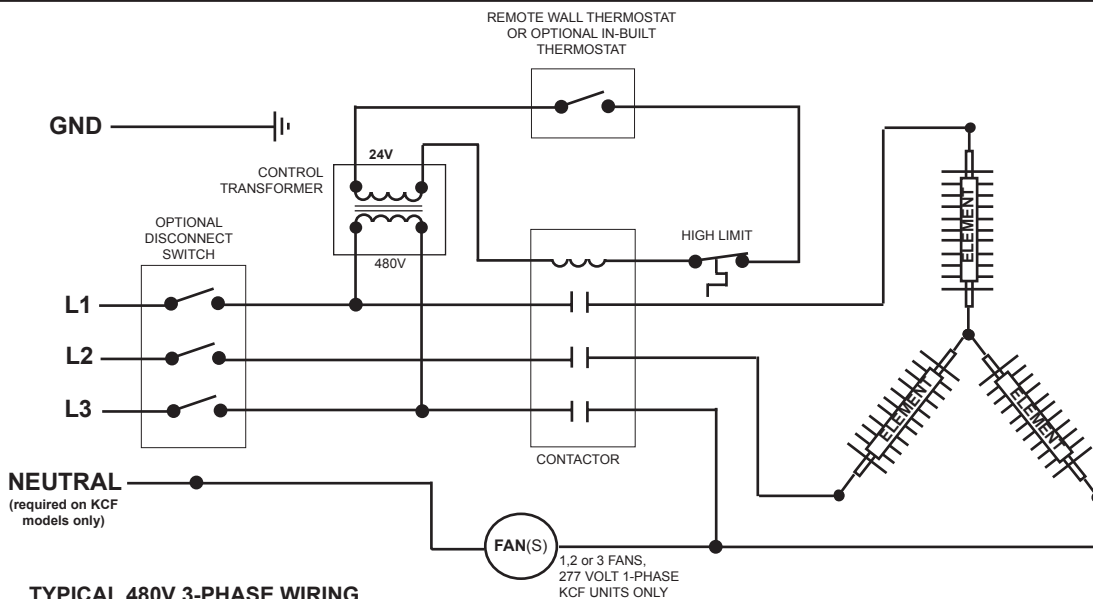
ADD SUFFIX	DESCRIPTION
-1	1-Phase (first extension after base model number)
-3	3-Phase (First extension after base model number)
-R	Recessed Mounting
-S	Surface Mounting
-SB	Sub floor base, 3" high
-T	1-Pole Built-In Thermostat (40°F - 90°F)
-T2	2-Pole Built-In Thermostat (40°F - 90°F)
-RT	Line Voltage Terminal Block (for wiring to a remote thermostat)
-CX	Power Contactor for 208, 240 & 277V models line voltage holding coil
-RT24	Power Contactor and Transformer for 24V control (for wiring to a remote low voltage thermostat) Standard on 480V models
-3PS	3-Position Switch (Heat / Fan / Off)
-DS1	2-Pole Disconnect Switch for 1-Phase Models
-DS3	3-Pole Disconnect Switch for 3-Phase Models



TYPICAL 1-PHASE WIRING
208/240/277 VOLT
LINE VOLTAGE CONTROL



TYPICAL 3-PHASE WIRING
208/240 VOLT
LINE VOLTAGE CONTROL



TYPICAL 480V 3-PHASE WIRING
24 VOLT CONTROL