

king

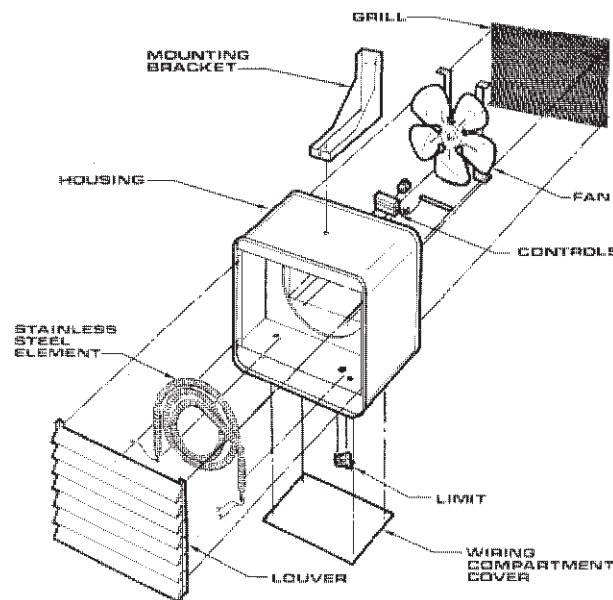
electrical mfg. company

9131 - 10th Avenue South Seattle Washington 98108

INSTALLATION & MAINTENANCE MANUAL

SAVE THESE INSTRUCTIONS

for KB SERIES UNIT HEATERS



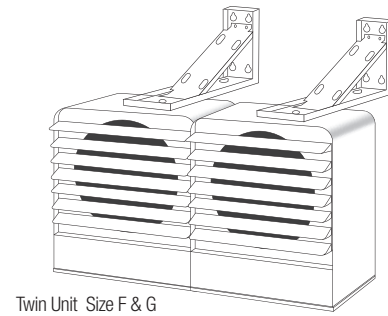
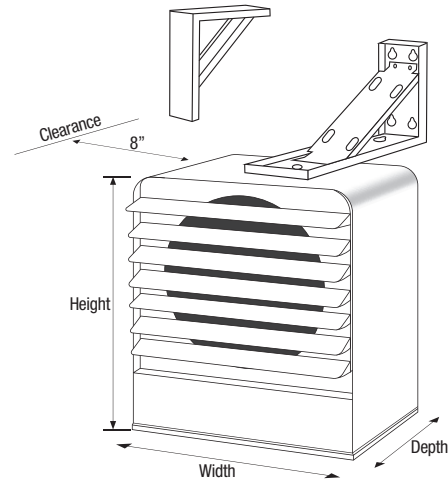
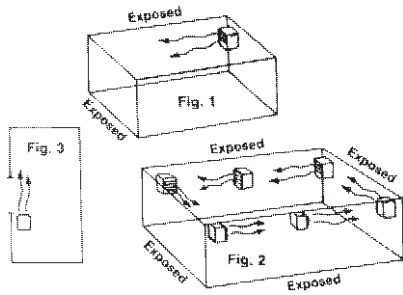
WARNING

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. 120 VOLT CONTACTOR COILS ARE AVAILABLE FOR EXTERNAL 120 VOLT CONTROL SUPPLY. 208/240 OR 277 VOLT HEATERS MAY ALSO BE ORDERED WITH 24 VOLT CONTROL - KBLV-1 (WHICH INCLUDES TRANSFORMER AND CONTACTOR) OR KBLV-2 (WHICH INCLUDES TRANSFORMER AND WIRING FOR HEATERS THAT ALREADY HAVE CONTACTORS AS STANDARD EQUIPMENT). 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 OR DEATH. DISCONNECT ALL POWER FROM THE HEATER AT THE MAIN SERVICE PANEL BEFORE ATTEMPTING TO INSTALL OR SERVICE THIS UNIT. ALL ELECTRICAL WIRING MUST CONFORM TO LOCAL ELECTRICAL CODES. HEATER CIRCUIT MUST BE PROTECTED WITH PROPER FUSES.

Congratulations on the purchase of your new **KING ELECTRICAL UNIT HEATER**. Your new heater is made with the highest standards in electrical design and quality components to ensure your satisfaction in durability and performance. The steel fin tube element which has a 5 year warranty is backed by a heavyduty fan directing a strong flow of warm air to any desired area through adjustable louvers. The rugged, totally enclosed, service-free motor is combined with our fan design to maintain the correct relationship of air volume to final air temperature. The quick access panel allows easy connections in the wiring compartment. The universal bracket will allow ceiling or wall installation to fit your particular application.

Location of Heater

The heater should be installed out of the reach of persons. The direction of air flow should not be restricted by machinery, beams, etc., and the air flow should wipe exposed walls rather than blowing directly at them. When more than one heater is used in an area the heaters should be arranged so that the air discharge of each heater supports the air flow of the others to provide best circulation of warm air. (see air flow chart)



Unpack & Inspect Your New Heater

Remove heater from the box and inspect it for any damage. Verify you have received the mounting bracket or thermostat if needed. (optional)

Tools Needed

You will need the following tools to install your unit heater:

- Screwdriver - (Phillips head & slotted)
- Pliers
- Electric Drill
- Wire Cutters
- Adjustable Wrench

Hardware Needed

You will also need the following hardware, which can be purchased from your local hardware store or electrical supply house:

- adequate gauge and length of wire for your application
- proper size fuses or breakers to handle amperage
- proper wire connectors for your application
- fasteners appropriate for application that are strong enough to hold unit

For certain applications conduit may be required. Check local electrical codes. Also, if you run the wiring in conduit and wish to be able to turn the heater, be sure to purchase enough flexible conduit to allow the heater to be turned.

Mounting Height

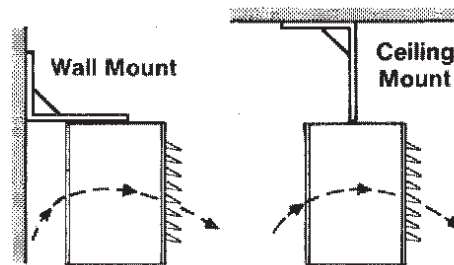
When the airflow of the heater is directed vertically or horizontally the minimum mounting height is 6 feet. Mounting heights depend upon building utilization and heater kW capacity.

Distance From Walls

Be sure to maintain 6" minimum clearance to walls and ceilings.

Mounting Bracket & Heater

Locate a stud in ceiling or wall and securely fasten bracket to supporting surface with 3 1-1/4" screws.



Attach heater to bracket with 3/8" x 1" bolt & lock washer supplied with bracket. After desired air discharge position has been determined, tighten bolt so the heater will not pivot.

Wiring

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 wiring compartment cover. Remove one of the knockouts from back of unit.

Select power supply wire 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. Secure power supply cable with clamps.

Connect grounding conductor to green screw. Reinstall wiring compartment cover.

Adjust the louvers to the desired position. NOTE: The louvers are designed so they can not be completely closed. Do not attempt to defeat this feature - damage to the unit can result.

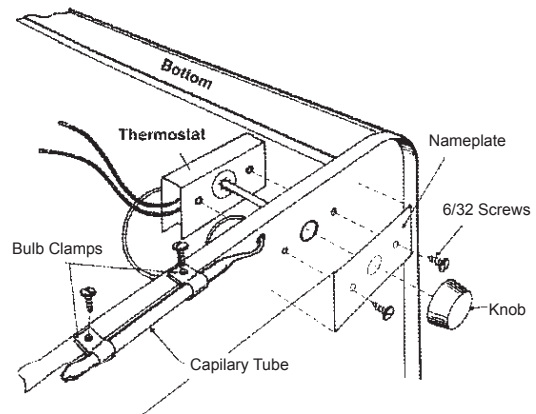
Thermostat Installation - Inbuilt

Remove wiring compartment cover. Remove plug from back of chassis. Insert thermostat (model KBT on standard units - for stainless steel see below) into holes punched in chassis. Position thermostat so

capillary tube will exit knockout.

Adhere nameplate and attach thermostat with two #6 screws as shown. Carefully bend capillary tube through hole and attach bulb clamps with screws to lip of chassis as shown in figure.

Connect wires as shown in wiring diagram. Reinstall wiring compartment cover. Attach knob to thermostat.



Stainless Steel Models require a special thermostat model (TF115) that will be mounted to the outside of the heater. This must be sealed properly and is recommended to be done at the manufacturing plant. For additional information please consult the factory.

Maintenance

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

Because of its rugged design, superior engineering and high quality craftsmanship and manufacturing, the King KB Unit Heater requires little maintenance. 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 heating element loosen the 4 Phillips head screws located behind the louvers in the corners of the louver housing. Grasp the louver housing on both sides, lift up and pull out. This provides access to the heating element. Remove dust or lint with a soft brush or a vacuum cleaner. Replace the louver housing and tighten the Phillips head screws.

To clean the fan and motor remove the safety grill from the rear of the heater. This provides access to the fan and motor. Wipe the fan and motor with a soft cloth or brush. The fan motor does not require lubrication.

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 or 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 or by fax at 206-763-7738.