



Garage/Shop Heater EKB Series



Model Code:

EKB	24	40	TB
A	B	C	D

A: Series
 B: 12 - 120V, 20 - 208V
 24 - 240V
 C: Watts (5000)
 D: TB- Thermostat
 & Bracket



- Quick heat element
- Long life unit bearing motor
- Patented Smart Limit® protection
- Aluminum fan blade
- Built-in thermostat
- Universal mounting bracket
- Standard color: black textured finish
- Safety sensor on each element
- 1-year limited warranty



The EKB Garage/Shop Heater

The EKB is designed to be an affordable, high-capacity garage / shop heater. Combining King's patented Smart Limit safety technology with dual NiChrome coil elements for rapid heat transfer, the EKB is ideal for many residential applications. The flow-through design efficiently moves air by pulling air from the back and sides of the heater and discharges it out the front, easily heating a large space. The built-in thermostat has a temperature range from 40 to 85 degrees. The universal mounting bracket can be wall or ceiling mounted at a minimum of 6 feet above the floor. Good air distribution and comfort is achieved by swiveling the bracket to specific work areas.

Ordering Information

	MODEL	UPC	VOLTS	WATTS	AMPS	WIRE	BREAKER SIZE	TEMP RISE	HEATING SQ FT
120V	EKB1230TB	16506	120	2850	24	10-2 w/ground	30 Amp 1 pole	40	500
	EKB1220TB	16507	120	1920	16	12-2 w/ground	20 Amp 1 pole	40	300
	EKB2050TB	16501	208	5000	24	10-2 w/ground	30 Amp 2 pole	80	750
208V	EKB2040TB	16503	208	3750	18	10-2 w/ground	30 Amp 2 pole	70	600
	EKB2030TB	16505	208	2850	14	12-2 w/ground	20 Amp 2 pole	50	500
	EKB2450TB	16500	240	5000	20	10-2 w/ground	30 Amp 2 pole	80	750
240V	EKB2440TB	16502	240	3850	16	12-2 w/ground	20 Amp 2 pole	70	600
	EKB2430TB	16504	240	2850	12	14-2 w/ground	15 Amp 2 pole	50	500

Engineering Specifications

Heating Elements: Rigid Muscovite Mica construction with 80-20 NiChrome heating wire provides quick heating without cold air start ups, heat is wiped from elements as fans slows to a stop. Manual reset Safety sensor on each element.

Thermostat: Factory installed single pole operation range 40 to 85 degrees F.

Unit Bearing Motor: Permanently lubricated, cast aluminum unit bearing, 6-watt output 4 pole motor, 1550 rpm, 20 cc oil supply.

Mounting Bracket: 18 ga steel, multiple mounting options - ceiling/wall.

CFM: 270 Maximum

Thermal Overload: Heaters shall be equipped with King's patented thermal overload Smart Limit Protection®, which disconnects elements and motor in the event normal operating temperatures are exceeded. If thermal overload trips due to abnormal operating temperatures, thermal overload shall remain open until manually reset by turning the heater off for 15 minutes. U.S. PATENT #6,748,163 B2 • CIPO PATENT #2,393,882

Case: 22 ga steel, inlet and outlet perforation, special side and top safety air inlets.

Exterior: Durable textured finish.

Approval: cULus (E41422)

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Dimensional Data

EKB Unit Heater



Heater case size
w/o bracket
Height: 13 5/8 in. / 34.6 cm
Width: 10 3/8 in. / 26.35 cm
Depth: 9 3/9 in. / 24.76 cm

Maximum Outside Dims
W/bracket and stat
Height: 18 3/4 in. / 47.62 cm
Width: 11 3/8 in. / 28.90 cm
Depth: 10 5/8 in. / 26.98 cm

Bracket Information

Hole Sizes
* 1/2 in. / 1.27 cm 3 holes
+ 1/4 in. / .63 cm 4 holes

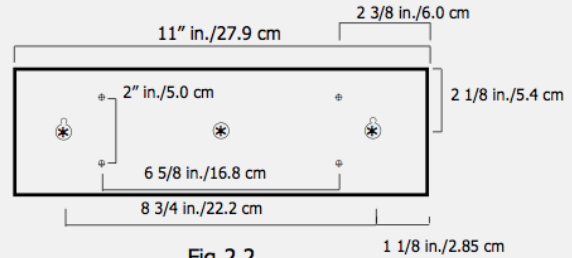
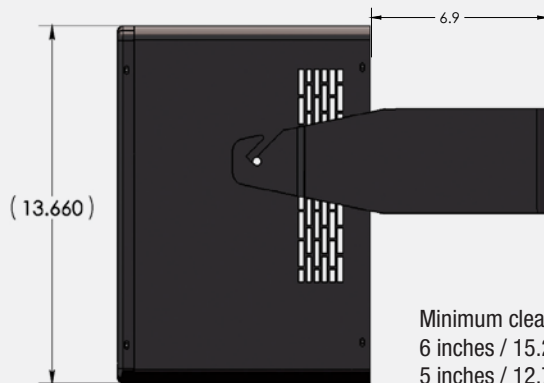
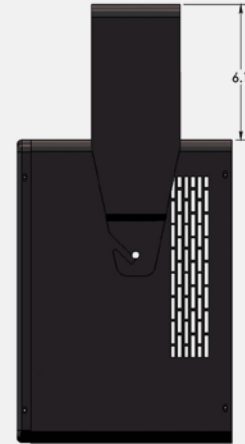
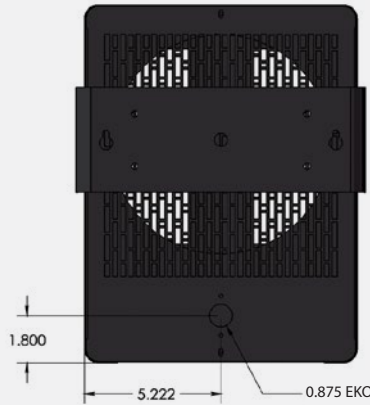
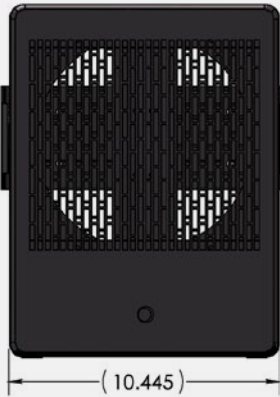


Fig 2.2



Minimum clearances from walls and ceiling
6 inches / 15.24 cm to the side
5 inches / 12.7 cm from the back
2 inches / 5.08 cm from ceiling
Never point heater at ceiling
Maintain clearance of at least 3 ft. in front of heat outlet

MINIMUM CLEARANCE

From combustibles: 18" from front,
2" from top, 6" from sides
and 5" from rear.

Selecting The Proper Unit Heater

To obtain the best performance from King unit heaters use this chart for proper heater selection. To determine which type of unit is best note the ceiling height and room size. In addition to the air throw capabilities of each type of unit heater, wall and ceiling insulation must be considered when determining wattage requirements. The most common error of unit heater selection is installing a unit designed for low ceiling application on a high ceiling. In this application heat is unable to circulate properly to the floor – the result: unsatisfactory comfort or performance level. Following this guide allows correct unit heater selection for the determined space and environment. With correct selection and placement this King unit heater will provide years of high performance heating.

Application Tips

First, calculate heating loads in the conventional way using the N.E.M.A. handbook or ASHRAE guide. Next, determine quantity and size of heaters to be used. In instances where large groups of people are normally settled in the same location use a large number of smaller kW heaters (Example: people on a production line or skilled machine operations). By utilizing heaters in this manner one can best distribute uniform heat, prevent hot drafts, reduce potential noise levels and balance the electrical operating demand. When considering warehouse areas or storage rooms where heat distribution and constant temperatures are less important, use fewer heaters of higher capacity. To maintain uniform heat and reduce stratified air it is recommended that the total CFM of the units turn the air over approximately 3 times per hour.

Horizontal Mount

Smaller rooms can be heated by one unit heater. Where two walls are exposed heaters should be mounted as shown below. In larger rooms, units should be located so air streams wipe exposed walls without blowing at them. Units should be located so the airstream of one supports that of another thus setting up a circulatory air movement. (Distance between units to be approximately 1 times published air throw). Units should not be mounted horizontally in areas having ceiling heights in excess of 10 to 12 feet.

Vertical Mount

Units should be mounted vertically in high bay areas where they may not otherwise interfere with assorted material or handling equipment. Heaters should be situated to provide free air circulation. Size and selection of units should be based on recommended mounting height. Unit heaters are frequently used to combat cold air inrush when loading dock doors are opened. For such applications, one or more units should be arranged to blow warm air vertically in front of opening.

Dual Mounting

Where square footage is large and comfort essential, both horizontal and vertical installations may best serve your requirements.

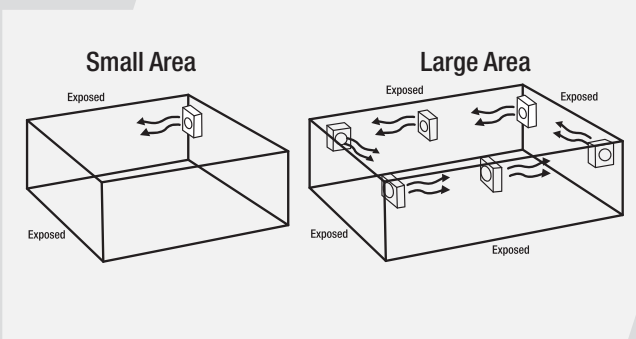
Mounting Limitations

Unit heaters should not be used in potentially explosive atmospheres. The finish is not intended for direct salt spray exposure in marine applications or the highly corrosive atmospheres of swimming pools, chemical storage bins, etc. Please refer to the factory for explosion proof or marine application heater information. Do not install unit heaters above recommended maximum mounting height. See chart for height information. Obstructions must not block unit heater air inlet or discharge. To prevent possible injury heaters must be mounted at least 6 feet above the floor to prevent accidental contact with heating element or fan blade.

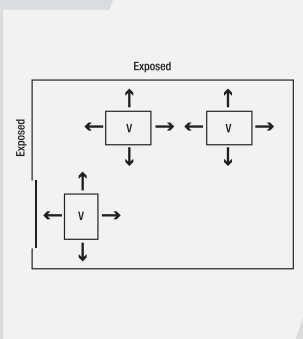
Selection

CEILING HEIGHT	UNDER 8 FEET	10 FEET	12 FEET	13 FEET AND OVER
250 Sq. Ft.	N/A	KBP	KBP	KFUH
1000 Sq. Ft.	KBP	KBP	KBP / KB	KFUH
2000 Sq. Ft.	KBP / KB	KBP / KB	KB / KFUH	KFUH
3000 Sq. Ft.	KB	KB	KFUH	KFUH
5000 Sq. Ft.	KB	KFUH	KFUH	KFUH
10,000 Sq. Ft.	KB	KFUH	KFUH	KFUH

Horizontal



Vertical



Dual

