

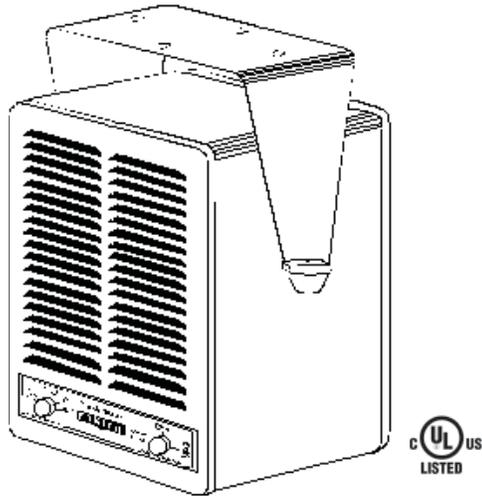


electrical mfg. company

9131 - 10th Avenue South Seattle Washington 98108

INSTALLATION & MAINTENANCE MANUAL

Model: **KBP2406** 240V-1phase Unit Heater



Unpack & Inspect Your New Heater

Remove heater from box and inspect it for any damage. Verify you have received the mounting bracket and accessories.

Tools Needed

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

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

Hardware Needed

You will need the following hardware:

- Adequate gauge & length of wire for your application
- Proper size fuses or breakers to handle amperage
- Proper wire connectors for your application
- Appropriate size fasteners to mount heater.

In certain applications conduit may be required by code. Check local electrical codes. If you want to be able to turn the heater be sure to use flexible conduit.

Mounting Height

When the air flow of the heater is directed vertically or horizontally the minimum mounting height is 6 feet in USA and 8 feet in Canada. Mounting heights depend upon building utilization and heater kW capacity.

Distance From Walls

Maintain 6" minimum clearance to side walls and 2" to ceiling in back of the heater (air intake side). Maintain 18" clearance in front of the heater (discharge side).

WARNING

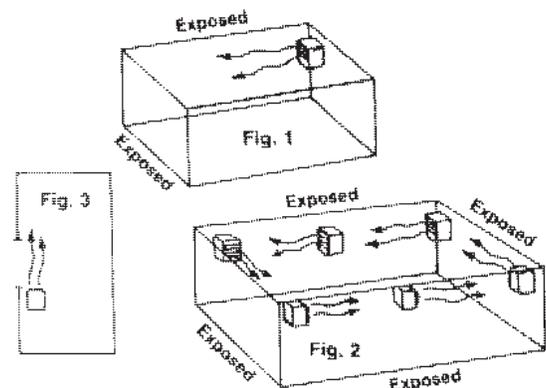
Model: KBP2406 is 240 volt. It is important that you verify the power supply voltage is the same as the nameplate voltage of the heater. Improper installation or failure to follow the procedures as outlined in this manual can result in damage to the heater. Note that the KBP2406 will operate at 208 volt but will produce 25% less wattage and draw 13% less Amps. 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 properly protected.

Mounting Heater

Locate a stud in ceiling or wall and securely fasten bracket with a minimum of two #12 fasteners 1-1/4" long. Attach heater to bracket with 3/8" x 1" wingnut & lock washer supplied. Install the lock washer between the bracket and heater. Do not put lock washer on the plastic wingnut. After desired air discharge position has been determined tighten wingnut so heater will not pivot.

Location of Heater

The heater should be installed out-of-reach of persons. The direction of airflow should not be restricted by machinery, beams, etc. and the airflow 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 airflow of the others to provide best circulation of warm air. (see *airflow chart*)



Wiring Heater

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

1. Remove wiring compartment cover.
2. Remove one of the knockouts from back of unit. It is not necessary to remove grill covers.
3. Size service wire to adequately handle Amp load of heater. Refer to the Circuit Sizing Table for proper wire size and circuit protection.
4. Connect supply wire to L1 & L2 as shown in the diagram below.
5. Secure power supply cable with clamps.
6. Connect groundwire to the green pigtail.
7. Reinstall wiring compartment cover.
8. Adjust the heater to the desired position.

CIRCUIT SIZING TABLE

WATTS	BTUH	VOLTS	AMPS 1-PHASE	WIRE SIZE	CIRCUIT PROTECTION*	AREA COVERED (sq. ft.** / cubic ft.***)
1900	6484	240	8	#14 / 2	15A - 2P	240 / 1920
2850	9727	240	12	#14 / 2	15A - 2P	360 / 2880
3800	12969	240	16	#12 / 2	20A - 2P	480 / 3840
4750	16211	240	20	#10 / 2	30A - 2P	600 / 4800
5700	19454	240	24	#10 / 2	30A - 2P	720 / 5760

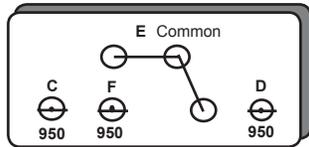
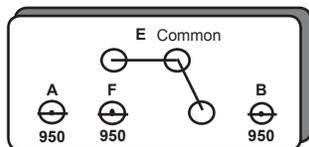
* Per the National Electric Code heating circuits are considered a continuous load and therefore must be derated by 20%. For example: a 20 Amp heating circuit can not have more than 16 Amps of load connected. If heater is operated at 208V it will draw 13% less Amps and produce 25% less wattage.
 ** Assumes an 8 ft. high ceiling; Use cubic feet to estimate wattage requirement when ceiling is not 8 ft.
 *** If area is larger than 720 sq. ft. / 5,760 cubic feet use more than one heater.

INSTALLATION INSTRUCTIONS

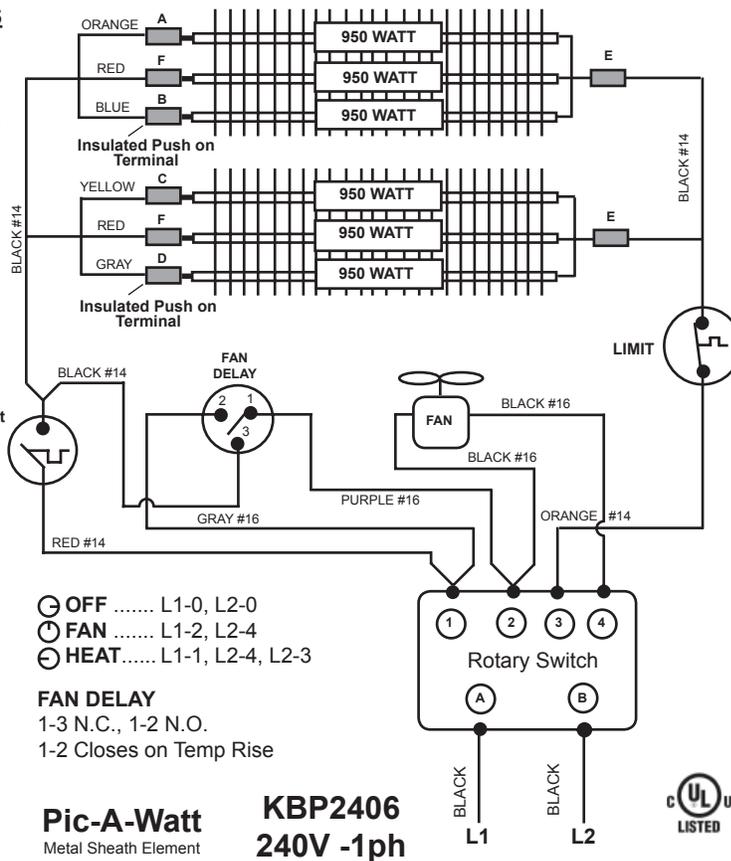
This heater is shipped from the factory wired for maximum wattage of 5700 Watts at 240 Volts. To reduce the wattage unplug (disconnect) an insulated push on terminal and wrap with electrical tape to prevent the possibility of electrical contact with other parts.

Field Wattage Selection

1. 5700 Watts factory wired
 2. 4750 Watts disconnect terminal A
 3. 3800 Watts disconnect terminals A,D
 4. 2850 Watts disconnect terminals A,B,D
 5. 1900 Watts disconnect terminals A,B,C,D
- E - Black Do Not Disconnect (Common)
 F - Red Do Not Disconnect



END VIEW OF ELEMENT SHOWING QUICK CONNECT TERMINALS
 1900•2850•3800•4750•5700
 WATTAGES AVAILABLE IN ONE UNIT



- ⊖ OFF L1-0, L2-0
- ⊙ FAN L1-2, L2-4
- ⊙ HEAT..... L1-1, L2-4, L2-3

FAN DELAY
 1-3 N.C., 1-2 N.O.
 1-2 Closes on Temp Rise

Pic-A-Watt
 Metal Sheath Element

KBP2406
240V -1ph



Maintenance & Warranty Information:

The high quality and superior design of this heater will provide years of trouble-free performance. Each year the heater should be checked and cleaned for lint and dust accumulation. We recommend using a soft bristle brush such as a paint brush to assist in removing contaminants from the heater. The motor is permanently lubricated and does not need servicing. King Mfg. Company will repair or replace without charge any KBP2406 heater found to be defective or malfunctioning for five years after purchase to the original owner.