



Stars Management DMCC

SUBMITTAL

BASEBOARD

HEATER

(K Series)

baseboard heater

K
SERIES

CONVECTION



FEATURES:

- Convection Heat
- Quiet Running
- Backwire design
- Built-in cable clamps
- Crushproof element
- All-aluminum element
- Full length safety cutout
- Baked enamel finish
- Standard color: almond (-A)
- Electrogalvanized 20 gauge front cover, 22 gauge back can
- Reinforced cover
- Soft contoured corners
- 7/8" in diameter knockouts for 1/2" conduit
- Removable reflector

Baseboard heaters are an economical way to provide heat. They are typically used in apartment construction and other rental properties because of low initial cost and maintenance.

Quality components guarantee a long-lasting, reliable heater. Standard color is almond. Special colors available. Customer must provide sample or color chip at time of order. Due to the King painting system an exact color match is not guaranteed.

Four weeks or more lead time is required on all special color baseboard orders. Special pricing will apply.

Institutional grade 18 gauge front covers and 22 gauge back cans are available for special applications. All other specifications are the same as the standard heater. **NOTE:** Baseboard heaters are to be mounted on outside walls to cover the coldest part of a room with a blanket of heat.

OPTIONS:

- Color: bright white (-BW)
- 18 gauge front cover
- Single or Double Pole thermostat



Die-formed corners provide a smooth appearance and added safety

ENGINEERING SPECIFICATIONS:

Contractor shall supply and install K Series electric convection baseboard heaters manufactured by King Electrical Mfg. Company of the wattage, voltage and length indicated on the plans.

Construction:

- The heater shall take room air in the bottom (lower front) and discharge it through the top front.
- The heater back, bottom, and top shall be fabricated from electrogalvanized 22 gauge steel. Front panels shall be fabricated from 20 gauge electrogalvanized steel, ribbed longitudinally for extra strength and have center support to resist impact loads.
- The heater casing shall have modern rounded ends and corners to provide a smooth appearance, finished with a baked enamel.
- The heater shall be provided with a continuous capillary sensor tube for thermal protection, extending the full length of the heating element, rated at 175° F, and be a fail-safe type.

- The heater shall have a 44 cubic inch junctionbox at both ends, furnished with five 1/2" knockouts located on the back, bottom, and side.
- Heater elements shall consist of high quality 80% Nickel and 20% Chromium alloy resistant wire completely surrounded by Magnesium Oxide and enclosed in a rust-resistant sheath. Ribbon aluminum fining shall be compression welded to the sheathed element to provide chimney-type flue for heat transfer.
- Heaters shall be supplied with a one year limited warranty.

Rating and Approval:

- The heaters shall be available in ratings from 375 through 1,500 Watts at 120 Volts, and 375 to 2,500 Watts at 208-240 and 277 Volts.
- The heaters shall be available in 187 or 250 Watts per lineal foot.
- UL (E29778), cCSAus (43323)

MODEL CODE:

4K2410A

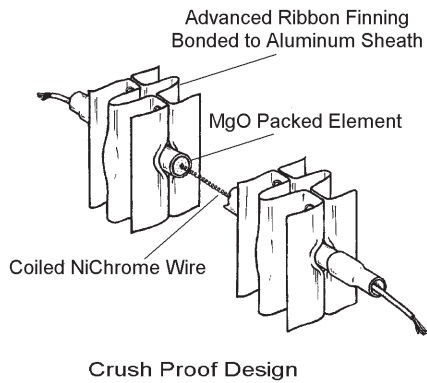
4' Length
K Series
240 Volts
1000 Watts
A Almond

STANDARD DENSITY: 250 WATTS PER FOOT

WATTAGE	120V		208V		240V		277V		LENGTH	WT. (lbs.)
	*MODEL	UPC #093319 PART #	*MODEL	UPC #093319 PART #	*MODEL	UPC #093319 PART #	*MODEL	UPC #093319 PART #		
500	2K1205A	11362	2K2005A	11382	2K2405A	11410	2K2403A	11442	27"	6.5
750	3K1207A	11366	3K2007A	11386	3K2407A	11414	3K2405A	11446	3 ft.	8
1000	4K1210A	11370	4K2010A	11390	4K2410A	11418	4K2407A	11452	4 ft.	10.5
1250	5K1212A	11374	5K2012A	11394	5K2412A	11422	5K2410A	11456	5 ft.	13
1500	6K1215A	11378	6K2015A	11398	6K2415A	11426	6K2412A	11460	6 ft.	15
1750					7K2418A	11430			7 ft.	19
2000			8K2020A	11402	8K2420A	11434	8K2415A	11464	8 ft.	19
2500			10K2025A	11406	10K2425A	11438	10K2418A	11468	10 ft.	24

* Add suffix (-BW) for optional bright white finish. **Note:** Over 6500 ft altitude 210 degree limits required

Standard Color: Almond

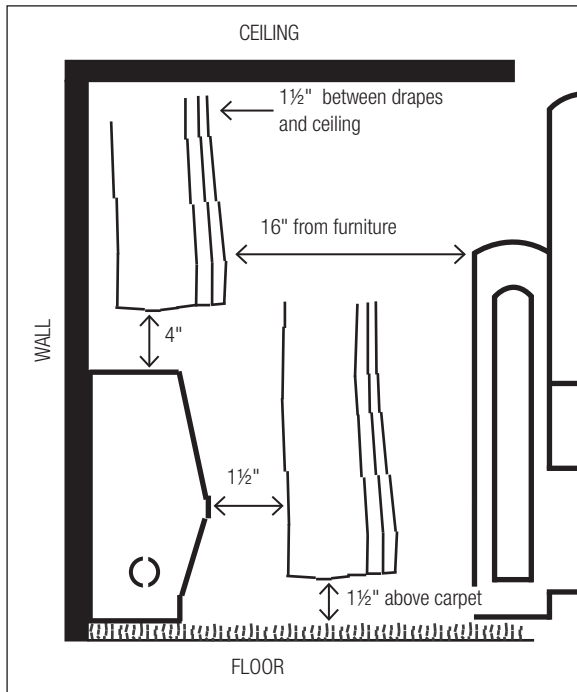


LOW DENSITY: 187 WATTS PER FOOT

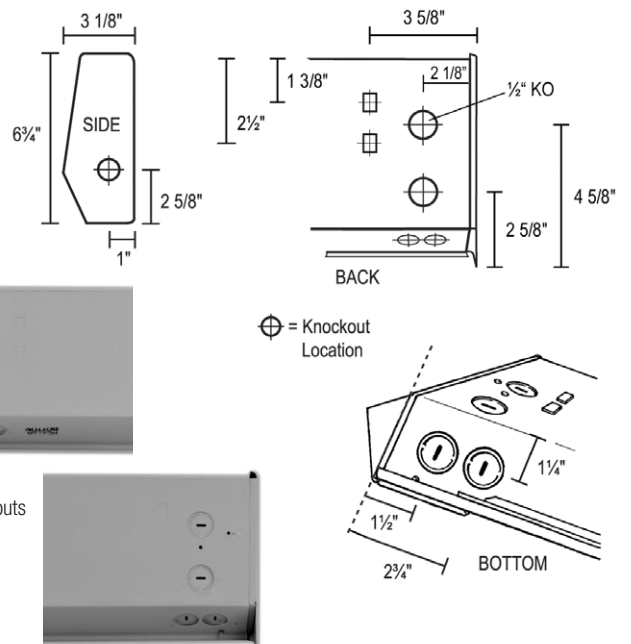
WATTAGE	208V		240V		LENGTH	WT. (lbs.)
	*MODEL	UPC #093319 PART #	*MODEL	UPC #093319 PART #		
375	2K2405A	11410	2K2403A	11442	27"	6.5
563	3K2407A	11414	3K2405A	11446	3 FT.	8
750	4K2410A	11418	4K2407A	11452	4 FT.	10.5
938	5K2412A	11422	5K2410A	11456	5 FT.	13
1125	6K2415A	11426	6K2412A	11460	6 FT.	15
1313	7K2418A	11430			7 FT.	19
1500	8K2420A	11434	8K2415A	11464	8 FT.	19
1875	10K2425A	11438	10K2418A	11468	10 FT.	24

* Add suffix (-BW) for optional bright white finish. **Note:** Over 8000 ft Altitude 210 degree limits required

CLEARANCE MINIMUMS FOR DRAPES



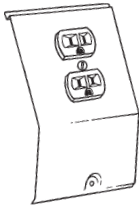
DIMENSIONS:



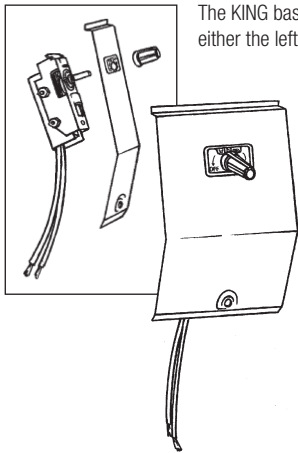
ACCESSORIES:

*MODEL	DESCRIPTION	UPC #093319 PART #	WT. (lbs.)
BKC	Corner Connector	11472	1
BKR120	Duplex Receptacle Cover Plate (requires separate circuit)	11492	1
BKLT120	Load Transfer Cover Plate (Heat / Cool / Off) 120V	11480	1.5
BKLT240	Load Transfer Cover Plate (Heat / Cool / Off) 240V	11482	1.5
BKHCT240	Heat / Cool Switch 240V double pole thermostat - junction box cover	11478	1.5
BKCB1	4" Relay Control Box (relays not included)	11518	1.5
BKCB2	8" Dual Relay Control Box (relays not included)	11490	3
BKT1	Built-in Single Pole Single Throw Thermostat Kit	11496	1
BKT2	Built-in Double Pole Single Throw Thermostat Kit	11502	1
BKT1-TP	Built-in Tamperproof Thermostat Kit Single Pole Single Throw	11528	1
BKT2-TP	Built-in Tamperproof Thermostat Kit Double Pole Single Throw	11530	1
	12 Oz. Can Spray Paint - Bright White	19565	.75
	12 Oz. Can Spray Paint - Almond	19568	.75

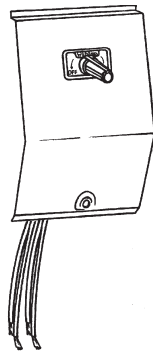
* Add suffix (-BW) for optional bright white finish



BKR120 - Duplex Receptacle Cover Plate (requires separate circuit)

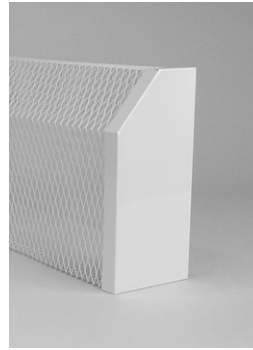
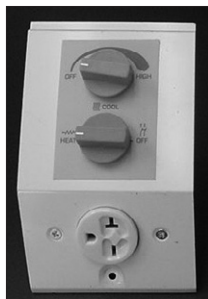


The KING baseboard thermostat may be mounted in either the left or right junctionbox of the heater.



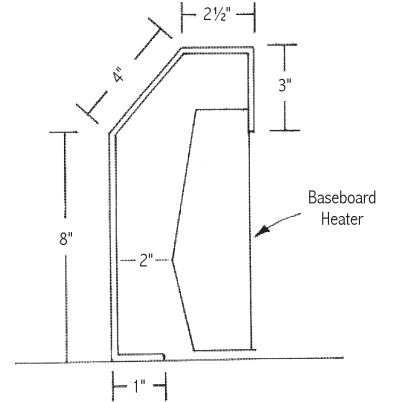
BKT1 - Built-In Thermostat Kit SPST

BKT2 - Built-In Thermostat Kit DPST



made to order

K-Series Heater Shield



MODEL	SHIELD (specify color - Almond or White) NON CANCELLABLE NON-RETURNABLE ITEM (NCNR)	UPC #093319 PART #	WT. (lbs.)
SHIELD-33"	K-Series Heater Shield for 27" Baseboard	10290	6
SHIELD-42"	K-Series Heater Shield for 3' Baseboard	10291	7
SHIELD-54"	K-Series Heater Shield for 4' Baseboard	10292	8.5
SHIELD-66"	K-Series Heater Shield for 5' Baseboard	10293	10
SHIELD-78"	K-Series Heater Shield for 6' Baseboard	10294	11
SHIELD-102"	K-Series Heater Shield for 8' Baseboard	10295	14

NON CANCELLABLE NON-RETURNABLE ITEM (NCNR)

*Requires separate circuit



Baseboard 18 Gauge Cover Adder

NON-CANCELLABLE NON-RETURNABLE ITEM (NCNR)

MODEL	COVER (specify color - Almond or White)	UPC #093319 PART #	WT. (lbs.)
BB-18ga Cover 2'	18 Gauge Cover for 27" Baseboard	52054	1.5
BB-18ga Cover 3'	18 Gauge Cover for 3' Baseboard	52056	2
BB-18ga Cover 4'	18 Gauge Cover for 4' Baseboard	52058	2.6
BB-18ga Cover 5'	18 Gauge Cover for 5' Baseboard	52060	3.65
BB-18ga Cover 6'	18 Gauge Cover for 6' Baseboard	52062	4
BB-18ga Cover 8'	18 Gauge Cover for 8' Baseboard	52064	5.3
BB-18ga Cover 10'	18 Gauge Cover for 10' Baseboard	52052	6.2

Add the appropriate part number to the price of the baseboard for 18 gauge covers

Electric Baseboard Heaters K and CB Series



Installation, Operation & Maintenance Instructions

IMPORTANT INSTRUCTIONS

GENERAL

This heater is designed to provide years of efficient, trouble free operation as a primary or supplementary heat source for comfort heating in residential and commercial applications. Baseboard heaters must be thermostatically controlled for efficient, safe operation. A thermostat is not provided with this heater. However, a single or double pole thermostat accessory is available for installation into this heater at your place of purchase, or the heater may be connected to any suitable wall mounted thermostat that will meet the electrical load requirements. Installation or use of this product in any manner not described herein will void the warranty and could result in injury, damage to property, or permanent damage to heater.

⚠ WARNING ⚠

WHEN USING ELECTRICAL APPLIANCES, BASIC PRECAUTIONS SHOULD ALWAYS BE FOLLOWED TO REDUCE THE RISK OF FIRE, ELECTRIC SHOCK, AND INJURY TO PERSONS, INCLUDING THE FOLLOWING:

- 1) Read all instructions before installing or using the heater.
- 2) A heater has hot and arcing or sparking parts inside, Do not use in areas where gasoline or flammable liquids are used or stored.
- 3) This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, and curtains away from heater.
- 4) To prevent a possible fire, do not block air intakes or exhaust in any manner.
- 5) Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire, or damage the heater.
- 6) Serious injury or death could result from electric shock. Make sure electrical power supply circuit coming to heater is disconnected at main disconnect or service panel before installing or servicing this heater.



NAMEPLATE

KING ELECTRICAL MFG. CO.
SEATTLE, WA

MODEL 2B2405 K SERIES 4
VOLTS 208/220/240
WATTS 375/420/500

CAUTION: ALL WIREWAY WIRING MUST BE APPROVED FOR 75 C WIRE AND DERATED 58%. NO MORE THAN 3 #10 AWG CONDUCTORS IN WIREWAY WITH NO MORE THAN 2 ENERGIZED. FIELD WIRING COMPARTMENT APPROVED FOR 60 DEGREE C WIRE.

BASEBOARD HEATERS




Figure 1: Nameplate Location

Table 1

Total Amps	Minimum AWG. Wire Size (Copper)	Circuit Breaker or Fuse Size
0 thru 12	#14	15 amp
12.1 thru 16	#12	20 amp
16.1 thru 24	#10	30 amp

Table 2: Net Volumes of Wiring Compartment

Description	Cubic Inches	Cubic CM
Heater Only (Each Wiring Compartment)	49.69	8.14
Heater with SP Thermostat	44.24	7.25
Heater with DP Thermostat	44.24	7.25

SAVE THESE INSTRUCTIONS

UNPACKING HEATER

Check heater to make sure it has not been damaged in shipping. Do not install or attempt to operate the heater if damaged. Return to place of purchase or file claim with freight carrier.

INSTALLATION INSTRUCTIONS



TO REDUCE THE RISK OF FIRE AND ELECTRIC SHOCK OR INJURY TO PERSONS, OBSERVE THE FOLLOWING:

1. Serious injury or death could result from electric shock. Make sure electrical power supply circuit coming to heater is disconnected at main disconnect or service panel before installing this heater.
2. Wiring procedures and connections must be in accordance with the National Electrical Code (NEC) and local codes. Refer to Wiring Diagrams Figure 5. Make sure all electrical connections are tight to prevent possible overheating. Use Copper Supply Wire Only.
3. Verify the electrical power supply voltage matches the voltage rating as printed on the heater nameplate - see Figure 1.

CAUTION - Never connect a heater to a voltage greater than the nameplate voltage as this will damage the heater and could cause a fire.

4. Do not install the heater against combustible low-density cellulose fiberboard surfaces, against or below vinyl wall coverings, or below any materials that may be damaged by heat such as vinyl or plastic blinds, curtains, etc.
5. Do not install heater below an electrical convenience receptacle (outlet).
6. **CAUTION - Heater Operates at High Temperatures.** Keep Electrical Cords (including telephone and computer cables), Drapes, and Other Furnishings Away From Heater. For efficient and safe operation, we recommend maintaining a minimum of 6 inches (152 mm) clearance above and in front of the heater at all times. See Figure 2 for minimum clearance requirements for drapery.
7. To reduce the risk of fire, do not store or use gasoline or other flammable vapors or liquids in the vicinity of the heater.
8. Do not install heater upside down or in any position other than as shown in this manual. Caution label with word "TOP" must be at the top when heater is installed.
9. Do not recess heater in wall or install heater inside any type enclosure as this will cause heater to overheat and could create a hazard.
10. When mounting heater, (see Figure 4), make sure screws do not damage crossover wiring or the safety limit in the heater.
11. Do not remove or bypass the safety limit control as this could allow heater to become a fire hazard - see Figure 4.
12. When using Transformer Relay Accessory, supply wiring provided in compartment where this accessory is installed, must be rated 90 °C minimum.

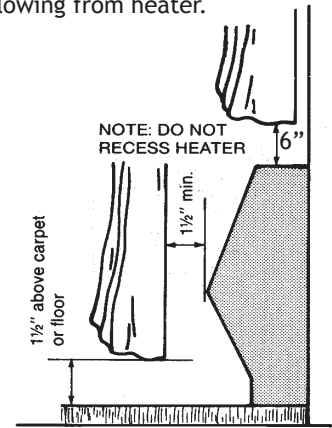
Minimum Clearances

Heater to Floor: heater may be mounted directly on finished floor or, if desired, above floor (such as above the baseboard). Up to 3/4 inch (19 mm) of carpeting may be installed up to and around heater as long as it does not obstruct the air flow.

Heater to Drapery: do not install heater where curtains or drapery will contact the heater. See Figure 2 for required minimum clearances.

Important Note: Certain fabrics and materials discolor or may become damaged by heat. Therefore, avoid installing heater against vinyl wall coverings or below plastic or vinyl items such as blinds or vinyl drapes since these items may become damaged by the heated air flowing from heater.

Figure 2:
Clearance for Drapery



Furniture: maintain at least 6 inches (152 mm) space between furniture and heater to allow for proper air flow.

1. Remove wiring compartment cover at end of heater where power supply cable is to enter (Figure 3). Determine desired mounting location, position heater to wall and mark wall (or floor) at location where power supply is to enter heater.

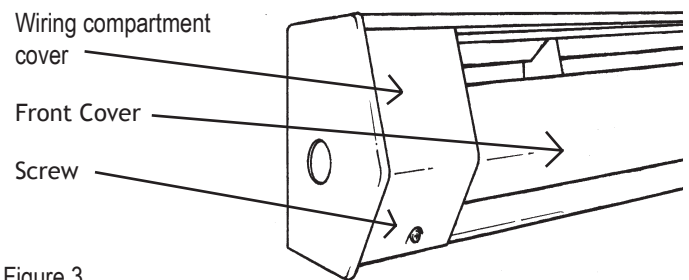


Figure 3

NOTE: For most efficient operation locate heaters along outside wall under windows. Position heater so it can be secured to wall stud. Power cable must enter heater through built in cable clamp or one of the knockouts provided in wiring compartment.

2. Drill hole in wall (or floor) at desired location for power supply entry. Install power supply wiring to heater and thermostat location as determined by thermostat option selected. Allow approximately 10 to 12 in (254mm to 305mm) of wire at heater for connections.
3. If any accessories are to be used with this heater, refer to installation instructions provided with the accessory for proper installation and wiring. Visit www.king-electric.com for instructions on some common accessories.
4. Position heater at desired location and attach to wall using good screws or appropriate hardware. Locate studs and drive screws into studs where possible. For heaters up to 6 feet (1.8 m) in length, one screw at each end is adequate. For longer units, an additional screw in center is required. Tighten screws and then loosen screws at least 1/4 turn to allow heater to expand and contract during use. If unit is mounted above floor, two additional mounting holes are provided at each end below the heating element (see Figure 4). Install an additional screw at each end for stability making sure to loosen each screw at least 1/4 turn.
5. Connect the supply cable grounding wire to the green wire pigtail in wiring compartment.

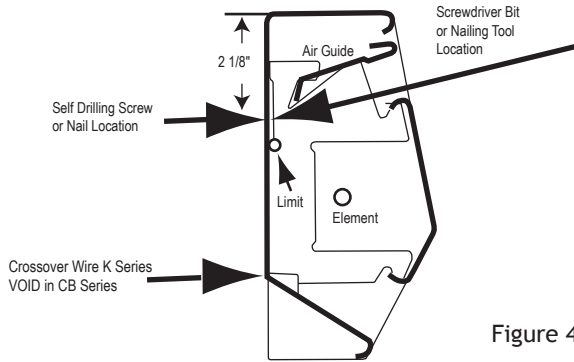


Figure 4

6. Follow the desired wiring diagram, as shown in Figure 5, to connect the power supply to the heater using approved wire nuts.

NOTE: When accessories are installed, use wiring diagram supplied with the accessory.

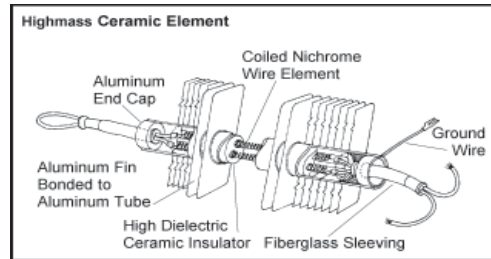
7. If front cover was removed, reinstall by hooking the top edge on the support bracket(s). Then push down to latch onto the support bracket(s).

8. Replace wiring compartment cover(s).

9. Follow instructions accompanying thermostat for installation and wiring thermostat. Visit www.king-electric.com for typical thermostat wiring diagrams.

CB Ceramic Element Baseboard Heater

The CB Series baseboard heater has the return wire within the element and the wireway is empty, (see Figure 4). If your power supply is on the right side you will need to cut the loop to apply your power. If the power supply is on the left, cut one connector to apply power supply similar to diagram in Figure 5.



K Series Element Baseboard Heater

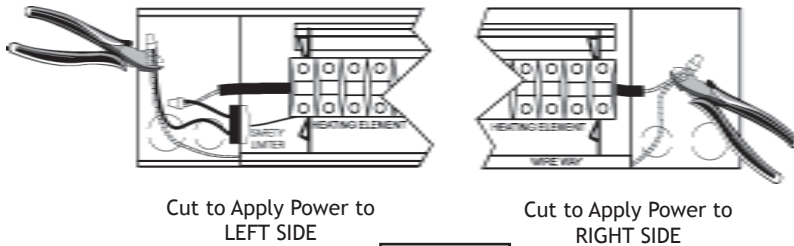
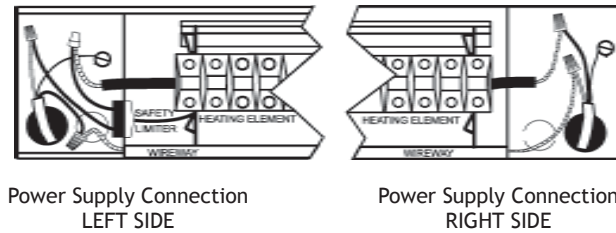


Figure 5

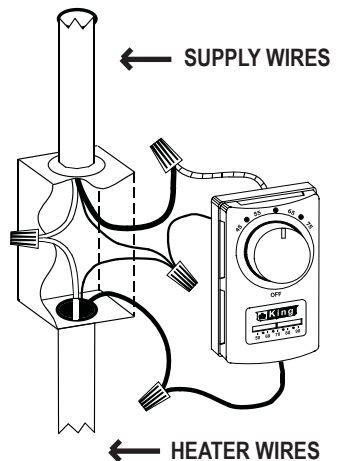
Instructions for Left or Right Side Wiring

1. Heater can be wired from either side - wire one side only.
2. Cut one factory splice cap as shown.
3. This leaves two wires for power connection.
4. **Caution:** Do not cut both factory splice caps on left side - you need only two wires for power connection.



Connection Diagram for Wall Thermostat

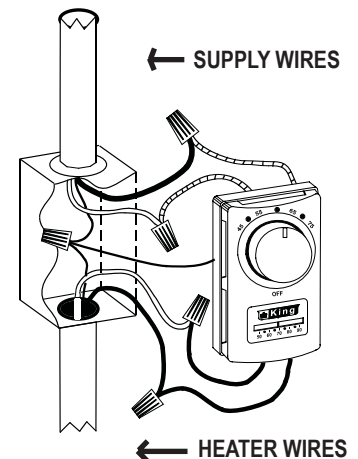
1. Connect power supply wires from wall thermostat as shown.
2. Black and white supply wires can be connected to the heater in reverse order. For simplicity the
3. most common method is shown.
4. Connect bare groundwire to green groundwire.



Connection Diagram for Wall Mounted Single Pole Thermostat

1. Red thermostat wire to black power supply wire.
2. Black thermostat wire to black heater wire.
3. White power supply wire to white heater wire.
4. Connect all bare groundwires together.

WIRE COLOR CHART	
	BLACK WIRE
	RED WIRE
	BARE GROUNDWIRE
	WHITE WIRE



Connection Diagram for Wall Mounted Double Pole Thermostat

1. Connect the two red thermostat wires to the black and white power supply wires.
2. Connect the two black thermostat wires to the black and white heater wires.
3. Connect all the bare groundwires together.

OPERATING INSTRUCTIONS

1. This heater must be properly installed in accordance with the National Electrical Codes (NEC) & local electrical codes before it is used.
2. After the baseboard system has been completely installed, all thermostats should be turned to LOW or NO HEAT. Turn on breakers, wait 3 to 5 minutes and check to see that none of the heaters are operating. If operating, disconnect power and check wiring. If none are operating then turn thermostats to highest position and wait 3 to 5 minutes. Check to see that all heater(s) are operating. Should any not be operating, disconnect power and check wiring.
3. Allow entire system to operate steadily for 1/2 hour. This

should remove oily residue from manufacturing. (Some smoking may occur).

4. Select the setting for comfort on all thermostats.
5. A safety limit control is provided to turn off the heater automatically if it is blocked or otherwise overheats due to an abnormal condition-see Figures 4 and 5. DO NOT bypass or remove this safety device from the electrical circuit-see Warning 11 on page 2. During normal use, this safety control should not operate. If you find that this control is operating, make sure the heater is not being blocked. If it continues to cycle the heater off, disconnect power to heater and have it checked and repaired by a qualified electrician.

MAINTENANCE INSTRUCTIONS

Your heater will give you years of service and comfort with only minimum care. To assure efficient operation follow the simple instructions below.

WARNING

1. Serious injury or death could result from electric shock. Make sure electrical power supply circuit coming to heater is disconnected at main disconnect or service panel before servicing this heater. Allow heater to cool before cleaning to prevent a possible burn
2. Use care when cleaning element fins to avoid damaging fins. Note also that fins are sharp and may cause cuts so avoid contact.

1. The user can perform some basic cleaning of the heater. All other servicing is to be done by qualified service personnel.
2. Because of the convection heating principle which depends upon a circulation of air through the finned element, dust will collect between the fins. The heater should be cleaned regularly for maximum efficiency.

3. To clean heating element fins, first remove both wiring compartment covers and the front cover. Using a vacuum cleaner or compressed air, remove the dust and lint from the aluminum heating element fins while being careful not to damage the fins.

4. The painted heater cabinet may be cleaned using a slightly damp cloth. Do not use abrasive cleaners or waxes as these may damage the finish or leave a residue that will discolor.
5. Replace front cover (making sure it is latched in place at each element support bracket and at each end) and two wiring compartment covers (using the two screws provided), restore power and check heater for proper operation.

Painting

If it becomes necessary to repaint heater, use only a quality enamel paint suitable for metal surfaces following the instructions provided with the paint. DO NOT paint the heating element or safety limit capillary tube. Repaint only the exterior of the cabinet.

TROUBLESHOOTING CHART FOR BASEBOARD HEATERS

SYMPTOM	PROBLEM	SOLUTION
Breaker trips	1. Short circuit	1. Find source of short. Trace heater circuit and verify the heater is wired properly.
	2. Overloaded circuit	2. Reduce wattage in circuit. Refer to circuit sizing table for maximum wattage
	3. Improper voltage	3. Verify the heater voltage matches the supply voltage.
Heater not working	1. No power	1. Turn breaker on. Turn thermostat on. Check that the breaker is positioned properly on panel bus-bar. A 2-Pole breaker must be connected to both bus-bars (A&B phase) to produce 240V power.
	2. Loose connections	2. Tighten wire connections.
	3. Defective limit	3. By-pass the limit to test. If heater works, replace the limit.
Heater Smokes	1. Oil on element	1. It is normal for the element to burn off some light finishing oil used in the manufacturing process when first energized. Open windows and allow room to vent until it stops, usually within a few minutes.
	2. Needs cleaning	2. Remove any dust or dirt accumulation.
Room Temperature does not match thermostat setting	1. Thermostat affected by another heat source	1. Sunlight or other heat sources can affect the thermostat. Move the thermostat to another location or remove the heat source.
	2. Improper calibration	2. Remove cover and adjust calibration screw.
Room Temperature swings from too hot to too cold	1. Defective or low quality thermostat	1. Replace with a better quality thermostat. Anticipated thermostats are fairly accurate; an electronic thermostat is the best.

WARRANTY

King Electrical Mfg Company will repair or replace, without charge to the original owner, any baseboard heater found to be defective or malfunctioning within 1 year (K Series) or 5 years (CB Series) of installation. If the product becomes defective, contact King at 206-762-0400 for instructions on how to replace heater. Do not return the heater to the store. All returned goods require a Returned Goods Authorization. This warranty requires the owner or his agent install the heater in accordance with these instructions, the National Electrical Code and any other applicable heating or electrical codes. It further requires that reasonable and necessary maintenance be performed on the unit. The company is not liable for abuse or misuse of product.