SAVE THESE INSTRUCTIONS

INSTALLATION AND MAINTENANCE

king

PAW Wall Heater

DANGER

ELECTRIC SHOCK OR FIRE HAZARD

READ ALL WIRE SIZING, VOLTAGE REQUIREMENTS AND SAFETY DATA TO AVOID PROPERTY DAMAGE AND PERSONAL INJURY

Figure 1

MADE IN USA
With U.S. & Global Materials

SMART SLP LIMIT PROTECTION

UL LISTED

Covers all PAW Series models

⚠ WARNING ⚠

Read Carefully - These instructions are written in an effort to prevent potential difficulties that might arise during installation. Studying the instructions first may save you considerable time and money later. Observing the following procedures will keep installation time to a minimum.

IMPORTANT INSTRUCTIONS

When using electrical heating 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 wiring or using this heater.**
2. WARNING: This heater is hot when in use. To avoid burns, don't let bare skin touch hot surfaces. Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, boxes, etc., & curtains at least 3ft (.9 m) from front of the heater and keep them away from the sides and rear.
3. CAUTION: Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
4. Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by qualified electrician for repair before reusing.
5. Do not use outdoors.
6. WARNING: To disconnect heater, turn controls to OFF, and turn OFF power to heater circuit at main disconnect panel.
7. WARNING: Do not insert or allow foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock, fire, or damage to the heater.
8. Do not block air intakes or exhaust in any manner.
9. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
10. WARNING: Use this heater only as described in this manual. Any other use is not recommended by the manufacturer and may cause fire, electric shock, explosion or injury.
11. All electrical work and materials must comply with the National Electric Code (NEC), the Occupational Safety and Health Act (OSHA), and all state and local codes.
12. Use copper conductors only.
13. Verify that the electrical supply wires are the same voltage as the rating label on the front of this heater.
14. Heater must be installed in a wall can.
15. DO NOT select a location where it is likely to be blocked by furniture, curtains, etc.
16. Be sure the location selected allows sufficient space for the heater as shown by Table 1.
17. Connect grounding lead to grounding screw provided. Keep all foreign objects out of heater.

SELECTING HEATER LOCATION

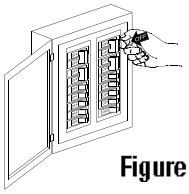
DO NOT install less than 6" (15cm) from vertical side walls or open edge of door. This heater must have an unrestricted airflow. DO NOT select a location where it is likely to be blocked by furniture, curtains, etc. Be sure the location selected allows sufficient space for the heater as shown by **Table 1**. DO NOT locate this heater in an area where combustible vapors, gases liquids, or excessive lint, dust or moisture is present.

Minimum Clearances: Table 1

Front	TOP	BOTTOM	SIDES
36 in	12 in	4 in	6 in
0.9 m	30.5 cm	10.2 cm	15.2 cm

Zero clearance to insulation.

PAW INSTALLATION INSTRUCTIONS



CAUTION!
Turn OFF All Electrical Power To Install Heater

Figure 3

DANGER

ELECTRIC SHOCK OR FIRE HAZARD

READ ALL WIRE SIZING, VOLTAGE REQUIREMENTS AND SAFETY DATA TO AVOID PROPERTY DAMAGE AND PERSONAL INJURY

Rating Label Location

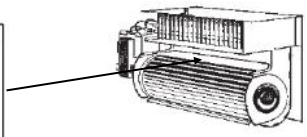


Figure 4

The wire and breaker sizing chart will give a general rule of installation size. Consult an electrician if you are not knowledgeable about wiring codes.

Wire and Breaker Sizing: Table 2

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

INSTALLATION STEPS

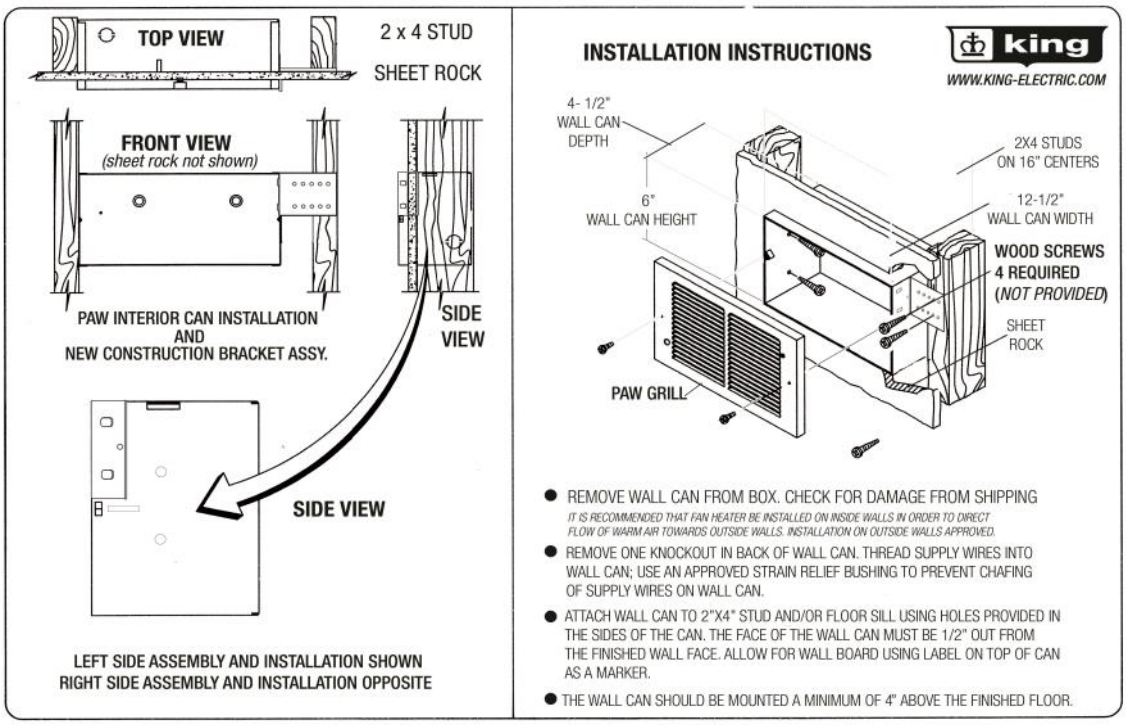
Connect heater only to the voltage, amperage and frequency specified on the nameplate.

Wiring procedures and connections shall be in accordance with all National and local codes having jurisdiction.

1. Loosen mounting screw and remove fan heater assembly.
2. A knockout of 1/2 inch conduit size (7/8 inch / 2.2cm) is provided in the back & side of heater for power to enter. Provide proper strain relief connectors for wire entering the wallbox.
3. Install wallbox a minimum of 6" from vertical sidewalls and 4" above floor. **The front edge of wall can MUST extend 1/2" beyond finished wall surface.**
4. Secure wallbox to the 2 x 4 stud using the two (2) holes on the side of wallbox. Secure to wall stud on opposite side if required using New Construction Bracket. **See Fig. 5.**
5. Connect supply wires, attach ground feed wire to the green ground wire with wire nuts.
6. Reinstall heater into wallbox with screw at top of interior.
7. Install grill securely with screws provided in packet.
8. Test unit by turning thermostat up past room temperature. You will see a puff of smoke as the elements are energized and the fan turns on. This is a normal burn off of manufacturing lubricants and will dissipate in 5 minutes.
9. Heater will run until the room temperature you set is reached and then turn itself off until the temperature drops again.

⚠ **CAUTION - <u>High temperature. Risk of fire</u>**, keep electrical cords, drapery, furnishings, and other combustibles at least 3 feet (0.9 m) from the front of the heater as well as away from the side and rear. To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.

<u>Figure 5</u>



PAW WIRING DIAGRAMS

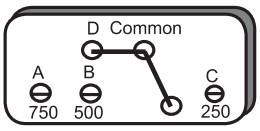
WATTAGE SELECTION

The heater is factory wired to 1500 Watts at 120 Volts. To reduce wattage unplug an insulated push on terminal per color coding below. Wrap with electrical tape to prevent possibility of electrical contact with other parts.

WIRE COLOR CODING

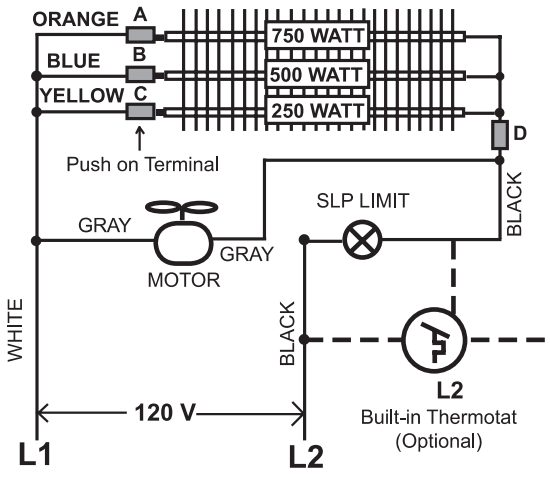
A Orange Disconnects the 750 Watt element
B Blue Disconnects the 500 Watt element
C Yellow Disconnects the 250 Watt element
D Black DO NOT DISCONNECT (Common)

END VIEW OF ELEMENT



A - 750 W **B -** 500 W **C -** 250 W
D - Common Leg of Power Supply

PIC-A-WATT® **1215** 120V 1500W
Steel Sheath Element



Field Connections

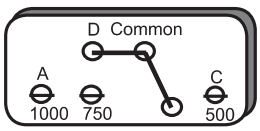
WATTAGE SELECTION

The heater is factory wired to 2250 Watts at 208/240 Volts. To reduce wattage unplug an insulated push on terminal per the color coding below. Wrap with electrical tape to prevent the possibility of electrical contact with other parts.

WIRE COLOR CODING

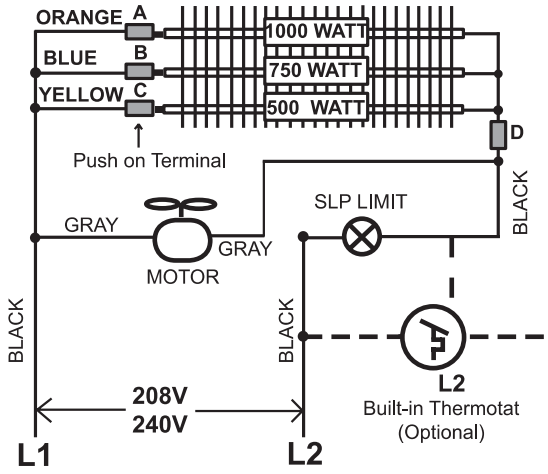
A Orange Disconnects the 1000 Watt element
B Blue Disconnects the 750 Watt element
C Yellow Disconnects the 500 Watt element
D Black DO NOT DISCONNECT (Common)

END VIEW OF ELEMENT



A - 1000 W **B -** 750 W **C -** 500 W
D - Common Leg of Power Supply

PIC-A-WATT® **2022** 208V 2250W
Steel Sheath Element **2422** 240V 2250W



Field Connections

SMART LIMIT PROTECTION & WARRANTY

Heater Safety Limit Tripped?

U.S. PATENT #6,748,163 B2
SMART SLP® LIMIT PROTECTION

This heater is equipped with a 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 fifteen minutes. Inspect for any objects on or adjacent to the heater that may cause high temperatures. After inspecting the heater, keep the power to the heater off for 15 minutes to reset the SLP thermal protector. If the SLP thermal protector shuts the heater off again, immediately turn the heater OFF at the circuit breaker and inspect the heater for possible fan motor failure or dirt and lint on the heating element. Repeat the starting procedure.

DO NOT TAMPER OR REMOVE THIS THIS DEVICE

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 bristled brush such as a paint brush to assist in removing contaminants from the heater.

Limited **5** Year Warranty:

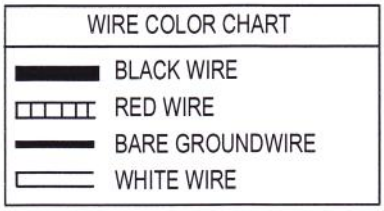
King Mfg. Co. will repair or replace without charge any King product found to be defective or malfunctioning during the first 5 years of purchase to the original owner.

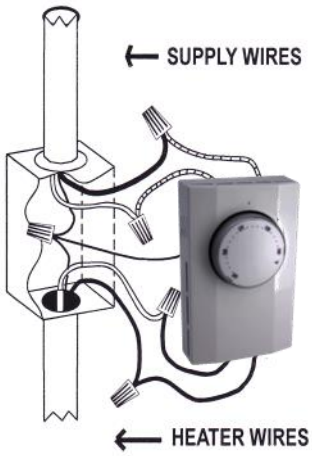
TROUBLESHOOTING GUIDE

SYMPTOM	PROBLEM	SOLUTION
Breaker Trips	1. Short Circuit 2. Overloaded Circuit 3. Improper Voltage	1. Find source of short. Trace heater circuit and verify the heater is connected properly. 2. Reduce wattage in circuit. Refer to Table 2 for maximum amperage. 3. Verify the heater voltage matches the supply voltage.
Heater not working	1. No Power 2. Loose Connections 3. Defective Limit	1. Turn Breaker ON, turn thermostat ON, check that the breaker is position properly on panel bus-bar. A dedicated 2-Pole breaker must be connected to both bus-bars (A & B phase) to produce 240V power. 2. Remove & retighten wire connections.
Heater Smokes	1. Oil on element 2. Needs Cleaning	1. It's normal for 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. Remove any dust or dirt accumulations.
Room Temp doesn't match stat setting.	1. Stat affected by other heat source. 2. Improper calibration	1. Sunlight or other heat sources can affect the thermostat. Move the thermostat to another location (No Stat Unit Only) or remove the heat source. 2. Adjust calibration screw. Call factory.
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; and electronic thermostat are best.

REMOTE WALL THERMOSTAT INSTALLATION

Figure 7





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 ground wires together.

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 wires to the black and white heater wires.
3. Connect all the bare ground wires together.

We're Here to Help!
For any difficulties installing or operating this product
Call Us Toll Free at:
1-800-603-5464
7:00 am -3:30 pm PST Mon-Fri
Visit king-electric.com or email us at info@king-electric.com