

INSTALLATION AND MAINTENANCE



PCKW Series

Industrial Portable Heater

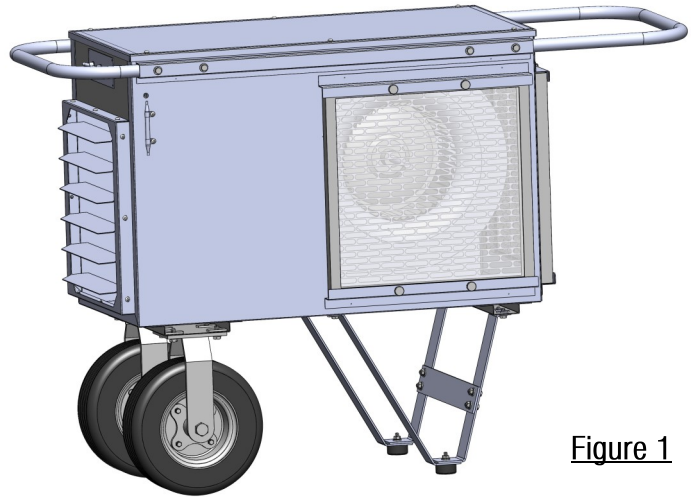
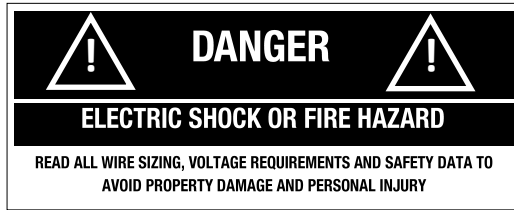


Figure 1

WARNING

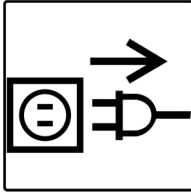
READ CAREFULLY - Use the heater only as described in this manual. Any other use is not recommended and could result in fire, electric shock, and personal injury. Following these instructions will prevent difficulties that might occur during the installation and use of the heater. Please study the instructions first, as they may save considerable time and trouble during use addition to providing important safety information. Make sure to save these instructions for future use.

NEVER LEAVE HEATER UNATTENDED WHILE CONNECTED TO A POWER SOURCE

Read all instructions before using this heater.

1. **WARNING:** 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, etc. and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
2. Extreme caution is necessary when heater is used by or near children or invalids and whenever the heater is left operating and unattended.
3. Always unplug heater when not in use.
4. **WARNING:** Do not operate heater with damaged cord or plug, after it malfunctions, has been dropped, or damaged in any manner. Discard heater or return to authorized service facility for examination and/or repair.
5. **WARNING:** Do not use outdoors.
6. This heater is not intended for use in bathrooms, laundry and similar indoor areas. Never locate heater where it can fall into a bathtub or other water container.
7. **WARNING:** Do not run cord under carpeting. Do not cover cord with throw rugs, runners, or similar coverings. Do not route cord under furniture or appliances. Arrange cord away from traffic area and where it will not be tripped over.
8. To disconnect heater, turn controls to off, then remove plug from outlet.
9. Connect to properly grounded outlets only.
10. **WARNING:** 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.
11. **WARNING:** To prevent a possible fire, do not block air intakes or exhaust in any manner.
12. **WARNING:** A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable vapors or liquids are used or stored.
13. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or injury to persons.
14. Always plug heater into wall outlet or receptacle. Never use with extension cord or relocatable power tap, or power strip.

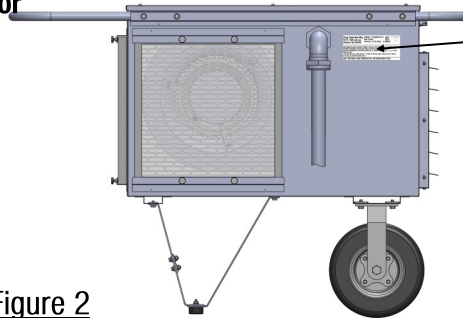
ASSEMBLY & SETUP



CAUTION!

Remove power by unplugging the Heater while setting up or placing

Figure 2
Rating Label Location



King Electrical Mfg. MODEL: PCKW2030-3
9131 10th ave so. VOLTS: 208
Seattle Wa. 98166 WATTS: 27KW 60hz 3 PHASE

MP MODELS ARE FACTORY WIRED 3 PHASE. FOR CHANGE TO 1 PHASE SEE WIRING DIAGRAM. INSTALLER MUST INDICATE 1 OR 3 IN PHASE BLOCK THERMOSTAT RATING: 240VOLTS AC 25AMP RESISTIVE, 2 F.L.A. 40VA PILOT DUTY. DO NOT INSTALL LESS THAN 6" FROM VERTICAL SIDE WALLS OR 6" ABOVE FLOOR. USE COPPER WIRE ONLY. NOT SUITABLE FOR RESIDENTIAL OR HOUSEHOLD USE

DANGER

ELECTRIC SHOCK OR FIRE HAZARD

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

Figure 2

PCKW PLUG SELECTION

Check rating label on heater (See Figure 2) and verify the proper voltage and SO cord type. PCKW Series requires the below rated plug and receptacle per the amperage requirement (Not provided). No adapter is available for this blade configuration.

HUBBELL®
Wiring Device-Kellems

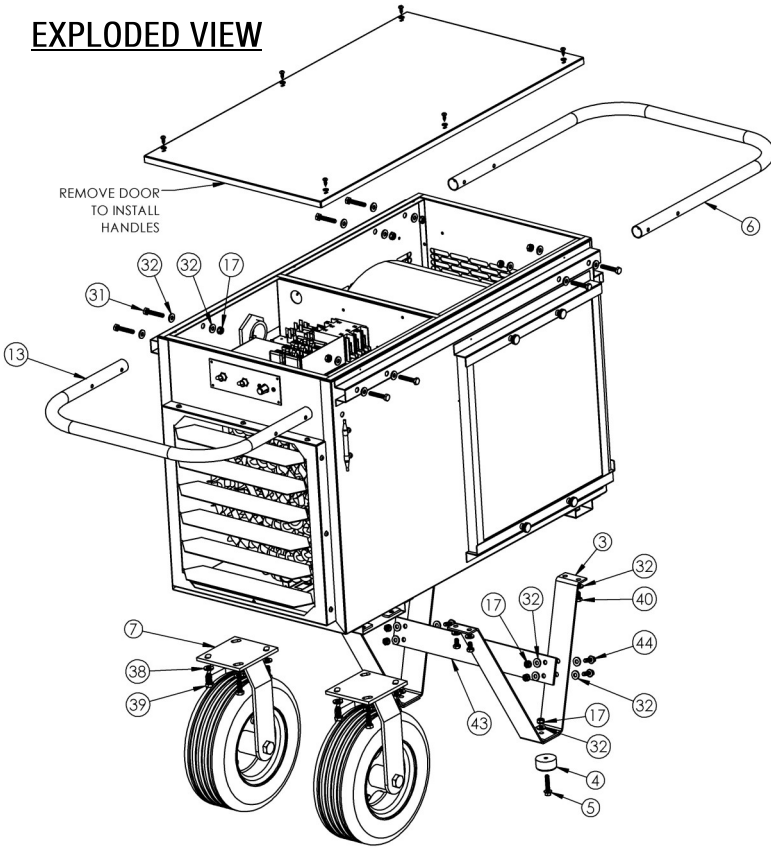


Dual-Certified IEC Pin & Sleeve Devices

| MODEL | PHASE | VOLTS | AMPS | SOOW CORD GAUGE | Rating | | | Watertight Devices | |
|------------|-------|-------|------|-----------------|---------|--------------|--|--------------------|------------|
| | | | | | Amps | Poles/ Wires | Configuration Recept./Conn. Plug/Inlet | AC Voltage | Receptacle |
| PCKW2010-1 | 1 | 208 | 48.1 | 6 | 60/63 | 2P 3W | 220-240V 250V | HBL360R6W | HBL360P6W |
| PCKW2015-1 | 1 | 208 | 72.1 | 2 | 100 | 2P 3W | 250V | HBL3100R6W | HBL3100P6W |
| PCKW2410-1 | 1 | 240 | 41.7 | 6 | 60/63 | 2P 3W | 220-240V 250V | HBL360R6W | HBL360P6W |
| PCKW2415-1 | 1 | 240 | 62.5 | 4 | 100 | 2P 3W | 250V | HBL3100R6W | HBL3100P6W |
| PCKW2010-3 | 3 | 208 | 27.7 | 8 | 60/63 | 3P 4W | 3Ø 250V | HBL460R9W | HBL460P9W |
| PCKW2015-3 | 3 | 208 | 41.6 | 5 | 60/63 | 3P 4W | 3Ø 250V | HBL460R9W | HBL460P9W |
| PCKW2020-3 | 3 | 208 | 55.5 | 4 | 60/63 | 3P 4W | 3Ø 250V | HBL460R9W | HBL460P9W |
| PCKW2025-3 | 3 | 208 | 69.4 | 2 | 100/125 | 3P 4W | 3Ø 250V | HBL4100R9W | HBL4100P9W |
| PCKW2410-3 | 3 | 240 | 24.0 | 10 | 60/63 | 3P 4W | 3Ø 250V | HBL460R9W | HBL460P9W |
| PCKW2415-3 | 3 | 240 | 36.1 | 6 | 60/63 | 3P 4W | 3Ø 250V | HBL460R9W | HBL460P9W |
| PCKW2420-3 | 3 | 240 | 48.1 | 4 | 60/63 | 3P 4W | 3Ø 250V | HBL460R9W | HBL460P9W |
| PCKW2425-3 | 3 | 240 | 60.1 | 4 | 100/125 | 3P 4W | 3Ø 250V | HBL4100R9W | HBL4100P9W |
| PCKW2430-3 | 3 | 240 | 72.1 | 2 | 100/125 | 3P 4W | 3Ø 250V | HBL4100R9W | HBL4100P9W |
| PCKW4810-3 | 3 | 480 | 12.0 | 14 | 60 | 3P 4W | 3Ø 480V | HBL460R7W | HBL460P7W |
| PCKW4815-3 | 3 | 480 | 18.0 | 12 | 60 | 3P 4W | 3Ø 480V | HBL460R7W | HBL460P7W |
| PCKW4820-3 | 3 | 480 | 24.0 | 10 | 60 | 3P 4W | 3Ø 480V | HBL460R7W | HBL460P7W |
| PCKW4825-3 | 3 | 480 | 30.1 | 8 | 60 | 3P 4W | 3Ø 480V | HBL460R7W | HBL460P7W |
| PCKW4830-3 | 3 | 480 | 36.1 | 6 | 60 | 3P 4W | 3Ø 480V | HBL460R7W | HBL460P7W |

ASSEMBLY & SETUP

EXPLODED VIEW

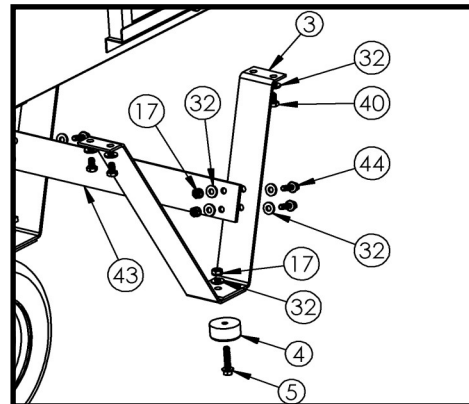
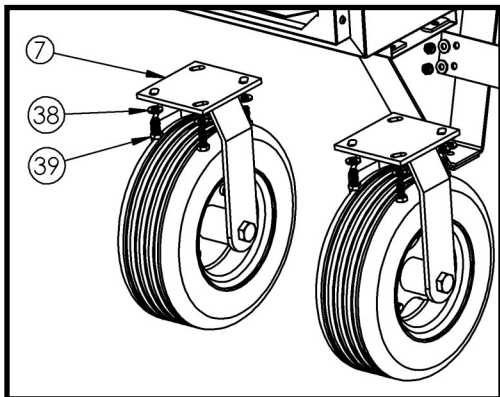


BILL OF MATERIALS

| ITEM NO. | PART NUMBER | DESCRIPTION | QTY. |
|----------|-------------|---|------|
| 3 | 103891 | WELDMENT, PCKW LEGS | 2 |
| 4 | 102360 | PKB 1" RUBBER FOOT | 2 |
| 5 | 103875 | BOLT, 1/4-20 X 1 1/4, GRADE 5 STEEL, FLANGED HEX HEAD | 2 |
| 6 | 103868 | WPCK REAR HANDLE | 1 |
| 7 | 103873 | CASTER, RIGID, PNEUMATIC 10 IN TIRE | 2 |
| 13 | 103869 | WPCK FRONT HANDLE | 1 |
| 17 | 64033 | 1/4-20 KEPS NUT | 14 |
| 31 | 100906 | BOLT, HEX, 1/4-20 X 1.5 IN, GRADE 2 STEEL | 8 |
| 32 | 100903 | WASHER, FLAT, 1/4 NORMAL, .281 ID X .625 STEEL-ZINC | 34 |
| 38 | 103881 | WASHER, 5/16, ID .344 X OD .688 X THK .051-.080 | 8 |
| 39 | 103882 | BOLT, 5/16-18 X 3/4, GRADE 5 STEEL, FLANGED HEX HEAD | 8 |
| 40 | 66278 | 1/4-20X1/2 STEEL HEX BOLT ZINC FOR KB'S 1/6 HP MOTOR | 8 |
| 43 | 103871 | WPCK, REAR LEG CROSS MEMBER | 1 |
| 44 | 64075 | 1/4-20 X 3/4 IND HEX SLOT W/TYPE "F" ZINC | 4 |

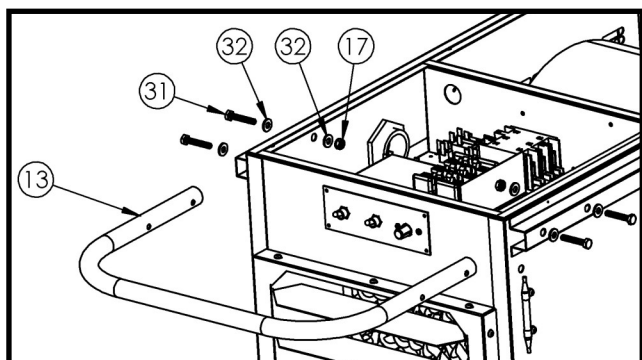
HEATER SETUP

1. Unpack & inspect your heater for any damage. If damage is found contact factory or return to authorized service facility.
2. Install 2 Front Wheels (#7) according to the assembly diagram, using 8 bolts (#39) and washers (#38) provided.
3. Install Rear Legs (#3) and Cross Member (#43) Assembly according to the assembly diagram, using bolts (#44 & #40), washers (#32) and nuts (#17) provided. Install Rubber Feet Stoppers (#4) using bolts (#5), washers (#32) and nuts (#17) provided.

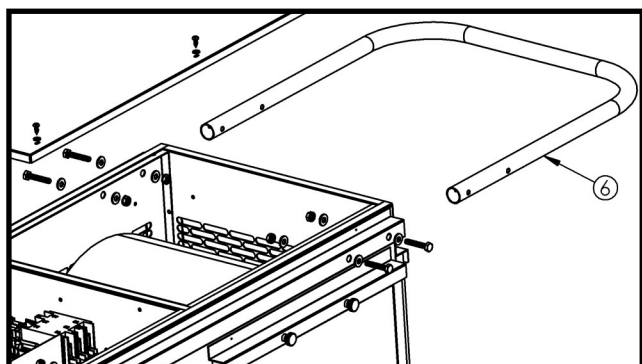


HEATER SETUP

4. Prepare for Front and Rear Handles installation by first removing the Top Cover (Door) to gain access to mounting the handles.
5. Insert Front Handle (#13) into metal channels on sides of the unit, according to the assembly drawing. Secure with bolts (#31), washers (#32) and nuts (#17) as shown.



6. Install Rear Handle (#6) following this same process.



7. Reattached Top Cover, making sure screws are properly tightened.
8. Install proper plug configuration (Plug: Hubbell #HBL4100P9W) at the end of the power cord. (See Page 2 for details).
9. Place heater at least 6" (15cm) away from vertical surfaces and keep the intake clear of obstructions. Keep all combustible

materials, such as furniture, papers, clothes, drapes, and curtains at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.

Route power cord away from traffic areas to avoid tripping.

7. NEVER route power cord under carpets, rugs, drops furniture or other equipment.
8. Plug power cord into a grounded wall outlet (Hubbell # HBL4100R9W) (See Page 2 for details) only. DO NOT use an extension cord.
9. Wiring diagram located in wiring housing.
10. WARNING: This heater is for floor use ONLY and should not be tipped on side, placed upside down, mounted on or inserted into a wall. A tip-over auto disconnect switch will activate when tipped more than 30°.
11. DO NOT use heater in areas where gasoline, paint, or other flammable liquids are used.
12. DO NOT use heater outdoors or in wet or moist indoor areas such as bath or laundry rooms.
13. Store unplugged and in a dry indoor location.
14. This heater is for use on 208 volts. The type outlet is a 208 volt grounding outlet. When properly installed, it provides a ground connection through the cord to the heater to protect the operator from electric shock. Do not coil up the cord while the heater is in operation, heat is multiplied with every turn and will melt the cord.

OPERATION AND ADJUSTING THERMOSTAT

This heater must be properly placed before it is used.

DO NOT tamper with or change the operating of this heater. All service should be preformed by a authorized service representative.

1. After the electric heater has been completely placed, the thermostats should be turned to LOW or NO HEAT position.
2. Plug unit into grounded outlet. Do not use extension cords.
3. Turn thermostats to highest position and wait 3 to 5 minutes. Check to see that all heaters are operating. Should any not be operating, disconnect power and check wiring.

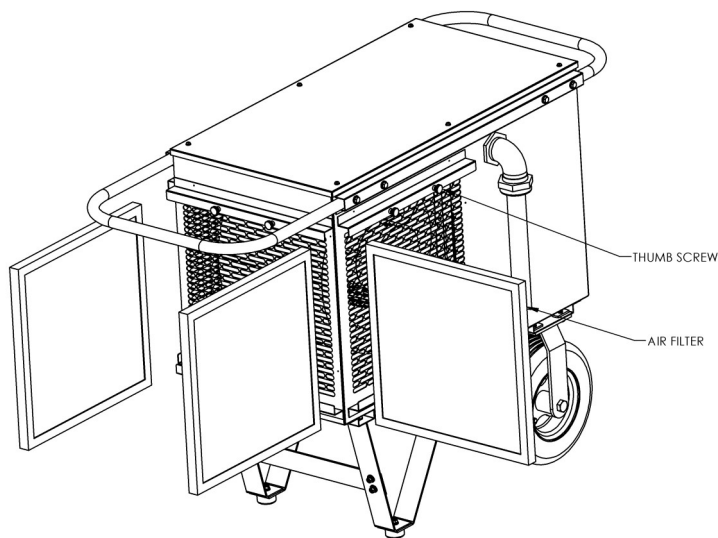
4. Allow entire system to operate steadily for 1/2 hour. This should remove oily residue from manufacturing. (Some smoking may occur).

Selecting desired temperature on the thermostat:

To adjust the temperature to your requirements, turn the dial on the thermostat clockwise all the way to turn heater on. When the room reaches the desired temperature, turn the thermostat knob counter clockwise until you hear the click. Leave in this position to maintain the room temperature at this setting. For additional heat, turn clockwise until you the click and the heater will turn on.

FILTER REPLACEMENT

1. Turn power OFF to unit before replacing filters.
2. Loosen 4 thumb screws per air filter.
3. Slide old filter out from support channels.
4. Slide new air filter into support channels.
5. Retighten thumb screws to secure air filter in place.



CLEANING INSTRUCTIONS



Before cleaning heater, heating elements must be cool.

1. Before removing front louver housing, turn the electrical power OFF by unplugging it. If not, electricity may still be flowing to the heater. If you are uncomfortable working with electrical appliances consult a qualified electrician. Once power is off completely, proceed to the next step.
2. Remove screws located on the sides of the front louver

housing. Wipe housing with soft cloth or brush.

3. Using a hair dryer or vacuum on blow cycle, blow debris back through the element. Do not touch elements. Vacuum lose debris without touching the elements.
4. Replace front louver housing and secure with screws.
5. Wipe the fan and motor with a soft cloth or brush.
6. Replace front louver housing & plug the unit back in.

TROUBLESHOOTING

Troubleshooting Chart for Electric Heaters

| SYMPTOM | PROBLEM | SOLUTION |
|--|---|---|
| Breaker Trips | <ol style="list-style-type: none"> 1. Short Circuit 2. Overloaded Circuit 3. Improper Voltage | <ol style="list-style-type: none"> 1. Find source of short. Trace heater circuit and verify the heater is wire properly. 2. Reduce wattage in circuit. Refer to circuit sizing table for maximum wattage. 3. Verify the heater voltage matches the supply voltage. |
| Heater not working | <ol style="list-style-type: none"> 1. No Power 2. Loose Connections 3. Defective Limit | <ol style="list-style-type: none"> 1. Turn Breaker ON, turn thermostat ON, check that the breaker is position properly on panel bus-bar. A 2-Pole breaker must be connected to both bus-bars (A&B phase) to produce 240V power. 2. Tighten wire connections. 3. By-pass the limit to test. If heater works, replace the limit. |
| Heater Smokes | <ol style="list-style-type: none"> 1. Oil on Element 2. Needs Cleaning | <ol style="list-style-type: none"> 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. Remove any dust or dirt accumulations. |
| Room Temperature does not match thermostat setting | <ol style="list-style-type: none"> 1. Thermostat affected by another heat source. 2. Improper calibration | <ol style="list-style-type: none"> 1. Sunlight or other heat sources can affect the thermostat. Move the thermostat to another location or remove the heat source. 2. Remove cover and adjust calibration screw. |
| Room Temperature swings from too hot to too cold | <ol style="list-style-type: none"> 1. Defective or low quality thermostat | <ol style="list-style-type: none"> 1. Replace with a better quality thermostat. Anticipated thermostats are fairly accurate; an electronic thermostat is best. |

SMART LIMIT PROTECTION AND MAINTENANCE



Heater Safety Limit Tripped?

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



Smart Heating Solutions