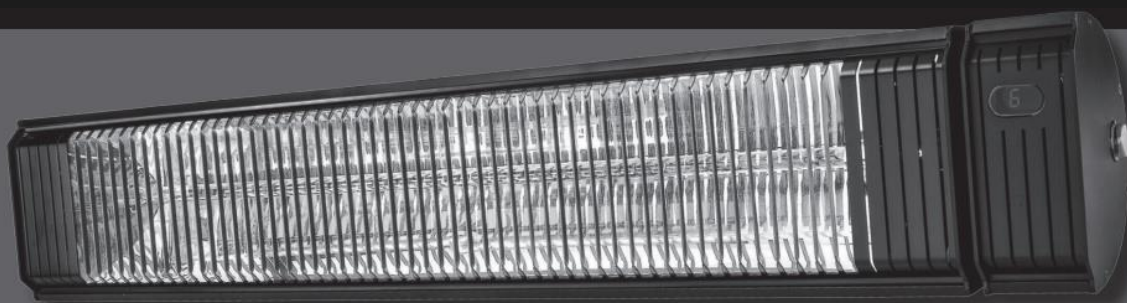


INSTALLATION, OPERATION AND MAINTENANCE MANUAL

RADIANT INFRARED ELECTRIC HEATER



BIG ASS FANS OBSIDIAN® ELECTRIC HEATER

MODELS	VOLTAGE	TOTAL POWER (W)	CURRENT(AMPS)
BACF15120B	120	1500	12.5



FIRE/EXPLOSION HAZARD WARNING

NOT FOR USE IN HAZARDOUS OR EXPLOSIVE ATMOSPHERES



During operation, always ensure combustible materials are kept at a safe distance from the heater body and from the emitted radiant energy. This heater is not intended for use in hazardous areas where flammable vapours, gases, liquids or other combustibles are present. Failure to do so can result in personal injury/or property damage.



FOR INDOOR AND OUTDOOR COMMERCIAL AND RESIDENTIAL USE

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WARNINGS



THIS ELECTRIC APPLIANCE PRODUCES INFRARED HEAT, AND FAILURE TO FOLLOW WARNINGS AND INSTRUCTIONS CAN CAUSE FIRE, ELECTRIC SHOCK, OR INJURY.



Heater must be installed by a certified electrician and installation must adhere to all local, state and national electric codes.



READ AND SAVE THESE INSTRUCTIONS

Please read this owner's manual carefully before using the unit and keep the manual for future reference.

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

Notice: Changes or modifications not approved by the party responsible for compliance will void the user's authority to operate the equipment.

IMPORTANT INSTRUCTIONS

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 outlined in section 1 – SAFETY. **Read all instructions before installing or using this heater.**

1 - SAFETY



WARNINGS



WARNING: FIRE OR EXPLOSION HAZARD

- Failure to precisely follow safety warnings could result in serious injury or property damage.
- Heater has hot surfaces and arcing or sparking parts inside. Do not use the heater in areas where gasoline, paint or flammable vapors or liquids are used or stored.
- Heater is not to be installed or used in an area containing hazardous or flammable materials including but not limited to rags, fabrics, spray or aerosol cans, cleaning compounds, plastic containers, paper products, organic dusts, straw/hay, gasoline, kerosene, lighter fluid, etc.
- To prevent a possible fire, do not block air intakes or exhaust in any manner.
- 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 to the Heater. Do not cover the heater in any manner, do not hang clothing on or near the heater.
- **Caution!** Do not use the heater together with another appliance connected to the same supply line or connected to the same breaker.
- Use the heater with a properly grounded three prong plug.
- The power cord must not be left on or around the heater body.
- Keep combustible materials, such as furniture, pillows, bedding, papers, clothes, curtains, etc. at least 6 feet (1.8m) from the front of the heater and keep them away from sides and rear.

WARNING: PERSONAL INJURY HAZARD - OPERATION

- This heater is hot when in use. To avoid burns, do not let bare skin touch hot surfaces.
- 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.
- Extreme caution is necessary when any heater is used by or near children or invalids and whenever the heater is left operating and unattended.
- Never leave the heater unattended while it is operating.
- Do not use the heater without the aluminium grille in place.
- Do not operate any heater after it malfunctions. Disconnect power at service panel and have heater inspected by an electrician before reusing.
- Do not use the heater to light cigarettes or similar materials.
- Do not insert objects in heater openings. Electrical shock could result.
- Connect to properly grounded outlets only. To disconnect heater, turn controls to off, and turn off power to the heater circuit at the main disconnect panel.

WARNING: PERSONAL INJURY HAZARD - CLEANING AND MAINTENANCE

- To avoid property damage, personal injury or death due to electrical shock DO NOT service the unit without turning the unit OFF and disconnecting the heater from the main power supply.
- Before cleaning the unit or replacing the emitter, turn off the main power. Make sure the heater and/or the emitter is cool before handling.
- Service must be performed only by a qualified service technician.

WARNING: INSTALLATION

- **This product must be installed by a certified electrician and must adhere to all local, state and national electric codes (NEC)**
- Do not direct the radiant part of the heater towards the ceiling.
- Specified minimum clearances from front, sides, bottom and back of unit must be met. Failure to meet clearance minimums can result in fire.
- Heater is not for use in bathrooms, laundry areas or other locations where unit could fall into water.
- Do not use the heater if it has been dropped or damaged in any way. Ensure the emitter is not cracked or chipped visually. Contact an authorized BIG ASS FANS dealer for support.
- Do not use the heater if the power cord is damaged. Contact an authorized servicer or qualified electrician to replace the cord prior to use.
- Unplug the appliance when it is not in use for long periods of time, or for cleaning and maintenance.
- 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.
- **Heater is not to be recessed**
- The heater must be installed at level on a flat, stable surface, rigid enough to safely withstand the weight of the heater and the heater must not be covered by any flexible material, such as carpets, plastic or fabric.

SAVE THESE INSTRUCTIONS

2 - INSTALLATION INSTRUCTIONS

Heater installation must be carried out by qualified personnel in compliance with local National Codes (NEC) as well as any other applicable standards. Failure to comply with applicable requirements could result in personal injury and/or property damage. Wiring procedures and connections shall be made in accordance with national and local electrical codes having jurisdiction.

BIG ASS FANS infrared heaters produce radiant heat that warms people and objects, rather than the air around them. The heater can be wall mounted and includes brackets which allow the user to direct the infrared heat where desired.

To reduce the risk of fire, do not store or use gasoline or other flammable vapors and liquids in the vicinity of the heater.

2.1 INSTALLATION CLEARANCE DISTANCES



DANGER FIRE HAZARD



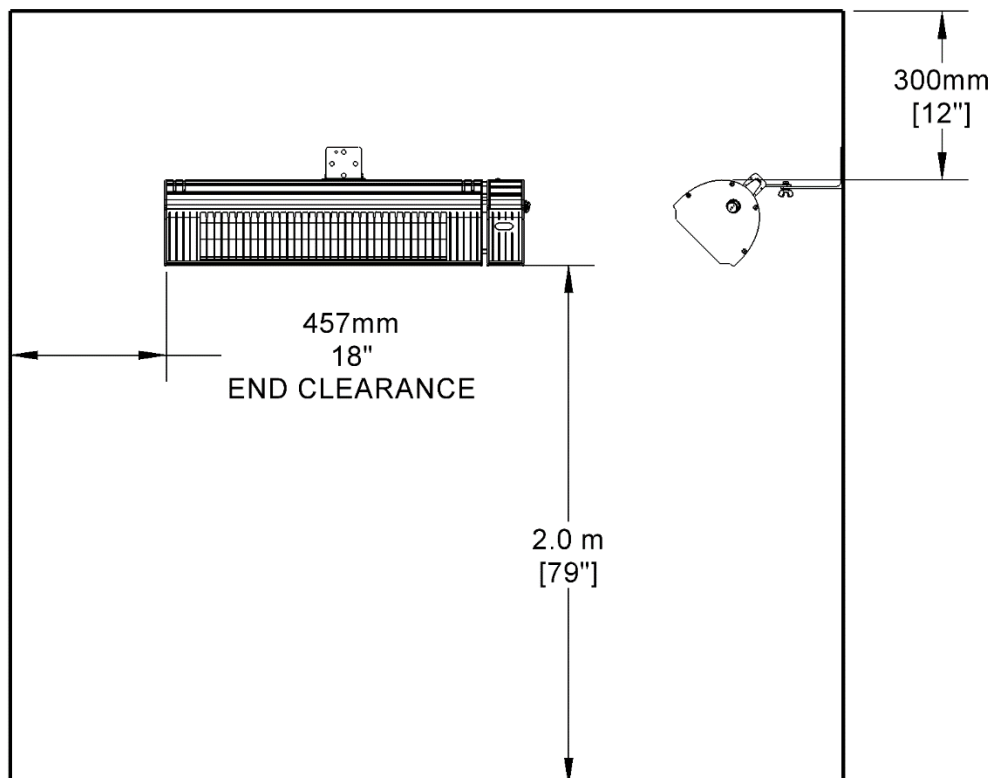
The minimum clearances indicated on the nameplate and in the user manual must be observed at the time of installation.

CAUTION: High temperatures are present, risk of fire! Keep electrical cords, drapery, furnishings and other combustibles at least 6 feet (1.8m) from the front of the heater and away from the sides and rear.

Minimum Clearance Distances

Floor	Ceiling	Adjacent walls
6'7" (2 m)	1' (30 cm)	18" (45 cm)

Wall Mount Minimum Clearances



2.2 ELECTRICAL INSTALLATION

Safety Precautions

1. Each power supply circuit must be properly grounded.
2. Use a certified ground fault protection device for wet environment installations.
3. Use a proper electrical connection box
4. Supply voltage and frequency must correspond to the electrical rating indicated on unit's information plate

2.3 WALL-MOUNTED INSTALLATION

1. Take the heater out of the box and remove all protective foam inserts.
2. Select the installation location on the wall by identifying the studs or structural beams that will allow the heater to be securely attached.

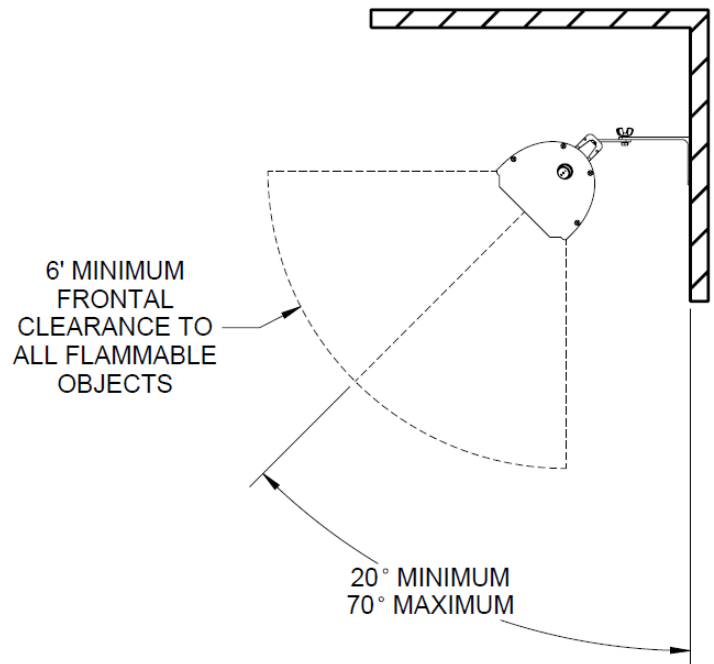
WARNING: Ensure minimum clearances outlined in section 2.1 are met.

3. Securely fasten the L-shaped brackets to the mounting surface using both fixing holes in the short part of the bracket. **NOTE:** Wall bolts or anchors are not supplied. Select an appropriate size to provide adequate support for the weight of the unit and taking into consideration any wind load conditions.

CAUTION: If there is any question regarding security of the bolts and fixtures, contact a professional contractor.

4. Mount the heater to the brackets with the terminal box at the right side of the heater.
5. Adjust the heater to the desired directional angle, then fix in this position by tightening the fixing bolts on the brackets at the back of the heater.

6. Secure the electrical supply cable so it does not contact the heater body or obstruct the air vents. Follow local and national electrical code requirements.



The angles of attachment are 20° to 70°, measured from the mounting wall.

2.4 ADJUSTING DIRECTIONAL POSITIONING



WARNING

Never attempt to move or adjust the heater angle while it is running. Personal injury could result.

1. Turn off the heaters electrical supply line from the main power supply.
2. Allow the heater to cool before adjusting the angle.
3. Loosen the fixing bolts on the brackets at the back of the heater; adjust the heater as desired, then re-tighten the fixing bolts.

Notice : The unit produces radiant heat that warms people and objects rather than the air around them. Install the heater at an angle which points the reflector at the target space. Do not point the heater at windows or vacant spaces, as the heat will not be delivered to the occupants.



INCORRECT



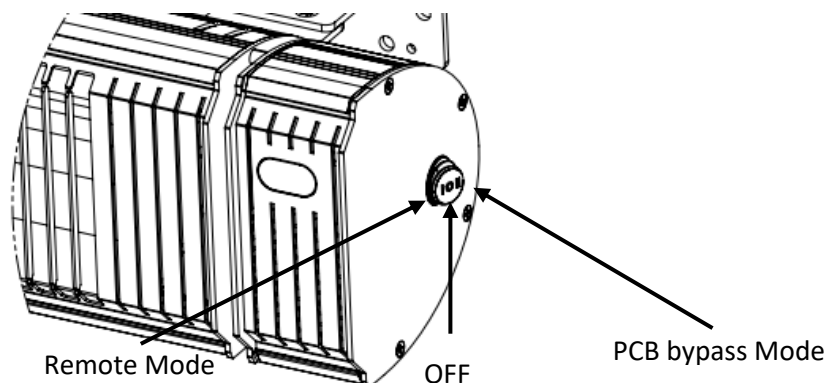
CORRECT

3 OPERATING INSTRUCTIONS

Caution! The heater must be properly installed before it is used.

Caution! When the heater is not in use for extended periods of time, be sure to set the operating mode to the "OFF" position.

The heater has two modes of operation, these two modes can be selected using the button on the right side of the heater.



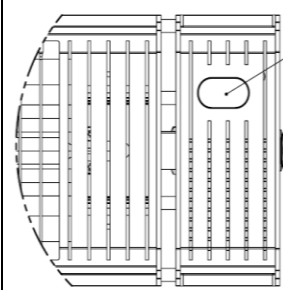
3.1 PCB BYPASS MODE

When the bypass mode is selected, the heater will operate at 100% of rated power OR may be controlled by other type of external control system. Installer or specifier is responsible for compatibility and safety of controls not included with this heater.

3.2 REMOTE MODE

The remote control must be pointed in the direction of the receiver on the heater body (located on the front face) and must be used within a maximum distance of 6 m.

In remote mode the heater has 6 power levels. The power level can be selected with the remote. The selected power level is displayed on the screen on front of the heater. The remote mode only works with the remote control supplied with the product. L0 represents standby while L6 represents the maximum heating level.

	<i>Display</i>	<i>Description</i>	<i>Power setting</i>
	L1	Heating level 1	33%
	L2	Heating level 2	50%
	L3	Heating level 3	66%
	L4	Heating level 4	80%
	L5	Heating level 5	88%
	L6	Heating level 6	100%
	L0	Standby	0%

3.2.1 OPERATION OF THE REMOTE CONTROL

	Symbol	Description
	▲	Up one heating level
	MAX	The heater goes directly to the highest heating level (short delay on start).
	▼	Down one heating level.
	ON	To switch the heater ON: Press On. The heater has a soft start function using only 16% of maximum power. 4 seconds after the heater has been turned on, it will automatically switch to the last heating level used. In case of the first-time use, after 4 seconds the heater will automatically switch to 100% power.
	OFF	To switch the heater OFF: Press OFF. The heater will switch to Standby mode (the receiver indicator will light up).

Notice:

1. Use 2 pieces AAA, 1.5V batteries (not included) in the remote control. Remove the batteries when not in use for an extended period of time to increase battery life.
2. The heater can be still used normally in the event the remote control is misplaced, however it must be used in PCB bypass mode where the heater will run fully on. Contact your local authorized BIG ASS FANS Dealer for remote replacement.
3. The remote-control function may not work if there is a barrier between the remote control and heater.
4. Replace the batteries as required to ensure correct remote functionality.

4 MAINTENANCE

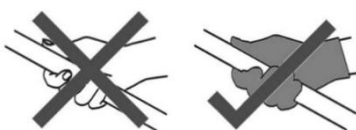


WARNINGS



1. Allow the heater and the emitter to cool down before handling.
2. Installation and maintenance must be performed by a qualified technician.
3. Turn off the power before beginning maintenance.
4. Do not attempt to service or repair the unit while it is running.
5. Should the heater be dropped or damaged or malfunction at any time, immediately turn off the main power source and do not use it until it has been examined by an authorized service facility.

Notice: Do not touch the emitter with bare hands. Wearing soft cotton gloves is highly recommended. Finger prints will burn into the carbon emitter during use and cause premature heater failure. If the emitter is inadvertently touched, or if it needs to be cleaned, carefully wipe it using rubbing alcohol or methylated spirits.



4.1 CLEANING

To keep the heater running at peak performance and prevent premature failure, the emitter lamp and reflector should be cleaned as required. Buildup of dust on these components will accelerate aging. In seaside environments, salt spray may collect on these components. Salt spray should be removed regularly.

To clean the reflector or emitter lamp, follow these steps:

1. Turn the power to «OFF» and disconnect the heater from the main power supply.
2. Remove screws from the left side cover and slide the perforated front grille out of the heater body.
3. Carefully wipe the reflector with a soft, lint-free cloth.
4. After cleaning, be sure to properly reinstall the heater grille.

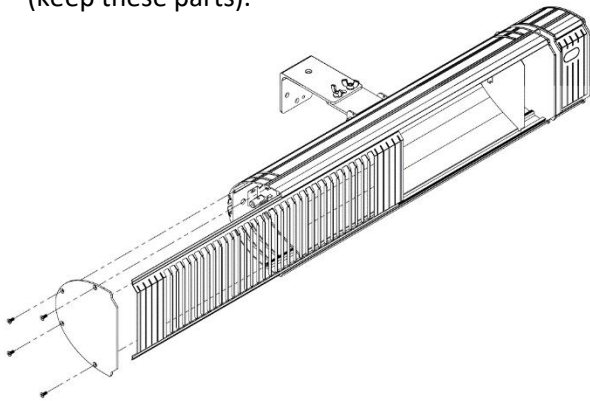
4.2 REPLACING THE EMITTER

Contact your distributor for the correct replacement emitter, providing the model number and rating from the rating label. Using an incorrect replacement emitter can cause the heater to fail.

Notice: Read through the Emitter replacement procedure below before beginning the replacement. For easier replacement, remove the heater from the wall or ceiling.

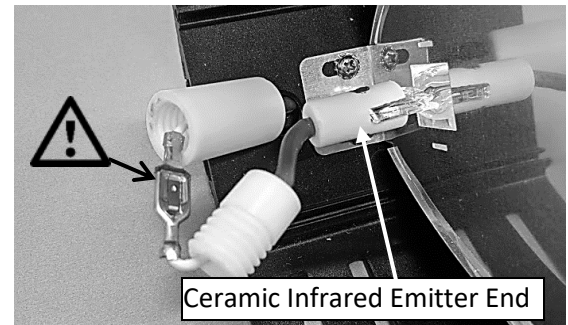
1. **WARNING! TURN OFF THE POWER AND DISCONNECT THE HEATER FROM THE MAIN POWER SUPPLY. FAILURE TO DISCONNECT HEATER BEFORE REPLACING THE EMITTER COULD CAUSE ELECTRIC SHOCK OR DEATH!**

2. Be sure the heater and the emitter are cool: burns can result from touching hot components.
3. Remove screws from the left side of the heater fixture and remove the aluminum end cap. (keep these parts).



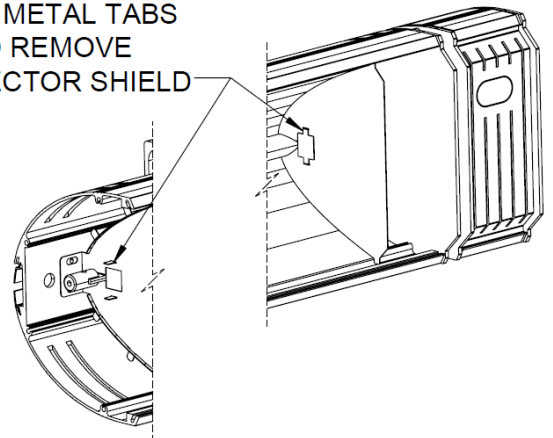
4. Carefully slide the protective grille out of the heater body to expose the emitter and the plastic sealing connectors.
5. Carefully unscrew the protective plastic cap and carefully slide the cap back cap to expose the wire/ metal connector system.

Caution! Disconnect the metal locking connectors by squeezing the metal tab.



6. Bend the metal tabs to remove the small reflector shield sheet metal parts. Hold on to these pieces. This will allow you to slide the emitter into a bigger cavity to remove it from the reflector and heater body. Properly dispose of the broken emitter at your local recycling center.

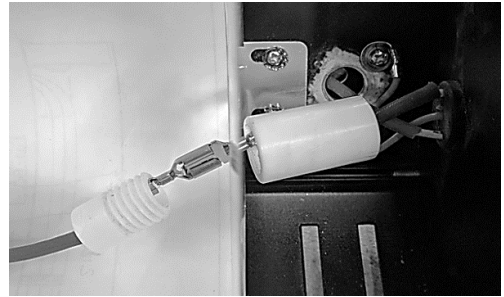
**BEND METAL TABS
TO REMOVE
REFLECTOR SHIELD**



7. Hold the new emitter by the ceramic ends or wear clean dry gloves to prevent and position the new lamp inside the unit.

8. Insert the new emitter through the reflector openings. Insert the Reflector Shields and bend the tabs back into place. The Reflector Shields hold the emitter in the correct position during operation. It is important that they are re-installed during emitter replacement.

9. Connect the new emitter to the terminals of the heater; screw in the protective plastic caps



10. Carefully replace the protective aluminum grille and screw the protective end cap in place.

5 GROUNDING INSTRUCTIONS



WARNING

Connection to GFCI protected outlet is recommended For outdoor, exposed environments and/or as required by local, state and National Electrical Code (NEC) requirements.

FAILURE TO USE A GFCI PROTECTED OUTLET COULD RESULT IN FIRE OR ELECTRIC SHOCK!

This heater is for use on 120-volt circuits. The cord has a plug as shown in image (A) in Figure 60.1 below. An adapter shown at C must be used to connect three-blade grounding-type plugs to two-slot receptacles. Adapters should not be used if a three-slot grounded receptacle is available. The green grounding lug extending from the plug must be connected to a permanent ground such as a properly grounded outlet box.

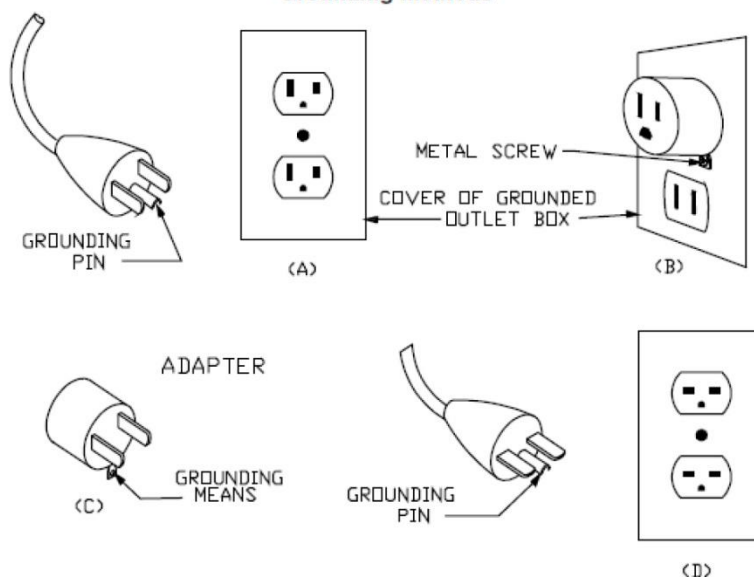
NOTE: This heater may be hard wired by a licenced electrician per NEC or Local codes. To hard wire, a licenced electrician may remove the plug and hard wire the heater to a properly grounded junction box.



WARNING

Modification of the supplied cord for hardwire purpose may only be completed by CERTIFIED ELECTRICIANS, and modification must satisfy local and NEC requirements. Incorrect modifications could result in electric shock or fire!

Figure 60.1
Grounding methods



Due to ongoing product improvements, specifications and dimensions are subject to change and correction without notice and without incurring obligations. Determining the application and suitability for use of any product is the responsibility of the installer. Additionally, the installer is responsible for verifying dimensional data on the actual product prior to beginning any installation preparations.

Incentive and rebate programs have precise requirements as to product performance and certification. All products meet applicable regulations in effect on date of manufacture; however, certifications are not necessarily granted for the life of a product. Therefore, it is the responsibility of the applicant to determine whether a specific model qualifies for these incentive/rebate programs.

Manual Revision: A1: 2023-10-18



BIGASSFANS.COM/PRODUCT-WARRANTIES