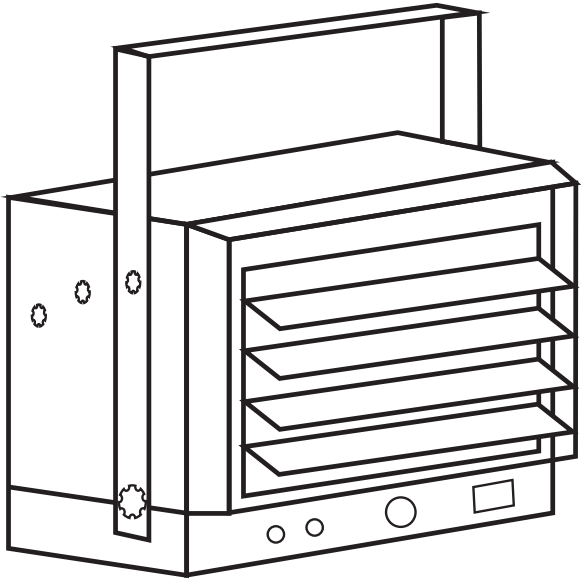


VORBO

5000W GARAGE HEATER

INSTRUCTION MANUAL



PLEASE READ AND SAVE THESE IMPORTANT SAFETY INSTRUCTIONS

PET OWNERS WARNING: Health warning for some small pets, including birds, as they are extremely sensitive to the fumes produced during the first-time use of many appliances. These fumes are not harmful to humans but we recommend that you do not use your heater around birds and small pets during its initial use until the manufacturing corrosion (anti-corrosion) coatings burn off.

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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:

1. Read all instructions before installing or using this heater.
2. 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 at least 3 feet (0.9 m) from the front of the heater and keep them away from the sides and rear.
3. Extreme caution is necessary when any heater is used by or near children or invalids. Do not leave the heater operating if unattended.
4. Always turn the heater off when not in use.
5. Do not operate any heater after it malfunctions, had been dropped or damaged in any manner. Disconnect power at the service panel and have heater inspected by a reputable electrician before reusing.
6. Do not use outdoors.
7. This heater is not intended for use in bathrooms, laundry areas and similar indoor locations. Never locate heater where it may fall into a bathtub or other water container.
8. To disconnect heater, turn controls to off, and turn off power to heater circuit at main disconnect panel.
9. Do not insert or allow any foreign objects to enter any ventilation or exhaust opening as this may cause an electric shock or fire or damage the heater.
10. To prevent a possible fire, do not block air intakes or exhaust in any manner. Do not use on soft surfaces, like a bed, where openings may be blocked.
11. A heater has hot and arcing or sparking parts inside. Do not use it in areas where gasoline, paint, or flammable liquids are used or stored.
12. All wiring must be carried out by a certified electrician and must be in accordance to national and local electrical codes in the United States.
13. Use this heater only as described in this manual. Any other use not recommended by the manufacturer may cause fire, electric shock, or personal injury.
14. This heater may include a visual alarm to warn that parts of the heater are getting excessively hot. If the alarm illuminates, immediately turn the heater off and inspect for any objects on or adjacent to the heater that may have blocked the airflow or otherwise cause high temperatures. DO NOT OPERATE THE HEATER WITH THE ALARM ILLUMINATING.
15. This appliance is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. Children should be supervised to ensure that they do not play with the appliance.

SAVE THESE INSTRUCTIONS

DESCRIPTION

The heavy-duty electric heater is designed for garages, workshops and similar locations. It features three heat settings, for a maximum heat production of 17,065 BTU per hour. It includes horizontal and vertical air flow and a built-in thermostat with overheating safety thermal cut-out.

SPECIFICATIONS

Rating	VOLTAGE	AMPS	BTU/hour
5000W III	240V	20 A	17,065
4000W II	240V	16.7A	14,105
3000W I	240V	12.5A	11,285

GENERAL SAFETY INFORMATION

WARNING: This heater requires hard-wire installation (no plug). The installation of this product must be carried out by a certified electrician and in accordance with all local and national electrical codes.

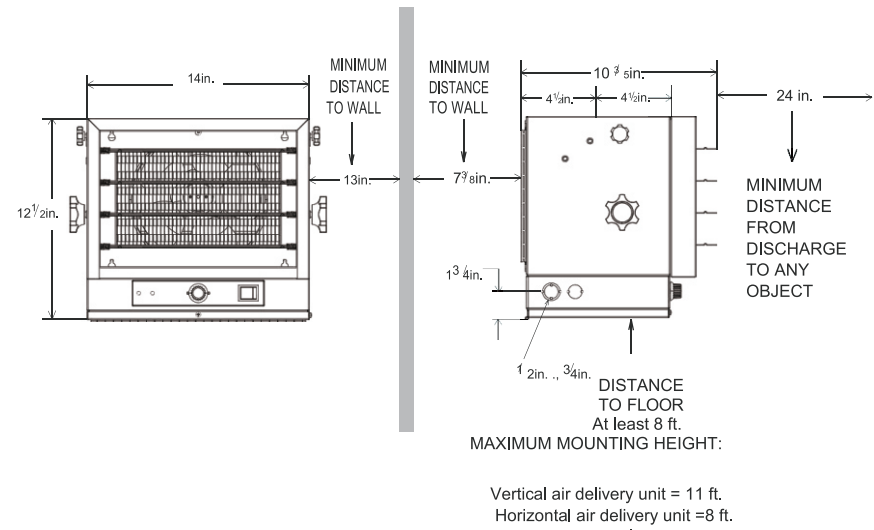
NOTE: Compatible with a 240V line voltage double pole wall thermostat. This heater must be installed by a certified electrician.

- WARNING:** Read and understand all installation and operation instructions prior to operating this unit. Observe all safety instructions.
1. Use only copper wires rated for at least 75°C.
 2. Heater airflow must be directed parallel to or away from adjacent wall.
 3. Observe wall, floor and ceiling clearance requirements.
 4. All wiring must be done according to national and local electrical codes in the United States. The heater must be grounded as a precaution against possible electrical shock. Heater circuit must be protected with proper fuses.
 5. The mounting structure and the anchoring hardware must be capable of supporting the weight of the heater and the mounting bracket (if used).
 6. All electrical power must be disconnected and the main service box, which must be locked before connecting, inspecting, cleaning or servicing the heater. This is a precaution to prevent serious electric shock.
 7. This heater is not suitable for use in hazardous locations as defined by the national fire protection association (NFPA) in the United States. This heater has hot and arcing sparking parts inside. Do not use it in areas where gasoline paint or flammable liquids are used or stored.
 8. This heater is not suitable for use in corrosive atmospheres such as marine greenhouses or chemical storage areas.
 9. The heater must be mounted at least 8 feet above the floor.

WARNING: Improper installation or failure to follow the procedures outlined in this instruction manual can result in serious electrical shock.

LOCATING THE HEATER

Install heater out of traffic areas, maintaining clearances stated in figure 1. The direction of airflow should not be restricted by columns or machinery and the airflow should wipe exposed walls rather than blowing directly on them. When more than one heater is used in an area, the heaters should be installed so that the air discharge of each heater supports the air flow of the others, to provide best circulation of warm air as indicated in figure 2.



FRONT VIEW

Figure 1

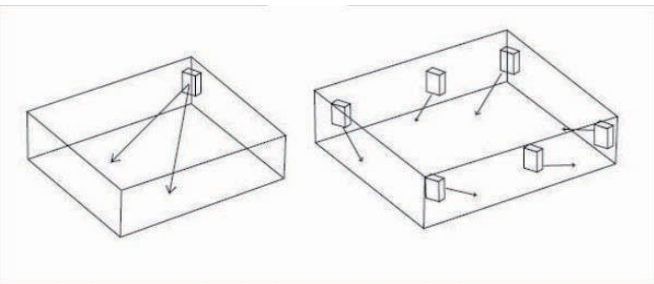


Figure 2

INSTALLATION

Hardware needed

You will also need the following hardware, which can be purchased from your local hardware store or electrical supply store:

- Electric wire in the adequate gauge and length for your application;
- Proper size fuse or breaker for your heater's amperage;
- Proper wire connectors for your application;
- Fasteners appropriate for your application that are strong enough to hold the unit.

Mounting the bracket

Refer to Figures 3a and 3b.

1. Locate a wood stud in the wood ceiling joist. If you cannot locate a wood stud, you have to install a wood piece on the ceiling as this heater must be securely fastened.
2. Remove the mounting bracket from the heating unit by loosening bracket screws with a wrench and slipping the handle off over the screw heads.
3. Place a washer on screws before inserting through the holes in the mounting bracket and screw them securely into a ceiling joist.

NOTE: If you want to swivel the heater either to the right or left adding a washer to both sides of the bracket is recommended. A longer lag bolt may be required to properly secure the unit. See Figure 3a.

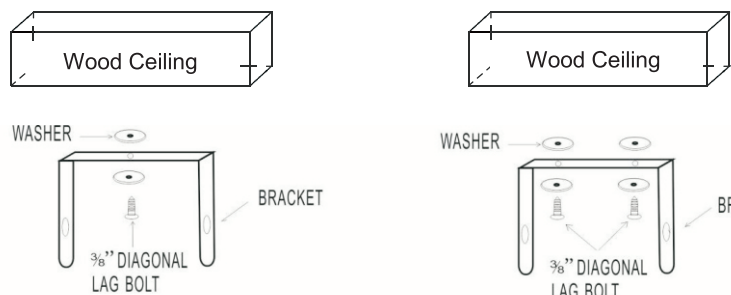


Figure 3a-single-Screw Mounting

Figure 3b-Double-Screw Mounting

HANGING THE HEATER

- 1) Lift the heater up and into the mounting bracket.
- 2) Align the bracket screws with the keyhole slots in the mounting bracket.
- 3) If the heater is to be tilted, it must be positioned in the keyhole slots. (see figure 4).
- 4) Tighten the bracket screws with a wrench so the unit is securely suspended at horizontal or vertical level.

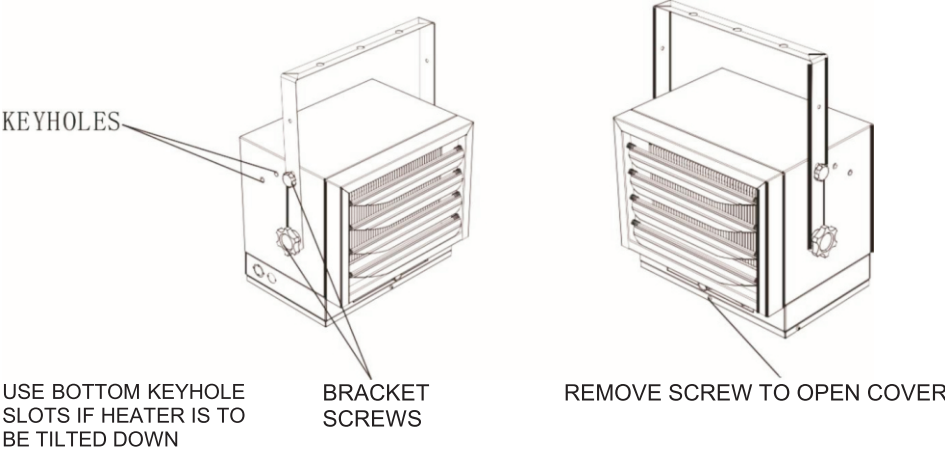


Figure 4

ADJUSTING AIRFLOW DIRECTION

1. To turn the unit horizontally when it has been installed with a single lag bolt (as shown in figure 3a), simply turn the entire heater as needed. (as shown in figure 5 – rotate). The unit cannot be turned horizontally if it has been installed with 2 lag bolts.
2. To tilt the unit vertically, loosen the bracket screws (see figure 4) and see figure 6 to view multiple vertical angles.
3. Adjust louvers to the desired position.

NOTE: The louvers are designed so they cannot be completely closed. Do not attempt to defeat this feature; damage to the unit can result.

NOTE: To prevent possible overheating, please maintain adequate clearance as shown in figure. 1.

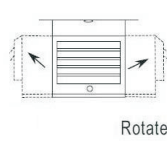


Figure 5

MULTIPLE VERTICAL ANGLES

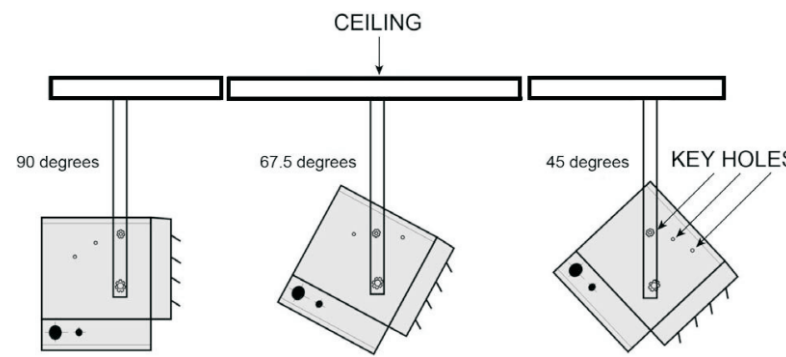
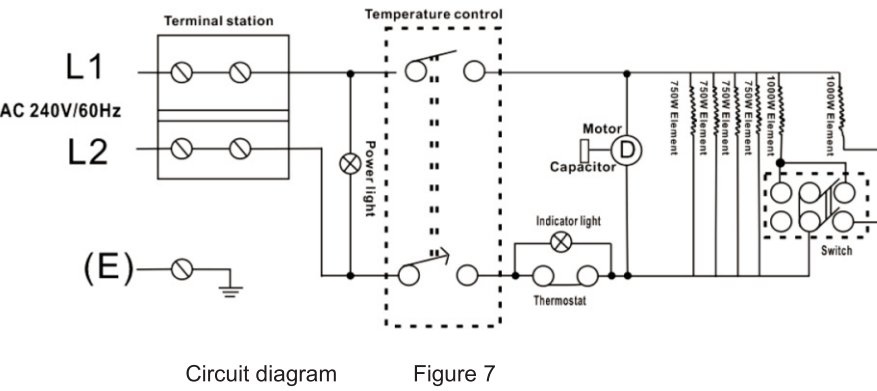


Figure 6

CONNECTING THE POWER

HEATER RATING&VOLTAGE	HEATER AMPS	FUSE SIZE	MIN WIRE SIZE 75 °C COPPER
5000W@240V	20	30	#10

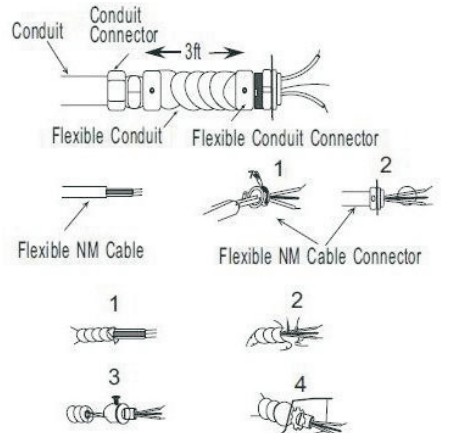


Warning: This appliance must be grounded!

Warning: The appliance must be connected to a current protection circuit or 30 Amp device before being connected to power supply!

1. Remove the screw from the front of the unit to connect the power to the heater.
2. Attach the cable connectors to the unit (See Figure 8) and slide the 10-gauge wire through the cable connector.
3. Connect the wire to the power block located in the base of the heater - See Figure 9.
4. Turn on the power at the main service.

NOTE: All wiring must be carried out by a certified electrician and must be in accordance to national and local electrical codes in the United States. For certain applications, conduit may be required (as shown in figure 8). Check local electrical codes. If you run the wiring in conduit and wish to be able to turn the heater be sure to purchase enough flexible conduits to allow the heater to be turned.



Connectors, cable, and hardware used to wire the heater

Figure 8

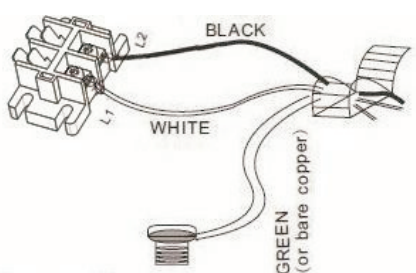
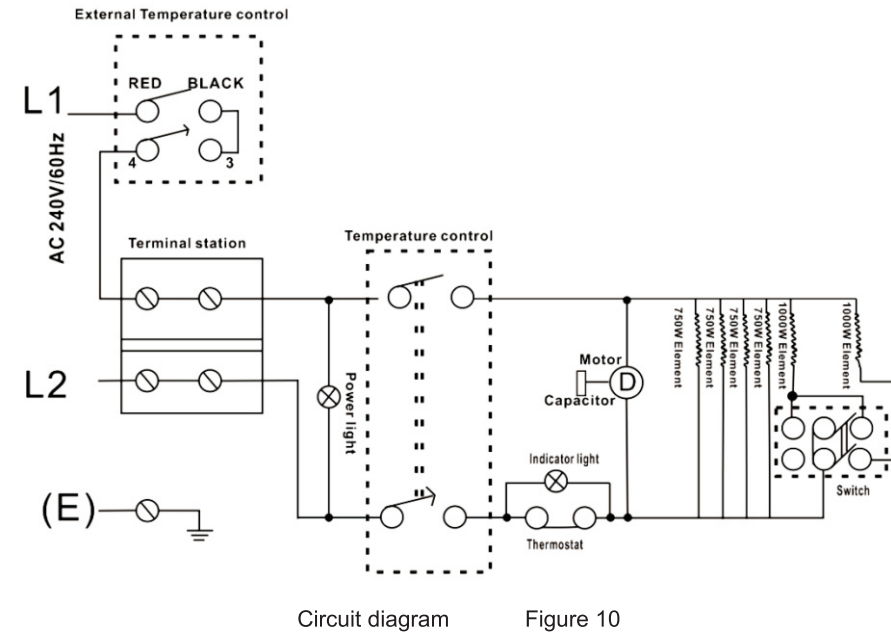


Figure 9

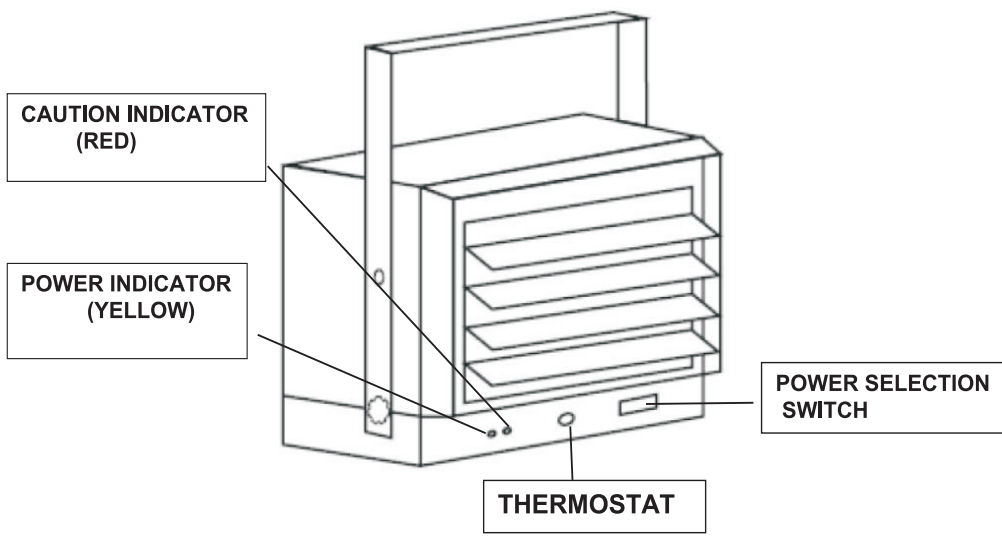
If you will use an external temperature control (external thermostat) to control the heater to be operated or not, please follow below attention points:

1. Make sure that the heater's temperature control knob (thermostat knob) is turned fully clockwise.
2. Connect the wire according to below wiring diagram.



3. The external temperature control (external thermostat) must be in accordance with the requirement of UL or ETL standard.
4. The current carrying capacity of external temperature control can not less than 26.5A.
5. The lead wire of external temperature control (external thermostat) can not less than 10AWG.

OPERATING INSTRUCTIONS



WARNING: the heater must be properly installed before it is used.

SETTING THE THERMOSTAT

- 1) Rotate thermostat knob clockwise to high position, the yellow POWER INDICATOR light will turn on.
- 2) After room reaches desired comfort level, rotate thermostat knob counterclockwise until a click is heard, then rotate it slightly higher (toward Max).

NOTE: Heater will cycle on and off to maintain room temperature.

POWER SELECTION SWITCH

Using the POWER SELECTION SWITCH, select the heating output: I for 3000W, II for 4000W, III for 5000W.



THERMAL CUT-OUT

The heater will automatically turn off should it overheat. When this happens, the red indicator will turn on. After the unit has cooled back down to a normal level, the heater will turn ON again and the red indicator will turn off, but the reason of the overheating must be determined and corrective action must be taken before further operation.

THE HEATER MUST BE TURNED OFF IMMEDIATELY WHEN THE CAUTION INDICATOR IS GLOWING RED.

NOTE: When the thermal cut-out is activated, the caution indicator will turn red. In this case, immediately turn the heater OFF and inspect for any objects on or adjacent to the heater that may cause high temperatures.

MAINTENANCE INSTRUCTIONS

1. Before cleaning, make sure the power has been turned off at the circuit breaker panel and the heating element of the heater is completely cool.
2. To maintain the heater's appearance, it needs only to be wiped over occasionally with a dry duster. During the summer months, or at other times when the appliance is not in use and is completely cold, wipe over with a damp cloth. Never allow water to drip into the heater.
3. Do not use abrasive cleaning powders or furniture polish. Do not use chemical or abrasive products, metallic scourers and so on, which may deteriorate the surface, to clean the appliance.
4. During the summer months, or at other times when the appliance will not be used for extended periods of time, disconnect the power supply and cover the whole appliance with a dust cloth. Store the heater in a dry and cool place.
5. All other servicing should be performed by qualified service personnel. Do not try to repair the heater yourself.