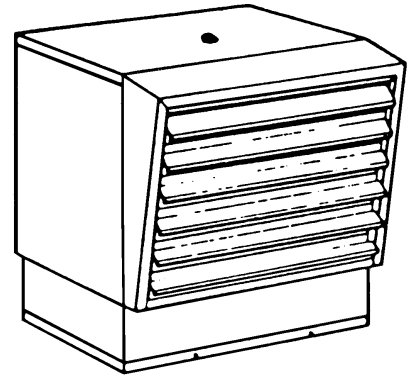




Marley
Engineered Products



UH SERIES UNIT HEATERS

5KW through 30KW

 **UL** US
FILE #E21609

Installation & Maintenance Instructions

Dear Owner,

Congratulations! Thank you for purchasing this new heater manufactured by a division of Marley Engineered Products. You have made a wise investment selecting the highest quality product in the heating industry. Please carefully read the installation and maintenance instructions shown in this manual. You should enjoy years of efficient heating comfort with this product from Marley Engineered Products... the industry's leader in design, manufacturing, quality and service.

*... The Employees of
Marley Engineered Products*



WARNING



Read Carefully - This Instruction Sheet contains vital information for the proper installation, use and efficient operation of the heater. Carefully read the manual before installation, operation, or cleaning of the heater. Failure to adhere to the instructions could result in fire, electric shock, death, serious personal injury or property damage. Save these instructions and review frequently for continuing safe operation and instructing future users.

1. To prevent a possible electrical shock, disconnect all power coming to heater at main service panel before wiring or servicing.
2. All wiring must be in accordance with the National Electrical Code (Canadian Electrical Code in Canada) and all applicable local codes. The heater must be grounded as a precaution against electrical shock. Supply wiring must be copper and suitable for at least 75° C.
3. Verify the power supply and control voltages coming to the heater match the ratings printed on the heater nameplate before energizing.

4. This heater is NOT suitable for use in hazardous locations as described by the National Fire Protection Association (NFPA). this heater has hot and arcing or sparking parts inside. DO NOT use in areas where gasoline, paint or other flammable liquids are used or stored.
5. Heater must be installed so the minimum clearances shown in Specifications table are maintained.
6. Heater air flow MUST be directed parallel to or away from adjacent walls.
7. The mounting structure and anchoring hardware MUST BE capable of reliably supporting the weight of the heater plus mounting bracket if used. Refer to specifications table for heater weight.
8. To prevent a possible fire, DO NOT block air intakes or exhaust openings in any manner. DO NOT allow foreign objects to enter grille openings as this may cause electric shock, fire or damage to heater.

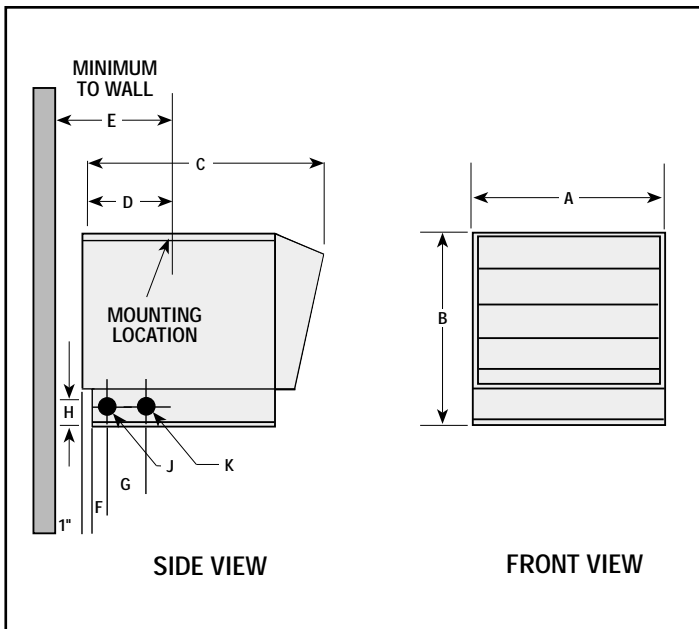
SAVE THESE INSTRUCTIONS

Specifications

Model No.	Wattage (KW)	Btu/Hr.	Heater Voltage	Wiring Phase	Mounting Height ft. (mm)		Air Throw ft. (mm)	Center of Heater to Wall inches (mm)	Ship Wt. lb. (kg)
					Min.	Max.			
UH520 UH524 UH534 UH548 UH560	5.0	17,065	208 240 347 480 600	3* 3* 1 3 3	6 (1828)	8 (2486)	18 (5486)	13 (333)**	30 (13.60)
UH720 UH724 UH727 UH734 UH748 UH760	7.5	25,598	208 240 277 347 480 600	3* 3* 1 1 3* 3	6 (1828)	8 (2436)	20 (6096)	13 (333)**	30 (13.60)
UH1020 UH1024 UH1027 UH1034 UH1048 UH1060	10.0	34,130	208 240 277 347 480 600	3* 3* 1 1 3* 3	6 (1828)	9 (2743)	20 (6096)	13 (333)	72 (32.66)
UH1520 UH1524 UH1527 UH1534 UH1548 UH1560	15.0	51,195	208 240 277 347 480 600	3* 3* 1 1 3* 3	6 (1828)	10 (3048)	28 (8534)	13 (333)	78 (35.38)
UH2034 UH2048 UH2060	20.0	68,260	347 480 600	1 3* 3	6 (1828)	11 (3352)	32 (9753)	16 (406)	78 (35.38)
UH2548 UH2560	25.0	85,325	480 600	3 3	6 (1828)	15 (4572)	34 (10360)	20 (508)	136 (61.69)
UH3048 UH3060	30.0	102,390	480 600	3 3	6 (1828)	15 (4572)	38 (11582)	20 (508)	142 (64.40)

* Factory wired for 3 Phase - Field convertible to 1 Phase.

** 48 in. (1219) for 45 deg. to vertical downward.



Dim. inches (mm)	Heater Size		
	5 - 7.5 KW	10 - 20 KW	25 - 30 KW
A	14 (354)	18 (457)	26 (660)
B	12 ¹ / ₂ (317)	18 (457)	24 (609)
C	12 ¹ / ₂ (317)	17 ¹ / ₂ (444)	23 ¹ / ₈ (587)
D	5 ¹ / ₂ (139)	9 ¹⁵ / ₃₂ (240)	9 ¹⁵ / ₃₂ (240)
E	13 (330)	#	20 (508)
F	1 ³ / ₄ (44)	2 (51)	2 (51)
G	1 ³ / ₈ (35)	2 ¹ / ₂ (63)	2 ³ / ₄ (70)
H	1 ¹ / ₂ (38)	2 ¹ / ₄ (57)	2 ¹ / ₄ (57)
J	1/2 (12.7) 3/4 (19.7)	3/4 (19.1) 1 (25.4)	1 (25.4) 1 ¹ / ₂ (38)
K	1/2 (12.7)	1 (25.4) 1 ¹ / ₄ (32) 1 ¹ / ₂ (38)	1 (25.4) 1 ¹ / ₂ (38) 2 (50.8)
Wiring Compartment Volume	60 in ³ (968 cm ³)	105 in ³ (1720 cm ³)	288 in ³ (4720 cm ³)

GENERAL INFORMATION

Automatic Fan Delay: All models incorporate an automatic fan delay. When the thermostat calls for heat, fan action is delayed momentarily until the heating element is warm. When the thermostat is satisfied, the fan continues to operate until the heating element is cool. This action prevents circulation of cold air, and avoids exposing unit to residual heat, thus providing higher comfort level and prolonged element life.

Optional Controls and Accessories: The following controls and accessories are available from your electrical distributor.

Catalog Number	Description
CWB-1	Combination wall brackets for 2.5 kw thru 15 kw units.
CWB-2	Same as above but for 20 kw thru 50 kw units
TA-1	Single pole thermostat kit 60 to 120° F temp. range for field installation in all units.
DS-30	3-pole power disconnect switch kit for field installation on unit heaters rated 30 amps or less.
DS-63	3-pole power disconnect switch kit for field installation on unit heaters 10kw and above rated at 30 to 63 amps.

Thermal Safety Cutout: Each unit heater is equipped with one or more thermal safety cutouts which will automatically shut off the heater in the event of overheating, and will activate the heater when the operating temperature returns to normal. If the thermal safety cutout cycles due to overheating, the cause should be determined before further operation.

LOCATION OF HEATERS

Refer to min. and max. mounting heights and clearances in Specifications table. Mounting heaters too high will require setting the louvers sharply downward to direct warm air toward the floor, thereby decreasing the distance of the air throw. Heaters should be arranged so that the discharge air stream will not be restricted by columns, machinery, etc. Heaters should be installed out of the reach of persons. Heaters may be rotated and louvers adjusted to obtain the desired direction and distance of warm air discharge. Where a remote thermostat is used, it should be located on an inside wall or post, out of the direct rays of the sun and internal heating sources, and away from cold drafts. The number and capacity of heaters required should be determined by the heat loss of the structure. Small areas can be heated by one unit heater. Larger areas require multiple units. Where multiple units are required, the air discharge of each heater should support the air flow of the others to provide perimeter rotational circulation of warm air. (See Figure 1).

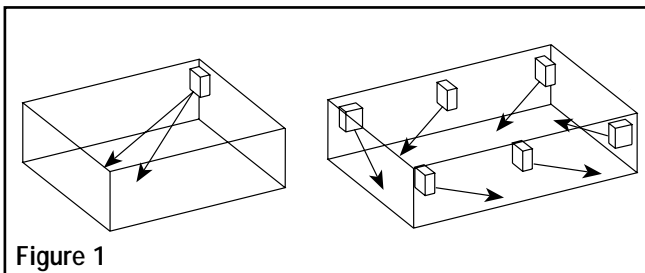


Figure 1

MOUNTING THE HEATER

10kw thru 30kw: A 1/2"-13NC threaded mounting hole is provided in the top of the heater for securing the heater to an optional mounting bracket, or other mounting structure having a minimum of 10" (254mm) clearance from the ceiling. Combination wall/ceiling, wall, and ceiling mounting kits are available from your electrical distributor. They are designed to mount the heaters on wall or ceiling, provide adequate support, insure proper clearance from walls, and permit rotation of the heater. Installation instructions are included in the kits. If one of the mounting kits is not used, the installer must provide suitable means of mounting heaters securely, allowing adequate clearance from adjacent walls and ceiling as indicated in the specifications chart.

5kw & 7.5 kw: In addition to the 1/2"-13 NC threaded mounting hole, the 5 kw & 7.5 kw heaters are supplied with a hanger bracket. The bracket may now be mounted for horizontal air discharge in the double keyhole slot which will space the top of the heater 1-7/8 inch (47 cm) from the ceiling (Figure 2), or it can be attached in the single keyhole slot for horizontal or vertical mounting.

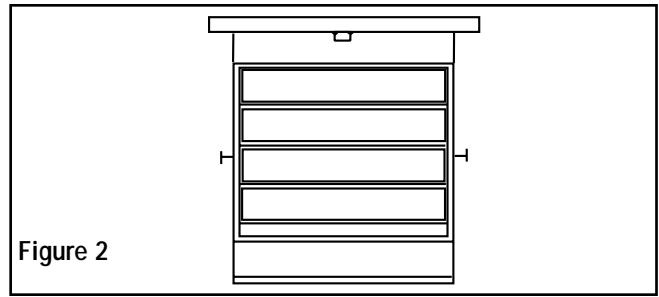


Figure 2

INTERNAL WIRING

1. Heaters drawing 48 amps or more have internal subdivided branch circuit fusing.

NOTE: A properly fused disconnect switch or suitable circuit breakers must be installed between the heater connections and power supply.

⚠
WARNING
⚠

Before proceeding further with the installation of the heater, turn off the power to the supply line for the heater at the main service box.

2. All wiring connections are made inside the control box at the bottom of the heater. To open control box, loosen screws holden the hinged cover at front (if cover is slotted) or remove screw(s) (if cover is unslotted) and open cover (Figure 3).

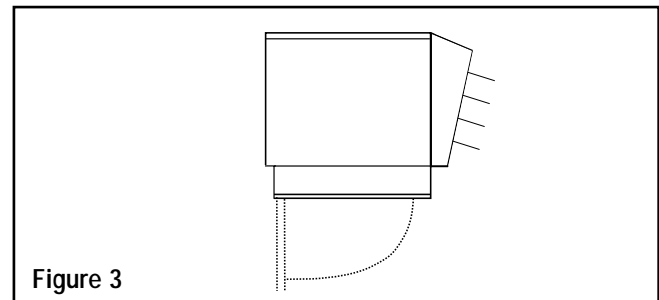


Figure 3

3. Knockouts and terminal blocks are provided for power supply connection, and connections for heater controls.

EXTERNAL WIRING

1. Supply wire size should be selected in accordance with the electrical rating shown on the heater data plate and/or wiring diagram (located on inside of control box cover), and must be suitable for 75° C.
2. Connect conduit to appropriate knockout on control box panel. If rigid conduit is used, connect to heater with sufficient length of flexible conduit so heater can be rotated as desired.
3. Connect supply leads to the heater terminals and connect any required jumpers as shown on the wiring diagram.
4. After all connection are completed, close and secure control box cover.

MAINTENANCE INSTRUCTIONS

In order to maintain the efficiency of the unit heat, it should be inspected periodically and any dirt that may have accumulated should be removed from the heating element, fan blades and motor using a soft brush or a vacuum cleaner.

5 kw & 7.5 kw Heaters: The heating element is accessible by removing the louvered bezel, front section of the heater. Loosen, but do not remove, 4 recessed head screws located to the rear of louvers (Figure 4). Grasp bezel on both sides, lift up and pull out, disengaging bezel. After servicing the unit, reverse this procedure to replace bezel.

To service the motor, remove the rear wire safety grille (Figure 5).

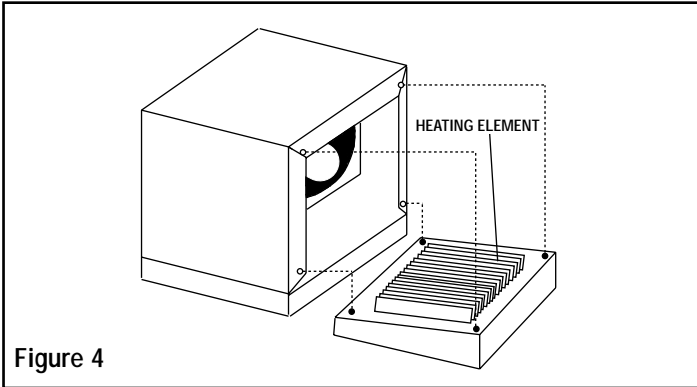


Figure 4

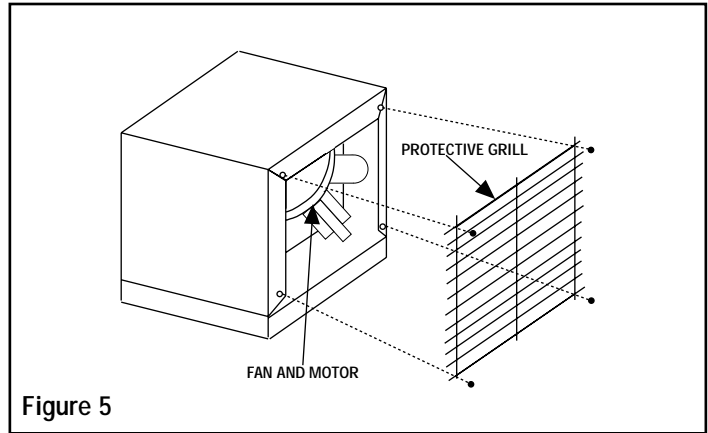


Figure 5

10 kw through 30 kw Heaters: The heating element surface and fan motor area are accessible by removing the left or right side panel of heater. To do this, open the hinged control box cover, and then remove the two screws that hold the bottom of the side panel. Lift out that end of the side panel and then pull down for removal. After servicing the unit, reverse the unit, reverse this procedure to replace the side panel.

NOTE: When a new heater is first energized, a light smoking may be noticeable. This is caused by burning off any residue oil left on the heating element during manufacturing. This condition will disappear in a few minutes after heater is put into operation.

LIMITED WARRANTY

All products manufactured by Marley Engineered Products are warranted against defects in workmanship and materials for one year from date of installation, except heating elements which are warranted against defects in workmanship and materials for ten years from date of installation. This warranty does not apply to damage from accident, misuse, or alteration; nor where the connected voltage is more than 5% above the nameplate voltage; nor to equipment improperly installed or wired or maintained in violation of the product's installation instructions. All claims for warranty work must be accompanied by proof of the date of installation.

The customer shall be responsible for all costs incurred in the removal or reinstallation of products, including labor costs, and shipping costs incurred to return products to Marley Engineered Products Service Center. Within the limitations of this warranty, inoperative units should be returned to the nearest Marley authorized service center or the Marley Engineered Products Service Center, and we will repair or replace, at our option, at no charge to you with return freight paid by Marley. It is agreed that such repair or replacement is the exclusive remedy available from Marley Engineered Products.

THE ABOVE WARRANTIES ARE IN LIEU OF ALL OTHER WARRANTIES EXPRESSED OR IMPLIED. AND ALL IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE WHICH EXCEED THE AFORESAID EXPRESSED WARRANTIES ARE HEREBY DISCLAIMED AND EXCLUDED FROM THIS AGREEMENT. MARLEY ENGINEERED PRODUCTS SHALL NOT BE LIABLE FOR CONSEQUENTIAL DAMAGES ARISING WITH RESPECT TO THE PRODUCT, WHETHER BASED UPON NEGLIGENCE, TORT, STRICT LIABILITY, OR CONTRACT.

Some states do not allow the exclusion or limitation of incidental or consequential damages, so the above exclusion or limitation may not apply to you. This warranty gives you specific legal rights, and you may also have other rights which vary from state to state.

For the address of your nearest authorized service center, contact Marley Engineered Products in Bennettsville, SC, at 1-800-642-4328. Merchandise returned to the factory must be accompanied by a return authorization and service identification tag, both available from Marley Engineered Products. When requesting return authorization, include all catalog numbers shown on the products.

HOW TO ORDER REPAIR PARTS

In order to obtain any needed repair or replacement parts, warranty service or technical information, please contact Marley Engineered Products Service Center toll-free by calling 1-800-642-HEAT.

When ordering repair parts, always give the information listed as follows:

1. The Part Number
2. The Model Number
3. The Part Description
4. Date of Manufacture



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