



INSTALLATION, OPERATING AND MAINTENANCE INSTRUCTIONS FOR HEATREX 236 SERIES UNIT HEATERS USED IN HAZARDOUS LOCATIONS

INSTALLATION

1. **Caution:** These installation instructions are for use by qualified personnel only.

MECHANICAL INSTALLATION

2. Do not install the heater in an atmosphere where gases whose ignition temperatures are lower than the maximum operating temperature of the heater as shown on the nameplate are present, or in any location other than that shown on the nameplate.
3. Install the heater allowing at least 8 inches of free space in front and either side of the unit.
4. Install the heater with wall or ceiling mounting brackets furnished with the unit. Optional threaded rods may be supplied for mounting. (See Fig. 5).
5. If louvered grille is furnished with the unit, it can be installed with louvers deflecting the air up or down, 45° to the axis of the shroud.

ELECTRICAL INSTALLATION

6. Follow the wiring diagram on the inside of the control enclosure.
7. Supply connections must be made with copper wiring rated for at least 90°C.
8. If supply connections are for 250 volts or greater, all wiring must be insulated for 600 volts.
9. All the supply connections must be made according to the latest NEC requirements for Class I and Class II locations. All the conduits entering the enclosures must be provided with seals at the enclosures.
10. Supply conductors must be sized for at least 125% of the rated load, calculated as follows:

$$\text{Single Phase Units} = \frac{\text{Kilowatts per set of terminals} \times 1250}{\text{Voltage}}$$

$$\text{Three Phase Units} = \frac{\text{Kilowatts per set of terminals} \times 1250}{\text{Voltage} \times 1.73}$$

11. National Electrical Code (NEC) and Factory Mutual (F.M.) require the heater manufacturer to supply (a) overcurrent protection if the total current exceed 48 amps and (b) any contactors required for the proper functioning of the limit controls. If these devices are not built into the heater package, they are supplied in a separate panelboard to be mounted in a remote location. Do not install the panel in any location other than that shown on the nameplate of the panel. The wiring between the panel and the heater must be done in accordance with the NEC.

12. If not built-in, install a line disconnect switch or main circuit breaker in accordance with Article 424-19 of the NEC.
13. All electrical connections in the heaters, including both field and factory made connections should be checked for tightness before operating the heaters. In addition, after a short period of operation, all connections should again be checked for tightness.

OPERATION AND MAINTENANCE

Caution: All sources of power must be disconnected before working on this equipment. To avoid injury and electric shock do not perform any service other than that which is contained in the Operating Maintenance Instructions.

14. Maximum ambient temperature in which the heater can be operated is 80°F. (60°F for heaters rated more than 87 kW).
15. To operate the heater, make sure all enclosure covers are closed securely, all associated control equipment is on, energize main supply disconnect and if a thermostat is controlling the heater, set it above the ambient temperature. If the heater is provided with a selector switch, it must be in the on position.
16. The heater is equipped with two temperature limit controls. If a heater with a manual reset cutout fails to operate, make sure the manual reset cutout is operative by pushing the reset button.
17. The heater is equipped with a built-in time delay relay for the fan. When the heater is switched off either by the thermostat or the selector switch, the fan will remain in operation for about a minute to cool the elements.
18. During normal operation, the limit controls are not supposed to cycle the heater "On" and "Off." If frequent tripping of the limit controls occur, check to see if the inlet or the outlet of the heater is blocked in some way. If no obstruction is visible, the heater has to be examined by qualified service personnel only, to determine the cause of nuisance tripping.
19. The heater can be washed down with water, only if the nameplate on the heater shows that is rated for "NEMA 4 Locations." On the heaters rated for all other locations, compressed air can be used.
20. The fan motor on the heater is lubricated for life and does not require any periodic maintenance. The only routine maintenance required on the heater is to check all electrical connections, enclosure cover, and mounting bracket for tightness, at least once each year.



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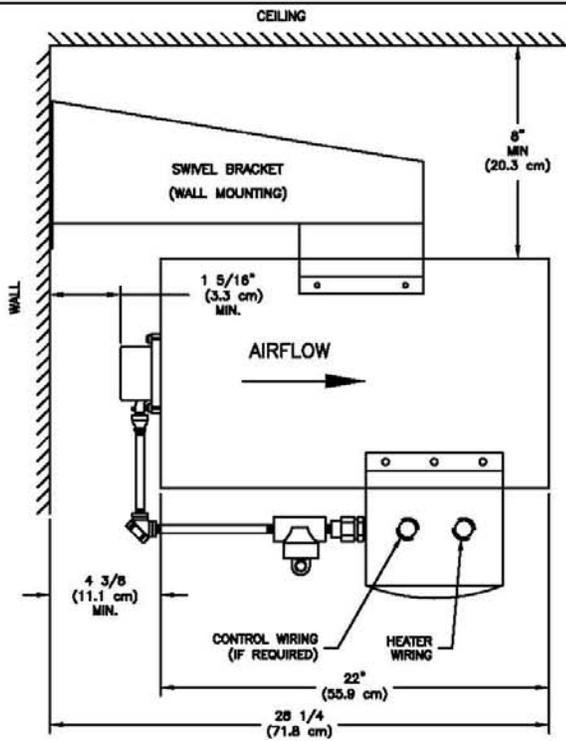


Figure 1

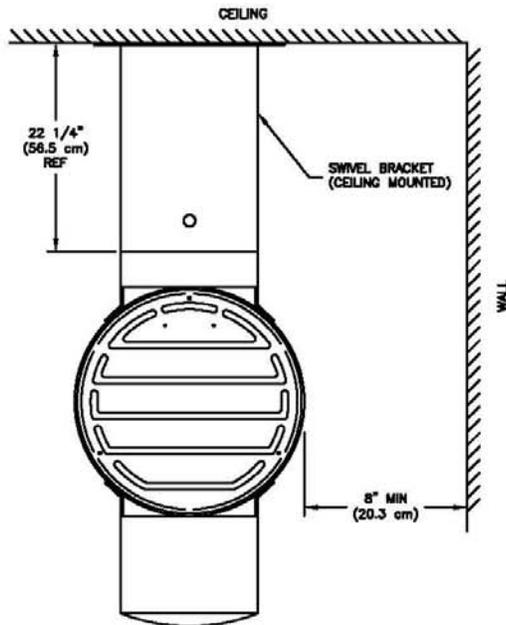
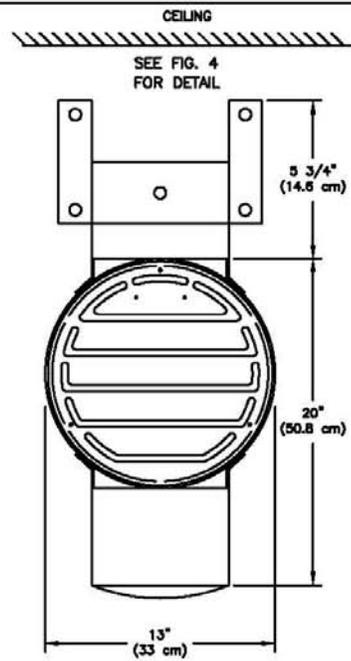


Figure 2

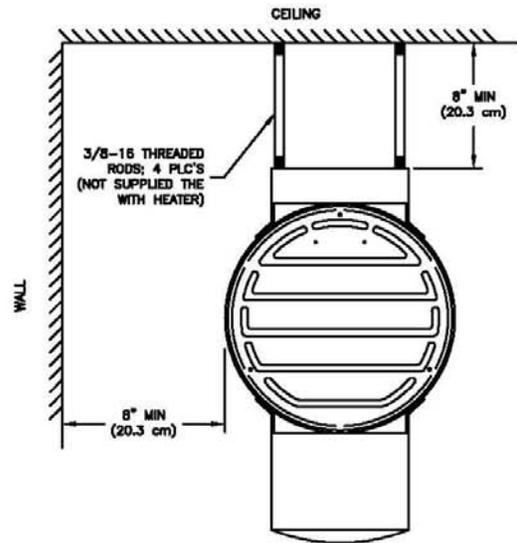


Figure 3

**Optional Ceiling Installation
with 4 Threaded Rods**

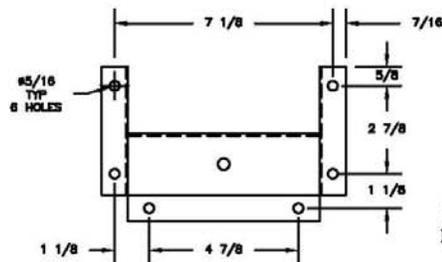


Figure 4

**Mounting Hole Detail
Rear View of Bracket**