



Operation Manual for Benchmark Thermal's Motor Heaters

Product Overview

Benchmark Thermal's MH (motor heater) series heaters are designed to control moisture build-up on the electric motor windings. Condensation build-up in the motor can result in premature failure of the electric motor. Moisture condensation occurs when moist air comes in contact with the cold metal surface. Over a period of time the moisture deteriorates the electric windings in the motor. Benchmark Thermal's motor heaters provide heat to the electrical windings preventing moisture to collect in the motor.

MH series heater also benefits electrical motors by ensuring warm start-ups, extended bearing life and adds freeze protection to electrical motors.

Product Information

Benchmark Thermal's MH series heaters are constructed in either a wire wound heating element. The heating element is vulcanized between plies of fiberglass reinforced silicone rubber. All Benchmark Thermal's motor heaters are equipped with 24 inch, 22 AWG, Teflon insulated lead wire. They are manufactured in the following sizes at 5 watts per square-inch:

Motor Heater Sizes		
Width(inches)	Length(inches)	Wattage (watts)
1	5	25
1	10	50
1	15	75
1	20	100
1	25	125
2	15	150
2	20	200
2	25	250

These heaters are available in either 120-volts or 240-volts.

The amperage draw of the heater could be found using the following formula:

$$\text{Amperes} = (\text{wattage}) / (\text{voltage})$$

Benchmark Thermal's motor heaters are suitable for temperature from -70 °F to 400 °F.



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Product Installation

Benchmark Thermal's motor heaters should be installed directly on the electrical windings of the electrical motor.

The following steps should be taken to install the heater:

1. To prevent electrical shock, remove motor from power supply.
2. Remove electrical motor cover exposing electrical windings.
3. Clean the winding to ensure that no foreign substance that would interfere with the heat transfer.
4. Spread a thin film of a high temperature silicone RTV on the back side of the heater (side without lead bump).
5. Ensure the mounting surface is clean and dry prior to fixing the heater to electrical winding.
6. Mount silicone heater to motor's electrical windings.
7. Replace electrical motor cover.
8. Wire heater into motor heater power supply or separate power supply.
9. Allow time for silicone to cure (harden) before use.

Note: Heater could be wired into an electrical switch to power when the motor is off. Motor should produce enough heat to prevent condensation when the motor is on.

WARNING!

ELECTRICAL SHOCK HAZARD. Disconnect all power to the heater before servicing or replacing heaters

WARNING!

ELECTRIC SHOCK HAZARD. All applications of motor heaters should be grounded in accordance with the National Electric Code (NEC) and local electric codes. All the Motor Heaters are manufactured without grounding grid, electric motor should be grounded for electrical protection.

1. The electrical receptacle, including GFCI (ground fault Circuit Interrupter), should be wired in accordance with the National Electrical Code (NEC) and local codes by a qualified person.
2. Do not connect the heater to a higher voltage source than it is rated. Check the model number stamped on the heater to confirm the voltage and amp draw.



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