

**MODEL & PART NO.:**

MM-13A	(04440102)
MM-18A	(04427602)
MM-24A	(04495402)
MM-33A	(04427202)
MM-46A	(04420302)



WARNING! DO NOT ATTEMPT TO INSTALL, OPERATE, OR SERVICE THIS PRODUCT BEFORE READING ALL INSTRUCTIONS CAREFULLY. FAILURE TO COMPLY WITH THESE INSTRUCTIONS COULD RESULT IN FIRE, PERSONAL INJURY AND/OR PROPERTY DAMAGE! RETAIN INSTRUCTIONS FOR FUTURE REFERENCE.

DESCRIPTION

The Mitey Midget heater is available in five lengths, ranging from 13 inches to 46 inches. Select from a wide variety of wattage's and voltages, from 500W/120V to 3800W/577V. These models have a heavy duty aluminum extrusion with a bright aluminum insert, an aluminum housing, mounting brackets for permanent installation or chain suspension, and an end-to-end wireway for single end wiring and easy installation.

All models are UL and C-UL (USA and Canada) Listed under file #E32304, for indoor commercial and industrial comfort heat applications.

Not for indoor residential use.

REQUIRED CLEARANCE

Caution - Spacing: Heaters must be mounted a minimum of 24" from a vertical surface, a minimum of 24" from the ceiling, a minimum of 24" from direct radiation to combustibles, and a minimum of 2.4M (7.87') above the floor. Heaters must be at least 36" apart.

SPECIFICATIONS

MODEL NUMBER	WIDTH	LENGTH (in.)	WATTS	VOLTS
MM-13A		13	500	120
MM-18A		18	1000	208
MM-18A		18	1000	240
MM-24A	3-3/4"	24	1600	208
MM-24A		24	1600	240
MM-24A		24	1600	277
MM-33A		33	2500	480
MM-33A		33	2500	577
MM-46A		46	3000	480
MM-46A		46	3800	577
MM-46A		46	3650	480

IMPORTANT SAFETY INFORMATION

Read all instructions before using this heater.

1. Make certain that the power source conforms to the electrical requirements of the heater. Disconnect power before installing or servicing. If the power disconnect is out of sight, lock it in the open position and tag it to prevent unexpected application of power. Failure to do so could result in fatal electric shock.

WARNING: DO NOT DEPEND UPON A THERMOSTAT OR OTHER SWITCH AS THE SOLE MEANS OF DISCONNECTING POWER WHEN INSTALLING OR SERVICING THE HEATER. ALWAYS DISCONNECT THE POWER AT THE MAIN CIRCUIT BREAKER AS DESCRIBED ABOVE. FAILURE TO DO SO COULD RESULT IN FATAL ELECTRIC SHOCK.

2. This heater is intended ONLY for permanent installation in accordance with the National Electric Code (NEC), all applicable local codes and ordinances, and all sections of this manual. Any variance voids the warranty and may create unsafe conditions. All wiring should be done by a qualified electrician, using copper wire only.
3. This heater is intended for general heating applications ONLY. It must NOT be used in potentially dangerous locations such as flammable, explosive, chemical-laden or wet atmospheres.

4. Special attention must be given to any bonding (grounding) information pertaining to this heater. To prevent the risk of electrocution, the heater must be securely and adequately bonded. This should be accomplished by connecting a conductor between the service panel and the green ground screw provided in the heater. To ensure a proper bond, the bonding means must be tested by a qualified electrician.

5. Do not insert fingers or foreign objects into the heater. Do not block or tamper with the heater while it is in operation. Do not touch heater while it is in operation or just after it has been turned off, as some parts may be hot enough to cause injury.

6. Do not attach ductwork to this heater or attempt to use it as a make-up air heater. Such use voids the warranty and may create unsafe conditions.

7. In cases where property damage may result from malfunction of the heater, a back-up system or a temperature alarm should be used.

CAUTION: Check branch voltage. Heaters should be operated at voltages no higher than the heating elements and the heater are designed for. (Lower voltages, however, pose no problem other than a loss of wattage).

CAUTION

POSSIBLE LAMP FAILURE

The heating elements used in this product can be damaged by contamination (salt deposits from perspiration or coastal air) on the surface of the quartz sleeve. At high temperatures, these salts will cause the quartz to become porous and leak allowing air to come in contact with the tungsten element. When this occurs, the element will burn out quickly and the quartz tube can break. The instructions below must be followed.

- Always wear cotton or latex gloves when installing or replacing elements.
- Always clean the quartz tube with an alcohol-moistened soft cloth before using the heater.
- Whenever contamination (milky white appearance on quartz tube) is observed, the element must be immediately replaced.

LAMP INSTALLATION

CAUTION: DISCONNECT POWER BEFORE INSTALLING OR REPLACING LAMPS. THESE LAMPS CAN AND SHOULD BE INSTALLED PRIOR TO MOUNTING HEATER.

To insert quartz lamp:

- 1 Remove the 4 sheet metal screws (2 each end) that hold fixture end caps in place.
- 2 Carefully wrap the heating element pigtail clockwise around the terminal screws (see Figure 1). **NOTE:** Cut excess pigtail wire off at the terminal to prevent the lead wire from touching metal parts. Avoid handling quartz glass as much as practical. Quartz should be wiped off with a clean cloth.
- 3 Tighten terminal screws (see Figure 1). **CAUTION: Do not draw pigtail so tight that pressure is put on the heating element. Maintain a partial loop (or looseness) in the pigtail.**
- 4 Replace the end caps using the screws removed in Step 1.

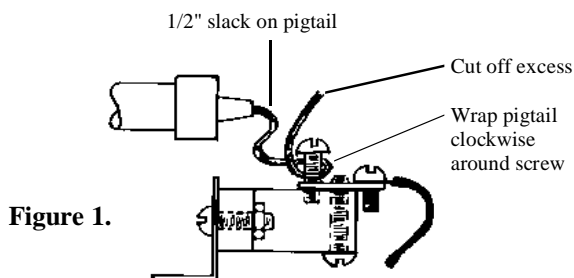


Figure 1.

WIRING

1. Select appropriate knockout on the terminal box and install the 6" conduit nipple and splice box (both customer supplied).
2. Place silicone wire leads (18" free length provided) from the terminal box through the customer provided conduit, and connect the supply wiring inside the customer provided splice box. (See Figure 2 below)
3. Follow local and national electric codes.
4. **Do not use the heater as a field-wiring compartment.**

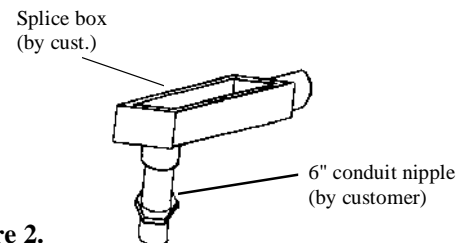


Figure 2.

MAINTENANCE

Always disconnect the heater from the power source before performing any service or maintenance. Periodically clean the reflector with a dampened soft cloth, using a mild detergent. Rinse with water and wipe dry with a clean, soft cloth.

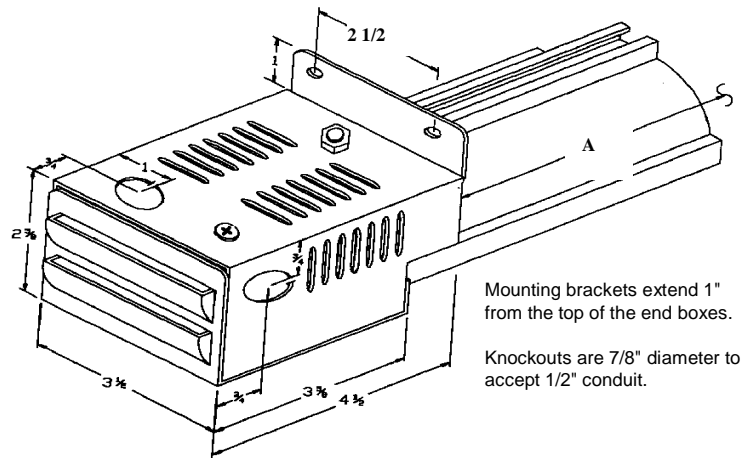
TROUBLESHOOTING CHART

SYMPTOM	POSSIBLE CAUSE(S)	CORRECTIVE ACTION
Element does not energize.	<ol style="list-style-type: none"> 1. Defective element. 2. Improper connection. 3. Pigtail loose from socket connection. 	<ol style="list-style-type: none"> 1. Replace element. 2. Check connection to outlet. Check power. 3. Rewind pigtail on socket.
Not enough heat.	<ol style="list-style-type: none"> 1. Heater too small for application. 2. Heater mounted too high or too far. 	<ol style="list-style-type: none"> 1. Add additional heaters. 2. Decrease mounting height or distance.
Too much heat.	<ol style="list-style-type: none"> 1. Heater too large for application. 2. Heater mounted too low or too close. 	<ol style="list-style-type: none"> 1. Replace with smaller heater. 2. Increase mounting height or distance.

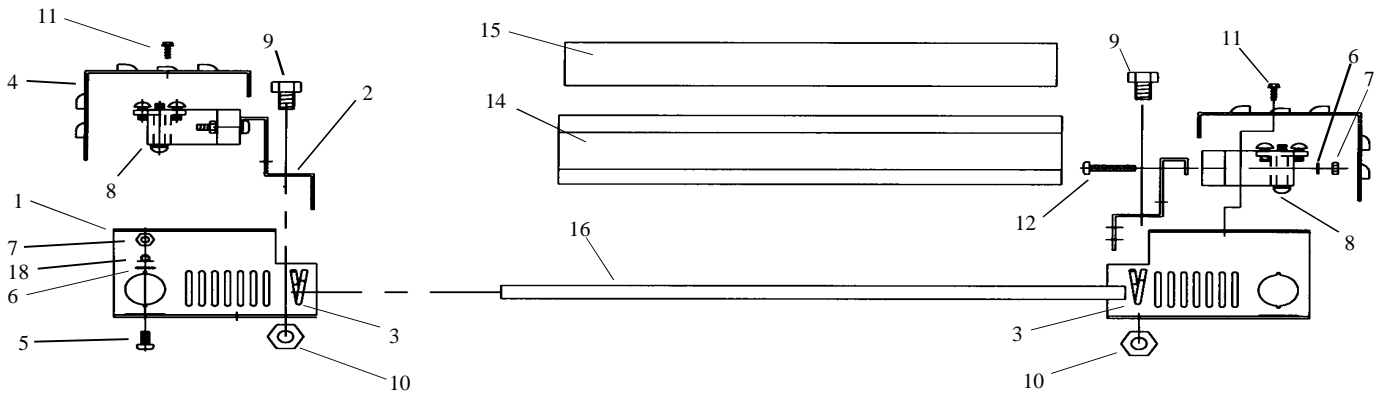
MOUNTING DIMENSIONS

Model	"A" Dim.
MM-13A	4"
MM-18A	9"
MM-24A	15"
MM-33A	24"
MM-46A	37"

"A" dimension indicates exact spacing between mounting brackets. (See sketch at right.)



REPLACEMENT PARTS LIST and EXPLODED VIEW



REF. NO.	DESCRIPTION	PART NUMBER	QTY.
1	Housing end	8509100	2
2	Lamp holder (prior to Aug 2006)	8509200	2
	Lamp holder (after Aug 2006)	8509800	2
3	Spring hose clamp	2400539	2
4	End cap	8509000	2
5	Screw PHD P 10-32 X 3/8 Ig.	3401539	1
6	Washer lock external tooth #10 (prior to Aug 2006)	3466039	5
	Washer lock external tooth #10 (after Aug 2006)	3466039	1
7	Hex nut #10-32(prior to Aug 2006)	3405239	5
	Hex nut #10-32(after Aug 2006)	3405239	1
8	Socket assy. w/brass centered	8500001	2
9	Screw HHM 3/8-16 X 1/2 Ig.	3474339	2
10	Hex nut 3/8-16	3494039	2
11	Screw HHD S #6 X 3/8 Type B (prior to Aug 2006)	3400439	4
	Screw HWH #8-18 7/8(after Aug 2006)	2465000	4
12	Screw PHD P 10-32 X 1 Ig.	3401939	4
13	Wire assembly 12 Ga. SF-2 Bl.	See Table A	1
14	Extrusion	See Table A	1
15	Reflector	See Table A	1
16	Aluminum tubing 3/8 OD	See Table A	1
17	Wire assembly 12 Ga. SF-2 Bl.	3160633	1
18	Wire assembly 12 Ga. SF-2 Gr.	3160704	1
19			
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Table A

Model Series	Item #13 Part No.	Item # 14 Part No.	Item #15 Part No.	Item #16 Part No.
MM-13A	3160603	9720712	8049001	8509601
MM-18A	3160607	9721215	8049002	8509602
MM-24A	3160610	9721821	8049003	8509603
MM-33A	3160620	9722730	8049004	8509604
MM-46A	3160604	9724043	8049005	8509605

Electric Infrared Element Information

When ordering a quartz lamp, be sure to designate whether your application requires a Horizontal or Vertical quartz lamp model number. Non-vertical burning quartz lamps must be horizontally mounted to avoid premature burnout.

WARRANTY

FOSTORIA INDUSTRIES, INC. – 1200 North Main Street - Fostoria, Ohio 44830-1911 - (419) 435-9201

The warranty herein set forth is in lieu of all other warranties expressed or implied.

Fostoria Industries, Inc. of Fostoria, Ohio 44830, warrants its products to the owner against defects in material and workmanship for a twelve (12) month period under normal use and service following date of manufacture or installation when proof of such is provided to seller.

This Warranty requires that the owner, or his agent, install the equipment in accordance with the National Electrical Code, any other applicable heating or electrical codes and the manufacturer's installation instructions. It further requires that he perform reasonable and necessary maintenance on the unit. The company is not liable for abuse or misuse of product as may be finally determined by the company.

The obligation of Fostoria Industries, Inc. under the terms of this warranty, shall be to supply a new part, repair of defective part, or a refund, at the company's option with no cost to owner for the new or repaired part. Such parts are to be returned to the factory, or such other location as the company may designate. This warranty does not obligate Fostoria Industries, Inc. to bear the cost of labor in replacing any assembly, unit or component part thereof, nor does the company assume any liability for secondary charges, expenses for installing or removal, or any other consequential losses. The company's maximum liability shall not in any case exceed the list price for the product claimed to be defective.

The warranty shall not apply to any product or parts of products that have been repaired or altered outside of Seller's factory in any manner. Warranty is void on products that have been determined to have been subjected to misuse, negligence or accident or which have been used in a manner contrary to Seller's instructions.