



Silicone Rubber Band Drum / Pail Heaters

Instruction Manual



Read and understand this material before operating or servicing this drum heater. Failure to understand how to safely operate this heater could result in an accident causing serious injury or death. This heater should only be operated by qualified personnel.

TABLE OF CONTENTS

Introduction.....	2
Safety Alert Symbol.....	2
Important Safety Instructions.....	3
Summary of Operation.....	4
Prior to Installation.....	4
Installation of Heater.....	5
Adjustment of Temperature Set-Point.....	5
Connecting Heater to AC Power.....	6
Troubleshooting Guide.....	7
Warranty.....	7

INTRODUCTION

Thank you for purchasing a Morse Silicone Rubber Drum / Pail Heater. Your heater is designed to provide a long and efficient service life with function, reliability, and safety in mind. For additional information concerning this, or other Morse Manufacturing Co., Inc. products, please contact at 1-315-437-8475.

SAVE THESE INSTRUCTIONS!

Additional copies of this manual are available upon request.



SAFETY ALERT SYMBOL

The symbol above is used to call your attention to instructions concerning your personal safety. It points out important safety precautions. It means **“ATTENTION! Become Alert! Your Personal Safety is involved!”** Read the message that follows and be alert to the possibility of personal injury or death.



Immediate hazards which **WILL** result in severe personal injury or death



Hazards or unsafe practices which **COULD** result in severe personal injury or death



Hazards or unsafe practices which **COULD** result in minor personal injury or property damage.

IMPORTANT SAFETY INSTRUCTIONS



⚠ DANGER

A person who has not read and understood all installation instructions is not qualified to install this product.

Agency Approvals



73/23/EC (Low Voltage Directive)

Approvals valid only when installed in accordance with all applicable instructions, codes, and regulations.

⚠ DANGER

- Do not immerse heater in liquid.
- Keep volatile or combustible material away from heater when in use.
- Use heater only in approved locations.
- Keep sharp metal objects away from heater.

Failure to observe these warnings may result in electric shock, risk of fire, and personal injury.

⚠ WARNING

End User Must Comply to the Following:

- Only qualified personnel are allowed to connect electrical wiring.
- Disconnect all supply power at the source before making any power connections.
- All electrical wiring must follow local electrical codes and highly recommend following NEC Article 427.
- Final installation / wiring is to be inspected by the authority who has jurisdiction in the area that the heater is installed.
- The end-user is responsible for providing a suitable disconnecting device.
- The end-user is responsible for providing suitable electrical protection device. It is highly recommended that a ground fault circuit breaker is used.

Failure to observe these warnings may result in personal injury or damage to the heater.

⚠ CAUTION

- Never handle the heater while it is in operation; always disconnect the heater from the power source and allow to cool prior to handling.
- Inspect heater before use.
- Never operate heater without a temperature control device.
- Do not wrap the heater over itself
- If spillage of foreign matter onto heater occurs, disconnect from power source and clean after heater is allowed to cool.
- Never operate a heater without an appropriate heat sink (device being heated is considered a heat sink).
- Do not operate heater above rated temperature value.
- Fasten heater to device using approved methods only.
- Do not repair damaged or faulty heaters.
- Do not crush or apply severe physical stress on heater or cord assembly.
- Disconnect heater when not in use.
- Use specified sized heater with same sized drum. Do not use for other applications.

Failure to observe these warnings may result in personal injury or damage to the heater.

⚠ WARNING

Read and understand this entire manual before operating this electric heater.

SUMMARY OF OPERATION

Morse Silicone Rubber Drum Heaters are designed to heat the contents inside either metal or poly drums / pails. 710 series drum heaters are designed for metal drums / pails. 711 series drum heaters are designed for poly drums / pails.

Drum heaters are integrated with an adjustable thermostat controller.

PRIOR TO INSTALLATION

1. Check for suspected damage to the heater like rips, punctures, etc.
2. Verify surface to be heated is free from all sharp edges, weld splatter, rust, oil, etc.
3. Check that the desired placement of the heater will not cause damage to the heater through impact shock, vibration, ambient temperature, or by neighboring moving parts.
4. Confirm voltage / wattage rating of heater is appropriate for power supply device or temperature controller. The heater is designed to work at a specific voltage to heat properly. For additional information, contact Morse.
5. Confirm heater maximum exposure temperature rating is suitable for environment. The temperature of the internal heating element may run up to 25% higher than the external surface of the heater. Use extreme caution for applications that require a process temperature near the maximum exposure temperature ratings of the drum heater.
 - Exposure temperature range: -60°F to 450°F (-51°C to 232°C)
5. Do NOT connect to AC power until all installation steps are completed.

INSTALLATION OF HEATER

1. Verify drum surface is clean, free of weld splatter, and not damaged in anyway.
2. Select a suitable location on the drum, below the lowest expected content level. For almost all applications, the heater should be mounted on the bottom 1/3 of the drum.
3. Wrap the heater around the drum. Extend the spring attached to the metal tab; latch the spring loop onto the hook on the opposite side as shown in **Figure 1**.
4. Verify there are no air gaps between the heater and the drum.

⚠ WARNING Do not use metal tab as a handhold when extending the spring.
The heater **MUST** make continuous contact with the drum.
Do not overlap the drum heater onto itself or another heater.



FIGURE 1

ADJUSTMENT OF TEMPERATURE SET-POINT

⚠ WARNING If the operating temperature is within 50°F (10°C) of the maximum exposure temperature of the heater or if the temperature sensor/ controller or thermostat is controlling a process remote to the heater, an intergral high-limit temperature cut-out sensor/controller or thermostat is required to protect the heater.

Adjust dial to desired setting.

- 710 series can be adjusted 50-425°F.
- 711 series can be adjusted 50-160°F.

CONNECTING HEATER TO AC POWER

1. The drum heater is designed to work at a specific voltage. Refer to the lead wire label or stamp located on the heater for rated voltage and wattage.

▲ WARNING Failure to operate the drum heater at its rated voltage could cause damage to the heater, surface being heated, or contents of drum.

All electrical connections must be made by qualified personnel and in accordance with all local codes and regulations.

Properly sized circuit breakers must be used.

The end-user is responsible for providing suitable electrical protection device. It is highly recommended that a ground fault circuit breaker be used.

2. For 120VAC model, plug standard 3-prong plug to appropriate electrical power supply. For 240VAC model, terminate power cord to appropriate electrical power supply. The power cable consists of three color-coded conductors, black, white, and green. The black wire should be connected to Line 1. The white wire should be connected to Line 2. The green wire should be connected to earth ground. The power connections must be adequately rated to electrically support the voltage and amperage of the heater. The identification label located on the power cord displays voltage and amperage requirements. Follow all local electrical codes for proper electrical connections.

TROUBLESHOOTING GUIDE

Please read this guide prior to contacting Morse Manufacturing Co., Inc.. This guide is designed to answer the most commonly asked questions. If you are unable to identify the problem or need additional assistance, please contact us at 1-315-437-8475.

PROBLEM	SOLUTION(S)
Does not heat	Verify heater is connected to proper voltage. The identification label located on the power cord displays the heater's voltage requirement. Check to see if there is a resistance reading (not an open circuit) in heater using an ohm meter.
Circuit breaker is tripping	Validate that the circuit breaker is capable of handling the amp requirement of heater. The identification label located on the power cord displays the heater's amperage requirement. Examine heater and cord for any damage.
Does not fit	Confirm that the heater provided was designed to fit around your specified drum. If the heater was designed for the specified drum, please call 1-315-437-8475 for further assistance.
Something has lightly spilled on exterior or interior	Apply any general household cleaner, that does not contain any silicone rubber dissolving type ingredients, with a clean cloth fabric.

WARRANTY INFORMATION

Morse Manufacturing Co., Inc. warrants to the original purchaser for the period of eighteen (18) months from date of shipment or twelve (12) months from date of installation, whichever comes first. Contact us at 1-315-437-8475 for complete details.



Morse Manufacturing Co., Inc.
P.O. Box 518 727 West Manlius Street East Syracuse, NY 13057
Phone: (315) 437 - 8475
www.MORSEmfgco.com