

### Drum Heaters and PailPRO™ 5-Gallon Pail Heaters

- Heat the contents of a steel, plastic or fiber drum
- Heaters are moisture and chemical resistant
- Heat a 55, 30 or 15-gallon drum (208, 114 or 57 liter drum)
- Even heat a 5-gallon (19 liter) pail
- Melt or preheat process ingredients
- Control viscosity
- Promote dissolution
- Speed liquid flow
- Reduce residue in drum
- Speed chemical action
- Protect against freezing
- CE marked for sale in Europe

Morse flexible drum heaters provide a simple, effective and reliable way to heat the contents of drums. A drum heater is available for almost any steel, plastic or fiber drum... even heaters for metal and plastic 5-gallon (19 liter) pails.

Heaters for metal drums have an adjustable thermostat for a control range of 50° to 425°F (10° to 218°C). Heaters for plastic and fiber drums have a 50° to 160°F (10° to 71°C) thermostat.

Morse band drum heaters are made of tough, long lasting, fiberglass reinforced silicone rubber. They are easy to keep clean as few chemicals will stick to silicone rubber.



Drum heaters MUST be properly positioned BELOW the content level in the drum. Drum heater provides uniform heat over the 4" (10.16 cm) wide band around drum.

Two or more heaters may be used on the same drum for faster warming, but both MUST be attached below drum content level.

**Heaters for Metal Drum or Pail** have 50° to 425°F (10° to 218°C) thermostat

- 55-Gallon (210 liter) drum: 1500 watt
- 30-Gallon (114 liter) drum: 1000 watt
- 15-Gallon (57 liter) drum: 700 watt
- 5-Gallon (19 liter) pail: 550 watt

**Heaters for Plastic drum or Pail, and for fiber drum** have 50° to 160° (10° to 71°C) thermostat

- 55-Gallon (210 liter) drum: 300 watt
- 30-Gallon (114 liter) drum: 250 watt
- 15-Gallon (57 liter) drum: 200 watt
- 5-Gallon (19 liter) pail: 150 watt

#### Typical Applications

- Maintain liquid temperatures in water purification systems
- Keep resin at optimum temperature
- Control viscosity of chemical binder in sand casting mold operation
- Protect materials vulnerable to freeze damage

Adhesives	Lubricating oils
Asphalt/tar/creosote	Mastics
Brine	Mineral oil
Chemicals	Molasses
Chocolate	Paints
Corn syrup	Plastics
Fat/grease/lard	Resins
Fuel oils	Solvents (nonflammable)
Glycerine	Syrups
Glycol	Vegetable oils
Honey	Wax
Liquid sugar/dextrose/sucrose	

Note: Excessive heat may be harmful to some materials.

To attach to your drum, simply wrap drum heater around below level of contents within drum, and engage the spring and hook to hold it in place. The pliable heater conforms to curved drum wall, assuring thorough band contact for effective heat transfer through drum sidewall to material inside. They are more flexible than metal band heaters, and therefore able to conform to the drum's surface to transfer heat more effectively.

Adjustable thermostat to control the drum temperature.

Attach the spring and hook to secure in place around your drum.

Tough fiberglass reinforced silicone rubber band is flexible, chemical resistant, and easy to keep clean. Heater band conforms to the drum surface, held in contact by spring tension. Heaters have a 4" (10.16 cm) wide with heating elements.

115V models have a 6 foot (183 cm) cord and plug for ordinary outlets. 230V models have a 6 foot cord. Install correct plug for your application.

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#### Easy to attach heater to drum

Simply wrap the heater around your drum and attach the spring and hook arrangement. Always clamp the drum heater around drum prior to plugging in.

#### Estimate the time required to reach a set temperature

Step 1 - Subtract your drum's starting temperature from the desired temperature. This difference is the necessary "Temperature rise from ambient."

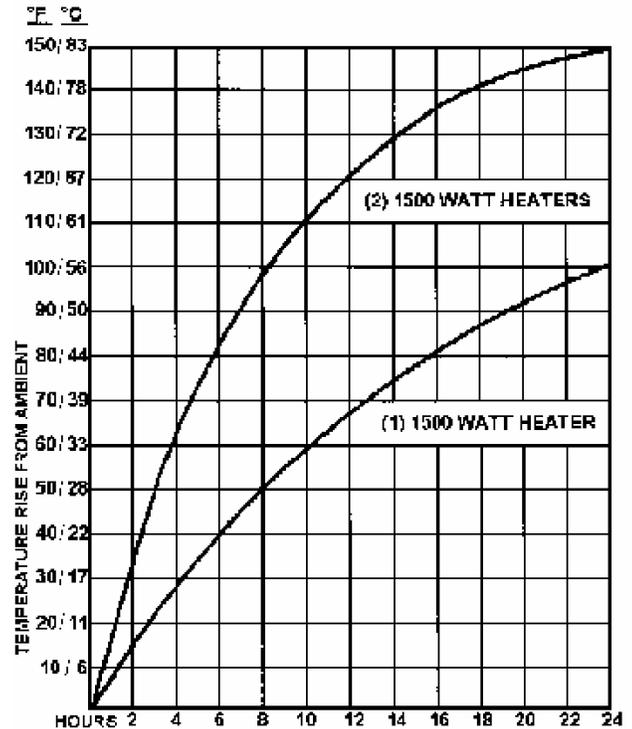
Step 2 - Find where the curve reaches the necessary RISE value and read the corresponding number of HOURS on the scale at bottom of the graph.

Example - You have 14 hours until the drum needs to be at 150° F (66° C). Its starting temperature is 30° F (-1° C). So you need to a RISE of 120° F (67° C).

The chart shows a RISE of little more than 70° F (39° C) at 14 hours using one drum heater. Use two 1500 watt heaters to increase the temperature by 120° F (67° C) in only 12 hours.

**Caution:** Drum contents may be hazardous. Some materials may become more hazardous when heated. Refer to the Material Safety Data Sheets for the material in your drums. It is the user's responsibility to take appropriate safety and protective measures. Morse heaters are NOT for use with flammables, and NOT for "explosion hazard" areas. Excessive heat may be harmful to some materials.

Increase in temperature: The graph assumes that ambient air temperature and drum initial temperature are the same. Graph is based on heater performance with a drum of water. Performance with other materials may differ.



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Model #	Drum Heaters with 4" (10 cm) Band	Fits Diameter	Thermostat
<b>Heaters for a Steel Drum</b>			
710-55-115	Heater for 55-gallon (210 liter) steel drum, 115V 50/60Hz, 1500W	22.5" +/- 1" (57.15 +/- 2.5 cm)	50° to 425° F (10° to 218° C)
710-55-230	Heater for 55-gallon (210 liter) steel drum, 230V 50/60Hz, 1500W		
710-30-115	Heater for 30-gallon (114 liter) steel drum, 115V 50/60Hz, 1000W	18.25" +/- 1" (46.4 +/- 2.5 cm)	
710-30-230	Heater for 30-gallon (114 liter) steel drum, 115V 50/60Hz, 1000W	14" +/- 1" (35.6 +/- 2.5 cm)	
710-15-115	Heater for 15-gallon (57 liter) steel drum, 115V 50/60Hz, 700W		
710-15-230	Heater for 15-gallon (57 liter) steel drum, 230V 50/60Hz, 700W		
<b>Heaters for a Plastic Drum or Fiber Drum (can also be used on steel drum)</b>			
711-55-115	Heater for 55-gallon (210 liter) plastic or fiber drum, 115V 50/60Hz, 300W	22.5" +/- 1" (57.15 +/- 2.5 cm)	50° to 160° F (10° to 71° C)
711-55-230	Heater for 55-gallon (210 liter) plastic or fiber drum, 230V 50/60Hz, 300W	18.25" +/- 1" (46.4 +/- 2.5 cm)	
711-30-115	Heater for 30-gallon (114 liter) plastic or fiber drum, 115V 50/60Hz, 250W		
711-30-230	Heater for 30-gallon (114 liter) plastic or fiber drum, 230V 50/60Hz, 250W	14" +/- 1" (35.6 +/- 2.5 cm)	
711-15-115	Heater for 15-gallon (57 liter) plastic or fiber drum, 115V 50/60Hz, 200W		
<b>PailPRO™ 5-Gallon Pail Heaters (19 liter pail heaters)</b>			
710-5-115	Heater for 5-gallon (19 liter) metal pail, 115V 50/60Hz, 550W	11.25" +/- 1" (28.6 +/- 2.5 cm)	50° to 425° F (10° to 218° C)
710-5-230	Heater for 5-gallon (19 liter) metal pail, 230V 50/60Hz, 550W		
711-5-115	Heater for 5-gallon (19 liter) plastic pail, 115V 50/60Hz, 150W	11.25" +/- 1" (28.6 +/- 2.5 cm)	50° to 160° F (10° to 71° C)
711-5-230	Heater for 5-gallon (19 liter) plastic pail, 230V 50/60Hz, 150W		

#### Thermostat

Morse drum heaters for metal drums have an adjustable thermostat with a range of 50° to 425° F (10° to 218° C). Heaters for plastic and fiber drums have a 50° to 160°F (10° to 71° C) thermostat. You can set the maximum temperature to automatically be maintained at the temperature you require.

Once attached to a drum and plugged in, the heater will continuously warm the drum temperature as high as the heater's thermostat setting. Then the thermostat will turn the heat off and on to maintain the temperature. The actual time it takes to reach the setting is a function of the necessary temperature rise and other factors such as the nature of the material, its specific heat, ambient air temperature, etc.