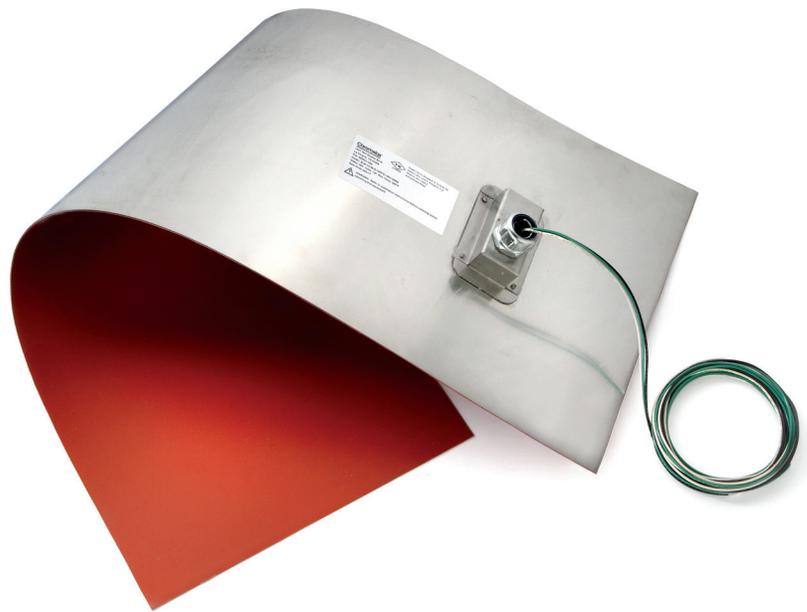


# Installation Instructions

## **SLTH** Tank Heater



**Chromalox<sup>®</sup>**  
PRECISION HEAT AND CONTROL

PL403  
161-882841-731  
August 2013

## General

### **⚠ WARNING**

**Read and understand all instructions before installing, servicing, or operating product. Failure to do so could result in personal injury or property damage.**

### **⚠ WARNING**

**FIRE/EXPLOSION HAZARD. To prevent ignition of hazardous atmospheres, this heater should not be installed in areas where vapors or gases have ignition temperatures less than 230°C (446°F) (T2C). These heaters must not be operated in ambient temperatures exceeding [max ambient temp].**

1. Connect heaters to the same line voltage printed on heater label.
2. Heaters are to be mounted directly to metal or plastic tanks using hardware included in accompanying heater installation kits.
3. All controls such as thermostats and contactors, when required, must have the same explosion-proof rating as the heater.

4. Do not install a heater above the estimated tank fluid level.
5. Do not energize a heater that is above the tank fluid level.
6. All unit electrical installation fittings, conduit, wiring and seals must meet NEC and local codes for hazardous locations. External line fusing or circuit breaker protection is required.
7. Failure to understand and follow these installation instructions and the “WARNING” notes therein may result in severe personal injury, death, or substantial property damage.

### **⚠ WARNING**

**ELECTRIC SHOCK HAZARD. Any installation involving electric heaters must be performed by a qualified person and must be effectively grounded in accordance with the National Electric Code to eliminate shock hazard.**

## Installation

### **⚠ WARNING**

**ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heater. Failure to do so could result in personal injury or property damage. Heater must be installed by a qualified person in accordance with the National Electric Code, NFPA 70.**

#### **Setup/Preparation:**

1. Ensure that the installation surface is clean. Remove any dirt, rust, or debris before installing heater.
2. Heaters vary in width from 6-24” and range from 12-96” in length. They are generally bonded to the lower tank wall using silicone RTV adhesive. Heaters should not be placed above the minimum tank liquid level. Failure to place heaters properly can result in excessive sheath operating temperatures and subsequent premature system failure.
3. Minimum bend radius of heater is 6”.
4. Ensure that all required accessories are included in the supplied installation kit (See Table 1 below).

Table 1- Installation Kit Accessories\*

Item Description	Quantity
Roller	1
Trowel	1
Caulk Gun	1
Aluminum Tape	1 (50 yd roll)
Permanent Marker	1
Silicone RTV Adhesive	2 (10.3 oz tubes)
Caution Labels	5

5. Perform heater resistance check using a standard ohm meter. The nominal resistance value can be calculated as follows:  
 $(\text{Rated Voltage})^2 / (\text{Rated Wattage}) / 1.025$

**Note:** A cold ohm factor of 2.5% is used when calculating the nominal heater resistance.

For example, if the voltage and wattage indicated on the heater label is 120V and 300W, the nominal resistance value would be  $120^2 / 300 / 1.025 = 46.8$  ohms. Since the resistance tolerance is +10/-5%, the acceptable resistance range would be **44.5-51.5** ohms.

## Heater Attachment

1. Consider any possible obstructions when planning heater placement on the tank.
2. Mark the outline of the heater on the tank where it will be installed using the supplied marker.
3. Load one 10.3 oz RTV adhesive tube into the caulking gun. Clip off or puncture adhesive tube tip and install nozzle. Clip off tip of nozzle to allow for adhesive application.
4. Apply a bead of adhesive around the perimeter of the silicone side of the heater. Maintain an approximate 2" border between the adhesive bead and the outer edge of the heater.
5. Apply another bead of adhesive to the tank surface using the same method used in step 4. Maintain an approximate 2" border between the adhesive bead and the marked border on the tank.
6. Immediately spread the adhesive on the heater and tank using the supplied trowel. The thickness of the adhesive after spreading should not exceed 1/32". Make sure the adhesive uniformly covers the heater and tank mounting surface.
7. Immediately position the heater in the area marked on the tank. Use the supplied roller to press heater in place. Work the roller from the center of the heater out to remove any existing air pockets.
8. Use the supplied aluminum tape as need for additional mounting reinforcement.
9. Cure time for the adhesive is 24 hours. Do not energize heater before adhesive is cured.

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## Wiring

### **⚠ WARNING**

***ELECTRIC SHOCK HAZARD. Any installation involving electric heaters must be performed by a qualified person and must be effectively grounded in accordance with the National Electric Code to eliminate shock hazard.***

1. All wiring should be done in accordance with local codes and the National Electric Code by a qualified person as defined in the NEC.
2. Wire per diagrams below based on the rating and control operation.
3. Connect conduit to heater fitting.
4. Tighten the cap nut first by hand, then tighten a second time with a wrench.
5. Repeat resistance check performed before installation to ensure the heater was not damaged during installation.
6. Thermostat bulbs or sensors should be mounted at a level similar to the heaters. The sensor should be mounted mid-way between individual heaters.
7. Properly insulate the tank and heaters after installation is verified. Verify installation is water-tight. Tank temperatures will not be maintained if insulation is wet or not used at all.
8. Repeat Step 5.
9. "Electric Heat Tracing" caution labels should be applied to the outer surface of the insulation weather barrier. The labels should be applied at regular intervals around the tank. 5 labels are supplied with the Mounting Kit. Additional labels may be ordered with part number 382424 (CL-1 Caution Label Kit 5 Weather Resistant Labels).

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## Operation

### **⚠ WARNING**

***The system designer is responsible for the safety of this equipment and should install adequate back-up controls and safety devices with their electric heating equipment. Where the consequences of failure could result in personal injury or property damage, back-up controls are essential.***

1. Do not operate heater at voltages in excess of that listed on the heater label. Overvoltage will shorten heater life and cause high element temperatures which may exceed allowable temperatures of operation in a hazardous atmosphere.
2. Do not operate heaters on a tank where the liquid level lower the heater location. This can result in high element temperatures, shortened heater life, and/or damage to the tank and surrounding equipment.

## Maintenance

### **⚠ WARNING**

**ELECTRIC SHOCK HAZARD. Disconnect all power before installing or servicing heater. Failure to do so could result in personal injury or property damage. Heater must be installed or serviced by a qualified person in accordance with the National Electric Code, NFPA 70.**

1. Periodically check all electrical connections and re-tighten to avoid electrical wiring difficulties.
2. Inspect insulation and check seals for possible moisture ingress.

## Ordering Information

Model						
SLTH	Silicone Rubber Tank Heater					
	<b>Code</b>	<b>WSI</b>				
	M	2.0				
	P	0.7				
		<b>Code</b>	<b>Lead Length</b>			
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			<b>Code</b>	<b>Width (Available widths 6", 12", 24")</b>		
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				<b>Code</b>	<b>Length</b>	
				---		
				<b>Code</b>	<b>Voltage</b>	
				1	120V	
				2	240 V	
				4	480 V	
SLTH -	M	072	12	24	2	Typical Model Number

### Limited Warranty:

Please refer to the Chromalox limited warranty applicable to this product at <http://www.chromalox.com/customer-service/policies/termsofsale.aspx>.

# Chromalox®

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