



WARRANTY/DISCLAIMER

OMEGA ENGINEERING, INC. warrants this unit to be free of defects in materials and workmanship for a period of **13 months** from date of purchase. OMEGA's WARRANTY adds an additional one (1) month grace period to the normal **one (1) year product warranty** to cover handling and shipping time. This ensures that OMEGA's customers receive maximum coverage on each product.

If the unit malfunctions, it must be returned to the factory for evaluation. OMEGA's Customer Service Department will issue an Authorized Return (AR) number immediately upon phone or written request. Upon examination by OMEGA, if the unit is found to be defective, it will be repaired or replaced at no charge. OMEGA's WARRANTY does not apply to defects resulting from any action of the purchaser, including but not limited to mishandling, improper interfacing, operation outside of design limits, improper repair, or unauthorized modification. This WARRANTY is VOID if the unit shows evidence of having been tampered with or shows evidence of having been damaged as a result of excessive corrosion; or current, heat, moisture or vibration; improper specification; misapplication; misuse or other operating conditions outside of OMEGA's control. Components in which wear is not warranted, include but are not limited to contact points, fuses, and triacs.

OMEGA is pleased to offer suggestions on the use of its various products. However, OMEGA neither assumes responsibility for any omissions or errors nor assumes liability for any damages that result from the use of its products in accordance with information provided by OMEGA, either verbal or written. OMEGA warrants only that the parts manufactured by the company will be as specified and free of defects. OMEGA MAKES NO OTHER WARRANTIES OR REPRESENTATIONS OF ANY KIND WHATSOEVER, EXPRESSED OR IMPLIED, EXCEPT THAT OF TITLE, AND ALL IMPLIED WARRANTIES INCLUDING ANY WARRANTY OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE ARE HEREBY DISCLAIMED. LIMITATION OF LIABILITY: The remedies of purchaser set forth herein are exclusive, and the total liability of OMEGA with respect to this order, whether based on contract, warranty, negligence, indemnification, strict liability or otherwise, shall not exceed the purchase price of the component upon which liability is based. In no event shall OMEGA be liable for consequential, incidental or special damages.

CONDITIONS: Equipment sold by OMEGA is not intended to be used, nor shall it be used: (1) as a "Basic Component" under 10 CFR 21 (NRC), used in or with any nuclear installation or activity; or (2) in medical applications or used on humans. Should any Product(s) be used in or with any nuclear installation or activity, medical application, used on humans, or misused in any way, OMEGA assumes no responsibility as set forth in our basic WARRANTY/DISCLAIMER language, and, additionally, purchaser will indemnify OMEGA and hold OMEGA harmless from any liability or damage whatsoever arising out of the use of the Product(s) in such a manner.

RETURN REQUESTS/INQUIRIES

Direct all warranty and repair requests/inquiries to the OMEGA Customer Service Department. **BEFORE RETURNING ANY PRODUCT(S) TO OMEGA, PURCHASER MUST OBTAIN AN AUTHORIZED RETURN (AR) NUMBER FROM OMEGA'S CUSTOMER SERVICE DEPARTMENT (IN ORDER TO AVOID PROCESSING DELAYS).** The assigned AR number should then be marked on the outside of the return package and on any correspondence.

The purchaser is responsible for shipping charges, freight, insurance and proper packaging to prevent breakage in transit.

FOR **WARRANTY** RETURNS, please have the following information available **BEFORE** contacting OMEGA:

1. Purchase Order number under which the product was PURCHASED,
2. Model and serial number of the product under warranty, and
3. Repair instructions and/or specific problems relative to the product.

FOR **NON-WARRANTY** REPAIRS, consult OMEGA for current repair charges. Have the following information available **BEFORE** contacting OMEGA:

1. Purchase Order number to cover the COST of the repair,
2. Model and serial number of the product, and
3. Repair instructions and/or specific problems relative to the product.

OMEGA's policy is to make running changes, not model changes, whenever an improvement is possible. This affords our customers the latest in technology and engineering. OMEGA is a registered trademark of OMEGA ENGINEERING, INC.



User's Guide

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SHDH, SSDH series



SEPDH series

SEPDH, SHDH, SSDH SERIES Silicone Rubber Drum Heaters

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INTRODUCTION

Thank you for purchasing a OMEGALUX® Silicone Rubber Drum Heater. Your heater is designed to provide a long and efficient service life with function, reliability, and safety in mind. For successful operation of these heaters, read and understand these instructions prior to use.

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.

SAVE THESE INSTRUCTIONS!

Additional copies of this manual are available upon request.

CONNECTING HEATER TO AC POWER

SEPDH series

2. Connect the hazardous location approved plug to power source only after all steps listed above are complete.

SHDH and SSDH without controller series

2. Refer to external temperature controller instructions for power installation instructions.

TROUBLESHOOTING GUIDE

Please read this guide prior to contacting OMEGA. 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 1-800-USA-HEAT.

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 1-800-USA-HEAT 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.

ADJUSTMENT OF TEMPERATURE SET-POINT

SEPDH series

1. Remove the two screws securing the metal plate opposite the temperature sensor.
2. Remove the metal plate to expose the low and high limit set-point controls.
3. Adjust the high and low temperature set-points to an appropriate level for the environment. The low temperature set-point is the process control. The high limit set point is connected to the high temperature limit indicator light.

NOTE: These heaters have a built-in, high limit thermostat that will prevent it from overheating.

T-3 rated heaters: 292°F [145°C] high limit thermostat

T-4A rated heaters: 158°F [70°C] high limit thermostat

▲ WARNING Do not adjust the low set-point higher than the high limit thermostat.

Do not adjust the low set-point higher than the high temperature set-point connected to the indicator light.

4. Replace the metal plate and secure with two screws.

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.

SHDH-C and SSDH-C series

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.

IMPORTANT SAFETY INSTRUCTIONS



▲ DANGER

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

▲ 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.
- All SEPDH heaters have T ratings described in Article 501 of the NEC code. The heaters should not be used in an area with a lower T rating than the heater. The T rating is stated in marking on the heater.

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

▲ WARNING

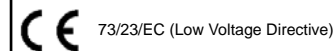
End User Must Comply to the Following:

- 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.
- SEPDH series: A NRTL (National Recognized Testing Laboratory) listed temperature controller must be used to control the surface temperature of the blankets. The controller must be approved for the area where it is located.
- SEPDH series: Heaters provide surface heating, consult proper authorities for information for safe heating of materials/ contents of any vessel heated by SEPDH heaters.

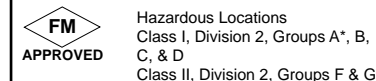
Failure to observe these warnings may result in personal injury or damage to the heater.

Agency Approvals

SHDH and SSDH series



SEPDH series



* without included controller only

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

▲ 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.
- SEPDH series: Never allow the full weight of the thermal bulb controller to hang from the heater.
- SEPDH series: the metal enclosure must not support more than 10lbs (4.5kg).

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

PRIOR TO INSTALLATION

⚠ WARNING

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

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.
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.
 - SHDH and SSDH exposure temperature range: -60°F to 450°F (-51°C to 232°C)
 - SEPDH exposure temperature range: -60°F to 400°F (-51°C to 204°C)
 - T3: 292°F (145°C) high limit thermostat
 - T4A: 158°F (70°C) high limit thermostat
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.

INSTALLATION OF HEATER

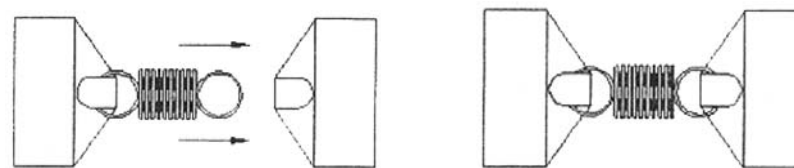


FIGURE 1

MOUNTING OF TEMPERATURE SENSOR (SEPDH series)

1. Mount the temperature sensor as close as possible to the heater, on the outside of the drum. It is best to mount the sensor vertically. Avoid bending or coiling the capillary tube tighter than a 1/2" (13mm) radius.

NOTE: The sensing point is the entire length of the sheath (10.5" / 267mm). It is important that as much of the bulb's surface is in contact with the drum.

- ⚠ WARNING** Do not immerse the sensing bulb into the contents of the drum.
2. Once an appropriate location has been determined, secure the sensor to the drum using aluminum or fiberglass adhesive tape.

ADJUSTMENT OF TEMPERATURE SET-POINT

⚠ WARNING Do not operate the heater without a temperature controlling device (if not installed). Failure to use such a device may result in in-process damage or heater failure.

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.

SHDH-C and SSDH-C series

Adjust dial to desired setting. Drum heaters can be adjusted 50-425°F (10-218°C).