



User Instructions for Silicone Rubber Heaters

EFH1009
Issue 2

GENERAL INFORMATION

Silicone Rubber heaters have wire-wound or etched foil heating circuits laminated between thin layers of fiberglass-reinforced, high temperature insulation, silicone rubber.

Silicone Rubber heaters are resistant to temperature extremes, moisture, weathering, radiation, fungus and chemical attack. They also have a high dielectric strength, flexibility, provide a cost-effective heating solution and are easily bonded or cemented to heat sinks or other parts to be heated.

INSTALLATION

⚠ WARNING

IMPROPER INSTALLATION

- Ensure the heater is installed by qualified personnel.
- Ensure the heater is not exposed to damaging or flammable chemicals, acids, alkalis, oils, fluids, liquids or other substances.
- Ensure the heater is not cut, pierced, folded or otherwise mishandled
- Ensure proper measures are taken to control heater temperature if heater is insulated.
- Ensure the heater is attached to an appropriate heat sink and not energized free standing in air.
- Ensure that the heater's exposed thermostat sensor is not damaged.
- Do not overlap heaters.
- Do not repair a damaged heater.

Failure to comply with these instructions could result in death or serious injury.

CAUTION

HEATER DAMAGE

- Ensure that the entire heater is in contact with the mounting surface (heat sink) with no air packets trapped underneath.

Failure to comply with these instructions could result in product damage.

1. Attach the heater to an appropriate heat sink (may be flat or curved) by one of the following means. Ensure that the heat sink is clean and oil/grease-free:
 - Mechanical clamping.
 - Factory-applied pressure sensitive adhesive (PSA).
 - A thin layer of room temperature vulcanizing (RTV) silicone.
2. Install a method of temperature control (such as a thermostat, thermocouple and temperature controller, or a variable voltage transformer).
3. Place the temperature sensor close enough to the heater to sense the heater temperature.

OPERATION

⚠ WARNING

IMPROPER OPERATION

- Ensure the heater is used by qualified personnel.
- Ensure the heater does not exceed:
 - Specified or rated voltage.
 - Maximum operating and surface temperature ratings.
- Ensure the heater is not exposed to damaging or flammable chemicals, acids, alkalis, oils, fluids, liquids or other substances.
- Ensure the heater is not immersed in liquids.
- Ensure the heater is not cut, pierced, folded or otherwise mishandled
- Ensure adequate safety controls are installed for unattended operating heaters.
- Ensure that the heater's exposed thermostat sensor is not damaged.
- Do not repair a damaged heater.

Failure to comply with these instructions could result in death or serious injury.

Silicone Rubber Heaters



Table 1. General Specifications

Characteristic	Value
Material and construction	fully vulcanized fiberglass-reinforced silicone rubber encapsulating a nickel alloy or thin foil heating element
Voltage	115V
Power densities available (at 115V)	2.5W/in. ² , 5W/in. ² , 10W/in. ²
Operating temperature range	-70°F to 450°F
Exposure temperature range	-70°F to 450°F
Resistance tolerance	±10%
Thickness	0.030in. to 0.070in. (except at lead exit)
Leads: gauge insulation length	varies according heater wattage and voltage Teflon [®] unless specified 12.0in. min.
Component approvals	UL, CSA
High-potential dielectric testing (at 115V)	1250V
Serviceable parts	none

WARRANTY AND LIMITATION OF REMEDY AND LIABILITY

Electro-Flex Heat, a Division of MCF, LLC (hereafter referred to as “Electro-Flex Heat”) warrants its products against defects in material and workmanship for at least one (1) year from the time of delivery, provided such product is properly applied, used and maintained. **Electro-Flex Heat** does not warrant any product against damage from corrosion, contamination, misapplication, improper specification or wear and tear and operational conditions beyond **Electro-Flex Heat’s** control. The terms of this warranty are the exclusive terms available to buyer and to any other person or entity to which products are transferred during the period of this warranty. No person has authority to bind **Electro-Flex Heat** to a presentation or warranty other than this express warranty.

Electro-Flex Heat shall not be liable for incidental or consequential damages resulting from use of the products whether a claim for such damage is based upon warranty, contract, negligence or other cause of action. Should any product fail while subject to this warranty, such product shall be repaired or replaced, at **Electro-Flex Heat’s** option, at no charge to buyer or to any other person or entity to which product is transferred during the period of this warranty. **Electro-Flex Heat** must be notified of the alleged failure of the product within thirty (30) days of such event and advanced authorization for repair or replacement must be obtained in writing from **Electro-Flex Heat**.

THIS WARRANTY IS MADE EXPRESSLY IN LIEU OF ALL OTHER WARRANTIES, EXPRESS OR IMPLIED, INCLUDING WITHOUT LIMITATION, ANY WARRANTY ARISING FROM A COURSE OF DEALING OR USAGE OF TRADE, AND ALL OTHER SUCH WARRANTIES ARE SPECIFICALLY EXCLUDED. THE CORRECTION OF ANY DEFECT IN OR FAILURE OF PRODUCTS BY REPAIR OR REPLACEMENT TO THE EXTENT SET FORTH ABOVE, SHALL BE Electro-Flex Heat’s LIMIT OF LIABILITY AND THE EXCLUSIVE REMEDY FOR ANY AND ALL LOSSES, DELAYS OR DAMAGES RESULTING FROM THE PURCHASE OR USE OF THE PRODUCTS. IN NO EVENT SHALL Electro-Flex Heat BE LIABLE FOR SPECIAL, INDIRECT, INCIDENTAL OR CONSEQUENTIAL DAMAGES. Electro-Flex Heat SHALL NOT BE LIABLE FOR, BUYER AND ANY OTHER PERSON OR ENTITY TO WHOM PRODUCTS ARE TRANSFERRED DURING THE PERIOD OF THIS PERIOD OF THIS WARRANTY ASSUMES RESPONSIBILITY FOR, ALL PERSONAL INJURY AND PROPERTY DAMAGE RESULTING FROM OR RELATED TO THE HANDLING, POSSESSION OR USE OF PRODUCTS AND PRODUCTS MANUFACTURED AND SOLD BY Electro-Flex Heat HEREUNDER.

Electro-Flex Heat IS NOT LIABLE FOR LABOR COST INCURRED IN REMOVAL, REINSTALLATION, OR AUTHORIZED REPAIR OF THE PRODUCT OR FOR DAMAGE OF ANY TYPE WHATSOEVER, INCLUDING INCIDENTAL OR CONSEQUENTIAL DAMAGE.

USERS ARE RESPONSIBLE FOR THE SUITABILITY OF THE PRODUCTS TO THEIR APPLICATION. PRICING IS F.O.B.



5 Northwood Rd
Bloomfield, CT 06002
Phone: 860-242-6287
Fax: 860-242-7298

www.electroflexheat.com

EFH1009, Issue 2
February 2017
©2017 Electro-Flex Heat, a Division of MCF, LLC

