



# Silicone Rubber Beaker Heater Instruction Manual



## INTRODUCTION

Thank you for purchasing a OMEGA® Silicone Rubber Beaker 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 beaker heaters, read and understand these instructions prior to use.

## AGENCY APPROVALS

**CE** 73/23/EC (Low Voltage Directive)

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

## IMPORTANT SAFETY INSTRUCTIONS

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.

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 be 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.

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

## PRIOR TO INSTALLATION

1. Check for suspected damage to the heater like rips, punctures, etc.
2. 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. Failure to operate the heater at the specified rating could result in overheating of the heating blanket, the surface being heated, or personal injury. Also note lower-than-rated voltage will result in under-heating.

## INSTALLATION

1. Wrap heater around properly sized beaker. **The heater must be installed with the wires exiting at the bottom of the glass beaker.**

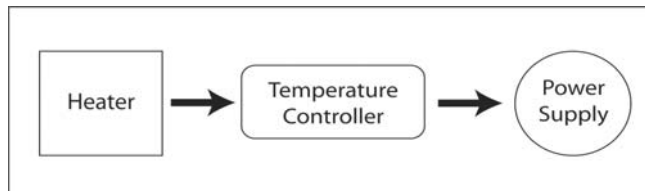
2. For proper temperature control, secure the thermocouple, RTD, or other sensing device, vertically along the lead wire seam of the blanket with one strip of adhesive tape so that it is sandwiched firmly in-between the heater and glass beaker.

- Sensor must be in close proximity to the heater to prevent overheating.
- Sensor should be connected in accordance with instructions provided with temperature controller.

3. Ensure heater is in contact with the surface to be heated. The heater must be tightly wrapped around the glass beaker. Minimal air gaps between the heater and the beaker provide the best heat transfer and best heater life.

**⚠ CAUTION** Do not wrap the heated areas of the blanket over itself or allow it to contact a second heater.

4. Once the beaker heater has been properly setup:  
 120VAC: Plug the heater into an acceptable temperature controller. Use a variable transformer, manual control, or automatic controller to prevent overheating.  
 240VAC: The two wires (same color) must be connected to the temperature control device directly or to a connector that is mated to a receptacle connected to the temperature control source. These heaters are non-polarized, allowing either wire to be connected to neutral or hot.



**⚠ WARNING** All electrical connections must be made by qualified personnel and in accordance with all applicable codes and regulations.

**To Avoid Damage:**

- Never plug directly into a power source. Your heater MUST be operated with a temperature controller and with an appropriate sized beaker, filled with fluid.
- Never operate heater without fluid within the flask.
- Never operate the heater at temperatures above 232°C (450°F).

**TROUBLESHOOTING GUIDE**

PROBLEM	SOLUTION(S)
Does not heat	Verify heater is connected to proper voltage. 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.  Check to see if there is a resistance reading between power leads.
Does not fit	Designed for only specific sized glass beakers. Check to be sure the beaker size and heater size match.



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The information contained in this document is believed to be correct, but OMEGA accepts no liability for any errors it contains, and reserves the right to alter specifications without notice.  
**WARNING:** These products are not designed for use in, and should not be used for, human applications.