



## INSTALLATION INSTRUCTION UL LISTED IMMERSION HEATERS

**INSTALLATION** – Care must be taken to insure complete immersion of the heated length of the heater at all times. The heated surface should never be in contact with any sludge.

The gasket surface should be clean and dry before the heater is seated. The terminals must be protected at all time from moisture or vapor. The heaters should be inspected periodically for coatings and corrosion, and cleaned if necessary.

In an electroplating application, the metal surface of the heater is to be grounded. The heaters are not, under any circumstances, to be placed between the electrodes and the work.

**LOW MEGOHM CONDITION** – The refractory material used in electric heaters may absorb some moisture during transit, storage or when subjected to a humid environment. This moisture absorption corrects itself after heat-up and does not affect the heater efficiency or life.

A low megohm condition can be easily corrected by removing the terminal hardware and baking the heater in an oven at 250°F to 350°F for several hours, preferably overnight.

An alternate procedure is to energize the heater at low voltage until the megohm reading returns to normal. When energizing heaters in air, the sheath temperatures should not exceed 750°F for steel or Incoloy® rods. Made-to-order heaters, with long cold section and/or low watt densities, must be bake-dried.

For a particular point not covered, write GAUMER COMPANY, INC. giving a full description of the application.

**ELECTRICAL CONNECTIONS** – Heaters purchased with moisture resistant terminal covers should be wired with rigid conduit connections in keeping with the requirements of the National Electrical Code and local codes for the particular installation.

If temperature will not exceed 400°F, the electrical wiring can be insulated copper wire. A high temperature wire should be used where temperature may exceed 400°F. (Contact GAUMER COMPANY, INC. for type RHTW 1200°F 600 Volt rated wire).

**GENERAL INFORMATION** – Immersion heaters with 120 volt or 240-volt elements can be connected in series for high voltage operation except when uneven wattage is supplied on the respective elements.

Bending the heating elements is not recommended. If bending is necessary, contact GAUMER COMPANY, INC.

Do not remove immersion heaters from the tank while connected to the power supply.

**CORROSION OF METAL** – The sheath is believed to be satisfactory for heating the water bases solution named. The rate of corrosion is affected by temperature, concentration, erosion, inhibitors, flux, impurities in the solution, etc. GAUMER COMPANY, INC., therefore, cannot guarantee this unit against damage resulting from corrosion, electrolysis, or other operating condition beyond our control. Electric units for heating various water based liquids, subject to customer's approval. The supplier of the water-based solution may likewise be asked for recommendations of sheath material.

**WARRANTY** – Seller warrants its products to be free from defects in material and workmanship under normal use and maintenance as herein provided. Seller's sole obligation under this warranty shall be limited to repairing, replacing or allowing credit for, at Seller's option, any product which under normal and proper use and maintenance proves defective in material or workmanship within one (1) year after delivery to buyer, provided however, that notice of any such defect and satisfactory proof thereof is promptly given by Buyer to Seller, and thereafter such product is returned to Seller, with transportation charges prepaid, and Seller's examination proves such product to have been defective.

This warranty does not apply in respect of damage to any product or accessory or attachment thereof caused by misuse, neglect or accident, nor does this warranty apply to any product which has been repaired or altered in any way which, in the sole judgment of the Seller, affects the performance, stability or general purpose for which it was manufactured. Performance of Seller's products or systems for specific applications is warranted only in cases where Seller has sole responsibility for product and system concept, design, and selection of components, manufacture and installation. Wherever Buyer has specified that certain components be used, such products or system performance warranties are limited to that consistent with the performance specified by the manufacturers of the components so employed. For goods, products and/or equipment or systems only sold by Seller and manufactured by others, Seller only passes such manufacturer's warranties on to Buyer.

If a factory installed thermal device is not provided, the user is responsible for providing their own thermal control.

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