



A  GLO-QUARTZ Company

PTFE (fluoropolymer) Immersion Heaters

INSTALLATION, OPERATING & MAINTENANCE INSTRUCTIONS

BEFORE INSTALLING HEATERS PLEASE READ AND FOLLOW THESE INSTRUCTIONS TO ENSURE SAFE AND PROPER OPERATION!

VERIFY THE FOLLOWING:

- Check to make sure that the heater received is the same as ordered.
- Available voltage and phase agree with nameplate ratings – Do **NOT** install especially if on-site voltage exceeds rated voltage.
- PTFE material and Watt density rating must be compatible with chemistry of environment – Consult with Heatmax or Chemistry provider's (MSDS) as necessary.
- Thermostatic, high limit (over temperature) and liquid level controls are in place as required (Please refer to "Danger-Warning" tag found on heater).
- That operational personnel are adequately trained in all key safety facets surrounding the use and maintenance of electric immersion heaters and controls.
- Installation is performed by qualified personnel in accordance with National Electric Code and other electrical codes as they apply.

Failure to verify these installation criteria may result in premature heater and equipment failure and may present a HAZARD to personnel and/or property as electric heaters are an ignition source in certain situations. Consult with Heatmax Heaters with any questions.

INSTALLATION:

- Heater is designed for either vertical mounting (secured at tank lip) or horizontal orientation of heating elements (L-Shaped, sitting on bottom of tank floor with a vertical tube "riser" paralleling tank wall. A terminal/connection box sits atop riser in the proximity of tank lip).
- PTFE heater sleeves are subject to damage from abrasion, nicks or cuts. Handle with extreme care.
- Mount heater assembly securely, especially in agitated tanks. Available polypropylene guards are highly recommended.
- Wire in accordance with National Electrical Code and secure terminal covers and conduit connections.
- Connect thermostatic control, over-temperature safety switch and liquid level control.

OPERATION:

- **NEVER** energize or operate heater unless solution covers the heated zone of the PTFE elements.
- Set thermostat to desired operating temperature and observe thermostatic control at start-up. **NEVER** circumvent safety circuit for any reason.
- Test all safety interlocks at start-up to assure they deactivate power to heater. Note that the integral over-temperature switch may not prevent heat deformation damage to PTFE sleeve in the event of a liquid level drop that exposes the heater zone to the atmosphere. **ALWAYS** use a separate liquid level control that will de-activate electrical power in the **cold zone** section of the heater, before level can drop into heated zone.
- **AVOID** racks of parts from coming into contact with heater.
- **AVOID** excessive splashing or dripping onto heater terminal boxes.

- Do **NOT** place heater terminal boxes under cover
- Do **NOT** place heater terminal boxes in the direct flow path of tank fume ventilation system.

MAINTENANCE:

- **ALWAYS** disconnect power when performing any maintenance or service.
- **NEVER** remove an energized or connected heater out of tank; allow at least a 15 minute stabilization period before removing.
- Periodically inspect PTFE element surface and **NEVER** return a damaged heater to service.
- Periodically inspect for electrical and conduit connections for tightness and any signs of deterioration.
- The removal of scale build-up from PTFE surface should never involve tapping or hammering as breakage will occur. Consult the chemical provider for suggestions as to how to remove and dispose of particulate scales.