



Teflon (PTFE) Flanged Immersion Heaters

Installation, Operation and Maintenance Instructions

1.0 Handling

Unpack and handle with care to avoid damage to PTFE coated elements, thermoplastic flange assemblies and accessories. Avoid bending, impact, abrasion or scratching of PTFE coated surfaces. Store indoors in a clean, dry environment. Prior to startup, verify insulation resistance using a minimum 500 VDC megohm meter. Insulation resistance should exceed 10 megohms at room temperature.

2.0 Safety

Disconnect all power before installation or service. Wiring must conform to applicable electrical codes and be performed by qualified personnel. PTFE coated heaters are intended for immersion in compatible liquids only. Never energize a heater unless fully immersed. Use lockable disconnects and appropriate grounding practices.

3.0 Installation and Operation

The use of temperature controls, over-temperature protection and independent low liquid level protection devices is strongly recommended. Verify supply voltage matches heater nameplate ratings. Ensure all heated surfaces remain fully submerged during operation.

PTFE flanged immersion heaters are commonly used in plating tanks, pickling tanks, rinse tanks, chemical processing systems and corrosive solution applications. Install heaters to allow unrestricted liquid circulation around all heated surfaces. Locate heaters to avoid sludge accumulation and maintain adequate liquid coverage at all times.

Verify compatibility of the process solution with PTFE coatings, thermoplastic flange materials, gaskets and sensors. Tighten all electrical and flange connections properly and inspect for leaks before energizing. Do not exceed 105% of rated voltage.

4.0 Maintenance

Disconnect power before performing maintenance. Periodically inspect terminals, wiring and electrical connections. Inspect PTFE coated surfaces for cuts, abrasion, cracks, blistering, discoloration or chemical attack.

Remove deposits using non-metallic cleaning methods only. Do not use wire brushes, abrasive pads or sharp tools that may damage the PTFE coating. Verify liquid level controls, flow switches and over-temperature protection devices remain functional.

5.0 Troubleshooting

Verify supply voltage and control circuit operation. Check heater resistance and continuity. A reading of infinity indicates an open heating circuit requiring replacement. Longer heat-up times may indicate a failed heating element, inadequate circulation, scale buildup or improper sensor placement.

Important Warning

PTFE coated immersion heaters must never be operated in air. Loss of liquid coverage can rapidly overheat and permanently damage the heater. Independent low-level cutoffs and high-temperature safety controls are strongly recommended.



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