

### Deep Tank/Sump Immersion Heater

#### Application

These fluid immersion heaters are designed for top mounting in large or deep enclosed tanks having a manhole access or opening suitable to insert & attach the heater. They are usable for either outdoor or indoor applications, within exposed or in-ground tanks and sewerage sumps. They are designed for permanent mounting and can be sealed weather-tight with supplied gaskets and adjustable riser fittings.

NEMA 4 terminal housing is easily removable & resealed to facilitate installation. Units are available with element watt densities from 6 wsi for heavy oils, to 60 wsi for clean water immersion applications. Element bundle diameters ranging from minimum of 10" OD to a maximum of 30" OD are available.

#### Construction

The tubular elements are welded into a submersible liquid-tight stainless steel junction box. Element power leads are routed up through adjustable riser pipe and connected to a terminal block inside the upper NEMA 4 terminal housing. Unless specified otherwise, heaters are factory wired for three phase and are easily converted to single phase.

All wetted parts are 300 series stainless steel. Standard unit includes 60-250°F double-pole thermostat mounted in upper housing that has a 3/8" dia. bulb & capillary installed in watertight thermowell with adjustable compression fitting.

#### Design Features

- \* .475 diameter Incoloy elements and stainless steel wetted parts standard
- \* Designed for permanent installation in outdoor/indoor applications
- \* 2 ft to 12 ft vertical riser height (for thermostat designs)
- \* Weathertight mounting hardware supplied
- \* Riser adjustable to facilitate mounting variations
- \* NEMA 4 Electrical Enclosure with 3/4 conduit fitting
- \* 1-1/2" Sludge legs
- \* Double-pole 60-250°F pilot duty thermostat
- \* Watertight thermowell sized for 3/8" max. dia. sensing bulb
- \* 120V, 208V, 277V, & 575V versions available (consult Tempco)

#### Optional Features

- \* 316 SS, Steel, or Copper element designs
- \* Passivation, electropolished, or bright annealed surface treatments for stainless steel or Incoloy designs (elements only)
- \* Custom or ASI pressure rated flange on riser for mounting
- \* NEMA 1 or NEMA 4/7 (explosion resistant) terminal housings
- \* Alternate single- or double-pole thermostat (see page 11-6 through 11-9 for ranges)
- \* Internally mounted definite purpose Magnetic Contactor, single circuit units only (see page 13-96 for volt/amp ratings and coil voltages available)
- \* RTD or Process MI thermocouple in thermowell in place of thermostat
- \* Hi-limit thermocouple on element sheath
- \* Special riser or sludge leg heights
- \* Right-angle riser design for offset terminal housing
- \* Up to 24 elements per heater assembly
- \* 1/32 DIN temperature controller, internal or panel mounted on terminal housing and used with T/C or RTD probe & contactor for heater control
- \* Integrated float switch for liquid level control

