



**THERMAL  
PRODUCTS** INC.  
Engineered Solutions To  
Industrial Applications

**INDEECO**

# Indeeco's ESI series flanged immersion heaters offer the simplest installation available with our unique enclosure design

## Performance Features

- Wattages up to two megawatts
- Watt densities up to 100 W/in<sup>2</sup>
- Voltages up to 600 V
- Process temperatures up to 1,200° F
- Flange sizes up to 36" and 2500# ASME B16.5
- Removable and rotatable general purpose enclosure for easy pairing of incoming power feed.
- Weatherproof enclosure offers multiple flat surfaces for the addition of connection hubs.
- Weatherproof enclosures are constructed of stainless steel providing corrosion resistance.

## Typical Applications

- Water
- Industrial rinse tanks
- Vapor degreasers
- Hydraulic oil, crude, asphalt
- Lubricating oils
- Gases
- Caustic solutions
- Chemical baths
- Boiler equipment
- Glycol solutions
- Paraffin



**FastTrack**  
Availability



Our products do more in a wide range of applications. **Expect More.**

## Standard Features

- ANSI B16.5 150# or 300# flange 2" up to 36"\*
- Designed to fit into schedule 40 or schedule STD pipe for the given flange size
- Flange material A105 carbon stl, A182 304/304L or 316/316L stainless steel\*
- Element sheath materials available: steel, 304 SST, 316 SST, 321 SST, incoloy 800, incoloy 840, copper
- Epoxy or RTV sealed heating elements to prevent moisture absorption
- Stainless steel welded bussing to eliminate loose connections
- Heater circuits divided into 48A max as default
- Heavy duty, low pressure drop design, 304 SST element support spacers provided on 24" centers
- Spacer support rods provided on 10" and larger flange sizes
- General purpose, weatherproof, or explosion-proof terminal enclosure\*
- Lifting lugs for heaters 4" and larger
- Nitrile bonded fiber, or SST/graphite spiral flange gasket provided as a standard
- Certifications –cCSAus certified and UL Recognized for general purpose and weatherproof constructions. (per CSA 22.2 no. 72 and 88 / UL574 for OIL / UL1030 or UL499 for water or air)

## Optional Features

### Extended terminal box

Provided when heater operating above 500° F to allow for cooler operation of the terminal box. This allows the heating elements to be sealed with epoxy or RTV and for the customer to provide incoming wire with a much lower insulation temperature rating.

### ASME

The heater can be supplied in accordance with ASME section VIII Div. 1 U-Part stamped and certified.

### Thermostats †

Bulb and capillary pilot duty or load carrying thermostats can be provided to control the heater or to provide over-temperature protection. The thermostat bulb can be installed in a thermowell to sense process or element sheath temperature.

### Thermocouples †

Type J or K thermocouples can be provided to monitor the process or element sheath temperatures. Thermocouples provided with a ceramic wafer head and screw terminals for ease of wiring. Alternate type E or T available but not FastTrack eligible.

### Hermetically sealed element terminations

A ceramic to metal soldered seal can be provided to eliminate the possibility of moisture from entering the heating element.

### Removable bussing †

Allows troubleshooting and isolation of a failed heating element.

### Cross-baffle

Construction utilizes alternating half baffles spaced closely to cause increased flow velocity across the heating elements to allow better heat transfer from the elements to the fluid.

### Ventilated general purpose cover

Provides means for heat to exhaust from the terminal box to minimize heat buildup.

### Add support rods for flange sizes 8" and smaller

Support rods can be added to high flow heaters to keep the element support spacers in place.

### Larger heater circuits for greater than 48A per circuit

### Heavy wall pipe design

Element bundles with smaller outside diameter can be provided for any flange size requested.

### Pickle and Passivate

A chemical treatment in nitric acid can be performed to remove free iron from the outer surface of stainless steel for applications sensitive to contaminants.

### Electro-polish

Is a process similar to plating using cathode and anode reactions but material is removed rather than added to the heater surfaces in order to provide a clean and bright finish.

### Ring and cover weatherproof or corrosion resistant enclosures

Heavy duty pipe and plate construction.

### Other element sheath and flange materials available

### Flange ratings greater than 300# are available up to 2500#

\* FastTrack 2 week delivery available for all standard features with flange sizes 3" thru 6". Explosion-proof enclosure and 316/316L flange not included.

† Options available with FastTrack program.



When you need more  
than an off-the-shelf,  
standardized product.  
Ask **More.**