



**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/in²
- 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.**