

SCREW PLUG HEATER

Specialist In: Custom Built Heaters & Heater Assembly Unit Along-With Temperature Controller As Per Customer's Specification.



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Company Profile

"SUBHOT" the brand name of Three Decades Rich, quality oriented and completely indigenously manufactured IEC standard product since 1990, we are catering successfully to domestic and international Industries. We design develop and supply industrial heaters, heating elements, thermocouples and other high temperature Material Management equipments as per the customer's requirement. We have in house Design, Development & research facilities, follows by stringent quality control measures right from beginning to delivery of the material. Customer satisfaction is our first priority.

We manufactur various types of Tubular Electrical Heaters and heating systems, along with control accessories Cartridge Heaters, Mica Band Heaters, Ceramic Band Heaters, Casted Heaters, Furnace Heaters, Nozzle Heaters, Coil heaters, which are used in Hazardous and Non Hazardous area. In Tubular Electrical heater Heating element is Mineral filled sheathed tubular type. Heating element Insulation material used is Mgo (Magnesium oxide) and heating element wire material is Nichrome. Heating elements are manufactured and tested as per IS-4159 BIS Standards. Electrical heaters are suitable for application for Water, Oil, Chemical, Air, Fuel gas, Natural gases etc and Design as per requirement of customer based on the technical input provided by them. Heating unit consist of Heater vessel, Heater bundle, Terminal box, and U-Shaped heating element fitted on Tube sheet .The selection of heating element for a particular assembly depends on the uses & customers requirement total rating, surface loading, diameter of heating element tube, Operating temperature, space limitation, Type of electrical connection and number of bank etc. The heating element can be permanently fixed on tube sheet OR Can be removable type. Various Sheath material and sizes are available based on design requirement. The heating unit can be supplies Complete with Heater Vessel, Inlet-Outlet Nozzle/Flange, Lug Support and external insulation.

Heater vessels are generally designed as per ASME SecVIII Div-1. For Hazardous area flameproof terminal box are used which are duly certified by CMRI Dhanabad for Gas group IIA, IIB or IIC.

We are also manufacturing the following product at our works:

- Immersion heating elements for Water, Oil and Chemical heating.
- Air Heating element
- Fuel gas and Process gas heater.
- Regeneration heaters.
- Large heating unit upto 520KW with terminal box and control panel.
- Heater for ESP and Ash handling system.
- Cartridge Heaters
- Mica Band Heaters
- Ceramic Band Heaters
- Casted Heaters
- Furnace Heaters

Size of heating tube: 8.2mm, 9.5mm, 11.0mm, 12.0mm, 12.5mm, and 16.0mm, 19.0 mm or as per customer requirement.

MOC of Heating Tube: Copper, Titanium, SS all grade, Incoloy 800, Inconel etc.

Sizing of Tube Sheet: As per design requirement. **Sizing of Heater Vessel**: As per design requirement.

Thermocouple: J & K Type own make in SS all grade and Incoloy.



SCREW PLUG HEATER



DESCRIPTION

Screw Plug Heaters Are Compact, High-Efficiency Immersion Heaters Designed For Direct Heating Of Liquids And Gases In Tanks, Vessels, And Pipelines. The Heating Elements Are Brazed Or Welded Into A Threaded Plug, Allowing Easy Installation Into Standard NPT Or BSP Threaded Openings.

These Heaters Offer Rapid Heat-Up, Uniform Temperature Distribution, And Minimal Heat Loss, Making Them Ideal For Applications Ranging From Water And Oil Heating To Chemical Processing. Available In A Variety Of Sheath And Plug Materials, Screw Plug Heaters Can Be Configured For Safe Operation In Hazardous Or Corrosive Environments.

COMPONENTS

Component	Specification
Hairpin Element	NiCr or FeCrAl tubular coil, MgO-packed for efficient heat transfer and electrical insulation.
Threaded Plug	Carbon steel, SS304/316, Brass, or Incoloy plug with BSP/NPT threads for leak-tight mounting.
Terminal Enclosure	IP65/67-rated housing with ceramic terminal block and cable gland for secure wiring.
Gasket & Seal	PTFE, graphite, or Viton gasket for chemical resistance and leak prevention.
Element Mounting Collar	Locknut and support for vertical or angled immersion without element movement.

TECHNICAL SPECIFICATION

Parameter	Specification
Heater Sheath Material	SS304/316, Brass, Incoloy Plug
Watt Density	Up to 100 W/in ²
NPT Plug Sizes	½" to 4" NPT/BSP
Voltage	Up to 480V AC
Element Length	Up to 3000mm immersion depth
Control Options	Built-in thermostat, over-temp sensing, dual- element switching

ADVANTAGES

- Compact & Efficient Direct immersion ensures minimal heat loss.
- **Easy Replacement** Elements can be changed without draining the vessel.
- **Versatile Material Options** Sheath and plug alloys for water, oils, and chemicals.
- Hazardous-Area Ready Explosion-proof and flameproof designs available.
- Fast Heat-Up High watt density for rapid thermal response.
- Durable & Low Maintenance Long service life with robust construction.

APPLICATIONS

- Water Heating Process tanks, storage vessels, and cleaning baths.
- Oil Heating Lubrication oil, hydraulic oil, and thermal fluids.
- Chemical Processing Vessels, baths, and reactors.
- **Steam Generation** Boilers and steam-producing systems.
- Grease & Solvent Heating Industrial cleaning and processing systems.

FEATURES

- **Direct Immersion Design** Maximizes heat transfer efficiency.
- Replaceable Elements Service without full system shutdown.
- Corrosion Resistance Alloy options to match process fluid chemistry.
- Safety Options Explosion-proof and flameproof variants available.
- Rapid Heat-Up Uniform heating with high watt density.
- Long Service Life Built for demanding industrial environments.