SUBHOT®
INDUSTRIAL HEATERS

BOBBIN & PIPE HEATER

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

MAKE IN INDIA

AN ISO 9001:2015 COMPANY

NSIC CERTIFIED CO. | CE | ZED Zero Effect Zero Defect | D&B Decide with Confidence | IAF MEMBER OF MULTILATERAL RECOGNITION ARRANGEMENT | eiaCI 035-CB-QMS | GeM Government e Marketplace

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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.

BOBBIN & PIPE HEATERS

DESCRIPTION

Bobbin & Pipe Heaters Are Specialized Industrial Heaters Designed For Indirect Heating Of Liquids, Semi-Solids, And Gases. These Heaters Use High-Purity Ceramic Bobbins With Wound Resistance Wire, Enclosed In Metallic Immersion Tubes For Safe And Efficient Heat Transfer.

Their Modular Design Allows Easy Replacement Of Bobbin Elements, While Optional Thermowells And Sensors Enable Precise Temperature Control. Widely Used In Chemical, Food, And Laboratory Industries, They Offer Durability, Efficiency, And Flexibility In Demanding Applications.

COMPONENTS

Component	Material / Details
Refractory Insulator	High-purity ceramic bobbin (Ø 25–93 mm, custom sizes) for accurate resistance wire support.
Resistance Wire	FeCrAl or NiCr alloy wire wound for uniform watt density (1–10 W/cm²).
Immersion Tube	Titanium, SS316, Incoloy, or cast-alloy tube (1.5–3 mm wall, 300–2800 mm length).
Terminal Box	MS IP54 or IP66 enclosure with ceramic block & cable gland for secure wiring.
Thermowell & Sensor	Optional stainless-steel thermowell with PT100 or thermocouple for temperature feedback.

TECHNICAL SPECIFICATION

Parameter	Specification
Temperature Range	Up to 600 °C
Heating Element	FeCrAl, NiCr 80/20, NiCr 70/30
Bobbin Sizes	Ø 25, 30, 36, 42, 45, 57, 93 mm (custom)
Watt Density	1–10 W/cm²
Power	Up to 50 kW (custom)
Immersion Tube	SS316, Incoloy, Cast Alloys
Tube Thickness	1.5–3 mm
Tube Length	Up to 3000 mm (custom)
Terminal Box	MS IP54 or IP66
Control Options	Thermocouple, RTD, Thermostat

ADVANTAGES

- **Indirect Heating** – Ensures clean, contamination-free heating of liquids and gases.
- **Customizable** – Wide range of diameters, lengths, and power ratings.
- **Durable Build** – Ceramic bobbins and robust immersion tubes for long life.
- **Safe Operation** – Terminal boxes with IP-rated protection.
- **Energy Efficient** – Low heat loss and high thermal transfer efficiency.
- **Easy Maintenance** – Bobbin elements can be replaced without disturbing the immersion tube.

APPLICATIONS

- **Fluid Heating** – Oils, chemicals, and industrial liquids.
- **Semi-Solids** – Heating wax, fats, and bitumen.
- **Gas Preheating** – Process gas heating in protection tubes.
- **Laboratory Equipment** – Scientific and analytical instrumentation.
- **Industrial Processing** – Safe and clean heating where direct immersion is not feasible.

FEATURES

- High-purity ceramic refractory bobbins for insulation and support.
- Uniform watt density for consistent heating performance.
- Corrosion-resistant alloys (SS316, Incoloy, Titanium).
- Sheathed and unsheathed design options.
- Versatile mounting and control options (RTD, thermocouple, thermostat).
- Designed for continuous industrial duty cycles.