

# **TUBULAR HEATERS**

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.



#### **TUBULAR HEATERS**



#### **DESCRIPTION**

Tubular Heaters Are The Most Versatile And Widely Used Industrial Heating Elements, Designed For Direct Heating Of Air, Liquids, Solids, And Surfaces. Built With A NiCr Resistance Wire Insulated With High-Purity Magnesium Oxide And Encased In A Metal Sheath, They Provide Efficient Heat Transfer, Durability, And Uniform Performance.

Available In Straight, Bent, Or Custom-Formed Shapes, Tubular Heaters Are Suitable For Immersion, Radiation, Or Conduction Heating. Their Adaptability, Robust Design, And Long Service Life Make Them The Standard Choice For A Wide Range Of Industrial And Commercial Applications.

## COMPONENTS

Component	Specification
Resistance Coil	NiCr wire coil precisely centered for consistent heating performance.
Magnesium Oxide Insulation	High-purity MgO powder around the coil for excellent heat transfer and dielectric strength.
Sheath	Sturdy metal housing (Copper, Steel, SS304, Incoloy, Titanium) for protection and heat conduction.
Terminal Head	Enclosed head with ceramic terminal block for secure electrical connections and ingress protection.
Mounting Brackets & Clamps	Custom-designed supports and clamps for easy installation in any orientation.

## **TECHNICAL SPECIFICATION**

<b>Parameter</b>	Specification
Heater Sheath Material	SS304/310/316/321, Incoloy, Titanium
Watt Density	Up to 65 W/in <sup>2</sup>
Sheath Length	Up to 6.5 m (custom)
Diameter	6 mm, 8 mm, 11 mm, 12.5 mm, 13.7 mm, 14.5 mm, 16 mm, 18 mm (custom)
Element Clamp	Custom-designed
Mounting Brackets	Custom-designed
Termination Option	Single-ended & Double-ended
End Seal Options	Teflon, Silicone Rubber, Epoxy, Ceramic Cement

## **ADVANTAGES**

- Highly Versatile Suitable for air, liquid, and surface heating.
- Customizable Design Available in straight, bent, or complex shapes.
- **Efficient Heat Transfer** Conduction, convection, and radiation heating modes.
- **Corrosion Resistance** Wide choice of sheath alloys for harsh environments.
- Rapid Heat-Up Fast response with uniform heating.
- Durable Construction Long service life with minimal maintenance.

### **APPLICATIONS**

- Air Heating Ovens, dryers, and furnaces.
- Liquid Heating Immersion in tanks, baths, and process vessels.
- Plastics & Rubber Mould heating and hot runner systems.
- Food Processing Holding, cooking, and drying equipment.
- Packaging & Sealing Heat-sealing and shrink systems.
- HVAC & Dehumidification Heating coils and air conditioning systems.
- Medical Sterilizers, autoclaves, and laboratory equipment.

## **FEATURES**

- Flexible Mounting Can be designed in multiple orientations.
- Efficient Heat Transfer Utilizes conduction, convection, and radiation.
- Uniform Heating Ensures consistent temperature distribution.
- Corrosion & Oxidation Resistant Built for industrial environments.
- Custom Sizes Available up to 10 meters in length.
- Wide Power Range Supports varied watt densities and voltages.