

FURNACE STRIP HEATER

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



AN ISO 9001:2015 COMPANY



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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 manufacture 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.

FURNACE STRIP HEATER



DESCRIPTION

Furnace Strip Heaters Are Flat, High-Performance Electric Heaters Designed To Provide Uniform Surface Heating At Elevated Temperatures. Built On A Ceramic Substrate With Resistance Wire Bonded Securely, These Heaters Deliver Fast Thermal Response, Consistent Heat Distribution, And Energy-Efficient Operation.

Due To Their Compact And Low-Mass Design, Furnace Strip Heaters Are Ideal For High-Temperature Applications Such As Plastic Molding, Hot Metal Forming, Laboratory Instruments, Sealing Bars, And Infrared Heating Panels. Their Durable Ceramic Insulation, Robust Terminal Connections, And Optional Protective Coatings Make Them Highly Reliable Even In Harsh Industrial Conditions.

COMPONENTS

Component	Material / Details
Ceramic Substrate	High-density alumina board for electrical insulation and thermal shock resistance.
Resistance Wire	NiCr or FeCrAl alloy wire with precise diameter control for accurate watt density.
Bonding Adhesive	High-temperature ceramic adhesive securing the wire to the substrate.
Terminal Pins	Stainless steel or Inconel pins for robust electrical connections.
Mounting Holes	Pre-drilled for screw-down installation on flat or contoured surfaces.
Protective Coating	Optional silica-based layer for enhanced abrasion and chemical resistance.

TECHNICAL SPECIFICATION

Parameter	Details
Heating Element	Nichrome (NiCr 80/20) or FeCrAl resistance wire
Terminal Rod Material	SS 310, FeCrAl
Insulation	High-temperature Mica or Ceramic Core
Max Operating Temp.	Up to 500°C – 850°C
Watt Density	1.5 to 4 W/cm ²
Voltage Range	Upto 480V AC (customizable)
Mounting Options	Slotted mounting holes, brackets, terminal covers
Applications	Ovens, drying chambers, food warmers, dies, platens, etc.

ADVANTAGES

- **High-Temperature Capability** – Operates up to 1100 °C without thermal degradation.
- **Precision Heating** – Accurate watt density control ensures uniform process heating.
- **Energy Efficiency** – Low thermal mass minimizes power usage during cycling.
- **Durability** – Resistant to thermal shock, abrasion, and harsh chemicals.
- **Versatile Design** – Suitable for flat platens, nozzles, sealing bars, and custom fixtures.
- **Reliable Operation** – Stable resistance elements ensure long-term performance.

APPLICATIONS

- Plastic molding nozzles and platen heating.
- Hot metal forming dies and press equipment.
- Infrared heating panels and radiant systems.
- Laboratory and analytical instruments.
- Cutting, sealing, and shrink-wrapping machinery.
- Industrial furnaces and controlled heating zones.

FEATURES

- Rapid thermal cycling with minimal overshoot.
- Uniform surface emissivity for consistent heating performance.
- Low-mass ceramic body reduces energy consumption.
- Easy installation with pre-drilled mounting holes.
- Long service life with stable element retention.
- Available in custom shapes, sizes, and heating patterns.