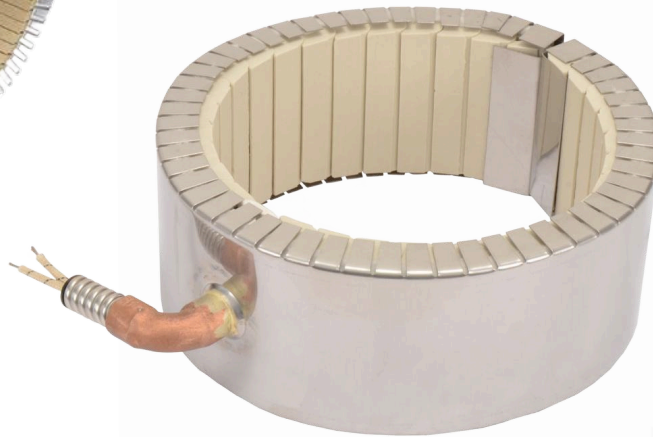
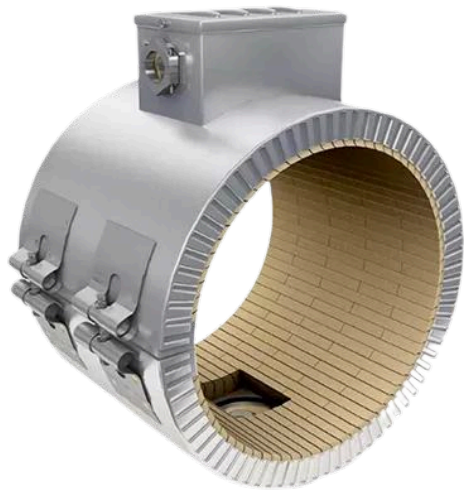


CERAMIC BAND HEATER

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.

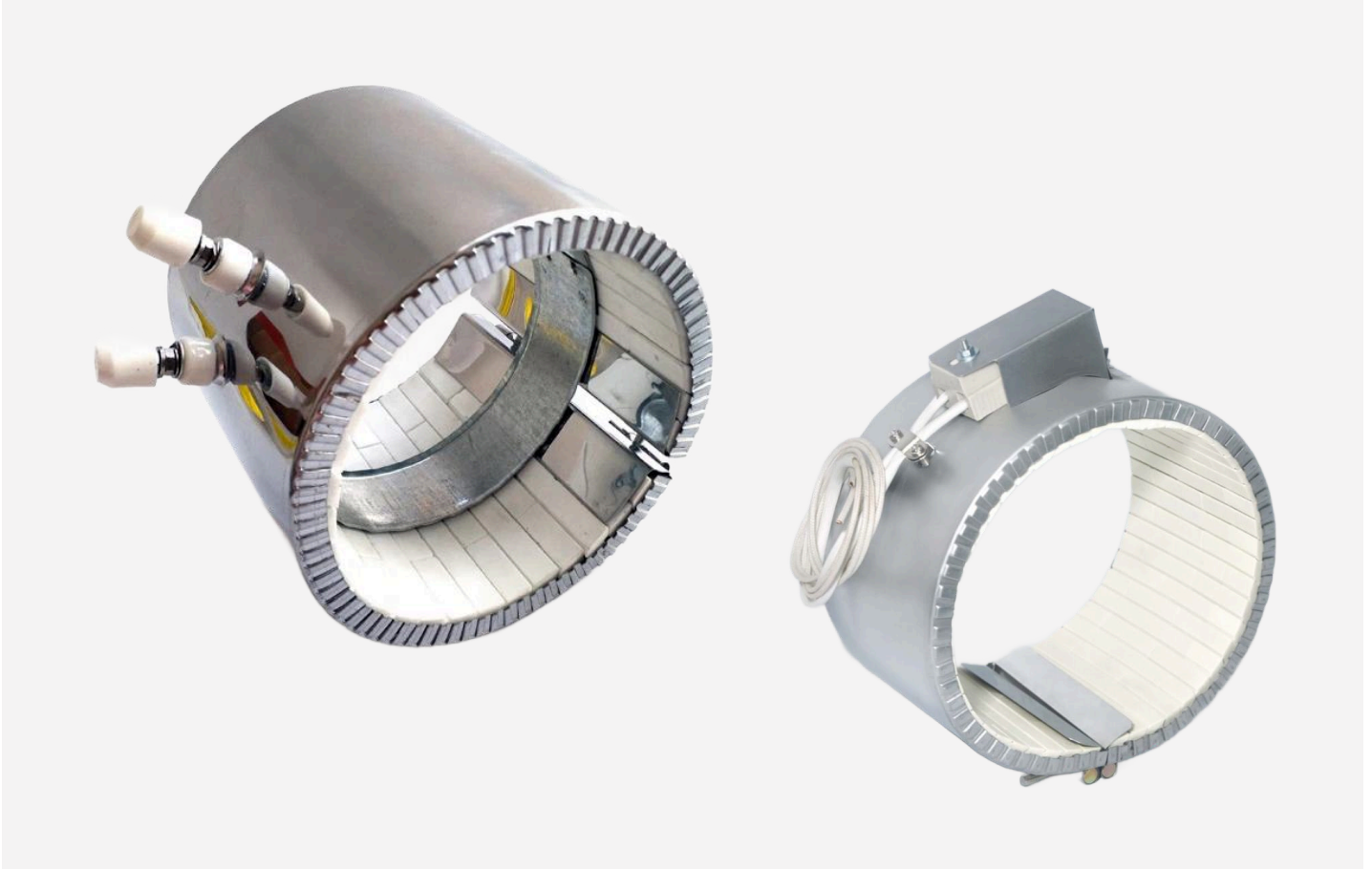
MOC of Heating Tube: Copper, Titanium, SS all grade, Incoloy 800,Inconel etc.

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.

CERAMIC BAND HEATER



DESCRIPTION

The Ceramic Band Heater By Subhot Enterprises Pvt. Ltd. Is Designed For High-Temperature And Energy-Efficient Heating Of Cylindrical Surfaces Such As Barrels, Nozzles, And Extrusion Machines. Unlike Mica Heaters, Ceramic Band Heaters Utilize Ceramic Insulation (Steatite), Which Not Only Conducts Heat By Conduction But Also Radiates It Effectively, Providing A Higher Degree Of Thermal Efficiency.

Built With A Precision-Wound Nichrome Resistance Coil Embedded In Ceramic Halves, Enclosed In A Stainless Steel Or Aluminum-Clad Sheath, These Heaters Ensure Uniform Heat Distribution, Reduced Energy Consumption, And A Longer Service Life. They Are Widely Used In Plastics, Packaging, Chemical, And Semiconductor Industries, Where Stable High-Temperature Heating Is Essential.

COMPONENTS

Component	Detailed Description
Steatite Insulation	High-density, porosity-free ceramic halves providing excellent dielectric strength, heat conduction, and energy efficiency.
Nichrome Coil	Precision-wound Nichrome wire coil embedded in ceramic for uniform and consistent heating.
Stainless Steel Sheath	Rugged 304 stainless steel or aluminum-clad housing ensures durability, corrosion resistance, and effective heat retention.
Clamping System	Spot-welded clamp bars with Allen-screw fastening for a uniform fit, easy installation, and reliable hold during operation.
Cooling Fins (Optional)	Perforated stainless-steel fins allow forced-air cooling for better temperature control and extended heater life.

TECHNICAL SPECIFICATION

Parameter	Specification
Sheath Material	Aluminum-clad, Galvanized Iron (GI), or Stainless Steel (SS 304)
Insulation	High-density Ceramic (Steatite)
Watt Density	Up to 25 W/in ²
Watt Ratings	50 W – 11,000 W
Voltage	Up to 480V (customizable)
Width	25 mm – 250 mm
Diameter Range	Ø 40 mm minimum, expandable up to Ø 1200 mm (in 3 segments)
Maximum Operating Temp.	550 °C
Control Options	Thermostat or integrated thermocouple on request
Cooling Options	Forced-air cooling fins (optional)

ADVANTAGES

- **Energy Efficiency** : High-density ceramic insulation lowers energy consumption compared to mica heaters.
- **High-Temperature Capability** : Can operate reliably up to 550 °C, making it suitable for demanding applications.
- **Uniform Heating** : Combination of conduction and radiant heating provides even temperature distribution.
- **Long Service Life** : Durable stainless-steel sheath and ceramic insulation ensure extended operational reliability.
- **Flexible Design** : Available in multiple diameters, widths, watt densities, and custom shapes, with segmental construction for large barrels.
- **Process Control Options** : Supports optional thermocouple integration, thermostat control, and forced-air cooling fins for precise heating management.

APPLICATIONS

- **Plastic Processing Industry** – Barrel heating for injection molding & extrusion machines
- **Moulds, Dies, and Nozzles** – For precise temperature maintenance
- **Extrusion Lines** – Continuous barrel heating applications
- **Waste Incineration & Pipelines** – Maintaining controlled heating in flow lines
- **Semiconductor & Electronics** – Process equipment requiring stable high temperatures

FEATURES

- Superior ceramic insulation reduces energy losses
- Heat transfer by both conduction and radiation ensures uniform distribution
- Capable of withstanding high operating temperatures up to 550 °C
- Long service life, even under thermal cycling conditions
- Easy to install, replace, and retrofit with segmental design for larger diameters
- Optional thermocouples, sensors, and cutouts available for advanced process control