

# SUBHOT<sup>®</sup>

## INDUSTRIAL HEATERS

### CASTED HEATERS

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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SUBHOT ENTERPRISES PRIVATE LIMITED

## 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.

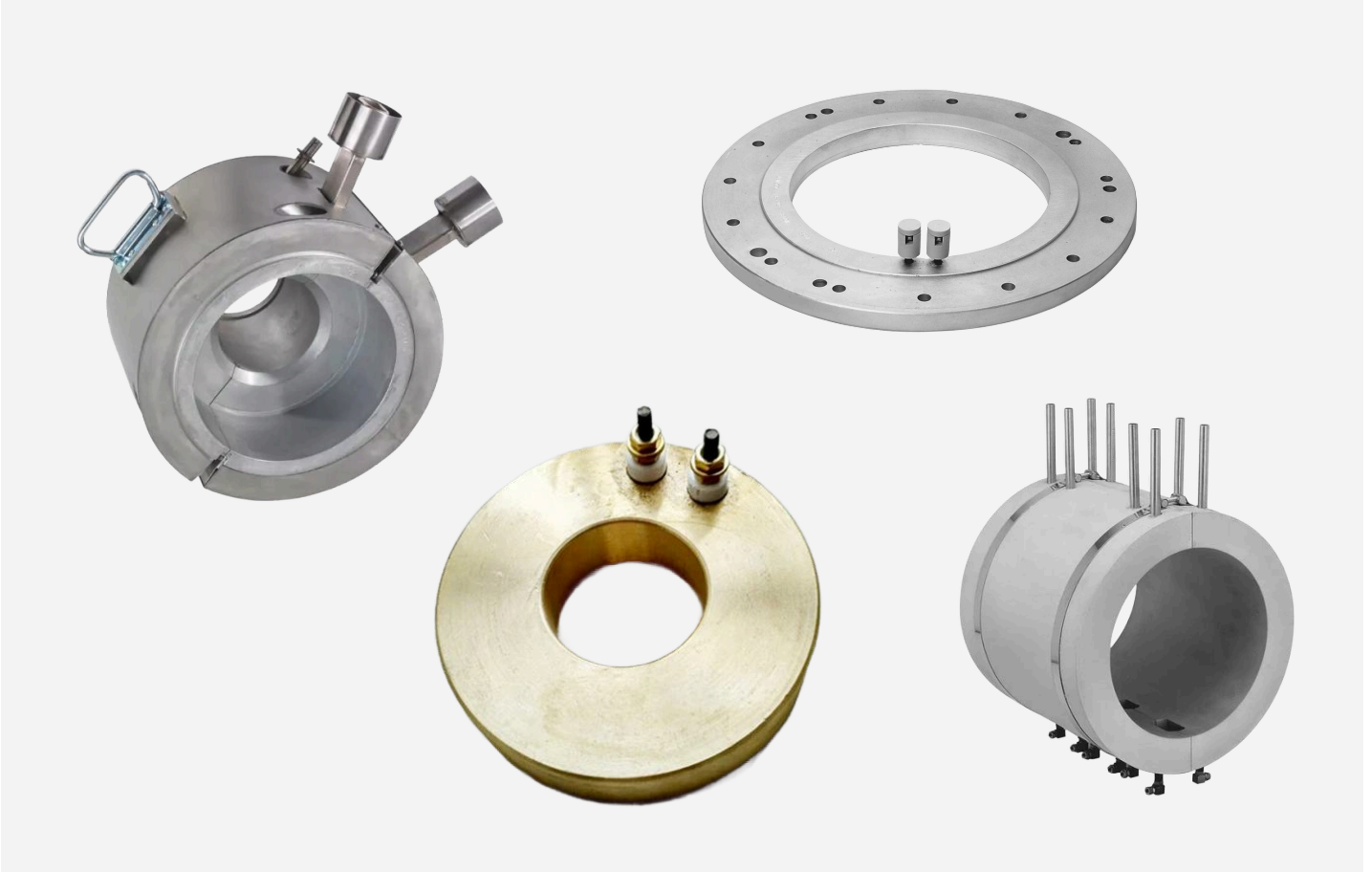
**MOC of Heating Tube:** Copper, Titanium, SS all grade, Incoloy 800, Inconel etc.

**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.

## CASTED HEATERS



## DESCRIPTION

Casted Heaters Are High-Performance Industrial Heating Solutions Manufactured By Embedding Tubular Resistance Coils Into Precision-Cast Bodies Of Aluminum, Brass, Or Iron Alloys. This Unique Construction Ensures Exceptional Heat Transfer Efficiency, Thermal Stability, And Durability Under Demanding Operating Conditions.

With Customizable Shapes And Sizes, Casted Heaters Are Specifically Engineered To Match The Contours Of Molds, Platens, Or Specialized Equipment Surfaces, Ensuring Uniform Heat Distribution Across The Entire Contact Area. Their Excellent Thermal Conductivity Minimizes Heat Lag, Making Them Ideal For Applications Where Rapid Heating Cycles And Accurate Temperature Control Are Critical.



COMPONENTS

Component	Specification
Cast Body	Iron cast, high-purity aluminum, or brass alloy cast to custom shapes for optimal heat transfer.
Heating Elements	MgO-packed NiCr resistance coils embedded within casting for uniform heating.
Cooling Channels	Integrated liquid or air passages machined into the casting for active cooling.
Thermocouple Pocket	Precision-machined pocket for insertion of RTD or thermocouple sensors.
Mounting Flanges	Custom brackets or flanges cast/machined for secure mounting to equipment.

TECHNICAL SPECIFICATION

Parameter	Specification
Material Options	Aluminum, Brass, Iron castings
Watt Density	Up to 5 W/cm <sup>2</sup> (Al) / 7 W/cm <sup>2</sup>
Power Circuit	Single-phase or Three-phase
Shapes	Custom cylindrical, platen, tubular, or complex geometries
Temperature Range	Ambient to 300 °C (Al) / 350 °C (Brass)
Cooling Method	Liquid, Forced-air, or None (passive)

## ADVANTAGES

- **High Thermal Conductivity** – Rapid heat-up and uniform surface temperature distribution.
- **Custom Geometries** – Cast to exact shape of the part or machine surface for maximum coverage.
- **Integrated Cooling** – Supports liquid/air cooling for temperature-sensitive processes.
- **Durability** – Rugged casting resists corrosion, wear, and mechanical stress.
- **Precision Heating** – Thermocouple/RTD integration for accurate thermal regulation.
- **Energy Efficient** – Direct contact heating minimizes losses and improves efficiency.
- **Long Service Life** – Stable design reduces maintenance requirements.

## APPLICATIONS

- **Plastic & Rubber Industry** – Extrusion and compression molding platens, thermoforming molds.
- **Packaging Industry** – Sealing, cutting, and forming equipment.
- **Semiconductor Manufacturing** – Precision process tooling requiring stable thermal conditions.
- **Food Processing** – Heat sealing and forming in packaging machines.
- **Medical & Laboratory** – Controlled heating fixtures for sterilization or testing.

## FEATURES

- Cast body in aluminum, brass, or iron for different thermal properties.
- Embedded NiCr heating coils packed with MgO for uniform heating.
- Optional cooling channels for liquid or forced-air cooling.
- Integrated thermocouple pocket for temperature monitoring.
- Custom mounting flanges or brackets for easy installation.
- Suitable for single-phase or three-phase operation.
- Rugged, corrosion-resistant construction for industrial environments.