

# SUBHOT<sup>®</sup>

## INDUSTRIAL HEATERS

### EDGE WOUND 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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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.

## EDGE WOUND HEATER



## DESCRIPTION

Edge Wound Heaters Are High-Performance Industrial Heating Elements Designed For Use In High-Temperature Furnaces And Process Heating Equipment.

They Use A Specially Wound NiCr Or FeCrAl Alloy Ribbon Edge-Mounted On Ceramic Supports, Which Provides High Surface Watt Density, Uniform Heating, And Long Service Life. Their Robust Design Makes Them Ideal For Continuous Operation In Demanding Furnace Environments, Offering Fast Response Times And Efficient Heat Transfer.

**COMPONENTS**

<b>Component</b>	<b>Material / Details</b>
Heating Ribbon	NiCr (80/20 or 70/30) or FeCrAl alloy strip, edge-wound for maximum heat transfer.
Ceramic Support	High-alumina ceramic insulators for electrical isolation and mechanical strength.
Sheath / Housing	Optional protective metallic sheath for durability and corrosion resistance.
Mounting Base	Custom-designed base plate with pre-drilled holes for secure horizontal or vertical installation.

**TECHNICAL SPECIFICATION**

<b>Parameter</b>	<b>Specification</b>
Heating Alloy	NiCr 80/20 or 70/30; FeCrAl optional
Max. Temp	Up to 1050 °C (1950 °F)
Power Rating	Up to 65 kW per element
Diameter / Size	Custom – up to 160 mm
Mounting Options	Horizontal or Vertical

## ADVANTAGES

- **High Heat Transfer Efficiency** : Edge-wound design maximizes surface contact and ensures superior energy utilization.
- **Compact Power Output** : Delivers high watt density in a compact size, making it suitable for space-limited furnace chambers.
- **Customizable Solutions** : Available in different alloys, diameters, and mounting options to meet specific industrial requirements.
- **Durability in Extreme Environments** : Can withstand continuous exposure to temperatures up to 1050 °C with long service life.
- **Fast Thermal Response** : Heaters heat up and recover quickly, improving process control and reducing energy loss.
- **Low Maintenance** : Simple, rugged design with long life expectancy and minimal downtime.

## APPLICATIONS

- **Roller-hearth furnaces** – for continuous heating in steel and aluminium industries.
- **Pit and batch furnaces** – reliable heat source for heat treatment processes.
- **Aluminium tempering furnaces** – provides uniform heating for controlled tempering operations.
- **Exothermic gas generators** – supports consistent heating in gas-producing equipment.
- **Heat treatment equipment** – ideal for carburizing, annealing, tempering, and other metallurgical processes.

## FEATURES

- Edge-wound alloy ribbon ensures compact and powerful heating.
- High surface watt density for efficient operation in furnaces.
- Uniform temperature distribution eliminates hot spots in the heating chamber.
- Horizontal or vertical mounting flexibility.
- Optional sheath / housing for enhanced protection against oxidation and chemical attack.
- Designed for continuous-duty cycles in industrial operations.
- Available in custom diameters, wattage, and configurations.