

ENGINEERS ASSOCIATE

MANUFACTURER & DESIGNER OF

THERMOCOUPLES FOR FURNACES AND SALT BATHS

THERMOCOUPLES: CR/AL(K Type), Pt/Pt-13%Rh(R-Type), Pt-6% Rh Vs Pt-30% Rh (B Type), Fe/Con (J Type) and all other types in **Straight and Right Angle** shape for measuring temperature upto 1800°C.

RTD (Pt-100) sensors
Mineral Insulated (MI) Thermocouples

FURNACES

Industrial Furnaces, Muffle Furnaces & Furnace Heating Coils

INDUSTRIAL HEATERS

Industrial Cartridge Heaters, Radiant Heater, Tubular Heaters, Strip/Finned Air Heaters

Control Panels

Control Panels, Digital Temperature Indicators and Calibrators

Deals in: Compensating Cables, RTD Cables, Shield Cables, CR/AL wires, Pt/Pt – 13% Rh wires, (Pt-6% Rh/Pt 30%Rh)wires, Heating Element wires, (80/20) Nichrome wires & strips, Ceramic Fibre Blankets

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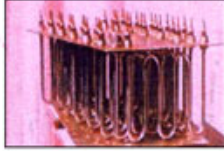
PRODUCT BROCHURE



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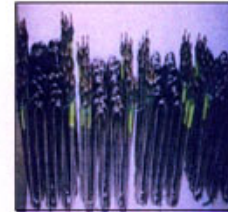
Electrical Heaters:

SS Multiple Bend Heaters



Temperature: 150°C (max)

Application: Obtaining hot air in comparatively smaller length than conventional heating system.



Designed & manufactured for

- Iron & steel and
- Ferro chrome industries.

We also design and manufacture finned tubular heaters for rapid heat transfer with natural convection & forced air heating in industries.

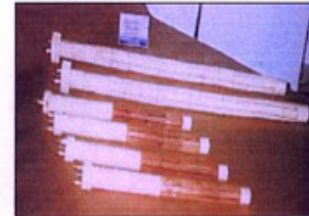
Cartridge Heater:

Temperature: 300-350°C.

Application: Used for low temperature application.

Designed, manufactured and supplied for

- Drying
- Demoisturization
- Painting
- Powder coating
- Oil & Fluid heating
- Organic compound heating.



Designed for both vertical and horizontal application

Casing:

- MS seamless casing to withstand high pressure &
- SS casing for resistance to oxidation and corrosion.

Radiant Tube Heater:

Temperature: 1050-1100°C.

Application: Used for high temperature application. Can be mounted both vertically and horizontally and is manufactured in lengths up to 6mts or 20ft.



Designed & manufactured for obtaining high speed heating in

- Ferrite and ceramic industry and
- Heat treatment of MS sheet prior to galvanizing.

High Performance Heating Element for Radiant tubes enables achievement of "High Power Rating" in Small Area in comparison to conventional "Coiled heating elements" thus Higher Temperature is achieved with better Durability.

Designed and manufactured for various processing industries like

- Continuous Galvanizing Plant &
- Continuous strip/sheet annealing plant.

Designed in different lengths for different KW ratings and could be manufactured up to 20' in one length



Industrial Furnace - Electrically Heated

Temperature: 1050 °C.

Application: Heating of-

- Iron & steel products.
- Ceramic products.
- Other metallic products.



Designed & manufactured for

- Heat treatment of metallic tubes in power sectors.
- Testing of ceramic items and
- Heat treatment of tools.

We also design and manufacture heating elements for heating of giant metallic inconel 600 muffles in which continuous strip annealing occurs.



Ovens (Electrically Heated):

Temperature: 350°C

Application:

- Drying of alumina grains & plastic granules.
- Curing of aluminum castings.
- Drying of small moulds.
- Removal of moisture in wet powder like chemicals.
- Drying of fiber tissues.
- Drying of mica bonded items.

We have designed, manufactured and implemented for all of the above purposes.



Driers (Electrically Heated):



Temperature: 450°C

High volume of Hot Air Displacement happens inside the Driers with the help of Giant Turbo Fan Unit. This "High Volume Hot

Air" flows on the material kept inside the drier, helping the product to release its entrapped moisture faster.

Application: Rapid Drying of wet/moist components in-

- Iron & Steel
- Ferro chrome
- Processing

- Pottery
- Refractory
- Ceramic and Food processing industry.

Designed & manufactured driers with Air-Circulation arrangement for

- Mould Drying unit
- Chemical Powder Drying unit
- Rubber industry
- Refractory industry &
- Motor core insulation Drying.

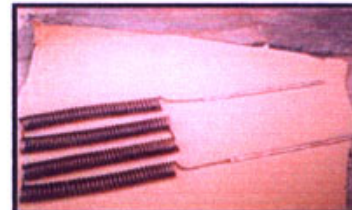
Industrial Furnace Heating Elements(Made with Wires and Strips):

Temperature: 1050°C

Application:

- Used for Heat Treatment Furnaces.
- Aluminum Melting Furnaces.
- Hardening Furnaces.
- Long Kilns.
- In Line Annealing Furnaces.
- Lehring Furnaces & Pot Furnaces.

The Custom built & properly designed heating elements both magnetic and non magnetic grade are offered for manufacturing furnaces across different industry verticals.



Flexible Heating System:



Temperature: 200 °C.

Application: Used for heating up of "longer lengths of pipe containing fluids" to increase the flow-ability of fluids. They conform to the surface that requires heating.

Designed and manufactured Flexible heating system with control panel to increase the flow-ability of

- Coal tar & pitch like compounds

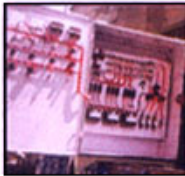
- Furnace oil
- Vanaspati
- Soap and other organic compound.

Designed for different lengths- 3mts, 4mts, 27mts, 54mts.

We also design Flexible Heating Elements for wrapping of big pipe joints.

Bulk use of Flexible Heating Elements: For pre weld & post weld heat treatment of large diameter iron and steel vessels and pipes at site.

Control Panel:



Application: Used in association with Heating Systems like Cartridge heater unit, Tubular heater unit, Furnace, Ovens, and Driers for

- Controlling the temperature at required level for processes and
- Arresting the temperature within certain limit- its helps to have a long durable life of heating system.

Our Control Panels are provided with energy regulating system to save power and higher rating contactors to avoid any breakdown.

We also manufacture Digital Temperature Controller and indicators upto 1600°C and Digital Calibrator for J, K, R and S type sensors.



RTD & Thermocouple with head Assembly and flange:

Application: Temperature measurement in Industrial Heating

We design and manufacture: Thermocouples:

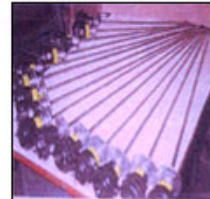
- CR/AL(K type)
- Pt/Pt-13%Rh(R-type)
- Pt-6% Rh Vs Pt-30% Rh (B type)
- Fe/Con (J type) and all other types in Straight and Right Angle shape for measuring temperature up to 1800°C.

RTD(Pt-100) sensors

Mineral Insulated (MI) Thermocouples.

Designed & manufactured

- 16ft 9in long thermocouple made with special alloy for horizontal application inside Kiln operating at 950°C.
- Multiple thermocouples in single thermocouple tube to measure temperature at different parts of furnace and kiln with space limitation.



We also deal in:

- Compensating Cable for Type-J, K, R & S Type Sensor.
- R.T.D. Cables for R T D (Pt-100) Sensor.
- Ceramic Fibre Blankets for High Thermal Insulation- to prevent heat loss from radiant surface;
- Kanthal - D; Kanthal.-A-1, Kanthal- AF, (80/20) Nichrome wires & strips, Strip chart recorder.



Oven-Inner Air Circulation Type



Oven- For Drying Moulds



Flexible Heating Element



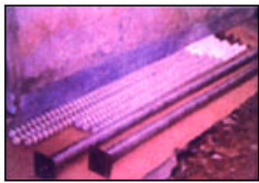
Industrial Heater



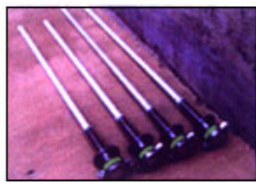
L- Shaped Thermocouple



Industrial Tubular Heater



Radiant Tube & Radiant Heater



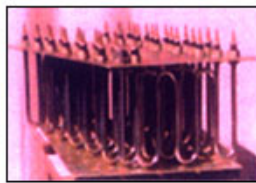
Thermocouple with Ceramic Sheath



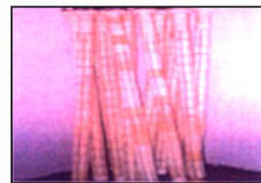
Syndanio Assembly for Heater unit



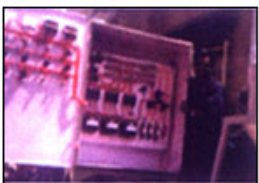
Radiant Tube Heaters



Multiple Bend Heaters



Industrial Cartridge Heaters



Control Panel



Muffle Furnace with Control Unit



Cartridge Heaters with Metallic Casing



Pit- Furnace



Control Panel



Muffle Furnace & Control Unit