



Heat Plus

**SOLUTIONS FOR
INDUSTRIAL HEATING &
PROCESS CONTROLS**



HEAT PLUS ENGINEERING

ABOUT US

We at, **M/s. HEAT PLUS ENGINEERING** provide complete solutions for Industrial Heating and Process Control. Managed by professionals having rich experience in Design / Application Engineering, Manufacturing of Industrial Heaters and its Controls for use in Oil, Gas, Refinery, Petrochemical, Chemical, Pharmaceutical, Power and Industrial process industry.

Highest quality products are ensured at our modern and comprehensive manufacturing facility, using best quality raw materials, ISO certified Quality Management Systems, Experienced / Trained manpower.

Customer's specific requirements are met by providing Precise innovative design, Optimum size at low cost and with enhanced features through application engineering using our rich experience in field of Industrial Heating Products.

We offer wide range of excellent quality electric heaters for industrial applications in standard size and capacities as well as customized to meet the individual needs of the customer.

We offer the following products:

- Tubular Water, Oil, Air, Chemical Heaters
- Flanged Heating element Assemblies/bundles
- Duct Heaters
- Band heaters
- Heat tracers
- Silicon Rubber Heating Blanket
- Vacuum formed ceramic Fiber Heating Modules
- Ceramic Flexible pad Heater
- ESP Heaters including Shaft, support and Hopper Heater
- Complete heating units with heater bundles, Pressure vessels, Thyristor/ Contractor controlled panes, Instrumentation
- Cartridge heaters/ Porcelain heaters
- Bolt Heater
- High Temperature MI Heating Cables
- Silicon pad, Drum and Belt Heater
- Vacuum formed ceramic Fiber Heating Modules
- Thermocouples / Temperature controller

TUBULAR HEATERS


WATER HEATER: For Industrial hot water baths, water Jacketed apparatus, process tanks etc.

Type/ Construction	Sheath	Flange	Size/Rating	Product
Heating elements fitted on threaded screw plug type flange. Metallic cap for protection of terminals	Copper	Brass	1KW to 12KW 1" , 1-1/4", 1-1/2", 2", 2-1/2" BSP	

* Can be supplied in SS304/SS316/SS321 Tube & Plate type flange

OIL HEATERS

For fuel oil heating, oil circulating for systems. Specially designed not to carbonize oil.



Type/ Construction	Sheath	Flange	Size/Rating	Product
Heating elements fitted on Threaded Screw plug type flange Provided with thermostat pocket.	SS304	Steel	1KW to 6KW 2-1/2" BSP	

* Can be supplied with plate type flange

AIR HEATERS

For baking and curing of paints, enamels, lacquers, varnish, adhesive etc. Also used for drying of metals, powders, sands, paper, textiles etc.

FINNED AIR HEATER: For rapid and uniform heat transfer for forced convection air heating. Ideal for use in air ducts and blower types heaters. For industrial process work, requiring heated air blast for drying, heat treating annealing and for localised uniform heating of areas.


Type/ Construction	Sheath	Flange	Size/Rating	Product
U tube Heating elements with L Shape mounting Brackets	SS321	—	0.5KW to 2KW	
U Tube heating elements with Fins and L Shape mounting Brackets	SS321 with MS galvanized fins	—	0.5KW to 2KW	

CHEMICAL IMMERSION HEATERS

Alkaline heater used for most alkaline cleaning solutions.

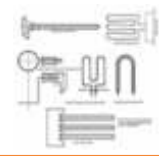
Chemical heater made out of Titanium tube offers excellent corrosion resistance properties for most plating solutions containing Nitric, Phosphoric and chromic acids.

Lead Covered Heaters Used in Dull Nickel, Chrome and Copper plating baths and pickling bath up to 10%

Type/ Construction	Sheath	Flange	Size/Rating	Product
Inverted L Shape heating element Alkaline Solutions	SS321 / SS316	CI Terminal box	3KW, 685mm depth of immersion	
Plating solutions / Nitric Acid / Chromic acid	Titanium			
Dull Nickel/Chrome& copper plating/Pickling	SS304 Tube covered with Lead sleeve			

CUSTOMIZED HEATERS

ESP Heaters with weather proof junction box, Hopper Heaters, Shaft Insulator Heaters and Support Insulator Heaters. Zig-Zag Heaters in various tube diameter and sizes with different metallurgy i.e SS-321, 316, 304, Incoloy 800, Inconel 625 etc.



PROCESS HEATERS / HEATING SYSTEMS

Complete Process Heaters including Pressure Vessel, Heater Bundle with Weather Proof / Flameproof Terminal Box, Junction Box, Control Panel and Instrumentation.

Construction:

Multiple U bend heating elements are brazed, welded, fitted through ferrule couplings to Tube sheet, Stand off cold portion can be provided between heater flange and terminal box,

Very low pressure drop values achieved through Laser cut Mesh Baffles

Heater Power up to 1000KW in single and 3000KW multiple shell configuration

Terminal box weatherproof IP 55, IP65

Operating Temperature up to 450°C

Design Pressure up to 100 Kg/sq Cm(g)

Thermocouple for Skin temperature

sensing Thyristorised Control Panels

Materials

Carbon steel (SA 516, Gr 60/70)

Stainless steel (A316, A304, A321, A310)

Low Alloy Steel

Alloy steel (Incoloy, Inconel)

Codes & Standards

IS 4159 / IEC 60335-1

ASME SEC VIII DIV 1



APPLICATIONS

Refinery & Petrochemical Process: CCR, SRU, Isomerization, Chlorination, Regeneration, Reduction, Molecular sieve regeneration, Fuel gas, Seal gas, Hydrogen heaters, LPG heaters, Air heaters, Reboilers, Steam super heaters, Methanol heaters, Separation heaters, Crude oil heaters.

Power Sector: Fuel Gas, Fuel Oil, Lube Oil Heaters, DM water heaters, Compressed air Heaters, Seal heaters, Duct heaters, Regeneration, Thawing, Air Separation, Cryogenics, Dryers.

Chemical Plants: Steam super heating, Re-boilers, Catalyst heating, Regeneration, Reactor start-up, HTM heaters, Hot Oil re-circulation, Air separation heaters.

Process Industry/OEM's: Oil Heater, Water heaters, Air heaters, Vaporisers, Fuel oil storage heaters.

Heater bundles consisting of heater flange, Heating elements, Baffle plates and Tie rods assembly, Terminal enclosure, Temperature protection sensors can also be supplied.

HOT RUNNER HEATERS / MICRO TUBULAR COILED HEATERS

COILED HEATERS

FEATURE :

- Higher Watt Density
- Built in type J or K Thermocouple
- Maximum Operation Temperature 800°C
- Even Temperature Profile
- Maximum Heat Transfer due to more contact Area
- Maximum Total Length upto 3000 mm

APPLICATIONS

- Moulds & Dies
- Nozzle Heating
- Medical Equipments
- Hot Runner Bushing

SPECIFICATION

Standard size for Coil Heaters

Round : 3 / 4 / 4.5 / 5 mm dia

Square : 3 x 3 / 3.2 x 3.2

Flat : 2.2 x 4.3 / 2.5 x 4.3 / 2.5 x 4.5 / 3 x 5.2



CARTRIDGE HEATERS (HIGH & MEDIUM WATT DENSITY)

FEATURE :

- Nickle Chrome Resistance Wire
- Maximum 4 Watt / Cm² for Low Density
- Maximum 50 Watt / Cm² for High Density
- Maximum Operation Temperature 800°C
- For Low Density 250°C for Brass & 400°C for SS

APPLICATIONS

- Plastic Processing Machinery
- Moulds / Dies & Packaging m/c
- Food Processing Machinery
- Medical Equipments

SPECIFICATION

Standard size for Coil Heaters

Round : 4 / 6 / 8 / 10 / 12 / 16 / 19 / 20 / 22 / 25 mm dia (Also inch size)

Length : 40 - 500 mm

Voltage : 240 / 110 / 50 V or Custom specification

Sheath : SS 304, Brass



CAST IN HEATERS

FEATURE :

- Efficient Heat Transfers
- Uniform Surface Temperature
- Exceptionally Long Life
- Surface Temperature 300°C
- 500 W / Sq.Inch

APPLICATIONS

- Packaging Machinery
- Injection & Blow Moulding
- Extruders
- Thermoforming Equipments
- Medical Equipments

TYPES

- Air / Water Coiled Type
- Cast in Plate & Round Heater
- L & U Shaped Cast Heater
- Customised Designed Cast in Heater



HIGH WATT DENSITY CARTRIDGE HEATER

FEATURE :

- Efficient Heat Transfers
- Uniform Surface Temperature
- Exceptionally Long Life
- Surface Temperature 300°C
- 500 W / Sq.Inch

APPLICATIONS

- Packaging Machinery
- Injection & Blow Moulding
- Extruders
- Thermoforming Equipments
- Medical Equipments

TYPES

- Air / Water Coiled Type
- Cast in Plate & Round Heater
- L & U Shaped Cast Heater
- Customised Designed Cast in Heater



MICA INSULATED BAND HEATERS

FEATURE :

- Nickle Chrome Ribbon
- Available with inbuilt Insulation Pad to reduce Power consumption
- Maximum 3.6 Watt / Cm²
- Maximum Operation Temperature 250°C
- Low Cost

APPLICATIONS

- Plastic Processing Machinery
- Injection & Blow Moulding
- Extruders
- Hot Runner Bushing

SPECIFICATION

- Round : 2" or 50 mm dia & up
Width : 1" or 25 mm & up
Voltage : Upto 480 V (Single / Three Phase)
Sneath : SS 304
Thickness : 6 mm
Insulation : Mica



CERAMIC BEND HEATERS

FEATURE :

- Nickle Chrome Resistance Wire
- Ceramic Fiber Insulation
- Reduce Power Consumption by 20 to 30%
- Available with Heating and Cooling Combination
- Maximum 7 Watt / Cm² (50W / Sq.Inch)
- Maximum Operation Temperature 700°C

APPLICATIONS

- Plastic Processing Machinery
- Injection & Blow Moulding
- Extruders

TYPES

- Round : 2 1/2" or 65 mm dia & up
- Width : 1 1/2" or 38 mm & up
- Voltage : Upto 480 V (Single / Three Phase)
- Terminals : Junction Box fitted with braided cable & Post Terminal
- Sneath : SS 304
- Thickness : 12 mm



CERAMIC BOBBIN CARTRIDGE HEATERS

SPECIFICATIONS :

- For Oil - 1.4 to 4.0 W / Cm²
- For Water - 1.4 to 8.0 W / Cm²
- For Metals - 2.0 to 5.0 W / Cm²
- For Air - 1.6 to 3.2 W / Cm²

APPLICATIONS

- Heating Liquids & Gases
- Dyers and Ovens
- Printing & Packaging Industries



HEAT TRACERS

PRODUCT DESCRIPTION:

Heat Tracers are made with superior quality imported grade Teflon (PTFE) insulated and braided with S.S. fine gauge multi wires. It is moisture proof & chemical proof and can be widely used for temperature maintenance applications on Edible Oils, LDO, Bitumen Pipelines, Storage Tanks of Boilers, Furnaces, D.G. Sets, etc. Suitable to maintain a maximum temperature of 260°C



TECHNICAL & OTHER DETAILS

Withstands temperature ranging -60°C to +260°C. Totally moisture & chemical proof to use under any outdoor condition. Designed to meet Indian & International standards and to use under explosive areas, such as petroleum products to conform to the International standard of BS-6351. Designed life of over 20 years continues usage. Available in 23 / 33 / 45 Watts / Meter in 230 Volts standard & upto 150 mt. single length.

A very economical and reliable alternative to conventional tracers. Its flexible nature helps in easy installation on any surface and available in wide range.

APPLICABLE INDUSTRIES

Iron Steel, Glass Furnace, Edible Oils, Refineries, Biscuit, Bitumen, Wax, Petroleum Jelly Industries etc.

DRUM HEATERS



We have all kinds of heaters for various drum and pail of different sizes from 5Kg to 200Kg., Built-in adjustable thermostat allows user maintain the desired temperature. As they conduct heat through the drum wall to the material inside the drum or pail, drum heaters can operate at higher temperatures and work faster on metal drums because of better thermal conductivity. We also have gentle drum heaters for plastic and fiber drums. Silicone Drum Heater.

INFRA RED HEATERS (SHORTWAVE & MEDIUM WAVE)

Tungsten filament consists in quartz tube sealed with inert gas having terminal leads at both ends it can be housed in metal box. with the reflector as per requirement.

FEATURES

- Max Watt density : 100W / Linear inch
- Max Surface Temp. : 1500°C
- Wave length : 1:16 microns



FLEXIBLE CERAMIC PAD HEATER



TEMPERATURE SENSOR

RTD'S

(Resistance Temperature Detector)

TYPE : PT-100, PT-50. PT-1000. CU-50, PT-200

High Accurate RTD's for variety of Application :

Pharmaceuticals, Petrochemical. Chemicals, Power Plant (Gas turbine) Nuclear, Plastic & Packaging Industries, Cement Industries

Types of RTD'S

(Resistance Temperature Detector)

- Multi Point RTD's
- Skin RTD's
- Vibration proof RTD's for DG sets
- RTD's with head
- RTD's with Male / Female connectors
- Bearing & winding temp. RTD's
- RTD's with seal pot
- RTD's for portable indicator
- RTD's for Gas / Steam turbine
- TRI clover - RTD's
- Baynot type RTD's



THERMOCOUPLE

TYPE : J, K, N, R, S, T, B

High Accurate Thermocouple for variety of Application :

Pharmaceuticals, Petrochemical. Chemicals, Power Plant (Gas turbine) Nuclear, Glass Industries, Plastic & Packaging Industries, Cement Plant, Furnace / Oven

Types of Thermocouples

- Multi Point Thermocouple
- Skin Thermocouple
- Thermocouple with head
- High Tem.with t/c with Male / Female Connectors
- High Tem.with t/c with Alumina Sheath
- Washer type / Bolt type t/c
- Thermocouple with seal pot
- Baynot type Thermocouple
- Thermocouple with portable indicator
- Thermocouple for Gas/Steam turbine



THERMOWELLS

Thermowells and Protection Tubes

A wide choice of refractory and stainless steel protective sheathing is available to suit various application.

METAL

Material : SS 304, SS 316, SS 310, SS321.
Hastalloy, Monel, Alloy 20 Titanium etc.
Type : Drilled, Bar Stock, Fabricated
Connection : Flange Connection - 1" / 1.1/2", 2" ANSI
Class 150,300,600.
Thread Connection - 1/2" (F) x 1/2" (M)
1/2" (F) x 3/4" (M)



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