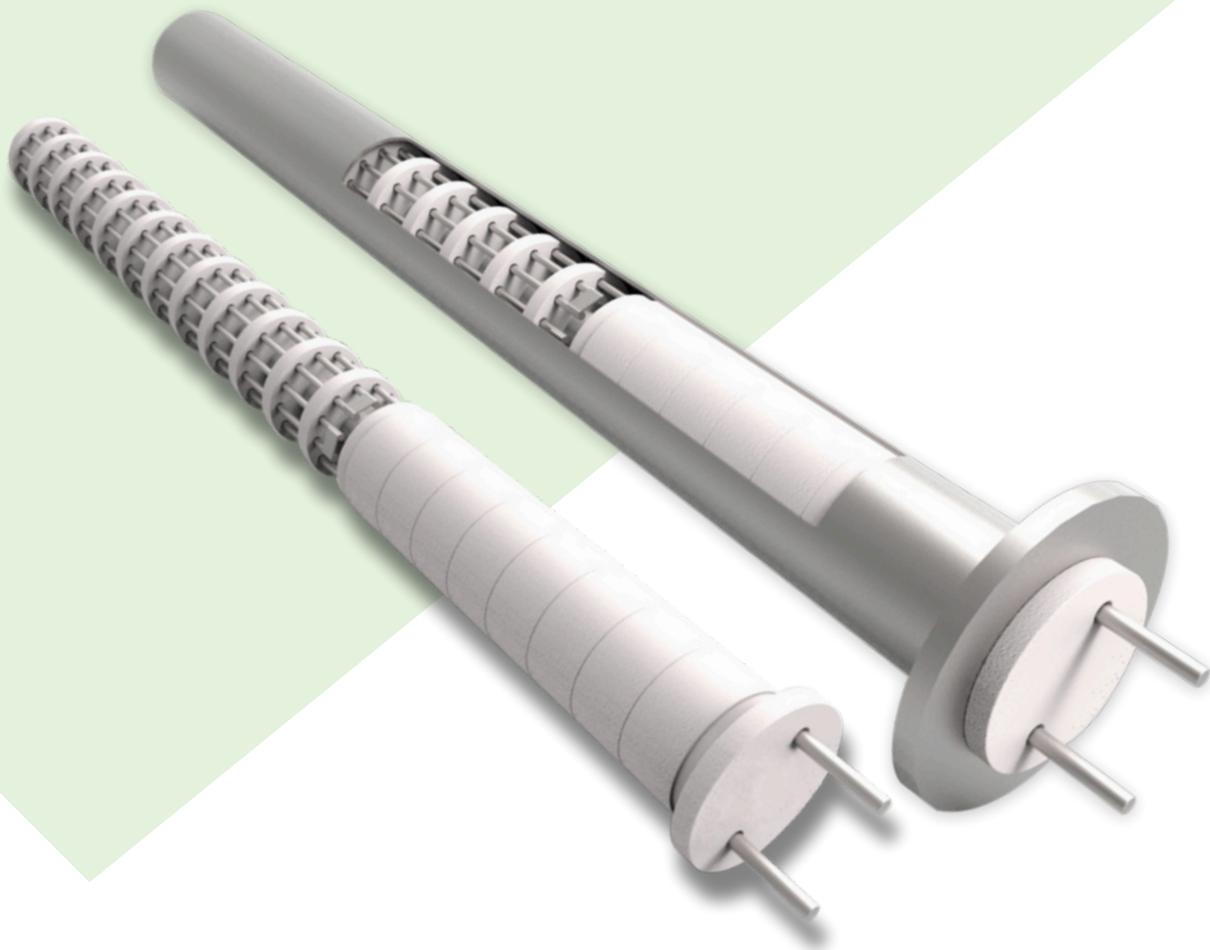




Heating Technologies

UDYAM-
DL-07001874



BUNDLE-ROD HEATERS

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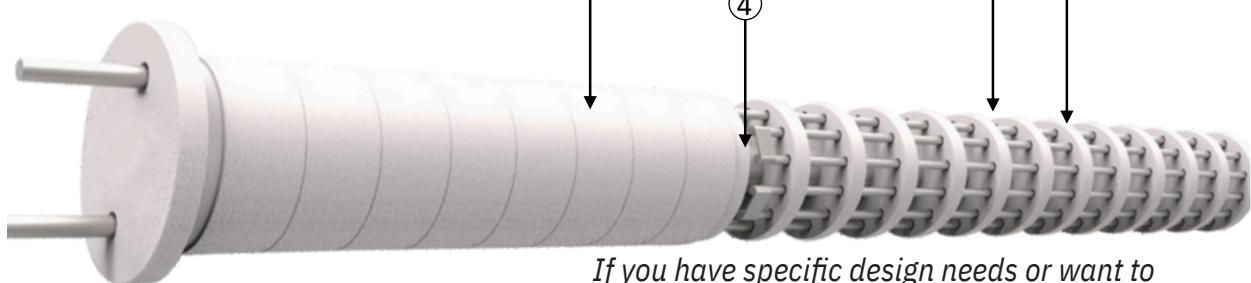
heat&cool.in

Heat & Cool as the name implies, a bundle rod heater is made up of a round ceramic disk that contains the heating elements.

Together with the high-power radiant tubes, prevent refractory corrosion and gas impurities in process materials. These are made to last a long time and require no maintenance. Ferritic alloys up to 1250°C and NiCr alloys up to 1100°C can supply the element.

Construction

1. Direct heating element wire.
2. Ceramic Disc : for hold the heating element & insulation.
3. Fiber Disc : for holds the terminal rod and prevent heat loss.
4. Center rod : for alignment & take weight of heater bundle.s



If you have specific design needs or want to discuss a custom project, please reach out to us.

Technical Details

Power	1 kw to 75 kw
Cold Resistance Tolerance	≤3%
Heating Element	Ferritic alloy powder metallurgical element, Mara FeCrAl, NiCr 80/20
Watt Density	1 to 10W/cm 2
Temperature	Upto 1250°C
Heater Parameter	Customized Power Rating, Voltage, Resistance, Length, Dia Any Other Dimensions
Fiber Disc	Customized
Ceramic Disc	Flower design, round type, conical typ
Ceramic Size	Standard: 70, 80, 95, 110, 124, 154 other customize size available

Benefits

- reduces CO₂ emissions by removing flue gases and controlled air in different heat treatment furnaces, preventing burning results or furnace gas corrosion on heating elements. Temperature control, assembly, and maintenance are all highly practical, and sealing can be simple. High efficiency and powerful heating capability. Refractory steel is a cost-effective material. either vertical or horizontal mounting. less influence on the environment. greater technical qualities and a longer operational life. greater resistance and surface load. devoid of oxide debris. Economical price with high output watt density.

Utilization

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primary furnace for melting and storing aluminum. The steel industry uses galvanizing furnaces. furnace for heat treatment in the automobile sector. furnace for annealing. furnace for carburizing.

Heatandcool.in Heating Element Mara FeCrAl

Ferritic alloys and the nicrome element's mechanical and physical characteristics

Heating Element Grade		Mara FeCrAl- MaraSuper	FeCrAl-60	Mara FeCrAl- Mara 55	FeCrAl-Mara 48	Nichrome 80/20
Standard chemical composition%	Al	6 23	6 23	5.5 23	4.8 23	Ni-80 20 0
	Cr	Balance	Balance	Balance	Balance	1200 1400
	Fe	1420	1400 1500	1300	1200 1500	1.08±5%
Maximum continuous operating temperature °C		1500	1.45±5%	1500	1.42±5% 7.2	8.4
Melting point	°C	1.45±5%	7.1	1.40±5%	14.8x10-6	17.6x10-6
Electric resistivity at 20°C	μΩ·m	7.1	13.6x10-6	7.2	630~850	700~900 20
Density	g/cm³	14.8x10-6	650~900	13.6x10-6	10~30	or more
Thermal expansion factor 20°C ~ 1,000°C°C-1		650~900	15~25	650~900	220~240 ≥5	150~190
Tensile strength	N/mm²	15~25	220~240	15~30	≥100/1300	
Elongation	%	220~240	≥5	220~240	Magnetic	
Hardness	Hv	≥5		≥5		
Repeat bending frequency	F/R					
Continuous service life	Hours/°C	≥300/1300	≥300/1300	≥300/1300		≥300/1200
Magnetic properties		Magnetic	Magnetic	Magnetic		Non-Magnetic

Accessories for Bundle Rod Heaters

When used in conjunction with radiant tubes, bundle rod heaters provide high power, prevent refractory corrosion, and eliminate gas impurities in process materials.

Radiant Tube	Stainless steel SS grade, Incoloy, PMD, Cast alloys
Thickness of Tube	
Length of Tube	1.5 to 8mm
Hangers	300 to 5000mm (customize diameter & length)
Flange	
Thermocouple Pocket	NiCr 80/20
Control	MS, SS grade
	Alumina Tube(ceramic)
	Thermocouple, RTS's, Thermostat for temperature controlling

