

# Cartridge Heaters



## HIGH DENSITY CARTRIDGE HEATERS

### ≡ APPLICATION

To Heat dies & moulds, Smelting of materials, heating of fluids & heat welding etc. HD cartridge heaters are able to withstand the toughest working conditions such as vibration, moisture, fluids, spills, frequent expansions & where the temp. Is 400 to 750 Deg. C. are required, or temperatures within a limited space.

### ≡ CONSTRUCTION

High-wattage cartridges belong to a new generation of electric heating elements; they make it possible to use high watt loads in small spaces, thus ensuring excellent reliability in heavy-duty work conditions. Their special construction technology makes them the most advanced type of heating elements. The entire length of the wire wound around a magnesium oxide core is in a far away position from the axis of the cartridge, very close to the metal sheath, with a very thin and compressed insulating wall in between; this allows excellent heat exchange that allows a much lower temperature of the resistance wire than in other heaters in which the wire is in a deeper position. Besides the use of advanced technology and precise inspection techniques in their manufacturing.

### ≡ INSTALLATION & PRECAUTIONS

- \* The hole where it is going to be installed, the cartridge must have a diameter tolerance between  $-0.02$  to  $-0.06$  mm (depends upon watt density, higher watt density must have lower tolerance).
- \* The cartridge must not be longer than the hole where it is installed.
- \* Connecting leads must not be scratched, flattened, stained, wet, etc.
- \* The sensors for the controller should be placed between the working surface of the part & the heaters. The temperature of the part approximately half inch away from the heaters is used in selecting maximum allowable watt density.
- \* Control of power is an important consideration in high watt density applications. On/Off control is frequently utilised, but it can cause wide excursions in the temperature of the heaters & working parts. Thyristor power control are valuable in extending the life of the high watt density heaters, since they effectively eliminate On/Off cycling.
- \* The cartridge heaters cannot work in open air. \* Controlling systems must be used with the cartridge heaters.
- \* Resistance Tolerance:  $+10\% - 5\%$  \* Wattage Tolerance:  $+5\% - 10\%$  \* Length Tolerance:  $\pm$  up to 5mm

In association with



#### CORPORATE

115, Jaywant Ind. Estate, Opp. Sobo Central Mall,  
63, Pt. M. M. Malaviya Road, Mumbai 400 034. India  
Tel: +91 22 2353 1025; Fax: +91 22 2351 7431  
Mob: +91 93 2224 4540

Email: [info@heatsource.in](mailto:info@heatsource.in)

#### FACTORY

Bldg No. E-8, Parasnath Complex, Village Valgaon,  
Dapoda Road, Tal.Bhiwandi, Thane 421 302. India  
Tel: +91 2522 645665; Mob: +91 93222 32090  
Mob: +91 98207 12343

Web: [www.heatsource.in](http://www.heatsource.in)