

VITAR<sup>®</sup>

VITAR

PRODUCT LISTING

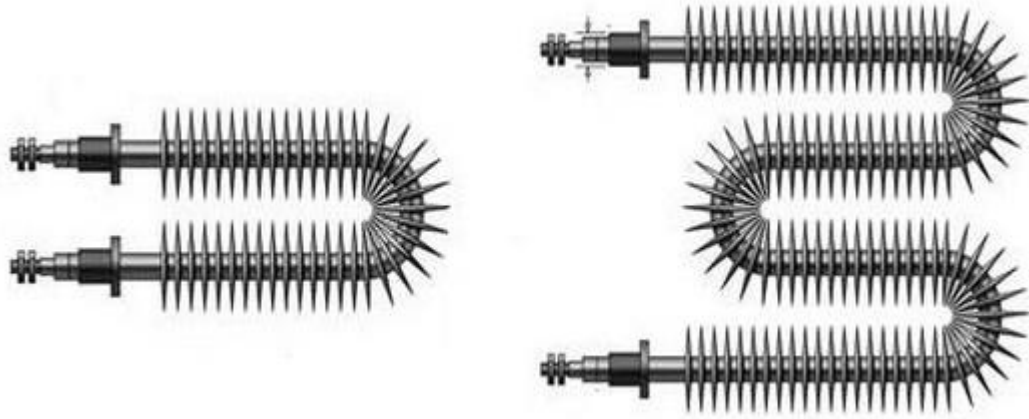
### **Tubular Heater**

Tubular heaters are a versatile heating source for wide variety of industrial and commercial applications. It can be applied in straight or bent into complex shape by having variety of sheath material to suit your application. The VITAR<sup>®</sup> tubular heaters have a variety of mounting and termination option that make them ideal for the industrial applications. VITAR<sup>®</sup> heaters are heavy duty tubular heaters for wide range of application such as water, oil, ammonia and many more.



### **Finned Heater**

The finned heater is suitable for air applications such as forced air duct heating, recirculating drying ovens, packaged air conditioning equipment, load testing equipment and other air heating application. The stainless steel fins are forced coiling by our high technologies machine spirally wound over the heating element allow better heat transfer compare to normal tubular heater. The VITAR<sup>®</sup> tubular heaters have a variety of design and termination option that make them ideal for the industrial applications.



#### Features:

- Wide variety of wattages and voltages
- Precisely designed
- Wide variety of sheath material
- Finned sheath optional
- High purity compacted MgO provides maximum heat conductivity
- Integral cold pins provide optimum in-current carrying capacity
- Optional end seals.

#### Cartridge Heater

VITAR® cartridge heaters provide superior heat transfer, uniform temperatures, resistance to oxidation and corrosion and long life even at the high temperature. Cartridge heater can fulfil our requirement by give high power to a limited space. The efficiency and life expectancy of the cartridge heater depends mainly on the fit tolerance. Our tolerance for diameter is  $-0.02$  to  $-0.04$  mm to get long heater lifespan with the efficiency of heat transfer. VITAR® Cartridge heater can be design in a huge variety of sizes and also to custom specification.

#### Benefits

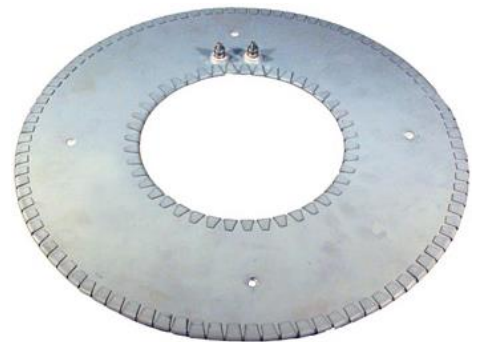
- Resistant to impact and vibration.
- Uneven watt density cartridge heater design.
- Can customize with build-in thermocouple K or J.
- High power in confined space.





## Strip Heater

The VITAR® Strip Heaters are manufactured to your custom specifications; the strip heaters feature a high temperature oxidation metal sheath and high grade mica insulation resistant to moisture and high temperatures. Plus mica withstands high voltage spikes, resists moisture and is inert to most chemicals. Nickel/Chromium resistance wire evenly wound provides for uniform and reliable heat distribution. The element wire is then embedded in magnesium oxide (MgO) based insulation compacted into a solid mass creating excellent heat conductivity and high dielectric strength. The heater is then enclosed in aluminized steel or 430 stainless steel sheathing.



## **VITAR® Infrared Silica/ Infrapara Heaters**

VITAR® Infrared Silica/ Infrapara Heaters can be manufactured in several types of lengths, wattage, voltages; may be in accordance with customer's specifications. VITAR® Infrared Silica/ Infrapara Heaters also have food grade tube that is suitable for food industries usage. This heater are favoured in the industrial applications where rapid heat response by having broad emission spectrum and cover various absorption ranges.

### Features and advantages:

1. Unique ceramic heater-selected ceramics with high thermal durability, mechanical strength and good electrical insulation.
2. High emissivity.
3. Easy control to radiate favorable wave lengths for different targets materials
4. 1-10 times more speedy than ordinary heaters.
5. Oven volume reduces to one half or even less. Maintenances or replacement of existing of existing old-fashioned heat pipes in oven is easy.
6. Free from dust contamination. No fire flame appears during heating process.
7. High safely and uniform temperature distribution.



## Bobbin Ceramic Heater

Bobbin heaters are used in the heating of air and heating various liquids when disassembly without draining is absolutely necessary. These heaters are available in various lengths; this type of heater is replaceable, inserted into S/S 304, S/S 316 pipe and suitable to use for heating for oil, water, plating solution and chemicals solutions. For these applications the ceramic element is mounted in the tube. These types of heaters also used in the applications with demand for reduced lime or coke formations around the heating element and also when increased wall thickness of the tube due to the heavy pressure stresses is required.



Calculation for Watt density,

| Diameter      | Bobbin Heater                       |                                  |                                     |                                  |
|---------------|-------------------------------------|----------------------------------|-------------------------------------|----------------------------------|
|               | Water Heating                       |                                  | Oil Heating                         |                                  |
| Bobbin (inch) | Watt density for 1 <sup>st</sup> 6" | Additional watt density per inch | Watt density for 1 <sup>st</sup> 6" | Additional watt density per inch |
| 1.5"          | 339                                 | 85                               | 226                                 | 56                               |
| 2"            | 468                                 | 117                              | 322                                 | 81                               |

|                 | Diameter $\phi$ (mm) |    |    |
|-----------------|----------------------|----|----|
| Ceramic Element | 45                   | 32 | 29 |
| Pocket SS 316   | 51                   | 38 | 38 |
| Pocket SS 304   | 51                   | 38 | 38 |

## **Band Heater**

VITAR® Band heaters can be manufactured in several types of dimension, wattage, voltages and material. The band heater also have varies type of terminal position and terminal box to protect the terminal. Insulation is required to heat up your application directly rather than experience heat loss and slower heat-up time. Band heaters from VITAR® are the ideal solution for high watt densities and high operating temperature applications, especially for the plastics industry.

### Ceramic Band Heater

Ceramic band heaters are manufactured using quality tested raw material under our skilled professional to ensure our quality is flawlessness. These heaters have capability to produce high and uniform temperature. The heaters are built with special high grade of steatite insulators for the superior thermal conductivity.



### Mica Band Heater

The application of the mica band heater is in the blow moulding barrels, Injection moulding, plastic and rubber processing machine. We offering premium quality of the heaters with various specifications and can customized as per exact information laid down by our renowned customer.



### Construction styles

- Full band heater
- Half band heater

## Anti-condensation heater

Anti-condensation heaters are used in order to avoid condensation problems in shielded electrical installations, boards and control cabinets. Mounting in the bottom part of the cabinet will increase efficiency. As for the position in relation to other components in the cabinet, a distance of at least 5 cm to the sides and 3 cm to the bottom is recommended.

### Features

- Upgrade version of wiring terminal with Porcelain Ceramic Terminal Block.
- Heating capacities from 60 to 120W.
- High grade of non-flammable wire wound resistor element.
- Minimal maintenance.

