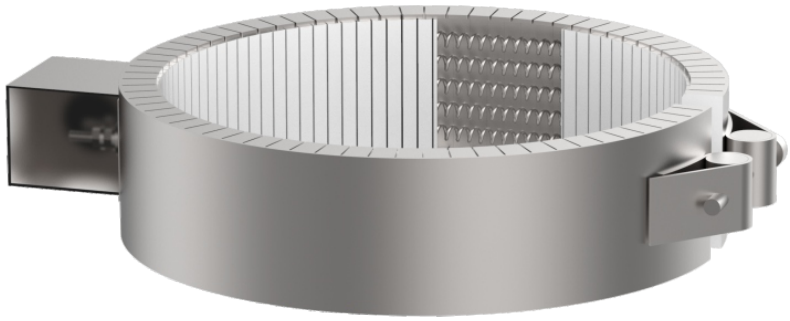
nobleheat™
Heating Technologies

AN ISO : 9001-2015 CERTIFIED CO.



# CERAMIC BAND HEATERS

**Contact @**
C-12/423, Yamuna Vihar,
District North East,
Delhi - 110053
**Hotline** +91-81 91 91 91 84
**E-mail** : info@nobleheat.com

nobelheat.com

## CERAMIC BAND HEATERS :

are heaters that operate at temperatures ranging from medium to high, with a maximum operating temperature of 648°C. Energy-efficient ceramic fiber jackets are an optional feature of these robust heaters. Ceramic band warmers are completely flexible, come with a variety of termination designs, and can accept cutouts and holes. Nickel-chrome wire is inserted in a flexible outer wall composed of unique, interlocking ceramic tiles (KNUCKLES) that are put together similarly to a brick wall in a ceramic band heater. This assembly is covered by a stainless steel/aluminized steel jacket and an insulating ceramic fiber mat. In addition to preventing heat loss, this structure uses 20% less electricity. Ceramic band warmers can be produced with various termination types, clamping mechanisms, perforations, and holes and cutouts. Fit is less important than in other kinds of bands since the element winding is made to heat the ceramic blocks until they radiate energy into the barrel and conduct energy by coming into touch with it.

### Utilization

- Cut down on power usage.
- even dispersion of heat.
- Keep the heat in.
- Different styles of ending.
- high level of adaptability.

### Maximum Watt Density Per Square Inch Permitted

| Cylindrical Temp °C | 1.5-3" I.D | 3-10" I.D. | 20 |
|---|---|---|---|
| 94 | 52 | 47 | 41 |
| 150 | 51 | 46 | 40 |
| 205 | 50 | 45 | 39 |
| 260 | 46 | 42 | 36 |
| 315 | 41 | 38 | 31 |
| 370 | 37 | 33 | 27 |
| 425 | 29 | 25 | 20 |

### Ceremic Heater Technical Data Sheet

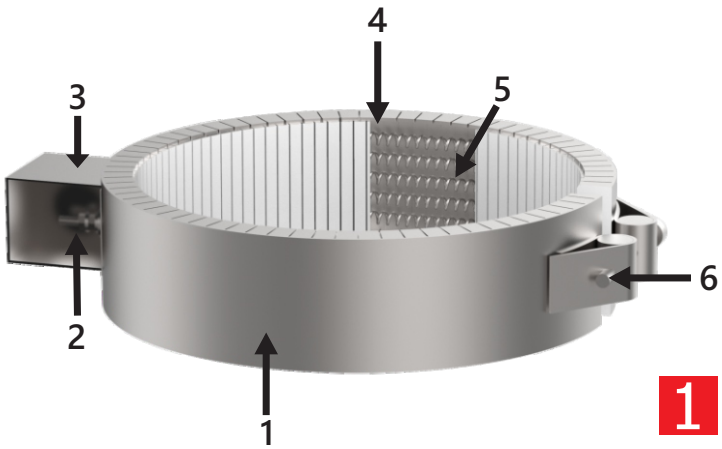
| Application | Sheath Material |
|---|---|
| Sheath Material | Aluminium coated or SS |
| Insulation Material | Ceramic Fiber Blanket |
| Watt Density | Up to 45 W/in2 |
| Watt Ratings | 500-5000W |
| Voltage | 120 V & 240 V, single phase, 2 phase and 3 phases |
| Width | 25MM – 250MM |
| Diameter | 40 MM minimum to expand up to 1200 mm in 3 parts |

### Ceramic Band Heater Benefits

- reduced expenses for operations.
- good transfer of heat.
- increased operating temperature.
- Adaptable and simple to install.
- extended lifespan of the heater.

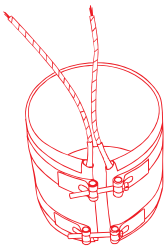
### Construction

1. **Stainless Steel Sheath:** For oxidation resistance in a range of environments, we typically utilize aluminum coated sheaths, but we can also supply SS 304 stainless steel based on application needs.
2. **Screw Terminals:** Screw terminals provide a secure connection with the winding and the highest carrying capability for amperage.
3. **The** purpose of a terminal box is to shield exposed terminals from spills and drips. A variety of termination types are used, including SS bolded terminals and copper lug crimping on lead ceramic connectors.
4. **Resistance Wire:** For optimal heater life, use an 80/20 nickel-chromium resistance wire that is uniformly wrapped to distribute heat evenly.
5. **Ceramic Fiber Insulation:** Due to their resistance to high temperatures, ceramic fibers are utilized as insulation materials.
6. **Ceramic Knuckles:** The heating element wrapping method uses ceramic knuckles made of high-purity aluminum oxide, which are highly compacted for maximum heat transmission and maximum dielectric strength and thermal conductivity.



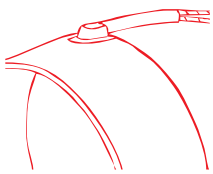
## Fibreglass Lead & Stainless Steel Braid terminations

### Type of Order: L1/B1



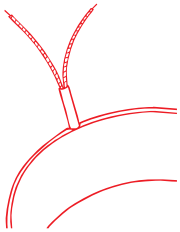
- Unless otherwise noted, leads leaving both sides of the gap are standard.
- High-temperature fiberglass leads have a 455°C rating.
- The typical lead length is 10".

### Type of Order L4/B4



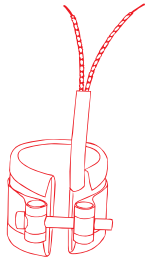
- Leads can leave the heater from any point at a right angle out of the cap.
- Standard sleeve protection measures are 1.5".

### Type of Order: L2/B2



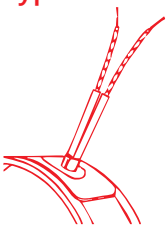
- In nozzle heater applications, lead wires that emerge 180 degrees from the gap are typical installations.
- On lead exits, 1.5" of sleeve protection is required.

### Type of Order L5/B5



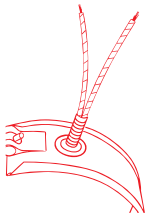
- Any construction can have lead wires on one side of the gap.
- A typical little band heater exit.
- The typical spacing is.300".

### Type of Order L3/B3



- On any building, leads that exit directly out the side are available.
- A brass eyelet allows the leads to exit.

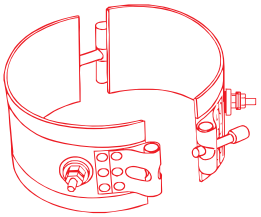
### Type of Order L6/B6



- A stainless steel spring shields leads from severe bends by offering additional support.

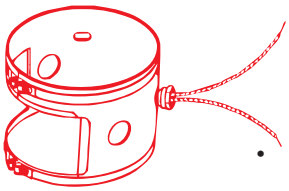
## Special Constructions using NobleHeat

### A pair of pieces



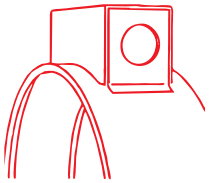
- There is a two-piece construction option for simple installation and removal.
- Please include the total power when placing your order.
- I.D. minimum of 3

### The Holes



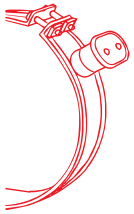
- Band heaters can be produced with unique slots or holes for thermocouples or unique mounting requirements.
- The minimum distance between the hole and the heater's edge is 1/2".

### The Terminal Box



- Electrical shock and electrical shorts can be effectively avoided with terminal boxes.
- Terminal boxes can be installed on any type of construction or clamping.

### The Euro Plug



- Plugs of the European kind are available upon request.
- 1" x 1.75" x 1"