BUCAN ELECTRIC HEATING DEVICES INC.

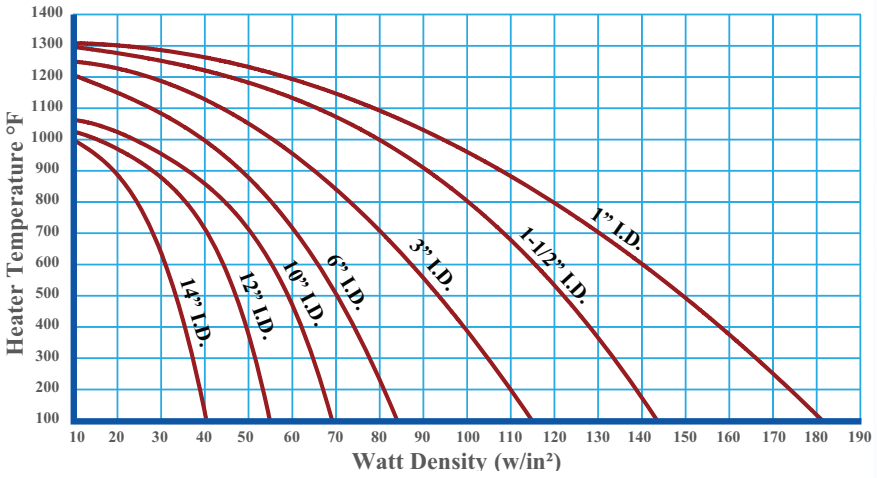
MINERAL INSULATED BAND HEATERS

Specifications	
Max Temperature	1400°F
Max Voltage	480V
Max Watt Density	Depends on Diam X Width
Wattage Tolerance	+5%, -10%
Minimum Diameter	1”
Minimum Width	1”
Max Width	6”
Gap	1/4”- 3/4” Depending on width
Sheath Material	Stainless Steel 430

Typical Heating Applications:

- *Injection Molding Machines*
- *Plastic Extruders*
- *Blow-Molding Machines*
- *Heat Treating Pipes*
- *Cylinder Heating Applications*

Mineral insulated band heaters are rugged and heavy duty heaters made for applications that require high temperatures (up to 1400°F) and high watt densities (up to 100 W/in^2). These heaters are ideal for increasing output especially in injection molding and to meet the heating requirements to process newly engineered high tech resins.
The nickel chrome resistive material inside a mineral insulated heater is embedded in Aluminum Oxide insulating medium which provides excellent heat transfer and dielectric strength. A stainless steel outside casing gives external protection.
Mineral insulated band heaters are made with various clamping mechanisms, electrical termination styles, thermocouples and can be manufactured with holes and cut-out.

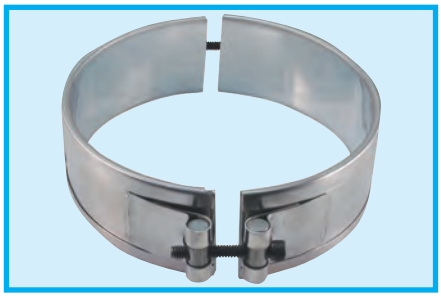


BUCAN MINERAL INSULATED BAND HEATERS

Constructions

One piece construction

To secure good clamping and efficient heat transfer, it is recommended to use 2" - 3" wide heaters.

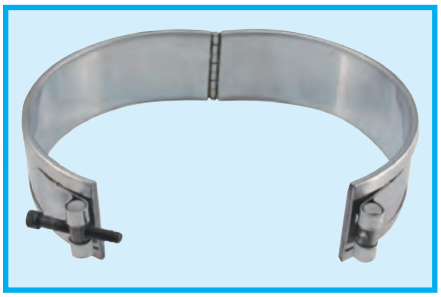


Two piece construction

To facilitate the installation on a barrel, this construction type is recommended. All heaters having internal diameters above 14", should have two piece construction.

Expandable construction

Two piece construction heaters that have a common top sheet. This construction type allows opening of the heater in order to install it on a barrel. The terminals of these heaters are made 90° with respect to the gap or next to the gap.



Hinged construction

Two piece construction heaters with a hinge on one side. The terminals of these heaters are made 90° with respect to the gap or next to the gap.

Holes and Cutouts

Mineral insulated heaters can incorporate holes and cut outs with certain dimensional restrictions.

Construction	ID (in)		Width (in)	
	Max	Min	Max	Min
One-piece	14	1	6	1
Two-piece	26	3	6	1
Expendable	14	3	6	1.5
Hinged	26	6	6	1.5

Selection tips

The chart on the previous page is a watt-density selection guide for different heater diameters. The following points should also be considered.

- The watt-density for heaters wider than 2in should be reduced by 25%.
- The watt-density for heaters that have an insulating jacket should be reduced by 30%.
- To maintain moderate on-off cycles, it is recommended to make the wattage of an MI heater as close as possible to the application wattage.
- Multiple narrow heaters (1.5in - 2.5in) are preferable to a single wide heater.
- Because they run at high temperatures and are exposed to severe thermal expansions, MI heaters should be retightened (after the initial tightening) when their temperature reaches 400°F. Disconnect power before tightening.
- Holes and cutouts increase the unheated sections and complicate the internal construction of a heater. In most cases it is possible to use a wider gap instead.

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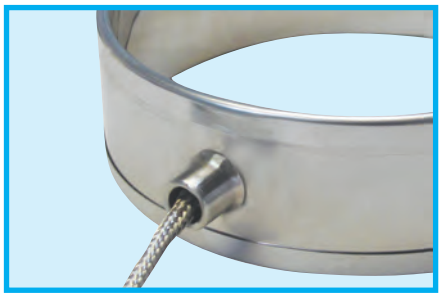
Terminations

B1 Style
Post terminals (10-32 UNF) placed along the width of the heater side by side

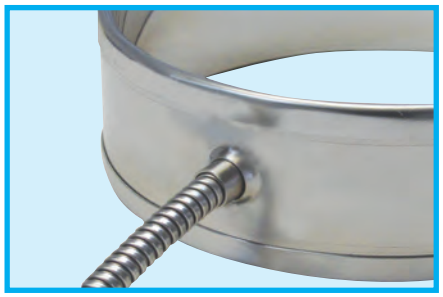
B2 Style
Post terminals (10-32 UNF) placed along the length of the heater side by side

G Style - Terminal box
Post terminals (10-32 UNF) placed inside a heavy duty stainless steel terminal box that eliminates the risk of electrical shock and shorting

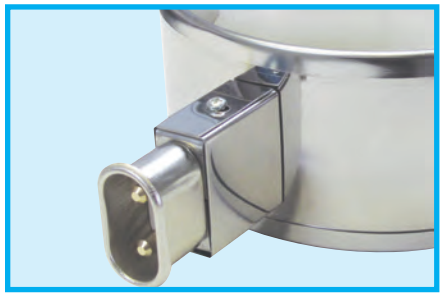
LP Style
Low profile terminal cover for stainless steel braided high temperature leads.
The orientation of the leads could be across the width or parallel to the circumferential length of the heater



E Style
Stainless steel braided high temperature leads exiting vertically on the surface of the heater



H Style
A flexible steel hose protecting high temperature leads exiting vertically on the surface of the heater



K00 Style
European plug placed on a terminal box in a vertical position

K90 Style
European plug with a terminal box placed in a 90° position

Termination	Min ID (in)	Min Width (in)
B1	2	2
B2	2	1.5
G	4	1.5
LP	1.5	1.5
E	1.5	1.5
H	2	2
K00	4	1.5
K90	4	1.5

Dimensional limitation with different type of terminals.