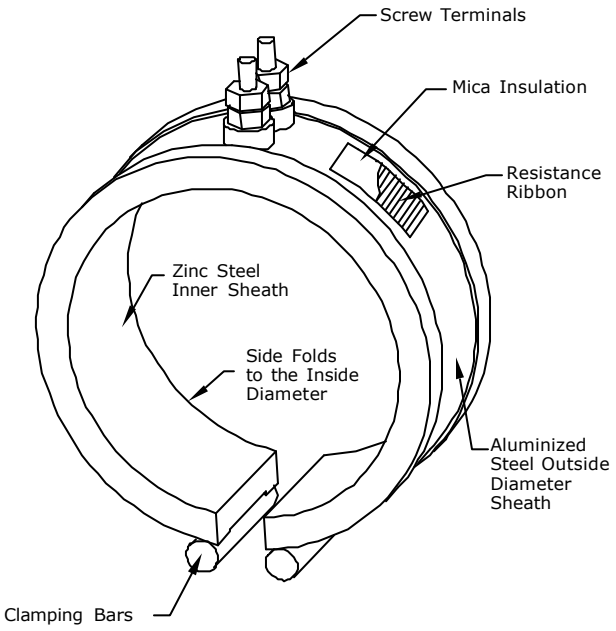
MICA INSULATED BAND HEATERS



Mica insulated band heaters are efficient and economical solutions to the heating requirements of many applications. Although their maximum sheath temperature is limited to 900° F, with different electrical termination styles, clamping mechanisms, and ability to accommodate holes and cutouts, they are successfully used in many applications, but are mostly sought for in the plastics industry.

Mica band heaters utilize different types of top grade mica. The thickness of each mica layer is carefully selected to balance between the insulating characteristics of Mica and the ease of heat transfer from the resistance ribbon to the machine barrel.

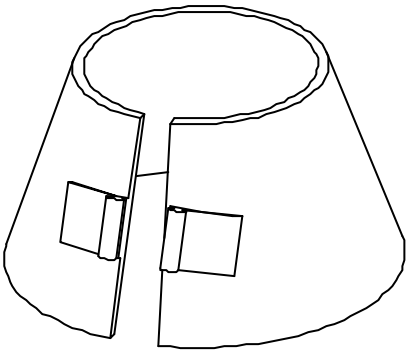
The resistance ribbon used is not restricted to the capabilities of Nichrome wire. Different alloys are considered for different applications. The internal winding is carefully designed to ensure uniform heat distribution throughout the heater.

To maximize the surface-to-surface contact, heaters are carefully rounded and formed to optimize the grip on a machine barrel. The external metallic protective sheath of a is made of a special alloy, which expands less than the barrel when heated. This difference in thermal expansion makes the heater grip the barrel firmly once it is energized, and this improves heat transfer. Poor heat transfer acts like a throttle and makes the resistance element inside the heater function at elevated temperatures, which eventually leads to the premature failure of the heater.

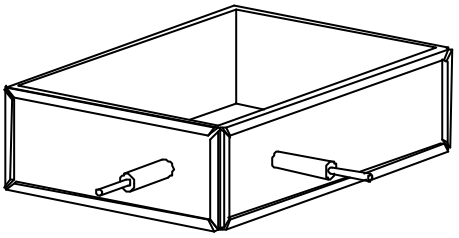
Band heaters are made in different construction styles, clamping mechanisms, and terminal types. Holes, cutouts, slots, thermocouple or mounting brackets can be accommodated in the design.

MICA INSULATED BAND HEATERS

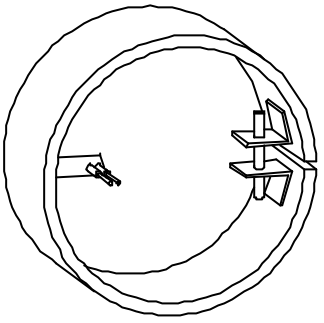
Conical
Conical or irregular shaped heaters are made to fit unconventional forms. Heat transfer considerations impose limitations on the overall design and construction of these heaters. Our engineers are available to discuss the requirements of each application.



Square and rectangular
Mica bands can be made square, rectangular or multi-sided to suit your specific requirements.



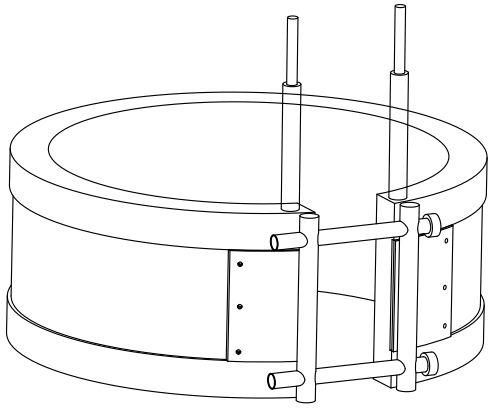
Reverse
Reverse heaters are used in applications where heating from inside the barrel is required. The outside shell of these heaters is the heating surface and all the terminations and clamps are located on the inside of the heater.
Diameter: 3"min; 36" max
Width: 1"min; 12" max



Installation Tips

- The cylinder should be clean from any contaminants and foreign materials.
- The heater should be tightened firmly on the cylinder. The rims should be gently tapped with a plastic mallet and the heater re-tightened.
- Energize the heater for a short period of time and then re-tighten the fasteners.
- To compensate for thermal expansion, large diameter heaters should have spring-loaded fasteners.
- One-piece construction heaters should be opened only slightly, and made to slide on a cylinder. Two-piece construction or flexible heaters should be used when a heater has to be fully opened.

MICA BAND HEATERS



EXAMPLE: HBA-2.0X5.0-240-1000-72FG-C-BN-2P

HBA — [ ] X [ ] — [ ]

1. STYLE	
CODE	DESCRIPTION
HBA	Mica Band Heater

2. INSIDE DIAMETER
Specify in Inches or Millimeters

3. WIDTH
Specify Width in Inches or Millimeters

4. VOLTAGE
120V
240V
480V
Specify Other

[ ] — [ ] — [ ]

5. WATTAGE
Specify

6. LEAD LENGTH
Specify Length in Inches or Millimeters

7. LEAD TYPE	
CODE	DESCRIPTION
FG	Fiberglass (482°F)
HFG	Hi-Temp Fiberglass (932°F)
FGS	Fiberglass (482°F) W/ Stainless Steel Braid
HFGS	Hi-Temp Fiberglass (932°F) W/ Stainless Steel Braid
FGA	Fiberglass W/ Armor (482°F)
HFGA	Hi-Temp Fiberglass (932°F) W/ Armor
T	Teflon (500°F)
TA	Teflon With Armor (500°F)
TB	Terminal Box

8. OPTIONS
Refer to Page I-11

(See I-19 For Sample Photos)

BAND HEATERS (OPTIONS)

Choose 1

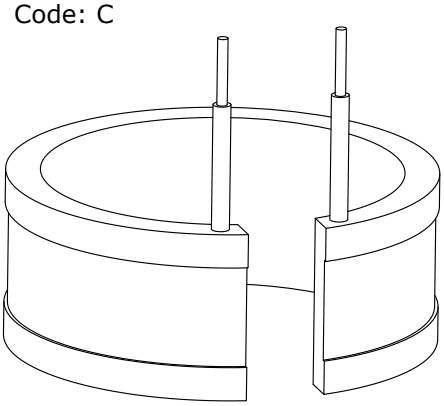
TABLE 8 - MICA AND MINERAL BAND HEATER OPTIONS	
CODE	DESCRIPTION
LEADWIRE TERMINATIONS	
C	Exit either side of the gap on thickness
C1	90 Degree exit with cap and tube near gap, exiting towards opening
C2	90 Degree cap with tube near gap, tangential
C3	45 Degree exit with cap and tube near gap, exiting towards opening
C5	90 Degree exit with cap and tube opposite gap, exiting towards opening
C6	90 Degree cap with tube opposite gap, tangential
C7	45 Degree exit with cap and tube opposite gap, exiting towards opening
D	Leads exiting opposite the gap
E	Leads exit near gap
F	Leads exiting either side of the gap
I	Leads exiting opposite gap on thickness
SCREW TERMINAL TERMINATIONS	
A	Seperate on opposite sides of the gap
AV	Seperate on opposite sides of the gap with ceramic protective covers
B1	Along the width side by side
B1G	Along the width side by side with protective terminal box
B1V	Along the width side by side with ceramic protective covers
B2	Along the length side by side
B2G	Along the length side by side with protective terminal box
B2V	Along the length side by side with ceramic protective covers
PLUG TERMINATIONS	
K00	European Plug vertical with box
K3P	European Plug 3 prong with ground
K45	European Plug 45 degree with box
K90	European Plug tangential with box

CLAMPING STYLES	
BN	Barrel Nuts
CP	Clamping Pads
FL	Flange Lock-Up
IS	Independant Strap
LT	Latch and Trunion
LP	Low Profile Barrel Nuts
SB	Spring Loaded Barrel Nuts
WL	Wedge Lock

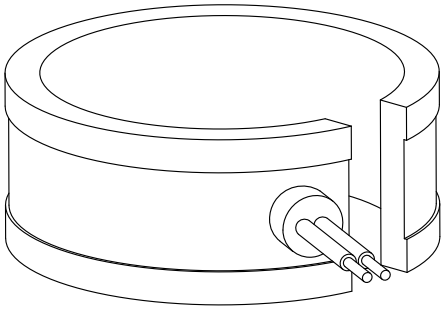
CONSTRUCTION OPTIONS	
2P	2 Piece construction (*note: wattage indicated in box 5 will be total wattage)
H	Hole (indicate inside diameter / location)
TC	Built in Thermocouple (specify calibration)

BAND HEATERS (OPTIONS)

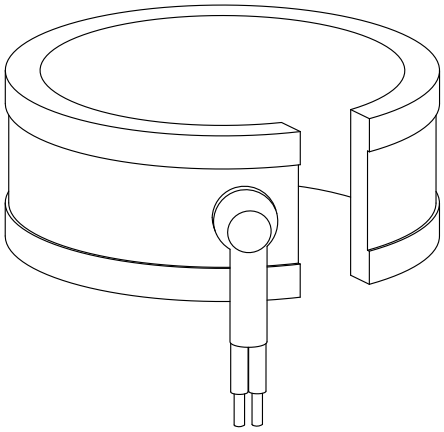
LEADS NEAR GAP
Code: C



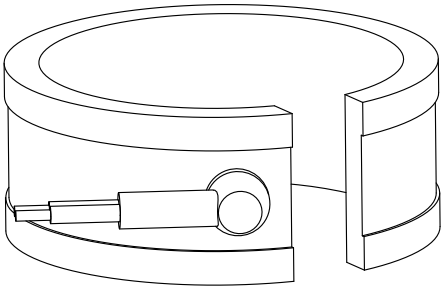
LEADS NEAR GAP (B)
Code: E



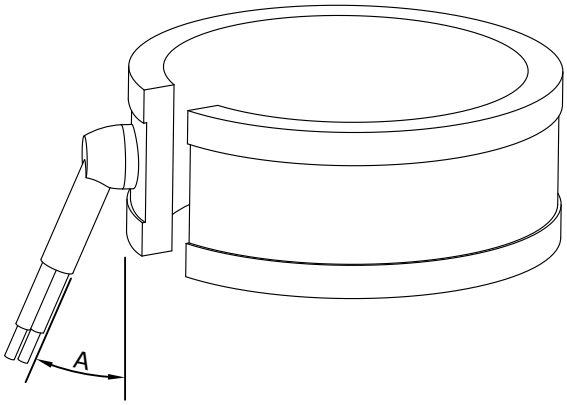
LEADS W/ CAP NEAR GAP
Code: C1



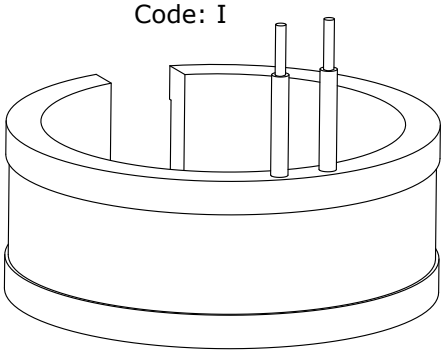
LEADS W/ 90° CAP NEAR GAP
Code: C2



LEADS W/ CAP AT ANGLE
Code: C3

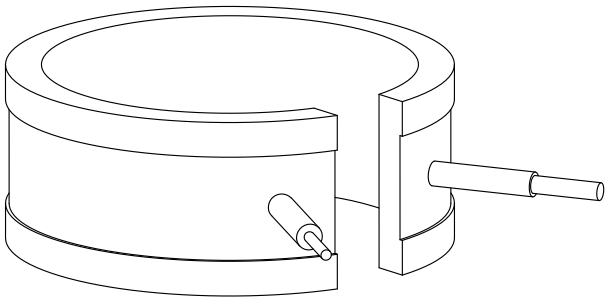


LEADS OPP. GAP
Code: I

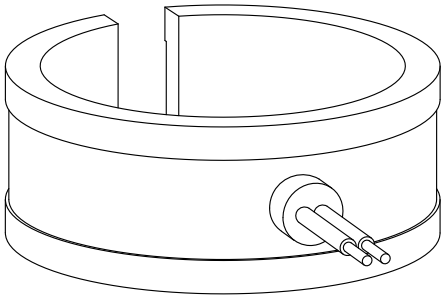


BAND HEATERS (OPTIONS)

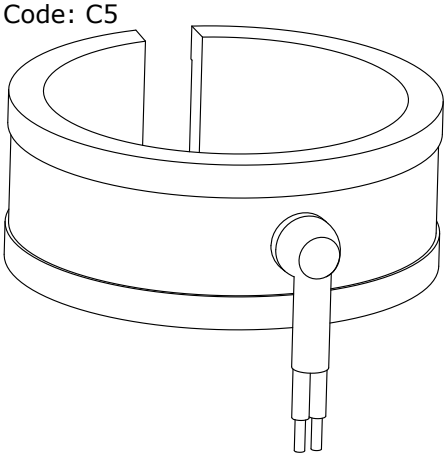
LEADS ON BOTH SIDES OF GAP
Code: F



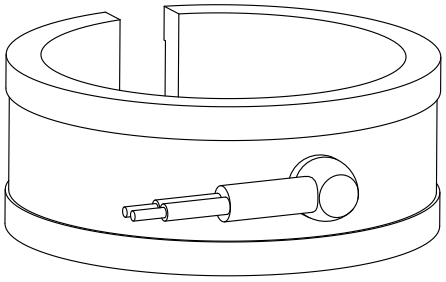
LEADS OPP. GAP
Code: D



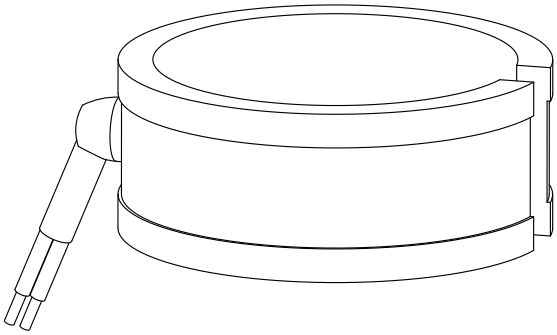
LEADS W/ CAP OPP. GAP
Code: C5



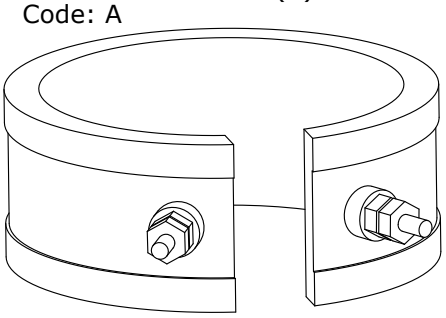
LEADS W/ 90° CAP OPP. GAP
Code: C6



LEADS W/ CAPP OPP. GAP AT ANGLE
Code: C7

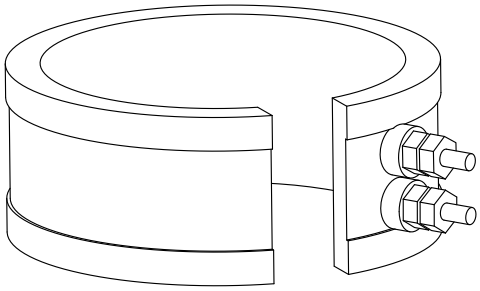


SCREW TERMINALS (A)
Code: A

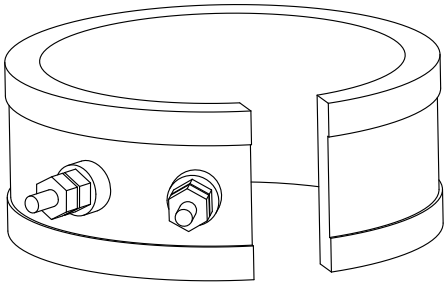


BAND HEATERS (OPTIONS)

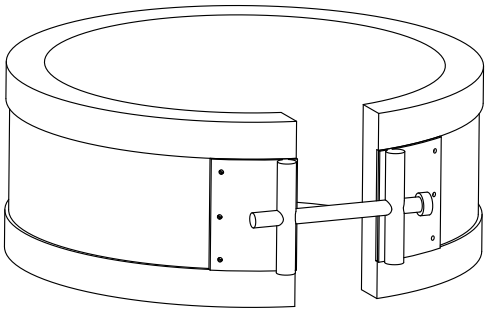
SCREW TERMINALS (C)
Code: B1



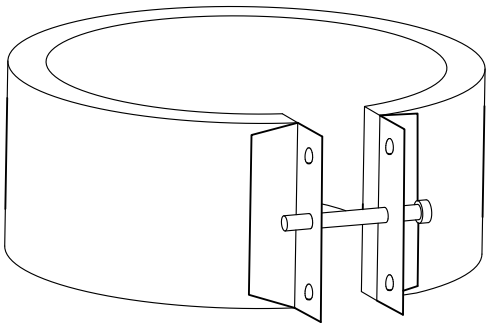
SCREW TERMINALS (B)
Code: B2



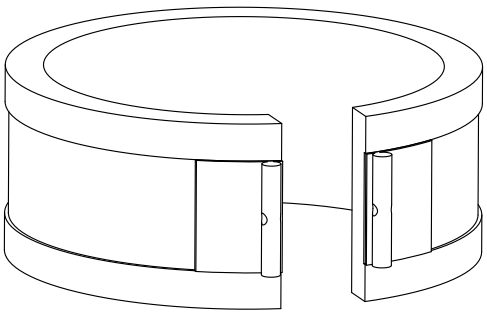
INDEPENDENT STRAP
Code: IS



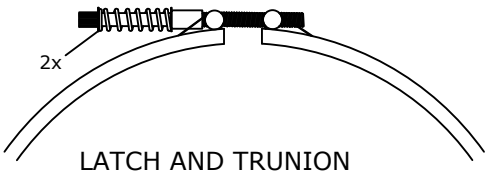
FLANGE
Code: FL



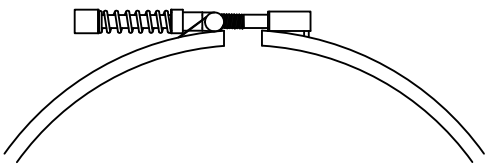
SPOT WELDED STRAPS
Code: SS



SPRING-LOADED BARREL NUTS
Code: SB

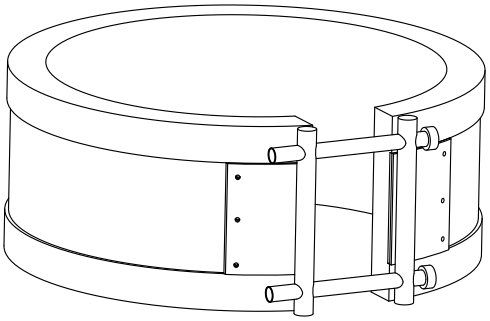


LATCH AND TRUNION
Code: LT

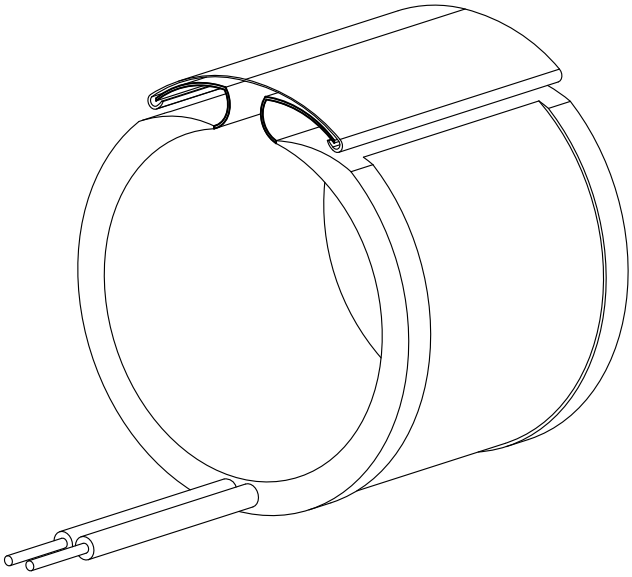


BAND HEATERS (OPTIONS)

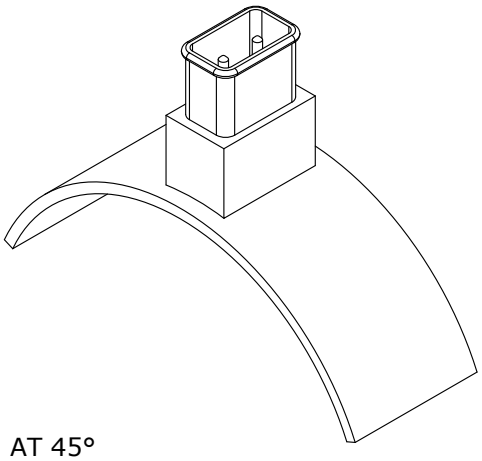
BUILT IN BARREL NUTS
Code: BN



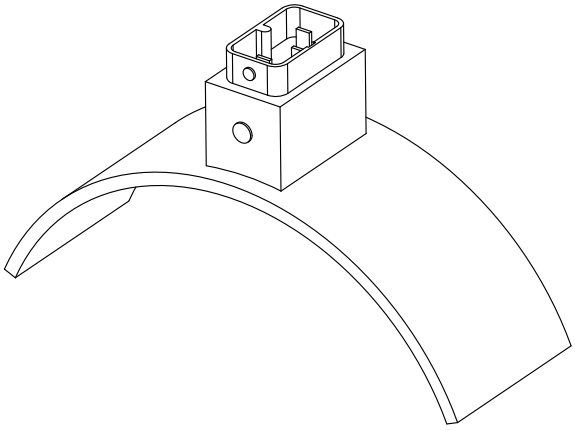
WEDGE-LOCK
Code: WL



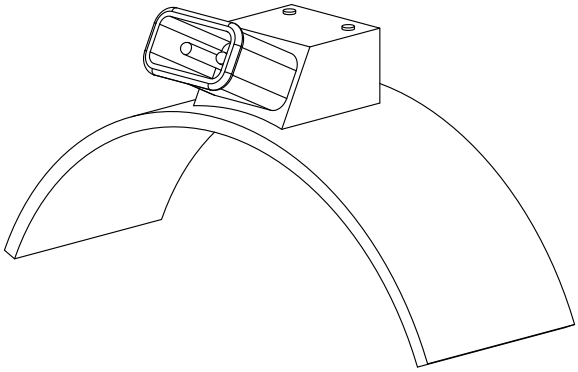
VERTICAL WITH BOX
Code: K00



3 PRONG WITH GROUND
Code: K3P



AT 45°
Code: K45



TANGENTIAL WITH BOX
Code: K90