HT MICA BANDS

MI BETTER BANDS

PERMAHEAT BAND HEATERS

ULTIMA BANDS

TUTCO CONDUCTIVE

HT Mica Band Heaters

MADE IN THE **USA**

TUTCO's HT Mica Band Heaters are built with premium Mica insulation, known for its excellent thermal properties. Our precision engineered resistive element ensures low internal temperatures possible. This design extends heater life and delivers consistent surface temperatures. The inclusion of a high temperature phlogopite Mica insulation sheet further enhances heat transfer efficiency and dielectric strength, guaranteeing optimal performance in even the most demanding environments. Built to withstand the rigors of industrial applications, our HT Mica Band Heaters feature a stainless-steel corrosion-resistant sheath, providing both physical strength and excellent thermal conductivity. Whether you opt for lead-wire or screw terminal variations, rest assured that each heater is equipped with a reliable welded internal termination junction, ensuring secure and hassle-free installation. Accurate, quick, and built to last, the TUTCO HT Mica Band Heaters are the preferred choice for a wide range of industries, including the plastics industry where precise and reliable heating is paramount. Beyond plastics manufacturing, these heaters find common applications in heating pipes, chemical processes, fuel cell temperature control, and drum heating. Trust TUTCO for unmatched performance, customization, and durability in band heater solutions tailored to your specific needs.

REQUEST A QUOTE

FEATURES AND BENEFITS

- Fast high-temperature ramp rates
- Efficient temperature transfer
- Cost-effective performance
- Durable long-lasting materials
- Standard one-piece band construction
- Multiple piece expandable construction per request
- Optional partial and reverse configurations are available
- Low minimum order quantities as low as 1 piece
- Expedited delivery options are available—consult factory
- Consult factory for other custom options

MATERIAL AND CONSTRUCTION

- Precision engineered wound resistor element
- Low expansion clamping is standard
- Optional wire leads or screw-down terminations
- High-temperature oxidation-resistant stainless-steel sheath
- Connections are welded to an SS pad and properly insulated
- U.L. / C.S.A. (when specified) consult factory
- High-temperature mica tape lead wire, 842º F (450º C)
- Standard wire length is 10”, custom length added upon request
- Several lead wire protection options - fiberglass sleeve, SS braid, armor, armor with German plug, SS box with German plug, copper 90º elbow, and other specified pipe couplings and power plugs
- Grounding options - none, ground stud or ground wire

- Clamping options - 1 or 2 piece standard or full-width strap, strap ends, bar, ear, Belleville Spring Washer, or spring bolt clamping

Specifications	
Maximum Operating Temperature	900°F (482°C)
Holes	Yes
Cutouts	Yes
Durability	Good
Power	45 W/in² (7 W/cm²)
Wattage Tolerance	+5% / -10%
Available Voltage	12 to 480V, 3 Phase Optional
Lead-wire terminations	10A
Screw terminations	8-32UNF: 20 A, 10-24UNC: 25 A
Resistance Tolerance	+10% / -5%
Minimum Width	3/4" (19.1 mm)
Width Tolerance	±1/16" (1.59 mm)
Minimum Inside Diameter	1" (25.4mm)

APPLICATIONS

PLASTICS

Extruders & Extrusion Die Heaters
Plastic Injection Molding
Injection Molding Nozzle
Heaters Blown Film Processes
Blow Molding Machines

AGRICULTURE

Holding Tanks
Drum & Barrel Heating

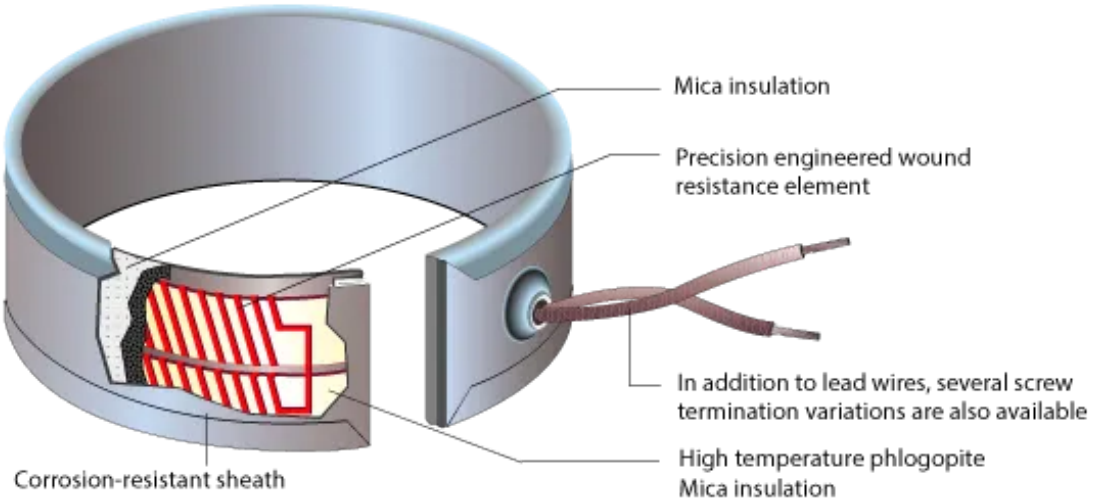
FOOD SERVICE

Food Processing
Candy Extruders
Food Service Warming

PROCESSES

Chemical Processing
Tin and Flux Melting
Scientific Testing Equipment
3D Printers
Medical Process Heater

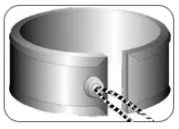
In addition, HT Mica Band heaters can be modified to meet the demands of virtually any special application. Our engineers can utilize a variety of alternative features and options to customize the heater to your specific needs.



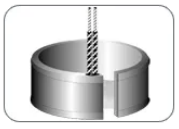
LEAD OPTIONS +

FLEXIBLE LEADS, NEAR GAP

ON THICKNESS, EACH SIDE OF GAP



ON ONE SIDE OF GAP

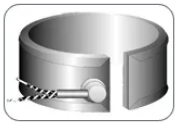


ON TOP, ONE NEAR GAP,

Available with leads exiting axially or along the width of the band. Axial leads can be positioned on each side of the gap or on one side only. Axial leads feature full contact clamping for longer heater life. 10" (25.4 cm) leads standard, other lengths available.

FLEXIBLE LEADS, NEAR GAP, WITH CAP

ON TOP, NEAR GAP WITH CAP AND 90º TUBE



ON TOP, NEAR GAP WITH CAP AND 90º TUBE

ON TOP, NEAR GAP WITH CAP AND 90º TUBE

Low profile cap and tube with leads exiting axially, 90° to axis, or at a specified 15°, 30°, or 45° from axis. Axial leads exit in direction of junction/termination. If heaters are in tandem,

they can be positioned next to one another. 90 degree cap ideal for installations where access is limited. 10" (25.4 cm) leads standard, other lengths available.

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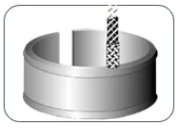
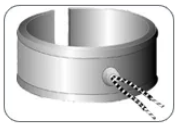
TWO PIECE BAND
Specify for easy installation/removal where projections or tandem positioned heaters are in use. When using two-piece heaters, each half is designed with half of the total wattage requirement. This has the capability of being used on either 120 Volt (V1 = V2 = V Total) when connected in parallel or 240 Volts (V1 + V2 = V total) when connected in series.

GROUND WIRE
A ground wire is available on most heaters where grounding is required.

Additional Lead Options: FLEXIBLE LEADS, OPPOSITE GAP



ON THICKNESS, OPPOSITE GAP

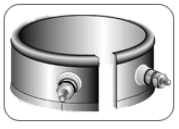


ONE PIECE ON TOP, OPPOSITE GAP

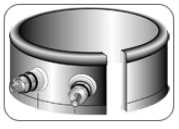
The cap and tube option gives protection near the sheath. Leads can exit axially, 90° to the axis, or at a specified 15°, 30° or 45° from the axis. 10" (25.4 cm)lead standard. Other lengths available.

SCREW TERMINAL OPTIONS +

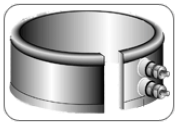
SCREW TERMINALS NEAR GAP



ON TOP, NEAR EACH END ON GAP



ON TOP, ONE PLACE NEAR GAP, ALONG LENGTH



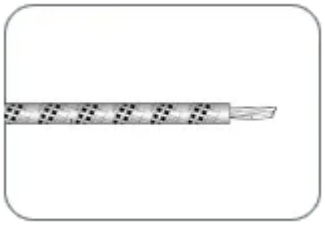
ON TOP, ONE PLACE NEAR GAP, ALONG WIDTH

Screw terminals can be positioned near the gap on each side, along the width, or along the length. This style of terminal helps simplify lead wire connections.

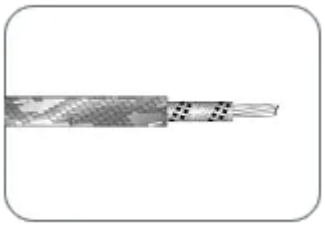
SCREW TERMINALS OPPOSITE GAP

Screw terminals can also be positioned opposite the gap either along the width or along the length.

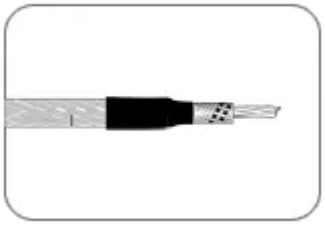
LEAD PROTECTION +



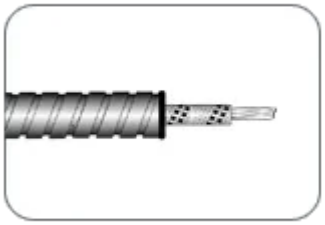
PLAIN LEADS
Our high temperature mica insulated leadwire with nickel standard conductors is suitable for continuous service up to 842°F (450°C).



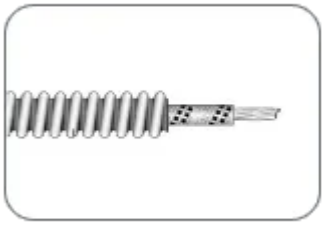
SLEEVING
Fiberglass silicone rubber coated sleeving class C1, 392°F (200°C) service. Provides extra insulation where wire is exposed to heat, molten plastics or abrasion. Rated for 1500 volts at 428°F (220°C), except 5/16" size which has no voltage rating.



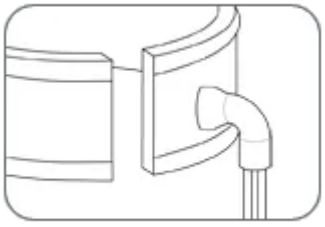
STAINLESS STEEL BRAID
Stainless steel over braid is most commonly specified in applications where leads may be subjected to abrasion due to movement of the application. Lead wires may be rubbing together or passing over sharp objects.



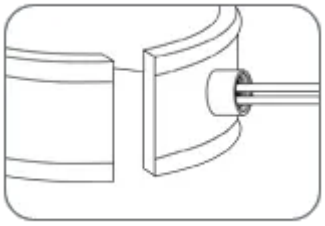
STAINLESS STEEL ARMOR
Used over leads in areas where more protection is necessary. Selected for similar applications as the stainless steel braid, in addition to applications where non-fluid contamination may come in contact with the leads. This lead protection is not as flexible as the braid. Stainless steel square lock construction.



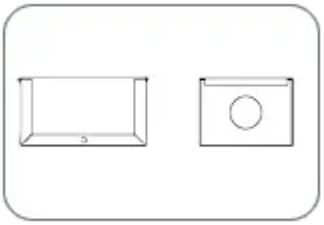
CONVOLUTED ARMOR
This is a seamless product and can be attached to the heater so that fluids do not contaminate the leads. This system of lead protection is generally associated with the Sealed Band construction. Not recommended where leads are flexed in the application.



COPPER ELBOW
Simple straight abrasion-resistant stainless steel armor or moisture-resistant armor is attached to a 90° copper elbow to accommodate applications where lead access is only possible from one side and armor exit direction is a concern. When ordering without a swivel option, specify direction of 90° copper elbow.

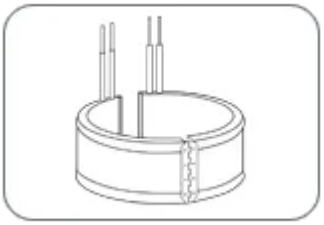


PIPE COUPLING/EXTENSION TUBE
These pipe couplings, welded to the heater sheath, provide a method of fastening conduit or armor to the heater which can be disconnected from the heater as required. Standard stainless steel.

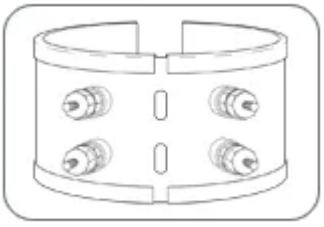


STANDARD TERMINATION BOX
Designed for protection safety, snap-off cover leaves terminals easily accessible.

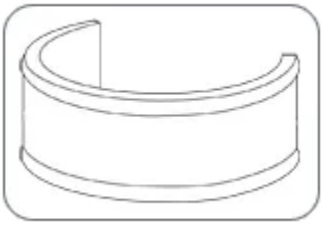
SHAPES AND CONSTRUCTION +



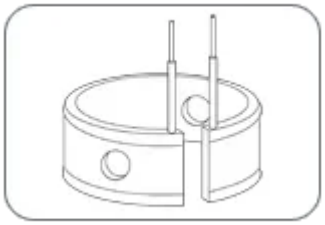
HINGED BAND
Available in two-piece heaters for applications in which the assembly is frequently required to be opened for easy and registered positioning around the surface.



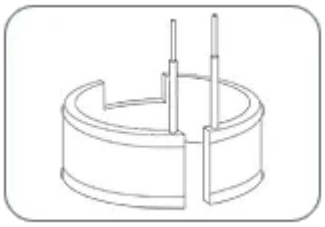
EXPANDABLE BAND
A heater which can be easily expanded to fit around a surface. Not for applications requiring consistent removal. (2-3 times max.) Can be expanded 2-3 times without parting.



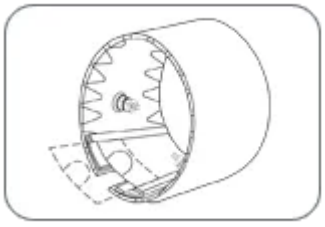
PARTIAL BAND
Available in a variety of terminations and clamping styles (please indicate when ordering). Specially constructed to any angle. Please specify inner diameter, width, angle and termination style.



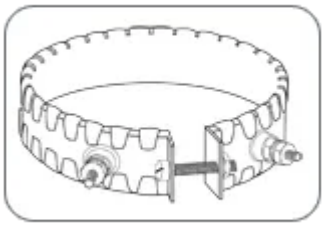
SPECIAL WITH HOLES
Heaters can be built to satisfy your special requirements. Certain applications require holes for thermocouples, to clear tubing, wiring, and other obstacles. These modifications require customer drawings to specify exact diameters and locations of the holes. Special order only.



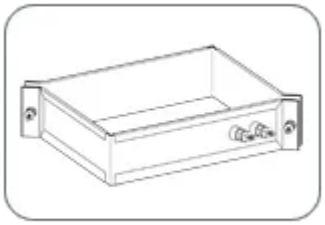
SPECIAL WITH CUTOUT
When clearance is a problem with band heater installation, consider requesting slot cut-outs. This can greatly facilitate installation. Drawing is required with exact dimensions and locations. Special order only. Specify length, maximum length: 12" (30 cm).



REVERSE BAND
Design allows the heater to be expanded and thus heat from an internal surface. Available in a variety of clamping styles (please indicate when ordering; shown is the wedge lock low profile clamping). Constructed with a fully notched case.



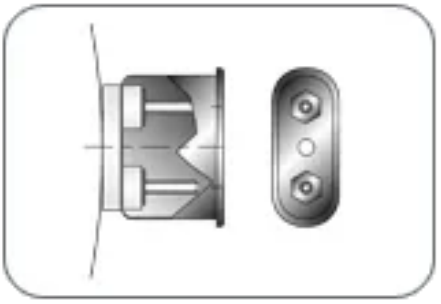
FULLY NOTCHED BAND
Fully notched band provides greater flexibility. Available in a wide variety of termination styles.



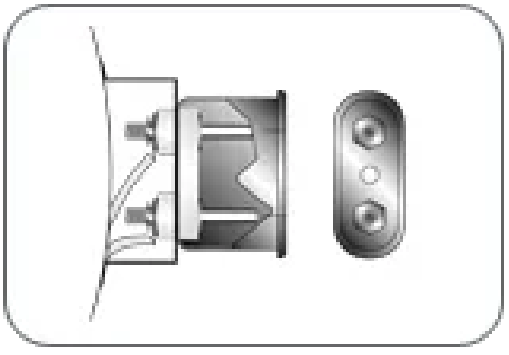
RECTANGULAR BAND
Specify inside dimensions, width dimensions and clamping ears. Available in a variety of termination styles and two location choices for clamping ears.

PLUGS +

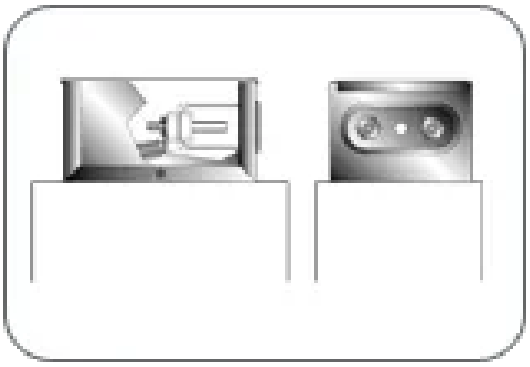
GERMAN POWER PLUG OPTIONS



GERMAN PLUG



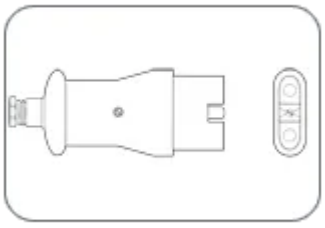
GERMAN PLUG WITH BRACKET



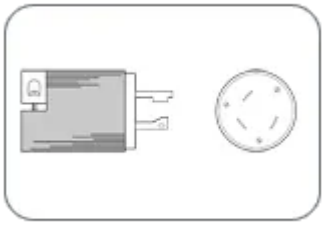
GERMAN PLUG WITH BOX

The German Power Plug is illustrated in the most common position. There are occasions for special boxes where the plug may be positioned on the top surface of the box.

OTHER PLUG OPTIONS



QUICK DISCONNECT SOCKET
2 POLE, 25 AMP, 250V, 600°F (315°C) Service. Ideal for power connection to heaters. Durable cast aluminum body on female side. Both side have ceramic insulators. Ground connection via contact fingers.

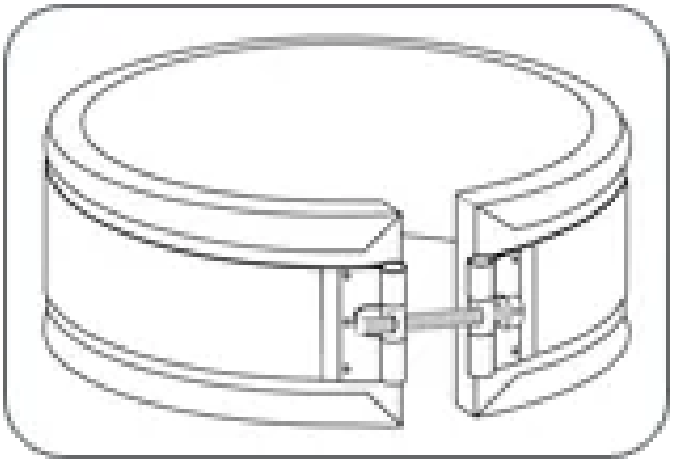


SPECIALTY PLUGS
Customer to specify manufacturer, type, part number, and amperage required.

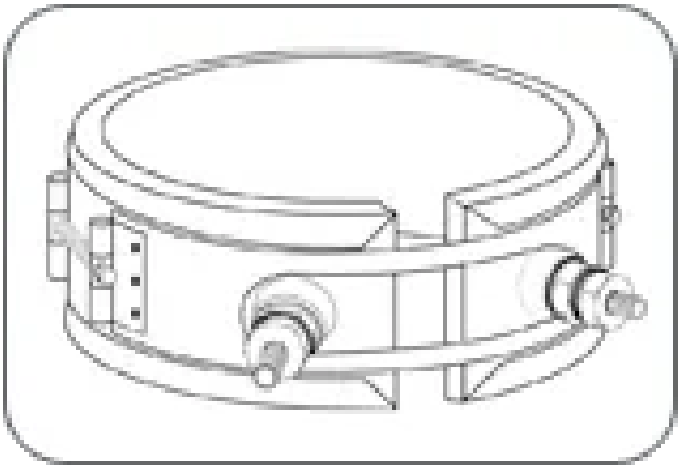
CLAMPING +

STRAP STANDARDS

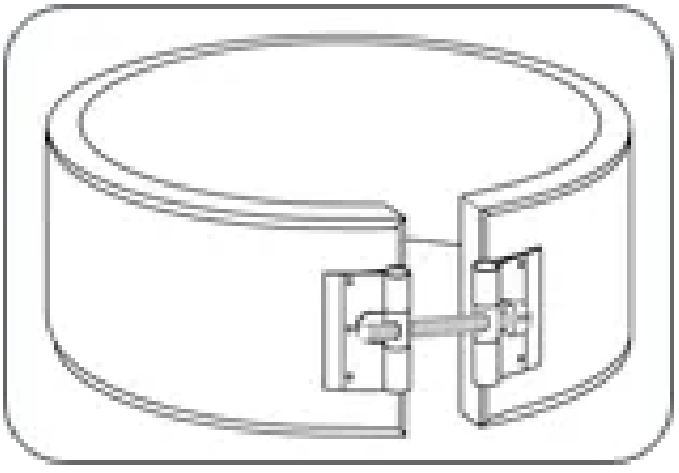
Straps or strap ends can be vastly modified to fit a wide variety of bands. As wider bands are used, multiple straps will most likely be designed in. Normally barrel nuts are built into the ends: one threaded, one through hole. Slots shown are to clear termination areas. Unless otherwise specified, straps are assigned by our engineering staff to best suit each application.



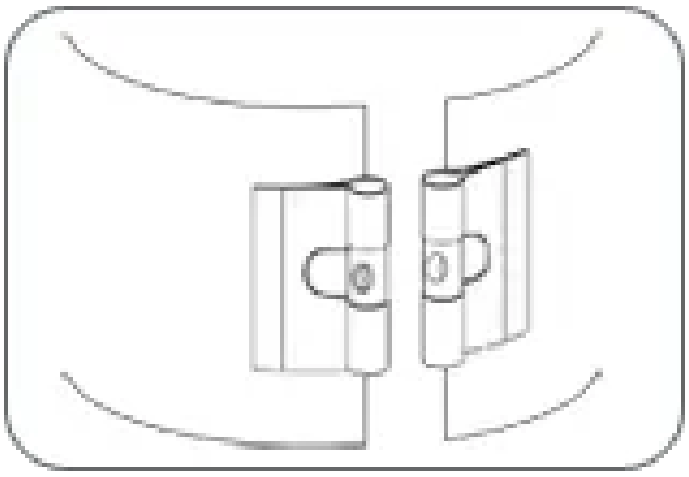
ONE-PIECE STRAP



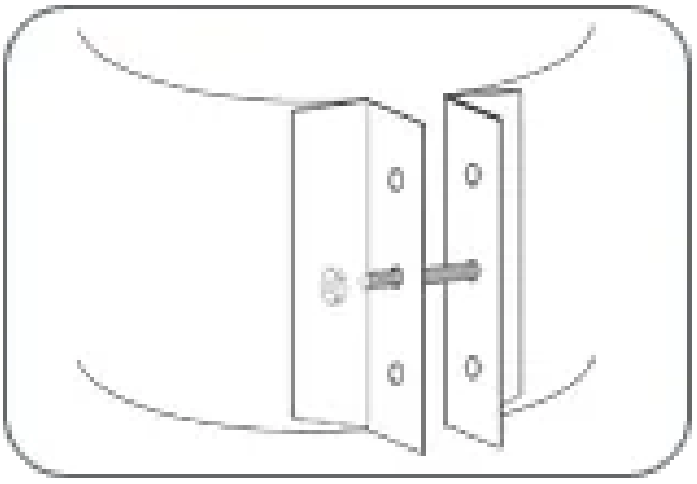
TWO-PIECE STRAP



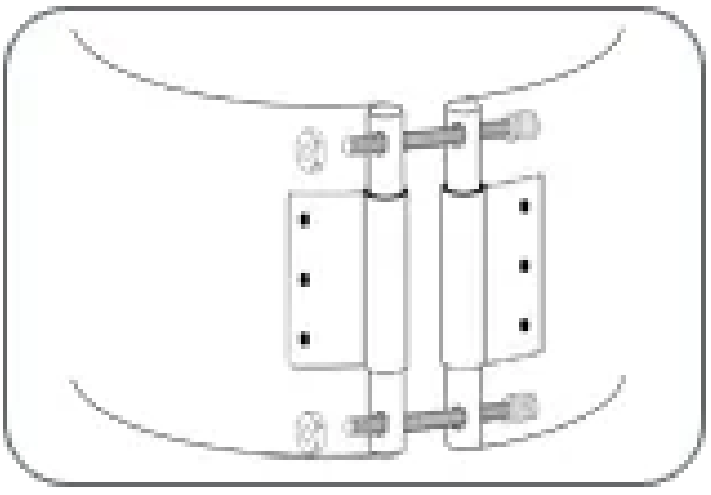
STRAP



STRAP ENDS



EAR CLAMPING

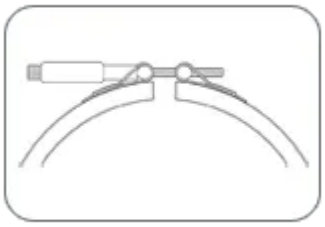


BAR CLAMPING

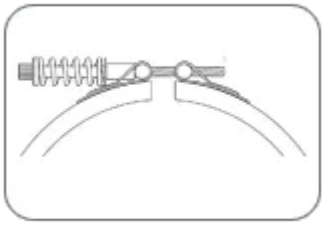
Illustrated are the various available styles of clamping for band heaters. When a band is provided the material is of a low coefficient of expansion type. Width of the clamping band or the number used per heater is dictated by the design standards. There are a variety of clamping mechanisms that can be attached to the band or directly to the heater. The most common forms are the strap and strap ends. Factors influencing the type and size of clamping are:

- Type of band heater
- Diameter and Width
- Termination type and location
- Holes and notches in heater
- Preferences of the user

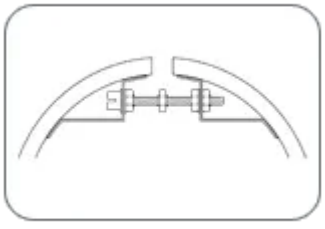
Consult factory for other custom options.



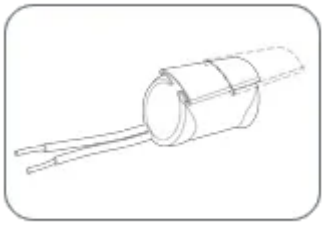
BELLEVILLE SPRING WASHER CLAMPING
A clamping system is generally selected for use with large diameter heaters where additional compensation of band elongation is required. Belleville clamping comes with a standard 1/4 – 20 X 5 (12.7 cm) long screw.



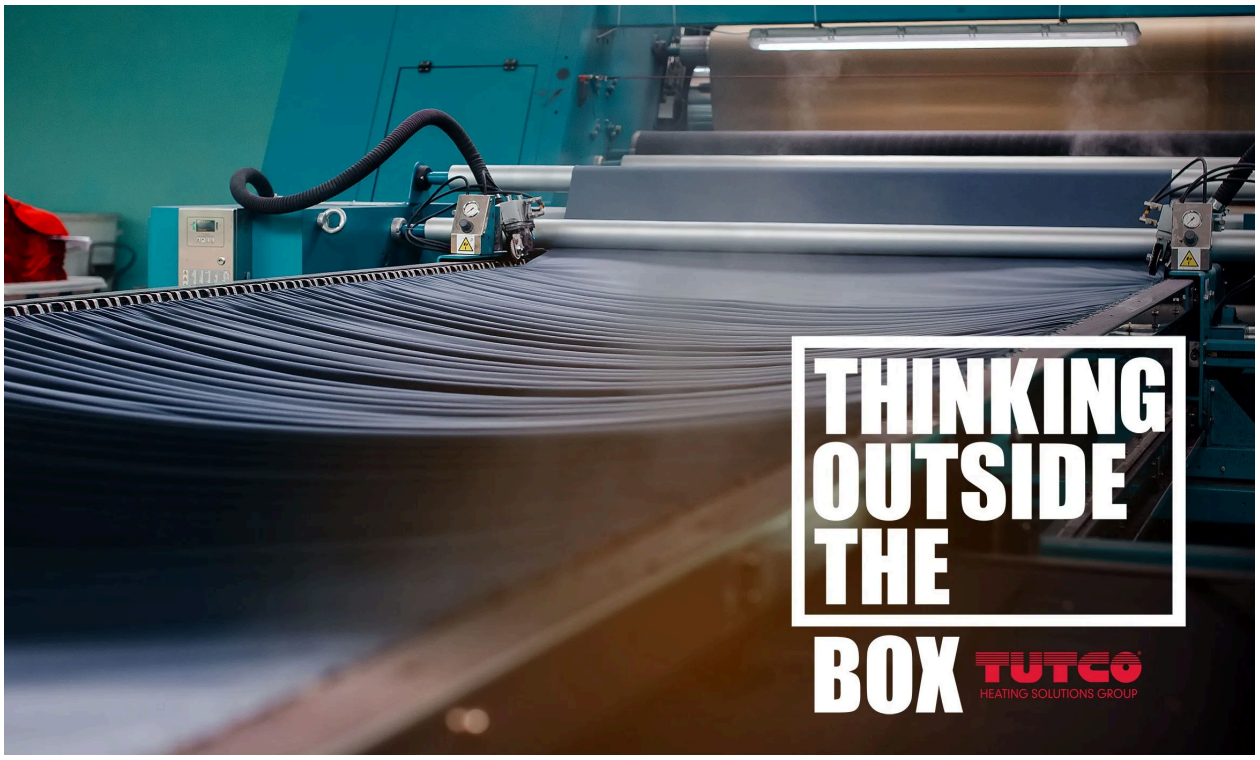
SPRING BOLT CLAMPING
Spring bolt clamping applies constant tension on the clamping mechanism to compensate for heater elongation once it has been energized. Spring bolt clamping comes with either a 1/4 – 20 X 4 (10.7cm) or 1/4 " – 20 X 5 (12.7cm) long screw.



TURNBUCKLE
Specified where a heater is used to heat an I.D. surface. Use of this mechanism is governed by the heater diameter and width. Obstructions such as shafts passing along the center line of the heater may present an interference problem.



WEDGE-LOCK
Specially designed for mounting where space is limited. Eliminates the need for straps. Leads must exit opposite gap.



Tutco HT Mica Band Heater Fits Textile Manufacturer Nicely

A high-volume garment manufacturer using a large heated fabric press to mold and form accessories faced a challenge with the Mica Band heaters used in the press.

GET INFO

Design With Mica In Mind

At TUTCO-Farnam, the majority of our custom-designed heaters use mica board machined to meet the customer's specifications.

GET INFO

All About Tolerances In Conductive Heaters

There are normal variations in the dimensions and electrical properties of heaters we build, and it's good to know what they are so there are no surprises.

GET INFO

Band Heaters

TUTCO band heaters are meticulously engineered to work with cylindrical applications, spanning from plastic processing to scientific testing.

GET INFO