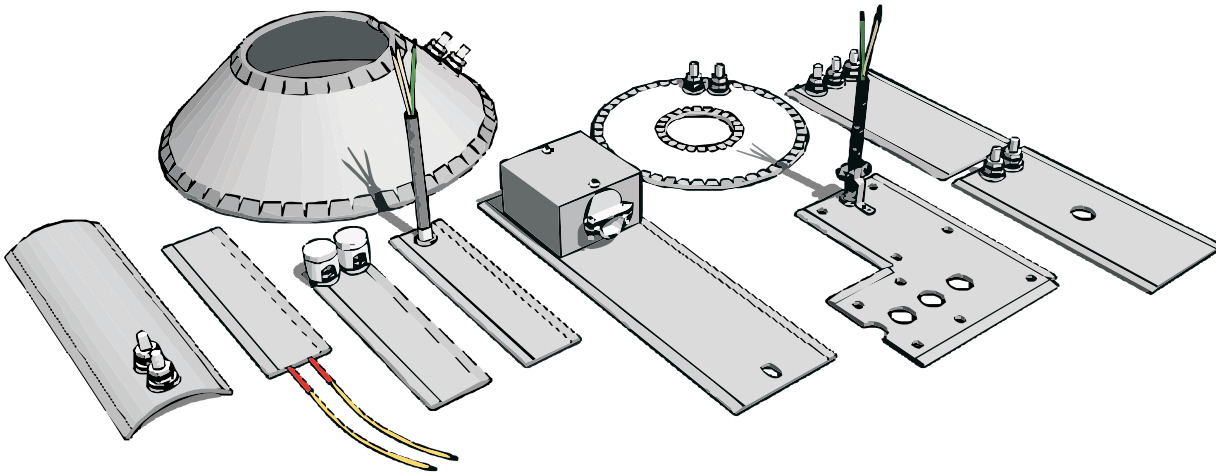


MICA STRIP HEATERS



Mica Strip Heaters

Zesta designs and manufactures all components of the thermal system - heaters, sensors and control systems.

For more than 45 years, Zesta has provided expert solutions to thousands of challenging and unique application problems. This datasheet details Zesta's mica strip heater offering.

Mica strip heaters are versatile and highly customizable. In addition to rugged construction, each heater is expert engineered to stand up to the most demanding applications.

Mica strip heaters are capable of sheath temperatures up to 900°F (480°C). A variety of heater constructions are available, with many termination options.

This datasheet contains many typical mica strip heater configurations. For specialized variations, please consult your Zesta sales engineer for custom applications.

Performance Capabilities

- Alumined steel sheath temperatures to 900°F (480°C)
- Stainless steel sheath temperatures to 1200°F (650°C)
- Watt densities to 55 W/in² (8.5 W/cm²)

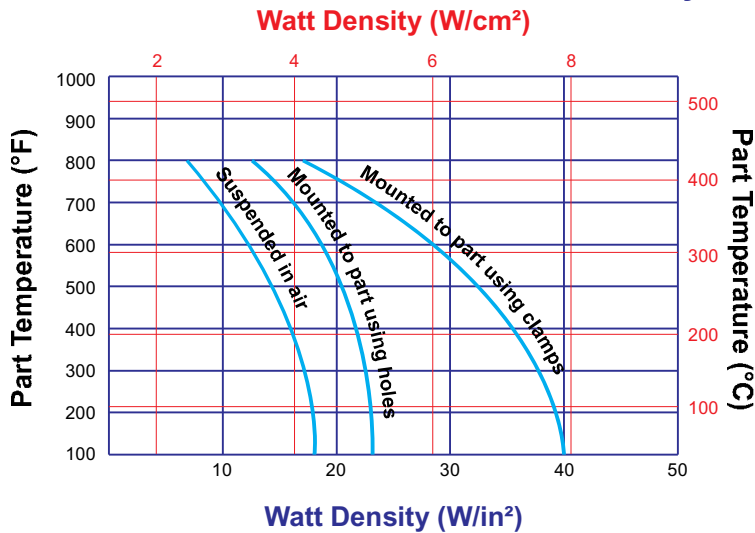
Features and Benefits

- Economic and rugged design.
- Expert engineered for optimal heater performance and longevity
- A variety of termination options to fit application needs.

Applications

- Dies and molds
- Hot plates
- Glue pots
- Sealing equipment
- Packaging equipment
- Thermoforming
- Food warming equipment

Maximum Recommended Watt Density



Calculating Maximum Wattage

Calculate the safe maximum wattage for your heater using:

Heated Area x Maximum Watt Density.

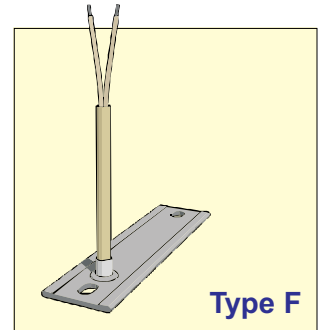
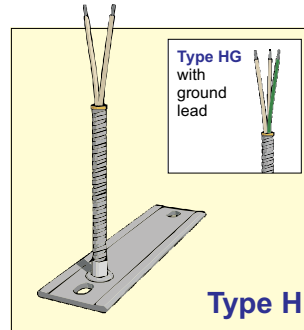
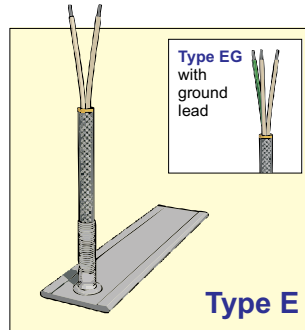
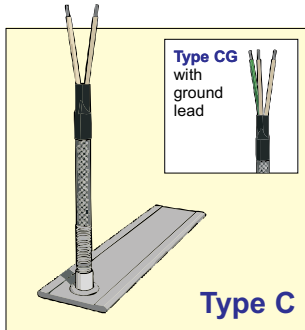
The **Heated Area** of your strip heater is calculated by subtracting the no-heat area from the total area. Subtract the no-heat area at the termination and any additional no-heat area caused by holes, slots or oversize gaps.

Determine the **maximum watt density** of your heater from the graph below. Apply the necessary correction factors:

- For heaters mounted less than 1" apart on a metal part, derate by 5%
- For heaters mounted within 3" of a reflective surface, derate by 10%
- For heaters mounted 2 to 6" apart and radiating toward each other, derate by 10%
- For heaters mounted within 1" of a reflective surface, derate by 20%
- For heaters mounted less than 2" apart and radiating toward each other, derate by 20%

Physical Limitation of Variations

Heater Type	Width		Length	
	Min. in (mm)	Max. in (mm)	Min. in (mm)	Max. in (mm)
Post Terminal				
Opposite	0.625 (15.8)	15 (381)	2 (50.8)	96 (2438.4)
Tandem	0.625 (15.8)	15 (381)	2 (50.8)	96 (2438.4)
Parallel	1.5 (38.1)	15 (381)	2 (50.8)	96 (2438.4)
Opposite (with holes)	0.625 (15.8)	15 (381)	5.5 (139.7)	96 (2438.4)
Tandem (with holes)	0.625 (15.8)	15 (381)	5.5 (139.7)	96 (2438.4)
Parallel (with holes)	1.5 (38.1)	15 (381)	5.5 (139.7)	96 (2438.4)
Leads				
Type C, E, F, H	1 (25.4)	15 (381)	5.5 (139.7)	96 (2438.4)
Type K				
w/o mounting holes	1 (25.4)	15 (381)	5.5 (139.7)	96 (2438.4)
with mounting holes	1.5 (38.1)	15 (381)	5.5 (139.7)	96 (2438.4)
European Plug				
Vertical	1 (25.4)	15 (381)	5.5 (139.7)	96 (2438.4)
Horizontal	2.5 (63.5)	15 (381)	6.25 (159)	96 (2438.4)
Three Phase	3 (76.2)	15 (381)	5.5 (139.7)	96 (2438.4)
Dual Voltage	3 (76.2)	15 (381)	5.5 (139.7)	96 (2438.4)
Terminal Box				
Tandem	1.5 (38.1)	15 (381)	4.25 (108)	96 (2438.4)
Parallel	2.5 (63.5)	15 (381)	4.25 (108)	96 (2438.4)
Tandem (with holes)	1.5 (38.1)	15 (381)	6.25 (159)	96 (2438.4)
Parallel (with holes)	2.5 (63.5)	15 (381)	6.25 (159)	96 (2438.4)

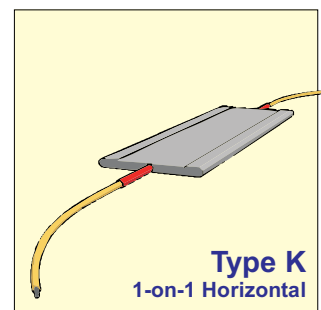
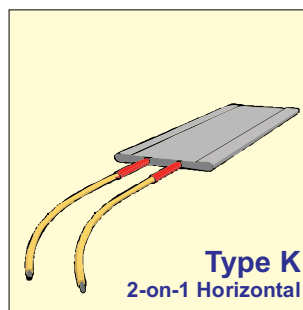
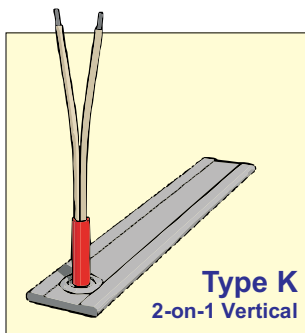


Type C
Leads with tight stainless steel overbraid. Braided leads offer flexibility and abrasion protection.

Type E
Leads with loose stainless steel overbraid. Braided leads offer flexibility and abrasion protection.

Type H
Leads with stainless steel flexible hose provides superior abrasion protection.

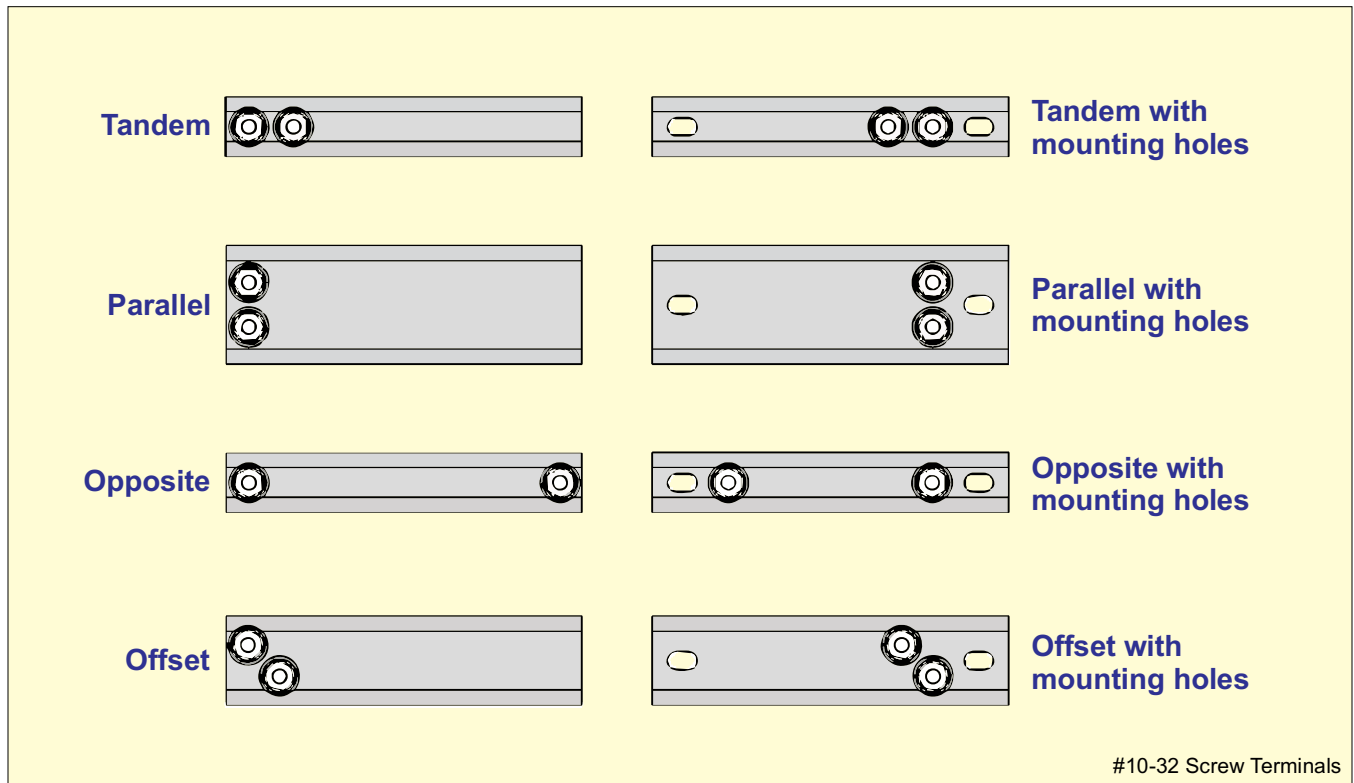
Type F
Leads with fiberglass sleeving. Provides additional high temperature protection.



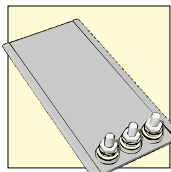
Type K (2-on-1 Vertical)
Leads with no additional protection.

Type K (2-on-1 Horizontal)
Leads with no additional protection. Both leads exit horizontally from end.

Type K (1-on-1 Horizontal)
Leads with no additional protection. Leads exit horizontally from each end.



Terminal Options



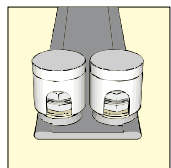
Three Terminal Construction:

Ground Terminal

Can be connected to the sheath for easy grounding.

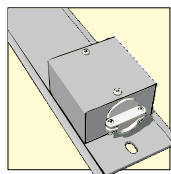
3-phase or Dual Voltage

A third terminal can be added to provide dual voltage or three-heat operation.



Ceramic Terminal Covers

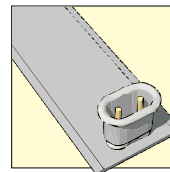
A cost effective way to insulate post terminals. Sized for standard length posts. #10-32 screw thread size.



Terminal Box

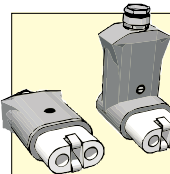
Covers terminals for added safety. Conduit may be attached to the box through 7/8" dia. holes in the ends of the box.

European Plug



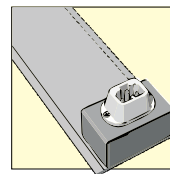
European Plug (DIN)

"ERGE" European style plugs provides a safe and simple way to apply power to band heaters. Maximum of 15A at 240V.



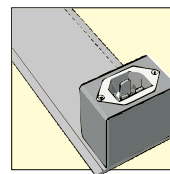
European Style Female Adaptors

For use with "ERGE" high temperature European style plugs.



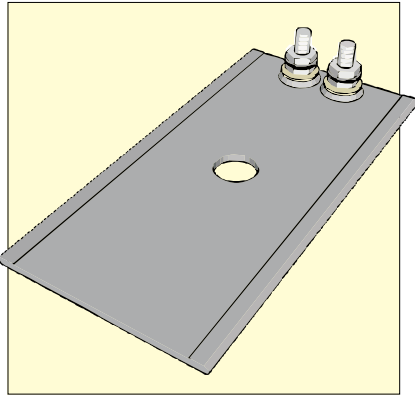
European Plug (IEC) Vertical

Maximum of 15A at 240V.

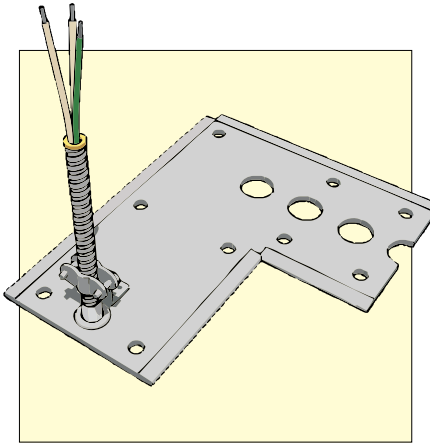


European Plug (IEC) Horizontal

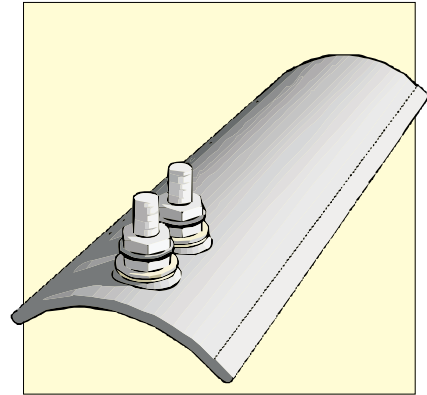
Maximum of 15A at 240V.



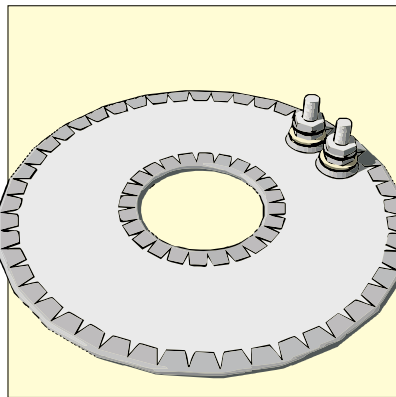
Holes or Slots
Provides access for instrumentation. Standard hole sizes up to 2" diameter.



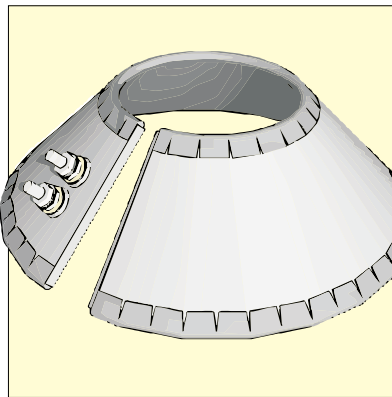
Odd Shapes
Mica strip heaters can be made into virtually any custom shape. Drawing or sample required.



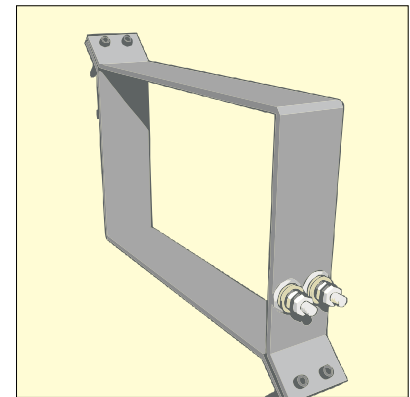
Curved Strip Heater
For piping applications. Specify pipe diameter (O.D.) when ordering.



Ring Shaped
Specify **inside** and **outside** diameters when ordering.



Cone Shaped
For heating hoppers or funnels. Specify top diameter, bottom diameter, and cone height when ordering.



Rectangular Construction
Made to exact customer specifications. Dimensional drawing is required.