

The mineral insulated (MI) band heater is a high-performance heater. Its performance is derived from a material with much higher thermal conductivity than mica and hard ceramic insulators used in conventional heaters. It is used to insulate the nickel chrome resistance wire from the stainless steel sheath. It is the solution for applications that require high watt densities (W/in^2) and/or high temperatures.

Applications

- Extruders
- Blown film dies
- Injection molding machines
- Other cylinder heating applications

Operating temperatures up to 1400°F (760°C)

- Allows safe melting of resins such as PEEK®, Teflon®, Ultem® and Zytel®

Higher watt densities

- Contributes to faster heat-up and throughput for increased productivity

Stainless steel cover and side fold design

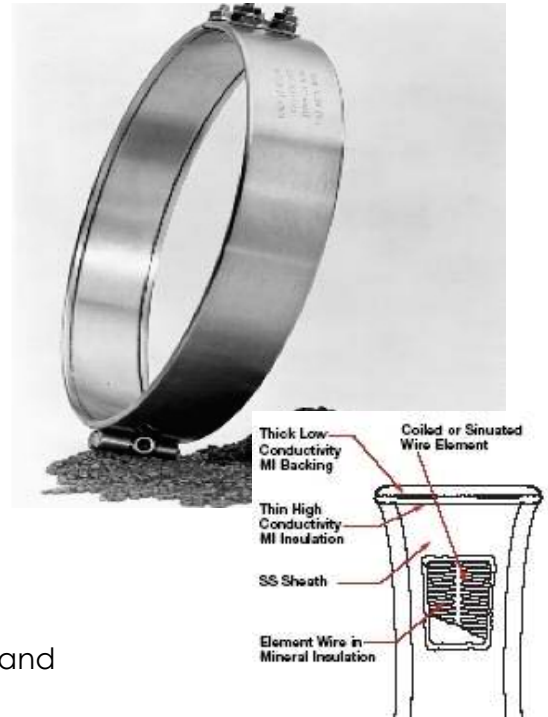
- Resists contamination from overflow of plastic or other free-flowing materials

Permanently attached clamp bars

- Eliminates cumbersome clamping straps, making installation easier

Construction Styles

One-Piece heaters are the most efficient construction, providing the most heated area. Two-piece construction is recommended for larger diameter heaters. Thermal Solutions can provide a variety of styles, including custom design.



High thermal conductivity of MI and low mass construction

- Gives an almost instant response to temperature control
- Eliminates thermal lag and temperature overshoot associated with ceramic knuckle heaters

Clamping Variations

Clamping brackets are formed from its outer sheath, creating a “built-in strap”. Barrel nuts and socket head cap screws generate clamping power, required in high temperature operations.



STANDARD CLAMPING STRAP



SEPARATE CLAMP STRAPS



LOW-PROFILE BUILT IN STRAP



OUTRIGGER BUILT IN STRAP



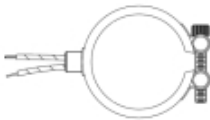
SPRING LOADED BUILT IN CLAMP

Terminations



POST TERMINALS

Post terminals provide optimum connections. Screw thread is 10-24. To order, specify **post terminals** (metric threads available).



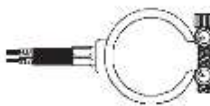
PLAIN WIRE

Lead wires exit straight out through a stainless steel eyelet. High temperature mica insulated lead wire is standard.



WOVEN METAL BRAID

Two fiberglass insulated lead wires exit in a single metal braid for good abrasion protection, lead flexibility and wiring convenience.



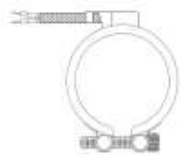
FIBERGLASS SLEEVE

Loose fiberglass sleeve encloses two fiberglass leads for additional protection where high temperature or minor abrasion is present.



FLEXIBLE STEEL HOSE

A flexible steel hose encloses the leads for maximum abrasion protection. Leads are 2 in. (51 mm) longer than hose. Standard leads are 12 inches long with 10 inches protected.



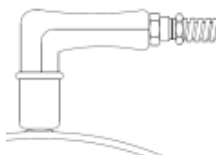
RIGHT ANGLE

Stainless steel braid exits parallel to the heater through a low profile stainless steel cap, which acts as a strain relief against excessive flexing or pulling of wire.



TERMINAL BOX

Terminal boxes, which attach directly to the heater, act as a safety feature by covering the terminals. Conduit may be attached to the box through holes in the ends of the box.



DISCONNECT PLUG

The combination of high-temp male and female “quick disconnect” plugs eliminates exposed terminals and wiring that can be a potential hazard to employees or machine.

Inner Diameter Available

Width		1 Piece				Expandable				2 Piece			
		Min		Max		Min		Max		Min		Max	
IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM	IN	MM
1.0	25.4	1.0	25.4	to 6.0	152.4	3.0	76.2	to 12.0	304.8	3.0	76.2	to 12.0	304.8
1.4	34.9	1.0	25.4	to 3.0	76.2	3.0	76.2	to 6.0	152.4	3.0	76.2	to 6.0	152.4
1.5	38.1	1.0	25.4	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
2.0	50.8	1.3	31.8	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
2.5	63.5	1.3	31.8	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
3.0	76.2	1.5	38.1	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
3.5	88.9	1.8	44.5	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
4.0	101.6	2.0	50.8	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
4.5	114.3	2.3	57.2	to 14.0	355.6	3.0	76.2	to 14.0	355.6	3.0	76.2	to 28.0	711.2
5.0	127.0	2.5	63.5	to 14.0	355.6	3.0	76.2	to 14.0	355.6	4.0	101.6	to 28.0	711.2
5.5	139.7	2.8	69.9	to 14.0	355.6	3.0	76.2	to 14.0	355.6	4.0	101.6	to 28.0	711.2
6.0	152.4	3.0	76.2	to 14.0	355.6	3.0	76.2	to 14.0	355.6	4.0	101.6	to 28.0	711.2
7.0	177.8	to 14.0		355.6	4.0	101.6	to 14.0	355.6					

Optional Features

- Built In Thermocouple
- Thermocouple Coupling
- Ground Wire
- Lead Wire
- Holes and Cutouts
- Bayonet Adapter
- Heavy Duty Quick Disconnect Plugs
- Lead End Connections
- TIG Welded Barrel Nuts
- Low-Profile Clamp Bars

Accessories

- Ceramic Terminal Covers
- Ceramic Wire Connectors
- Ring Terminals
- Splice (Butt) Connectors
- Metallic Terminal Box

How To Order

- Specify Quantity
- Inside Diameter and Width
- Voltage and Wattage
- Lead Type and Length (if applicable)
- Special Options