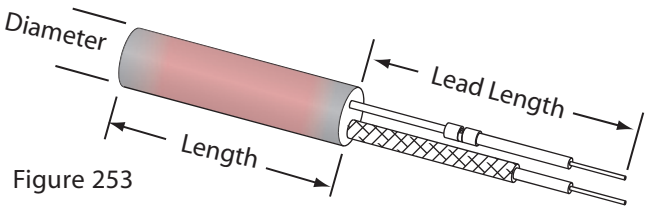


Figure 253

Crimped-On Leads, Figure 253

A high temperature double crimp connects the MGT (450°C) leads to solid nickel pins. This construction is recommended for applications with elevated temperatures. Due to the rigid nickel pins, this construction is not recommended in applications where movement or flexing is encountered, or if sharp bends are required adjacent to the heater exit

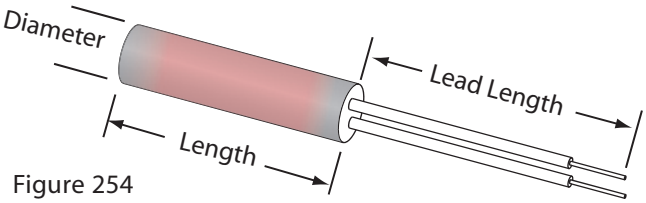


Figure 254

Swaged in Leads, Figure 254

High temperature MGT (450°C) wire is internally connected and swaged in place. This construction is recommended for applications in which the leads must be bent at the exit point from the heater and where mild flexing may be found. For applications with continuous or more severe movement, we would recommend metal braid or armor cable.

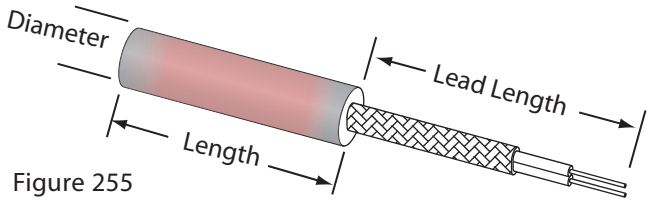


Figure 255

Stainless Steel Braid, Figure 255

High temperature MGT (450°C) wire is internally connected and swaged in place along with stainless steel braid. This construction offers protection against abrasion and sharp edges. This is a very strong construction which offers full length flexibility. This construction is recommended in applications with flexing and where the leads must pass through metal openings or routed along metal components.

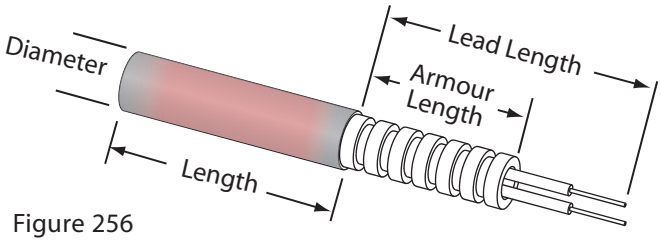


Figure 256

Stainless Steel Armoured Cable (Hose), Figure 256

High temperature MGT (450°C) wire is internally connected and swaged in place along with stainless steel hose. This construction is recommended for applications in which the leads are subjected to abrasion or run the risk of being pinched. This is the strongest lead protection available and works well in moving or flexing applications.

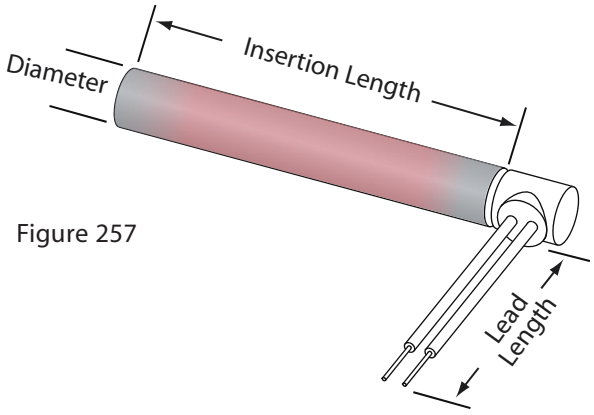


Figure 257

Right Angle Fibreglass Leads, Figure 257

High temperature MGT (450°C) leads exiting at right angle to the sheath. This construction offers a compact design where space is limited. This construction is not recommended where abrasion or flexing is present.

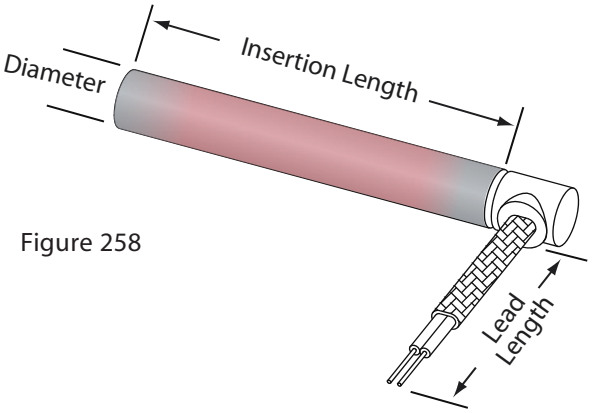


Figure 258

Right Angle Stainless Steel Braid, Figure 258

Stainless steel braid over high temperature MGT (450°C) wire exiting at right angle to the sheath. This construction is recommended in applications with flexing and where the leads must pass through metal openings or routed along metal components. This construction is desirable when space is limited and it is not feasible to bend standard leads.

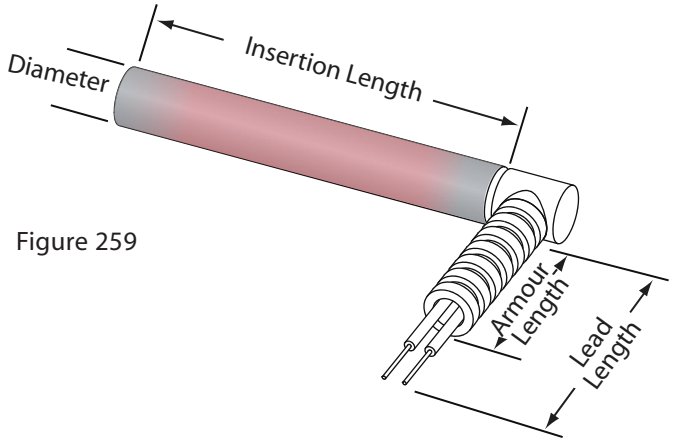


Figure 259

Right Angel Stainless Steel Armour (Hose), Figure 259

Stainless steel hose over high temperature MGT (450°C) wire exiting at right angle to the sheath. This is the strongest lead protection for use in applications where severe abrasion is present. These leads offer good flexibility and are good for moving or flexing applications.

Heater Diameter	Minimum Unheated Length
1/8″	Not Available
1/4″	1″
5/16″	1 1/2″
3/8″	1 1/2″
1/2″	1 1/2″
5/8″	1 9/16″
3/4″	1 7/8″
15/16″	1 7/8″
1″	1 7/8″

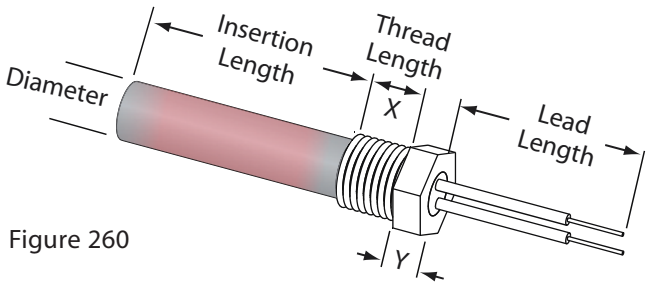


Figure 260

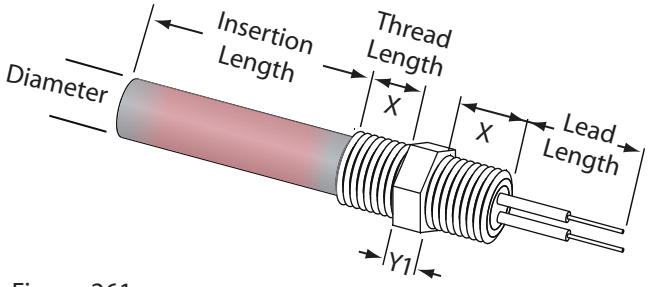


Figure 261

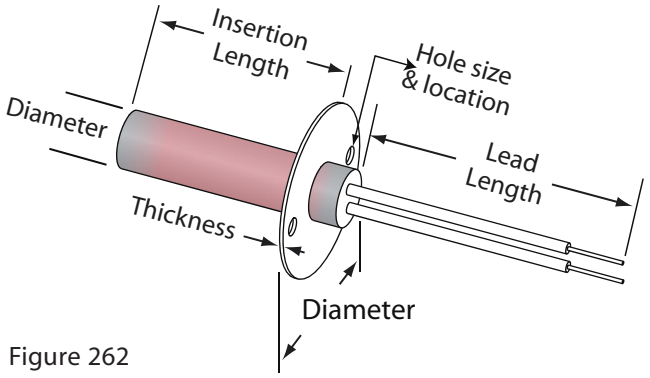


Figure 262

Single and Double Threaded Fittings, Figures 260 & 261

Single or double threaded fittings attached to sheath to allow for installation into threaded holes.

Fitting Materials - Brass, Steel and Stainless Steel

Leadwires - Fiberglass for high temperature applications
- Teflon for moisture protection
- Stainless Braid or Hose for flexing applications and abrasion protection

Terminal Boxes - General purpose and moisture resistant housings

Heater Diameter	NPT Size	X Dimension	Y Dimension	Y1 Dimension
1/4"	1/8-27	3/8"	3/16"	1/4"
3/8"	1/4-18	1/2"	3/16"	1/4"
1/2"	3/8-18	9/16"	1/4"	1/4"
5/8"	1/2-14	5/8"	1/4"	5/16"
3/4"	3/4-14	3/4"	1/4"	3/8"
7/8"	1-11 1/2	3/4"	1/4"	3/8"
1"	1-11 1/2	3/4"	1/4"	3/8"
1 1/4"	1 1/4–11 1/2	7/8"	5/16"	1/2"

Mounting Flanges, Figure 262

Mounting flanges are recommended for applications where vibration or movement may cause the heater to be disloged from its hole. Stainless steel flanges are available in a variety of sizes and configurations. The standard flange is round and is supplied with two mounting holes. For heaters 5/8" diameter and under, the flange would be 1 1/2" in diameter. For larger diameter heaters the standard flange would be 2.00" in diameter.

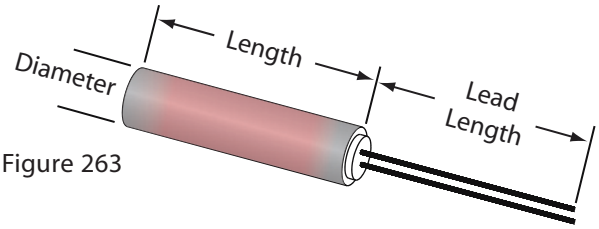


Figure 263

Teflon End Seal, Figure 263

A Teflon plug is swaged in place along with Teflon leads. This construction resists oil and water to 250°C/480°F. There is a minimum of a 1.00" unheated length at the lead end. Longer cold sections may be required if the watt density or operating temperature is high.

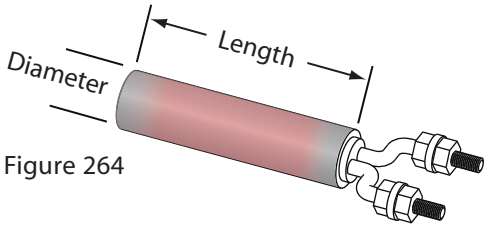


Figure 264

Screw Terminals, Figure 264

Threaded stud terminals are supplied complete with high temperatue nuts and washers. Standard screw is #8-32. Available in $^{5}/_{8}$", $^{3}/_{4}$", 1", 16 mm and 20mm diameters heaters

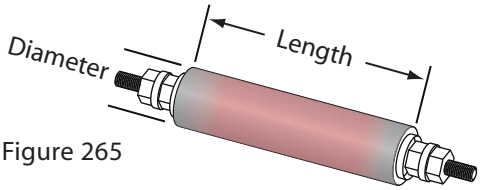


Figure 265

Double Ended Terminals, Figure 265 & 266

These terminations are ideal for applications where wiring form both ends is required. A minimum cold section of 1" is required for these leads.

Available Terminations - Solid nickel pins
- Leadwires
- Threaded studs

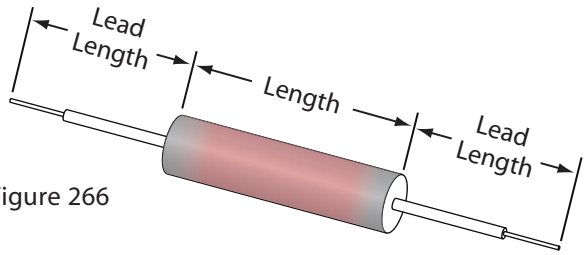


Figure 266

Terminal Boxes, Figure 267

Terminal boxes are permanently attached to the heater sheath to provide excellent protection in a variety of environments.

Available Boxes - General purpose sheet metal
- Moisture proof
- Cast aluminum explosion resistant

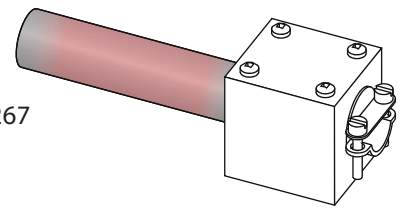


Figure 267

Figure 268

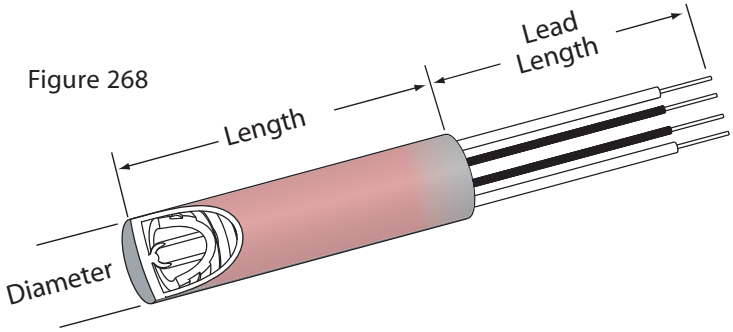


Figure 269

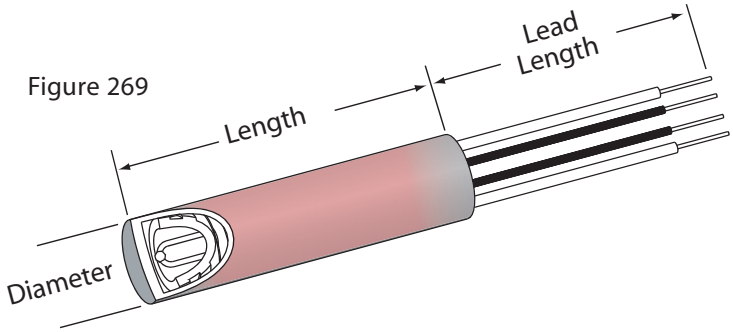


Figure 270

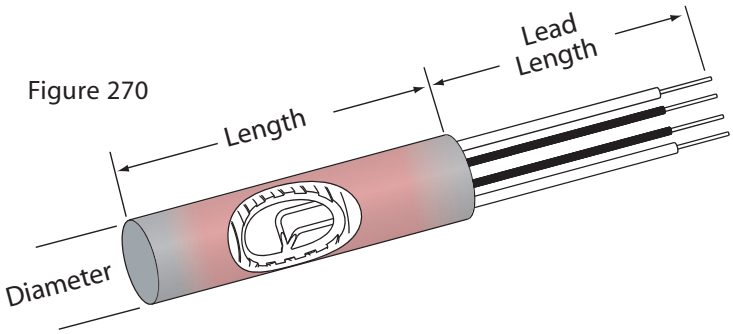
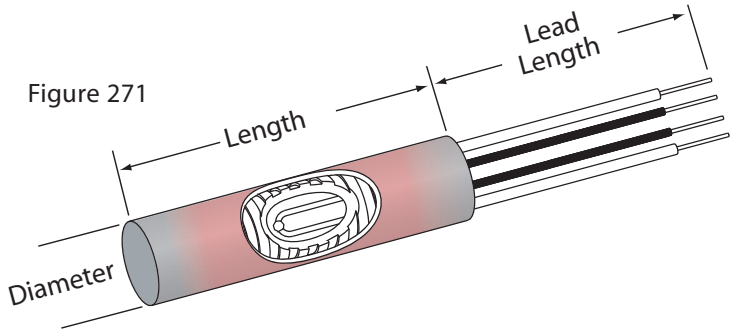


Figure 271



Internal Thermocouples

Internal thermocouples are built into the heater assembly to monitor the internal or sheath temperatures. These are useful as high limit devices or in applications where space is at a premium. The power and sensor leads exit the sheath together and can be ordered with a variety of lead protections. Not all thermocouple configurations are available on smaller diameter heaters.

Type J and K calibrations are standard for the shown constructions.

Grounded at Disc End, Figure 268

The thermocouple junction is grounded to the disc end of the heater. This construction is commonly used in hot runner applications. The disc end can be filled with silver solder and ground flat. This will ensure good contact when inserted into a flat end blind hole

Ungrounded at Disc End, Figure 269

The thermocouple junction is ungrounded and is located just behind the disc end. This will give a reference temperature of the part being heated.

Grounded at Centre, Figure 270

The thermocouple junction is grounded to the sheath along the length of the heater. The standard location is at the center of the heater, but can be located anywhere along the lenght of the sheath. This construction will provide a quick response

Ungrounded at Centre, Figure 271

The thermocouple junction is ungrounded and is centered in the diameter of the sheath. The standard location is at the center of the heater, but can be located anywhere along the length of the sheath. Typically used as a high limit in air or vaccum applications