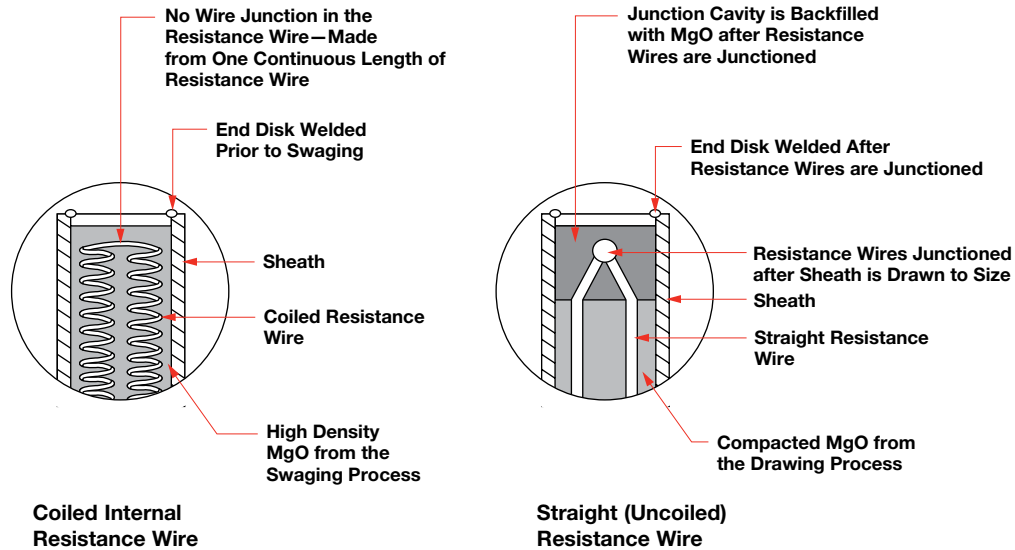




Coil/Cable Heaters

Internal Construction (Continued)

Disk End of Sheath



The end of the heater sheath opposite from the lead exit end is called the disk end.

With coil construction methods, the internal resistance wires form a 180° bend inside the sheath and do not require a junction. After the end cap has been welded in place, the entire area at the end of the sheath is swaged to provide maximum density of the magnesium oxide (MgO).

Straight (Uncoiled) Resistance Wire

With straight construction, the internal wires—whether resistance or thermocouple—must be junctioned before the heater sheath can be finished. MgO is removed from the tip of the sheath to expose the wires, which are junctioned by welding. MgO powder is backfilled into the cavity surrounding the junctioned wires and lightly compacted. The end cap is inserted and welded into place.

Thermocouples

Internal thermocouples are available in ASTM Type J or K calibration with both the coil or straight construction methods.

Coil:

- 0.125 in. (3.2 mm) round
- 0.128 x 0.128 in. (3.3 x 3.3 mm) square
- 0.102 x 0.156 in. (2.6 x 4.0 mm) rectangular

Straight:

- 0.125 in. (3.2 mm) round
- 0.157 in. (4.0 mm) round
- 0.188 in. (4.8 mm) round
- 0.128 x 0.128 in. (3.3 x 3.3 mm) square
- 0.102 x 0.156 in. (2.6 x 4.0 mm) rectangular

Specialty Heaters



Coil/Cable Heaters

Options—Internal Construction

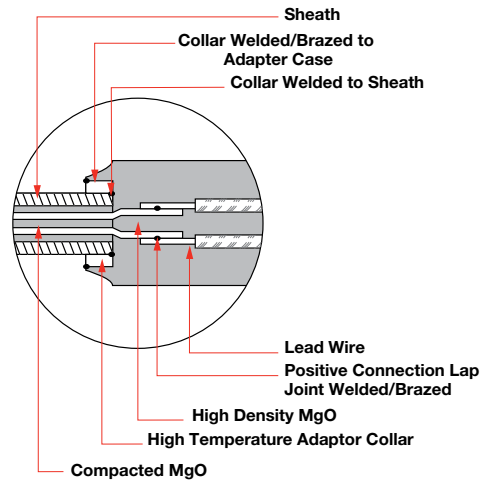
Adapters

Adapters are transition sections where lead wires are attached and connected with the internal wires from the heater sheath.

The **positive connection** lap joint brazes or welds the wire lap joint before the adapter is compacted. Positive connection is used in all standard applications and adds protection in high temperature environments.

An extended length adapter collar, or **high temperature** collar, is used as a heat sink enabling the heater to operate in high temperature, demanding applications.

The positive connection and collar are used in conjunction with both power leads and thermocouple leads.



External Construction

Lead Wire

100 percent nickel, copper, nickel plated copper or silver plated copper

Insulation

PTFE, fiberglass or a high temperature variety such as MGT or MGE

Lead Protection

Stainless steel hose, stainless steel braid or fiberglass braid

Contact your Watlow representative for details.