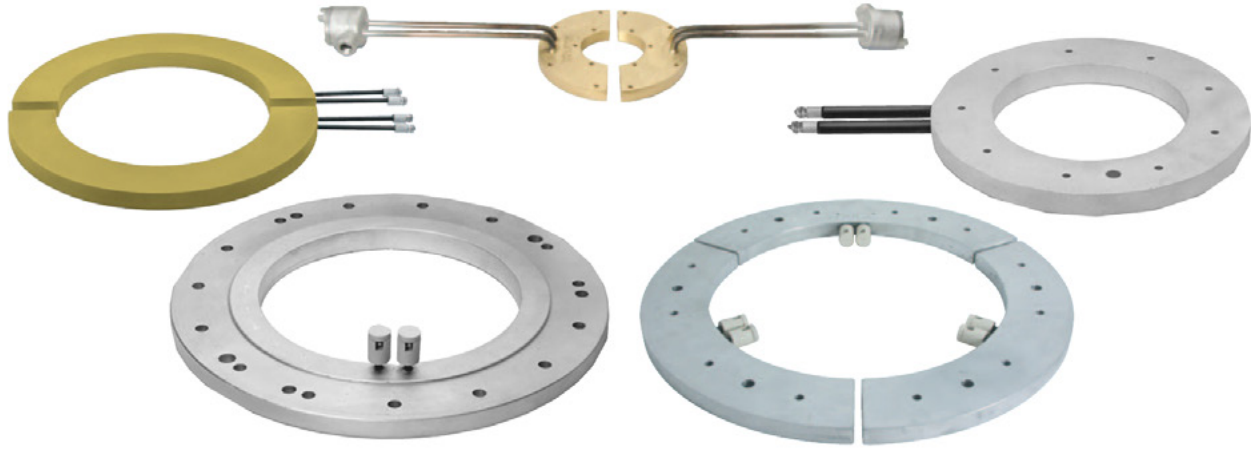


# CAST-IN HEATERS

## TERMINAL PROTECTION BOXES FOR CAST-IN HEATERS

### CAST-IN ALUMINUM OR BRONZE RING HEATERS FOR PLASTICS PROCESSING EQUIPMENT



#### ***Designed to Heat Limited Access Locations***

Cast-In Ring Heaters provide an excellent means of applying extremely uniform heat to limited access application areas. Cast-In Ring Heaters are frequently used in Blown Film Die, Extrusion Die, Screen Changer and Extruder Barrel Adapter applications where long life and minimal maintenance concerns are prevalent.

The design scope of this product line makes it possible to cast large or small diameter disc shaped rings with nominal thicknesses of 5/8" to 1". These units are an excellent choice for heating the top or bottom of a cylindrical die.

As a standard, Cast-In Ring Heaters are generally manufactured in aluminum because of its superior thermal conductivity. For higher temperature or high watt density requirements, bronze or brass alloys can be used. The units can be fully machined to include through holes for mounting, thermocouple holes and surface machining.

#### ***Standard Design Features and Options***

- Computer designed, precisely formed tubular heating element optimizing the heat transfer pattern
- Variety of termination options including terminal enclosure housings
- Variety of shapes and sizes
- Through holes, tapped holes or cutouts to facilitate mounting or obstructions
- Precision machining of one or all surfaces of casting – specify your individual requirements

#### ***Custom Manufactured***

For sizes and ratings not listed, we will design and manufacture a Cast-In Ring Heater to meet your requirements.

Specify the following:

- Inside Diameter
- Outside Diameter
- Thickness
- Wattage and Voltage
- Number of Segments
- Termination Type
- Alloy (Aluminum or Bronze)
- Special Features
- Machining Specifications
- Detailed Drawing

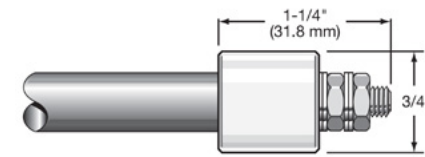
# CAST-IN HEATERS

## ELECTRICAL TERMINATION OPTIONS

### STANDARD TUBULAR HEATER TERMINATIONS FOR CAST-IN HEATERS

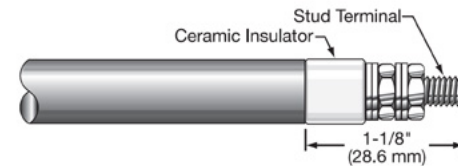
#### Type S Standard Unless Otherwise Specified

- Heavy Duty Ceramic Insulators.
- 0.315" diameter heater has 8-32 screw terminals.
- 0.430" diameter heater has 10-32 screw terminals.



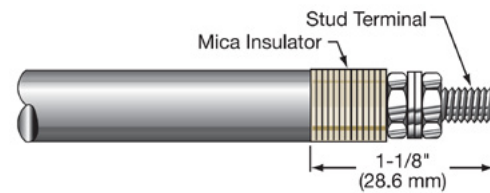
#### Type T7

- Ceramic insulator is the same diameter as the heating element.
- 0.260" diameter heater has 6-32 screw terminals.
- 0.315" diameter heater has 8-32 screw terminals.
- 0.430" diameter heater has 10-32 screw terminals.



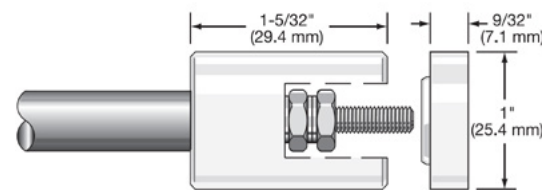
#### Type T

- Mica insulator is the same diameter as the heating element.
- 0.260" diameter heater has 6-32 screw terminals.
- 0.315" diameter heater has 8-32 screw terminals.
- 0.430" diameter heater has 10-32 screw terminals.



#### Type C4

- Heavy duty ceramic insulator with terminal cover.
- 0.315" diameter heater has 10-32 screw terminals.
- 0.430" diameter heater has 10-32 screw terminals.



#### Type P - Plain Pin

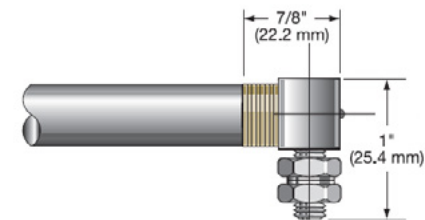
- Plain terminal pin. Specify Length "L." Standard 1/2" (12.7 mm) pin length.

Element Diameter	Nominal Pin Diameter
0.260	0.091
0.315	0.100
0.430	0.120



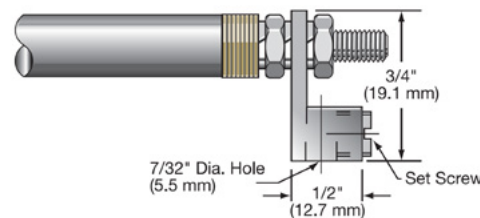
#### Type R

- Mica washers with 90° blockhead screw terminal with 10-32 screw threads. Available for .315" and .430" diameter heaters.



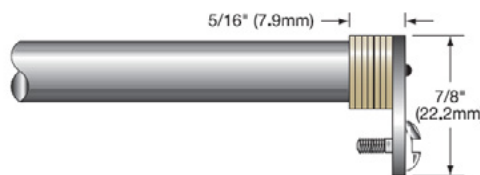
#### Type R2

- Mica washers with blockhead and through hole for lead wire connection.
- Eliminates the use of ring terminals.
- Available for 0.315" and 0.430" diameter heaters. Accepts 6-14 gauge wire.



#### Type E

- Right-angle lug welded to pin with mica washer insulators and 10-32 binding head screw. Available for 0.260", 0.315" and 0.430" diameter heaters.



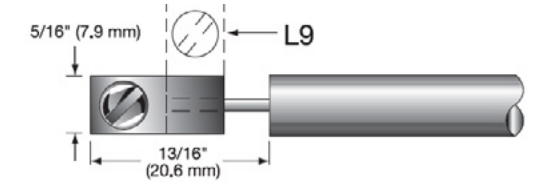
# CAST-IN HEATERS

## ELECTRICAL TERMINATION OPTIONS

### STANDARD TUBULAR HEATER TERMINATIONS FOR CAST-IN HEATERS

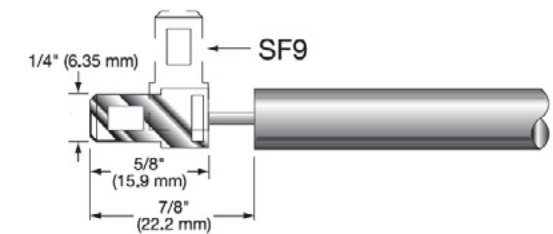
#### Type L & L9

- Terminal lug spot welded to pin with 10-32 binding head screw.
- Available for 0.260", 0.315" and 0.430" diameter heaters.
- Type L represents straight; Type L9 represents 90° to pin. Specify lug orientation.



#### Type SF & SF9

- Quick-disconnect spade tabs spot welded to pin.
- Available for 0.260", 0.315" and 0.430" diameter heaters.
- Type SF represents straight. Type SF9 represents 90° to pin. Specify tab orientation.



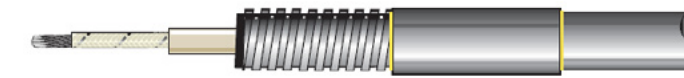
#### Type F

- Flexible lead: insulated stranded wire crimped to cold pin.
- Crimp connection is insulated with fiberglass sleeving.
- Available for .260", .315" and .430" diameter heaters. Wire insulation rated to 250°C, 450°C optional. Specify lead length.



#### Type R1

- Flexible Armor Cable provides excellent protection to lead wires against abrasion and contaminants.
- Available for .260", .315" and .430" diameter heaters.
- Specify cable length and lead length. Style may vary from depiction depending on heater diameter and cable diameter used.



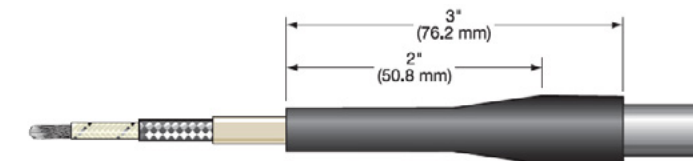
#### Type R1A

- Stainless Steel Wire Overbraid provides flexibility and excellent protection to lead wires against abrasion.
- Available for .260", .315" and .430" diameter heaters.
- Specify stainless steel wire overbraid length and lead length. Style may vary depending on heater diameter and braid diameter used.



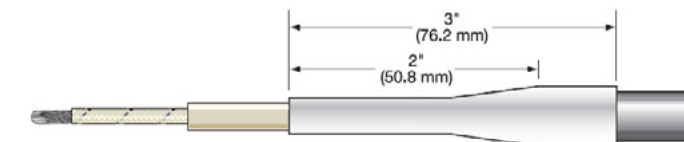
#### Type MR

- Moisture resistant shrink strain relief and lead wire with or without stainless steel overbraid.
- Available for .260", .315" and .430" diameter heaters.
- Specify lead wire and overbraid length. Maximum operating temperature is 350°F (177°C).



#### Type TS

- Contamination seal shrink-down Teflon® sleeving over the heater and lead wire splice.
- Provides a good moisture resistant seal.
- Maximum operating temperature 500°F (260°C). Available for 0.260", 0.315" and 0.430" diameter heaters. Specify lead length.



#### Type P1

- Quick-disconnect plug, either mounted directly on casting or on elements ends offset a specified distance from casting.
- Rating: 16A-250VAC.

