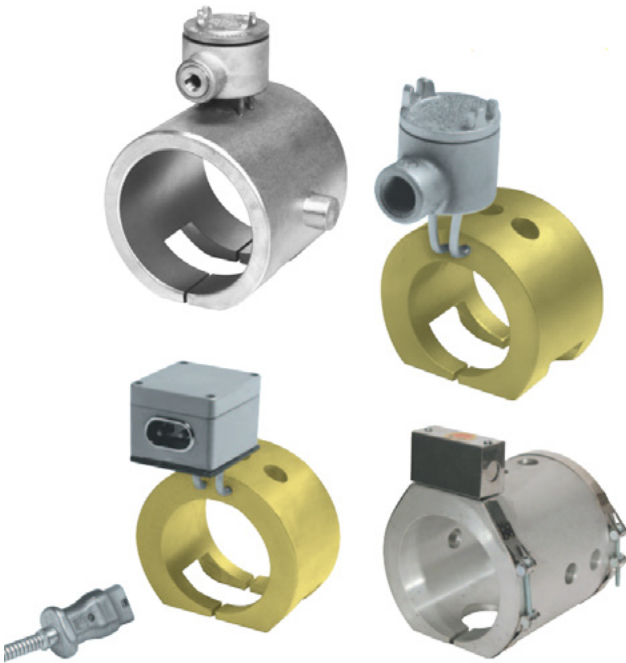


CAST-IN HEATERS

TERMINAL PROTECTION BOXES FOR CAST-IN HEATERS

CAST-IN CROSS HEAD DIE HEATERS FOR PLASTICS EXTRUSION PROCESSING EQUIPMENT



Maximize Service Life on Difficult Extrusion Die Applications

Extrusion Cross Head and related extrusion dies present extremely challenging operating parameters to most conventional heating elements. This is primarily due to the presence of excessive contamination, high watt densities and high temperature as well as unusual physical and dimensional requirements.

Many processors continue to use ceramic and mica band heaters on this application, with frequently marginal results. In these instances, Cast-In Aluminum or Bronze heaters are recommended to substantially improve heater life expectancy and performance.

Cast-In Heaters are less susceptible to contamination problems, and can operate at higher temperatures with higher watt densities. In addition, the design is structurally better suited to accommodate holes and cutouts without compromising the heater's electrical and mechanical integrity.

As a standard, Cross Head Die Heaters are typically designed in aluminum as a one-piece band with a single slot that can be slid over the die and clamped with stainless steel clamping straps. For higher temperature or high watt density requirements, bronze or brass alloys can be used.

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.
- Optional 1/4", 3/8" or 1/2" cooling tubes cast into the cross head die body for liquid cool function.
- Variety of shapes and sizes.
- Aluminum and bronze alloys.
- Through holes, tap 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 Cross Head Die Heater to meet your requirements.

Specify the following:

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

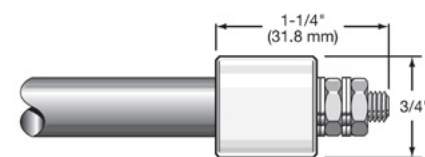
CAST-IN HEATERS

ELECTRICAL TERMINATION OPTIONS

STANDARD TUBULAR HEATER TERMINATIONS FOR CAST-IN HEATERS

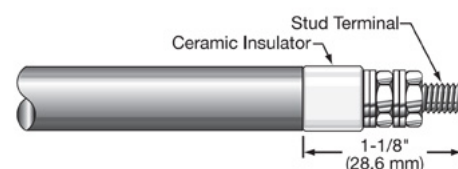
Type S Standard Unless Otherwise Specified

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



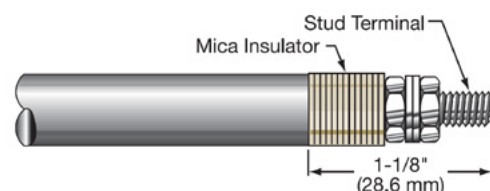
Type T7

- 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.



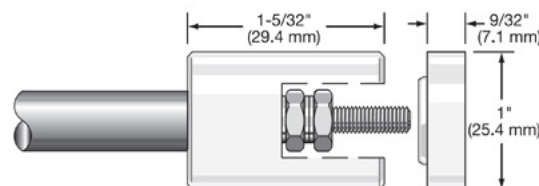
Type T

- 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

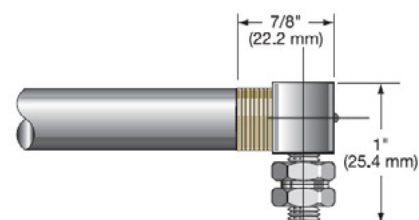
- Plain terminal pin. Specify Length "L." Standard 1/2" (12.7 mm) pin length.

Element Diameter	Nominal Pin Diameter
0.260	0.091
0.315	0.100
0.430	0.120



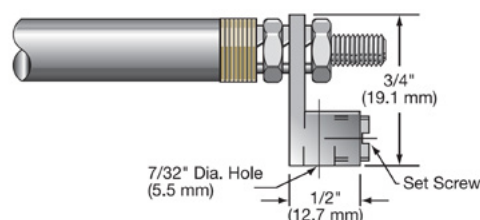
Type R

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



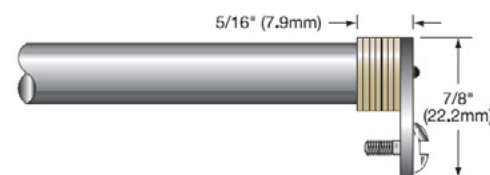
Type R2

- 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.



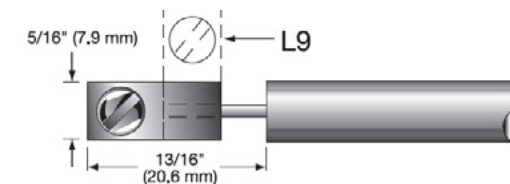
CAST-IN HEATERS

ELECTRICAL TERMINATION OPTIONS

STANDARD TUBULAR HEATER TERMINATIONS FOR CAST-IN HEATERS

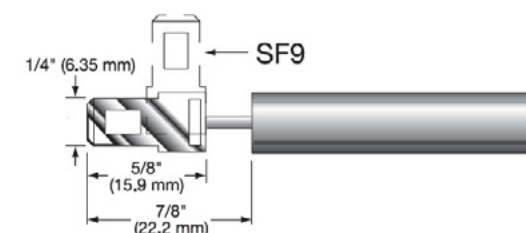
Type L & L9

- 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.



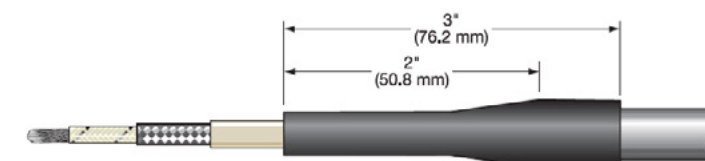
Type R1A

- 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.



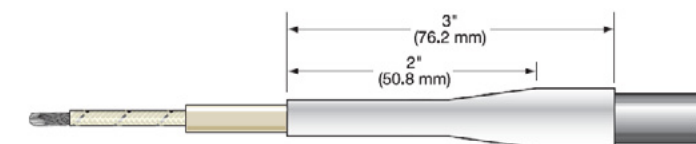
Type MR

- 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.

