



## Cartridge Heaters Thermocouple Leadwire

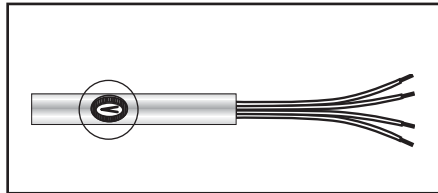
- Process Temperature Control
- Protection from Overheating and Temperature Burnout
- Type J or K

In some applications, the heating element temperature is closely related to the temperature of the platen or mold it is heating. Chromalox Cartridge heaters with built-in thermocouples allow you to precisely measure the temperature at the ideal measurement point within the cartridge heater, and control the internal heater temperature to more closely maintain the optimum process temperature. Longer heater life and increased heat transfer efficiency may be achieved by precisely controlling the heater temperature.

Built-In Thermocouple Cartridge Heaters are available in three styles, each designed for specific application needs.

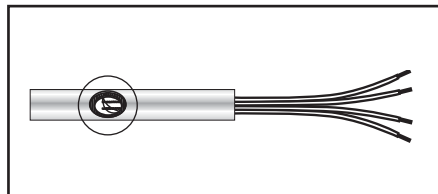
### Thermocouple Cartridge Styles

#### Code T1



Thermocouple (T/C) junction is located in the center of the core and at any point along the length. The T/C is not grounded. Style T1 is used as an overtemperature control or for burnout protection. It can also be used for process temperature control.

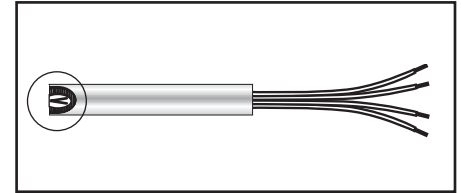
#### Code T2



T/C junction is located at most any point (specify location) along the length of the heater and grounded against the sheath. A 1/2" unheated section must be allowed for the T/C to clear the resistance wire.

Style T2 is used to control process temperature. T/C should be placed along the length of the heater in the most suitable position to control the temperature of the mold or platen being heated.

#### Code T3



T/C junction is embedded in the end disc. The T/C is grounded.

Style T3 is used when the process temperature at the end of the cartridge heater is critical. In applications where the process product flows past the heater end, such as plastic molding, this thermocouple style allows the cartridge end temperature to be closely controlled.

### Thermocouples

Type	Range	
	(°F)	(°C)
Type J	100 - 1400	38 - 760
Type K	100 - 2300	38 - 1260
Diameters	3/8, 1/2, 5/8, 3/4"	
Leadwire Length	Standard 14 inches Maximum length available 36 inches	



### HTRC — Chromalox Heat Transfer and Release Coating (Patented)

Chromalox HTRC is used for improving heat transfer and release in the following applications.

- Cartridge units in drilled holes.
- Tubular units in drilled holes, grooves or clamp-on surfaces.
- Strip and Ring heaters in grooves or clamped on to rough surfaces.

Laboratory tests have demonstrated that in high temperature applications, improved heat transfer can lower the internal wire temperature to provide up to 100% improvement in heater life. Chromalox HTRC is recommended for use in the above applications where sheath temperature of the heater is expected to exceed 750°F.

HTRC has an excellent heat transfer coefficient approaching that of aluminum. Shelf life greater than one year.

- PCN 014293 - 4 oz.
- Max. Temp. -1800°F