

## Cartridge Heaters Modifications & Options

### Modifications & Options

Cartridge heaters can be easily specified to meet the demands of special applications. Simply select from a variety of standard options and features to customize the heater to your specific needs. For customized engineering or alternative options, contact your Chromalox sales representative for fast turnaround on your specifications.

- Leadwire Types
- End Seal Options
- Lead Options
- Mounting Options
- Built-In Thermocouple

### Leadwire Types

Description	Volts	Operating Temperature	
		(°F)	(°C)
Mica Fiberglass® Insulation	300V Standard 600V	842	450
Fluoropolymer	300V 600V	392	200

### Seal Options

Type	Description/Application
Epoxy	Epoxy seal available on above leads by voiding end of sheath and filling with epoxy to provide a moisture barrier.
Fluoropolymer	A swaged-in seal that provides additional moisture resistance.
RTV	For applications where a moisture barrier is required.
Hermetic	Ceramic-to-metal seal is good for element temperatures up to 1000°F. Specify heater length beyond the seal. Metal portion of the seal overlaps the heater sheath by 3/16".
MR SEOT2	Meets UL File SEOT2.SA 12768

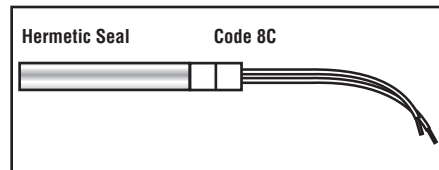
### End Seal Temperature Limits

Description	Operating Temperature	
	(°F)	(°C)
Air Set Cement Standard	1000	538
Epoxy Seal	194	90
Fluoropolymer Seal	392	200
RTV Seal	284 392	140 200
Hermetic Seal	1000	538
MR-SEOT2	374	190

### End Seal Options

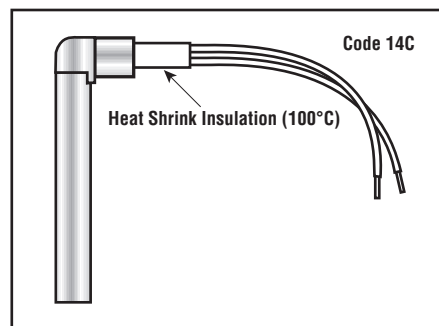
#### Hermetic Seal

Ceramic-to-metal seal is good for element temperatures up to 1000°F. Specify heater length beyond the seal. Metal portion of the seal overlaps the heater sheath by 3/16". For washdown conditions.



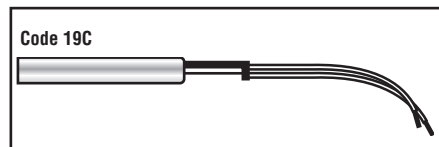
### Lead Options

#### Right Angle Flexible Leads



#### Strain Relief

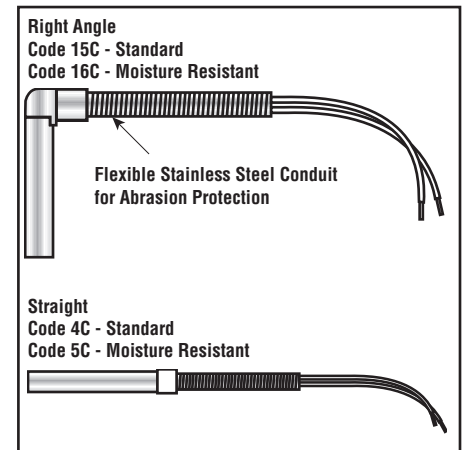
Strain Relief supports leads to reduce bending, crimping and breakage.



### Lead Options (cont'd.)

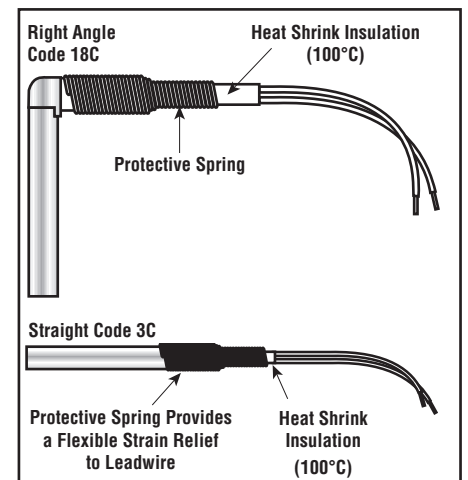
#### Flexible Stainless Steel Conduit

Flexible Stainless Steel Conduit provides leadwire protection from abrasion and sharp edges, and facilitates easier handling in harsh environments. Available in both straight and right angle configurations.



#### Protective Spring

Available in both straight and right angle configurations, the Protective Spring gives strong, yet flexible leadwire protection from bending, fatigue and flexing.



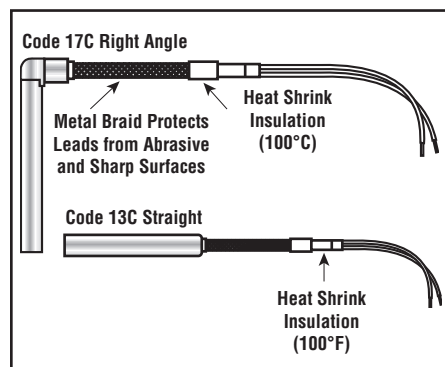
## Cartridge Heaters

### Modifications & Options (*cont'd.*)

#### Lead Options (*cont'd.*)

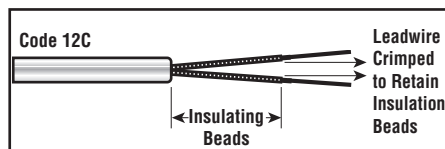
##### Metal Braid

Stainless Steel metal braid protects leadwire from abrasion and sharp edges, yet maintains flexibility and ease of installation. Metal braid is available in both straight and right angle configurations.



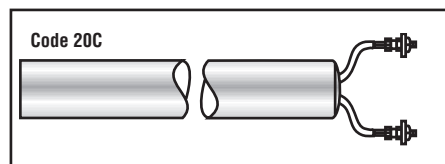
##### Ceramic Beads

Ceramic Bead insulation can be specified to protect leadwires from high ambient temperatures up to 1200°F (649°C). To order, specify ceramic beads length and additional lead length.



##### Threaded Post Terminals

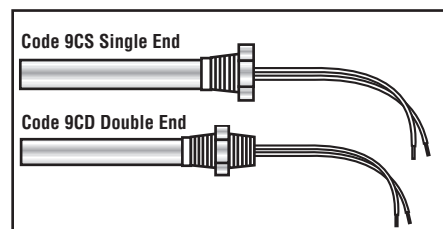
Post Terminals provide a strong, secure connection to buss bars or ring/fork connectors. Available only on 5/8 and 3/4" diameter heaters.



#### Mounting Options

##### Threaded Fittings

Threaded fittings allow the heater to be easily installed into a threaded hole for immersion applications. Available with single or double threaded fittings. The fitting overlaps the cartridge heater sheath by 1/4". Specify "brass" or "stainless steel" threaded fitting.

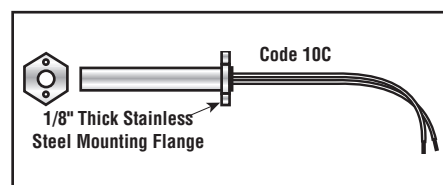


##### Threaded Fitting Sizes

Nom. Heater Diameter (In.)	NPT Size (In.)	Hex Size (In.)
1/4	1/8 - 27	7/16
3/8	1/4 - 18	9/16
1/2	3/8 - 18	11/16
5/8	1/2 - 14	7/8
3/4	3/4 - 14	1-1/16

##### Mounting Flange

The mounting flange option allows for easy mounting and specific positioning of the heater within an application.



##### Wire Pull

The Wire Pull assists in heater removal.

