

### Cartridge Heater — Double Ended National Pipe Thread (NPT)

#### Type CN Double Threaded Fitting Mounting Termination Fitting Flush with Lead End of Sheath

Available on HDC, HDM, and LDC cartridge heaters

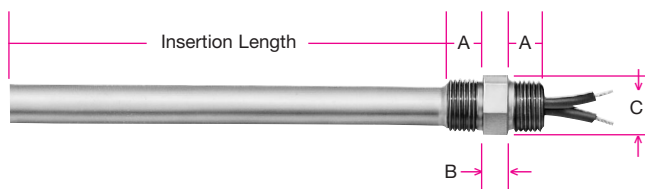
A double threaded pipe fitting is attached to the end of a cartridge heater to allow for installation into a threaded hole. Brass fittings are silver brazed and stainless steel fittings are heli-arc welded.

#### Standard NPT Bushing Dimensions

Heater Diameter (in)	NPT Size	"A"	"B"	"C"
1/4	1/8-27	3/8	1/4	7/16
3/8	1/4-18	1/2	1/4	9/16
1/2	3/8-18	9/16	1/4	11/16
5/8	1/2-14	5/8	5/16	7/8
3/4	3/4-14	3/4	3/8	1-1/8
7/8	1-11 1/2	3/4	3/8	1-3/8
1	1-11 1/2	3/4	3/8	1-3/8
1-1/4	1 1/4-11 1/2	7/8	1/2	1-3/4

#### Type Codes for Double Threaded Fittings

Potting Seal Type	Fitting Material	
	Brass	Stainless Steel
Low Temp Epoxy	CNA	CNN
Hi-Temp Cement	CNB	CNP
Silicone Rubber	CNC	CNQ
Hi-Temp Epoxy	CND	CNR



Potted end seals help to protect the heater from moisture or contamination from plastic material, cleaning solvents, or oils. The bushing cavity can be sealed with various materials such as:

**CNA/CNN Low temperature epoxy potting** — 266°F (130°C), UL rated to 194°F (90°C)  
Teflon® leads internally connected, rated 392°F (200°C).

**CNB/CNP Hi-temp cement potting w/ silicone varnish** — 1000°F (538°C)  
Fiberglass leads internally connected, rated 482°F (250°C).

**CNC/CNQ Silicone rubber potting** — 392°F (200°C)  
Silicone rubber leads internally connected, rated 392°F (200°C).

**CND/CNR High temperature epoxy potting** — 450°F (232°C)  
Teflon® leads internally connected, rated 392°F (200°C).

- A minimum of 1/4" unheated section below the bushing is required.
- Standard 10" (254 mm) leads. Specify longer leads.

### Cartridge Heater Immersion Heater Top Hat Screw Plug Termination

#### Type TH Top Hat Screw Plug

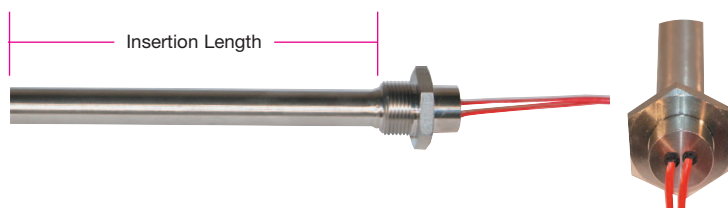
Available on HDC (except 1/8") and HDM cartridge heaters

This heater has a header cap as an integral part of the fitting. Leads exit through small holes which are sealed with epoxy for moisture protection.

**Low temperature epoxy potting** — 266°F (130°C), UL rated to 194°F (90°C)

Teflon® leads internally connected, rated 392°F (200°C).

- Standard 10" (254 mm) leads. Specify longer leads.



### Cartridge Heater — Bulkhead Fitting Termination

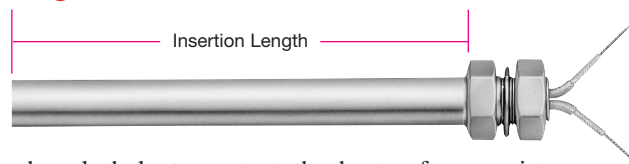
#### Type BF Bulkhead Fitting

Available on HDC and LDC 1/2" and 5/8" cartridge heaters

A 5/8-18 UNF fitting is attached to the end of the cartridge heater to allow for mounting the heater to the wall of a tank or enclosure. Brass fittings are silver brazed and stainless steel fittings are heli-arc welded. Includes a copper washer and jam nut. The lead wires are internally connected. Available with the potting seals listed in the table.

#### Type Codes for Bulkhead Fittings

Potting Seal Type	Fitting Material	
	Brass	Stainless Steel
Low Temp Epoxy	BFA	BFJ
Silicone Rubber	BFB	BFK
Hi-Temp Epoxy	BFC	BFL



Potted end seals help to protect the heater from moisture or contamination from plastic material, cleaning solvents, or oils. The fitting cavity can be sealed with various materials such as:

**BFA/BFJ Low temperature epoxy potting** — 266°F (130°C), UL rated to 194°F (90°C)  
Teflon® leads internally connected, rated 392°F (200°C).

**BFB/BFK Silicone rubber potting** — 450°F (232°C)  
Silicone rubber leads internally connected, rated 392°F (200°C).

**BFC/BFL High temperature epoxy potting** — 450°F (232°C)  
Teflon® leads internally connected, rated 392°F (200°C).

- A minimum of 1/4" unheated section below the bushing is required.
- Standard 10" (254 mm) leads. Specify longer leads.