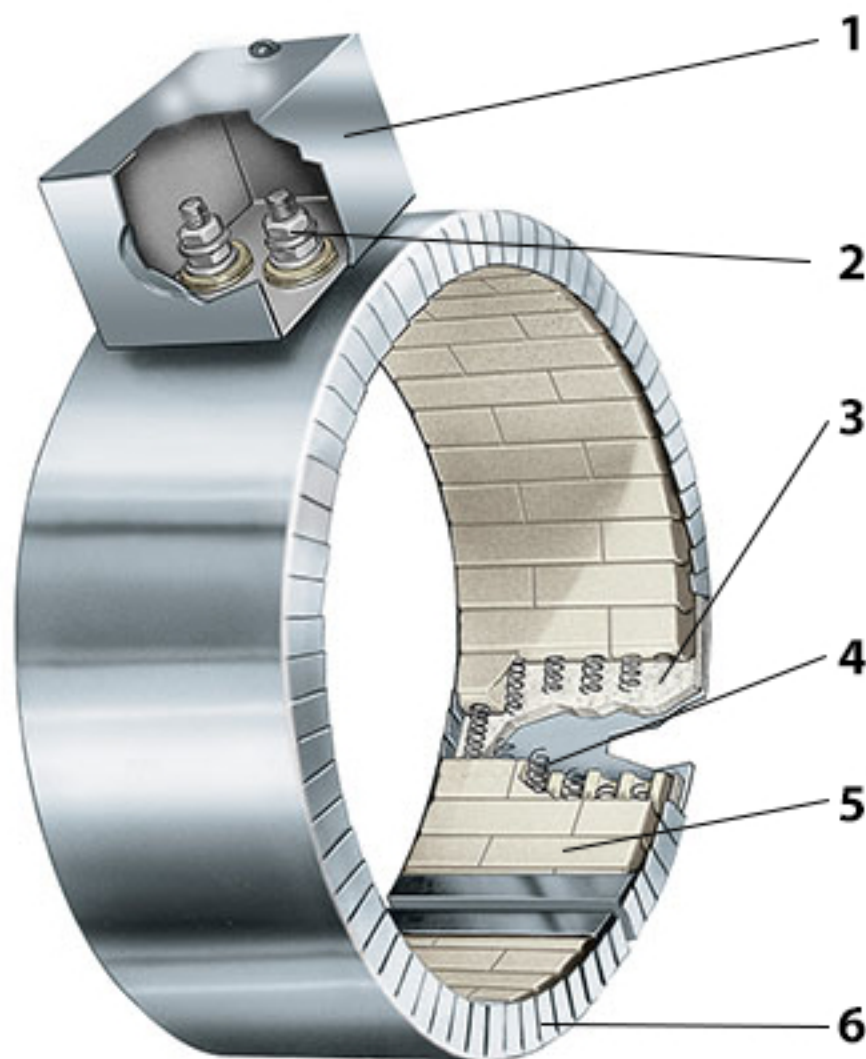


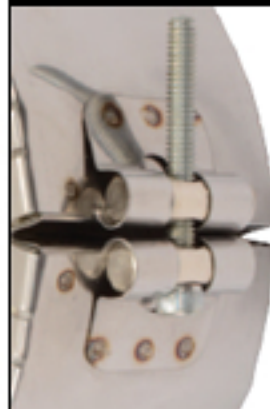
Ceramic Insulated Band Heaters



- 1** General purpose terminal box offers excellent protection to exposed terminals. To simplify electrical wiring, the box has a 1/2" trade size knockout (actual dia. 7/8") that will accept standard conduit or flexible armor connectors.
- 2** Stainless steel screw terminals connected to stranded nickel wire designed to provide maximum average carrying capacity.
- 3** Built-in ceramic fiber insulation 1/4" thick standard on all Ceramic bands will reduce power consumption by 25-30%. Further reduction can be obtained with optional 1/2" thick insulation.
- 4** Helically wound nickel-chrome resistance wire strung through specially designed ceramic insulated bricks.
- 5** Protherm's ceramic insulating bricks provide excellent dielectric strength at high temp & voltages. Interlocking ceramic brick construction is used where applicable to allow for additional heater widths & to improve the rigidity of the heater.
- 6** Stainless steel housing with serrated edges provides maximum flexibility for ease of installation.

Reduces Heat Loss
Conserves Energy
Maximize User Comfort
Reduce Operation Cost

MOUNTING BRACKET



*Located
180° from
terminals*

Ceramic Band Standard Specifications and Tolerances

PERFORMANCE RATINGS

Maximum Temperature: 1400°F (760°C)
Nominal Watt Density: 20–45 W/in² (3–7 W/cm²)
Maximum Watt Density: 45 W/in² (7 W/cm²)

ELECTRICAL RATINGS

Maximum Voltage: 480 VAC per termination
Dual Voltage: Available depending on heater configuration
Maximum Amperage per circuit:
 lead wire termination: 12.5 amp
 screw terminations: 25 amp
Resistance Tolerance: +10%, –5%
Wattage Tolerance: +5%, –10%



Exposed electrical wiring on band heater installations is a violation of Electrical Safety Codes including O.S.H.A.

PHYSICAL SIZE CONSTRUCTION LIMITATIONS

Sheath Material: Stainless Steel
Insulation Material: Ceramic Fiber Blanket
 Standard Thickness: 1/4" (6.4 mm)
 Double Thickness: 1/2" (12.7 mm)

Overall Thickness:

Insulation Type	Dia. less than 4"	Dia. 4" or greater	
	Standard	Standard	Optional
Standard	1/2" (12.7 mm)	5/8" (15.9 mm)	1/2" (12.7 mm)
Double	11/16" (17.5 mm)	3/4" (19.1 mm)	11/16" (17.5 mm)
Ribcage (Uninsulated)	11/32" (8.7 mm)	1/2" (12.7 mm)	11/32" (8.7 mm)

Minimum Width: 1" (25.4 mm)

Standard Width Increments: 1/8" (3.2 mm)

Consult Tempco for non-standard widths.

Maximum Width:

One-Piece & Two-Piece:

Dependent upon the ratio of diameter to width
 Maximum Width to Diameter Ratio is 3:1
 Maximum Width for 5" or greater ID is 15"

Reverse Band: 4" (101.6 mm)

Width Tolerance:

1" (25.4 mm) to 3-1/2" (88.9 mm): ±1/16" (±1.6 mm)
 4" (101.8 mm) to 6-1/2" (165.1 mm): ±1/8" (±3.2 mm)
 Over 6-1/2" (165.1 mm): ±1/4" (6.4 mm)

Minimum Diameter:

One-Piece: 2" (50.8 mm)
Two-Piece: 4" (101.6 mm)
Reverse Band: 5-1/2" (139.7 mm)

Maximum Diameter

One-Piece: 21" (533.4 mm)
Two-Piece & Reverse Band: 44" (1,117.6 mm)

Nominal Gap: 3/8" (9.5 mm) — If a larger gap is required for probes or thermocouples, specify when ordering.

If tighter tolerances are required consult Tempco.

Construction Clamp	Min. ID		Min. Width		Max. ID	
	in	mm	in	mm	in	mm
One-Piece	2	50.8	1	25.4	21	533.4
Two-Piece	4	101.6	1	25.4	44	1117.6
Reverse Band	5.5	139.7	1	25.4	44	1117.6
Standard Insulation	2	50.8	1	25.4		N/A
Double Insulation	2	50.8	1	38.1		N/A
Rib Cage (RCC)	3	76.2	1	114.3		N/A
Built-In Bracket	2	50.8	1	25.4		N/A
Built-In Bracket Spring Loaded	2	50.8	1	25.4		N/A
Latch and Trunnion	4	101.6	1	25.4		N/A
Bent-Up Flange	2	50.8	1	25.4		N/A
Shell Overlap	3	76.2	1	38.1	20	508.0

How To Specify A Ceramic Band Heater

Ceramic band heaters offer several variations in construction, clamping and electrical terminations. For ease of ordering, make a selection from options listed in each of the boxes below.

Construction

(See below)
One-piece
Two-piece
Multiple Sections
(Specify number of sections required.)
Type T – Reverse Heater Band

Insulation

(See page 1-67)
Standard 1/4" insulation (**S**)
Double 1/2" insulation (**D**)
Uninsulated (**R**) (1-75)

Clamping

(See page 1-67)
Type B – Built-in bracket (Standard)
Type S – Built-in bracket with spring loaded screw
Type L – Latch and trunnion
Type F – Bent-up flange (Ears)

Shell Overlap

(See page 1-67)
Provides T/C hole.
(Specify if required.)

Termination

Select termination type from pages 1-68 through 1-74

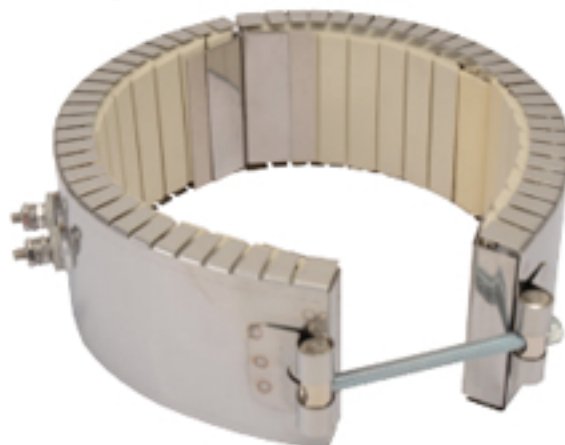
Ceramic Band Construction Styles



One-Piece Band

The One-Piece Ceramic Band Heater is the basic design most often specified by OEMs and processors. It is available with all types of insulation, construction styles, clamping or termination variations.

Min. ID: 2" (50.8 mm)
Min. Width: 1" (25.4 mm)
Max. ID: 21" (533.4 mm)



Two-Piece Band

The Two-Piece Ceramic Band Heater is commonly used on sizes larger than 21" diameter or when it would be inconvenient to use a one-piece heater. It is available with all types of insulation, construction styles, clamping or termination variations.

Min. ID: 4" (101.6 mm)
Min. Width: 1" (25.4 mm)
Max. ID: 44" (1118 mm)

Larger sizes are manufactured in multiple sections. Watts and volts are specified per each section when ordering.

Ceramic Band Construction Variation

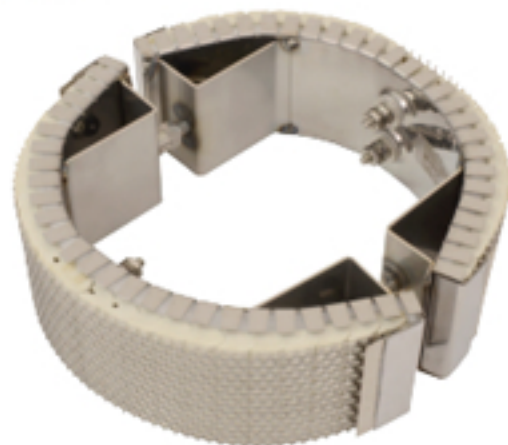
Type T: Reverse Band

Reverse Ceramic Band Heaters are intended for the outer surface of the band to heat the inner surface of a cylinder. These heaters use the same built-in insulation as normal ceramic bands and therefore can either reduce the power needed to heat an application to the desired temperature or offer some thermal protection to anything else that might also be inside the cylinder.

The specially designed internal brackets exert outward pressure to ensure good contact with the application surface. To aid in holding the internal components together during installation, reverse ceramic bands are supplied with a perforated stainless steel outer liner.

The outer diameter is the distinguishing characteristic and should match the inner diameter of the cylinder to be heated.

If airflow is needed for cooling, Tempco's Type R Uninsulated Ceramic Band with a perforated sheath is also available. This is also the same robust construction that can reach higher temperatures than other heater bands.



Min. ID: 5-1/2" (139.7 mm)
Min. Width: 1" (25.4 mm)

Max. ID: 44" (1117.6 mm)
Max. Width: 4" (101.6 mm)

Ceramic Band Insulation Options

Standard Insulation (S): 1/4"

Built-In ceramic fiber insulation 1/4" thick standard on all Ceramic Bands will reduce power consumption by 25 to 30 percent, and lower external temperatures.



Standard Insulation
Cross Section

Optional Double Insulation (D): 1/2"

For situations requiring additional insulation for lower external temperatures and increased electrical energy savings, Tempco offers Double Insulated Ceramic Bands with a full 1/2" thick ceramic fiber insulation. This will decrease power consumption by 35 to 37 percent when compared to uninsulated band heaters.



Double Insulation
Cross Section

Note: Not available for Reverse Construction

Ceramic Band Clamping Variations



Type B – Built-In Bracket (Standard)

The Built-In Bracket is the basic design most often specified by OEMs and processors. The standard screw used is 1/4-20. It is available with all types of insulation, construction styles, and termination variations.

Type S – Built-In Bracket with Spring-Loaded Screw

The Built-In Bracket can also be supplied with a spring-loaded screw. The spring-loaded clamp aids in absorbing thermal expansion.

Limitations –

One-Piece Bands

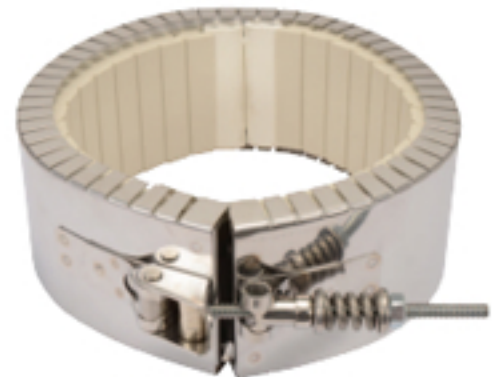
Min. ID: 2" (50.8 mm)

Min. Width: 1" (25.4 mm)

Two-Piece Bands

Min. ID: 4" (101.6 mm)

Min. Width: 1" (25.4 mm)



Type L – Latch and Trunion

The spring-loaded Latch and Trunion clamping system is ideal for bands over 12" in diameter to absorb thermal expansion and facilitate installation on large bands.

The Latch and Trunion clamping system is available with all types of insulation, construction styles, and termination variations.

Limitations –

One-Piece Bands

Min. ID: 4" (101.6 mm)

Min. Width: 1" (25.4 mm)

Two-Piece Bands

Min. ID: 4" (101.6 mm)

Min. Width: 2" (50.8 mm)



Type F – Bent-Up Flange (Ears)

The Bent-Up Flange (Ears) design is available with all types of insulation, construction styles, and termination variations.

Limitations –

One-Piece Bands

Min. ID: 2" (50.8 mm)

Min. Width: 1" (25.4 mm)

Two-Piece Bands

Min. ID: 4" (101.6 mm)

Min. Width: 2.5" (63.5 mm)



Shell Overlap

The Shell Overlap design is the preferred method of providing a thermocouple mounting hole in a ceramic band heater. It is available with all types of insulation, construction styles, clamping and termination variations.

Limitations –

One-Piece Bands

Min. ID: 3" (76.2 mm)

Min. Width: 1-1/2" (38.1 mm)

Standard Hole: 3/4" (19.1 mm)

Two-Piece Bands

Min. ID: 4" (101.6 mm)

Min. Width: 2" (50.8 mm)

Standard Hole: 3/4" (19.1 mm)

Ceramic Band Type T2 – Screw Terminals

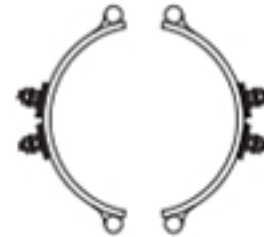
Type T2 Screw Terminals are available with all types of insulation, construction styles, and clamping variations. They are considered to be standard on most band heaters under 2" in width unless otherwise specified. 10-32 post terminals are standard.



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/25A



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/25A each half

Note: Not available for
Reverse Construction

Ceramic Band Type T3 – Screw Terminals

Type T3 Screw Terminals are available with all types of insulation, construction styles, and clamping variations. They are considered to be standard on most band heaters unless otherwise specified. For use with leads, crimp terminals, or bus bars.



One-Piece Band

Standard Termination Location:
opposite the gap; across center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 2" (50.8 mm)
- * Maximum Volts/Amps: 480VAC/25A



Two-Piece Band

Standard Termination Location:
center of each half; across center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 2" (50.8 mm)
- * Maximum Volts/Amps: 480VAC/25A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

Ceramic Band Type W1 – Abrasion Resistant Straight Wire Braid Leads

Straight Wire Braid Leads are available with all types of insulation, construction styles, and clamping variations. Wire braid leads offer sharp bending not possible with armor cable. If applicable, screw terminals should always be specified due to the high heat generated by ceramic bands. The standard leads are 10" of wire braid over 12" of flexible leads.

If longer leads are required, specify when ordering.



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

Ceramic Band Type R1 – Abrasion Resistant Straight Armor Cable

Straight Armor Cable is available with all types of insulation, construction styles, and clamping variations. Armor cable provides far superior protection to lead wires where abrasion is a constant problem. If applicable, screw terminals should always be specified due to the high heat generated by ceramic bands. The standard leads are 10" of armor cable over 12" of flexible leads.

If longer leads or electrical connectors are required, specify when ordering.



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A

Type R1A – Galvanized Steel Armor Cable

Type R1B – Stainless Steel Armor Cable



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

Ceramic Band Type W2M – Right-Angle Wire Braid Leads, 90° to Heater

Stainless Steel Wire Braid exits perpendicular to the heater centerline through a low profile stainless steel cap. This cap acts as a strain relief which protects against excessive flexing or pulling of the lead wire. The standard leads are 10" of wire braid over 12" of flexible leads.

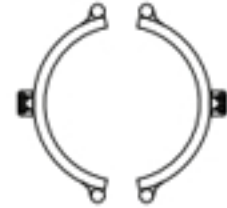
If longer leads are required, specify when ordering.



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

Ceramic Band Type W5M – Right-Angle Wire Braid Leads, Parallel to Heater

Stainless Steel Wire Braid exits parallel to the heater centerline through a low profile stainless steel cap. This cap acts as a strain relief which protects against excessive flexing or pulling of the lead wire. The standard leads are 10" of wire braid over 12" of flexible leads.

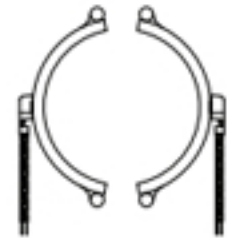
If longer leads are required, specify when ordering.



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

Ceramic Band Type R2 – Abrasion Resistant Right-Angle Armor Cable

Right-Angle Armor Cable is available with all types of insulation, construction styles, and clamping variations. It is used where space is limited and abrasion is a constant problem. If applicable, screw terminals should always be specified due to the high heat generated by ceramic bands. The standard leads are 10" of armor cable over 12" of flexible leads.

If longer leads or electrical connectors are required, specify when ordering.



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A

Type R2A – Galvanized Steel Armor Cable

Type R2B – Stainless Steel Armor Cable



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

A strain relief spring is attached to the heater at the termination exit to reduce strain on leads subjected to excessive flexing. The spring is 2-5/8" long. The flexible standard leads are 10" long with 2-1/2" of fiberglass sleeving.

If longer leads are required, specify when ordering.

Type S1A – Plain Leads and Strain Relief Spring

Type S1B – Stainless Steel Wire Braided Leads and Strain Relief Spring



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2" (50.8 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 1" (25.4 mm)
- * Maximum Volts/Amps: 480VAC/12.5A each half

Available on Reverse Band

- * Minimum Inside Diameter: 5-1/2" (139.7 mm)

General Purpose Terminal Boxes: Type C2 & Type C5

Terminal Boxes are available with all types of insulation, construction styles, or clamping variations. It is a simple and economical way to protect employees from electric shock or prevent electric shorts that can result from exposed wiring on band heater electrical installations.

The Heavy Duty Terminal Boxes have a 1/2" trade size knockout (actual diameter 7/8") that will accept standard armor cable connectors. The boxes can be field assembled on band heaters that have a center distance between screws of 7/8". To simplify installation the boxes can be pre-wired with galvanized armor, stainless steel armor, or wire braid.

Ceramic Band Type C2 – Standard Terminal Box



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * **Minimum Inside Diameter:** 2" (50.8 mm)
- * **Minimum Width:** 1-1/2" (38.1 mm)
- * **Maximum Volts/Amps:** 480VAC/25A

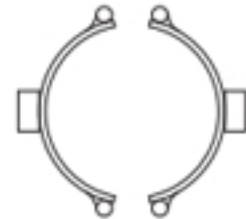
Type C2 □ Standard Box

- C2A**—Box only
- C2B**—with galvanized armor
- C2C**—with stainless steel armor
- C2D**—with wire braid

Box Size: 1-1/2"H × 1-1/2"W × 2-1/2"L
for bands 1-1/2" to 2" wide

Box Size: 1-1/2"H × 2-1/8"W × 2-1/8"L
for bands greater than 2" wide

NOTE: Heater dimensions will determine terminal configuration.



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * **Minimum Inside Diameter:** 4" (101.6 mm)
- * **Minimum Width:** 1-1/2" (38.1 mm)
- * **Maximum Volts/Amps:** 480VAC/25A each half

Available on Reverse Band

- * **Minimum Inside Diameter:**
15" (381 mm)

Ceramic Band Type C5 – Low-Profile Terminal Box



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * **Minimum Inside Diameter:** 2" (50.8 mm)
- * **Minimum Width:** 1-1/2" (38.1 mm)
- * **Maximum Volts/Amps:** 480VAC/25A

Type C5 □ Low Profile Box

- C5A**—Box only
- C5B**—with galvanized armor
- C5C**—with stainless steel armor
- C5D**—with wire braid
- C5J**—Box with lead wire

Box Size: 1"H × 1-1/4"W × 3"L
for bands 1-1/2" to 2" wide

Box Size : 1"H × 2-1/4"W × 2"L
for bands greater than 2" wide

NOTE: Heater dimensions will determine terminal configuration.



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * **Minimum Inside Diameter:** 4" (101.6 mm)
- * **Minimum Width:** 1-1/2" (38.1 mm)
- * **Maximum Volts/Amps:** 480VAC/25A each half

Available on Reverse Band

- * **Minimum Inside Diameter:**
15" (381 mm)



Note: If a Low Profile Box with cable or leads is required, it is strongly recommended to order it pre-wired by the factory.

Exposed electrical wiring on band heater installations is a violation of Electrical Safety Codes including O.S.H.A.

Quick Disconnect Plugs: Type P1, Type P2, Type P3 & Type P4

Quick Disconnect Plugs are available on any construction or clamping variation. These quick disconnect plug assemblies are highly recommended and should be used whenever possible. The combination of plug and cup assembly along with armor cable covered leads eliminates all live exposed terminals or wiring that can be a potential hazard to employees or machinery.

Type P1 and P3 assemblies are available with a straight or right-angle plug. Type P2 and P4 plug assemblies have a lower profile and are available with a straight plug only.

To simplify installation, band heaters with these assemblies can be supplied pre-wired using high temperature lead wire protected with armor cable. *If longer leads are required, specify when ordering.*

Ceramic Band Type P1 – Quick Disconnect Plugs



Type P1Q shown

One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * **Minimum Inside Diameter:**
2" (50.8 mm)
- * **Minimum Width:** 2" (50.8 mm)
depending on termination orientation

Type P1□—Standard Cup Assembly

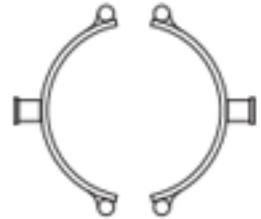
- P1K**—Cup Assembly only
- P1L**—w/straight plug only
- P1M**—w/90° plug only
- P1N**—w/straight plug & galvanized armor cable
- P1O**—w/straight plug & stainless steel armor cable
- P1P**—w/straight plug & wire braid
- P1Q**—w/90° plug & galvanized armor cable
- P1R**—w/90° plug & stainless steel armor cable
- P1S**—w/90° plug & wire braid

Plug Electrical Ratings

- * **2-Pole 3-Wire Grounding**
- * **Maximum Volts:** 250 VAC
- * **Maximum Amps:** 16A
- * **Maximum Temperature:** 392°F (200°C)

Available on Reverse Band

- * **Minimum Inside Diameter:**
5-1/2" (139.7 mm)



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * **Minimum Inside Diameter:**
4" (101.6 mm)
- * **Minimum Width:** 2" (50.8 mm)
depending on termination orientation

Ceramic Band Type P2 – Quick Disconnect Plugs



Type P2H shown

One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * **Minimum Inside Diameter:**
2" (50.8 mm)
- * **Minimum Width:** 2" (50.8 mm)

Type P2□—Low Profile Assembly

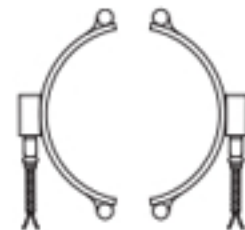
- P2F**—Low profile assembly only
- P2G**—w/straight plug only
- P2H**—w/straight plug and galvanized armor cable
- P2J**—w/straight plug and stainless steel armor cable
- P2K**—w/straight plug and wire braid

Plug Electrical Ratings

- * **2-Pole 3-Wire Grounding**
- * **Maximum Volts:** 250 VAC
- * **Maximum Amps:** 16A
- * **Maximum Temperature:** 392°F (200°C)

Available on Reverse Band

Consult Tempco with your requirements.



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * **Minimum Inside Diameter:**
4" (101.6 mm)
- * **Minimum Width:** 2" (50.8 mm)

CONTINUED

Ceramic Band Type P3 – DIN 49458 A/B Quick Disconnect Plugs

Continued from previous page...



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 3" (76.2 mm)
- * Minimum Width: 2" (50.8 mm)

Type P3 □ – Vertical Box Assembly

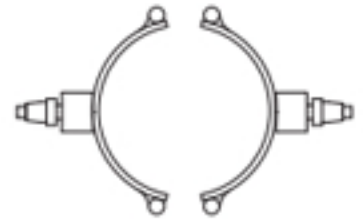
- P3A – Box assembly only
- P3B – Box assembly w/straight plug
- P3C – Box assembly w/right-angle plug

Plug Electrical Ratings

- * 2-Pole 3-Wire Grounding
- * Maximum Volts: 250 VAC
- * Maximum Amps: 16A
- * Maximum Temperature: 392°F (200°C)



Standard Pin Orientation



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 2" (50.8 mm)

Available on Reverse Band

Consult Tempco with your requirements.

Ceramic Band Type P4 – DIN 49458 A/B Quick Disconnect Plugs



One-Piece Band

Standard Termination Location:
opposite the gap; center of width

- * Minimum Inside Diameter: 2-1/2" (63.5 mm)
- * Minimum Width: 2-1/2" (63.5 mm)

Type P4 □ – Horizontal Box Assembly

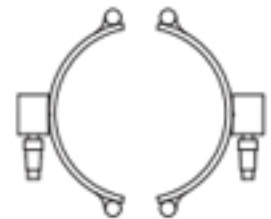
- P4A – Box assembly only
- P4B – Box assembly w/straight plug

Plug Electrical Ratings

- * 2-Pole 3-Wire Grounding
- * Maximum Volts: 250 VAC
- * Maximum Amps: 16A
- * Maximum Temperature: 392°F (200°C)



Standard Pin Orientation



Two-Piece Band

Standard Termination Location:
center of each half; center of width

- * Minimum Inside Diameter: 4" (101.6 mm)
- * Minimum Width: 2-1/2" (63.5 mm)

Available on Reverse Band

Consult Tempco with your requirements.

Additional Features



Electrical VARIATIONS

Three-Phase — On very high wattage band heaters it would be advantageous to set up the wiring three-phase to reduce the current load across a single conductor. Three-phase wiring is available with all types of insulation, construction styles, and clamping variations.

Limitations

Minimum width: 3" (76.2 mm)

Dual Voltage — Band heaters can be designed using 3-wire series/parallel circuits for dual voltage applications. Whether the heater is run on the high or low voltage, the wattage will be the same. Dual Voltage wiring is available with all types of insulation, construction styles, or clamping variations.

Limitations

Minimum width: 2" (50.8 mm)

Single-Phase/Three-Phase — Ceramic Band Heaters can be designed with multiple circuits to operate single or three-phase.



Lead VARIATIONS

Electrical Plugs — Industry standard NEMA twist lock electrical connectors are available. The plugs can be attached to fiberglass leads, armor cable or wire braid. Electrical Plugs can be added to any termination variation. See Section 15 page 15-15.

Terminal Lugs — Various types of crimp terminals can be attached to the heater leads to make wiring into applications quick and easy. High temperature [1200°F (649°C)] ring terminals and nylon or PVC insulated terminals are available. Spade, ring, and right-angle or straight quick disconnect type terminals can be attached to the leads. See Section 15 page 15-18.

High Temperature Lead Wire — When required, high temperature lead wire can be used. The wire is insulated with mica tapes over the stranded nickel conductors and then treated fiberglass overbraid. See Section 15 page 15-2.

Maximum temperature: 450°C (842°F)

Ground Terminal or Lead — For those applications requiring a separate ground terminal or lead attached to the heater sheath. A Ground Terminal or Lead is available on any construction or termination variation.



Other VARIATIONS

Oversize Gap — The nominal gap is 3/8". If a larger gap is required for probes or thermocouples, specify when ordering.

Installation Accessories Available for Immediate Delivery

- * High Temperature Terminal Lugs
- * Igloo™ Ceramic Insulating Covers
- * UL Listed Plugs
 - * High Temperature Lead Wire 842°F (450°C)
 - * Armor Cable
 - * Stainless Steel Braid
 - * High Temperature Sleeving
 - * High Temperature Mica Insulated Wiring Harnesses 842°F (450°C)
 - * Thermocouples
 - * Temperature Controllers
 - * High Temperature Fiberglass Tape