

AIC EQUIPMENT & CONTROLS INC.

PRO-STAR[★] **HIGH PERFORMANCE** **CERAMIC HEATERS**

The AIC **PRO-STAR** line of ceramic heaters are engineered to meet an ever increasing demand for high processing temperature and while providing ample energy savings.

Ceramic insulated heaters provide many advantages over other types of heaters:

- * **Longer Life**
- * **Lower Energy Costs**
- * **Higher Temperature Capability**
- * **Less Downtime for Replacement**
- * **Fewer Bands Per Installation**
- * **Quick Installations and Removal**
- * **Improved Heat Transfer**
- * **Improved Control Response**
- * **Wider Range of Watt Density**



Pro-Star

High Performance Ceramic Heaters

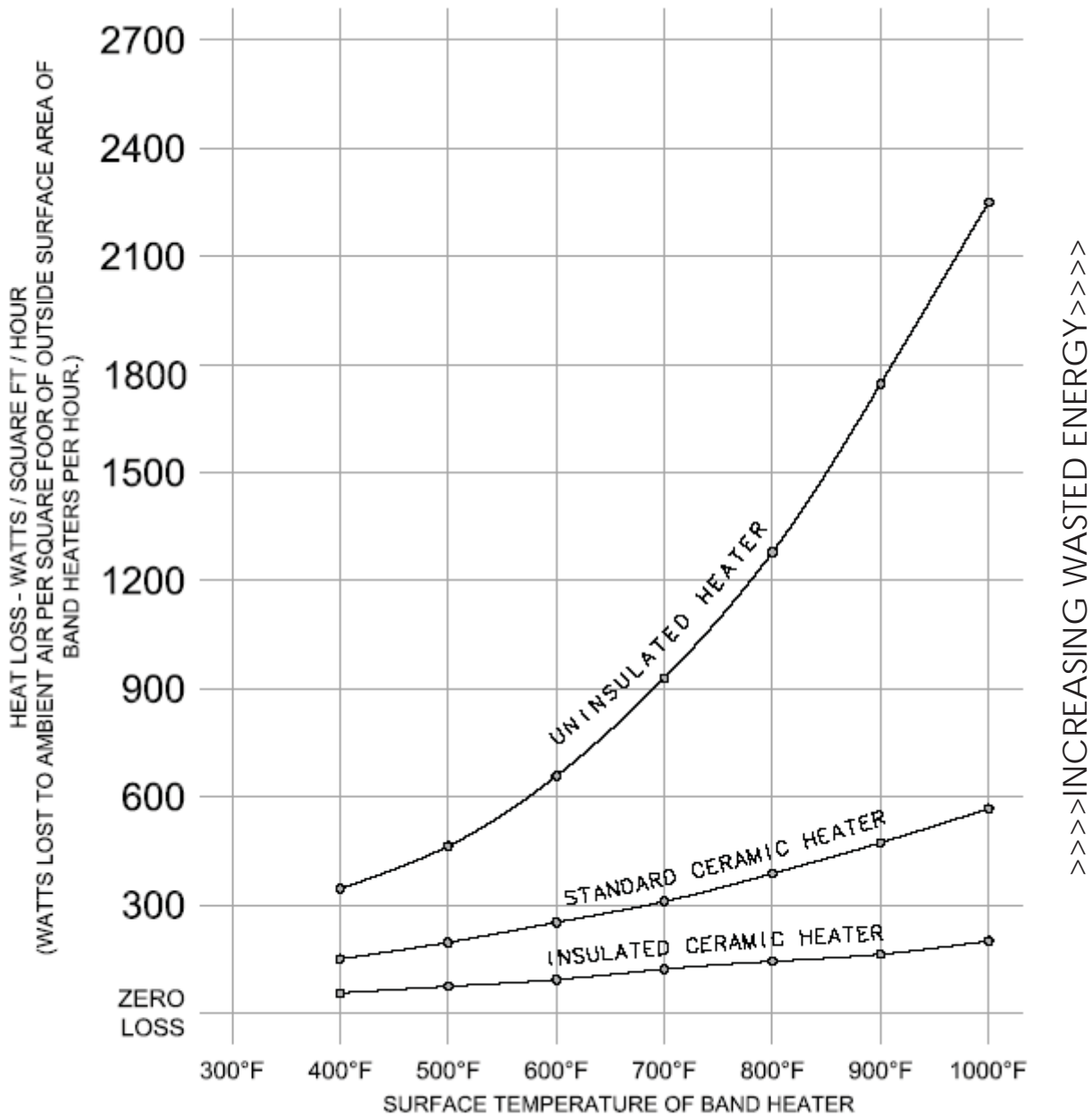
Ceramic Band Heaters provide long life and are more efficient (because of insulation) in plastics extrusion and injection molding applications. The heaters are constructed with a stainless steel shroud enclosing high quality ceramic knuckles through which run coiled high temperature nickel-chromium element wire. Configuration choices allow selection of one or two piece heaters, type of closure, and type of leads/post terminals. Diameters of 1 1/2" or greater and widths of 1" and larger are available. Leads normally exit 180° from gap. Options include terminal boxes, holes, 3-phase power, dual voltages, partial coverage designs, European connectors, and perforated sheaths without insulation for air cooled applications.

Advantages of Ceramic Band Heaters:

- **Lower Operating Cost** - Because of superior insulation, less heat escapes to the air and less wattage is required to maintain barrel temperature. Also the heater is safer because the external surface is much cooler.
- **Operator Comfort** - With the majority of the heat going directly to your process, the ceramic band heater gives off significantly less heat to ambient air than a mica band heater.
- **Longer Heater Life** - because all materials used are rated to operate at very high temperatures.
- **Higher Operating Temperatures**
- **Flexible** - easy to install and remove
- **Dual Heat Transfer** - Heat is transferred through both radiation and conduction so a near perfect fit is not required as with other heaters, such as mica heaters.

The chart below demonstrates the energy savings potential.

INSULATED HEATERS
 VERSUS NON-INSULATED HEATERS
 ENERGY LOSS



***Many Additional Sizes Available,
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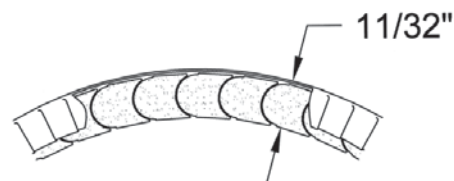
Pro-Star High Performance Ceramic Heaters

AIC manufactures four different styles of ceramic heater bands. Following are features of each style to help you decide which one will suit your needs.

Pro-Star Thin

High performance super thin ceramic heaters, provide up to 65 watts of power per square inch of surface area for high temperature applications, with long life and energy savings.

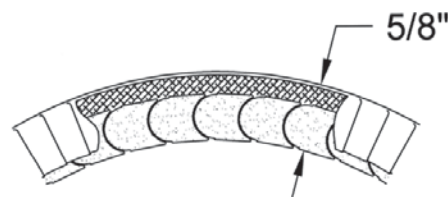
- 11/32" Thick
- Watt densities up to 65 watts per square inch
- 3/16" Thermal Insulation
- Lower in cost than most competing premium styles, such as mineral insulated, ceramic or refractory.
- This thin, high temp., high watt density heater can meet the most demanding performance you may require.



Pro-Star

The preferred choice for plastics processing, the Pro-Star provides efficient heat transfer and energy savings.

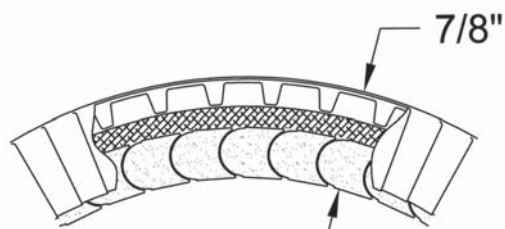
- 5/8" Thick
- Watt densities up to 45 watts per square inch
- 1/8" Thermal Insulation
- Lowest in cost
- Widely used as a barrel heater on injection molding machines for processing low to medium range temperature resins.



Pro-Star Plus

Provides a layer of thermal insulating for good heat conservation, Pro-Star Plus provides energy savings and cooler ambient temperatures around the machine.

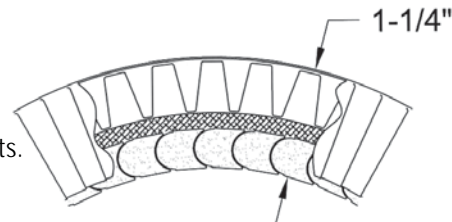
- 7/8" Thick
- Watt densities up to 45 watts per square inch
- 3/8" Thermal Insulation
- Approximately, 15% higher in cost than the Pro-Star.
- Developed for energy saving use in all the above applications.
- Energy savings up to 30%.



Pro-Star Max

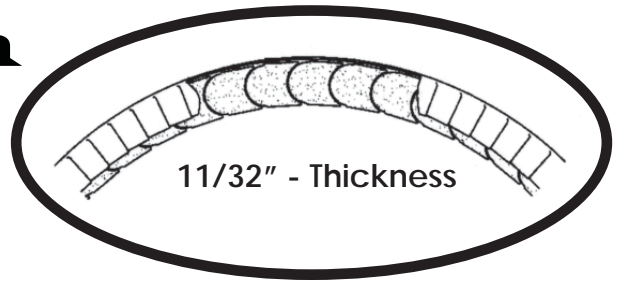
The ultimate in heat conservation, employing an added 5/8 inch of additional thermal insulations encased in a separate flexible stainless steel.

- 1 1/4" Thick
- Watt densities up to 40 watts per square inch
- 3/4" Thermal Insulation
- Approximately, 10% higher than Pro-Star Plus. Not only saves energy but enables the elimination of expensive insulating blankets. Ideal for use where lower sheath temperatures are required.



Pro-Star Thin

High performance super thin ceramic heaters, provide up to 65 watts of power pre square inch of surface area for high temperature applications, with long life and energy savings.



AIC's high performance heater band for processing high temperature engineering resins. The Pro Star Thin bands have the same basic construction as our standard ceramic heaters except they are much thinner and have a high ratio of thermal to electrical insulation. The thin ceramic insulators used results in a lower mass construction, which improves response to control and minimizes temperature lag and overshoot.

Unexcelled as high temperature barrel heaters in any size. The backside thermal insulation is highly efficient and results in minimal heat loss and lower sheath temperature. The Pro Star Thin has averaged 100°F lower sheath temperature when tested against other high temperature heaters at 600°F cylinder temperatures.

Pro Star Thin heaters are constructed of all high temperature materials. The heater element itself is computer designed for maximum wire size which results in a long service life. Developed primarily for high temperature, high watt density plastic processing machinery, this premium performance heater can be used in many other applications.

SPECIFICATIONS

Wall Thickness	11/32" (+1/32", -.00)	Insulation	3/8" thick insulation (Ceramic fiber)
Temperature	Up to 1400°F	Sizes	Minimum ID 1 1/2" (38.1mm) – 1" wide and up
Watt Density	Up to 65watt per square inch	Terminals	Post Terminal Standard (10-24 Thread or 1/4-20 Thread)
Voltage	Up to 480V (single or three phase)	Sheath	Stainless Steel
Resistance-Tolerance	+10% -5%	Lock-up	Flange or Barrel Nut Standard
Wattage Tolerance	+5% -10%	Standard Gap	1/4" when tightened
Maximum Amperage	20/Circuit		

OPTIONS

- Armor Cable
- Braid Over Leads
- Plain Leads
- Right Angle Armor
- Right Angle Braid
- Partial Coverage
- T/C Hole (specify location)
- Inner S.S. Liner
- Ground Stud or Wire
- Dual Voltage
- Latch-Trunnion Lock-up
- Overlap on shell at gap
- Standard Terminal Box
- Low Profile (1" high) Terminal Box
- Ceramic Terminal Caps
- Quick Disconnect High Temperature Plugs

WHEN ORDERING PLEASE SPECIFY:

Quantity

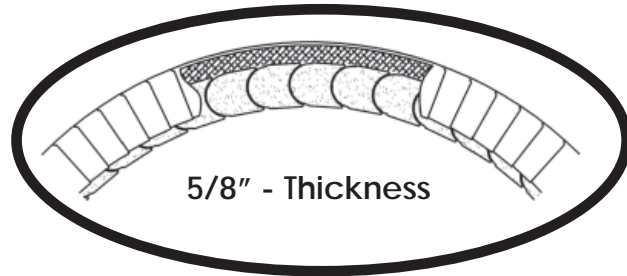
- Inside diameter & width
- Voltage – on 2 piece bands we suggest each piece be rated at half the operating voltage; please specify total voltage.
- Wattage – on 2 piece bands please specify total wattage.
- Basic construction and options
- Gap (if other than standard minimum)
- Lead length (if other than standard 12")

***** Many Additional Sizes Available, Please Call!**

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Pro-Star

The preferred choice for plastics processing, the Pro-Star provides efficient heat transfer energy savings.



Plastics processing requires high operating temperatures and fast production rates. We have designed the ceramic band heaters to meet these demands. These heaters are, in effect, high temperature electric furnaces capable of very efficient heat transfer by conduction, convection and radiation. Built-in insulation minimizes unwanted temperature changes along the barrel.

Other types of band heaters are primarily conductive, requiring an intimate fit with components being heated. Grooves or other surface irregularities form voids under the bands, resulting in hot spots and premature heater failure. Ceramic bands are recommended here because here because efficient heat transfers is not affected by irregular surfaces or loose fit. At higher watt densities they can be used in wider increments than other heaters. This means you can reduce the number of bands used and simplify wiring.

SPECIFICATIONS

Wall Thickness	5/8" (+5/8", -.00)	Insulation	3/8" thick insulation (Ceramic fiber)
Temperature	Up to 1400°F	Sizes	Minimum ID 2" and up (in 1/2" increments)
Watt Density	Up to 45watt per square inch	Terminals	Post Terminal Standard (10-24 Thread or 1/4"-20 Thread)
Voltage	Up to 480V (single or three phase)	Sheath	Stainless Steel
Resistance-Tolerance	+10% -5%	Lock-up	Flange or Barrel Nut Standard
Wattage Tolerance	+5% -10%	Standard Gap	1/4" when tightened
Maximum Amperage	25/Circuit		

OPTIONS

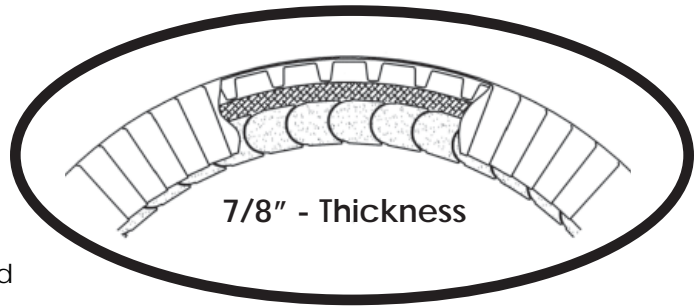
- Armor Cable
- Braided Wire
- Lead Wire, No Braid or Armor
- Leads exiting out of edge of heater, through porcelain insulator
- Terminal Connectors on studs – Ring Lugs
- Partial Coverage
- T/C Hole in element area
- Thermocouple hole in gap area, notched
- Inner Liner
- Twist Lock Plugs on leads
- Wider than normal gap, specify
- Ground Stud
- Dual Voltage – for bands 2 1/2" or more in width
- Four wire construction
- Overlapping shell on gap area

WHEN ORDERING PLEASE SPECIFY:

- Quantity
- Inside diameter & width
- Voltage – on 2 piece bands we suggest each piece be rated at half the operating voltage; please specify total voltage.
- Wattage – on 2 piece bands please specify total wattage.
- Basic construction and options
- Gap (if other than standard minimum)
- Lead length (if other than std. 12")

Pro-Star Plus

Provides a layer of thermal insulating for good heat conservation, Pro-Star Plus provides energy savings and cooler ambient temperatures around the machine.



The standard ceramic insulated band has been, and continues to be the only barrel heater having built-in thermal insulation. In the past machine manufacturers have elected to use the heater because of several advantages, but rarely for its heat conserving qualities.

The Pro Star Plus ceramic band heater consists of the standard ceramic band components, plus an additional insulation chamber, all of which is contained in a single flexible sheath. This additional insulation chamber dramatically reduces power consumption, in comparison to all other non-insulated band heaters.

SPECIFICATIONS

Wall Thickness	7/8" (+7/8", -.00)	Insulation	3/8" thick insulation (Ceramic fiber)
Temperature	Up to 1400°F	Sizes	Minimum ID 2" and up (in 1/2" increments)
Watt Density	Up to 45watt per square inch	Terminals	Post Terminal Standard (10-24 Thread or ¼-20 Thread)
Voltage	Up to 480V (single or three phase)	Sheath	Stainless Steel
Resistance-Tolerance	+10% -5%	Lock-up	Flange or Barrel Nut Standard
Wattage Tolerance	+5% -10%	Standard Gap	¼" when tightened
Maximum Amperage	25/Circuit		

OPTIONS

- Armor Cable
- Braided Wire
- Lead Wire, No Braid or Armor
- Leads exiting out of edge of heater, through porcelain insulator
- Terminal Connectors on studs – Ring Lugs
- Partial Coverage
- T/C Hole in element area
- Thermocouple hole in gap area, notched
- Inner Liner
- Twist Lock Plugs on leads
- Wider than normal gap, specify
- Ground Stud
- Dual Voltage – for bands 2 ½" or more in width
- Four wire construction
- Overlapping shell on gap area

WHEN ORDERING PLEASE SPECIFY:

- Quantity
- Inside diameter & width
- Voltage – on 2 piece bands we suggest each piece be rated at half the operating voltage; please specify total voltage.
- Wattage – on 2 piece bands please specify total wattage.
- Basic construction and options
- Gap (if other than standard minimum)
- Lead length (if other than std. 12")

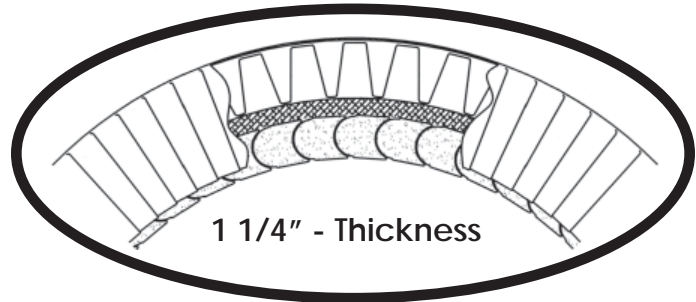
***** Many Additional Sizes Available,
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Pro-Star Max

Pro-Star Plus with its ability to reduce sheath temperatures to a safe level at common molding temperature will give you the following options: You can eliminate an insulated shroud entirely

or at the very least us a simpler (less expensive) not insulated shroud. You can eliminate expensive insulating blankets. These blankets do increase temperatures on wiring and terminals and in turn increase chances of heater failure. This problem does not occur with the Pro-Star Max.



SPECIFICATIONS

Wall Thickness	1 1/4" (+1 1/4", -.00)	Insulation	3/8" thick insulation (Ceramic fiber)
Temperature	Up to 1400°F	Sizes	Minimum ID 2" and up (in 1/2" increments)
Watt Density	Up to 45watt per square inch	Terminals	Post Terminal Standard (10-24 Thread or 1/4-20 Thread)
Voltage	Up to 480V (single or three phase)	Sheath	Stainless Steel
Resistance-Tolerance	+10% -5%	Lock-up	Flange or Barrel Nut Standard
Wattage Tolerance	+5% -10%	Standard Gap	1/4" when tightened
Maximum Amperage	25/Circuit		

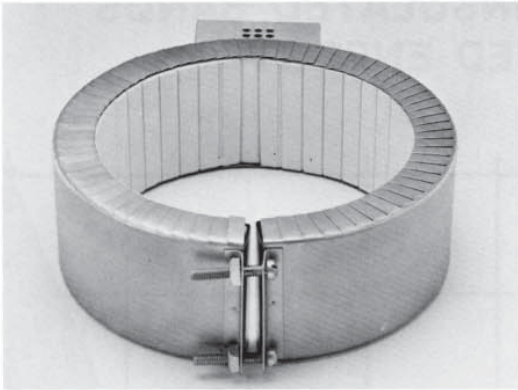
OPTIONS

- Armor Cable
- Braided Wire
- Lead Wire, No Braid or Armor
- Leads exiting out of edge of heater, through porcelain insulator
- Terminal Connectors on studs – Ring Lugs
- Partial Coverage
- T/C Hole in element area
- Thermocouple hole in gap area, notched
- Inner Liner
- Twist Lock Plugs on leads
- Wider than normal gap, specify
- Ground Stud
- Dual Voltage – for bands 2 1/2" or more in width
- Four wire construction
- Overlapping shell on gap area

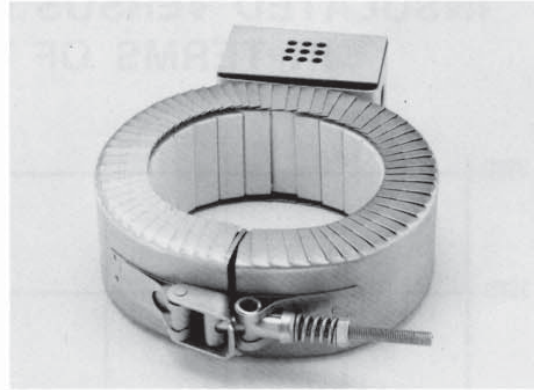
WHEN ORDERING PLEASE SPECIFY:

- Quantity
- Inside diameter & width
- Voltage – on 2 piece bands we suggest each piece be rated at half the operating voltage; please specify total voltage.
- Wattage – on 2 piece bands please specify total wattage.
- Basic construction and options
- Gap (if other than standard minimum)
- Lead length (if other than std. 12")

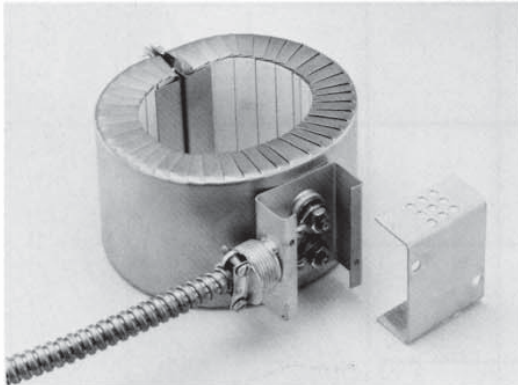
OPTIONS



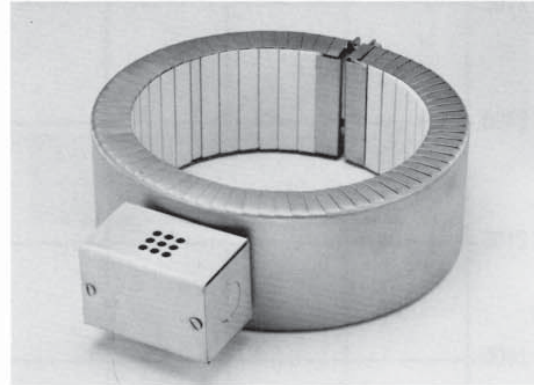
Standard Flange Lock-Up



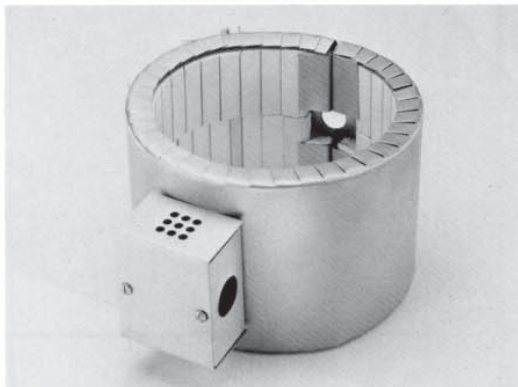
Optional Spring Loaded Latch and Trunnion Lock-Up For Large Diameter Bands.



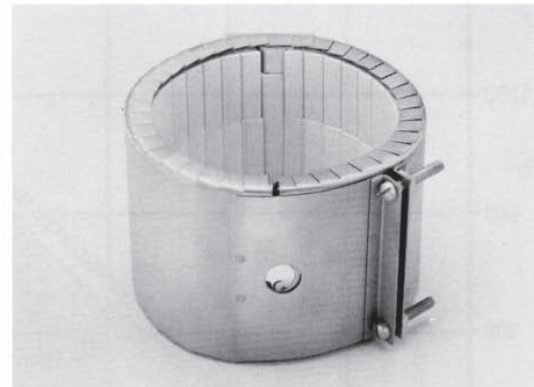
Stud Terminals In Low Profile Box (1" High) With BX Installed



Stud Terminals In Standard Two Terminal Box (1 3/4" High)



Stud Terminals In Standard Three Terminal Box (1 3/4" High)



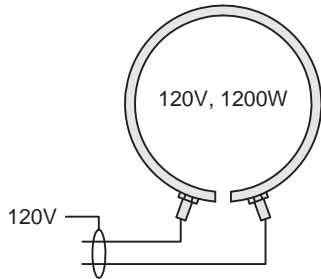
Thermocouple Hole In Gap Shell Overlap With Lock-Up Flanges

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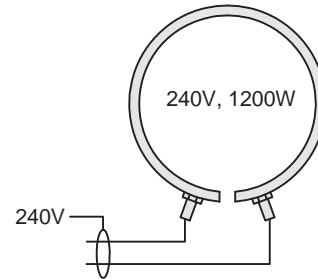
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Heater Band Wiring Diagrams
One Piece

120 VOLT CONFIGURATION
 1200 WATT

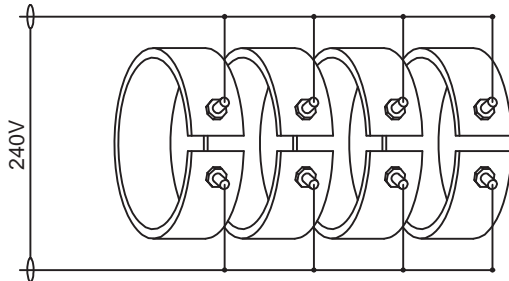


240 VOLT CONFIGURATION
 1200 WATT



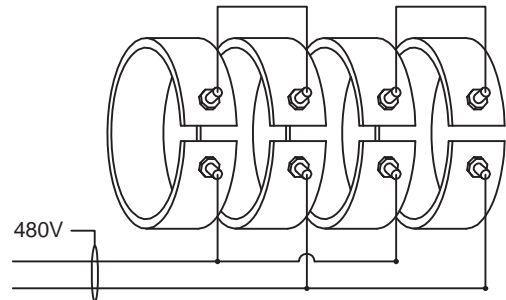
HEATER BAND COMMON WIRING
 IN PARALLEL BY ZONES

WIRED IN PARALLEL



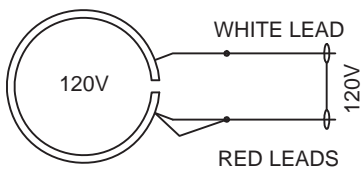
240V BAND WIRED TO ACCEPT 480V
 BANDS MUST BE EQUAL WATTAGE AND
 WIRED BY PAIRS IN SERIES

WIRED IN SERIES

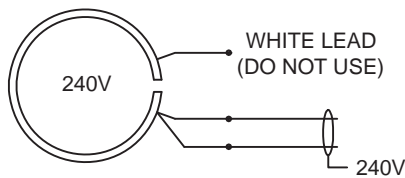


WIRING DUAL VOLTAGE HEATER BANDS

Wire Lead Connection

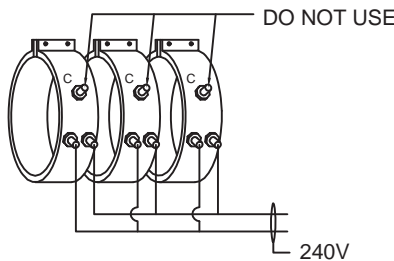
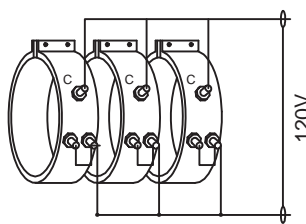


- 1) CONNECT WHITE LEAD TO COMMON
- 2) JOIN RED LEADS AND CONNECT TO OTHER SIDE OF LINE.

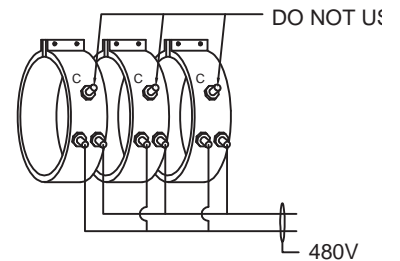
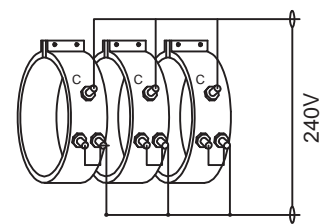


- 1) INSULATE WHITE LEAD - (DO NOT USE)
- 2) CONNECT ONE RED TO EACH SIDE OF LINE.

120V / 240V - Terminal Connection



240V / 480V - Terminal Connection



10

*****Many Additional Sizes Available,
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Heater Band Wiring Diagrams

Two Piece

120 VOLT CONFIGURATION

240 VOLT CONFIGURATION

2 PIECE BAND RATED @ 240V
 1200 WATTS,
 EACH HALF IS 120V@600W

2 PIECE BAND RATED @ 240V
 1200 WATTS,
 EACH HALF IS 120V@600W

2 PIECE BAND RATED @ 480V
 1200 WATTS,
 EACH HALF IS 240V@600W

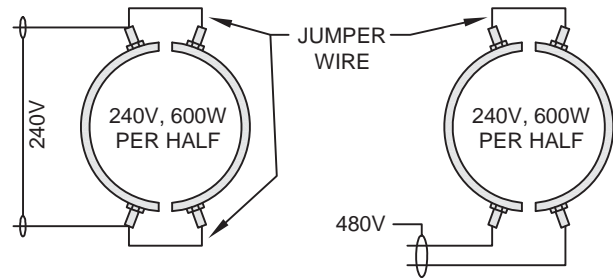
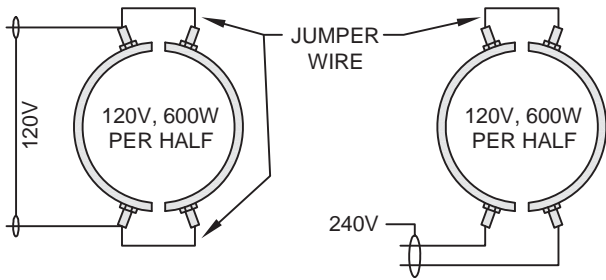
2 PIECE BAND RATED @ 480V
 1200 WATTS,
 EACH HALF IS 240V@600W

WIRED IN PARALLEL

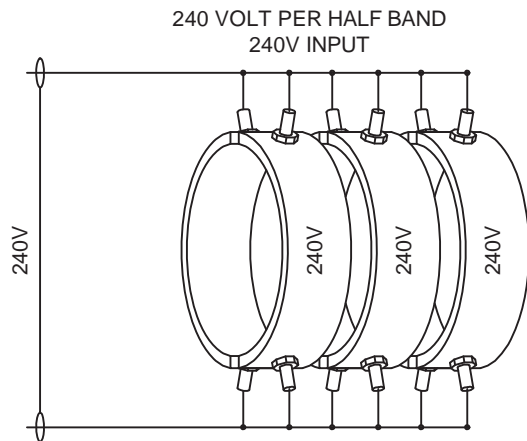
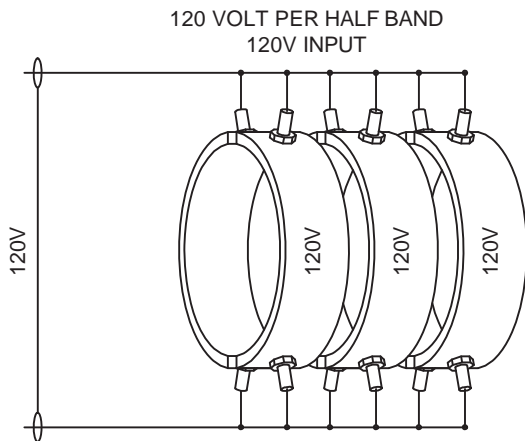
WIRED IN SERIES

WIRED IN PARALLEL

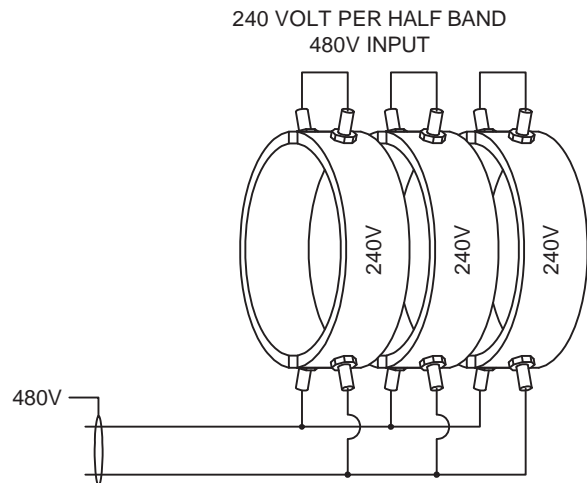
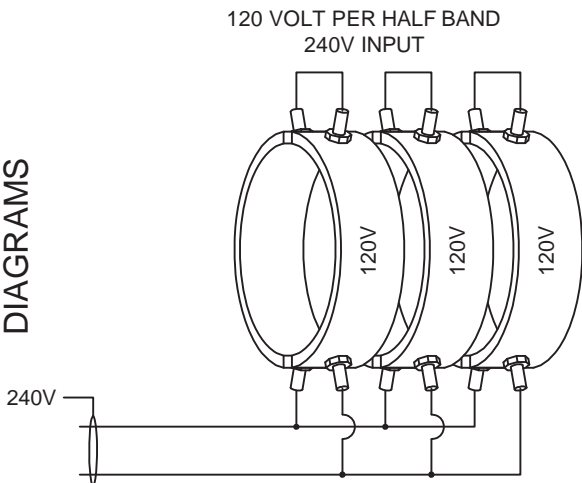
WIRED IN SERIES



PARALLEL WIRING DIAGRAMS



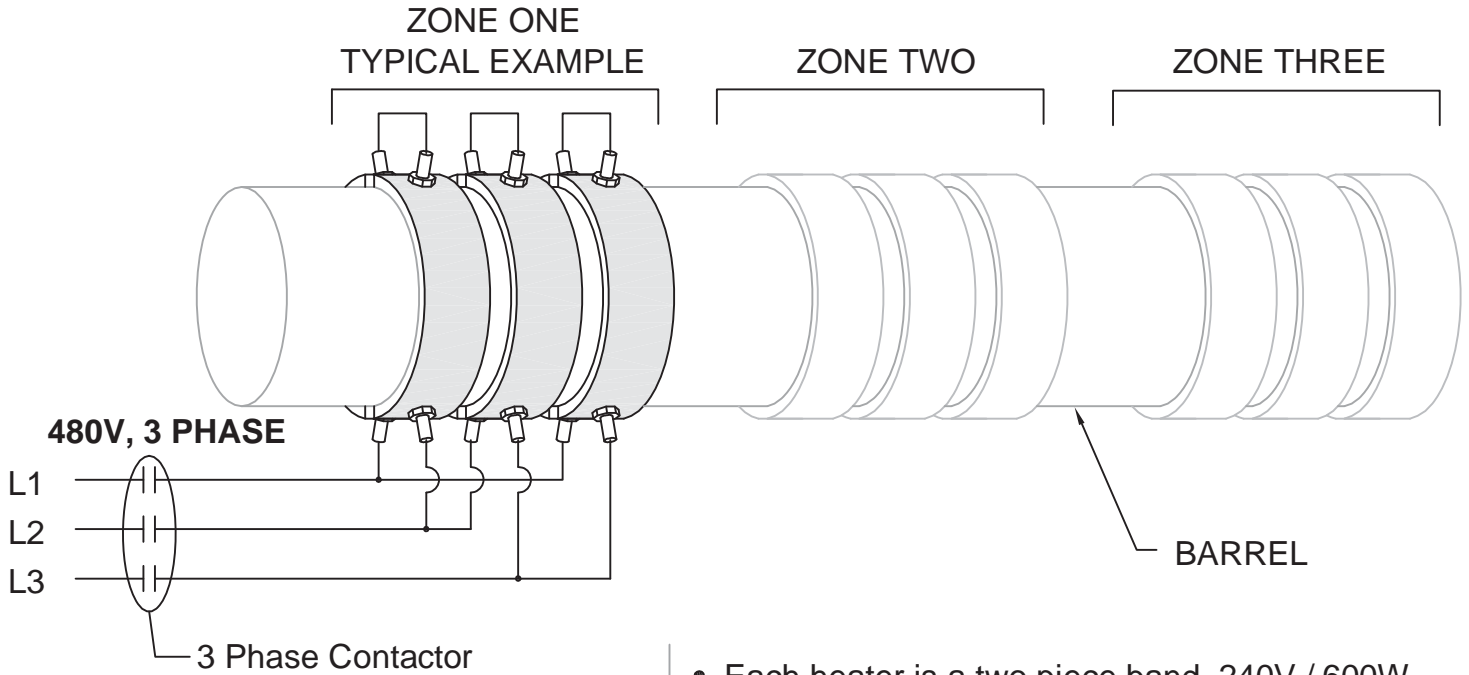
SERIES WIRING DIAGRAMS



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Heater Band Wiring Diagrams
Two Piece



- Each heater is a two piece band, 240V / 600W each half for a 1200W total.
- Each zone consists of (3) single phase heaters wired collectively for 3 phase.
- Note 3 Phase rotation - L1 L2, L2 L3, L1 L3

OHM'S LAW

P=Watts

$$\text{Watts} = \frac{\text{Volts}^2}{\text{Ohms}}$$

$$\text{Watts} = \text{Amps}^2 \times \text{Ohms}$$

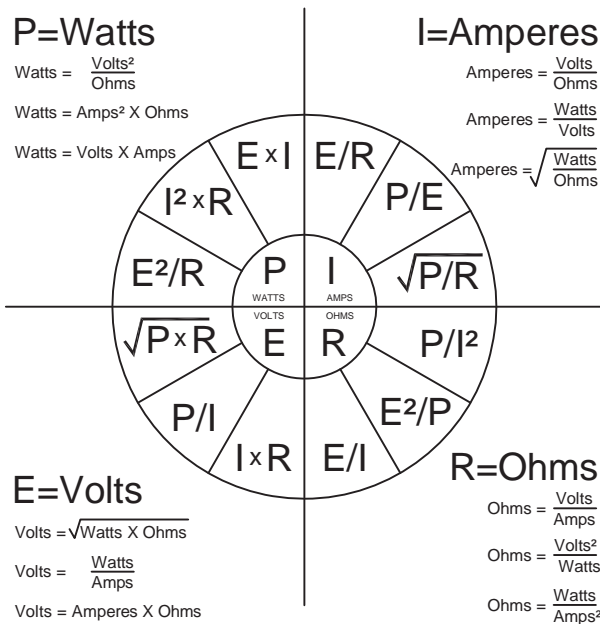
$$\text{Watts} = \text{Volts} \times \text{Amps}$$

I=Amperes

$$\text{Amperes} = \frac{\text{Volts}}{\text{Ohms}}$$

$$\text{Amperes} = \frac{\text{Watts}}{\text{Volts}}$$

$$\text{Amperes} = \sqrt{\frac{\text{Watts}}{\text{Ohms}}}$$



Each 480V / 1200W heater would draw 2.5 Amps single phase. Current measured on each leg of the 3 Phase feed for a given zone would be 4.33A.

SINGLE PHASE FORMULA

$$I = \frac{P}{E}$$

$$2.5A = \frac{1200 \text{ WATTS}}{480 \text{ VOLTS}}$$

$$2.5\text{Amps} \times (3) \text{ heaters} = 7.5 \text{ (Single phase amps)}$$

$$7.5/1.732 \text{ (3 Phase factor)} = 4.33 \text{ (3 Phase amps)}$$

THREE PHASE FORMULA

$$I = \frac{P}{E \times 1.732}$$

$$4.33A = \frac{3600 \text{ WATTS}}{480 \text{ VOLTS} \times 1.732}$$

Pro-Star

High Performance Ceramic Heaters



Part Number	I. D.	Width	Volts	Watts	Termination
C-30C3011	3	3	480	1500	POST TERM, BOX
C-34C301	3 1/2	3	460	1500	POST TERM
C-40B141	4	1 1/2	240	650	POST TERM
C-40C141-1	4	1 1/2	460	625	POST TERM
C-40C301-2	4	3	480	1000	POST TERM
C42C307	4 1/4	3	480	1600	24" ARMOR CABLE
C-42B421	4 1/4	4 1/4	240	1100	POST TERM
C-43B201	4 3/8	2	240	800	POST TERM
C-44C301	4 1/2	3	480	1000	POST TERM
C-44B141	4 1/2	1 1/2	240	810	POST TERM
C-42E4411F-1F	4 1/2	4 1/2	230/460	1400	68" LEADS, FLANGE LOCK UP, DUAL VOLTAGE, BOX
C-45C501	4 1/2	5	480	1500	POST TERM
C-46B501	4 3/4	5	240	1700	POST TERM
C-50C2011	5	2	480	1000	POST TERM, BOX
C-50B301-1	5	3	240	1200	POST TERM
C80E4011-1	5	4	240/480	3000	POST TERM, DUAL VOLTAGE, BOX, T/C HOLE
C-50C501	5	5	480	1650	POST TERM
C-52C141	5 1/4	1 1/2	460	600	POST TERM
C-52C241	5 1/4	2 1/2	480	1600	POST TERM
C-52C301	5 1/4	3	460	1700	POST TERM
C-52E441	5 1/4	4 1/2	240/480	2700	POST TERM, DUAL VOLTAGE, BOX
C-54C201	5 1/2	2	480	1100	POST TERM
C-56C141	5 3/4	1 1/2	480	1000	POST TERM
C-56B3011	5 3/4	3	240	1200	POST TERM, BOX
C-56C301	5 3/4	3	480	1200	POST TERM

***** Many Additional Sizes Available,
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Part Number	I. D.	Width	Volts	Watts	Termination
C-60B301	6	3	240	1650	POST TERM
C-60B3611	6	3 3/4	240	1350	POST TERM, BOX
C-60B5011	6	5	240	2000	POST TERM, BOX
C-60E5411	6	5 1/2	240/480	2000	POST TERM, BOX, DUAL VOLTAGE
C-62C241-1	6 1/4	2 1/2	480	1400	POST TERM
C-62C301	6 1/4	3	480	1600	POST TERM
C-64E5411	6 1/4	5 1/2	240/480	3000	POST TERM, TERM BOX
C-62C241	6 1/2	2 1/2	480	1250	POST TERM
C-64C401	6 1/2	4	480	1600	POST TERM
C-64C541	6 1/2	5 1/2	480	650	POST TERM
C-65C5011	6 5/8	5	480	3500	POST TERM, TERM BOX
C-66C201	6 3/4	2	480	1300	POST TERM
C-66B301-1	6 3/4	3	240	1630	POST TERM
C-66E501	6 3/4	5	240/480	2600	DUAL VOLTAGE
C-66C601	6 3/4	6	480	3000	POST TERM
C-67B201	6 7/8	2	240	1000	POST TERM
C-70C141	7	1 1/2	480	1300	POST TERM
C-70C2011	7	2	480	1200	POST TERM, TERM BOX
C-70C2411	7	2 1/2	480	1600	POST TERM, TERM BOX
C-70C301-1	7	3	480	1800	POST TERM
C-70C306-1	7	3	480	2600	24" WIRE BRAID
C-70B501	7	5	240	3700	POST TERM
C-72C207	7 1/4	2	480	1400	24" ARMOR CABLE, TERM BOX
C-72C401	7 1/4	4	480	2000	POST TERM
C-73C141	7 3/8	1 1/2	480	1200	POST TERM

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High Performance Ceramic Heaters



Part Number	I. D.	Width	Volts	Watts	Termination
C-74B141	7 1/2	1 1/2	240	1000	POST TERM
C-74C141	7 1/2	1 1/2	480	1400	POST TERM
C-74C141-2	7 1/2	1 1/2	480	1000	POST TERM
C-74C201	7 1/2	2	480	1250	POST TERM
C-74C3011	7 1/2	3	480	2000	POST TERM, TERM BOX
C-74C301-3	7 1/2	3	480	2000	POST TERM
C-74C401	7 1/2	4	480	3000	POST TERM
C-74C401-1	7 1/2	4	480	2500	POST TERM
C-74C4011-1	7 1/2	4	480	3000	POST TERM, TERM BOX
C-74C6011	7 1/2	6	480	2000	POST TERM, BOX
C-74C6011-1	7 1/2	6	480	3000	POST TERM, BOX
C-74C701	7 1/2	7	480	5000	POST TERM
C-75C301	7 5/8	3	480	2600	POST TERM
C-75C401	7 5/8	4	480	2600	POST TERM
C-76C4011	7 3/4	4	480	3000	POST TERM, BOX
C-80C241	8	2 1/2	480	2000	POST TERM
C-80E4011-1	8	4	240/480	3000	POST TERM, BOX, DUAL VOLTAGE, T/C HOLE
C-82C141	8 1/4	1 1/2	480	1000	POST TERM
C-82C2411	8 1/4	2 1/2	480	2000	POST TERM
C-82B301	8 1/4	3	240	2000	POST TERM
C-82C401	8 1/4	4	480	2000	POST TERM
C-82C401-1	8 1/4	4	480	1500	POST TERM
C-82C5411	8 1/4	5 1/2	480	4400	POST TERM, BOX
C-84B301	8 1/2	3	240	2000	POST TERM
C-84C4011	8 1/2	4	480	3350	POST TERM, BOX
C-84C401	8 1/2	4	480	2000	POST TERM
C-86C401-1	8 3/4	4	480	2500	POST TERM

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Part Number	I. D.	Width	Volts	Watts	Termination
C-90B141	9	1 1/2	240	1500	POST TERM
C-90C1411	9	1 1/2	480	1675	POST TERM, BOX
C-90C301	9	3	480	2600	POST TERM
C-90C401	9	4	480	2500	POST TERM
C-90C4011	9	4	480	2750	POST TERM, LOW PROFILE BOX
C-90C5011	9	5	480	2500	POST TERM, BOX
C-90C5011-1	9	5	480	3000	POST TERM, BOX
C-90B601	9	6	240	2500	POST TERM
C-90C601	9	6	480	4000	POST TERM
C-90C6011	9	6	480	3000	POST TERM, TERM BOX
C-90C6011-1	9	6	480	2000	POST TERM, TERM BOX
C-90B7411	9	7 1/2	240	3200	POST TERM, TERM BOX
C-93E4111	9 3/8	4 1/8	240/480	2370	POST TERM, TERM BOX, DUAL VOLTAGE
C-43E4111-T	9 3/8	4 1/8	240/480	2370	POST TERM, TERM BOX, DUAL VOLTAGE, T/C HOLE
C-94C401	9 1/2	4	480	2500	POST TERM
C-94C501	9 1/2	5	480	2750	POST TERM
C-94C501-1	9 1/2	5	480	4500	POST TERM
C-94E5011	9 1/2	5	240/480	2500	POST TERM, TERM BOX, DUAL VOLTAGE
C-94C601	9 1/2	6	480	3000	POST TERM
C-94C6011	9 1/2	6	480	2000	POST TERM, TERM BOX
C-94C601-1	9 1/2	6	480	5400	POST TERM
C-95C401	9 5/8	4	480	2500	POST TERM
C-95C601	9 5/8	6	480	3500	POST TERM
C-95C601-S	9 5/8	6	480	3000	POST TERM, PARTIAL COVERAGE
C-95C701	9 5/8	7	480	3500	POST TERM
C-95C741-S	9 5/8	7 1/2	480	3500	POST TERM, PARTIAL COVERAGE
C-96C601	9 3/4	6	480	4000	POST TERM
C-96C6011	9 3/4	6	480	5450	POST TERM, TERM BOX

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High Performance Ceramic Heaters



Part Number	I. D.	Width	Volts	Watts	Termination
C-100C301	10	3	480	2000	POST TERM
C-100C3011-1	10	3	480	2000	POST TERM, TERM BOX
C-100C601	10	6	480	4000	POST TERM
C-102C301	10 1/4	3	480	2000	POST TERM
C-102C341	10 1/4	3 1/2	480	2500	POST TERM
C-102C4011	10 1/4	4	480	2500	POST TERM, LOW PROFILE BOX
C-102C5011	10 1/4	5	480	3250	POST TERM, LOW PROFILE BOX
C-102C6011	10 1/4	6	480	3500	POST TERM, TERM BOX
C-104C3411	10 1/2	3 1/2	480	3000	POST TERM, TERM BOX
C-104C4011	10 1/2	4	480	1750	POST TERM, TERM BOX
C-104C4011-1	10 1/2	4	480	3000	POST TERM, TERM BOX
C104C4011-2	10 1/2	4	480	4000	POST TERM, TERM BOX
C-110C3011	11	3	480	2950	POST TERM, TERM BOX
C-110C3011-2	11	3	480	2750	POST TERM, LOW PROFILE BOX
C-110C401	11	4	480	3000	POST TERM
C-110C501	11	5	480	2000	POST TERM
C-110C501-1	11	5	480	5200	POST TERM
C-110C521	11	5 1/4	480	4000	POST TERM
C-112C1411	11 1/4	1 1/2	480	1000	POST TERM, TERM BOX
C-112C3011-1	11 1/4	3	480	3000	POST TERM, TERM BOX
C-112C5011	11 1/4	5	480	4500	POST TERM, TERM BOX
C-112C5011-1	11 1/4	5	480	5000	POST TERM, TERM BOX
C-114C301	11 1/2	3	480	3000	POST TERM
C-114C3011	11 1/2	3	480	3000	POST TERM, TERM BOX
C-114C3011-1	11 1/2	3	480	2000	POST TERM, TERM BOX
C-114C301-2	11 1/2	3	480	2000	POST TERM
C-114C3611	11 1/2	3 3/4	480	2700	POST TERM, TERM BOX
C-114C401	11 1/2	4	480	3500	POST TERM
C-114C4011	11 1/2	4	480	2000	POST TERM, TERM BOX
C-114C601	11 1/2	6	480	6000	POST TERM

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Part Number	I. D.	Width	Volts	Watts	Termination
C-120C3011	12	3	480	2000	POST TERM, LOW PROFILE BOX
C-120C6011	12	6	480	5000	POST TERM, TERM BOX
C-120C601	12	6	480	4000	POST TERM
C-120C601-1	12	6	480	5000	POST TERM
C-120C6011-1	12	6	480	4000	POST TERM, TERM BOX
C-120E6011	12	6	240/480	4000	POST TERM, DUAL VOLTAGE, LOW PROFILE BOX
C-124C341	12 1/2	3 1/2	480	2500	POST TERM
C-124C6011	12 1/2	6	480	5000	POST TERM, TERM BOX
C-126B601	12 3/4	6	240	5000	POST TERM
C-130C2011	13	2	480	2000	POST TERM, TERM BOX
C-130C241	13	2 1/2	480	3000	POST TERM
C-130C3011-1	13	3	480	3000	POST TERM, TERM BOX
C-130C301-2	13	3	480	3500	POST TERM
C-130C3411-1	13	3 1/2	480	3500	POST TERM, TERM BOX
C-130C4011-1	13	4	480	3000	POST TERM, LOW PROFILE BOX
C-136B5011	13 3/4	5	240	4000	POST TERM, TERM BOX
C-136C5011	13 3/4	5	480	4000	POST TERM, TERM BOX
C-140C309-1	14	3	480	3000	36" WIREBRAID LEADS
C-144C201	14 1/2	2	480	2000	POST TERM
C-144C301	14 1/2	3	480	3000	POST TERM, LOW PROFILE BOX
C-150C301	15	3	480	5000	POST TERM, 1" GAP
C-150C3011-1	15	3	480	4000	POST TERM, TERM BOX
C-150C401	15	4	480	4500	POST TERM

Metric Sizes

Part Number	I. D.	Width	Volts	Watts	Termination
C-M85C80M1	85MM	80MM	480	1000	POST TERM
C-M100C145M9-T	100MM	145MM	460	1700	36 WIRE BRAID, T/C HOLE
C-M110B120M1	110MM	120MM	240	1830	POST TERM
C-M110C50M11	110MM	50MM	480	915	POST TERM, TERM BOX
C-M110C90M11	110MM	90MM	480	1250	TERM BOX
C-M128C255M11-T1	128MM	255MM	480	3100	TERM BOX, T/C HOLE
C-M140B120M11W-T	140MM	120MM	240	1585	48" WIRE BRAID, T/C HOLE, LOW PROFILE BOX
C-M140B135M11W-T	140MM	135MM	240	1780	TERM BOX, 48" WIRE BRAID, T/C HOLE
C-M165B47M11-T	165MM	47MM	240	950	TERM BOX, T/C HOLE
C-M168B33011-D	168MM	330MM	240	5200	TERM BOX
C-M180C153M1-W	180MM	153MM	480	2500	POST TERM, 3/4" WIDE GAP
C-M190B47M11-1	190MM	47MM	240	1400	TERM BOX, T/C HOLE
C-195C120M11-T	195MM	120MM	480	2250	TERM BOX, T/C HOLE
C-M212C101M1-W	212MM	101MM	480	2700	POST TERM, WIDE GAP
C-M220C111M11-T	220MM	111MM	480	2700	TERM BOX, T/C HOLE
C-M238E105M11W-T	238MM	105MM	240/480	2370	72" WIRE BRAID LEADS, TERM BOX, T/C HOLE, DUAL VOLTAGE
C-M238E120M11W-T	238MM	120MM	240/480	2710	72" WIRE BRAID LEADS, TERM BOX, T/C HOLE, DUAL VOLTAGE
C-M247C53M11W-1	247MM	53MM	480	1700	TERM BOX, 72 WIRE BRAID
C-M290C100M11	290MM	100MM	480	2650	TERM BOX

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