OMEGA HEATER COMPANY

INFORMATION MATERIAL

THIS MATERIAL IS MEANT TO BE USED ALONG WITH OUR CATALOG
IT IS NOT A SUBSTITUTE FOR THE CATALOG

OMEGA HEATER COMPANY

COMPANY OVERVIEW

Since 1970, we have been pioneering new developments in heater technology and providing total heating solutions. Heaters are our only business. We are the original and the only **Omega Heater Company**.

As the leader in energy saving heater bands, Omega is the heating line preferred by the plastics industry. We offer a full line of stock and custom heaters, controls & accessories for industrial equipment manufacturers and end users. Our applications engineers are always available to help with your heating needs.

THIS MATERIAL IS MEANT TO BE USED ALONG WITH OUR CATALOG
IT IS NOT A SUBSTITUTE FOR THE CATALOG

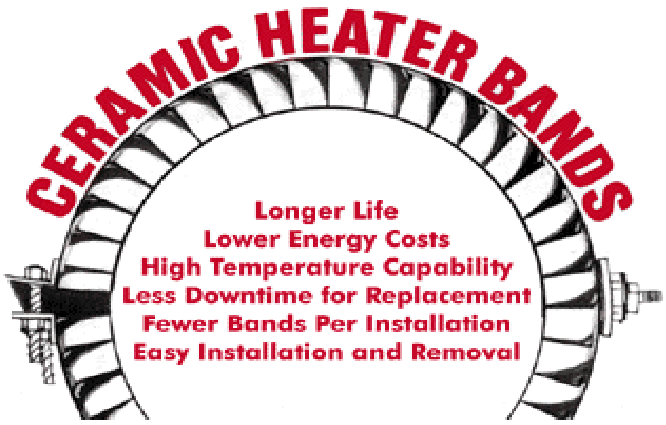
OMEGA HEATER COMPANY

TABLE OF CONTENTS

This material is to be used as an aid to the salesmen in conjunction with our catalog

IT IS NOT A SUBSTITUTE FOR THE CATALOG

CERAMIC HEATER BANDS



5 Styles to Choose From • Energy Saving • Up to 65 Watts/Sq. In.

STANDARD - ***5/8" thick, ¼" thermal insulation, up to 1400 F, 45 watts/sq. in.***
"THE PREFERRED CHOICE OF OEM'S"

INSULATION PLUS - ***7/8" thick, ½" thermal insulation, energy savings u p to 30%***
"THE ENERGY SAVER"

SUPER INSULATION PLUS - 1-1/4" thick, 7/8" thermal insulation, up to 40 watts/sq. in.
"MAXIMUM ENERGY SAVINGS, MINIMUM SHEATH TEMPERATURES"

ULTRA THIN - ***3/8" thick, , 3/16" thermal insulation, up to 65 watts/sq. in.***
HIGH PERFORMANCE FOR CRITICAL HIGH TEMP OPERATIONS

AIR COOLED - ***3/8" thick, , NO Thermal insulation, up to 45 watts/sq. in.***
Developed Especially for Air Cooled Systems

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

A NOTE ON CERAMIC BANDS

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

 # 1) STANDARD CERAMIC BAND

5/8" THICK
Watt Densities up to 45w / sq. in.
1/8" thermal insulation
Lowest in cost

Widely used as a barrel heater on injection molding machines for processing low to medium temperature resins. Also for heating dies pipes and other related equipment

 # 2) INSULATION PLUS

7/8" THICK
Watt Densities up to 45w / sq. in.
3/8" thermal insulation
Approx. 15% higher in cost then standard ceramic

Developed for energy saving used in all the above applications.
Energy savings up to 30%

 # 3) SUPER INSULATION PLUS

1-1/4" THICK
Watt Densities up to 40w / sq. in.
3/4" thermal insulation
Approx. 10% higher in cost then Insulation Plus

Not only saves energy but enables the elimination of expensive insulation blankets.
Ideal for use where lower sheath temperatures are required.

 # 4) ULTRA THIN LINE

3/8" THICK
Watt Densities up to 65w / sq. in.
3/16" thermal insulation
Lower in cost then most competing premium styles, such as mineral insulated, ceramic, or refractory

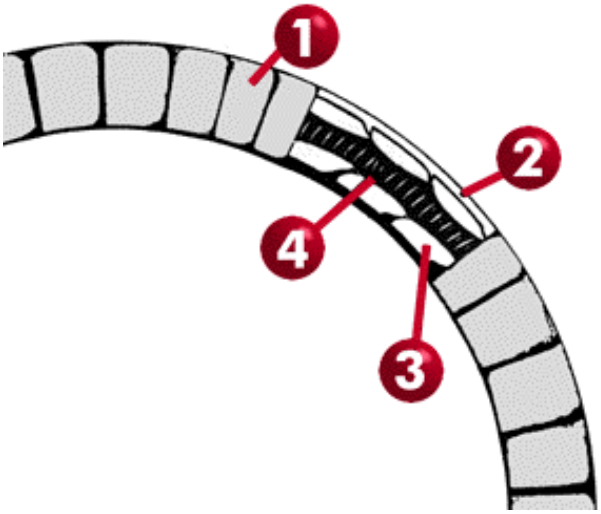
This thin. High temp., high watt density heater can meet the most demanding performance you may require.

 # 5) AIR COOLED

1/2" THICK
Watt Densities up to 45w / sq. in.
***NO* thermal insulation**
63% open perforated sheath
Can be supplied with shrouds for blowers

STANDARD **- 5/8" thick, ¼" thermal insulation, up to 1400 F, 45 watts/sq. in.**

"THE PREFERRED CHOICE OF OEM'S"



OMEGA QUALITY CONSTRUCTION

1. Stainless steel sheath

Resists rust and high temperatures, and provides firm mechanical support. Easily wraps around barrel due to fluted construction.

2. Thermal insulation

¼ inch of ceramic fiber prevents heat loss, thereby lowering energy costs.

3. Ceramic coil supports

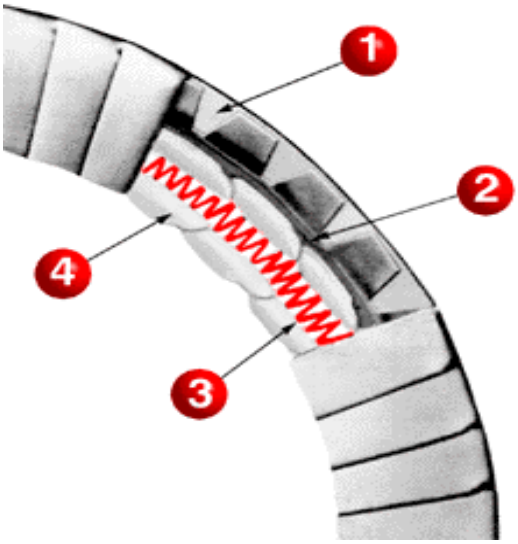
Designed for their dielectric and thermoconductive characteristics, the interlocking feature provides flexibility so band wraps easily around barrel.

4. Nickel-chrome heating coil

Precision wound, helical construction gives extended service. A heavier weight than found in mica or other conventional heaters.

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

INSULATION PLUS - ***7/8" thick, ½" thermal insulation, energy savings u p to 30%***
"THE ENERGY SAVER"



OMEGA QUALITY CONSTRUCTION

1. INSULATION PLUS EMPLOYS AN ADDITIONAL 1/4-INCH OF THERMAL INSULATION ENCASED IN A SEPARATE FLEXIBLE STAINLESS STEEL SHELL

2. STANDARD 1/4-INCH THICK THERMAL INSULATION FOUND ON ALL OMEGA CERAMIC BAND HEATERS.

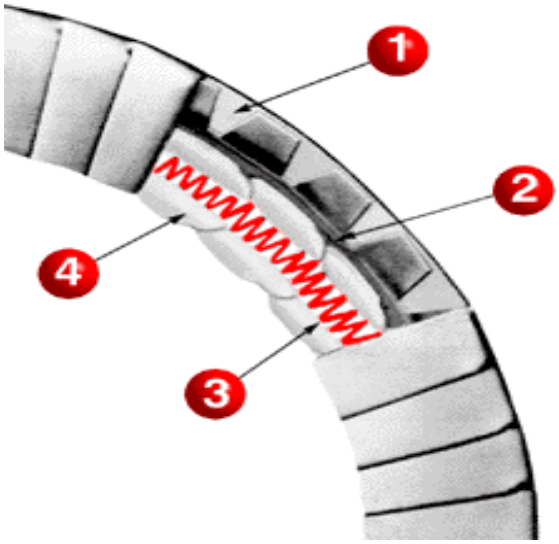
3. HELICAL NICKEL-CHROME COIL FOR EXTENDED SERVICE

4. CERAMIC COIL SUPPORTS

COOLER AMBIENT TEMPERATURES AROUND THE OPERATING MACHINES

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

SUPER INSULATION PLUS - 1-1/4" thick, 7/8" thermal insulation, up to 40 watts/sq. in.
"MAXIMUM ENERGY SAVINGS, MINIMUM SHEATH TEMPERATURES"



OMEGA QUALITY CONSTRUCTION

1. INSULATION PLUS EMPLOYS AN ADDITIONAL 5/8-INCH OF THERMAL INSULATION ENCASED IN A SEPARATE FLEXIBLE STAINLESS STEEL SHELL

2. STANDARD 1/4-INCH THICK THERMAL INSULATION FOUND ON ALL OMEGA CERAMIC BAND HEATERS.

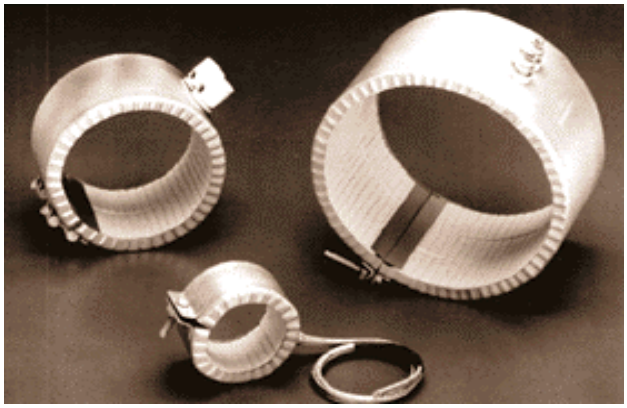
3. HELICAL NICKEL-CHROME COIL FOR EXTENDED SERVICE

4. CERAMIC COIL SUPPORTS

COOLER AMBIENT TEMPERATURES AROUND THE OPERATING MACHINES

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

ULTRA THIN - *3/8" thick, , 3/16" thermal insulation, up to 65 watts/sq. in.*
HIGH PERFORMANCE FOR CRITICAL HIGH TEMP OPERATIONS



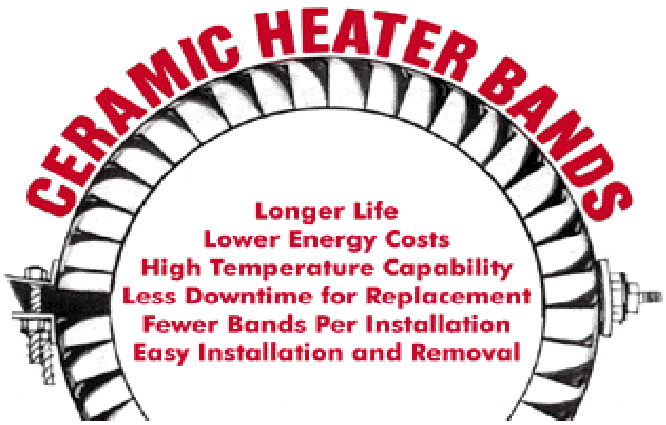
OMEGA QUALITY CONSTRUCTION

1. 3/16-INCH THICK THERMAL INSULATION

2. HELICAL NICKEL-CHROME COIL FOR EXTENDED SERVICE

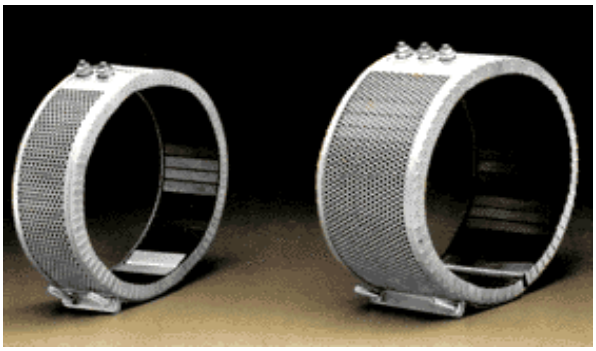
3. CERAMIC COIL SUPPORTS

"HIGH PERFORMANCE FOR CRITICAL HIGH TEMP OPERATIONS"



OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

AIR COOLED - ***3/8" thick, , NO Thermal insulation, up to 45 watts/sq. in.***
Developed Especially for Air Cooled Systems



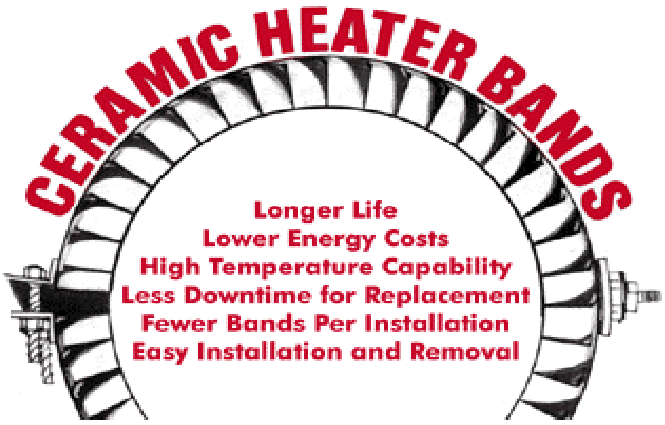
OMEGA QUALITY CONSTRUCTION

1.PERFERATED OUTER SHEATH
2. *NO* THERMAL INSULATION
3. HELICAL NICKEL-CHROME COIL FOR EXTENDED SERVICE
4. CERAMIC COIL SUPPORTS

Omega Heater Company's, super-efficient and economical air cooled ceramic heater bands are designed for use on extrusion machinery or on any heat/cool operation.

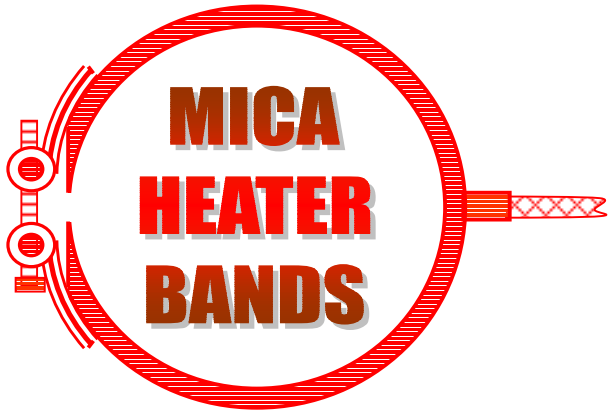
Omega's air cooled ceramic heater bands are available in various sizes to either accommodate new designs or to replace less efficient, more expensive cast aluminum heaters.

They can be manufactured to replace individual heaters in the field or be made as full units with shrouds for blowers



OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

MICA BANDS



The use of mica as an electrical insulator produces a thin, efficient heater.
Heat from the precisely wound Nichrome element is quickly transferred to the working surface. This allows for fast heat-up, and response.
Mica provides excellent dielectric strength and heat transfer capability.
The mica element is encased in a corrosion resistant sheath.

Omega Heater manufactures 26 basic constructions with a variety of electrical terminations and mounting configurations.
We also manufacture custom shapes and special features upon request.

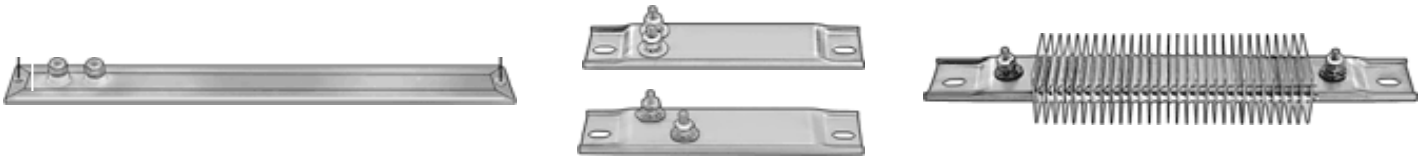
BELOW ARE SOME TYPICAL TERMINATIONS AND CLAMPING





OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

STRIP HEATERS



3 Styles to Choose From • Economical • Radiant • Air Cooled

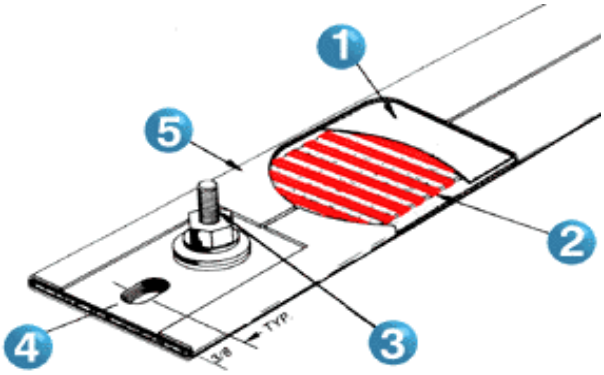
MICA STRIP HEATERS - ***Thin and Light, Fast Response, Low cost***
For hot plates, sealing Equipment, Hot Stamping, Dies & Molds, Etc..

CERAMIC STRIP HEATERS - **1/4" , *5/16" and 3/8" Thick, up to 45 Watts / sq. in.***
Can Be Used As Radiant Heaters or Die Heaters

FINNED STRIP HEATERS - ***5/16" Thick, Fin Size 1-3/8" x 2", up to 50 Watts / sq. in.***
Used For Convection Heating or any Process Requiring a High Velocity air stream

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

MICA STRIPS HEATERS - 3/16" Thick, up to 35 Watts / sq. in.
FOR HOT PLATES, SEALING EQUIPMENT, HOT STAMPING, DIES AND MOLDS, ETC.



"L" series (flexible leads)

OMEGA QUALITY CONSTRUCTION

1. Top quality MICA insulation
2. Nickel-chrome ribbon engineered for longest life at rated watts & volts
3. Post terminals - riveted for positive electrical connection to element
4. 1/4 x 3/8 mounting hole
5. Standard steel sheath with special surface treatment to increase heat transfer and to retard oxidation (stainless steel option.)

SPECIFICATIONS

Length
Minimum without mounting holes = 2-1/2"
Minimum with mounting holes = 3-1/2"
Maximum consult Omega

Width
Minimum, Types P1R-L2CR = 3/4"
Minimum, Type P3R = 1-3/4"
Maximum consult Omega

Thickness
Nominal 3/16

Sheath Temperature
Maximum, Standard units 900 Deg. 482 Deg C
Maximum, Stainless Steel Sheath
1200 Deg. F 650 Deg. C

Wattage
35 WATTS/sq. in. recommended max.

Terminals
10-24 x 7/16 POST TERM. Or 12" FLEX. LEADS

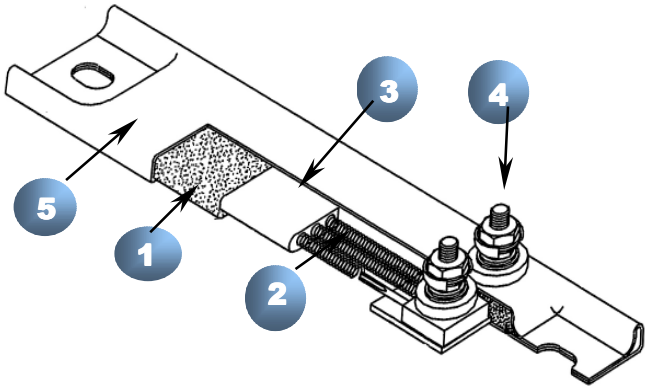
Voltage
Maximum 480VAC

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

CERAMIC STRIP HEATERS - *5/16" and 3/8" Thick, up to 45 Watts / sq. in.*

Thermoforming • Air Heating • Platens • Molds• Ovens • Sealing • Dies • Tank Heaters • Hot

4 SIZES AVAILABLE ¼" x 1" • 5/16" x 1" • 5/16" x 1-1/2" • 3/8 x 1-1/2"



OMEGA QUALITY CONSTRUCTION

1. Magnesium Oxide insulation
2. Nickel-chrome coil engineered for longest life at rated watts & volts
3. Ceramic Core
4. Post terminals -10-24 thread
5. Stainless Steel extruded tube for sheath

OPTIONS

LEADS - Off top surface or from end

LEADS - in braid or armor

NOTE: 1/4" THICK HEATERS - LEADS ONLY

SPECIFICATIONS

ELEMENT -
Nickel/Chrome Coil

SHEATH -
Stainless Steel (Heavy Gauge)

THICKNESS -
1/4"-5/16"-3/8"

TEMPERATURES -
Up to 1400 deg.F

WATT DENSITY -
Up to 45 watts/square inch

VOLTAGE -
Up to 240 volts - Consult factory for higher voltage

TERMINALS -
Post Type-Standard 10-24 Thread
1/4" x 1" WIDE LEADS ONLY

LENGTH -
Minimum 4" up to any practical length

MOUNTING TABS -
Available with or without tabs

MOUNTING SLOTS -
5/16" X 1/2"

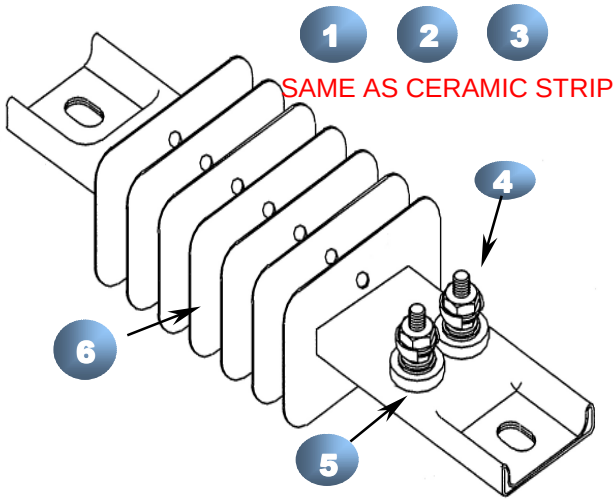
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

FINNED STRIP HEATERS - ***5/16" Thick, Fin Size 1-3/8" x 2", up to 50 Watts / sq. in.***

Used For Convection Heating or any Process Requiring a High Velocity air stream

APPLICATIONS:

Air & Gas Heating, Oven & Duct Heating, Load Banks, Space Heaters, Heat Curing, Food Warmers, Shrink Tunnels, Moisture Protection, Ink Drying



SPECIFICATIONS

Element - Nickel Chrome coil
Sheath - Seamless Stainless Steel
Thickness- 5/16"
Fin Size - 1-3/8" x 2"
Fin Material - Nickel Plated Steel (ST.ST. Opt.)
Fin Spacing - 6 per inch
Mounting Slot - 5/16" x 1/2 " 3/8" x 1/2"

OMEGA QUALITY CONSTRUCTION

1. Magnesium Oxide insulation
2. Nickel-Chrome coil engineered for longest life at rated watts & volts
3. Ceramic Core
4. Post terminals -10-24 thread
5. Stainless Steel extruded tube for sheath
6. FINS

Line voltage over 300 volts require secondary insulating bushing with larger Mtg. Slots

MAXIMUM WATT DENSITY

STILL AIR

Up to 300 F - 20 watts/sq. in.
300 F to 600 F - 16 watts/sq./in.
600 to 800 F - 10 watts/sq./in.

MOVING AIR- 600 FT/MIN.

Up to 200 F - 40 watts/sq. in.
200 to 400 F - 30 watts/sq./in.
400 to 600 F - 20 watts/sq./in.

MOVING AIR- 1200 FT/MIN.

Up to 200 F - 50 watts/sq. in.
200 to 400 F - 35 watts/sq./in.
400 to 600 F - 25 watts/sq./in.
400 to 600 F - 25 watts/sq./in.

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

REFERENCE DATA

Variations Of Ohm's Law

OHM'S LAW

VOLTS

$$\text{Volts} = \sqrt{\text{Watts} \times \text{Ohms}}$$

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

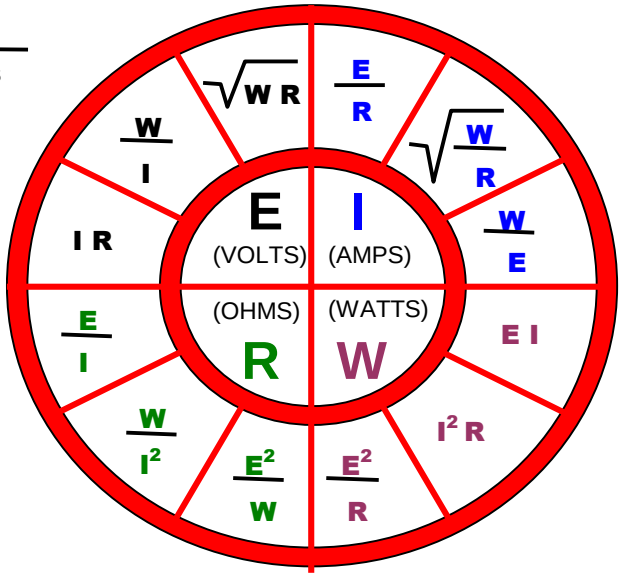
$$\text{Volts} = \text{Amperes} \times \text{Ohms}$$

AMPERES

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

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

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



OHMS

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

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

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

WATTS

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

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

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

Wattage varies directly as ratio of voltage squared

$$W_2 = W_1 \times \left(\frac{E_2}{E_1}\right)^2$$

$$\text{3 Phase Amperes} = \frac{\text{Total Watts}}{\text{Volts} \times 1.732}$$

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

REFERENCE DATA

CALCULATING WATT DENSITY

CERAMIC AND MICA BAND HEATERS

$$\text{WATTS / SQ. IN} = \frac{\text{WATTAGE}}{(\text{ ID x WIDTH x 3.1416 }) - (\text{COLD AREA})}$$

CERAMIC AND MICA STRIP HEATERS

$$\text{WATTS / SQ. IN} = \frac{\text{WATTAGE}}{(\text{ HEATED LENGTH x WIDTH })}$$

CHANNEL STRIPS HEATERS

$$\text{WATTS / SQ. IN} = \frac{\text{WATTAGE}}{(\text{ HEATED LENGTH x 3.625 })}$$

FINNED STRIP HEATERS

$$\text{WATTS / SQ. IN} = \frac{\text{WATTAGE}}{((\text{ OVERALL LENGTH - "X" }) \text{ x } 3.625)}$$

For Parallel Terminals "X" = 4.625"
For Offset Terminals "X" = 5.25"
For Tandem Terminals "X" = 5.25"

NOTE: Cold area (Gaps, Holes, Cutouts, Terminal Area, Etc.) May Be Subtracted From Above For More Detailed Calcutations.

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

HEATER BAND WIRING

COMMON CONDITIONS

ONE PIECE BANDS:

Rated for a single voltage. 120 , 240 , 480.

TWO PIECE BANDS:

Rated for 240V Total 120V / 1/2, 480V Total 240V / 1/2

PARALLEL WIRING:

Used to wire several heaters of the same voltage by zone.

SERIES WIRING:

Used to wire heaters rated at part of the total voltage

DUAL VOLTAGE:

For bands that are manufactured to operate at two different voltages

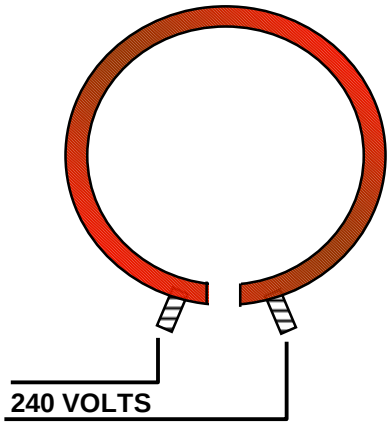
3 PHASE WIRING:

Used to limit the currant load on bands of high wattage and low voltage.

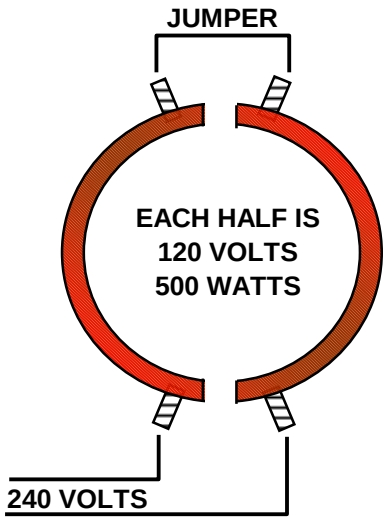
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

ONE PIECE AND TWO PIECE BANDS:

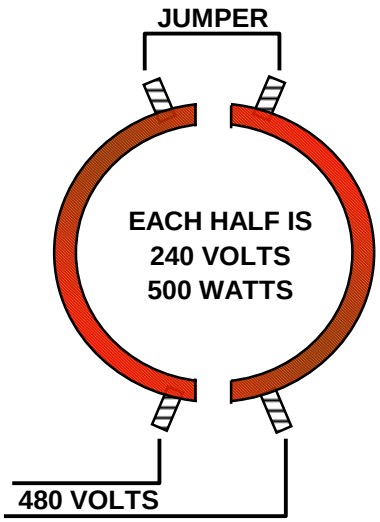
1 PIECE BAND RATED
240V / 1,000 WATTS



2 PIECE BAND RATED
240 VOLTS / 1,000 WATTS
EACH HALF IS 120 V / 500 W
WIRE EACH HALF IN SERIES

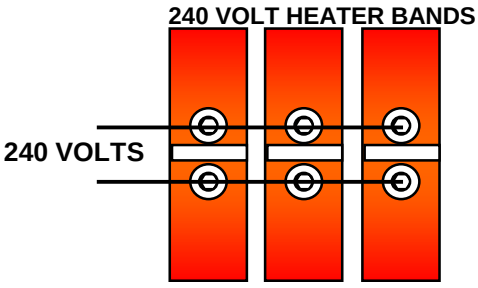


2 PIECE BAND RATED
480 VOLTS / 1,000 WATTS
EACH HALF IS 240 V / 500 W
WIRE EACH HALF IN SERIES

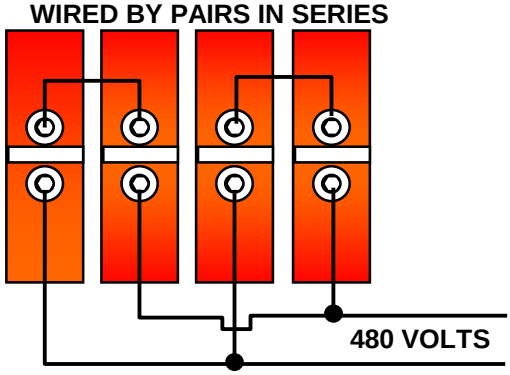


PARALLEL AND SERIES WIRING

PARALLEL WIRING:
HEATER BANDS ARE NORMALLY WIRED IN PARALLEL BY ZONE

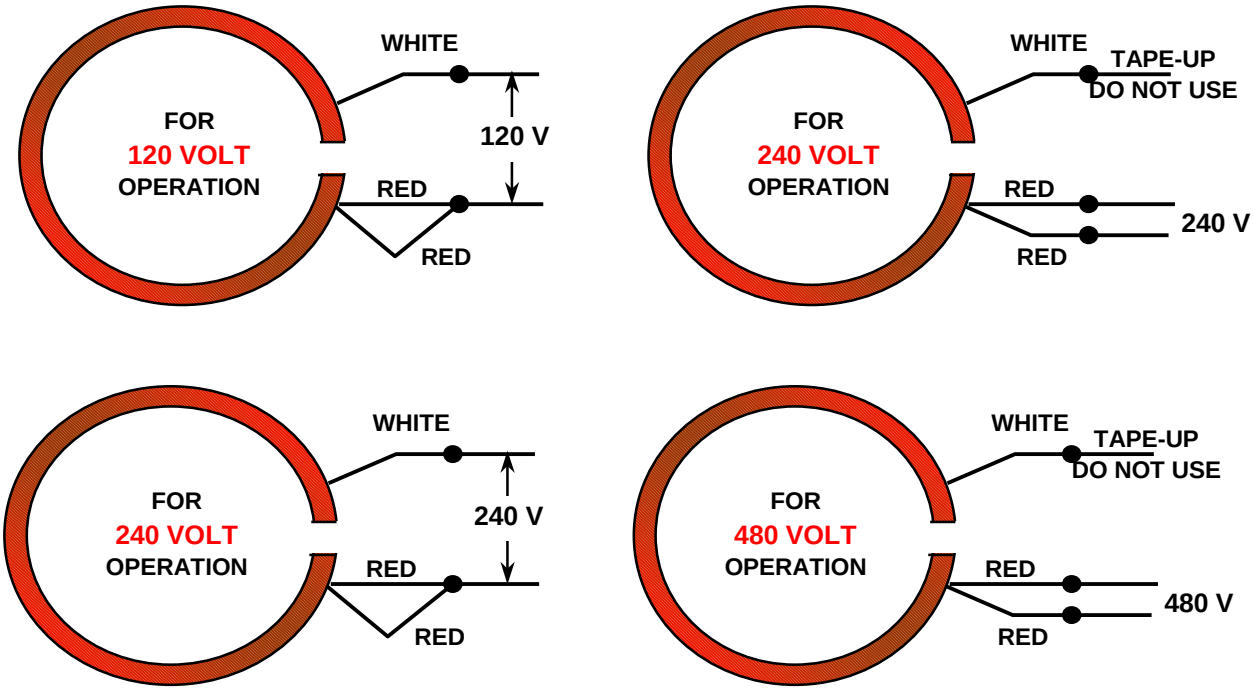


SERIES WIRING:
ILLUSTRATION SHOWS 240 VOLT BANDS WIRED TO ACCEPT 480 VOLTS
BANDS MUST BE OF EQUAL WATTAGE AND WIRED BY PAIRS IN SERIES



OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

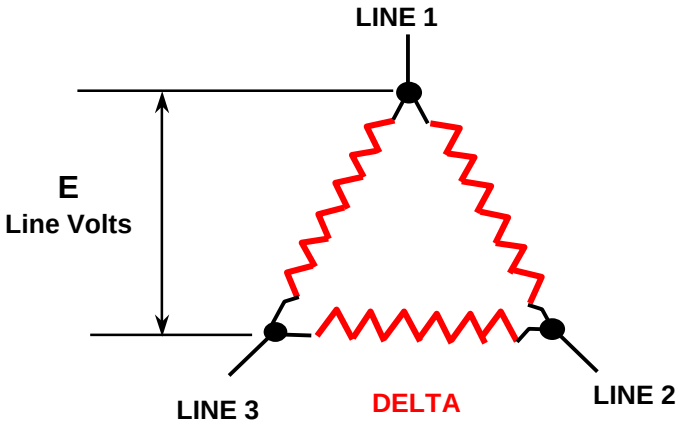
DUAL VOLTAGE:

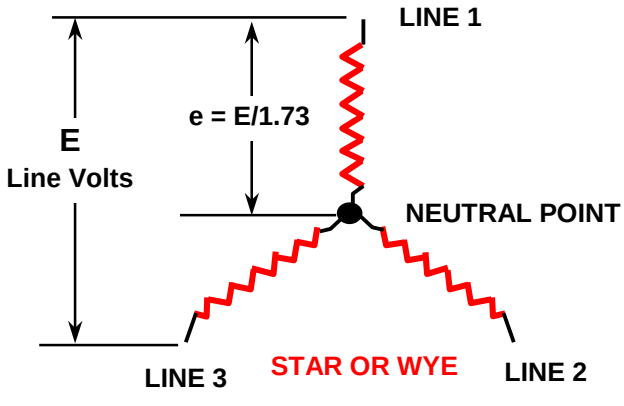


3 PHASE

Element Resistance (Hot) = $\frac{1.731\ E}{I}$

Element Resistance (Hot) = $\frac{E}{1.731}$



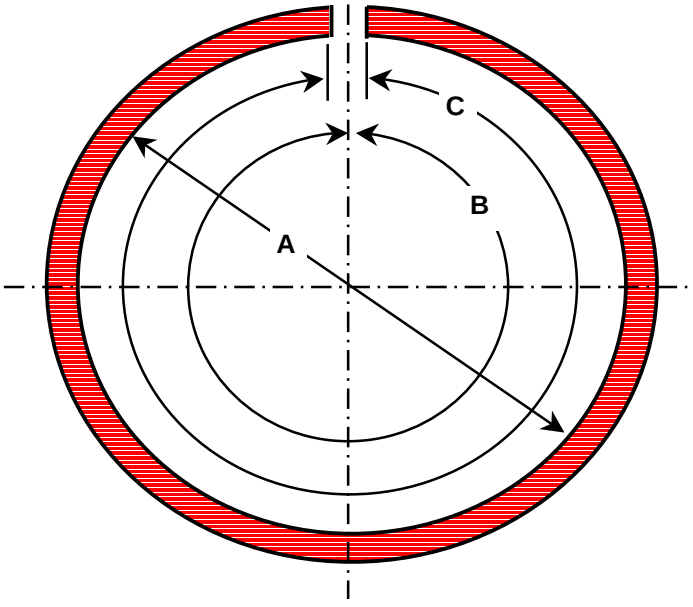


OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

SIZING BAND HEATERS IN THE FIELD

HEATER GAP
ALL MICA & CERAMIC HEATERS REQUIRE A GAP FOR EXPANSION

STANDARD GAP SIZE
IS 1/4" TO 1/2" DEPENDING ON THE SIZE OF THE HEATER



GETTING THE PROPER DIAMETER FOR THE BAND IS CRITICAL TO INSURE PROPER FIT

1) **The best way to size the heater is if the OUTSIDE DIAMETER (A) of the part being heater is known This would be the INSIDE DIAMETER (A) of the band, and the proper gap for the heater size will be used.**
2) **The diameter can also be found by measuring the CIRCUMFERENCE (B) of the item being heated. From this the DIAMETER needed can be calculated.**
3) **If working from heaters in a stock bin *DO NOT* close the heaters completely**

REMEMBER THE GAP

4) **Try holding the heater with a 1/4" gap and measure the DIAMETER (A) with a ruler.**

OR

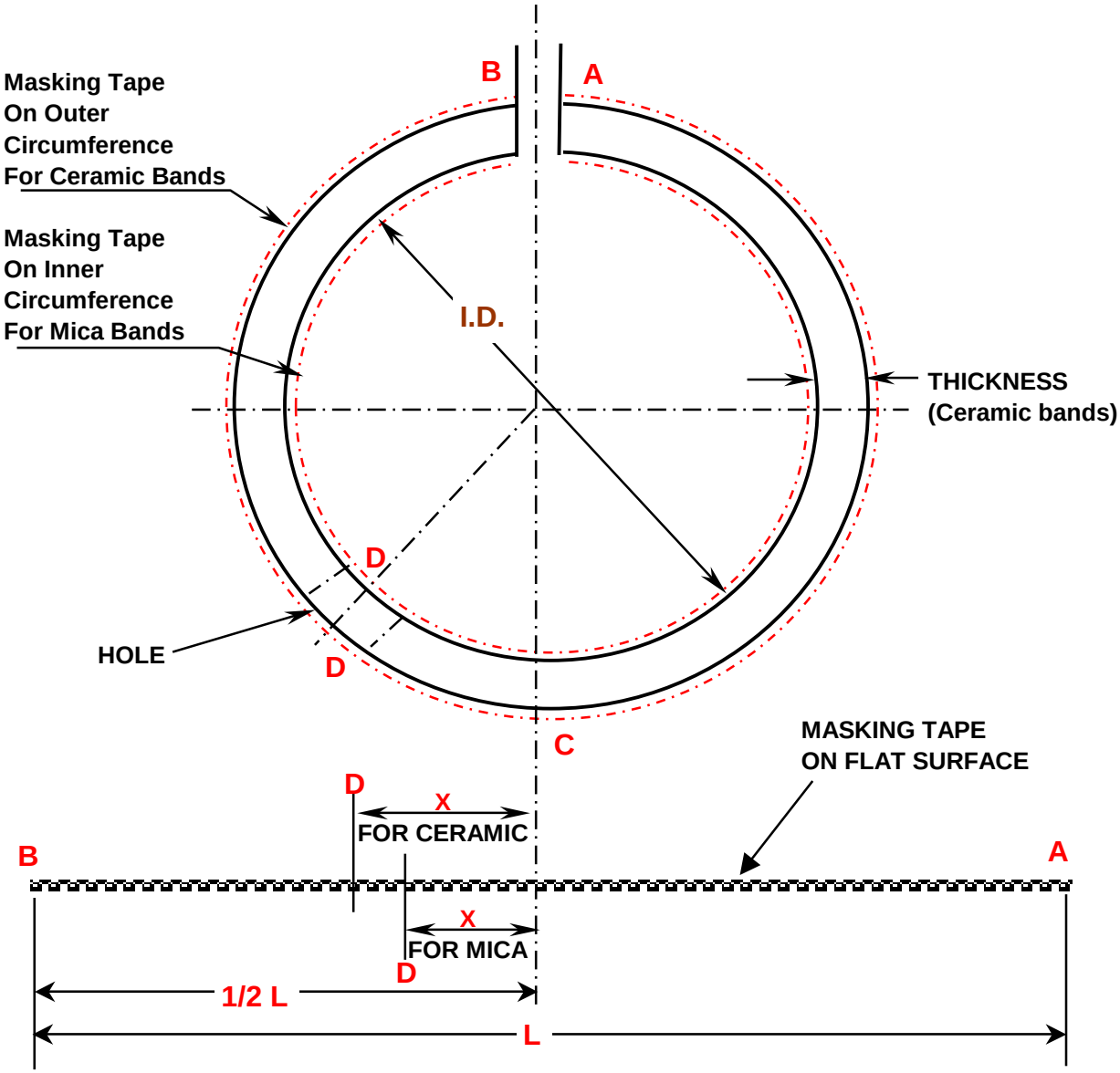
5) **Measure the inside surface of the heater "C" from end to end, add a 1/4" for the gap this will give you the CIRCUMFERENCE (B) of the heater.**
6) **If special gaps are required it is the responsibility of the customer to advise the manufacturer**

THESE DIMENSIONS ARE APPROXIMATE.
ONLY STEP # 1 CAN BE USE AS AN ACCURATE MEASUREMENT FOR MANUFACTURING

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

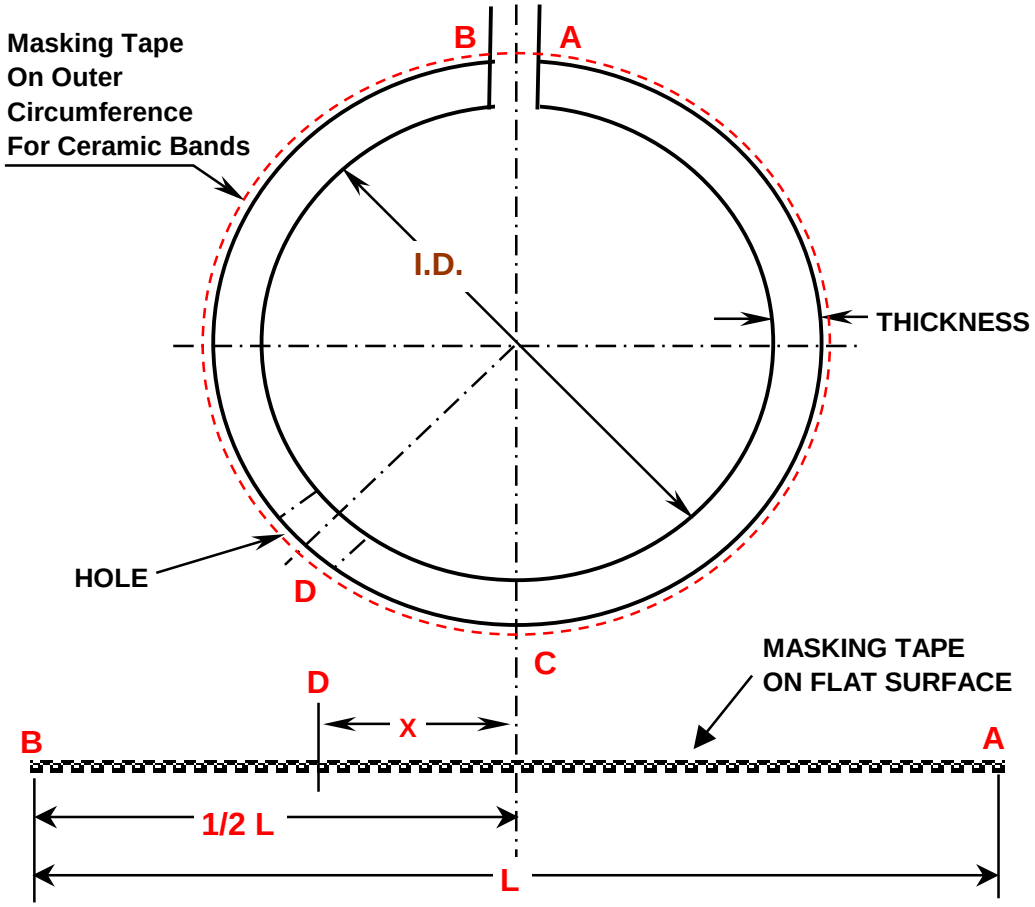
LOCATING HOLES IN BAND HEATERS



FOR CERAMIC BANDS SEE PAGE 22
FOR MICA BANDS SEE PAGE 23
FOR FORMULAS SEE PAGE 24

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

HOLE LOCATION FOR CERAMIC BANDS

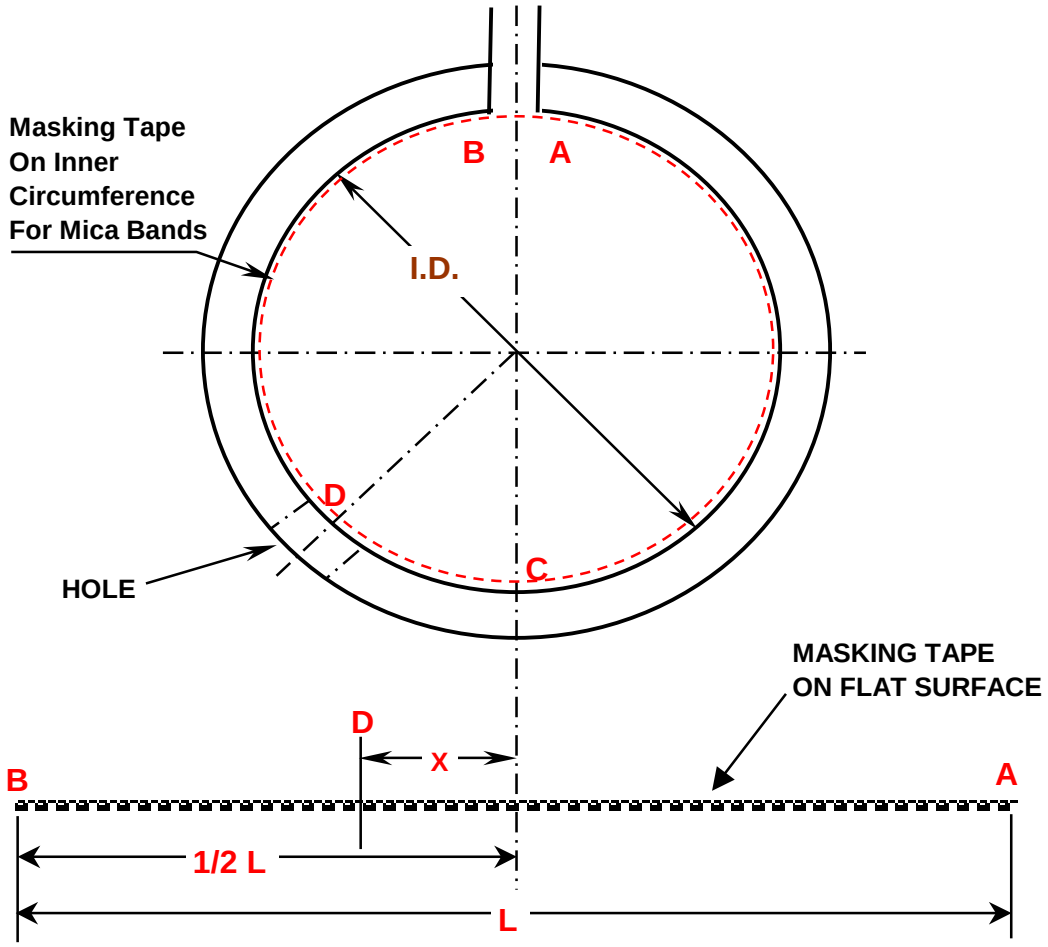


1) Using a piece of masking tape on the OUTSIDE surface of the heater, mark the two ends, points "A" and "B", and the centers of the holes, point "D".
2) Take the tape off the heater and lay it on a flat surface.
3) Find the center of the tape from points "A" and "B", this is the center of the heater shell, point "C" and your reference point.
4) From point "C" measure to the center of the holes. For multiple holes measure from point "C" to the center of each hole, point "D", = (X).
5) On Ceramic Bands we must also know the thickness of the heater.
6) Measurements from the end of the heater may not be accurate due to differences in manufacturing.

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

HOLE LOCATION FOR MICA BANDS



1) Using a piece of masking tape on the *INSIDE* surface of the heater, mark the two ends, points "A" and "B", and the centers of the holes, point "D".
2) Take the tape off the heater and lay it on a flat surface.
3) Find the center of the tape from points "A" and "B", this is the center of the heater shell, point "C" and your reference point.
4) From point "C" measure to the center of the holes. For multiple holes measure from point "C" to the center of each hole, point "D", = (X).
5) This procedure can be done on the outside surface of the heater but must be *NOTED* as such
6) Measurements from the end of the heater may not be accurate due to differences in manufacturing.

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

FORMULAS FOR LOCATING HOLES

CONVERTING INCHES TO DEGREES

$$1 \text{ DEG.} = \text{DIA.} \times \frac{\pi}{360}$$

DIA. = I.D. For Mica Bands
O.D. For Ceramic Bands
(I.D. + 2 x Thickness)

$$\text{TOTAL. DEG.} = \frac{X}{\text{in./deg.}}$$

Where X = Inches Of Length From Centerline Of Heater (Point C) To Centerline Of Hole (Point D)

$$\pi = 3.1416"$$

EXAMPLE : MICA BAND 10" I.D.,(1) HOLE, 5-1/4" FROM POINT C TO POINT D

$$1 \text{ DEG.} = \frac{10 \times \pi}{360} = .087 \text{ inches}$$

$$\text{TOTAL DEG.} = \frac{X}{.087} = \frac{5.25}{.087} = 60 \text{ DEG.}$$

FOR ORDERING PROVIDE:

DEGREES FROM CENTERLINE OF HEATER ON INSIDE SURFACE

OR

DISTANCE (X) FROM CENTERLINE OF HEATER TO CENTERLINE OF HOLE ON INSIDE SURFACE

OR

DISTANCE (X) FROM CENTERLINE OF HEATER TO CENTERLINE OF HOLE AND HEATER THICKNESS ON OUTSIDE SURFACE

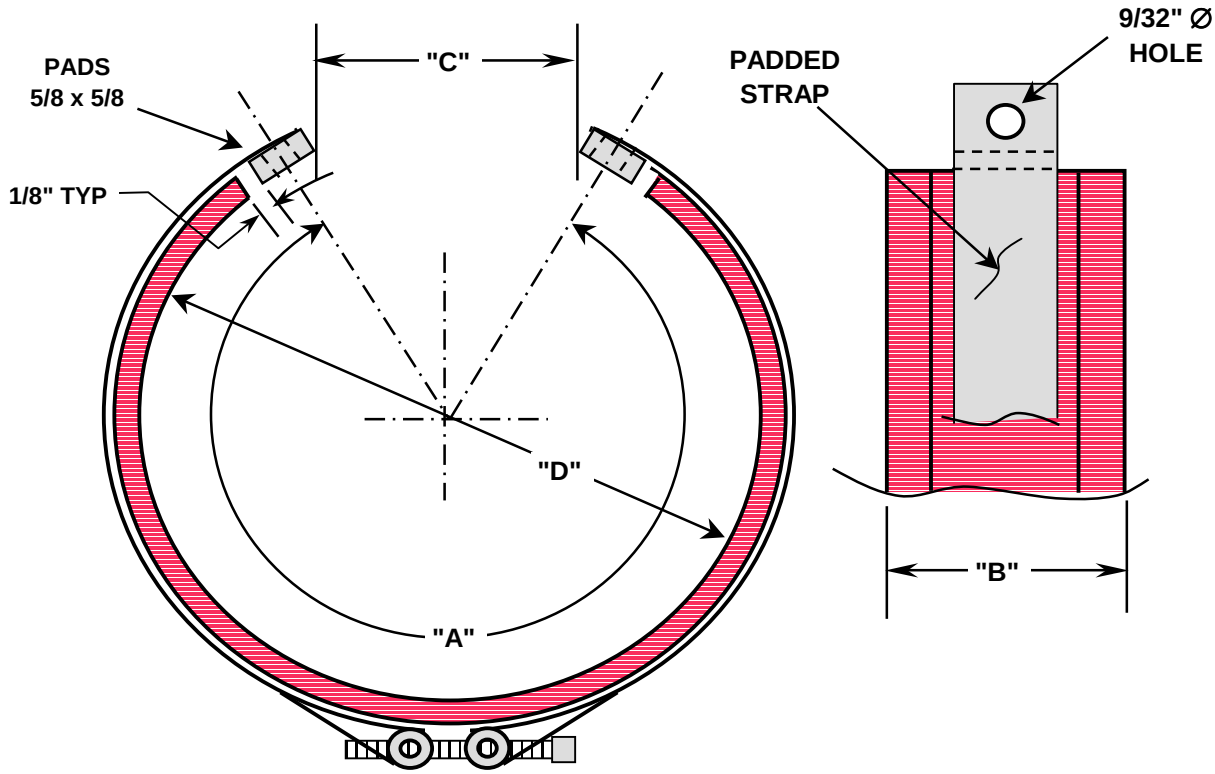
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

MICA BANDS TYPE 13

ONE **PIECE CONSTRUCTION** **PADDED CLAMPING STRAP**



OR

HEATER COVERAGE	DIM "A" =	o "
HEATER WIDTH	DIM "B" =	"
HEATER GAP	DIM "C" =	"
HEATER DIAMETER	DIM "D" =	"

NOTES

(1) Termination can be Lead Wires or Post Terminals.(Specify location)
(2) Straps are 5/8" wide with 10-24 B/N unless specified.
(3) Number of straps is to be specified by customer
(4) Hole size in pads is 9/32" unless specified

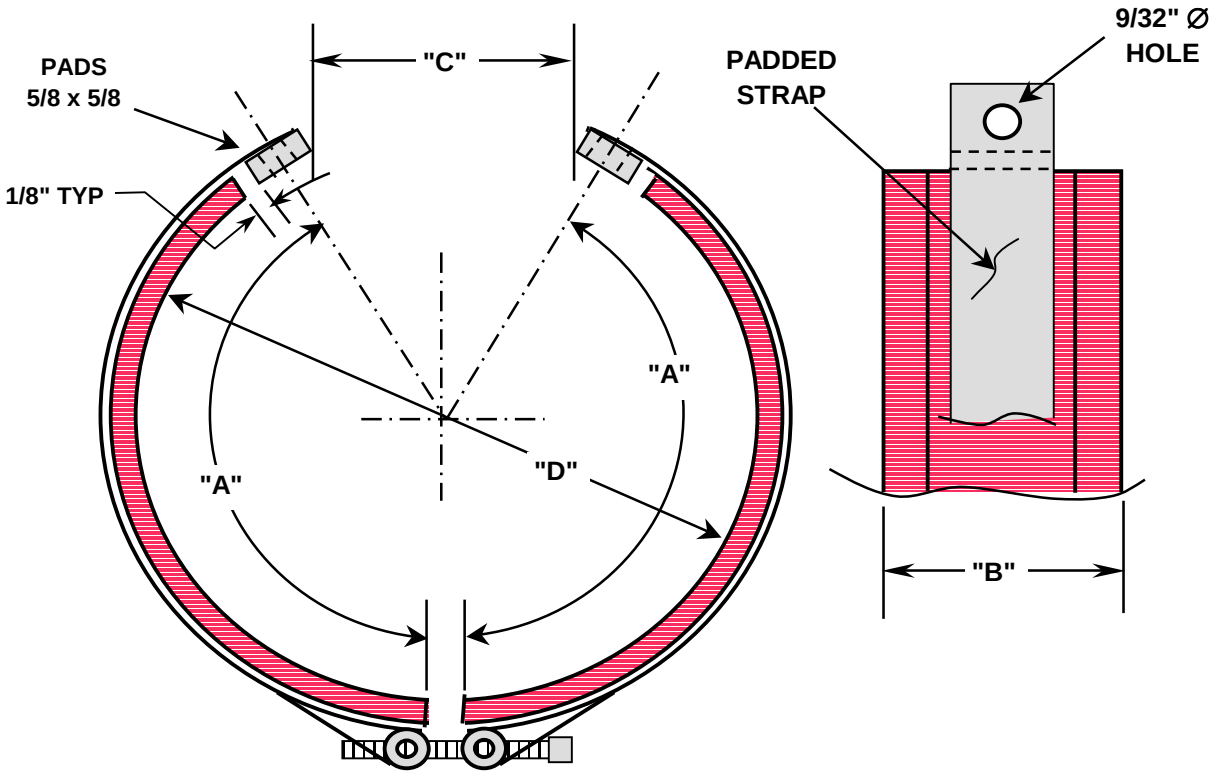
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

MICA BANDS TYPE 13

TWO **PIECE CONSTRUCTION** **PADDED CLAMPING STRAP**



OR

HEATER COVERAGE	DIM "A" =	o "
HEATER WIDTH	DIM "B" =	"
HEATER GAP	DIM "C" =	"
HEATER DIAMETER	DIM "D" =	"

NOTES

(1) Termination can be Lead Wires or Post Terminals.(Specify location)
(2) Straps are 5/8" wide with 10-24 B/N unless specified.
(3) Number of straps is to be specified by customer
(4) Hole size in pads is 9/32" unless specified

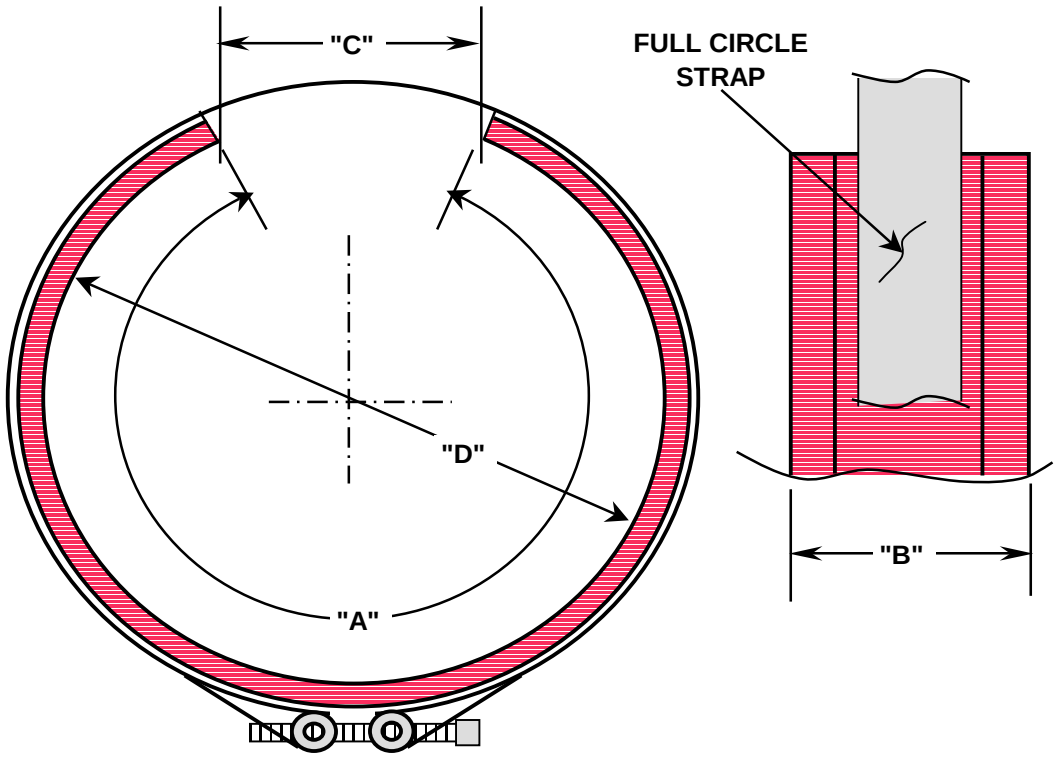
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

MICA BANDS TYPE 13

ONE **PIECE CONSTRUCTION** **FULL CIRCLE CLAMPING STRAP**



OR	HEATER COVERAGE	DIM "A" =	o "
	HEATER WIDTH	DIM "B" =	"
	HEATER GAP	DIM "C" =	"
	HEATER DIAMETER	DIM "D" =	"

NOTES

(1) **Termination can be Lead Wires or Post Terminals.(Specify location)**
(2) **Straps are 5/8" wide with 10-24 B/N unless specified.**
(3) **Number of straps is to be specified by customer**

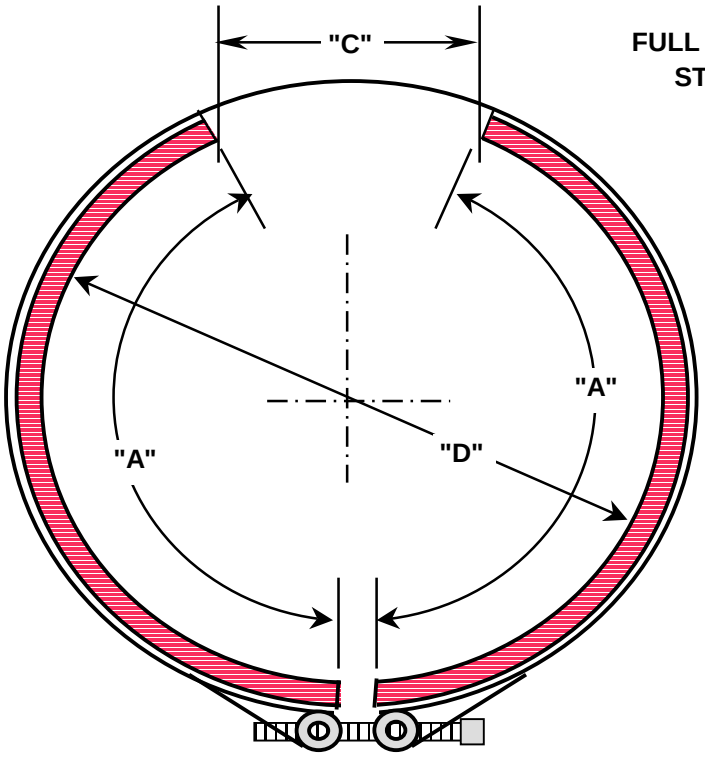
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

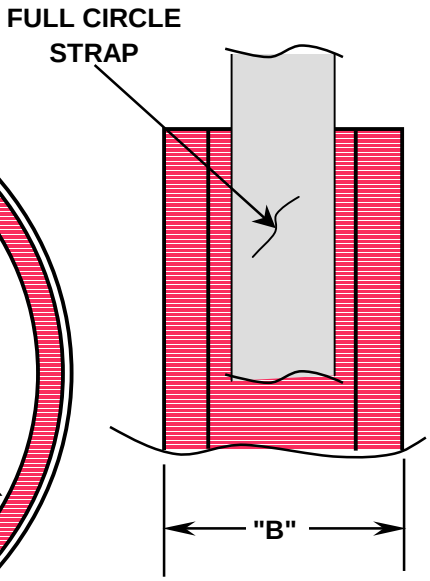
MEASURING PARTIAL COVERAGE BANDS

MICA BANDS TYPE 13

TWO **PIECE CONSTRUCTION**



FULL CIRCLE CLAMPING STRAP



OR

HEATER COVERAGE	DIM "A" =	o "
HEATER WIDTH	DIM "B" =	"
HEATER GAP	DIM "C" =	"
HEATER DIAMETER	DIM "D" =	"

NOTES

(1) **Termination can be Lead Wires or Post Terminals.(Specify location)**

(2) **Straps are 5/8" wide with 10-24 B/N unless specified.**

(3) **Number of straps is to be specified by customer**

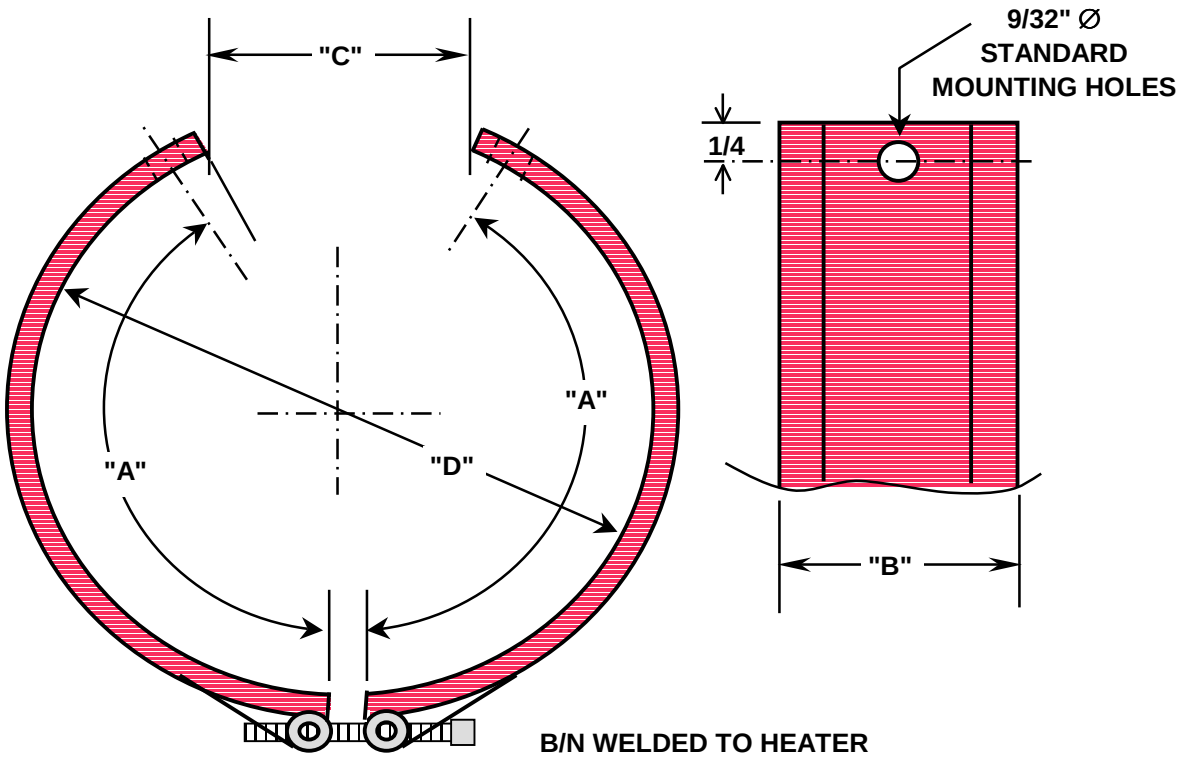
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

MICA BANDS TYPE 13

MUST BE TWO **PIECE CONSTRUCTION** **SPECIAL LOCK -UP**



B/N WELDED TO HEATER

OR

HEATER COVERAGE	DIM "A" =	o "
HEATER WIDTH	DIM "B" =	"
HEATER GAP	DIM "C" =	"
HEATER DIAMETER	DIM "D" =	"

NOTES

(1) **Termination can be Lead Wires or Post Terminals.(Specify location)**
(2) **Barrel nuts may be 10-24 or 1/4-20 thread depending on heater width (B)**
(3) **Number, location and size of mounting holes is to be specified by customer**

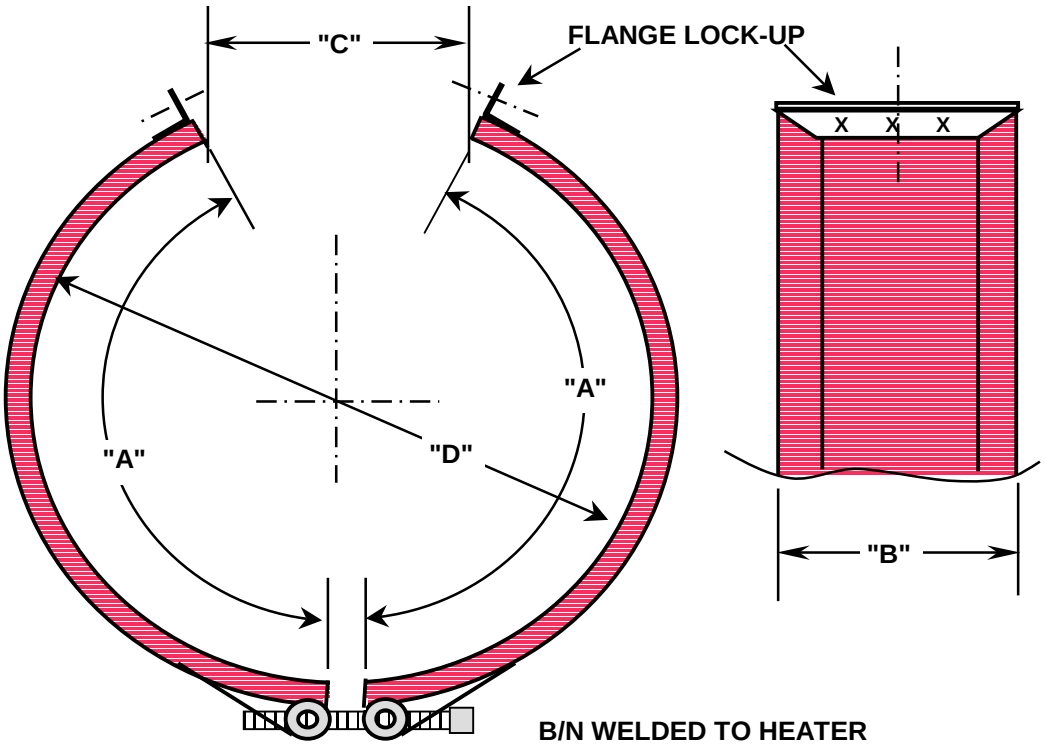
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

MICA BANDS TYPE 13

MUST BE TWO **PIECE CONSTRUCTION** **SPECIAL LOCK-UP**



B/N WELDED TO HEATER

OR

HEATER COVERAGE	DIM "A" =	o "
HEATER WIDTH	DIM "B" =	"
HEATER GAP	DIM "C" =	"
HEATER DIAMETER	DIM "D" =	"

NOTES

(1) **Termination can be Lead Wires or Post Terminals.(Specify location)**
(2) **Barrel nuts may be 10-24 or 1/4-20 thread depending on heater width (B)**
(3) **Flange size to be Specified by customer**
(4) **Number, location and size of flange holes is to be specified by customer**

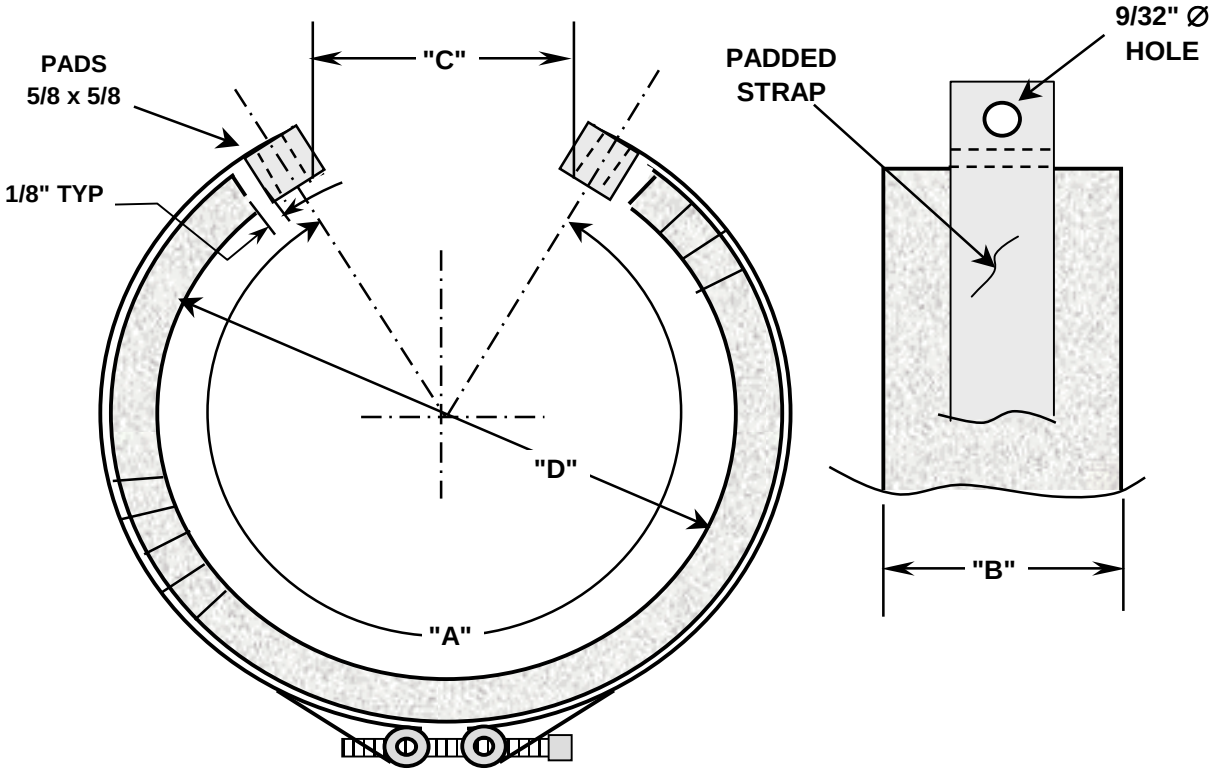
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

CERAMIC BANDS

ONE **PIECE CONSTRUCTION** **PADDED CLAMPING STRAP**



OR	HEATER COVERAGE	DIM "A" =	o "
	HEATER WIDTH	DIM "B" =	"
	HEATER GAP	DIM "C" =	"
	HEATER DIAMETER	DIM "D" =	"

NOTES

(1) **Termination can be Lead Wires or Post Terminals.(Specify location)**
(2) **Straps are 5/8" wide with 10-24 B/N unless specified.**
(3) **Number of straps is to be specified by customer**
(4) **Can be made as TWO PIECE construction**

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

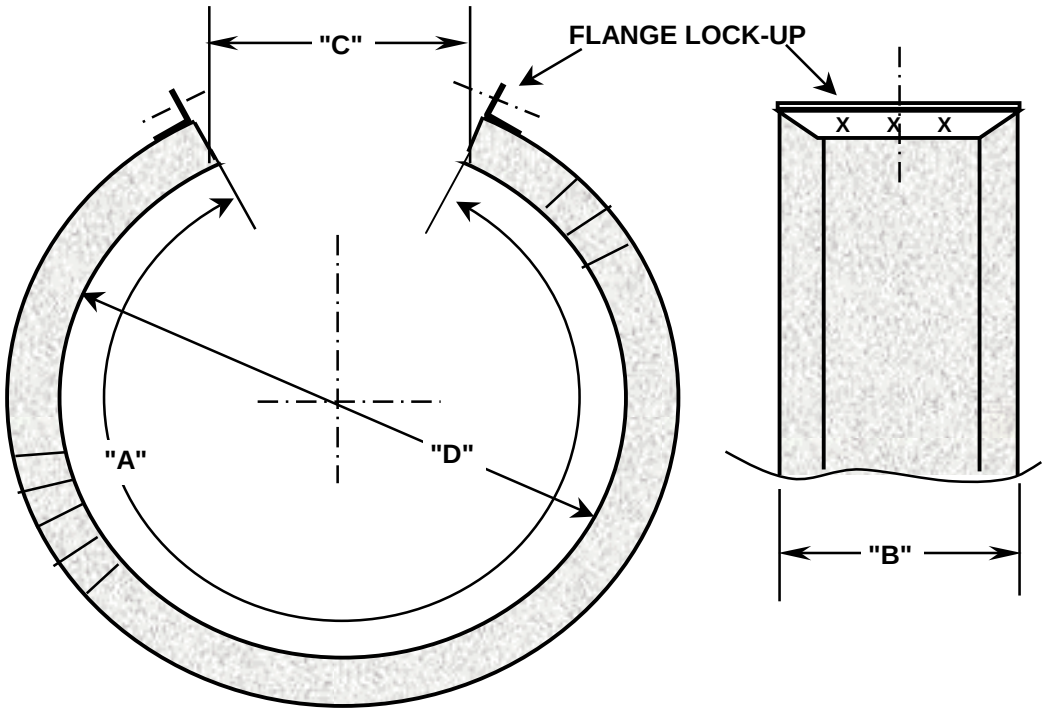
OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

CERAMIC BANDS

ONE **PIECE CONSTRUCTION**

FLANGE LOCK-UP



OR	HEATER COVERAGE	DIM "A" =	o "
	HEATER WIDTH	DIM "B" =	"
	HEATER GAP	DIM "C" =	"
	HEATER DIAMETER	DIM "D" =	"

NOTES

(1) Termination can be Lead Wires or Post Terminals.(Specify location)
(2) Flange size to be Specified by customer
(3) Number, location and size of flange holes is to be specified by customer
(4) Can be made as TWO PIECE construction

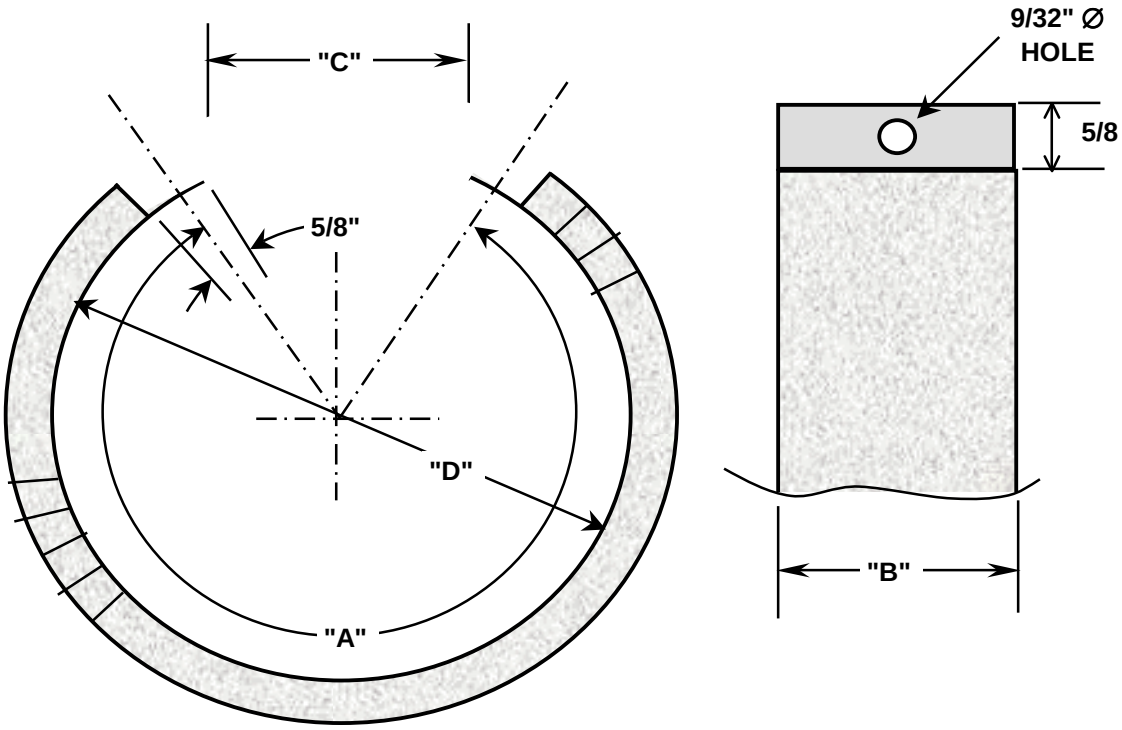
OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com

OMEGA HEATER COMPANY

MEASURING PARTIAL COVERAGE BANDS

CERAMIC BANDS

ONE **PIECE CONSTRUCTION** **TAB LOCK-UP**



OR

HEATER COVERAGE	DIM "A" =	o "
HEATER WIDTH	DIM "B" =	"
HEATER GAP	DIM "C" =	"
HEATER DIAMETER	DIM "D" =	"

NOTES

(1) Termination can be Lead Wires or Post Terminals.(Specify location)
(2) Tab size to be Specified by customer
(3) Number, location and size of TAB holes is to be specified by customer
(4) Can be made as TWO PIECE construction

OMEGA HEATER CO. Inc. 2059 Ninth Avenue, Ronkonkoma, NY 11779-6233 Phone: 631-588-8820 Fax: 631-588-8953
E–mail: omega@omegaheater.com • Website: www.omegaheater.com