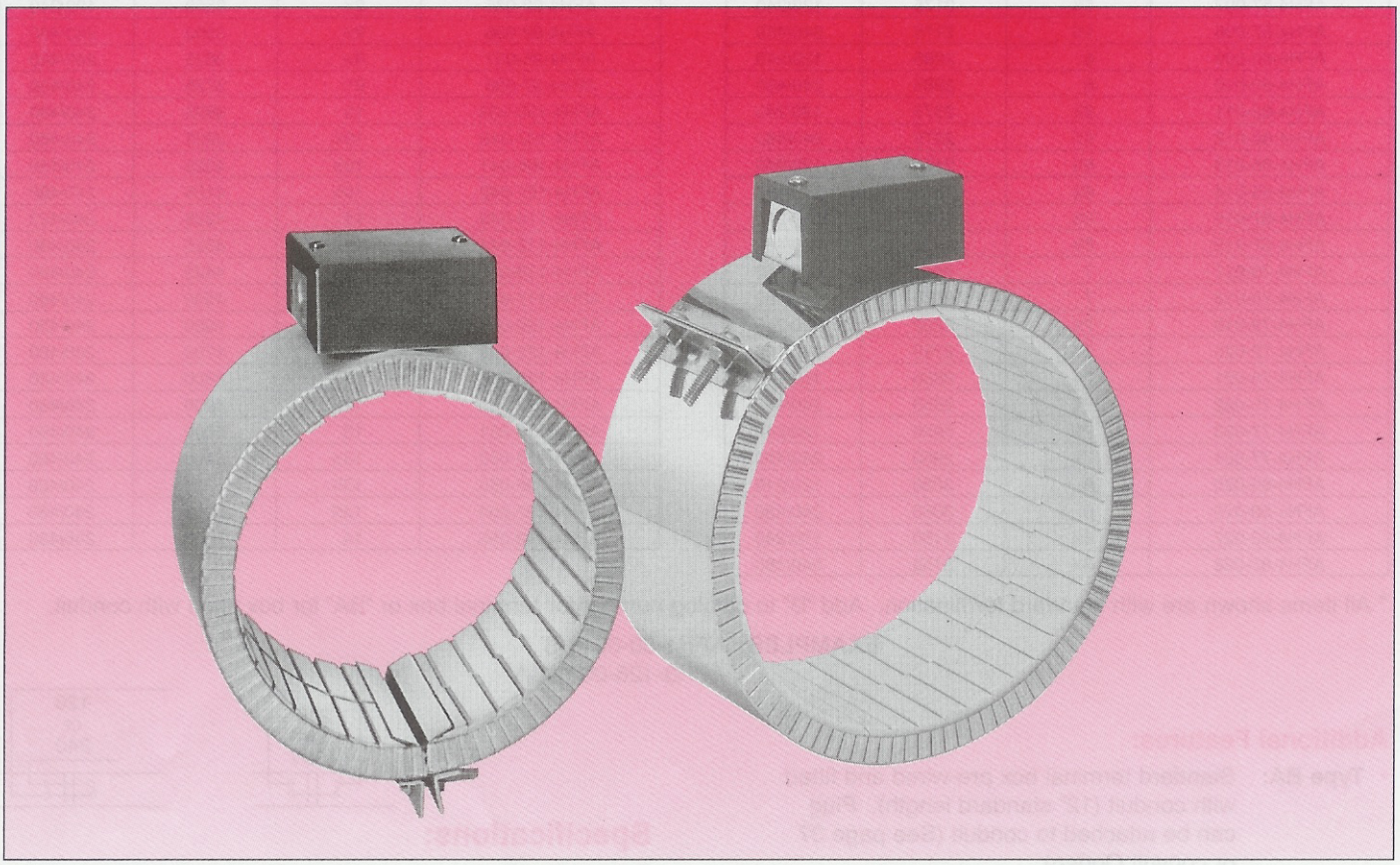
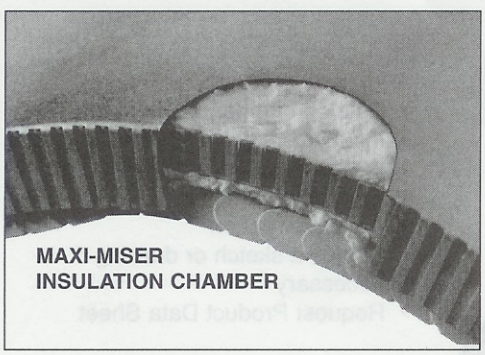
MIGHTY-MISER® INSULATED CERAMIC BAND HEATERS

Typical applications are plastic molding, extrusion and molding presses. Ceramic band heaters are also used for pipe heating, heat treating and autoclaves or any application where there is a need to apply heat to a cylindrical surface.



DESIGN FEATURES

- Energy efficient, less power consumption
- High sheath temperature capability up to 1600°F (Consult Ogden)
- Thermally insulated
- Uniform temperature
- Flexible, easy to install and remove
- Elongation compensation with spring loaded screw (over 18" diameter)



MAXI-MISER
INSULATION CHAMBER

Ceramic Fiber Insulation:

The standard insulation is ¼" thick to improve energy conservation 25% and more over non-insulated bands. ½" thick double thick insulation is optional. In the Maxi-Miser design, an additional ½" non-compressed layer of sinsulation is contained in a separate, flexible chamber for even greater energy savings as depicted on the chart on page 21.

Serrated Sheath:

Sheath material is resistant to heat and corrosion. Unique Serrations maximize flexibility, increase surface contact and provide easy opening and installation of the heater, eliminating the necessity of two piece band heaters up to 18" in diameter.

Simplified Installation, Additional Energy Conservation:

Ceramic Band Heaters can be manufactured in widths much greater than what is practical in Mica Band Heaters, eliminating heat losses between gaps in narrow band heaters and simplifying installation.

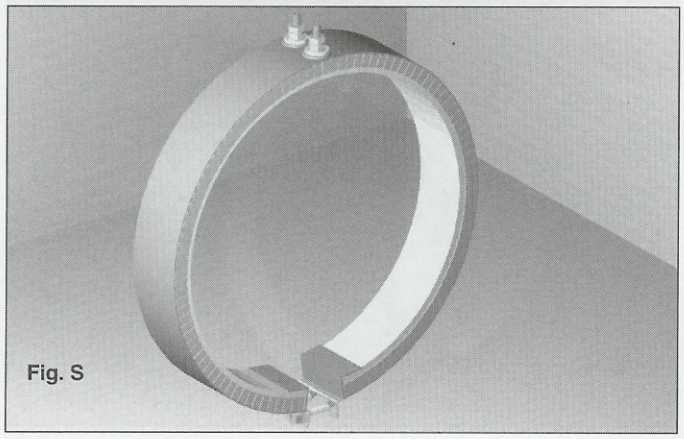


Fig. S

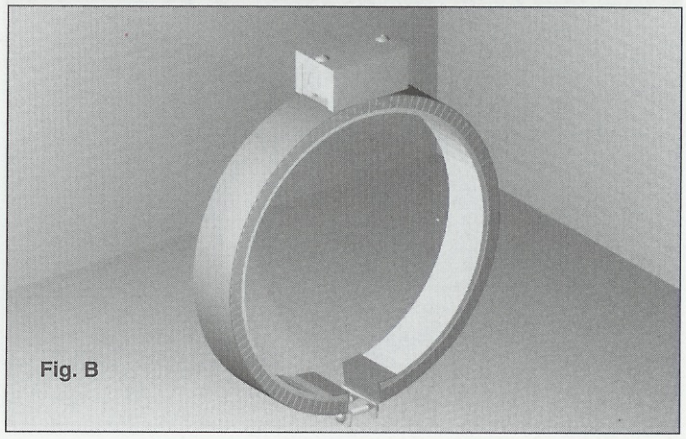


Fig. B

Screw Terminals and Box Protection:
¼-20 x 1" threaded terminals are standard as in Fig. S or in terminal box as in Fig. B. Under 2" width, terminals are parallel to circumference. Over 2", terminals are perpendicular to circumference. Standard position is 180° from gap. Specify alternate position.

Dimension of Fig. B Terminal Box

HEATER WIDTH	W	L	H
1½"	1½"	3"	1¾"
2"	2"	3"	1½"
Over 3"	2"	3"	1½"

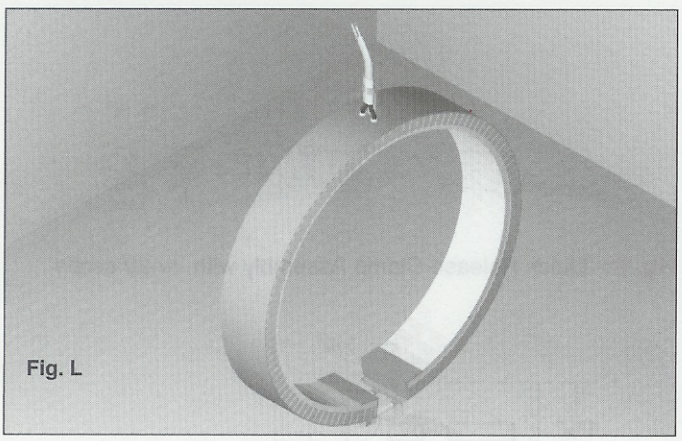


Fig. L

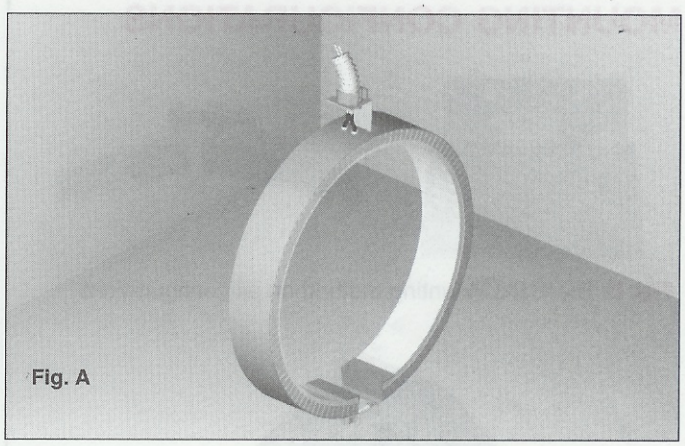


Fig. A

Braid or Conduit Protection:
To protect leads against abrasion, braided sleeve in Fig. L. is held in place by a clip. Conduit in Fig. A is connected to stand off bracket. Standard position is 180° from gap. Specify alternate position. Standard length is 12" braid or cable with 14" leads.

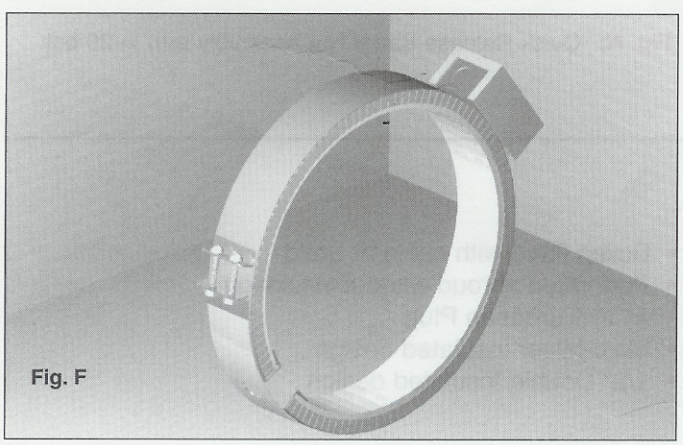


Fig. F

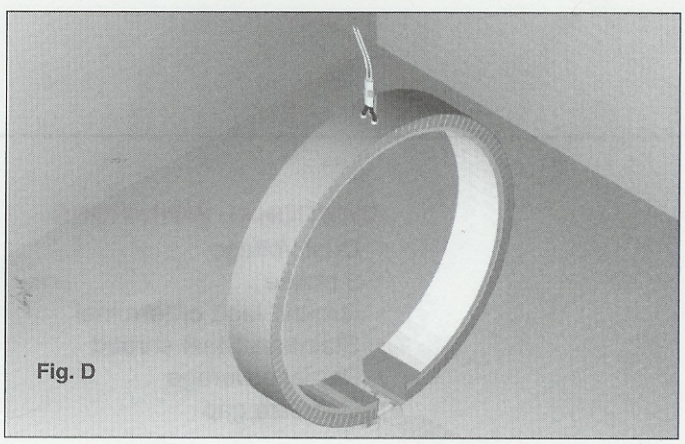
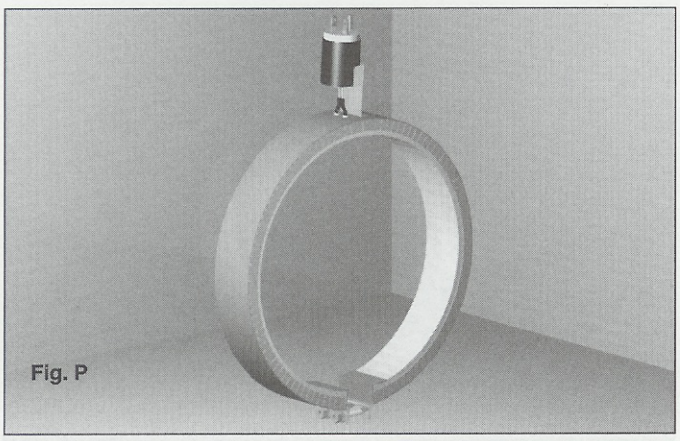
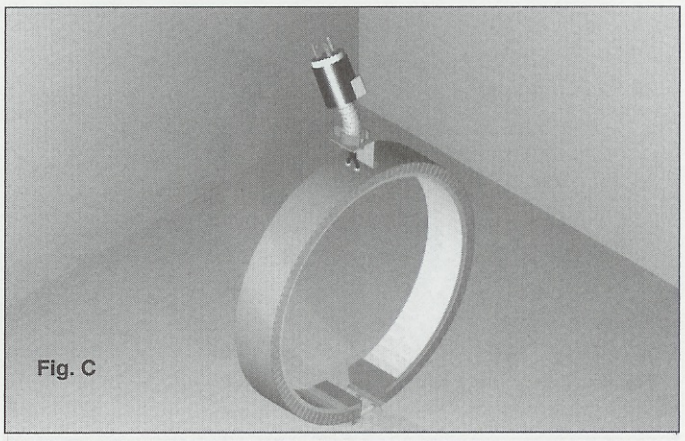


Fig. D

Overlap Flange:
For thermocouple probe hole located through gap as per Fig. F. Holes and cut-outs through sheath can be provided if required.

Leads:
Fiberglass insulated lead wires held in place by a clip as per Fig. D. Standard position is 180° from gap.
Specify alternate position.





Quick Disconnect Plug:
U.L. approved plugs can be attached with Bracket–Fig. P; Conduit–Fig. A and C; Braid–Fig. L. Mighty-Miser Ceramic Band Heaters can also be supplied with #110 European Plug as shown on page 11. Other plugs attached to leads are available, see page 37 for selection.

MOUNTING CONFIGURATIONS

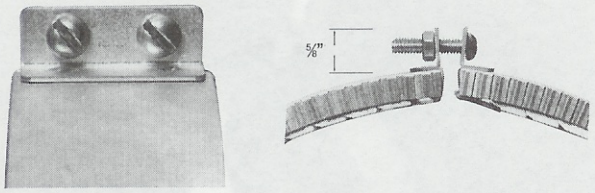


Fig. E: Standard Mounting method on all configurations

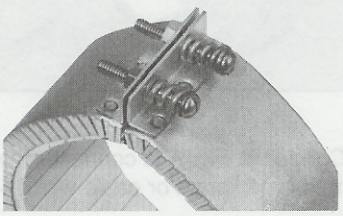


Fig. ES: Spring loaded screw is available to compensate for thermal expansion and contraction (over 18" diameter).

Fig. R: Quick Release Clamp Assembly with ¼-20 screw

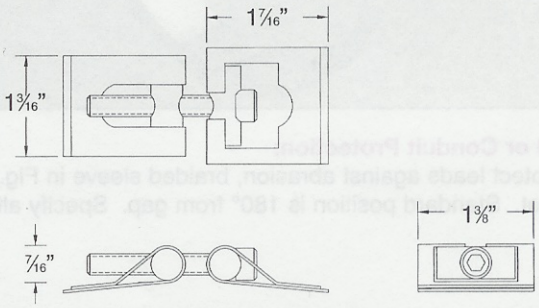
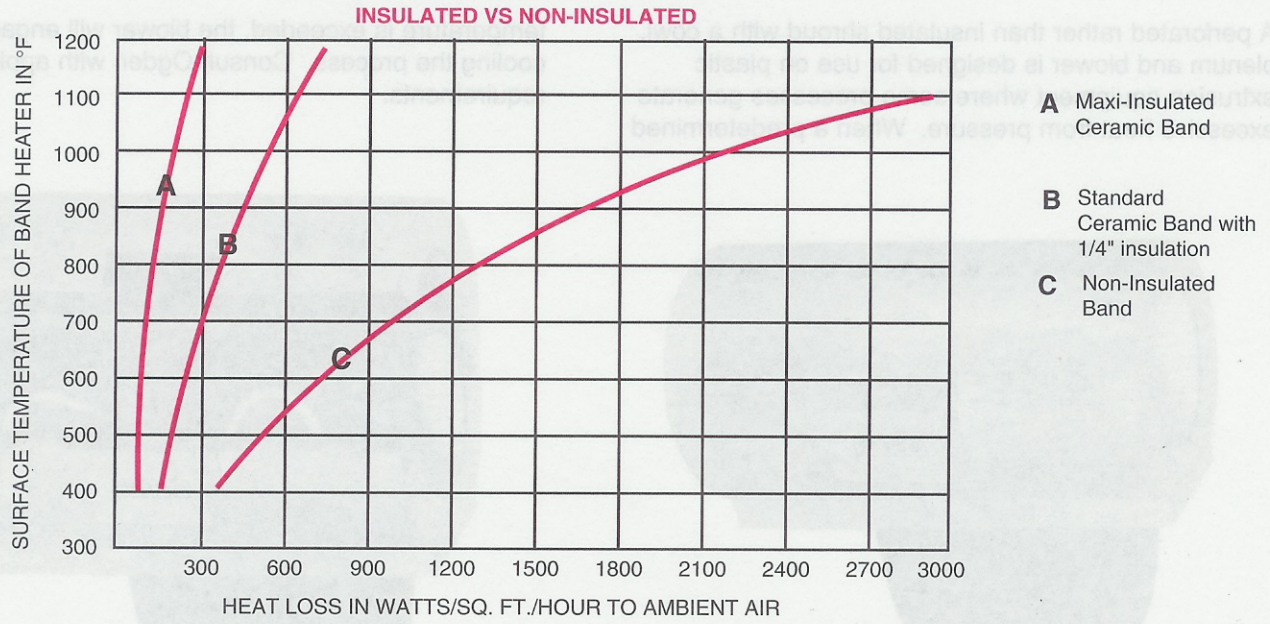


Fig. N: Quick Release Barrel Nut Assembly with ¼-20 bolt

ADDITIONAL VARIATIONS

- Dual Voltage
- 3 phase
- Ground lead or terminal
- Stainless Steel shroud
- Partial coverage
- Oversize gap
- Boxes fitted with cable or braid
- Perforated shroud without insulation
- #110 European Plug
- Maxi-Miser Insulated design
- 1/2" Double Insulated design

HEAT LOSSES OF BAND HEATERS



MIGHTY-MISER® CERAMIC BAND HEATERS

The following is a list of common sizes and ratings available. Not all items are stocked. For items not shown refer to the ordering information on page 22. See current Stock List.

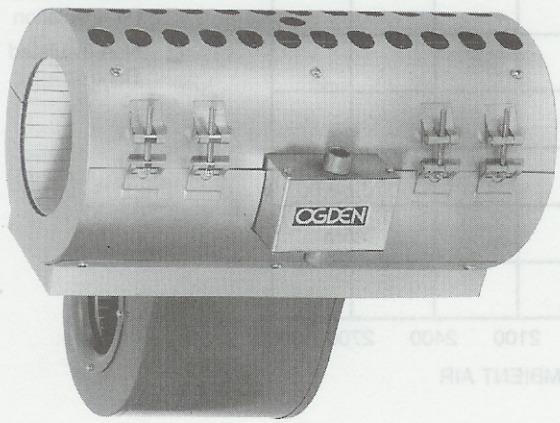
I.D.	WIDTH	WATTS	VOLTS	FIG. #s	CATALOG NUMBER
2¼	2½	250	240	S	CBE02E02J-00001
3	1½	500	240	B	CBE03A01J-00002
	2½	1000	120	B	CBE03A02J-00003
	5	2000	240/480	B	CBE03A05A-00004
3½	1½	600	240	B	CBE03J01J-00005
	3	1400	240	S	CBE03J03A-00006
	4	1200	240	B	CBE03J04A-00007
	6	1000	240	S	CBE03J06A-00008
3⅝	1½	625	240	S	CBE03L01J-00009
4	1½	625	240	S	CBE04A01J-00010
	3	1500	240	B	CBE04A03A-00011
4½	2½	1200	240/480	B	CBE04J02J-00012
	4	2000	240	B	CBE04J04A-00013
	6	3500	480	B	CBE04J06A-00014
5	2	1000	240	B	CBE05A02A-00015
	4	2200	240	B	CBE05A04A-00016
5¼	2	750	240	B	CBE05E02A-00017
	2½	1300	240	S	CBE05E02J-00018
	2½	1800	240,480	B	CBE05E02J-00019
	5	4200	240,480	B	CBE05E05A-00020
5½	2½	1800	240	B	CBE05J02J-00021
	4	1500	230/460	B,F	CBE05J04A-00022
	5	1200	240	B	CBE05J05A-00023
	5	2000	230/460	B,F	CBE05J05A-00024
	8	3500	480	B	CBE05J08A-00025
6	1½	1000	240	B	CBE06A01J-00026
	3	1300	480	B,N	CBE06A03A-00027
	3	1700	230/460	B	CBE06A03A-00028
	3½	2000	240	S	CBE06A03J-00029
	4	2200	480	B	CBE06A04A-00030
	5	2000	240/480	S	CBE06A05A-00031
	5½	2000	240/480	B,F	CBE06A05J-00032
	5½	2000	230/460	B	CBE06A05J-00033
	6	2000	230/460	B,F	CBE06A06A-00034
	6	4320		S	CBE06A06A-00035
	7	5000	240/480	S	CBE06A07A-00036
6½	1½	1000	240	B	CBE06J01J-00037
	2	1600	240	B	CBE06J02A-00038
	3	2000	240	B	CBE06J03A-00039
	4½	2700	240/480	B,N	CBE06J04J-00040
	5½	2400	480	B	CBE06J05J-00041

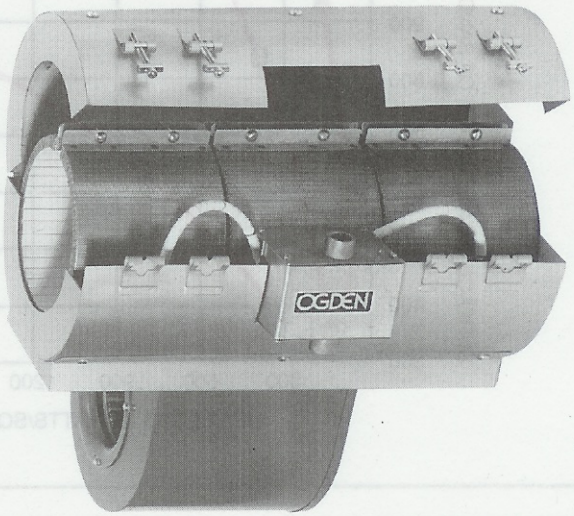
I.D.	WIDTH	WATTS	VOLTS	FIG. #s	CATALOG NUMBER
6¾	2	1250	240	S	CBE06N02A-00042
	2	1600	240	S	CBE06N02A-00043
	4½	2600	240/480	B	CBE06N04J-00044
7	1½	1100	240	B	CBE07A01J-00045
	3	1650	240/480	B	CBE07A03A-00046
	4	3600	480	B	CBE07A04A-00047
7½	1½	1200	240	B	CBE07J01J-00048
	4½	2000	240/480	B,F	CBE07J04J-00049
	4½	3750	240/480	S,F	CBE07J04J-00050
	5½	2500	480	B	CBE07J05J-00051
	6	5000	240/480	S	CBE07J06A-00052
	6½	2600	480	B	CBE07J06J-00053
	7	2600	240/480	B	CBE07L07A-00054
7¾	2	1500	240	B	CBE07N02A-00055
8	1½	800	240/480	B	CBE08A01J-00056
	3	1600	240	S	CBE08A03A-00057
	6½	2600	480	B,F	CBE08A06J-00058
8½	1½	1350	240	B	CBE08J01J-00059
	4	3600	240/480	B	CBE08J04A-00060
9	1½	1400	240/480	B	CBE09A01J-00061
	5½	3000	240/480	B	CBE09A05J-00062
	5½	3000	240/480	B,F	CBE09A05J-00063
	6	5000	240/480	S	CBE09A06A-00064
9¾	3	2600	480	S	CBE09N03A-00065
10	2	1750	240	B,N	CBE10A02A-00066
	5½	2500	240	B	CBE10A05J-00067
10½	4	3200	240/480	S	CBE10J04A-00068
11	2	3000	240/480	S	CBE11A02A-00069
	5½	4000	240/480	B,F	CBE11E06A-00070
11¼	6	3600	230/460	A	CBE11E06A-00071
11½	4	3200	240/480	S	CBE11J04A-00072
12	4	5200	240/480	S	CBE12A04A-00073
	6	4000	230/460	B	CBE12A06A-00074
	6	5000	230/460	B	CBE12A06A-00075
13	1½	2000	240/480	S	CBE13A01J-00076
14½	1½	2000	240/480	B	CBE12J01J-00077
15	4	6000	240/480	S,F	CBE15A04A-00078
	6	8000	230/460	S,F	CBE15A06A-00079
	6	8000	480	B	CBE15A06A-00080
17½	4	2600†	240†	B	CBE17J04A-00081

† *Denotes wattage and voltage each half.*

CERAMIC BAND HEATER WITH BLOWER

A perforated rather than insulated shroud with a cowl, plenum and blower is designed for use on plastic extrusion equipment where some processes generate excessive heat from pressure. When a predetermined temperature is exceeded, the blower will engage, cooling the process. Consult Ogden with application requirements.





Specifications:

Resistance Tolerance: + 10%, - 5%
Wattage Tolerance: + 5%, - 10%
Cold Resistance: 12% lower than hot resistance
Maximum Volts: 600
Maximum Amperage: 25
Maximum Watt Density: Varies depending upon application considerations
Minimum Width: 1"
Minimum Width on Maxi-Miser: 3"
Width Tolerance: ± ⅛"
Minimum I.D.: 2"
Minimum I.D.: Double Insulated: 4"; Maxi-Insulated 6"
Maximum I.D.: 18" full band; 36" half band
Maximum Width: 3 - 4 x I.D. depending upon type and size
Standard Width Increments: ½" -
Standard Gap when Tightened: ½" depending upon I.D.
Thickness w/¼" Insulation: ⅝"
Thickness w/½" Insulation: ¾"
Thickness of Maxi-Miser: 1"
Ceramic heaters can be manufactured in flat design for use as a strip heater, radiant heater or without shroud for use as a furnace element.

Maintenance and Trouble Shooting for Prolonged Heater Life:

1. Regulate Voltage. A 10% variation in voltage results in a 20% variation in power.
2. The cylinder must be clean and smooth for efficient heat transfer.
3. When attaching the lead wires to the terminals, excessive turning pressure can cause breakage of the terminal resistance wire.
4. A ½" gap should be maintained at the opening when operating. Retightening is not normally required, however, if the operating temperature is changed, the flange bolt should be checked.
5. Oil, plastic, dirt, etc., should not be allowed to accumulate on the heaters.
6. Select a heater to match the diameter of the cylinder.
7. Match the heaters as closely as possible to the actual load requirement.

Ordering Information

Specify:

- Catalog number if available
- Inside diameter
- Width
- Watts and Volts
- If 2 piece, watts and volts each half
- Type of termination and location
- Type of mounting
- Modifications or options
- Sketch or drawing if necessary
- Request Product Data Sheet