BriskHeat® Your ***Heating*** Specialist since **1949**

MICA BAND & NOZZLE HEATERS

High-Temperature Heaters for Cylindrical Surfaces

Contents

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MICA BAND & NOZZLE HEATERS

Mica Band and Nozzle heaters deliver reliable high-temperature heating to cylindrical surfaces. They are available in one-piece or two-piece construction along with a variety of diameters, widths, voltages, wattages, clamp styles and power connections. Common applications include plastic injection molding, plastic extrusion, molding presses, die casting, blown-film, packaging, food processing, analytical instrumentation, and more.

BriskHeat Mica Band and Nozzle Heaters are manufactured with only the highest quality materials for superior performance and durability. Choose from over 140 in-stock configurations or tell us what your special requirements are and we will have it designed and shipped in 2 weeks or less.

Standard Band & Nozzle Heater Specifications:

Nozzle (NZ Series)

Diameters: 1-3 in (25-76 mm)
Widths: 1-4 in (25-102 mm)
Voltages: 120, 240 VAC
Watts: Up to 1000 W
Construction:
- One-piece design
- 10 in (254 mm) fiberglass leads
- SS barrel clamps

Band (BA Series)

Diameters: 3½-12 in (89-305 mm)
Widths: 1-4 in (25-102 mm)
Voltages: 120, 240, 480 VAC
Watts: Up to 2300 W
Construction:
- One-piece or two-piece designs
- Post terminals
- SS barrel clamps

Product Features:

- High-temperature electrogalvanized steel sheath provides oxidation resistance and extreme durability.
- Premium grade mica insulation provides excellent electrical insulation at high temperatures.
- Stainless-Steel barrel clamps maintain clamping pressure at elevated temperatures.
- Nickel/Chromium resistance wire is evenly wound for uniform heat distribution and reliable accuracy.
- Low-Profile designs are approximately 1/8 in (3 mm) thick.
- High watt density up to 40 W/in² (6 W/cm²) for high-performance heating in demanding applications.
- Maximum operating temperature up to 850°F (454°C).

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MICA BAND & NOZZLE HEATERS

BriskHeat offers a wide variety of custom options to design and manufacture a band or nozzle heater to your specifications. Common custom options include size, power connection types, clamping and closure types, electrical requirements, and more. Minimum order quantity for custom heaters is 1 piece.

Post Terminals:


Both sides of gap


Vertical


Horizontal

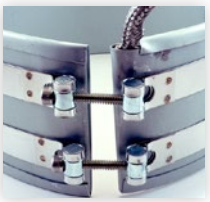
Stainless Steel Conduit:


Straight out of the side


Right angle out of cap

Lead-Wires: (SS braid shown)


Both sides of gap


One side of gap


180 degrees from gap


Straight out of the side


With stainless steel spring


Right angle out of cap

Clamping:


Strap


Welded-on barrel nut


Flange


Spring-loaded


Wedge

Special Construction Options:

- Internal thermocouple
- Bayonet for thermocouple
- Three-phase
- Dual-voltage
- Europlug
- Terminal box
- Ceramic terminal covers
- Button terminals
- Expandable design
- Square or rectangle shape
- Custom holes or slots
- UL, CE (by request)

Over 140 Band and Nozzle Heaters in Stock and Available to Ship Within 24 Hours.
Custom Heaters' Standard lead time is 2 weeks with expedites to 3 days.

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INDUSTRIES, USERS, AND CUSTOMERS for MICA BAND & NOZZLE HEATERS

Example Industries:

- Plastics Injection Molding & Extrusion
- Die Casting
- Blown Film
- Vending Machines
- General Manufacturing
- Pulp & Paper
- Analytical Instrumentation
- Food and Candy (Extruders)
- Autoclaves

Types of Users:

- Production Engineers
- Design Engineers
- Facilities Maintenance
- Process Engineers
- Plant Managers

Potential Customers:

- Saint-Gobain Performance Plastics
- Monolayer Blown Film
- Polyplex
- Frito-Lay
- Mars, Inc.
- Del Monte Foods, Inc.
- PSI Extrusion
- National Plastic Heater
- Wagner Machine Co.
- WSF Industrial Autoclaves
- Harrington Industrial Plastic
- Procter & Gamble
- Absolute Custom Extrusion
- Amcor Rigid Plastics
- PepsiCo
- Spangler Candy
- Park Plastic Products
- JB Tool, Die, and Engineering, Inc.
- Young Plumbing & Heating
- Sunbelt Plastics
- Tri-City Extrusion
- Tuttnauer Autoclave
- Preferred Plastics
- Myco Instrumentation
- ABB Measurement & Analytics
- Wisconsin Precision Casting
- Liberty Casting Company
- Stainless Tank & Equipment





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FREQUENTLY ASKED QUESTIONS (FAQs)
MICA BAND & NOZZLE HEATERS

Q: What is the difference between a Band Heater and a Nozzle Heater?

A: A nozzle heater is a smaller version of a band heater. Typically, a heater with a diameter of 3 in (76 mm) or less is considered a nozzle heater.

Q: What is Mica and why is it important?

A: Mica is an electric insulation that surrounds the heating elements in band and nozzle heaters. It provides the dielectric strength needed for demanding applications.

Q: What is the maximum watt density and operating temperature of a BriskHeat band or nozzle heater?

A: Maximum watt density is 40 W/in² (6 W/cm²) and maximum operating temperature is 850°F (454°C).

Q: What 3rd-party approvals do BriskHeat band and nozzle heaters have?

A: By request, BriskHeat band and nozzle heaters can be manufactured to UL Standard UL499 and CE compliance.

Q: Can these heaters be used in washdown areas or outdoors?

A: Yes, but certain options are better than others. Consult BriskHeat for assistance.

Q: What if the cylinder I need to heat has obstructions?

A: BriskHeat band and nozzle heaters can be made with cut-outs, holes, and slots.

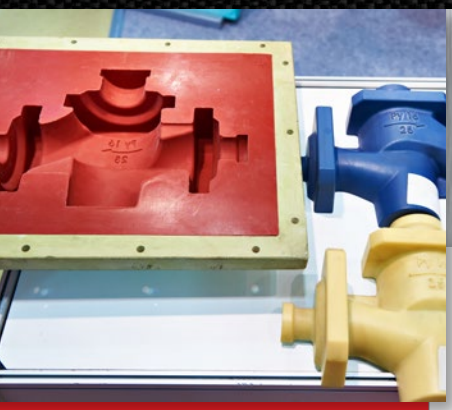
Q: Are all band and nozzle heaters cylindrical-shaped?

A: No. BriskHeat can also supply these heaters in “box” or rectangular shapes.

Q: Are BriskHeat band and nozzle heaters approved for hazardous locations?

A: No.

Application Note



Plastic Injection Molding

High temperature heating for melting plastic pellets

Application

Common plastic products created through injection molding include toys, packaging, consumer items, furniture, containers, machine parts, tools, and much more. To create these plastic products, manufacturers begin the process with plastic granules or pellets. The pellets are fed through a hopper and into a barrel or chamber where they are melted and directed by a screw-conveyer to the individual molds. The melting process must be fast and powerful to ensure production efficiency. Temperatures required to melt plastic can be at or above 500°F (260°C), and the heaters used must be able to survive contact with molten plastic if leaks occur. If the temperatures are not maintained across the entire surface, the process loses efficiency which could lead to costly downtime.

Solution

BriskHeat's mica band heaters wrap firmly around the barrel to provide the necessary heat to efficiently melt the pellets. They are designed to the exact dimensions of the barrel to ensure maximum heat transfer and extended heater life. They can generate up to 40 W/in² (6 W/cm²) and reach temperatures up to 850°F (454°C). They are moisture and corrosion resistant, have a low-profile 1/8 in (3 mm) designs, and are constructed with evenly-wound nickel/chromium resistance wire for uniform heat distribution. Additionally, they can be manufactured to UL standard UL499 and CE compliance.

Other Applications

This application is very similar to plastic extrusion, where long, pre-shaped plastic products are created. Additionally, BriskHeat Band Heaters are used in applications found in die casting, blow molding, tank & drum heating, pulp & paper processing equipment, food & candy extruders, vending machines, and analytical instrumentation.

Types of Users

- Production Engineers and Managers
- Design Engineers
- Facilities Maintenance
- Process Engineers
- Plant Managers

Industry

- Plastic/Injection Molding

Toll Free: 800-848-7673 **Phone:** 614-294-3376 **www.BriskHeat.com** **Email:** bhtsales1@briskheat.com **Fax:** 614-294-3807

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Application Note

Blown-Film Manufacturing

Precision heating for manufacturing blown-film plastics

Application

"Blown Film" refers to a broad range of plastic films manufactured for a wide range of uses. Examples of products made from blown film include trash and kitchen bags, plastic wrap, cellophane tape, laminating films, food packaging, agriculture and membrane films, industrial packaging wraps, and much more. To manufacture blown film, air and plastic are blown through heated tubular chambers of varying diameters to create a thin film which is then cooled and transferred to rollers. A precise combination of heat and air is used to properly produce the blown film. If it is not combined accurately, the product may be defective, causing huge losses of finished goods in addition to production downtime.

Solution

BriskHeat's mica band heaters provide the precise heat required to properly manufacture blown film. These band heaters are computer designed and manufactured to exact application specifications. Materials are the highest quality, low-thermal-expansion stainless-steel clamps are used to maximize surface contact, the nickel/chromium resistance wire is evenly wound for uniform heat distribution, and exact watt densities can be attained. Additionally, they are moisture and corrosion resistant, have a low-profile 1/8 in (3 mm) design, and can be manufactured to UL standard UL499 and CE compliance.

Other Applications

BriskHeat Band Heaters are used in applications found in injection molding, die casting, tank & drum heating, pulp & paper processing equipment, food & candy extruders, vending machines, and analytical instrumentation.

Types of Users

- Production Engineers and Managers
- Design Engineers
- Facilities Maintenance
- Process Engineers
- Plant Managers

Industry

- Packaging
- Trash Bags
- Tapes
- Laminating Films

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MICA BAND & NOZZLE HEATERS

Ordering Information:

Part No.	Dia x Width in (mm)	Volts	Watts
BA035-010B	3.5 x 1 (89 x 25)	240	300
BA035-015C	3.5 x 1.5 (89 x 38)	240	500
BA035-020B	3.5 x 2 (89 x 51)	120	500
BA035-020C	3.5 x 2 (89 x 51)	240	500
BA035-025A	3.5 x 2.5 (89 x 64)	240	750
BA037-010A	3.75 x 1 (95 x 25)	240	350
BA037-015A	3.75 x 1.5 (95 x 38)	240	700
BA037-025A	3.75 x 2.5 (95 x 64)	240	850
BA040-010B	4 x 1 (102 x 25)	240	625
BA040-015H	4 x 1.5 (102 x 38)	240	550
BA040-015J	4 x 1.5 (102 x 38)	240	750
BA040-020D	4 x 2 (102 x 51)	240	600
BA040-020E	4 x 2 (102 x 51)	240	800
BA040-025B	4 x 2.5 (102 x 64)	240	1000
BA040-040A	4 x 4 (102 x 102)	240	1250
BA045-010A	4.5 x 1 (114 x 25)	240	350
BA045-015G	4.5 x1.5 (114 x 38)	240	650
BA045-020C	4.5 x 2 (114 x 51)	240	500
BA045-025A	4.5 x 2.5 (114 x 64)	240	1000
BA047-015A	4.75 x 1.5 (121 x 38)	240	600
BA047-015B	4.75 x 1.5 (121 x 38)	480	600
BA048-020A	4.81 x 2 (122 x 51)	240	760
BA048-020B	4.81 x 2 (122 x 51)	480	760
BA050-015E	5 x 1.5 (127 x 38)	240	750
BA050-020A[1]	5 x 2 (127 x 51)	240	800
BA050-030D	5 x 3 (127 x 76)	240	1200
BA050-032A	5 x 3.25 (127 x 83)	240	1250
BA052-010A	5.25 x 1 (133 x 25)	240	500
BA052-015B	5.25 x 1.5 (133 x 38)	240	600
BA052-015C	5.25 x 1.5 (133 x 38)	240	1000
BA055-015E	5.5 x 1.5 (140 x 38)[1]	240	800
BA055-020A	5.5 x 2 (140 x 51)[1]	240	1000
BA057-015A	5.75 x 1.5 (146 x 38)	240	600
BA060-015E	6 x 1.5 (152 x 38)	240	850
BA060-015F	6 x 1.5 (152 x 38)[1]	240	600
BA060-015G	6 x 1.5 (152 x 38)[1]	240	900
BA060-020A	6 x 2 (152 x 51)[1]	240	1000
BA060-030A	6 x 3 (152 x 76)[1]	240	1400
BA062-030A	6.25 x 3 (159 x 76)[1]	240	1500
BA065-015B	6.5 x 1.5 (165 x 38)[1]	240	950
BA065-020D	6.5 x 2 (165 x 51)[1]	240	1000
BA067-015C	6.75 x 1.5 (171 x 38)[1]	240	750
BA067-020A	6.75 x 2 (171 x 51)[1]	240	1300
BA070-015B	7 x 1.5 (178 x 38)[1]	240	950
BA070-015C	7 x 1.5 (178 x 38)[1]	240	1100
BA072-020A	7.25 x 2 (184 x 51)[1]	240	900
BA075-015B	7.5 x 1.5 (191 x 38)[1]	240	1200
BA075-030B[1]	7.5 x 3 (191 x 76)	240	1800
BA077-015A[1]	7.75 x 1.5 (197 x 38)	240	1000
BA077-030A[1]	7.75 x 3 (197 x 76)	240	2000
BA080-015A[1]	8 x 1.5 (203 x 38)	240	950
BA080-015B[1]	8 x 1.5 (203 x 38)	240	1200
BA080-020A[1]	8 x 2 (203 x 51)	240	1500
BA080-030A[1]	8 x 3 (203 x 76)	240	2250
BA082-020B[1]	8.25 x 2 (210 x 51)	240	1500
BA085-015A[1]	8.5 x 1.5 (216 x 38)	240	1200
BA085-020A[1]	8.5 x 2 (216 x 51)	240	1600
BA090-015B[1]	9 x 1.5 (229 x 38)	240	1300
BA090-020A[1]	9 x 2 (229 x 51)	240	1800
BA095-030A[1]	9.5 x 3 (241 x 76)	240	2000
BA097-020A[1]	9.75 x 2 (248 x 51)	240	2000
BA100-015A[1]	10 x 1.5 (254 x 38)	240	1400
BA110-015B[1]	11 x 1.5 (279 x 38)	240	1600
BA110-020A[1]	11 x 2 (279 x 51)	240	1200
BA110-020B[1]	11 x 2 (279 x 51)	240	2000
BA115-015A[1]	11.5 x 1.5 (292 x 38)	240	1650
BA120-020A[1]	12 x 2 (305 X 51)	240	2300
NZ1010-10100	1 x 1 (25 x 25)	120	100
NZ1010-10125	1 x 1 (25 x 25)	120	125
NZ1010-10125B	1 x 1 (25 x 25)	120	125
NZ1010-20100	1 x 1 (25 x 25)	240	100
NZ1010-20125	1 x 1 (25 x 25)	240	125
NZ1010-20125B[2]	1 x 1 (25 x 25)	240	125
NZ1015-10150	1 x 1.5 (25 x 38)	120	150
NZ1015-20150	1 x 1.5 (25 x 38)	240	150
NZ1020-10200	1 x 2 (25 x 51)	120	200
NZ1020-20200	1 x 2 (25 x 51)	240	200
NZ1030-10300	1 x 3 (25 x 76)	120	300
NZ1030-20300	1 x 3 (25 x 76)	240	300
NZ1040-10400	1 x 4 (25 x 102)	120	400
NZ1040-20400	1 x 4 (25 x 102)	240	400
NZ1510-10150	1.5 x 1 (38 x 25)	120	150
NZ1510-20150	1.5 x 1 (38 x 25)	240	150
NZ1515-10250	1.5 x 1.5 (38 x 38)	120	250
NZ1515-10275	1.5 x 1.5 (38 x 38)	120	275
NZ1515-10275B[2]	1.5 x 1.5 (38 x 38)	120	275
NZ1515-10300	1.5 x 1.5 (38 x 38)	120	300
NZ1515-10300B[2]	1.5 x 1.5 (38 x 38)	120	300
NZ1515-20250	1.5 x 1.5 (38 x 38)	240	250
NZ1515-20275	1.5 x 1.5 (38 x 38)	240	275
NZ1515-20275B[2]	1.5 x 1.5 (38 x 38)	240	275
NZ1515-20300	1.5 x 1.5 (38 x 38)	240	300
NZ1515-20300B[2]	1.5 x 1.5 (38 x 38)	240	300
NZ1520-10300	1.5 x 2 (38 x 51)	120	300
NZ1520-20300	1.5 x 2 (38 x 51)	240	300
NZ1525-10400	1.5 x 2.5 (38 x 64)	120	400
NZ1525-20400	1.5 x 2.5 (38 x 64)	240	400
NZ1530-10450	1.5 x 3 (38 x 76)	120	450
NZ1530-10450B[2]	1.5 x 3 (38 x 76)	120	450
NZ1530-20450	1.5 x 3 (38 x 76)	240	450
NZ1530-20450B[2]	1.5 x 3 (38 x 76)	240	450
NZ1540-10550	1.5 x 4 (38 x 102)	120	550
NZ1540-20550	1.5 x 4 (38 x 102)	240	550
NZ1550-10700	1.5 x 5 (38 x 127)	120	700
NZ1550-20700	1.5 x 5 (38 x 127)	240	700
NZ1560-10900	1.5 x 6 (38 x 152)	120	900
NZ1560-20900	1.5 x 6 (38 x 152)	240	900
NZ1715-10300	1.75 x 1.5 (44 x 38)	120	300
NZ1715-20300	1.75 x 1.5 (44 x 38)	240	300
NZ1720-10350	1.75 x 2 (44 x 51)	120	350
NZ1720-20350	1.75 x 2 (44 x 51)	240	350
NZ1730-10500	1.75 x 3 (44 x 76)	120	500
NZ1730-20500	1.75 x 3 (44 x 76)	240	500
NZ2010-10200	2 x 1 (51 x 25)	120	200
NZ2010-20200	2 x 1 (51 x 25)	240	200
NZ2015-10300	2 x 1.5 (51 x 38)	120	300
NZ2015-20300	2 x 1.5 (51 x 38)	240	300
NZ2020-10400	2 x 2 (51 x 51)	120	400
NZ2020-20400	2 x 2 (51 x 51)	240	400
NZ2025-10500	2 x 2.5 (51 x 64)	120	500
NZ2025-20500	2 x 2.5 (51 x 64)	240	500
NZ2030-10600	2 x 3 (51 x 76)	120	600
NZ2030-20600	2 x 3 (51 x 76)	240	600
NZ2510-10300	2.5 x 1 (64 x 25)	120	300
NZ2510-20300	2.5 x 1 (64 x 25)	240	300
NZ2515-10350	2.5 x 1.5 (64 x 38)	120	350
NZ2515-20350	2.5 x 1.5 (64 x 38)	240	350
NZ2520-10500	2.5 x 2 (64 x 51)	120	500
NZ2520-20500	2.5 x 2 (64 x 51)	240	500
NZ2530-10700	2.5 x 3 (64 x 76)	120	700
NZ2530-20700	2.5 x 3 (64 x 76)	240	700
NZ3010-10300	3 x 1 (76 x 25)	120	300
NZ3010-20300	3 x 1 (76 x 25)	240	300
NZ3015-10400	3 x 1.5 (76 x 38)	120	400
NZ3015-20400	3 x 1.5 (76 x 38)	240	400
NZ3020-10600	3 x 2 (76 x 51)	120	600
NZ3020-20600	3 x 2 (76 x 51)	240	600
NZ3030-11000	3 x 3 (76 x 76)	120	1000
NZ3030-21000	3 x 3 (76 x 76)	240	1000

[1] 2-piece construction

[2] 10" Stainless Steel Braided Leads

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