



BACKER
MARATHON



Engineered Solutions

Heating Elements & Temperature Sensors

Cartridge Heaters

Standard Features



- High Purity MgO fill for maximum dielectric strength and thermal conductivity
- Nickel-Chromium resistance wire for maximum heater life, evenly wound for even heat distribution
- Tig welded end disk to prevent contamination and moisture absorption
- 304SS, 316SS and Incoloy sheath available (suitable up to 1600°F maximum temperature)
- 1/8" up to 1 inch diameter. Metric sizes also available
- UL recognized available, restrictions may apply



Lead Configurations



- High temp lead wire (550°C), Teflon wire, silicone rubber wire, SJ00W Cord (2 or 3 conductor)
- Swaged in or crimped on leads
- Post Terminals
- Silicone Sleeving, SS braid, SS conduit, or convoluted conduit
- Right angle leads, right angle elbow, copper coupler, or bent heater

End Seals and Potting

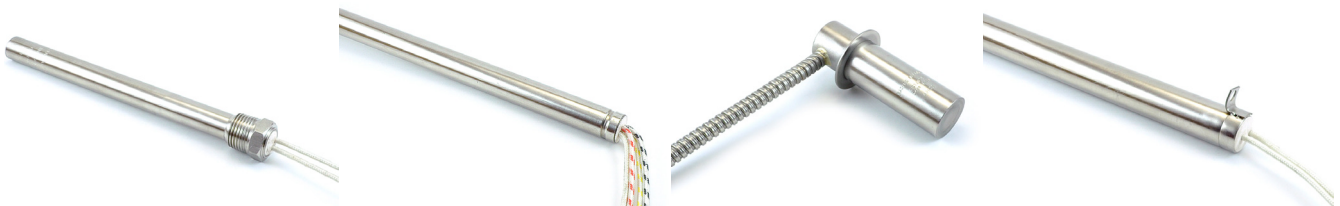


- | | |
|-----------------------------|--------------------|
| • Ceramic end piece | • RTV potting |
| • Teflon, Mica or Lava seal | • Epoxy potting |
| • Cement potting | • Epoxylite (650°) |



Fittings, Flanges, Mechanical Stops Other Options

- | | |
|-----------------------------------|-----------------------------|
| • Brass, 304SS, or 316SS NPT | • Internal Thermocouple |
| • Single and double ended NPT | • Profiled heating |
| • Ring or Tab Stop and Weld beads | • Dual Voltage construction |
| • Standard round flanges | • Multi-zone construction |
| • Custom shaped flanges | • Three-Phase construction |

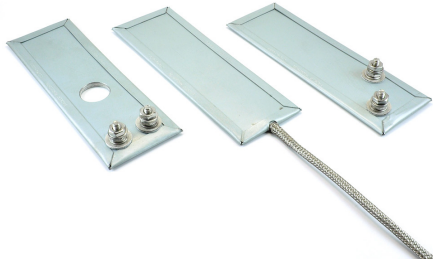




BACKER
MARATHON



Mica Strip Heaters



- Up to 900°F maximum temperature
- Lengths up to 8ft and widths up to 4ft
- Flat, ring, and plate styles available
- Multiple termination options
- Custom holes and cutouts for easy installation
- UL recognized available, restrictions may apply

Ceramic Strip Heaters



- Up to 1000°F maximum temperature
- 3/8" and 5/16" thickness available
- Lengths up to 10ft
- Multiple termination options
- Aluminized or Stainless Steel sheath options
- Available with and without mounting tabs for easy installation

Basic Thermocouples and RTDs



- Diameters from 1/8" and up
- Standard J and K calibrations, and 2 or 3 wire RTDs
- 24 ga and 20 ga wire available with or without lead protection
- Multiple terminations
- Various styles to address different requirements
- Custom designs also available

Mineral Insulated Thermocouples



- Sensing temperature up to 2200°F maximum temperature
- Diameters from .062" and up
- Type J or K calibrations
- Sheath material available in 304SS, 316SS, and/or Inconel 600
- Multiple termination options
- Fast response time

Silicone Rubber Heaters



- Flexible heaters for applications up to 400°F maximum temperature
- Lengths up to 10 ft. and widths up to 3 ft.
- 12V to 480V (AC or DC)
- Sponge insulation and multiple mounting options
- Rectangular, round, and custom shapes available
- UL recognized available, restrictions may apply

Starflex Band Heater



- Up to 600°F maximum temperature
- Diameters up to 10ft. and multiple termination options
- Extruded aluminum segmented band with low expansion straps for close contact to part
- Rugged refractory tubular element inside
- Cooling only band and heat/cool bands available
- Extremely long life

Mica Band Heaters



- Up to 1000°F maximum temperature
- 3/4" to 60" diameter
- One piece, two piece, and expandable construction
- Multiple termination options
- Custom holes and cutouts for easy installation
- UL recognized available, restrictions may apply

Ceramic Band Heaters



- Up to 1400°F maximum temperature
- 3" to 16" Diameter
- 1.50" to 12" Wide
- Expandable for easy installation
- Multiple termination options
- Insulated for energy conservation

Coil Heaters



- Up to 850°F maximum temperature
- 1/8" Square cross section
- 36° Flexible Teflon lead wire with SS braid protection and groundwire
- Available with or without J Type internal thermocouple
- Coiling for special wattage distribution available
- Stock sizes available

Air Heaters



- Up to 1000°F maximum temperature
- 1/2", 5/8", or 3/4" diameters available in 304SS sheath
- High temperature leads or 3 pin connector
- Male and female pipe fittings available
- 8 stock models available in 1/2" diameter
- Custom configurations and sizes also available

Square Cartridge Heaters



- 3/8", 1/2", and 5/8" cross sections available
- Swaged construction for high temperature and high watt density
- Multiple lead wire terminations
- Various end seals available
- Tab stop available for slide prevention
- Ideal for milled slots and ease of removal from part

Founded in 1996, Backer Marathon is the premier manufacturer of electric heating elements and sensors in the U.S. Backer Marathon specializes in manufacturing custom heating elements for OEMs as well as direct-fit replacements for popular brands. Backer Marathon, Inc. is a member of the Backer North America group of companies.



**BACKER
MARATHON**

BACKER MARATHON, INC.

Founded in 1996, Backer Marathon designs, manufactures and stocks industrial-grade heating elements and temperature sensors. We believe in hard work, creative engineering and excellent customer service. Whether you need one piece or one thousand, Backer Marathon is committed to providing you with exactly what you need when you need it.



BACKER
EVERYDAY · EVERYWHERE



NORTH AMERICA

EUROPE

ASIA/OCEANIA

BACKER GROUP

Christian Backer patented the modern day tubular heating element in 1921. 30 years later, Backer BHV was founded in Sosalda, Sweden to commercialize this technology for large scale production. Today the Backer Group is made up of 57 companies with 8,500 employees worldwide in the fields of heating, measurement, and control.

Backer Group is a division of NIBE Group. www.NIBE.com



Your Authorized Representative is:

