



## “MAXPAK” Sealed, M.I. Band And Strip Heaters..... for superior band and strip performance.

Duratherm sealed mineral insulated band and strip heaters feature a highly compacted ceramic element construction in a flat tube style design with fully welded and sealed seams. The weld sealed construction eliminates the open seams which are typical of other band constructions and provides maximum resistance to the absorption of moisture and other contaminants which degrade heater dielectric properties and result in element failures.

Precision wound elements embedded in highly compacted ceramic insulation and incased in a stainless steel sheath provide maximum performance in all demanding high temperature and high wattage heating applications. The combination of thin construction, low mass and high thermal conductivity insures optimum heat transfer to the application, providing rapid heat-up and higher throughput rates. The sealed M.I. band and strip heaters are the premium heating source for processing of high melting point plastic resins such as Ultem®, PEEK®, Teflon® and Ryton®.

The sealed band heater constructions include the one piece design for applications where the band can be installed over the end of a cylinder and the two piece band, expandable band and hinged band constructions which allow the band to be opened and installed over a cylinder. Partial bands are also available for applications where obstructions do not allow the use of a full 360° coverage band.

Duratherm offers a wide variety of standard and special lead and termination systems designed to simplify wiring. All lead style terminations feature 850° F. (450° C.) UL rated insulated wire. Ground leads and terminals can be supplied when required. Lead protection options include high temperature sleeving, stainless steel wire braid and stainless steel armor. The heaters can also be supplied with post terminals, electrical boxes and high temperature plugs. Both standard and low profile terminations can exit at any desired position on the heater surface.

Versatile clamping system selections are designed to provide the best possible contact between the heater and the heated tooling. Users can select the desired clamping system from a wide range of low profile, medium duty and heavy duty clamping systems.

Popular sealed M.I. band and strip heater electrical options include three phase elements, multiple heat zone configurations and dual voltage designs.

Sensor options including single or multiple internal thermocouples to control and monitor heater temperature and/or tooling temperature can be provided. The sealed M.I. bands can also be designed with a wide gap or machined access holes to accommodate sensors and other process instrumentation.

### 1

**Compacted Mineral Insulated Construction.** Element wire tightly compacted within the ceramic insulation by the hydraulically pressed and rolled construction maximizes heat transfer from the element to the application for optimum heater performance and element life.

### 2

**Premium Electrical Properties.** High purity ceramic insulation materials in combination with sealed design maximizes insulation resistance and dielectric properties.

### 3

**High Temperature Construction.** Stainless steel sheath and compacted ceramic insulation provides superior performance at temperatures of 1400° F. (760° C.) and watt densities to 200 watts per square inch for smaller heaters and 100 watts per square inch for larger heaters depending on application.

### 4

**Low Mass Design.** The thin element construction of our mineral insulated band and strip heaters minimizes thermal lag, reduces heat-up time and speeds the response to changing process temperature conditions for higher throughput rates.

### 5

**Superior Internal Element Design.** Sealed M.I. band and strip elements feature computer designed element assemblies consisting of precision wound wire or ribbon welded to the internal conductors and designed for maximum element wire size and surface coverage to provide maximum wattage capabilities and reduce wire loading.

### 6

**Versatile Construction Styles.** The sealed mineral insulated heaters are offered in a variety of configurations including flat strip and band heaters. The sealed band heaters can be supplied in one piece, two piece, expandable, hinged and partial band configurations.

### 7

**Rugged Termination Systems.** Abuse resistant lead, terminal, plug and box terminations are offered. Lead style terminations feature welded protective caps and can be readily supplied with any desired protection including sleeving, stainless steel wire braid and stainless steel armor.

### 8

**Optional Clamping Systems.** Clamping systems include a variety of full strap, attached strap ends and attached clamping ears. Specialty clamp designs utilizing spring loaded systems are also available.