

### Ceramic Band Heaters — Cool TO-THE Touch Shroud Systems

#### Type R Uninsulated Ceramic Band Heaters

This system was developed to provide another means of heating and cooling high temperature extrusion processes. Typically cast-in bronze or brass units are used in applications in which heater temperatures can be in excess of 700°F (371°C). Cast-in bronze or brass heaters are expensive and since they weigh approximately three times their aluminum counterparts they are difficult to install.

In response to this challenge, Tempco's engineers have developed a low mass, non-thermally insulated ceramic band heater to work in tandem with a highly efficient stainless steel sheet metal shroud for high temperature heating and cooling extrusion processes.

Forced air blowers are used for cooling. The ambient air-flow enters the shroud, circulates around the ceramic heater and barrel, removes the heat from the heater and the process and exits the shroud opposite the entrance port.

#### Construction Characteristics

**Type R** construction is an uninsulated ceramic band heater with a perforated Stainless Steel outer shell for more efficient cooling. It is typically used in multiple quantities with forced air cooling systems.

*Consult Tempco with your requirements.*

Type R Uninsulated Ceramic Band Heater



Cool TO-THE Touch™ Shroud System with Type RCC



#### Type RCC (Ribcage) Heating Mounting Configuration

Tempco's **Type RCC** (Rib Cage) Air Cooled System uses multiple Type R Ceramic Band Heaters under one air cooled shroud. Type R heaters are typically arranged with spaces between the heaters to enhance the cooling of the barrel when external heat is no longer required.

The Cool TO-THE Touch dual layer shroud uses an inner stainless steel solid layer thermally isolated from the heater, providing a path for the forced cooling air. An outer Stainless Steel perforated layer provides optimal venting and heat dissipation while providing personnel safety.

See catalog page 3-29 for shroud assembly details.

**Complete Information on Shrouds Systems  
can be found in Section 3, pages 3-26 through 3-47**

#### PERFORMANCE RATINGS FOR HEATER BAND

**Maximum Watt Density:** 50 W/in<sup>2</sup> (8 W/cm<sup>2</sup>)

**Maximum Temperature:** 900°F (482°C)

#### MECHANICAL

**Standard Width Increments:** 1/8" (3.2 cm)

**Maximum Width:** depends on ratio of diameter to width

**Minimum Width:** 1" (25.4 mm)

**Standard Gap:** 3/8" ±1/8" (9.5 ±3.2 mm)

#### ELECTRICAL RATINGS

**Resistance tolerance:** +10%, -5%

**Wattage tolerance:** +5%, -10%

**Maximum Voltage:** 480 single or 3-phase (when applicable)

**Maximum Amperage: Screw Terminals:** 25 Amps per circuit

**Lead Wire:** 10 Amps per circuit