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.

Type R Uninsulated Ceramic Band Heater

Cool TO-THE Touch™ Shroud System with Type RCC

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 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^2 (8 W/cm^2)

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