

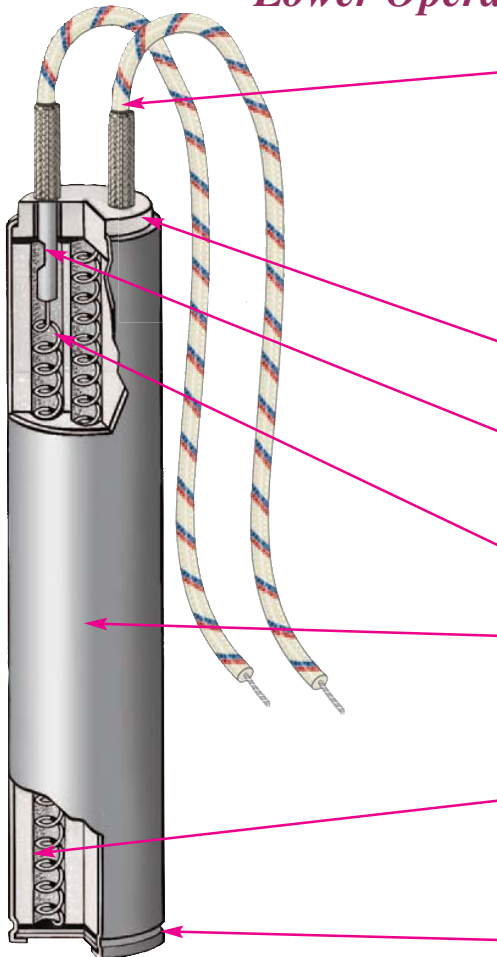
Cartridge Heaters



Low-Density

CARTRIDGE HEATER FEATURES

*An Economical and Reliable Cartridge Heater,
Used in Applications Requiring
Lower Operating Temperatures and Watt Densities*



A The standard termination for Low-Density Cartridge Heaters is Type F, consisting of 10" (254 mm) internally connected flexible lead wires with high temperature insulation, UL approved for 300 Volt or 600 Volt service and temperature rated to 482°F (250°C).



Note: To meet the requirements of your application we offer over 40 standard termination styles to select from that will solve many of the most common application problems. See pages 2-39 through 2-60.

B Ceramic end cap protects the cartridge internally from outside contamination.

C Resistance wire and lead wires are mechanically spliced with heavy wall nickel connectors for a positive electrical connection.

D Helically wound Nickel-Chrome resistance wire is evenly stretched and strung through ceramic insulators.

E Alloy 304 Stainless Steel is used to provide high temperature strength, good thermal conductivity and resistance to oxidation up to 1200°F (650°C). Alloy 304 is a Nickel-Chromium Stainless Steel. For immersion heating of corrosive solutions consult Tempco.

F Specially selected grain size high purity Magnesium Oxide (MgO) is used to fill all remaining space inside the ceramic insulator, thus increasing thermal conductivity, dielectric strength and heater life.

G Sheath is roll crimped over a 304 Stainless Steel end disc. A mica spacer electrically insulates the heater core from the end disc. This style end seal is not moisture proof.



Low Density Cartridge Heaters are UL recognized and CSA certified in many design variations under UL File Number E65652 and CSA File Number 043099.

If you require UL and/or CSA Agency Approval, please specify when ordering.

Tempco Low-Density Cartridge Heaters are an excellent, cost effective choice without compromising quality for Original Equipment Manufacturers (OEMs) consuming large quantities of cartridge heaters for their equipment.

Typical Applications

- ↔ Heat Sealing Equipment
- ↔ Laminating Equipment
- ↔ Packaging Equipment
- ↔ Labeling Machines

- ↔ Molds and Dies
- ↔ Food Processing
- ↔ Refrigeration
- ↔ Shoe Machinery

- ↔ Glue Guns
- ↔ Wax Pots
- ↔ Heating Liquids
- ↔ Heating Gases



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Low-Density Cartridge Heater Specifications

Standard Specifications and Tolerances of Low Density Cartridge Heaters.
If tighter tolerances are required consult Tempco.

PERFORMANCE RATINGS

Maximum Temperature: 1200°F (650°C)

Maximum Watt Density: 20-45 W/in² (3.1-7.0 W/cm²) depending on heater size and operating temperature.

DIMENSIONAL SPECIFICATIONS

Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/4
Actual Diameter– in.	.185	.247	.372	.496	.621	.745	.870	.995	1.250
Actual Diameter–(mm)	(4.70)	(6.27)	(9.45)	(12.60)	(15.77)	(18.92)	(22.10)	(25.27)	(31.75)
Diameter Tolerance	±.002 (.051 mm)				±.003 (.076 mm)				±.005 (.127 mm)
Length Tolerance	±1/16 (1.59 mm) up to 6" (152.4 mm) long; ±1/8" (3.18 mm) over 6" long								
Camber Tolerance	.010" (.254 mm) per foot of length								

ELECTRICAL SPECIFICATIONS

Nominal Diameter	3/16	1/4	3/8	1/2	5/8	3/4	7/8	1	1-1/4
Maximum Voltage	240	240	240	240	480*	480*	480*	480*	480*
Maximum Amperage	1.5	3.5	6	8	10	15	15	25	30
Maximum Wattage	Consult Tempco								
Wattage Tolerance	Plus 5%, Minus 10%								
Resistance Tolerance	Plus 10%, Minus 5%								

*480V when applicable. Consult Tempco.