Installation

Drill and ream holes to the proper length and the nominal diameter plus .001” maximum, minus .000” of the heater diameter 3/16", 3/8", 1/2", 5/8", etc. The heaters are sized so that they never exceed .005 less than the nominal diameter and always at least .001 under the nominal diameter for a slide fit. These close fits insure rapid heat transfer from the heater and also help keep the unit as cool as possible, which contributes to long life. Always finish-ream drilled or cast holes to insure a smooth, uniform metal to metal contact. A knockout hole should be provided if possible to aid removal. The receptacle hole should be free from oil before heater installation to avoid contamination and short life. Do not use set screws to hold heaters in place. Lead wires, especially when the heater is in a moving die or platen, should be supported to prevent excessive stress on the lead wires.

On many applications, plastic material, machine oil, and/or moisture may be present. Cycling of a cartridge heater causes these materials to be absorbed. Heaters, therefore, should be carefully selected for these applications utilizing sealed terminations.

When installing high watt density cartridge heaters (CSH Series), see the graph below for allowable watt densities at different fit tolerances and operating temperatures.

The watt densities are based on a unit installed in mild steel. Different materials affect the above values, i.e. the lower the thermal conductivity of the material, the lower the maximum allowable watts per square inch.
Specifications

Lead Length: 6” long (152 mm)

Lead Insulation:

Heater diameter of 1/4” (6.4 mm) and smaller: Teflon, rated to 200°C (392°F)
Heater diameter of 5/16” (7.9mm) and larger: Fiberglass, rated to 250°C (482°F)

Wattage Tolerance:
+5% to -10% at rated voltage

Diameter Tolerance:
From 0.001” to 0.005” less than the nominal diameter

Length Tolerance:
±2% or ±1/16” (1.6 mm), whichever is greater

Camber Tolerance:
0.020” per foot length (1.7 mm/m) for units up to 12” (305 mm) long

Sheath Material:
300 series stainless steel