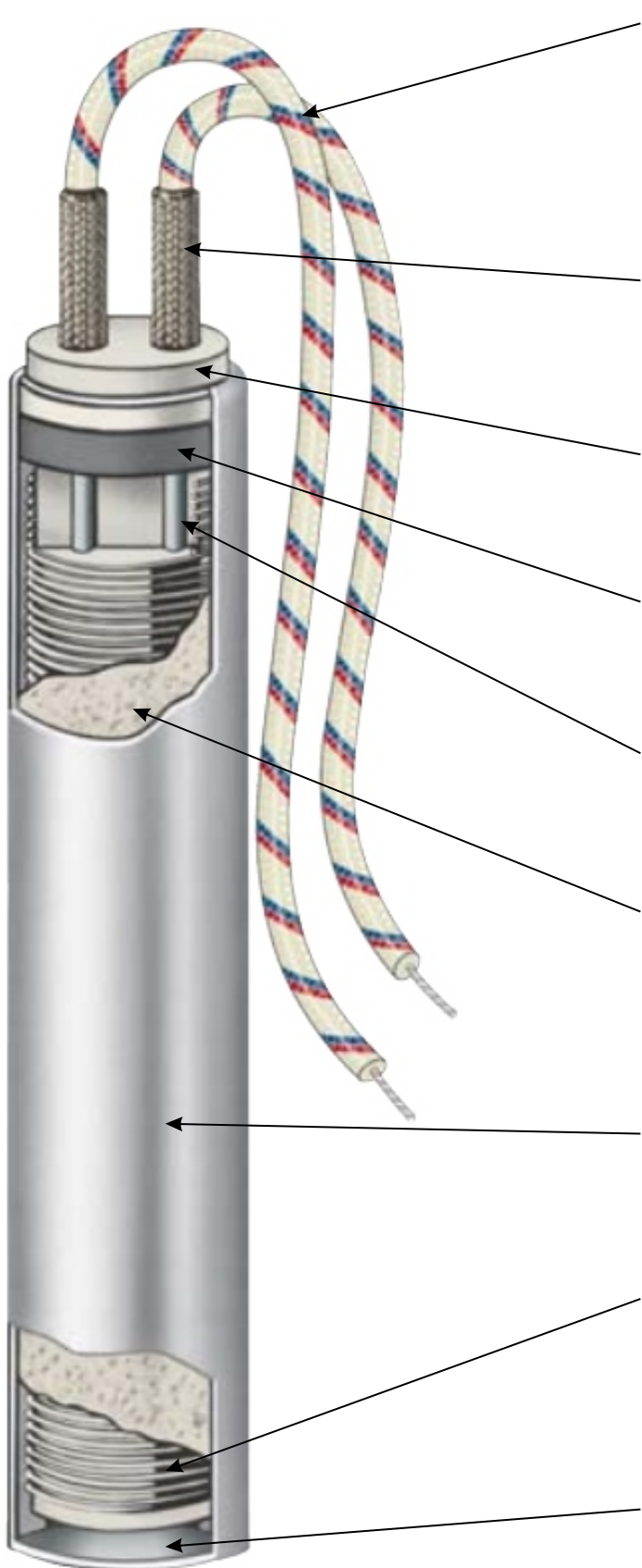


CARTRIDGE HEATERS



A The standard termination for SENSETECH Cartridge Heaters is 12" externally connected leads are stranded nickel connectors. The leads are stranded nickel wire with high temperature Fiber Glass / Silicon insulation, rated at a continuous operating temperature of 482°F (250°C). To meet the requirements of your application we offer alternate termination styles that will solve many of the most common application problems.

B Double wall thickness high temperature fiberglass sleeve provides maximum electrical insulation to the connector used to splice the nickel conductors to the flexible leads.

C Ceramic end cap prevents nickel conductors from shoring out against sheath when sharp bending of the leads is required.

D Ceramic end cap and swagged-in lava plug protect the internal cartridge from outer contamination. Other types seals can be provided.

E For maximum current carrying capacity large diameter solid nickel conductors are used to ensure a good electrical connection between the resistance wire and the nickel lead wires.

F Specially selected grain size high purity Magnesium Oxide (MgO) is used to fill all remaining space inside the sheath. Heater is then swaged, which compacts the magnesium oxide grains into a solid mass, thereby increasing thermal conductivity and dielectric strength.

G Stainless steel 304 / 316 is used to provide high temperature strength, good thermal conductivity and resistance to corrosion and scaling.

H Grade "A" Nickel-Chrome resistance wire is precisely wound on a high purity magnesium oxide core, placing the resistance wire as close to the inside sheath as possible while still maintaining dielectric. This provides excellent heat transfer, and results in the highest possible watt densities and longer heater life.

I Heli-arc welded end disc made from same material as the sheath provides a positive seal against moisture and other contaminants.

CARTRIDGE HEATERS

Description

- Cartridge heaters are some of the most versatile heaters of its kind.
- It is available in various specifications and dimension suitable for different applications.
- Sensing Technology Corporation manufactures and delivers the most diverse cartridge heater to its large clientele, i.e. the leading industrial manufacturers in the country.
- Sensing Technology Corporation customizes cartridge heaters using premium materials, automated machineries and tight manufacturing controls.
- Manufacturing processes conform to stringent procedures to ensure quality and reliability into the products.

Heater Watt Density

- Cartridge Heater Watt Density is defined as the wattage dissipated per square centimeter of the heated sheath surface.
- For a particular application, a heater watt density governs internal resistance wire temperature, which in turn determines the outer sheath temperature.
- These factors are critical to the proper heating and life expectancy of the heater.
- It is always advisable to use heaters that have watt densities below the maximum recommended watt density to get the longest heater life.
- For most general applications, it is recommended not to exceed a watt density of 20 watts / cm².

Operating Temperature

- A major factor in determining the life expectancy of a heating element is its operating temperature.
- The heater depends on the actual temperature of the resistance wire within the heater and not on the process operating temperature.
- A lower heater watt density is recommended when applications require high operating temperature.

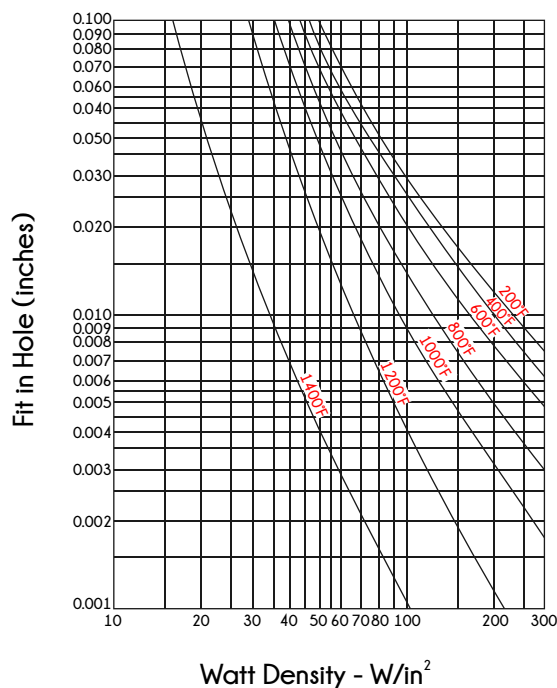
Application

- Molds and dies
- Food processing
- Plastic molding
- Packaging equipment
- Hot stamping
- Plastic extruders
- Hot runner molds
- Medical Equipment
- Shoe Machinery
- Semiconductor
- Hot plates
- Sealing
- Fluid heating

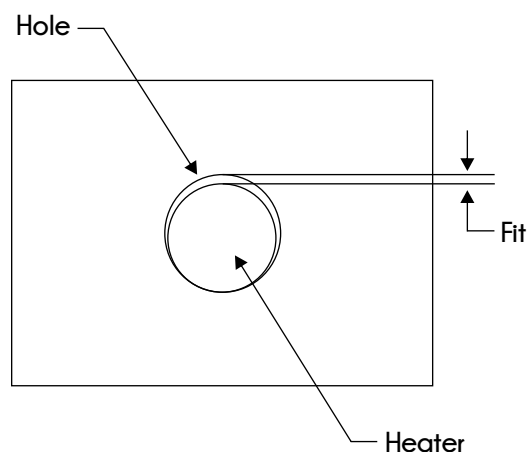
Determining Fit

- At high watt densities, a close fit is an important factor in determining the life expectancy of the heater.
- The fit is the difference between the heater diameter and diameter of the hole.
- A good fit is usually between 0.07mm to 0.15mm.

Recommended Watt Density For Heating Parts

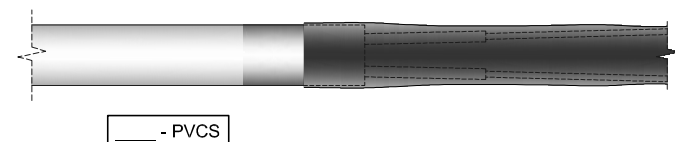
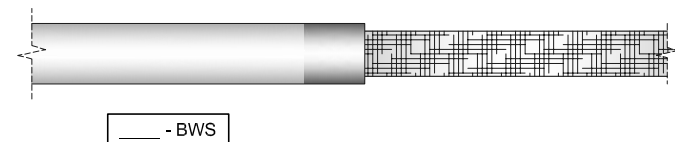
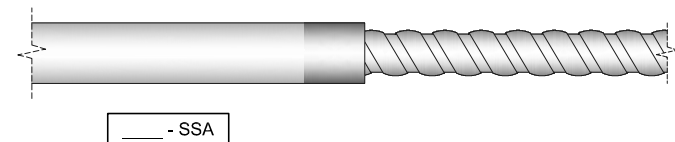
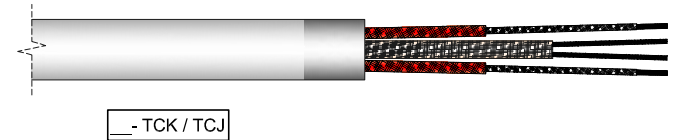
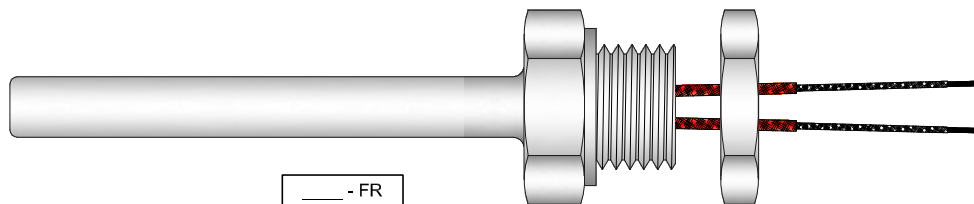
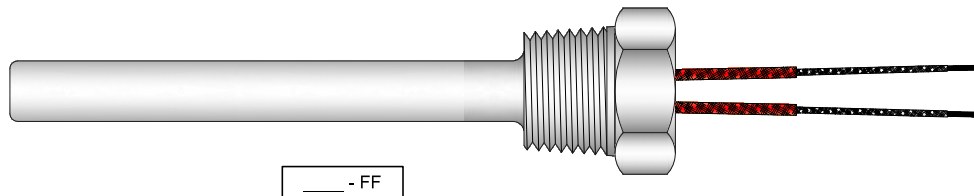
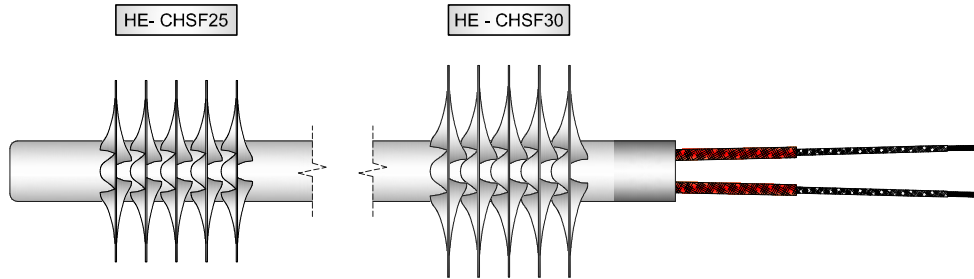
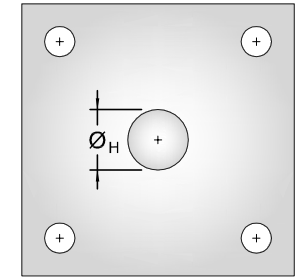
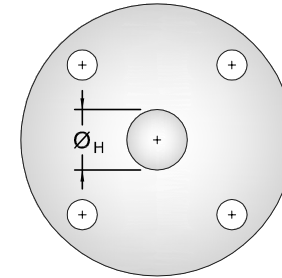
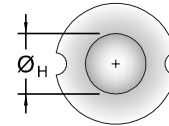
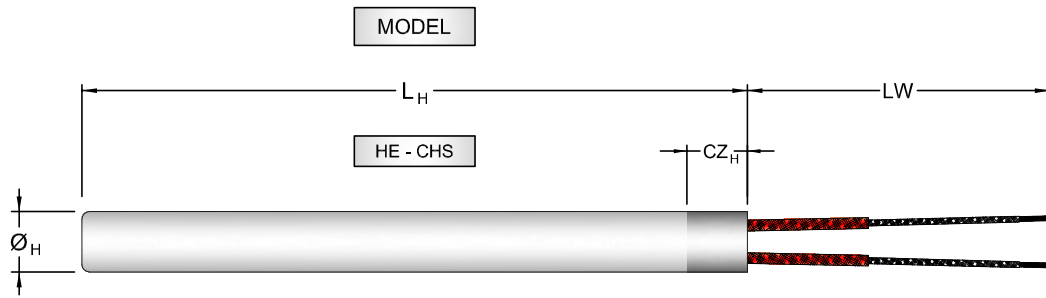


Determining Fit



STRAIGHT CARTRIDGE HEATER DESIGN AND OPTIONS

To Order : Please specify the complete assembly, indicate the code letter or value for each option.



STRAIGHT CARTRIDGE HEATER ORDER CODE TABLE



To Order : Please specify the complete assembly, indicate the code letter or value for each option.

Model	Length - L _H	Cold Zone - CZ _H	Diameter - Ø _H	Sheath	Wattage	Supply	Leadwire - LW	Option	Size
				S4					

Model	Description
HE - CHS	Cartridge Heater, Straight
HE - CHSF25	Cartridge Heater, Straight With Fins - Ø 25mm
HE - CHSF30	Cartridge Heater, Straight With Fins - Ø 30mm

0	Description
TCK	Type K, Thermocouple, Built In
TCJ	Type J, Thermocouple, Built In
FF	Fitting Forward eg... 12N
FR	Fitting Reversed eg... 34B
RMF	Round Mounting Flange eg... Ø18mm
SMF	Square Mounting Flange eg... 20mm
BTS	Butt Stopper eg... Ø15mm
SSA	Stainless Steel Armour eg... Ø9.5mm
BWS	Braided Wire Sleeve
PVCS	PVC Shrinkable Sleeve

Example:

HE - CHS	200	30	15	S4	850	220	500	TCK	FF - 12N	SSA
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- Cartridge Heater, Straight
- 200mm..... Length
- 30mm..... Cold Zone
- 15mm..... Diameter
- SS304... Sheath Material
- 850 Watts..... Wattage
- 220 VAC..... Supply
- 500mm..... Lead Wire
- TCK..... Type K, Thermocouple, Built In
- FF-12N..... Forward Fitting, 1/2" NPT
- SSA... Stainless Steel Armour, Square Locked, Ø 9.5mm