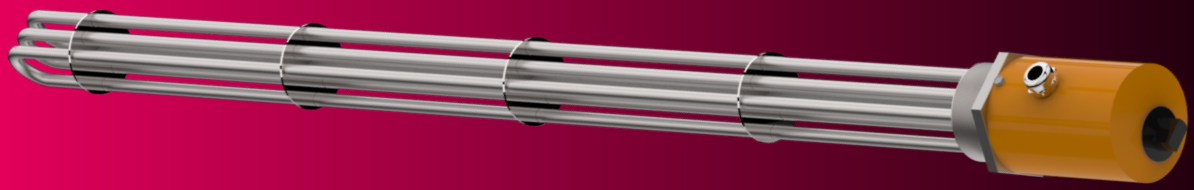
TEMPSENS

Thermal and Cable Solutions

ISO 9001-2015 CE IEC CCOE Underwriters Laboratories

SCREW PLUG HEATERS



TEMPSENS INSTRUMENTS (I) PVT. LTD.

B188A, Road No.-5, M.I.A., Madri, Udaipur, (Rajasthan.) INDIA 313 003

Ph.: +91 294 3507700, **Fax :** +91 294 3507731

E-mail : info@tempsens.com

www.tempsens.com

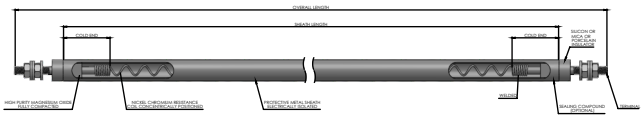
SCREW PLUG HEATERS

Screw Plug Heaters are smaller version of Immersion Heaters in which heater flange in replaced with a Threaded Plug. A Single or multiple tubular heating elements that fitted into a thread hexagonal head which are then screwed directly through a threaded coupling in the tank wall or vessel, or installed process line.

Screw plug heaters are an easy way to heat up solutions in smaller containers that may or may not require auto control on temperature. The Heaters can be installed either horizontally or vertically in the tank. The heater is compatible for both Single phase as well as three phase power supply.

The screw plug heaters are also be provided with a Thermo well, in which a temperature sensor can be installed for the Temperature monitoring and control purpose. In most of the applications a simple thermostat will be installed inside the thermo well and pre wired with the installed heater to ensure heater ON / OFF at a pre set temperature. The Thermostat knob can be projected outside the terminal cover for easy access of the operator.

Construction



1. Nickel Chromium Resistance wire. Uniformly coiled wire is stretched through the active length of the element. The ends are proved with the terminal pins to create cold ends.
2. Magnesium oxide: High purity magnesium Oxide power is filled between the coil and outer tube in a automated filling station to ensure the right insulation, conduction as well as compactness.
3. Outer sheath: a Tube (welded or seamless) which acts as a outer protection for the heating Element. Selection of outer tube depends on various factors such as temperature, pressure, fluid to be heated etc.
4. Terminal pins: Also known as terminal pins are extended ends of the heating elements. The SS rods of a specific diameter are fusion welded to the coils at both ends. The length of the rod depends on the non heating length required for any application and installation.
5. End Sealing: Sealing is done using the combination of Ceramic beads, soft seals & sealants. The sealing ensures that no moisture from the atmosphere enters the heating element and keeps it dry.

Technical Specifications

Sheath Material	SS , Alloy 600 series, Alloy 800 series, Hastelloy, Titanium, copper etc
Rating	0.1kW to 50kW
Screw Plug Material	CI, Carbon steel, Brass, SS etc
Screw Plug NPT fittings	1", 1.1/4", 1.1/2",2",2.1/2", 3" (BSP/ NPT) or equivalent Metric threads
Voltage	120 to 690V AC Single phase or three phase
Terminal Enclosure	Safe / Hazardous
Control	Thermostat/RTD/Thermocouple.

- **Sheath selection datasheet :** The different sheath materials used in these heaters have different watt densities and operating temperatures.
- **Stainless Steel :** Maximum operating temperature is 1200°F
- **INCOLOY :** Maximum operating temperature is 1600°F

Note : Watt density depends largely on the fluid to be heated and it can vary anywhere between 0.7w/cm2 to 15W/ cm2.

Application

- Crude oil / HFO/ Lubricant Oil Pre Heating in the tanks.
- Clean Water heating.
- Alkaline and corrosive solvent heating.
- Water & other liquid Vaporizers.
- Gas heating Systems
- Pre Heaters
- Anti condensation heating in the motors
- Oil pre heating in compression units.
- Solar water baths
- Chemical heatings
- Storage chamber heating.
- Small ovens

Advantages

- Efficient Heating and Reliable Design
- Easy to install
- Easy to Regulate & Maintain
- Lower Cost of Maintenance
- Energy Efficient