



SCREWPLUG IMMERSION HEATERS



APPLICATIONS

Copper Sheath: Clean water, freeze protection, hot water storage, cooling towers, heating of solutions not corrosive to copper

Stainless Steel Sheath: Process water, soap and detergent solutions, soluble cutting oils, demineralized or deionized water (passivation recommended)

Incoloy Sheath: Solution water, corrosive solutions, steam super heating, air or gas

Steel Sheath: Asphalt, wax, paraffin, tar, etc., heat transfer medium, petroleum, degreasing and solvent oils, machine oil, fuel oils, alcohol cooled relatively quickly.

STANDARD FEATURES

- 1", 1 1/4", 2" and 2 1/2" NPT pipe plug in brass, steel or stainless steel
- .312" diameter element(s) on 1" and 1 1/4"; .430" diameter elements on 2" and 2 1/2"
- Copper, steel, 321 stainless steel, or Incoloy 800 sheath material
- High, medium and low watt densities for various processes

- General purpose or explosion and moisture resistant terminal enclosures
- Bends are repressed after forming to recompact MgO and extend element life
- Single and double pole thermostats in several temperature ranges

MATERIALS INFORMATION

SCREW PLUG MATERIAL	INFORMATION
Brass Screw Plug	Used for clean water and other non-corrosive materials
304 SS Screw Plug	Used for corrosive materials
316 SS Screw Plug	Used for corrosive materials
Steel Screw Plug	Used for oils and other non-corrosive materials

WATT DENSITIES FOR TYPICAL APPLICATIONS

WATT DENSITY	TYPICAL APPLICATION	SCREWPLUG MATERIAL	ELEMENT MATERIAL
8 watts/in² (1.3 watts/cm ²)	Fuel Oils (Bunker C and Number 6)	Steel	Steel
15 watts/in² (2.3 watts/cm ²)	Medium Weight Oils • Heat Transfer Oils	Steel	Steel
16 watts/in² (2.5 watts/cm ²)	Medium Weight Oils • Heat Transfer Oils • Liquid Paraffin	304 Stainless Steel	Incoloy® 800
23 watts/in² (3.6 watts/cm ²)	Forced Air & Gases • Caustic Solutions • Degreasing Solutions	304 Stainless Steel	Incoloy® 800
23 watts/in² (3.6 watts/cm ²)	Lightweight Oils • Degreasing Solutions • Heat Transfer Oils	Steel	Steel
48 watts/in² (7.5 watts/cm ²)	Process Water	304 Stainless Steel	Incoloy® 800
60 watts/in² (9.3 watts/cm ²)	Clean Water	Brass	Copper
60 watts/in² (9.3 watts/cm ²)	Deionized Water • Demineralized Water	316 Stainless Steel	316 Stainless Steel

SHEATH MATERIALS

MATERIAL	INFORMATION
Incoloy 800	Nickel 30-35%, Chromium 19-23%, Iron balance. The high nickel content of this alloy contributes to its resistance to scaling and corrosion. Used in air heating and immersion heating of potable water and other liquids.
316/316L Stainless Steel	Chromium 16-18%, Nickel 11-14%, Iron balance. (316L – Low Carbon) Modified with the addition of Molybdenum (2-3%) to improve corrosion resistance in certain environments, especially those which would tend to cause pitting due to the presence of chlorides. Applications include deionized water. Maximum Sheath Temperature: 1200°F / 649°C
304/304L Stainless Steel	Chromium 18-20%, Nickel 8-11%, Iron balance. (304L – Low Carbon) Used in the food industry, medical, and chemical heating. Maximum Sheath Temperature: 1200°F (649°C)
Copper	Standard Copper Alloy A low temperature, inexpensive material used mainly for clean water heating. Maximum Sheath Temperature: 350°F / 177°C
Steel	Low Carbon Used for high to low viscosity oils, asphalt, tar, wax, molten salt, heat transfer liquid media and other compatible solutions.

THERMOSTATS

TYPE OF THERMOSTAT	DESCRIPTION
DPST Thermostat	Double Pole – Single Throw Thermostats
SPST Thermostat	Single Pole – Single Throw Thermostats
Adjustable Thermostat w/ Manual Reset High Limit	For single & 3 phase circuits. Adjustable Temperature Control w/ Manual Rset high limit