



PERFECT INDUSTRIAL SERVICES

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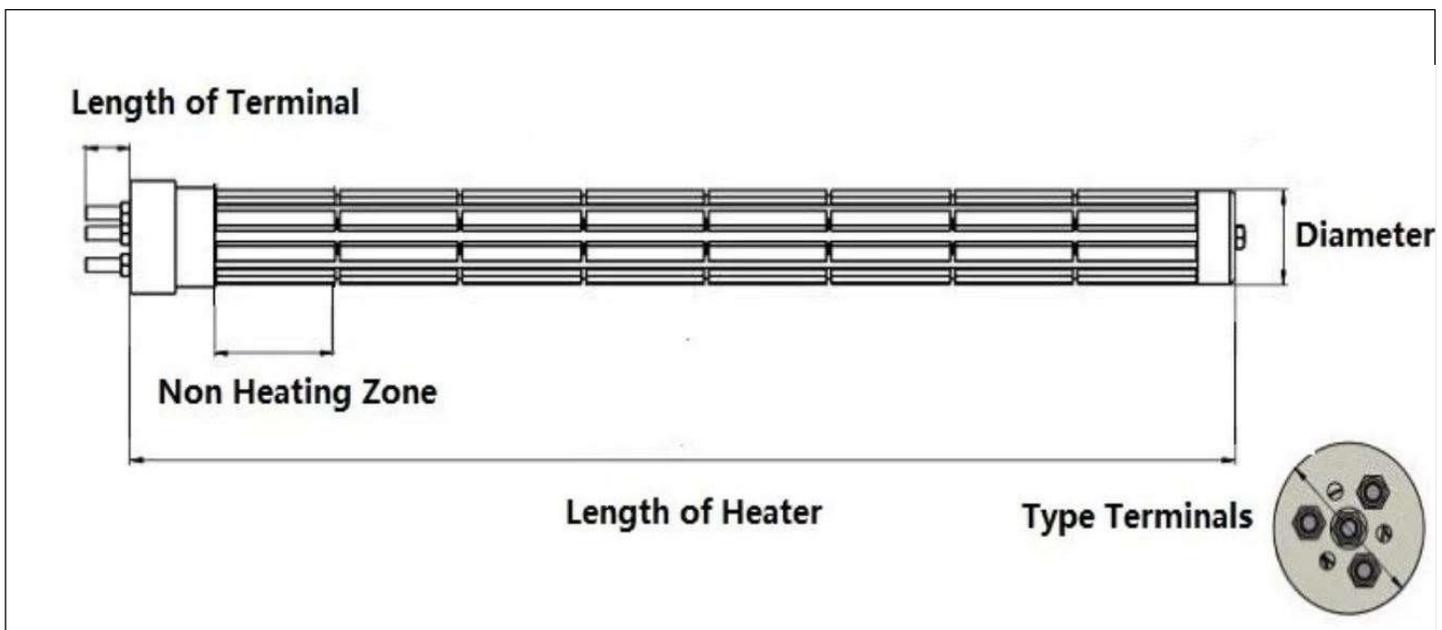
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LUB OIL IMMERSION HEATER (Part Code – PIS2526 / FTBHE0025.12)

Description

The inner core of the ceramic bobbin radiant heater is composed of a U-shaped axially arranged end-welded resistance wire and a ceramic support frame, and the inner core and the outer protective sleeve are not shielded, and the heat dissipation is good. The electric radiant heater with rated working temperature of 1000 degrees, the material of the resistance wire is Cr20Ni80 or 0Cr21Al6Nb, the surface working temperature can reach 1200 degrees, the highest working temperature of the electric radiant tube with this material can reach 1000 degrees, and the support frame is high aluminum ceramic parts. The outer protective sleeve is a cold-drawn seamless thin-wall heat-resistant steel tube. The material is 1Cr25Ni20Si2 or 1Cr25Ni35Si2. The material has good high temperature oxidation resistance, high temperature creep strength and certain anti-carburization performance. The radiant tube design and material selection safety factor Larger.

Infrared heater	Ceramic bobbin heater
Insulation	Alumina ceramic
Heating wire	Nickel chrome wire, NiCr 80/20
Voltage	100V-480V or as customer's demand
Power	1000w-10000w based on your length
High temperature	1200-1400 degree celsius
Corrosion preventive	Yes
Material	Ceramic and Stainless Steel
Lifetime	Long, 5-8 years in standard operation
Applications	Electric heating boiler, furnace, Lub Oil , Gease ETC



Bobbin heaters used with an outer pipe are a type of **indirect immersion heating solution**, primarily designed to heat liquids, gases, or semi-solid materials in industrial applications. This configuration allows for the heating element to be replaced or maintained without draining the contents of the tank or vessel.

➤ Key Features and Construction

The core of this system is the ceramic bobbin heater itself, which is then inserted into a protective outer pipe, also known as a thermowell or sheath.

- **Heating Element:** A high-resistance wire (typically Nichrome 80/20) is wound around a ceramic (steatite or porcelain) core, which provides electrical insulation.
- **Outer Pipe (Sheath/Thermowell):** The bobbin assembly is inserted into an outer tube (pipe) that is sealed at one end and mounted to the vessel via a flange or screw plug. The material of this outer pipe is chosen based on the substance being heated to resist corrosion and degradation:
 - **Stainless Steel (SS 304, SS 316):** Common for water, oils, and general industrial use.
 - **Copper:** Often used for general water heating applications.
 - **Titanium or Lead-bonded pipe:** Used for heating highly corrosive acidic or alkaline solutions, such as in plating or anodizing baths.
 - **Fused Silica (Glass):** Used for heating strong acids (except hydrofluoric and phosphoric) where metal sheaths would corrode.

➤ Advantages

- **Easy Maintenance:** The primary advantage is that the heating element can be serviced or replaced without needing to empty the tank or shut down the entire system.
- **Durability:** The protective outer pipe shields the delicate heating element from direct contact with corrosive or harsh materials, extending the overall lifespan of the heater.
- **Versatility:** This design is suitable for a wide range of applications, including heating oils, waxes, fats, water, and various chemicals, as the sheath material can be tailored to the specific medium.

➤ Applications

- Industrial tanks and vats
- Chemical processing plants
- Oil heating systems (where low watt density prevents product degradation)
- Anodizing and plating baths
- Commercial boilers and water heaters

