



F.A.T.I.
Electric Heater for Industry

General®

Think FATI for Hot Solutions



General[®]

COMPANY PROFILE



F.A.T.I. (Fabbrica Apparecchiature Termoelettriche Industriali) founded in 1945 at Milan - Italy, quickly established itself as an industry leader in the field of Heating Elements for industrial application. Initially based at Via Bigli, it moved to Via Voghera in the 1960s and subsequently to Via Volta on the outskirts of Milan. The changes it has undergone over the years has seen the company become much stronger and well positioned to meet the demands of ever changing marketplace and the global competition.

The company uses most modern solutions in the field of industrial technologies applied for the production of heating elements and heat exchangers. Armoured heating elements are the most advanced and reliable technological solution for electrical heating. In fact, thanks to the high level of magnesium oxide isolation, they guarantee long operational life, also in case of particularly heavy duty. We manufacture heating elements in the most varied shapes and with a wide range of diameters, lengths and materials.

The range of heating elements produced by F.A.T.I. is the most complete range proposed in the market and due to the thorough qualitative improvement, the products are subjected to, it is the best available in the industry worldwide.

Maintaining the highest standards of quality throughout the design, production and customer service is the center stone of F.A.T.I.'s philosophy. Our plant is certified by an accredited body for Quality Management Systems including ISO9001. In addition, the products confirm to ATEX as well as other applicable EU directives and are CE marked accordingly.



As a part of its expansion program to meet and cater to the global requirements, F.A.T.I. has set up its works in India under a joint venture of FATI GENERAL EQUIPMENTS PVT. LTD. The India operations would cater to Asia Pacific region, manufacturing and supplying Electrical Heaters under strict technical control and guidance from F.A.T.I.

It has a sprawling 7500 sq.ft. of Factory premises at Navi Mumbai, India. The facility is equipped with design and engineering department, capable of providing best solutions for electrical heating, using latest Software and Design programs.

No matter the application or environment, rely on the knowledge and experience of F.A.T.I.'s team to equip you with best Electrical Heating Solutions to meet your specific needs.



HEATING ELEMENTS



Tubular elements are the most versatile and widely used type of electric heating elements for industrial applications because of their compacted granular insulation, they give long life in a variety of rugged environments. They can be bent to virtually any shape, they can be finished in an almost endless variety of diameters, lengths and sheath materials.

F.A.T.I. has manufactured tubular elements since 1945. Since that time, we have developed engineering standards and manufacturing techniques to meet the most demanding applications

Our range of Electric Immersion Heaters is made to heat water, oil and chemical. These are made from superior grade of copper, stainless steel and titanium pipe, & known for their efficiency and long lasting performance. Range of immersion heaters is available with easy installation and accurate control that makes these heaters highly useful in many industrial heating processes. These are suitable for heating various liquids, viscous materials and solid materials with low melting points. Our immersion heaters are based on latest technological advancements.



FLANGED HEATERS

Advantages:

- Upto 4000 Kw in single unit

Technical description:

Flanged heaters for heating liquids and gases. The certified enclosure is produced in carbon or stainless steel.

- Upto 36" flange acc. ANSI B 16.5; material carbon steel, high alloy steel, nickel alloy, monel, inconel, incoloy, etc.
- Degree protection of the enclosure IP65-66-67
- Standard diameter of heating elements; 8, 5, 12, 5, 16 mm
- Material of elements fe35.2, st.st304, 316, 321, Alloy 800, 825, Alloy 600, 625, Hastelloy, Copper
- Immersion length upto 3000 mm

The electric heater bundle can be provided with:

- Protective and/or control devices: thermostat, thermocouple or PT100
- Temperature transmitters
- Anti-condensation heater
- Certified cable gland

Particular material can be provided on Customer's demand.

Over-the-Side Immersion heaters occupy little workspace, require no tank penetrations, and are easily withdrawn for servicing and replacement. They are immersed within a tank to evenly distribute heat in a variety of applications including acid or alkali solutions

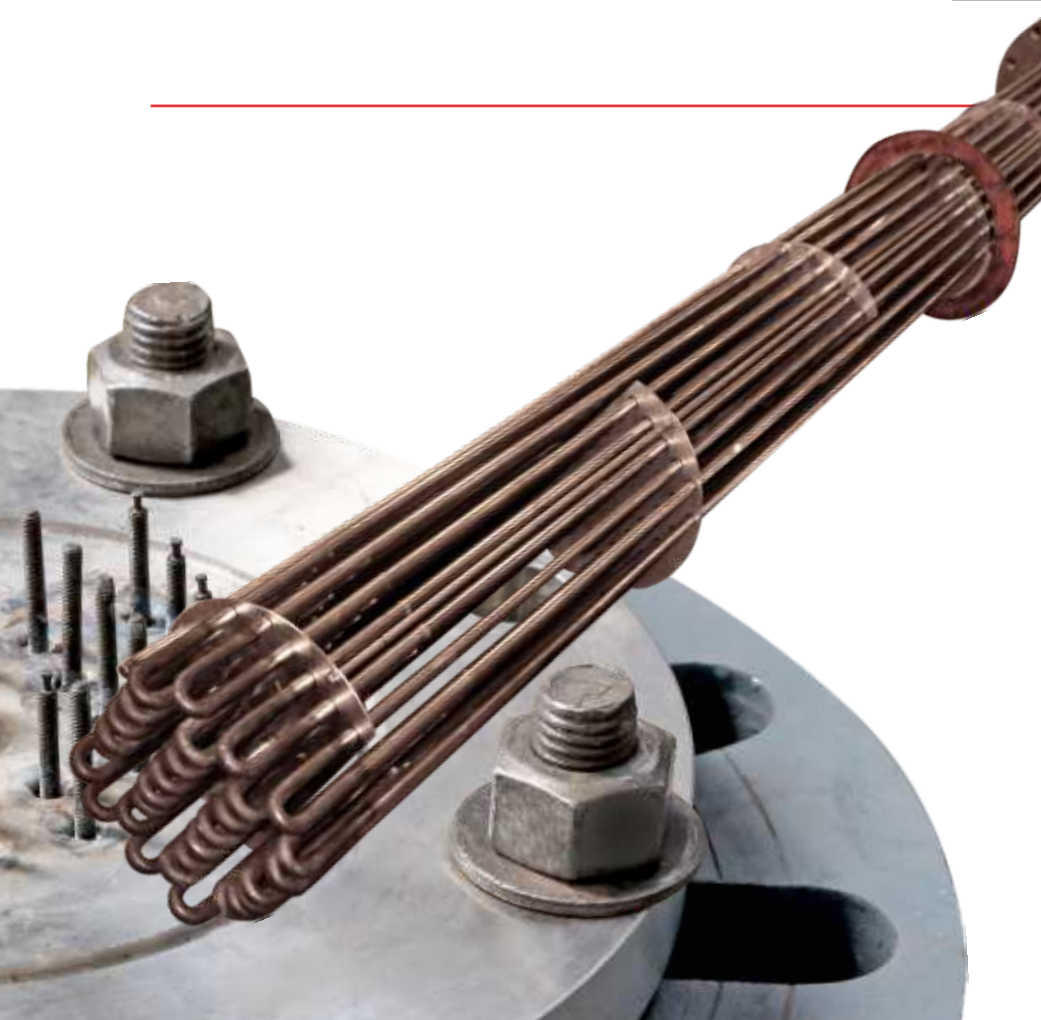


Immersion Heater For Hazardous Area

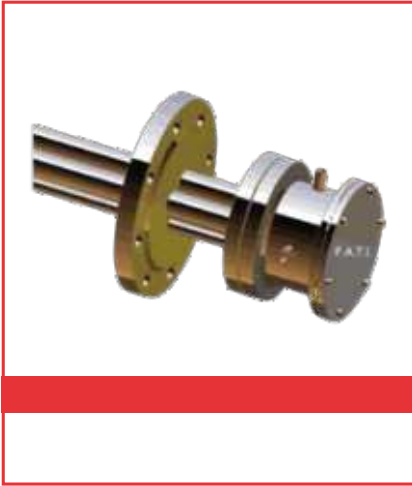
Typical Applications		
Fresh water	Process gas	Heating medium
Sea water	Air	Molecular sieve regeneration
Crude Oil	Tank heating	KO drums
Glycol reboilers	Synthetic Oils	Butane/propane vaporizer

F.A.T.I. range of immersion heaters is suitable for heating all process fluids which are non-corrosive to the materials of construction. They are primarily intended for use in bulk storage Vessels, flow heaters and hot water calorifiers. Ideal for generating steam and heating gases and liquids in pressure vessels and tanks, flanged immersion heaters are hairpin-bent tubular elements welded into a flange and provided with electrical enclosures.

- Length: Up to 4 meters
- Power ratings: Up to 4 kW
- Flange material: Carbon steel, stainless steel, INCOLOY and INCONEL.
- Sheath material: Copper, steel, stainless steel, INCOLOY and INCONEL.



REMOVABLE HEATERS



Bundle replaceable without decommissioning the tank.

Power range from 0,5 to 120kW.

Internal control thermostat(s) and over-temperature thermostat. Weatherproof terminal enclosure to IP55-65-66-67.

Carbon/Stainless Steel mounting flange.

Finished in textured red paint to RAL 3000 or in according to Customer's specifications.

Designed for horizontal installation only.

Typical Application:

- Calorifier Packages
- Hot Water Storage Tanks
- Cleaning and Rinsing Equipment
- Heat Transfer System
- Bulk Liquid Storage



SCREWED HEATERS



Screw Plug Immersion Heaters consist of tubular elements welded or brazed into a threaded screw plug which can then be inserted into a threaded opening in a tank wall or through a mating full or half coupling.

Screw plug immersion heaters consist of tubular elements in a threaded hex plug. They screw directly through threaded openings in tank walls to heat liquids, viscous fluids, forced air and gases by direct contact.

Flameproof (Explosion proof) industrial screwed immersion heaters for zones I & 2 Hazardous areas, gas groups IIA, IIB, & IIC temperature class T1-T6.

The electric heating elements are constructed with high quality 80/20 nickel chrome resistance wire, centred in a metal tube and insulated with compacted magnesium oxide.

The element tube material generally used includes: carbon steel, stainless steels 304, 316, 321 Incoloy 800 & 825, Inconel 600, 625, Titanium, Copper, Monel, and other available materials.

The elements are either welded or brazed to a threaded boss, which is available in a variety of materials to suit the element sheath and the application. The screwed boss can be BSP, NPT, or ISO thread forms. Special thread forms and materials are available on request.

For operating temperature lower than 70°C applications the terminal box is attached directly to the screwed boss. Above this temperature the terminal box is stood off varying distances depending on the operating temperature.

The heaters are complete with thermostat and manual reset safety cut out.



CONTROL PANELS

FATI can supply electric control panels for the regulation and control of electrical heaters to satisfy all Customers requests without power limit.

The panels are designed and constructed to guarantee maximum reliability and safety in accordance with a current standards.

The power controls can be On-Off type or with SCR single phase or three phases with two to three lines with zero-crossing or phase angle commutation control.

FATI use high quality components for the construction of their control panels.

Engineering and implementation of systems for the automation and management of industrial machinery, industrial ovens (electric / combustion), process control, start up, certification.

- Analysis of the needs of the Customer
- Study of the project and the proposed technical solutions
- Choice of materials and equipment
- Drafting of wiring diagrams with software
- Review and discuss the project with the customer
- Development of the soft-ware on PLC and / or system of supervision by BUS Field (MOD-BUS, Profibus)
- Construction of hardware control panel
- Testing, calibration instruments and certification of the product
- Drafting of the operators and maintenance manual
- Start up and training to the customer (when required)



ELECTRIC EXCHANGERS



F.A.T.I. can offer you a wide variety of electrical exchangers in special construction fully in accordance with clients specifications and requirements.

Electric circulation heaters and process heating systems for heating a wide range of industrial liquids and gases.

Mechanical design codes include ASME, BS5500, ISPEL(PED), STOOMWEZEN, TEMA, AD MERKBLATTER, or any other recognised code.

Typical Applications

- Oil and gas field equipment
- Refineries and petrochemical plants
- Chemical and industrial gas plants
- HVAC duct heating
- Open tanks and heat treat baths
- Textile drying
- Heat transfer and lube oil systems
- Semiconductor processing equipment
- Precision cleaning equipment
- Power generation systems
- Emissions control systems
- Supercritical fluid heating
- In-line water boilers



Our range of Flameproof Heaters consist of a screw plug or flanged type immersion heater mounted in a heating vessel and are designed to efficiently transfer heat to a flowing medium (liquid, air or gas).

All F.A.T.I. flameproof heaters are designed for use in Zone 1 & 2 Hazardous Areas, Gas Group IIA, IIB or IIC.

We are specialized in large heaters for:
Petrochemical industry e.g. Refinery, Off-shore, Onshore,
Oil and Gas, Chemical industry, Pharmaceutical, Metal
industry, Shipyards, Paint manufacturers, etc.



- Weatherproof construction for safe area or Exd terminal enclosure for Hazardous Areas with mechanical protection to IP55-65-66-67.
- Working pressure up to 300 bar.g
- Working temperature up to 700°C.
- Internal control and over-temperature control with thermostat(s) or thermoresistance
- thermocouple.
- Thermal insulation and cladding as option.
- Designed for horizontal or Vertical position.

Available materials of construction are

- Carbon steel
- St. St. 304-316-321
- Hastelloy
- Incoloy
- Inconel
- Monel
- Titanium

Others materials on request



GALLERY







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