

TESI GROUP

# Ignition Systems

Lighting up innovation



TESI

## ABOUT TESI GROUP

With over 30 years of expertise, TESI designs, manufactures and distributes products and accessories for the energy, oil & gas, petrochemical and chemical industries.

Our production is divided into three main business areas:

- Heat Shrinkable Products for corrosion protection of pipes.
- Equipment for pipeline induction heating and heat treatment.
- Ignition systems for industrial burners

Continuous research and development of new solutions, full cooperation with customers, efficiency and precision in execution are the strengths that have enabled the company to succeed in these three decades.

The great flexibility of the structure and the ability to deeply understand customers needs make TESI a reliable partner providing superior solutions all over the world.

## TESI IGNITION DIVISION

TESI leads sector of industrial ignition, proposing to customers the widest range of solutions available in this market.

Solutions designed and manufactured by TESI, assure reliable ignition in most severe condition granting huge savings of money to our customers.

TESI igniters portfolio, list 5 standard High Energy power packs able to provide always the most appropriate ignition solution for our customers.

TESI High Energy electrodes are available in 3 different outer diameters in order to allow our customer to find more easy the integration of TESI igniter even in small burners or very special applications without the real need to make changes on the burner's original design.

TESI spark plug range provides necessary tools for all kind of needs coming by the combustion process.

Temperature, corrosion, pressure, duration.

TESI main focus is to provide special execution igniters, proposing to our customers tailor made solutions, designed in order to achieve goals of efficiency, reliability and safety.

TESI partner you  
with flexible solutions  
for complex applications.



## HIGH ENERGY DEVICES HE

TESI range of High Energy ignition devices is based on 5 different High Energy powerpacks able to deliver from 36 Joules per second till 240 Joules per second, providing always the most appropriate solution able to ignite all kind of gases, including heavy oils and other liquid fuels. TESI HE devices are also used to replace pilot torches and directly ignite main burners.

Spark generation is not affected by the presence of dirt or humidity on the electrodes fitted inside the burner. This because TESI spark plugs are properly sealed by semiconductor with the most innovative materials from aerospace industry.

TESI High Energy electrodes are available in 3 different outer diameters (12mm,14mm,17mm) in order to allow our customer to find more easy the integration of them even in small size burners or very special and difficult applications without the real need to make changes on the burner's original design.

### Main features of High Energy devices

- Not affected by dirt or deposits onto electrodes coming by the burning process.
- Not affected by humidity or liquids (100% waterproof).
- Very reliable and long lasting.
- Maintenance free.
- High adaptability in all kind of burners even replacing old traditional ignition devices.
- Increase efficiency of the plant.
- Safer than traditional ignition devices.



## IGNITERS FOR FLARES

TESI proposes a very innovative solution based on High Energy technology suitable to ignite all kind of flares, ground flares, tall flares and off shore flares.

Focus in flare market is that flares never shut down as they are serving many processes in the plants.

Shutting down a flare means always a huge loss of money.

TESI designs igniters suitable for flares focused on the following criteria:

- Ignition unit specifically designed to provide a good spark at very long distances till 500 mt.
- Ignition cable is designed to resist to high temperature and severe environmental conditions.
- Ignition circuit special housing filled with resin, 100% waterproof.
- Easy and fast connection, without any particular tool use, of ignition cable and ignition electrode, allow operators to make a safe and easy maintenance.
- High temperature and 100% waterproof High Energy electrode design grants always the best spark performance.



## HIGHT VOLTAGE DEVICES HV

High Voltage ignition power units represent the most cost effective ignition solution available in our range.

High Voltage igniters generate an electric arc delivering the output current from an ignition transformer (6 or 8 kV) to the ignition electrodes, or spark plug, that is often a simple rod wire insulated by ceramic insulator.

They are suitable to ignite mainly gas fuels. TESI provides a wide range of HV ignition devices and spark plugs, also suitable for explosion-proof areas.



## PILOT TORCHES

TESI designs and manufactures a wide range of gas fired igniters (pilot torches).

Key factors of TESI pilots are high reliability, low maintenance, compact design, flexibility and easy installation.

TESI pilot range also proposes versions integrating the High Energy technology, providing to our customers the most important tools to achieve goals in terms of efficiency and reliability of their burners.

- Compact design and flexibility: dimensions and shape can be customized to match Client's request.
- Easy and fast maintenance: ignition and flame ionization devices can be easily disassembled without removing the complete pilot from the burner wall.
- High Voltage or High Energy Igniter version pilots are available, offering always the best solution to ignite burners.
- TESI pilots are provided in forced or self-induced draft combustion air supply versions, upon customer's need.



## IGNITION CABLES

TESI designs and manufactures a wide range of ignition cables suitable for the application in petrochemical plants, and other severe environmental conditions.

Mainly, ignition cable need to grant reliable service and performance at high voltage, high temperature, corrosion, mechanical stress.

TESI ignition cables are available in robust armoured design in order to grant long lasting and top efficiency.

All TESI cables are available with on demand length.

For an easy and fast connection, TESI cable range provides also quick couplings version.



Your best partner  
in Ignition Equipment.

## IGNITION ACCESSORIES

TESI proposes a range of accessories suitable to be used in combination with TESI ignition devices in order to increase reliability, efficiency and flexibility.

Pneumatic retraction devices with coaxial or side mounted actuators. In order to prevent spark tips damage from flames and corrosive atmospheres (for example in sulfur burners), TESI developed a smart and compact retractable device that can be easily mounted on standard ignition rods.

This device allows retraction of the spark tip in a protected area of the combustion chamber, once sparking is finished. On request, HAZARDOUS AREA executions are available.

Special ignition electrodes with flexible portion are available in order to make them suitable for tilting burners.

Available on demand special execution flanges and adjustable sliding couplings to ease positioning of igniters inside the burner.

Wide Selection of spark push buttons and safety interlock switches to make more user friendly and safe ignition operations.

Available on demand Special design ceramic insulators.



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