

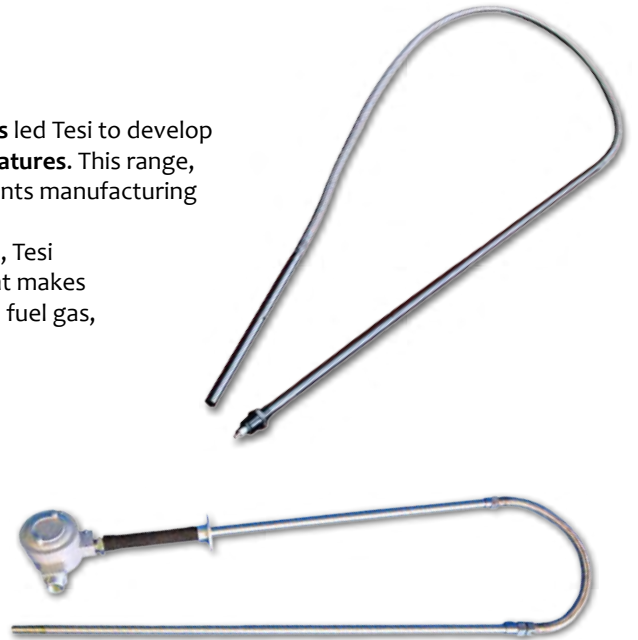
# HIGH ENERGY IGNITION SPARK RODS

Tesi product range includes a broad selection of ignition rods.

The recent and ever increasing demand for **direct ignition of main burners** led Tesi to develop a dedicated range **specifically designed for overexposure to high temperatures**. This range, allowing to replace pilots, leads also to a considerable reduction in the plants manufacturing and operational costs.

In order to satisfy this operational need for direct ignition of main burners, Tesi introduced a selection of special solutions alongside standard devices, that makes them suitable to ignite directly a wide range of fuels including natural gas, fuel gas, diesel, light fuel oil (LFO) and heavy fuel oil (HFO):

- **side or coaxial retractable pneumatic devices** protecting tips from dirt and flames once sparking is finished
- **tilting flexible rods** to follow the main burner's angle
- **guide pipes**



Our key strength is the ability to provide **custom configurations**. Tesi **utmost flexibility** is highly appreciated among our customers, since it allow us to **meet their real requirements**.

Tesi ignition rods range comes in three main standard diameters: 12 / 14 / 17 mm; **length and diameter of the igniter are customizable**, and various accessories are available in order to satisfy any operational need.



## FEATURES

### HIGH RELIABILITY

The powerful sparks ensure reliable ignition in all conditions and environments, removing any risks of failure due to contaminants or humidity.

### LOW MAINTENANCE

Tesi self-cleaning spark tips guarantee a successful ignition while reducing maintenance efforts. The high power of the sparks cleans the surface of the tip during every ignition.

### EASY TIP REPLACEMENT

Being spark tips screwed onto the end of the rod, they can be replaced quite easily, reconditioning the system very quickly and reducing costly downtime.

### ACCESSORIES & SPARE PARTS

A wide range of accessories and spare parts on stock can be quickly supplied and allows for customization of the systems according to customer specifications.

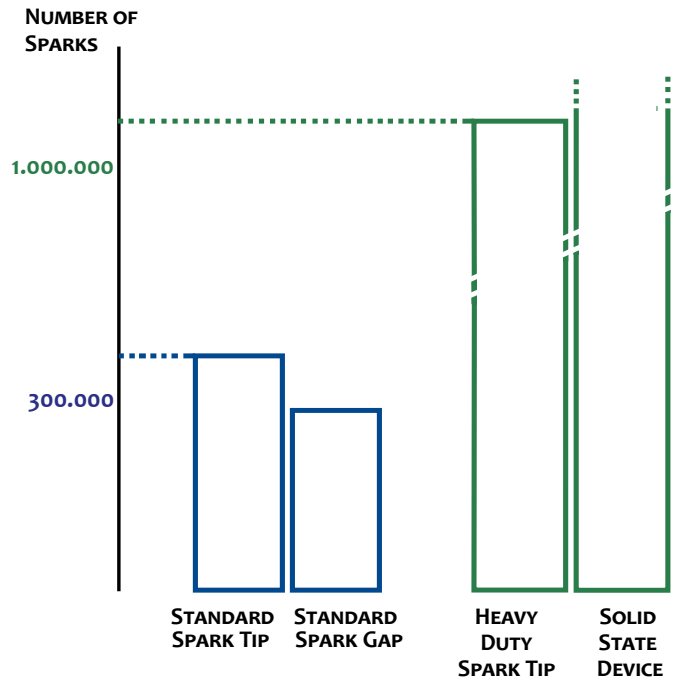


# HIGH ENERGY SOLID STATE IGNITERS FOR HEAVY DUTY APPLICATIONS

Tesi solid state spark gap circuit feature an innovative technology allowing **up to 15 min. of continuous sparking** without the need to replace any consumable (gas spark gap).

## FEATURES

- **constant performance** throughout the entire lifetime
- **longer durability** than a standard gas spark gap
- it delivers energy up to 24 Joules
- 4-24 sparks per second
- it ignites directly HFO and low flammable fuels
- it can **retrofit** traditional gas pilot torches



## PILOT BURNERS

Tesi ignition devices include a wide range of pilot burners, available with:

- built-in **High Energy or High Voltage ignition rod**
- **flame monitor device** by optical or ionization rod
- thermocouples

## FEATURES

### High reliability

Pressurized air and high energy sparks ensure reliable ignition, without any risk of failures during start up.

### Compact design & flexibility

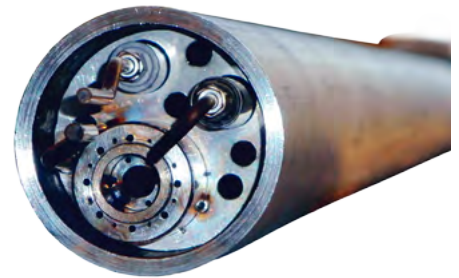
Dimensions and shape can be customized to match customer requirements.

### Easy & quick maintenance

Igniters and flame ionization electrodes can be easily disassembled, without pulling out the entire pilot.

Tesi pilot burners range includes:

- Gas pilot burners
- Oil pilot burners
- Dual fuel pilot burners



# HIGH ENERGY STANDARD REPLACEABLE SPARK TIPS

HERC 17			
CODE	OPERATING TEMPERATURE		DIAMETER
<b>ZZA00106</b>	760°C (max 1000°C)	1400°F (max 1832°F)	17 mm
<b>ZZA00106HT</b>	1000°C	1400°F	17 mm

HEM 17			
CODE	OPERATING TEMPERATURE		DIAMETER
<b>ZZA00100</b>	760°C (max 1000°C)	1400°F (max 1832°F)	17 mm
<b>ZZA00100HT</b>	1000°C	1400°F	17 mm

HEM 14			
CODE	OPERATING TEMPERATURE		DIAMETER
<b>ZZA00130</b>	760°C (max 1000°C)	1400°F (max 1832°F)	14 mm
<b>ZZA00130HT</b>	1000°C	1400°F	14 mm



## IDEAL FOR:

OUTDOOR	WATERPROOF
✓	✓
GAS	HEAVY OIL
✓	✓

## IGNITION DEVICES TESTING KIT

Tesi ignition testing kit allows to perform a complete set of tests to **check the correct functioning** of retraction devices and accessories, spark rods and high energy cables.

The testing kit consists of a **control panel** and a **test box** in which the sparking components can be tested:

- SPARK TIP TEST
- RETRACTION UNIT TEST
- IGNITION SPARK ROD TEST
- HIGH VOLTAGE CABLE TEST



## CONNECTION CABLES

Tesi connection cables range includes:



### ARMOURED HIGH TEMPERATURE CABLE

This high voltage armoured cable has a single core copper wire and flat stainless steel braid (AISI 304). It is high temperature resistant, non combustible, oil resistant, alogen free and highly flexible.



### ARMOURED HIGH ENERGY CABLE

This high voltage double core armoured cable has a flat stainless steel braid (AISI 304). It is non combustible, oil resistant, alogen free, highly flexible and suitable also for ATEX areas.



### SAFE AREA ARMOURED HIGH VOLTAGE CABLE

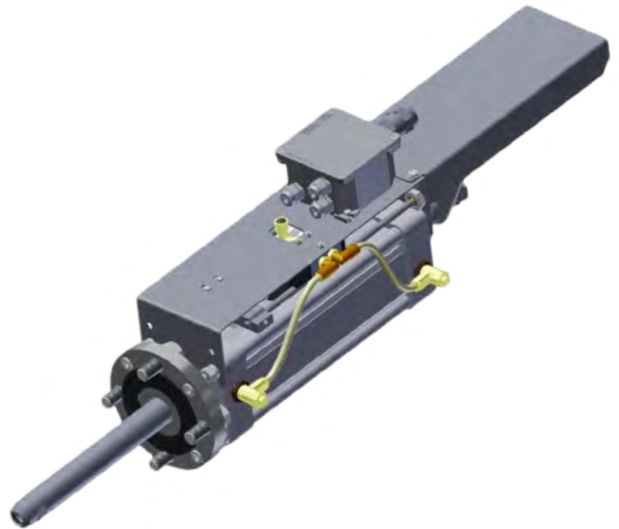
This cable is specifically designed according to the requirements of each ignition box and ignition rod, in order to meet in the best possible way customers operational needs. It is also available in High Temperature configuration.

## ACCESSORIES: PNEUMATIC COAXIAL RETRACTION UNIT

In order to prevent tips 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, **ATEX executions are available**.

ACTUATOR TYPE	Pneumatic
ACTUATOR MATERIAL	Aluminium Cylinder, SS Rod, Viton Seals (SS cylinder on request)
ACTUATOR STROKE	100 ÷ 500 mm
VALVE TYPE	4-way / Dual Coil (or as required)
SOLENOID VOLTAGE	115 VAC, 230 VAC, 24 VDC, 48 VDC
SOLENOID CASING	IP65 - II2GD Ex d IIC for ATEX execution
JUNCTION BOX	Plastic or Aluminium, Factory Wired
JB PROTECTION CLASS	IP 65 / NEMA 4
TEMPERATURE RATING	-5 to 70°C (or as required)
SPEED CONTROL	2 Needle valves
LIMIT SWITCHES	2 Total, inserted / retracted
LIMIT SWITCH CASING	IP65 - II2GD Ex i IIC for ATEX execution

data subject to change without notice



With the aim to meet even the most demanding operational requirements, Tesi developed a **wide range of accessories and configurations**, including:

- insertion switches
- mounting flanges
- 90° handles
- rubber handles and stopping flanges
- ball joints
- positioning sensors
- manual retraction devices
- remote push buttons



IGNITER	
MATERIAL	stainless steel
	electrical connection of aluminium alloy
	Junction Box Ex d IIC IP66 included
OPERATING TEMPERATURE	760°C (max 1000°C)
WEIGHT	0.8 Kg per meter of length
LENGTH	customizable, according to specifications
TIP	High Energy, easily replaceable 17 mm (12/14 mm on request)
HANDLE	rubber, 150 mm as standard, 90° on request
OPTIONAL	adjustable stopping flange
CONNECTION CABLE	
MATERIAL	flexible stainless armoured cable
INSULATION	external silicon rubber
FITTINGS	1/2" ISO 7/1 NPT or metric on request
OPERATING TEMPERATURE	-20°C ÷ +60°C (silicon cable only -40°C ÷ +180°C)
WEIGHT	0.4 Kg per meter of length
LENGTH	customizable, according to specifications



شرکت آلاپرداز مهیبا

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