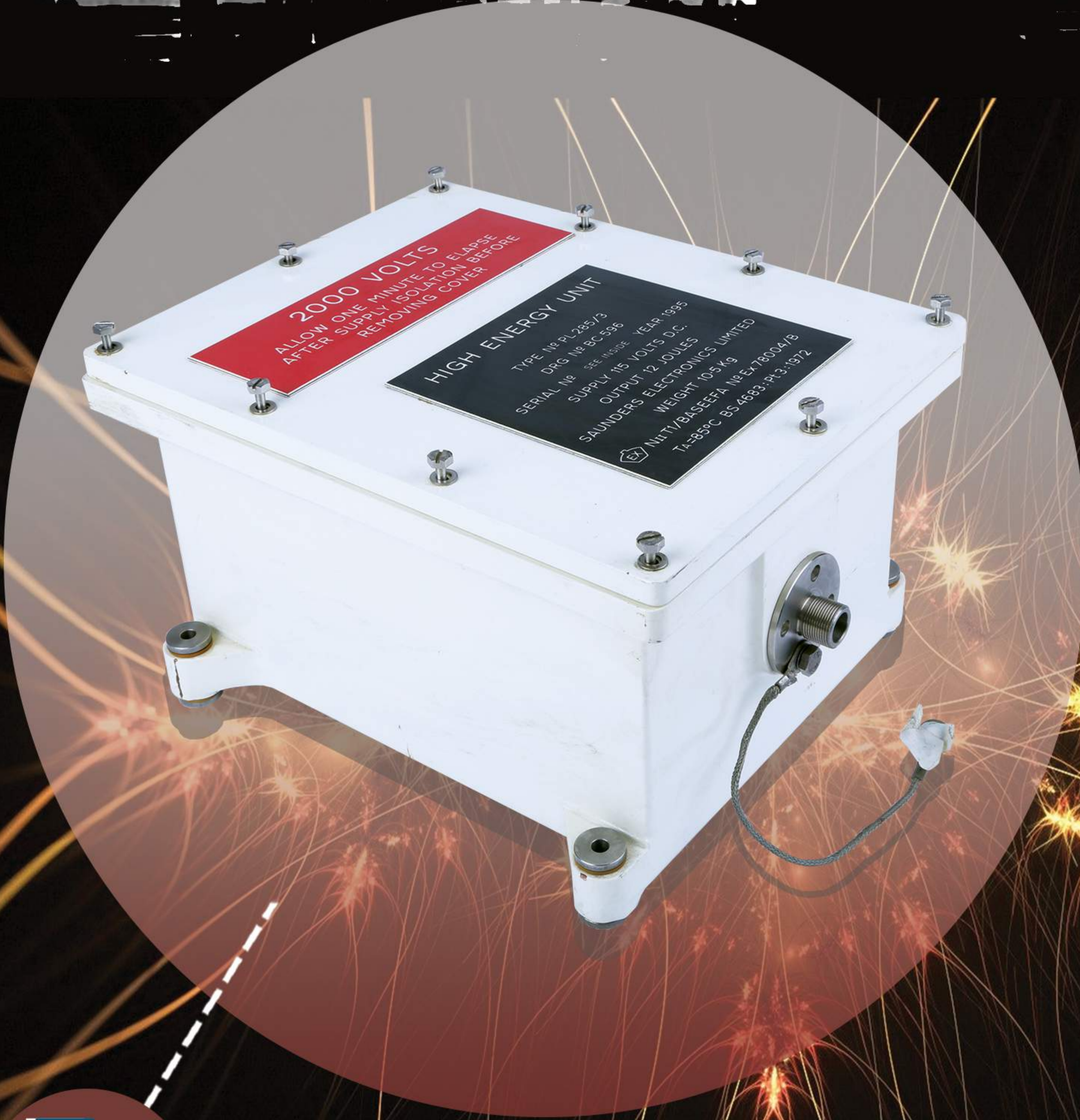
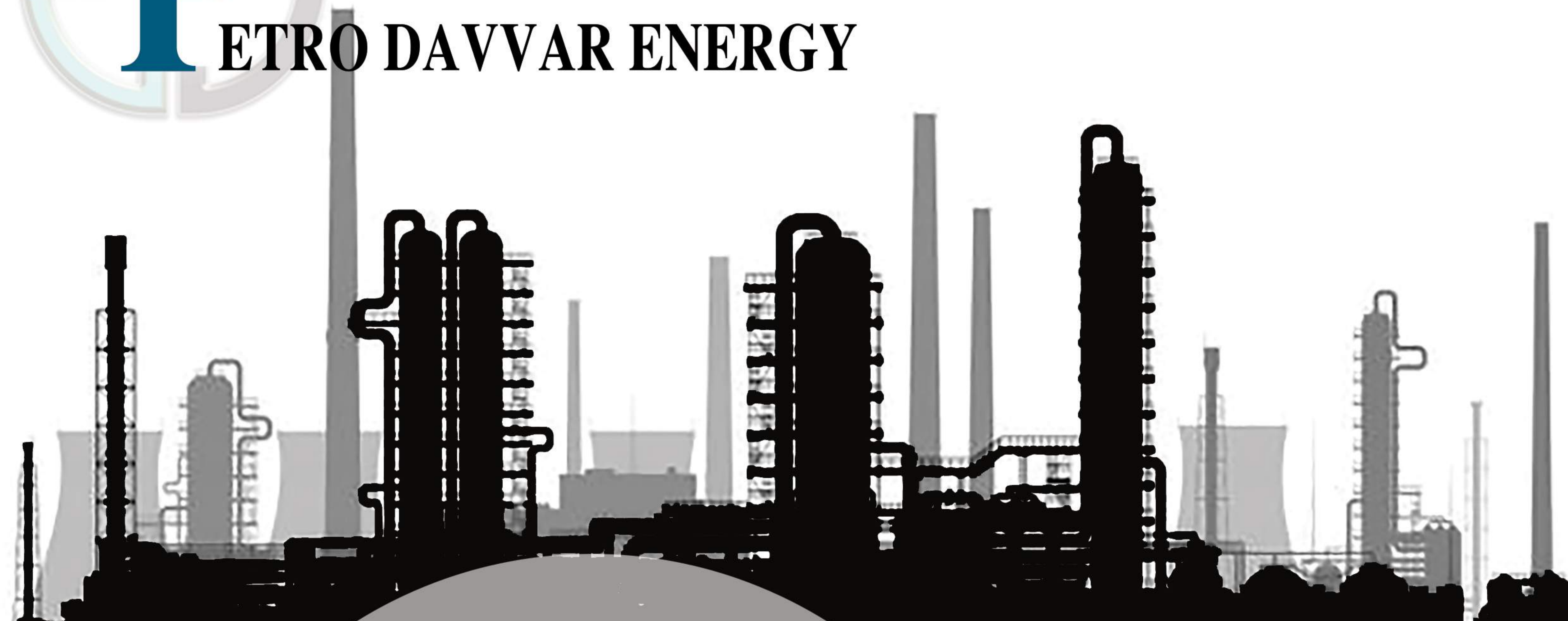




ETRO DAVVAR ENERGY



Ignition Systems

Rev E
2021/09/05



If there is a will, there is a way...

Ignition Systems

Introduction To Ignition Cable For Gas Turbine Ignition Systems

Ignition Leads

Petro Davvar Energy designs and manufactures a full range of ignition leads for heavyduty applications in oil & gas field, petrochemicals, refineries, power plants and etc...Our leads are designed and constructed to offer the most effective and efficient conduit between the engine exciter and igniter. Petro Davvar Energy also provides EX certifications with its ignition systems. These designs can be used as configured or repackaged to meet the customer specification

Ignition Cable

Part For Solar Gas Turbines

Solar P/N: 919340C2
Our P/N:PD-IGC-201001



Part for GE Gas Turbines

Our P/N:PD-IGC-604004

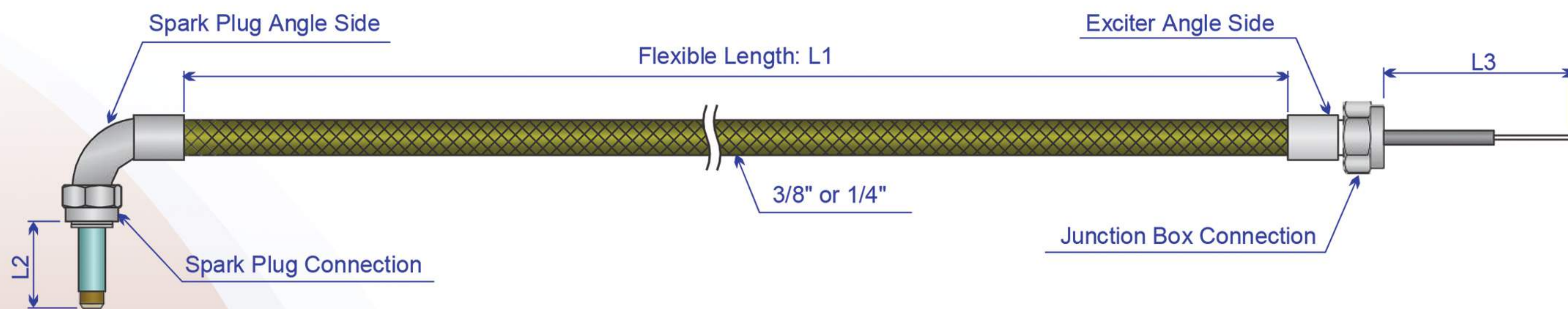


Part for Rolls Royce Gas Turbines

Rolls Royce P/N: 2-02j-202-001
P/N: S400401
Our P/N:PD-IGC-302002



Ignition Cable



PD-IGC	Cable Length L1 (mm)	Spark Plug Angle Side (Note 1)	Exciter Angle Side (Note 1)	Spark Plug Connection Type (Table 1)	Exciter Connection Type (Table 1)	Spark Plug Connection Thread	Exciter Connection Thread	Spark Plug Side Connection Length L2 (mm)	Spark Plug Side Connection Length L3 (mm)
PD-IGC	5000	01	00	01	03	5/8" BSPP	M18X1.5	30	500

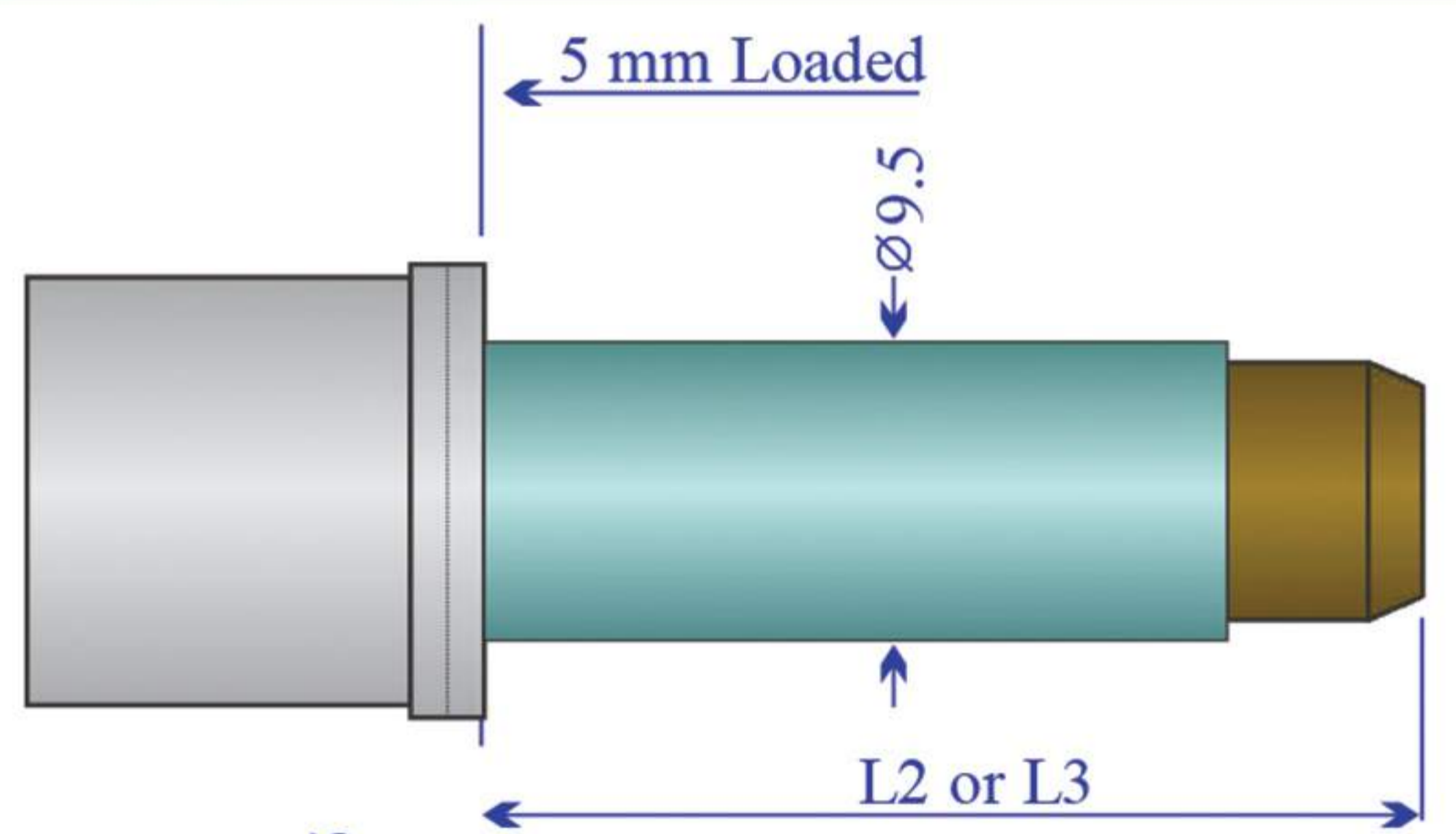
Note 1 : Write angle 0 ° with the code 00 and angle 90 ° with the code 01

How to Order

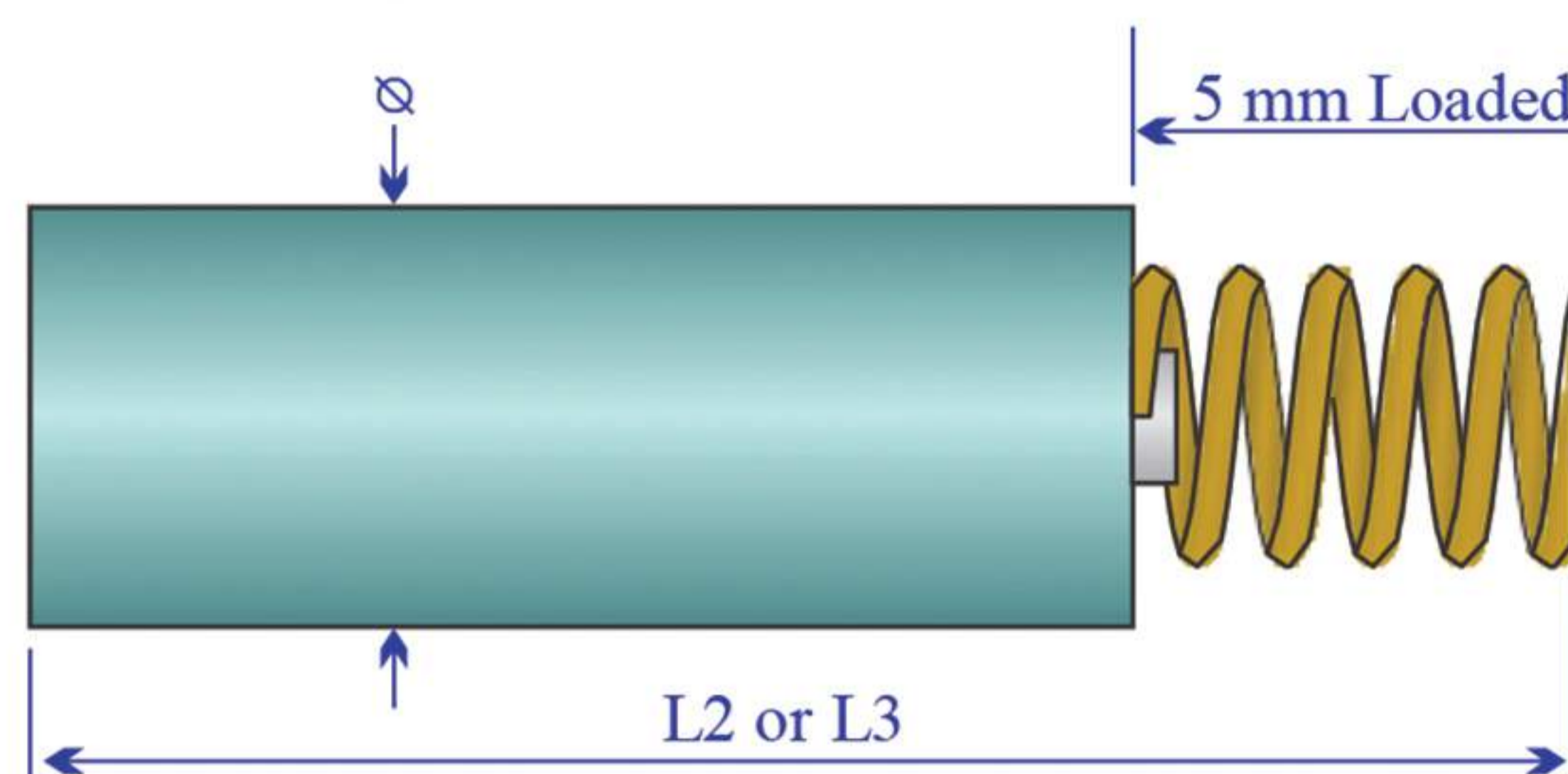
Example: PD-IGC – 5000 – 01 – 00 – 01 – 03 – 5/8" BSPP – M18 X 1.5 – 30 – 500

Type	Name	Description
------	------	-------------

01 Captured Spring



02 Ttip Spring



03 Only Lead Wire

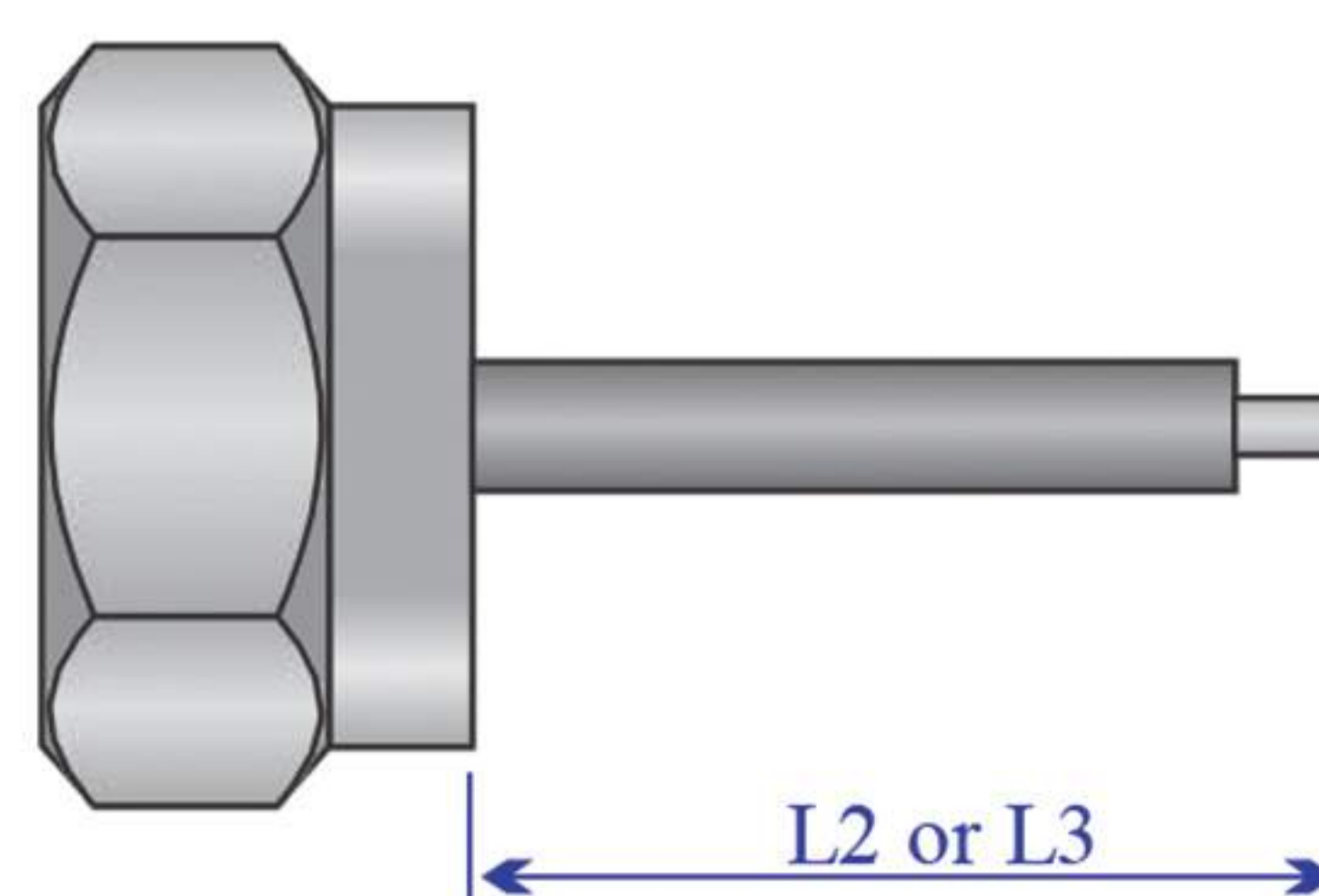


Table1

Igniter

Introduction To Igniter For Gas Turbine Ignition Systems

2. Igniter

Petro Davvar Energy has produced igniter designs for customers, including marine power plants; oil, gas, and furnaces; oil rig operations; and pumping stations, refineries. Our internal Ceramic Manufacturing capability permits design and manufacture of industry leading Alumina Oxide insulators and Silicon Carbide semiconductors which sets it apart from the competition in product performance, quality and response time. We have both high energy igniters and high voltage igniters.



Part For Solar Centaure MDG 4000 Gas Turbines

OEM P/N: 903316C1
Our P/N: PD-SPG-20330



Part For Rolls Royce Gas Turbine

OEM P/N: 2-02j-199-201
Our P/N: PD-SPG-30110



Part for Ruston Gas Turbines

OEM P/N: TA23119
Our P/N: PD-SPG-10220



Part for Hispano Suiza Gas Turbines

OEM P/N: 539646
Our P/N: PD-SPG-70440



Part for Solar Saturn 1200 Gas Turbines

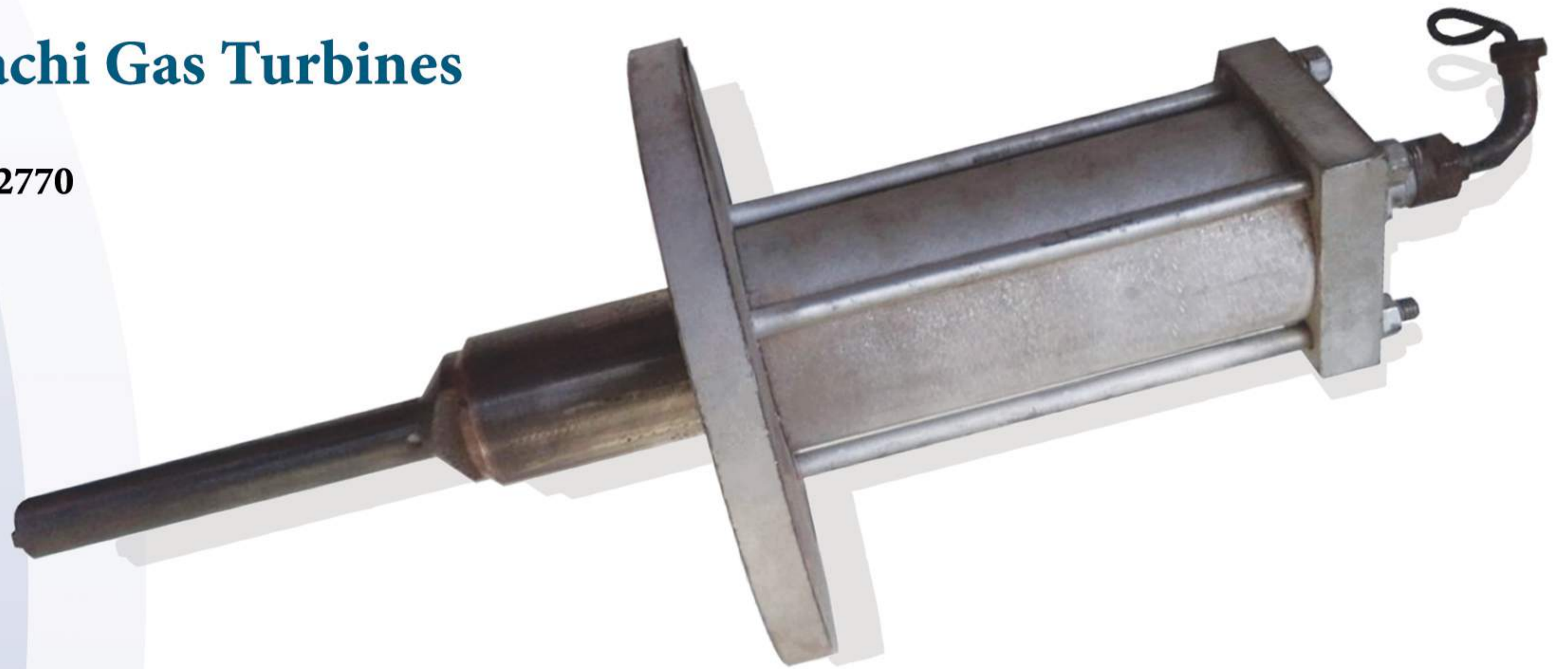
Our P/N: PD-SPG-025500



Igniter

Part for Hitachi Gas Turbines

Our P/N: PD-SPG-02770



Part for Sulzer Gas Turbines

OEM P/N: 00000-4582145

Our P/N: PD-SPG-40660



Exciter

Introduction To Exciter For Gas Turbine Ignition Systems

3. Exciter

Petro Davvar Energy offers traditional spark gap technology in legacy products, Spark Gap design to maximize reliability, efficiency and capability while minimizing weight.

Definitions

Spark : An electric current arc.

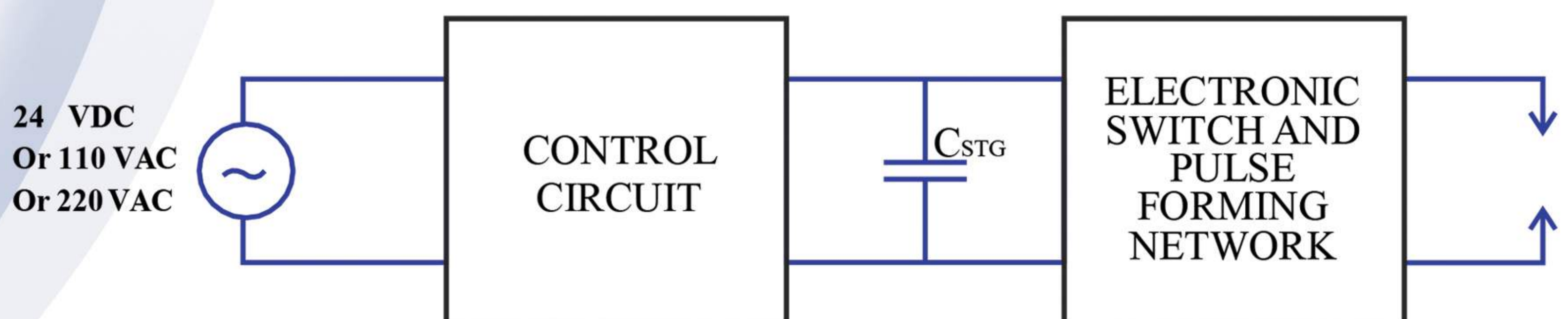
High Energy Ignition : Electric spark ignition system utilizing high energy sparks for direct ignition of hydrocarbon fuels such as gas, diesel, or oil.

High Energy Exciter : An electronic device that stores electric charge and releases it cyclically to an igniter to create high power sparks.

Petro Davvar Energy High Energy Ignition Systems

High Energy Ignition (HEI) systems directly ignite burner fuels by providing short time duration (impulse), high current electrical arcs commonly referred to as sparks. These sparks are generated by abruptly releasing electrical energy (charge) stored in large capacitors. The energy is released through an igniter driver circuit called a pulse forming network to specialized high energy igniters. The result is a high power spark with increased ability to ignite fuels.

Petro Davvar Energy High Energy Ignition Systems are designed to operate in conditions of extreme temperature, moisture, and contamination; creating high power sparks that dependably provide direct spark ignition to a wide range of fuels in a wide range of adverse conditions. The igniter can spark even under water.



High Energy Exciter basic schematic

System Specifications

Description of Equipment

Petro Davvar Energy high energy ignition systems are specifically designed to ignite gas, light oil, and diesel fuels directly while operating in a wide range of environmental conditions.

Installation Instructions

For mounting dimensions, refer to the equipment datasheet. The exciter should be mounted to a firm structure

Exciter

Part for Rolls Royce Gas Turbines Exciter

P/N	Description
Our P/N:PD-HE-30033	Input voltage: 24 VDC Output voltage : 2000VDC Output Energy: 12 Joules Output Frequency :1 to 3 Spark Per Second



High Voltage Nouvopignone Gas Turbines Exciter

P/N	Description
Our P/N:PD-HV-50055	Input voltage : 110-220V AC-50HZ Output voltage: 16000 VAC Output Current: 20 mA



Part for Solar Centaur Gas Turbines Model Gse/Gsc4000 Exciter

P/N	Description
OEM P/N:917560C2 Our P/N:PD-HE-20022	Input voltage: 18-30 VDC Output voltage: 18000 V Output Energy : 2 Joules Output Frequency:8 Spark /Sec



Part for Ruston Gas Turbines Exciter

P/N	Description
OEM P/N:64-51001096 Our P/N:PD-HV-10011	Input voltage: 24 VDC Output voltage : 12000 V Output current: 20 mA



Exciter

Part for Siemens SGT-100 cyclone Exciter

P/N

OEM P/N:9060040-1 K
 Our P/N:PD-HE-01088
 P/N Siemens: 64/07001393/1

Description

Input voltage: 230 VAC
 Output voltage: 2000 V
 Frequency : 50 to 60 HZ
 Output Frequency:2 to 3 Spark/Sec
 Energy: 12 Joules



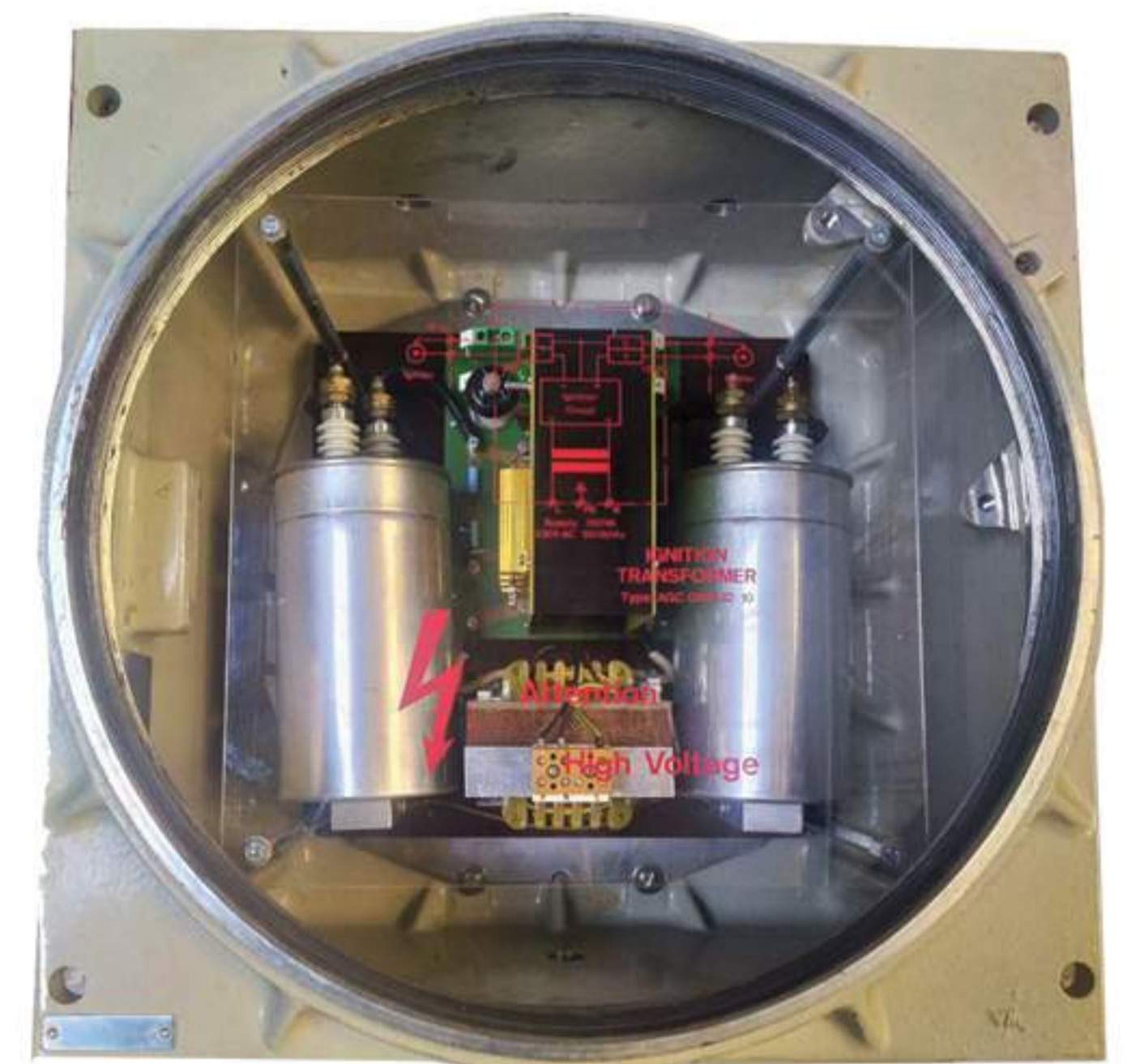
Part for Sulzer Gas Turbines Exciter

P/N

OEM P/N:00000-4582122
 Our P/N:PD-HV-40066

Description

Input voltage: 230 VAC
 Output voltage: 4 KV
 Output Energy : 16 Joules
 No. of Channel: 2 Channel



Part for Mitsubishi Gas Turbines Exciter

P/N

OEM P/N: K7301ED
 Our P/N:PD-HE-90077

Description

Input voltage: 220 VAC
 Output voltage: 3000 VDC
 Output Energy : 8 Joules Output
 Frequency:6 Spark /Sec



High Energy Exciter

How To Order Petro Davvar High Energy Exciter



	Exciter Type Table 1	Input Voltage Table 2	Output Voltage Note1	Output Energy Note2	Output Spark Note 3	No.Of OutPut Channel Note 4	Ex Approval Table 3
PD-şimşek	HE	01	3000	12	3	1	01

How to Order

Example: PD-şimşek-HE-01-3000-12-3-1-01

High Voltage Exciter Unit

How To Order Petro Davvar High Voltage Exciter



	Exciter Type Table 1	Input Voltage Table 2	Output Voltage Note1	Output Current Note 5	Ex Approval Table 3
PD-şimşek	HV	01	3000	10	01

How to Order

Example: PD-şimşek-HE-01-3000-12-3-1-01

	Input	Code		
He: High Energy InPut	18 ~ 30 VDC	01	With Ex Box	01
Hv: High Voltage OutPut	110 VDC	02	Not Ex Box	00
	180 ~ 240 VAC	03		

Table1

Table2

Table3

Note 1: Output Voltage Should be Between 1200 To 3000 V For example Write 2000 For 2000 Volt.

Note 2: Output Voltage Can be between 2 To 16 Joules, for example For 16 Joules Write 16 in This Field.

Note 3: No of spark is between 1 spark/sec to 6 spark/sec for example write 3 for 3 spark per second.

Note 4: No of output channel is between 1 to 6. write 2 for 2 channel unit. default for channel is 1 channel, if not please specify.

Note 5: Output Voltage Should be Between 5 KV To 15 KV For example Write 2000 For 2000 Volt.

Note 6: Output Current Should be Between 10 To 50 mA For example Write 10 For 10 mA.

Flame Detector

Flame Detector For Gas Turbine And Flares

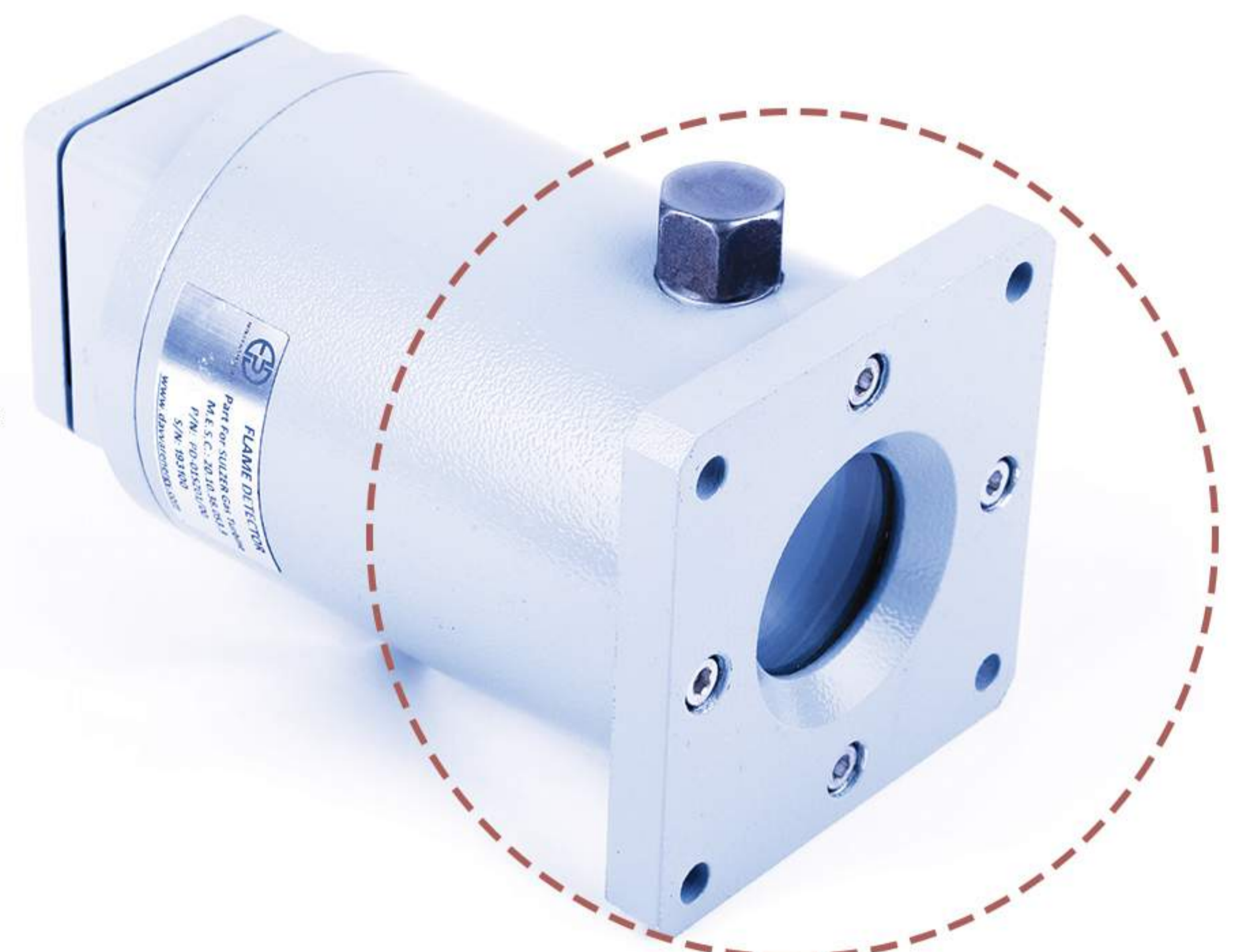
4. Flame Detector

Petro davvar energy pajohan also produces flame detectors for gas turbines with IR, UV sensors.

Another important component of the combustion chamber of gas turbines is flame detector and its main task is to monitor the presence or absence of flame. if the flame in the combustion chamber decreases from the flame detector's sight level or disappears, it sends the fuel shut-off command to the fuel control valve, To prevent fuel congestion and explosion.

Petro davvar Energy pajouhan Company, has succeeded in manufacturing and successfully installing the Sulzer gas turbine flame detector.

P/N	Description
OEM P/N:0000-10482621 Our P/N:PD-01SZ01/00	Power: 24 VDC Wave Length : 190-280 nm Working Temperature:-20 ~ 85 °C



3D VIEW



VIEW1



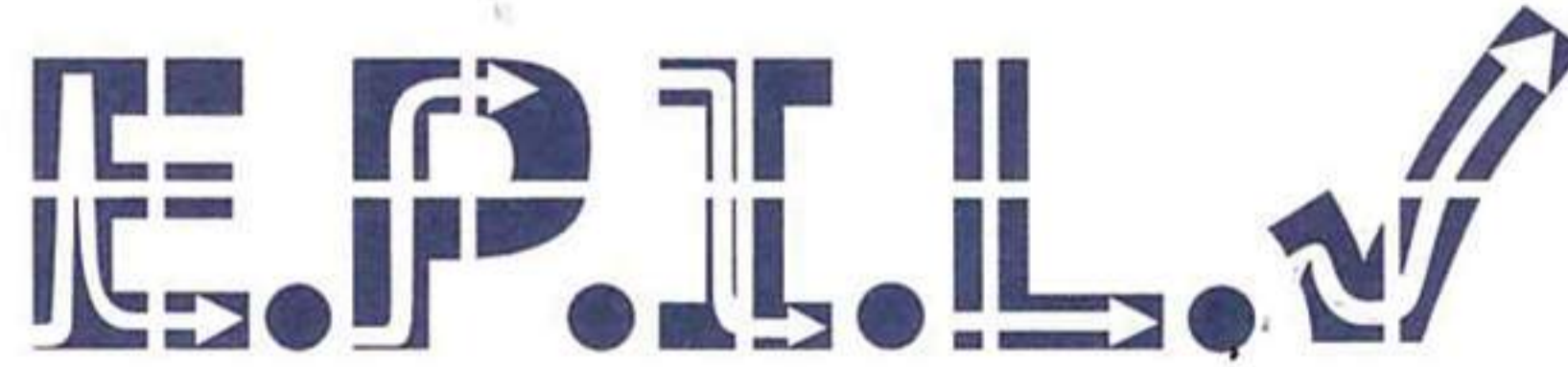
VIEW2



VIEW3

Explosion Proof Certificate

Accredited lab in
Electrical, Oil, Gas
Telecommunications
IT, Luminaires and
Renewable Energy



Energy & Power Industries Laboratories Co.(J.S.)

ISO IEC 17025
Accredited Lab

LQF-510-02

TEST REPORT

Project No.: H1-40003

Equipment Under Test: *Flame detector*

Manufacture : Petro Davvar Energy
Model : PD-01SZ01/00
Ingress Protection : 65
Type of protection : db
Gas group : IIA
Temperature class : T6
Ambient temperature : -20°C to +40°C
EPL : Gb
Category : 2G

Tested according to: EN 60079-0:2012/A11:2013, EN 60079-1:2014

Applicant: *Petro Davvar Energy*

No. Pages : 58
Issue date : 28-August-2018

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B. Hamidifard

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S. Jamshidi

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Chief executive officer

S. M. Mirsadri



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Test results pertain to the tested sample only.

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