



Business Presentation

Energy Solution



Chi Siamo: Affianco alle imprese che operano nell'energia alternativa e da idrocarburi



From our experience, more than ten years, we realized the importance of offering our customers a:

- Assistance service on cogeneration, trigeneration and compression plants;
- In addition to 24/7 on-site assistance for on-call or scheduled interventions, routine maintenance or full service programs;
- A [Saver Program Time](#) program for the management of your industrial plant

Our distinctive features:

- Reliability
- Competence
- Presence on the territory

We deal with sales and assistance of:

- Energy systems
- Gas and diesel endothermic engines
- Spare parts

In which areas we work:

- Cogeneration
- Gas and diesel endothermic engines
- On-board and industrial system

Sectors of application



Industry

Food / beverages, chemicals, plastics, textiles, ceramics, metallurgy, electroplating, tanning, and, in general, all sectors with high electrical and thermal loads.



Hotel

Characterized by a heat requirement of 4,000-4,500 hours a year, 7 days a week, and a high consumption of domestic hot water; the electrical consumption is normally not high, so the sizing of the machine must be done very carefully.



Swimming Pools

With a high and almost constant heat requirement throughout the year (although higher in winter), this is an appropriate area; the sizing of the cogenerator must be carefully evaluated.



Hospitals

Hospitals and retirement homes: characterized by high consumption of thermal and cooling energy, with loads required 24 hours a day for 365 days a year, medium-high and constant electrical loads, it is one of the most interesting cases for cogeneration.



District Heating

Energy plants connected to district heating networks: in this case cogeneration is the preferred technology, due to the characteristic of the simultaneous exploitation of electricity and heat.



Tertiary/Offices

With a thermal requirement of 2,500-3,000 hours a year and an electrical load that is not very high, but constant in high cost ranges, cogeneration is interesting in the presence of trigeneration.



Shopping Centers

With extended opening hours (14 hours a day, often 7 days a week), they are characterized by high electrical, thermal and refrigeration loads, making trigeneration operation an investment with guaranteed return.

Advantages of cogeneration



The main feature of cogeneration is the high level of efficiency compared to other energy production technologies. This makes it possible to consume less primary energy, with advantages on the costs of energy supply, and to reduce polluting emissions for the same amount of energy produced, thus determining environmental benefits. Here we summarize all the advantages of cogeneration:

- 1. Lower energy consumption:** for each MWh produced in cogeneration, 0.14-0.15 TOE (Tons of oil equivalent), 160 m3 of methane gas, 130 Kg of diesel oil are avoided
- 2. Environmental sustainability:** lower fuel consumption with the same useful effects; for each MWh produced in cogeneration, 500-600 kg of CO₂, 0.15 kg of NO_x (nitrogen oxides), 15 kg of SO_x (sulfur dioxide) are avoided on average;
- 3. Greater energy independence from suppliers,** thanks to the self-consumption of electricity and heat.
- 4. Peak Shaving effect,** ie the reduction of peak loads from the network with a relative decrease in the cost items in the bill;
- 5. Possibility of operating in trigeneration,** using the excess heat for the production of cooling energy that can be used for summer air conditioning or for industrial processes;
- 7. Possibility of using local renewable energy sources (biomass) instead of fossil fuels;**
- 8. Use of the incentive mechanisms of the White Certificates for CAR (high-yield cogeneration),** shortening the pay-back time;
- 9. The generation of energy distributed on the territory** avoids the construction of new power stations and transmission lines, also reducing grid losses.

Incentives for cogeneration



The cogeneration plants, if they are of the CAR type (high efficiency cogeneration), can access the Energy Efficiency Certificates (TEE), also called White Certificates. The units must be new or refurbishments of units in operation for at least twelve years (total rebuilds or with replacement of at least two main components). A cogeneration unit, pursuant to Legislative Decree 20/07 supplemented by Ministerial Decree 4 August 2011, is highly efficient if the combined production of electrical and thermal energy is achieved by achieving primary energy saving (PES, Primary Energy Saving), compared to the separate production of the same quantities of electrical and thermal energy, higher than the following values:

- 10% for cogeneration units with power > 1 MW;
- any value for micro and small cogeneration units (up to 1 MW).

To access the TEEs, the In CAR operation must be certified by the GSE through a procedure called "final evaluation" with which the PES and thick TEEs are calculated, in a number proportional to the PES, according to a coefficient that varies according to the size of the 'plant. The value of the TEEs is established on a specific market managed by the Energy Services Operator, while the duration of the incentive period is 10 years (15 for new cogeneration units combined with district heating networks). The CAR also gives the right to other benefits:

- reduced excise duty on fuel; different excise duties are provided for depending on the fuels used (natural gas, diesel, etc.) and use: for the production of electricity, for industrial or similar uses, for civil uses;
- dispatching priority of the electricity produced over conventional production;
- access to the On-Site Exchange service (for plants below 200 kW of power);
- possibility of being classified as Simple Production and Consumption Systems;
- Fer premium, i.e. access to higher tariffs for biomass-fueled cogeneration units possibly combined with district heating networks (not combinable with TEEs).

Our corporate values



Together

The relationship with our customers is based on collaboration and loyalty with the aim of common success. We offer our employees good growth opportunities.



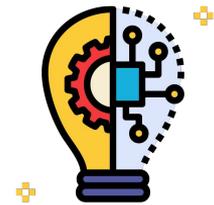
Responsible

We are aware of our responsibilities in the economic, ecological and social fields. Our goal is to protect the climate and the natural elements necessary for life.



Innovative

We drive the technological innovation of our sector and will also contribute to determining its technical progress in the future.



Official distributor of the Tenneco group



TENNECO



Federal Mogul Industrial Spark Plugs



Federal-Mogul spark plugs are used in the maintenance and spare parts of stationary industrial engines. They guarantee excellent performance, contributing to savings in consumption and the reduction of emissions. [See all our catalogs](#)



14R-4DIU3 Z281

- Roof electrode gap: 0,30 mm (.011")
- Electrode: Iridium J-Gap
- Center electrode: Iridium
- Ground electrode: Iridium
- Thread size: M14x1.25
- Thread reach: 19 mm (3/4")
- Torque: 30-40 Nm
- Hex size: 20,8 mm



14R-4DIU2 Z258

- Roof electrode gap: 0,30 mm
- Electrode: Iridium J-Gap
- Thread size: M14x1.25
- Thread reach: 19 mm (3/4")
- Hex size: 20,8 mm



14R-4CIU Z187

- Electrode: Iridium / Iridium
- Thread Size: 14mm
- Gap: .012" (0.30mm)
- ThreadReach: 3/4" (19mm)
- Torque: 30-40 Nm
- Hex Size: 13/16" (20,8mm)

Denso Industrial Spark Plugs

DENSO SPARK PLUGS



Denso builds industrial spark plugs that find many applications as original equipment in industrial engine manufacturers. [See all our catalogs](#)



GE3-1

- Roof electrode
- Gap: .011" (0,30mm)
- Electrode material: Iridium/Platinum
- Thread size: M14 x 1,25mm
- Thread reach: 19 mm (3/4")
- Hex size: 21 mm (13/16")



GE3-5

- Roof electrode
- Gap: .011" (0,30mm)
- Electrode material: Iridium/Platinum
- Thread size: M14 x 1,25mm
- Thread reach: 19 mm (3/4")
- Hex size: 20,6 mm (13/16")



CL3-5

- Gap: .012"
- Electrode material: Iridium
- Thread size: M18 x 1,5 mm
- Thread reach: 20,6 mm
- Hex size: 20,8 mm
- Tightening torque: 45 Nm

Champion Industrial Spark Plugs



Champion industrial spark plugs, impregnated with iridium and backed by Federal-Mogul engineering, offer quality solutions. Champion's technology for industrial spark plugs is high-performance and long-lasting. [See all our catalogs](#)



RN79G

- 2 side electrodes
- Gap: 0,12 mm (.015")
- Ground electrode: Au-Pd
- Center electrode: Au-Pd
- Thread size: M14 x 1,25 mm
- Thread reach: 3/4"
- Hex size: 20,6 mm (13/16")



RL85G

- Electrode: Gold Palladium
- Gap: .013" - .016"
- Ground electrode: gold/palladium fine wire
- Center electrode: copper-cored nickel with gold/palladium
- Thread size: M14 x 1,25 mm
- Thread reach: 12,7 mm
- Hex size: 20,8 mm



RB75WPCC

- Gap: .012"
- Ground electrode: Platinum
- Center electrode: Iridium
- Thread size: M18 x 1,5
- Thread reach: 18 mm
- Hex size: 21 mm.

MWM Industrial Spark Plugs



MWM industrial candles, impregnated with iridium, are excellent quality solutions, which allow reliable ignition and long life. [See all our catalogs](#)



12284432

- Shielded cylinder length 370 mm
- Gap: 0,31 mm
- Electrode type: Prechamber
- Thread size: M18x1.5
- Thread reach: 17.2 mm
- Hex size: 22,2 mm



12452828

- Gap: 0,30 mm
- Electrode type: prechamber
- Thread size: M18x1.5
- Thread reach: 26 mm
- Hex size: 22.2 mm



12420480

- Gap: 0,31 mm
- Electrode type: Massive double Iridium J gap
- Thread size: M18 x 1,25
- Thread reach: 20,6 or 19 mm
- Hex size: 20,6 mm

Teflon Extension



The Energy Solution Teflon Extension have a considerable duration and are used to connect the coil with the spark plug. They are built with a very resistant Teflon with high technical properties. The quality of these components is essential for a correct ignition of the engine machines and for their efficiency in terms of performance.

The spark plug cables, as mentioned, are a very important component for the ignition of industrial engines. To meet every need of our customers, we produce spark plug cables on request or with a simple used sample of the old ones installed on the engine.

[See all our catalogs](#)



Ignition Coils



Our ignition coils have the same durability and performance characteristics of the best original equipment suppliers of the motor manufacturers, both shielded and not.

[See all our catalogs](#)



Carburation



Despite their apparent simplicity, these carburetion elements play a fundamental role in a combustion plant and have the purpose of conveying the fuel to the machine supply inlet flange, regulating and stabilizing the pressure. Energy Solution offers its customers meticulous assistance in the design of the most suitable elements, proposing solutions that can guarantee the system from malfunctions with significant fuel savings.

The choice is made on brands such as Dungs and Kromschroder with the possibility of also supplying individual operating, measurement and fuel flow control components.

[See all our catalogs](#)



Control Cabinet and Board

altronic

Energy Solution constantly selects for its customers the best systems, control units, speed detectors, gas mixers, currently on the market, paying particular attention to their quality, precision and robustness in order to offer solutions capable of improving the performance of any engine. The injection process has undergone numerous improvements over the years, in particular in the optimization of the control boards, to achieve high performance standards, less polluting emissions and better cold start even in extreme conditions. However, it cannot ignore that of ignition, the use of poor quality spark plugs can nullify the positive effects of even the best injection systems and can lead to significant decreases in efficiency or, in the worst cases, to sudden and expensive downtime.

[See all our catalogs](#)



Industrial Filtration



Industrial filters are essential for the correct maintenance of stationary industrial engines and turbochargers. Here you can find industrial filtration systems for: air, oil, gas.

In many years of experience in the field of cogeneration, oil compression, on-board and industrial systems, we have decided to rely on leading brands in the industrial components sector, recommending them to our customers.

[*See all our catalogs*](#)



Industrial Engines



We are distributors and resellers of gas powered endothermic engines. In **Energy Solution** we consider industrial motors as the heart of every plant, of fundamental importance to guarantee our customers the best solution in terms of efficiency, reliability and management / maintenance costs in compliance with current regulations.

We do not think there is a single solution, for this reason **Energy Solution**, through strategic partnerships worldwide, evaluates every need for power generation as a case in itself, selecting among the various models on the market, engines / generators and proposing the product more suited to the specific needs of the customer.

All this is completed by offering, at the same time, a valid and efficient assistance and maintenance service in the field with quality spare parts.

Energy Solution is able to supply Motors and Generators: **MWM, Jenbacher, Mitsubishi, Kohler, Tedom, Waukesha**. Other brands are available upon your specific request.

We are distributors of **Tedom** industrial engines and resellers of new, used and reconditioned **Waukesha** industrial engines. We also deal with the following brands: **Guascor, Jenbacher, Man, Mitsubishi**. We offer complete assistance on your **Cogenerator and Compression Group**.

[See all our catalogs](#)

Starters



Each component of a system has its own fundamental role, and its correct functioning inevitably depends on the correct functioning of the other elements that make up the system. Similarly, an appropriately designed starting system ensures starting even in difficult conditions, without which, although optimized in all its parts, no engine could be defined as completely reliable.

Energy Solution is able to guarantee a decisive start of any type of engine, thanks to the use of a wide range of gas, air and electric starting systems.

[See all our catalogs](#)



Measuring and Control Tools



The philosophy of Energy Solution, always attentive to the needs of its customers, is completed with the offer of a wide range of measurement tools, essential for monitoring the systems used in the systems built or assisted by us.

Here are some examples of the tools that we can provide quickly and possibly install with the help of our technical staff.

[*See all our catalogs*](#)



Spare Parts



Our work mainly consists in making available to our customers the experience gained and that we constantly mature, to solve any type of problem that may arise in their plants.

We believe that the best way to do this is to be able to offer a wide range of mechanical spare parts, combined with in-depth knowledge of the sector, meeting the needs of the customer in the shortest possible time and with the utmost competence.

[See all our catalogs](#)



Turbines



The design of a correct exhaust and ventilation system allows plant operators to work in safe and healthy conditions, free from harmful emissions (such as carbon monoxide) and with noise levels in compliance with current regulations.

Undoubtedly, these systems, like ignition systems, are among those most subjected to stress with consequent problems of occlusion, corrosion and wear, making it necessary to periodically check their operating conditions.

[See all our catalogs](#)



Used Reconditioned



We are able to offer reconditioned used materials and diesel and gas engines with high standards of quality and reliability. The main activities are:

- [Assistance, maintenance and complete overhaul of the engine](#) (or individual parts);
- Production of bearings, in particular undersized and / or oversized for all types of 4-stroke engines;
- Reconditioning / grinding of crankshafts up to 8,100 mm in length;
- Supply of second-hand / overhauled diesel engines and spare parts;
- Reconditioning and overhauls are carried out in our certified workshops using only quality spare parts;



Program for the management of industrial engines



Save Program Time is the complete Energy Solution program that allows client companies to manage their industrial plants with a single solution.

Save Program Time includes optimization services for industrial plants (> 5max) including professional training of personnel in charge of their maintenance, direct on-site and remote assistance with continuous supervision of motors and industrial systems through proprietary or developed remote control technologies on-demand.

Upon request, Save Program Time also becomes a delocalized Purchasing Office: a flexible resource capable of adapting to your needs by offering you concrete support in the management of suppliers as well as a billing and purchase / resale center for components and engine parts. With SPT specialists you are always ready to face and resolve any insurance, financial and contractual guarantee issue. The team of professionals of the INSURANCE FINANCING PRODUCT TIME division is available with consultancy aimed at saving money on the total management of the system, reducing the cost of the service fee based on actual use from year to year.

[Discover more](#)

Contacts



0185 72 12 55



commercialel@energysolution.it



facebook.com/EnergySolutionSrl



linkedin.com/EnergySolutionSrl



www.energy-solution.it