



SMARTFLEX™

Product Overview
Company Profile

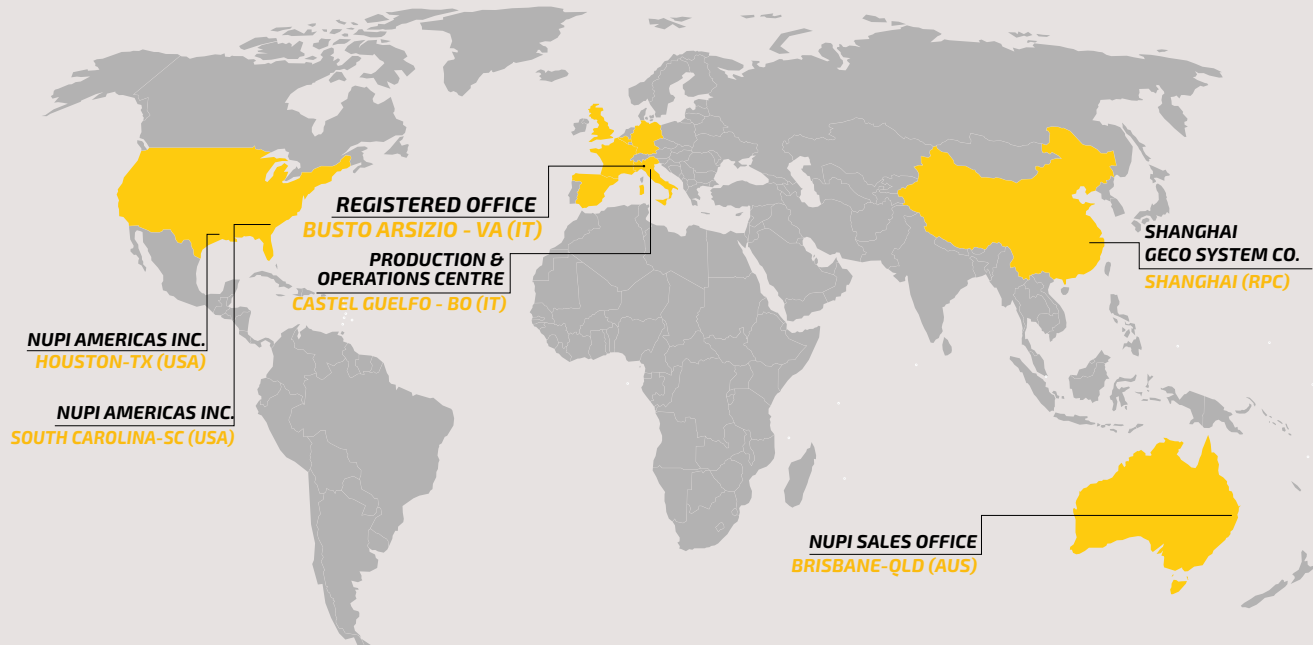


Piping at its Best

THE COMPANY

NUPI INDUSTRIE ITALIANE S.P.A. WAS BORN IN 2015 TO REPLACE NUPIGECO S.P.A., FOUNDED IN 2008 BY THE MERGER OF NUPI S.P.A. AND GECO SYSTEM S.P.A. – TWO COMPANIES WITH MORE THAN 40 YEARS OF EXPERIENCE IN THE FIELD.

NUPI INDUSTRIE ITALIANE S.P.A. DEVELOPS AND MANUFACTURES PIPING SYSTEMS FOR USE IN INDUSTRIAL, SANITARY (PLUMBING), HVAC APPLICATIONS, WATERWORKS, GAS AND IRRIGATION MARKETS. RELYING ON EXPERIENCE AND CONSTANT GROWTH, OUR COMPANIES HAVE PROVEN TO BE CUTTING EDGE MANUFACTURERS, READY TO MEET THE NEEDS OF THE MARKET WHILE ALSO PROTECTING THE ENVIRONMENT.



IN 1995, FOLLOWING THE COMPLETION OF AN EXTENSIVE RESEARCH AND DEVELOPMENT PROGRAM, WE INTRODUCED A NEW RANGE OF REVOLUTIONARY PIPING SYSTEMS SPECIFICALLY DESIGNED FOR PETROLEUM, CHEMICAL AND PETROCHEMICAL APPLICATIONS. SINCE THEN, TWO SPECIAL PIPING SYSTEMS MADE OF HIGH DENSITY POLYETHYLENE (HDPE) HAVE BEEN MARKETED WORLDWIDE: SMARTFLEX FOR THE DOWNSTREAM AND OILTECH FOR THE UPSTREAM. OUR TRADEMARKED SYSTEMS ARE REAL SYSTEM SOLUTIONS, COVERING A WIDE RANGE OF APPLICATIONS, REDUCING COSTS, AVOIDING WASTE AND INCREASING PRODUCTIVITY. THANKS TO THEIR QUALITY, THESE PRODUCTS HAVE PASSED MANY DIFFERENT TESTS AND HAVE OBTAINED THE MOST PRESTIGIOUS CERTIFICATES AND LISTINGS, IN LINE WITH THE REGULATIONS OF THE FIVE CONTINENTS FOR THE CONSTRUCTION OF WATER AND GAS NETWORKS AND SYSTEMS FOR THE TRANSPORT OF FUELS.

PRODUCING BETTER QUALITY AND BEING COST EFFECTIVE IS THE GOAL, WHICH IS MADE EASIER EVERYDAY BY NEW TECHNOLOGY. OUR COMPANIES ARE CONTINUOUSLY INVESTING IN RESEARCH AND DEVELOPMENT PROGRAMS, WHILE STRENGTHENING OUR PRODUCTION SYSTEMS, OPERATED BY A SOPHISTICATED TECHNOLOGY THAT GUARANTEES THE HIGHEST QUALITY OF PRODUCTS.

OUR FACILITIES USE MODERN, STATE-OF-THE-ART COMPUTER CONTROLLED PRODUCTION EQUIPMENT AND METHODS THAT GUARANTEE PRODUCTS OF THE HIGHEST QUALITY TOGETHER WITH CONTINUOUS QUALITY CONTROL SYSTEMS. ON THESE SOLID FOUNDATIONS NUPI INDUSTRIE ITALIANE S.P.A. DEMONSTRATES LEADERSHIP THROUGHOUT THE THERMOPLASTIC PIPING INDUSTRY. OUR CUSTOMERS CAN RELY ON THE BEST QUALITY MATERIALS AND PRECISE MANUFACTURE, OBTAINED THROUGH COMPLETELY AUTOMATED PRODUCTION SYSTEMS RESULTING IN TIMELY DELIVERIES.

CUSTOMER SATISFACTION IS PURSUED THROUGH HIGH QUALITY PRODUCTS AND THE CONSTANT ATTENTION TO OUR CUSTOMERS' NEEDS AND REQUIREMENTS AND BY MEANS OF AN EFFECTIVE TEAM OF PEOPLE IN POST-SALES SERVICE, EFFECTIVE AND PRECISE TECHNICAL ASSISTANCE AND INTENSIVE TRAINING OF INSTALLERS.

THE PRODUCT

SMARTFLEX™ is a multilayer piping system manufactured by **NUPI INDUSTRIE ITALIANE S.p.A.** for the transfer of automotive and aviation fuels, biofuels and hazardous fluids. A system with UL Listing, EN, IP, Kiwa, Dibt and many more approvals that is used and approved by all the major international petroleum companies.

SMARTFLEX™ is produced using the latest technopolymers that are biocompatible and **fully recyclable**.

The **quality** of the materials used and the strict **quality controls** in its manufacture allow **NUPI INDUSTRIE ITALIANE S.p.A.** to provide a product warranty of **30 years**

■ NO CORROSION

HDPE pipes are resistant to all degrees of water hardness as well as chemicals. They have a high resistance to acids and alkalis in a wide range of concentrations and temperatures.

■ RESISTANCE TO STRAY CURRENTS

Polyethylene is a very poor electrical conductor, thereby avoiding the risk of perforation of the pipe or fittings caused by stray currents.

■ LOW PRESSURE DROP

SMARTFLEX™ pipes have reduced pressure losses because their surface is very smooth (roughness = $5,6 \times 10^{-6}$ ft and Hazen-Williams friction factor = 150).

■ ABRASION RESISTANCE

The high resistance to abrasion of the **SMARTFLEX™** system provides high velocity of gasoline circulation without erosion problems.

■ LIFE

More than **30 years**, depending on temperature and working pressure.

THE RANGE

FULL SINGLE WALL RANGE

Full range from \varnothing 32 mm to \varnothing 250 mm.

More than **30,000 service stations** in the five continents in perfect working order.

FULL DOUBLE WALL RANGE

Primary \varnothing 32 mm - Secondary \varnothing 40 mm
Primary \varnothing 50 mm - Secondary \varnothing 63 mm
Primary \varnothing 63 mm - Secondary \varnothing 75 mm
Primary \varnothing 90 mm - Secondary \varnothing 125 mm
Primary \varnothing 110 mm - Secondary \varnothing 125 mm
Primary \varnothing 160 mm - Secondary \varnothing 225 mm

Thanks to an investment of more than **5ML €** all our fittings are molded. This means more compact parts (less bulky installations) and ease of implementation by reducing the time of labor.



APPLICATION

The **SMARTFLEX™** system has been optimised to be used in underground applications and for the conveyance of the widest range of the most common fuels available on the market. It is also compatible with mixtures of these fuels combined in the most varied percentages



Here are some examples:

- 98 unleaded gasoline
- 95 unleaded gasoline
- 95 unleaded gasoline with 8 to 10% ethanol (SE95-E10)
- Methanol
- Toluene
- Kerosene
- Alcohol fuels
- Diesel fuels
- Aviation fuels
- Diesel oil
- Non-sulphur diesel oil
- Naphtha
- DOM fuel
- Jet Fuel A
- Bio diesel
- E85 ethanol

All **SMARTFLEX™** products are available in various dimensions and configurations, making the system suitable to any kind of installation. The most common applications for **SMARTFLEX™** pipes and fittings, both in suction and pressure installations, are as follows:

- ROAD AND MOTORWAY SERVICE STATIONS
- HARBOR AND MARINE SERVICE STATIONS (MARINAS)
- FUEL DISTRIBUTION IN AIRPORTS
- FUEL STORAGE TANKS
- GENERATOR CONNECTIONS TO FUEL TANKS

TECHNOLOGY

The key material employed in the production of **SMARTFLEX™** is **high-density polyethylene (HDPE-PE100)**, a material with high durability and working benefits to the user. Moreover, **HDPE** can be a more cost-effective solution than more traditional materials such as metal. All **SMARTFLEX™** primary piping consists of a multilayer composite wall lined product pipe that combines the excellent mechanical properties of **HDPE** with the low permeability and high resistance to hydro-carbons of a new class of polymers used in the lining material.

MAIN FEATURES:

- Real time monitoring and containment
- High impact resistance
- Excellent resistance to corrosion
- Excellent chemical resistance to hydrocarbons, saline, acid and alkaline solutions
- Outstanding long-term resistance to pressure
- Minimal head losses
- High abrasion resistance
- Barcode technology for ease and accuracy of welding during installation that allows for full traceability



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SAFETY & MONITORING

The entire **SMARTFLEX™** system respects safety standards and limits. Welding, for example, is carried out at safety observant minimum voltages in compliance with accident prevention standards. Product barcodes contain information that allows start-up, checking and monitoring during the product lifetime. This technology allows traceability and therefore greater reliability.

Details provided by the barcode include:

- product identification
- item name
- origin of parts and materials
- size
- production facility
- manufacturing parameters
- batch number
- welding parameters.



NEW WELDING UNIT

The **new SMARTWELD** welding machine associated to its **NUPIWELDINGAPP** allows a total management of all information regarding construction site, welds, traceability of the products installed, installation mapping by GPS tracking and all subsequent testing activities.

The **new SMARTWELD** welding machine allows to carry out welds without errors and manage them by using the latest technologies such as:

- WiFi and Internet communication for **welding control and data management;**
- **smart device including** the specific application;
- **cloud storage area** that stores all the data that can then be managed from anywhere and anyone authorized by a password;
- geolocation through the use of the **GPS device included** in the mobile device;
- **fingerprint detection** for the recognition of the identity of the operator (by means of the personal device).

NUPIWELDINGAPP is designed to satisfy the needs of the most demanding installers and solve welding traceability issues by eliminating manual management of the information related to the installation of pipes and fittings

SMARTFLEX™ standard heavy and light welding units with total traceability complete the welding equipment range.

MORE!



SMARTFLEX™



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