

# SMARTFLEX™

Product Overview  
Company Profile



**PIPING AT ITS BEST**

**HDPE Pipe and Fitting System  
for the Transfer of Fuels**

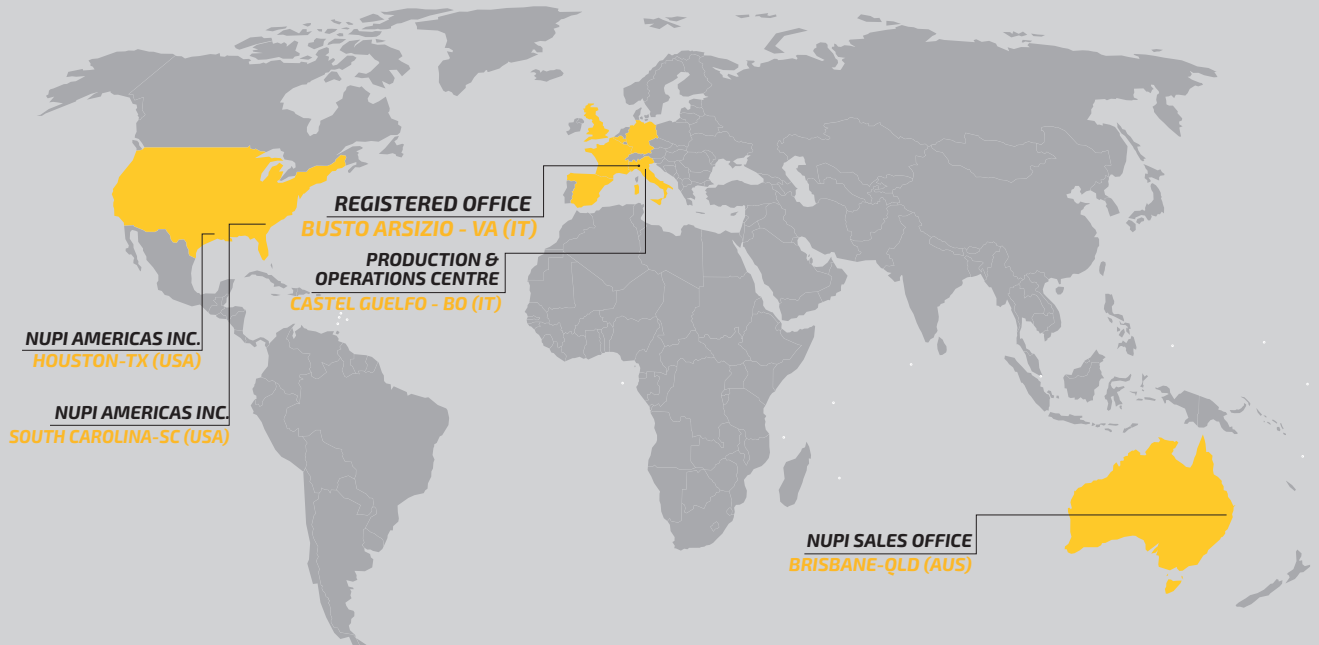


# THE COMPANY

**NUPI AMERICAS INC.** WAS FOUNDED IN 2001 AND IS BASED IN HOUSTON, TX WHERE IT ESTABLISHED A WAREHOUSE AND PRODUCTION FACILITY. ANOTHER WAREHOUSE IS LOCATED IN SOUTH CAROLINA.

**NUPI AMERICAS** HAS ITS ROOTS IN **NUPI INDUSTRIE ITALIANE S.P.A.**, THAT HAS ITS ORIGIN IN **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.** AND **NUPI AMERICAS** TOGETHER DEVELOP AND MANUFACTURE 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.

A FEW YEARS LATER, THE **SMARTCONDUIT** PIPING SYSTEM FOR THE CONVEYANCE AND PROTECTION OF POWER AND DATA CABLES IN HYDROCARBON-RICH ENVIRONMENTS WAS DESIGNED.

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.** AND **NUPI AMERICAS** DEMONSTRATE 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 multi-layer piping system manufactured by **NUPI AMERICAS Inc.** for the transfer of automotive and aviation fuels, biofuels and hazardous fluids. A system with UL Listing, EN, IP, Kiwa and many more approvals that is used and approved by all the major international petroleum companies.

The **range** is available both in **SINGLE WALL** and **DOUBLE WALL** models.

**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 AMERICAS Inc.** to provide a product **warranty of 30 years**.



## APPLICATIONS & FLEXIBILITY

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

**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





# CHARACTERISTICS & BENEFITS

## **FULL SINGLE WALL RANGE**

Full range from  $\varnothing 1\frac{1}{2}$ " to  $\varnothing 4$ ".

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



## **FULL DOUBLE WALL RANGE**

Primary  $\varnothing 1\frac{1}{2}$ " - Secondary  $\varnothing 2$ "

Primary  $\varnothing 2$ " - Secondary  $\varnothing 2\frac{1}{2}$ "

Primary  $\varnothing 3$ " - Secondary  $\varnothing 5$ "

Primary  $\varnothing 4$ " - Secondary  $\varnothing 5$ "

Thanks to an investment of more than US \$ 3,5 million all our fittings are molded. This means more compact parts (less bulky installations) and ease of implementation by reducing the installation time.

## **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.

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 multi-layer 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.

## **LIFE**

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



## FIND OUT MORE!



# APPROVALS



The **SMARTFLEX™** system is certified by **85 prestigious international quality control institutions** such as:

- **UL** United States of America - UL971
- **ERA TECHNOLOGY** European Standard - EN14125
- **KIWA** The Netherlands - BRL K 552
- **Dibt** Germany - Deutsches Institut für Bautechnik
- **IP** UK - Institute of Petroleum

Just to mention some...



# TRACEABILITY

The installation **technology based on the electrofusion system** is one of the most used connection methods in the installation of polyethylene pipes. Electrofusion is the thermal junction process between pipe and fitting obtained by heating a resistance wire included in the fitting.

One of the latest proposal by **NUPI AMERICAS Inc.** is the new **SMARTWELD welding machine associated to its NUPI WELDING APP**, an innovative tool that allows installers to jump into the future by eliminating paper and manual management of the information related to the installation of pipes and fittings.



**NUPI WELDING CLOUD** is an APP designed for the most demanding installers that solves all the problems of welding traceability. It 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 communication via WIFI and Internet** for welding control and data management, a Cloud storage area and fingerprint detection for the recognition of the identity of the operator.

**SMARTFLEX™**



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