IND SIEX

FIXED EXTINGUISHING SYSTEM

with DRY CHEMICAL POWDER

# HAND HOSE SKID

## SIEX™ IND-SH

LARGE-SCALE PROTECTION

# THE MOST ADVANCED TECHNOLOGY FOR PROTECTING SPECIAL HAZARDS

There are numerous hazards where the use of dry chemical is the best option for fire-fighting, and where the use of portable fire extinguishers or automatic fixed systems are not ideal or insufficient for optimum fire protection.

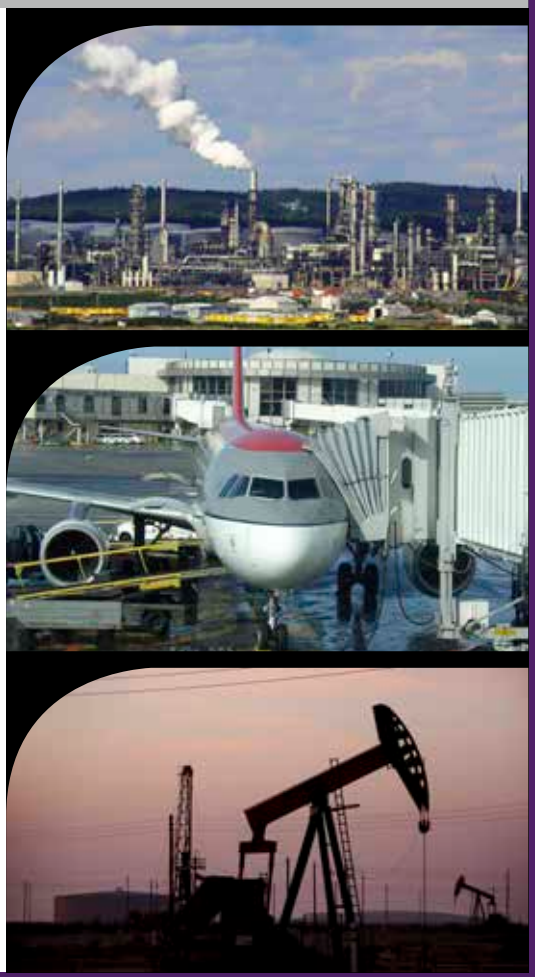
If a significant quantity of extinguishing agent is required and application needs to be manual or can be variable, **SIEX™ IND-SH fixed, hand hoseline, dry chemical extinguishing systems** are the best option.

# APPLICATIONS

The system consists of a cylinder or tank of agent and adjacent nitrogen cylinder(s). The system may be fixed or relocatable if pre-mounted on a base plate. Application using manual hose reels and a special nozzle enables you to attack the seat of the fire with the necessary intensity and duration, providing sufficient release depending on the need.

**Developed and manufactured entirely by SIEX™, they provide our customers with the best solution for manual fighting of large fires, with great autonomy and flexibility in design and installation**. With the widest range of capabilities and great effectiveness, they are versatile in fighting virtually any fire.

- PETROCHEMICAL INDUSTRY
- INDUSTRIAL PLANTS, FACTORIES
- STORAGE OF LIQUID FUELS:
  HANGARS, FUEL TANKS, TRANSFER AREAS
- GAS TREATMENT, REGASIFICATION
- PORTS, AIRPORTS, HELIPORTS
- LOGISTICS CENTERS AND WAREHOUSES
- REFINERIES
- MILITARY APPLICATIONS
- MARINE AND OFFSHORE
- *ETC.*



# COMPONENTS

## MAIN

### CYLINDERS AND LARGE CAPACITY TANKS

Siex provides **large storage capacity from 187 to 8820 lb (85 to 4000 kg)** and even higher on request. This means our equipment can be adapted to any customer requirement.

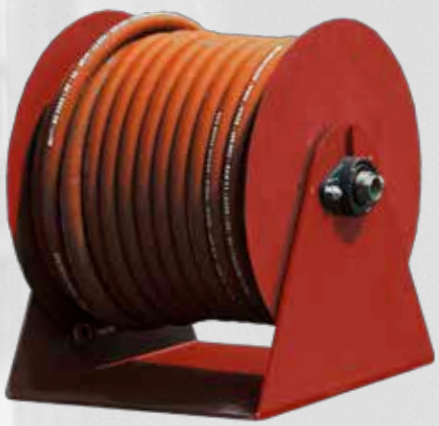
| LBS (KG) | | | | | | |
|---|---|---|---|---|---|---|
| 187 (85) | 220 (100) | 264 (120) | 562 (250) | 661 (300) | 1102 (500) | 1653 (750) |
| 1764 (800) | 2205 (1.000) | 3307 (1.500) | 4409 (2.000) | 7716 (3.500) | 8818 (4.000) | ... (consult us) |

### HOSE REEL

Quick and easy to use, with an advanced, heavy duty design that allows easy hose deployment by the operator, making it ready for action much quicker. Available in **lengths up to 60 m**.

### NOZZLES

Including a special valve for manual discharge control, connected to the end nozzle, available in **aluminium, brass or stainless steel** and in two sizes: **3/4''** and **1''**, to suit the discharge ratio.



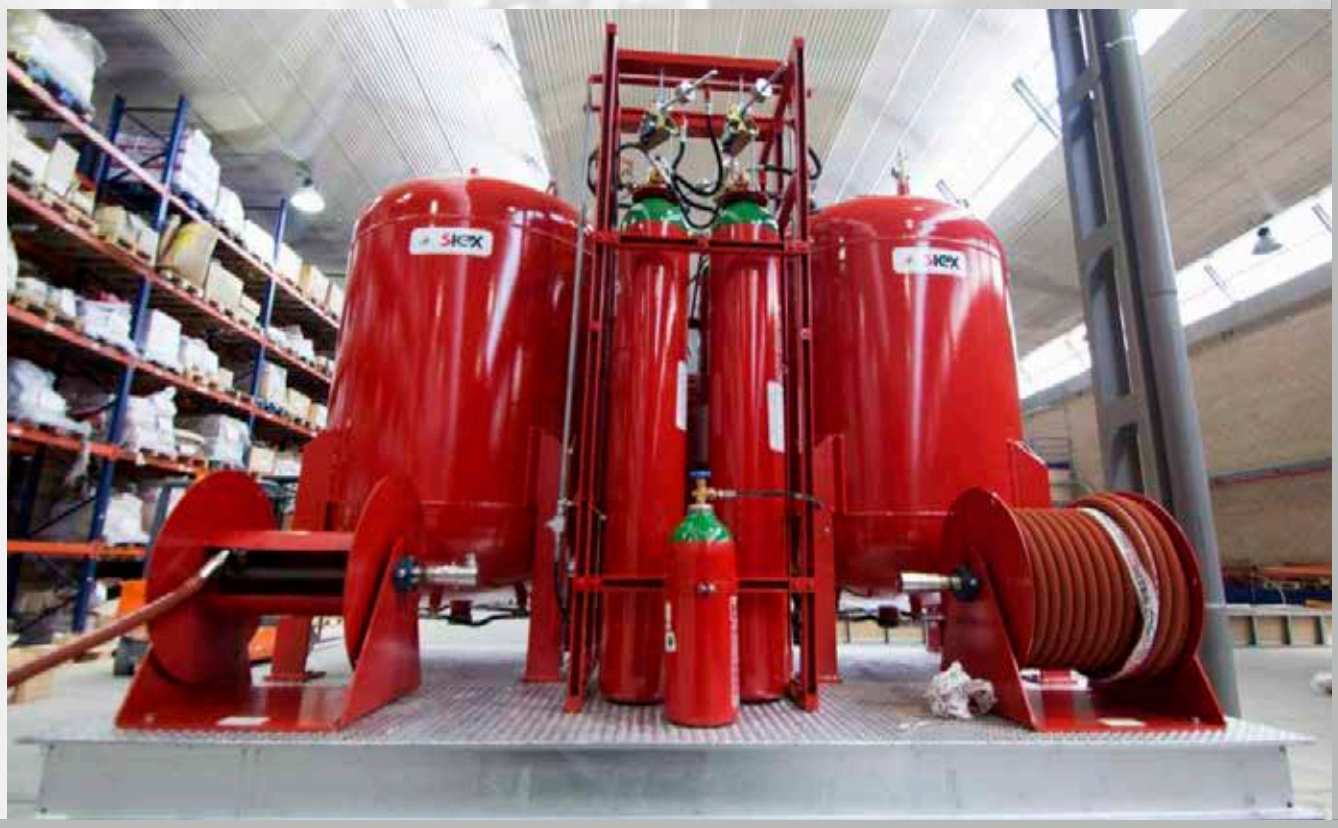
# OPTIONAL

## FILL CONTROL

SIEX™ IND-SH equipment can be completed with **gauges for visual control** of inert propellant gas cylinder fill pressure. They can also be monitored by **mechanical weighing**, with complete precision in filling control, by **pressure switches or gauges with electrical contacts**. All these cases give a signal that allows real-time, remote system status monitoring.

## DISCHARGE CONFIRMATION

This is used in cases where it is important to **confirm** that discharge of the agent is taking place as planned or to **give an alert** that there was an accidental system discharge. This alert has local latching, enabling connection to the fire panel to prevent such a discharge from going unnoticed.



# SPECIAL EQUIPMENT

## ATEX ACCESSORIES

All our electrical components are available for explosive atmospheres: due to their typical applications, these devices are usually used in locations with presence of gases, vapours or suspended particles. Here, a small spark or overheating is likely to cause a serious explosion. SIEX, aware of these requirements, provides fully appropriate, safe alternatives for hazardous atmospheres in accordance with the regulations applicable in each case (**ATEX directive**, **UL**, **cUL**, etc.). For splashing, water jets, etc., **NEMA** and **IP** fittings ensure the appropriate level of protection.

## BEDS

These are made of **various materials, finishes and dimensions** to order. They provide a firm, strong base on which to fit all the necessary equipment for protection. This speeds transport, on-site installation and possible future relocations without needing to dismantle it and transfer equipment in pieces, thereby avoiding unnecessary handling and potential damage.

## PROTECTIVE HOUSING

Also **available in various finishes and sizes**, these prevent access by third parties and/or tampering. Very useful for protecting equipment from the inclemencies of the weather and avoiding direct sunlight on pressurised equipment. They can be supplied in sheet steel, sandwich panel, polyester, etc.

# ADDITIONAL FEATURES

## SPECIAL PAINT AND OTHER FINISHES

The top-quality finishes can be customised to give the system **improved performance and ageing in particularly demanding settings** such as marine, corrosive and chemical environments or exposure to the elements. We have our own painting facilities that allow us to respond to special requirements in the shortest time, as well as **laboratories for paint and adhesion analysis**.

## PRESSURISATION CONTROLLED

The use of innovative ***Constant Flow Technology*** provides not only constant propellant gas pressure throughout the discharge, but also **optimises agent flow** both during pressurisation of the tank and during the discharge phase, making it possible to achieve and maintain the required nitrogen pressure and flow in each case.

## BACKUP SYSTEM

This involves duplicated or redundant systems, which can be ready connected to the same discharge network to offer greater autonomy or serve as backup during maintenance or refilling the main equipment and vice versa.

# DRY CHEMICAL

Dry chemical is a very effective agent that suppresses flames with a minimum amount of product. This allows you to set up **very compact, self-contained equipment**. It acts directly by blocking the chemical combustion reaction. This makes it a very fast-acting, almost instantaneous, agent.

SIEX™ IND-SH systems incorporate various types of dry chemical depending on application needs. The hardware is reliable and robust, developed for **maximum flexibility in firefighting**. It combines all the advantages of dry chemical with the flexibility of manual equipment, enabling you to adjust the discharge or increase the time if necessary. Additionally, it is supplied complete, ready for connecting and rapid commissioning.

The pressure necessary for proper propulsion and discharge is provided by the high pressure inert gas cylinders associated with each dry chemical tank. This connection includes all the necessary fittings such as hoses and check valves, allowing gas to enter at the bottom of the tank, **optimising extinguishing agent flow and giving a fully homogeneous discharge** through the corresponding syphon tube.

The tanks also feature pressure relief valves, ensuring equipment integrity, and pressure gauges for easy pressure measurement. This can all be supported on a heavy duty platform, making transport and installation much easier (optional).

## EXTINGUISHING AGENT

The main components of the dry chemical powder (e.g. sodium bicarbonate, sodium, potassium bicarbonate) mixed with the most advanced additives **improves its storage, flow and water repellent properties**, leading to greater firefighting efficiency.

# FIT FOR EVERY NEED

## ABC DRY CHEMICAL

Composed of **mono ammonium phosphate**. The active ingredient is mixed with ammonium sulfate and additives to improve its physical characteristics and make it resistant to moisture from the environment.
Suitable for class A (combustible solids), class B (combustible liquids) and class C (flammable gases) fires.

## BC DRY CHEMICAL

It consists of **sodium and potassium bicarbonates**, a very effective agent for type B fires. It is used for class B and C fires such as oils, gasoline, grease, paints, lacquers, natural gas, generators and transformers.
Compatible with the use of foams.

## D DRY CHEMICAL

It is a compound of **inert salts** (different chemical composition depending of the hazard). It is the only suitable extinguishing agent to fight metal fires fuels (D type), such as aluminum, titanium, lithium or magnesium in use industrial machining, etc.
It is a fine, white powder that flows easily.

# BENEFITS OF USE

## EASILY POSITIONABLE

the compact, heavy duty design of the SIEX™ IND-SH system greatly facilitates equipment transport, enabling it to be located where it is needed to cover protection of the hazard in question, **adapting to the requirements of each project**, including at height, as it can be lifted.

## EXTRAORDINARY STORAGE CAPACITY

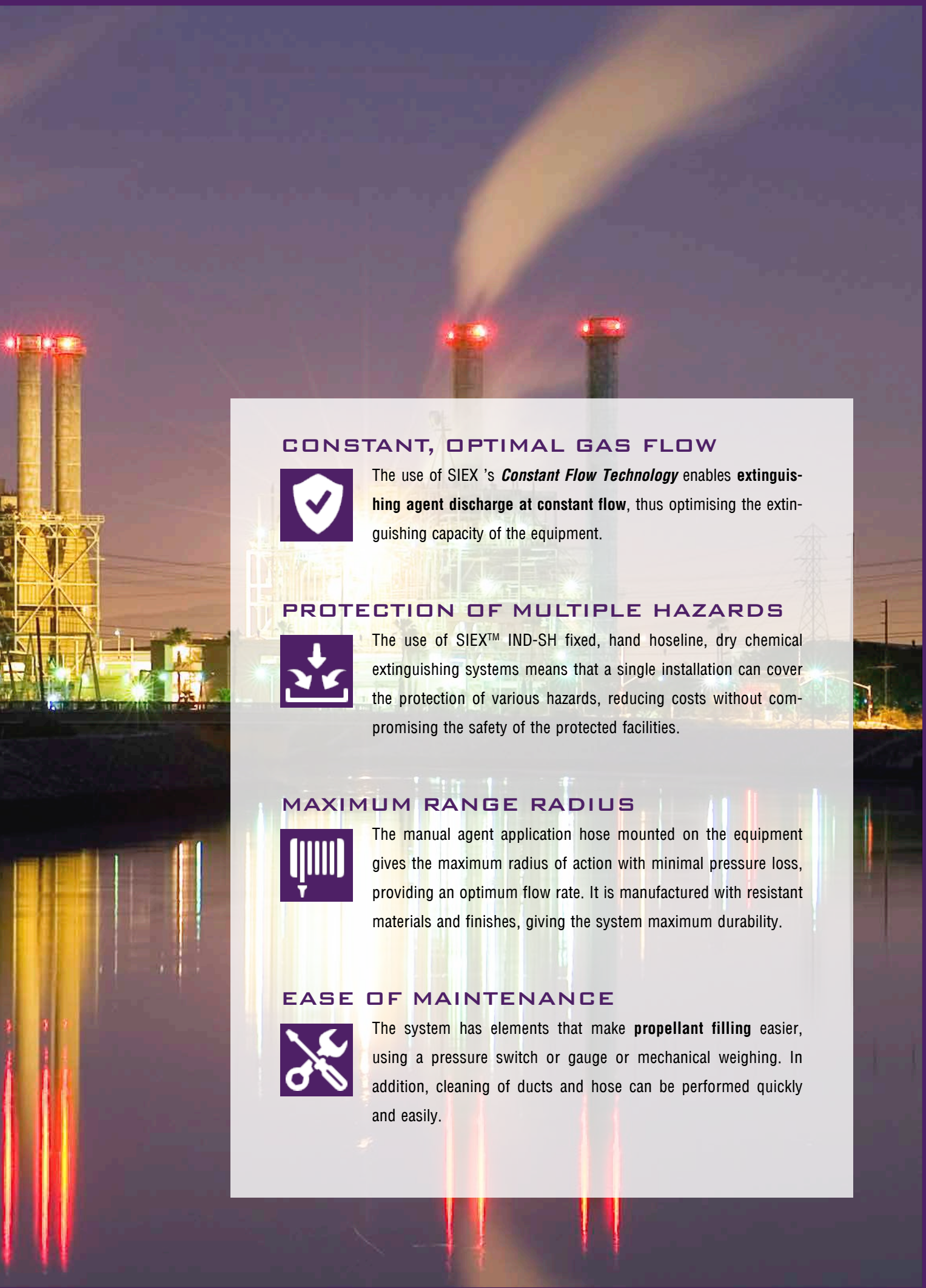
SIEX™ IND-SH systems can be designed for high storage capacity and can be **adapted to any protection** and even allow for protection of larger hazards that require a large amount of agent.

## GREAT AUTONOMY

The high efficiency of dry chemical used with this system, together with the high capacity and variety of dry chemical storage tanks means that lack of agent will never be a problem in firefightin.

## TOTAL FLEXIBILITY OF THE SYSTEM

The wide variety of storage sizes allows the designer to **customise each design** based on the requirements of each project.



## CONSTANT, OPTIMAL GAS FLOW

The use of SIEX 's ***Constant Flow Technology*** enables **extinguishing agent discharge at constant flow**, thus optimising the extinguishing capacity of the equipment.

## PROTECTION OF MULTIPLE HAZARDS

The use of SIEX™ IND-SH fixed, hand hoseline, dry chemical extinguishing systems means that a single installation can cover the protection of various hazards, reducing costs without compromising the safety of the protected facilities.

## MAXIMUM RANGE RADIUS

The manual agent application hose mounted on the equipment gives the maximum radius of action with minimal pressure loss, providing an optimum flow rate. It is manufactured with resistant materials and finishes, giving the system maximum durability.

## EASE OF MAINTENANCE

The system has elements that make **propellant filling** easier, using a pressure switch or gauge or mechanical weighing. In addition, cleaning of ducts and hose can be performed quickly and easily.

SIEX 2001 S.L.
C. Merindad de Montija nº 6
P.I. Villalonquéjar 09001
Burgos (SPAIN)

TLFNO: +34 947 28 11 08
WEB: www.siex2001.com

SIEX® is a registered trademark.

The information provided in this document is for information purposes only. Technical information must be used for the installation of all SIEX systems. SIEX assumes no liability for any use that third parties may make of this information. SIEX reserves the right to make any change in both the capabilities and features of its equipment.