



FIXED EXTINGUISHING SYSTEM

with FM-200®  
EXTINGUISHING AGENT

S-FLOW

wide range of pressures

FIRE  
PROTECTION

**EFFECTIVE  
PROTECTION THANKS  
TO THE LATEST  
TECHNOLOGY**



Fire protection is a top priority for any company, institution or public space. An accident of this type can irreparably affect the building, property and equipment, not to mention the toll on human lives and the business or activity itself.

SIEX develops fixed extinguishing systems that use FM-200® agent, which acts effectively against fire, minimizing the impact on equipment and also providing increased safety for personnel.

Thanks to an in-depth study of the needs of each enclosure, we have developed a protection technology that covers **the greatest choice of working pressures** on the market.

The novel **SIEX-HC™ S-FLOW** system outperforms all traditional fixed extinguishing systems with chemicals. The system can be configured to high working pressures and therefore can be installed in a wide range of spaces and applications. The reliability of each component adapted to these new working requirements translates into one of the safest and most versatile systems in the world.

**SIEX-HC™ S-FLOW** guarantees quick and safe fire extinguishing. Its features provide great safety and effectiveness, from installation until activation (when required).

# GREATER VARIETY OF WORKING PRESSURES

**SIEX-HC™ S-FLOW** features an innovative cylinder valve suitable for the widest range of operating pressures in the market. It also boasts the widest range of cylinder capabilities. The result is maximum adaptability of the equipment to the protected hazard, enhancing the system's design and optimizing its cost.

When it comes to protecting high-cost property or equipment in occupied areas, the traditional clean agent SIEX HC systems are the best choice. They are suitable for cases where storage

tanks should be removed from the protected hazard or where long pipe runs are required.

With **SIEX-HC™ S-FLOW**, design or installation constraints can be overcome thanks to its ability to work under high pressure.

It is ahead of the curve of other alternatives, offering exclusive protection.



**SIEX-HC™ S-FLOW**  
WORKS AT PRESSURES OF  
32, 34, 50, 55 AND **60** BAR.



Our breakthrough system is certified by certifying bodies VdS, FM and UL for all its working pressures.

# MAJOR BENEFITS

- SAFER EQUIPMENT, DESIGNED TO WORK AT HIGH PRESSURES
- A SINGLE STORAGE SYSTEM CAN BE USED FOR PROTECTING SEVERAL HAZARDS
- USE OF SELECTOR VALVES WITH MINIMUM RESTRICTIONS
- LONG PIPE RUNS POSSIBLE
- LESS COMPONENT DIAMETER
- LESS STORAGE SPACE REQUIRED, WHICH EQUALS GREATER AMOUNTS OF AGENT
- SPECIFIC HYDRAULIC CALCULATION SOFTWARE THAT OPTIMIZES THE DESIGN OF EACH SYSTEM
- QUALITY ASSURANCE CERTIFIED BY THE MAIN CERTIFYING BODIES UP TO 60 BAR





Installing cylinder banks close to the room protected is advisable, but it is not always possible due to lack of storage space or for aesthetic or technical considerations. Therefore, the WORKING PRESSURE is an extremely important factor that allows overcoming these obstacles.

Depending on the requirements of the protected enclosures, the working pressure of the equipment is adjusted to the design constraints (pipe length, number and arrangement of cylinders, nozzles, etc.).

**THE INDIVIDUAL FEATURES THAT MAKE UP THE SYSTEMS—COUPLED WITH THE FACT THAT WE ARE THE MANUFACTURER WITH THE GREATEST RANGE OF CYLINDER SIZES—MAKES OUR EQUIPMENT THE MOST COMPETITIVE IN THE MARKET.**



# APPLICATIONS

*MUSEUMS AND ART GALLERIES ■ TELECOMMUNICATION SYSTEMS*

*HOSPITALS ■ PETROCHEMICAL FACILITIES ■ COMPUTER ROOMS*

*LABORATORIES AND CLEAN ROOMS ■ ELECTRICAL CABINETS AND SUBSTATIONS*

*DATA PROCESSING CENTRES (DPCS) ■ ARCHIVES AND LIBRARIES*

*OFFSHORE PLATFORMS ■ OTHERS...*



# A UNIQUE SOLUTION

## **THE BEST CHOICE FOR PROTECTING LARGE SPACES.**

A single bank of cylinders is capable of safeguarding large rooms thanks to the higher range achieved by the variety of pressures on SIFEX equipment. This is therefore a highly recommended solution for protecting various spaces using a single system. In addition, the extensive coverage and maximum height of the nozzles make it unique.

## **NO RESTRICTIONS ON THE USE OF SELECTOR VALVES**

Unlike other systems which simultaneously protect multiple hazards with selector valves, the advanced S-FLOW technology for adjusting pressure translates into an enhanced use of selector valves with fewer limitations.

## **FEWER CHANGES TO ARCHITECTURAL STRUCTURES**

The features highlighted above also translate into less impact on the building itself. With the S-FLOW system, a single cylinder bank helps protect the entire building, providing structural and aesthetic benefits and requiring less storage space.



### **OPTIMIZATION OF PIPEWORK SYSTEM**

S-FLOW achieves a significant improvement in the installation of piping, allowing the use of smaller diameters and longer runs to reach remote hazards. The design is optimized thanks to SIEX's specific software, the only valid tool for proper design.

### **SAFER HANDLING**

The suitability of each of the components for higher working pressures results in greater strength. The strength of the equipment ensures safe handling during installation and maintenance with maximum effectiveness.

# **BREAKTHROUGH FOR THE PROTECTION OF LARGE HAZARDS**

# RELEASE METHOD

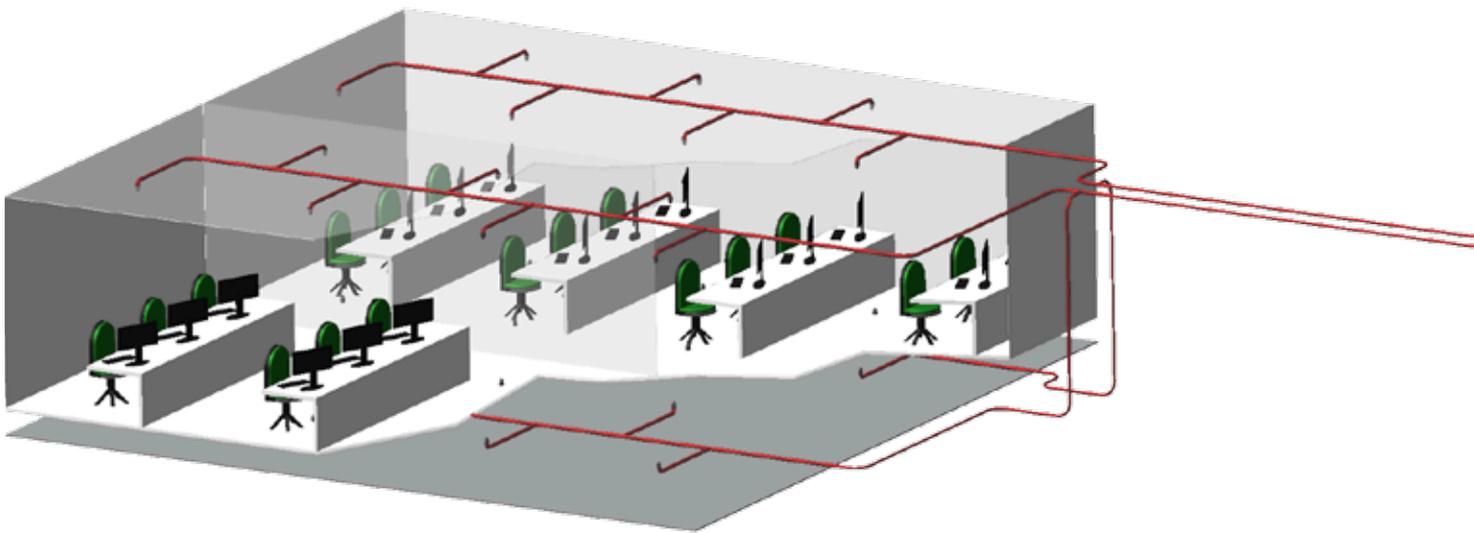
**SIEX-HC™ S-FLOW** works by total flooding, which is why the protected enclosure must be completely watertight. The discharge of the design concentration and its hold time for the minimum period necessary ensures fire extinguishing and prevents its re-ignition.

The discharge is very safe, relatively quiet and does not reduce visibility. These features facilitate the evacuation of

personnel who might be in the room and avoid equipment damage, increasing safety.

**The system acts in the early stages of the fire, preventing its spread and minimizing damage.**

The scattering of the agent occurs within a maximum of 10 seconds, which means minimal impact on the room.



Having a backup system is advisable to ensure protection during charging and/or re-stamping of the main system, and when the system covers several areas via selector valves.

**A backup system can be extremely beneficial to ensure the safety of the facility.**

*The backup system will have the same quantity of gas for protecting the enclosure as was calculated for the main system. When uninterrupted protection is required, both the main and backup agent supply systems must be permanently connected to the distribution piping and arranged in such a way as to make the switch as easy as possible.*

# COMPONENTS

## CYLINDERS

The widest range of storage volumes in the market. Thanks to the S-FLOW valve, the system can operate at pressures of 32, 34, 50, 55 and 60 bar. This allows maximum design flexibility for these systems.

*Much greater distance possible from storage to the hazard.*

CYLINDERS CAPACITY (L)

6	13	26	40	67	80	100
120	150	180	240	368	451	514

\* 2 and 4.7 litre bottles are available in SIEX SMS

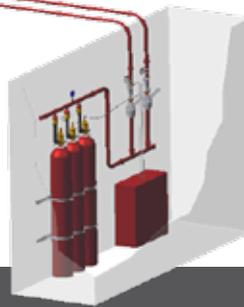
CYLINDERS CAPACITY (lb)

15	30	65	100	165	195	255
300	375	455	610	930	1140	1300

\* 5 y 11.9 lbs bottles are available in SIEX SMS

\* Orientative capacities

## EXTINGUISHING AGENT



DuPont™ FM-200®, a colourless, odourless and non-conductive agent. Under normal conditions it's gaseous state ensures high scattering capacity.

It is a clean chemical gas (heptafluoropropane) which is stored in liquid state, thus requiring reduced storage space. Its conversion to vapour occurs easily in the pipework once the cylinder has been actuated, and it is discharged in gaseous form. It extinguishes the fire by physical and chemical means, weakening it by heat absorption until it disappears.

- *Suitable for occupied areas*
- *Harmless to the ozone layer*
- *Electrically non-conductive*
- *Clean, leaves no residue*
- *High extinguishing capability*

*Specially created  
for high pressures*



## CYLINDER VALVES

SIEX has the greatest range of cylinder valve sizes, make it suitable for any hazard through optimal configuration. Its components ensure reliable and safe operation at high pressures, for which the system has been approved. It can be installed with large cylinders, ensuring a 10" discharge time, as required by law.

*We offer a wide range of activation elements, including electrical, pyrotechnic, manual, pneumatic or manual pneumatic. A mechanical remote manual activation handle can also be added.*

## SELECTOR VALVES

When there are two or more independent hazards together, they can be protected with a single set of storage cylinders thanks to the use of directional valves. The cylinder bank sized for the most unfavourable hazard is sufficient for protecting the rest of them. This translates into a huge installation savings.

## IN-LINE CHECK VALVES

These valves must be installed in arrangements featuring a main plus a backup bank. They ensure proper operation and prevent component damage, by using the same discharge manifolds.

## SHUT-OFF VALVES WITH ELECTRIC SIGNAL

Our shut-off valves provide the system with an additional safety element, making it possible to maintenance the cylinders and prevent accidental discharge.



## NOZZLES

The design ensures that the agent is discharged uniformly and as required in the areas to be protected (main room, false floor or ceiling, etc.). Both features are possible due to the joint and suitable design of the required piping system, nozzles and calibrated orifices. A 100% effective and homogeneous discharge is guaranteed.

The nozzles are selected depending on the enclosure needs. SIEX's wide range of high-pressure nozzle sizes completes its innovative S-FLOW system.

Thanks to their advanced design, the number of nozzles can vary according to the aesthetic and functional requirements of the room.

They boast the greatest coverage (13.2 x 13.2 m) and maximum height available in the market, which allows optimizing system design.



*Range of nozzles made of stainless steel, brass, aluminium or chrome-plated steel.*

## CHECKING THE AGENT FILL

### CONTINUOUS WEIGHING

The fire panel is alerted of any loss in cylinder agent. It is a simple, standardized system which is easy to install and also allows visual inspection. It does not remain in contact with the agent, so there is no risk of leakage.

### PRESSURE SWITCH

A pressure switch can be assembled on the SIEX-HC™ S-FLOW cylinder valve which can be handled with the pressurized cylinder. This device controls the internal pressure, sending a signal to the fire panel in case of failure.

### GAUGE WITH ELECTRICAL CONTACTS

This combination of gauge and pressure switch enables visually checking the pressure and also sends a notice to the fire panel in the event of any change in the cylinders.

For checking the correct activation, SIEX-HC™ S-FLOW includes:

#### PRESSURE SWITCH

Installed in the bank manifold or in the piping system, it allows discharge confirmation.

**Other components that may be added to the system to increase the safety of personnel in the discharge areas are as follows:**

**PNEUMATIC RETARDANTS, PNEUMATIC SIRENS, RELIEF VALVES, DECOMPRESSION VALVES AND ODORIZERS.**

SIEX S-FLOW has FLAMEPROOF components for the petrochemical industry.

## **SIEX**

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