



*FIXED EXTINGUISHING SYSTEM  
WITH HFC-125 AS EXTINGUISHING AGENT*

**25 / 42 BAR**

**FIRE  
PROTECTION**

# QUICK AND CLEAN ACTION AGAINST FIRE



Fixed automatic fire extinguishing systems provide continuous protection in enclosures housing high-value assets or in enclosures where immediate resumption of activity is critical to maintaining competitiveness.

SIEX-HC™ 125 is designed for quick and clean extinguishing. Each of its components is optimized and its working pressure is adjustable according to installation requirements.

**SIEX is fully committed to ensuring appropriate protection for each project.**

To do this, our engineers use the most advanced calculation programmes (appropriate, validated and certified for each system) and always advise the client accurately, offering the solution that best suits every protection need.

# SIEX-HC™ 125, GREATER SAVINGS

SIEX-HC™ 125 is the most efficient extinguishing system in terms of weight, compared to other halocarbon gases, with a low design concentration. It acts on solid, liquid or energized electrical fires and needs up to 25% less gas.

This translates into HIGH SAVINGS, very practical when large volumes need to be protected and there is reduced storage space. This represents a significant savings in agent and piping.

HFC-125 has been used extensively and offers reliability, which makes it suitable for such important hazards as telecommunications, record rooms, aerospace industry and explosion suppression (acting as inertizer), among others.

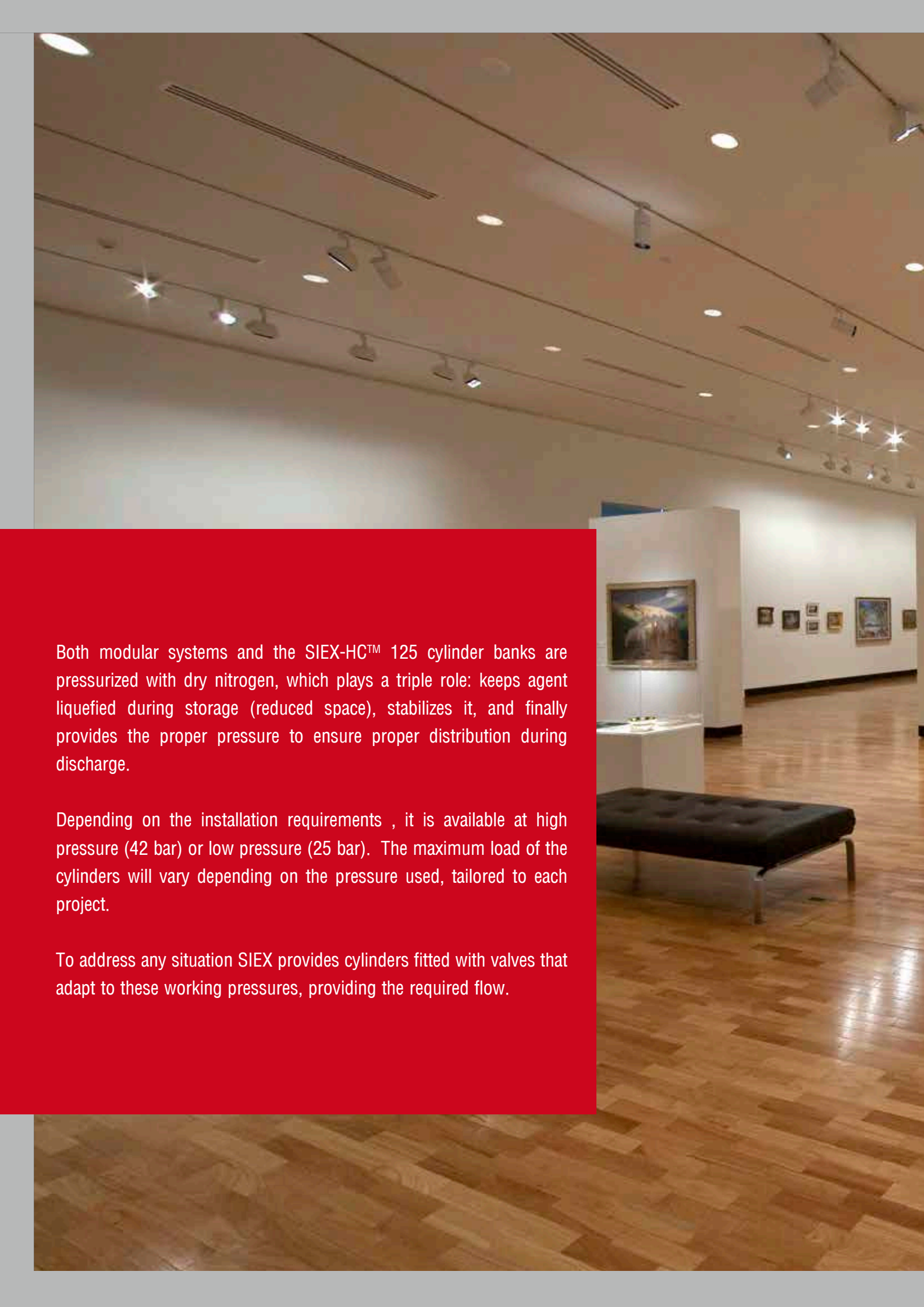
Like other halocarbon agents, SIEX-HC™ 125 works effectively by total flooding for hazards of combustible solids and liquids and energized electrical fires (unsuitable for materials with their own oxygen supply, as well as alkaline, alkaline earth, radioactive and powdered metals), on which it produces rapid 10-second discharges. The HFC-125 agent boasts a higher hold time, which ensures that the fire does not restart.

**IDEAL FOR TOUGH  
FIRES: MORE EFFEC-  
TIVE WITH LESS  
AGENT.**

**Pipe diameters are smaller and pipe runs can cover longer distances, facilitating the design and layout of the piping system.**

Complies with  
ISO 14520, UNE 15004-4 and NFPA 2001





Both modular systems and the SIEX-HC™ 125 cylinder banks are pressurized with dry nitrogen, which plays a triple role: keeps agent liquefied during storage (reduced space), stabilizes it, and finally provides the proper pressure to ensure proper distribution during discharge.

Depending on the installation requirements , it is available at high pressure (42 bar) or low pressure (25 bar). The maximum load of the cylinders will vary depending on the pressure used, tailored to each project.

To address any situation SIEX provides cylinders fitted with valves that adapt to these working pressures, providing the required flow.

# VARIETY OF WORKING PRESSURES

## SIEX-HC™ 125 **25 BAR**

Stored in steel cylinders fitted with quick-opening and high flow rate valves.

CYLINDERS CAPACITY													
l.	6.7	13.4	25	40	60	84	101	127	180	240	368	451	514
lbs.	12	25	45	70	105	150	180	225	315	425	650	795	905

\* 2 and 4.7 litre / 5 y 11.9 lbs bottles are available in SIEX™ SMS

## SIEX-HC™ 125 **42 BAR**

Its high storage pressure (42 bar at 20 °C) allows us to reduce the pipe diameter so cylinders can be located further away from the protected hazard. The cylinder load can also be greater than in low pressure systems.

CYLINDERS CAPACITY									
l.	6.7	13	26.8	40.2	67	80	100	120	180
lbs.	14	25	55	80	135	165	205	245	370

\* 2 and 4.7 litre / 5 y 11.9 lbs bottles are available in SIEX™ SMS

Allows use conventional pipes and fittings, thus reducing installation costs.





# SAFETY

In order to avoid unnecessary exposures to the agent, the use of safety elements is highly recommended.

**SIEX's range of protection components—the largest and most comprehensive on the market—facilitates evacuation and protects the installation.**

## PNEUMATIC SIREN

It makes a long, sharp sound, sufficiently intense to alert all personnel at risk in the range of the firefighting system discharge.

## PNEUMATIC RETARDER

They allow evacuation prior to discharge, delaying it 30 or 60 seconds. They are available for direct or indirect action, depending on how it acts on the master cylinder and the pilot cylinder, respectively.

Retarders include a manual release to cancel the delay. They operate autonomously and feature automatic activation.

## ACTUATORS:

Placed in the valve actuation ports, they start the discharge, actuating cylinders as required in each case:

- electrical
- manual
- pneumatic
- electric firing pin
- pyrotechnic/manual
- pneumatic/manual
- remote manual by pull cable (protective case available)



manual actuator



electrical actuator

## ODORIZER

Emits a strong gas smell that permeates the room in which it is released. It is useful for preventing accidents by warning people of the presence of the agent during discharge and after ventilation.

## SHUT-OFF VALVES WITH ELECTRIC SIGNAL

Our shut-off valves provide the system with an additional safety element, making it possible to maintain the protected hazard and prevent accidental actuation.

## IN-LINE CHECK VALVES

Avoid unnecessary loss of extinguishing agent between the primary and standby systems: part could be deviated from one manifold to the other, with the subsequent pipe pressure and enclosure concentration reduction. Without this element, gas leaks could easily occur when one of the units is undergoing maintenance.

Furthermore, SIEX has the following components to enhance security:

- PIPED EXHAUST RELIEF VALVES
- RELIEF VALVES
- MANUAL CABLE PULL WITH PULLEY ELBOWS
- FLAMEPROOF COMPONENTS



pneumatic actuator



electric / pyrotechnic actuator

Handling is quick and easy. It can be installed with dry pipes, even with a loaded cylinder, without losses and with the maximum simplicity.

# HOW HFC-125 AGENT WORKS

SIEX-HC™ 125 uses FE-25 gas from Dupont™, a colourless, odourless and non-conductive agent. It generates no residues after application and offers quick and effective extinguishing.

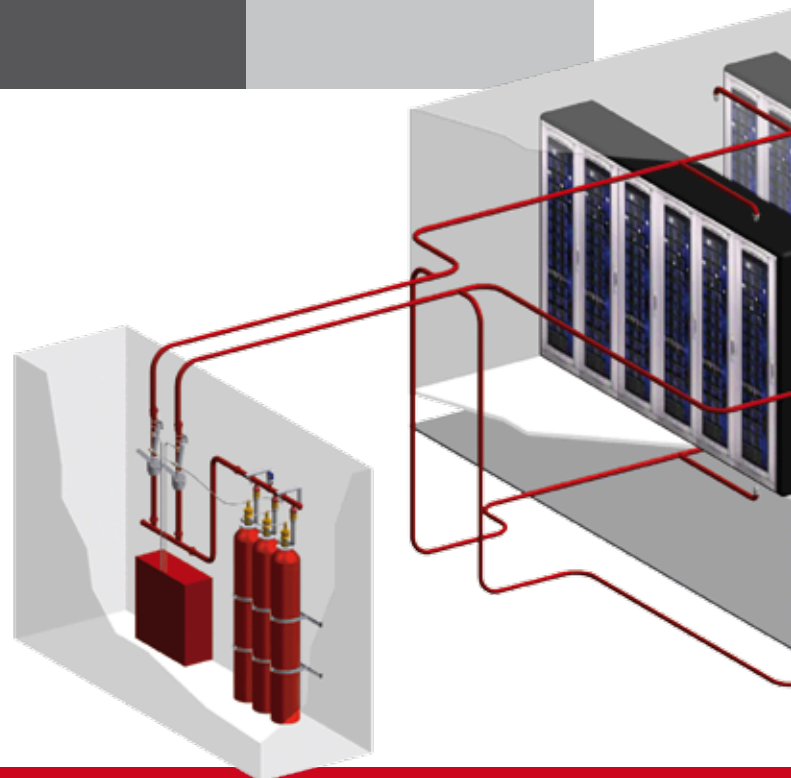
It is a clean chemical gas (pentafluoroethane, formula  $CF_3CHF_2$ ). Stored in liquid state, it requires little storage space. And thanks to its superior properties, less agent per cubic metre protected is required for protection. Its conversion to vapour occurs easily in the pipework once the cylinder has been actuated.

It is effective in protecting electrical hazards such as transformer rooms, electrical panels, telecommunications, etc. It is also recommended for low temperatures (boiling point  $-48\text{ }^\circ\text{C}$ ,  $-54\text{ }^\circ\text{F}$ ).

Protection is continuous, 365/24, with minimal business disruption, reduced downtime, rapid return to normal (no cleaning) and negligible damage to property or equipment due to its rapid action.

FLAME  
KNOCK-  
DOWN BY  
COOLING

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





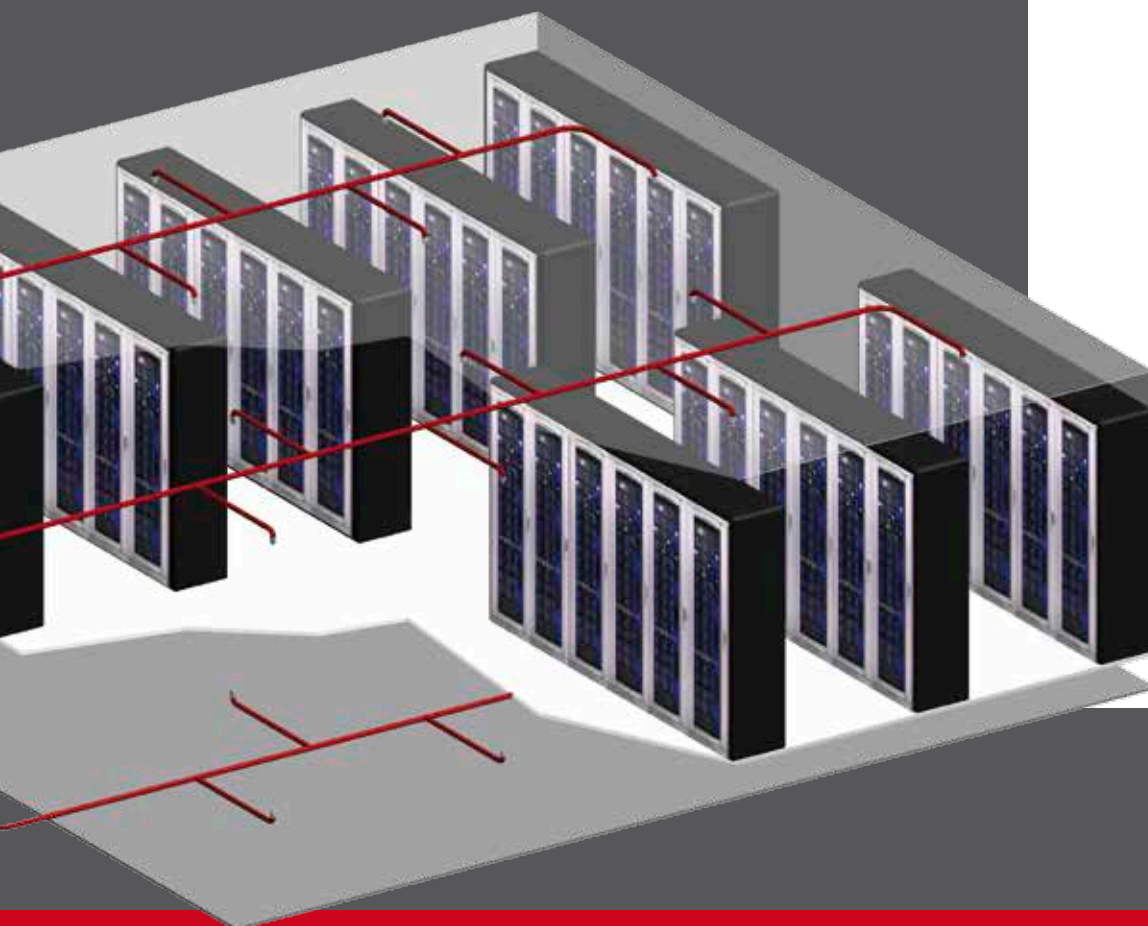
# DISCHARGE

SIEX-HC™ 125 works by physical and chemical means: it extinguishes by COOLING, weakening the flame and absorbing its heat until it disappears and, to a lesser extent, limiting the formation of free radicals, which hinders the combustion chain reaction.

HFC-125 has a very high hold time, better than other agents, preventing reignition of the fire after discharge of the design concentration and facilitating the maintenance of the same during the stipulated time.

The system acts in the early stages of a fire, preventing its spread and minimizing damage. Fast discharge of the agent occurs in a maximum of 10 seconds, which implies minimal impact on the enclosure, minimizing discharge time and therefore fire damage.

- *Very rapid extinguishing*
- *Minimal amount of agent per unit volume*
- *Harmless to the ozone layer*
- *Electrically non-conductive*
- *Clean, leaves no residue*
- *Suitable for risks at low temperatures*
- *Substantial hold time*



**These features facilitate the evacuation of personnel who might be in the room and avoid equipment damage.**

# BENEFITS

## VERY STABLE BEHAVIOUR

It delivers great reliability in storage as well as discharge, thanks to agent stability. Users can be assured that HFC-125 that has not been used for a long time will not under-perform.

## HIGH EXTINGUISHING CAPABILITY

The effectiveness of gas HFC-125 and its high cooling capacity leads to very rapid extinguishing. Thus, extinguishing is radical, minimizing the effects of the fire and ensuring a very quick return to normal.

## SAFE FOR EQUIPMENT

Its chemical composition does not react with electrical or electronic components, so there is no risk of corrosion or damage to equipment. Hazards protected by HFC-125 do not experience substantial overpressures.

# GREATER SAVINGS

## IN THE INSTALLATION

Compared with other agents, the design amount is much lower, which reduces the number of storage cylinders and the space they occupy. It is also one of the best alternatives for existing fire protection systems, since it allows reusing legacy Halon 1301 systems, which involves a reduction in installation costs. This allows the use of smaller diameter pipe, streamlining installation and reducing costs.

## IN THE SYSTEM

It boasts one of the fastest discharge times and is one of the most economical extinguishing agents. Thanks to its efficiency and its excellent properties, it stands out as a highly competitive product.

# APPLICATIONS



*Medical equipments*



*DPCS*



*Printing machines*



*Archives*



*Wind generators*



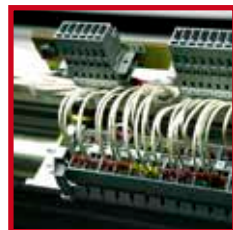
*Flammable liquids stored*



*Laboratories*



*Paint booths*



*Electrical cabinets and substations*



*Control rooms*



*False floor and false ceilings*



*Telecommunications systems*

## **SIEX**

**C. MERINDAD DE MONTIJA Nº 6  
P.I. VILLALONQUÉJAR 09001  
BURGOS (SPAIN)**

**TLFNO: +34 947 28 11 08  
WEB: WWW.SIEX2001.COM**

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