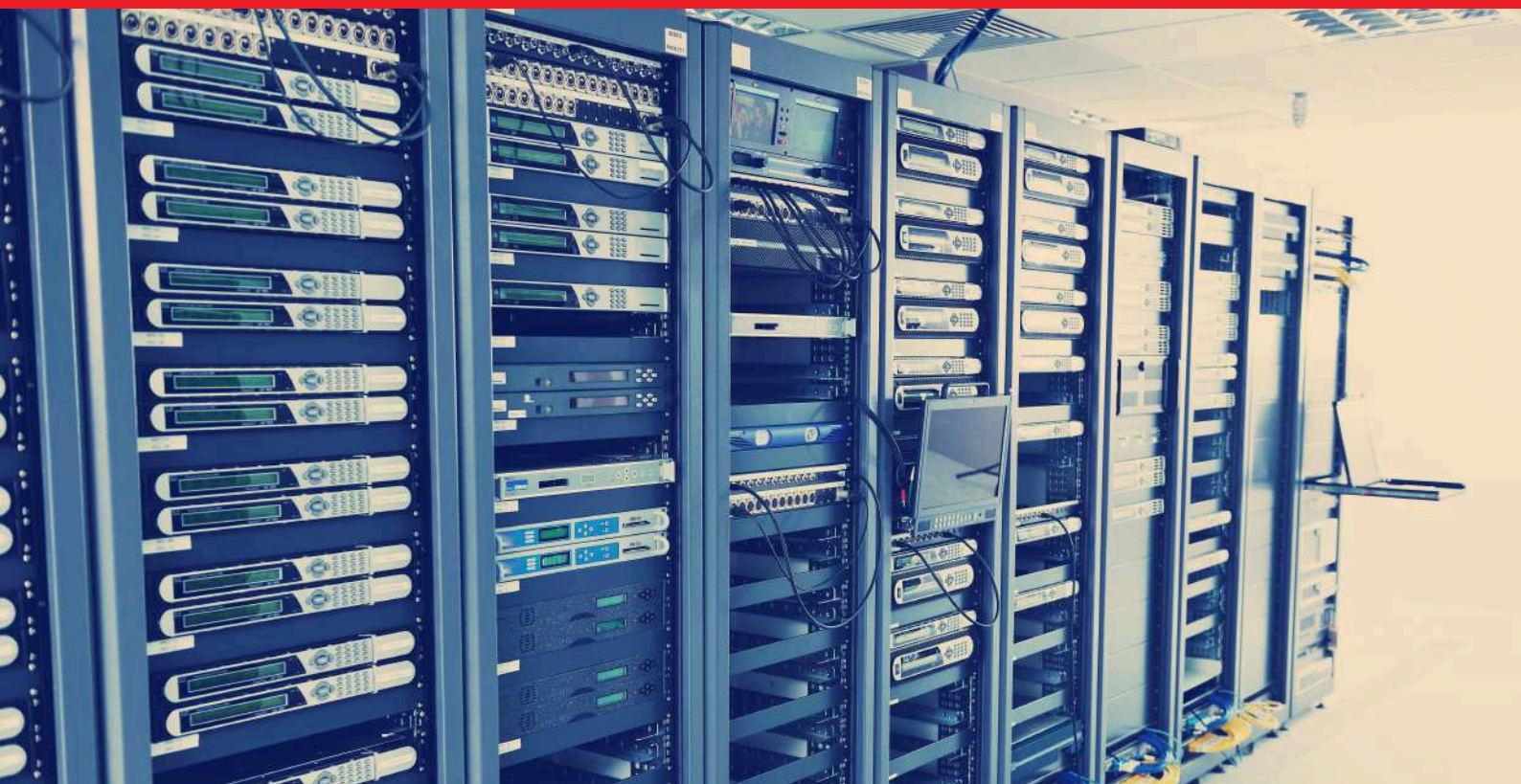




## FIXED EXTINGUISHING SYSTEM

with **SIEX-NC™ 1230**  
extinguishing agent



# PROTECTION THAT MAKES THE DIFFERENCE



The fire protection systems industry is fast-paced and driven by technology, delivering high added value in line with the benefits it provides: occupational safety and operational continuity for industries, businesses and services.

With a growing need to improve the performance of traditional systems, the latest generation of extinguishing gases introduces new technologies, reducing fire damage and improving sustainable use. The SIEX-NC™ 1230 agent is a clean gas, especially suitable for protecting sensitive and/or valuable goods.

It acts swiftly in target areas – while the outbreak is in its initial phase – to suppress fire without damaging equipment. Its early detection capability reduces fire, smoke or particulate damage, as well as the collateral damage caused by alternative suppression agents, such as water, chemical powders or aerosols.

SIEX-NC™ 1230 is doubly clean: as the least polluting chemical gas on the market, it leaves no residue and is environmentally friendly, leading to zero deterioration of the ozone layer and minimal greenhouse effects.

## Safety and efficiency for people, goods and the environment

Electrical, electronic, IT, industrial, and other key systems are vulnerable to fire and the collateral damage from an outbreak (smoke, soot, water damage from sprinklers or fire hoses). Moreover, the use of a system that is safe for sensitive equipment helps to properly protect valuable items in storage.

**The SIEX-NC™ 1230 systems are safe, clean and flexible and can adapt to every need.**

Industry increasingly relies on the continuous operation of sensitive electronic devices, which means they must be protected from failure.

In the event of an outbreak, the business losses from an interruption in the services provided by these components must be added to the direct cost of repair or replacement of the affected equipment. Such interruptions can lead to a complete shutdown of company operations.

INNOVATION + VERIFICATION  
= GUARANTEED PROTECTION

Do not settle for less protection against specific threats:

UL , FM , VdS , LPCB



\* In process



## The SIEX-NC™ 1230 family

 **SIEX** <sup>NC</sup><sub>1230</sub>

25 & 42 bar  
For daily protection

 **SIEX** <sup>NC</sup><sub>1230</sub> <sup>S-FLOW</sup>

32, 34, 50, 55 & 60 bar  
For the most particular and demanding conditions

 **SIEX** *trace*

 **SIEX** <sup>Dual</sup>  
DETECTION & EXTINCTION

 **SIEX** *Silp*

 **SIEX** <sup>SPK</sup>

For the protection of small spaces. With built-in detection.

 **SIEX** <sup>Dual</sup>  
*Marina*

For the most complete detection and extinguishing in offshore environments.

# The SIEX-NC™ 1230 agent

- Clean
- Leaves no residue
- Colorless
- Odorless
- Electrically non-conductive

## System that fulfils maximum expectations

The SIEX-NC™ 1230 extinguishing gas is a CLEAN agent: it does not leave ANY residue after discharge, nor does it produce significant overpressure in enclosures.

The use of this gas as an alternative for fire suppression has been certified to comply with environmental standards in major markets: USA-EPA<sup>1</sup> and UE-EEA<sup>2</sup>.

It is a colorless, odorless, non-conductive composite with a water-like appearance, suitable for solid fuel fires, flammable liquids or energized electric fires.

It acts by totally flooding the enclosure, which means it is necessary to guarantee the rated concentration over the required length of time. It does not significantly reduce ambient oxygen, emit noisy discharges or create conditions of low-visibility, favoring safe evacuation.

It is designed to protect sensitive installations, such as: data or telecommunications processing centers, banks, museums, libraries, clean rooms, electrical equipment, and similar, where water would cause severe damage.

<sup>1</sup>United States Environmental Protection Agency (SNAP – Significant New Alternatives Policy)  
<sup>2</sup>European Environment Agency (F-gas regulation)

**It is designed to protect sensitive installations, such as: data or telecommunications processing centers, banks, museums, libraries, clean rooms, electrical equipment, and similar, where water would cause severe damage.**

### ECOLOGICAL

The gas does not lead to depletion of the ozone layer (ODP), possesses a low greenhouse potential (GWP) and a short atmospheric half-life. It is the most environmentally-friendly chemical extinguishing agent.

### SAFE

It has a low design concentration compared to the levels of adverse effects observed (NOAEL).

**It is an extinguishing agent with outstanding fire performance.**

EN-15004	CLASE A	NOAEL	LOAEL	LC50
HFC-23	16.3 %	30.0 %	30.0 %	>65.0 %
HFC-125	11.2 %	7.5 %	10.0 %	>70.0 %
HFC-227ea	7.9 %	9.0 %	10.5 %	>80.0 %
FK-5-1-12	5.3 %	10.0 %	10.0 %	>10.0 %

NFPA 2001	CLASE A	NOAEL	LOAEL	LC50
HFC-23	18.0 %	30.0 %	30.0 %	>65.0 %
HFC-125	8.7 %	7.5 %	10.0 %	>70.0 %
HFC-227ea	6.7 %	9.0 %	10.5 %	>80.0 %
FK-5-1-12	4.5 %	10.0 %	10.0 %	>10.0 %

## SIEX-NC™ 1230 Systems

The SIEX-NC™ 1230 fire suppression systems are pressurized with dry nitrogen to 25 or 42 bar.

### SIEX-NC™ 1230 at 25 bar

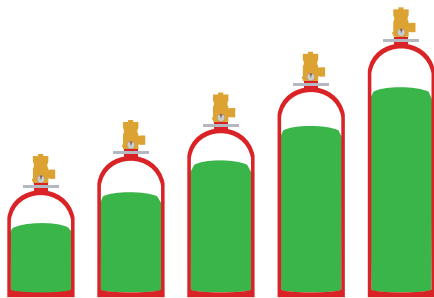
This allows for the use of low-pressure welded cylinders, as well as conventional pipes and fittings.

These characteristics make the system highly competitive and suitable for wide application.

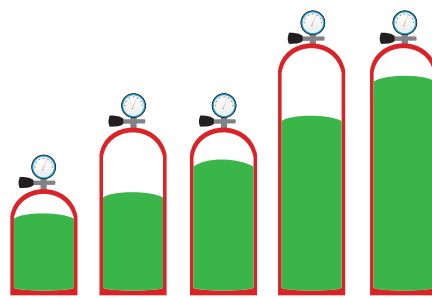
### SIEX-NC™ 1230 at 42 bar

At this pressure, non-welded cylinders can be used, while pipes can cover greater distances with higher discharge levels. Extremely useful for complex networks or for protection of medium and large enclosures.

In addition, we offer the widest range of cylinder capacities on the market, meaning our clients can match their investments to their precise needs.



**SIEX**  
BEST CHOICE FOR  
ANY USE SCENARIO



**OTHERS COMPANIES**  
SMALLER SIZE RANGES  
MEAN LESS FLEXIBILITY



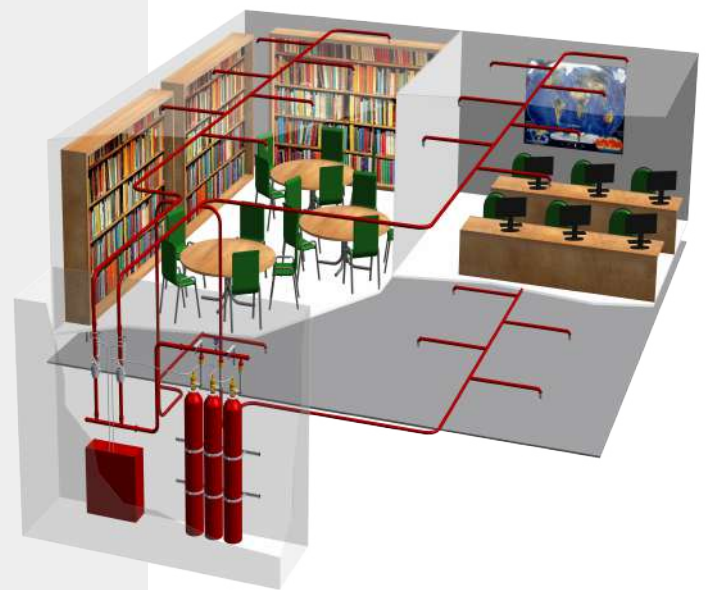
Our systems are compact and optimized, allowing our clients to minimize the installed system footprint thanks to the ability to tailor the load size and piping layout for the liquefied gas, pressurized with dry nitrogen, to exact design needs.

## SIEX-NC™ 1230

The most compact, ecologically-friendly fire suppression option on the market.



- SIEX complies with ISO 14520, EN 15004 or NFPA 2001 and local regulations.
- We include justifying hydraulic calculations, with approved download software.
- We guarantee a precise filling, without humidity or impurities, as part of our certification.



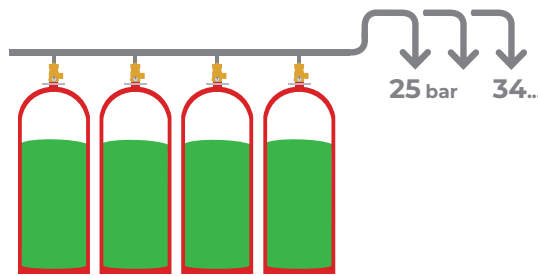
## S-FLOW

### SUPERIOR DISCHARGE PERFORMANCE

The SIEX-NC™ 1230 S-FLOW systems rated at 464, 493, 725 & 798 psi (32, 34, 50, 55 & 60 bar) deliver optimal discharge performance, allowing maximum adjustment and optimization for any design.

#### SIEX-NC™ 1230 S-FLOW at 32 / 34 bar:

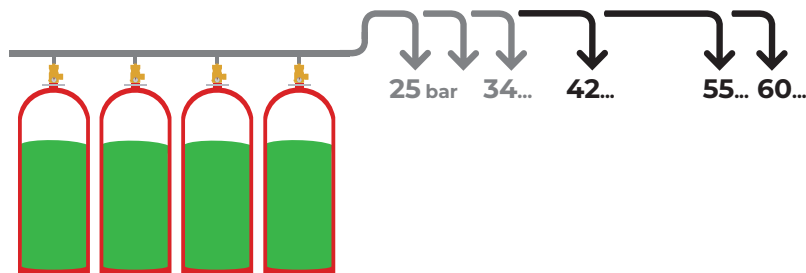
The use of low pressures of up to 34 bar allows increasing distance and discharge flow without increasing overall system costs, yielding improved performance without sacrificing budget objectives.



#### SIEX-NC™ 1230 S-FLOW at 50, 55 / 60 bar:

High-pressure designs can reach maximum capacity, covering great distances of pipe within complex networks while delivering excellent discharge volume (over 1T in 10s).

Our system is the ideal choice for reducing installed piping diameters (owing to increased flow) to protect large enclosures (high discharge capacity) or for centralized systems (use of directional valves with selective activation in line with enclosure size).





# Other components

Our systems are compact and optimized, allowing our clients to minimize the installed system footprint thanks to the ability to tailor the load size and piping layout for the liquefied gas, pressurized with dry nitrogen, to exact design needs.

Siex tests and approves all the required and/or optional devices deployed in a customized client installation:

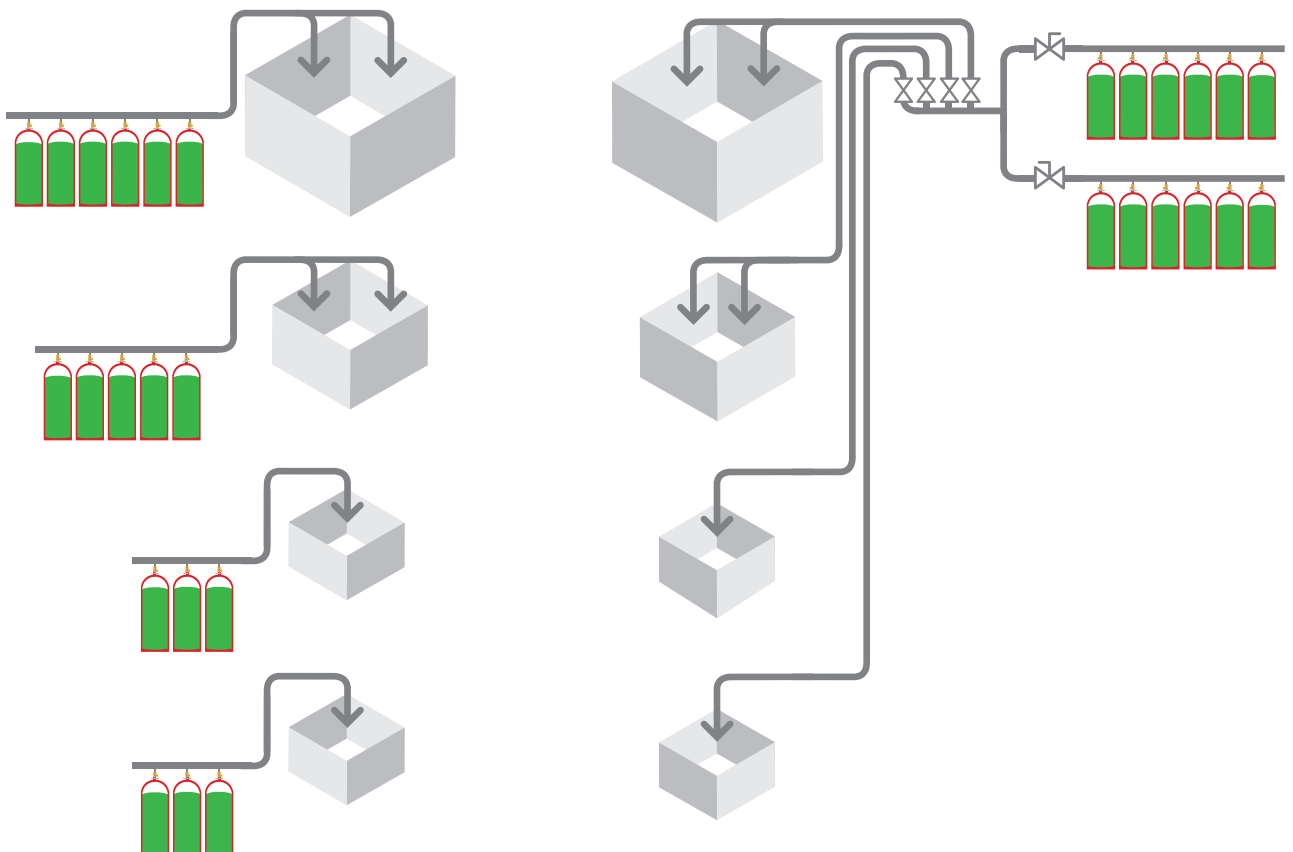
**ACTUATORS:** Electric, manual, remote manual, pneumatic, remote pneumatic, thermal, and so on.

**SECURITY AND CONTROL:** Load control (pressure switches, pressure gauges, weighing device), pneumatic retarder, odorizer, disable device or bleed valves, and so on.

**HAZARDOUS AREAS:** electrical components for explosive atmospheres.

**SELECTOR VALVES:** For centralized distribution of the agent to a variety of enclosures. Pneumatic apertures available up to 4".

Optimal design while ensuring complete safety. Optional inclusion of passive or online reserves.



## The most demanding needs require the most innovative solutions:

# SIEX DETECTION + EXTINCTION

## Autonomous

The autonomous detection and extinction systems provided by SIEX are the ideal choice for the protection of average or small-size enclosures. They offer proven reliability under certified real fire testing. Employing both linear and point sensors, the effectiveness of the SIEX-NC™ 1230 agent allows for detection + extinction in just 60 seconds using the smallest possible equipment installation.

### SIEX-NC™ 1230 + PUNCTUAL DETECTION:



It consists of two detection systems:

**Simplex Systems:** Central deposit equipped with mechanical control triggered by thermal detection using a line of calibrated bulbs. Simple, efficient and functional, needing no external power.

**Complex System:** Enables cross-detection using two lines of thermofusible bulbs, which prevent accidental discharges from the central mechanical deposit. Reliable, safe and autonomous. The systems possess the most internationally-recognized certifications, including for land and FM-Marina, for use on ships, yachts or offshore platforms.



The line of copper pneumatic detection points is flexible, easy to install, and very resistant to physical or mechanical wear. It operates without any need of external power.



Placed in the upper part of the enclosure, the small container discharges immediately after the thermal bulb breaks owing to accumulated heat. Ideal for small spaces with fast-moving fires.

### SIEX-NC™ 1230



During the incipient stage of a fire, the industry-standard thermofusible sensor tubing used as the main detection device allows for detection and extinction of the fire in just one minute, with no need for reactivation. The installation can simply run along the upper part of the enclosure thanks to its superior performance and design.



## ADVANTAGES



MINIMUM  
INSTALLATION



PROTECTION OF VITAL OR  
SENSITIVE EQUIPMENT



COMPACT  
AND VERSATILE



CLEAN AND SAFE, WITH  
NO RESIDUE OR CLEAN UP



ENVIRONMENTALLY-  
FRIENDLY



IMMEDIATE RESUMPTION,  
AFTER VENTILATION



AUTONOMOUS ACTIVATION  
USING NO EXTERNAL POWER

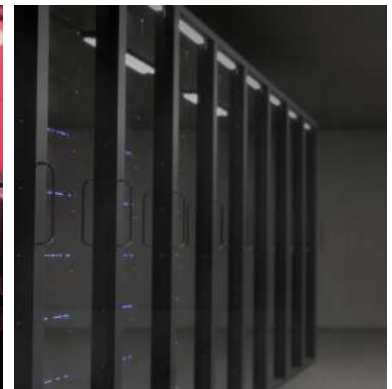
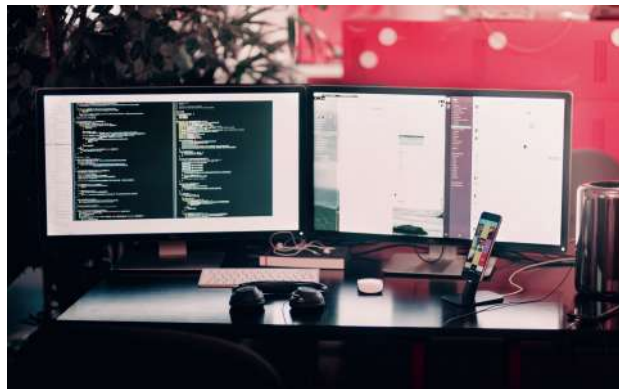


CAN BE MONITORED

Because the science of fire suppression does not cease to evolve, we examine our every step in consultation with experts in the field: insist on independent UL, FM, VdS, LPCB approvals.



\* In process





## FIXED EXTINGUISHING SYSTEM

with **SIEX-NC™ 1230**  
extinguishing agent

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**SIEX® IS A REGISTERED TRADEMARK.**

The information detailed in this document is for guidance only.  
For the installation of all SIEX systems, technical information  
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