



FIXED EXTINGUISHING SYSTEM

with ARGON
EXTINGUISHING AGENT

200BAR

FIRE
PROTECTION

SAFE AND ECO-FRIENDLY



Currently, enclosures equipped with fixed fire protection systems house high-value goods, not only in terms of their high cost but due to the important role they carry out and the critical data they may store, especially in the case of computer equipment. Any damage could thus result in service or productive activity interruption, delays, loss of data, which in some cases can even lead to legal problems and, in short, difficulties and obstacles that lead to temporary or even permanent cessation of activity.

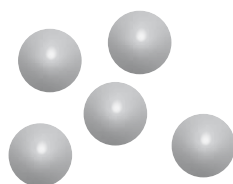
The INERT-SIEX™ 01 system uses argon as an extinguishing agent to quickly neutralize the fire, preventing damage to people, equipment, machinery, furniture and to the structure itself.

The IG-01 agent is perfectly suitable for especially sensitive and valuable hazards, thanks to its functional, environmental and safety features. It is thus highly effective, safe and respectful of occupants, the environment and the property protected.

ARGON: STABLE AND BALANCED

The agent used in the INERT-SIEX™ 01 system, argon, also provides high efficiency, adaptability and significant advantages in the refilling and maintenance of equipment in any location.

This extinguishing agent is harmless to humans and therefore **SUITABLE** for occupied areas at design concentrations according to the main standards. Since it is non-toxic and does not reduce visibility, the enclosure can be evacuated quickly and safely in case of release.



| | |
|-----------------|--------------|
| molecular weigh | 40 |
| Density | 1,38 (air=1) |

IG-01: Argon

This agent offers significant **ENVIRONMENTAL** added value. It does not deplete the ozone layer (ODP) and has zero global-warming potential (GWP).

This **CLEAN** agent does not damage electronic equipment and is chemically stable. When discharged, argon does not generate particles or other debris that may be deposited and harm protected goods.

Since it is an inert extinguishing gas, IG-01 is **GLOBALLY AVAILABLE**, under no market or patent restrictions. Since argon is extracted from atmospheric air, it is accessible anywhere in the world.

EFFECTIVENESS AND EXPERIENCE

INERT-SIEX™ 01 is certified by major international agencies, which highlights its quality.

It is developed to comply with all relevant standards: ISO 14520:15, UNE 15004-7, NFPA 2001 and CEA 4008.

It also complies with ISO 9001:2000, ISO 14001:2004 and European CE and VdS standards, as well as American FM & UL standards.

SIEX supports its customers in all phases of the project thanks to the experience accumulated throughout its history. This ensures success in all situations.



COMPONENTS

VALVES and CYLINDERS

The RGS-MAM-12-2 / RGS-MAM-12-2C cylinder valves developed for equipment at 200 bar features high-flow capacity and very quick opening. It delivers high operational reliability, ensuring total sealing of the assembly during its lifetime. They are made of hot-stamped brass with the most advanced techniques and feature all the necessary load control components.

The quality of these elements is certified by key international certifications, such as VdS in Europe and FM & UL in the United States.

INERT-SIEX™ 01 can be stored at 150, 200 or 300 bar. Pressures at 150 and 200 bar are the most widely used globally and ensure compatibility with maintenance and refill installations and equipment in any country.

A pilot cylinder of N₂ is included for the activation of cylinder banks containing more than ten units.

| 150 AND 200 BAR | | | | |
|-----------------|----------------------|----------------------|------------------------------------|------------------|
| Cylinder | Load IG-01 | | Valve | Load |
| | 150 bar | 200 bar | | |
| 40 litres | 6.30 m ³ | | RGS-MAM-12-2 ó RGS-MAM-12-2C | Model FH-15CO |
| 67 litres | 10.50 m ³ | 14.00 m ³ | | |
| 80 litres | | 16.70 m ³ | | |
| 140 litres | | 29.20 m ³ | | |

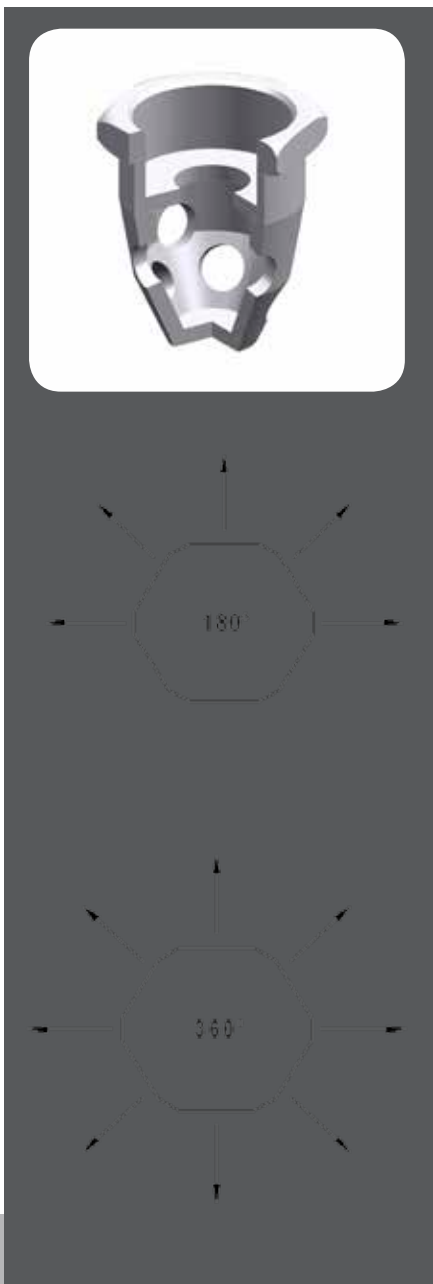
ARGON ALLOWS GREATER LOAD CAPACITY COMPARED TO OTHER INERT AGENTS.



NOZZLES

They are designed to effectively distribute extinguishing agent into the enclosure, even in rooms with large surface areas and high ceilings, in the most extreme circumstances.

The FEDR nozzles in the INERT-SIEX™ 01 system are the result of a long and complex design and research process that enables us to provide our customers with an advanced engineering element, allowing them to get the most out of their firefighting system.



Developed to provide efficient distribution, even at low pressures and temperatures, thus allowing more flexibility in system design. They are suitable for any circumstance, extinguishing areas where other nozzles prove ineffective.

They can cover an angle of 360° if placed in central positions above the enclosure or 180° when placed next to walls. In both cases the area covered is 13.2 x 13.2 metres and a height of 7.1 metres is reached using a single level of nozzles, thus minimizing installation costs.

SIEX has developed nozzles ranging from 3/8" to 2", with two levels of holes. Available in stainless steel, brass, steel and aluminium, they are always corrosion-resistant.



They are tested at temperatures between -20 and +600 °C and high pressure, ensuring proper operation in extreme conditions, even in a fire situation. These components can be installed in rooms with adverse conditions without seeing their effectiveness reduced.

The hydraulic calculation software specifically developed for this system and SIEX components defines adequate size to ensure the pressure needed for proper distribution of the agent and the right amount to be discharged in the maximum time required.

This is done by calibrating orifice plates after a thorough analysis of the system and the installed network.



The design and different finishes allow full integration of this element into the architecture of the protected hazard without causing an aesthetic impact that could negatively impact its original design.

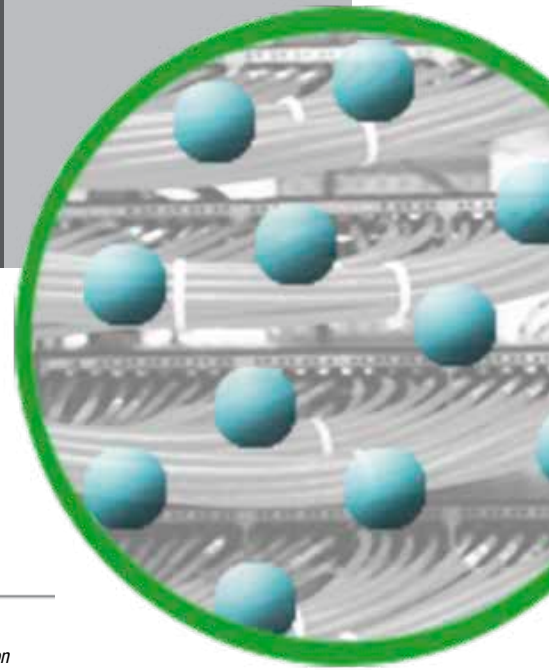
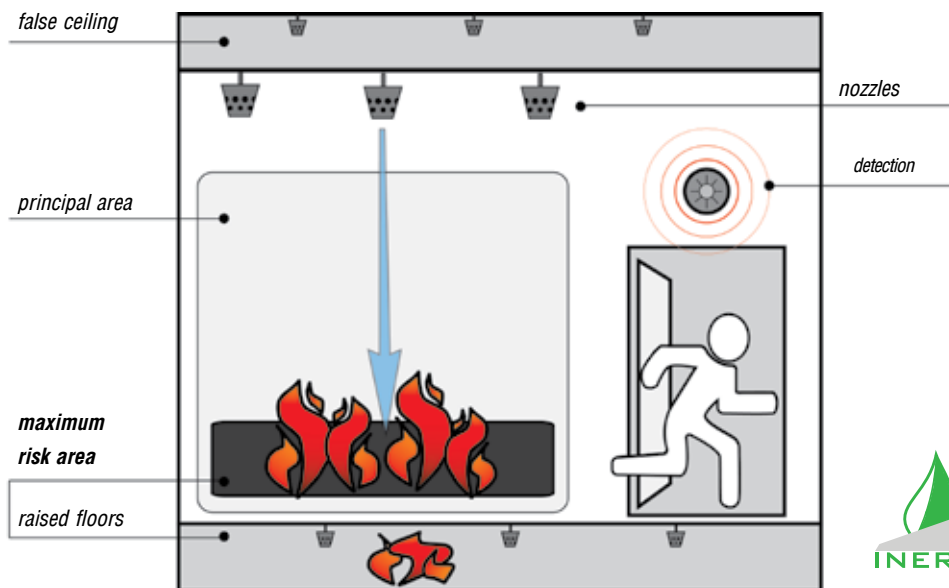
HOW IT WORKS

INERT-SIEX™ 01 uses an inert gas obtained from the atmosphere as its extinguishing agent. It consists of argon, a noble, stable gas that does not react with anything, even at high temperatures (such as those occurring in a fire). INERT-SIEX™ 01 therefore does not react dangerously to changes (temperature, pressure, humidity, light or other compounds present during a fire) and is totally suitable for solid fuel, flammable liquid, electrical or electronic fires.

Thanks to its properties, it can quickly protect all the enclosure in a few seconds, minimizing potential damage that may occur.

EXTINGUISHING
AGENT
IG-01

Its high relative air density allows it to quickly protect low-lying areas of the enclosure.



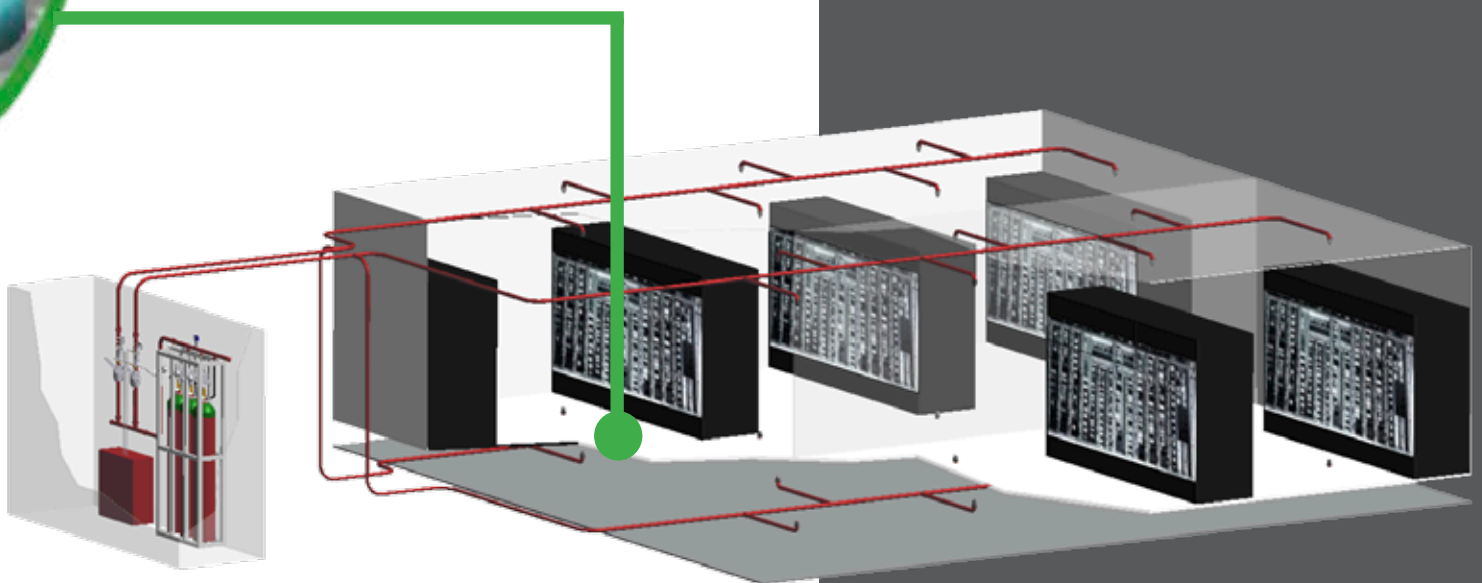
 **SIEX⁰¹**

FIREFIGHTING

Upon detection of fire, the system sends an activation signal. This action can also be manually performed by staff present. In both cases the same discharge protocol starts.

The gas, which is stored at a pressure of **200 bar** to minimize system space requirements, is discharged through the cylinder valve(s) (modular or cylinder bank systems). Pressure is reduced to below 60 bar via a calibrated restrictor. Downstream of this, the lower pressure allows the use of conventional piping and fittings, resulting, in turn, in storage that can be located away from the protected hazard, handling any architectural obstacle.

- *Suitable for areas occupied by personnel.*
- *Harmless to the ozone layer (ODP zero)*
- *Zero global warming potential (GWP)*
- *Electrically non-conductive*
- *Clean, leaves no residue*
- *Inert, does not damage electrical or electronic equipment*
- *High extinguishing capability*
- *Immediate resumption of activity*
- *Low cost of installation, recharging and maintenance*
- *Compatible with any type of detection.*
- *Real tests can be performed.*
- *Flexible design, adaptable to any hazard.*
- *Extensive experience in the use of these agents*



*Suitable for fires in medium / low areas
and RAISED FLOORS*

APLICACIONES



*Special for
raised floor*



*Telecommunication
systems*



*Computer
rooms*



*Gas
facilities*



*Off-shore
platforms*



Hospitals



Wind turbines



*Petrochemical
facilities*



Laboratories



*Electrical cabinets
and substations*



*Archives
and libraries*



*Academics
facilities*



*Pharmaceutical
Industry*



*Museums and
art galleries*



Offices



*Residential
buildings*



*Stations and
airports*



Vehicles

..and many other applications

BENEFITS

SUITABLE FOR OCCUPIED AREAS.

Extinguishing using argon is completely safe in enclosures where there are usually personnel present since it is non-toxic and ensures maintains good levels of visibility, facilitating evacuation.

Oxygen concentration levels are maintained at appropriate and safe levels for occupied spaces.

IMMEDIATE RETURN TO STANDBY STATUS

Upon extinguishing, **the agent is removed simply by venting the enclosure.** The agent prevents reignition and leaves no residue of any kind, so it does not need any cleaning.

By acting quickly, potential damage is limited.

NO DAMAGE TO EQUIPMENT

The agent acts on the entire enclosure, and in gaseous form protects hard-to-reach areas, easily reaching into the equipment without leaving any residue. Its inert nature does not cause any reaction, protecting sensitive, electrical and electronic equipment. It also does not cause corrosion.

EASY TO REFILL

Argon is extracted directly from the atmosphere: it is an unblended gas free from trademark restrictions, so it is inexpensively and readily available worldwide.

Refills are simple thanks to SIEX's proprietary valves and the nature of the agent, **which allows a higher fill per cylinder than other gases.**

LONG PIPE RUNS

This is the ideal system when the cylinders are located away from the protected hazard, when the pipework is complicated or there are many fittings, because storage pressure is at 200 bar and the discharge pressure is set at 60 bar.

COMPLETELY

ENVIRONMENTALLY FRIENDLY

Argon is obtained directly from the atmosphere and does not affect the ozone layer or contribute to global warming (zero ODP and GWP). This enables full-scale tests without harming the environment.

SIEX

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