



SIEX

FIXED EXTINGUISHING SYSTEM

WITH DRY POWDER
EXTINGUISHING AGENT

STORED PRESSURE TANKS

FIRE
PROTECTION

TECHNOLOGY DEVELOPED FOR THE PROTECTION OF SPECIAL HAZARDS



The dry chemical systems designed by SIEX are suitable for protecting a wide range of hazards. They are an excellent option for extinguishing fires in large volumes and outdoor areas. Besides, their adaptability allows them to be used in confined spaces and in fires for which other agents are not suitable.

SIEX's wide variety of dry chemical systems allow adapting the protection to every need. Depending on the quantity of extinguishing agent and the storage space available, the

STORED PRESSURE TANK SYSTEMS are an option, which can store large amounts of agent. Cylinder systems with stored pressure are also suitable for smaller hazards.

The SIEX™ IND dry chemical range also includes specific equipment for the protection of petrol stations, paint booths and large vehicles.

(See specific catalogues)

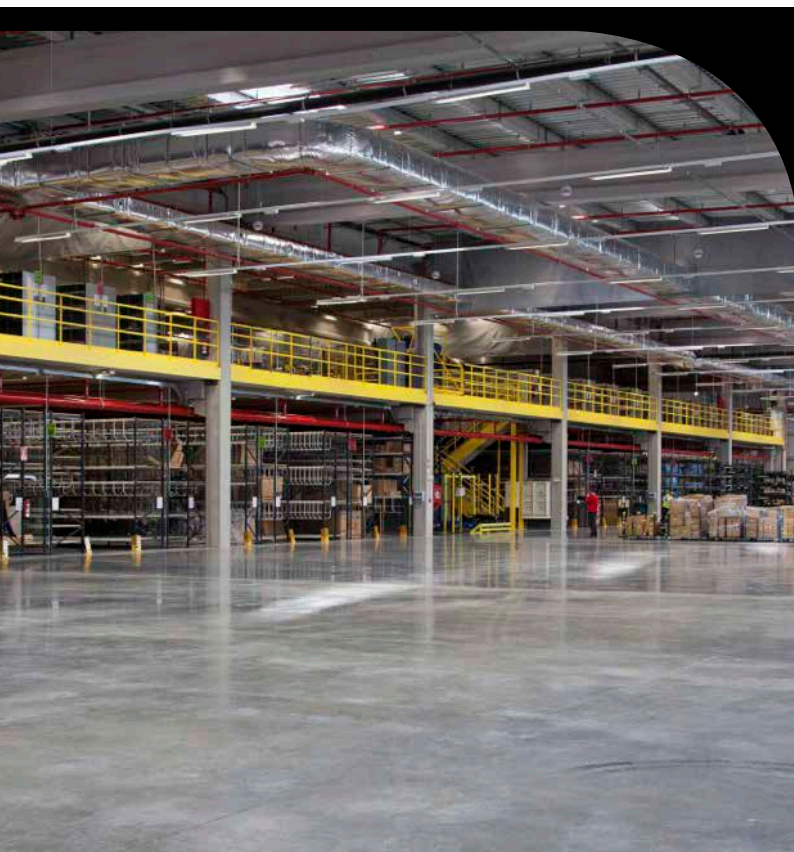
PROTECTION OF LARGE HAZARD AREAS

When it comes to protecting large areas, even those where airtightness of the enclosure cannot be guaranteed or outdoor areas, dry chemical storage tanks are one of the best firefighting solutions because they offer **GREATER PROTECTION COVERAGE**.

They are used for extinguishing fires in hazards where the extinguishing of special materials is required. It is useful on class A, B and C fires and for oil and grease fires (class K) and fires of combustible metals such as lithium, sodium and magnesium (class D).

Powder systems are mainly applicable in fires that require rapid flame knock-down, such as flammable and/or combustible liquid fires, or leaks of combustible liquids or gases during transfer, loading or unloading, surface fires in solids, and are very useful in fires on live electrical equipment.

THESE SYSTEMS ARE USUALLY DESIGNED FOR LOCAL APPLICATION IN OPEN SPACES AND TOTAL FLOODING INDOORS. THE SYSTEM CAN BE TAILORED TO THE PROTECTED SPACE.



Typical applications are:

- *PROCESSING CHAINS*
- *PAINT SPRAY BOOTHS*
- *PETROL STATIONS*
- *FUEL TANKS*
- *DIP TANKS*
- *TRANSFORMER ROOMS*
- *FLAMMABLE LIQUID STORAGE AREAS*
- *HAZARDOUS GOODS STORAGE AREAS*
- *ENGINE AND PUMP ROOMS*
- *OFFSHORE PLATFORMS*
- *ETC.*

SYSTEM COMPONENTS



TANK SYSTEMS

These units are characterized by their two main parts: the dry chemical tank with its accessories and the cylinder filled with nitrogen (propellant) with its accessories.

STORAGE TANKS

The dry chemical tank is made of steel according to the pressure equipment directive, with an inlet for propellant gas and a check valve at the bottom. It is equipped with a pneumatic actuation output valve of the right diameter or burst disc, pneumatic discharge head (actuation pressure 10 bar), pressure reducer and control gauge (0-24 bar) for proper maintenance and relief valve.

STORAGE TANKS SIZE (Kg)

25	85	100	200	550	750	1100
1.500	2.000	3.000	4.000	5.000	10.000	15.100

* SIEX features many other capabilities.
Check for more information

SIEX™ IND has many tanks ranging in capacity for designing the best installation in each case, streamlining system cost.



CYLINDERS

The cylinder filled with nitrogen (propellant) is manufactured under European CE and directive 2010/35/EU on transportable pressure equipment. It provides the necessary propellant to release the dry chemical to the nozzles with the necessary flow and pressure for adequate discharge, resulting in quick and effective extinguishing.

CYLINDER VALVES

Propellant (nitrogen) cylinders feature the most advanced valves: RGS-MAM-11, RGS-MAM-12 and RGS-MAM-RD are made of stamped brass and boast the highest reliability in their class. They are fitted with a burst disc, pressure gauge and optionally gauge with electric contact and/or pressure switch, fastening and actuation hardware.

RELEASE

The SIEX™ IND system is compatible with a large variety of actuators in order to suit any requirement:

- Electrical release
- Local manual release
- Remote manual release
- Pneumatic release
- Pneumatic/manual release
- Pyrotechnic release
- Pyrotechnic/manual release
- Mechanical control panel
- Pneumatic/mechanical heat detection

This wide range of actuators allows adapting the dry chemical extinguishing system design to all types of requirements with total flexibility and without limitation.

NOZZLES

The variety of hazards that can be protected with dry chemical requires adapting the nozzles to the characteristics of each application.

Total flooding nozzles: Allow effectively flooding a protected space.

Curtain nozzles: specifically designed to protect a surface.

Vertical local application nozzles: used to discharge the agent at a certain distance from the hazard.

Each of these types of nozzles is available in different sizes, ensuring the right flow for each case. Their breakthrough development also translates into negligible limitations.

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.

DRY CHEMICAL

TAILORED TO EVERY NEED

ABC DRY POWDER

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 POWDER

It consists of sodium bicarbonate, a very effective agent for type B fires. The idea is to make it resistant to the influence of extreme climates using hydrophobic silicon-based agents. 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 POWDER

The extinguishing agent is designed to combat fires in combustible metals such as lithium and magnesium. It is a compound based on sodium borates. The compound is treated to make it resistant to the influence of extreme climates using hydrophobic silicon-based agents. It is a fine, white powder that flows easily.

THE ACTING PRINCIPLES OF THE EXTINGUISHING AGENT

When discharged directly into the fire area, the powder instantly extinguishes the flame. The extinguishing effectiveness of these products are due in great part to the smothering, cooling and heat blocking qualities of these products, although the main extinguishing mechanism is the interruption of the flame's chain reaction.

APPLICATION

SIEX™ IND can be applied different ways depending on the protected area. These two alternatives are available:

TOTAL FLOODING

In this case, a predetermined amount of dry chemical is discharged through the piping system and the nozzles placed in the hazard area. Total flooding is applicable when the hazard area is an closed room that must be protected in its entirety. Nozzles discharge the agent evenly throughout the enclosure, covering the entire hazard area.

LOCAL APPLICATION

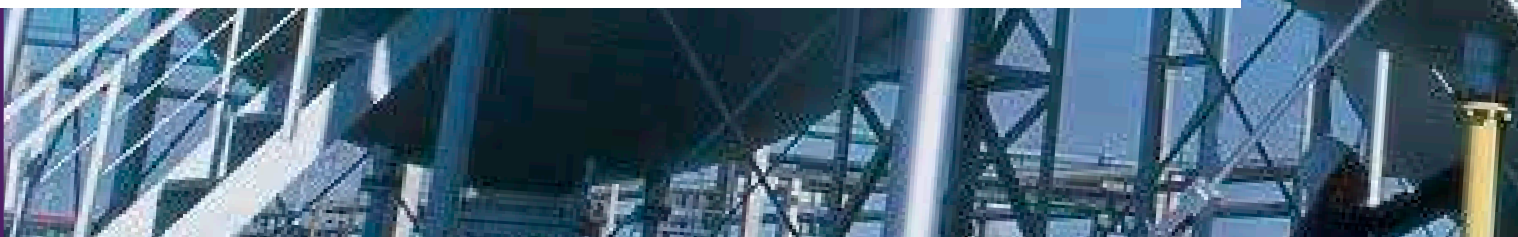
This differs from total flooding in that the nozzles are discharged directly over the protected object or area. It is a good option in cases where the hazard area can be isolated from other risk areas, so that the fire does not spread to other areas adjacent to the protected area and where the hazard area needs to be protected individually.

FIXED STATIONS

Allow a human operator to take charge of the fire by manually aiming the flow of extinguishing chemical powder to the right spot (different with each fire) with maximum safety and effectiveness. A pistol has been designed to achieve the best agent release performance, according to the most advanced principles of ergonomics so the operator can control the fire without the slightest danger.

If they are hazards which could be occupied and the application is total flooding, it is advisable to include safety measures prior to releasing the system.

If, however, the risk is isolated, the release method prioritizes rapid response of the system, so detection and release systems can act autonomously to ensure the earliest possible extinguishing.





BENEFITS

VARIETY OF COMPONENTS

We have a complete range of solid agents, combined with nozzles that best meet the needs of each hazard. Neither the product nor the components may be the same when it comes to protecting hazards as varied as petrol stations, paint booths, rooms with spills, etc.

WIDE RANGE OF CAPABILITIES

We offer cartridge operated dry chemical tanks from 25 kg to 15,100 kg. We also offer specific products for special risks, also with different sizes for agent storage.

POSSIBILITY OF AUTOMATIC RELEASE

These systems can be used with thermal-mechanical or pneumatic detection systems, ensuring the release of the system in any circumstance, being optimal in those cases in which a standalone operation is required.

VERSATILE APPLICATION

The ability to tailor our equipment to the hazard via local application and total flooding extends the range of hazards in which this equipment can be installed.

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