

GRUPO
KOMTES

ELECTRICITY GENERATION AND DISTRIBUTION

 **SIEX**

 **AG SPRINKLER**

Koneba®

Komttech 

 **Macoin**  **Ribõ**


Tecno Envases

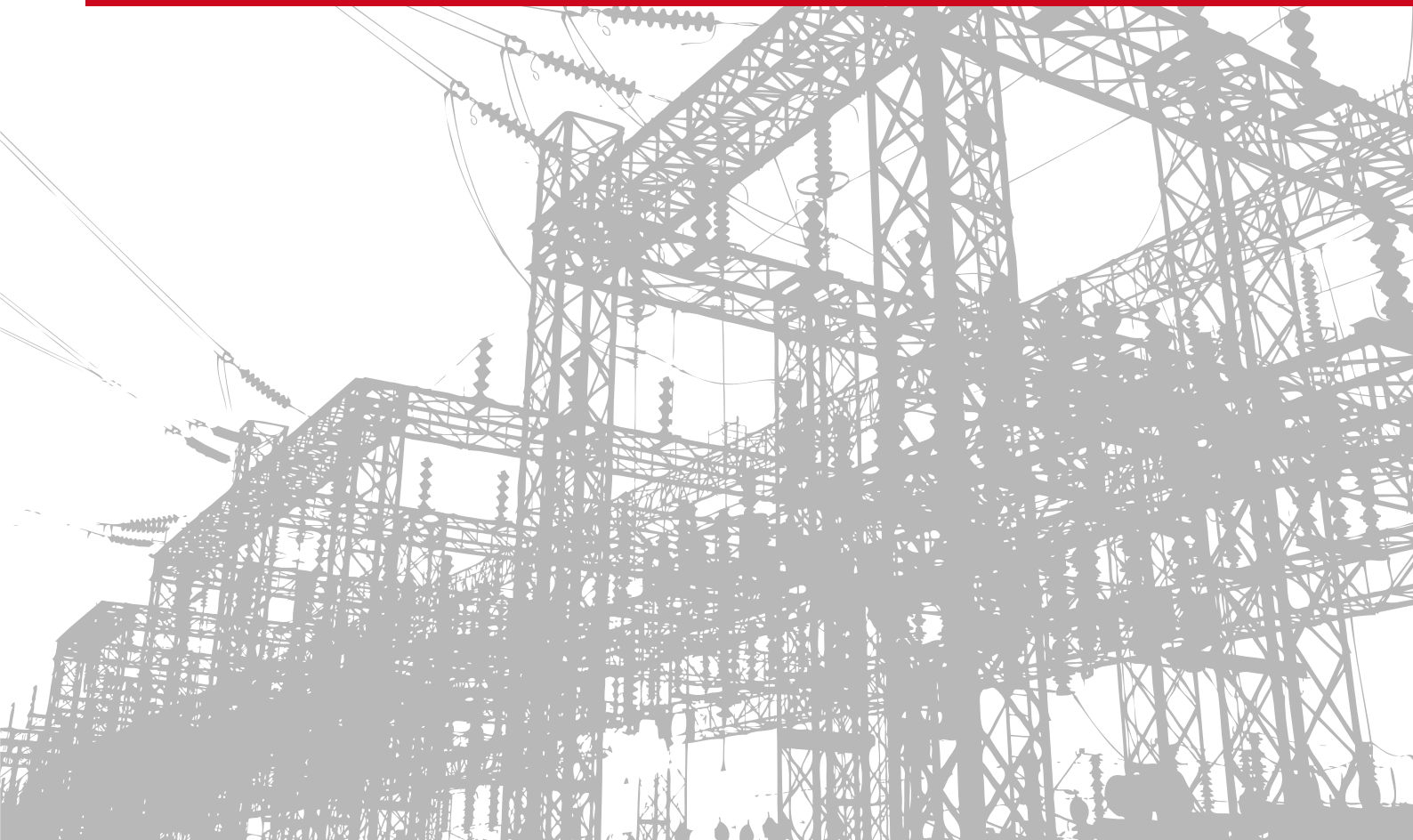


Fire protection in all types of infrastructure is particularly important, but especially so for power stations, where service downtime and damages from cessation of activity can affect a larger number of users, from individuals to businesses of all kinds, potentially extending to neighborhoods and cities with a large social impact.

It is important to undertake correct risk assessment, set appropriate security measures and assess their benefits, performance or limitations. The solutions required protect very specific and specialized systems, necessitating careful study owing to the enormous potential diversity of equipment, facilities and structures that may require such protection.

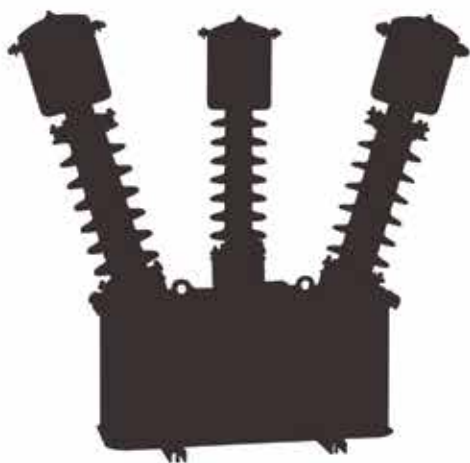


The issue of the strong interdependence of infrastructure with the economy means that even a short interruption, due to natural or technical causes, or deliberate attack, could have serious consequences in the flow of vital supplies or the operation of essential services, as well as causing serious disruptions and safety dysfunctions [...]



GRUPO **KOMTES**

Our experience in the energy sector includes both generation plant and distribution node protection, expertly meeting the needs and design requirements of the different systems that coexist in such locations.



The generation of electricity from other sources occurs in heterogeneous structural and functional facilities such as nuclear power, thermal, geothermal, hydro, wind, solar thermal, solar photovoltaic, combined cycle plants, and the like. In all cases, fire is a real, probable and potentially catastrophic hazard.

**SPECIFIC INDUSTRY
KNOWLEDGE**

+

**MISSION-SPECIFIC
SYSTEMS**

=

**PROTECTION
TAILORED TO
YOUR NEEDS**

We offer proven solutions to specific challenges

STRATEGIC CHALLENGE



CRITICAL FACILITIES

KOMTES acts:
These are essential services; national energy networks depend on their proper operation

KOMTES provides: FAST-ACTING SUPPRESSION

Immediate and forceful action on the source of the outbreak is the way to prevent it from spreading, causing direct or collateral damage that may affect the plant.

DESIGN CHALLENGE



STRICT DESIGN CONSTRAINTS

KOMTES acts:
In the presence of liquid, high fire loads and sources involving high-voltage energized fires, proper risk assessment ensures proper solution configuration

KOMTES offers: PROVEN QUALITY AND EFFICIENCY STANDARDS

High-efficiency equipment for energized fires, spills, and large concentrations of fuels. Internationally-recognized approvals by independent organizations.

FUNCTIONAL CHALLENGE

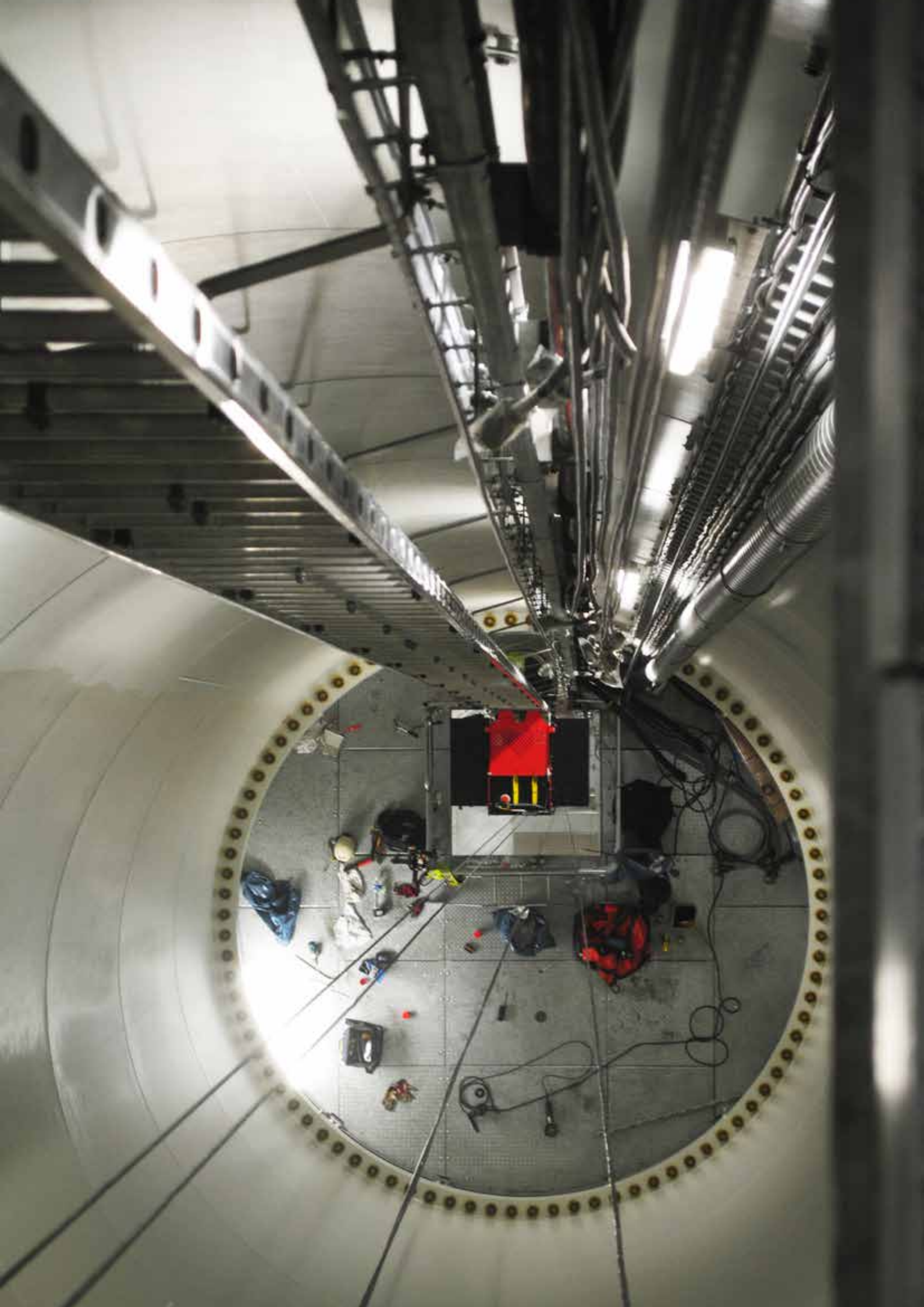


MULTIPLE COEXISTING TASKS

KOMTES acts:
Energy generation and distribution may involve fuel depots, boilers, turbines, transformers or control rooms. The hazards pertaining to each are different, but they are also interconnected and exist in proximity.

KOMTES offers: OUTBREAK PREVENTION, ADAPTABLE MULTIPURPOSE SYSTEMS

The speed of the initial response reduces the risk of fire spreading. Equipment with a broad spectrum of use scenarios allows for a corresponding wide range of applications and greater coverage.





DETECTION

In all instances, the protection of valuable generators, turbines and/or transformers is paramount. For this, detection is essential to alert personnel and act quickly. **KOMTTECH** has a wide range of both analog and conventional systems. Smoke, flame, heat, toxic gas or carbon monoxide detectors allow identifying any of these consequences of fire. In large machinery rooms, or large open spaces in general, the various types of laser barriers or aspirating detection systems are recommended due to the large surface area they can cover.

Since power generating stations contain abundant sources capable of producing dense and toxic fumes, smoke detection points or aspiration is recommended for indoors. If redundant detection also desired, **SIEX** provides thermal and thermal-mechanical and thermal-pneumatic fuses, independently acting in case of explosions or blackouts. In the case of transformers or outdoor risks, traditional thermal detection can be complemented by a hydraulic or pneumatic detection pilot line, equipped with calibrated sprinkler bulbs.

MANUAL METHODS

The protocols of action in response to each substation fire must take into account a large number of variables. One of the most important is the human factor: there should be trained personnel, clear firefighter accesses, and easy access to manual and automatic means that is adequate to sustain prolonged action. With **MACOIN / TECNOENVASES**, it is possible to have portable extinguishers installed on easy-to-use skids, loaded with 50 kg of agent (chemical, water/foam and CO₂). **MACOIN / TIPSA** additionally offers equipment housings and industrial-use hydrants for use by the fire service from outside the building. AG Sprinkler distributes manual monitors, electric or hydraulic self-oscillators, with water and/or foam nozzles.

Given the proximity between processes and the high risk of contagion, **KOMTES** also offers mobile support equipment. **AG FIRE SPRINKLER** manufactures trailers with foam monitors to equip vehicles for immediate action, and **SIEX** manufactures twin agent powder-foam trailers, easily transportable to the affected SOURCE to provide support.

FIXED PROTECTION SYSTEMS

Apart from efficient extinction mechanisms, large and expensive generators, turbines, generators and transformers also require rapid response, as fast as possible to prevent damage to these critical components, high in technical complexity with a long service downtime during any repair or replacement. **SIEX** possesses extinguishing systems using gas, water mist, premixed foam, and chemical powders suitable for such use.

The protection of specific sources of fire hazard, such as machinery, is best done with water mist and CO₂, safe in action and highly effective via both total deluge flooding and localized application.

Water mist is the preferred high technology option, offering maximum efficiency in water use. It does not require sealing of the room, nor subsequent cleaning,

and acts to cool the structure. It is specifically tested for use with generators, transformers, turbines, cable tunnels, and electrical installations. Using either pumping groups or batteries of cylinders, it is the ideal choice for any volume area to be protected, is safe for any staff and equipment present, and is often used for wind turbines and remote applications.

The use of carbon dioxide is restricted to areas with no human occupants. CO₂ is highly versatile and multipurpose, and can be stored in cylinders under high pressure or in low pressure tanks. It comes with numerous security and alarm devices so that electric plant installations are easy to monitor, are safe, and operate uninterruptedly: mechanical weighing, odorizers, sirens, pressure switches, relief valves, backup systems, etc.



For control rooms, protection using inert or chemical gases provides an equally clean action, harmless to people or equipment, and is easy to replace. The option of covering electrical panels or small volumes independently is viable using compact and economical SMS systems, characterized by rapid flooding capabilities and a minimal use of materials and space. If further heat-sensing is desired, sensor tube or mechanical detection systems allow avoiding electronic solutions while yet permitting easy monitoring.

For all these situations, **SIEX** offers explosion-proof equipment for explosive atmospheres

Sometimes, large plants are divided into fuel collection, loading and transport stations, and boilers, generators and distribution substations with a series of interconnected facilities nearby.



Traditional electricity generation in thermal power plants (gas, diesel, combined cycle, coal or biomass) presents the additional risk of large fuel stores and depots, which can cause major fires at the plant and in the surrounding towns.

AG FIRE SPRINKLER manufactures equipment for foam systems, which can separate the fuel from ambient oxygen and suffocate the fire. These employ deluge control points, storage tanks, and all types of fixed or variable flow proportioning, discharge equipment, monitors and movable platforms.

For the protection of transformers, cable tunnels, conveyors, pipe racks and tanks, as well as structural protection, AG FIRE SPRINKLER has a wide range of solutions based on water spray.

For the protection of cooling towers, sprinkler systems or deluge systems may be employed.





SUMMARY OVERVIEW

Comprehensive protection of power generation facilities is a real need, and must be tailored according to the specific requirements of each type. Whether for storage, power generation or distribution facilities, Komtes Group provides effective solutions with the added value of its numerous international standards approvals and certificates of compliance:



ELECTRICAL INFRASTRUCTURE	Komttech	Mocolin Ribó Tecto Emasez	AG SPRINKLER	Koneba	SIEX
Generators	Early and/or redundant detection	Hydrants and monitors. Hydrant equipment housings	Water spray (Only outdoors)	Compartmentalization	Water mist, CO ₂ , Inert agents
Turbines					
Transformers	Hydraulic pilot line, thermal detection				
Cooling towers	-		Automatic sprinkler and deluge systems		-
Fuel Storage	Aspirating smoke detection optical thermal detection	Portable carts Hydrants and monitors. Hydrant equipment housings Fire hose wheels of 45mm and 70mm, with hoses of up to 60m	Foam Systems	THSECS	Water mist
Storage of flammables					
Cable tunnels	Linear heat detection	-	-	-	
Control and surveillance rooms	Smoke detection point	Portable fire extinguishers, 25mm fire hose wheels	Automatic sprinklers	-	Inert gases, Chemicals, Water mist
False floors	Aspirating detection	-	-	-	
Electrical cabinets and switchboards	Aspirating detection and/or thermal fuses	Portable fire extinguishers, carts, fire hose wheels	Automatic sprinklers	Compartmentalization	

DETECTION SYSTEMS

- OPTIMAX
- PREMIUM

INTELLIGENT

Analog and algorithmic systems with voice evacuation.

CONVENTIONAL

Option for remote access via TCP/IP for system management.

SPECIALTY SYSTEMS

- HIGH SENSITIVITY LASER DETECTION VIA ASPIRATION
- LINEAR THERMAL DETECTION VIA HOT-MELT TECHNOLOGY OR FIBER OPTICS
- SPECIAL TEMPERATURE PROBES
- THERMO GRAPHIC CAMERAS
- ASSORTED ATMOSPHERES

AUTOMATIC PROTECTION SYSTEMS

SPRINKLERS

- SPRINKLERS
- VALVE CONTROL SYSTEMS
- VALVES

FOAM

- CONTROL VALVES
- STORAGE TANKS
- FOAM PROPORTIONERS
- PROTECTION OF FLAMMABLE LIQUID STORAGE TANKS AND TROUGHS
- GENERATORS
- MONITORS

WATER SPRAY

- HIGH/MEDIUM VELOCITY OPEN SPRAY NOZZLE
- VALVE CONTROL SYSTEMS

FIRE SUPPRESSION SYSTEMS

CLEAN AGENTS

- SIEX-HC™
- SIEX-HC™ S-FLOW
- SIEX-NC™ 1230
- INERT-SIEX™
- INERT-SIEX™ CFT
- SIEX™CO₂

WATER MIST

- UAC (cylinder groups)
- UAP (electrical / diesel pump unit)

DRY CHEMICAL POWDER

- STORED PRESSURE
- CARTRIDGE OPERATED
- STATIONARY / SEMI-PORTABLE HAND HOSE LINE DRY CHEMICAL EXTINGUISHING SYSTEMS UNITS
- HAND HOSE DRY CHEMICAL EXTINGUISHER TRAILERS
- TWIN AGENT

FOAM PREMIX

AUTONOMOUS DETECTION

KITCHEN SYSTEMS

MANUAL FIRE PROTECTION

HOSE REEL CABINETS

- WITH SEMI-RIGID HOSE
- WITH FLAT HOSE
- ALARM AND EXTINCTION CENTERS

HYDRANTS

- DRY BARREL
- WET BARREL
- BURIED
- CUSTOM CABINETS FOR HOSE AND ACCESSORIES

EXTINGUISHERS

- WATER
- DRY CHEMICAL
- CO₂
- SPECIAL APPLICATIONS (non-magnetic, etc.)

FIRE, SMOKE AND TEMPERATURE CONTROL

SECTORIZATION

- **SMOKE CONTROL:**
 - KORTEX SMOKE FIX 600 C°
 - KORTEX SMOKE AUTOMATIC 600 C°
 - KOTEX SMOKE AUTOMATIC 1100 C°
- **FIRE CONTROL:**
 - KORTEX FIRE E
 - KORTEX INSULATION FIRE EW
 - KORTEX RAIN FIRE EI

ELECTRONIC MECHANISMS OF CONTROL

EXPULSION OF SMOKE

- LOUVER (LAM)
- TWIN FLAP

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