GRUPO KŌMTES

LOGISTICS

SIEX

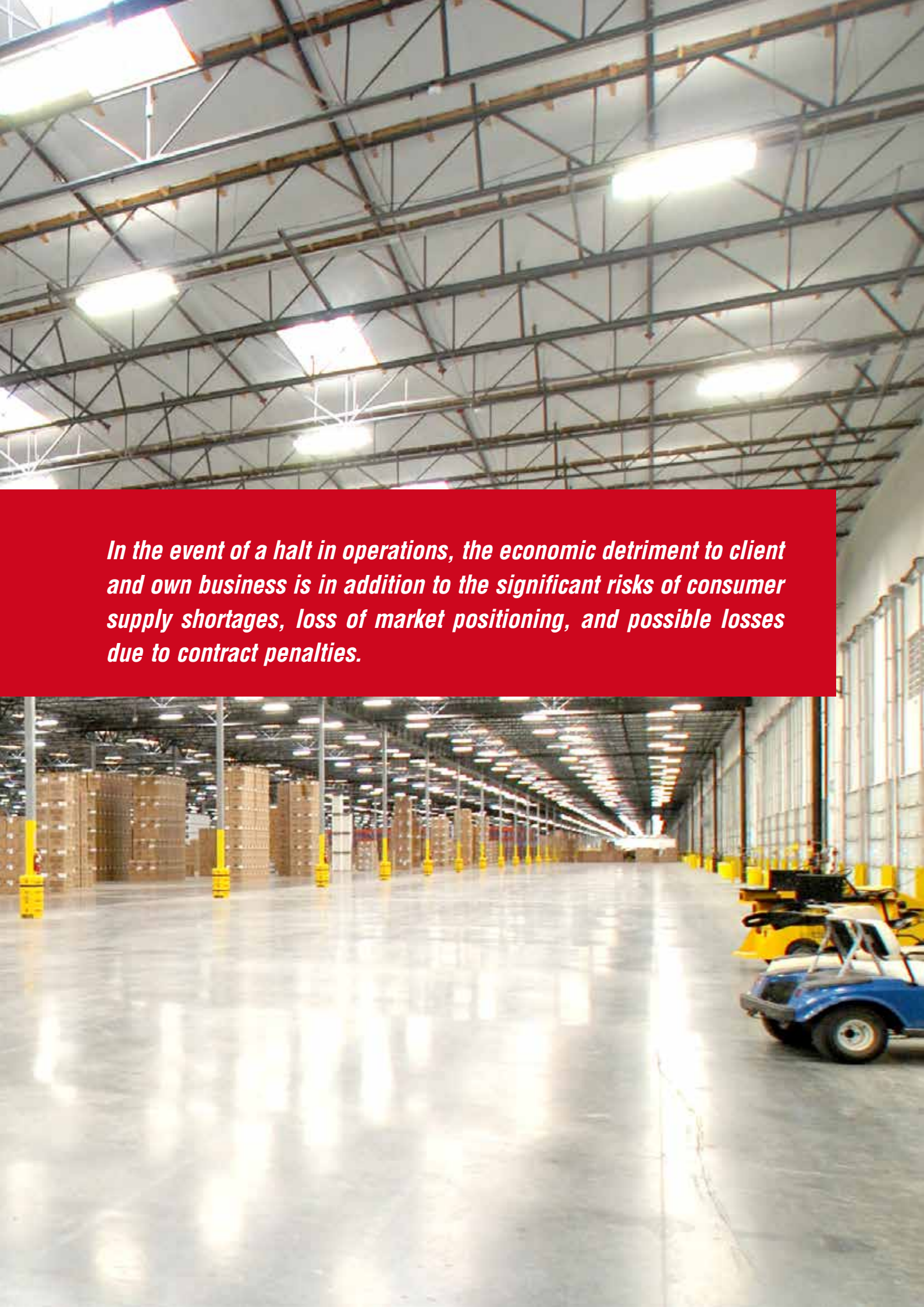
AG SPRINKLER

Koneba®

Komttech

Macoin Ribō

Tecno Envases



In the event of a halt in operations, the economic detriment to client and own business is in addition to the significant risks of consumer supply shortages, loss of market positioning, and possible losses due to contract penalties.

In a globalized world characterized by strong interdependencies, both locally and supranationally, logistics centers are critical points in the supply chain of goods and services markets.

These large storage and distribution facilities concentrate a significantly higher fire load per surface area (when compared with most industrial uses) or even much higher (in comparison to buildings, ancillary areas, etc.) than is the average case for commonly protected installations. Therefore, the need for specific and effective fire protection is inevitable, so much so that is a prerequisite for insurers, investors and major customers.

THE KOMTES GROUP, WITH OVER 50 YEARS OF EXPERIENCE IN THE INDUSTRY, PROVIDES COMPREHENSIVE AND INDIVIDUALIZED SOLUTIONS FOR THE LOGISTICS SECTOR, IN WHICH A COMPANY'S SURVIVAL MAY DEPEND ON THE SEAMLESS CONTINUITY OF SERVICE AND A RAPID RESPONSE TO ANY THREATS.

To prevent economic, human, and environmental harm and damage to business continuity, it is vital that firefighting equipment be in place, in the form of both active and passive protection measures.

FIRE OUTBREAKS

PASSIVE MEASURES	
Preparatory actions	
KONEBA	TCHSES
	Zoning and partitioning
ACTIVE MEASURES	
KOMTTECH *detection*	Special detectors for wide-area coverage: Laser barriers, aspiration
	Remote control access center
MACOIN/RIBÓ *manual methods*	Industrial equipped fire hydrant boxes of 45mm; specialty hoses
	High capacity manual, mobile skid units
AG FIRE SPRINKLER *structural protection*	Storage Sprinklers: Control mode (CDMA, CMSA) and suppression mode (ESFR) sprinklers for high-rack storage use with intermediate levels.
	Cold storage rooms with dry sprinklers
	Hydrocarbon (spill or storage) foam systems.
MACOIN / AG FIRE SPRINKLER / firefighters	Industrial hydrants, equipment housings
	Foam monitors, control stations
	Skid units, hoses, trailers

FIRE SOURCE EXTINCTION

GRUPO KOMTES

For specific protection in the logistics sector, KOMTES Group acts on fire sources with systems that have been designed for either general or miscellaneous storage, storage of reagent products or flammable systems, and also covers issues such as partitioning, and protection of vehicles and complementary operations.

SPECIFIC INDUSTRY KNOWLEDGE

+

MISSION-SPECIFIC SYSTEMS

=

PROTECTION TAILORED TO YOUR NEEDS

We offer proven solutions to specific challenges

DESIGN CHALLENGE

HEAVY FIRE LOADS

KOMTES acts:
Mass storage of high-rack or stacked products of a variable nature, with their associated packaging and often inaccessibly placed, leads to a significant hazard of deep-seated fires and similar outbreaks, creating the potential that any fire will be virulent and potentially devastating

KOMTES offers:
SPECIALIZED SYSTEMS WITH A VERY LARGE EXTINGUISHING CAPACITY

The diversity and growing number of combustible products has led our company to invest in providing the proper equipment for large scale, autonomous repression responses.

OPERATIONAL CHALLENGE

VARIABLE RISKS, HIGH AND CHANGING PROPAGATION RATES

KOMTES acts:
Partition, define and protect: cover every eventuality to ensure complete safety.

KOMTES offers:
FLEXIBLE SOLUTIONS AND MULTIPURPOSE AGENTS

From detection specialized in extinction of very hazardous fires, to reactive or flammable substances, to explosives. Each set of risks can be met with one of our tailored solutions.

FUNCTIONAL CHALLENGE

MULTIPLE ASSOCIATED AND INTERRELATED USES

KOMTES acts:
These solutions must be capable of covering large open or communicating areas and spaces, as well as common everyday hazards, risks from vehicles and so on, and must all work in tandem, closely linked together.

KOMTES offers:
AN EXTENSIVE SOLUTIONS PORTFOLIO

Stationary systems are complemented by manual means of support, partitioning, and smoke evacuation. These systems do not impact normal daily operation of the facility, and provide a wide range of uses.

In the presence of hazardous products such as oil, chemicals, and similar substances, additional means to control toxic emissions that might require personnel evacuations or cause environmental damage must be available.

A logistics platform can be divided into:

- *LOADING AND UNLOADING CARGO AREAS*
- *PROCESSING AREAS*
- *STORAGE AREAS*
- *ANCILLARY USE AREAS*

The latter are where a greater fire load and/or potential sources of fire may be found.

DETECTION

The detection and alarm network is the first line of defense in fire protection: it must be **fully automatic and autonomous**, capable of activating security protocols, initiating evacuation and alerting the fire department.

Speed is essential in detecting and preventing the source from spreading and causing further damage. However, **the typically large volume of logistics facilities presents great challenges in proper protection.**

KOMTTECH markets a wide range of analog and conventional systems, but in the case of logistics centers, the large size of the warehouses make laser systems and **extraction barriers the most suitable solutions.**

Laser barriers offer maximum coverage with a minimum number of devices: up to 100m in length and 14m in width. For that reason, processing or cargo areas can be covered with few devices, yet are set up for maximum performance. To avoid false alarms, an interruption in the laser beam activates an alert, but only the type of beam spread distinctively generated by smoke activates the fire alarm.

Aspiration systems, which absorb and analyze the air through a perforated tube, can also be employed. These, too, offer great coverage per device, with adjustable sensitivity and rejection of false alarms.

In any case, **KOMTTECH** detection systems allow **communication with company-trained personnel**, thanks to their **remote access capabilities** - very useful in large facilities of this kind - as well as the supplied **activate- abort- manual intervention** actuators for each affected area. The remaining occupants evacuate by following the signs, visual clues and audible alerts.

MANUAL METHODS

To facilitate **control of small pockets of fire**, **portable fire extinguishers** can deal with practically any hazard. However, it is **the large capacity extinguishers** placed in large open areas located in the cargo handling, fuel transfer, and similar areas which guarantee greater autonomy of action for the operator. **MACOIN / TECNOENVASES** offers different extinguisher capacities and **agents, mounted on manageable skid units equipped with built-in pressure units for complete autonomy**.

For dealing with events on a larger scale, major logistics centers should be furnished with equipped fire hydrant boxes, such as those recommended by **MACOIN / TIPSA**, **ranging from 45mm up to 70mm, offering high flow for industrial use**. These consist of a flat hose from 15 to 60m, available with textile finishing or rubber coating for extra wear and drag resistance, etc.

As a final measure, firefighting crews can use the standard industrial exterior hydrants from **MACOIN / TIPSA**, designed for special applications or mounted on monitors. Open outdoor areas will be covered with hydrants and equipment housings with connections for firefighters, which come with Siamese valves, are protected against the weather, and are available in different finishes.

AUTOMATIC PROTECTION

If a small fire source cannot be controlled manually, or it occurs in an unoccupied area, automatic protection systems ensure complete and uninterrupted action, 24/7/365. Sprinkler installations, in addition to saving lives and property, protect the integrity of the building and prevent its collapse.

Large storage facilities are protected with special mode suppression (ESFR), control mode (CDMA), or specific application mode (CMSA) sprinklers. **AG FIRE SPRINKLER** offers a wide range of models from K11(160) to K25(360).

The protection of goods in **high rack storage** is done **with sprinklers placed at intermediate levels**, which in addition have cages to prevent mechanical damage that would affect their operation, and anti-water plates to protect against water from the upper levels.

Besides the **ESFR** suppression models, **the latest technology sprinklers for specific application (CMSA)**, intended for storage areas requiring extended coverage, allow optimizing the layout and reducing the need for piping, flow and pressure. Cold storage rooms or enclosures at low temperature, meanwhile, can be protected with **dry sprinklers**, with different head lengths to prevent freeze damage.

On the other hand, systems using **high expansion foam** are an effective solution for those risks where there is limited space for the water reservoir or physical limitations of any kind for sprinkler installations, since every liter of water generates up to 750 liters of foam.
The use of self-oscillating monitors placed at height is an effective solution for those risks in which the structure is not capable of accommodating sprinkler pipes or supporting their weight.

Moreover, logistics facilities may have **warehouses containing flammable substances**. Stockpiles of **aerosols, oils, cosmetics, pyrotechnics or hydrocarbons, among many other gases and flammable liquids**, pose an added hazard which must be specifically protected against.

For areas dedicated to processing or storing hydrocarbons, chemicals or flammable substances, AG FIRE SPRINKLER offers **equipment for low, medium or high expansion foam systems**, which act to separate the burning product from the oxygen in the air, thus suffocating the fire. These systems employ deluge guns; atmospheric or membrane storage tanks; inline fixed discharge foam proportioners; variable flow proportioners or ratio controllers; volumetric dosing systems; pressure balancing systems, discharge equipment such as foam sprayers; medium or high expansion generators, or foam shapers; manual, self-oscillating, electric or hydraulic monitors; and mobile equipment.

PARTITIONING AND CONTROL

Once the structure is protected, it is critical to maintain control over the growth and spread of a large fire. Passive zoning measures and the control of dense or intense flows of smoke and heat keep the fire source isolated while preventing it from becoming uncontrolled. As the logistics industry continually receives and reships third-party products, it is crucial to minimize damage to customer property.

KONEBA supplies a complete set of components for a Temperature Control and Heat and Smoke Evacuation System ("TCHSES" or "SCTEH" in Spanish), as well as partitioning systems employing fire partitions with E, EW and EI classifications, which can withstand temperatures above 1100˚C

In large logistics warehouses fixed **fire curtains can be hung from ceiling areas,** confining the smoke to the affected area. **Extraction vents**, suitable in number and size for high-flow evacuation, facilitate the removal of smoke. The **design is tailored** according to the needs of each project, as well as the type of smoke related to the stored material.

SUMMARY OVERVIEW

Comprehensive protection in logistics facilities with large stores of goods and materials, flammable products, the movement of vehicles, supervisory and management offices, electrical installations, and so on, requires specialized solutions:

PROTECTION AREA		Komttech	Macolin Ribo Tecno Emulsio	AG SPRINKLER	Koneba	SIEX
STORAGE	Cargo areas	Laser barriers and extraction	Portable skid units Equipped fire hydrant boxes of 45mm and 70mm, with hoses of up to 60m	Control or application-specific mode sprinklers	-	Chemical powder, water mist
	Processing Areas				-	-
	Warehouses			ESFR, CDMA, CMSA sprinklers, intermediate levels. High-expansion foam systems.	-	-
	Automated warehouses	Extractors Laser Barriers			-	-
	Flammables	Laser barriers and extractor systems	Portable skid units	Foam Systems	TCHSES	Water mist, CO_2
	Cold storage rooms	Extractors	-	Dry sprinklers or dry control points	-	-
	Conveyor belts	Linear thermal detection.	-	Water spray or control mode sprinklers	Partitioning	Water mist, CO_2
ADMINISTRATION	Offices	Conventional or analog detectors	Fire extinguishers, 25mm equipped fire hydrant boxes	Normal or extended coverage sprinklers	Partitioning	Inert gases, water mist
	Surveillance and data rooms					
VEHICLES	Refueling points	Thermal detection, fuse elements	Portable fire extinguishers	Foam AFFF	-	Chemical powder
	Vehicles		Manual fire extinguishers	Control Mode Sprinklers	-	Fixed dry chemical system
FACILITIES	Electrical facilities and rooms	Early detection Point detection	Fire extinguishers, 25mm equipped fire hydrant boxes	-	Partitioning	Inert gases, water mist, HFCs, tube sensors
	Generators and transformers	Detection via aspiration Thermal Detection		Water spray	Partitioning	CO_2, inert gases, water mist

Komttech

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

AG SPRINKLER

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

SIEX

FIRE SUPPRESSION SYSTEMS

CLEAN AGENTS

- SIEX-HC™
- SIEX-HC™ S-FLOW
- SIEX-NC™ 1230
- INERT-SIEX™
- INERT-SIEX™ CFT
- SIEX™CO_2

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

Macoin Ribo Tecno Envases

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.)

Koneba

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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