



GRUPO  
**KOMTES**

**GLOBAL INDUSTRY**

 **SIEX**

**AG**...  
SPRINKLER

**Koneba**<sup>®</sup>

**Komttech** 

   
**Macoin Ribó**

  
**Tecno Envases**



*The presence of significant hazards in industrial facilities increases the likelihood of an outbreak of fire in such facilities.*

*These can lead to serious property damage and human losses, and affect the environment.*



Large manufacturing plants in the automotive, steel, paper, wood, food, pharmaceutical and petrochemical industries are some examples of installations with a large fire load, where accidental fire can threaten large numbers of staff, causing huge economic losses. One can also expect an environmental disaster in the area or region due to potential emissions and discharges of toxic waste products employed in production processes.

In response to this problem, centers and facilities for industrial use must meet a series of requirements and conditions to ensure their safety in case of fire, preventing its outbreak and/or providing an adequate response if it does. The potential of fire to spread should be limited, and its extinction made possible, in order to eliminate or reduce the damage that might be caused by an accidental fire.

**Fire prevention measures** should be designed to **limit the presence of the fire hazards as well as the circumstances**



**that can trigger them**, whereas **fire response measures** will aim to **control or combat the fire, extinguishing it and minimizing any damage** that might result.

<b>OUTSET OF FIRE OUTBREAK</b>	<b>PASSIVE MEASURES</b> (Protection plan, materials resistance, etc.)		<b>EXTINCIÓN DEL FOCO</b>
	<b>Acciones previas</b>		
	<b>KONEBA</b>	THSECS	
		Partitioning	
	<b>ACTIVE MEASURES</b>		
	<b>KOMTTECH</b> <i>detection</i>	Remote control access	
		Special detectors: flames, sparks, laser barriers	
	<b>MACOIN/RIBÓ</b> <i>manual methods</i>	Extinguishers on portable skids	
		Hydrants and equipment housings	
		Industrial 45mm, 70mm hydrant boxes and foam hydrants	
<b>AG FIRE SPRINKLER</b> <i>structural protection</i>	Sprinklers for ordinary, extra, and storage hazards, in control or suppression mode.		
	Water mist: Deluge systems and nozzles for extinguishing and cooling.		
	Foam: Foam makers, foam discharge equipment, monitors and mobile units for combating hydrocarbon fires		
<b>SIEX</b> <i>clean systems</i>	Water mist: industry-rated and approved		
	CO <sub>2</sub> : combustible liquid fires (Classes B & C), extinction via inert elements		
	Dry chemical powder (Class D): metals, industrial vehicles, reagent products		

# GRUPO **KOMTES**

*The extensive background of the KOMTES Group in all manner of fire suppression products affords us an in-depth knowledge of both normal fire hazards and the requirements for and constraints on the design of firefighting installations inside a building.*



**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:**

Both for processing areas (work involving heat, sparks, electrical overloads, residual waste, etc.) and for storage areas (raw materials, chemicals, packaging), high-autonomy equipment is indicated for these hazards: whether normal or high rating fire dangers

**KOMTES offers:  
HIGH CAPACITY INSTALLATIONS  
WITH MULTIPURPOSE AGENTS**

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

### FUNCTIONAL CHALLENGE



#### MULTIPLE OUTBREAK POINTS, RAPIDLY SPREADING FIRES AND RELATED USES

**KOMTES acts:**

The combined use of fixed and manual methods with multipurpose or specific agents can confine hazards and prevent contagion

**KOMTES offers:  
FLEXIBLE PROTECTION  
SYSTEMS FOR LARGE AREAS**

Fixed and mobile reinforcement systems with specialized agents allowing effective suppressive action wherever the danger is located, and wherever it displaces, as necessary.

### ECONOMIC CHALLENGE



#### ROI LINKED TO PRODUCTIVITY AND EFFICIENCY

**KOMTES acts:**

Systems that emphasize response time, damage control or ease of use: effective rapid action is what makes a minor incident stay minor.

**KOMTES offers:  
FLEXIBLE, ADAPTABL  
E SOLUTIONS**

High-efficiency equipment to minimize financial risk from fire damage, clean-up, inventory or equipment replacement, and/or loss of market positioning due to downtime.

# MANUAL METHODS

The most commonly used devices used to first respond to a fire are manual: each zone of a plant should have the necessary means installed for workers to be able to act at the earliest stage of an outbreak.

The primary means for manually extinguishing an industrial fire is the portable skid or trolley. **MACOIN / TECNOENVASES** sells and distributes a wide range of models and fire suppression agents. Portable **ABC** and BC dry chemical extinguishers, water, foam or CO<sub>2</sub> are located in processing and administrative areas, but for the increased hazard of storage facilities greater autonomy is required: the hose and nozzle-equipped

skids feature up to 50 kg of agent and enjoy maximum maneuverability, readily displaceable to the affected point.

Other manual means are **trailers with foam monitors** from **AG FIRE SPRINKLER** and fixed systems from **SIEX** with hose, nozzle and features adapted to each type of hazard: **fixed CO<sub>2</sub> or twin-agent stations with a hose, dry chemical skids** with manual nozzles, and **water mist sprinklers** with cylinders or pumping units. All are designed for intense and prolonged action on pockets of solid, hydrocarbon or energized fires, allowing the operator to act according to the nature of the outbreak.

**Equipped fire hydrant boxes** are another key element for projecting water drawn from the building mains network. Fire hydrant boxes of 45 and 70mm, including foam, from **MACOIN/TIPSA** are optimal for industrial use thanks to their special discharge nozzles in standard or custom configurations.

For outdoor use, industrial facilities must have **hydrants** for exclusive use by the fire service. **MACOIN/TIPSA** carries different wet, dry and ground outdoor hydrants, and special types for industrial use by monitors. The equipment housing includes a weatherproof base and accessories according to use.



**All of these solutions are customizable in size, material and finish:**

- **Different colors, carbon or stainless steel, or fiberglass;**
- **Finishings for marine and chemical environments;**
- **Various sizes for different needs in reach and autonomy**



# DETECTION

It is essential to have an adequate detection system that allows for the activation of alarm and evacuation systems, extinguishing systems, and those alerting the fire service.

**KOMTTECH** offers complete analog and conventional detection systems. Each zone must have the most suitable components for the hazard in question, and for that reason our Group carries a wide range of equipment that covers all these needs.

**Where possible, early detection systems should be used in areas of high strategic value and major hazard.** Laser barriers and aspiration systems are very effective for covering the large open areas and volumes of an industrial plant.

Once the central unit has confirmed a fire outbreak, the alarm system is activated, consisting of visual signals, acoustic sirens and prerecorded voice messages designed to alert all users to the hazard and proceed to evacuate.

# PASSIVE PROTECTION

After locating the source of the fire, it is important that it remains confined and affects the lowest possible number of processes. To prevent the free spread of flames or hot and/or toxic smoke in these large facilities, **KONEBA** supplies partitioning systems to suit each project.

The fire resistance rating is 180 minutes at 600°C for **smoke control barriers**, normally placed in the upper parts of the structure to control smoke without affecting the daily operations of the facility, while the fire resistance rating of **fire and temperature barriers** is 180 minutes at 1000°C, which are fixed standing to the floor in order to separate and compartmentalize areas.

These facilities are complemented by **extraction slats** on the roof of industrial facility designed to evacuate large

flows of combustible gases, with their size and quantity suitable to the nature of each hazard, as well as **movable irrigated fire curtains** that protect escape routes for facility operators.



# AUTOMATIC PROTECTION WITH SPRINKLERS, WATER MIST AND FOAM



In both processing and storage areas, and other special facilities, the installation of automatic protection is essential. **AG FIRE SPRINKLER** supplies sprinklers and control stations for either fuse-triggered autonomous sprinkler actuation under cold, warm or normal temperatures, or for electrical activation, using signals from a central fire detection unit.

Through us, process-oriented industries have at their disposal regular and extended coverage sprinklers, for both regular and high fire danger ratings.

Storage applications typically will be of the ESFR type: early suppression and fast-response systems. Storage areas at height will also have intermediate protection levels, with shock and drip-protected sprinklers at higher levels using anti-water cages and shields. Systems using Control Mode for Specific Application (CMSA) are also available.

For the protection of transformers, conveyors, storage tanks, cable tunnels, hydraulic basements, structures, conduits, and pipe racks, water mist systems are employed, extinguishing or cooling using deluges, spray nozzles and water curtains.

For areas of processing or storage of hydrocarbons, chemicals or flammable substances, **AG FIRE SPRINKLER** manufactures **equipment for foam systems, which can generate a separating film between the product and the oxygen in the air. These employ deluge control points, storage tanks, all types of fixed or variable flow proportioning, discharge equipment, monitors and movable platforms.**

# SUPPRESSION SYSTEMS WITH CLEAN AGENTS

For various types of industrial establishments, SIEX manufactures complete and specialized extinguishing systems. As an authorized distributor of DuPont™, the **FM-200®** units we carry are compact and versatile, available in approved pressures of up to 60 bar to protect anything from control rooms to electrical panels to machine tools.

To act promptly on a risk within a large facility, **carbon dioxide** and **water mist** systems are optimal, since they do not require sealing the enclosure to protect it and allow localized application without residue or damage to sensitive mechanical or electronic components in complex industrial machinery. Additionally, water mist contributes to the stability of the building by cooling the structure.

In the case of water mist, **applications range from machinery of all kinds to ducts and cable tunnels, with a wide range of diffusers approved** for use on or in confined transformers, enclosed conveyor belts, industrial kitchens, low lying storage areas, etc. Unlike water spray systems, the greater cooling capacity, oxygen displacement and kinetic effects of high pressures significantly reduce the amount of water needed in mist systems.

**CO2** is used to extinguish fires in open indoor, partially or totally closed areas. Machinery and electrical equipment are the most common applications, owing to their **high efficiency on fuel, lubricant and energized fires**; but it is also extremely versatile for **specific hazards**,

such as painting, printing, computing, and wiring facilities, **deep-seated textile fires, and fires involving paper, or the plastic present in any industry today, and even capable of inerting silos or tanks at low pressure.**

Finally, operations that may generate hazardous **metal fires** may be covered by a Class D **chemical agent**, stored in batteries or deposits for both total flooding and for localized application. It is also suitable for localized application or deluge flooding of water-reactive agents present in processing operations. Its simple design, including built-in or attached pressure systems, facilitates monitoring, maintenance and autonomous operation.



*The diversity of production types, in scale, of materials used, and in processes carried out in the industrial sector requires adaptable solutions that complement each other. The Komtes Group, with over fifty years' experience in the field of fire protection, offers the widest range of products, systems and solutions with remarkable technical performance, with the added value of our demanding quality and innovation standards, backed by recognized and prestigious international certification bodies.*



# SUMMARY OVERVIEW

PROTECTION AREA		Komttech	  	 	Koneba	
PROCESSING AREAS	General industrial machinery • heat treatment • abrasion • machining • etc.	Smoke and flame detectors Aspiration	Hydrants Equipment housings Special nozzles	Water mist	Fire and thermal radiation control	CO <sub>2</sub> , water mist, fixed stations
	Conveyor belts	Infrared detection Thermal Linear	Industrial equipped fire hydrant boxes		Partitioning	Water mist
	Electrical equipment	Aspiration			Partitioning	Water mist, FM-200
	Packing and palletizing	Smoke and flame detectors Aspiration	Control or application-specific mode sprinklers	THSECS	CO <sub>2</sub>	
	Cold rooms	Extractors		Dry stations or sprinklers	-	-
	Vehicles or skids	Mechanical or pneumatic detection (fuses)	CO <sub>2</sub> manual fire extinguishers	Control Mode Sprinklers	-	Dry Chemical
STORAGE AREAS	Miscellaneous Storage	Laser Barriers Extractors	Portable dry chemical and CO <sub>2</sub> skids	ESFR, CMSA, CMDA or intermediate level sprinklers. High expansion foam	THSECS	-
	Combustibles and flammable gases	Smoke and flame detectors Aspiration	Portable dry chemical skids	Foam Water mist	Stationary smoke and fire curtains. Smoke and gas extraction systems	Water mist
	Packaging, paper and plastics	Laser Barriers	Portable dry chemical and CO <sub>2</sub> skids	Control or application-specific mode sprinklers		Water mist, CO <sub>2</sub>
	Finished product	Aspiration	Industrial fire hydrant boxes	ESFR, CMSA, CMDA or intermediate level sprinklers. High expansion foam		Water mist
	Automated warehouses					Local application with CO <sub>2</sub> , water mist
USOS COMUNES	Oficinas y despachos	Analógica y convencional	Extinguisher (6kg)	Normal or extended coverage sprinklers	Irrigated movable curtains	Water mist, inert gases
	Centros de datos, vigilancia o salas de ordenadores	Detección de humos Aspiración			Extraction and venting	HFCs, water mist, inert gases

**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™CO<sub>2</sub>

**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
- CO<sub>2</sub>
- SPECIAL APPLICATIONS (non-magnetic, etc.)

**FIRE, SMOKE AND TEMPERATURE CONTROL**

**SECTORIZATION**

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

**ELECTRONIC MECHANISMS OF CONTROL**

**EXPULSION OF SMOKE**

- LOUVER (LAM)
- TWIN FLAP

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