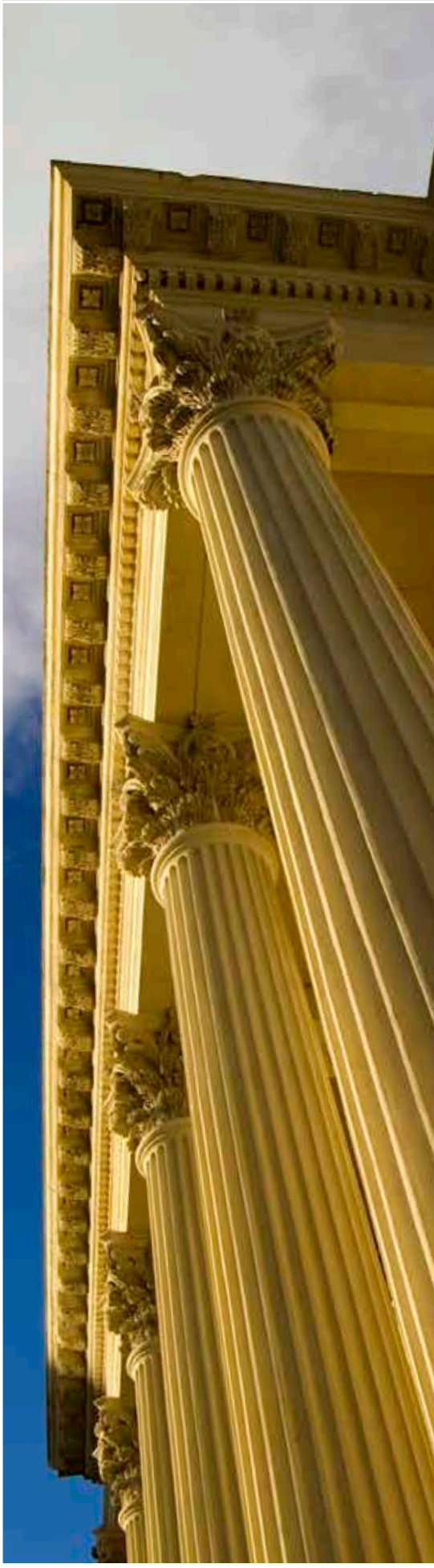
PROTECCIÓN DE
RIESGOS ESPECIALES

# AUTOMATIC FIREFIGHTING SYSTEMS IN

# BANKS

SIEX
WATER MIST SYSTEM




# Bank Security

*In many cases, corporations and large companies, aware of their responsibility to their customers, employees and adjacent premises design systems that allow them to contain risk while, at the same time, being able to carry on their business.*

*SIEX has VdS approval for the protection of OH1 hazards.*

Undoubtedly, Bank Security is and always has been the basic starting point for the development of so called 'Private Security'.

An approach, analysis and implementation of security systems and services on a constantly evolving area is necessary and subject to various specific legislative requirements. The banking sector requires constant updating for proper development of the goals for the safety of people and property.

**The goal is to meet the general needs of this user group: banks, financial institutions, bureaux de change, etc.**

New conditions result in new needs, including the need to be in safe buildings adapted to the existing risk factors.
Within the safety plans of financial institutions, one of the most important aspects is the fire protection plan, via analysis and risk assessment, protection equipment, emergency and evacuation plan and implementation.

The protection covers the following areas: Government buildings, Banking and Saving Banks, Professional Practices, Technical Offices and, in general, any area with offices and similar activities.

# Main risks

The most common sources of fires in financial institutions are:

- Technical faults in electrical, pneumatic and mechanical equipment.
- Refurbishing and maintenance activities.
- Arson.

Banks may have a large number of installations capable of generating significant risks:

***Air-conditioning and heating systems,*** *which may carry smoke from a fire from one area to others.*

***Electrical outlets for various uses,*** *such as those used for mobile phone chargers, laptops, video players, heaters, etc.*

***Combustible gases,*** *used for cooking or heating, generally using LPG, town gas and natural gas.*

In addition to offices and, where major sources of fire may be found (including paper storage and documentation, computer equipment, rubbish bins, miscellaneous equipment and furniture), one of the most relevant and likely fire hazards in such entities are the technical and server rooms.

***DPC´s are strategic points in any organization. In them is stored all the company's information, presumably one of the greatest assets of the company.***

In case of fire, losses are valued not only by the material value of the equipment, but are significantly greater when the chain reaction that occurs in the organization is taken into account: loss of stored information, often irrecoverable; loss of productive time, where normal business is impossible when data is not available, and even losses incurred as a result of time spent on reacquiring lost information.

## *Sources of fire*

*The main causes of fire that may occur in this type of facility are:*

***SPARKS DUE TO SWITCHES, SHORT CIRCUITS, OVERLOADS, STATIC ELECTRICITY, DIRT OR EXTERNAL ELEMENTS THAT MIGHT CAUSE FLAMING FROM OVERHEATING, ETC.***

*It must also be borne in mind that the vast majority of technical equipment rooms have false ceilings and floors, through which electrical wiring carries both power and information and these must be protected, since they are potential sources of fire with limited potential for visual inspection.*

*These centres are left unattended for much of the time (approximately two thirds of the day), and this is when the outbreak of fire can be a disaster.*

# Security Objectives

Banking corporations with large numbers of small branches distributed throughout the nation or internationally accumulate a high risk of fires, and this increases exponentially with volume.
Monitoring and maintaining FP installations requires responsible management and constant supervision; in many cases it is complicated by lack of information.

Most bank branches occupy premises on the ground floor of residential buildings and are adjacent to other shops. It is quite possible that the fire should not only devastate the branch office but also affect these neighbors, with unpredictable effects. So if the goal of any fire detection system under normal conditions is to reduce the reaction time and thus minimize the damage; in this type of installation not only early fire detection, but rapid transmission of the alarm and the immediate implementation of the emergency plan should be of special concern.

**Time is of the essence. This factor can be lessened only if we have access to immediate and accurate information.**

New generations of fire detection and control systems use communication protocols to remotely transmit any system status, type of equipment and alarm point. Each entity can select the solutions best suited to its needs and size, including the adoption of redundant systems.

## Security objectives focus on avoiding the

# CONSEQUENCES OF FIRE

**High cost in human lives and injuries.**

**High cost in damage to property.**

**High cost of lost production and information.**

**High cost of lost productivity until the resumption of business.**

# Extinguishing methods

It is important to have a suitable detection system, but other **ACTIVE PROTECTION** systems are very important, especially when the premises are unoccupied. Any delay in intervening results in a disaster and, as a result, temporary or complete cessation of business with the associated costs. Surrounding buildings, which could themselves constitute a risk to people and property will probably also be affected. We can minimize the above by applying the means which technology provides us with.

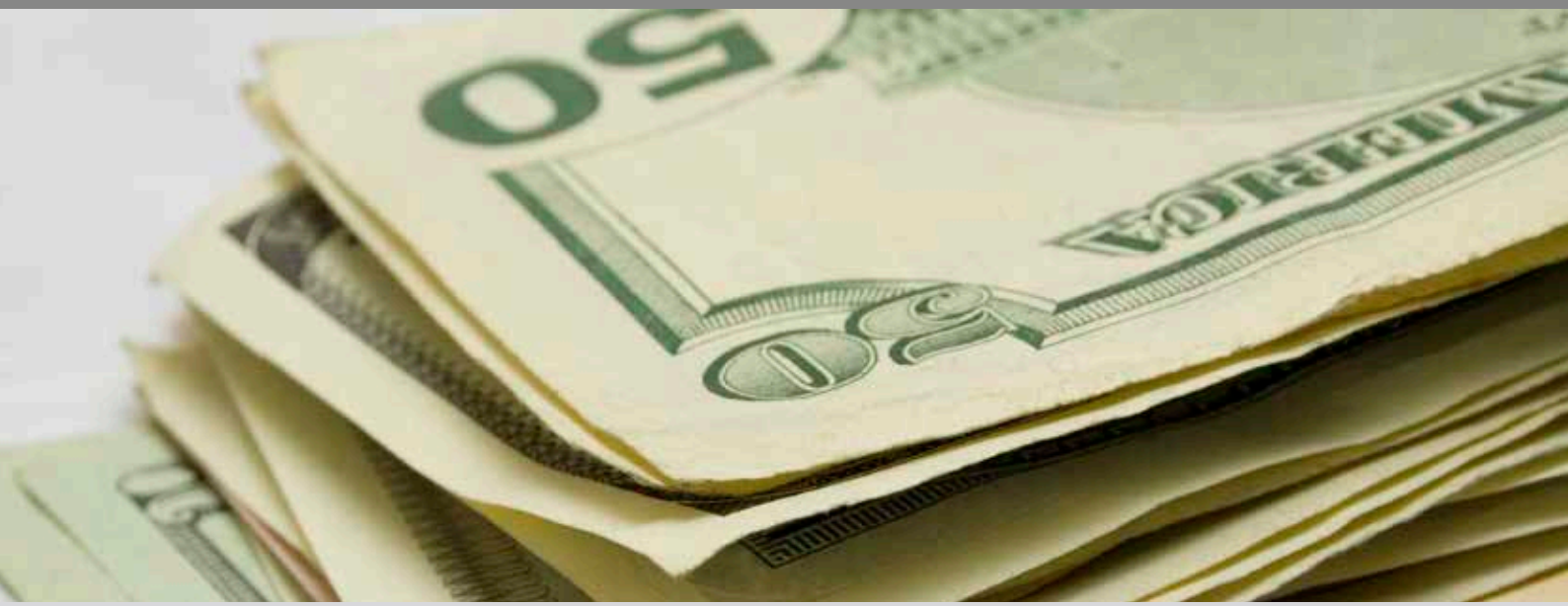
***SIEX provides high-tech systems for the security of all financial institutions and adjoining structures for the protection of their facilities.***

The solution is to install a **WATER MIST** system because, in this way, the fires are controlled at a suitable stage, with no extra risk to personnel, although for certain special hazard locations other extinguishing agents such as SIEX-HC™ or INERT-SIEX™ may be used.

**SIEX™ WATER MIST SYSTEM** is a technology used for many applications and is compatible with electrical and combustible equipment and therefore suitable for high-risk areas, not just public spaces.

Such systems require less water, up to 85% less than traditional sprinkler systems, which results in the installation of smaller diameter pipes and smaller space requirements. The flexibility of this equipment makes it easy to adapt to modern new banks, as well as the refurbishing of existing ones.

***A single SIEX™ WATER MIST system can protect the whole building, with simple installation and requirements which are much higher than those of traditional systems.***



# Solution

## WATER MIST

The water mist optimizes the extinguishing efficiency of water as compared to conventional extinguishing solutions by atomizing water into tiny droplets.

**The SIEX™ WATER MIST SYSTEM, as an active protection system, is fast becoming one of the most developed and useful technologies in the fire-fighting industry.**

This system plays a central role in today's fire protection. Water mist extinguishing systems are those in which water resources are optimized by dividing the volume of water discharged into tiny droplets, leading to a very high cooling capacity for a given amount of water.

SIEX WATER MIST SYSTEM

## OBJECTIVES

**CONTROL:**
TO LIMIT THE GROWTH AND SPREAD OF FIRE.

**COOLING:**
a considerable drop in the temperature of the gases and the near-by air

**SUFFOCATION:**
reduction of the oxygen concentration around the fire controlling

**FUEL SEPARATION:**
droplets resting on the surface of the fuel prevent heat reaching it

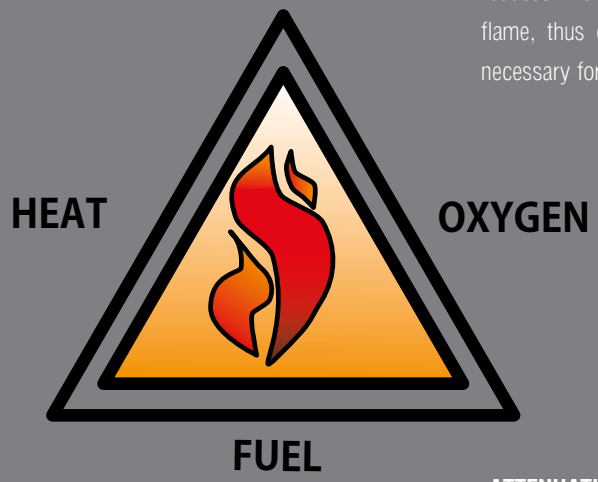
**FIRE BARRIER:**
water droplets suspended in the atmosphere absorb heat in the form of radiation

**SUPPRESSION:**
TO REDUCE THE HEAT RELEASE RATE OF FIRE.

## RELEASE METHOD

**COOLING:**
Water droplets come into contact with the flame or burning object and absorb much of the heat they contain. This eliminates one of the three elements necessary for there to be a fire.

**SUFFOCATION:**
Liquid water increases its volume by a factor of about 1,600 as it vaporizes. This change of state can be produced locally by the direct effect of the flame and throughout the room if there is a high enough temperature. The existence of this water vapour reduces the oxygen in contact with the flame, thus eliminating a second element necessary for the fire to exist.




**ATTENUATION:**
The mist generated in the enclosure absorbs much of the heat radiated by the flames, thus protecting near-by objects.

# Benefits

Here are some of the many advantages provided by water mist extinguishing systems:

- **Efficient and reliable fire protection systems.**
- **Much lower water requirement.**

*Sprinklers systems*

*SIEX WATER MIST System*

- **Much smaller pipe sizes.**
- **Application versatility.**
- **Economy of use and maintenance.**
- **Environmentally friendly extinguishing agent.**
- **Compatible with electrical equipment.**
- **More tolerant of lack of air-tightness of gas systems.**
- **Effective on flammable liquid fires.**
- **Harmless to protected equipment, people and the environment.**
- **Minimal damage to the contents.**
- **Drastic reduction of the temperature in the compartment.**
- **Oxygen level not affected.**
- **Scrubbing water-soluble smoke and toxic gases from atmosphere**
- **Prevention of reignition.**
- **Ease of testing - reliability.**

## Our commitment

### CHOICE OF SYSTEMS

SIEX has the widest range of products and systems to suit different needs, both as regards pressures and extinguishing agents.

### COMPETITIVE PRICE

Optimizing all of our processes make us more and more competitive worldwide.

### SPECIALIZED ENGINEERING

Our highly qualified staff ensure the best service for customers both as regards technical advice on the choice of system, and solving any problems that might arise after installation. Backed up by our extensive experience and a track record of successful projects.

### INNOVATION

At the forefront of innovation in every product we develop, ensuring the technical features offered.

### QUALITY GUARANTEE

All products meet the highest quality requirements and internationally recognised official approvals.

# OTHER SPECIAL HAZARDS PROTECTING BY SIEX:

SERVICE STATIONS
ARCHIVES AND LIBRARIES
DPCs
PAINT SPRAY BOOTHS
ELECTRICAL PANELS
INDUSTRIAL KITCHEN
TURBINES AND GENERATORS
ROAD TUNNELS
NATURAL GAS PLANTS
CLEAN ROOMS
CABLE TUNNELS
TELECOMMUNICATION CENTRES
HOTELS
HOSPITALS
EDUCATIONAL ESTABLISHMENTS
TRAIN AND UNDERGROUND STATIONS
TRAINS
TRANSFORMERS
OFFSHORE PLATFORMS
SOLAR THERMAL PLANTS
MACHINE TOOLS
PRINTING INDUSTRY
HISTORIC BUILDINGS
ROBOTIC PARKINGS
WIND TURBINES
STEEL INDUSTRY
BANKS
OFFICES
LARGE VEHICLES
CONVEYOR BELTS
GAS PUMPS
OIL & GAS
TIMBER INDUSTRY

C/ Merindad de Montija, 6
P.I. Villalonquéjar
09001 Burgos (SPAIN)

tlfno: +34 947 28 11 08
fax: +34 947 28 11 12

siex@siex2001.com
www.siex2001.com

SIEX®