

ESS | Wind Turbines | Electric Cabinets | Transformers

Revolutionary Fire Suppression Systems

Made in Germany



detexline
electric

ROBUST - PATENTED - UNIQUE!
detexline® combines simplicity and robustness,
making it the leading fire suppression
solution for the most demanding conditions.

Reliability and low maintenance
Directional Valve innovation

VdS . ISO9001
. approved product





Efficiency & Robustness



The power of liquid extinguishing agent

A large amount of fine droplets of liquid agent is sprayed through the special patented nozzles forming a huge cooling reaction surface. Thus, the fire will be quickly deprived of thermal energy, leading to a rapid temperature drop. The cooling effect breaks the reaction necessary to support combustion.

In addition, after the entire extinguisher has been dispensed, nitrogen propellant gas will be discharged from the patented container, resulting in a hybrid suppression system, also ensuring fire suffocation.

Fully Autonomous Fully Pneumatic - self-contained

100% Stainless Steel No plastics in the core system

LIQUID FIRES

Fuel, lubricant and hydraulic fluids



SOLID FIRES

Plastic, rubber, wood, sawdust, wires, cables, fibre

ELECTRICAL FIRES

Electrical cabinets, substations, transformers and other equipment



Fluorine Free

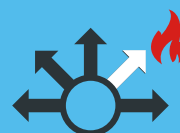
Directional Valve System



Protection for Multiple Cabinets with Directional Valve Smaller System, Greater Protection

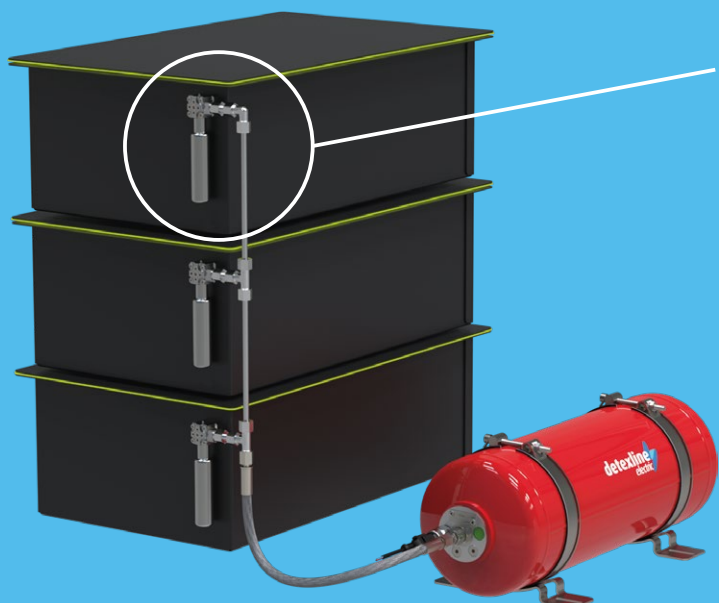
By enabling independent activation of each suppression circuit, the directional valve significantly reduces system complexity while enhancing safety, reducing agent consumption, and optimizing response time. This not only minimizes potential downtime but also ensures that only affected areas are targeted, preserving the integrity of unaffected components.

Effective on:
Open doors / ventilated cabinets





Innovative Protection for Multiple Battery Packs

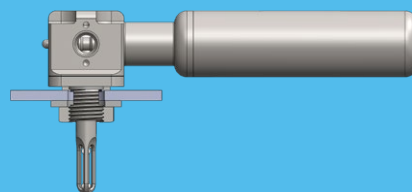


SPY-P

Individual protection for each battery pack

- ✓ Detection
- ✓ Suppression
- ✓ Directional Valve

...in a single unit!



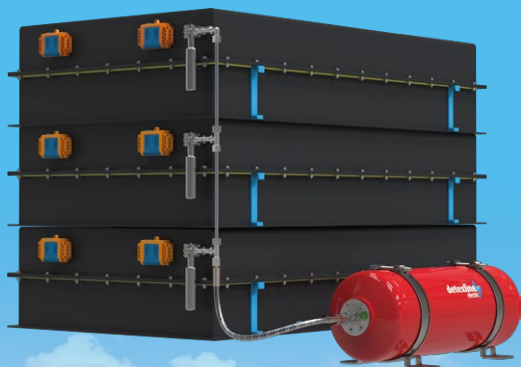
SPY-P

spy-p is the new form of individual protection for Lithium batteries.

This innovative system combines detection, suppression, and a **directional valve**. This makes it possible to identify exactly where the fire is located and direct the extinguishing agent exclusively to the affected cell.

When activated, it targets only the compromised battery cell, leaving other batteries and surrounding systems unaffected. By flooding the affected cells, it provides cooling and prevents the fire from spreading to adjacent batteries.

The system is designed to create the necessary time window for a fire brigade to intervene safely after activation, protecting surrounding equipment and reducing risks during firefighting operations.





1 Line System (detection and extinguishing)
Single pipeline for detection and extinguishing.



No Pressure
The extinguishing agent container is made of stainless steel and is pressure-free in the operating state. The tubing is also pressureless.



No Electricity
No electricity needed in the system.



5 Years - No Parts Change
Long savings - durable and resistant parts.



Ultra-fast Detection
Response speed: Ultra Fast Response.
False alarm proof. Based on "temperature" parameter for pneumatic activation.



Operation Temperature Range: -30°C to 80°C
Prepared for extreme climates, whether in the desert or in the mountains.



Capable of Working in Extreme Conditions
Shock and vibration resistant.



Stainless Steel
Precision manufacturing - highly durable stainless steel.



Very Low Maintenance
The absence of pressure, combined with the system's simplicity, means maintenance is almost exclusively visual.



Fully Mechanical / Pneumatic
The entire system is self-contained. It does not require manual operations and does not depend on external controls, such as control panels or electrical detectors.

Possibility of multiple temperature ranges in a single system.
57 °C | 68 °C | 79 °C | 93 °C | 110 °C | 141 °C | 182 °C | 230 °C | 260 °C

Operates in highly ventilated places and in open spaces



Always On, Always Reliable!

- ✓ **No-Pressure System**
- ✓ **No Electricity Required**
- ✓ **Constructed Entirely in Stainless Steel**

Energy Sto





Long-Term Savings and Effective Protection

Fictional representation

Almost Maintenance-Free for 5 years:

No need for the usual annual maintenance as it is not pressurized!

No False Alarms:

Patented, accurate and reliable detection system.

Make Your Own Maintenance:

Your own staff - no need for external companies.

How it Works

The detexline system operates with an unpressurized container and piping network, ensuring maximum safety during standby.

Activation occurs through SPY thermal detectors, which respond to excessive heat. When triggered, the detectors release the pressure in the pilot line and cylinder control valve, initiating the discharge of the extinguishing agent.

Tiborex Absolute is then deployed through fine spray nozzles, creating an immediate cooling effect and extinguishing the fire within seconds.

The system can also be manually activated remotely, and optional alarm and test buttons can be integrated for added functionality and system monitoring.

| | |
|------------------------------------|---|
| Name | detexline® |
| Temperature Range | -50°C / -30°C to 80°C |
| Detection Technology | Rise of Pressure |
| Detection and Extinguishing Line | 1 single piping network |
| System Pressure | No pressure |
| Detection Technology | SPY detection element - Stainless steel |
| Trigger Temperature | Glass ampoule, 9 independent temperatures |
| Life of Detectors | up to 15 years |
| Nozzle Type | Fine spray nozzle |
| Extinguishing Agent | TiboRex Absolute |
| Extinguishing Agent Volume | 4, 7 14, 24L |
| Extinguishing Technology | Fine spray technology |
| Extinguishing Container (pressure) | Pressureless (sealed cartridge inside) |
| Product Material | Stainless steel |
| Alarm Signal Switch | Yes |
| Maintenance Inspection | Annually |
| Parts Replacement Duration | 5 to 15 years |

Certifications for protecfire various systems:



SBF127:17

FA127

SPCR183

UNECE R-107



System Components

Compact & Fast to Install



Watch the Video



1 Directional Valve

The system redirects the extinguishing agent only to the area where the detector was triggered, allowing for accurate suppression and minimal agent consumption.



3 Fine-Spray Nozzles

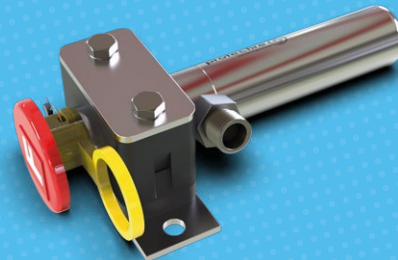
- Unique patented nozzle solution
- Quick and easy to install - Reduces installation time by ~70%.
- Very small - Virtually fits anywhere
- Stainless steel
- k4 factor - Fine spray technology
- Up to 130° spray pattern
- High quality, heavy-duty nozzle caps



2 SPY thermo-pneumatic detector

- Unique patented detector
- No electricity required
- High-finish stainless steel
- Response speed: Ultra Fast Response RTI 12
- Available detection temperatures:
- -57°C -68°C -79°C -93°C -110°C -141°C -182°C -230°C 260°C

Watch the video



4 Pneumatic Manual Actuator

- Unique patented pneumatic activation system
- Stainless steel
- Safety locking system
- Argon gas activation

5 Extinguishing Agent Tank

- Patented - Unique Pneumatic Release System
- Can be placed in any position!
- Stainless steel with electrostatic paint finish Ral3000
- Patented - Stainless steel actuation system
- Liquid Agent: Tiborex Absolute - exclusive protectfire agent
- Effective against liquid, solid and grease fires.

Watch the video





Extinguishing Agents Comparison

| | TiboRex Absolute | Water | Foam | Powder | Gas |
|----------------------------------|------------------|-------|------|--------|-----|
| Fast Temperature Reduction | + | - | - | - | - |
| Surface Blanketing | + | - | + | - | - |
| Quenching Effect | + | - | + | - | + |
| Fine-Spray Technology | + | + | - | - | - |
| Fluorine Free | + | + | - | - | + |
| Temperature Range -50°C to +80°C | + | - | - | + | - |
| Danger to Persons | + | + | - | - | - |

Ultrafast extinguishing

Only small amounts of extinguishing agent required. Tiborex rapidly delivers a huge cooling power. The object to be protected remains almost undamaged.

Ultrafast cooling

Enormous reduction of surface temperature. Avoidance of re-ignition. Reduced effect of fire. Quick interruption of combustion process.

The cooling effect

The enormous cooling effect of Tiborex Absolute is mainly based on **two physical properties**:

Quenching effect

Rapid removal of thermal energy therefore removing heat, hence no combustion or fire in hidden cavities.

Blanketing fat and oil fires

When mineral, animal or vegetable fats and oils burn, Tiborex Absolute uses chemical reactions to form a closed, gas-proof protective layer quenching the fire and protecting the hot fat or oil from re-ignition by cooling them down very quickly.

Residue monitoring and guaranteed quality

Residues of the extinguishing agent on the object can be identified with the help of ultraviolet light. A chemical analysis (DNA) can verify and confirm that the original Tiborex Absolute was used.

Environmental friendliness

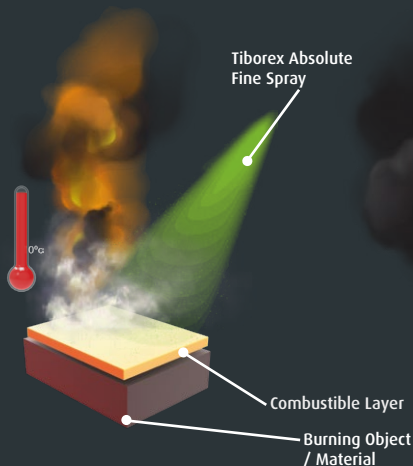
Ecological and 100% fluorine-free extinguishing agent. Biodegradable. Non toxic to humans and animals.

Cooling effect due to water evaporation: The fine-spray nozzles developed specially for Tiborex Absolute produce very fine droplets, smaller than 100µm, when discharging the extinguishing agent. As a result, ultra-fast evaporation of the liquid share in the extinguishing agent is achieved. Due to the required enthalpy of evaporation of 2.26 MJ/kg (equivalent to 1 litre of water) energy is extracted from the burning object in a minimum of time and it cools down substantially.

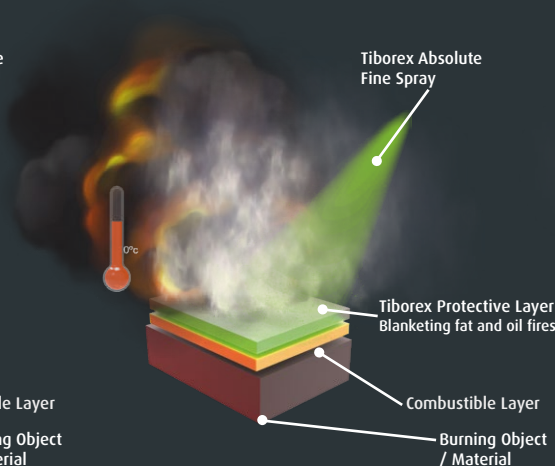
Cooling effect due to sublimation: During the evaporation of the aqueous phase some of Tiborex Absolute's main components form crystalline structures. With the still existing combustion temperature, these solid structures change from the crystalline phase to a gaseous phase. The enormous enthalpy of evaporation (heat) required for this amounts to 7.23 MJ/kg.

3 stages fire suppression

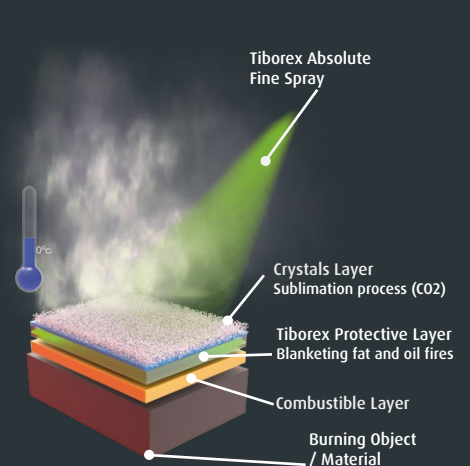
1 Cooling Effect Fine Spray Droplets that penetrate fire



2 Oxygen Suffocation by evaporation



3 Ultra Cooling through Sublimation Layering with solid crystals that convert to gas





Fictional representation. The suppression system shown does not correspond to a real system

