

Special Vehicles for Urban Cleaning, Waste Management, Road Maintenance, and Green Area Services

Revolutionary Fire Suppression Systems

Made in Germany



SBF127:17

FA127

SPCR183

UNECE R-107

TÜVNORD

DMT

KBA

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RAG

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Deutsche Steinkohle

detexline 4MC

ROBUST - PATENTED - UNIQUE!

The need for simplicity and robustness makes detexline 4MC the leading solution for heavy-duty continuous-operation machinery.

Suitable for all types of vehicles used in:
Urban Cleaning and Maintenance
Waste Management and MSW Collection (Municipal Solid Waste)
Road Maintenance and Public Spaces
Green Area Management





Efficiency & Robustness

NO FALSE ACTIVATIONS

high resistance to shocks & vibrations

100% Stainless Steel

No plastics in the core system



Tiborex Absolute is specially formulated to extinguish fires involving the diverse and challenging materials found in garbage trucks, including:

- Organic waste and solids
- Plastic and synthetic materials
- Oils, greases, and flammable liquids
- Electrical components and wiring

Its rapid action cools and smothers flames, preventing re-ignition and minimizing damage. Non-corrosive and residue-free, Tiborex Absolute protects sensitive mechanical and electronic parts while effectively tackling the complex fires typical in waste collection vehicles.



LIQUID FIRES

Fuel, lubricants, hydraulic fluids, and oils from waste materials

SOLID FIRES

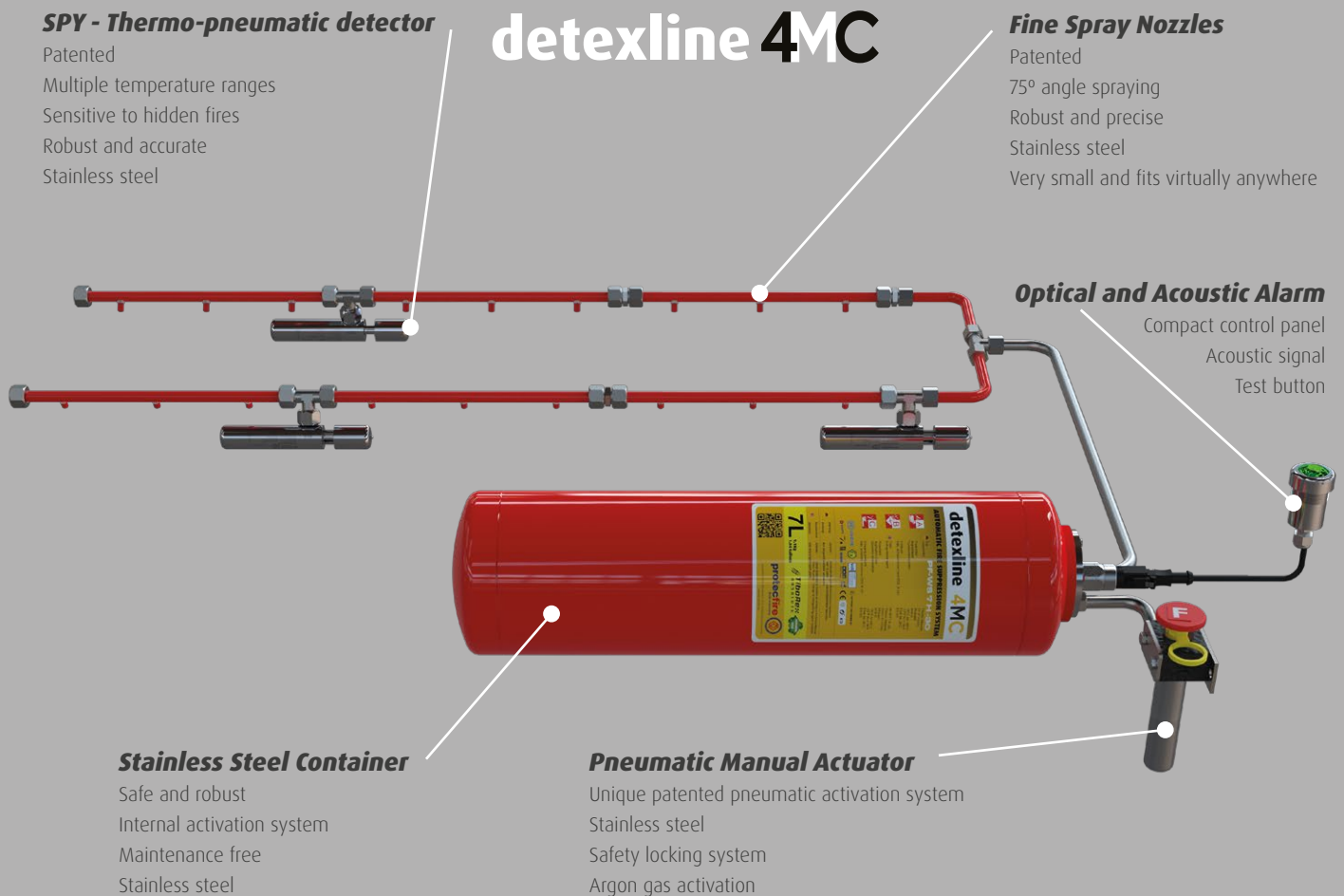
Organic waste, plastics, rubber, wood, cardboard, textiles, cables

ELECTRICAL FIRES

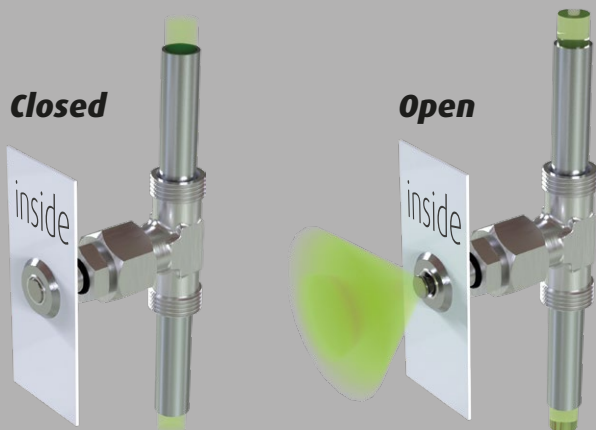
Control panels, wiring harnesses, batteries, and other electrical equipment



Fully Pneumatic - Self Contained



Impact-Resistant Nozzle for Debris-Filled Compartments



High-Resilience Nozzle with Automatic Opening

This special nozzle features an internal piston that opens automatically with extinguishing agent pressure. Fully sealed when inactive, it is built from stainless steel, highly resistant to abrasion, and designed to prevent debris accumulation.

Key Benefits:

- Automatic activation by agent pressure
- Fully sealed to prevent clogging
- High mechanical and impact resistance
- Stainless steel construction for durability
- Debris-shedding, low-maintenance design



Single-Line System (det-ex)

Detection and extinguishing in a single pipe line.



No Pressure

Extinguishing agent container and tubing are pressure-free in operating state.



No Electricity

No electricity needed in the system.



5 Years - No Parts Change

Long-term savings - durable and resistant system.



Ultra-Fast Detection

Response speed: Ultra Fast Response RTI 12.
False alarm proof. Activation is based on "temperature" parameter for pneumatic activation.



Operation Temperature Range: -50°C to +80°C

Prepared for extreme climates, whether in the desert or the mountains.



Capable of Working in Extreme Conditions

Shock and vibration resistant.



Stainless Steel

Precision manufacturing - highly durable stainless steel.



Very low Maintenance

Due to simplicity and absence of pressure, maintenance routines are practically only visual.

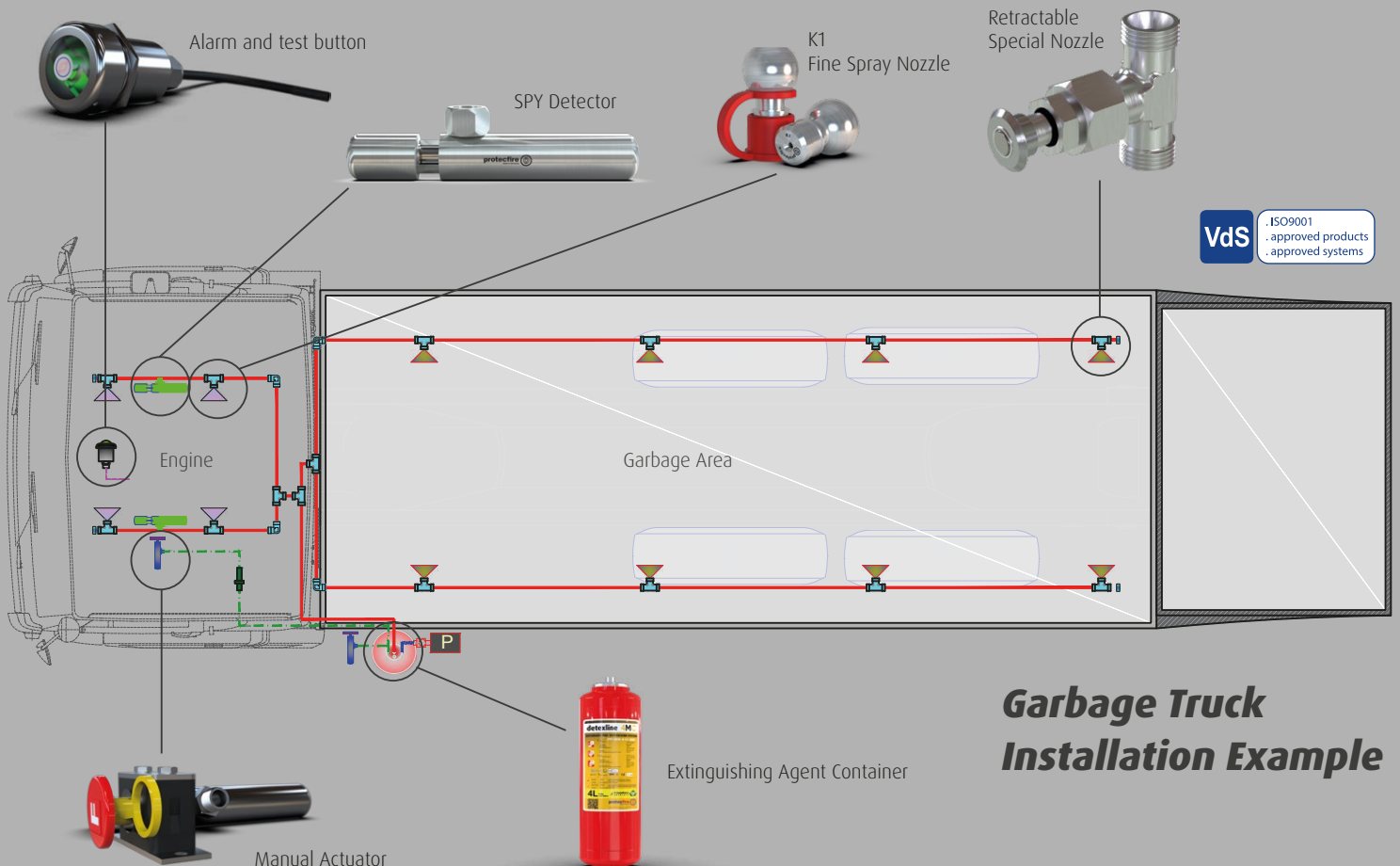


Fully Mechanical / Pneumatic

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

Operational in highly ventilated places and in open spaces



Garbage Truck Installation Example



Safer Work, Safer City

detexline 4MC



Factors that make Detexline the most economical system:

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.

Durable Material Construction

All essential equipment components are crafted from stainless steel.

How it Works

The detexline tank and piping are not pressurized.

The SPY detectors will be activated by thermal detection, thus releasing the pressure in the pipeline and cylinder control valve, which in turn will trigger the release of the extinguishing agent.

Fine spray nozzles will disperse the Tiborex Absolute providing the cooling effect and effectively extinguishing fires within the first few seconds.

It can be manually activated remotely.

An alarm and test button can be installed.

Name	detexline 4MC
Temperature Range	-50°C / -30°C to 80°C
Detection Technology	Rise of Pressure
Detection and Extinguishing Line	One integrated line
System Pressure	No pressure
Detection Technology	SPY detection element - Stainless steel
Trigger Temperature	Glass ampoule, 9 independent temperatures
Lifecycle of Detectors	5 years
Nozzle Type	S1
Extinguishing Agent	Tiborex Absolute
Extinguishing Agent Volume	4, 7, 14, 24L
Extinguishing Technology	Fine spray technology
Extinguishing Container (pressure)	Pressureless (Sealed Cartridge)
Product Material	Stainless steel
Alarm Signal Switch	Yes
Maintenance Inspection	Annually
Parts Replacement Duration	5 years

Certifications for protectfire various systems:





System components



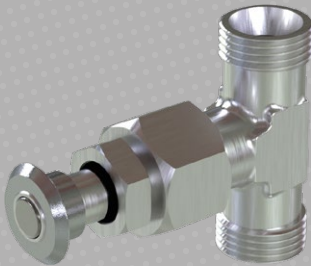
SPY thermo-pneumatic detector

- Unique patented detector
- No electricity required
- High-grade 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



Fine-Spray Nozzles

- Unique patented nozzle solution
- Quick and easy to install - Reduces installation time by ~70%.
- Very small - Virtually fits anywhere
- Stainless steel
- Fine spray technology
- Up to 75° spray pattern
- High quality, heavy-duty nozzle caps



Retractable Special Nozzle

- Automatic activation by agent pressure
- Fully sealed to prevent clogging
- High mechanical and impact resistance
- Stainless steel construction for durability
- Debris-shedding, low-maintenance design

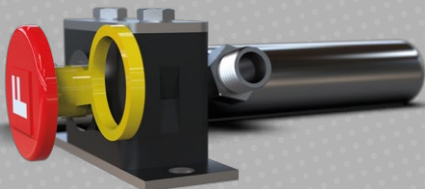


Extinguishing Agent Tank

- Patented - Unique Pneumatic Release System
- Can be placed in any position!
- Stainless steel with electrostatic paint finish Ral3000
- Patented - Stainless steel actuation system

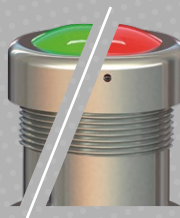


- Liquid Agent: Tiborex Absolute - exclusive protectfire agent
- Effective against liquid, solid and grease fires.



Pneumatic Manual Actuator

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



Alarm/Test Panel

- Easy to install
- One-button operation for testing
- Buzzer for alarm
- Optical LED light for test/alarm



Liquid extinguishing agent

- Ultra-Rapid Extinguishing
- Cooling and Blanketing effect
- Environmentally Friendly (non-toxic | biodegradable)
- Fluorine Free
- Residue control possible with ultraviolet light





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 sustainability

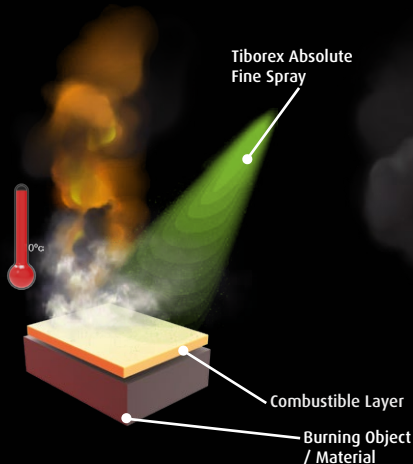
Ecological and 100% fluorine-free extinguishing agent. Biodegradable. Non-toxic to humans and animals.

Cooling effect due to water evaporation: The fine-spray nozzles developed specially for Tiborex Absolute produce very fine droplets of less 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.

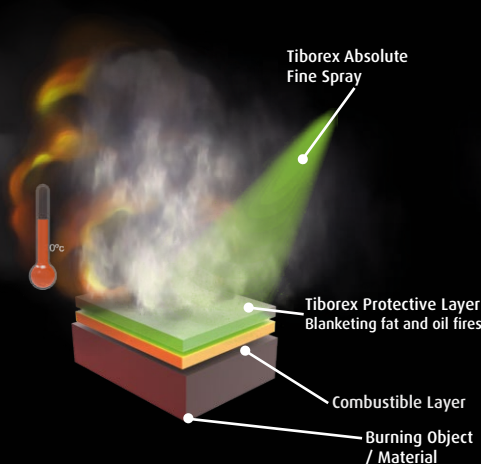
Cooling effect due to sublimation: During the evaporation of the aqueous phase some of Tiborex Absolute's main components form crystalline structures. With the still existing combustion temperature, these solid structures change from the crystalline phase to a gaseous phase. The enormous enthalpy of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

3 stages fire suppression

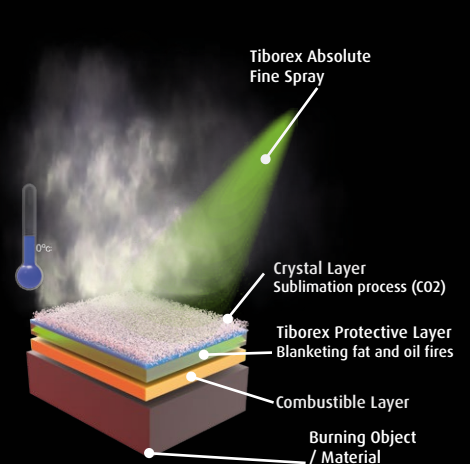
1 Cooling Effect Fine Spray Droplets that penetrate fire



2 Oxygen Suffocation by evaporation



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





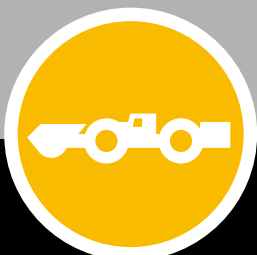
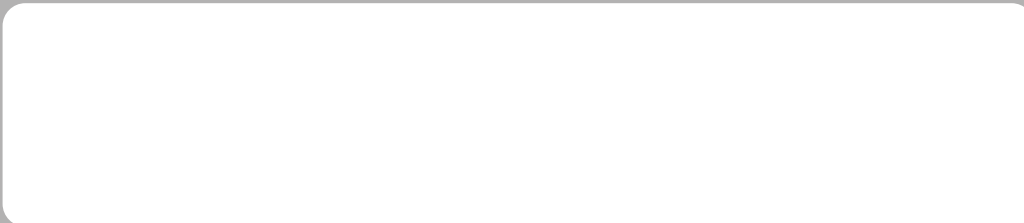
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Automatic Fire Suppression Systems for Special Vehicles

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Brochure Information / Warning
Detexline 4MC special vehicles 17082025

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