protecfire
German Engineering

MINING | CONSTRUCTION | TUNNEL BORING | FORESTRY | AGRICULTURE | HEAVY EQUIPMENT

Revolutionary
Fire Suppression Systems



HEAVY MOBILE EQUIPMENT FIRE PROTECTION

detexline 4MC | RAPTOR detex | RAPTOR 5062 | RAPTOR detex ice-master | RAPTOR powder | detex Ar | RAPTOR nova

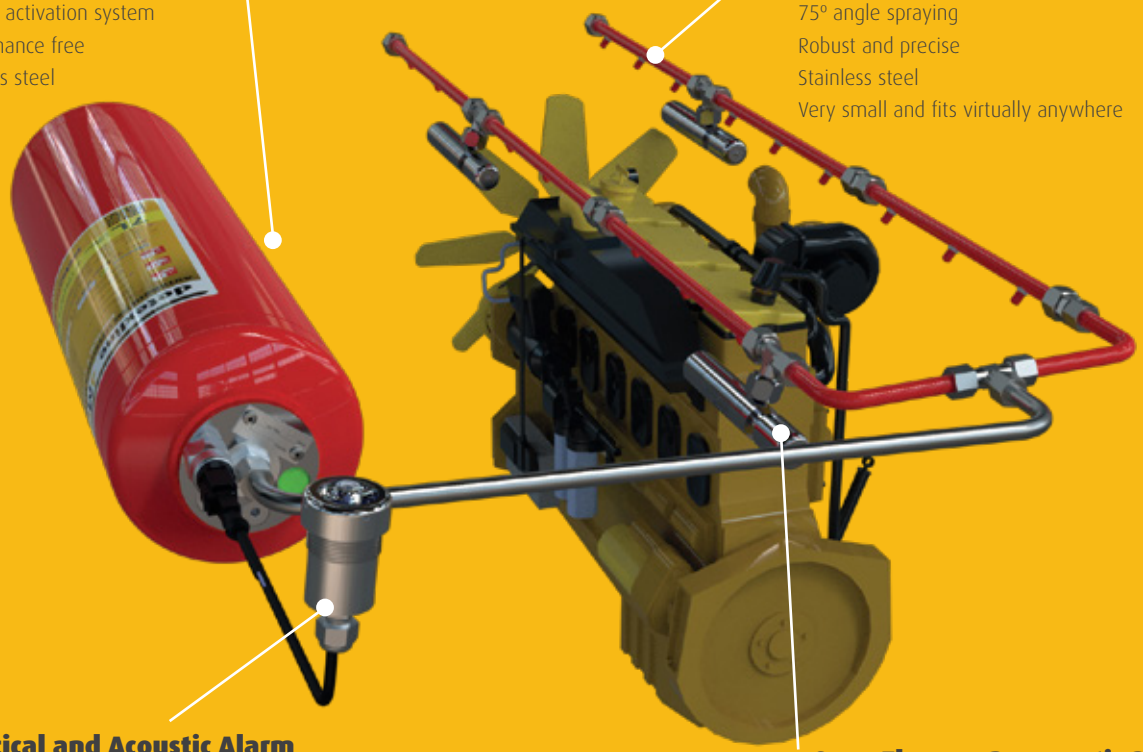
No Electricity **No Pressure** **Minimal Maintenance**

Safety & Environmental Protection is Our Priority

Fully Pneumatic - Self Contained

Stainless Steel Container
Safe and robust
Internal activation system
Maintenance free
Stainless steel

Fine Spray Nozzles
Patented
75° angle spraying
Robust and precise
Stainless steel
Very small and fits virtually anywhere



Optical and Acoustic Alarm
Compact control panel
Acoustic signal
Test button

Made in Germany

Spy - Thermo-Pneumatic Detector
Patented
Multiple temperature ranges
Sensitive to hidden fires
Robust and accurate
Stainless steel

detex360 version



360 degrees of fine spray and detectors, all in one piece.
A single small unit system with detection and extinguishing enables quick installation!
This system allows a homogeneous fine spray dispersion throughout the compartment.
The nozzles cover all directions for effective dispersion.

Watch the video

protecfire German Engineering

Single-line System (det-ex)
Detection and extinguishing in a single pipe line.

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 RTI 12. False alarm proof. Based on "temperature" parameter for pneumatic activation.

Operation Temperature Range: -50°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.

Minimal Maintenance
Due to the absence of pressure and simplicity, 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

Operates in highly ventilated places and in open spaces



System Components



SPY Thermo-pneumatic Detector

Watch the video

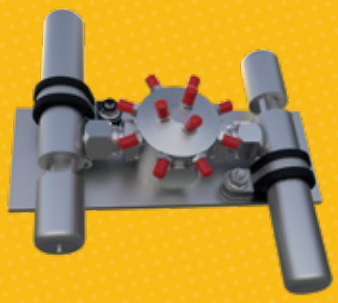
- Unique patented detector
- No electricity required
- High-finish stainless steel
- Response speed: Ultra Fast Response RTI 12
- Available detection temperatures:
  57 °C | 68 °C | 79 °C | 93 °C | 110 °C | 141 °C | 182 °C | 230 °C | 260 °C



Fine-Spray Nozzles

Watch the video

- Unique patented nozzle solution
- Quick and easy to install - Reduces installation time by ~70%.
- Very small - Virtually fits anywhere
- Stainless steel
- S1 factor 0.5 - Fine spray technology
- Up to 75° spray pattern
- High quality, heavy-duty nozzle caps



detex360

Watch the video

- Multi-directional fine dispersion nozzles and detectors in one piece.
- Very small - Virtually fits anywhere
- Stainless steel
- S1 factor 0.5 - Fine spray technology
- Up to 90° spray pattern on each nozzle - high coverage.
- Unique in the world.

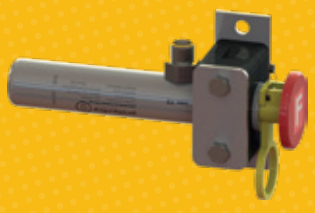


Extinguishing Agent Container

Watch the video

- 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 protecfire 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

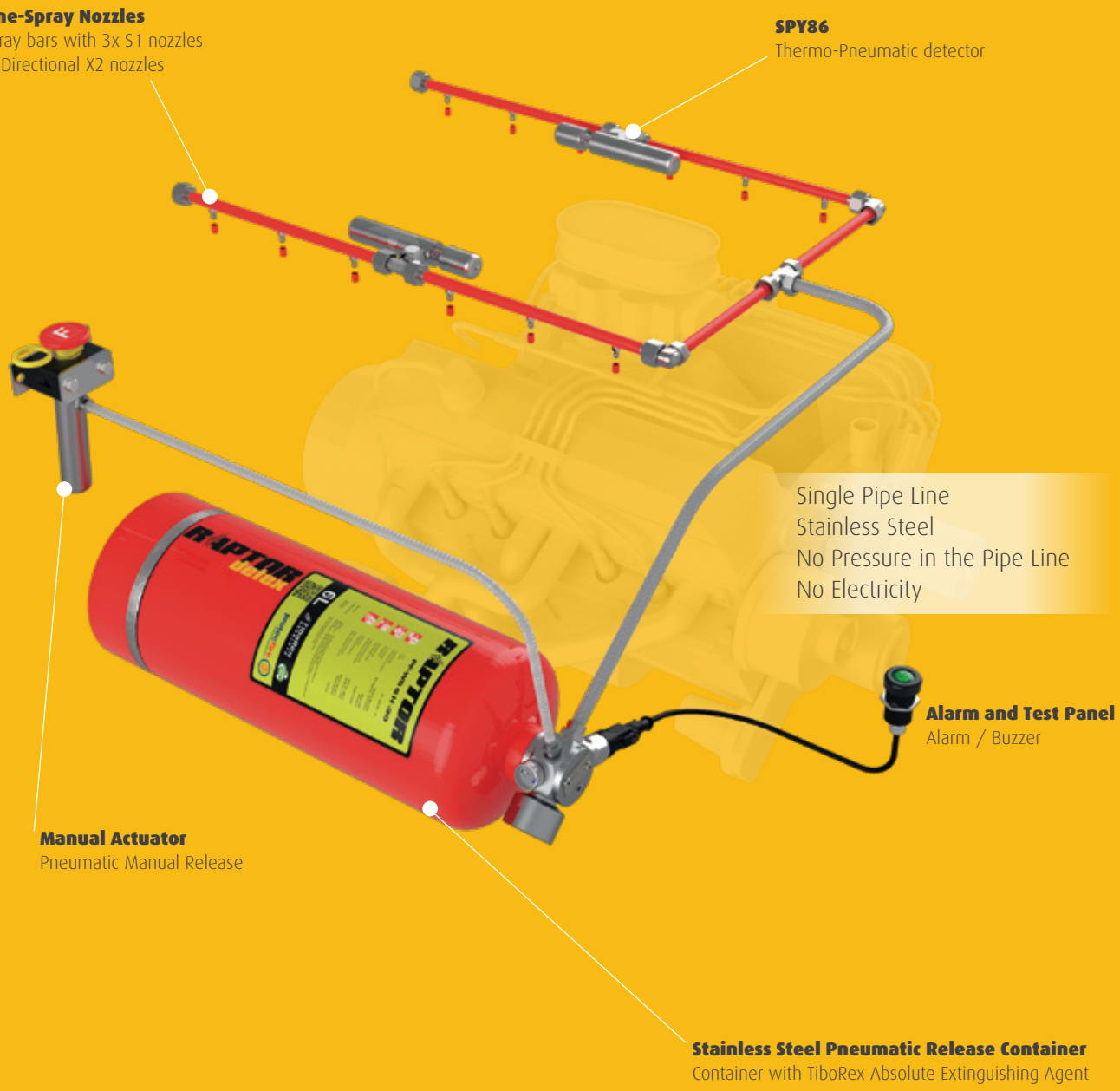
- Easy to Install
- One-button Operation for Testing
- Buzzer for Alarm
- Optical LED Light for Test/Alarm

TiboRex ABSOLUTE

Liquid Extinguishing Agent

- Ultra-Rapid Extinguishing
- Cooling and Blanketing Effect
- Environmentally Friendly (Non-toxic | Biodegradable)
- Fluorine Free
- Residue Control by Ultraviolet Light

System Components



Example of a Pre-engineered Raptor Kit

System Compontents



SPY86 Thermo-Pneumatic Detector

Patented Unique Detector
No Electricity Required
Stainless Steel CNC Machined

Available Detection Temperatures
57°C ·68°C ·79°C ·93°C ·110°C ·141°C ·182°C ·230°C·260°C



Fine Spray Bars - S1 Nozzles



X2 Fine Spray Nozzles

Fine Spray Nozzle Bars / X2 Nozzles

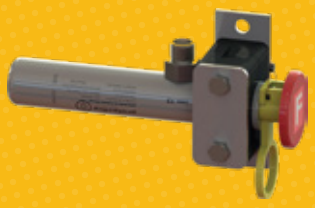
Patented Unique Nozzle Solution
Easy and Fast to Install - Reduces Installation Time by 70%.
Very Small - virtually fits anywhere
Stainless Steel
S1 0.5 Factor - Fine Spray Technology / K1.0 factor on X2 Nozzles
Up to 90° Spray Pattern
High Quality and Resistant Nozzle Caps



Extinguishing Agent Container

Patented - Unique Pneumatic Release System
Can be placed in any position (vertical or horizontal)
Stainless Steel with Powder Coating Finish Paint Ral3000
Patented - Stainless Steel Valve System

Liquid Agent: TiboRex Absolute - Exclusive protecfire Clean Agent
Effective against Liquid, Solid, and Grease fires



Pneumatic Manual Actuator

Patented Unique Pneumatic Activation System
Stainless-Steel
Safety Lock System
Argon Gas Activation



Alarm / Test Panel

Easy to Install
One Button Operation for Testing
Buzzer for Alarm
Optical Led light for Test / Alarm

TiboRex ABSOLUTE

Liquid Extinguishing Agent

Ultra-Fast Extinguishing
Quenching Effect
Blanketing Effect
Environmental Friendly (Non-toxic | Biodegradable)
Fluorine Free
Residue Monitoring by Uv Light

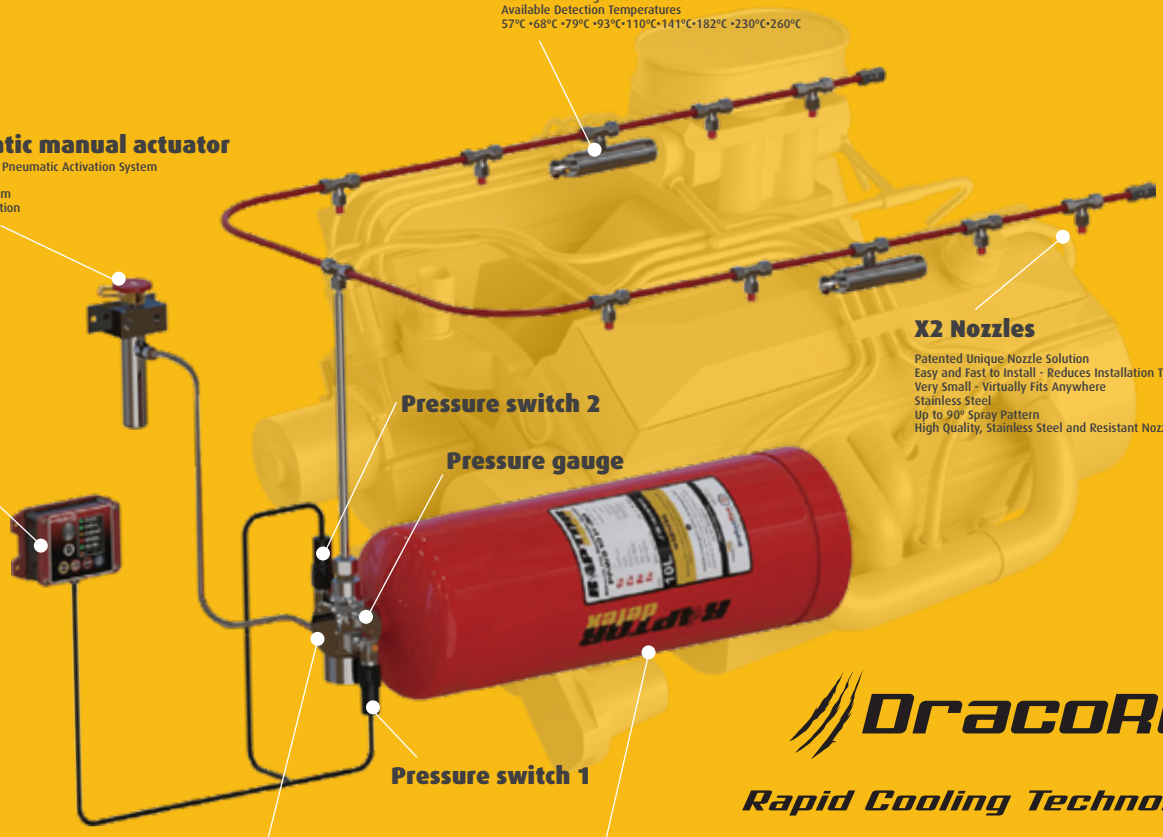
RAPTOR 5062

AS 5062
Australian Standard
AS 5062 Certified

German Patented Heat Detector
Patented Unique Detector (SPY86)
No Electricity Required
Stainless Steel Argon Gas Activation
Available Detection Temperatures
57°C •68°C •79°C •93°C•110°C•141°C•182°C •230°C•260°C

Pneumatic manual actuator
Patented Unique Pneumatic Activation System
Stainless Steel
Safety Lock System
Argon Gas Activation

Control panel
Easy to Install
Buzzer for Alarm
Optical LED Light for Test / Alarm
Engine Shutdown Capabilities



X2 Nozzles
Patented Unique Nozzle Solution
Easy and Fast to Install - Reduces Installation Time by 70%.
Very Small - Virtually Fits Anywhere
Stainless Steel
Up to 90° Spray Pattern
High Quality, Stainless Steel and Resistant Nozzle Caps

DracoRex
Rapid Cooling Technology

No electricity
No electrical power in the system is needed

No pressure
No pressure in all pipeline

Minimal Maintenance
No parts need to be replaced for up to 10 years

Applicable for 4 fire classes
A B C F

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Product Parameters

Fire Extinguishing Agent	DracoRex	Propellant	Argon
Charging Pressure (20℃)	25 bar	Product Specification	10L / 20L / 30L / 50L
Operating Temperature	-30℃ to +80℃	Shelf Life	10 years

Raptor detex 5062 Benefits

Raptor detex 5062	VS	*Conventional Fire Suppression Systems (LOP or Linear Detection Systems)*
Simple Installation (Less Than Half the Time and Resources)		Complex Installation
No Pre-Discharge		Pre-Discharge Required
German Patented Heat Detector Thermo-Pneumatic Detector (SPY86) Mounted on Stainless Steel Line with 9 Specific Activation Temperatures		Linear Detection & LOP Systems Thermoplastic Tube Assumes One H omogeneous Activation Temperature
Optical & Acoustic Alarm, Alarm Panel Not Require Hard Wiring		Alarm Panel in Most Applications Needs to be Hard Wired
Commissioning Annual Servicing with Pressure Test, No Discharge needed 5 Year Comprehensive Test, Discharge, and Some Component Replacement		Commissioning 6 Monthly Servicing: Approx. $2100.00 Over 5 Years Annual Servicing: Approx. $4800.00 Over 5 Years 5 Year Comprehensive Test, Discharge, and Component Replacement

Applications

Mining equipment | Forestry equipment | Agricultural equipment | Transportation equipment

Scan to see our capabilities

RAPTOR detex ice-master

Applicable for extremely cold situation of -50°C.



TiboRex ABSOLUTE

Robust

Fine Spray

Realiable and Effective

Patented German Technology

➢ Applicable for 4 fire classes





Product Parameters

Fire extinguishing agent	TiboRex Absolute
Applicable fire types	A+B+C+F
Operating temperature	-50°C to +80°C
Propellant	Argon
Charging pressure (20°C)	25bar
Maintenance cycle	5 years
Product Specification	3L / 4L / 6L / 10L / 20L / 30L / 50L
Booster Specification	Booster 760 / Booster 1520

Raptor detex ice-master offers improved fire suppression capabilities with a booster operating in the temperature range of -50°C.

1. When the cylinder is triggered, the rising pressure in the pipeline opens the booster.
2. All of the gas enters into the cylinder to provide additional injection power for the cylinder.

Ultra-low temperature fire extinguishing agent + fine spray = better suppression effect at lower temperature

The extinguishing agent rapidly cools the fire below ignition levels in seconds.

➤ Applications

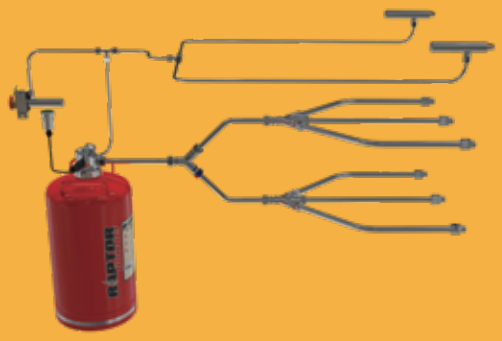
- Mining equipment
- Construction equipment
- Forestry equipment
- Tunnel vehicle
- Railroad vehicle

RAPTOR powder

TP TC 012/2011

Suitable for extremely low temperature of -55°C and more complex operating environments.

Raptor powder 6&15kg



- Easy installation.
- Improved dry powder spraying for better fire suppression effect.
- Meet the fire suppression requirements of the equipments' high-risk area.

Raptor powder 30&60kg



- Supports the installation of up to 4 pipelines and 16 nozzles.
- Rapidly release a large amount of dry powder, resulting in a superior fire suppression effect.
- Multi-point simultaneous protection, providing a larger protected area.

Product Parameters

Fire Extinguishing Agent	90% ABC Dry Chemical Powder	Propellant	Argon
Charging Pressure (20°C)	25 bar	Product Specification	6kg / 15kg / 30kg / 60kg
Operating Temperature	-55°C to +80°C	Maintenance cycle	5 years

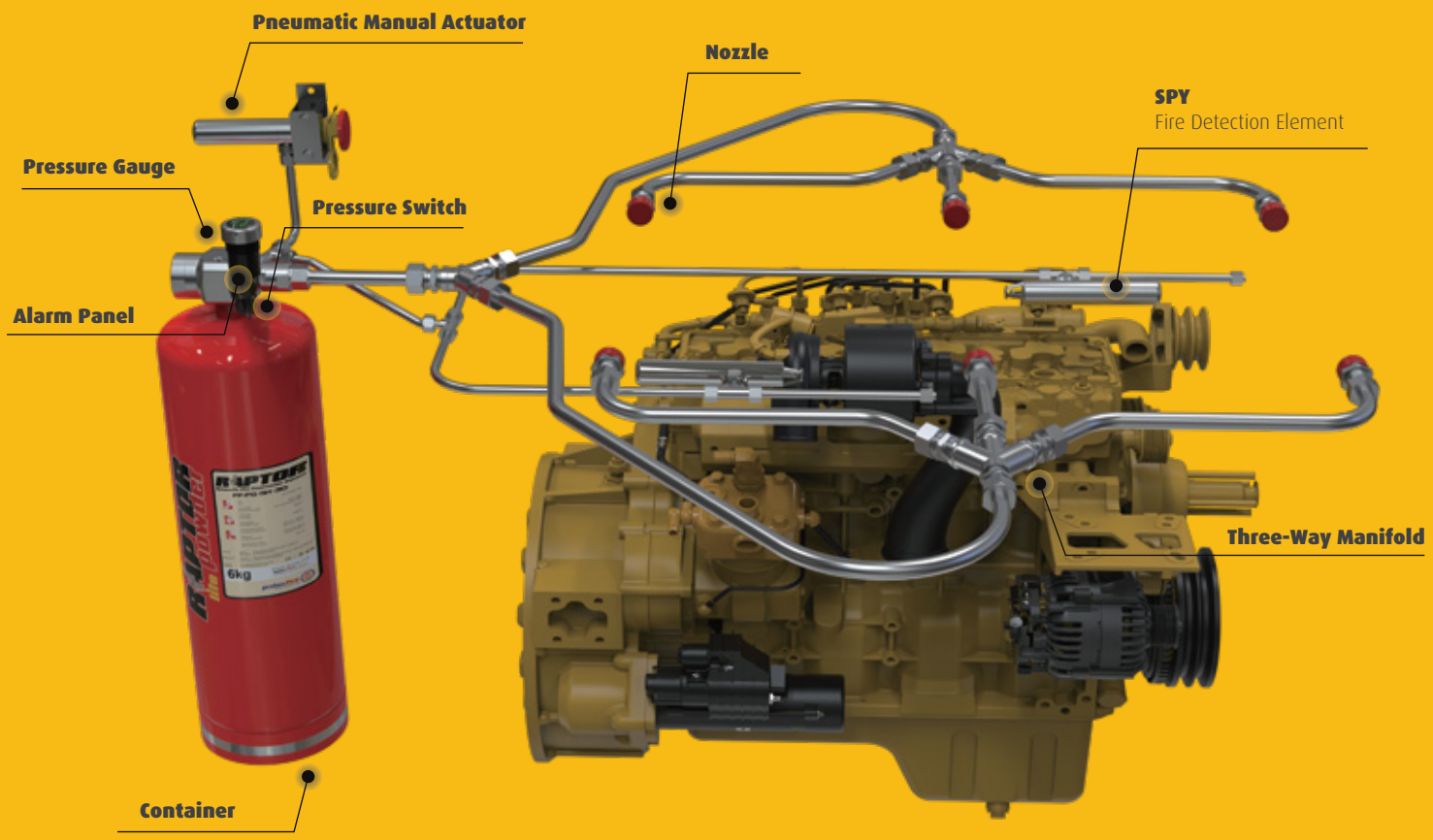
Mining Equipments | **Off-Road Vehicles** | **Construction Equipments** | **Tunnel Boring** | **Heavy Machinery**

RAPTOR lite powder

AS2030.1:2009
APPROVED

CE

2 Independent Lines (Detection / Extinguishing)



Product Parameters

Fire Extinguishing Agent	90% ABC Dry Chemical Powder	Propellant	Argon
Charging Pressure (20°C)	25 bar	Product Specification	6kg / 10kg / 20kg
Operating Temperature	-30°C to +80°C	Maintenance cycle	5 years

detexAr

Argon Gas Fire Suppression System

With one single pipeline!

18
Ar
Argon
39,95

Multiple Areas Protection
Automatic Sectioned Protection
by the Directional Control Valve

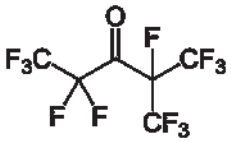
System only activates where the detection is triggered.
- Argon just goes where it is needed.
- More quantity is ejected where the fire is.
- Less cylinders are required.

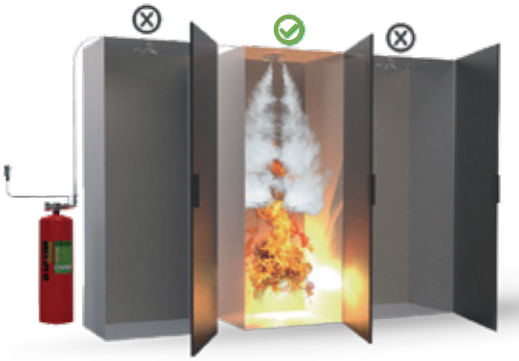


Available on:
10L
20L
50L



FK-5-1-12



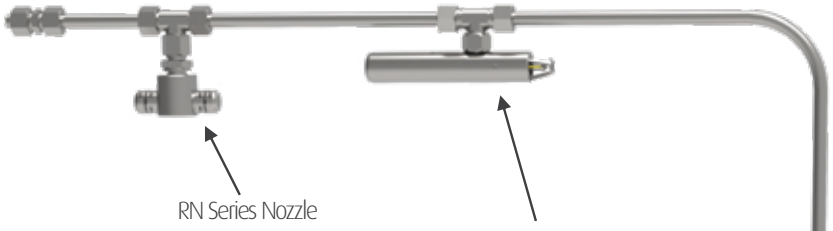


Non-electrical Conducting & Eco-friendly
Protect 3.5m³ to 23m³ Electrical Cabinets.



Available on :
3L (3.5m³) \ 4L (4.6m³) \ 6L (7m³)
10L (11.5m³) \ 20L (23m³)

System Components



HIGH QUALITY

GERMAN ENGINEERING

Features

No electricity

No electrical power in the system is needed

No pressure

No pressure in all pipeline

Maintenance free

Almost maintenance free, no parts need to be replaced for up to 10 years

Simple & Easy to install

Both for new system or retrofit and in a limited and confined space.

Suppression agent: FK-5-1-12

Able to work for Electrical Cabinet Fire

Temperature: -30°C to 80°C

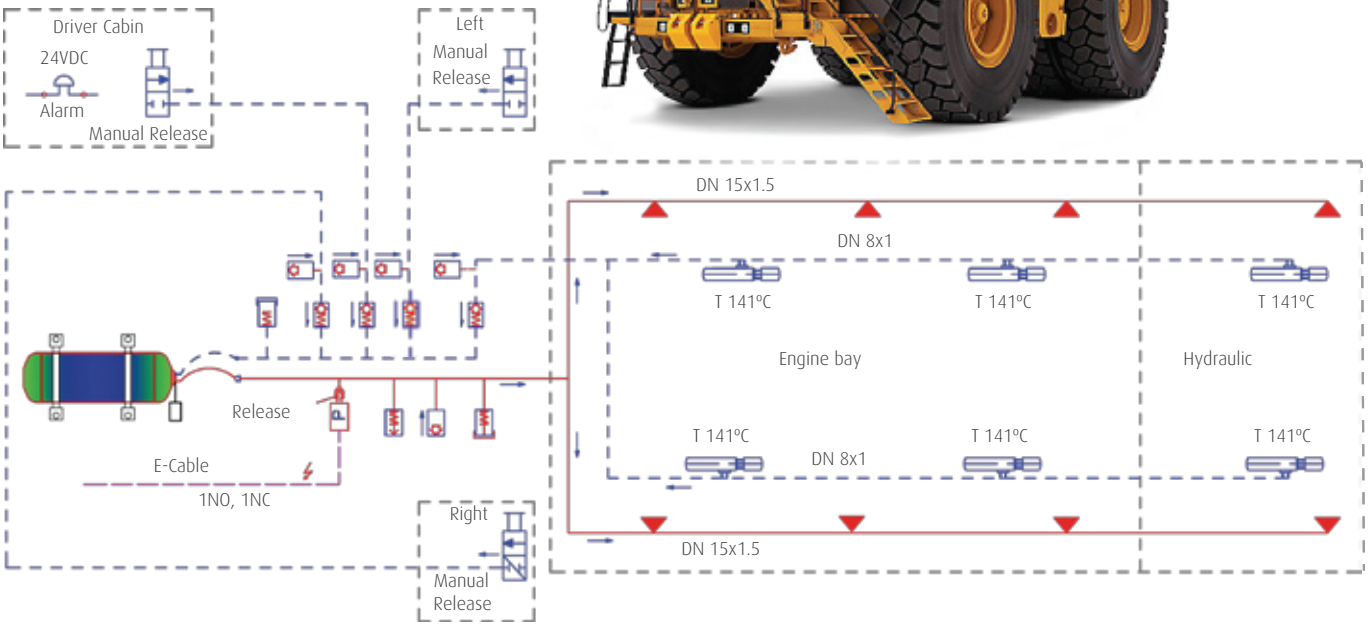
Able to work in extreme adverse conditions



Perfect fit installations

CAT Dump Truck

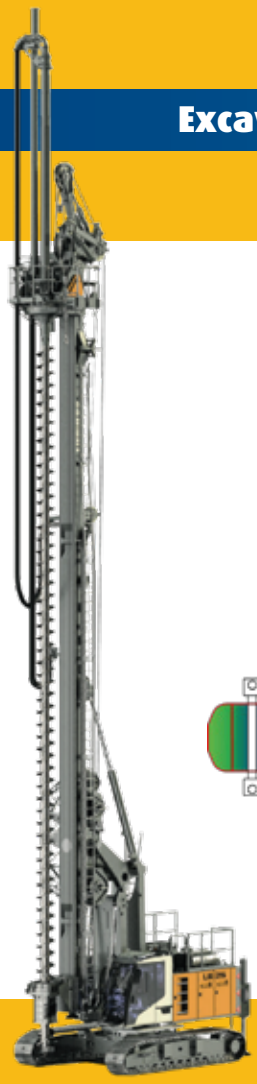




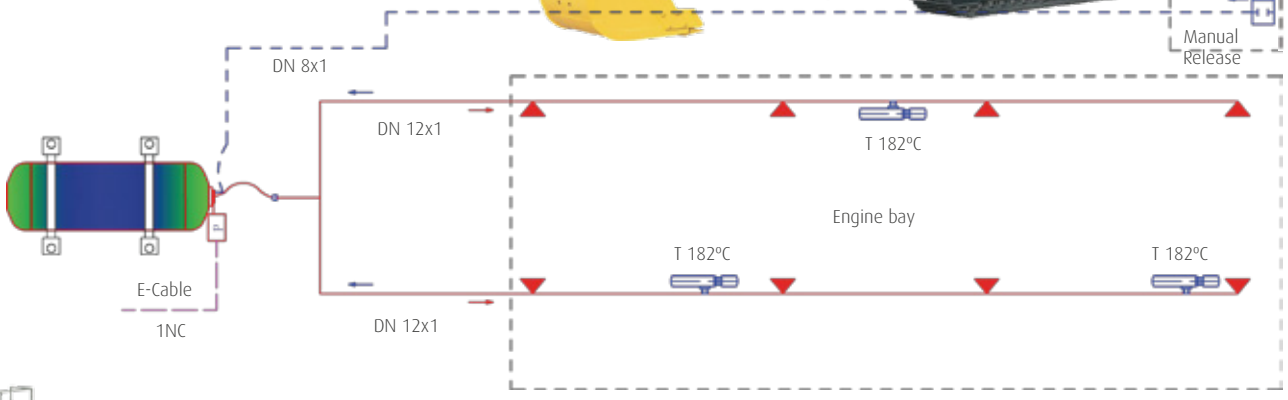
Rubber Belt Conveyor Protection



Excavator / Drilling Machine

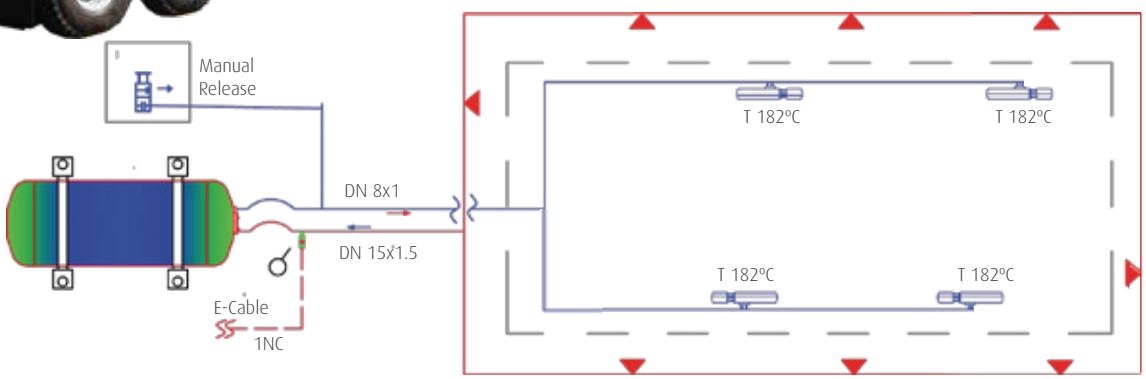






Fracking Truck / Drilling Machine





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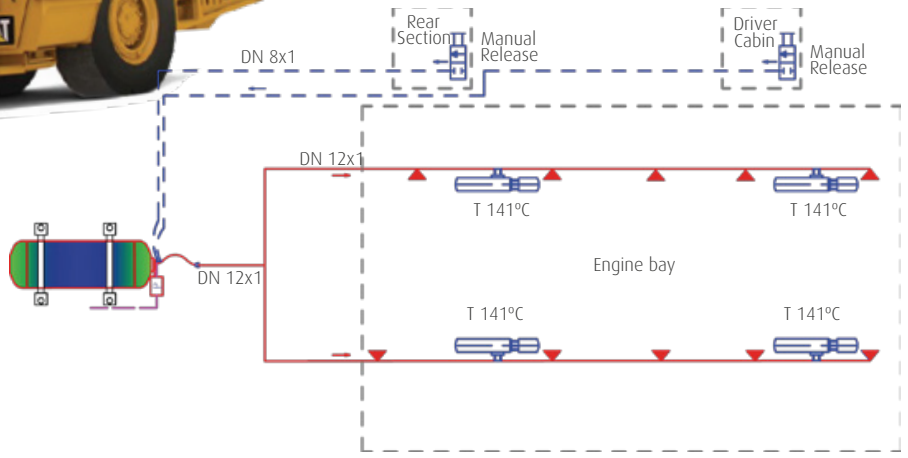
Tailor-fitted Systems

Protecfire develops custom tailored size installs. All projects are studied before installation.



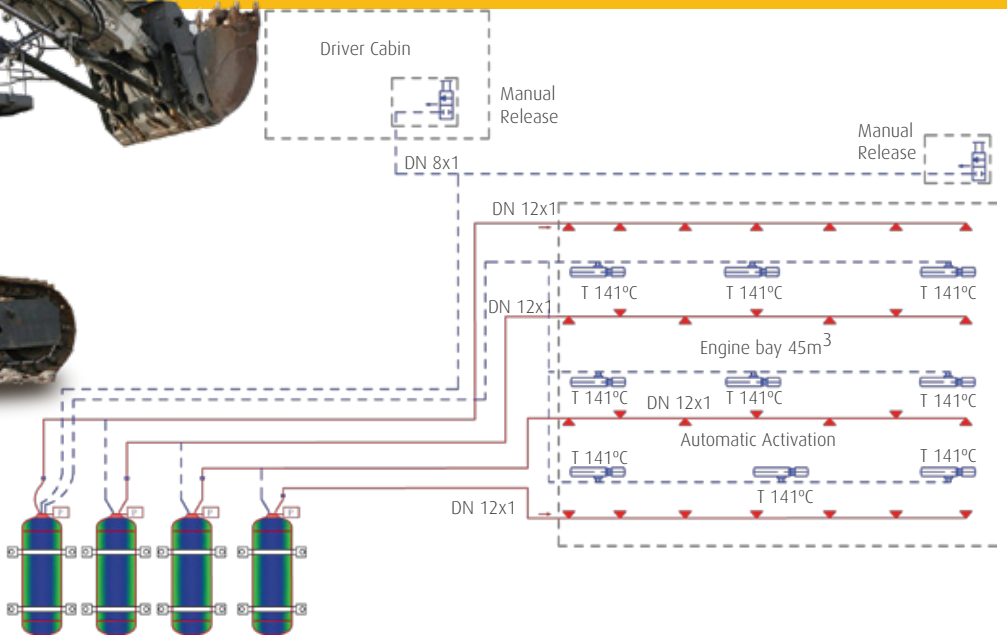
Underground Excavator



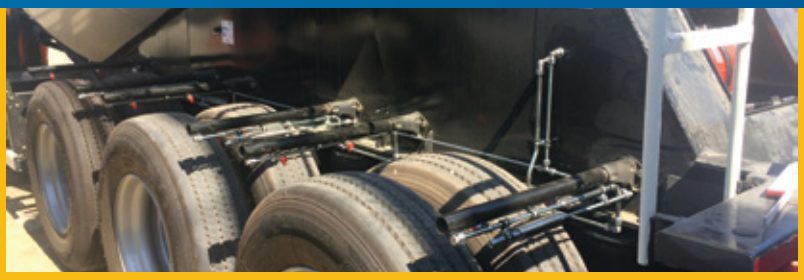


Excavator





tyre protection





underground mining








above ground mining



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Certifications



HIGH QUALITY
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