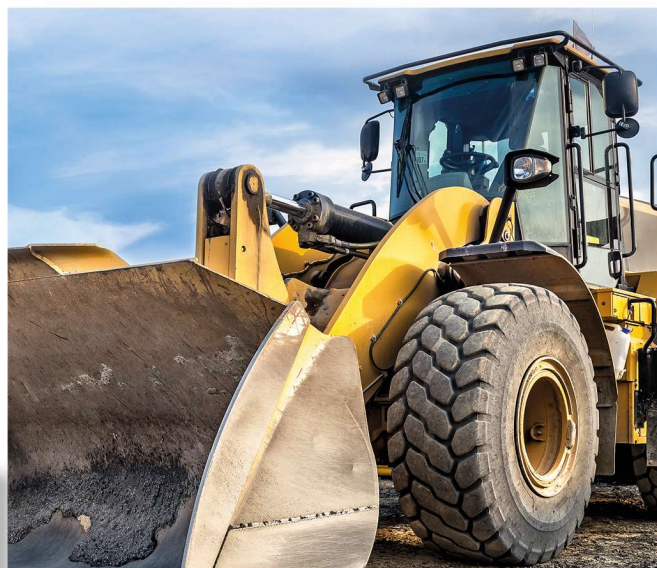


REACTON

FIRE SUPPRESSION



DRY POWDER ON ROAD & OFF ROAD VEHICLE AUTOMATIC FIRE SUPPRESSION SYSTEM

DATA AND SPECIFICATION SHEET

DOC - DSS0001
01 FEB 2020 - REV B



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KEY BENEFITS

- P-Mark to SPCR 183
- Approved – UNECE Regulation No.107
- CE Marked according to PED 2014/68/EU
- Automatic – requires no external power to detect and activate
- Designed and tested for harsh & demanding working environments
- Low weight, compact with easy installation
Pre-engineered ideal for OEM and Retrofit
- High quality, long-life, corrosion free stainless steel components

INTRODUCTION

The Reacton® On Road & Off Road Vehicle system is a pre-engineered Dry Powder fire suppression system offering complete automatic fire detection & suppression.

The Dry Powder system can be complimented with a Liquid System to reduce the risk of reignition.

The system employs specifically designed valve and nozzle technology to provide excellent fire protection performance for On Road & Off Road vehicles.

A pre-engineered Dry Powder system from Reacton® consists of:

- Pressurised cylinder(s) complete with the FUREX ABC 770 Dry Powder extinguishing agent and the patented CTX Indirect Valve™ to control & discharge the contents.
- Complete pneumatic, non-electrical detection system, made up of the Reacton® Detection Tube – a heat sensitive linear heat/flame detector. It is designed to burst at any location throughout its route where there is sufficient heat.
- Discharge network made up of flexible discharge hoses of varying lengths and specialist discharge nozzles to deliver the extinguishing agent where it is required.

APPLICATIONS

The Reacton® On Road & Off Road Vehicle system is a versatile fire suppression system for Class A, B & C fires all of which are extremely commonplace in this environment.

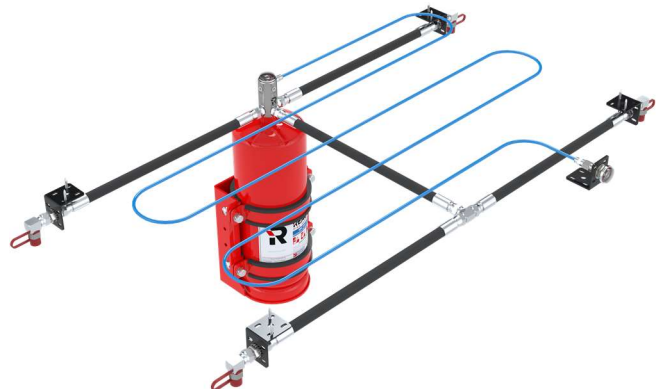
These can present themselves as a spray fire (burst hydraulic hose), pool fire (collection of diesel from a fuel line), short circuit (faulty/damaged wiring loom) and/or fuel leakage (Faulty connections dripping oil on to a hot surface).

All these fire conditions are covered by the On Road & Off Road Vehicle system from Reacton®.

All systems can be easily scaled up or down to suit the large range of On Road & Off Road Vehicles.

Types of Applications include but are not limited to:

- Wheel Loaders
- Excavators
- Bus & Coaches
- Cranes
- Airport Tugs
- Telescopic Handlers
- Forestry Machines
- Haulage Trucks
- HGV's
- Mining Equipment
- Draglines
- Generators



NO ELECTRICAL POWER

The majority of systems on the market rely on a constant source of power to detect and activate the system. At Reacton® through over 30 years of experience we know that relying on a constant supply of electricity on mobile equipment for detection and activation is not ideal.

Many systems on the market fail to detect and activate due to loss of power to the control panel, relying on the operator to activate the system.

The Reacton® system is constantly in automatic mode regardless of the power method of the machine.

SUPPRESSION METHOD

Dry Powder is an outstanding fire suppression agent due to its rapid fire knock down capabilities and its ability to tackle hidden fires that liquid systems may not be able to reach.

Reacton's Dry Powder provides a large suppression area due to its particle size, it can quickly cause a fire to expend its energy heating up the particles and therefore provide a "cooling effect". The Dry Powder will also provide chemical inhibition, reacting with the radicles and arrest the chemical combustion process.

Combined with the superior layering and barrier effect Dry Powder is the agent of choice for vehicle fire protection.

SYSTEM OPERATION

The Reacton® On Road & Off Road Vehicle system utilises the CTX Indirect™ valve technology. This technology utilises the Reacton® Detection Tube to automatically detect the fire and actuate the system(s).

The tubing is installed in and around the fire risk areas within the protected area, the tubing is pressurised and in communication with the valve which holds it in the closed position. When a fire occurs, the tubing will burst at the point of highest heat, the pressure loss in this process causes the valve to open. (This pressure loss function can be simulated through the use of a manual actuator).

The result of the valve opening allows the extinguishing agent to be delivered through a network of discharge hoses leading to strategically placed nozzles within the hazard.

Due to the speed of the detection and suppression fires are suppressed quickly & safely ensuring minimal damage and downtime. quick and complete fire protection for your valuable assets.

SYSTEM DESCRIPTION



The On Road & Off Road Vehicle system from Reacton® is an automatic pre-engineered pneumatically operated fire suppression system with a fixed nozzle set up.

It is available to protect hazards in both local application & total flood situations.

All Reacton® On Road & Off Road Vehicle systems utilise the pneumatic detection tube to detect and then release the system. The Reacton® Detection Tube can also be configured to support & provide additional functions such as battery isolation, manual activation, In-Cab Monitoring & delayed engine shutdown.

All systems consist of official Reacton® components that are all specifically designed to offer the reliable & proven protection for your On Road & Off Road Vehicle.

The range of approved components can be found in a Reacton® On Road & Off Road Vehicle system are shown below:

CTX Indirect Dry Powder Cylinder - consisting of a high-grade welded steel cylinder painted RAL 3000. A CTX Indirect Valve assembly & all necessary safety plugs and labels. All cylinder assemblies have a temperature range of -40 °C to + 60 °C and are superpressurised with Nitrogen to 15.0bar @ 20°C (217.5psig @ 68°F) or 25.0bar @ 20°C (362.6psig @ 68°F) or All systems are supplied factory filled by Reacton® and are available in 4 sizes (4.0kg, 6.0kg, 9.0kg & 18.0kg).

Heavy Duty Bracket - Wall or floor mounted powder coated heavy duty brackets are used to secure the systems in the correct orientation in demanding environments.



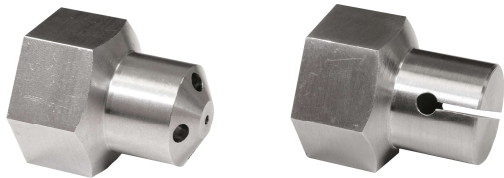
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Discharge Nozzle – Available in two types either the LR Type or FF Type. The selection of the nozzle type is based on the application. All nozzles control and distribute the agent throughout the protected risk(s) in a uniform, predetermined pattern and rate.

All nozzles must incorporate a high-grade silicone cap to stop the ingress of unwanted debris or environmental contaminants.



Discharge Hose – The Reacton® branded flexible 3/8" hoses have female swivel fittings at each end. All hoses are double braided to endure high impact conditions and maintain discharge performance in high temperatures or fire environments. Fully oil & weather resistant.

Detection Tube – Reacton® Detection tubing is the pneumatic detection system specifically manufactured by Reacton® solely designed for the use in fire suppression systems. These tubes rupture at specific temperatures to help trigger the release of suppressants.

The Reacton® Detection Tube is used as a non-electrical detection system. This will trigger the release of the extinguishing medium through a separate discharge pipe network.

The Reacton® Detection Tube is designed to withstand ambient temperatures up to 110°C. It is pressurised with Nitrogen to 15.0bar @ 20°C (217.5psig @ 68°F) or 25.0bar @ 20°C (362.6psig @ 68°F).



Manual Actuator – The Manual Actuator provides means of actuation through manual intervention. The device allows for initial charging, commissioning, and system pressure checks. All devices have an internal Schrader valve that allow for the safe removal of gauges and charging adaptors.

In-Cab Monitoring System – The In-Cab Monitoring System is to be used in situations where a sounder and physical indication of the status of the fire suppression system is required. The push button is connected to a manual release venting solution where the system can be manual actuated.

Battery Isolation Unit – The Battery Isolation Unit is controlled and triggered with the use of Reacton® Detection Tube. The Battery Isolation Unit is used to isolate a power source for minimising the chance of fire re-ignition.

Engine Shutdown – In certain applications engine shutdown or delayed engine shutdown is required, if specified this can be carried out by utilising the optional functions available in the In-Cab Junction box.

SPECIFICATIONS

In order for the On Road & Off Road Vehicle Fire suppression system from Reacton® to carry a valid warranty and offer its strict performance characteristics the system shall be fully designed, installed & maintained in accordance to the approved Design, Installation, Operation & Maintenance Manual.

Only approved Reacton® components shall be used on all systems whether it is for an initial, service or replacement installation.

All placement and routing of components shall meet the recognised limitations and specifications set out in the approved Design, Installation, Operation & Maintenance Manual.

APPROVAL

- P-Mark to SPCR 183
- UNECE Regulation No.107
- CE Marked according to PED 2014/68/EU

DUAL AGENT CONCEPT

Where there is a high concern of reignition with super- heated surfaces or the system size dictates it, the use of both the Dry Powder & Wet Chemical system from Reacton should be adopted.

When both systems are used in conjunction with each other it is referred to as a Dual Agent System.

The Dual Agent System combines the rapid flame knockdown of a Dry Powder with the cooling & blanketing properties of Wet Chemical.

The detection and operation of both systems are identical, the systems are designed to be discharged simultaneously regardless of whether it is manually or automatically actuated.



SPECIFICATION TABLE – 15 BAR

PART NUMBER	AGENT FILL	CYLINDER VOLUME	OPERATING TEMPERATURE	OPERATING PRESSURE
RE-CTX-054-040-ABC	4.0 kg [8.8 lbs]	5.4ltr [329.5in ³]	-40 °C to +60 °C [-40°F to + 140°F]	15.0 bar [217.5 psig]
RE-CTX-075-060-ABC	6.0 kg [13.2 lbs]	7.5ltr [457.7in ³]	-40 °C to +60 °C [-40°F to + 140°F]	15.0 bar [217.5 psig]
RE-CTX-120-090-ABC	9.0 kg [19.8 lbs]	12.0ltr [732.3in ³]	-40 °C to +60 °C [-40°F to + 140°F]	15.0 bar [217.5 psig]
RE-CTX-240-180-ABC	18.0 kg [39.7 lbs]	24.0ltr [1464.6in ³]	-40 °C to +60 °C [-40°F to + 140°F]	15.0 bar [217.5 psig]

SPECIFICATION TABLE – 25 BAR

PART NUMBER	AGENT FILL	CYLINDER VOLUME	OPERATING TEMPERATURE	OPERATING PRESSURE
RE-CTXCE-054-040-ABC	4.0 kg [8.8 lbs]	5.4ltr [329.5in ³]	-40 °C to +60 °C [-40°F to + 140°F]	25.0 bar [362.6 psig]
RE-CTXCE-075-060-ABC	6.0 kg [13.2 lbs]	7.5ltr [457.7in ³]	-40 °C to +60 °C [-40°F to + 140°F]	25.0 bar [362.6 psig]
RE-CTXCE-120-090-ABC	9.0 kg [19.8 lbs]	12.0ltr [732.3in ³]	-40 °C to +60 °C [-40°F to + 140°F]	25.0 bar [362.6 psig]
RE-CTXCE-240-180-ABC	18.0 kg [39.7 lbs]	24.0ltr [1464.6in ³]	-40 °C to +60 °C [-40°F to + 140°F]	25.0 bar [362.6 psig]

REACTON

FIRE SUPPRESSION

Protecting your future, today



REACTON EUROPE

Address: 14 Baynes Place, Waterhouse Business Park, Chelmsford, Essex, CM1 2QX, United Kingdom

Phone: +44 (0) 1245 930 296

email: info@reactonfire.com

web: www.reactonfire.com

REACTON NORTH AMERICA

Address: 23335 N 18th Dr #140, Phoenix, AZ 85027, USA

Phone: +1 844 732 2866

email: info@reactonfire.com

web: www.reactonfire.com

REACTON UNITED ARAB EMIRATES

Address: Business Center, Building A3, Dubai World Central, Dubai, United Arab Emirates

Phone: +971 50 236 2357

email: info@reactonfire.ae

web: www.reactonfire.ae



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