

REACTON

FIRE SUPPRESSION

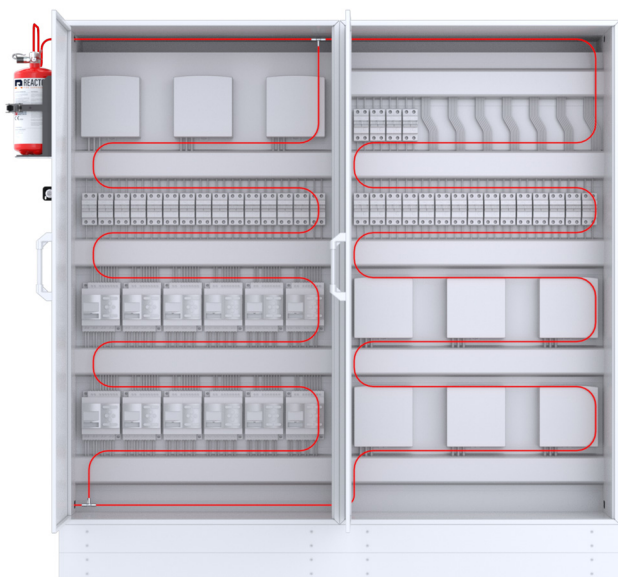


CLEAN AGENT ELECTRICAL PROTECTION AUTOMATIC FIRE SUPPRESSION SYSTEM

DATA AND SPECIFICATION SHEET

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01 JUNE 2019 - REV C





KEY BENEFITS

- CE Marked
- PED 2014/68/EU
- Designed, manufactured & tested in ISO 9001: 2015 certified facilities
- Rapid Detection & Activation
- Zero false alarms
- No Clean-up & Damage after discharge
- Automatic - requires no external power to detect and activate
- Low weight, compact with easy installation
- Pre-engineered ideal for OEM and Retrofit
- High quality, long-life, corrosion free stainless steel components

INTRODUCTION

Reacton® Clean Agent systems are a pre-engineered fire suppression system utilising 3M™ Novec™ 1230 Fire Protection Fluid or HFC-227ea extinguishing mediums, offering complete automatic fire detection & suppression.

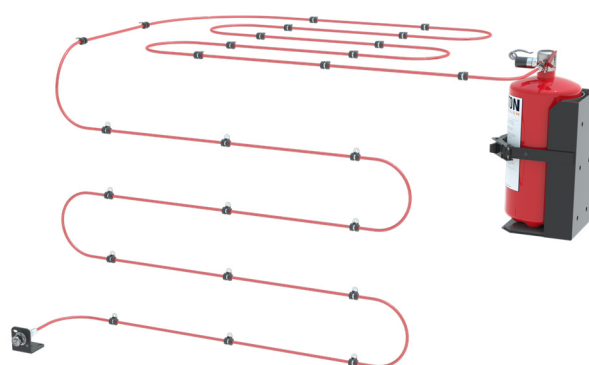
Available in both Direct & Indirect variants the system employs specifically designed valve and nozzle technology to provide excellent fire protection performance for your critical assets

A pre-engineered Clean Agent system from Reacton® consists of:

- Pressurised cylinder(s) complete with the 3M™ Novec™ 1230 Fire Protection Fluid or HFC-227ea extinguishing agent and either the CT Direct Valve™ or 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. The Reacton Detection Tube serves as the delivery mechanism of the extinguishing agent in Direct configurations and only the detection & actuation mechanism in Indirect form.

- Discharge network made up of flexible discharge hoses or stainless steel tube of varying lengths. Specialist discharge nozzles then deliver the extinguishing agent where it is required. (Indirect Configurations only)



APPLICATIONS

Reacton® Clean Agent systems are a versatile fire suppression system for Class A, B & C fires. These fire conditions can present themselves as a short/overloaded circuit, faulty components, poor installation & power surges or flammable liquid/gas Fires.

All these fire conditions are covered by the Clean Agent system from Reacton®.

The Reacton® system can be scaled for use with a wide range of applications ranging from a single electrical panel right through to Wind Turbine braking systems.

Types of applications include but are not limited to:

- Electrical Cabinets
- Control Panels
- Wind Turbines
- CNC Machines
- Laboratory Fume Cupboards
- Cable Trays
- UPS
- Motor Control Centres (MCC)
- Invertors
- Charging Stations

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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 critical assets 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 application.

SUPPRESSION METHOD

Clean Agents are the leading choice for fire suppression when rapid protection & zero clean-up is required for your sensitive electrical equipment.

Reacton's Clean Agents are stored as a liquid and discharged as a gas. They work at a molecular level by removing the thermal energy of a fire to an extent where the combustion reaction cannot sustain itself.

Reacton's Clean Agents are electrically nonconductive and leave no residue, meaning that the most delicate and sensitive equipment can be protected safely & effectively.

SYSTEM OPERATION

Both Direct & Indirect technologies have stored pressurised cylinders that are controlled through the use of the Reacton® Detection Tubing.

The tubing is installed in and around the fire risk within the protected area, the tubing is pressurised and in communication with the valve.

When a fire occurs, the tubing will burst at the point of highest heat, the pressure loss in this process causes the system to activate and discharge the Clean Agent extinguishing medium either directly through the Reacton® Detection Tube or through a discharge network and nozzle(s) in the Indirect configuration.

This entire process takes less than 10 seconds providing fast and complete fire protection for your valuable assets.

SYSTEM DESCRIPTION



The Clean Agent system from Reacton® is an automatic pre-engineered pneumatically operated fire suppression system with either Direct Detection and suppression through the Reacton Detection Tube or a fixed nozzle set up when configured as an Indirect system.

All Reacton® Clean Agent systems utilise the pneumatic detection tube to detect and then release the Extinguishing Agent. The Reacton® Detection Tube can also be configured to support & provide additional functions such as manual activation & monitoring.

All systems consist of official Reacton® components that are specifically designed to offer the reliable & proven protection for your critical asset.

Details of the approved components in a Reacton® Clean Agent system are shown below:

Clean Agent Cylinder – consisting of a high-grade welded steel cylinder painted RAL 3000. Either a CT Direct or CTX Indirect Valve™ assembly & all necessary safety plugs and labels. All cylinder assemblies have a temperature range of -20°C to + 60°C and are superpressurised with Nitrogen to 15.0bar @ 20°C (217.5psig @ 68°F) All systems are supplied factory filled by Reacton® and are available in 4 sizes for Direct applications & 5 sizes for Indirect applications.

Cylinder Bracket – Wall or floor mounted powder coated brackets are used to secure the systems in the correct orientation. Available in wire, medium & heavy duty variants provide complete clamping and vibration support.

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.

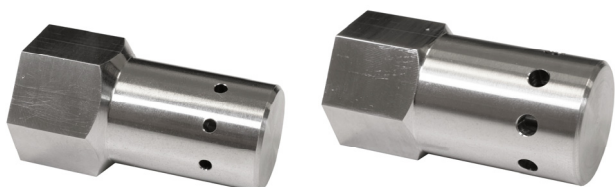
When configured for Direct applications the Reacton® Detection Tube automatically detects, actuates & discharges the Clean Agent directly at the source of the fire.

When configured for Indirect applications 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 75°. It is pressurised with Nitrogen to 15.0bar @ 20°C (217.5psig @ 68°F)



Discharge Nozzle - Available in two types either the 1-2kg Flow or 2-3kg Flow. 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. (Indirect Configurations only)



Discharge Network – Available in either Reacton® branded flexible 3/8" hoses or 1/4" stainless steel pipe.

The discharge Network transports the Clean Agent to the discharge nozzles with the use of approved 3/8" hose fittings or 1/4" compression fittings. (Indirect configurations only)

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. (Indirect configurations only)

Pressure Switches – Available in various switching points these pressure switches can be added to the system to initiate shut down of equipment and connected risks, active audible signals or integrated to local or building alarm systems.



SPECIFICATIONS

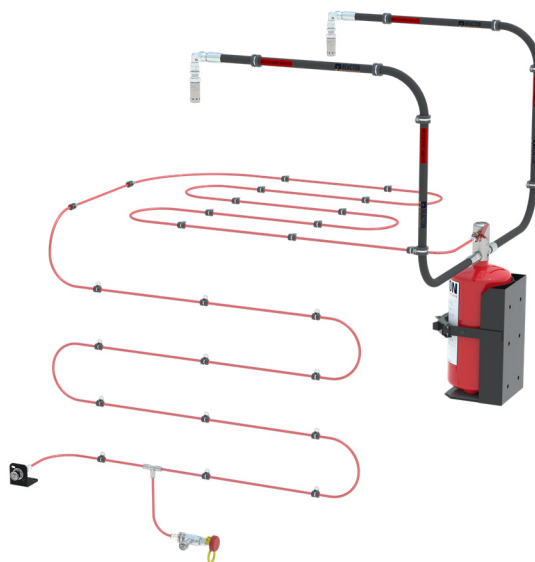
In order for the Clean Agent Fire suppression system from Reacton® to carry a valid warranty and offer its strict performance characteristics, the system shall be fully designed, installed & maintained in accordance to the approved Design, Installation, Operation & Maintenance Manual.

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

- CE Marked
- PED 2014/68/EU
- Designed, manufactured & tested in ISO 9001: 2015 certified facilities
- Exova Laboratories



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SPECIFICATION TABLE – DIRECT

PART NUMBER	AGENT FILL	OPERATING TEMPERATURE	OPERATING PRESSURE	DETECTION TUBE*	DISCHARGE NOZZLES	SYSTEM WEIGHT
RE-CT-014-010-FK5 or RE-CT-014-010-HFC	1.0 kg [2.2 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 20.0m	N/A	2.5 kg [5.5 lbs]
RE-CT-026-020-FK5 or RE-CT-026-020-HFC	2.0 kg [4.4 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 40.0m	N/A	4.1 kg [9.26 lbs]
RE-CT-048-030-FK5 or RE-CT-048-030-HFC	3.0 kg [6.6 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 60.0m	N/A	5.8 kg [12.7 lbs]
RE-CT-048-040-FK5 or RE-CT-048-040-HFC	4.0 kg [8.8 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 60.0m	N/A	6.8 kg [14.9 lbs]
RE-CT-075-060-FK5 or RE-CT-075-060-HFC	6.0 kg [13.2 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 60.0m	N/A	9.7 kg [21.5 lbs]

*The maximum length from the valve to the furthest detection point shall be 10.0 m

SPECIFICATION TABLE – INDIRECT

PART NUMBER	AGENT FILL	OPERATING TEMPERATURE	OPERATING PRESSURE	DETECTION TUBE	DISCHARGE NOZZLES	SYSTEM WEIGHT
RE-CTX-014-010-FK5 or RE-CTX-014-010-HFC	1.0 kg [2.2 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 40.0m	1 x 1-2kg Nozzle	2.9 kg [6.4 lbs]
RE-CTX-026-020-FK5 or RE-CTX-026-020-HFC	2.0 kg [4.4 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 40.0m	2 x 1-2kg Nozzle	4.5 kg [10.0 lbs]
RE-CTX-048-040-FK5 or RE-CTX-048-040-HFC	4.0 kg [8.8 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 40.0m	2 x 1-2kg Nozzle	7.2 kg [15.9 lbs]
RE-CTX-075-060-FK5 or RE-CTX-075-060-HFC	6.0 kg [13.2 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 40.0m	2 x 2-3kg Nozzle	10.2 kg [22.5 lbs]
RE-CTX-120-090-FK5 or RE-CTX-120-090-HFC	9.0 kg [19.8 lbs]	-20 °C to +60 °C [-4°F to + 140°F]	15.0 bar [217.5 psig]	Max system length of 40.0m	4 x 2-3kg Nozzle	15.3 kg [33.8 lbs]

REACTON

FIRE SUPPRESSION



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