

Firewolf High Rate Discharge Suppressor

Explosion Protection System Components

Advantages:

- Electromechanical, non-explosive actuation increases safety, and reduces storage, licensing, and transportation concerns.
- No periodic changing of detonators is required which reduces maintenance costs.
- SIL2 rated with redundant motor coils and actuation electronics.
- Corrosion resistant valve body.
- Electronic function and performance testing (including reaction time) on installed suppressor can be performed by the customer.
- Valve Transport Lock also functions as a lockout/tag-out provision and promotes safe entry into protected vessel.
- Supervisory low pressure switch continuously monitors suppressor nitrogen pressure.
- Designed for use in hazardous locations, per ATEX directives for dust zone 21 and gas zone 2.



Application

The IEP Technologies Firewolf™ suppressor is designed to discharge suppressant in milliseconds within a process vessel or to mitigate the propagation of flame through interconnected ductwork. It is used in conjunction with IEP Technologies range of control panels and detectors. IEP Technologies sophisticated computer modeling techniques determine the quantity and size of suppressors to be used. These techniques predict reduced explosion pressures based on actual process conditions and detector settings.

Description

The IEP Technologies Firewolf™ HRD suppressor consists of a pressurized suppressant storage cylinder and a valve body that contains a dust-ignition proof, weatherproof enclosure. The Firewolf™ houses an electro-mechanical actuation mechanism and does not use pyrotechnic detonators or gas generators.

Upon detection of an incipient explosion, an actuation signal is sent to the suppressor by the control panel. The electronics of the valve trigger two pairs of capacitors which discharge into the redundant electro-motor coils, releasing the flap valve mechanism of the Firewolf™ and initiating the rapid release of the pressurized, suppressant into the protected area within milliseconds.

All safety-relevant parts of the electronics are redundant. There are several monitoring functions to control the functioning of the system. The position of the actuation shaft is monitored to guarantee no false actuation. The capacity and the charge voltage are monitored, as well as the motor. The wiring circuit between the control panel and the Firewolf are also monitored for short-circuit and cable continuity. Any deviation from the normal operating state is signaled to the alarm control unit as a fault. LED indicators on the housing also provide visual indication of the suppressor status.

A transport lock (bolt) is integrated in the housing which allows for the blocking of the latch. Once locked, the flap valve cannot be opened. The position of the transport lock is monitored with built-in redundancy. The outside hexagonal screw head of the lock bolt allows easy lock/unlock by turning the bolt by 180°.

The enclosure is completely sealed to ambient via screw cover and an explosion proof quick-disconnect connector for easy connection to field wiring. The pressure sensor provides a trouble signal to the control panel if the suppressor pressure drops below its normal operating pressure. A pressure gauge is installed to monitor the pressure when the Firewolf is not installed.



Specifications

Type	5 Litre Container	20 Litre Container
Total weight	25 kg	65 kg
Filling weight Extinguishing agent	4 kg	16 kg
Extinguishing agent	KIDDEX™	
Operating pressure	60 bar @ 20°C	
Valve diameter	3" (75 mm)	
Ambient temperature	-20°C to +70°C	
Colour valve	Anthracite	
Colour cylinder	Red / RAL 3000	
Triggering element	Electric motor	
Operating voltage	20 - 30 VDC	
Operating current	100 mA	
Power supply FAB-13	20 - 30 VDC / 1 A	

System certification	
Explosion suppression	FSA 09 ATEX 1592 X
Flame barrier	FSA 09 ATEX 1593 X
Equipment certification	SNCH 01 ATEX 3263
Type of protection Firewolf®	II 2D T75°C IP66
	II 3G EEx nR IIC T6
Type of protection Field terminal box FAB-13	II 2D T83°C IP68
	II 3G EEx nA II T6
Type of protection Distribution box VT-1	II 2D T83°C IP66
	II 3G EEx nA II T6
Use of Firewolf®, FAB-13 and VT-1	Zone 21, Zone 2

Contact Information

For additional information, please contact one of the following locations:

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