

Protractor Operated HRD Suppressors

Explosion Protection System Components Overview

These suppressors are used for explosion suppression of gases, solvent vapours and combustible dusts. The suppressors deliver high rates of suppressant that quench an explosion flame in its early stages, thus preventing a pressure rise from reaching dangerous proportions.

Description

A cylindrical alloy steel container filled with 3kg, 4kg or 16kg of powder suppressant and pressurised to 60 bar (880 psi) with dry nitrogen. Inside the flange is a hinged flap supported by a beam which is kept closed by a latch. Two piston, non-explosive protractor operated actuators are used to initiate opening. Each suppressor is subject to a full function test as part of the strict and robust quality procedures.

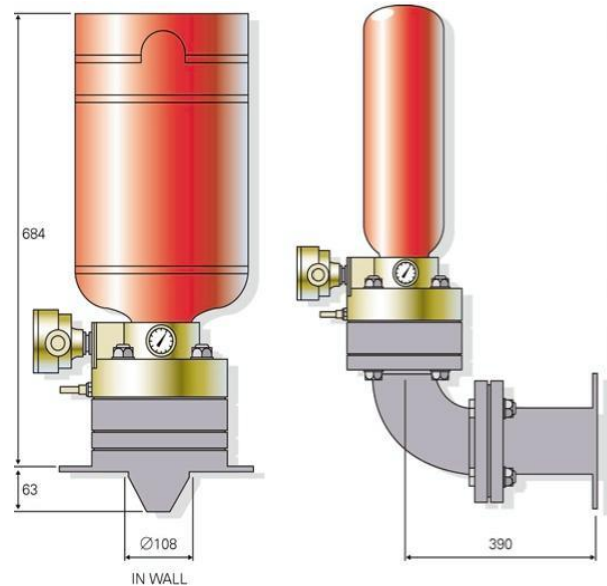
The suppressor is supported by either a flanged elbow or mounting stub. Within the mounting stub is a spreader designed to give the optimum distribution pattern of suppressant. A silicone rubber blow-off cup is fitted over the spreader to prevent ingress of material from the protected plant.

Operation

When the actuators are actuated by means of an electrical impulse from the associated control unit, pistons move the latch, which allows the flap to open. The nitrogen then expels the suppressant at high rate through the spreader assembly into the protected volume. IEP Technologies engineers are available to undertake periodic inspection and maintenance. The recommended time interval between inspections is three months, or 2000 plant operating hours.

Approvals

The suppressors are designed to comply with future ATEX directives. Zone 1 approval, EExdIIc T6 is also available.



4kg or 16kg PHRD
Suppressor Vertically
Mounted on
Fixed Spreader

4kg or 16kg PHRD
Suppressor Fitted to
an Elbow and
Spreader Assembly

Explosive Classifications

This suppressor contains no explosive devices.

Technical Information

Specifications	4kg	16kg
Suppressant options	KiddEx (other suppressants available for special hazards)	
Suppressant Quantity	4kg	16kg
Normal Contents pressure	60 bar g	60 bar g
Dimensions	See installation drawing	
Suppressor weight-full	27 kg	57 kg
Ancillary fittings-weight	90° Mounting: 17.7 kg	
	Vertical Mounting: 7.1 kg	
Discharge Outlet	75mm dia	
Discharge Time	30mS	140mS
Life on Plant	6 Years	
Max. Installed temp	Limited by piston actuator (Max 55°C)	
Max. plant process temp	Typically 250°C – depends on installation method	
Material and Finishes		
Container	Alloy steel, painted red	
Suppressor flange	Mild steel, zinc plated	
Flanged elbow (optional)	Mild steel, painted red	
Mounting stub	Zinc plated mild steel or stainless steel	
Spreader assembly	Stainless steel	
Electrical Data		
Actuator Fuse Resistance	Between 0.9 and 1.6 ohms	
Options: EExd IICT6 version available upon request		

Contact Information

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

IEP Technologies – United Kingdom

Unit 1, Neptune Business Centre
Tewkesbury Road
Cheltenham, GL51 9FB
Tel: +44 (0) 1242 283 060

IEP Technologies - Switzerland

Roetzmattweg 105
CH-4603 Olten
Tel: +41 (0) 62 207 10 10

IEP Technologies - Germany

Kaiserswerther Str. 85c
D-40878 Ratingen
Tel: +49 (0) 2102 5889 0