STUVEX By STIF

FIRE & EXPLOSION SAFETY



STUVEX is part of the STIF Group

English

For over 50 years, **STUVEX** has been a leading player in explosion and industrial fire protection.

Based in Belgium and operating internationally, the company designs, manufactures, and installs comprehensive solutions covering the entire process safety cycle: prevention, venting, suppression, isolation, and fire protection.

Today, **STUVEX** is part of the **STIF Group**, further strengthening its ability to deliver global and complementary solutions in the field of industrial safety.

This strategic alliance combines technical expertise, innovation, and a global presence, serving the most demanding industries, including food processing, chemicals, energy, pharmaceuticals, and recycling.

Our teams of engineers and technicians support each customer at every stage of their project from design to commissioning ensuring reliability, performance, and compliance with international standards **(ATEX, DSEAR, NFPA, etc.)**.

Our mission: to protect people, equipment, and facilities worldwide.

Engineering, Installation & Service

Technical study carried out by ISMA

STUVEX works closely with its partner **ISMA**, who is responsible for carrying out all technical studies related to explosion safety. By combining in-depth expertise in explosion phenomena with extensive experience in industrial processes, **ISMA** delivers robust and reliable analyses that support effective, compliant protection solutions.

Thanks to this unique combination, **ISMA**'s recommendations are pragmatic, practical, and directly applicable to real industrial environments.

Installation

This team is dedicated to **delivering and installing the equipment designed in collaboration with ISMA and selected by the customer.** Our customers benefit directly from the **expertise of STUVEX in-house specialists**, working on-site within their facilities.

With **STUVEX, the customer has a single, trusted partner** to address all aspects of **explosion protection**.

Our objective: to provide the customer with a **complete, integrated solution**, from study to implementation.

Service

This **specialized service team** ensures the **maintenance, reliability, and long-term performance** of installations and products. Support is provided through **training customer teams on proper system maintenance** or by **performing maintenance directly**, always with the highest level of care and expertise.

STUVEX specialists are also available to **advise and support customers before and after system activation**, ensuring optimal operation and safety.

In addition, **STUVEX** offers access to a **training and demonstration facility**, designed to share expertise, validate solutions, and support continuous improvement.



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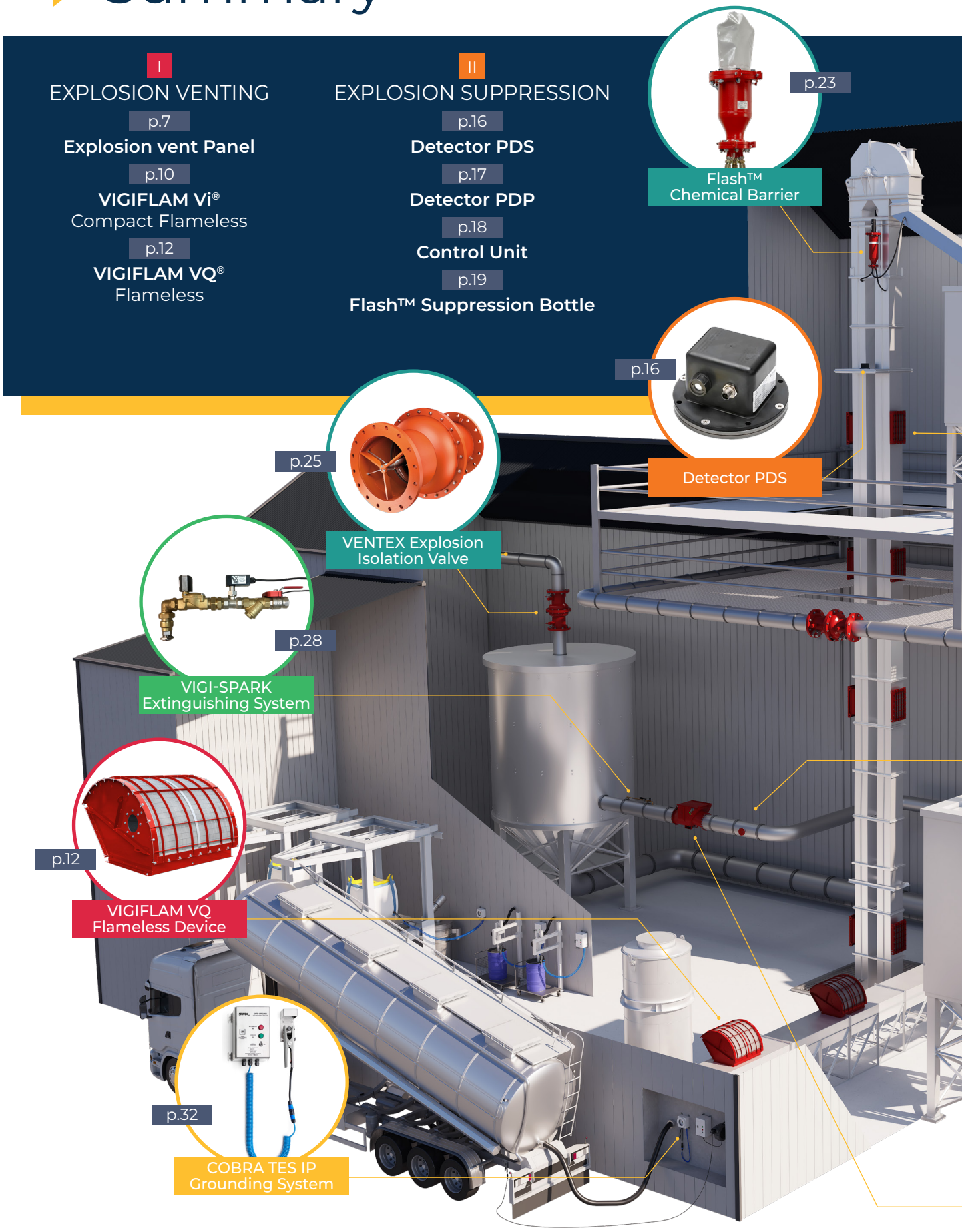
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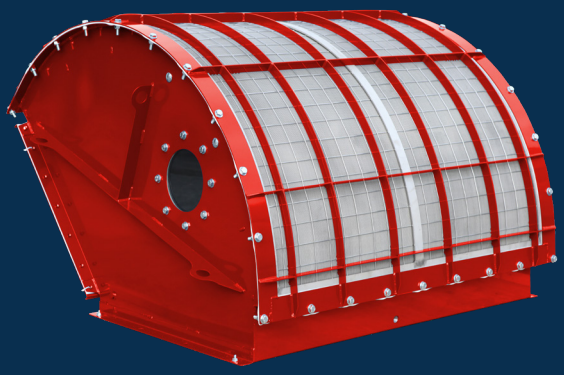
I

EXPLOSION VENTING

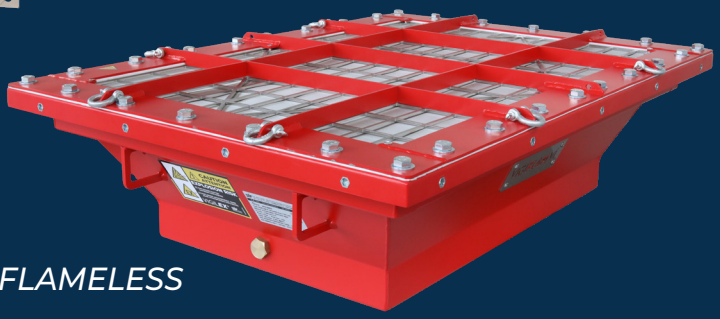
Control the pressure, protect the process



EXPLOSION VENT PANEL



FLAMELESS VENTING



COMPACT FLAMELESS

When an explosion occurs inside a closed industrial system such as a silo, filter, or conveyor the pressure rises in milliseconds.

Explosion venting provides a safe, controlled way to release this overpressure, preventing catastrophic damage to the equipment and protecting nearby personnel.

STIF offers a complete range of explosion venting solutions under the VIGILEX brand, combining performance, safety, and reliability.

Explosion Vent Panel



VIGIL**EX** VL® *FLAT*



VIGIL**EX** VL-R® *CURVED*



VIGIL**EX** VD® *DOMED*



VIGIL**EX** VL-SANITARY® *SANITARY*



VIGIL**EX** VD-HV® *HIGH VACUUM*



VIGIL**EX** VL-HV®&VL-R-HV®

Explosion Vent Panel

RECTANGULAR & SQUARE

INTERNAL DIMENSION		EXTERNAL DIMENSION	AREA
(mm)	Inches	(mm)	(cm^2)
110 x 290	4 x 11	174 x 354	310
150 x 600	6 x 24	230 x 680	885
170 x 470	7 x 19	250 x 550	785
220 x 420	9 x 17	300 x 500	910
229 x 229	9 x 9	310 x 310	515
229 x 305	9 x 12	310 x 386	690
247 x 610	10 x 24	327 x 690	1485
270 x 458	11 x 18	350 x 538	1220
300 x 500	12 x 20	380 x 580	1480
300 x 600	12 x 24	350 x 650	1780
305 x 457	12 x 18	386 x 538	1385
305 x 610	12 x 24	386 x 690	1845
319 x 765	12 x 30	405 x 850	2425
340 x 385	13 x 15	404 x 449	1290
340 x 440	13 x 17	404 x 504	1430
350 x 650	14 x 26	430 x 730	2255
375 x 655	15 x 25	460 x 740	2445
390 x 620	15 x 24	470 x 700	2395
410 x 410	16 x 16	480 x 480	1660
420 x 520	16 x 20	500 x 600	2165
420 x 920	16 x 36	500 x 1000	3835
457 x 890	20 x 28	537 x 970	4040
470 x 610	18 x 24	550 x 690	2845
480 x 680	19 x 27	570 x 770	3260
490 x 490	19 x 19	570 x 570	2380
490 x 590	19 x 23	570 x 670	2865

INTERNAL DIMENSION		EXTERNAL DIMENSION	AREA
(mm)	Inches	(mm)	(cm^2)
520 x 520	20 x 20	600 x 600	2680
520 x 620	20 x 24	600 x 700	3200
520 x 1020	20 x 40	600 x 1100	5270
580 x 780	23 x 30	670 x 870	4495
580 x 1180	23 x 46	670 x 1270	6805
586 x 920	23 x 36	666 x 1000	5360
610 x 610	24 x 24	690 x 690	3695
610 x 1118	24 x 44	690 x 1198	6785
645 x 645	25 x 25	735 x 735	4130
645 x 1130	25 x 44	735 x1220	7250
653 x 653	26 x 26	735 x 735	4260
680 x 680	27 x 27	770 x 770	4595
720 x 1020	28 x 40	800 x 1100	7305
780 x 780	30 x 30	870 x 870	6050
780 x 1180	30 x 46	870 x 1270	9160
800 x 1000	31 x 40	890 x 1090	7960
880 x 880	35 x 35	970 x 970	7705
915 x 1118	36 x 44	996 x 1198	10 200
920 x 920	36 x 36	1000 x 1000	8425
980 x 980	39 x 39	1070 x 1070	9560
1000 x 1000	40 x 40	1080 x 1080	9960
1020 x 1020	40 x 40	1100 x 1100	10 360
1080 x 1080	42 x 42	1170 x 1170	11 620
1130 x 1130	44 x 44	1220 x 1220	12 720
1180 x 1180	46 x 46	1270 x 1270	13 875
1000 x 2000	40 x 79	1080 x 2080	19940

Other sizes available

Explosion Vent Panel

ROUND

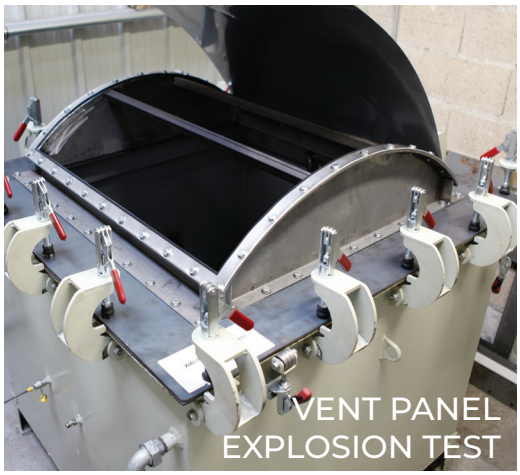
INTERNAL DIMENSION		EXTERNAL DIMENSION	AREA
(mm)	Inches	(mm)	(cm²)
Ø 200	8	Ø 268	310
Ø 250	10	Ø 330	480
Ø 300	12	Ø 390	700
Ø 350	14	Ø 424	955
Ø 400	16	Ø 473	1240
Ø 450	18	Ø 545	1570
Ø 500	20	Ø 574	1950

INTERNAL DIMENSION		EXTERNAL DIMENSION	AREA
(mm)	Inches	(mm)	(cm²)
Ø 600	24	Ø 646	2805
Ø 700	28	Ø 790	3815
Ø 750	30	Ø 842	4335
Ø 800	31	Ø 880	5010
Ø 900	36	Ø 980	6325
Ø 980	39	Ø 1070	7445

Other sizes available

TECHNICAL INFORMATION

STUVEX MODEL	DESIGN	Pstat @ 22 °C	EFFICIENCY RATIO	MAX VACUUM	KST MAX
VL VD	Single flat Integrated frame	100 ≤ Pstat ≤ 500 (±15%) Pstat < 100 (±20%)	80 % - 100 %	50 mbar	500 bar.m/s


VENT PANEL EXPLOSION TEST

CERTIFICATIONS

Ex II D

EN14 491
EN14 994
EN14 797
EN1127.1

EC Certificate:
INERIS 15ATEX0001X

Production quality assurance notification :
INERIS 08ATEXQ406



VIGIFLAM Vi®

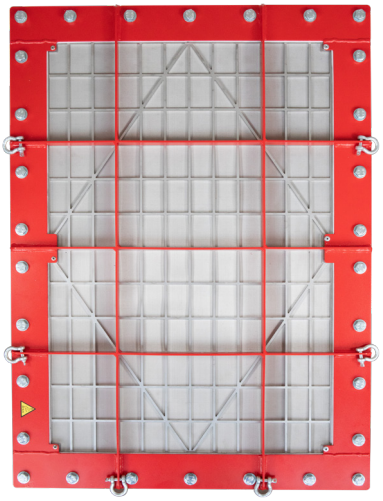
COMPACT FLAMELESS DEVICE VIGIFLAM Vi®

APPLICATIONS

The **flameless explosion venting device VIGIFLAM Vi** is designed in a rectangular shape and consists of three main components: the body, a metal filter composed of several layers to cool flames, and a new innovative explosion panel. This stainless steel membrane is weakened in the middle allowing to rupture when excessive overpressure occurs inside the enclosure intended to be protected.

The purpose of **VIGIFLAM Vi** is to neutralize the flame effects produced during an explosion, which would typically vent through a standard explosion panel. By containing the flames, it helps protect both people and property within a building or room.

VIGIFLAM Vi is specifically optimized for conveyors bucket, belt, chain, and screw conveyors due to its compact and efficient design, making it suitable for protecting such equipment in industrial settings.



CERTIFICATIONS

Ex II D

EN 16009

EC Certificate:
DNV 25 ATEX 55887X

Production quality assurance notification:
INERIS 08ATEXQ406

CERTIFIED FOR:

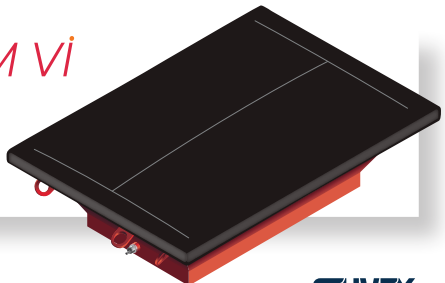
- Organic dust
- Fiber dust

Standard characteristics

- Vent panel
- Mild steel body + coating
- Stainless steel 304 mesh
- Integrated Silicone gasket
- Integrated burst sensor

OPTIONS FOR VIGIFLAM Vi

- Waterproof sanitary cover



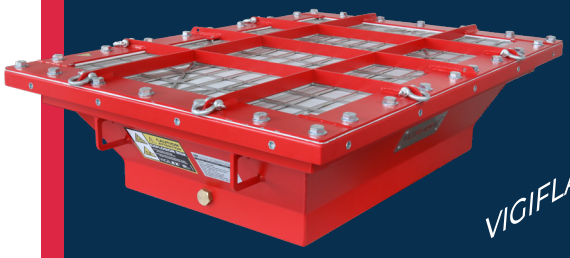
VIGIFLAM Vİ®

ALL RIGHTS RESERVED
PATENTED
No. FR3147617

GENERAL DIMENSIONS

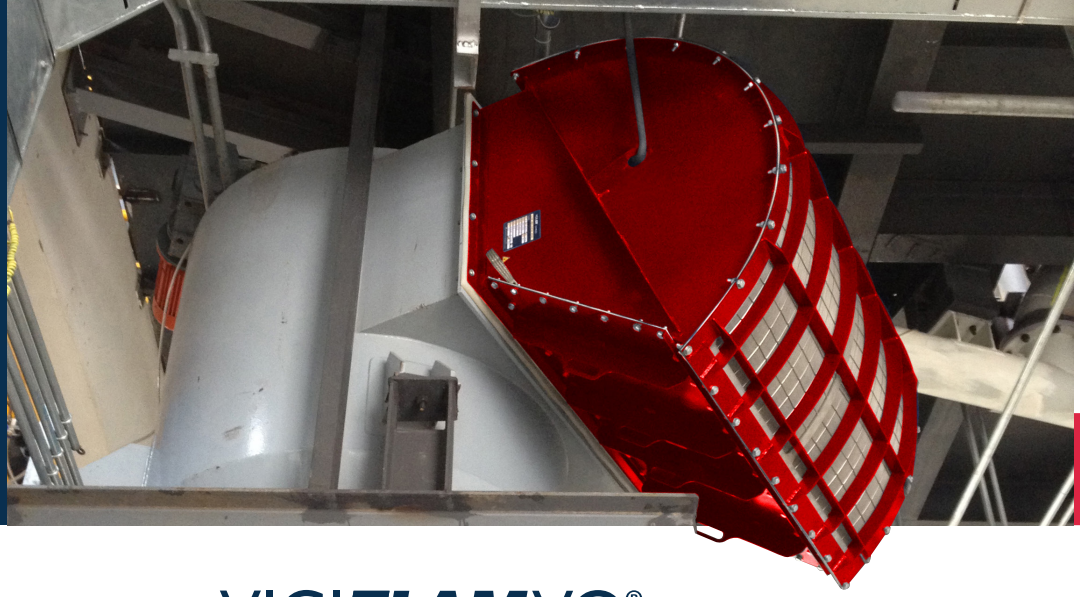
VIGIFLAM Vİ	NOMINAL PANEL SIZE		NOMINAL PANEL AREA		WEIGHT		FIXING BOLT
	(mm)	Pouces	m²	sq ft	kg	lb	Nbr
170 x 470	170 x 470	7 x 19	**0.0799**	0.845	**29**	64,0	16 M10
180 x 420	180 x 420	7 x 17	**0.0756**	0.795	**28**	61,7	16 M10
205 x 610	205 x 610	8 x 24	**0.1251**	1.320	**38**	83,8	20 M10
270 x 458	270 x 458	11 x 18	**0.1237**	1.315	**40**	88,2	18 M10
305 x 610	305 x 610	12 x 24	**0.1861**	1.980	**55**	121,3	22 M10
350 x 650	350 x 650	14 x 26	**0.2275**	2.420	**67**	147,7	22 M10
490 x 590	490 x 590	19 x 23	**0.2891**	3.085	**80**	176,4	26 M10





TECHNICAL INFORMATION

VIGIFLAM Vİ	Kst max ≤ 200	Pmax : 9,4 bar	Pred : 1 bar	Pstat ≤ 0,1 bar (±20%)



VIGIFLAM VQ®

FLAMELESS DEVICE VIGIFLAM VQ®

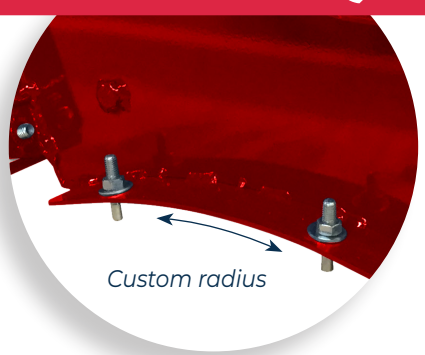
APPLICATIONS

The **VIGIFLAM VQ** is a rectangular flameless device connected with an internal standard panel **VIGIFLAM** bursting panel.

It can be used with great effect indoors and outdoors and is a fast and easy solution instead of cumbersome and expensive solutions with pipe installations to the open air.

VIGIFLAM VQ can eliminate the spread of flame and glowing particles. During the early stage of an explosion the explosion vent opens. The flame, burned and unburned dust enter the flame arrestor element. Flame propagation beyond the **VQ** is prevented by energy dissipation in the filter element, reducing the burning fuel below its ignition temperature.

The dust is retained within the **VQ** and gases from the explosion are vented through the device into the external atmosphere around the device.



Custom radius

VIGIFLAM VQ Features

- VL flat vent panel or VD domed vent panel included
- Mild steel body + coating
- Stainless steel mesh
- Burst sensor VIGILEX INR included

CERTIFICATIONS

Ex II GD
Ex II 2 D

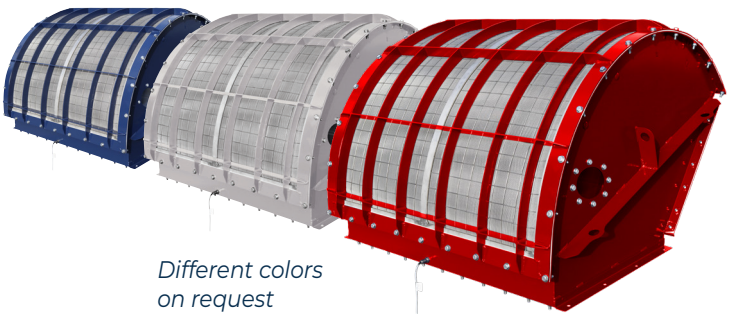
EN 16009

EC Certificate: *INERIS 14 ATEX 0049 X*

Production quality assurance notification: *INERIS 08ATEXQ406*

CERTIFIED FOR:

- Organic dust
- Fiber dust
- Gas



Different colors on request

OPTIONS for VIGIFLAM VQ

- Waterproof sanitary cover



- Body made of stainless steel

VIGIFLAM VQ LW®

Light weight - Pred : 0,5 bar

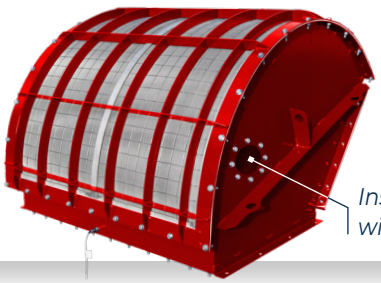
VIGIFLAM VQ HW®

Heavy weight - Pred : 2,3 bar

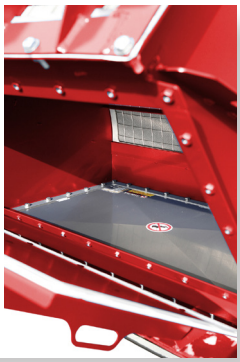
VIGIFLAM VQ SPECIFICATIONS

VIGIFLAM VQ	IN COMBINATION WITH VENT PANEL				WEIGHT VQ LW		WEIGHT VQ HW		BOLT SPECS	
MODEL	Nominal Size (mm/inch)		Nominal Square (m^2/ft^2)		kg/lb		kg/lb		Qty	Size
VIGIFLAM VQ 170x470	170 x 470 mm	7 x 19 in	0,0785 m^2	0,845 sq ft	48 kg	105,8 lb	59 kg	130,1 lb	20	M10x30
VIGIFLAM VQ 270x458	270 x 458 mm	11 x 18 in	0,1220 m^2	1,315 sq ft	60 kg	132,3 lb	74 kg	163,1 lb	22	M10x30
VIGIFLAM VQ 300x500	300 x 500 mm	12 x 20 in	0,1480 m^2	1,595 sq ft	67 kg	147,7 lb	82 kg	180,8 lb	24	M10x30
VIGIFLAM VQ 305x610	305 x 610 mm	12 x 24 in	0,1840 m^2	1,980 sq ft	79 kg	174,2 lb	96 kg	211,6 lb	26	M10x30
VIGIFLAM VQ 350x650	350 x 650 mm	14 x 26 in	0,2250 m^2	2,425 sq ft	84 kg	185,2 lb	101 kg	222,7 lb	26	M10x30
VIGIFLAM VQ 490x590	490 x 590 mm	19 x 23 in	0,2870 m^2	3,085 sq ft	94 kg	207,2 lb	123 kg	271,2 lb	32	M10x30
VIGIFLAM VQ 610x610	610 x 610 mm	24 x 24 in	0,3695 m^2	3,975 sq ft	112 kg	246,9 lb	147 kg	324,1 lb	32	M10x30
VIGIFLAM VQ 457x890	457 x 890 mm	18 x 35 in	0,4040 m^2	4,349 sq ft	117 kg	257,9 lb	152 kg	335,1 lb	34	M10x30
VIGIFLAM VQ 586x920	586 x 920 mm	23 x 36 in	0,5360 m^2	5,770 sq ft	136 kg	299,3 lb	178 kg	392,4 lb	42	M10x30
VIGIFLAM VQ 645x1130	645x1130 mm	25 x 44 in	0,7250 m^2	7,804 sq ft	222 kg	489,4 lb	240 kg	229,1 lb	34	M10x30
VIGIFLAM VQ 920x920	920 x 920 mm	36 x 36 in	0,8425 m^2	9,068 sq ft	317 kg	698,9 lb	641 kg	1413,2 lb	50	M10x30
VIGIFLAM VQ 1130x1130	1130 x 1130 mm	44 x 44 in	1,2720 m^2	13,694 sq ft	442 kg	974,4 lb	802 kg	1768,1 lb	62	M10x30

ADVANTAGES







TECHNICAL INFORMATION

VIGIFLAM VQ LW	Kst max 500	Pmax ≤ 10 bar	Pred ≤ 0,5 bar	Pstat = 0,1 to 0,3 bar
VIGIFLAM VQ HW	Kst max 500	Pmax ≤ 10 bar	Pred ≤ 2,3 bar**	Pstat = 0,1 to 0,5 bar

** VQ LW Version Only*

*** Pred < 1,85 for VQ HW ≥ 645x1130*

II

EXPLOSION SUPPRESSION

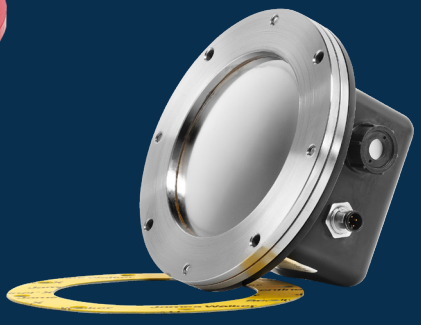
FLASH™ SYSTEM



FLASH™ SUPPRESSION BOTTLE



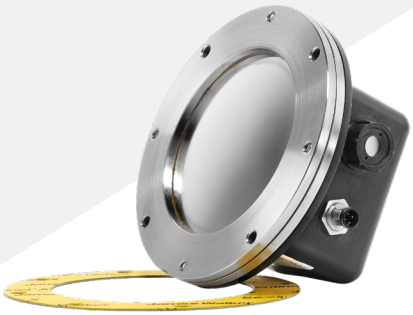
CONTROL UNIT



DETECTOR PDS

Stop the explosion in milliseconds

The Flash™ system is composed of:



Detector PDS

The PDS sensor responds to a pressure rise and activates when the preset pressure threshold is reached. It is equipped with a mechanical locking system that prevents automatic reset and an indicator light that shows the status.



Detector PDP

The Detector PDP consists of an Explosion Detection Module (EDM) and a Pressure Detection Sensor Head (PDP-SH).

The PDP has 3 measurement capabilities:

1° Static pressure measurement
2° Dynamic pressure measurement
3° Optical measurement



Control Unit

The control unit is designed for explosion suppression and isolation systems using Flash II chemical barriers. It interfaces explosion detectors (PDS/PDP) with Flash™ suppression bottle. The base version includes a display and event logging, while the expansion unit is monitored and controlled via the base unit.



Flash Suppression Bottle

Flash™ suppression bottles are key components of Flash™ explosion suppression and active chemical barrier systems. Monitored and activated by the control unit, each bottle releases sodium bicarbonate extinguishing powder upon explosion detection, rapidly stopping combustion and preventing escalation.



Flash™ Detectors

DETECTOR PDS & PDP

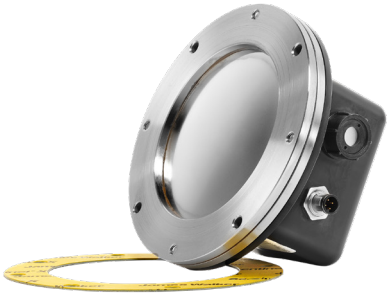
APPLICATIONS

PDS and **PDP** detectors are designed for the early detection of explosions in industrial processes and are an integral part of the **Flash explosion suppression system**. They are used to trigger suppression and isolation actions in dust explosion protection applications.

These detectors are commonly installed in process vessels, silos, filters, cyclones, conveyors, and ducting, where rapid pressure rise detection is essential to prevent explosion escalation and propagation.

DETECTOR PDS

The **PDS** is a static pressure transmitter that detects the pressure difference between the atmospheric pressure and the process pressure by means of a large pre-formed membrane.



DETECTOR PDP

The Detector **PDP** consists of an Explosion Detection Module **(EDM)** and a Pressure Detection Sensor Head **(PDP-SH)**.

The PDP has 3 measurement capabilities:

1° Static pressure measurement
2° Dynamic pressure measurement
3° Optical measurement





Control Unit

FLASH™ CONTROL UNIT

APPLICATIONS

The control unit of type CU-P03D is used in explosion suppression and explosion isolation systems with chemical barriers of the Flash II type. It provides the interface between explosion detectors of type PDS or PDP and explosion suppression bott-les of type EAB or MP in the Flash II system.

The base version of type CU-P03O-8 integrates a display module and history module. The CU-P03O-E type is expansion unit that communicates with the base unit and is monitored and controlled via the base unit.



FCU P03-2D-B

GENERAL CHARACTERISTICS

	CU P03-02D-B	CU P03-02D-E
External Signaling		
Reset button	V	X
on/off key switch	V	X
System status LED	V	X
External keypad	V	X
LCD-display	V	X
Internal Signaling *(ZCN Module)*	V	
Reset button	V	V
on/off key switch	V	V
Zone status LED	V	V



Flash™ Suppression Bottle

APPLICATIONS

Flash™ suppression bottles are integral components of **Flash™ explosion suppression systems** and **active chemical barrier systems**. These bottles are monitored and activated through the **CU-P03 series control unit**. Each bottle features a **painted steel body** containing **sodium bicarbonate extinguishing powder**, a **gas generator**, and a **single discharge outlet**. The powder reservoir is fully sealed and maintained at **atmospheric pressure**.

Upon explosion detection, the control unit triggers the gas generator, rapidly producing a significant volume of gas to **instantaneously discharge the extinguishing powder**. The sodium bicarbonate effectively **halts the combustion process**, preventing the explosion from escalating into a destructive event.

The Flash™ suppression bottle is a **direct discharge unit** with a single outlet, designed for **explosion suppression in enclosed spaces or for compartmentalizing explosive events**.

It is available in two sizes: **10 L/7 kg** and **20 L/14 kg**.



Flash™

FLASH™ BENEFITS

- Suppression bottle operates without permanent pressure, exempting it from pressurized equipment regulations (PED)
- Safe handling with no risk of accidental activation
- Uses food-grade extinguishing powder, ensuring compatibility with food industry applications, EN 1935
- Easy on-site assembly of the powder kit

MAINTENANCE and SERVICE

STUVEX offers ongoing maintenance and service for your FLASH™ Suppression System.

Flash™ Suppression Bottle



TECHNICAL SPECIFICATIONS

EAB-E-SF (ANGLED OUTLET) SPECIFICATIONS			
	EAB10-E-SF-700cc	EAB20-E-SF-700cc	EAB20-E-SF-1150cc
Drilling diameter (process side)	ø125 mm		
Material	Painted steel, SS304		
Total weight *(kg)*	75	99,5	114
...Gas generator *(kg)*	16,5	16,5	31
...Powder reservoir *(kg)*	11,5	22	22
...Bottle *(kg)*	47	61	61
Dimensions *(H1 mm)*	1038	1328	1420
...H2 *mm*	345	345	434
...H3 *mm*	521	811	811
...D1 *mm*		365	
...D2 *mm*		150	

EAB-V-SF (STRAIGHT OUTLET) SPECIFICATIONS			
	EAB10-V-SF-700cc	EAB20-V-SF-700cc	EAB20-V-SF-1150cc
Drilling diameter (process side)	ø125 mm		
Material	Painted steel, SS304		
Total weight *(kg)*	74	98,5	113
...Gas generator *(kg)*	16,5	16,5	31
...Powder reservoir *(kg)*	11,5	22	22
...Bottle *(kg)*	46	60	60
Dimensions *(H1 mm)*	927	1217	1306
...H2 *mm*	345	345	434
...D1 *mm*		365	

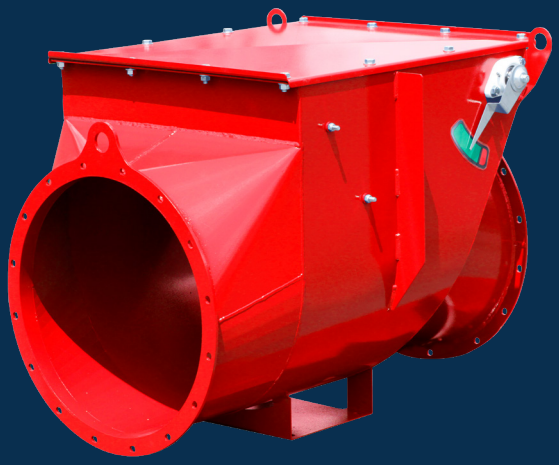
III

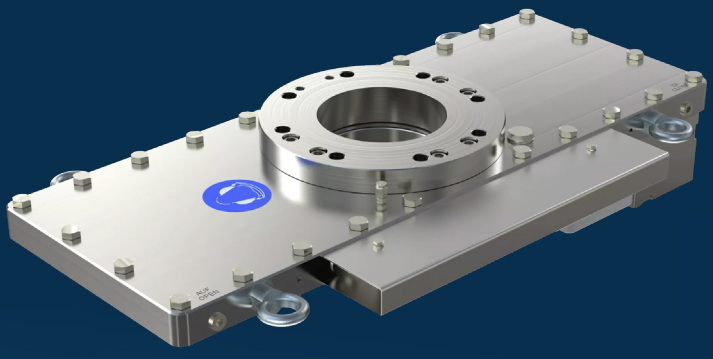
EXPLOSION ISOLATION



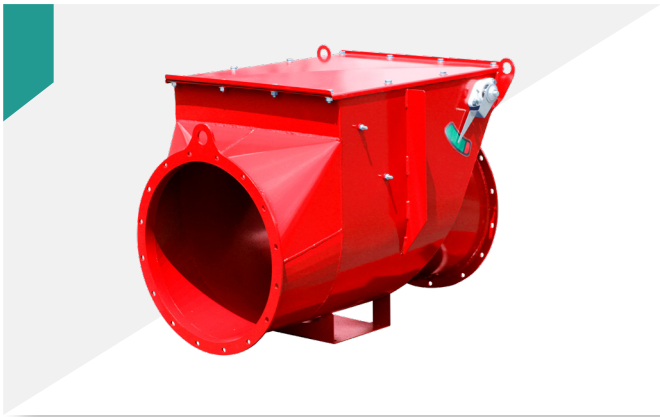
FLASH™ CHEMICAL BARRIER

NON-RETURN VALVE VIGIFLAP





FAST SHUTTING GATE VALVE RSV



Vigiflap

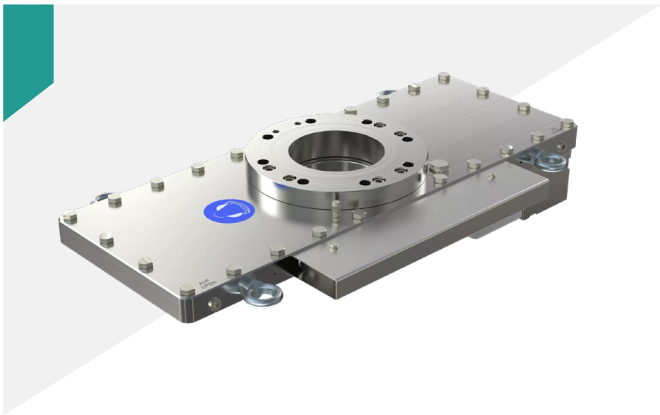
The VIGIFLAP is a non-return valve designed to prevent overpressure or flame caused by a downstream explosion to propagate in the piping system.



Flash™ Chemical Barrier

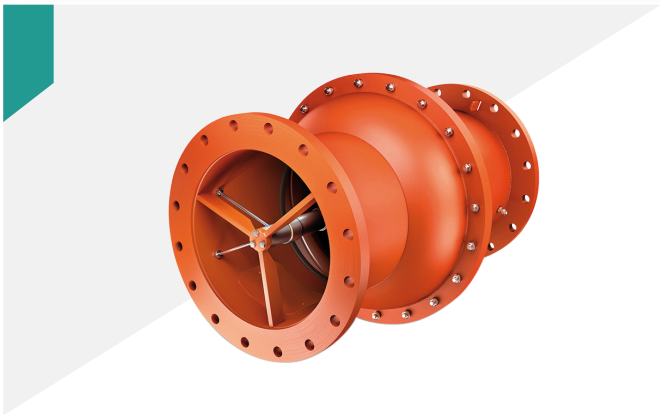
The Flash™ chemical barrier is composed of detectors, a control unit, and a gas generator with its suppressor bottle.

Flash™ chemical barriers are used for explosion isolation, detecting an explosion at an early stage and preventing flame propagation between connected process units by rapidly forming a chemical barrier.



RSV

RSV fast-shutting gate valves prevent the propagation of dust explosions by blocking the shock wave and flame, closing within milliseconds when activated by a spark or explosion detector.



Ventex

VENTEX explosion isolation valves prevent the propagation of dust explosions by blocking the shock wave and flame front, closing passively without the need for any external input.



VIGIFLAP®

NON RETURN VALVE VIGIFLAP®

APPLICATIONS

The VigiFLAP is a non-return valve designed to prevent overpressure or flame caused by a downstream explosion (dust collectors, filters, cyclones...) to propagate in the piping system.

The valve is held open by a lever arm. It can be used both at the entrance and at the exit of the filter. This allows to isolate the filter from an explosion or an overpressure.

In case of explosion, the valve closes and remains locked preventing the progress of the flame. The unlocking of the flap is done manually.



CERTIFICATIONS

INERIS 19ATEX0016 X
EN 16447 EN 15089
NFPA 69

VIGIFLAP Features

- Body: Painted steel
- Flap: Round domed flap: Stainless steel
- Diameter: ø100 mm to ø800 mm
- EPDM FDA Gasket: -30 °C to +70 °C/-22 °F to 158 °F
- Flanges: ISO and ANSI flanges design
- Inductive Sensor: Non ATEX closing indication sensors in case of explosion or overpressure

TECHNICAL INFORMATION

Kst max	≤250 bar.m/s	Pred max*	≤ 0.5 bar	Air flow speed	Clean air side : ≤ 30 m/s Dirty air side : ≤ 45 m/s
Kst min	No limit	VIGIFLAP Resistance	2.0 bar	Working	Air + dust circuit /Clean air circuit
Pmax	10 bar / 145 psi	Marque ATEX	II D	Air flow range	Pull flow / Push flow
MIE	≥ 10 mJ	Atex inside	Zone 20 (II 1D)	Working pressure	500 mbar max
MIT	≥ 400° C / ≥ 752° F	Dust**	All dusts kinds	Working vacuum	-800 mbar max
MESG	1,7 mm / 0.067 inch	Dust concentration	No limit	Elbow quantity	No limit

**Vessel (potential explosion source)*

***Organic dust, synthetic dust and metal dust*



Flash™

FLASH™ CHEMICAL BARRIER

APPLICATIONS

Based on the Flash™ explosion suppression system and operating in a similar manner, Flash™ chemical barriers are capable of detecting an explosion in an early stage by means of pressure or flame detectors. Suppressant powder is injected at multiple locations forming a barrier preventing flame propagation.

Flash™ chemical barriers are typically used to protect inlets and outlets of e.g. bucket elevators, chain conveyors, dryers, filters, mills, etc.

Robust, easy to mount modular architecture

The Flash™ chemical barrier is modular in design and consists of three major building blocks:

- *Explosion detector(s) for the rapid detection of static pressure, dynamic pressure or light intensity (flame) increase.*
- *Control unit directing the operation between detector and suppressor bottle.*
- *Gas generator and suppressor bottle containing suppressant powder kit with multiple injection points.*

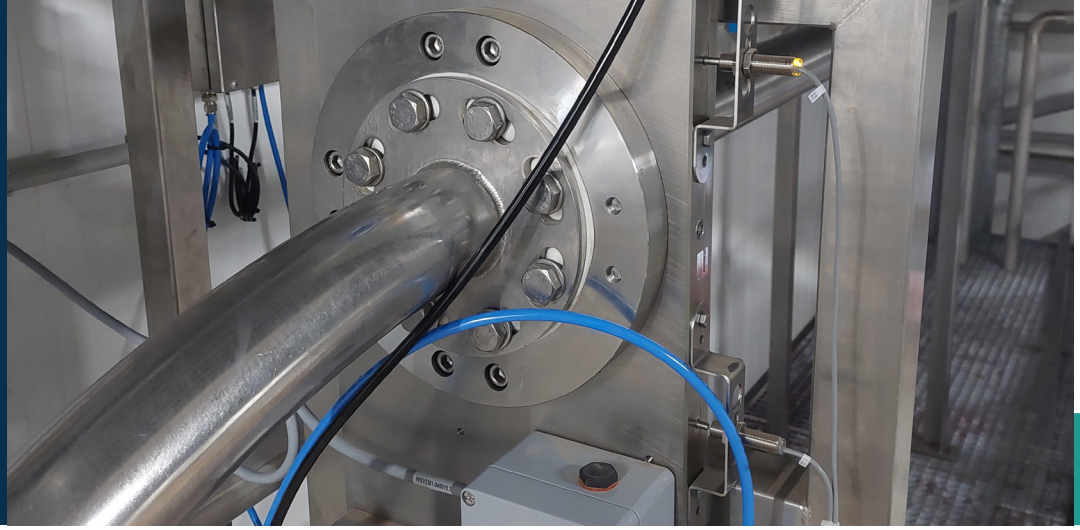






FLASH™ Chemical Barrier Features

- ATEX certified chemical barrier
- Food compliant sodium bicarbonate suppressant powder
- Up to 4 exits per bottle
- Easy mounting onto existing process equipment
- Easy to operate and maintain
- Not subject to PED (Pressure Equipment Directive) requirements
- Robust modular design
- 20+ years of experience in a wide environments

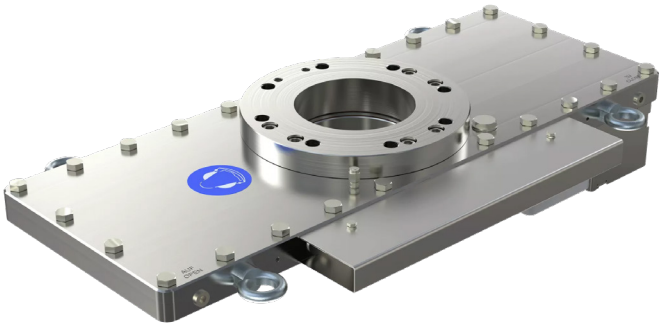


RSV

FAST SHUTTING GATE VALVE

APPLICATIONS

RSV fast shutting gate valves prevent explosion propagation from dust, gas or hybrid mixture explosions by blocking the shock wave and flame. **RSV fast shutting gate valves** are active valves closing in a matter of miliseconds when triggered by a spark or explosion detector. They are used in a variety of industrial applications and typically protect dryers, mills, filters, cyclones, pneumatic conveying lines, so with high dust loads. The RSV also meets the highest hygiene requirements in food and pharmaceutical applications.



RSV Features

- Short installation distance due to quick closing time
- Suitable for conveying pipes carrying high products loads
- Product contact parts SS 1.4301 (ASI 304) or 1.4404 (AISI 316)
- Durability thanks to selected materials
- No pressure drop due to free slide passage
- Installation in any preferred position
- Due to its design, outer housing insensitive to dirt
- Optimal cleanability thanks to IP65 protection class
- ATEX 2014/34/EU and EN 15089
- Pharmaceutical industry compliance

VERSIONS

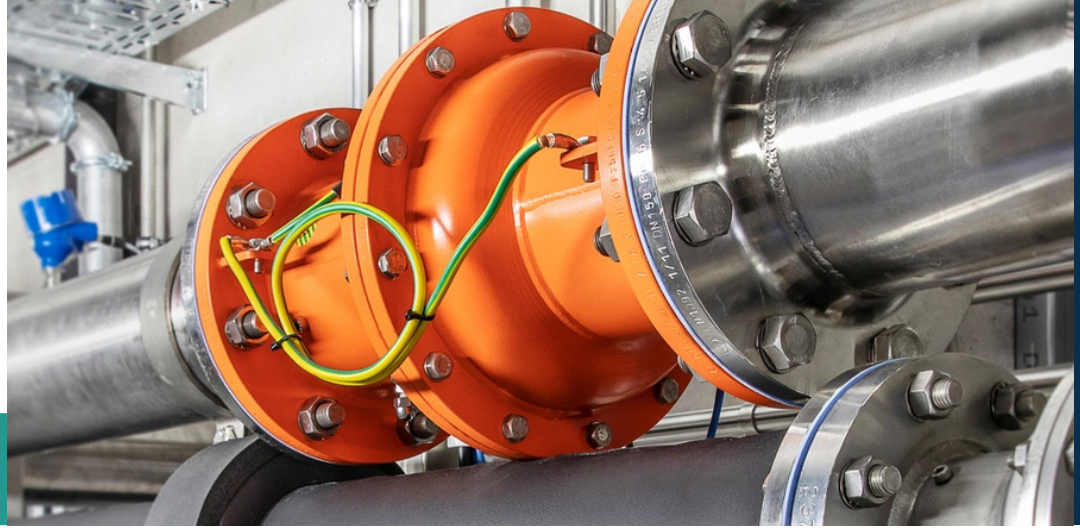
RSV-D: Dust version *(DN50-DN500; dual acting).*
Suitable for underpressure.

RSV-G: Gas version *(DN50-DN400; dual acting).*
Suitable for under and overpressure.

RSV-P: Pharma version *(DN50-DN200; dual acting).*
Suitable for under and overpressure.

MAINTENANCE AND REVISION

Contact STUVEX for regular maintenance and revision of your RSV slide valve.
STUVEX is an (by producer) certified repair center for RSV slide valves.



Ventex®

EXPLOSION ISOLATION VALVE

APPLICATIONS

Ventex explosion isolation valves prevent propagation of dust explosions by blocking the shock wave and flame front. Ventex valves are passive valves meaning they will close without requiring any external energy input. Ventex valves are suitable for low dust load process streams containing up to max. 50 g.m-3 of dust and are typically used to protect dryers, mills, filters, cyclones, etc.



Ventex Features

- Certified for metallic and organic dust, gas or hybrid mixtures Stainless steel internal parts
- Can be mounted horizontally or vertically (option)
- Easy to maintain
- ANSI flanges available on request
- Housing in coated or stainless steel
- Easy to reset following an activation
- Wide range of position indicators available
- Certified according ATEX 2014/34/EU and EN 15089
- Pharmaceutical industry compliance

VERSIONS

ATEX certified Ventex valves are available in three versions in sizes DN100, DN150, DN200, DN250, DN300, DN400, DN500 and DN600..

Ventex S: "single acting" stops explosion comming from one direction

Ventex D: "double acting" stops explosion comming from both directions

Ventex C: "check valve"

MAINTENANCE AND REVISION

Contact STUVEX for regular maintenance and revision of your Ventex explosion isolation valve.
STUVEX is an (by producer) certified Ventex repair center.

IV

SPARK & FIRE EXTINGUISHING



PAGG SYSTEM



VIGI-SPARK SYSTEM

VIGI-SPARK® System



Spark Detection & Extinguishing System

The **Spark Detection** and **Extinguishing System** is designed to reduce the risk of fire and explosion in dust filtration and pneumatic conveying systems.
Spark detectors continuously monitor process lines to detect sparks or hot particles at an early stage. When a spark is detected, the control unit immediately activates the automatic extinguishing system. The system protects defined zones by managing multiple detectors and suppression devices.
It provides a fast, reliable safety solution for industries handling combustible dust.

PAGG System

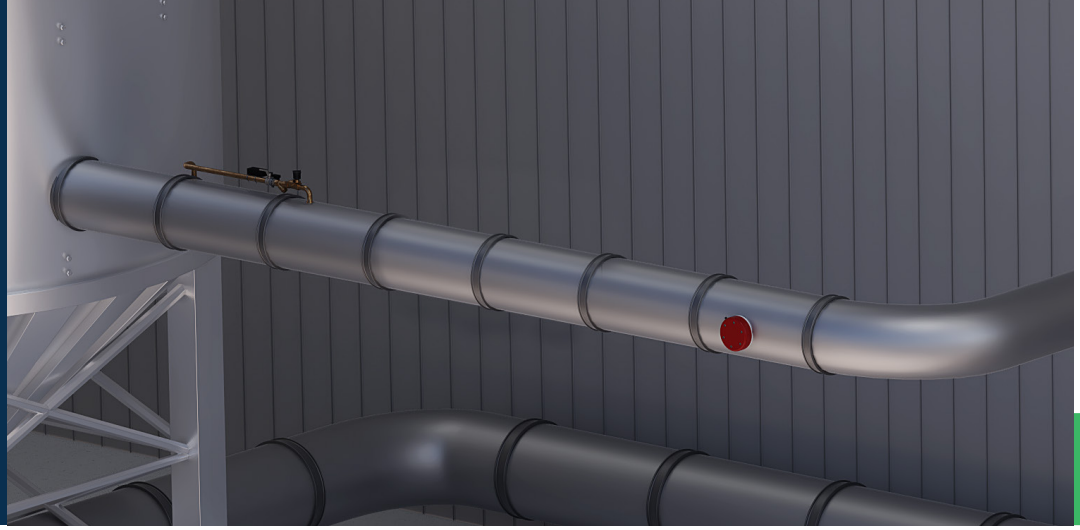


Fire Detection & Automatic CO_2 Extinguishing

The **PAGG system** consists of **flame detectors and optical flame detectors**, designed to **detect ignition sources and flames at an early stage** in industrial processes. These detectors continuously monitor the protected area and trigger a rapid response in case of fire.

They are connected to a **control unit**, which serves to **connect fire detection** devices (flame detectors, spark detectors, etc.) and to **control an automatic extinguishing system**.

The control unit has been specifically developed for the protection of **localized industrial hazards**, such as **paint and powder coating booths, industrial ovens and drying kilns, and machining equipment,** ensuring fast and reliable fire protection.



VIGI-SPARK® System

SDN SPARK DETECTOR

APPLICATIONS

Our **SDN spark detectors** are designed to monitor and register sparks in completely dark areas. This makes them highly suitable to monitor ventilation and material transport.

Our **SDN** is manufactured with reliability and dependability in mind. That is why it is constructed from a single solid metal piece. This makes it capable of withstanding influence production.



SDD SPARK DETECTOR

APPLICATIONS

Our **SDD spark detectors** are designed to monitor and register sparks in areas lit by daylight or electrical lights. This makes them highly suitable to monitor conveyor belts.

Our **SDD** is manufactured with reliability and dependability in mind. That is why it is constructed from a single solid metal piece. This makes it capable of withstanding influence production.



TECHNICAL INFORMATION

SDN SPARK DETECTOR & SDD SPARK DETECTOR	
DIMENSIONS	115 x 31 mm
VOLTAGE	+20 VDC ± 10 % (supplied by spark detection central)
CURRENT	10 mA ± 10 %
OPERATING TEMPERATURE	-40°C to +70°C (can be exceeded if used in conjunction with optional fiber optic cables)



VIGI-SPARK® System

SPARK DETECTION AND EXTINGUISHING SYSTEM

APPLICATIONS

The **Spark Detection and Extinguishing System** is used as a preventive fire and explosion protection solution in industrial environments where sparks, hot particles, or embers can be generated and transported through ducts, conveyors, or material handling systems. The system continuously monitors for ignition sources and acts before a fire or dust explosion can occur by detecting sparks early and triggering suppression actions. This makes it especially valuable for processes such as dust collectors, pneumatic conveying lines, silos, filters, and other areas where combustible dust or materials are present protecting equipment, facilities, and personnel from damage and hazards.

CONTROL UNIT

The **DC1 control unit** is designed for installation in environments where **explosive dust concentrations may occur**. Each **DC1** unit can connect and control **up to four spark detectors** and **two automatic extinguishing modules**, allowing it to monitor **one installation or two independent installations**. The control unit features a **two-step alarm and control logic**.

- **Step 1** is activated when irregularities are detected, triggering immediate suppression and visual/audible alarms.
- **Step 2** is fully configurable, enabling automatic shutdown of ventilation, filtration, or production equipment according to user-defined safety requirements.

System managment

The control unit is capable of managing:

- Up to 4 SDN or SDD spark detectors
- 2 automatic extinguishing units
- Monitoring of heat tracing cables
- Monitoring of water flow, pressure, and valve status

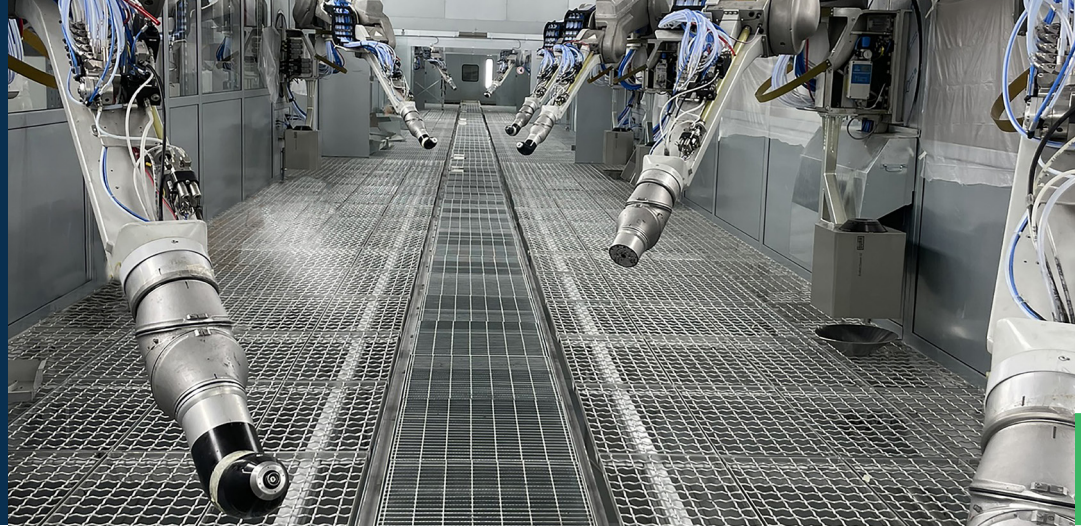


TESTING & RELIABILITY

- For maximum reliability, the spark detection system performs **automatic self-tests every two minutes**, with the option for **manual testing at any time**.

KEY BENEFITS

- Decentralized monitoring
- Configurations tailored to specific processes
- Cost-effective solution with low installation costs



PAGG System

PAGG – FLAME DETECTORS

Early detection of ignition sources is a key safety factor in industrial processes. Flame detectors provide fast and reliable flame detection, enabling immediate action to prevent fires or explosions in hazardous industrial environments.

FIBER OPTIC FLAME DETECTOR (IR2LF)



APPLICATIONS

Dedicated to robotized paint booths and powder coating booths for indoor applications only, without external light radiation (sunlight or natural light).

DESCRIPTION

The detector detects flames in the infrared spectrum via a fiber optic sensor connected to an LF amplifier, which interfaces with a control unit.

The fiber optic link ensures complete electrical isolation, allowing installation in **ATEX-classified** areas. Two fiber optic cables enable fiber integrity monitoring and detection window supervision. Any contamination of the sensor head generates a fault signal at the amplifier.

The LF amplifier supports up to 4 or 8 sensors and is available with **STUVEX** control unit outputs or dry contacts.

OPTICAL FLAME DETECTOR (IR4)



APPLICATIONS

Suitable for manual and automatic powder coating booths and solvent-based paint booths.

DESCRIPTION

The optical flame detector detects infrared radiation between 900 and 2900 nm and is highly sensitive to rapid intensity variations.

It is specifically designed for fireball detection and is ATEX certified II 3 GD. Equipped as standard with field-of-view monitoring and a compressed air system to reduce optical fouling, the IR4 can also be used as a spark detector in extraction ducts with no ambient light.

It is a stand-alone device, powered by 24 VDC, providing alarm and fault signals via dry contacts.

KEY ADVANTAGES

- Very fast response time (< 20 ms)
- Reliable flame detection in hazardous environments
- Robust industrial design
- Detection window monitoring
- Low power consumption
- Suitable for paint and powder coating applications



PAGG System

CO_2 INDUSTRIAL FIRE FIGHTING

APPLICATIONS

The **PAGG system** is a complete fire detection and automatic extinguishing solution designed to protect localized industrial hazards where rapid intervention is essential. It combines flame detection, control, and CO_2 extinguishing into an integrated and reliable safety system.Based on fast and accurate flame detectors connected to a control unit, the **PAGG system** detects ignition sources at an early stage and immediately triggers the extinguishing process.

Its modular design allows the extinguishing bottle to be installed close to the protected risk, ensuring efficient suppression.Delivered pre-wired and configurable to specific applications, the **PAGG system** is particularly suited for paint and powder coating booths, industrial ovens, drying kilns, and machining equipment, providing a robust and effective fire protection solution.

DESCRIPTION

The KLPO cabinet can integrate the following components:

- *1 floor-mounted metal enclosure*
- *1 pre-wired control unit*
- *1 safety relay cabinet*
- *1 electrical junction box*
- *1 or 2 weight controllers for the tank(s)*
- *1 manual break-glass call point*
- *1 combined audible alarm and flashing beacon*



PAGG SYSTEM

ADVANTAGES

- **Modularity:** the cylinder is installed as close as possible to the protected hazard
- **Simplicity:** the system is supplied pre-wired, including the control unit and the relay cabinet for interlocking *(optional)*



CobraTES

TRUCK EARTHING SYSTEM

APPLICATION

Loading and unloading non-conducting liquids or powders from trucks can generate electrostatic charges. If enough electrostatic energy is generated, there will be an explosion hazard. This risk can be avoided by earthing the truck via **COBRA TES** earthing verification system.

The system is ATEX certified and depending on the version (IP or EX) it can be used in ATEX zone 1, 2, 21, 22.



ADVANTAGES

- Safe electrostatic discharge of the truck
- Truck detection via capacitive measurement
- Low resistance (adjustable to < 10Ω or <30Ω) between truck and TES
- Clearly visible red and green LEDs
- Potential-free contact to enable loading and unloading operations
- Power supply : 110-240 V AC or 24 DC (standard) Easy 'plug and play' installation
- Truck detection ON/OFF, integrated for TES IP
- Stainless steel housing for TES IP version
- ATEX and IECEx certified
- Complies with IEC/TS60079-32-1 and NFPA 77
- Designed for SIL 2 applications

Cobra TES consists of a control unit, a spiral cable (3m, 5m, 10m) or a cable reel and an earthing clamp.

CONTROL UNIT



COBRA TES IP
ATEX ZONE 21, 22



COBRA TES EX
ATEX ZONE 1, 2, 21, 22

EARTHING SYSTEM



- *Single-clamp CMS1*



- *Cable reel (15m)*

STUVEX



Cobra MGS

MULTIPOINT GROUNDING SYSTEM

APPLICATION

The **COBRA MGS** earthing control system enables the monitoring and grounding of up to 10 objects simultaneously. It is used during loading or unloading operations involving flammable liquids, powders, or electrostatically sensitive materials (e.g., vessels, drums or containers).

Each earth clamp is connected to a control box that verifies the grounding condition and ensures the process can be safely released. The system can be configured for multi-station grounding or to monitor multiple grounding points within a single installation. If only one clamp is connected, only that station is activated, making the **COBRA MGS** ideal for multi-station industrial operations.

POWER BOX
ATEX ZONES 2, 22



RESISTANCE CONTROL BOX
ATEX ZONES 1, 2, 21, 22

Cobra RES

RESISTIVE GROUNDING SYSTEM

APPLICATION

COBRA RES resistive grounding monitoring system provides a visual indication of a good connection to earth. Thanks to the integrated potential-free Interlock, it can signal the start of filling or emptying process for objects such as IBC's, metal drums. Unlike fixed installations, the grounding of these objects may sometimes be overlooked or forgotten.

The system is ATEX certified and depending on the version (IP or EX) it can be used in ATEX zone 1, 2, 21, 22.



CONTROL UNIT



COBRA RES IP
ATEX ZONE 22



COBRA RES EX
ATEX ZONE 1, 2,21, 22

EARTHING SYSTEM



- *Single-clamp CMS1*



- *Cable reel (15m)*



Cobra FIBC

BIG BAG GROUNDING SYSTEM

APPLICATION

COBRA FIBC conductive system is especially designed for grounding of **FIBC's** (Big Bag), type C. The system recognizes the conductivity of an **FIBC** and confirms a secure and compliant grounding connection. For higher security level, 2-clamp detection system is available. **COBRA FIBC** provides visual indication and a dry contact to interlock the filling or emptying process and can be integrated in customer's PLC.



Cobra FIBC consists of a control unit, a spiral cable (3m, 5m, 10m) and 1 or 2 earthing clamps.

CONTROL UNIT

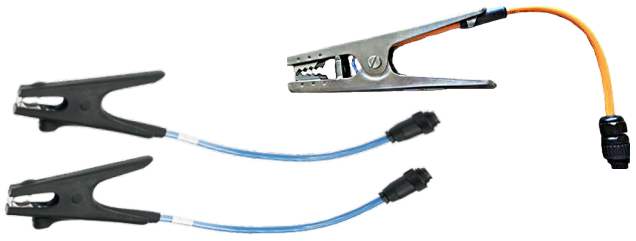


COBRA FIBC IP



COBRA FIBC EX

EARTHING SYSTEM



- *2-clamp detection system*
- *1-clamp detection system*

Accessories



TEST DEVICE RECONN

Cobra ReConn test device checks Cobra grounding systems for proper operation. If the system does not seem to function correctly, this device can help identify the problem.



EARTHING CLAMP – SMALL AND MEDIUM

The Cobra small and medium stainless-steel clamp is designed to provide an effective, low resistance connection between movable objects and earth to safely dissipate any static electricity.



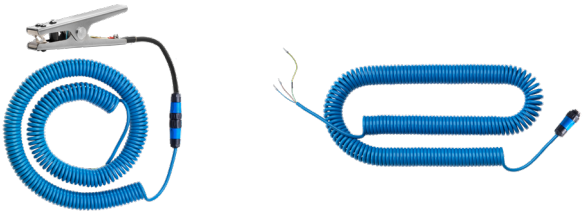
CABLE REEL

The cable reel is a component of Cobra grounding system and can be combined with any of the control units and clamps of Cobra products range.

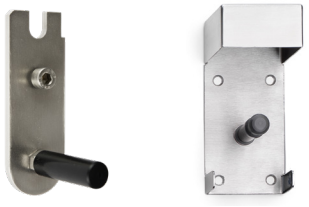


SPIRAL CABLE

COBRA spiral cables are available in lengths 3m, 5m and 10m. Spiral cables are available fully assembled or in seperate parts for self-assembly.



CLAMP HOLDER



DISSIPATIVE FOOTWEAR TESTING STATION



STUVEX By STIF



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