

Transitioning the World to a Safer Working Environment

EXPLOSION VENTING















About us

eginning in 2012, Boss Products formed with the intent to become the world's leading supplier of fire & explosion protection solutions serving industrial dust collection and related process industries.

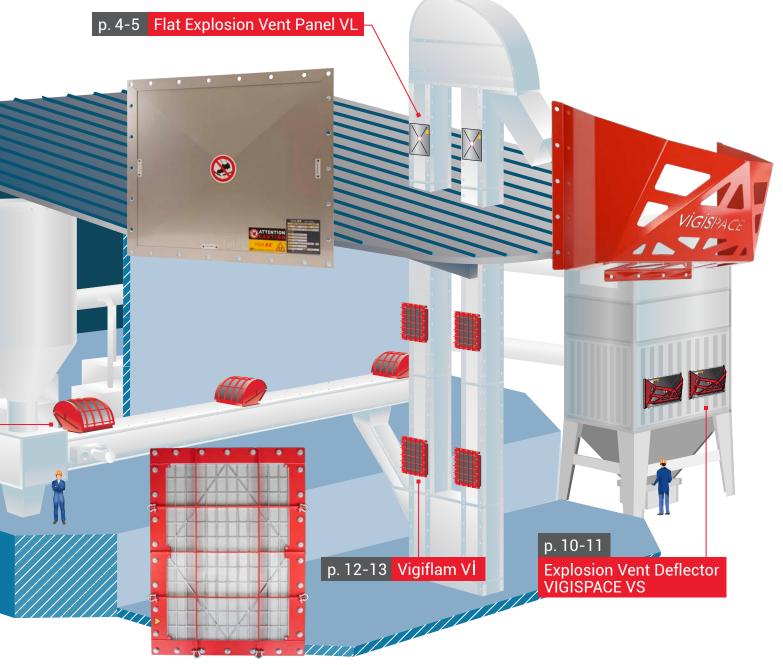
Boss Products promptly supplies our customers the safety components they need from the largest inventory available in North America.



Explosion Venting

Centrally located near San Antonio, Texas, we maintain redundant supplies of all sizes of varying inventory to assure customers have what they need in the best possible timeframe.

We are exclusive North American distributors for major worldwide manufacturers, as well as promoting our own Raptor Series brand of components that are supported by electronics manufacturing. oss Products explosion vent panels meet all the essential health and safety requirements for an explosive atmosphere. In case of an explosion, the explosion vents are designed to evacuate pressure and flames to a designated location away from people and equipment. A simple and efficient protection system, these highly rated explosion vents are made to resist high vacuum levels, pneumatic unclogging cycles, and can be used on silos, hoppers, filters, and cyclones.





Flat Explosion Vent Panel VL

APPLICATIONS

The **Flat Explosion Vent Panel VL** is suitable for all applications with low vacuum operating pressures. Typical applications include dust collectors, conveyors, cyclones, elevators, and silos.

The **Flat Explosion Vent Panel VL** is specifically designed to satisfy low pressure explosion venting requirements. It is designed with an integral gasketed flange that covers the breaking points, ensuring strong mechanical durability. A wide variety of standard and custom sizes and bolt patterns are available.

Standard burst pressure is 1.45 psi / 0.1 bar. Application specific burst pressures between 1.45 psi up to 7 psi are available for special orders.

Vacuum level: -0.7 psi/-20" w.g.



CERTIFICATIONS & STANDARDS

Ex II GD

EN 14491 - EN 14994 - EN 14797 - EN 1127.1

EU Certificate : INERIS 15ATEX0001X

NFPA 68 - NFPA 69 Compliant EN 16447

LIN 10441

Production quality assurance notification: INERIS 08ATEXQ406



STANDARD FEATURES

- Single Flat Panel **304 stainless steel**
- Full frame black EPDM gasket -40°F +176°F (-40°C +80°C)
- Integral **304L stainless steel** flange

OPTIONAL FEATURES

- Stainless steel 316L construction
- Full frame white silicone FDA gasket -76°F +392°F (-60°C +200°C)
- High temperature graphite gasket-328°F +932°F (-200°C +500°C)
- Integral 316L stainless steel flange with gasket

ACCESSORIES FOR VL

- Burst Sensor
- Thermal insulation

- Weather protection
- Duct discharge compatible
- Vacuum safety grid

convright February 2025 Boss Products 110

RECTANGULAR & SQUARE DIMENSIONS

INTERNAL DIMENSION			RNAL NSION	AREA		
Inches	mm.	Inches	mm.	ft²	m²	
7 x 19	170 x 470	10 x 22	250 x 550	0.845	0.078	
11 x 18	270 x 458	14 x 21	350 x 538	1.313	0.122	
12 x 20	300 x 500	15 x 23	380 x 580	1.593	0.148	
12 x 18	305 x 457	15 x 21	386 x 538	1.491	0.138	
12 x 24	305 x 610	15 x 27	386 x 690	1.986	0.184	
14 x 26	350 x 650	17 x 29	430 x 730	2.427	0.225	
18 x 35	457 x 890	21 x 38	537 x 970	4.348	0.404	
19 x 23	490 x 590	22 x 26	570 x 670	3.084	0.286	
23 x 36	586 x 920	26 x 39	666 x 1000	5.769	0.536	
24 x 24	610 x 610	27 x 27	690 x 690	3.977	0.369	
24 x 36	610 x 920	27 x 39	690 x 1000	6.230	0.561	
36 x 44	915 x 1118	39 x 47	996 x 1198	10.978	1.020	
36 x 36	920 x 920	39 x 39	1000 x 1000	9.068	0.842	
44 x 44	1130 x 1130	48 x 48	1220 x 1220	13.690	1.272	

Sizes are accurate in mm and rounded to the closest whole number in inches

Other sizes available

ROUND DIMENSIONS

INTERNAL DIMENSION			RNAL NSION	AREA		
Inches	mm.	Inches	mm.	ft²	m²	
8	Ø 200	11	Ø 268	0.334	0.031	
10	Ø 250	13	Ø 341	0.517	0.048	
12	Ø 300	15	Ø 390	0.748	0.069	
14	Ø 350	17	Ø 424	1.001	0.093	
16	Ø 400	19	Ø 473	1.324	0.123	
18	Ø 450	21	Ø 545	1.701	0.158	
20	Ø 500	23	Ø 574	2.083	0.193	
24	Ø 600	27	Ø 676	3.003	0.279	
28	Ø 700	31	Ø 790	4.122	0.383	
30	Ø 750	33	Ø 842	4.736	0.440	
31	Ø 800	35	Ø 880	5.381	0.500	
36	Ø 900	39	Ø 990	7.065	0.656	
39	Ø 990	42	Ø 1070	8.290	0.770	

Sizes are accurate in mm and rounded to the closest whole number in inches

Other sizes available Custom sizes and shapes available





Domed Explosion Vent Panel VD

APPLICATIONS

The **Domed Explosion Vent Panel VD** is specifically designed for high negative pressure applications and installations where high psi pulse cleaning mechanisms could cause metal fatigue over time. The dome design is optimal for high vacuum filter systems where explosion relief venting is required. Typical applications include dust collector filters, cyclones, and high pressure vessels.

The **Domed Explosion Vent Panel VD** is pressure tested and certified in compliance with a variety of test standards. It is ideal for **OEM** and retrofit applications. It is easy to install with premium gaskets and flanges.

Standard burst pressure is 1.45 psi / 0.1 bar. Application specific burst pressures between 1.45 psi up to 7 psi are available for special orders.

CERTIFICATIONS & STANDARDS

Ex II GD

EN 14491 - EN 14994 - EN 14797 - EN 1127.1

EU Certificate : INERIS 15ATEX0001X

NFPA 68 - NFPA 69 Compliant

Production quality assurance notification: INERIS 08ATEXQ406



STANDARD FEATURES

- Single domed **304 stainless steel**
- Full frame Gasket, black EPDM rated -40 F+176 F (-40 C+80 C)
- Integral 304L stainless steel flange with gasket

Vacuum level: -3 psi /-83" w.g.



OPTIONAL FEATURES

- Stainless steel 316L construction
- Full frame white silicone FDA gasket -76 F+392 F (-60 C+200 C)
- High temperature graphite gasket -328 F+932 F (-200 C+500 C)
- Integral **316L stainless steel flange** with gasket

ACCESSORIES FOR VD

- Burst Sensor
- Thermal insulation

- Weather protection
- Duct discharge compatible

Vacuum safety grid



RECTANGULAR & SQUARE DIMENSIONS

INTERNAL DIMENSION			ERNAL ENSION	AREA					
Inches	mm.	Inches	mm.	ft²	m²				
6x24	150x600	9x27	230x680	0.953	0.089				
6x19	170x470	10x22	250x550	0.845	0.079				
8x11	205x290	11x15	285x370	0.624	0.058				
9x17	220x420	12x20	300x500	0.980	0.091				
9x9	229x229	12x12	310x310	0.554	0.052				
9x12	229x305	12x15	310x386	0.743	0.069				
10x24	247x610	13x27	327x690	1.604	0.149				
11x18	270x458	14x21	350x538	1.313	0.122				
12x20	300x500	15x23	380x580	1.593	0.148				
12x18	305x457	15x21	386x538	1.496	0.139				
12x24	305x610	15x28	386x690	1.991	0.185				
13x15	340x385	16x18	404x449	1.345	0.125				
13x17	340x440	16x20	404x504	1.539	0.143				
14x26	350x350	17x29	430x730	2.433	0.226				
15x26	375x655	18x29	460x740	2.637	0.245				
16x16	410x410	19x19	480x480	1.787	0.166				

	ERNAL ENSION		ERNAL ENSION	AREA		
Inches	mm.	Inches	mm.	ft²	m²	
20x28	457x890	21x38	537x970	4.349	0.404	
18x24	470x610	22x27	550x690	3.062	0.285	
19x19	490x490	22x22	570x570	2.562	0.238	
19x23	490x590	22x26	570x670	3.084	0.287	
21x26	525x668	25x30	630x765	3.660	0.340	
23x36	586x920	26x39	666x1000	5.769	0.536	
24x24	610x610	27x27	690x690	3.977	0.370	
24x44	610x1118	27x47	690x1198	7.303	0.679	
25x25	645x645	29x29	735x735	4.445	0.413	
25x44	645x1130	29x44	735x1220	7.804	0.725	
26x26	653x653	29x29	740x740	4.585	0.426	
36x44	915x1118	39x47	996x1198	10.979	1.020	
36x36	920x920	39x39	1000x1000	9.069	0.843	
36x54	920x1380	39x57	1000x1460	13.369	1.242	
39x39	980x980	43x43	1080x1080	10.333	0.960	
40x40	1020x1020	43x43	1100x1100	11.151	1.036	

Sizes are accurate in mm and rounded to the closest whole number in inches

Other sizes available Subject to longer lead times

ROUND DIMENSIONS

INTERNAL DIMENSION			RNAL NSION	AREA		
Inches	mm.	Inches	mm.	ft²	m²	
8	Ø 200	11	Ø 268	0.334	0.031	
10	Ø 250	13	Ø 341	0.517	0.048	
12	Ø 300	15	Ø 390	0.748	0.069	
14	Ø 350	17	Ø 424	1.001	0.093	
16	Ø 400	19	Ø 473	1.324	0.123	
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20	Ø 500	23	Ø 574	2.083	0.193	
24	Ø 600	27	Ø 676	3.003	0.279	
28	Ø 700	31	Ø 790	4.122	0.383	
30	Ø 750	33	Ø 842	4.736	0.440	
31	Ø 800	35	Ø 880	5.381	0.500	
36	Ø 900	39	Ø 990	7.065	0.656	
39	Ø 980	42	Ø 1070	8.290	0.770	
47	Ø 1200	51	Ø 1290	12.665	1.177	

Sizes are accurate in mm and rounded to the closest whole number in inches

Other sizes available Custom sizes and shapes available Subject to longer lead times





High Vacuum Domed Explosion Vent Panel EV-VDHV

APPLICATIONS

The High Vacuum Domed Explosion Vent Panel EV-VDHV is specifically engineered to be an ideal solution for applications where negative operating pressures exceed 3 psi or operational metal fatigue is anticipated. Some high energy pulse-jet filter cleaning mechanisms, and systems operating under extreme high pressure, have been known to significantly shorten the life of standard explosion panels.

The High Vacuum Domed Explosion Vent Panel EV-VDHV is pressure tested and certified under a variety of test standards. It is ideal for OEM and retrofit extreme duty applications. It is easy to install with premium gaskets and integral flanges.

Standard burst pressure is 1.45 psi / 0.1 bar. Application specific burst pressures between **1.45** psi up to 7 psi are available for special orders.

Vacuum level: -3/-9 psi / -83/-250" w.g.



CERTIFICATIONS & STANDARDS

EN 14491 - EN 14994 - EN 14797 - EN 1127.1

EU Certificate: INERIS 15ATEX0001X

NFPA 68 - NFPA 69 Compliant

Production quality assurance notification:

INERIS 08ATEXQ406







STANDARD FEATURES

- Mechanically Reinforced single dome 304L stainless steel
- Full frame Gasket, black EPDM rated -40°F+176°F (-40°C +80°C)
- Integral 304L stainless steel flange

OPTIONAL FEATURES

- Stainless steel 316L construction
- Full frame white silicone FDA gasket -76°F +392°F (-60°C +200°C)
- High temperature graphite gasket -328°F +932°F (-200°C +500°C)
- Integral 316L stainless steel flange with gasket

ACCESSORIES FOR VD-HV

- Burst Sensor
- Thermal insulation

- Weather protection
- Duct discharge compatible
- Vacuum safety grid



RECTANGULAR & SQUARE DIMENSIONS

	RNAL NSION		RNAL NSION	BOLTS	MAX VACUUM				UNIT WEIGHT	
Inches	mm.	Inches	mm.	qty	in.WC	mbar	ft²	cm²	lbs	kg
7 x 19	170 x 470	10 x 22	250 x 550	16	-201	-500	0.84	785	7.5	3.4
8 x 11	205 x 290	11 x 15	285 x 370	14	-201	-500	0.62	580	2.43	1.1
9 x 17	220 x 420	12 x 20	300 x 500	16	-201	-500	0.98	910	5.29	2.4
9 x 9	229 x 229	12 x 12	310 x 310	12	-121	-300	0.55	515	1.81	0.82
9 x 12	229 x 305	12 x 15	310 x 386	14	-201	-500	0.74	690	4.08	1.85
10 x 24	247 x 610	13 x 27	327 x 690	20	-201	-500	1.6	1485	5.95	2.7
11 x 18	270 x 458	14 x 21	350 x 538	18	-201	-500	1.31	1220	7.94	3.6
12 x 20	300 x 500	15 x 23	380 x 580	20	-201	-500	1.59	1480	9.7	4.4
12 x 18	305 x 457	15 x 21	386 x 538	18	-201	-500	1.49	1385	7.43	3.37
12 x 24	305 x 610	15 x 27	386 x 690	22	-201	-500	1.99	1845	9.7	4.4
13 x 17	340 x 440	16 x 20	404 x 504	16	-201	-500	1.54	1430	7.65	3.47
14 x 26	350 x 650	17 x 29	430 x 730	22	-201	-500	2.43	2255	15.1	6.85
15 x 26	375 x 655	18 x 29	460 x 740	16	-193	-480	2.63	2445	11.9	5.4
16 x 16	410 x 410	19 x 19	480 x 480	12	-201	-500	1.79	1660	7.28	3.3
19 x 19	490 x 490	22 x 22	570 x 570	24	-201	-500	2.56	2380	15.72	7.13
19 x 23	490x 590	22 x 26	570 x 670	26	-201	-500	3.08	2865	12.13	5.5
19 x 24	470 x 610	22 x 27	550 x 690	24	-161	-400	3.06	2845	12.13	5.5
18 x 35	457 x 890	21 x 38	537 x 970	28	-201	-500	4.35	4040	18.52	8.4
23 x 36	586 x 920	26 x 39	666 x 1000	34	-121	-300	5.77	5360	27.12	12.3
23 x 36	586 x 920	26 x 39	666 x 1000	34	-201	-500	5.77	5360	30.42	13.8
24 x 24	610 x 610	27 x 27	690 x 690	24	-201	-500	3.98	3695	21.38	9.7
26 x 26	653 x 653	29 x 29	735 x 735	28	-201	-500	4.59	4260	19.18	8.7



Explosion Vent Deflector VIGISPACE VS

APPLICATIONS

When an outdoor explosion occurs, explosion vents open and release the explosion flame and pressure wave into the environment.

The Explosion Vent Deflector VIGISPACE VS limits the opening angle of the explosion vent and guides the explosion pressure wave, flames and heat into defined areas. By decreasing the size of dangerous areas, the **VIGISPACE** helps to reduce the safety zone to a minimum and increases usable operating space while providing optimum protection against explosions.



CERTIFICATIONS & STANDARDS

Ex II GD

EN 14491 - EN 14797 - EN 1127.1

Production quality assurance notification: INERIS 08ATEXQ406

NFPA Compliant & ATEX Certified





STANDARD FEATURES

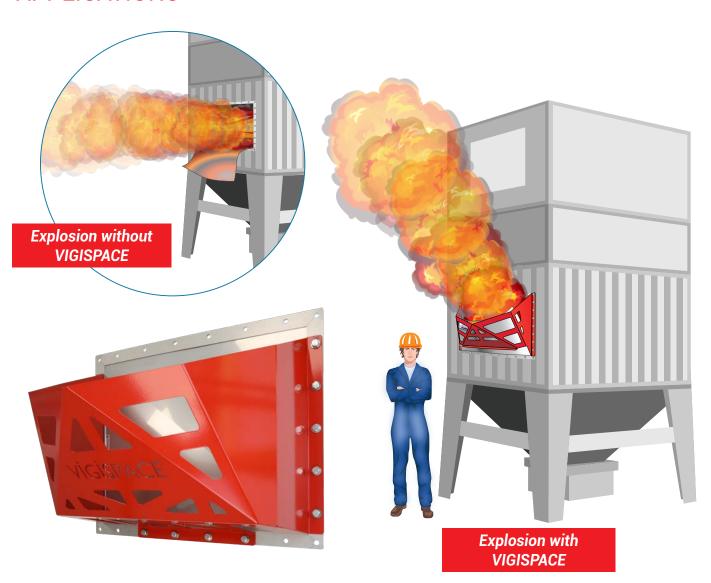
- Steel construction with safety red finish
- For use with Flat and Domed Vent Panels (7"x19" to 44"x44")
- 60% efficient

OPTIONAL FEATURES

■ Stainless Steel 304L



APPLICATIONS



TECHNICAL FEATURES

Kst max	200 bar m/s
Pmax	10 bar
Pred max	0.7 bar

Pstat of vent	≤ 0.5 bar
Hydraulic Diameter	≤ 1.2 m
Efficiency	60%





Flameless Explosion Vent VIGIFLAM VI

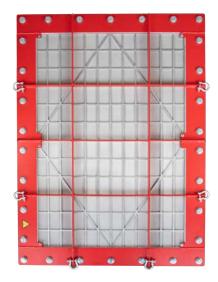


APPLICATIONS

The flameless explosion vent 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 the **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.

The **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 & STANDARDS

Ex II D

EN 16009

EC Certificate: GEX 24ATEX 1036X

Production quality assurance notification: *INERIS 08ATEXQ406*

CERTIFIED FOR:

- Organic dust
- Fiber dust





STANDARD FEATURES

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

OPTIONAL FEATURES

Waterproof sanitary cover



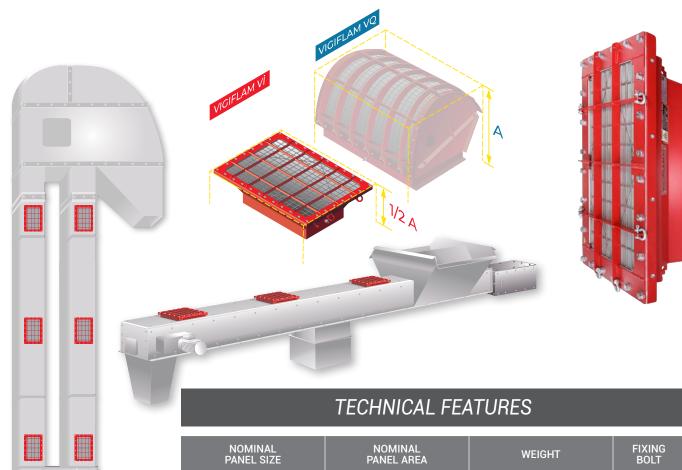
APPLICATIONS

The **VIGIFLAM VI** is a flameless explosion vent for bucket elevators & belt conveyors.





50% LESS VOLUME THAN THE VIGIFLAM VQ



NOMINAL PANEL SIZE			INAL . AREA	WEI	FIXING BOLT	
inches	mm	sq ft	m²	lbs	kg	Qty & Thread
7 x 19	170 x 470	0.845	0.0799	63.9	29	16 M10
7 x 17	180 x 420	0.795	0.0756	61.7	28	16 M10
8 x 24	205 x 610	1.320	0.1251	83.8	38	20 M10
11 x 18	270 x 458	1.315	0.1237	88.2	40	18 M10
12 x 24	305 x 610	1.980	0.1861	121.3	55	22 M10
14 x 26	350 x 650	2.420	0.2275	147.7	67	22 M10
19 x 23	490 x 590	3.085	0.2891	173.4	80	26 M10

Kst max ≤ 200 bar m/s Pmax : 9.4 bar Pred : 1 bar Pstat ≤ 0.1 bar (±20%)





Flameless Explosion Vent VQ

APPLICATIONS

The **Flameless Explosion Vent VQ** is a rectangular explosion device that combines a standard explosion panel with added protection to prevent flames from entering the environment.

The Flameless Explosion Vent VQ is certified for indoor and outdoor applications. It eliminates the need for costly heavy duty piping that is required for exterior venting when a vessel is installed within the workspace. The standard Explosion Vent Panel inside the flameless explosion vent bursts during the initial explosion phase. Immediately thereafter, the flame and burnt dust exit the vessel and is contained by the VQ flame arrestor.

All **Flameless Explosion Vents** are designed with the ability to replace the explosion panel without removing the flame arrestor assembly.

Boss Products® technical engineering staff is dedicated to ensuring optimum design & product selection for every application.



CERTIFICATIONS & STANDARDS

Ex II GD - Ex II 2 D

EC Certificate: INERIS 14 ATEX 0049 X

NFPA 68 - NFPA 69 Compliant

Production quality assurance notification: INERIS 08ATEXQ406

certified for:

- Organic dust
- Fiber dust
- Gas



STANDARD FEATURES

- Mild steel construction epoxy coated red
- Stainless steel mesh

OPTIONAL FEATURES

■ Silicone gasket

■ Stainless steel construction

■ Waterproof dust cover



PRODUCT DETAILS

FLAMELESS VQ LW(Light weight): Pred 7.25psi (0.5 bar) FLAMELESS VQ HW(Heavy weight): Pred 33.3psi (2.3 bar)

EV-VQ SPECIFICATIONS											
VIGIL	EX VQ	IN COMBINATION WITH VENT PANEL Nominal Size Nominal Square		WEIGHT LB/KG				BOLT SPECS			
Inches	mm.	Inches	mm.	Inches	mm.	VQ L	.W	VQ H	W	Qty	Size
7 x 19	170 x 470	7 x 19	170 x 470	0.845	0.0785	105.8 lb	48 kg	130.1 lb	59 kg	20	M10 x 30
11 x 18	270 x 458	11 x 18	270 x 458	1.315	0.1220	132.3 lb	60 kg	163.1 lb	74 kg	22	M10 x 30
12 x 20	300 x 500	12 x 20	300 x 500	1.595	0.1480	147.7 lb	67 kg	180.8 lb	82 kg	24	M10 x 30
12 x 24	305 x 610	12 x 24	305 x 610	1.980	0.1840	174.2 lb	79 kg	211.6 lb	96 kg	26	M10 x 30
14 x 26	350 x 650	14 x 26	350 x 650	2.425	0.2250	185.2 lb	84 kg	222.7 lb	101 kg	26	M10 x 30
19 x 23	490 x 590	19 x 23	490 x 590	3.084	0.2865	207.2 lb	94 kg	271.2 lb	123 kg	32	M10 x 30
24 x 24	610 x 610	24 x 24	610 x 610	3.975	0.3695	246.9 lb	112 kg	324.1 lb	147 kg	32	M10 x 30
18 x 35	457 x 890	18 x 35	457 x 890	4.349	0.4040	257.9 lb	117 kg	335.1 lb	152 kg	34	M10 x 30
23 x 36	586 x 920	23 x 36	586 x 920	5.770	0.5360	299.3 lb	136 kg	392.4 lb	178 kg	42	M10 x 30
25 x 44	645 x 1130	25 x 44	645 x 1130	7.804	0.7250	489.4 lb	222 kg	229.1 lb	240 kg	34	M10 x 30
36 x 36	920 x 920	36 x 36	920 x 920	9.068	0.8425	698.9 lb	317 kg	1413.2 lb	641 kg	50	M10 x 30
44 x 44	1130 x 1130	44 x 44	1130 x 1130	13.696	1.2720	974.4 lb	442 kg	1768.1 lb	802 kg	58	M10 x 30

ADVANTAGES







TECHNICAL INFORMATION

VQ LW

Kst max = 500

Kst max = 500

Pmax ≤ 145 psi (10 bar)

Pmax ≤ 145 psi (10 bar)

Pred ≤ 7 psi (0.5 bar)

Pred ≤ 33.3 psi (2.3 bar) *

Pstat = 1.45 to 4.35 psi (0.1 to 0.3 bar)

Pstat = 1.45 to 7.25 psi (0.1 to 0.5 bar)

* Pred < 26.8 psi (1.85 bar) for VQ HW > 586x920



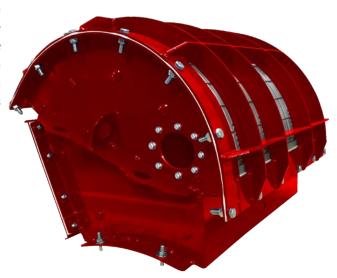
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Flameless Explosion Vent VQ

CURVED FLAMELESS EXPLOSION VENT VQ R

The Curved Flameless Explosion Vent VQR is similar to the standard VQ, but is available with an application specific curved flange to accommodate mounting on cylindrical vessels, without the need for expensive flange adapters. This design feature reduces accumulation of dust/material in a fabricated transition in front of the flameless vent's inner explosion vent panel.

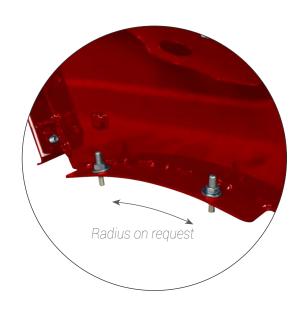


STANDARD FEATURES

- R Style Vent Panel with EPDM gasket
- Mild steel construction epoxy coated red.
- Stainless steel mesh flame arrestor
- Burst sensor
- Mounting radius per design application

OPTIONAL FEATURES

- Silicone gasket
- All stainless steel construction
- UL 698A Intrinsic control panel
- Dust cover





FLAMELESS STAINLESS STEEL VQ

The Flameless Stainless Steel VQ is a rectangular flameless device with a standard explosion vent panel. It is a perfect option for food or pharmaceutical facilities or high moisture atmospheres.

The Flameless Stainless Steel VQ provides effective low pressure resistance, eliminating the spread of flames and glowing particles.



STANDARD FEATURES

- R Style Vent Panel with EPDM gasket
 Mild steel construction epoxy coated red.
- Stainless steel mesh flame arrestor
- Burst sensor
- Mounting radius per design application

OPTIONAL FEATURES ■ Waterproof Dust cover

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Transitioning the World to a Safer Working Environment







ISO 9001: 2015 Certified Company, Certificate #12373

APTORSeries.











Mission

We preserve lives and investments with innovative, tailored safety solutions.

Vision

To be recognized as the world-wide leader in combustible dust safety, making technical solutions accessible to clients around the world.

Member of the Boss Industrial Group



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