



Transitioning the World to a Safer Working Environment

## EXPLOSION VENTING





## About us

**B**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.

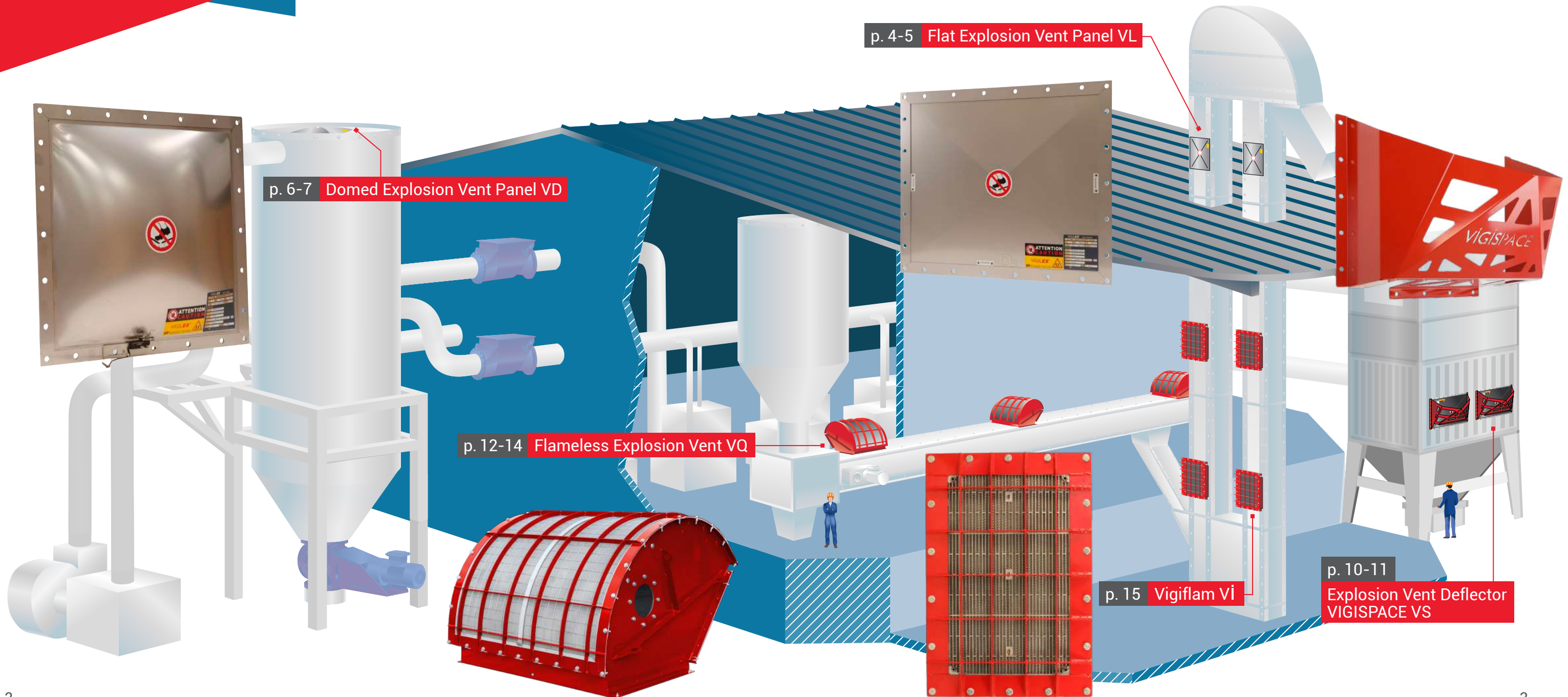
Boss Products promptly supplies our customers the safety components they need from the largest inventory available in North America.

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.

## Explosion Venting

**B**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.



## RECTANGULAR & SQUARE DIMENSIONS

INTERNAL DIMENSION		EXTERNAL DIMENSION		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

### 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  
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

## ROUND DIMENSIONS

INTERNAL DIMENSION		EXTERNAL DIMENSION		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.

Vacuum level : -3 psi / -83" 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  
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

### 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		EXTERNAL DIMENSION		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

INTERNAL DIMENSION		EXTERNAL DIMENSION		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		EXTERNAL DIMENSION		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 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.**



### 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

## 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



## ACCESSORIES FOR VD-HV

- Burst Sensor
- Thermal insulation
- Weather protection
- Duct discharge compatible
- Vacuum safety grid

## RECTANGULAR & SQUARE DIMENSIONS

INTERNAL DIMENSION		EXTERNAL DIMENSION		BOLTS	MAX VACUUM		AREA		UNIT WEIGHT	
Inches	mm.	Inches	mm.		qty	in.WC	mbar	ft²	cm²	lbs
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	490 x 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



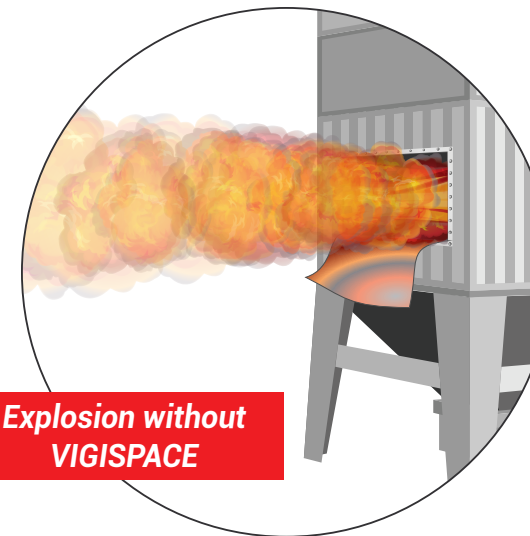
### STANDARD FEATURES

- 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



Explosion without VIGISPACE



Explosion with VIGISPACE

### TECHNICAL FEATURES

Kst max	200 bar m/s	Pstat of vent	≤ 0.5 bar
Pmax	10 bar	Hydraulic Diameter	≤ 1.2 m
Pred max	0.7 bar	Efficiency	60%



# 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.



## DIMENSIONS

EV-VQ SPECIFICATIONS							
VIGILEX VQ		IN COMBINATION WITH VENT PANEL				BOLT SPECS	
		Nominal Size		Nominal Square			
Inches	mm.	Inches	mm.	Inches	mm.	Qty	Size
7 x 19	170 x 470	7 x 19	170 x 470	0.845	0.0785	20	M10 x 30
11 x 18	270 x 458	11 x 18	270 x 458	1.315	0.1220	22	M10 x 30
12 x 20	300 x 500	12 x 20	300 x 500	1.595	0.1480	24	M10 x 30
12 x 24	305 x 610	12 x 24	305 x 610	1.980	0.1840	26	M10 x 30
14 x 26	350 x 650	14 x 26	350 x 650	2.425	0.2250	26	M10 x 30
19 x 23	490 x 590	19 x 23	490 x 590	3.084	0.2865	32	M10 x 30
24 x 24	610 x 610	24 x 24	610 x 610	3.975	0.3695	32	M10 x 30
18 x 35	457 x 890	18 x 35	457 x 890	4.349	0.4040	34	M10 x 30
23 x 36	586 x 920	23 x 36	586 x 920	5.770	0.5360	42	M10 x 30
25 x 44	645 x 1130	25 x 44	645 x 1130	7.804	0.7250	34	M10 x 30
36 x 36	920 x 920	36 x 36	920 x 920	9.068	0.8425	50	M10 x 30
44 x 44	1130 x 1130	44 x 44	1130 x 1130	13.696	1.2720	58	M10 x 30

## ADVANTAGES



### 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

## TECHNICAL INFORMATION

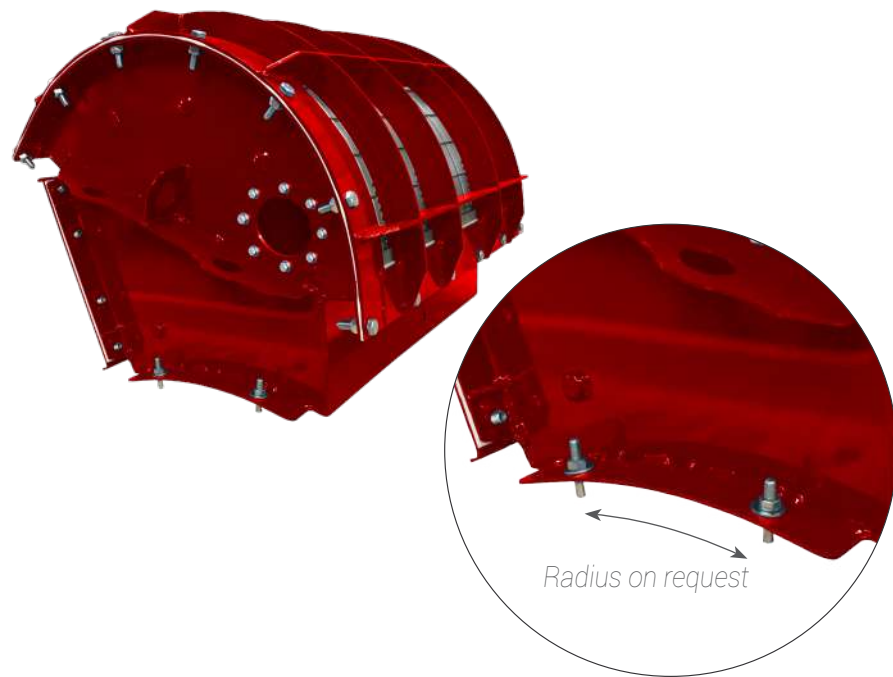
VQ	$K_{st} \max = 500$	$P_{max} \leq 145 \text{ psi} / 10 \text{ bar}$	$P_{red} \leq 7 \text{ psi} / 0.5 \text{ bar}$	$P_{stat} = 1.45 \text{ to } 3 \text{ psi} / 0.1 \text{ to } 0.5 \text{ bar}$
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\*  $P_{red} < 1.85$  for VQ 920x920 and 1130x1130

# Flameless Explosion Vent

## CURVED FLAMELESS EXPLOSION VENT VQ R

The **Curved Flameless Explosion Vent VQ R** 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.



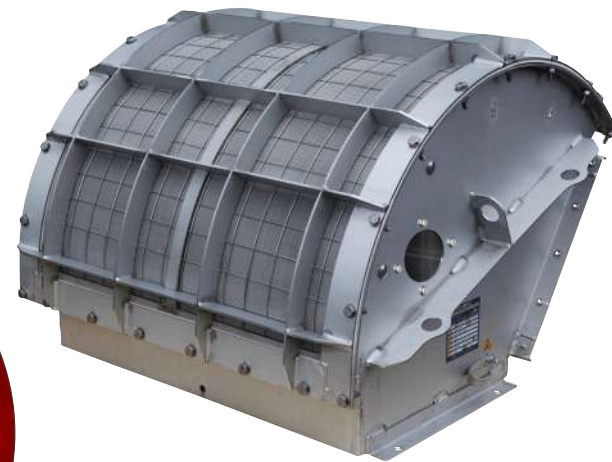
### STANDARD FEATURES

- 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

## 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.

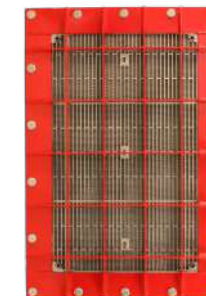
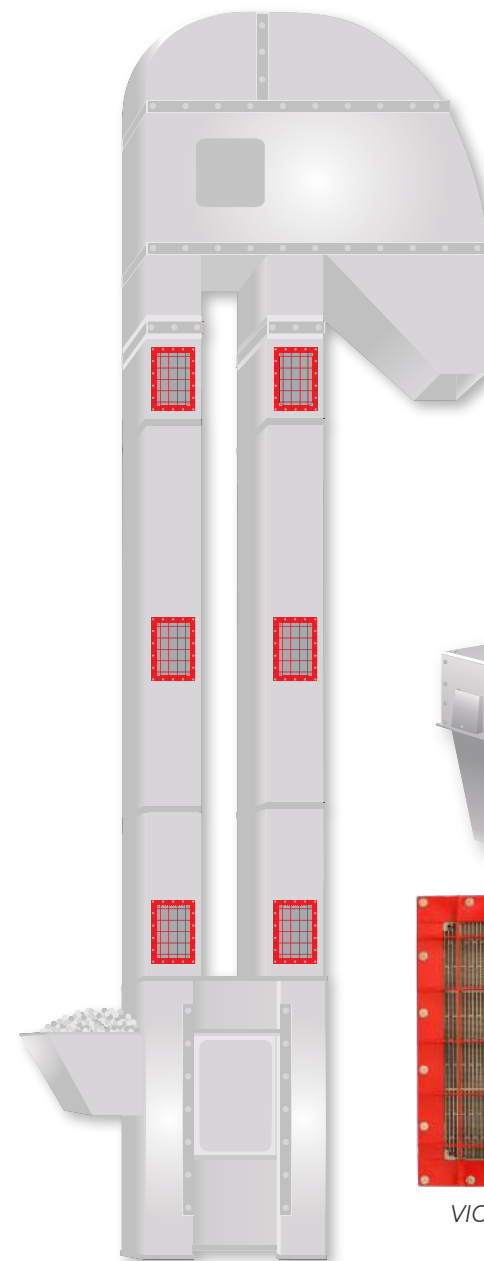
The **Flameless Stainless Steel VQ** provides effective low pressure resistance, eliminating the spread of flames and glowing particles.



## VIGIFLAM VI

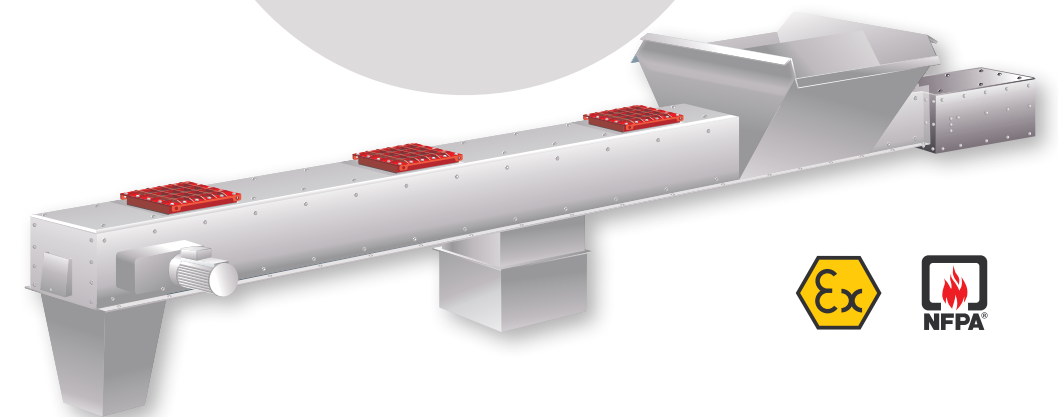
**COMING SOON**

Flameless Explosion Vent for bucket elevators & belt conveyors.



VIGIFLAM VI

Small volume  
Easy installation  
Cost effective



### VIGIFLAM VI DIMENSIONS

Inches	mm.
7 x 19	170 x 470
11 x 18	270 x 458
12 x 24	305 x 610
14 x 26	350 x 650
19 x 23	490 x 590
23 x 36	586 x 920





Transitioning the World to a Safer Working Environment



ISO 9001 : 2015 Certified Company, Certificate #12373

## RAPTOR Series



### 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.*



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