

EXPLOSION VENTING PANELS: TYPE CV, CV-S RECTANGULAR SHAPE

DESCRIPTION

Fike CV explosion venting panels are high performance explosion vents especially designed to provide a rapid and non-fragmenting opening in industrial process equipment when a dust- or gas explosion occurs. Excess overpressure is vented and the internal explosion pressure is reduced to a level that the process equipment can withstand.

Fike explosion vents are available in following distinctive types, each offering ideal solutions for specific applications or industries.

- **CV:** for use in most industrial applications where the operating pressures (both positive and negative) are near to atmospheric.
- **CV-S:** designed for use in applications where the operating pressure approaches the burst pressure range, or where high vacuum pressure may exist.

FEATURES AND BENEFITS

- Certified venting efficiency
- Non-fragmenting opening
- Maintenance free
- Fully compliant with ATEX / EN14797 / NFPA68 / EAC



SPECIFICATIONS

Type	CV	CV-S
Shapes	Rectangular ¹	
Sizes	200 x 355 mm to 1110 x 1110 mm	400 x 500 mm to 1110 x 1110 mm
Materials of Construction	1.4301 / FEP / 1.4301 (standard) 1.4301 / PFA / 1.4301 (optional) 1.4404 / FEP / 1.4404 (optional) 1.4404 / PFA / 1.4404 (optional)	
Burst Pressure (BP) ²	See Table	
Maximum Operating Pressure ²	70% of min. BP for nom. BP ≤ 0.1 barg 65% of min. BP for nom. BP ≥ 0.1 barg	85% of min. BP
Maximum Vacuum Rating	70% of min. BP for nom. BP ≤ 0.1 barg 65% of min. BP for nom. BP ≥ 0.1 barg	Partial vacuum: see table
Burst Pressure Tolerance	± 15 mbarg for burst pressure ≤ 70 mbarg ± 25 mbarg for burst pressure > 70 mbarg and ≤ 250 mbarg ± 50 mbarg for burst pressure > 250 mbarg	
ATEX (EN14797)	Min size: 300 x 300 mm Max Size: 1110 x 2220 mm Ratio 1:1 to 2:1 or Size between: 180 x 900 mm	Min Size: 300 x 300 mm Max Size 1110 x 2220 mm Ratio 1:1 to 2:1
	Kst ≤ 435 bar.m/s Kg ≤ 100 bar.m/s Pred,max ≤ 2 barg	
Operating Temperature Range ²	-40 °C up to 260 °C	

(1) For circular shape: see Fike HI-Type explosion vents.

(2) Burst pressure and burst pressure limits are dependent on operating temperature. Requested burst pressure, operating pressure as well as operating temperature have to be specified when ordering.

ACCOMPANYING GASKETS

All vents come with an integral gasket. Fike offers PTFE, EPDM, silicone and aramid fiber gaskets.

ACCOMPANYING FLANGES

The use of flanges with venting panels is mandatory. Flanges need to be ordered separately, or provided by the user according Fike specifications. See Table.

OPTIONAL ACCESSORIES

- Burst indicators
 - Provides an electrical signal that indicates opening of the explosion vent.
- Insulation
 - Prevents heat loss from the protected process and prevents condensation on the process side of the explosion vent.
- FlamQuench II™
 - Flamefilter that quenches the flames that are ejected through the opened explosion vent.
- Ex-Cover
 - Protects the explosion vent against the impact of weather conditions.

Additional info can be found in the separate datasheets.

RECTANGULAR SHAPED CV

EXPLOSION VENT				ANGLE FRAME ¹	
Relief Area (m ²)	Nominal Size a x b (mm)	Min. Burst Pressure in mbarg at 22 °C	Max. Burst Pressure in mbarg at 22 °C	Size a x b (mm)	Angle Profile (mm)
0.071	200 x 355	200	500	300 x 455	40x40x4
0.090	300 x 300	150	500	400 x 400	40x40x4
0.100	200 x 500	170	500	300 x 600	40x40x4
0.104	180 x 580	150	500	290 x 690	45x45x5
0.117	320 x 365	120	500	420 x 465	40x40x4
0.124	230 x 540	100	500	330 x 640	40x40x4
0.144	200 x 720	120	500	300 x 820	40x40x4
0.150	250 x 600	100	500	350 x 700	40x40x4
0.150	300 x 500	100	500	400 x 600	40x40x4
0.162	180 x 900	120	500	280 x 1000	40x40x4
0.175	350 x 500	100	500	450 x 600	40x40x4
0.179	230 x 780	85	500	330 x 880	40x40x4
0.200	400 x 500	85	500	500 x 600	40x40x4
0.216	345 x 625	70	500	445 x 735	40x40x4
0.221	470 x 470	70	500	570 x 570	40x40x4
0.228	350 x 650	70	500	450 x 750	40x40x4
0.231	300 x 770	70	500	400 x 870	40x40x4
0.245	350 x 700	70	500	450 x 800	40x40x4
0.250	500 x 500	70	500	600 x 600	40x40x4
0.268	470 x 570	65	460	570 x 670	40x40x4
0.270	300 x 900	60	440	400 x 1000	40x40x4
0.300	500 x 600	55	440	600 x 700	40x40x4
0.306	340 x 900	50	400	440 x 1000	40x40x4
0.348	590 x 590	50	450	690 x 690	40x40x4
0.350	500 x 700	50	380	600 x 800	40x40x4
0.360	400 x 900	45	350	500 x 1000	40x40x4
0.360	600 x 600	45	450	700 x 700	40x40x4
0.391	625 x 625 st	45	450	735 x 735	45x45x5
0.400	500 x 800	45	320	600 x 900	40x40x4

0.450	500 x 900	40	250	600 x 1000	40x40x4
0.490	700 x 700	40	250	800 x 800	40x40x4
0.500	500 x 1000 st	40	250	600 x 1100	40x40x4
0.509	566 x 900 st	35	300	666 x 1000	40x40x4
0.600	600 x 1000	35	250	700 x 1100	40x40x4
0.694	625 x 1110 st	30	250	735 x 1220	45x45x5
0.700	700 x 1000	30	250	800 x 1000	40x40x4
0.754	750 x 1005	30	250	860 x 1115	45x45x5
0.800	800 x 1000	25	250	900 x 1100	40x40x4
0.810	900 x 900 st	25	250	1000 x 1000	40x40x4
0.900	900 x 1000	25	250	1000 x 1100	40x40x4
1.000	1000 x 1000 st	25	250	1100 x 1100	40x40x4
1.232	1110 x 1110 st	20	250	1220 x 1220	45x45x5
1.465	1110 x 1320	20	250	1210 x 1420	40x40x4
1.500	1000 x 1500	20	250	1100 x 1600	40x40x4
1.665	1110 x 1500	20	250	1220 x 1610	45x45x5
1.752	1095 x 1600	20	250	1195 x 1700	40x40x4
2.000	1000 x 2000	20	250	1100 x 2100	40x40x4

(st) To accommodate delivery demands of the market, a number of CV style explosion vent sizes have been selected which are produced for stock with a nominal burst pressure of 0.1 barg \pm 15 mbarg at 22 °C.

(1) All vents have to be mounted with 40x40x4 mm or 45x45x5 mm angle profiles in order to comply with ATEX regulations and can be provided by Fike if needed. If delivered by Fike, the angle profiles comply with DIN EN 10 056-1/DIN EN 10 056-2.

RECTANGULAR SHAPED CV-S

EXPLOSION VENT				
Relief Area (m ²)	Nominal Size a x b (mm)	Min. Burst Pressure in mbarg at 22 °C	Max. Burst Pressure in mbarg at 22 °C	Vacuum Rating (mbarg) ¹
0.104	320 x 365	50	500	625
0.182	400 x 500	50	500	625
0.203	470 x 470	50	500	600
0.224	350 x 700	60	500	500
0.230	500 x 500	40	500	500
0.248	470 x 570 st	50	500	500
0.264	486 x 586	50	500	450
0.278	500 x 600	40	500	420
0.326	500 x 700	40	500	360
0.366	625 x 625	50	400	300
0.374	500 x 800	40	400	320
0.415	482 x 918	50	400	300
0.422	500 x 900	40	400	280
0.470	500 x 1000 st	40	400	250
0.480	566 x 900 st	40	400	200
0.480	566 x 900 st	40	400	700
0.556	570 x 1030	40	400	200
0.568	600 x 1000	40	400	200
0.608	800 x 800	40	400	200
0.659	625 x 1110	40	400	180
0.666	700 x 1000	40	400	180
0.764	800 x 1000	40	400	160
0.774	900 x 900 st	40	300	140
0.862	900 x 1000	40	300	140
0.943	895 x 1098	40	300	125
0.960	1000 x 1000 st	40	300	125
1.188	1110 x 1110	40	300	100

(st) To accommodate cost and delivery demands of the market, a number of CV style explosion vent sizes have been selected which are produced for stock with a nominal burst pressure of 0.1 barg ± 15 mbarg at 22 °C.

(1) Higher vacuum ratings might be available after additional validation, contact Fike for details on possibilities and cost.