

CV-S AND CV-S-HV EXPLOSION VENTS

DESCRIPTION

Fike designs simple, reliable explosion protection solutions to meet your safety requirements. The Fike CV-S and CV-S-HV explosion vents have a pre-bulged composite construction for use in applications where the operating pressures approach the burst pressure and where moderate to high vacuum pressure or cycling conditions may exist.

Typical applications include separation, drying, storage, conveyance, and processing operations.

FEATURES AND BENEFITS

CV-S and CV-S-HV have the same benefits as the CV Explosion Vent with the added benefits of:

- Increased Vacuum Resistance
- Increased Service Life
- Increased Resistance to Cycling and Pulsating Conditions



SPECIFICATIONS

| Type: | ROUND** (CV-S) | RECTANGULAR (CV-S & CV-S-HV) |
|------------------------------|--|--|
| Sizes: | Ø6" to Ø44" | 9" x 12" to 44" x 69" (CV-S)* |
| Compliance: | NFPA 68, EN 14797, ATEX Certification available (consult factory) | |
| Materials of Construction: | 316 SST / FEP or PFA / 316 SST | |
| Maximum Operating Pressure: | 90% of the minimum stamped burst pressure for BP ≤ 1.5 psig (103 mbar) 80% of the minimum stamped burst pressure for BP > 1.5 psig (103 mbar) | 85% of minimum stamped burst pressure |
| Maximum Vacuum Rating: | Full vacuum (-14.7) for sizes up to 30" -7.35 psig for sizes > 30" | Varies based on size and product type (see table) |
| Burst Pressure Tolerance: | ± 0.25 psig for burst pressures < 1.0 psig ± 0.5 psig for burst pressures 1.0 - 4.0 psig ± 1.0 psig for burst pressures > 4.0 psig | (±17 mbar for BP < 69 mbar) (±34 mbar for BP 69 to 276 mbar) (±69 mbar for BP >276 mbar) |
| Operating Temperature Range: | -40 to 400°F / -40 to 204°C (FEP) -40 to 500°F / -40 to 260°C (PFA) | |
| Optional Equipment: | Burst indicators / monitoring system; atmospheric insulation; process insulation; weather covers; frame assemblies; flameless venting; alternative materials, temperature ranges, and tighter tolerances are available | |

*Custom size & bolt patterns available.

**HI-CV, HI-CV-S, HI-CV-CF explosion vents are also available, please consult Fike for more information



CV-S VENTS

| | Vent Size inch | Relief Area ft ² (m ²) | Minimum Burst Pressure psig (mbarg) | Maximum Burst Pressure psig (mbarg) | Vacuum Rating** psig (mbarg) |
|-------------|-------------------|--|--|--|---------------------------------|
| Round | 6 | 0.13 (0.01) | 6.0 (414) | 15 (1030) | 14.7 (1014) |
| | 8 | 0.26 (0.02) | 4.5 (310) | 15 (1030) | |
| | 10 | 0.43 (0.04) | 3.6 (248) | 11 (760) | |
| | 12 | 0.65 (0.06) | 3.0 (207) | 10 (690) | |
| | 14 | 0.91 (0.09) | 2.6 (179) | 10 (690) | |
| | 16 | 1.23 (0.11) | 2.2 (152) | 10 (690) | |
| | 18 | 1.58 (0.15) | 2.0 (138) | 10 (690) | |
| | 20 | 1.97 (0.18) | 1.8 (124) | 10 (690) | |
| | 22 | 2.41 (0.22) | 1.6 (110) | 10 (690) | |
| | 24* | 2.89 (0.27) | 1.5 (103) | 10 (690) | |
| | 26 | 3.41 (0.32) | 1.5 (103) | 10 (690) | |
| | 30* | 4.59 (0.43) | 1.5 (103) | 10 (690) | |
| | 32 | 5.24 (0.49) | 1.5 (103) | 10 (690) | 7.35 (507) |
| | 36* | 6.68 (0.62) | 1.0 (69) | 10 (690) | |
| | 40 | 8.30 (0.77) | 1.0 (69) | 10 (690) | |
| | 44 | 10.09 (0.94) | 1.0 (69) | 10 (690) | |
| Rectangular | 9 x 12 | 0.52 (0.05) | 2.0 (138) | 10 (690) | 14.7 (1014) |
| | 9 x 18 | 0.82 (0.08) | 1.75 (121) | 10 (690) | 11.6 (800) |
| | 12 x 12 | 0.73 (0.07) | 1.75 (121) | 10 (690) | 12.6 (869) |
| | 12 x 18* | 1.16 (0.11) | 1.50 (103) | 8 (552) | 8.9 (614) |
| | 12 x 24 | 1.58 (0.15) | 1.25 (86) | 8 (552) | 7.0 (483) |
| | 18 x 18 | 1.83 (0.17) | 1.25 (86) | 7 (483) | 6.2 (427) |
| | 18 x 24 | 2.51 (0.24) | 1.00 (69) | 7 (483) | 4.9 (338) |
| | 18 x 35* | 3.75 (0.35) | 0.75 (52) | 7 (483) | 4.1 (283) |
| | 18 x 36 | 3.87 (0.36) | 0.75 (52) | 7 (483) | 4.1 (283) |
| | 24 x 24* | 3.44 (0.32) | 1.00 (69) | 7 (483) | 4.1 (283) |
| | 24 x 36* | 5.29 (0.49) | 0.75 (52) | 5 (345) | 3.0 (207) |
| | 24 x 44 | 6.53 (0.61) | 0.50 (34) | 5 (345) | 3.0 (207) |
| | 24 x 48 | 7.15 (0.66) | 0.50 (34) | 5 (345) | 3.0 (207) |
| | 30 x 36 | 6.72 (0.62) | 0.50 (34) | 5 (345) | 3.0 (207) |
| | 36 x 36* | 8.15 (0.76) | 0.50 (34) | 4 (276) | 3.0 (207) |
| | 36 x 44* | 10.05 (0.93) | 0.50 (34) | 4 (276) | 1.7 (117) |
| | 38 x 46 | 11.14 (1.04) | 0.50 (34) | 4 (276) | 1.7 (117) |
| | 44 x 44 | 12.40 (1.15) | 0.50 (34) | 4 (276) | 1.7 (117) |
| 44 x 69 | 19.73 (1.83) | 0.50 (34) | 4 (276) | 0.7 (48) | |

*Standard vent size available with a nominal burst pressure of 1.5 psig, ±0.25 psig at 72°F, reduced lead time.

**Vacuum ratings are valid for FEP or PFA seals only.

Note: Custom sizes are available. All dimensions are nominal. For metric sizes, consult factory.



CV-S-HV EXPLOSION VENTS

Fike's Rectangular CV-S-HV vents are designed for use in applications where the operating pressure approaches the burst pressure, or where high vacuum exists. The robust domed design provides high performance and long service life for harsh conditions such as pulsating or continuous cycling.

CV-S-HV RECTANGULAR VENTS

| Vent Size inch | Relief Area ft ² (m ²) | Minimum Burst Pressure psig (mbarg) | Maximum Burst Pressure psig (mbarg) | Vacuum Rating psig (mbarg) |
|-------------------|--|--|--|-------------------------------|
| 24 x 24 | 3.44 (0.32) | 1.5 (103) | 7 (483) | 10.15 (700) |
| 18 x 35 | 3.75 (0.35) | 1.5 (103) | 7 (483) | 10.15 (700) |
| 24 x 36 | 5.29 (0.49) | 1.5 (103) | 5 (345) | 10.15 (700) |
| 36 x 36 | 8.15 (0.76) | 1.5 (103) | 4 (276) | 10.15 (700) |
| 36 x 44 | 10.18 (0.95) | 1.5 (103) | 4 (276) | 10.15 (700) |

*CV-S-HV vents are available with a nominal burst pressure of 1.5 psig, ± 0.25 psig at 72°F. Order by p/n D4974-XXXX(size)

INSTALLATION

CV-S and CV-S-HV rectangular and CV-S round vents can be mounted in several lightweight angle frame configurations. CV-S Round Vents can be designed for installation between standard flanges (i.e. DIN 3632, ASME B16.5 etc.). Fike offers vent frames of multiple configurations and materials, please specify when ordering.

For installation and maintenance instructions refer to manual 06-308-1. For flameless venting installation refer to manual E06-045 (Round) or E06-085 (Square).