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**CV**  
EXPLOSION VENTS

# CV

## EXPLOSION VENTS

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Fike designs simple, reliable explosion protection solutions to meet your safety requirements. Fike's Composite Vent, or CV, is widely used and sets the industry standard for explosion vents. This flat vent layers stainless steel and FEP or PFA film to create a high performance explosion vent. The CV is an effective solution for static to light pressure cycling and light vacuum conditions.

### FEATURES AND BENEFITS

|                                      |  |
|--------------------------------------|--|
| Instantaneous Full Opening           | Reduced risk for accidental contamination, elimination of undetected openings  |
| Fail-Safe Design                     | Certified burst pressure provides full, predictable opening at or below its rated burst pressure even if the vent is damaged |
| Dynamically Tested                   | Tested under full-scale explosion conditions not just computer modeling  |
| High Mechanical Integrity            | Longer service life  |
| Easy Installation by Plant Personnel | Reduced downtime and maintenance costs   |
| Non-Fragmenting Design               | Reduced risk to personnel and equipment  |
| Maintenance Free                     | Reduced cost of ownership  |



### SPECIFICATIONS

|   |  |
|---|--|
| Compliance:                               | NFPA 68, ATEX Certification available (consult factory)  |
| Materials of Construction:                | 316 SST / FEP or PFA / 316 SST   |
| Maximum Operating Pressure/Vacuum Rating: | 75% of the minimum stamped burst pressure for BP ≤ 1.5 psig<br>60% of the minimum stamped burst pressure for BP > 1.5 psig   |
| Standard Burst Pressure Tolerance:        | ± 0.25 psig for burst pressures < 1.0 psig<br>± 0.5 psig for burst pressures 1.0 - 4.0 psig<br>± 1.0 psig for burst pressures > 4.0 psig   |
| Operating Temperature Range:              | -40 to 204°C / -40 to 400°F (FEP)<br>-40 to 260°C / -40 to 500°F (PFA)   |
| Optional Equipment:                       | Burst indicators / monitoring system; atmospheric insulation; process insulation; weather covers; installation frame; flameless venting; alternative materials, temperature ranges, and tighter tolerances are available |

| Vent Size  |            | Relief Area |       | Minimum Burst Pressure |       | Maximum Burst Pressure |       |
|------------|------------|-------------|-------|------------------------|-------|------------------------|-------|
| IN         | cm         | ft2         | m2    | psig                   | mbarg | psig                   | mbarg |
| 9/10/2012  | 23/10/1930 | 0.61        | 0.057 | 2.0                    | 138   | 10.0                   | 690   |
| 12/10/2012 | 30/10/1930 | 0.84        | .078  | 2.0                    | 138   | 8.0                    | 550   |
| 12/10/2018 | 30/10/1946 | 1.30        | .12   | 1/05/2021              | 103   | 8.0                    | 550   |
| *12 x 24   | 30/10/1961 | 1.76        | .16   | 1/05/2021              | 103   | 8.0                    | 550   |
| 18/10/2018 | 46 x 46    | 2/01/2021   | .19   | 1.0                    | 69    | 8.0                    | 550   |
| 18/10/2024 | 46 x 61    | 2.72        | .25   | 1.0                    | 69    | 8.0                    | 550   |
| 18/10/1930 | 46 x 76    | 3.42        | .31   | 1.0                    | 69    | 8.0                    | 550   |
| 24/10/2024 | 61 x 61    | 3.67        | .34   | 1.0                    | 69    | 8.0                    | 550   |
| 20/10/1930 | 51 x 76    | 3.83        | .36   | 1                      | 69    | 8.0                    | 550   |
| *18 x 35   | 46 x 89    | 4/01/2021   | .37   | 1.0                    | 69    | 8.0                    | 550   |
| 18/10/1936 | 46 x 91    | 4.13        | .38   | 1.0                    | 69    | 8.0                    | 550   |
| 24/10/1930 | 61 x 76    | 4.63        | .43   | 1.0                    | 69    | 8.0                    | 550   |
| *24 x 36   | 61 x 91    | 5.59        | .52   | .5                     | 35    | 8.0                    | 550   |
| 30/10/1930 | 76 x 76    | 5.84        | .54   | .5                     | 35    | 8.0                    | 550   |
| 24/10/1944 | 61 x 112   | 6.87        | .64   | .5                     | 35    | 8.0                    | 550   |
| 30/10/1936 | 76 x 91    | 7/05/2021   | .66   | .5                     | 35    | 8.0                    | 550   |
| 24/10/1948 | 61 x 122   | 7.51        | .7    | .5                     | 35    | 8.0                    | 550   |
| 36 x 36    | 91 x 91    | 8.51        | .79   | .5                     | 35    | 8.0                    | 550   |
| 30/10/1944 | 76 x 112   | 8.66        | .81   | .5                     | 35    | 8.0                    | 550   |
| *36 x 44   | 91 x 112   | 10.45       | .97   | .5                     | 35    | 8.0                    | 550   |
| 44 x 44    | 112 x 112  | 12.84       | 1.19  | .5                     | 35    | 8.0                    | 550   |
| 44 x 69    | 112 x 175  | 20.31       | 1.89  | .5                     | 35    | 8.0                    | 550   |
| 6 Dia.     | 15 Dia.    | .14         | .013  | 3.0                    | 27    | 15.0                   | 1030  |
| 8 Dia.     | 20 Dia.    | .28         | .026  | 2/05/2021              | 172   | 15.0                   | 1030  |
| 10 Dia.    | 25 Dia.    | .45         | .042  | 2.0                    | 138   | 11.0                   | 760   |
| 12 Dia.    | 30 Dia.    | .68         | .063  | 2.0                    | 138   | 10.0                   | 690   |
| 14 Dia.    | 36 Dia.    | .95         | .088  | 1/05/2021              | 103   | 10.0                   | 690   |
| 16 Dia.    | 41 Dia.    | 1.27        | .12   | 1.25                   | 86    | 10.0                   | 690   |
| 18 Dia.    | 46 Dia.    | 1.62        | .15   | 1.0                    | 69    | 10.0                   | 690   |
| 20 Dia.    | 51 Dia.    | 2/02/2021   | .19   | 1.0                    | 69    | 10.0                   | 690   |
| 22 Dia.    | 56 Dia.    | 2.46        | .23   | 1.0                    | 69    | 10.0                   | 690   |
| 24 Dia.    | 61 Dia.    | 2.95        | .27   | 1.0                    | 69    | 10.0                   | 690   |

# CV

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|         |          |       |     |    |    |      |     |
|---------|----------|-------|-----|----|----|------|-----|
| 26 Dia. | 66 Dia.  | 3.48  | .32 | .8 | 69 | 10.0 | 690 |
| 30 Dia. | 76 Dia.  | 4.67  | .43 | .5 | 35 | 10.0 | 690 |
| 36 Dia. | 91 Dia.  | 6.78  | .63 | .5 | 35 | 10.0 | 690 |
| 40 Dia. | 102 Dia. | 8.40  | .78 | .5 | 35 | 10.0 | 690 |
| 44 Dia. | 112 Dia. | 10.20 | .95 | .5 | 35 | 10.0 | 690 |

\* Standard sizes are available with a 1.5 psig nominal burst pressure at 72°F.

- Custom sizes are available
- All dimensions are nominal

### INSTALLATION

CV rectangular and circular vents with standard designs are mounted in several lightweight angle frame configurations. CV circular explosion vent designs may be created on special request to accommodate installation between standard flanges in accordance with DIN 3632 PN10 or ANSI B16.5 150. Fike offers frames of multiple configurations and materials.