

# EXPLOSION VENTING PRODUCT GUIDE

EXPLOSION PROTECTION

SOLUTIONS YOU CAN

COUNT ON WORLDWIDE.





# EXPLOSION PROTECTION SOLUTIONS



At Fike we know that safety is no accident. That's why we provide simple, reliable explosion protection solutions for your growing safety needs. With over six decades of field experience and a team of in-house engineers, application specialists, and combustion researchers, we understand your industrial processes, relevant code compliance, and how critical continued plant operation is to you. Fike's high quality vents can be installed easily — usually by your own personnel. There's no maintenance. With Fike explosion vents and our full range of safety solutions, your plant stays up and running.

## Select benefits of choosing Fike as your industrial safety resource for explosion vents:

- Vents are dynamically tested and validated under full-scale explosion conditions — **Fike exclusive!**
- Stock program gives you the best prices and 2 day delivery — **Fike exclusive!**
- Optimal relief area with **broadest range** of sizes and configurations
- **Certified burst pressure** offers predictable, full opening
- **Facility-wide monitoring** with burst indicators

				Performance Attributes							
				Operating Ratio	Operating Temperature Range	Vacuum Rating	Non-Fragmenting	Pulsating / Cycle	Sanitary		
										Compliance	
	Fike Model	Design	Burst Pressure Range								
Square / Rectangular	Bulged	Vmax	Single element	1.5 - 5.0 PSIG 103 - 345 MBARG 0.1 - 0.35 KG/CM <sup>2</sup>	80%	0 - 350°F 0 - 175°C	⇄⇄	•	•••		NFPA 68
		Sani-V-S	Single element Integrated frame	0.7 - 6.5 PSIG 50 - 460 MBARG 0.05 - 0.50 KG/CM <sup>2</sup>	80%	-40 - 460°F -40 - 240°C	⇄⇄	•	•••	•	NFPA 68 ATEX / CE CIP / SIP
		CV-S-I	Composite	0.5 - 14.5 PSIG 35 - 1000 MBARG 0.04 - 1.0 KG/CM <sup>2</sup>	80%	-40 - 1100°F -40 - 600°C	⇄⇄⇄	•	•••		NFPA 68
	Flat	CV-CF	Composite	0.75 - 10.0 PSIG 35 - 1000 MBARG 0.04 - 1.0 KG/CM <sup>2</sup>	60 - 75%	-40 - 250°F -40 - 120°C	⇄⇄	•	•••		NFPA 68 ATEX / CE
		CV-SF	Composite	.5 - 10.0 PSIG 35 - 690 MBARG 0.04 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 500°F -40 - 260°C	⇄⇄⇄	•	•••		NFPA 68
		CV-H	Composite	.5 - 10.0 PSIG 35 - 690 MBARG 0.04 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 500°F -40 - 260°C		•	•••	•	NFPA 68
		CV	Composite	0.5 - 10.0 PSIG 35 - 690 MBARG 0.04 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 500°F -40 - 260°C	⇄⇄	•	•••		NFPA 68 ATEX / CE
		CV-I	Composite	0.5 - 10.0 PSIG 35 - 690 MBARG 0.04 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 1100°F -40 - 600°C	⇄⇄	•	•••		NFPA 68
		Sani-V	Single element Integrated frame	0.5 - 6.5 PSIG 50 - 460 MBARG 0.05 - 0.5 KG/CM <sup>2</sup>	50%	-40 - 460°F -40 - 240°C	⇄⇄	•	•••	•	NFPA 68 ATEX / CE CIP / SIP
		EleGuard	Single element Integrated frame	0.7 - 2.9 PSIG 50 - 200 MBARG 0.05 - 0.2 KG/CM <sup>2</sup>	25%	-4 - 140°F -20 - 60°C		•	•••		NFPA 68 ATEX / CE
Round	Bulged	CV-S	Composite	1.0 - 15.0 PSIG 69 - 1030 MBARG 0.07 - 1.0 KG/CM <sup>2</sup>	80 - 90%	-40 - 500°F -40 - 260°C	⇄⇄⇄	•*	•••		NFPA 68 ATEX / CE
		CV-S-I	Composite	.5 - 10.0 PSIG 35 - 690 MBARG 0.04 - 0.7 KG/CM <sup>2</sup>	80%	-40 - 1100°F -40 - 600°C	⇄⇄⇄		•••		NFPA 68 ATEX / CE
	Flat	CV-CF	Composite	.75 - 15.0 PSIG 35 - 1030 MBARG 0.04 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 250°F -40 - 120°C	⇄⇄	•*	•••		NFPA 68
		CV-H	Composite	.5 - 15.0 PSIG 35 - 1000 MBARG 0.04 - 1.0 KG/CM <sup>2</sup>	60 - 75%	-40 - 500°F -40 - 260°C			•••	•	NFPA 68
		CV	Composite	.5 - 15.0 PSIG 35 - 1030 MBARG 0.04 - 1.0 KG/CM <sup>2</sup>	60 - 75%	-40 - 500°F -40 - 260°C	⇄⇄	•*	•••		NFPA 68 ATEX / CE
		CV-I	Composite	0.5 - 15.0 PSIG 35 - 1030 MBARG 0.04 - 1.0 KG/CM <sup>2</sup>	60 - 75%	-40 - 1100°F -40 - 600°C	⇄⇄		•••		NFPA 68

Vacuum Rating: Partial ⇄⇄ Full ⇄⇄⇄ Pulsating Cycle: ••• Good ••• Better ••• Best

\* Non-fragmenting with addition of High Integrity upgrade.



# EXPLOSION VENTING SOLUTIONS

## FLAMELESS EXPLOSION VENTING

During normal venting, an explosion is freely discharged, allowing flames and dust to exit the process vessel being protected. When the process vessel is located indoors, ducts are generally used to safely convey the explosion outside the building. However, ductwork has disadvantages and may result in decreased venting efficiency.



NORMAL VENTING



FLAMELESS VENTING

**Flameless venting in combination** with Fike explosion vents, extinguishes the flame from the vented explosion without the use of expensive ducting, limitations on equipment location, or

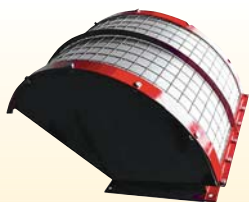
more expensive explosion protection. **Flame arresters are designed to protect people and equipment from flames and dust, releasing post-combustion gases only.**

- Eliminates need for expensive ducts
- Enhanced venting efficiency over venting with ductwork
- Choose explosion vent to match operating conditions
- No maintenance



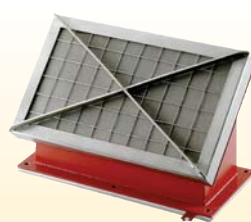
## FIKE'S STOCK VENTING PROGRAM

Explosion venting is one of the most common and effective forms of passive explosion protection for industrial equipment. Fike continues to lead the way by producing an unsurpassed range of reliable and certifiable explosion venting solutions. With Fike's Stock Vent program, you have the added advantages of quick turn-around and reduced costs. When you select one of the listed stock vents, you will realize shipment within 48 hours, at a price less than a custom vent! **Time is money, and you save both with Fike's Stock Explosion Vent Program.**



### FlamQuench II™ SQ

- For use with rectangular vents
- Field refurbish kits available
- CE Approved



### Ele-Quench™

- For use with EleGuard explosion vents
- CE Approved



### FlamQuench II™

- For use with round vents
- Field refurbish kits available
- FM/CE Approved



[www.fike.com](http://www.fike.com)

# PRODUCT OVERVIEW

## SANITARY EXPLOSION PROTECTION

### Sani-V-S

- Integrated frame designed for bolt-on installation
- Stock program\*
- FDA compliant materials



80%



### Sani-V

- Single membrane, integrated frame designed for bolt-on installation
- Stock program\*
- FDA compliant materials



50%



### CV-H

- Teflon liner on process side supports applications in static environments



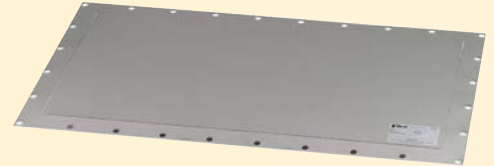
60 - 75%



## EXPLOSION PROTECTION

### CV

- Long-lasting service for static to light-pressure cycling conditions
- Stock program\*

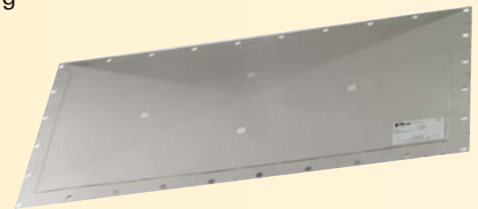


60 - 75%



### CV-CF

- Extended service life under heavy pulsating and cycling process conditions

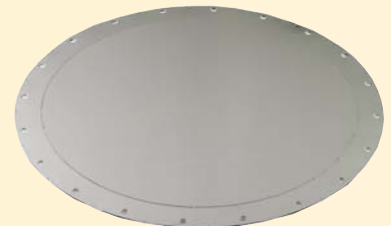


60 - 75%



### CV-I

- Insulation extends service life in high temperature applications



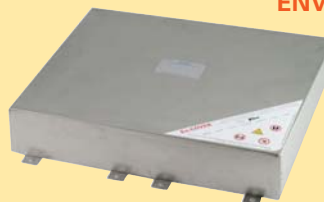
60 - 75%



## FIKE'S EXPLOSION VENT ACCESSORIES



- High quality installation **FRAMES** in a variety of materials and designs
- Easy plant-wide monitoring with **BURST INDICATORS** and monitoring



- Extend the service life of vents with **ENVIRONMENTAL PROTECTION** that reduces the effects of dirt, wind, and snow while maintaining vent functionality



## CV-S

- Optimal for full vacuum process conditions with some pulsating / cycling
- Stock program\*

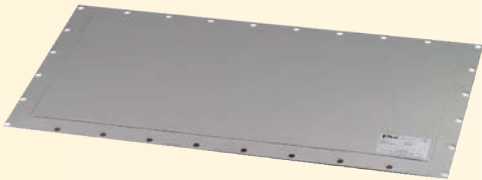


80 - 90%



## CV-SF

- Supports full vacuum conditions with use of back-up bars in the frame assembly
- Stock program\*



60 - 75%



## CV-S-I

- Optimal for high temperature vacuum process conditions with some pulsating / cycling



80%



\*Stock program varies by market

## ELEGUARD

- Integrated frame designed for bolt-on installation
- Designed and priced to protect bucket elevators

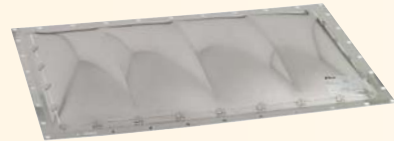


25%



## Vmax

- Single membrane, multi-dome design offers extended service life
- Provides stable burst pressure ratings independent of temperature
- Stock program\*



80%



## HIGH INTEGRITY UPGRADE

- Special design prevents fragmentation even during the most violent explosions
- Flange alignment independent
- Available for CV, CV-S, and CV-CF round vents



- Protect your equipment and vents with **PROCESS** and **ATMOSPHERIC INSULATION** options. Ideal for high-temperature conditions, to reduce energy loss, condensation effects, and acoustic emission levels



## TESTING

*Fike offers full-scale explosion testing —*

- DEFINE THE CHARACTERISTICS OF AN EXPLOSION IN YOUR PLANT
  - IDENTIFY VULNERABLE PROCESS AREAS
  - DESIGN PREVENTION AND PROTECTION SAFETY MEASURES
- CONTACT FIKE for a hazard evaluation.**



## CONTACT FIKE

Fike Corporation is a global team of experienced professionals dedicated to life and business safety. We work closely with our clients to solve highly complex problems with easy-to-use products and services.



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