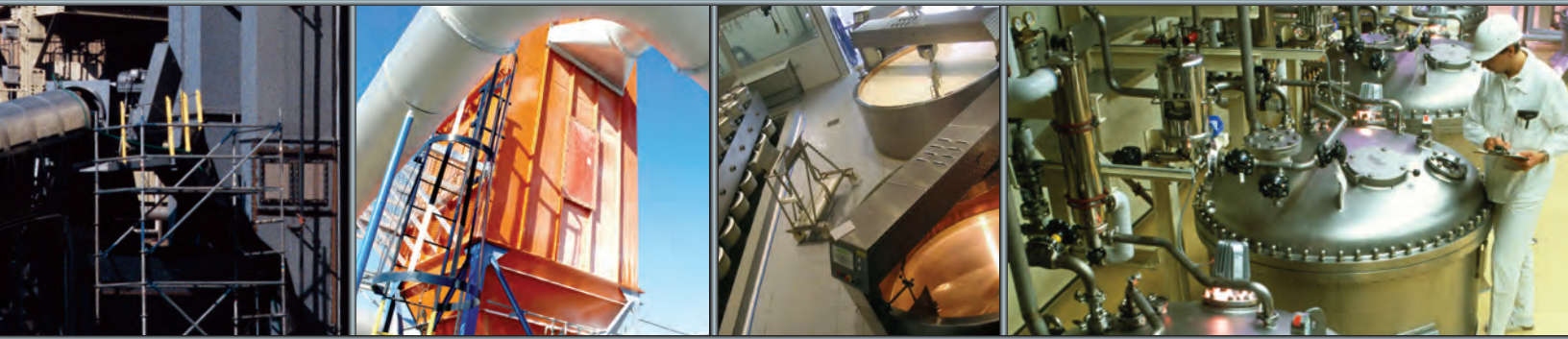


# EXPLOSION VENTING PRODUCT GUIDE

EXPLOSION PROTECTION

SOLUTIONS YOU CAN

COUNT ON WORLDWIDE





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 industrial processes, relevant code compliance, and how critical continued plant operation is to you. Fike's high quality vents can be installed and maintained easily. With Fike explosion vents and our full range of safety solutions, your plant stays up and running.

**There are many benefits to 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 ships within 2 days
- 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 -17 - 175°C	☆☆	•	●●●		NFPA 68
		Sani-V-S	Single element Integrated frame	0.7 - 6.5 PSIG 50 - 448 MBARG 0.05 - 0.5 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 52 - 690 MBARG 0.05 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 250°F -40 - 120°C	☆☆	•	●●●		NFPA 68 ATEX / CE
		CV-SF	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
		CV-H	Composite	0.5 -10.0 PSIG 35 - 690 MBARG 0.05 - 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 - 800°F -40 - 425°C	☆☆	•	●●●		NFPA 68
		Sani-V	Single element Integrated frame	0.5 - 6.5 PSIG 35 - 448 MBARG 0.04 - 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	0.5 - 10.0 PSIG 35 - 690 MBARG 0.05 - 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 52 - 1030 MBARG 0.05 - 1.0 KG/CM <sup>2</sup>	60 - 75%	-40 - 250°F -40 - 120°C	☆☆	•*	●●●		NFPA 68
		CV-SF	Composite	0.75 -10.0 PSIG 35 - 690 MBARG 0.05 - 0.7 KG/CM <sup>2</sup>	60 - 75%	-40 - 500°F -40 - 260°C		•	●●●		NFPA 68
		CV-H	Composite	0.5 - 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
		CV	Composite	0.75 - 15.0 PSIG 52 - 1030 MBARG 0.05 - 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 - 800°F -40 - 425°C	☆☆	•	●●●		NFPA 68

Vacuum Rating: Partial ☆☆ Full ☆☆☆ Pulsating Cycle: ●●● Good ●●● Better ●●● Best

\* Larger diameters may require the optional High Integrity model to prevent fragmentation. Please consult factory.

# PRODUCT OVERVIEW

## EXPLOSION VENTS - SANITARY

### Sani-V-S®

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

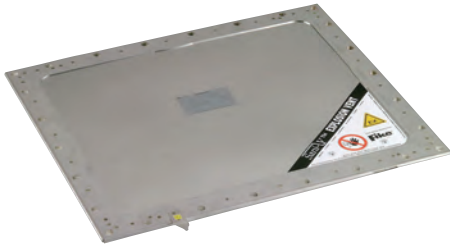


80%



### Sani-V®

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

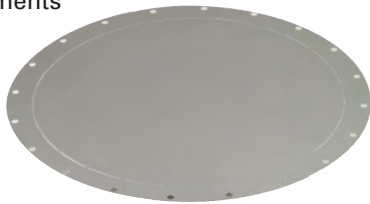


50%



### CV-H

- Teflon liner on process side supports applications in static environments
- Available in round and square /rectangular configurations



60 - 75%



## EXPLOSION VENTS

### CV

- Long-lasting service for static to light-pressure cycling conditions
- Available in round and square / rectangular configurations
- Stock program\*

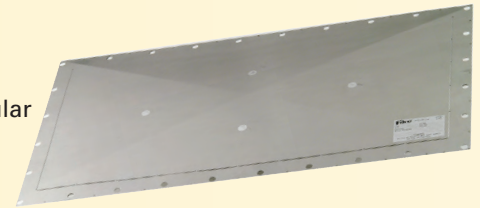


60 - 75%



### CV-CF

- Extended service life under heavy pulsating and cycling process conditions
- Available in round and square / rectangular configurations

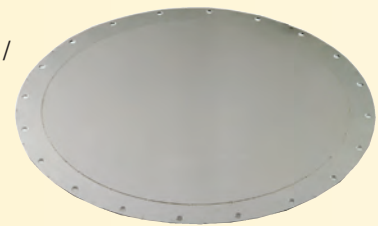


60 - 75%



### CV-I

- Insulation extends service life in high temperature applications
- Available in round and square / rectangular configurations



60 - 75%



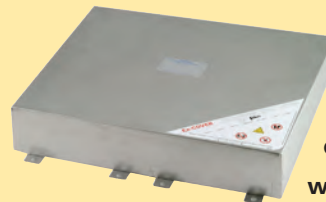
## FIKE'S EXPLOSION VENT ACCESSORIES

- High quality installation **FRAMES** in a variety of materials and designs

- Easy plant-wide monitoring with **BURST INDICATORS** and monitoring



- **PROTECTION WEATHER COVER:** Lightweight, corrosion resistant environmental protection, weather covers minimize the effect of dirt, wind, snow, etc., while safeguarding the operation of the explosion vent.




- **ATMOSPHERIC INSULATION:** An optional insulation pack is available to help avoid energy loss or condensation effects, and to reduce acoustic emission levels of protected systems.

## CV-S

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

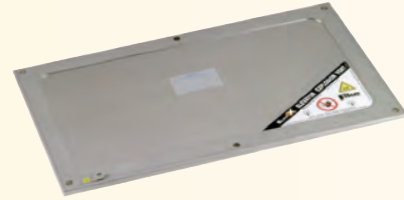


 80 - 90%



## ELEGUARD

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

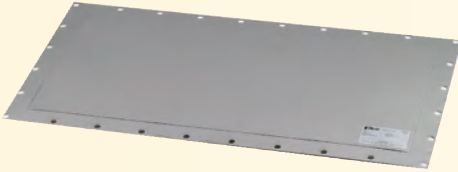


 25%



## CV-SF

- Supports full vacuum conditions with use of back-up bars in the frame assembly
- Available in round and square / rectangular configurations
- Stock program\*



 60 - 75%



## Vmax

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

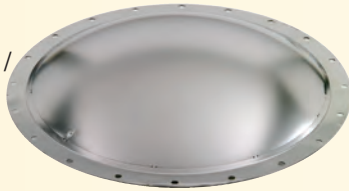



 80%



## CV-S-I

- Optimal for high temperature vacuum process conditions with some pulsating / cycling
- Available in round and square / rectangular configurations



 80%



## HIGH INTEGRITY MODELS

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



## VENT STOCKING 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 tested 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.**

\*Stock program varies by market

## 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.**



## 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



NORMAL VENTING



FLAMELESS VENTING

to safely convey the explosion outside the building. However, ductwork has disadvantages and may result in decreased venting efficiency. **Flameless venting in combination** with Fike explosion vents can extinguish the flame from the vented explosion without the use of expensive

ducting, limitations to equipment location, or more expensive explosion protection.

**Perfect for indoor applications, flameless venting is 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
- Virtually no maintenance

## Flex-V® Fire Limiting Explosion Vent

The Flex-V is a high performance explosion protection device. Unlike traditional venting, the Flex-V panel returns to its original position at the end of the venting process, re-covering about 90% of the vent relief area. This unique engineering breakthrough offers significant benefits over non-reclosing vents, for many industrial applications:

- The venting process is shortened, reducing the risk of secondary explosions.
- Space is re-confined, allowing more efficient use of fire-fighting agents, such as watermist and clean agent systems.
- Can open inward, offering protection against vessel collapse due to vacuum pressure.

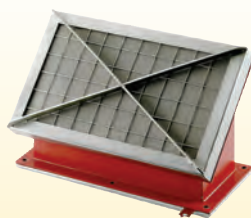


The Flex-V design is unique in that it allows fire-fighting agents the opportunity to effectively control fire situations.



### 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

**Fike®**

WWW.FIKE.COM

## CONTACT FIKE

Fike 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.



## FIKE GLOBAL MANUFACTURING, SALES AND SERVICE

### AMERICAS

**FIKE CORPORATION**  
Blue Springs, MO, USA  
Tel: +1-816-229-3405  
Email: fpssales@fike.com

**FIKE CANADA**  
Burlington, Canada  
Tel: +1-905-681-3100  
Email: fikecanada@fike.com

**FIKE LATINA LTDA**  
Jundiai, Brazil  
Tel: +55-11-4525-5900  
Email: vendas@fike.com.br

**CARIBBEAN, CENTRAL,  
SOUTH AMERICA (CCSA)**  
Houston, TX  
Tel: +1-281-895-8342  
Email: richard.puig@fike.com

### ASIA

**FIKE ASIA PACIFIC SDN BHD**  
Selangor Darul Ehsan, Malaysia  
Tel: +60-3-7859-1462  
Email: fikeap@fike.com

**FIKE JAPAN**  
Tokyo, Japan  
Tel: +81-335-951-291  
Email: office@fikejapan.co.jp

**FIKE INDIA PVT. LTD.**  
Pune, India  
Tel: +91-20-2439-1947  
Email: sameerp@pn2.vsnl.net.in

### EUROPE

**FIKE EUROPE**  
Herentals, Belgium  
Tel: +32-14-210031  
E-mail: fike-europe@fike.com

**FIKE UNITED KINGDOM**  
Maidstone, Kent, United Kingdom  
Tel: +44-1-622-677081  
Email: sales@fike.co.uk

**FIKE FRANCE**  
Cergy Pontoise Cedex, France  
Tel: +33-1-30-31-31-32  
Email: contact@fike.fr

**FIKE DEUTSCHLAND**  
Mannheim, Germany  
Tel: +49-621-321-67-0  
E-mail: info@fike.de

**FIKE ITALIA**  
Milano, Italy  
Tel: +39-02-2952-4166  
Email: webmaster@fike.it

**FIKE IBERICA**  
Barcelona, Spain  
Tel: +34-93-6000-800  
Email: fike@fike.es

### MIDDLE EAST

**FIKE MIDDLE EAST SPC**  
Kingdom of Bahrain  
Tel: +973-1758-3285



# Fike®

WWW.FIKE.COM

FlamQuench II, Sani V, Sani V-S, EleGuard, Ele-Quench, Flex-V, Fike and Fike Corporation are trademarks or registered trademarks of Fike Corporation.

U.S. Patents including 4,662,126; 4,821,909; 6,070,365; 6,959,828; 7,017,767; 7,234,278; 5,105,370; 5,105,371; 5,107,446; 5,138,562; 5,199,500; 5,647,438; 5,718,294; 5,816,330; 6,031,462; 6,131,594; 6,540,029  
Additional foreign patents and U.S. patents pending.

© Copyright 2009, Fike Corporation. All rights reserved. Form No. B9100 0509 Printed in the U.S.A.