

# Explosion Relief Vent Panels

## Explosion Protection System Components

### Advantages:

- Proven design provides fast, reliable operation.
- Complete range of vent panel sizes, configurations and ratings enable custom, leak-tight fitting for each process volume to be protected.
- Choice of flat, multi-layered or domed vent panels provide the right venting protection for each application.
- Easy to install and maintain, vent panels reduce plant operating costs.
- Optional rugged, carbon steel and stainless steel vent panel frames are available to withstand severe industrial environments.



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### Application

Fenwal Explosion Relief Vent Panels are designed to minimize damage to process vessels, ducts, and other industrial structures in the event of a deflagration involving combustible materials. They are relief devices each designed to rupture at a predetermined pressure which allows the fireball and the pressure from a deflagration to vent into a safe area. These highly efficient vent panels fit into the walls of a process volume and are available in a variety of sizes, configurations, ratings, and materials to suit specific applications.

### Description

Vent panels are available in round (8 to 42 inches) or rectangular (8 x 8 to 44.5 x 69 inches) configurations. Vent panels feature 316 stainless steel construction as standard. Multi-layered vents are also available in the same rectangular sizes. The multi-layered vent panels are comprised of a Teflon<sup>®</sup> seal layer sandwiched between outer layers of 316 stainless steel.

Domed vents, available in both round and rectangular configurations, are designed to resist a high level vacuum under pressure cycling conditions. Unlike conventional flat vents, the burst accuracy of a domed vent is unaffected after a million pressure cycles from light positive pressure to vacuum conditions.

# Specifications

Vent Model:	CRV	MV	CRVC
<b>Panel Design:</b>	Flat	Flat	Domed
<b>Vent Material:</b>	316 sst./Teflon® /316 sst.	316 sst.	316 sst./Teflon® /316 sst.
<b>Gasket Material<sup>1</sup>:</b>	Black neoprene	Black neoprene	Black neoprene
<b>Cycle Life:</b>	Fair	Good	Excellent
<b>Vacuum Resistance:</b>	Fair	Excellent	Excellent
<b>Burst Pressures Rated Minimum<sup>2</sup>:</b>	0.75 psig/0.05 barg	0.75 psig/0.05 barg	1.3 psig/0.05 barg
<b>Rated Maximum:</b>	5 psig/0.34 barg	5 psig/0.34 barg	5 psig/0.34 barg
<b>Burst Tolerance:</b>	±0.25 psig for burst pressure ≤ 2 psig or ±0.50 psig for burst pressure > 2 psig	±0.25 psig for burst pressure ≤ 2 psig or ±0.50 psig for burst pressure > 2 psig	±0.25 psig for burst pressure ≤ 2 psig or ±0.50 psig for burst pressure > 2 psig
<b>Operating Pressure:</b>	50% of minimum tolerance	60% of minimum tolerance	70% of minimum tolerance
<b>Temperature Range:</b>	-25°F to 500°F (-32°C to 260°C)	-25°F to 500°F (-32°C to 260°C)	-25°F to 500°F (-32°C to 260°C) as standard, up to 1000°F (538°C) with optional insulation layer.
<b>Frame (Option):</b>	Stainless or carbon steel. Bolted or welded.	Stainless or carbon steel. Bolted or welded.	Stainless or carbon steel. Bolted or welded.

<sup>1</sup>Each vent includes one black neoprene gasket on the process side.

<sup>2</sup>Minimum burst pressure noted may not be available for smaller panel sizes—consult factory.

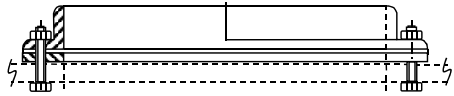


Figure 1. Mounting Frame Option for Bolted Installation

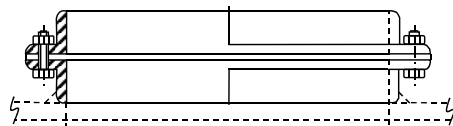


Figure 2. Mounting Frame Option for Welded Installation

**Sanitary Option:** MVS vents feature a smooth internal surface finish and silicone gasket suitable for aseptic service in the food, pharmaceutical, and related industries.

**Activation Sensor:** All vents are available with an optional magnetically activated sensor providing an immediate warning of vent activation.

## Ordering Information

Fenwal Explosion Vents and venting systems are designed in accordance with NFPA 68 Guide for Venting of Deflagrations. Information required for product selection includes volume of enclosure to be protected, process temperature and pressure ranges, details of material(s) processed, and the required reduced explosion pressure. Consult Fenwal Protection Systems for technical design assistance in selecting the proper vent panel(s) for your specific application.

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