EXPLOSION ISOLATION PINCH VALVE

Data Sheet

DESCRIPTION

The Fike Explosion Isolation Pinch Valve (EIPV), used in conjunction with other Fike Explosion Protection System components, is designed to provide an economical way to prevent deflagration propagation through interconnecting pipes or conveying lines to additional process equipment or operating locations.

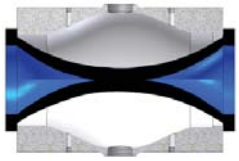
The Fike EIPV consists of a heavy duty cast valve body containing a rugged elastomer sleeve. The sleeve serves as the process flow section and is connected to the process via two circular flanges. Upon explosion detection, compressed air is released at high speed into the valve body such that the sleeve is pinched to full closure within milliseconds. This full closure provides a mechanical block to flame and pressure thereby stopping explosion propagation beyond the valve. The full-port design prevents pressure drop and clogging under the most difficult conditions. The elastomer sleeve extends to the full face of the flange to eliminate any dead spaces thus eliminating bacterial contamination.

The Fike EIPV System includes a heavy duty elastomer sleeve, high speed solenoid valves, a pneumatic accumulator, high and low pressure switches, shut off, vent and manual operation valves.

The actuating pressure is supplied from standard plant air source, regulated to 85 psig (6 barg) and stored in a pneumatic accumulator vessel mounted onto the valve body. The accumulator stores sufficient pneumatic energy to close the pinch valve quickly and maintain closure against a deflagration even without an active air supply.

The EIPV relies on the detection and control hardware from the Fike EPACO explosion protection system. The EIPV uses a special solenoid output version of the EPACO control module, EPC Solenoid Edition (P/N E10-0119).

Valve Open



Valve Closed

FEATURES AND BENEFITS

- Provides a mechanical block to explosion flame and pressure
- Fast closure minimizes installation distance from vessel
- Food grade sleeve standard
- Available in a variety of flange standards and sleeve materials
- Full-port design prevents pressure drop and material accumulation
- Sanitary design - elastomer sleeve extends to the full face of the flange, eliminating potential for bacterial contamination
- Proven concept, large scale tested at Fike
- Third party tested and certified (CE, ATEX)
- No pyrotechnic devices required to activate the valve
- No reaction forces upon closure
- Vertical or horizontal mounting
- Uses readily available plant air
- Supervised accumulator pressure
- Can be operated and reset by user
- Virtually maintenance free

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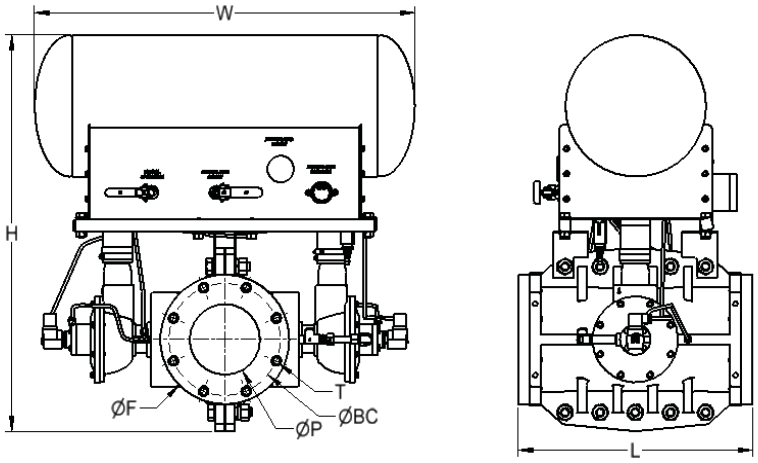
SPECIFICATIONS

Pinch Valve Body:	Cast Iron with white urethane coating as standard. Bolted construction.
Accumulator:	Carbon steel with white urethane coating as standard. Welded construction with ASME certification as standard. Canadian and European certifications available.
Solenoid Valves:	12 VDC Die cast Aluminum with protective coating.
Internal fittings:	Brass
Process Sleeve:	FDA approved white nitrile elastomer (Only process wetted component)
Ingress Protection:	NEMA 4X (IP66)
Electrical Rating:	Rated for non-hazardous atmospheres.
Maintenance	Sleeve replaceable by plant personnel. Removal from process required. All valves equipped with eyebolts for handling. Remaining components are easily accessible without removing valve from process.



ORDERING INFORMATION

EIPV	Dimensions (inches)						Studs		Weight
Pipe Size	W	L	H	Ø P	Ø F	Ø BC	Size	Qty	
4 in	25 in 635.0 mm	12.5 in 317.5 mm	29 in 736.6 mm	4 in 101.6 mm	9 in 228.6 mm	7.50 in 190.5 mm	5/8 -11	8	165 lbs 75 kg
6 in	32.5 in 825.5 mm	20 in 508.0 mm	34 in 863.6 mm	6 in 152.4 mm	11 in 279.4 mm	9.50 in 241.3 mm	3/4 -10	8	260 lbs 118 kg
8 in	36.25 in 920.8 mm	22 in 558.8 mm	37 in 939.8 mm	8 in 203.2 mm	13.5 in 342.9 mm	11.75 in 298.5 mm	3/4 -10	8	414 lbs 188 kg
10 in	42 in 1066.8 mm	24 in 609.6 mm	44 in 1117.6 mm	10 in 254.0 mm	16 in 406.4 mm	14.25 in 362.0 mm	7/8 - 9	12	525 lbs 239 kg
12 in	48 in 1219.2 mm	26 in 660.4. mm	47 in 1193.8 mm	12 in 304.8 mm	19 in 482.6 mm	17.00 in 431.8 mm	7/8 - 9	12	740 lbs 336 kg

Notes:

- All above data is subject to change without notice. Must not be used for construction unless confirmed in writing.
- Standard Flange Rating: ANSI 150. Other flange ratings are available upon request.
- Food grade neoprene standard sleeve material. Other materials available upon request.