

ProFlap+ Passive Isolation Valve

Explosion Protection System Components

Advantages:

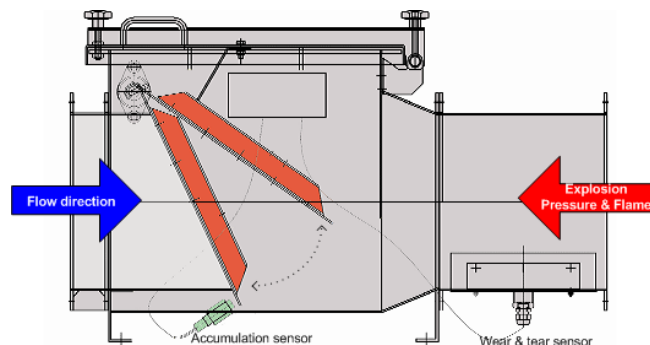
- Passive design, no triggering sensors or controller necessary
- Applicable for organic and inorganic dusts with K_{st} up to 300 bar.m/s
- Lowest cost explosion isolation option
- Monitors its operational conditions via integrated sensors, thus allows longer maintenance intervals
- Rugged, durable design requires minimal maintenance
- Easy access for inspection via swiveling flap
- Short mounting distances
- ATEX certified according to the latest standard prEN 15089



Application

For end-users and OEMs looking for a low cost and reliable explosion isolation alternative to mitigate explosion propagation risks to upstream equipment and to meet the requirements of OSHA Combustible Dust Directive and NFPA 654, Fenwal's ProFlap Plus passive isolation valve is an effective, self-actuating device providing inlet explosion isolation to protected vessels handling combustible dusts. The "ProFlap Plus" is certified as a protective system according to EU Guideline 94/9/EG (ATEX 95) and is approved for isolation of dust explosions of organic and inorganic dusts.

Typical applications for the ProFlap Plus valve include inlet explosion-isolation of dust collectors, cyclones, dryers, mills, silos, fluid bed granulators and other interconnected process equipment.



Description

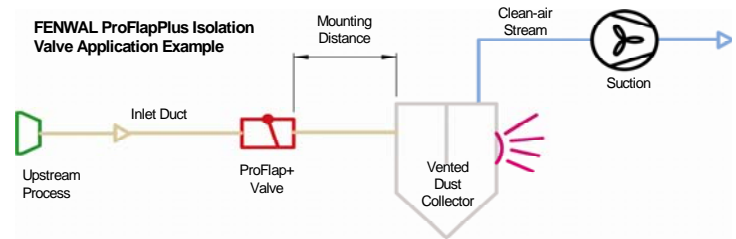
The ProFlap Plus backpressure flap valve has a carbon steel body incorporating a stainless steel flap. The valve is designed to withstand pressures up to the maximum reduced pressure ($P_{red, max}$) listed in the specifications section below.

During operation, the downstream mounted backpressure flap is kept open by means of the airflow. At standstill, the flap closes due to its own weight. When the system is starting, opening of the flap is damped by a damping element.

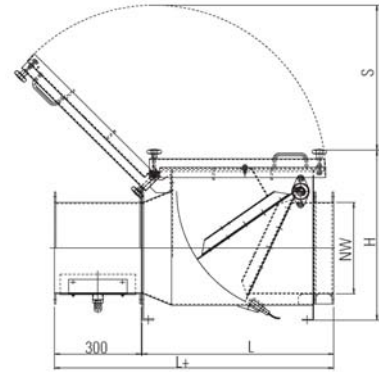
In the event of an explosion within a protected system, the flap closes due to the pressure front propagating within the duct and prevents propagation of the flame and the pressure to upstream equipment. Personnel working at capturing points or upstream system parts are protected against the explosion effects.

Specifications

	ProFlap Plus 140 to 160	ProFlap Plus 200 to 315	ProFlap Plus 355 to 560
Kst, max :	300 bar.m/s	300 bar.m/s	200 bar.m/s
Dust explosion class :	St-2	St-2	St-1
Pred, max :	0.5 bar (7 psi)	0.5 bar (7 psi)	0.4 bar (6 psi)
Mounting Distance :	3m (10 ft)	4m (13 ft)	2m (6.5 ft)
Mounting Position :	Horizontal		
Air-flow velocity :	15 to 30 m/s (2950 to 5900 ft/min)		
Process Temperature :	-10°C to +50°C (14°F to 122°F)		
Material of construction :	Housing : Carbon Steel, Flap: Stainless Steel		



Type	Nominal Width NW	Length ProFlapPlus L+	Weight	Width B	Height H	S	Pressure loss at 3940 ft/min
ProFlap+140	5"	28.3"	73 lb	13.4"	16.1"	15.4"	approx. 0.75" wc
ProFlap+160	6"	31.1"	82 lb	16.5"	17.4"	16.5"	approx. 0.79" wc
ProFlap+200	8"	32.7"	99 lb	18.1"	19.1"	18.1"	approx. 0.87" wc
ProFlap+250	10"	35.0"	123 lb	20.1"	20.1"	18.9"	approx. 0.91" wc
ProFlap+280	11"	36.6"	137 lb	21.3"	21.7"	20.5"	approx. 0.98" wc
ProFlap+315	12"	38.2"	148 lb	22.0"	23.2"	21.3"	approx. 1.14" wc
ProFlap+355	14"	41.3"	209 lb	23.2"	25.3"	23.2"	approx. 1.34" wc
ProFlap+400	16"	41.3"	243 lb	25.6"	27.4"	25.4"	approx. 1.54" wc
ProFlap+450	18"	44.1"	254 lb	27.6"	28.7"	27.6"	approx. 1.69" wc
ProFlap+500	20"	46.1"	298 lb	30.7"	31.3"	30.0"	approx. 1.89" wc
ProFlap+560	22"	48.4"	342 lb	33.5"	33.3"	32.3"	approx. 2.05" wc



Ordering Information

Description	Part Number
ProFlap+140 Passive Isolation Valve	32-700001-001
ProFlap+160 Passive Isolation Valve	32-700001-002
ProFlap+200 Passive Isolation Valve	32-700001-003
ProFlap+250 Passive Isolation Valve	32-700001-004
ProFlap+280 Passive Isolation Valve	32-700001-005
ProFlap+315 Passive Isolation Valve	32-700001-006
ProFlap+355 Passive Isolation Valve	32-700001-007
ProFlap+400 Passive Isolation Valve	32-700001-008
ProFlap+450 Passive Isolation Valve	32-700001-009
ProFlap+500 Passive Isolation Valve	32-700001-010
ProFlap+560 Passive Isolation Valve	32-700001-011

This literature is provided for informational purposes only. Actual performance is based on proper application by a qualified professional.

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