Explosion Isolation Valve VIGIFLAP

APPLICATIONS

The VIGIFLAP is an explosion isolation valve designed to prevent propagation of overpressure or flame front caused by an explosion downstream in vessels such as dust collectors, cyclones, and filters.

The valve is held open either by air flow or proprietary locking mechanism. As a result, the **VIGIFLAP** valve can be used as an explosion isolation device for both the inlet and oulet of a vessel.

The **Explosion Isolation Valve VIGIFLAP** complies with **NFPA** guidelines and is an **ATEX-Certified** device for the containment of explosion.

CERTIFICATIONS & STANDARDS

EN 16447 NFPA 69
Compliant

STANDARD FEATURES

- **Body:** Painted steel
- **Diameters:** ø6" to ø54" / ø160 mm to ø1350 mm
- **Gasket:** EPDM (Silicone FDA 356°F/180°C option)
- **Pressure Drop:** Lower pressure drop with round domed flap

OPTIONAL FEATURES

The VF is 100% NFPA 69 compliant with the following optional features:

- **Body:** Galvanized steel
- **Body:** Stainless steel
- **Frame silicone FDA:** 356°F/180°C
- Dust level sensor to prevent dust accumulation
- Connection box installed on the body, according to the ATEX zone (opposite side of the locking mechanism)

Product code: 50200

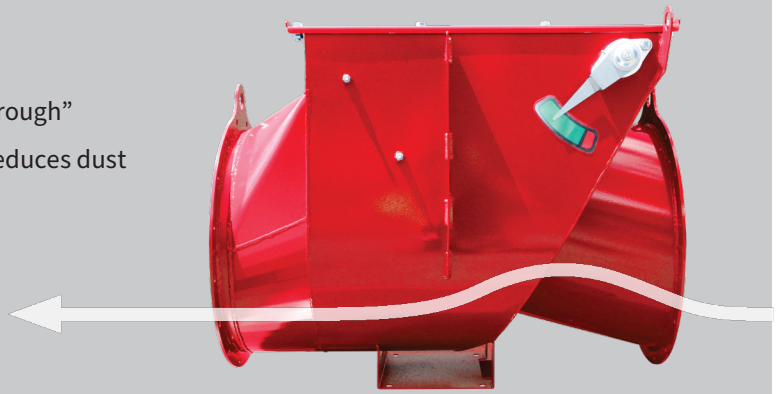
DIMENSIONS

DIMENSIONS				
Ø [inch]	Ø [mm]	Door gasket	Body gasket	Body
ø 4	ø 100	EPDM	EPDM	Mild Steel
ø 5	ø 125			
ø 6	ø 160			
ø 7	ø 180			
ø 8	ø 200			
ø 10	ø 250			
ø 12	ø 300			
ø 14	ø 350			
ø 16	ø 400			
ø 18	ø 450			
ø 20	ø 500			
ø 22	ø 550			
ø 24	ø 600			
ø 26	ø 650			
ø 28	ø 700			
ø 30	ø 750			
ø 32	ø 800			
ø 34	ø 850			
ø 36	ø 900			
ø 38	ø 950			
ø 40	ø 1000			
ø 42	ø 1050			
ø 44	ø 1100			
ø 46	ø 1150			
ø 48	ø 1200			
ø 50	ø 1250			
ø 52	ø 1300			
ø 54	ø 1350			

* Units in inches rounded to the closest whole number

MINIMUM INTERNAL DUST ACCUMULATION

The VigiFlap's unique inlet & outlet "straight through" design ensures very low static resistance and reduces dust accumulation.

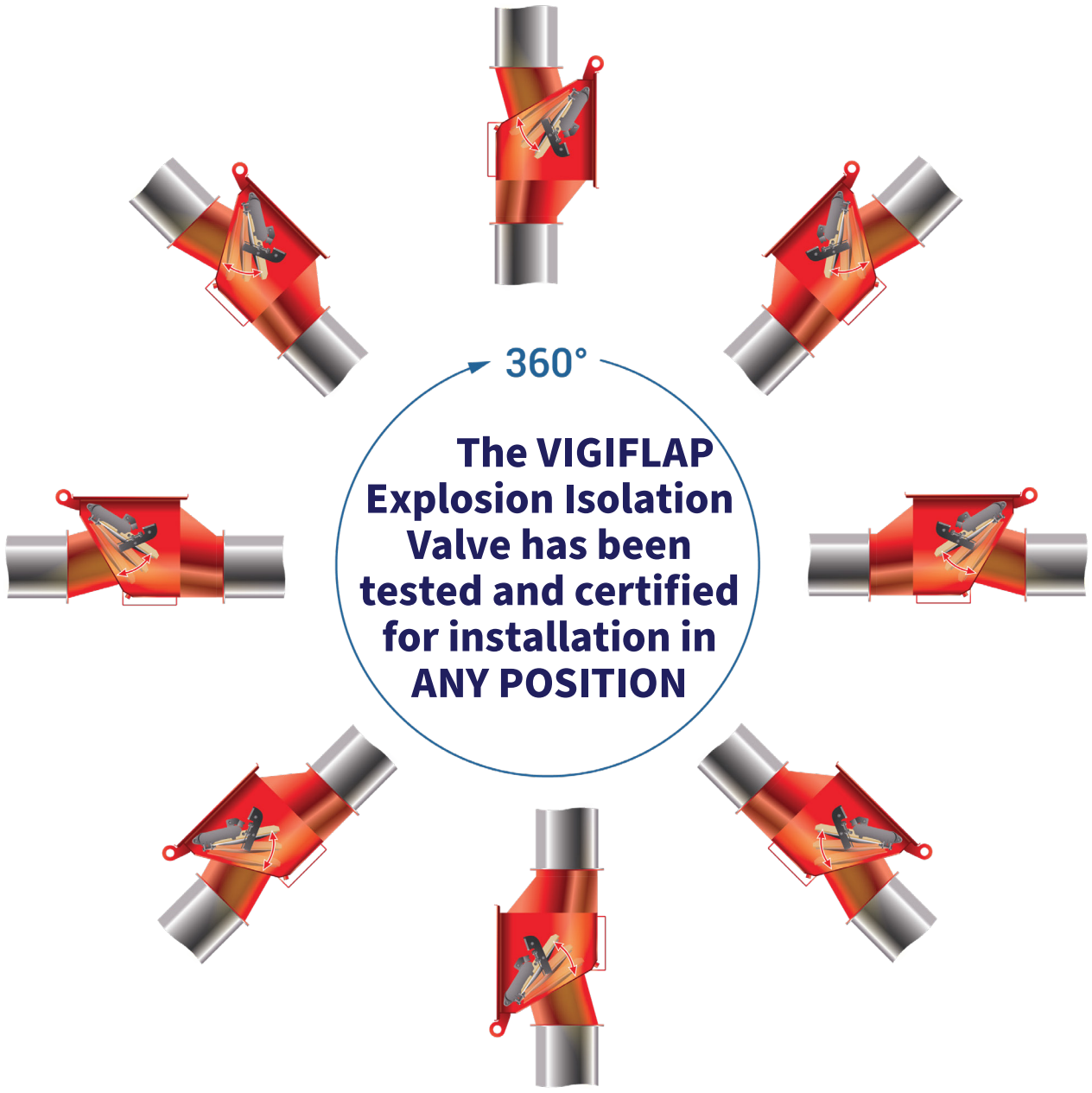


FREE FLOW DESIGN

Product code: 50200

INSTALLATION

The **VIGIFLAP Valve** has been tested and certified with the process pipe installed on up & downstream sides of the valve, simulating **REAL WORLD CONDITIONS.**



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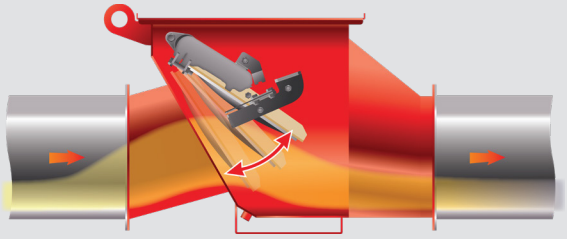
APPLICATIONS

PROCESS FLOW

flow positions:

1 Flap is held open by process flow

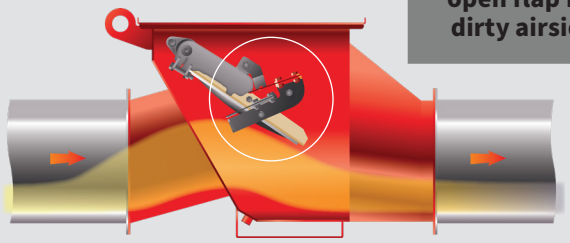
Installation with floating flap



or

Installation with flap locked open

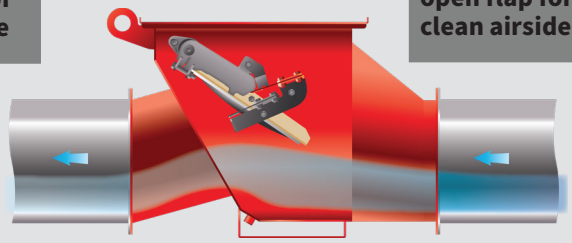
2 Flap locked in open position



Locked open flap for dirty airside

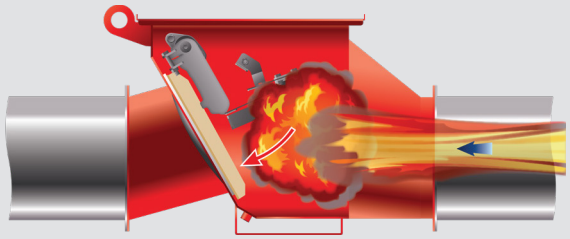
or

Locked open flap for clean airside



EXAMPLE DURING AN EXPLOSION EVENT

Explosion isolation is achieved by flap closure independent of being in free floating or locked open position



Manual locking mechanism reset is required

TECHNICAL INFORMATION

KST MAX	250 bar.m/s	**AMBIENT TEMPERATURE**	-4°F +140°F	**FLUX**	Overpressure or vacuum
PMAX	145 psi ≤ 10 bar	**SPEED FLOW**	Clean Air ≤ 30 m/s Dirty Air ≤ 45 m/s	**INTERIOR**	ATEX zone 20
MESG	1/16" 1.5 mm (ex: sulfur)	**DUST CONCENTRATION**	No limit	**OPERATING TEMPERATURE**	EPDM gasket: -22°F +158°F
DUST	Any kind of dust	**POSITION OF THE DEVICE**	Vertical / Horizontal		Silicone gasket: 14°F +356°F

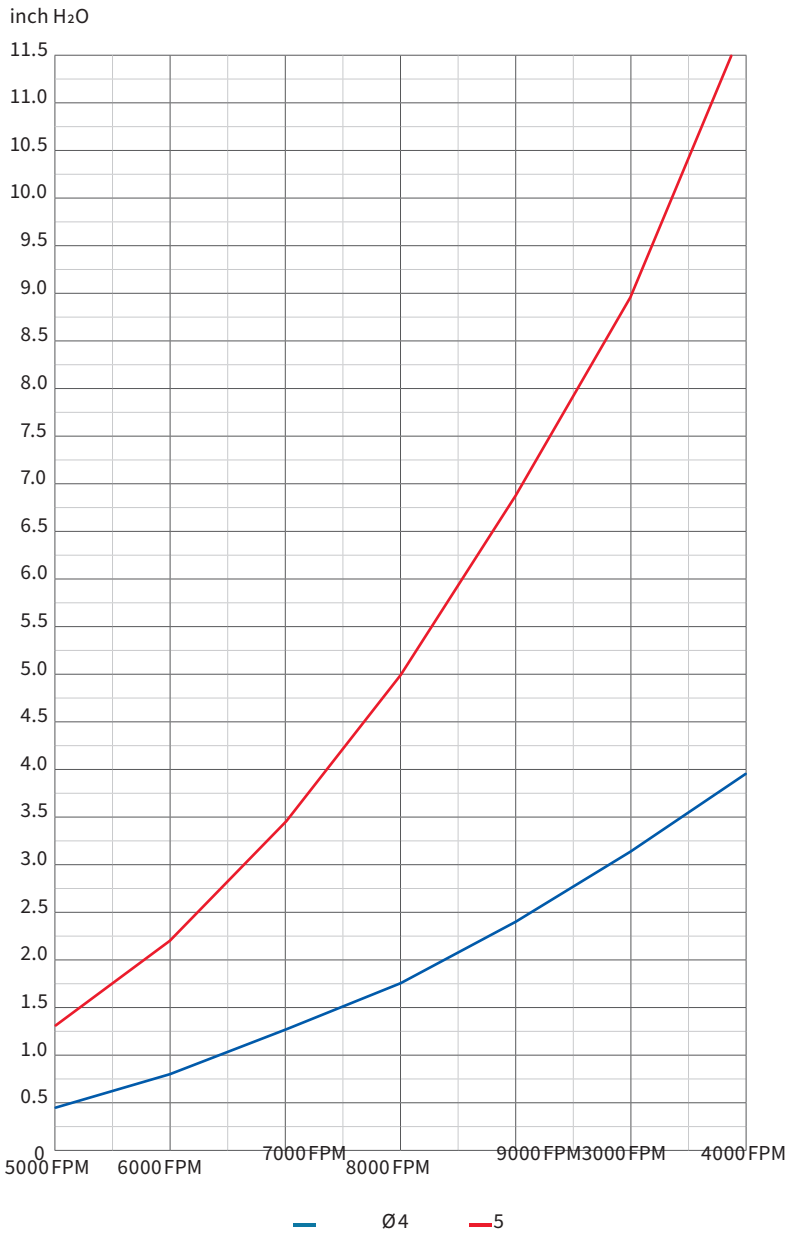
Product code: 50200

VIGIFLAP (VF) PRESSURE DROP

LOCKED OPEN POSITION DIRTY AIR SIDE

4”-5”

Ø100mm-Ø125mm



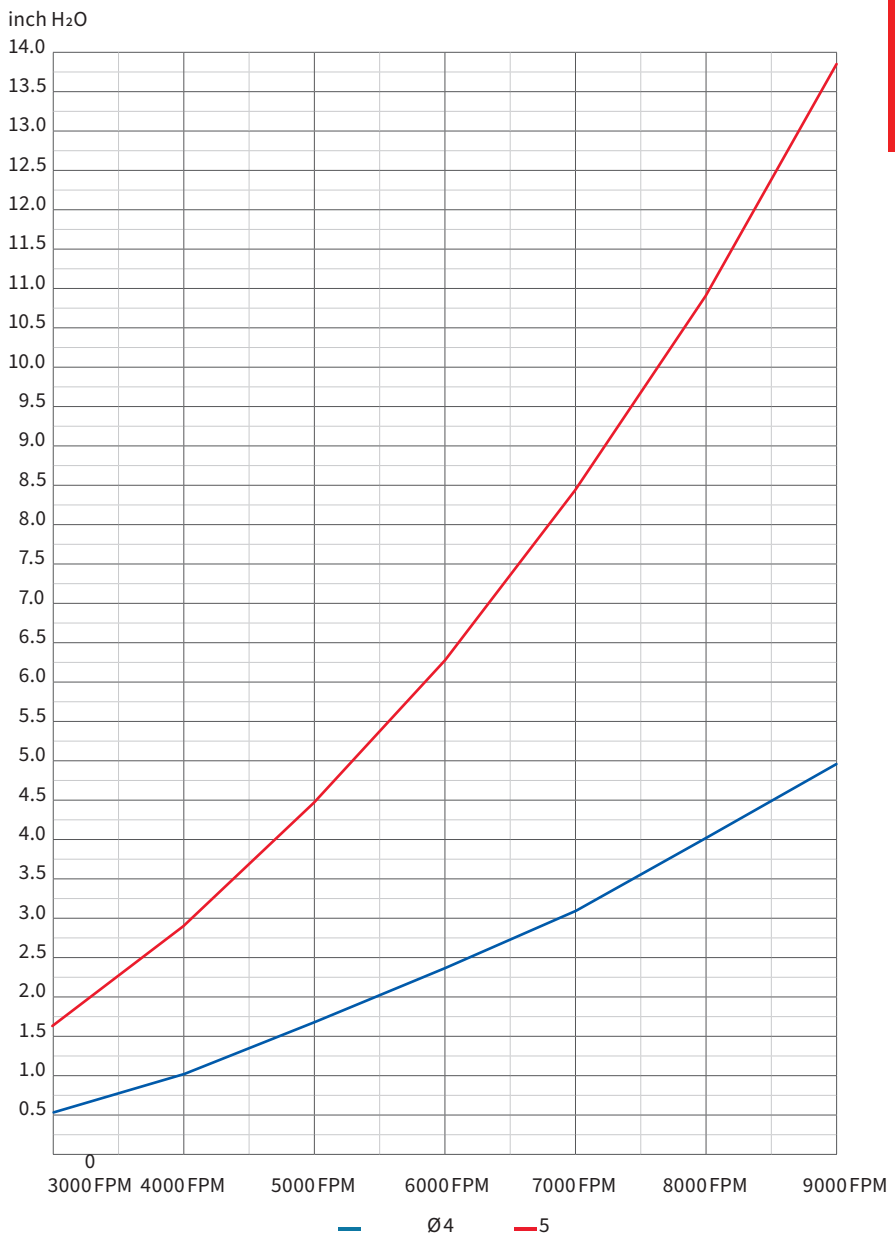
Pressure Drop in H_20							
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**	**7000 FPM**	**8000 FPM**	**9000 FPM**
ø4	0.44	0.78	1.22	1.76	2.39	3.13	3.96
ø5	1.26	2.23	3.49	5.02	6.83	8.93	11.30

Product code: 50200

VIGIFLAP (VF) PRESSURE DROP

FLOATING POSITION DIRTY AIR SIDE

4”-5”
Ø100mm-Ø125mm



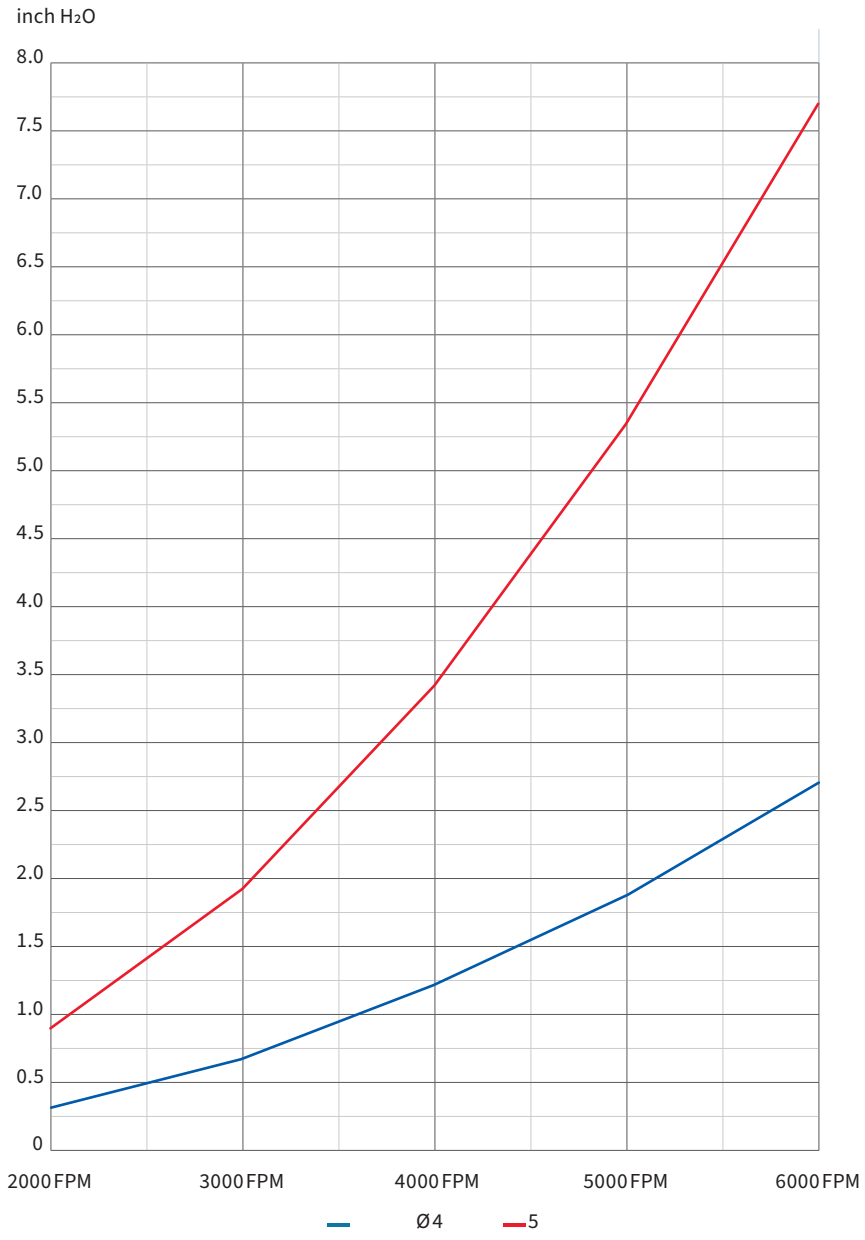
Pressure Drop in H_20							
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**	**7000 FPM**	**8000 FPM**	**9000 FPM**
ø4	0.53	0.95	1.48	2.13	2.90	3.78	4.79
ø5	1.52	2.70	4.22	6.08	8.27	8.27	13.67

Product code: 50200

VIGIFLAP (VF) PRESSURE DROP

LOCKED OPEN POSITION CLEAN AIR SIDE

4”-5”
Ø100mm-Ø125mm

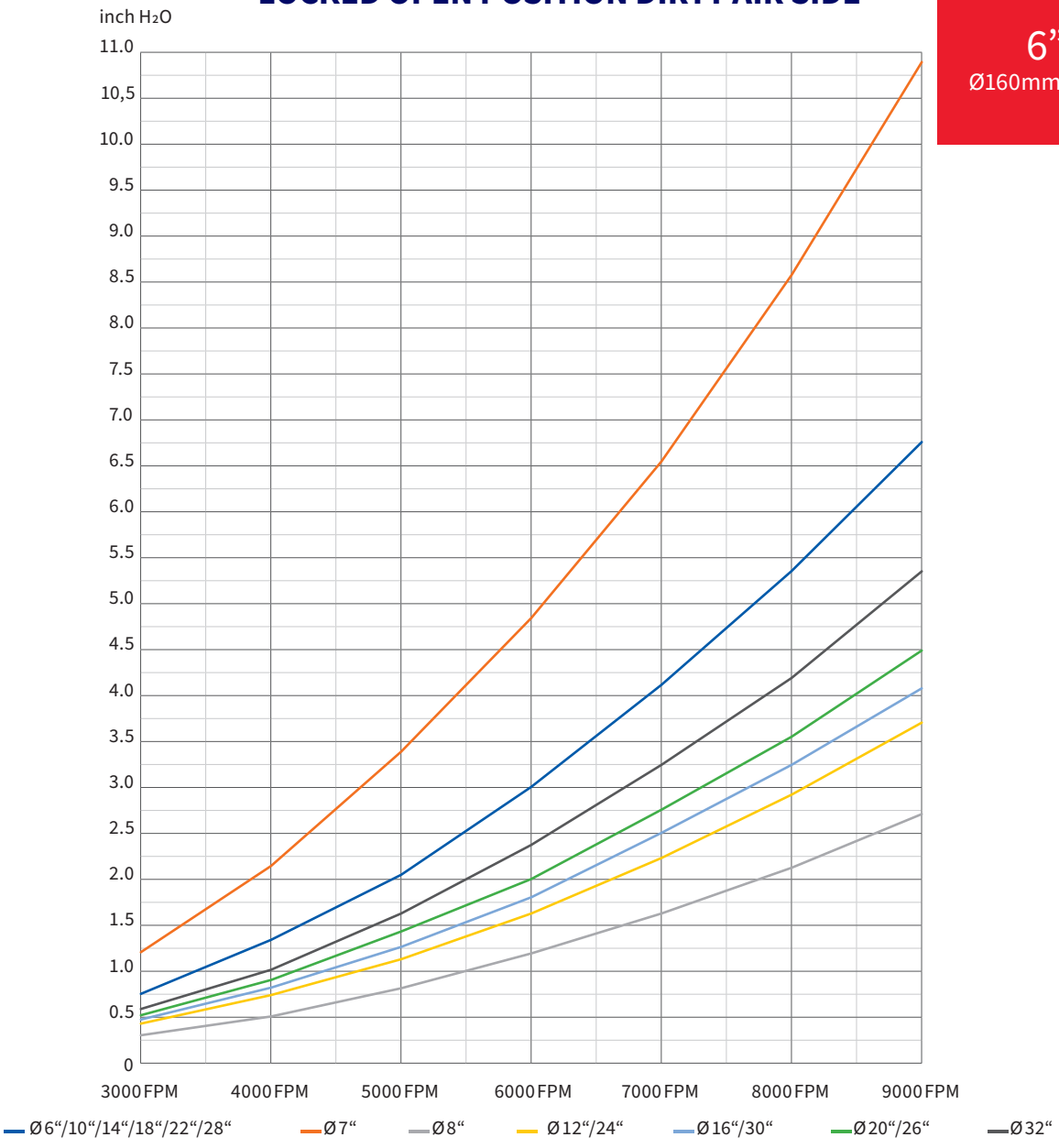


Pressure Drop in H_20				
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**
ø4	0.30	1.20	1.88	2.70
ø5	0.86	1.93	5.36	7.72

Product code: 50200

LOCKED OPEN POSITION DIRTY AIR SIDE

6”-32”
Ø160mm-Ø800mm



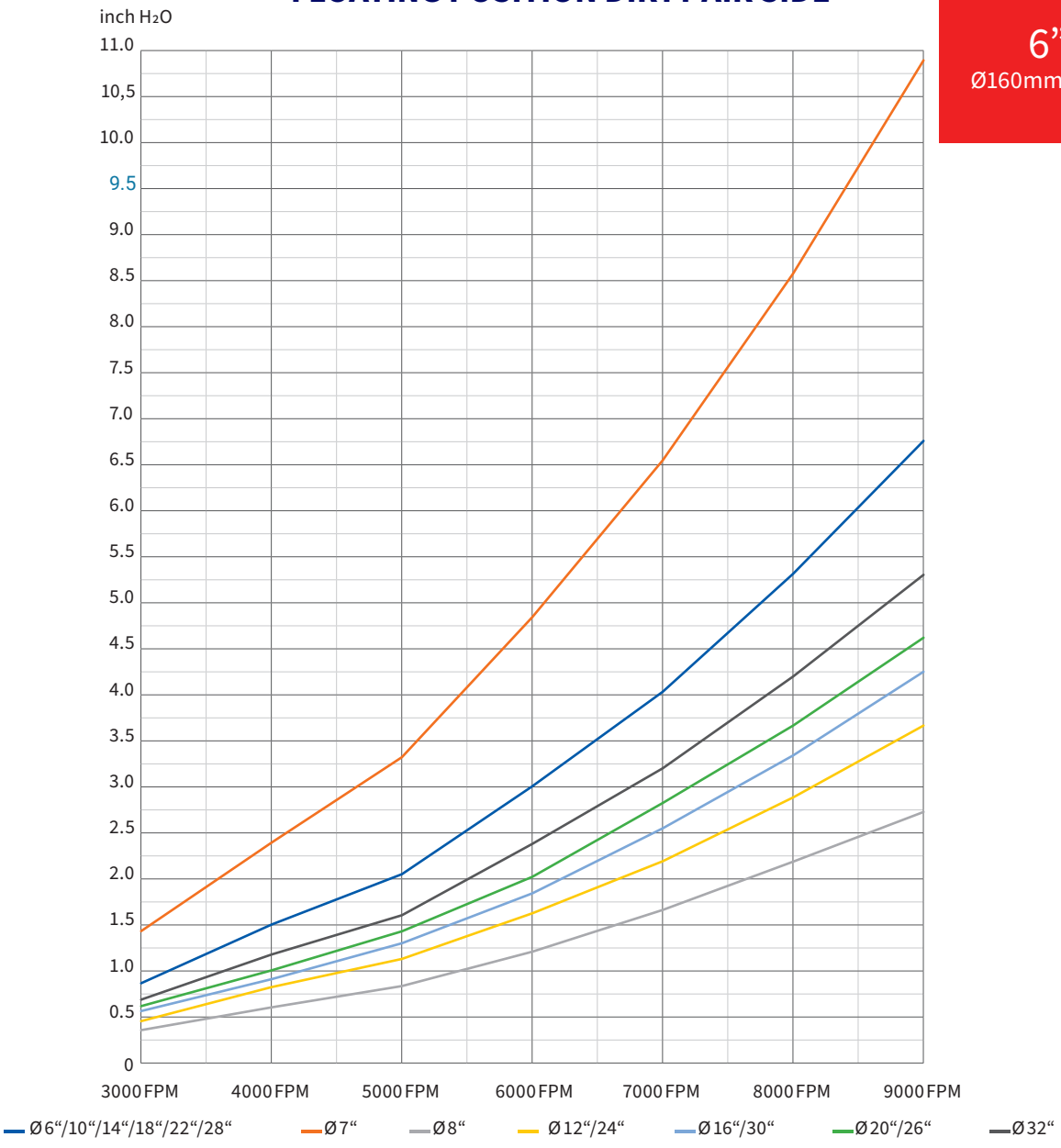
Pressure Drop in H_20						
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**	**7000 FPM**	**8000 FPM**
ø6/10/14/18/22/28	0.75	1.34	2.09	3.01	4.10	5.36
ø7	1.21	2.15	3.36	4.84	6.59	8.61
ø8	0.29	0.52	0.82	1.18	1.61	2.11
ø12/24	0.41	0.73	1.14	1.64	2.24	2.92
ø16/30	0.45	0.81	1.27	1.82	2.48	3.25
ø20/26	0.50	0.89	1.39	2.01	2.73	3.57
ø32	0.59	1.05	1.65	2.37	3.32	4.22

Product code: 50200

VIGIFLAP (VF) PRESSURE DROP

FLOATING POSITION DIRTY AIR SIDE

6”-32”
Ø160mm-Ø800mm



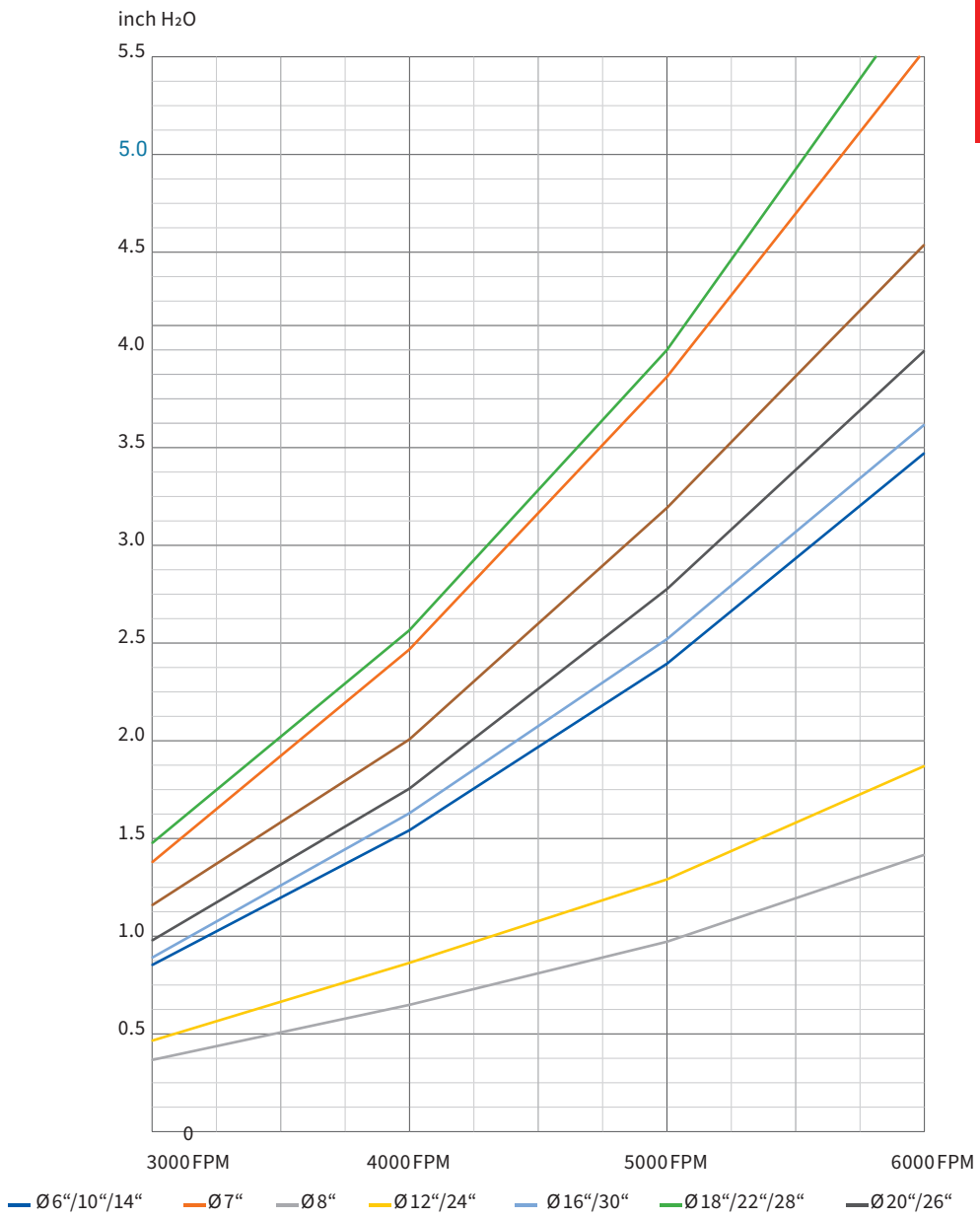
Pressure Drop in H_2O						
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**	**7000 FPM**	**8000 FPM**
ø6/10/14/18/22/28	0.81	1.50	2.07	3.00	4.06	5.32
ø7	1.34	2.39	3.33	4.79	6.54	8.53
ø8	0.36	0.60	0.85	1.21	1.66	2.19
ø12/24	0.44	0.81	1.13	1.62	2.19	2.88
ø16/30	0.56	0.89	1.30	1.86	2.56	3.33
ø20/26	0.60	1.01	1.42	2.03	2.80	3.65
ø32	0.65	1.17	1.62	2.35	3.21	4.18

Product code: 50200

VIGIFLAP (VF) PRESSURE DROP

LOCKED OPEN POSITION CLEAN AIR SIDE

6”-32”
Ø160mm-Ø800mm



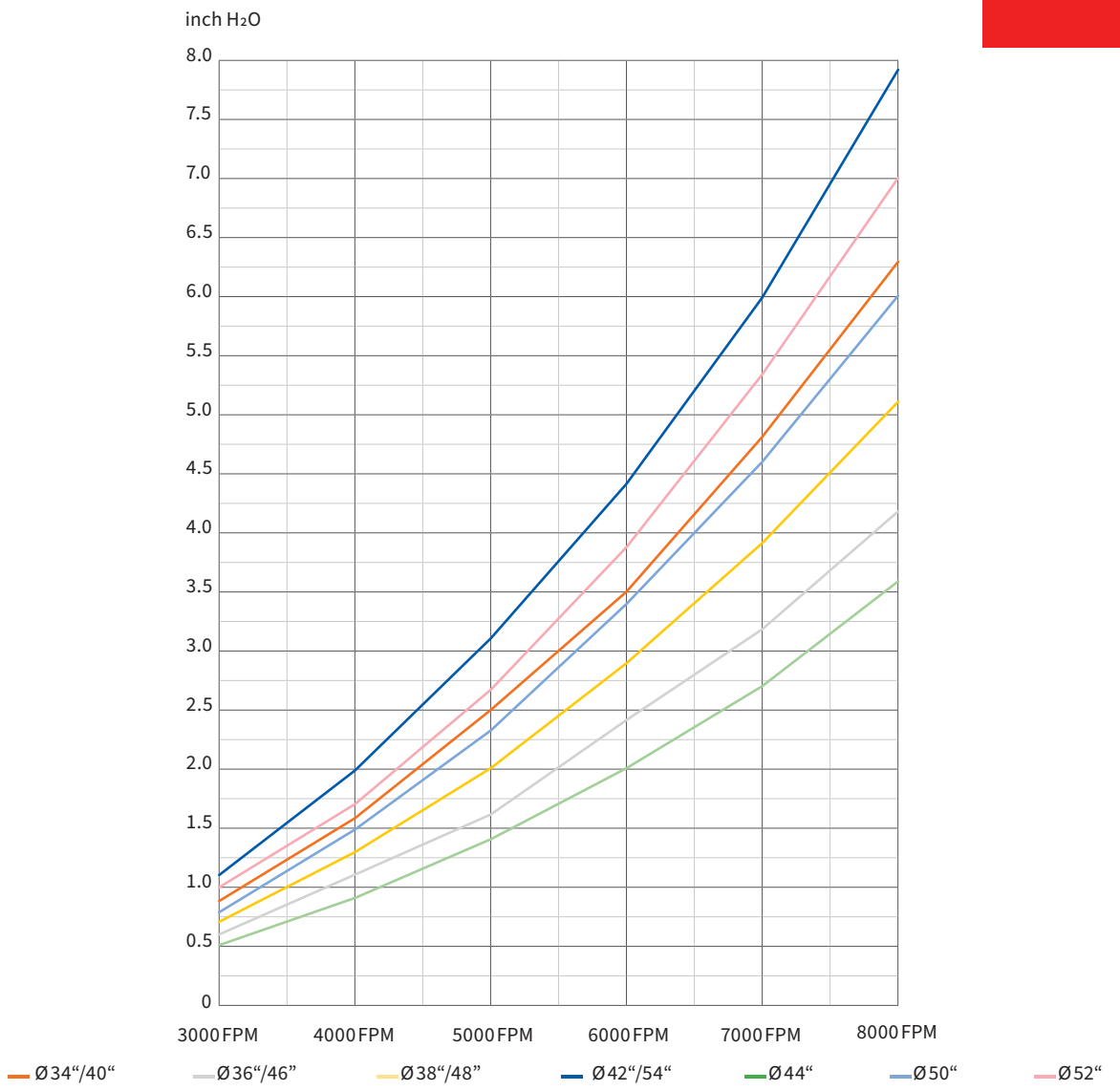
Pressure Drop in H_2O				
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**
ø6/10/14	0.85	1.54	2.40	3.45
ø7	1.38	2.48	3.86	5.53
ø8	0.37	0.61	0.98	1.42
ø12/24	0.45	0.81	1.30	1.87
ø16/30	0.89	1.63	2.52	3.62
ø18/22/28	1.46	2.56	4.02	5.81
ø20/26	0.98	1.75	2.76	3.98
ø32	1.14	2.03	3.217	4.55

Product code: 50200

LARGE SIZE VIGIFLAP (VF) PRESSURE DROP

LOCKED OPEN POSITION DIRTY AIR SIDE

34”-54”
Ø850mm-Ø1350mm

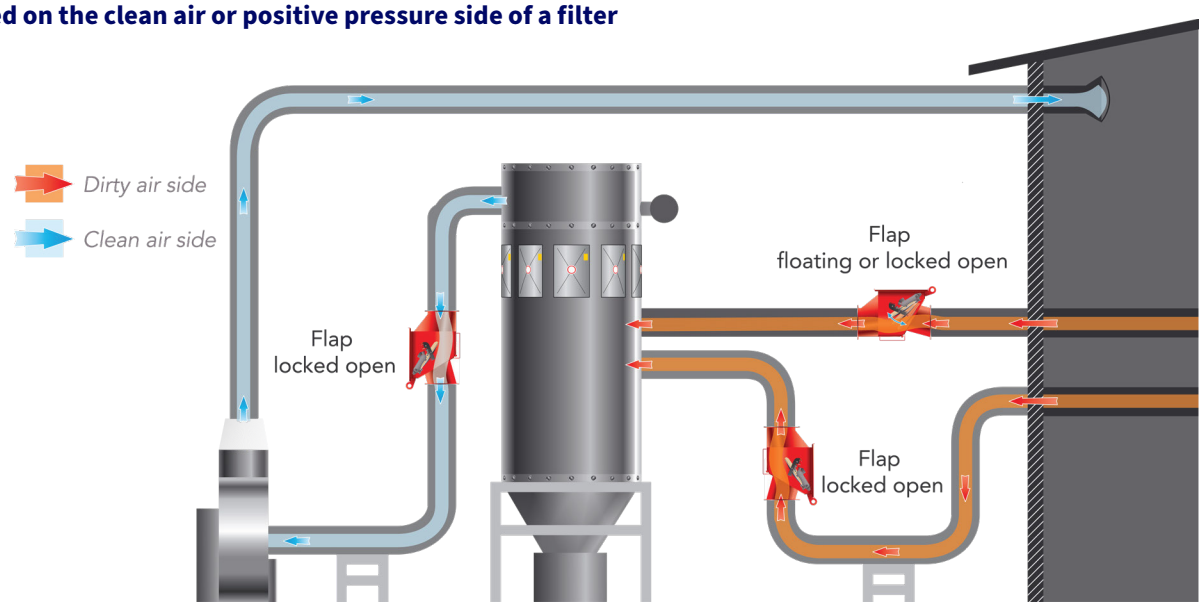


	Pressure Drop in H_20					
Diameter (in)	**3000 FPM**	**4000 FPM**	**5000 FPM**	**6000 FPM**	**7000 FPM**	**8000 FPM**
ø34/40	0.90	1.60	2.50	3.50	4.80	6.30
ø36/46	0.60	1.10	1.60	2.40	3.20	4.20
ø38/48	0.70	1.30	2.00	2.90	3.90	5.10
ø42/54	1.10	2.00	3.10	4.40	6.00	7.90
ø44	0.50	0.90	1.40	2.00	2.70	3.60
ø50	0.80	1.50	2.30	3.40	4.60	6.00
ø52	1.00	1.70	2.70	3.90	5.30	7.00

INSTALLATION EXAMPLES

THE EXPLOSION ISOLATION VALVE VIGIFLAP IS DESIGNED FOR USE ON THE INLET AND OUTLET SIDES OF A FILTER OR VESSEL

PROCESS FLOW (The VIGIFLAP is always set in the open locked position when installed on the clean air or positive pressure side of a filter



DEFLAGRATION EXPLOSIVE EVENT