

The VENTEX® valve is a passive isolation system suitable for installation in pressure-resistant equipment, which provides protection against explosions in one or both directions of flow without the need for an external power source, ensuring automatic and reliable closure in the event of a deflagration.

In the event of a deflagration, the pressure wave generated forces the closure body against its seat, instantly blocking the passage of the flame and combustion gases, thereby preventing the explosion from spreading to adjacent equipment.

The VENTEX® operates without the need for external power, detection or a control system. It is available in three configurations — single-acting (S), double-acting (D) and check valve (C) — allowing it to be adapted to each process whilst maintaining a high level of reliability and operational safety.

Key Advantages

- Passive isolation system, requiring no power supply, detection or control.
- High installation flexibility, suitable for horizontal or vertical mounting.
- Reduced pressure drop thanks to a hydrodynamically optimised design.
- Configurable as single-acting, double-acting or a check valve depending on process requirements.
- Suitable for organic and metallic powders, gases and hybrid mixtures.
- Seal materials available to meet different temperature and chemical resistance requirements.

Standards & Certification

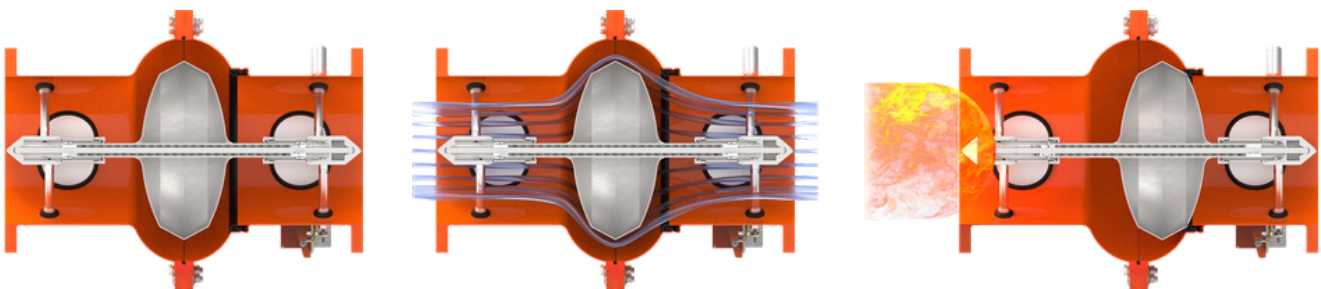
- ATEX certification: FSA 21 ATEX 1708 X in accordance with EN 15089 – Explosion isolation valves

Applications

The VENTEX® valve is designed for industrial processes involving a risk of explosion from dust, gases or hybrid mixtures, in pressure-resistant equipment, where it is necessary to isolate pipelines between connected units.

Typical applications:

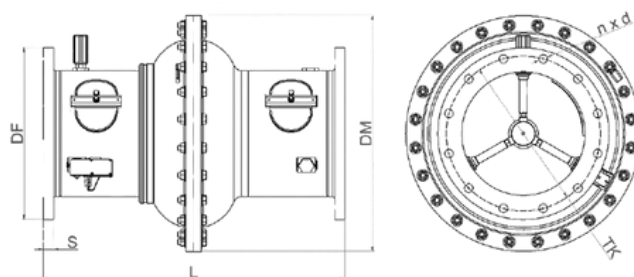
- Fluidised bed dryers
- Spray dryers
- Bag filters (clean gas side)
- Mills



Main Characteristics

Dust type	Organic powders St1–St3, metallic powders St1–St3, IIA–IIB3 gases and hybrid mixtures
Dust concentration	0.00312 lb/ft³ (50 g/m³) (Version C does not support powder loading)
Minimum flow rate	39.37 ft/s (12 m/s) (to prevent dust build-up)
Maximum fluid velocity	98.43 ft/s (30 m/s) towards the explosion
Nominal duct diameter	NPS 4" to 24" (DN 100 to DN 600)
Installation type	Single-acting (S), double-acting (D), check valve (C)
Installation	Horizontal or vertical
Areas of application	Zone 0/20, 1/21, 2/22
Used for protective purposes	Pressure wave-resistant design, explosion suppression, explosion venting
Housing material	S235JR steel AISI 304 stainless steel AISI 316L
Sealing materials	EPDM, VMQ, FKM, ceramic fibre
Maximum process temperature	248°F / 302°F / 482°F / 572°F (120°C / 150°C / 250°C / 300°C) (depending on the version)
Connection flange	EN 1092-1 PN10 / ASME B16.5 Class 150

Dimensions



Diameter NPS	4"	6"	8"	10"	12"	16"	20"	24"
Diameter DN	100	150	200	250	300	400	500	600
Length L (in) version S	13.78	19.69	24.02	27.95	30.71	37.01	51.18	55.91
Length L (in) version D	15.75							
Length L (mm) version S	350 ±4	500 ±4	610 ±4	710 ±4	780 ±4	940 ±6	1300 ±6	1420 ±6
Length L (mm) version D	400 ±4							
Ø connection flange DF - EN 1092-1 PN10 (in)	8.66	11.22	13.39	15.55	17.52	22.24	26.38	30.71
Ø connection flange DF - EN 1092-1 PN10 (mm)	220	285	340	395	445	565	670	780
Ø connection flange DF - ASME B16.5 Class 150 (in)	9.06	11.02	13.58	15.98	19.09	23.43	27.56	32.03
Ø connection flange DF - ASME B16.5 Class 150 (mm)	230	280	345	406	485	595	700	813,5
Ø central flange DM (in)	10.24	14.57	18.90	21.65	24.02	28.31	32.20	36.85
Ø central flange DM (mm)	260	370	480	550	610	719	818	936
Net weight (lb)	41.89	77.16	122.36	171.96	177.47	296.52	455.25	650.36
Net weight (kg)	19	35	55,5	78	80,5	134,5	206,5	295
Thickness of connection flange S (in)	0.59	0.59	0.94	0.94	1.02	1.02	1.18	1.18
Thickness of connection flange S (mm)	15	15	24	24	26	26	30	30



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