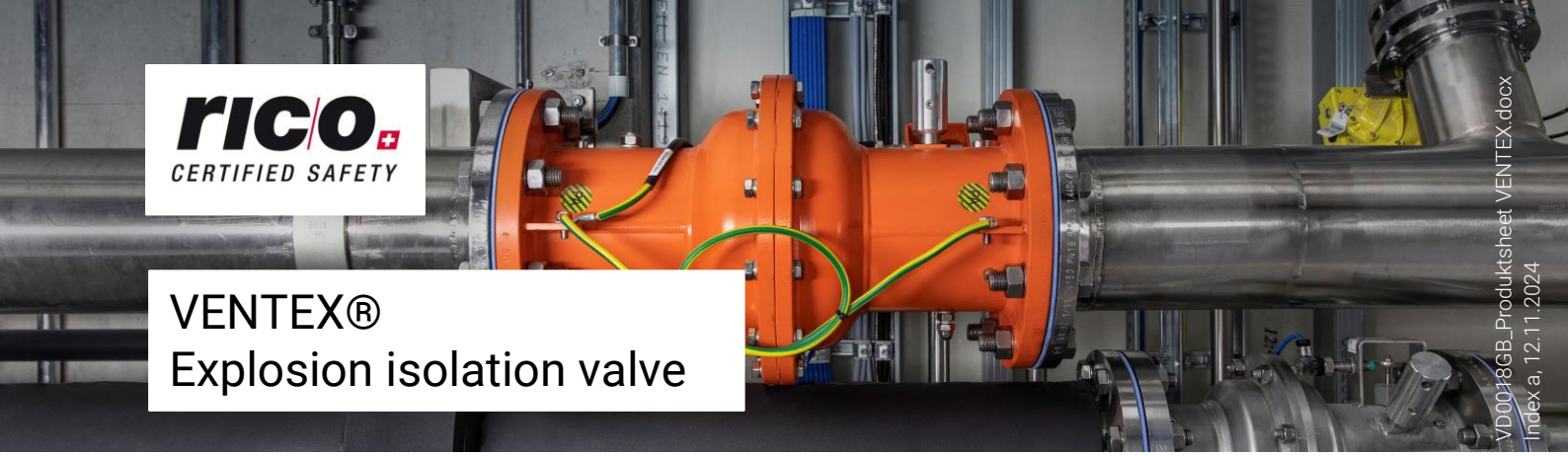


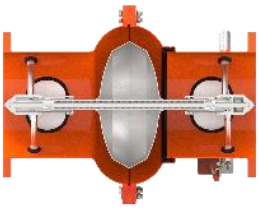
VENTEX®
Explosion isolation valve

Easier and safer than ever before
Guaranteed protection for a wide range of applications and systems without the use of external energy.

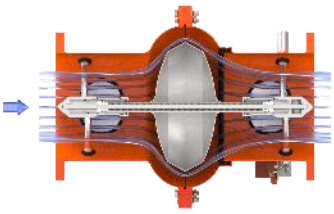
Your added value:

- Reliable explosion isolation system when air flow and explosion direction are same or opposite
- Highest flexibility in use thanks to a wide range of approvals and maximal variety of executions
- Guaranteed process reliability due to a maximum air velocity of 30 m/s
- Most flexible system planning thanks to the installation possibility directly in front of and after pipe bends and extensive installation distances
- Maximum process performance thanks to low pressure drop
- No waiting times during revision, as the gaskets is not glued
- Very adaptable to changes in your processes and equipment

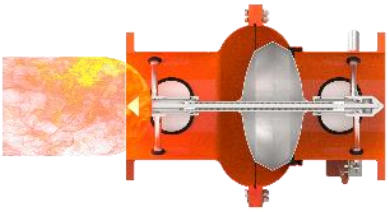
Functional principle:



When idle or rather without air flow, the Closing device is held in the middle position.



In normal operation, the medium flows around the closing device.



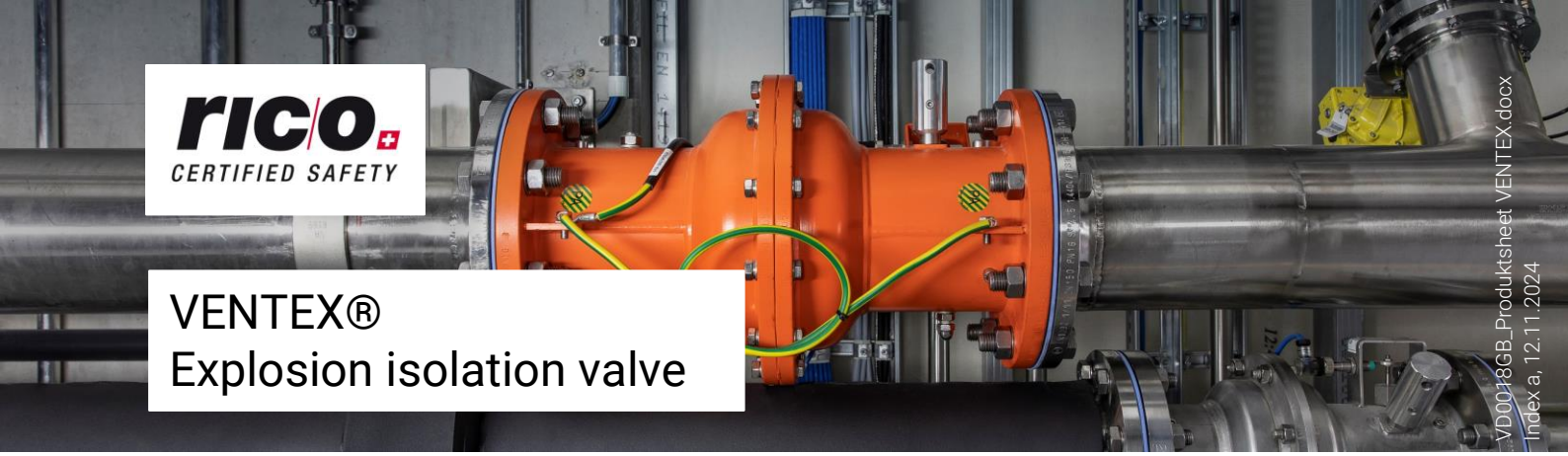
In case of an explosion, the pressure wave pushes the closing device against the valve gasket. The valve is locked in this closed state, preventing the spread of flames and pressure waves.

Approvals and conformities:

ATEX
EU-Type Examination Certificate:
– FSA 21 ATEX 1708 X

Certified according EN 15089
Conform to NFPA 69

FDA
Conform to FDA requirements
Conform to EC 1935:2004 requirements



VENTEX®
Explosion isolation valve

Optimal protective measure for your system[a]:

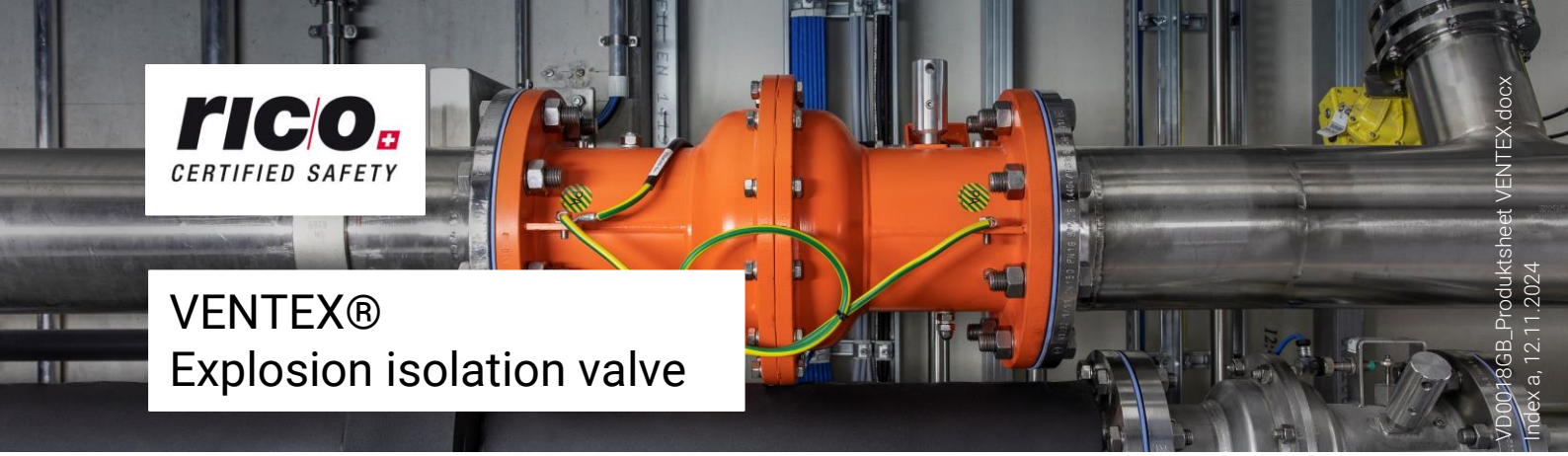
The VENTEX® is used in a wide range of applications and equipment types, where explosion isolation is essential to complete the protection concept.
Examples are:

- Fluid bed dryer
- Spray dryer
- Filter on the clean gas side
- Mill
- and many more

Specifications:

Nominal sizes:	-	DN100-DN600
Executions:	-	VENTEX® S (single acting)
	-	VENTEX® D (double acting)
	-	VENTEX® C (check valve)
Installation positions:	-	Horizontal
	-	Vertical[b]
Approval spectrum:	-	Organic dusts St1 to St3
	-	Metallic dusts St1 to St3
	-	Hybrid mixtures and turbulent gases IIA-IIB3[c]
Use in protection concept:	-	Pressure shock resistant design
	-	Explosion suppression[d]
	-	Explosion pressure relief[d]
Applicable in zones[e]:	-	0/20
	-	1/21
	-	2/22
Max. Flow velocity in explosion direction:	-	30 m/s in every approved installation situation and position
Max. Explosion pressure (P_{max}):	-	According RICO installation guideline VT0003GB
Process-related application limits:	-	Dust load[f] max. 50 g/m^3
	-	Min. 12 m/s flow velocity to avoid dust deposits. Without dust and shorter maintenance intervals lower velocity are possible

[a] Source picture: Glatt GmbH and RICO
[b] Possible in the execution "explosion from bottom to top" and "explosion from top to bottom" as well as "double acting"
[c] According to installation guideline VT0003GB
[d] In combination with hybrid mixtures and turbulent gases IIA-IIB3 please note the restrictions stated in the installation guideline VT0003GB.
[e] The outside zone depends on the switch used. Please note the device category on the nameplate and the technical data sheet of the individual explosion isolation valve.
[f] VENTEX® C no dust loading permitted



VENTEX®
Explosion isolation valve

Executions:

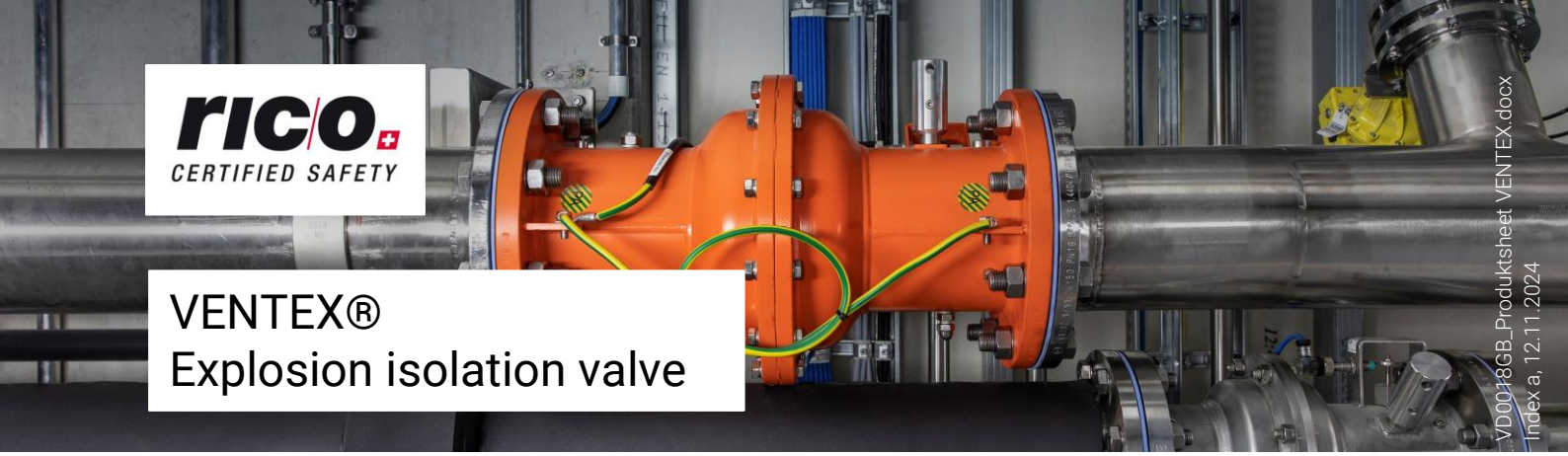
Housing material:	- Steel 1.0038 (S235JR) - Stainless steel 1.4301 (AISI 304) - Stainless steel 1.4404 (AISI 316L)
Surface treatment:	- Powder coating up to 120°C - Powder coating C4/C5 up to 120°C - Powder coating up to 250°C - Hot-dip galvanizing up to 300°C[g] - Stainless steel pickled and passivated up to 300°C
Flange pattern connection flanges:	- EN 1092-1 PN10 - ASME B16.5 Class 150 - ANSI
Seals:	- EPDM - VMQ - FKM - Ceramic fiber gasket
Max. Process temperature[h] depending on the version:	- 120 ° C - 150 ° C - 250 ° C - 300 ° C
Switch for position signaling:	- Wide range of mechanical and inductive switches for position indication for a wide range of requirements with regard to temperature, ATEX-approval, etc.

Special version VENTEX® CIP:

This version was specially developed for highly hygienic processes, such as often found in the pharmaceutical and food industry. Thanks to its individually positionable cleaning nozzles[i] it can be cleaned on the inside at any time without disassembly - for an efficient, safe and cost-saving cleaning.

- Optimal cleaning results thanks to polished surfaces and rounded edges and weld seams
- Tested gas tightness 2 barg to the outside in order to avoid undesired external air in the process
- Use of FDA and EG 1935/2004 compliant components

[g] Zinc particles can loosen from 200 ° C, which does not affect the corrosion protection. Not suitable for food applications
[h] The maximum explosion pressure of the valve and other equipment is reduced with increased process temperatures. Please see therefore the document VT0009GB.
[i] Not possible with DN100 and DN150. For further information, please refer to document VT0012GB.

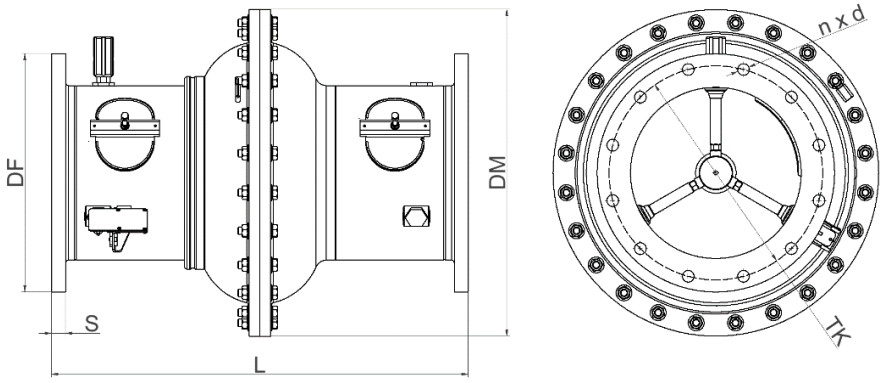


VENTEX®
Explosion isolation valve

Dimensions:

All dimensions are indicated in millimeter [mm], unless not otherwise mentioned.

Nominal size	DN100	DN150	DN200	DN250	DN300	DN400	DN500	DN600
	~ 4 "	~ 6 "	~ 8"	~ 10 "	~ 12 "	~ 16 "	~ 20 "	~ 24 "
Length [L]	S: 350 ± 4 D: 400 ± 4	500 ± 4	610 ± 4	710 ± 4	780 ± 4	940 ± 6	1300 ± 6	1420 ± 6
Connection flange diameter EN 1092-1 PN10 [DF]	220	285	340	395	445	565	670	780
Connection flange diameter ASME B16.5 Class 150 (ANSI) [DF]	230	280	345	406	485	595	700	813.5
Outside diameter middle flange [DM]	260	370	480	550	610	719	818	936
Net weight [kg]	19.0	35.0	55.5	78.0	80.5	134.5	206.5	295.0
Thickness of the connection flange [S]	15	15	24	24	26	26	30	30



Further and additional information:

- VT0003GB_Einbaurichtlinie VENTEX (installation guideline)
- VT0008GB_Betriebsanleitung VENTEX (operating instructions)
- VT0009GB_Temperaturabhängige Bauteilfestigkeit (pressure shock resistance)
- VT0012GB_VENTEX Ausführung CIP (CIP execution)
- VD0019GB_Transportverpackung VENTEX (transport packaging)
- VT0010GB_Rückstosskräfte VENTEX (repulsive forces)
- VT0023GB_Druckabfallwerte VENTEX (pressure drop values)
- Technical data sheets for the individual execution

This document is for informational purposes only and cannot be used for all installation situations and designs of the product. Please feel free to contact us for further and more detailed information.