

(DEFINOX





VDCI MC Mixproof valve

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TECHNOLOGY

The mixproof valve consists of a physical barrier between two circuits. This technology can be used to view possible leaks and allows two liquids of different types to cross over in complete safety. By activating the plugs, the valve can be cleaned perfectly (seals, seal seat and leakage chamber).

The valve consists of a main actuator, normally closed (NC), and two breakaway actuators that enable the valves to operate independently. The components in contact with the product are machined in one-piece to prevent any risk of retention. Thanks to these specific features, the VDCI MC is able to resist strong linear stresses.

These valves confirm to EHEDG design regulations and have been validated as 3A in accordance with section 85.00.





Different versions of VDCI MC are available

VDCI MC PFA with floating seals

This valve is fitted with two floating seals which are clamped into the housing of each plug. The floating seals make the valves extremely easy to clean.

As the valve expands, it allows cleaning fluid to flow over all of the valve's surfaces. Its plastomer structure also ensures that the surface is not porous and does not develop cracks. This type of seal is extremely resistant to chemical attack.

VDCI MC SP leak-free opening

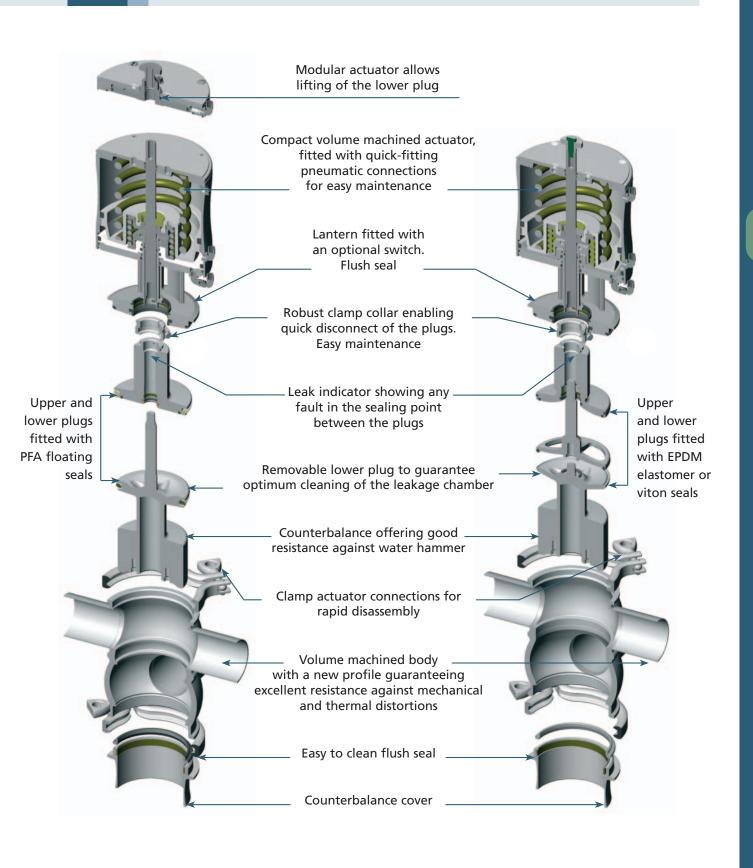
The sliding seal on the lower plug ensures a total seal when the valve is operated. There is no fluid lost on opening. The main actuator on this valve remains standard.

VDCI MC PMO

DEFINOX offers a PMO version (Pasteurized Milk Ordinance). This differs from the standard VDCI MC version by a leakage section identical to the one on the process pipe. This only requires a change of the lower plug.

N.B.: The ACS control top on this version can be extended using a proximity switch to detect the raising of the plug during operation, which is necessary for washing the chamber. The working conditions for this valve are identical to those of VDCI MC.





PFA version

SP version

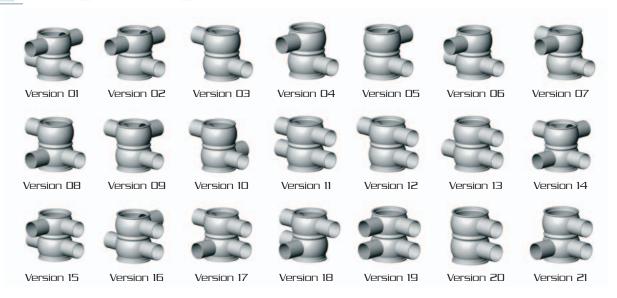


TECHNOLOGY

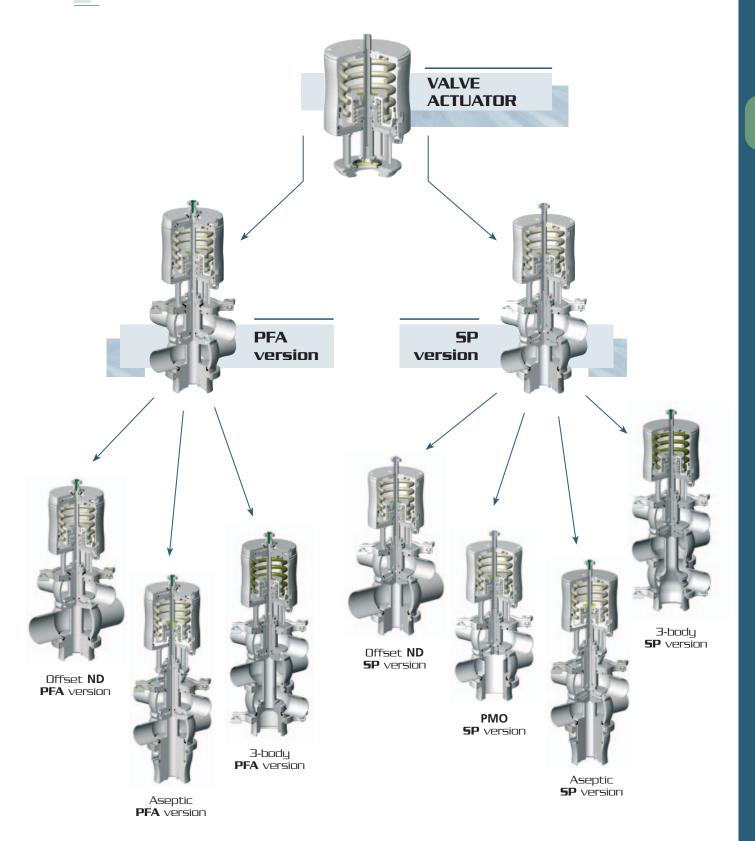
New features on the VDCI MC

- **Standard actuator** for all versions and options ensuring easy maintenance for the installations.
- High level of **modularity** for all options and versions.
- Plugs can be removed from the lantern making maintenance much easier.
- Reduced disassembly and assembly times for the actuator.
- Improved cleaning for the leakage chamber.
- Option to accurately detect the movement of each independent plug with our new generation ACS control top.

Body configuration



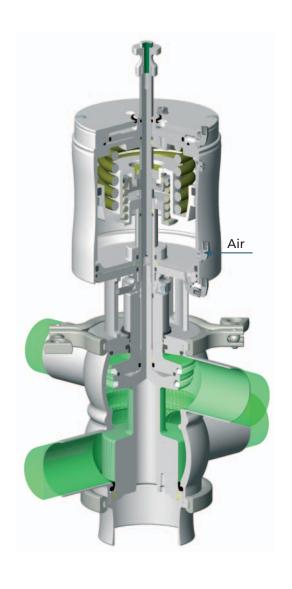
VDCI MC

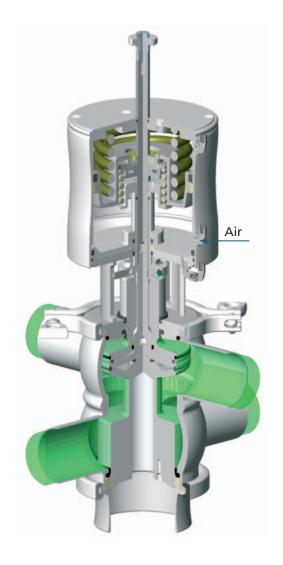


OPERATION

OPEN Phase

Passage of the fluid between the upper **line** and the lower **line**.





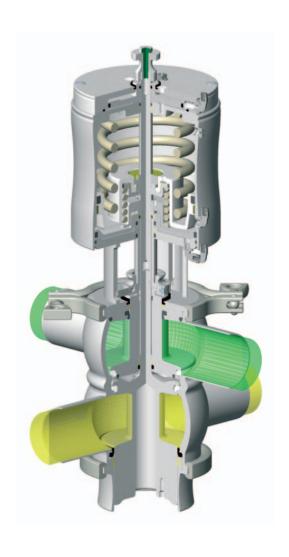
VDCI MC PFA

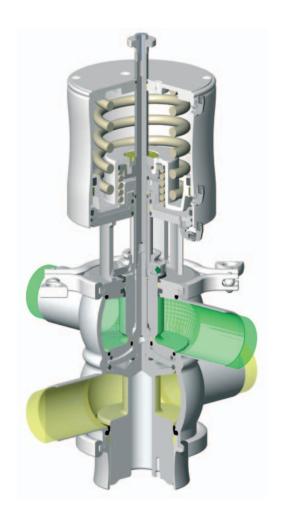
VDCI MC SP



CLOSED Phase

Passage of fluids in the upper line and the lower line with a **leakage chamber between the two lines** preventing the mixture of fluids.





VDCI MC PFA

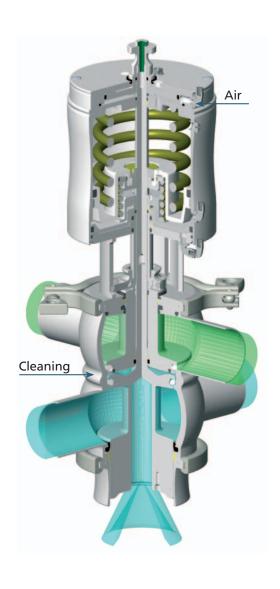
VDCI MC SP



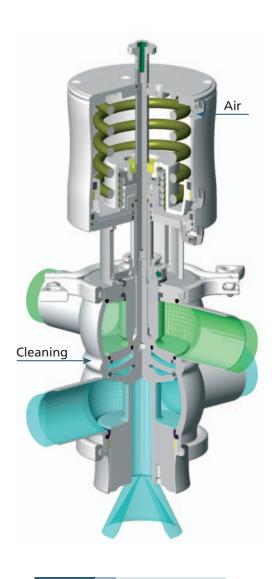
OPERATION

Washing phase for **LOWER LINE**

Washing of the lower line and of the leakage chamber with **operating the lower plug**.





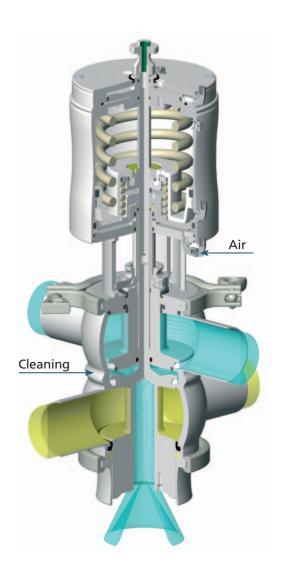


VDCI MC SP

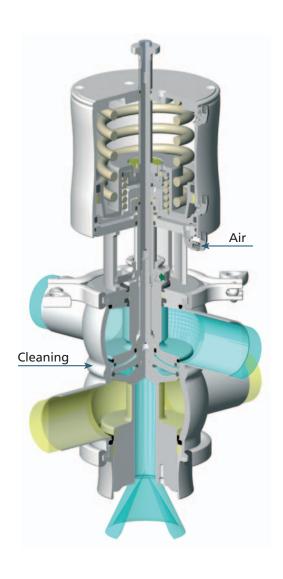


Washing phase for UPPER LINE

Washing of the upper line and of the leakage chamber with **operating the upper plug**.

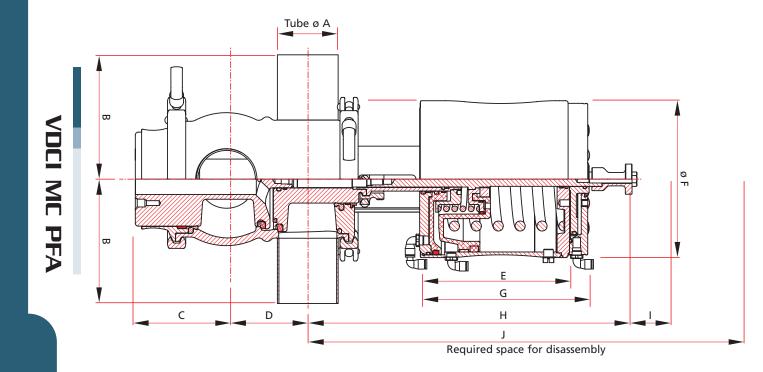


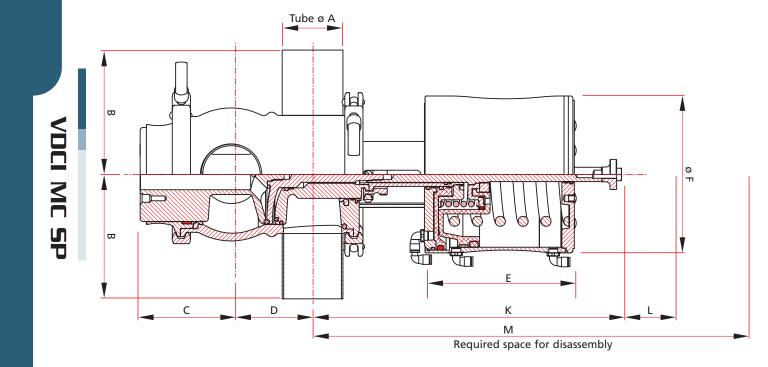




VDCI MC 5P









DIMENSIONS

Dimensions for VDCI MC PFA and SP mixproof valves

	ND	SMS DIN	38		40	51		50	63		65	70	0	δ	80		
		SU		1"1/2			2"			2"1/2			ω <u></u>		4		
	T. book	Iube & A	38 x 1.2	38.1 x 1.65	40 x 1	51 x 1.25	50.8 x1.65	53 x 1.5	63.5 x 1.6	63.5 x 1.65	70 × 2	76 x 2	76 x 1.65	85 x 2	101.6 x 2.1	104 × 2	129 x 2
	0	Ū	105	105	105	105	105	105	130	130	130	130	130	155	155	155	200
)	(80	80	81	88	88	88	103	103	106	110	110	113	141	141	152
	,	C	55	55	60	70	70	70	85	85	90	95	95	110	125	125	155
	п	п	126	126	126	126	126	126	156	156	156	156	156	156	196	196	196
	Qi .	ğ	128	128	128	128	128	128	164	164	164	164	164	164	218	218	218
	n	a	145	145	145	145	145	145	175	175	175	175	175	175	215	215	215
_	-	3	279	280	280	287	287	287	333	333	337	340	340	344	418	418	431
PFA	Ctualia I	Stroke	26	26	26	35	35	35	45	45	45	45	45	45	62	62	62
	-	٠	429	430	430	477	477	477	577	577	573	588	588	614	745	745	812
	ς.	7	275	275	276	282	282	283	323	323	326	588	330	333	408	408	421
SP	C+molto	SHOKE L	26	26	26	35	35	35	45	45	45	45	45	45	62	62	62
	3	IVI	425	425	433	472	472	473	549	549	563	580	580	605	735	735	803
	We	PFA	14	14	14	14.5	14.5	14.5	28	28	28.5	29.5	29.5	30.5	61.5	61.5	66.5
	Weight in kg*	SP	12.5	12.5	12.5	13	13	13	25.5	25.5	26	27	27	27.5	58.5	58.5	62.5
	¢g*	PMO	ı	12	ı	1	12.5	1	ı	23.5	ı	I	24	I	53	I	ı

WORKING CONDITIONS

Specifications

Parts in contact with the process fluid 14404 (AISI 316L)
Parts not in contact with the process fluid 14301 (AISI 304)

Roughness Interior Ra 0.8 μm Exterior Ra 1.6 μm

Seals

VDCI MC SP and PMO Standard EPDM (FDA)

Working temperature: -5°C to 120°C Sterilisation temperature: 130°C

Contact us for other temperatures

VDCI MC PFA Standard EPDM and PFA (FDA)

Working temperature: -5°C to 130°C Sterilisation temperature: 140°C

Contact us for other temperatures

Options FKM (FDA)

And other materials on request

■ Working pressure

Max 900 kPa (9 bar) Contact us for higher pressures

Cleaning pressure

Max 700 kPa (7 bar) Contact us for higher pressures

Compressed air supply pressure

500 kPa to 700 kPa (5 bar to 7 bar) with the ACS control top Up to 800 kPa (8 bar) in direct supply depending on the working conditions

	ND		KV flow c	oefficient high	CV flow co	/ flow coefficient Opening time Air consumption low high (s) (NI)				•
SMS	DIN	US	MC PFA	MC SP	MC PFA	MC SP	MC PFA	MC SP	MC PFA	MC SP
38			48	50	55.7	58	1	1	1.7	1.7
		1"1/2	48	50	55.7	58	1	1	1.7	1.7
	40		48	50	55.7	58	1	1	1.7	1.7
51			56	58	65	67.3	1	1	1.7	1.7
		2"	56	58	65	67.3	1	1	1.7	1.7
	50		56	58	65	67.3	1	1	1.7	1.7
63			95	102	110.2	118.3	2	2	3.2	3.2
		2"1/2	95	102	110.2	118.3	2	2	3.2	3.2
	65		97	105	112.5	121.8	2	2	3.2	3.2
76			117	135	135.7	156.6	2	2	3.2	3.2
		3"	117	135	135.7	156.6	2	2	3.2	3.2
	80		135	140	156.6	162.4	2	2	3.2	3.2
		4"	215	230	249.4	266.8	3	3	11	11
104	100		215	230	249.4	266.8	3	3	11	11
	125		325	340	377	394.4	3	3	11	11
	150		on re	quest	on re	quest	on request		on request on reque	

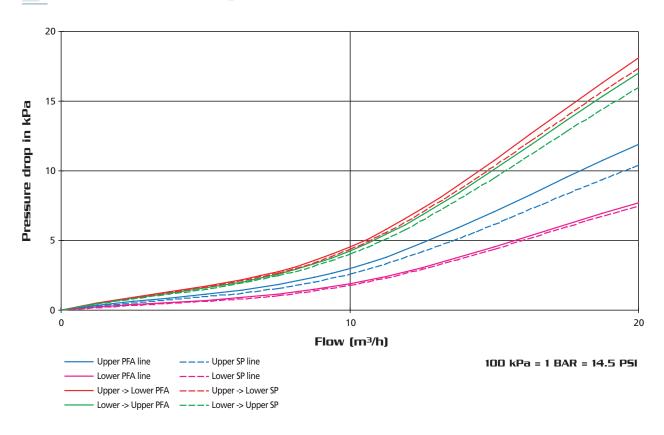


documents are available on request

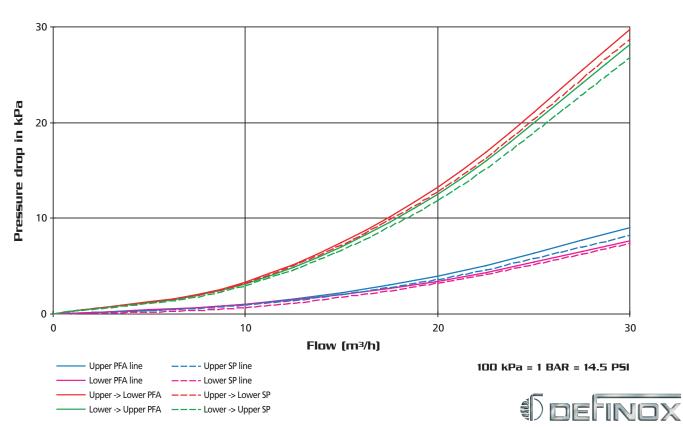
to help with the **installation** and **maintenance** of our valves.



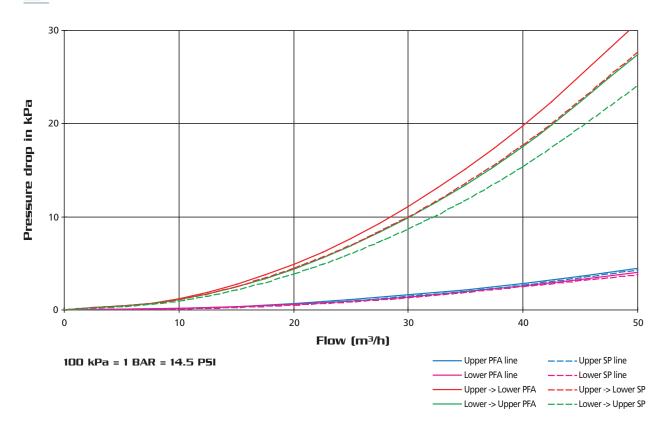
Pressure drop VDCI MC PFA and SP ND 38



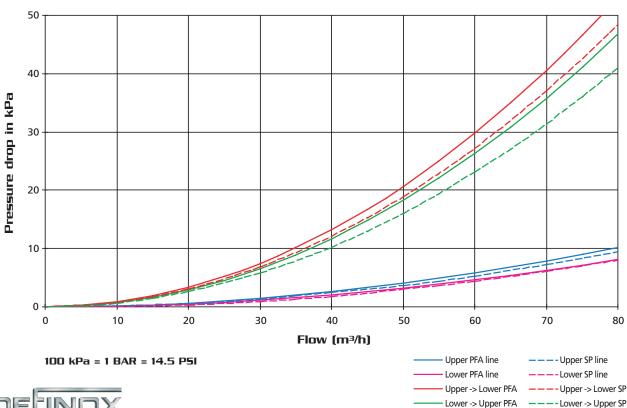
Pressure drop VDCI MC PFA and SP ND 51



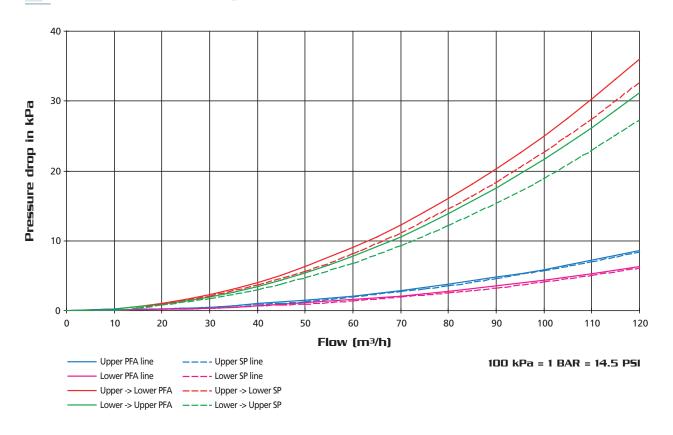
Pressure drop VDCI MC PFA and SP ND 63



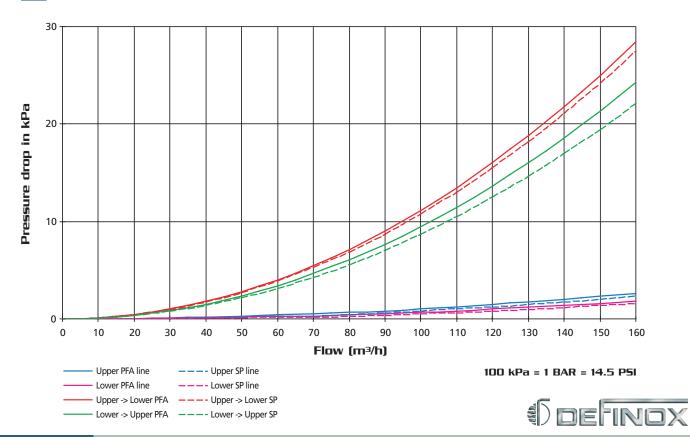
Pressure drop VDCI MC PFA and SP ND 76



Pressure drop VDCI MC PFA and SP ND 104



Pressure drop VDCI MC PFA and SP ND 125



COMMAND AND CONTROL SYSTEMS

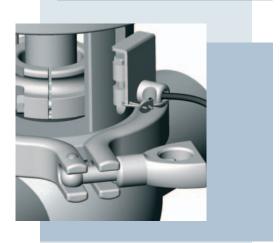
The **ACS** control top offers numerous option for **VDCI MC** valve controls and commands:

- AS-i or multi-voltage interface
- Detection of movements for each plug
- Use of a linear sensor
- Accurate adjustment of the sensor
- Adjustment of the opening and closing speed of the valve
- Quick disassembly of the control top for easy maintenance



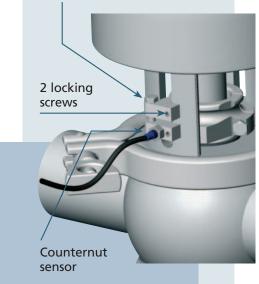
Lantern detection

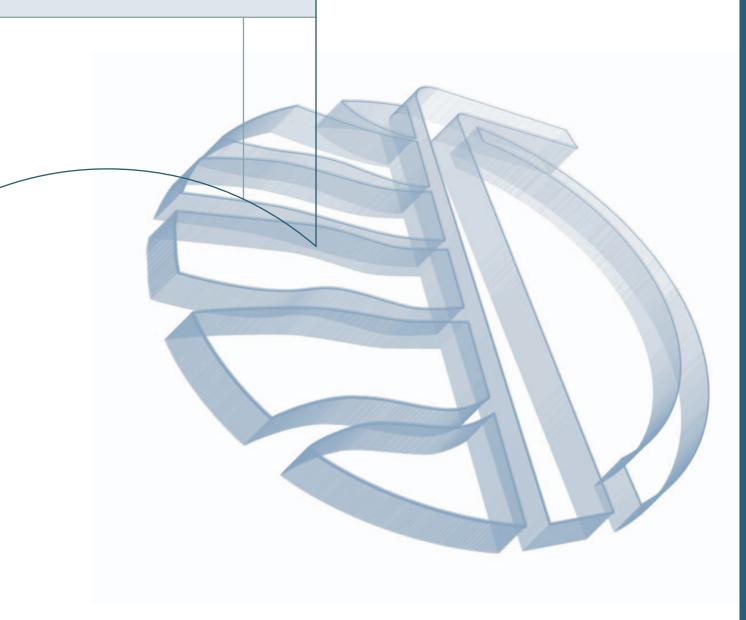
Detection with sealing



Detection of the upper plug operation

Precision adjusting screw





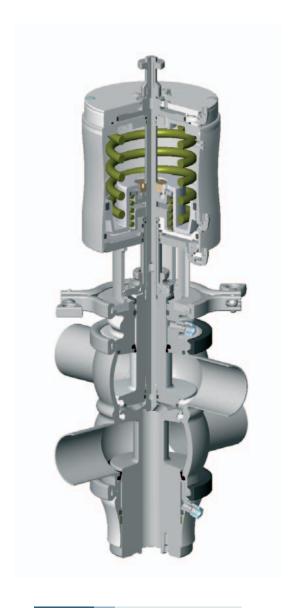
OTHER CONFIGURATIONS



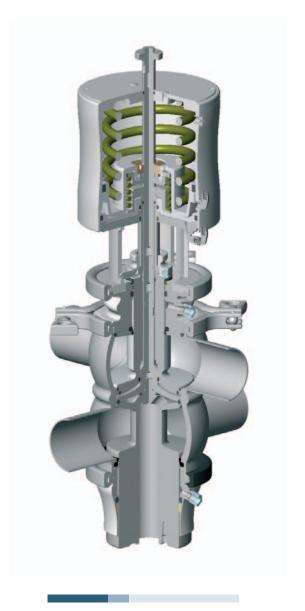
OTHER CONFIGURATIONS

■ VDCI MC **aseptic**

It is possible to fit the **VDCI MC** with a fluid or steam circulation bearing. In this case, the actuator lantern and the counterbalance cover are connected to a circulation ring and linked externally via a rigid inlet tube for the aseptic product.



VDCI MC PFA aseptic



VDCI MC SP aseptic

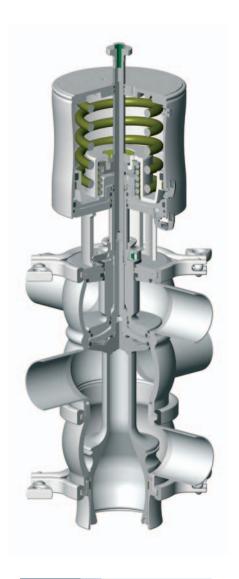


■ VDCI MC **3-body**

The 3-body **VDCI MC** is used to guide the fluid to the upper body on the valve or to the lower body. The double sealing function is provided between the upper body and the centre body. The specifications of the **VDCI MC** are observed, in particular the option to operate the plugs on the upper shut-off unit. Contact us for information on the pressure behaviour of the lower plug.



VDCI MC PFA 3-body



VDCI MC SP 3-body









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