

VDCI MC

Mixproof valve

 **DEFINOX**



VDCI MC

New modular and compact mixproof valve

This new mixproof valve offers modular actuators and plugs with a greater flexibility of choice. The modifications made to this range respond more effectively to the constraints of food processes in terms of maintenance and working conditions.

*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.

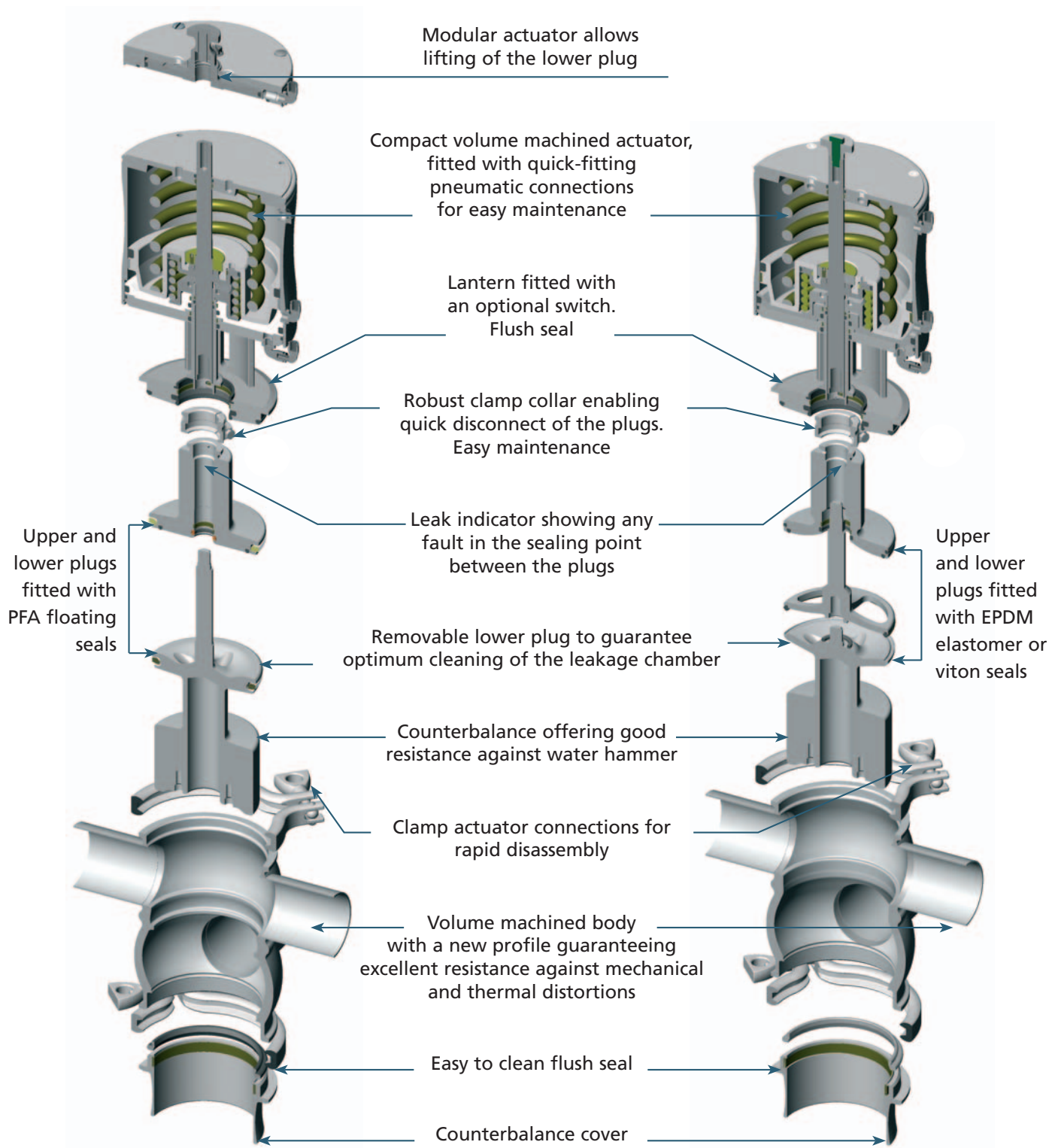
VDCI MC SP leak-free opening

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.



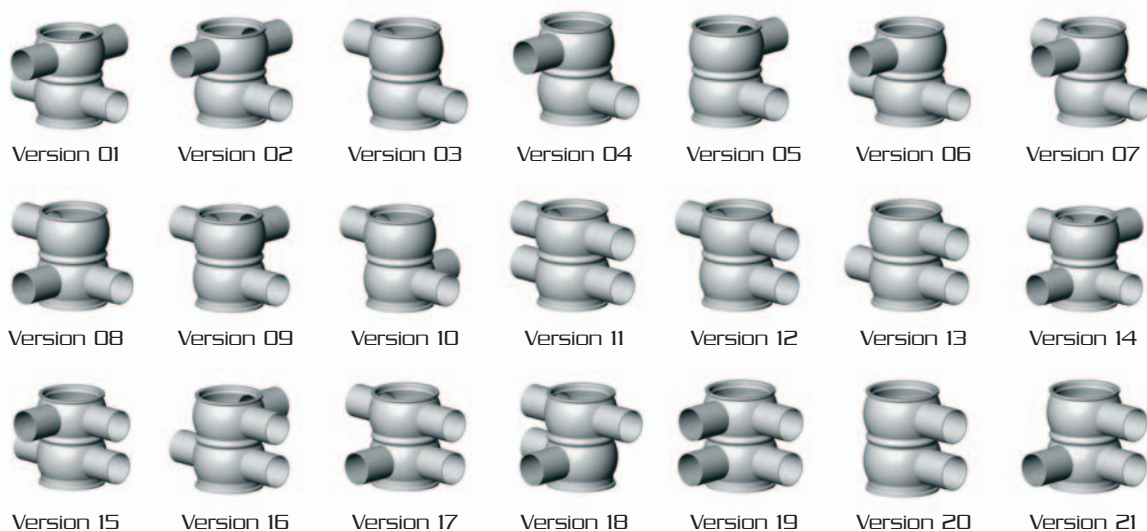
PFA version

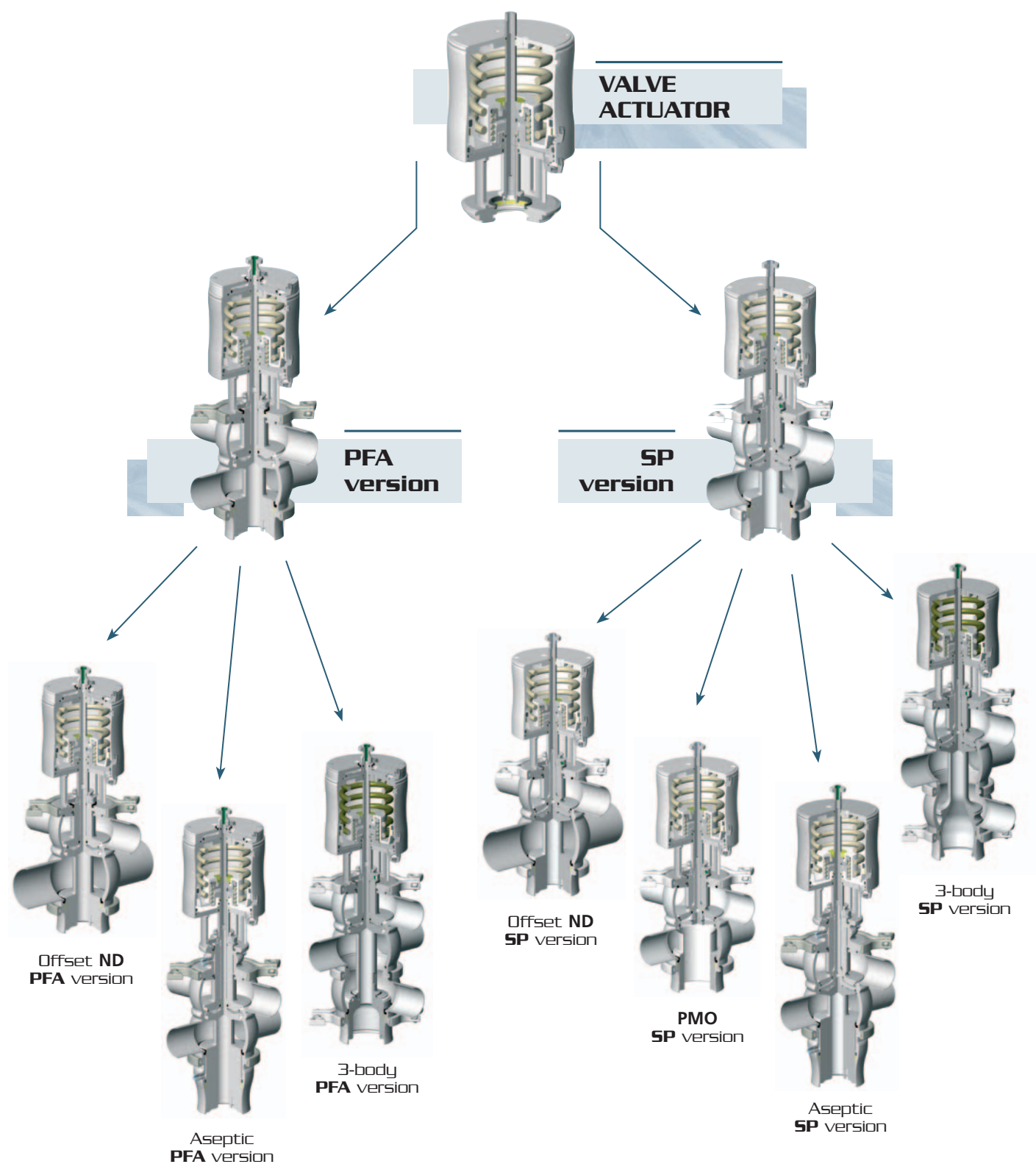
SP version

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

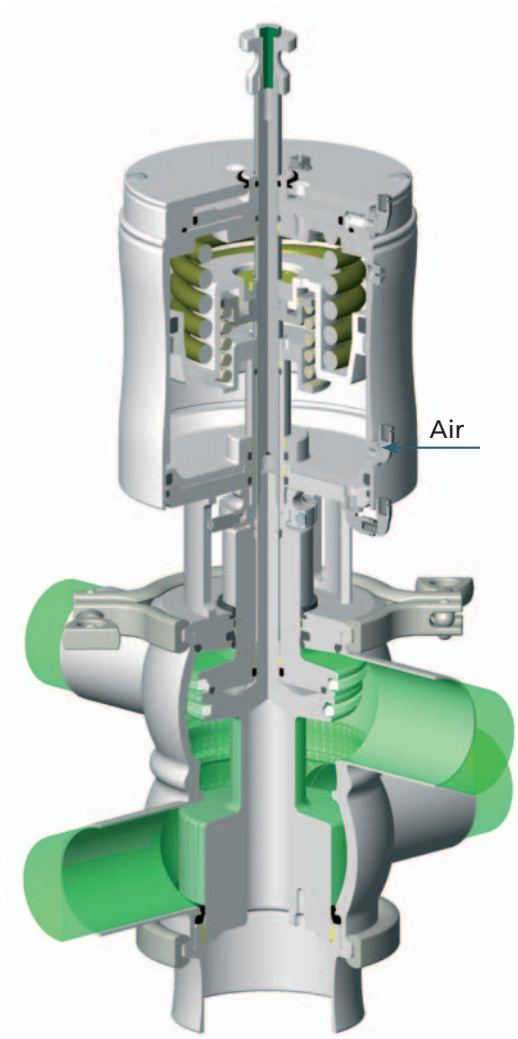




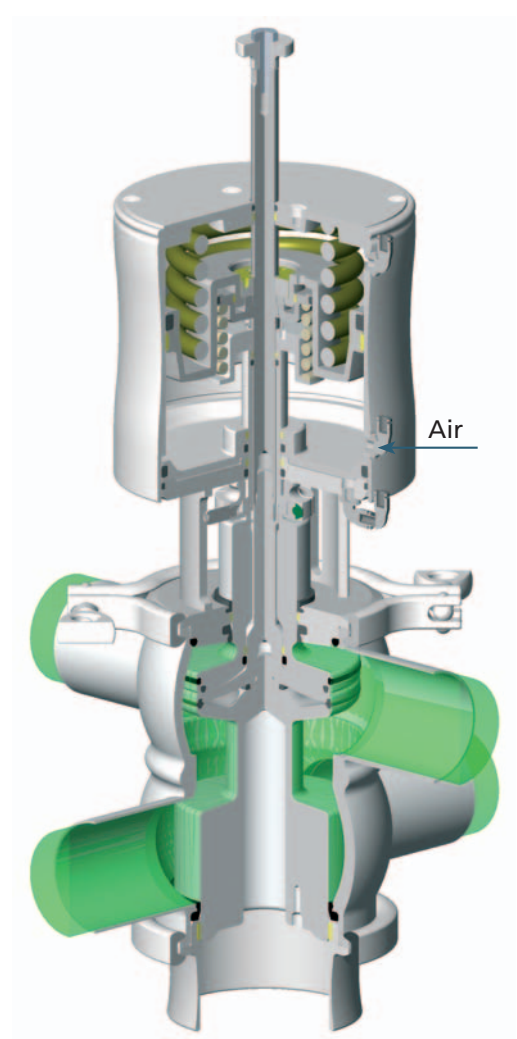
OPERATION

OPEN Phase

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



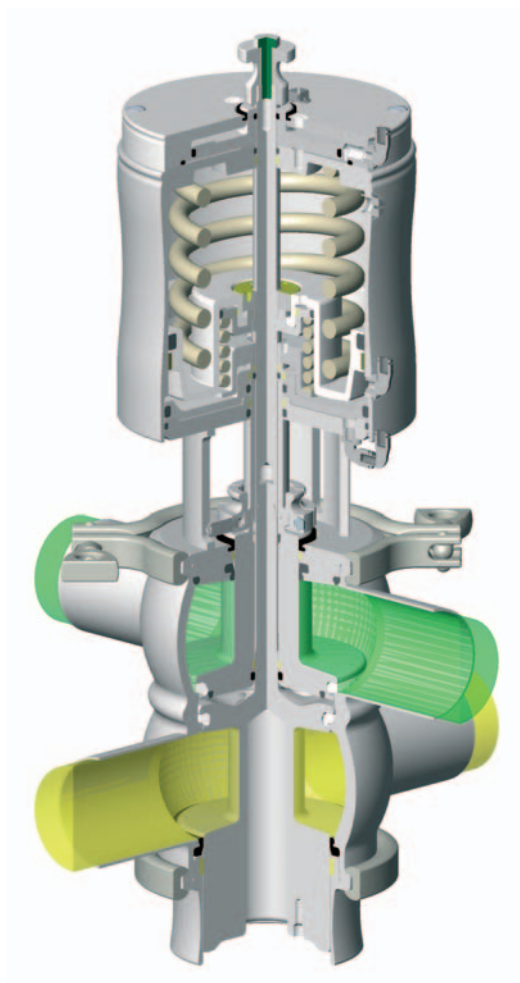
VDCI MC PFA



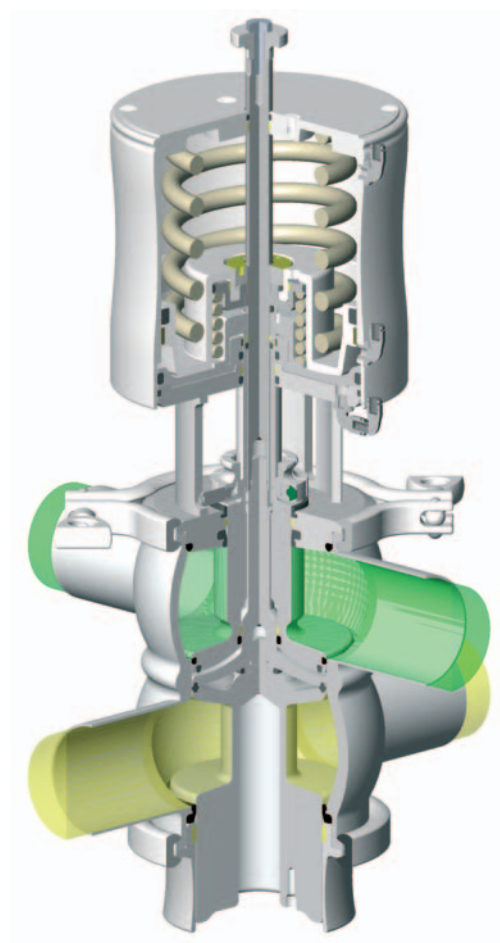
VDCI MC SP

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.



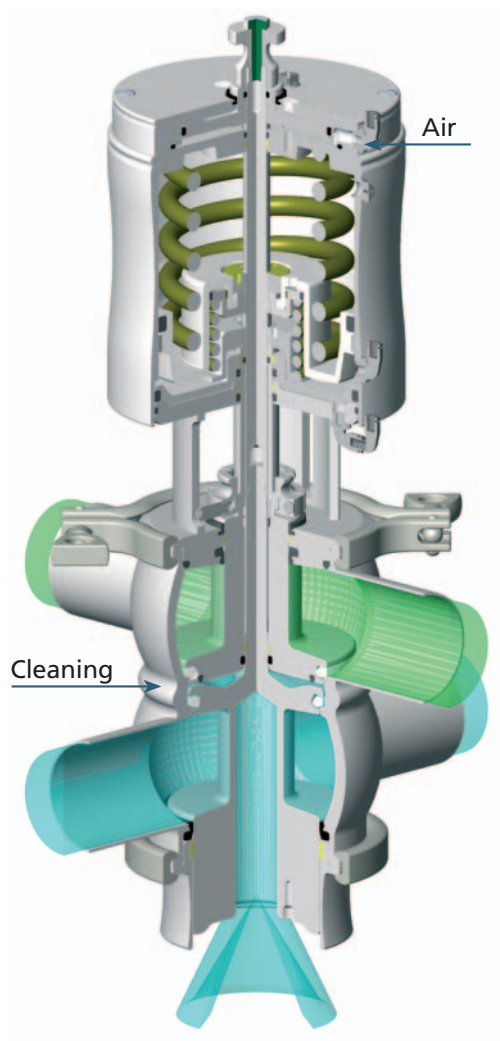
VDCI MC PFA



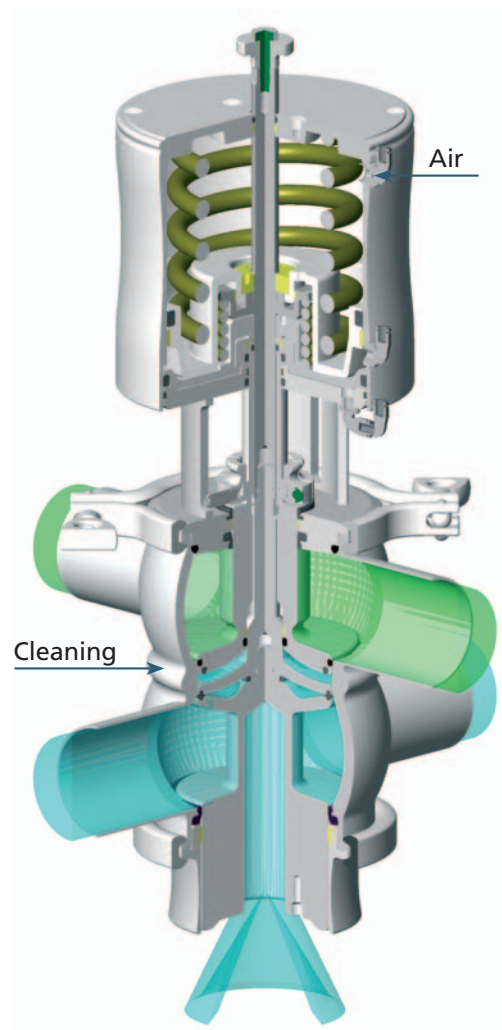
VDCI MC SP

■ Washing phase for **LOWER LINE**

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



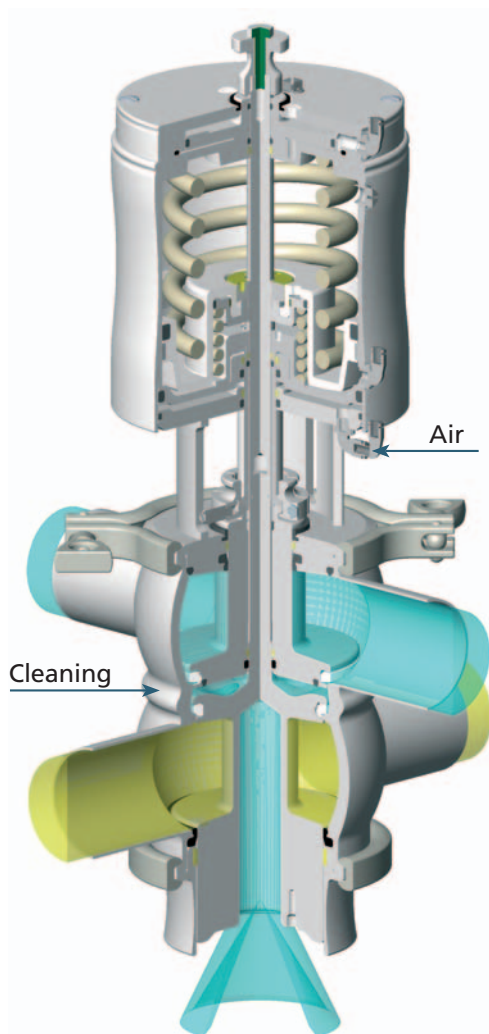
VDCI MC PFA



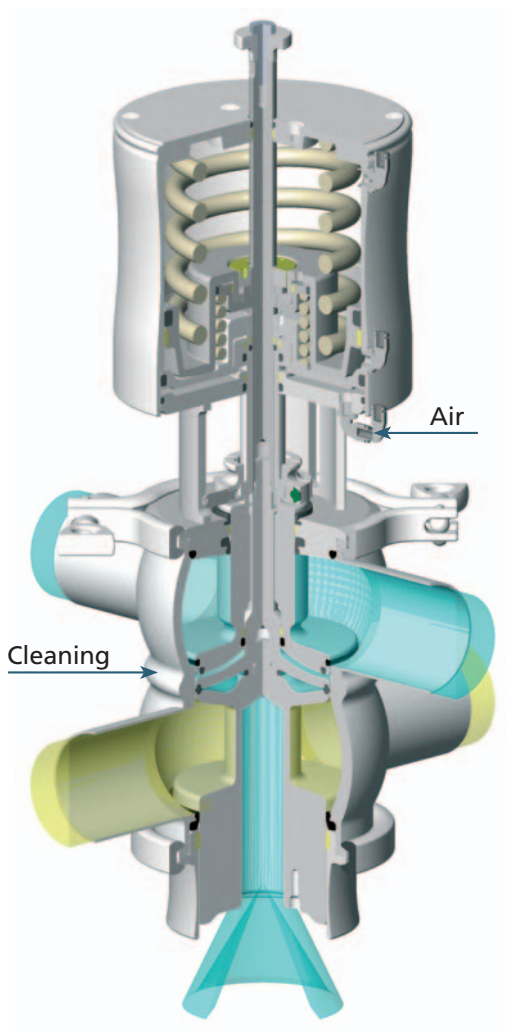
VDCI MC SP

■ Washing phase for **UPPER LINE**

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

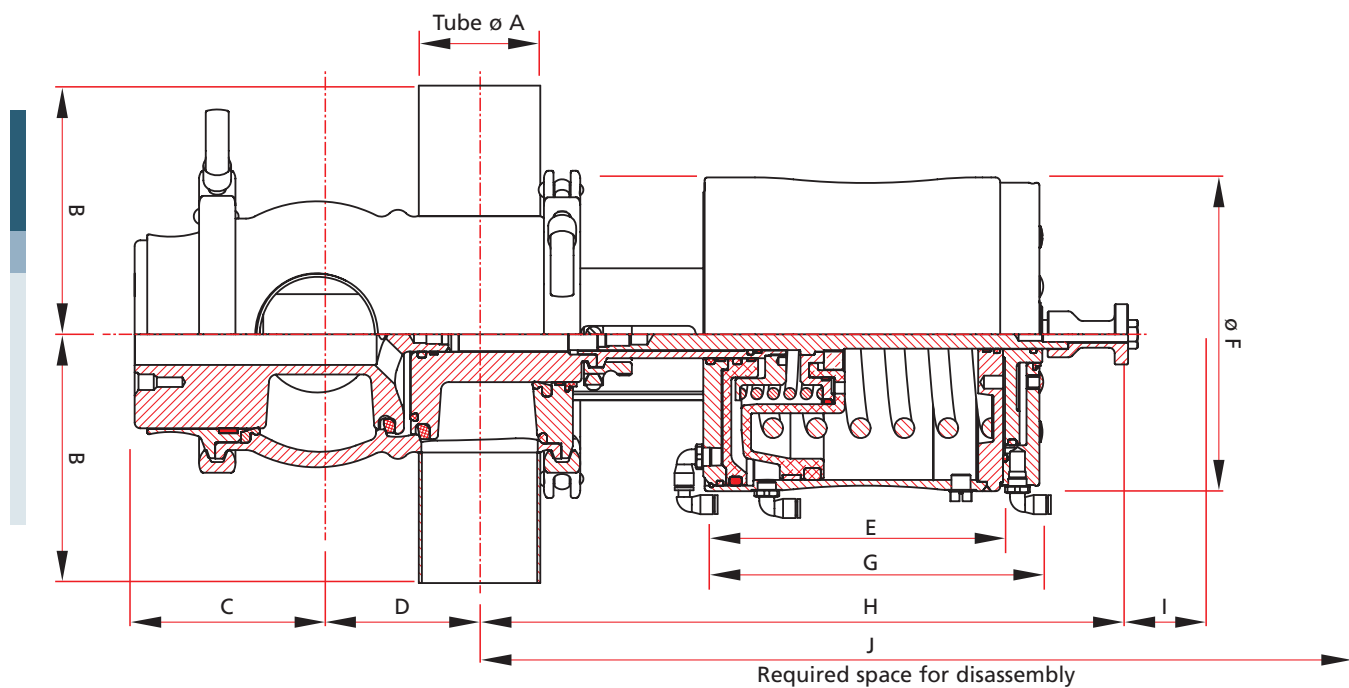


VDCI MC PFA

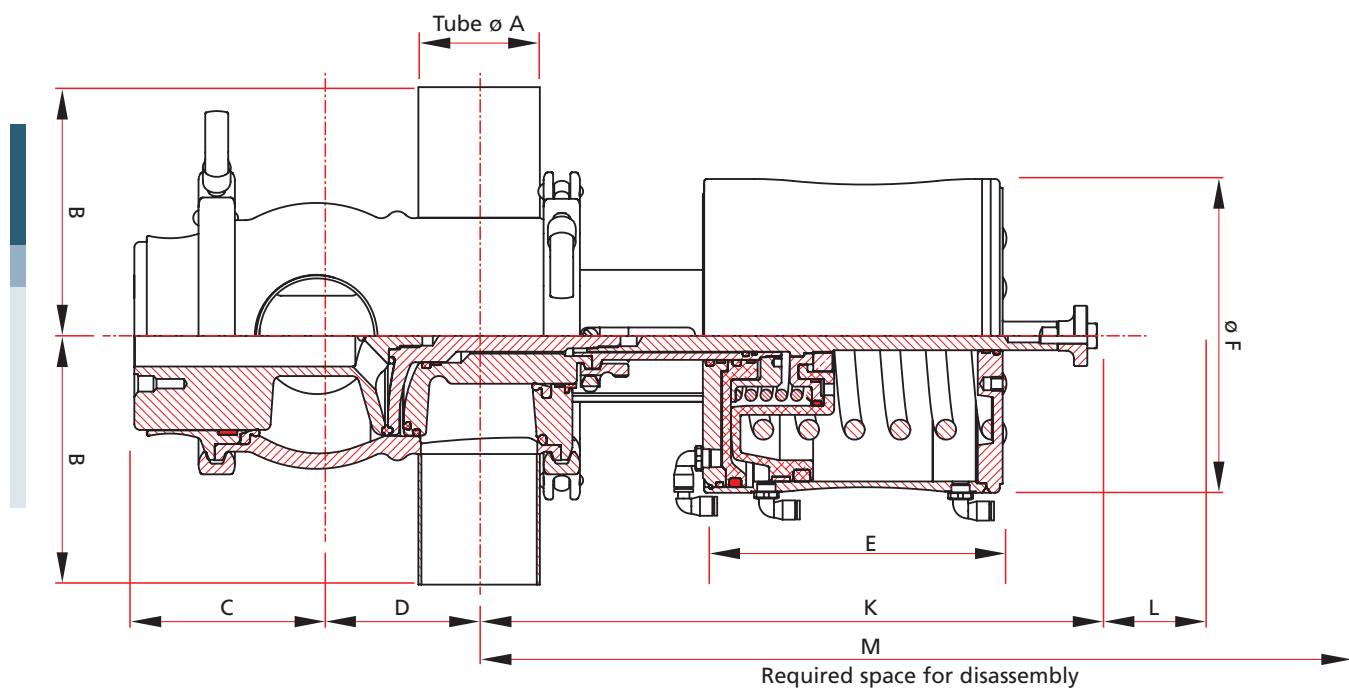


VDCI MC SP

VDCI MC PFA



VDCI MC SP



DIMENSIONS

Dimensions for VDCI MC PFA and SP mixproof valves

PFA																			SP			
ND			Tube Ø A	B	C	D	E	ØF	G	H	Stroke I	J	K	Stroke L	M	Weight in kg*						
SMS	DIN	US														PFA	SP	PMO				
38		1" 1/2	38 x 1.2 38.1 x 1.65	105 105	80 80	55 55	126 126	128 128	145 145	279 280	26 26	429 430	275 275	26 26	425 425	14 14	12.5 12.5	– 12				
	40		40 x 1	105	81	60	126	128	145	280	26	430	276	26	433	14	12.5	–				
51			51 x 1.25	105	88	70	126	128	145	287	35	477	282	35	472	14.5	13	–				
		2"	50.8 x 1.65	105	88	70	126	128	145	287	35	477	282	35	472	14.5	13	12.5				
63	50		53 x 1.5	105	88	70	126	128	145	287	35	477	283	35	473	14.5	13	–				
			63.5 x 1.6	130	103	85	156	164	175	333	45	577	323	45	549	28	25.5	–				
		2" 1/2	63.5 x 1.65	130	103	85	156	164	175	333	45	577	323	45	549	28	25.5	23.5				
	65		70 x 2	130	106	90	156	164	175	337	45	573	326	45	563	28.5	26	–				
76			76 x 2	130	110	95	156	164	175	340	45	588	326	45	580	29.5	27	–				
		3"	76 x 1.65	130	110	95	156	164	175	340	45	588	330	45	580	29.5	27	24				
	80		85 x 2	155	113	110	156	164	175	344	45	614	333	45	605	30.5	27.5	–				
		4"	101.6 x 2.1	155	141	125	196	218	215	418	62	745	408	62	735	61.5	58.5	53				
104	100		104 x 2	155	141	125	196	218	215	418	62	745	408	62	735	61.5	58.5	–				
	125		129 x 2	200	152	155	196	218	215	431	62	812	421	62	803	66.5	62.5	–				
* Without control top																						

* Without control top

WORKING CONDITIONS

Specifications

- **Materials**

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**

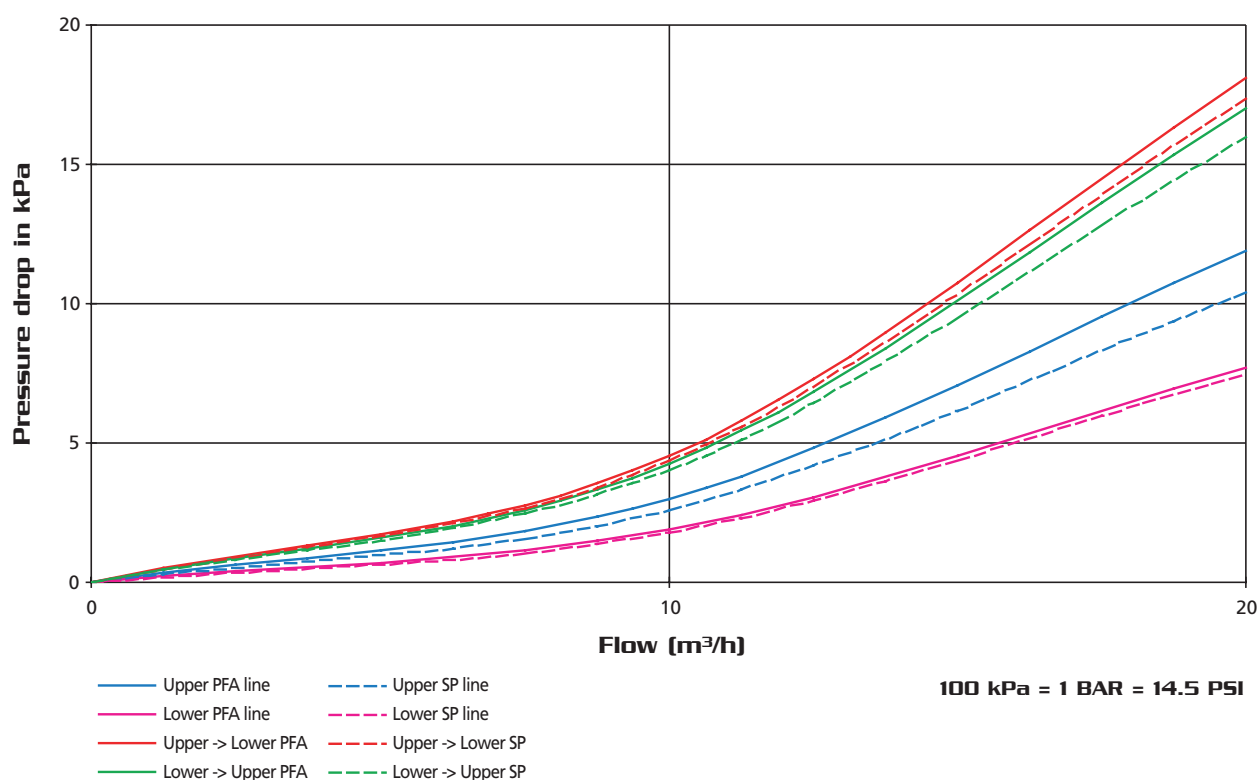
500 kPa to 700 kPa (5 bar to 7 bar) with the ACS control top
Up to 800 kPa (8 bar) in direct supply depending on the working conditions

ND			KV flow coefficient low □ high		CV flow coefficient low □ high		Opening time (s)		Air consumption (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 request		on request		on request		on request	

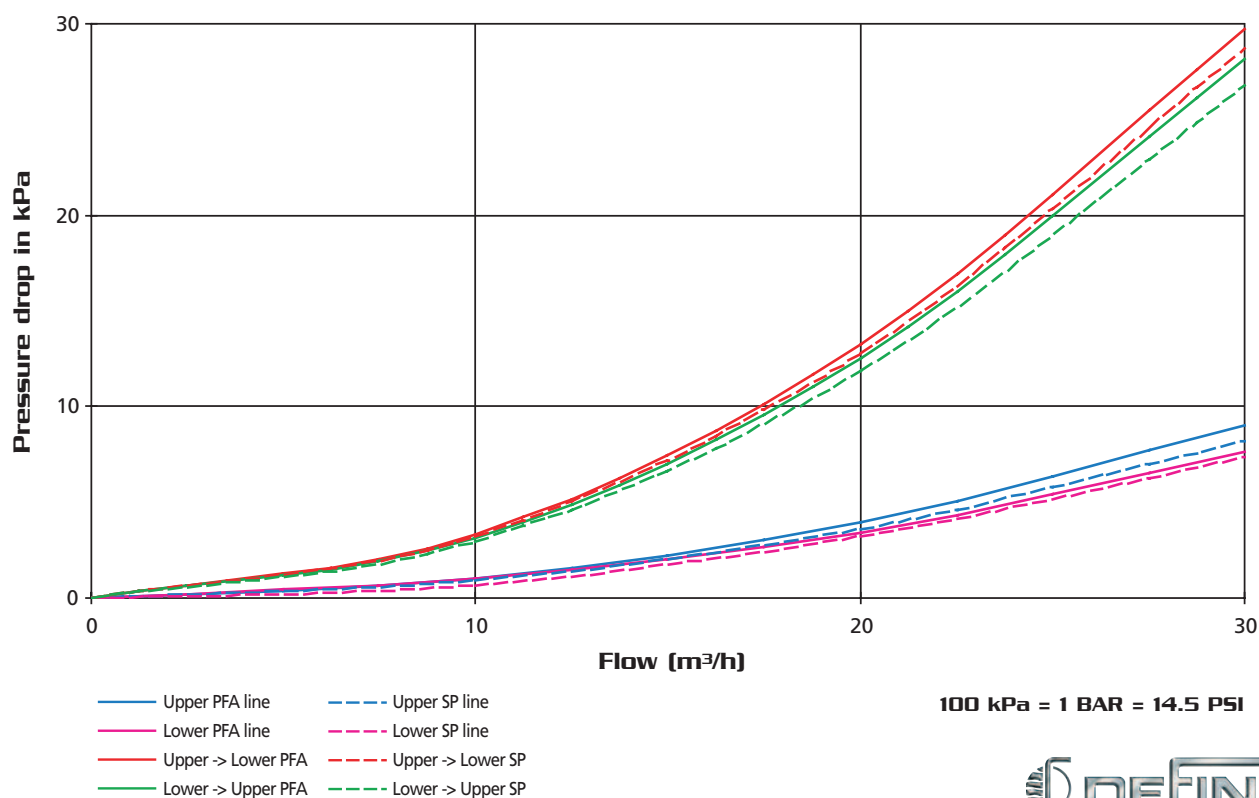
Additional

documents are available on request
to help with the **installation**
and **maintenance** of our valves.

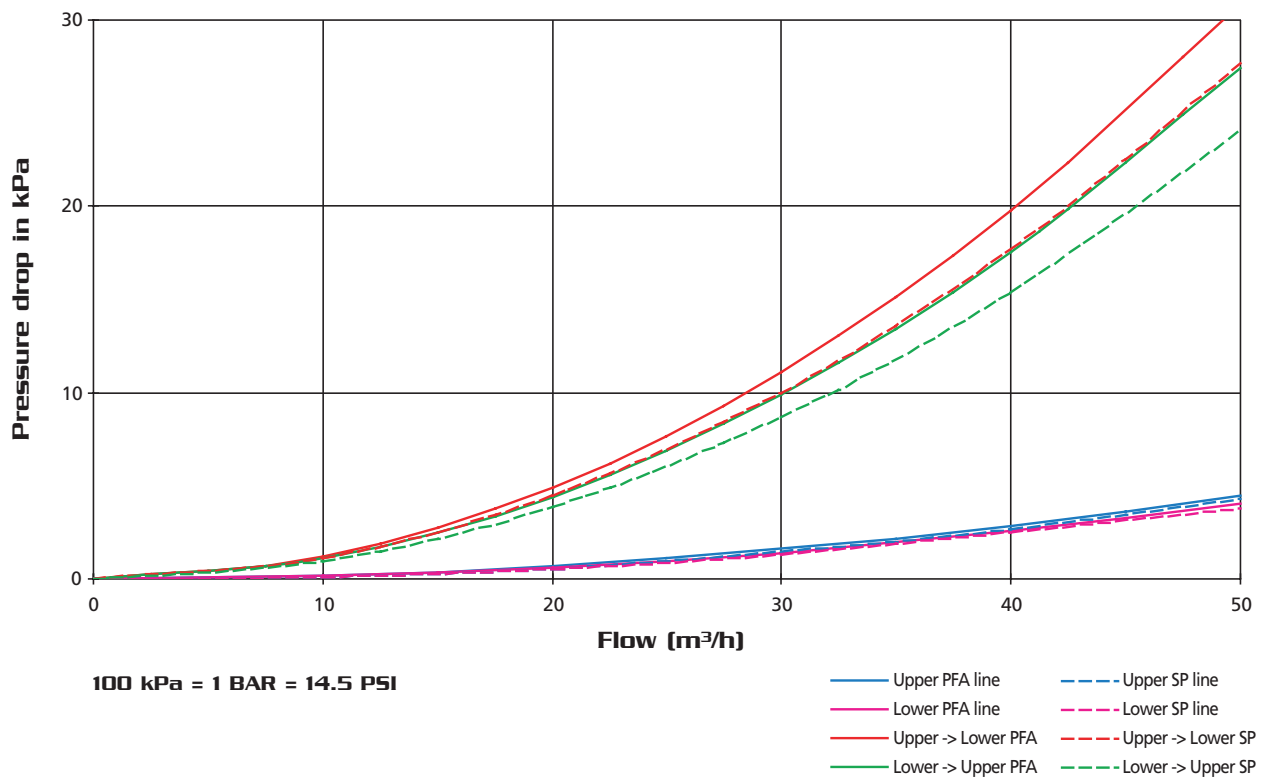
Pressure drop VDCI MC PFA and SP ND 38



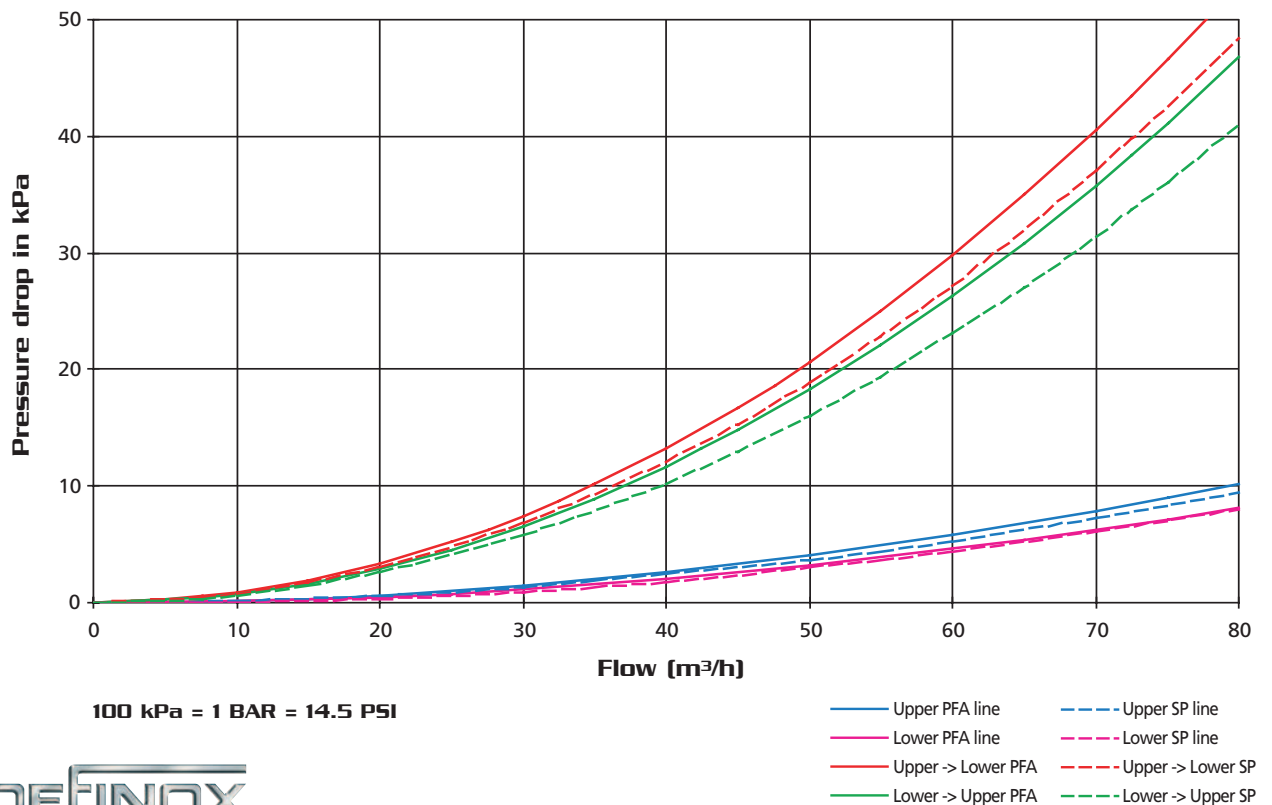
Pressure drop VDCI MC PFA and SP ND 51



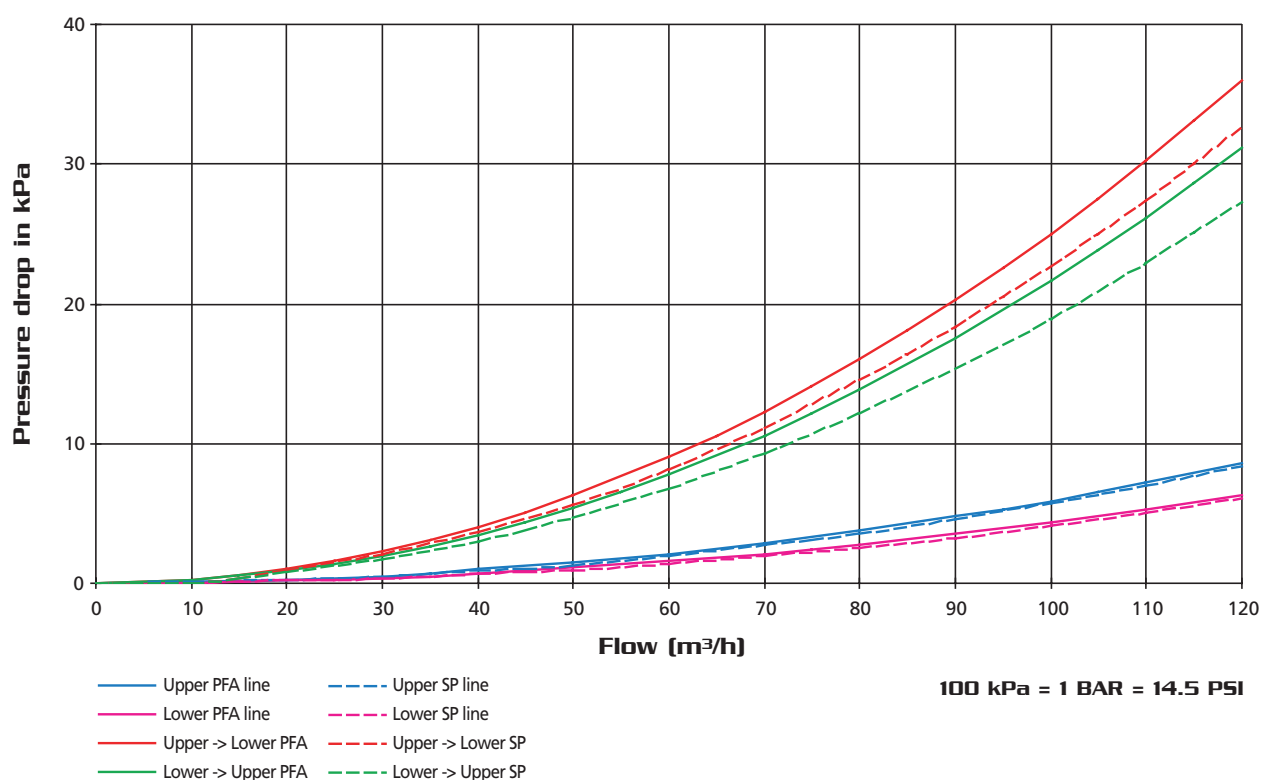
Pressure drop VDCI MC PFA and SP ND 63



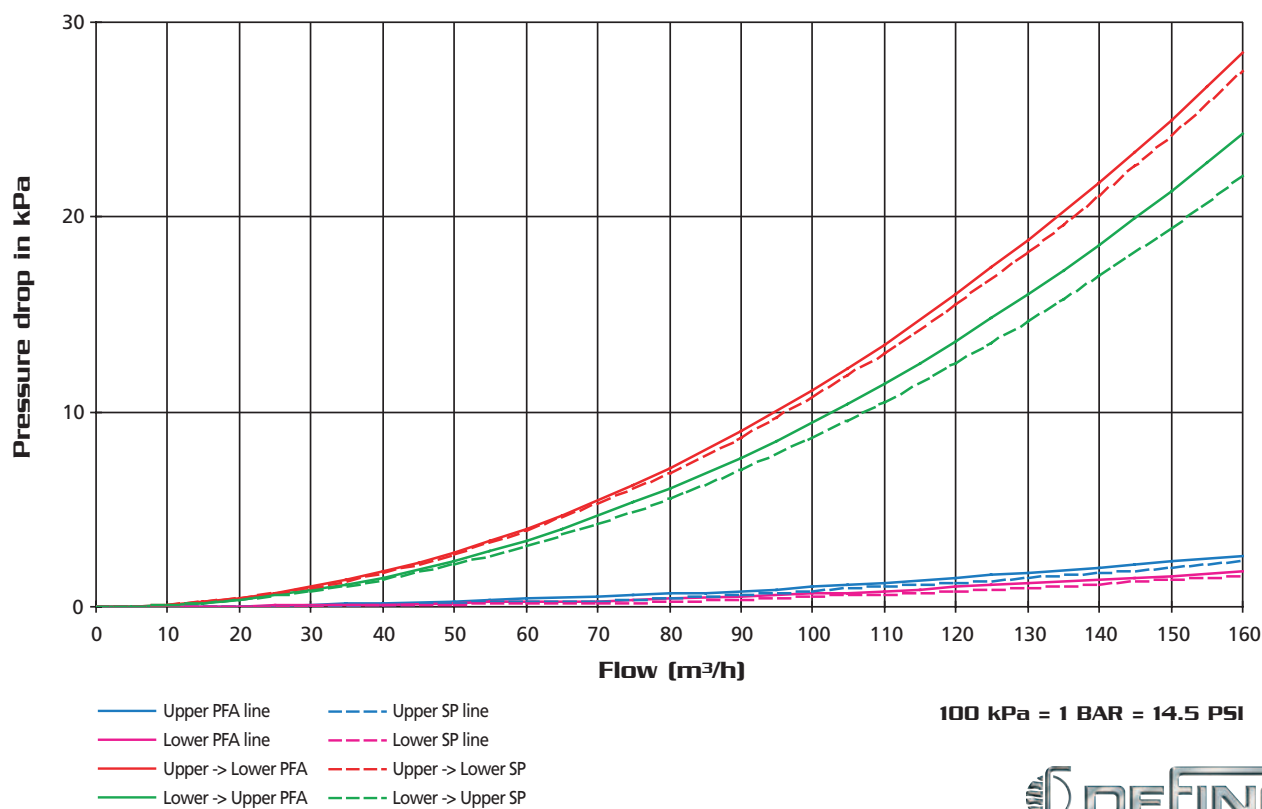
Pressure drop VDCI MC PFA and SP ND 76



Pressure drop VDCI MC PFA and SP ND 104



Pressure drop VDCI MC PFA and SP ND 125



COMMAND AND CONTROL SYSTEMS

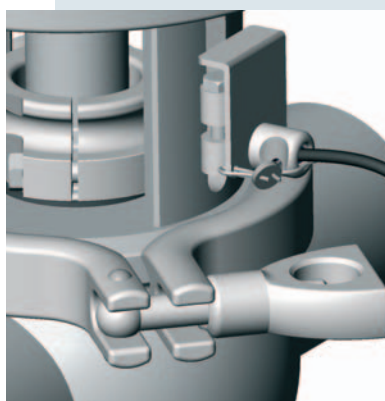
The **ACS control top** offers numerous options for **VDCI MC valve** controls and commands:

- 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

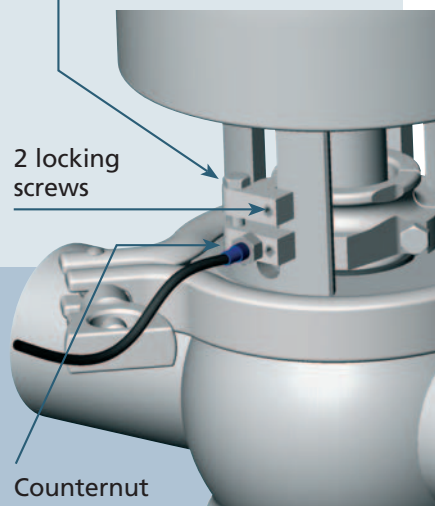


Detection of the upper plug operation

Precision adjusting screw

2 locking screws

Counternut sensor



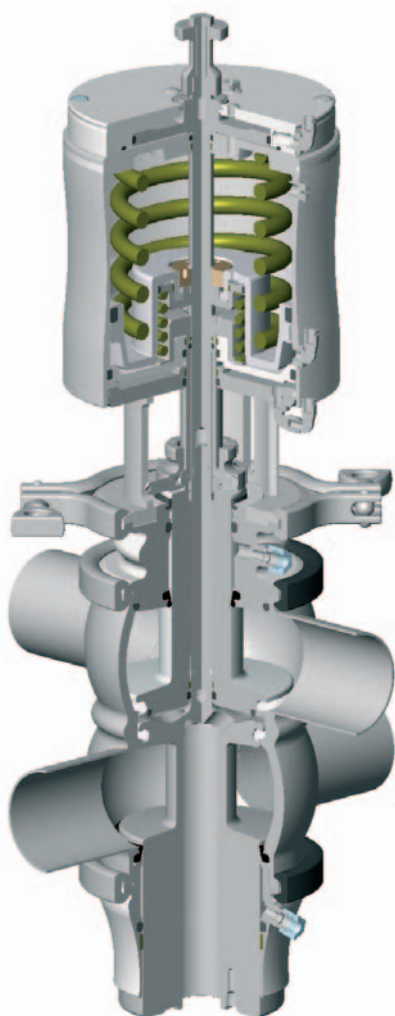


OTHER CONFIGURATIONS

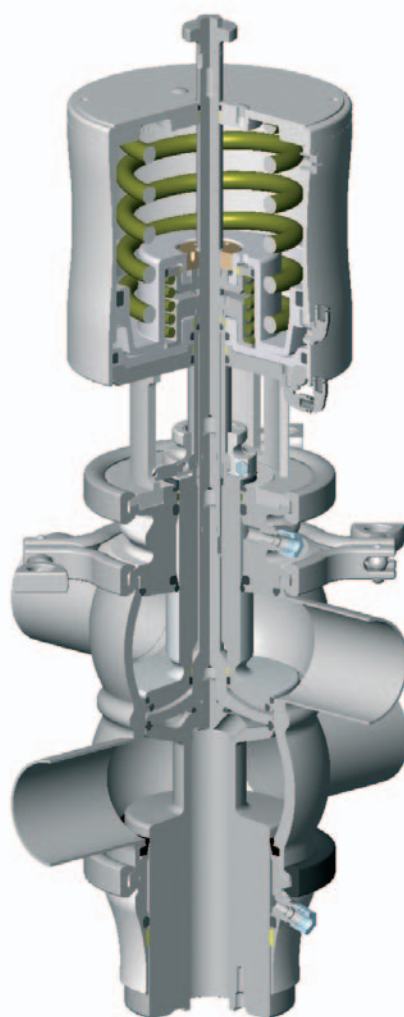
OTHER CONFIGURATIONS

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



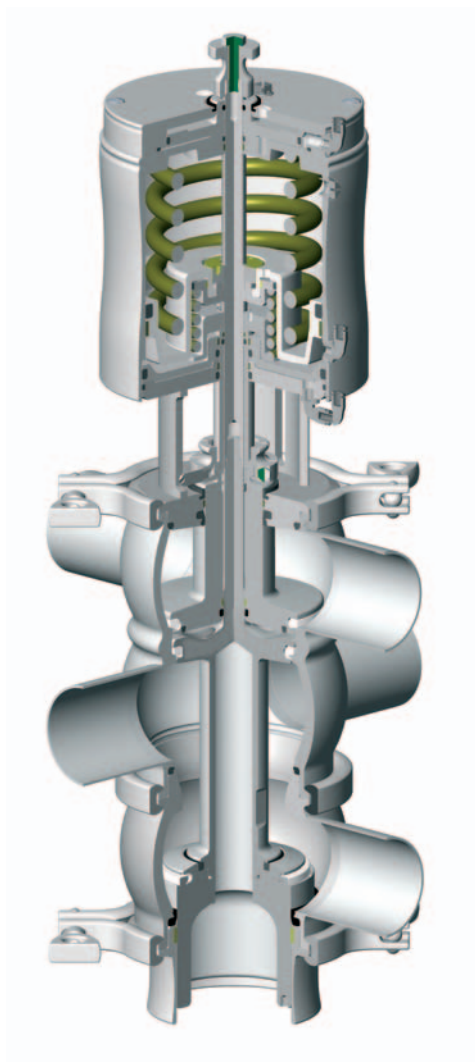
VDCI MC SP
aseptic

VDCI MC 3-body

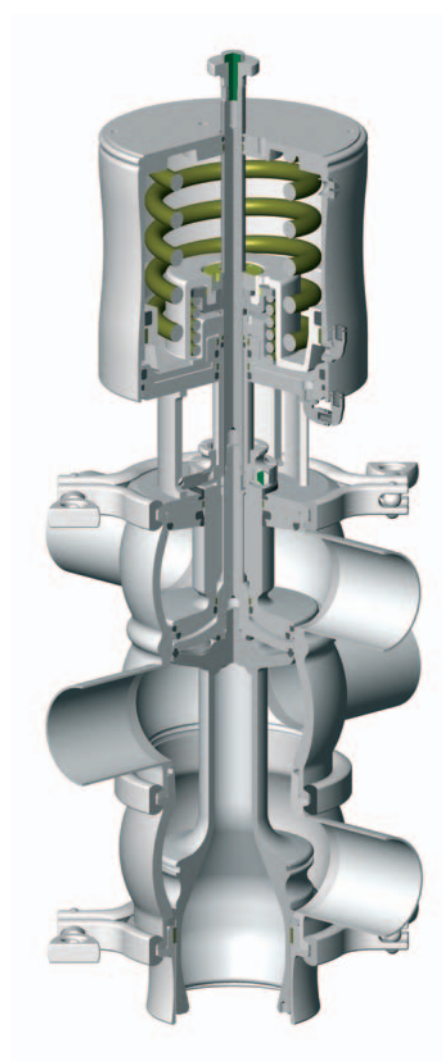
The 3-body **VDCI MC** is used to guide the fluid to the upper body on the valve or to the lower body. The double sealing function is provided between the upper body and the centre body.

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