



## I Application

The Mixproof valve is a completely hygienic double sealing valve. This system allows for the simultaneous processes in the two bodies of the valve by providing interface between the two fluids, preventing the possibility of product contamination. The leakage chamber and the leakage detector can be cleaned by the seat lifting system. Manifolding is one of the applications of these valves in the food-processing industries, especially in the beverage and dairy industries.

## I Operating principle

When the valve is open the fluid can pass from one body to the other. Once the valve is closed, the double seat creates an annular chamber that isolates the bodies sealing them with double seals. It allows a CIP operation providing an interface between the two fluids, preventing the possibility of product contamination. Due to the leakage detector any leak of a seat seal is detected by the appearance of liquid at the bottom of the valve. The zone between the poppets and the seats is cleaned by pulsing the individual poppets when the specific line is being cleaned, the poppets are fractionally stroked by two additional limited movement pistons located within the main actuator. The valve is balanced providing protection against overpressure and hydraulic shock up to 30 bar.

## I Design and features

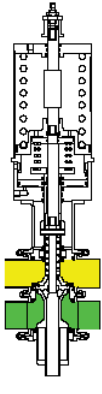
Compact design.  
 Valves with normally closed pneumatic actuator.  
 Weld connections (mm or inches).  
 Forged spherical bodies.  
 Balanced design.  
 Angular orientation 360°C.  
 Open lantern allows visual inspection of the sealing.  
 Easy disassembly by releasing the clamp.  
 Available from DN 40 - 1 1/2" to DN 100 - 4".

## I Design and features

Parts in contact with the product	AISI 316L
Other stainless steel parts	AISI 304
Gasket	EPDM in compliance with FDA 177.2600
Internal surface finish	Ra ≤ 0,8 µm

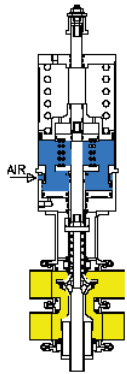


## I Operating principle



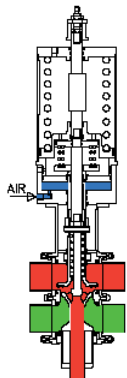
### Valve closed

Lower poppet held closed by main spring.  
 Upper poppet held closed by Intermediate spring and product pressure.  
 Products protected by double seals.  
 Interspace open to atmosphere.



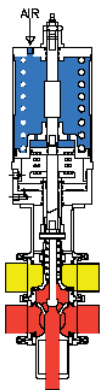
### Valve open

Main piston raised by air pressure to main actuator connection.  
 Motion transmitted through central shaft to the lower poppet.  
 Lower poppet engages on upper poppet.  
 Leakage path to atmosphere closes.  
 Valve fully opens.



### Upper Poppet Seat Clean

Lower piston pulsed by air pressure to bottom air connection.  
 Motion transmitted through outer shaft to the upper poppet.  
 Degree of lift controlled by central threaded adjustment.  
 Lower poppet positively held closed by main spring.  
 Fluid in upper body passes to atmosphere over poppet seal and through interspace.



### Lower Poppet Seat Clean

Upper piston pulsed by air pressure to top air connection.  
 Motion transmitted through central shaft to the lower poppet.  
 Degree of movement controlled.  
 Pressure simultaneously applied above main piston.  
 Upper poppet positively held closed.  
 Fluid in lower body passes to atmosphere over poppet seal and through interspace.



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**I Options**

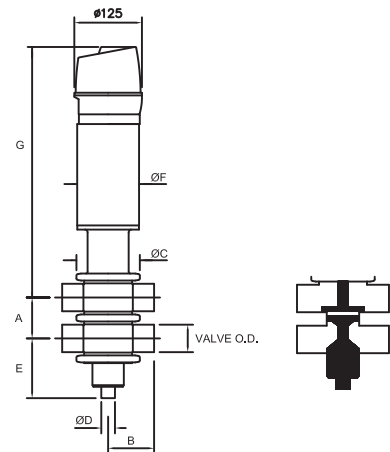
- Gaskets: NBR and FPM.
- Connections: DIN, SMS, Clamp, RJT, etc.
- Control box C-TOP.
- Surface finish  $Ra \leq 0,5 \mu m$ .
- Mixed body sizes: combinations of bodies with different diameters.
- DSO tank bottom valve.
- Heating jacket.
- Routing valve, with three bodies.

**I Technical specifications**

- Max. operating pressure 10 bar (for DN 4" - DN 100 valves - max. 5 bar)
- Min. operating pressure Absolute vacuum
- Working temperature -10 °C to 120 °C (140 °C for short periods or sterilisation)
- Compressed air pressure 5,5 bar - 7 bar
- Air supply connections R1/8" (BSP)

**I General dimensions**

		Body dimensions [mm]					Actuator dimensions [mm]			
		Valve size O.D.	A	B	ø C	ø D (drain tube)	E	ø F	G	Stroke
weld	inch	1½"	63	85	126	25,4	94	142	496	15
		2"	76	85	131	25,4	111	142	502	25
		2½"	87,5	100	170	38,1	134	219	529	35
		3"	100	100	170	38,1	140	219	523	35
		4"	124,5	119	202	50,8	165	219	536	45
weld	mm	DN 40	66	85	126	25,4	94	142	497	15
		DN 50	78	85	131	25,4	111	142	503	25
		DN 65	93	100	170	38,1	131	219	532	35
		DN 80	108	100	170	38,1	136	219	527	35
		DN 100	127	119	202	50,8	164	219	537	45



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