



# Alfa Laval Aseptic Mixproof Valve

## Concept

The Aseptic Mixproof Valve meets the highest demands of your process in terms of hygiene and safety. Built on the well-proven Unique SSV platform, it features a one-piece diaphragm to ensure hermetic sealing towards the atmosphere. The valve, designed for aseptic processing, is available in any configuration required, including seat lift, temperature sensor, transmitter etc. Maintenance can be performed easily and quickly, which keeps TCO (total cost of ownership) low compared to other technologies in the market.

## Working principle

The valve is a pneumatically operated seat valve in a hygienic modular design remote-controlled by means of compressed air. It has just a few simple moveable parts, which makes it a very reliable valve with low maintenance costs. An integrated valve plug/diaphragm ensures aseptic operation. When main actuation (two main valves (NC)) takes place, the two leakage detection valves (NO/NC) must close to prevent product spillage.

## Application

The Aseptic Mixproof Valve is a double seated valve with reinforced PTFE diaphragms that is designed for mixproof operation, separating two different products flowing through one valve.

All four valves operate simultaneously when the main valve is operated. The design of the two NC product valves ensures that pressure chocks will not open the valves. (Please observe the maximum allowable pressure for diaphragms).

The product lines are separated by two plugs (two NC valves) and a sterile (barrier) leakage chamber to prevent mixing of products and ensure immediate indication of any leakage from either of the two plug seals.

Two small leakage detection valves (NO/NO or NO/NC) control the flow of steam in and out of the leakage chamber, which must be kept clean and sterile when the main valves are closed.

Optionally, one of the two leakage detection valves can be ordered as a change-over valve to keep the steam flow up and ensure a continuous steam barrier in both leakage detection valves during main actuation of the product valves.

Within our Unique SSV portfolio, it is possible to utilise a change-over valve to control the steam in order to bypass or access a condensate reservoir, which is used to flush the leakage chamber prior to re-establishing the steam barrier.

## TECHNICAL DATA

### Temperature

Temperature range:	-10°C to +140°C (EPDM)
Max. sterilization temperature:	150°C/380 kPa (3.8 bar)

### Pressure

Pressure range:	0-800 kPa (0-8 bar)
Air pressure:	500-700 kPa (5-7 bar)

**Note!** Vacuum is not recommended in aseptic applications.



## PHYSICAL DATA

### Materials

Product wetted steel parts:	1.4404 (316L)
Other steel parts:	1.4301 (304)

### Surface finish

External surface finish:	Semi-bright (blasted)
Internal surface finish:	Bright (polished), Ra < 0.8 µm

### Seals

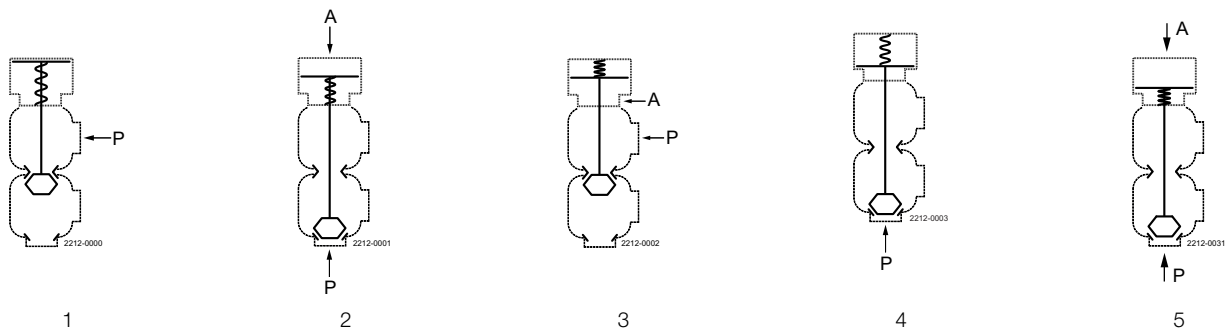
Product wetted seals:	EPDM
Optional product wetted seals:	HNBR
Other seals:	NBR
Diaphragm:	PTFE (Product wetted side) / EPDM

### Option

Temperature sensor:	with or without transmitter
Steam valve	Hygienic or Aseptic

### Sizes

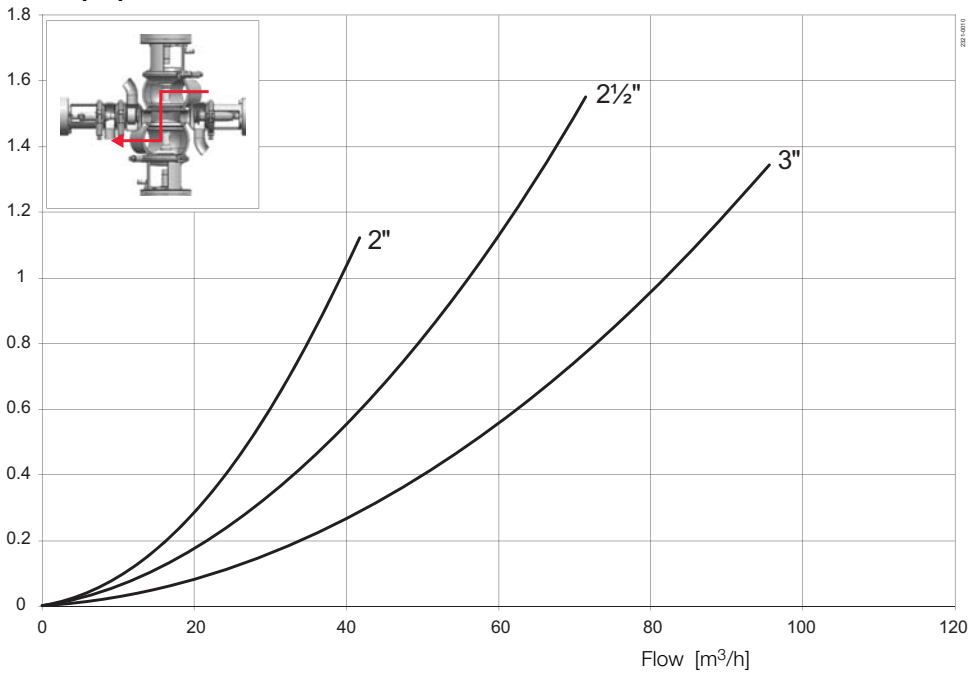
Main valve ISO:	51; 63,5; 76 mm
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Actuator / Valve body combination and direction of pressure	Air pressure (bar)	Plug position	Valve size			
			Main valve			Leakage detection valve
			51mm/2"	63.5mm/2.5"	76.1mm/3"	25mm/1"
1		NO				8 bar
2	5	NO				8 bar
3	5	NC				8 bar
4		NC	7.2 bar	4.2 bar	6.4 bar	8 bar
5	2	NC	8 bar	8 bar	8 bar	

**Pressure drop/capacity diagrams**

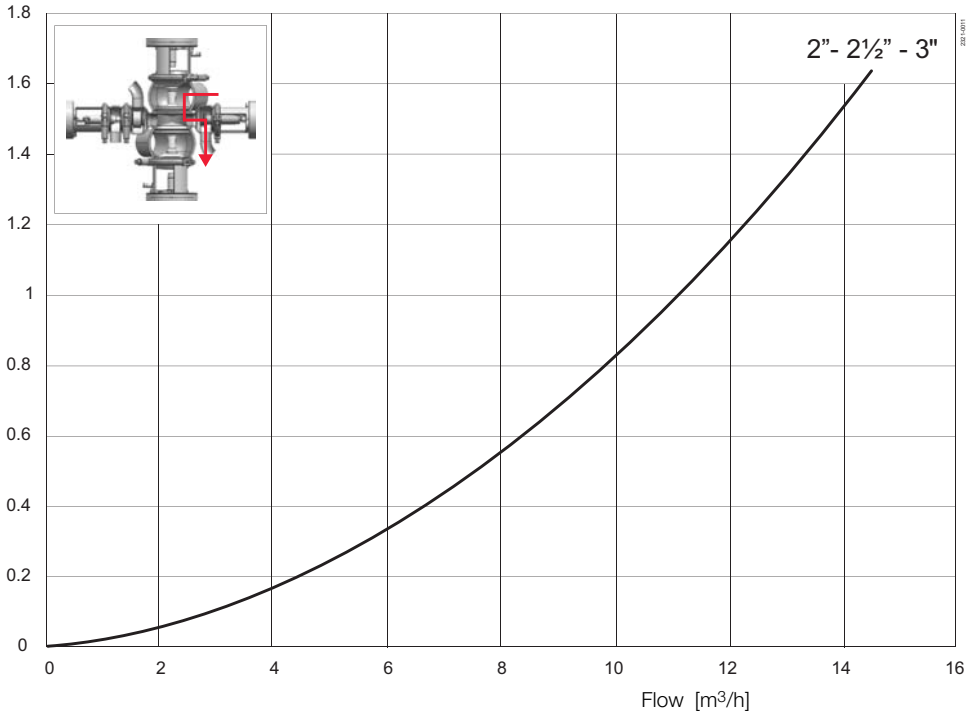
Delta P [Bar]



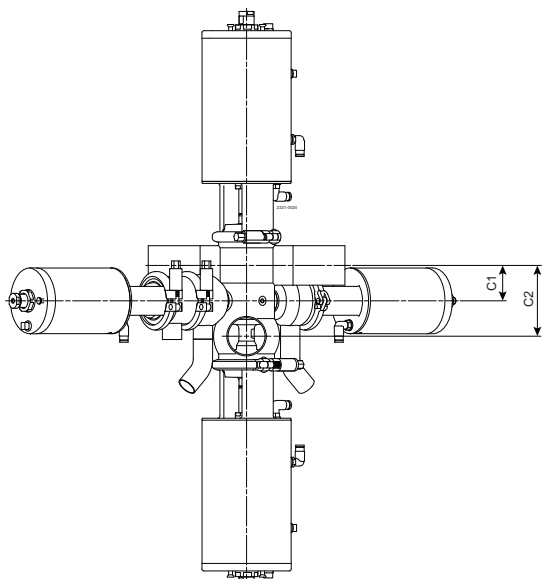
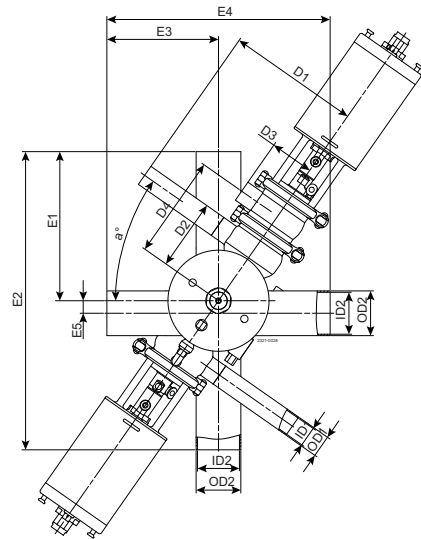
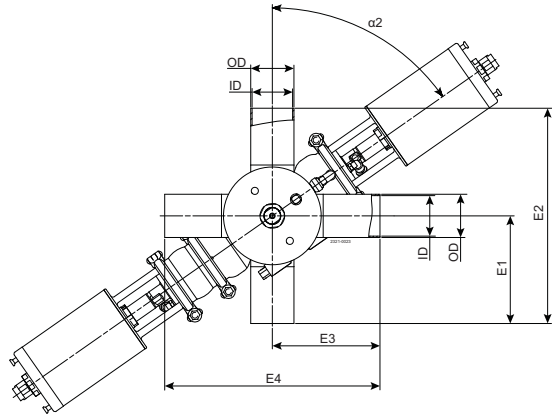
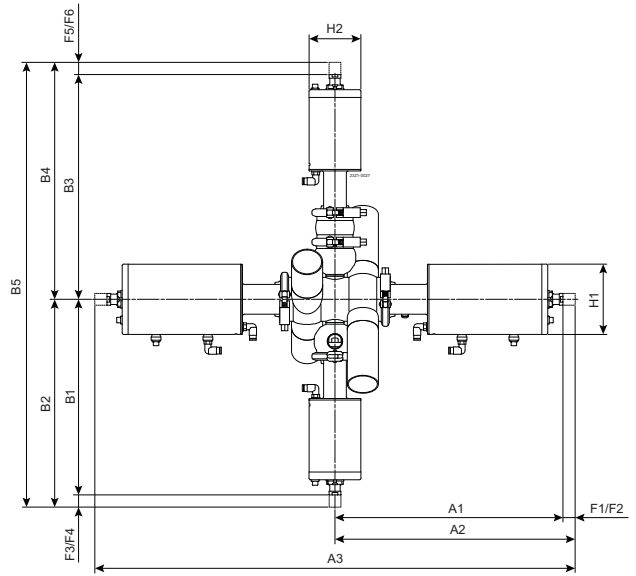
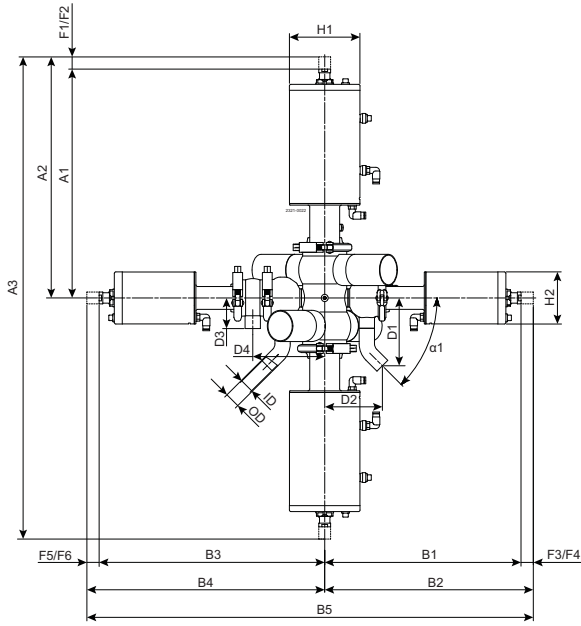
**Seat lift**

	<b>Kv-Value</b>
2"	3.1 m³/hr
2½"	3.6 m³/hr
3"	4.1 m³/hr

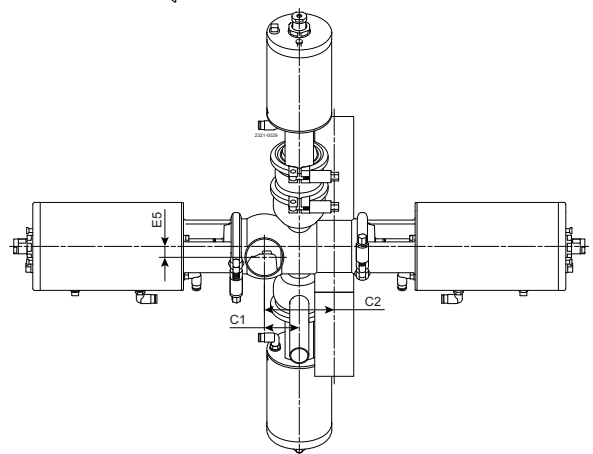
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Dimensions (mm)



Vertical mount



Horizontal mount

Size	Vertical mount			Horizontal mount		
	51mm/2"	63.5mm/2.5"	76.1mm/3"	51mm/2"	63.5mm/2.5"	76.1mm/3"
A1	352	364	406	352	364	406
A2	366	378	422	366	378	422
A3	732	756	845	732	756	845
B1	343	343	343	343	343	343
B2	358	358	358	358	358	358
B3	389	389	389	389	389	389
B4	401	401	401	401	401	401
B5	759	759	759	759	759	759
C1	45.7	52.0	58.3	45.7	52.0	58.3
C2	91.4	103.9	116.5	91.4	103.9	116.5
D1	110.7	110.7	110.7	172.5	172.5	172.5
D2	94.2	102.2	109.7	68.8	76.8	84.3
D3	50	50	50	50	50	50
D4	117.5	125.5	133.0	117.5	125.5	133.0
E1	127	133	139	170.0	216.0	226.0
E2	254	266	278	340.0	432.0	452.0
E3	127	133	139	127	133	139
E4	254	266	278	254	266	278
E5				14.4	18	21.6
$\alpha 1$	45°	45°	45°			
$\alpha 2$	55°	55°	55°	55°	55°	55°
F1	14	14	17	14.1	14.1	16.8
F2	2	2	2	2	2	2
F3	10	10	10	10	10	10
F4	15	15	15	15	15	15
F5	8	8	8	8	8	8
F6	12	12	12	12	12	12
H1	115	115	157.5	115	115	157.5
H2	85	85	85	85	85	85
ID1	22.6	22.6	22.6	22.6	22.6	22.6
ID2	47.8	60.3	72.9	47.8	60.3	72.9
OD1	25	25	25	25	25	25
OD2	51	63.5	76.1	51	63.5	76.1
Weight (kg) (max)	29	30	45	29	30	45





Alfa Laval reserves the right to change specifications without prior notification.

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**How to contact Alfa Laval**

Contact details for all countries  
are continually updated on our website.  
Please visit [www.alfalaval.com](http://www.alfalaval.com) to  
access the information direct.