



Alfa Laval Unique Sampling Valve - Single Seat

For Sterile Sampling

Concept

The Unique Sampling Valve is a single seat valve designed for sterilisation before and after each sample. The valve body and connecting pieces are made from one piece of material to avoid cracks and welding pores.

Working principle

Sterilising: when the valve is closed, the channel between the valve ports is open for sterilisation. If using steam, a small pressure relief valve (optional) on the outlet is recommended. **Sampling:** when the valve is opened, the stem and the membrane seal are retracted, allowing liquid to pass.

Standard design

The valve consists of three parts, a valve body, an actuator and a membrane seal. The rubber membrane seal is placed on the stem of the actuator and works as a stretchable plug. The valve bodies and actuators are interchangeable. The single seat valve can be upgraded to a double seat valve by replacing the handle or actuator with an upgrade kit - see ordering leaflet for accessories.



TECHNICAL DATA

Temperature

Temperature range: 1°C - 130°C

Max. sterilisation temperature,

dry steam (2 bar) 121°C

Steam must be dry, since condensate will damage the membrane seal. It is recommended that the membrane seal is changed every 500 samples/sterilisations or in accordance with working conditions or condition.

Pressure

Max. working pressure: 600 kPa (6 bar)

Min. working pressure: 0 kPa (0 bar)

PHYSICAL DATA

Materials

Valve body: 1.4404 (316L) with 3.1 cert.

Actuator: 1.4301 (304), 1.4404 (316L)

Membrane seal: EPDM, silicone



The valve is available in three sizes:

Size 4 for low-viscosity products such as water, beer, wine and liquid milk. Viscosity: (cP) 0100. Max. particle size: 2.5mm (0.098 in)

Size 10 for high-viscosity products such as fruit yoghurt, syrup and ice cream. Viscosity: (cP) 01000. Max. particle size: 7mm (0.276 in)

Size 25 is for products with very high viscosity such as jam. Max. particle size: 20mm (0.787 in)

Valve bodies:

- Tank (welding)
- Collared tube (welding)
- Tri-clamp
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Optional:

- Varivent

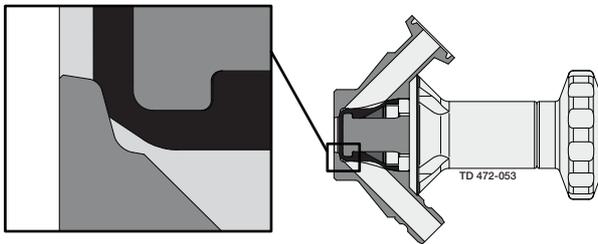
Valve heads:

- Handle
- Pneumatic actuator (air supply 5-8 bar)

Accessories:

- See ordering leaflet

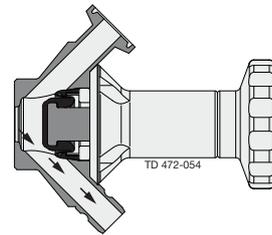
Closed valve



Closed valve: Sterilising

When the valve is closed, the channel between the valve ports is open for sterilisation.

Open valve

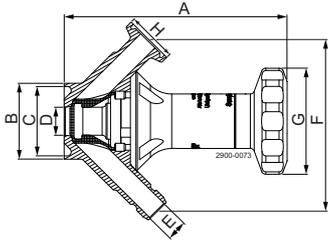


Open valve: Sampling

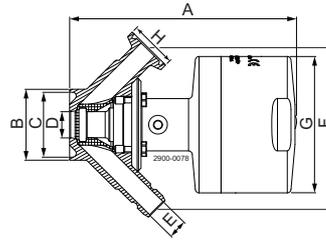
When the valve is opened, the stem and the membrane seal are retracted, allowing liquid to pass.

Dimensions

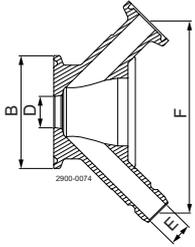
Handle with valve body: Collared pipe welding



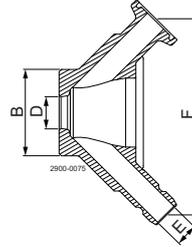
Pneumatic with valve body: Collared pipe welding



Valve body: Tri-clamp



Valve body: Tank welding



Valve size																
Size 4																
Valve Head																
Handle Single Seat																
Pneumatic Single Seat																
Valve body	Tank	Tri-clamp	Collarded pipe						Tank	Tri-clamp	Collarded pipe					
Connection size	ISO 25		ISO 38	ISO 51	DIN 25	DIN 40	DIN 50	ISO 25		ISO 38	ISO 51	DIN 25	DIN 40	DIN 50		
A	87.9	87.6	87.6	87.6	87.6	87.6	87.6	87.6	92.8	92.5	92.5	92.8	92.5	92.5	92.5	
B	29	50.5	25	38	51	29	41	53	29	50.5	25	38	51	29	41	53
C	-	-	21.8	34.8	47.8	26	38	50	-	-	21.8	34.8	47.8	26	38	50
D	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4	4
E	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6	6
F	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7	78.7
G	46	46	46	46	46	46	46	46	54	54	54	54	54	54	54	54
H	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Weight (kg)	0.7	0.7	0.7	0.7	0.7	0.7	0.7	0.7	1.3	1.3	1.3	1.3	1.3	1.3	1.3	1.3

Valve size																
Size 10																
Valve Head																
Handle Single Seat																
Pneumatic Single Seat																
Valve body	Tank	Tri-clamp	Collarded pipe						Tank	Tri-clamp	Collarded pipe					
Connection size	ISO 25		ISO 38	ISO 51	DIN 25	DIN 40	DIN 50	ISO 25		ISO 38	ISO 51	DIN 25	DIN 40	DIN 50		
A	111.4	110.9	112.6	110.6	110.6	110.6	110.6	110.6	121.9	121.4	122.1	121.1	121.7	121.7	121.7	121.7
B	38	50.5	25	38	51	29	41	53	38	50.5	25	38	51	29	41	53
C	-	-	21.8	34.8	47.8	26	38	50	-	-	21.8	34.8	47.8	26	38	50
D	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14	14
E	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10	10
F	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8	85.8
G	53.2	53.2	53.2	53.2	53.2	53.2	53.2	53.2	73.1	73.1	73.1	73.1	73.1	73.1	73.1	73.1
H	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25	25
Weight (kg)	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.1	1.9	1.9	1.9	1.9	1.9	1.9	1.9	1.9

Valve size							
Size 25							
Valve Head							
Pneumatic Single Seat							
Valve body	Tank	Tri-clamp	Collarded pipe				
Connection size	ISO 51		ISO 63,5		DIN 50		DIN 65
A	275.1	275.1	279.1	278.1	279.1	277.1	
B	70	77.5	51	63.5	53	70	
C	-	-	47.8	60.3	50	66	
D	25	25	25	25	25	25	
E	25	25	25	25	25	25	
F	143	143	143	143	143	143	
G	127	127	127	127	127	127	
H	50.5	50.5	50.5	50.5	50.5	50.5	
Weight (kg)	8.2	8.2	8.2	8.2	8.2	8.2	

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

How to contact Alfa Laval

Contact details for all countries
are continually updated on our website.
Please visit www.alfalaval.com to
access the information direct.