



Alfa Laval Unique SSV Manually Operated/Manually Regulating Valve

Simply Unique Single Seat

Concept

The new generation that meets the highest demands of your process in terms of hygiene and safety. Unique Single Seat Valves are built on a well-proven, platform from an installed base of more than one million valves.

Working principle

The valves permit gradual opening and the few and simple moving parts result in very reliable valves easy to dismantle. The plug can be fixed in the adjusted position with a lock screw. The valve is based on the modular platform of the Unique Single Seat Valve.

Standard Design

The manual operated valve can easily be converted to a pneumatic operated valve by replacing the crank mechanism with an actuator. The other parts are identical.



TECHNICAL DATA

Temperature

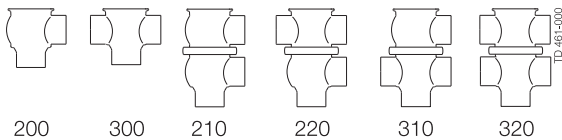
Temperature range: 14°F to +284°F (EPDM).

Pressure

Max product pressure: 145 psi (10 bar).

Min. product pressure: Full vacuum

Valve Body Combinations



PHYSICAL DATA

Materials

Product wetted steel parts: AISI 316L

Other steel parts AISI 304

Plug seal: EPDM

Optional plug seal: PTFE (TR2)

External surface finish Semi-bright (blasted)

Internal surface finish Bright (polished), Ra < 16 µin

Other product wetted seals EPDM

Optional product wetted seals: HNBR and FPM

Options

- A. Weld ends or connection types other than Tri-Clamp.
- B. Product wetted seals in HNBR or FPM.
- C. Replacable elastomer plug seals (only for Manual Operated Valve).
- D. External surface finish blasted.

Note

For further details, see instruction ESE00504ENUS.

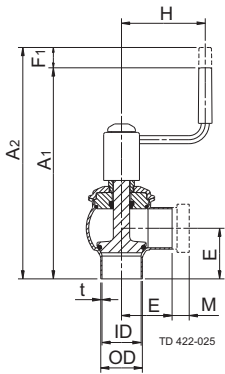
Other valves in the same basic design

The valve range includes several purpose built valves. Below listed are some of the valve models available, though please use the Alfa Laval computer aided selection tool (Anytime configurator) for full access to all models and options.

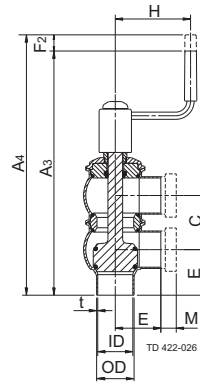
- Standard valve.
- Reverse acting valve.
- Aseptic valve.
- Long Stroke valve.
- Tank Outlet valve.

The actuator comes with a 5 years warranty

Size	1 inch	1.5 inch	2 inch	2.5 inch	3 inch	4 inch
A ₁	9.65	9.65	10.2	11.22	11.46	13.27
A ₂	10.24	10.43	11.18	12.2	12.64	14.45
A ₃	11.46	12.09	13.07	14.61	15.35	18.11
A ₄	11.93	12.76	13.94	15.47	16.42	19.17
C	1.88	2.39	2.91	3.4	3.89	4.87
OD	0.98	1.5	2.01	2.5	3	4
ID	0.86	1.37	1.88	2.37	2.87	3.84
t	0.06	0.06	0.06	0.06	0.06	0.08
E ₁	1.97	1.95	2.40	3.19	3.39	4.69
E ₂	1.97	1.95	2.40	3.19	3.39	4.69
F ₁	0.59	0.79	0.98	0.98	1.18	1.18
F ₂	0.47	0.67	0.87	0.87	1.06	1.06
H	4.13	4.13	4.13	4.13	4.13	4.13
M/ clamp	0.5	0.5	0.5	0.5	0.5	0.63
Weight (kg)						
Shut off valve:	1.8	2	2.6	3.6	4.6	7
Change-over valve:	2.6	3	4.2	5.6	7.3	11.4



a. Shut off valve.



b. Change-over valve.

Fig. 2. Dimensions.

Kv-Factors

Valve size	Kv
1.5"	14*/44
2.0"	75
2.5"	113
3.0"	171
4.0"	250

* optional

Kv = m³/h at a pressure drop of 1 bar.

For other pressure drops than 1 bar the flow can be calculated with the following formula:

$$Q = Kv \times \sqrt{\Delta p}$$

Where

Q = Flow in m³/h.

Kv = See above.

Δp = Pressure drop in bar over the valve.

Example:

Plug Kv 75

Q to be calculated at $\Delta p = 2$ bar:

$$Q = 75 \times \sqrt{2} = 106 \text{ m}^3/\text{h}$$

or at 50% stroke:

$$Q = 0.5 \times 75 \times \sqrt{2} = 53 \text{ m}^3/\text{h}$$

Pressure drop/capacity diagram:

The plugs have linear characteristics. This means that a certain amount of throttling, by reducing the stroke, results in a proportional reduction of the flow if the pressure drop remains unchanged.

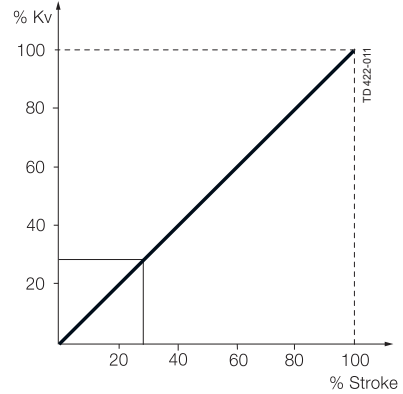


Fig. 3. The flow in % of the total flow at a pressure drop of 1 bar.

Dimensions (inch) - Unique Manually Regulating Valve

Size	1.5"	2"	2.5"	3"	4"
A1	6.93	7.48	8.50	8.74	10.60
A2	7.72	8.46	9.49	9.92	11.70
OD	1.50	2.01	2.50	3.00	4.00
ID	1.37	1.88	2.37	2.87	3.84
t	0.06	0.06	0.06	0.06	0.08
E1	19.50	2.44	3.23	3.43	4.72
E2	19.50	2.44	3.23	3.43	4.72
F1	0.79	0.98	0.98	1.18	1.18
H	3.15	3.15	3.15	3.15	3.15
M/ISO clamp	0.83	0.83	0.83	0.83	0.83
M/DIN clamp					
M/DIN male					
M/SMS male	0.79	0.79	0.95	0.95	1.38
Weight (kg)					
Shut off valve:	2.1	2.9	4.0	5.4	8.2

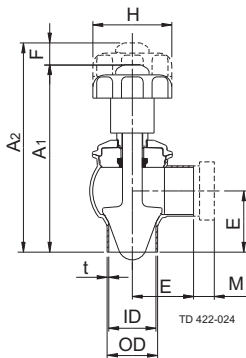


Fig. 4. Dimensions

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.us to access the information direct.