



The Safe Choice For High Purity Applications

Alfa Laval LKC UltraPure Non-return Valve

Concept

LKC is a non-return valve preventing reverse flow in a system. The UltraPure execution is designed and documented to meet the demand in industries like BioPharm and Personal Care.

Working principle

The spring acts on the valve plug and keeps the valve closed until the force from the pressure in the inlet exceeds the force of the spring. If a reverse flow should occur the spring force and the pressure from the outlet will keep the valve closed.

Standard Design

The valve body is made in two parts that are assembled with a clamp ring. A guide disc and four legs guide the spring loaded valve plug in the valve body.



TECHNICAL DATA

Max. product pressure: 1000 kPa (10 bar)
Required differential pressure for opening the valve when fitted in a vertical pipe, as shown in fig. 2, is approx. 6 kPa (0.06 bar).

Surface specification (Product wetted steel parts)

Alfa Laval designation: 7
Internal: Ra < 0.8 µm
ASME BPE designation: SF3
External: Ra < 0.8 µm

Alfa Laval designation: PL
Internal: Ra < 0.5 µm
ASME BPE designation: SF1
External: Ra < 0.8 µm



PHYSICAL DATA

Product wetted steel part 1.4404 (316L)
Acc. to EN 10088 or equal (AISI 316L)
Other steel parts 1.4301 (304)
Acc. to AISI 304
Spring Electropolished

Elastomers

Product wetted elastomer EPDM
Acc. to FDA and USP Class VI
Temperature: 10°C - 140°C
Product wetted elastomer FPM
Acc. to FDA
Temperature: 10°C - 180°C

Connections

Weld ends Matching tubes and fittings: ISO 2037
/ Series A/DIN
Acc. to ISO or DIN
Clamp ends Matching tubes and fittings: ISO 2037
/ Series A/DIN
Acc. to ISO or DIN

Pressure drop/capacity diagram

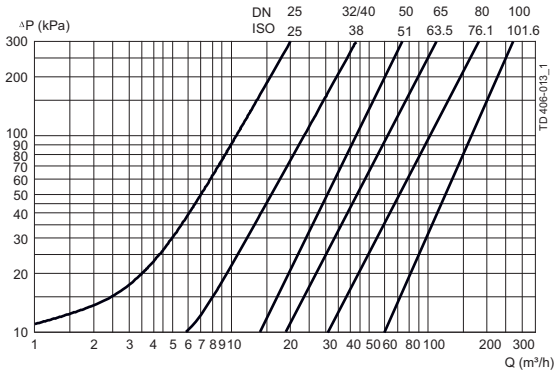


Fig.1. **Note!**

For the diagram the following applies:

Medium: Water (20°C).

Measurement: In accordance with VDI 2173.

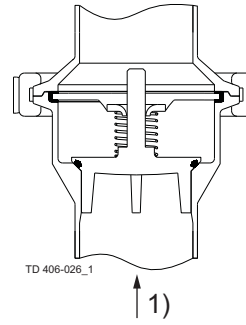


Fig.2.

1 = Flow direction.

Shows the optimal built-in situation to make sure the valve is drainable. The four guide legs of the valve cone ensure good alignment.

90° rotation.

Dimensions (mm)

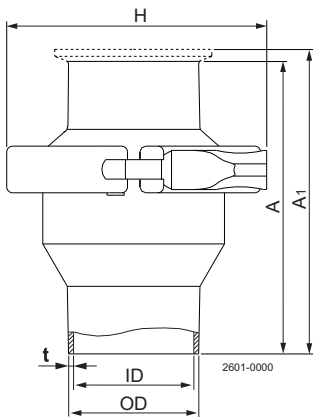


Table 1. Dimensions.

Size	ISO						DIN						
	25	38	51	63.5	76.1	101.6	25	32	40	50	65	80	100
A	62.5	75.0	87.5	95.0	115.0	155.0	62.5	75.0	75.0	87.5	95.0	115.0	155.0
A ₁	105.5	118.0	130.5	138.0	158.0	198.0	105.5	118.0	118.0	130.5	151.0	171.0	211.0
OD	25.4	38.4	51.4	63.9	76.4	102.0	30.0	36.0	42.0	54.0	70.0	85.0	104.0
ID	22.5	35.5	48.5	60.5	72.0	97.6	26.0	32.0	38.0	50.0	66.0	81.0	100.0
t	1.45	1.45	1.45	1.7	2.2	2.2	2.0	2.0	2.0	2.0	2.0	2.0	2.0
H	77.4	90.4	103.6	132.6	144.0	164.0	77.4	90.4	90.4	103.6	132.6	144.0	164.0
Weight (kg):													
Welding ends	0.7	1.0	1.3	2.1	2.9	4.3	0.7	1.0	1.0	1.3	2.1	2.9	4.3
Clamp ends	0.9	1.1	1.4	2.5	3.4	4.7	0.9	1.1	1.1	1.4	2.5	3.4	4.7



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