

# Alfa Laval LKC UltraPure Non-return Valve

The Safe Choice For High Purity Applications

**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

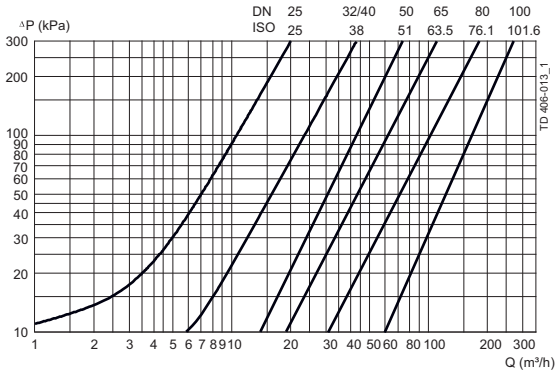


Fig.1. **Note!**

For the diagram the following applies:

Medium: Water (20°C).

Measurement: In accordance with VDI 2173.

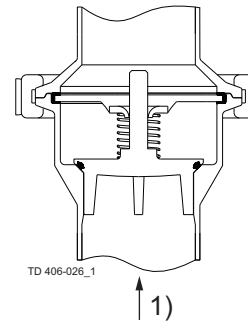


Fig.2.

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)

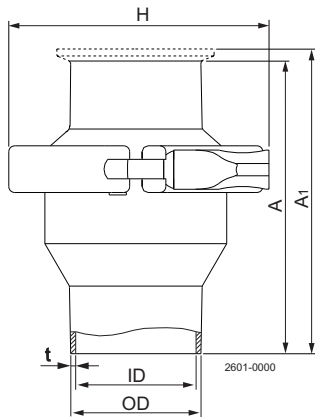


Table 1. Dimensions.

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 <sub>1</sub>	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
<b>Weight (kg):</b>													
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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