

## 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

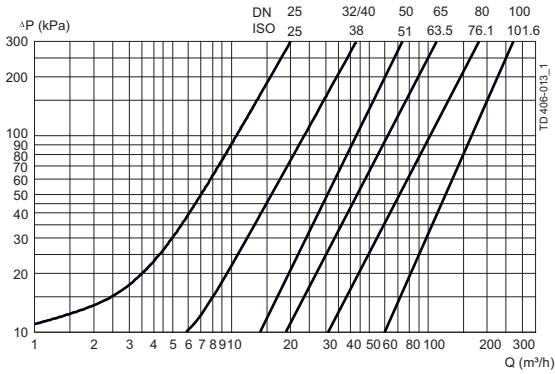


Fig.1. **Note!**

For the diagram the following applies:

Medium: Water (20°C).

Measurement: In accordance with VDI 2173.

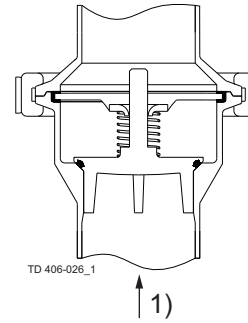


Fig.2.

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)

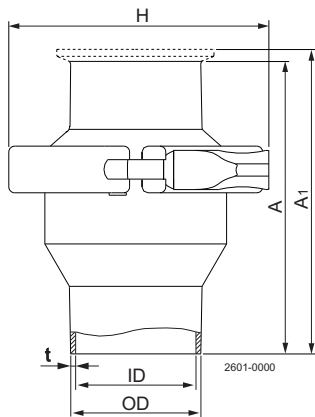


Table 1. Dimensions.

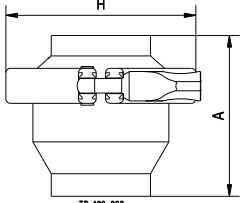
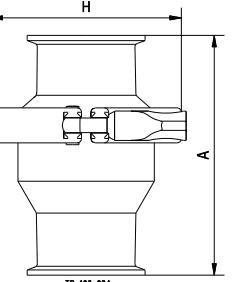
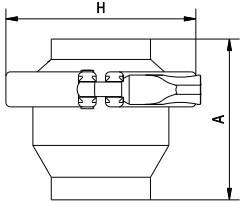
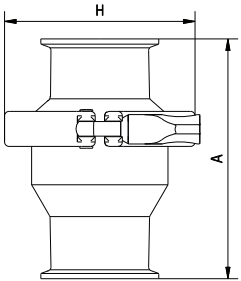
Size	ISO						DIN						
	25	38	51	63.5	76.1	101.6	25	32	40	50	65	80	100
A	62.5	75.0	87.5	95.0	115.0	155.0	62.5	75.0	75.0	87.5	95.0	115.0	155.0
A <sub>1</sub>	105.5	118.0	130.5	138.0	158.0	198.0	105.5	118.0	118.0	130.5	151.0	171.0	211.0
OD	25.4	38.4	51.4	63.9	76.4	102.0	30.0	36.0	42.0	54.0	70.0	85.0	104.0
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

TD 900-563

Product code: 5298

Material: 1.4404 (316L)  
 Connection: Welding ends/clamp ends  
 Seals: EPDM USP class VI, FPM  
 Inside surface finish: Ra < 0.8 µm  
 Outside surface finish: Ra < 0.8 µm

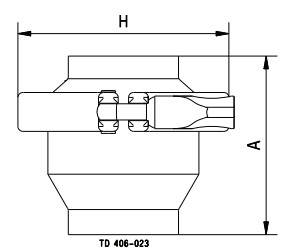
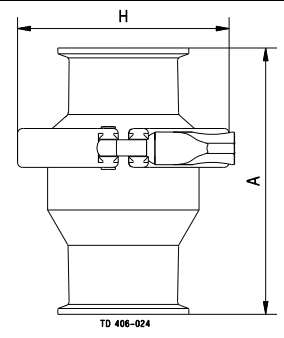
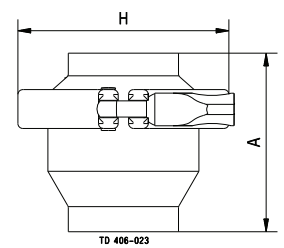
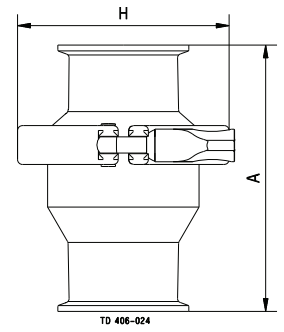
2.3

Item No.	PPL EUR	Item No.	PPL EUR	Size DN/OD		Dimension (mm)		ISO
				(mm)	DIN	A	H	
<b>EPDM</b>								
9613484301	<b>683</b>	9613484314	<b>683</b>	25		62.5	77.4	 <p style="text-align: center;">TD 406-023</p>
9613484302	<b>797</b>	9613484315	<b>797</b>	38		75.0	90.4	
9613484303	<b>997</b>	9613484316	<b>997</b>	51		87.5	103.6	
9613484304	<b>1283</b>	9613484317	<b>1283</b>	63.5		95.0	132.6	
9613484305	<b>1624</b>	9613484318	<b>1624</b>	76.1		115.0	144.0	
9613484306	<b>3248</b>	9613484319	<b>3248</b>	101.6		155.0	164.0	
<b>ISO Clamp</b>								
9613484327	<b>1197</b>	9613484340	<b>1197</b>	25		105.5	77.4	 <p style="text-align: center;">TD 406-024</p>
9613484328	<b>1339</b>	9613484341	<b>1339</b>	38		118.0	90.4	
9613484329	<b>1511</b>	9613484342	<b>1511</b>	51		130.5	103.6	
9613484330	<b>1767</b>	9613484343	<b>1767</b>	63.5		138.0	132.6	
9613484331	<b>2138</b>	9613484344	<b>2138</b>	76		158.0	144.0	
9613484332	<b>3755</b>	9613484345	<b>3761</b>	101.6		198.0	164.0	
<b>DIN</b>								
9613484307	<b>683</b>	9613484320	<b>683</b>		25	62.5	77.4	 <p style="text-align: center;">TD 406-023</p>
9613484308	<b>741</b>	9613484321	<b>741</b>		32	75.0	90.4	
9613484309	<b>797</b>	9613484322	<b>797</b>		40	75.0	90.4	
9613484310	<b>997</b>	9613484323	<b>997</b>		50	87.5	103.6	
9613484311	<b>1283</b>	9613484324	<b>1283</b>		65	95.0	132.6	
9613484312	<b>1624</b>	9613484325	<b>1624</b>		80	115.0	144.0	
9613484313	<b>3248</b>	9613484326	<b>3248</b>		100	155.0	164.0	
<b>DIN Clamp</b>								
9613484333	<b>1197</b>	9613484346	<b>1197</b>		25	105.5	77.4	 <p style="text-align: center;">TD 406-024</p>
9613484334	<b>1283</b>	9613484347	<b>1283</b>		32	118.0	90.4	
9613484335	<b>1339</b>	9613484348	<b>1339</b>		40	118.0	90.4	
9613484336	<b>1511</b>	9613484349	<b>1511</b>		50	130.5	103.6	
9613484337	<b>1767</b>	9613484350	<b>1767</b>		65	138.0	132.6	
9613484338	<b>2138</b>	9613484351	<b>2138</b>		80	158.0	144.0	
9613484339	<b>3761</b>	9613484352	<b>3761</b>		100	198.0	164.0	

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Item No.	PPL EUR	Item No.	PPL EUR	Size DN/OD		Dimension (mm)		ISO
				(mm)	DIN	A	H	
<b>EPDM</b>								
9613481901	<b>770</b>	9613481914	<b>770</b>	25		62.5	77.4	
9613481902	<b>884</b>	9613481915	<b>884</b>	38		75.0	90.4	
9613481903	<b>1083</b>	9613481916	<b>1083</b>	51		87.5	103.6	
9613481904	<b>1368</b>	9613481917	<b>1368</b>	63.5		95.0	132.6	
9613481905	<b>1710</b>	9613481918	<b>1710</b>	76.1		115.0	144.0	
9613481906	<b>3334</b>	9613481919	<b>3334</b>	101.6		155.0	164.0	
<b>ISO Clamp</b>								
9613481927	<b>1283</b>	9613481940	<b>1283</b>	25		105.5	77.4	
9613481928	<b>1397</b>	9613481941	<b>1397</b>	38		118.0	90.4	
9613481929	<b>1596</b>	9613481942	<b>1596</b>	51		130.5	103.6	
9613481930	<b>1881</b>	9613481943	<b>1881</b>	63.5		138.0	132.6	
9613481931	<b>2223</b>	9613481944	<b>2223</b>	76		158.0	144.0	
9613481932	<b>3847</b>	9613481945	<b>3847</b>	101.6		198.0	164.0	
<b>DIN</b>								
9613481907	<b>770</b>	9613481920	<b>770</b>		25	62.5	77.4	
9613481908	<b>826</b>	9613481921	<b>826</b>		32	75.0	90.4	
9613481909	<b>884</b>	9613481922	<b>884</b>		40	75.0	90.4	
9613481910	<b>1083</b>	9613481923	<b>1083</b>		50	87.5	103.6	
9613481911	<b>1368</b>	9613481924	<b>1368</b>		65	95.0	132.6	
9613481912	<b>1710</b>	9613481925	<b>1710</b>		80	115.0	144.0	
9613481913	<b>3334</b>	9613481926	<b>3334</b>		100	155.0	164.0	
<b>DIN Clamp</b>								
9613481933	<b>1283</b>	9613481946	<b>1283</b>		25	105.5	77.4	
9613481934	<b>1339</b>	9613481947	<b>1339</b>		32	118.0	90.4	
9613481935	<b>1397</b>	9613481948	<b>1397</b>		40	118.0	90.4	
9613481936	<b>1596</b>	9613481949	<b>1596</b>		50	130.5	103.6	
9613481937	<b>1881</b>	9613481950	<b>1881</b>		65	138.0	132.6	
9613481938	<b>2223</b>	9613481951	<b>2223</b>		80	158.0	144.0	
9613481939	<b>3847</b>	9613481952	<b>3847</b>		100	198.0	164.0	