

# The Safe Choice

## Alfa Laval LKC-2/LKC-H Non-return Valve

**Concept**

Non-return valve LKC-2 is designed for use in stainless steel pipe installations to prevent reverse flow.

**Working principle**

LKC-2 opens when the pressure below the valve plug exceeds the pressure above the plug and the spring force. The valve closes when pressure equalization has been achieved. A higher counter pressure will press the valve plug against the seat.

**Standard Design**

The valve body is in two parts, assembled by means of a clamp ring and hygienically sealed with a special seal ring. A guide disc and four legs guide the spring loaded valve plug with an O-ring seal.

The valve is available with welding ends for tubes according to ISO and DIN 11850.



**TECHNICAL DATA**

**Temperature**

Max. temperature: . . . . . 140°C (EPDM)  
 Min. temperature: . . . . . -10°C

**Pressure**

Max. product pressure: . . . . . 1000 kPa (10 bar)

**Mechanical**

Required differential pressure for opening the valve when fitted in a vertical pipe, as shown in fig. 3, is approx. 6 kPa (0.06 bar)

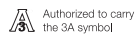
**Options**

Product wetted seal rings of Nitrile (NBR) or Fluorinated rubber (FPM).

**PHYSICAL DATA**

**Materials**

Product wetted steel parts: . . . . . 1.4301 (304) / 1.4404 (316L)  
 External surface finish . . . . . Bright (Machined Ra 1.6)  
 Internal surface finish . . . . . Bright (polished), Ra < 0.8 µm  
 Product wetted seals: . . . . . EPDM rubber



Pressure drop/capacity diagram

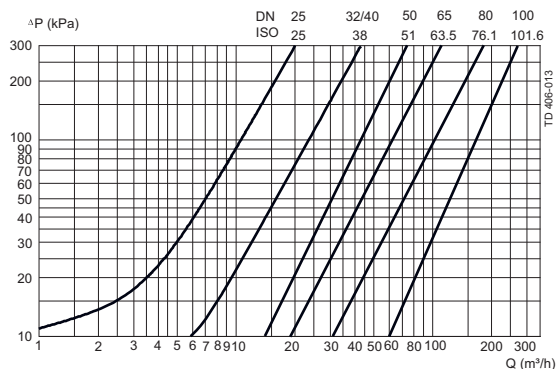


Fig. 1. **Note!**  
 For the diagram the following applies:  
 Medium: Water (20°C).  
 Measurement: In accordance with VDI 2173.

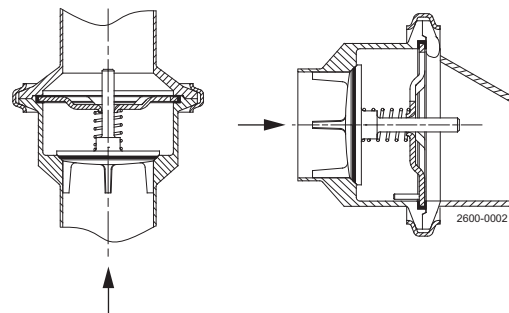


Fig. 2 = Flow direction.  
 Shows the optimal built-in situation. Other positions possible are e.g. horizontal. The four guide legs of the valve cone ensure good alignment. 90° rotation.

Dimensions (mm)

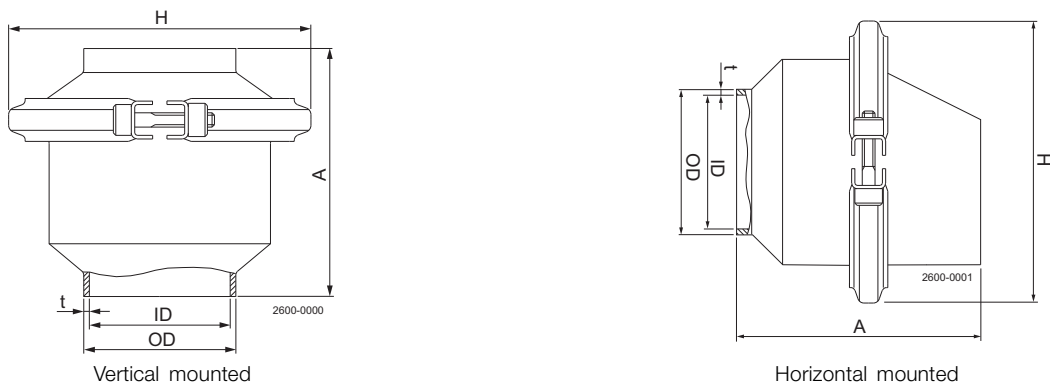


Table 1. Dimensions - Vertical mounted

Size	ISO						DIN						
	25 mm	38 mm	51 mm	63.5 mm	76.1 mm	101.6 mm	DN 25	DN 32	DN 40	DN 50	DN 65	DN 80	DN 100
A	62.5	75.0	87.5	95.0	115	155	62.5	75.0	75.0	87.5	95.0	115	155
OD	25.4	38.4	51.4	63.9	76.4	102	30.0	36.0	42.0	54.0	70.0	85.0	104
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
t	1.45	1.45	1.45	1.7	2.2	2.2	2	2	2	2	2	2	2
H	72.0	85.5	99	127	138	164	72.0	85.5	85.5	99	127	138	164
Weight (kg)	0.5	0.7	1.0	1.7	2.4	4.3	0.5	0.7	0.7	1.0	1.7	2.4	4.3

Table 2. Dimensions - Horizontal mounted

Size	25 mm	38 mm	51 mm	63.5 mm	76.1 mm
A	95.5	86.4	104.1	119.4	139.7
OD	25.4	38.4	51.4	63.9	76.4
ID	22.5	35.5	48.5	60.5	72.0
t	1.45	1.45	1.45	1.7	2.2
H	72.0	85.5	99.0	127.0	138.0
Weight (kg)	0.5	0.7	1.0	1.7	2.4

Non-return valves  
Product code: 5280

Connection: Welding ends/clamp ends  
Seals: EPDM  
Inside surface finish: Ra ≤ 0.8 µm

Material Item No.	PPL EUR	Material Item No.	PPL EUR	Size		Dimension (mm)		Inch tube
				Inch	DIN	A	H	
<b>1.4301 (304)</b>		<b>1.4404 (316L)</b>						
9612220001	<b>395</b>	9612220007	<b>437</b>	25		62.5	82.0	
9612220002	<b>432</b>	9612220008	<b>479</b>	38		75.0	95.5	
9612220003	<b>484</b>	9612220009	<b>559</b>	51		87.5	109.0	
9612220004	<b>629</b>	9612220010	<b>736</b>	63.5		95.0	137.0	
9612220005	<b>836</b>	9612220011	<b>947</b>	76.1		115.0	148.0	
9612220006	<b>1438</b>	9612220012	<b>1790</b>	101.6		155.0	164.0	
<b>DIN tube</b>								
9612220040	<b>395</b>	9612220047	<b>437</b>		25.0	62.5	82.0	
9612220041	<b>409</b>	9612220048	<b>458</b>		32.0	75.0	95.5	
9612220042	<b>432</b>	9612220049	<b>479</b>		40.0	75.0	95.5	
9612220043	<b>484</b>	9612220050	<b>559</b>		50.0	87.5	109.0	
9612220044	<b>629</b>	9612220051	<b>736</b>		65.0	95.0	137.0	
9612220045	<b>836</b>	9612220052	<b>947</b>		80.0	115.0	148.0	
9612220046	<b>1438</b>	9612220053	<b>1790</b>		100.0	155.0	164.0	
<b>Clamp ends</b>								
9612650179	<b>512</b>	9612650105	<b>553</b>	25		105.5	82.0	
9612650180	<b>550</b>	9612650106	<b>600</b>	38		118.0	95.5	
9612650102	<b>631</b>	9612650107	<b>708</b>	51		130.5	109.0	
9612650100	<b>857</b>	9612650164	<b>1061</b>	63.5		138.0	137.0	
9612650101	<b>1091</b>	9612650165	<b>1199</b>	76		158.0	148.0	
9612650181	<b>1888</b>	9612650182	<b>2235</b>	101.6		198.0	164.0	
<b>LKC-H Inch tube</b>								
		9612220030	<b>1137</b>	25		95.5	82.0	
		9612220031	<b>1187</b>	38		86.4	95.3	
		9612220032	<b>1239</b>	51		104.1	109.0	
		9612220033	<b>1414</b>	63.5		119.4	136.9	
		9612220034	<b>1817</b>	76		139.7	148.1	

NOTE! Seal rings of Nitrile (NBR) or Fluorinated rubber are also available.

## Non-return valves

The LKC-2 valves not mentioned in the code number sheets, should be ordered as below:

Product code: 5280

Item No.	PPL EUR	Size		Options
		Inch	DIN	
				<b>Male parts</b>
	61	25	25	Male part standards (included in the price) SMS, ISO/IDF, DS, BS, DIN, ISO clamp.
	61	38	40	
	74	51	50	
	115	63.5	65	
	127	76.1	80	
	226	101.6	100	
				<b>Seals</b>
	0	All types		Replacement to seals of Nitrile (NBR).
	40	25-63.5		Replacement to seals of Fluorinated rubber (FPM).
	103	76101.6		Replacement to seals of Fluorinated rubber (FPM).

\* = On request