

Control the Air in your System

Alfa Laval LKUV-2 Air-Relief Valve

Concept

LKUV-2 is a reliable, automatic air-relief valve which is installed vertically on the top of a pipeline or container or before the inlet for a pump, where the removal of air is required. Example 1: Bleeding of a pipe line where an air pocket has formed on account of the installation. In this case the valve is installed at the top of the pipe. Example 2: Bleeding of a pipe on the suction side of a pump. The suction side is bled automatically, before the pump starts, establishing a vacuum. Binding of air to the product will be prevented, and hence subsequent cavitation. In this case the valve is installed in front of the pump, on top of the inlet pipe.

Working principle

LKUV-2 is a double-seated valve with a freely moving plastic ball. The ball, which is lighter than water, closes against the upper or lower seat, depending on the pressure conditions.

Standard design

The valve body is in two parts and assembled by means of a clamp. The lower valve body has a welding stub.



TECHNICAL DATA

Pressure

Max. product pressure: 1000 kPa (10 bar)
 Max. temperature: 90°C (because of the plastic ball)
 Density of ball: 0.906 kg/dm³

PHYSICAL DATA

Materials

Product wetted steel parts: . . . 1.4301 (304)
 Ball: Material Polypropylene
 Product wetted seals: EPDM
 Surface finish: Bright

Options

- Alternative elastomers:
- NBR (Buna N)
 - FPM (SFY)

Note! Important for correct function:

- Product density higher than the ball density.
- Vertical installation.
- Pure products.

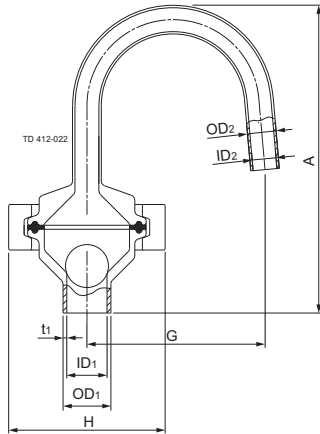


Fig. 1. Dimensions

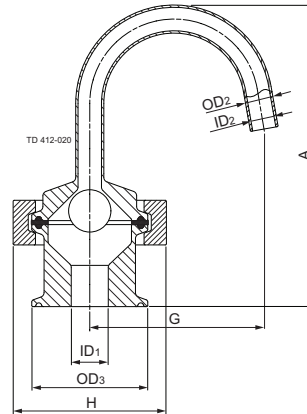
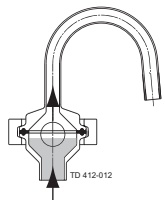


Fig. 2. Dimensions

Dimensions

Dimension	(mm)	(inch)
A	128.7	5.07
G	74.5	2.93
H	58.5	2.57
ID1	15.8	0.66
ID2	10	0.39
OD1	20	0.79
OD2	12	0.47
OD3	49.5	1.95
t1	64.0	2.52
Weight	1.6	0.06
	(kg)	(lb)
	0.6	1.32

Situation 1



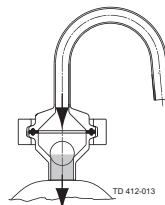
Pressure conditions

Pressure, air or product, or air/product.

Effect

The ball is lifted from the lower seat. The air can escape until the product lifts the ball against the upper seat, closing the valve.

Situation 2



Pressure conditions

Vacuum, air or product, or air/ product.

Effect

The ball moves against the lower seat, closing the valve, whether it contains air or product, or air/product.

Maintain the Right Liquid Level

Alfa Laval LKSV Float Valve

Concept

Float valve LKSV is designed for maintaining a constant liquid level in a tank or container.

LKSV is, however, not suitable if the liquid has a tendency to foam, and the pressure drop is relatively high.

Working principle

Float valve LKSV is installed on the tank wall and the tank inlet tube is fixed to the valve. The seat opening is determined by the position of the float on the liquid. The movement of the float is transferred by mechanical connection to the valve which allows liquid flow into the tank to compensate for outward flow, thus maintaining a constant level in the tank.

Standard Design

LKSV has a valve body and float of stainless steel. The valve body is made for fitting into the side wall of a tank, and it is supplied with a rubber seal for the product side and a fibre ring which goes between the tank wall and the retaining nut. The valve body has an internal pipe thread for connecting the inlet pipe. The valve cone is fitted with an O-ring which seals against the valve seat.



TECHNICAL DATA

Temperature

Max. temperature: 95°C (EPDM)

Min. temperature: 10°C

Pressure

Max. product pressure: 400 kPa (4 bar)

PHYSICAL DATA

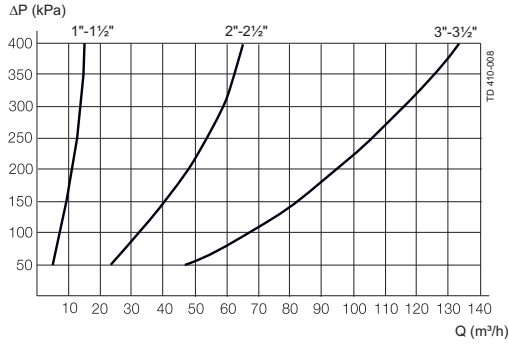
Materials

Product wetted steel parts: 1.4301 (304)

Product wetted seal: NBR

Surface finish: Semi bright

Pressure drop/capacity diagram



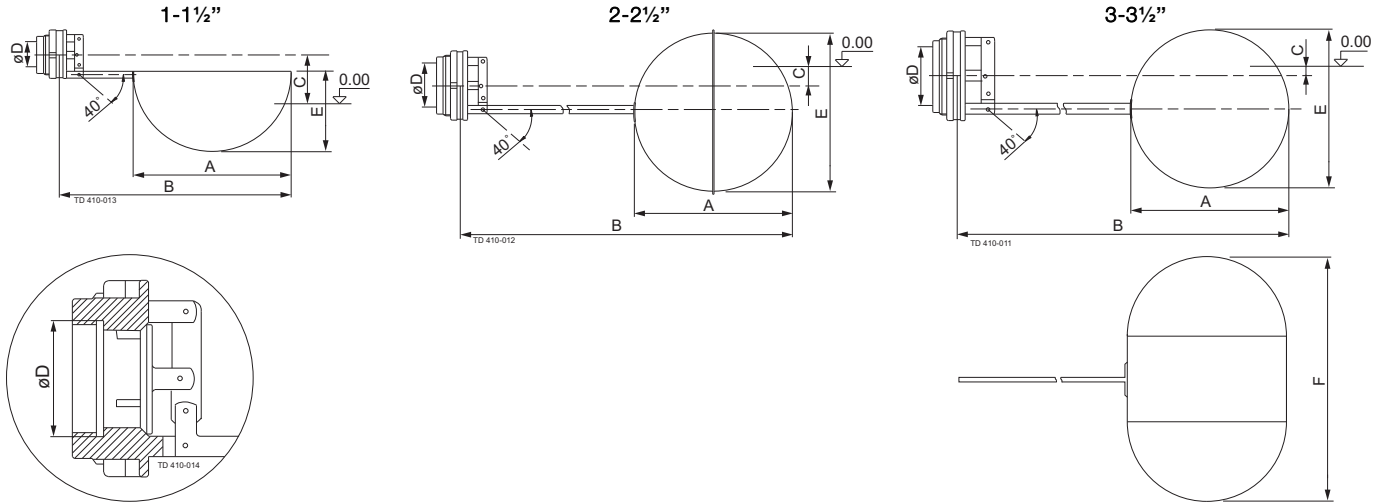
Option:

Equipment

Screen to minimize splashing during tank filling.

Note! Capacities are for float valve in fully open position.

Dimensions: (mm)

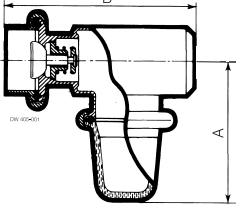
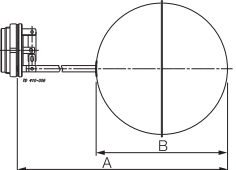
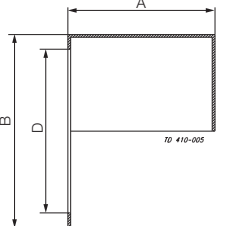
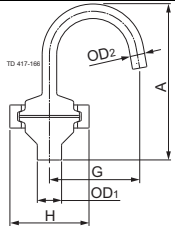
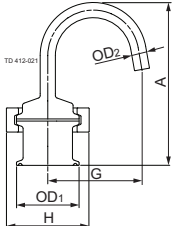


Size	1"	1½"	2"	2½"	3"	3½"
A	240	240	260	260	240	240
B	350	350	550	550	760	760
C	70	70	20	20	10	10
E	130	130	240	240	240	240
F					380	380
Weight (kg)	1.8	1.9	2.8	3.0	4.4	4.8

Connection D Internal thread R (BSP)	Internal valve diameter (mm)	Installation hole in tank wall (mm)	Max. wall thickness (excl. splashscreen) (mm)	Length of float arm (mm)
R 1" (BSP)	22.5	61	6	350
R 1½" (BSP)		61	6	
R 2" (BSP)	48.5	89	7	550
R 2½" (BSP)		89	7	
R 3" (BSP)	72	115	9	760
R 3½" (BSP)		115	9	

Other valves
Product code: 5288

Material: 1.4301 (304)

Item No	PPL EUR	Gasket	Size	Dimension (mm)					
				Inch	A	B	D		
Air blow valve - LKBV									
9611250117	978		51	106	143				
Float valve - LKSV									
9611250045	1534		1"	350	240				
9611250046	1561		1 1/2"	350	240				
9611250047	2046		2"	550	240				
9611250048	2046		2 1/2"	550	240				
9611250049	3410		3"	760	240				
Splash screen for LKSV									
9611250057	150		1-1 1/2"	70	78	61			
9611250058	165		2-2 1/2"	80	105	89			
9611250059	191		3-3 1/2"	100	140	115			
1.4307 (304)				A	G	H	OD1	OD2	Air Relief Valve LKUV-2
9613426901	465	EPDM		128.7	74.5	58.5	20.0	12.0	
9613426903	465	NBR		128.7	74.5	58.5	20.0	12.0	
9613426904	487	FPM		128.7	74.5	58.5	20.0	12.0	
1.4307 (304)				A	G	H	OD1	OD2	Air Relief Valve LKUV-2 Clamp
9613426905	605	EPDM	38	128.7	74.5	58.5	49.5	12.0	
9613426906	606	NBR	38	128.7	74.5	58.5	49.5	12.0	
9613426907	627	FPM	38	128.7	74.5	58.5	49.5	12.0	
9613426908	639	EPDM	51	128.7	74.5	58.5	64.0	12.0	
9613426909	639	NBR	51	128.7	74.5	58.5	64.0	12.0	
9613426910	639	FPM	51	128.7	74.5	58.5	64.0	12.0	

* = On request