



CHRYSSAFIDIS



ΠΕΤΑΛΟΥΔΕΣ ΤΡΟΦΙΜΩΝ

ALFA LAVAL i-BFV

Proven Performance

Alfa Laval i-BFV Automatic or Manual i-Series Butterfly valve

Concept

Alfa Laval i-BFV is a sanitary automatically or manually operated butterfly valve for use in stainless steel pipe systems.

The valve consists of two valve body halves, valve disc, bushes for the disc stem and seal ring. The valve is assembled by means of screws and nuts.

Actuator sizes $\varnothing 85\text{mm}$, cover all valve sizes. The actuator is available in two versions, LKLA and LKLA-T.

The actuator is fitted onto the valve by means of a bracket and screws. (It can also be fitted onto ball valves by means of special brackets).

The handle for manual operation is fitted onto the valve by means of a cap/block system and a screw.

The valve has welding ends as standard, but can also be supplied with fittings.

Control and indication is possible in connection with the remote-controlled Alfa Laval i-BFV valve. See "Options".

LKLA-T can be fitted with ThinkTop®

Working principle

Alfa Laval i-BFV is either remote-controlled by means of an actuator or manually operated by means of a handle.

The actuator is made in three standard versions, normally closed (NC), normally open (NO) and air/air activated (A/A).

The actuator is designed so that an axial movement of a piston is transformed into a 90° rotation of a shaft. The torque of the actuator is increased when the valve disc contacts the seal ring of the butterfly valve.

The handle for manual operation mechanically locks the valve in its open or closed position.

TECHNICAL DATA

Valve:

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

Min. product pressure: Full vacuum.

Temperature range: -10°C to +95°C.

Actuator:

Max. air pressure: 700 kPa (7 bar).

Min. air pressure, NC and NO: 400 kPa (4 bar).

Temperature range: -25°C to +90°C.

Air consumption: (litres free air) 0.24 x p (bar).

Weight: 3 kg.



PHYSICAL DATA

Valve:

Product wetted steel parts: . . . 1.4301 (304)

Other steel parts: 1.4301 (304).

Rubber grades: Silicone rubber (Q), EPDM or
Fluorinated rubber (FPM), HNBR, PFA.

Bushes for valve disc: PVDF.

Finish: Semi-bright.

Actuator:

Actuator body: Stainless steel 1.4307 (304L).

Piston: Light alloy (for $\varnothing 85\text{ mm}$: Bronze).

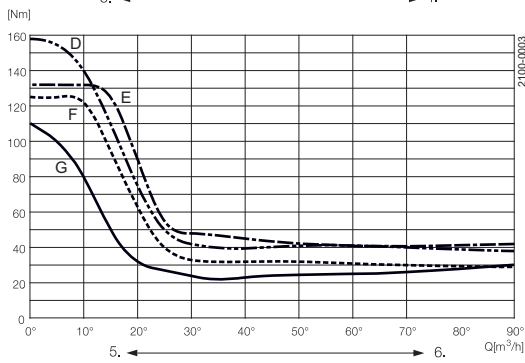
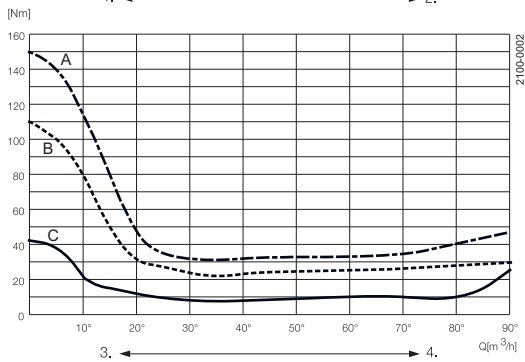
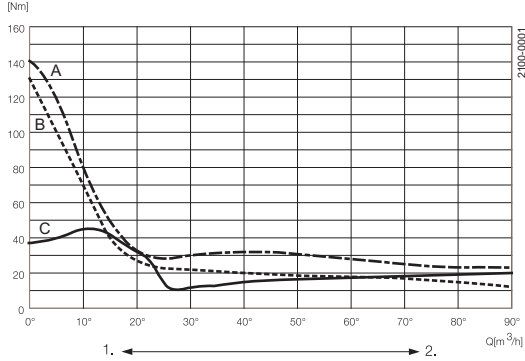
Air/air version.

Seals: Nitrile (NBR).

Housing for switches: Noryl (PPO).

Torque diagrams - Actuator

LKLA ø85 mm:



- A. 6 bar air pressure
- B. 5 bar air pressure
- C. Closing/opening with spring
- D. 6 bar air pressure connection on top
- E. 6 bar air pressure connection on bottom
- F. 5 bar air pressure connection on top
- G. 5 bar air pressure connection on bottom

Angular motion of actuator:

- 1. Closing - Spring activated
- 2. Opening - Air activated
- 3. Closing - Air activated
- 4. Opening - Spring activated
- 5. Closing
- 6. Opening

Torque values (for rotating the valve disc in a dry seal ring)

Size	Max. Nm
25 mm/DN25	15
DN32	15
38 mm/DN40	15
51 mm/DN50	20
63.5 mm/DN65	25
76 mm/DN80	30
101.6 mm/DN100	35
DN125	50
DN150	120



Dimensions (mm) - Alfa Laval i-BFV Valve - ISO

Size	25 mm	38 mm	51 mm	63.5 mm	76.1 mm	101.6 mm
A	42.0	42.0	42.0	61.0	79.5	106.0
B	15.5	16.7	16.6	17.5	16.6	16.0
C	49.0	49.0	58.5	69.5	73.5	93.0
OD	25.6	38.6	51.6	64.1	76.6	102.2
ID	22.5	35.5	48.5	60.5	72.0	97.6
t	1.55	1.55	1.55	1.8	2.3	2.3
E	32.5	32.5	42.0	52.0	57.0	77.0
F	78.0	78.0	94.0	117.0	132.0	169.0
G	8.0	8.0	8.0	8.0	10.0	12.0
H ₁	47.0	47.0	52.0	54.0	62.0	80.0
J	82.0	82.0	92.0	102.0	107.0	127.0
K	120.0	120.0	120.0	120.0	162.0	162.0
L SMS	38.5	43.5	46.0	51.0	55.0	75.0
M SMS	51.0	52.5	55.0	56.0	61.0	72.0
L DIN	45.5	45.5	48.0	52.0	61.0	70.0
M DIN	61.5	61.5	66.0	67.0	71.0	83.0
L Clamp	45.0	45.0	47.5	48.5	52.5	61.5
N	26.5	26.5	36.0	40.5	43.5	53.0
Weight [kg]	0.9	0.8	1.2	1.8	2.6	4.1

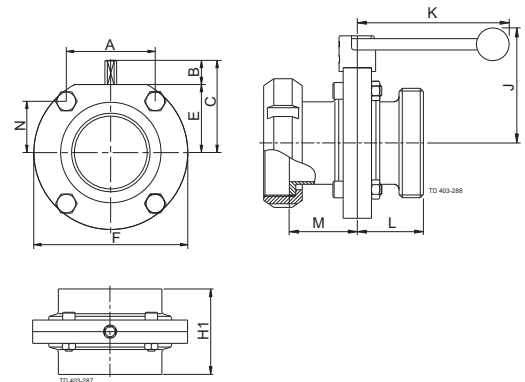
NOTE! Weights are for valves with welding ends and handles.

Dimensions (mm) - Alfa Laval i-BFV Valve - DIN

Size	DN25	DN32	DN40	DN50	DN65	DN80	DN100
A	42.0	42.0	42.0	42.0	61.0	79.0	106.0
B	14.7	15.9	16.7	16.6	17.5	16.0	16.0
C	48.0	49.0	54.0	63.0	75.0	79.0	93.0
OD	30.0	36.0	42.0	54.0	70.0	85.0	104.0
ID	26.0	32.0	38.0	50.0	66.0	81.0	100.0
t	2.0	2.0	2.0	2.0	2.0	2.0	2.0
E	33.3	33.3	37.7	46.6	57.3	63.0	77.0
F	79.2	79.2	86.5	104.0	125.0	143.0	169.0
G	8.0	8.0	8.0	8.0	10.0	10.0	12.0
H ₁	47.0	47.0	47.0	52.0	62.0	64.0	80.0
J	74.0	74.0	78.0	88.0	98.0	104.0	118.0
K	120.0	120.0	120.0	120.0	162.0	162.0	162.0
L DIN	45.5	45.5	45.5	49.0	56.0	57.0	70.0
N	27.3	27.3	31.7	40.6	45.8	49.5	53.0
Weight	1.1	1.0	1.2	1.6	2.4	3.1	4.5

Dimensions (mm) - Actuator LKLA and LKLA-T:

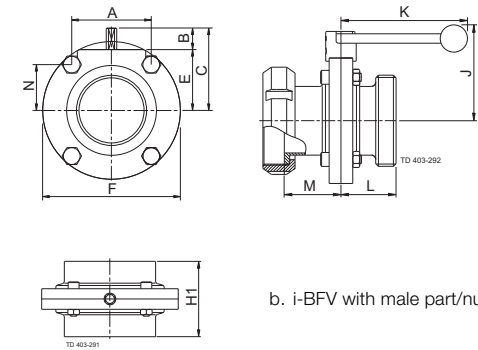
Valve size	25-63.5	76.1	101.6	101.6
A ₁	244	242	242	363
A ₂	193	191	191	316
A ₃	244	244	244	337
A ₄	173	173	173	290
D	85	85	85	133
d	17	17	17	30
I	16.5	16.5	16.5	34
S	8	10	12	12
Function	NC,NO,A/A	NC,NO,A/A	NC,NO,A/A	NC,NO,A/A



b. i-BFV with male part/nut and liner.

a. i-BFV with welding ends

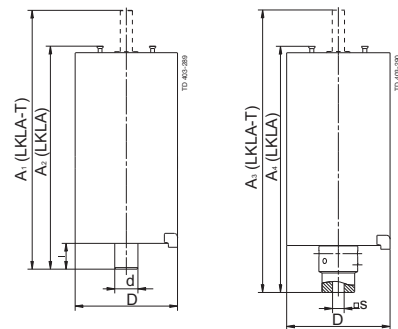
Fig. 1. Dimensions - ISO valve.



b. i-BFV with male part/nut and liner.

a. i-BFV with welding ends.

Fig. 2. Dimensions - DIN valve



a. Without coupling.

b. With coupling.

Fig. 2. Dimensions - actuators.



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Seal Qualities

PFA:

PFA is a bonded seal in the PTFE family consisting of an EPDM seal with an outside PFA liner. The chemical resistance of PFA is very similar to PTFE, but opposite to those PFA is thermo plastic and has minimal porosity. The seal has high mechanical strength which makes it a perfect choice when dealing with abrasive products. Furthermore, the design of the PFA seal minimizes the risk of worn seal. Another advantage of the PFA seal is that the service intervals are prolonged due to a longer lifetime for the seal. The maximal temperature for the PFA seal is 90°C (194°F).

The seal is available in the following sizes: ISO:38, 51, 63.5, 76.1, 101.6.

EPDM:

The EPDM seal is mechanically strong and normally resistant to ozone and other strong oxidizers, animal and vegetable fats, polar solvents, Acids and bases, water and aqueous solutions.

The seal is available in all sizes.

Silicone:

Normally resistant to ozone, other strong oxidizers and strong bases. The seal is available in all sizes.

FPM:

Normally resistant to ozone and other oxidizers, hydrocarbons in general, oils, lubricants and greases.

The seal is available in all sizes.

HNBR:

Mechanically strong and normally resistant to ozone and strong oxidizers, animal and vegetable fats, nonpolar solvents, oils and lubricants, water and aqueous solutions.

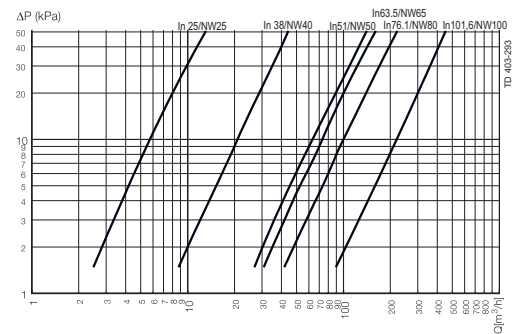
The flange seals are not available in HNBR, please select available rubber quality.

For further information on Product- and Chemical Resistance of Flexible Rubber Materials, please see PD sheet 65036.

Compressed air

R1/8" (BSP), internal thread.

Capacity/Pressure drop diagrams



Alfa Laval i-BFV - fully open

NOTE!

For the diagrams the following applies:

Medium: Water (20°C).

Measurement: In accordance with VDI 2173.

Options

- A. Male parts or clamp liners in accordance with required standard.
- B. ThinkTop® for control and indication.*
- C. Indication unit with micro switches.*
- D. Indication unit with inductive proximity switches.*
- E. Indication unit with Hall proximity switches.*
- F. Bracket for actuator. (Also for ball valves).
- G. Handle with two or four positions.
- H. Service tool for actuator.
- I. Service tool for fitting 25-38 mm valve discs.

* For further information see Product Catalogue chapter "Control & Indication".

Ordering

Please state the following when ordering:

- Valve type: Alfa Laval i-BFV.
- Valve size.
- Connections ISO, DIN, if not welding ends.
- Rubber grade: EPDM, Silicone (Q), Fluorinated rubber (FPM), HNBR or PFA.
- Type of handle, if required.

If ordering with actuator:

- Type: LKLA or LKLA-T.
- Size: ø85mm.
- Function: NC, NO or Air/Air.
- Other options.

Note!

For further details, see also instruction manual ESE00787

