



Manual or Automatic - it's your Choice

LKB Automatic or Manual Butterfly Valve

Concept

LKB is a sanitary automatically or manually operated butterfly valve for use in stainless steel pipe systems.

Working principle

LKB 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.

A variety of handle options for manual operation mechanically secures the valve in its open, closed, or intermediate positions.



TECHNICAL DATA

Valve

Max. product pressure: 145 PSI
Min. product pressure: Full vacuum
Temperature range: 15 °F to 200 °F. max.
temperature if valve operates

Actuator

Max. air pressure: 100 PSI
Min. air pressure, NC and NO: 60 PSI
Temperature range: 15 °F to 195 °F
Air consumption (litres free air) - ø3.35
in: 0.24 x p (bar)
Air consumption (litres free air) - ø5.24
in: 0.95 x p (bar)
Weight: - ø3.35 in: 6.6 lbs.
- ø5.24 in: 26.4 lbs

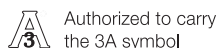
PHYSICAL DATA

Valve bodies

Product wetted steel parts: 1.4307 (304L) or 1.4404 (316L)
Disc: 1.4301 (304) or 1.4404 (316L)
Other steel parts: 1.4301 (304)
Rubber grades: Q, EPDM, FPM, HNBR or PFA
Bushes for valve disc: PVDF
Finish: Semi-bright

Actuator

Actuator body: 1.4307 (304L).
Piston: Light alloy (for ø3.35 in:
Bronze) Air/air version
Seals: NBR



Standard design

The valve consists of two valve body halves, valve disc, bushes for the disc stem and seal ring. LKB-F also consists of two flanges and two flange seal rings. The valve is assembled by means of screws and nuts. Two actuator sizes, \varnothing 3.35" and \varnothing 5.24", cover all valve sizes.

The actuator is fitted onto the valve by means of a bracket and screws. (The actuator 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 LKB is available with either welded ends or Tri-Clamp® sanitary connections.

Options

A. Tri-Clamp® or butt weld ends standard

LKB Handle Options

- other connections available upon request
- B. ThinkTop® for control and indication.*
- C. Green Top - position indication MS or PS
- D. Indication unit with micro switches.*
- E. Indication unit with inductive proximity switches.*
- F. Handle with two or four positions (standard on 6")
- G. Handle for electrical position indication.
- H. Handle with infinite intermediate positions (not for 6")
- I. Multi-positioning handle with lever handle or pull knob
- J. Service tool for actuator.
- K. Service tool for fitting 1"-1.5" valve discs

Note!

For further details, see also ESE02446.

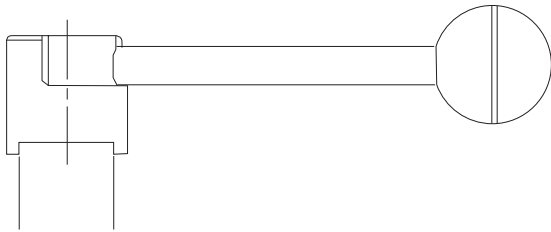


Fig. 5. LKB two position handle (black handle)

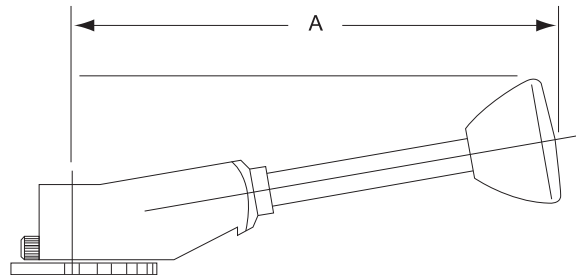


Fig. 6. LKB multi-position handle (green handle)

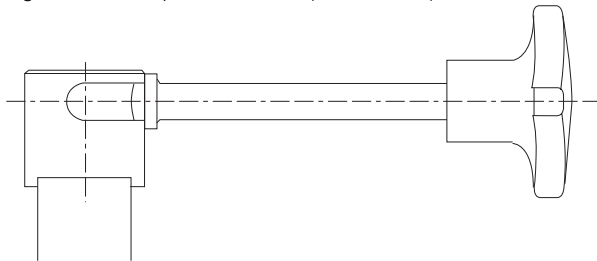


Fig. 7. LKB butterfly valve regulating handle

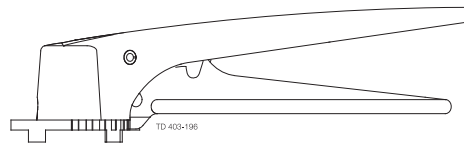
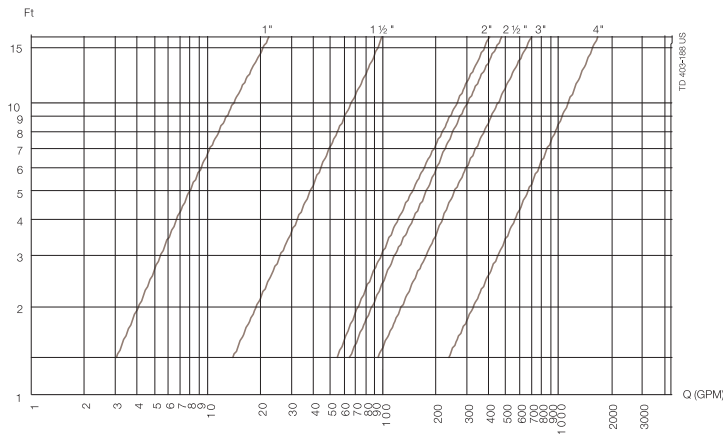


Fig. 8. LKB lockable multi-position handle

Capacity/Pressure drop diagrams



NOTE!

For the diagrams the following applies:

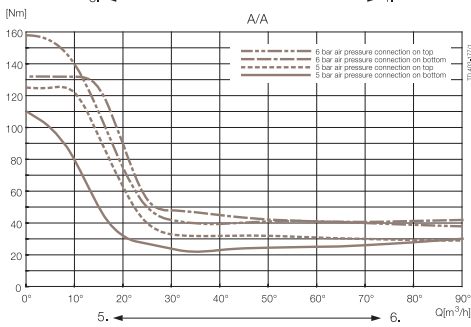
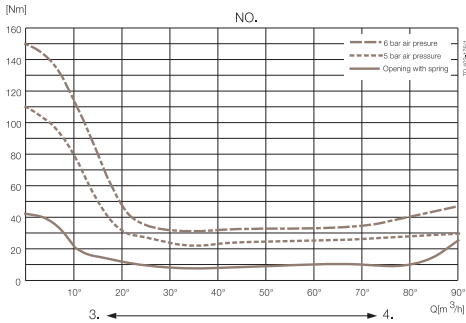
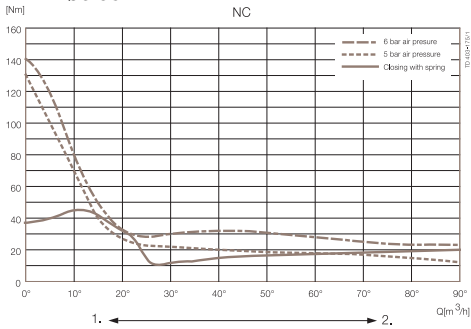
Medium: Water (68°F).

Measurement: In accordance with VDI 2173.

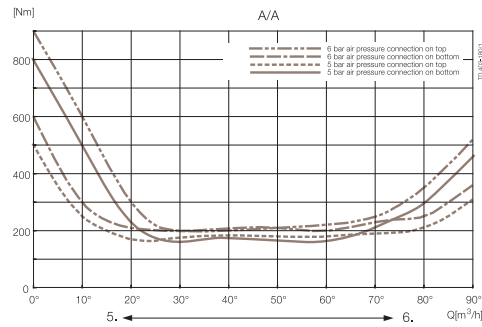
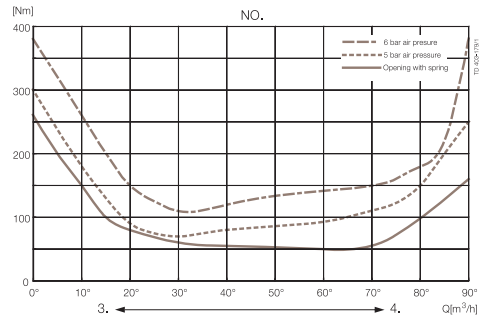
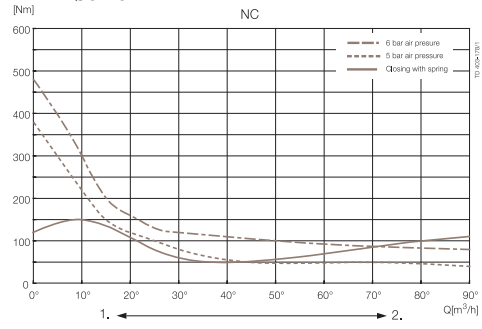


Torque diagrams - Actuator

LKLA $\phi 3.35$ in:



LKLA $\phi 5.25$:



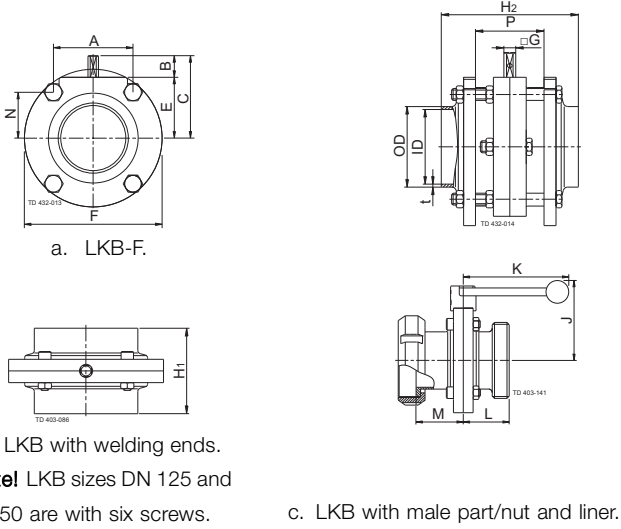
Torque values (for rotating the valve disc in a dry seal ring)

Valve Size	Max Torque (ft-lbs)
1-inch	11
1.5-inch	11
2-inch	11
2.5-inch	15
3-inch	18
4-inch	22
6-inch	26



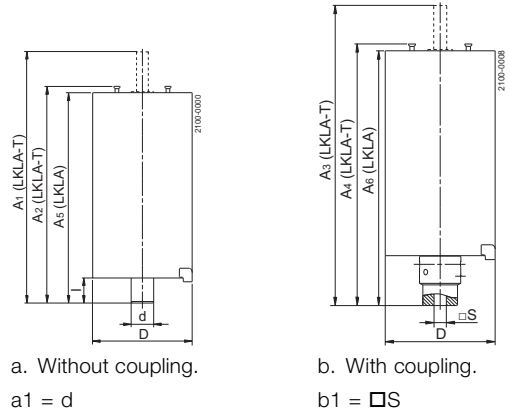
Valve Dimensions (inches)

Fig. 1. Dimensions - valve.

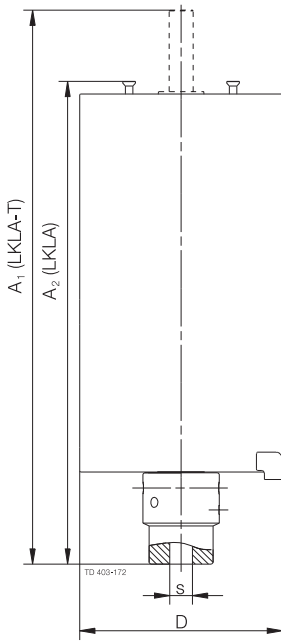


Note! LKB sizes DN 125 and 150 are with six screws.

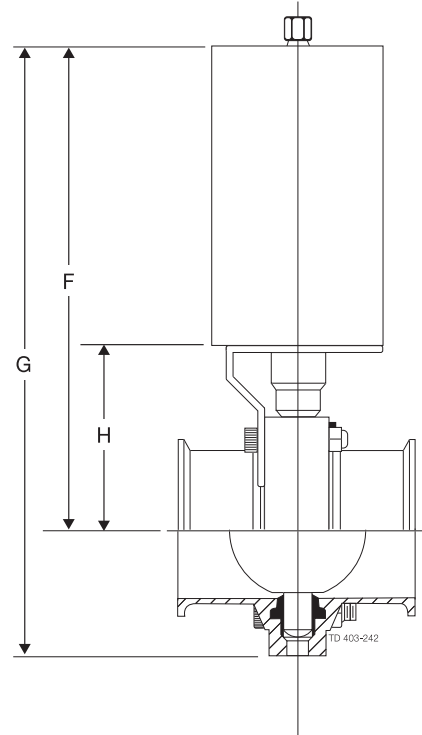
Fig. 2. Dimensions - actuator



Dimensions - actuator

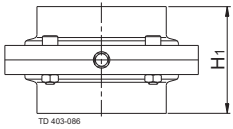


a. With coupling

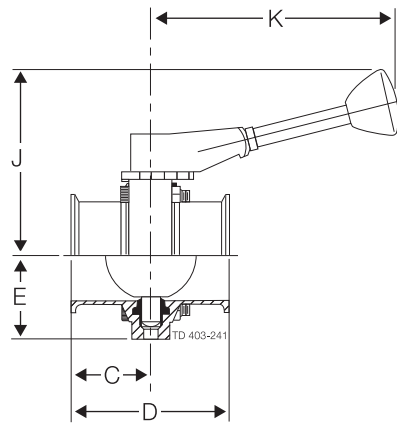


b. Mounted on a valve

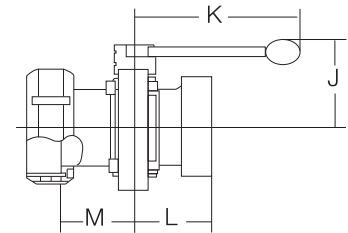
Dimensions - valve



a. LKB with welding ends



b. LKB multi-position green handle



c. LKB with male part/nut and liner

Dimensions (inch) - Valve

Size	1-inch	1½-inch	2-inch	2½-inch	3-inch	4-inch	6-inch
C	1.75	1.75	1.85	1.88	2.03	2.38	3.06
D	3.50	3.50	3.69	3.75	4.06	4.75	6.13
E	1.53	1.53	1.94	2.31	2.59	3.34	4.25
F	3.07	3.07	3.90	4.61	5.20	6.65	8.46
H ¹	1.85	1.85	2.05	2.13	2.44	3.15	3.15
J	3.23	3.23	3.62	4.02	4.21	5.00	5.98
J (green handle)	4.00	4.00	4.38	4.78	4.97	5.75	6.19
K (black handle)	4.72	4.72	4.72	4.72	6.38	6.38	6.34
K (green handle)	6.31	6.31	6.31	6.31	6.31	6.31	14.50
Weight LKB (lbs.)	2.64	2.20	3.31	4.63	10.36	19.84	-



Dimensions (inch) - Actuator

LKLA and LKLA-T:

Size	1-inch Ø85 mm	3-inch Ø85 mm	4-inch Ø85 mm	4-inch Ø133 mm	6-inch Ø85 mm	6-inch Ø133 mm
A1	9.61	9.53	9.53	14.29	9.69	14.29
A2	7.60	7.52	7.52	12.44	7.68	12.44
F	8.56	9.44	10.25	15.38	11.55	16.31
G	10.13	12.06	13.56	18.70	15.80	20.56
H	2.72	3.59	4.38	5.60	5.60	6.50
I	0.65	0.65	0.65	1.34	0.64	1.34
s	0.31	0.39	0.47	0.47	0.59	0.59
Function	NC,NO,A/A	NC,NO,A/A	NC,NO,A/A	NC,NO,A/A	A/A	NC,NO,A/A

Note! Suitability depends on process conditions

Connections

Compressed air

R1/8" (BSP), internal thread.

(Quick connect fittings for 1/4" tubing provided as standard)





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