Line rupture protection valve type LB

Line rupture protection valves, also called pipe rupture protection valves are a type of check valve. The valves are normally mounted directly on the cylinder. They prevent uncontrolled cylinder movement in the event of a pipe rupture or hose break.
The line rupture protection valve type LB offers a high level of safety in the event of pressure peaks. It features reproducibly accurate and secure closing at the pre-set trigger flow rate. Higher flow rates cause a plate raised from the valve seat by a spring to be pressed onto the housing seat by the flow forces and cause the valve to close. A variant with orifice bore in the valve plate permits a low flow rate in the locking direction. Type LB is available as a screw-in valve or in a housing version for in-line installation.
The line rupture protection valve type LB is used in industrial vehicles, lifting platforms and lifting equipment.

Features and benefits:
- Pressures up to 500 bar

Intended applications:
- Industrial trucks
- Lifting devices

Nomen-clature:	Line rupture safety valve
Design:	Insert valve Combination with housing for pipe connection
Adjustment:	Fixed
p_{max}:	500 bar
Q_{max}:	160 l/min

Design and order coding example

LB 2 | G | 1,0 | - 25

Response flow [lpm] Trigger volumetric flow Q_A in l/min

With/without orifice Orifice diameter 0.5 / 0.8 / 1.0 / 1.2 / 1.5 / 2 (dep. on type and size)

Design
- Screw-in valve (C)
- Design with housing (F, G)
- Fitting

Basic type, size: Line rupture safety valve type LB, size 2 to 4
- Version with imperial thread
- Version with metric thread
- Design with UNF thread

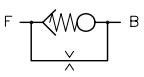
Function

LB

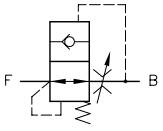
Simplified

Series

With orifice

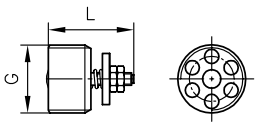


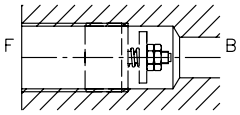
Detailed



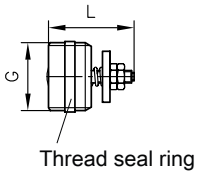
General parameters and dimensions

LB ..C
Screw-in valve



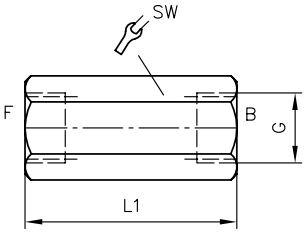


LB 11(21)C

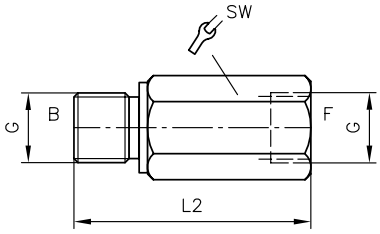


LB ..G

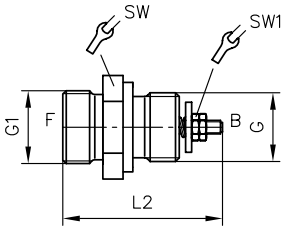
Valve with housing



LB ..F



LB 3 E
LB 4 E



	Q_{max} [lpm]	p_{max} [bar]	Ports		Dimensions [mm]					m [g][2]
			G	G1	L	L1	L2	SW = a/f	SW = a/f 1	
LB 1 (C, G, F)	4 ... 25	500	G 1/4 (A)	-	17.5	48	50	a/f 19	-	6 / 70
LB 11 C[1]	4 ... 25	700	G 1/4 (A)	-	17.5	-	-	-	-	6 / 70
LB 2 (C, G, F)	6.3 ... 50	500	G 3/8 (A)	-	21	52	58	a/f 22	-	12 / 100
LB 21 C[1]	6.3 ... 45	700	G 3/8 (A)	-	25	-	-	-	-	12 / 100
LB 3 (C, G, F)	16 ... 80	500	G 1/2 (A)	-	25	60	65	a/f 27	-	21 / 170
LB 4 (C, G, F)	25 ... 160	500	G 3/4 (A)	-	30.5	72	78	a/f 36	-	45 / 375
LB 3 E **LB 4 E**	4 ... 160	500	G 1/4 A - G 3/4 A	M18x1.5 - M36x2	-	-	46.8 - 64.4	SW 27 - SW 41	SW 7	150/210
LB 5	80 ... 200	300	G 1	-	38	-	-	-	-	102

1) Mounting thread, additionally sealed
2) Dimensions for insert valve and/or housing version

Associated technical data sheets:

- Line rapture protection valves, type LB: D 6990
- Line rupture safety valves type LB.E
  as a screw joint: Sk 6990 E