

2-way flow control valves type SB, SQ and SJ

The 2-way metering valves (lowering brake valves) type SB or SQ are preferentially used for flow control tasks of single-acting cylinders. In doing so, the lowering speed is largely kept constant regardless of the size of the load. The integrated sliding metering orifice enables completely free flow in the opposite direction. While with type SB, there is a slight load dependence preventing the occurrence of oscillations (e.g. required for fork lift trucks), type SQ has largely load-independent $\Delta p-Q$ characteristics.

These flow control valves are preferentially used to limit control flows in pilot circuits.

Features and benefits:

- Oscillation damping or load-independent
- Compact screw-in valve

Intended applications:

- General hydraulic systems
- Industrial trucks
- Lifting equipment

Nomenclature:	2-way flow control valve (drop rate braking valve)
Design:	Screw-in type with housing for in-line installation
Adjustment:	Fixed (pre-set) Tool adjustable from outside
p_{max}:	315 bar
Q_{max}:	0,25 ... 400 lpm

Design and order coding example

SB 2 1 C - 30

Response flow [l/min] Desired factory set response flow within the respective range

- Design** Adjustable or non adjustable version
- Screw-in version (C)
 - Version with housing for pipe mounting (E, F, G)

Additional versions

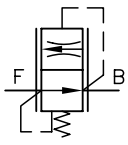
- With metric or UNF-thread
- With thread adaptor
- As banjo bolt and/or with swiveling screw fitting

Adjustment range Adjustable response flow

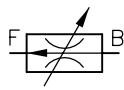
Basic type, size Type SB, SQ and SJ (without one-way orifice), size 0 to 5
Type DSJ (Q_{max} = 20 lpm, p_{max} = 300 bar) Flow control function in both directions e.g. for double acting cylinders

Function

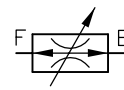
SB, SQ



SJ



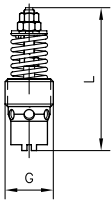
DSJ



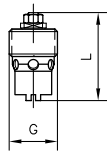
General parameters and dimensions

Screw-in valve ...C

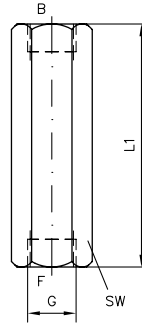
SB, SQ



SJ



With housing...G



	Coding for adjustment range of the set response flow from ... to ... [lpm] below						Ports (BSPP)	Dimensions [mm]			m [g]
	1	3	5	7	9	90		L	L1 _{max}	SW = a/f	
SB 0	1...1.6	1.6...2.5	2.5...4	4...6.3	6.3...10	10...15	G 1/4 (A)	39	78	19	13
SJ 0 ¹⁾								24	-	-	35
SB 1	2.5...4	4...6.3	6.3...10	10...16	16...25	25...35	G 3/8 (A)	43	82	22	23
SQ 1											
SB 2	16...21	21...28	28...37	37...50	50...67 ²⁾	-	G 1/2 (A)	49	96	27	40
SQ 2											
SB 3	37...50	50...67	67...90	90...120	120...150 ²⁾	-	G 3/4 (A)	61	106	32	80
SQ 3											
SB 4	80...100	100...125	125...160	160...200	200...250	-	G 1 (A)	78	145	41	150
SB 5	170...200	200...236	236...280	280...335	335...400	-		G 1 1/4 (A)	94	160	50
DSJ 1	1.0...21.0						G 1 1/4 (A)		39	78	19

1) Type SJ 0 without coding: adjust. range 0.25 ... 1.2 lpm

2) Not for type SQ..

Associated technical data sheets:

- Lowering brake valves type SB, SQ: [D 6920](#)
- 2-way flow control valves type SJ: [D 7395](#)
- 2-way flow control valves type CSJ: [D 7736](#)
- Double-acting 2-way flow control valves type DSJ: [D 7825](#)