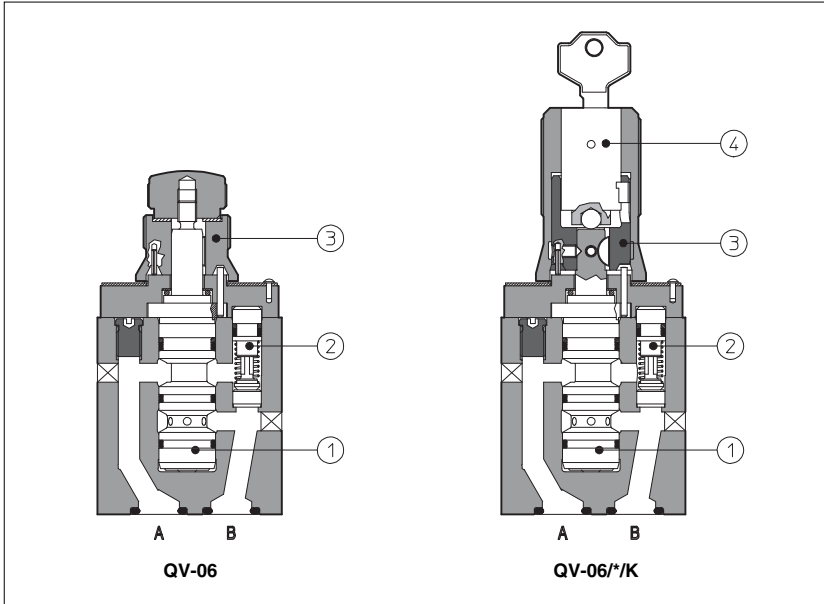


Flow control valves type QV-06

pressure compensated, two way, ISO 4401 size 06



QV are flow control valves with pressure compensator ①: the controlled flow rate is independent of pressure variations.

They are usually supplied with a built-in check valve ② to allow the free flow in the opposite direction.

The flow is regulated by turning a graduate micrometer knob ③. Clockwise rotation increases the flow regulation. Optional versions with locking key ④ on the adjustment knob are available on request.

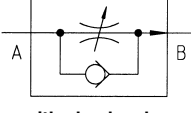
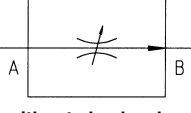
ISO 4401 size 06.

Flow up to 1,5; 6; 11; 16; 24 l/min (depending on models).
Pressure up to 250 bar.

Valves designed to operate in hydraulic systems with hydraulic mineral oil or synthetic fluid having similar lubricating characteristics.

1 MODEL CODE	QV - 06 / 6 /K ** /*
Pressure compensated flow control valve	Synthetic fluids: WG = water-glycol PE = phosphate ester
Size: 06	Series number
Maximum adjustable flow rate: 1 = 1,5 l/min 6 = 6 l/min 11 = 11 l/min 16 = 16 l/min 24 = 24 l/min	Options: /K = with lock key for the setting knob /V = without by-pass check valve

2 HYDRAULIC CHARACTERISTICS

Hydraulic symbols					
	with check valve	without check valve			
Valve model	QV-06/1	QV-06/6	QV-06/11	QV-06/16	QV-06/24
Max regulated flow [l/min]	1,5	6	11	16	24
Min regulated flow [cm³/min]	50				
Max flow B→A through check valve [l/min]	24				
Regulating Δp [bar]	3	3	5	6,5	8
Max flow on port A [l/min]	24				
Max pressure [bar]	250				

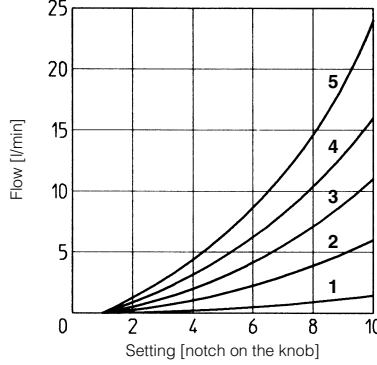
3 MAIN CHARACTERISTICS OF FLOW CONTROL VALVES TYPE QV-06

Assembly position / location	Any position
Subplate surface finishing	Roughness index $\sqrt{0.4}$, flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	-20°C to +70°
Fluid	Hydraulic oil as per DIN 51524 ... 535; for other fluids see section I
Recommended viscosity	15 ÷ 100 mm²/s at 40°C (ISO VG 15 ÷ 100)
Fluid contamination class	ISO 19/16, achieved with in line filters at 25 μm value and β ₂₅ ≥ 75 (recommended)
Fluid temperature	-20°C +60°C (standard and /WG seals) -20°C +80°C (/PE seals)

4 DIAGRAMS based on mineral oil ISO VG 46 at 50°C

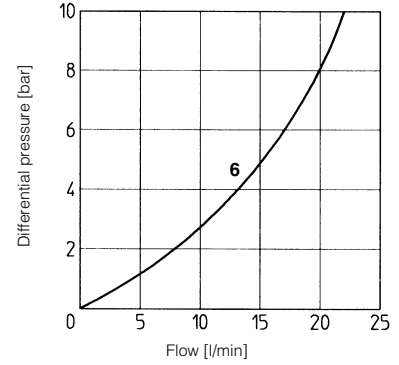
4.1 Regulation diagram

- 1 = QV-06/1
- 2 = QV-06/6
- 3 = QV-06/11
- 4 = QV-06/16
- 5 = QV-06/24



4.2 Q/Δp diagram through the check valve for free flow B→A

- 6 = QV-06/*



5 DIMENSIONS [mm]

Option /K

Mass: 1,2 Kg

ISO 4401: 2005
Mounting surface: 4401-03-02-05
(see note 1)

Fastening bolts:
 4 socket head screws M5x70 class 12.9
 Tightening torque = 8 Nm
 Seals: 2 OR 117
 Diameter of ports A, B: Ø = 7 mm

note 1: the manifold interface has to be provided only of the A and B ports.
 The valve cannot be installed on manifolds with ISO 4401-AB-03 interface with P and T ports.

ASSEMBLY IN MODULAR STACK
 see section 6

- ① = Flow control valve type QV-06
 Note that the valve(s) is (are) mounted:
 - on side port A for BHQ-011, BHQ-013, BHQ-016 and BHQ-023
 - on side port B for BHQ-014 and BHQ-024
 - on both sides for BHQ-012 and BHQ-022
- ② = Modular plate type BHQ, see section 6
- ③ = Closing element. This element can be on side port A or side port B depending on models. It is not present on BHQ-011, BHQ-016, BHQ-012 and BHQ-022
- ④ = Directional valve type DH (ISO 4401 size 06)

6 MODULAR PLATES TYPE BHQ

The modular plates type BHQ allow the assembling of valves type QV-06 in a modular stack with other components having ISO 4401 size 06 mounting surface. See below for model code and functional sketches; see section 5 for dimensions and example of assembly.

Available also version for water-glycol and for phosphate ester (add respectively /WG and /PE at the end of the model code).
 The plates type BHQ are supplied with 4 fastening bolts M5x60 (8 for BHQ-012 and BHQ-022) to fix one (or two) QV-06 which are supplied without fastening bolts.

7 MOUNTING PLATES TYPE BA

Valve	Subplate model	Ports location	Ports A, B, P, T	Ø Counterbore [mm] A, B, P, T	Mass [Kg]
QV-06	BA-202/Q	Ports A, B, P, T underneath;	G 3/8"	-	1,2
	BA-204/Q	Ports P, T underneath; Ports A, B on lateral side	G 3/8"	25,5	1,2
	BA-302/Q	Ports A, B, P, T underneath;	G 1/2"	30	1,8

The plates type BA-***/Q are supplied with 4 fastening bolts M5x60 because QV-06 are supplied without fastening bolts.