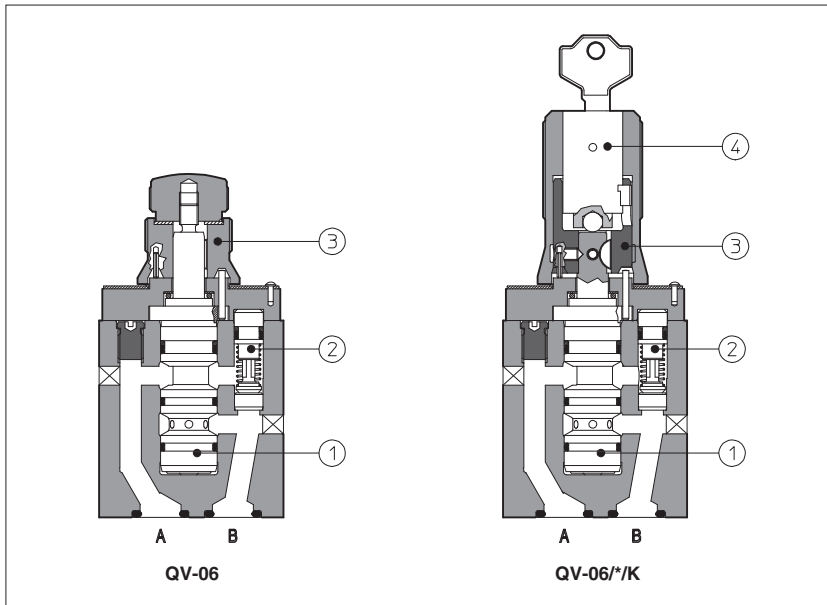


Flow control valves type QV-06

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.

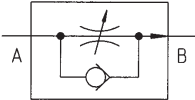
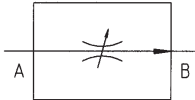
ISO 4401 size 06.

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				

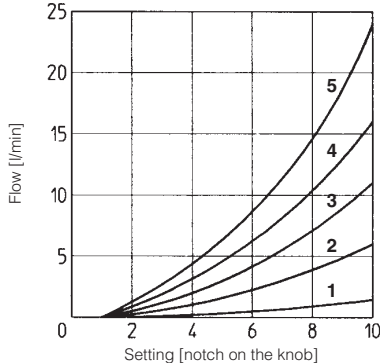
3 MAIN CHARACTERISTICS OF FLOW CONTROL VALVES TYPE QV-06

Assembly position / location	Any position
Subplate surface finishing	Roughness index \sqrt{Ra} , 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

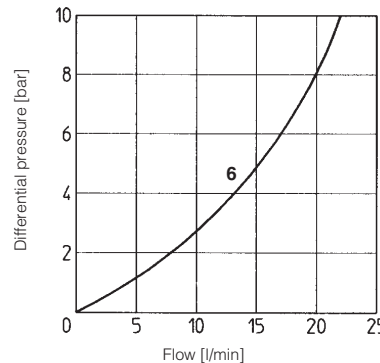
4.1 Regulation diagram

- 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

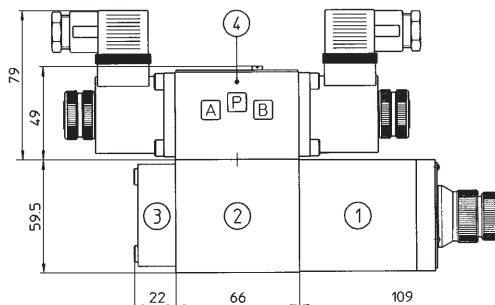
ISO 4401: 2005
Mounting surface: 4401-03-02-0-05
(see note 1)

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

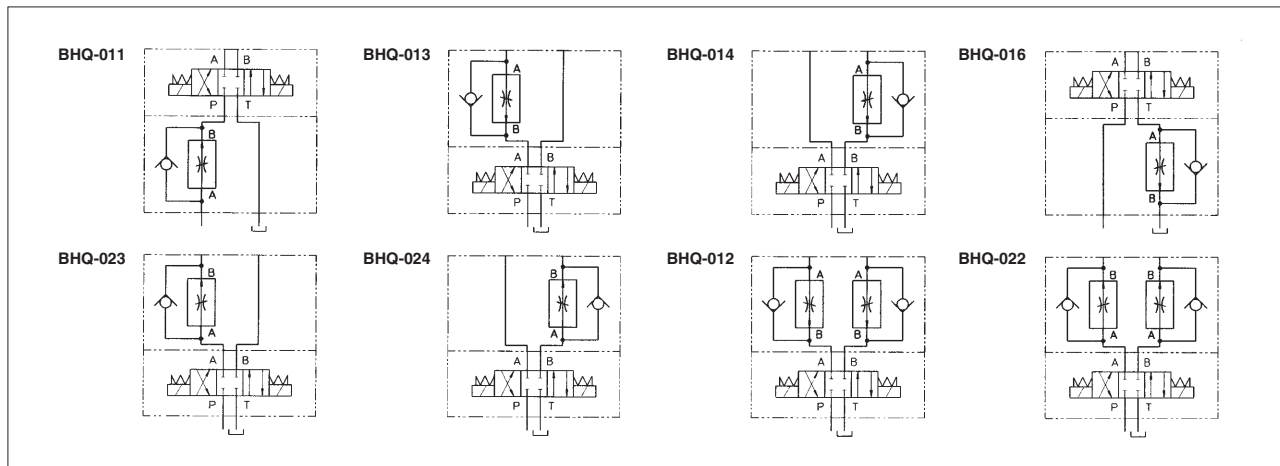
see section 6



- 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 6 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.