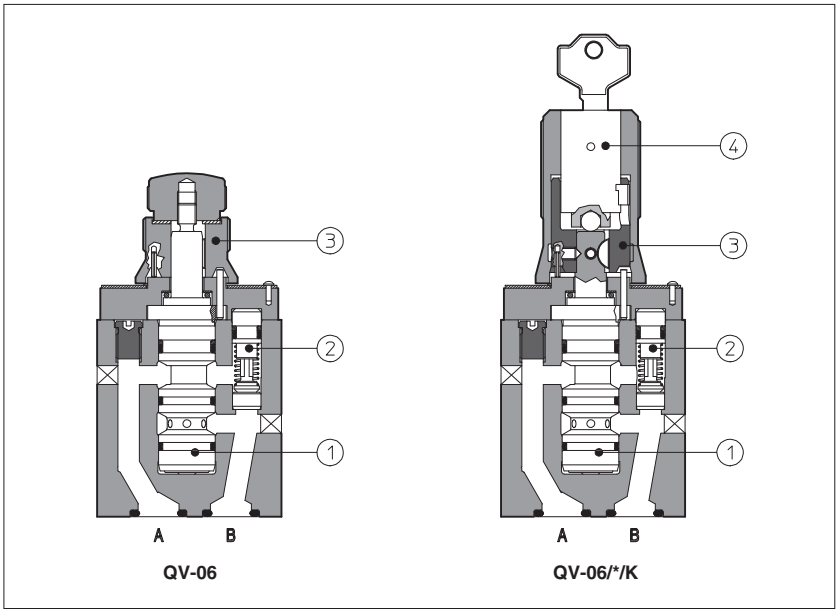
Flow control valves type QV-06

pressure compensated, two way, ISO 4401 size 06



QV-06 **QV-06/*/K**

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	**	/	*

QV: Pressure compensated flow control valve

06: Size: 06

6: Maximum adjustable flow rate:
1 = 1,5 l/min **11** = 11 l/min **24** = 24 l/min
6 = 6 l/min **16** = 16 l/min

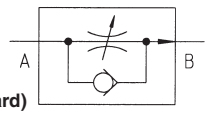
K: Options:
K = with lock key for the setting knob
V = without by-pass check valve

******: Series number

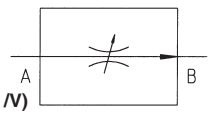
*****: Seals material, see section 4:
- = NBR
PE = FKM
BT = HNBR

2 HYDRAULIC CHARACTERISTICS

Hydraulic symbols



with check valve (standard)



without check valve (option /V)

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, SEALS AND FLUIDS - for other fluids not included in above table, consult our technical office

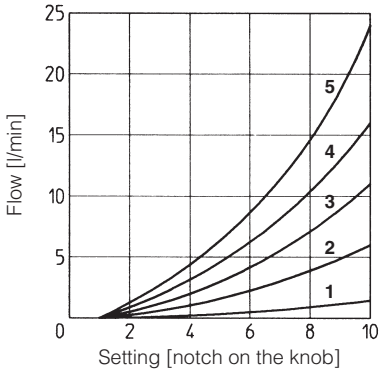
Assembly position	Any position
Ambient temperature	Standard = -30°C ÷ +70°C /PE option = -20°C ÷ +70°C /BT option = -40°C ÷ +70°C
Seals, recommended fluid temperature	NBR seals (standard) = -20°C ÷ +60°C, with HFC hydraulic fluids = -20°C ÷ +50°C FKM seals (/PE option) = -20°C ÷ +80°C HNBR seals (/BT option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C
Recommended viscosity	15÷100 mm²/s - max allowed range 2,8 ÷ 500 mm²/s
Fluid contamination class	ISO 4406 class 21/19/16 NAS 1638 class 10, in line filters of 25 μm (β10 ≥75 recommended)

Hydraulic fluid	Suitable seals type	Classification	Ref. Standard
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDU, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	

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

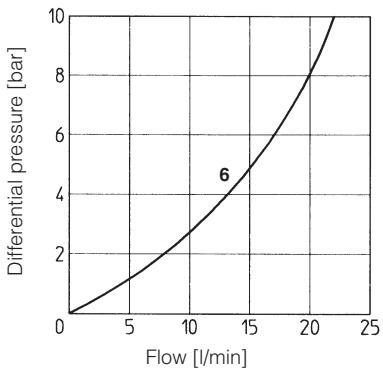
4.1 Regulation diagram

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

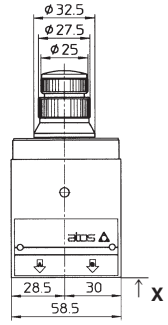


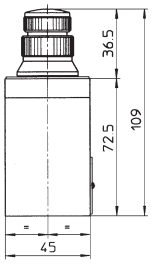
4.2 Q/Δp diagram through the check valve for free flow B→A

6 = QV-06/*

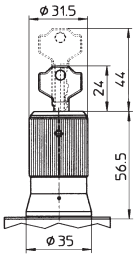


5 DIMENSIONS [mm]

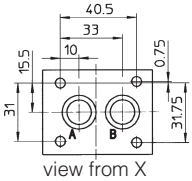




Mass: 1,2 Kg



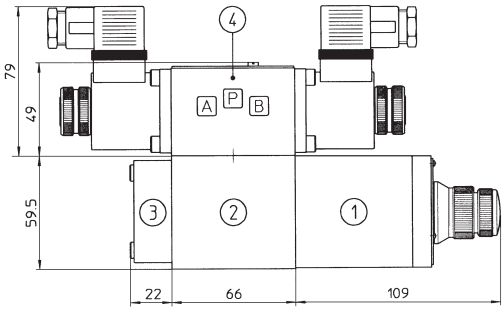
Option /K



view from X

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

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

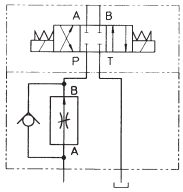
② = Modular plate type BHQ, see section 6
③ = Closing element. This element can be on side port A or side port B depending on models. It is not present on BHQ-011, BHQ-016, BHQ-012 and BHQ-022
④ = Directional valve type DH* (ISO 4401 size 06)

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.

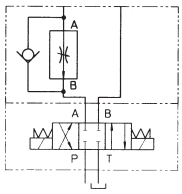
6 MODULAR PLATES TYPE BHQ

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.

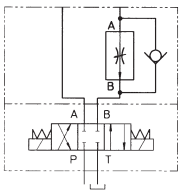
BHQ-011



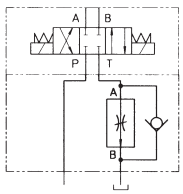
BHQ-013



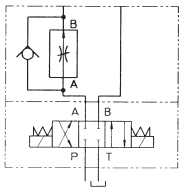
BHQ-014



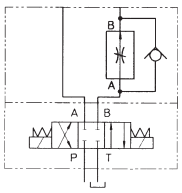
BHQ-016



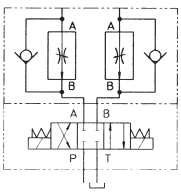
BHQ-023



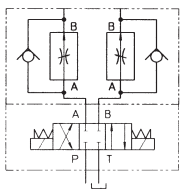
BHQ-024



BHQ-012



BHQ-022



Available also version for phosphate ester (add /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.