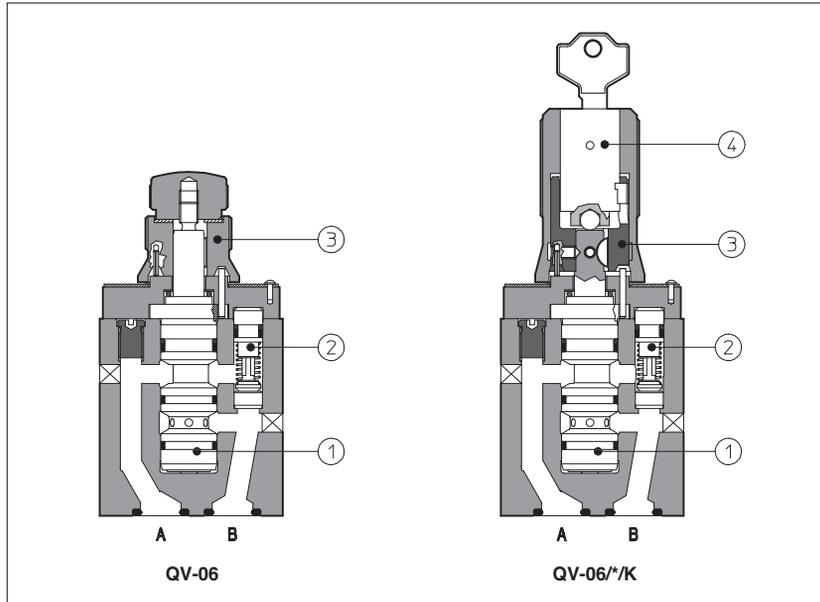


# Flow control valves type QV-06

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

<b>QV</b>	-	<b>06</b>	/	<b>6</b>	/	<b>K</b>	**	/	*
Pressure compensated flow control valve							Series number		Seals material, see section 4: - = NBR <b>PE</b> = FKM <b>BT</b> = HNBR
Size: <b>06</b>									
Maximum adjustable flow rate:									
<b>1</b> = 1,5 l/min				<b>11</b> = 11 l/min		<b>24</b> = 24 l/min			
<b>6</b> = 6 l/min				<b>16</b> = 16 l/min					
							Options:		
							<b>K</b> = with lock key for the setting knob		
							<b>V</b> = without by-pass check valve		

## 2 HYDRAULIC CHARACTERISTICS

Hydraulic symbols					
	with check valve (standard)		without check valve (option V)		
Valve model	<b>QV-06/1</b>	<b>QV-06/6</b>	<b>QV-06/11</b>	<b>QV-06/16</b>	<b>QV-06/24</b>
Max regulated flow [l/min]	1,5	6	11	16	24
Min regulated flow [cm <sup>3</sup> /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				

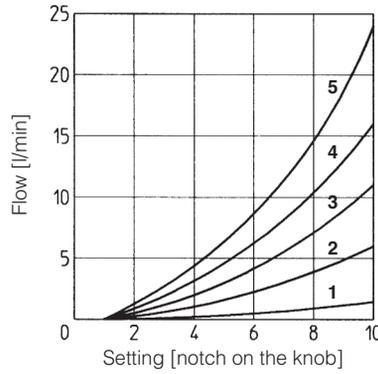
## 3 MAIN CHARACTERISTICS, SEALS AND FLUIDS - for other fluids not included in below table, consult our technical office

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 mm <sup>2</sup> /s - max allowed range 2,8 ÷ 500 mm <sup>2</sup> /s		
Fluid contamination class	ISO 4406 class 21/19/16 NAS 1638 class 10, in line filters of 25 μm (β <sub>25</sub> ≥ 75 recommended)		
<b>Hydraulic fluid</b>	<b>Suitable seals type</b>	<b>Classification</b>	<b>Ref. Standard</b>
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524
Flame resistant without water	FKM	HFDR, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	

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

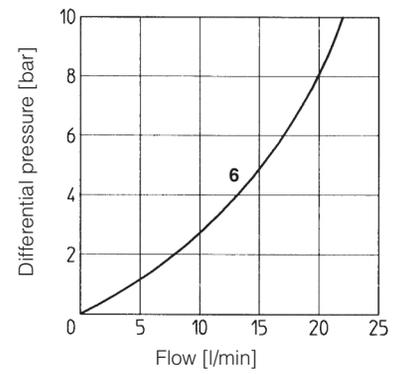
**4.1 Regulation diagram**

- 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

**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

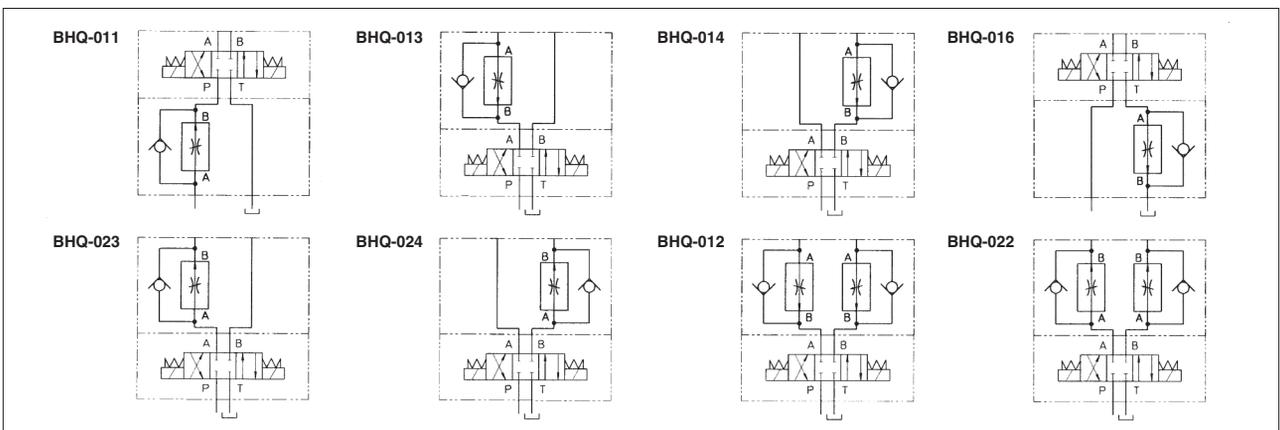
**ASSEMBLY IN MODULAR STACK**  
see section 6

- 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.



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.