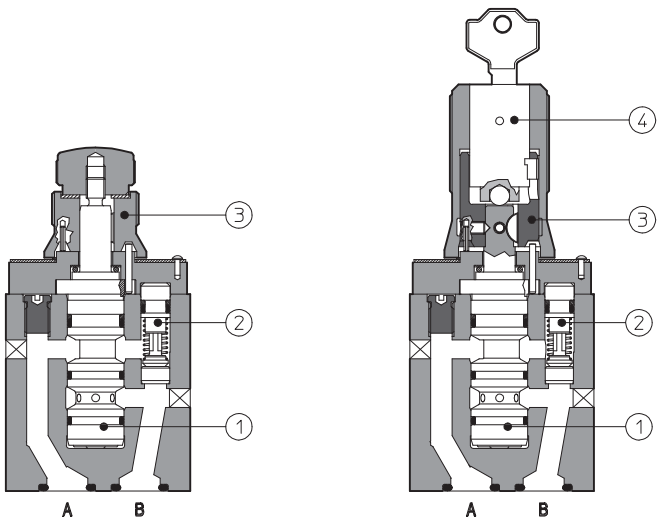
Flow control valves type QV-06

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.

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

Size: **06** - ISO 4401
Max flow: **24 l/min**
Max pressure: **250 bar**

1 MODEL CODE

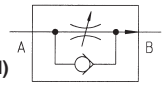
QV	-	06	/	6	/	K	**	/	*

- **QV**: Pressure compensated flow control valve
- Size: **06**
- 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
- Options:
  K = with lock key for the setting knob
  V = without by-pass check valve
- ******: Series number
- *****: Seals material, see section 3:
  - = NBR
  PE = FKM
  BT = HNBR

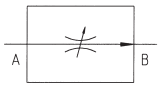
2 HYDRAULIC CHARACTERISTICS

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 below table, consult our technical office

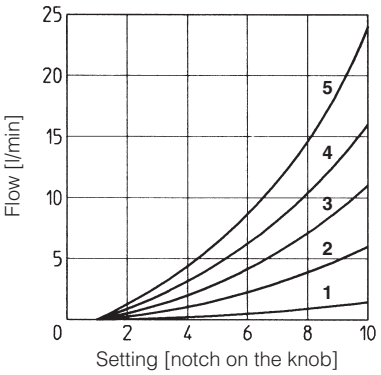
Assembly position	Any position
Compliance	RoHS Directive 2011/65/EU as last update by 2015/65/EU REACH Regulation (EC) n°1907/2006
Ambient temperature	Standard = -30°C ÷ +70°C /PE option = -20°C ÷ +70°C /BT option = -40°C ÷ +70°C
Seals, recommended fluid temperature	NBR seals (standard) = -20°C ÷ +80°C, 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
Max fluid contamination level	ISO4406 class 20/18/15 NAS1638 class 9, see also filter section at www.atos.com or KTF catalog

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

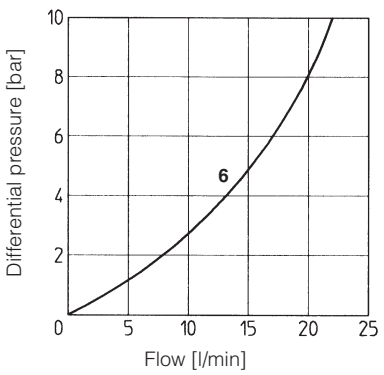
4.1 Regulation diagram

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

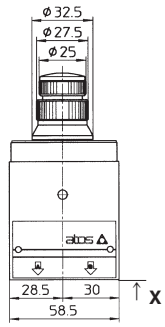


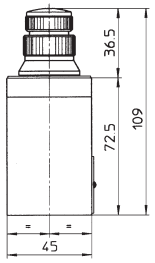
4.2 Q/Δp diagram through the check valve for free flow B→A

6 = QV-06/*

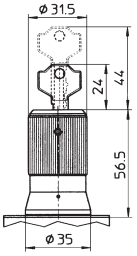


5 DIMENSIONS [mm]

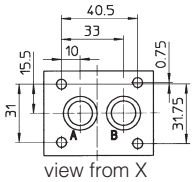




Mass: 1,2 Kg



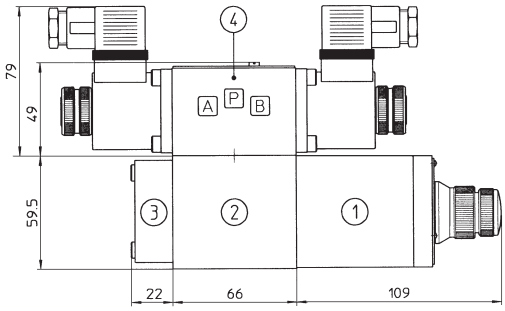
Option /K



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



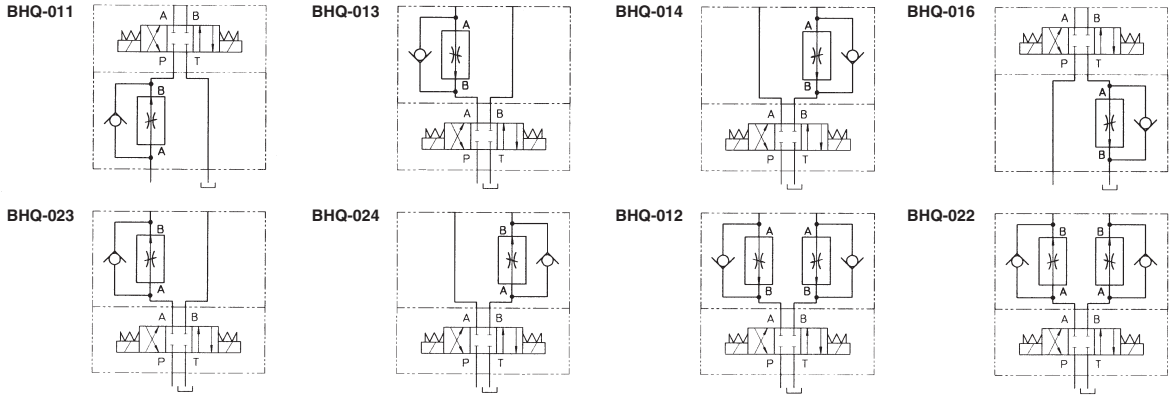
① = Flow control valve type QV-06
Note that the valve(s) is (are) mounted:
- on side port A for BHQ-011, BHQ-013, BHQ-016 and BHQ-023
- on side port B for BHQ-014 and BHQ-024
- on both sides for BHQ-012 and BHQ-022

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.



Available also version for phosphate ester (add /PE at the end of the model code).

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