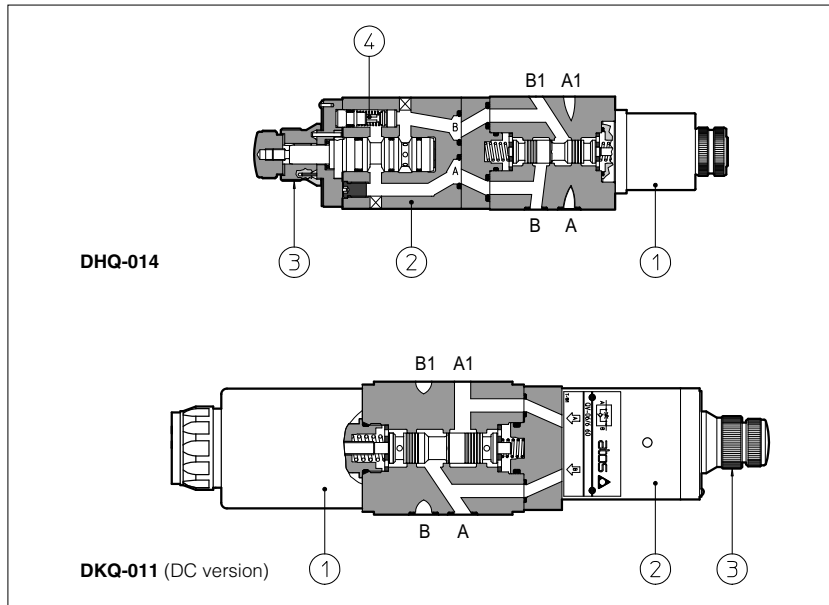


# Modular fast/slow valves type DHQ and DKQ

compensated flow control and by-pass solenoid valve, ISO 4401 sizes 06 and 10



DHQ and DKQ are modular units composed by one by-pass solenoid valve (1) and one 2-way pressure compensated flow control valve (2) type QV-06 (tab. C210).

The flow control valve is provided with a built-in check valve (4) to allow the free flow in the opposite direction.

The flow adjustment is obtained by turning the graduated micrometer knob (3). Clockwise rotation decreases the throttling (passage reduced).

Optional versions with locking key on the adjustment knob are available on request.

DHQ = ISO 4401 size 06 interface; controlled flow up to 1,5-6-11-16-24 l/min (depending on models); free flow up to 36 l/min.

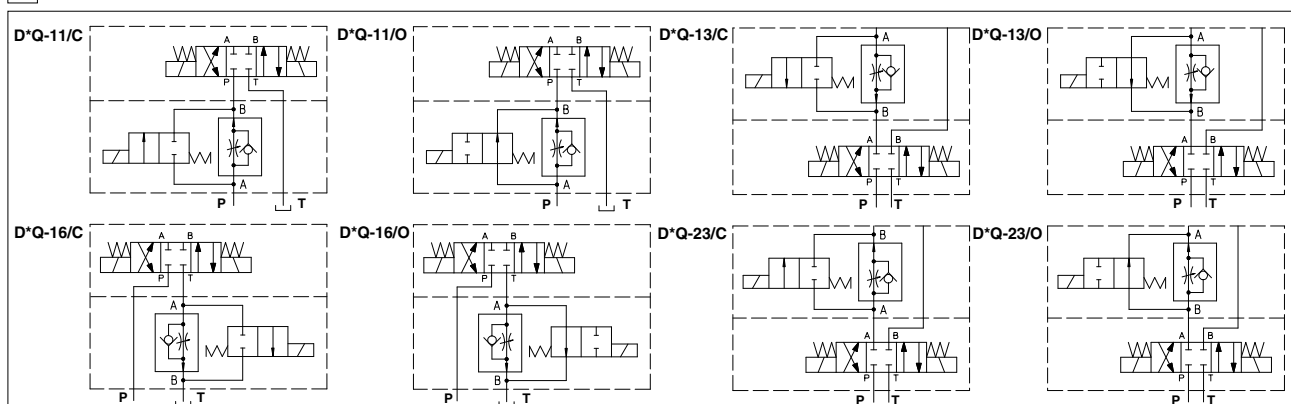
DKQ = ISO 4401 size 10 interface; controlled flow up to 1,5-6-11-16-24 l/min (depending on models); free flow up to 120 l/min.

Pressure up to 250 bar.

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

<b>1</b>	<b>MODEL CODE</b>	<b>13</b>	<b>/</b>	<b>C</b>	<b>/</b>	<b>6</b>	<b>/K</b>	<b>-</b>	<b>I</b>	<b>X</b>	<b>24DC</b>	<b>**</b>	<b>/*</b>
	<b>DHQ-0</b>												
	Modular flow control unit, pressure compensated, size: <b>DHQ-0</b> = 06 <b>DKQ-0</b> = 10										Supply voltage, see section 4 <b>00</b> = unit without coil	Series number	Synthetic fluids: <b>WG</b> = water glycol <b>PE</b> = phosphate ester
	Configuration, see section 2 control of flow discharged from the actuator <b>13</b> = on port A <b>14</b> = on port B <b>16</b> = on port T control of flow entering the actuator: <b>11</b> = on port P <b>23</b> = on port A <b>24</b> = on port B									<b>X</b> = without connector - See section 4			
	<b>C</b> = flow controlled when solenoid is de-energized <b>O</b> = flow controlled when solenoid is energized									Type of solenoid: for DHQ: I = solenoid OI for AC and DC supply for DKQ: E = solenoid AE for AC and DC supply ER = solenoid AER for AC and DC supply, certified cURus			
										Options: <b>/K</b> = with lock key for the setting knob <b>/I</b> = without by-pass check valve <b>/L1, L2, L3</b> = device for switching time control (only for DHQ, see tab. E010)			
											Maximum adjustable controlled flow: <b>1</b> = 1,5 l/min; <b>6</b> = 6 l/min; <b>11</b> = 11 l/min; <b>16</b> = 16 l/min; <b>24</b> = 24 l/min		

## 2 HYDRAULIC CHARACTERISTICS



**D\*Q-014/\*, D\*Q-024/\*** are similar to corresponding D\*Q-013/\*, D\*Q-023/\* but control the flow through port B of solenoid valve

Valve model	DHQ-0***/1 DKQ-0***/1	DHQ-0***/6 DKQ-0***/6	DHQ-0***/11 DKQ-0***/11	DHQ-0***/16 DKQ-0***/16	DHQ-0***/24 DKQ-0***/24
Max regulated flow [l/min]	1,5	6	11	16	24
Min regulated flow [cm <sup>3</sup> /min]	50	50	50	50	50
Regulating Δp [bar]	3	3	5	6,5	8
Max flow through check valve [l/min]	24				
Max free flow	36 l/min for DHQ; 120 l/min for DKQ				
Max flow on port A [l/min]	24				
Max pressure [bar]	250				

### 3 MAIN CHARACTERISTICS OF FLOW CONTROL UNITS TYPE DHQ AND DKQ

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°C
Fluid	Hydraulic oil as per DIN 51524 ... 535; for other fluids see section <b>I</b>
Recommended viscosity	15 ÷ 100 mm <sup>2</sup> /s at 40°C (ISO VG 15 ÷ 100)
Fluid contamination class	ISO 19/16, achieved with in line filters at 25 µm value and $\beta_{25} \geq 75$ (recommended)
Fluid temperature	-20°C +60°C (standard and /MG seals)    -20°C +80°C (/PE seals)

### 4 ELECTRIC/ELECTRONIC CONNECTORS AND ELECTRIC FEATURES

For electric/electronic connectors (to be ordered separately) and electric features of DHQ units, see tab. E010.  
For electric/electronic connectors (to be ordered separately) and electric features of DKQ units, see tab. E025.

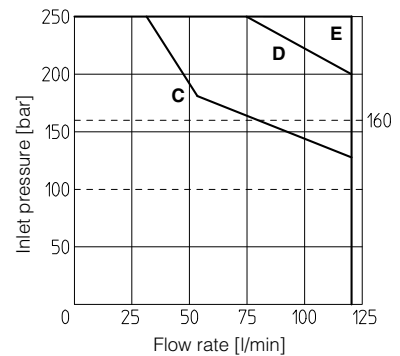
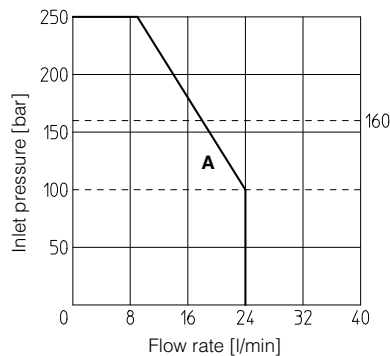
### 5 OPERATING LIMITS

#### DHQ

**A** = DHQ with OI solenoid

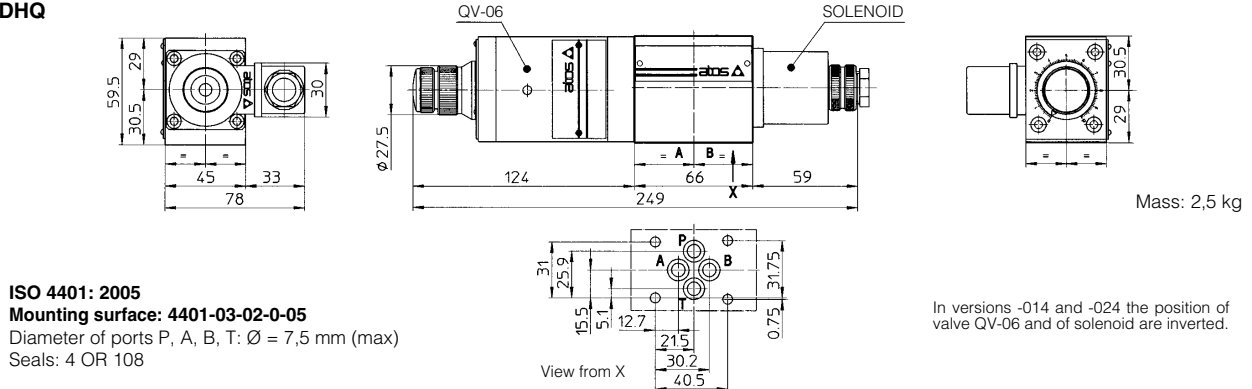
#### DKQ

**C** = DKQ with AE and AER solenoid, version 011/O, 023/O, 024/O  
**D** = DKQ with AE and AER solenoid, version 013/C, 014/C, 016/C  
**E** = DKQ with AE and AER solenoid version 011/C, 013/O, 014/O, 016/O, 023/C, 024/C



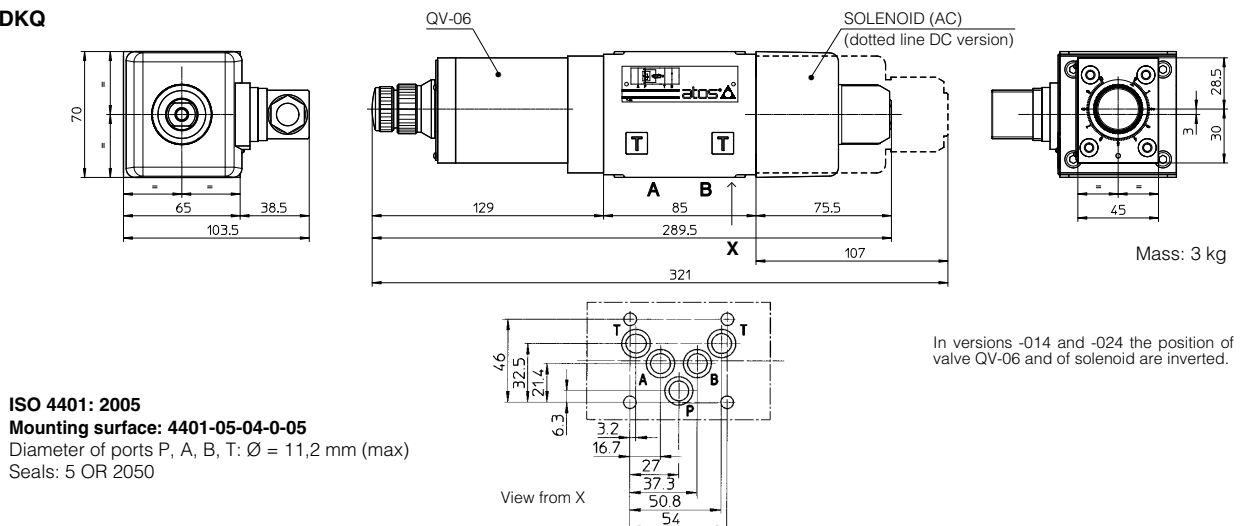
### 6 INSTALLATION DIMENSIONS [mm]

#### DHQ



Fastening bolts: 4 socket head screws M5. The length depends on number and type of modular elements associated

#### DKQ



Fastening bolts: 4 socket head screws M6. The length depends on number and type of modular elements associated

Overall dimensions refer to valves with connectors type SP-666