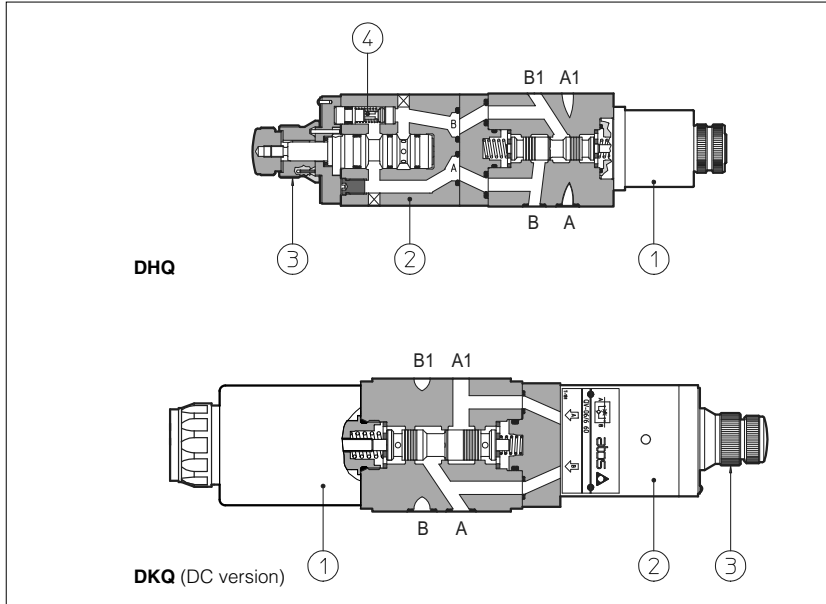


Modular fast/slow valves type **DHQ** and **DKQ**

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.

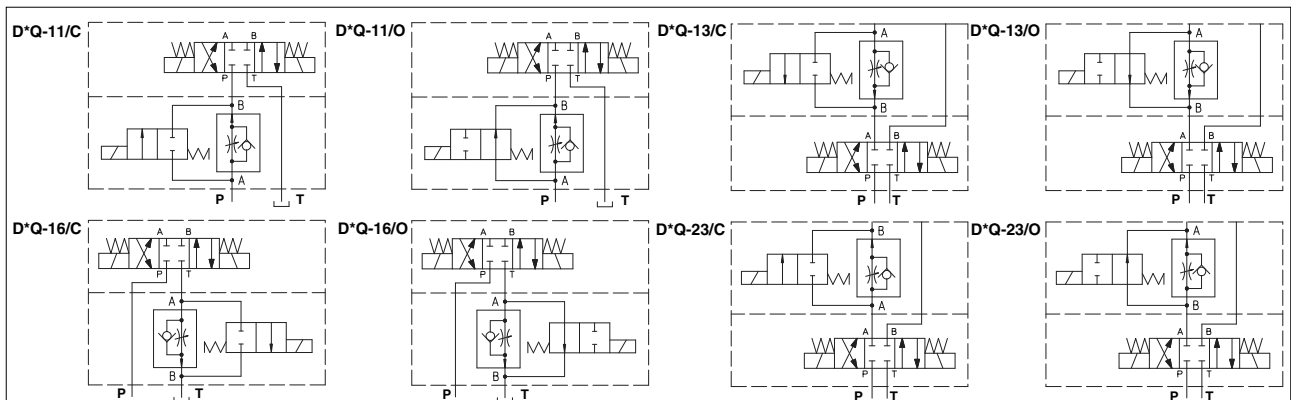
DKQ = ISO 4401 size 10 interface; controlled flow up to 1,5-6-11-16-24 l/min (depending on models); free flow up to 120 l/min.

Pressure up to 250 bar.

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

1	MODEL CODE	DHQ-0	13	/	C	/	6	/K	-	I	X	24DC	**	/*
	Modular flow control unit, pressure compensated, size: DHQ-0 = 06 DKQ-0 = 10											Supply voltage, see section 4 00 = unit without coil	Series number	Synthetic fluids: WG = water glycol PE = phosphate ester
	Configuration, see section 2 control of flow discharged from the actuator 13 = on port A 14 = on port B 16 = on port T control of flow entering the actuator: 11 = on port P 23 = on port A 24 = on port B							Type of solenoid: for DHQ: I = solenoid OI for AC and DC supply U = solenoid OU for DC supply for DKQ: E = solenoid AE for AC and DC supply ER = solenoid AER for AC and DC supply, certified C UR US				X = without connector - See section 4		
	C = flow controlled when solenoid is de-energized O = flow controlled when solenoid is energized							Options: /K = with lock key for the setting knob /I = without by-pass check valve L1, L2, L3 = device for switching time control, see tab. E010 for DHQ and E025 for DKQ						
								Maximum adjustable controlled flow: 1 = 1,5 l/min; 6 = 6 l/min; 11 = 11 l/min; 16 = 16 l/min; 24 = 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 ³ /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{Ra} , 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 I
Recommended viscosity	15 ÷ 100 mm ² /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 /WG 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.

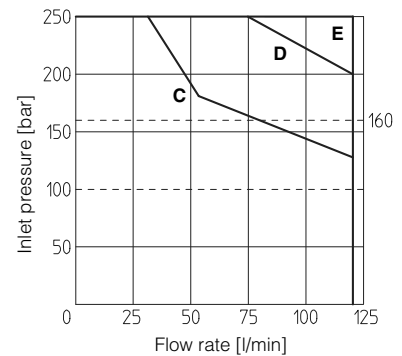
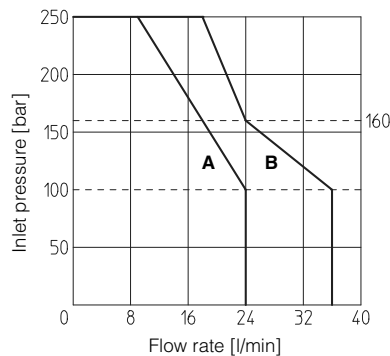
5 OPERATING LIMITS

DHQ

A = DHQ with OI solenoid
B = DHQ with OU solenoid

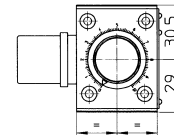
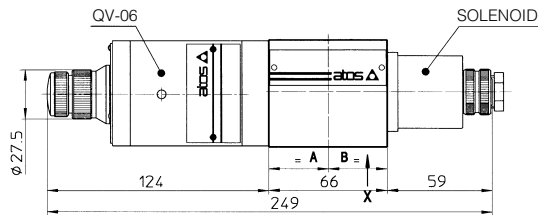
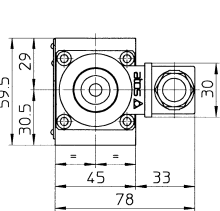
DKQ

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

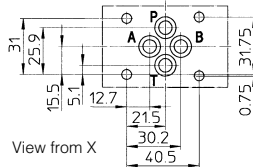


Mass: 2,5 kg

ISO 4401: 2005

Mounting surface: 4401-03-02-0-05

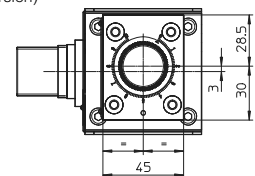
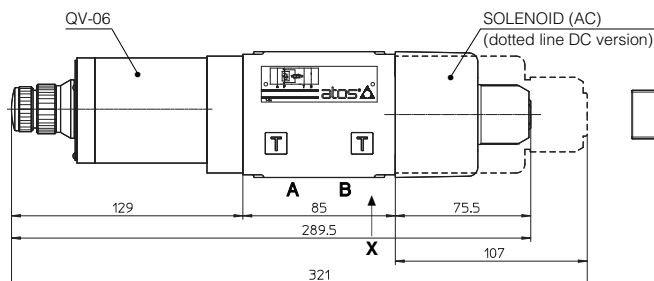
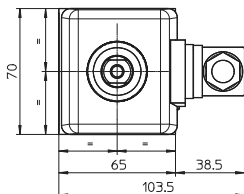
Diameter of ports P, A, B, T: $\varnothing = 7,5$ mm (max)
Seals: 4 OR 108



In versions -014 and -024 the position of valve QV-06 and of solenoid are inverted.

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

DKQ

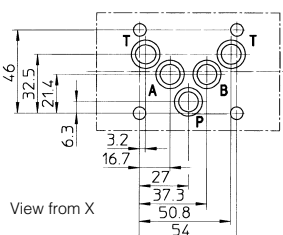


Mass: 3 kg

ISO 4401: 2005

Mounting surface: 4401-05-04-0-05

Diameter of ports P, A, B, T: $\varnothing = 11,2$ mm (max)
Seals: 5 OR 2050



In versions -014 and -024 the position of valve QV-06 and of solenoid are inverted.

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