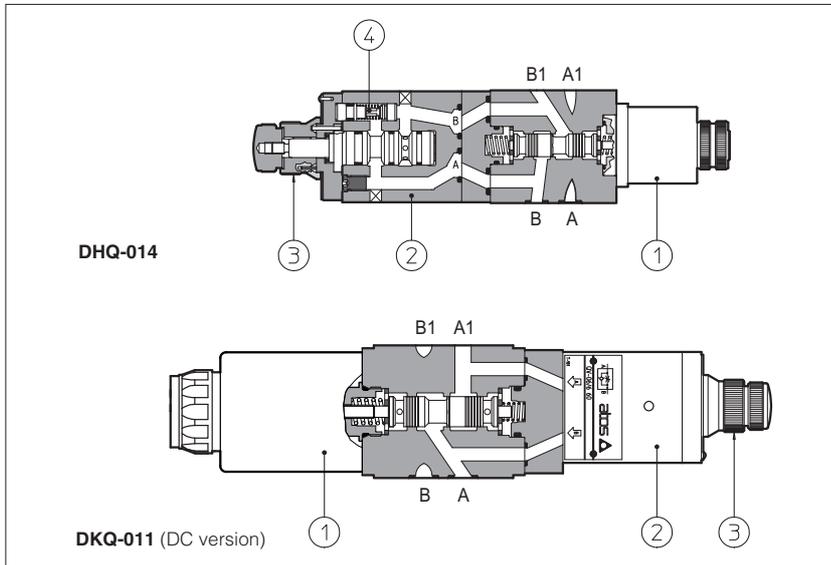


Modular fast/slow valves type **DHQ** and **DKQ**

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

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

Mounting surface:

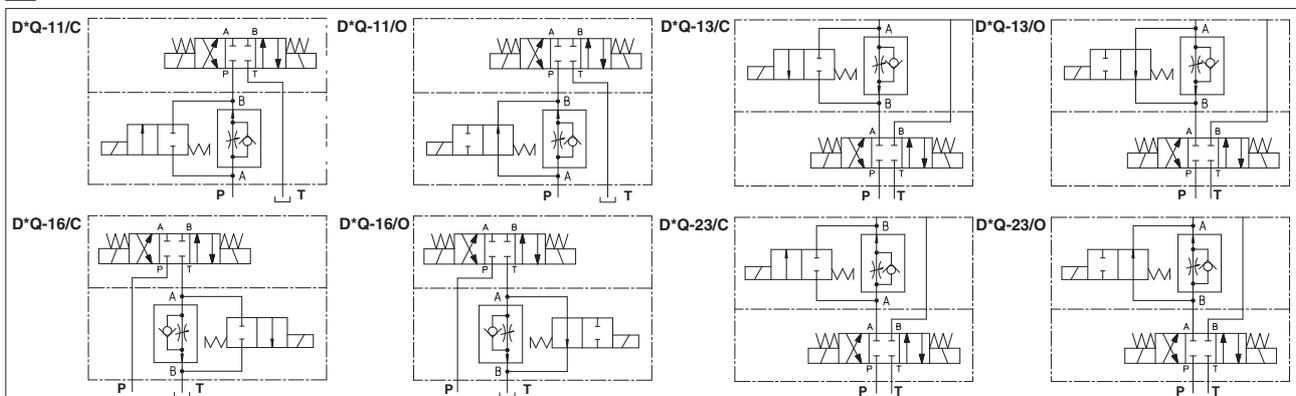
ISO 4401 size 06 and 10

Max pressure: up to **250 bar**

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	Series number
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			X = without connector (1): See section 7 for available connectors, to be ordered separately -00 = solenoid valve without coils (for DHQ) -00-AC = AC solenoid valve without coils (for DKQ) -00-DC = DC solenoid valve without coils (for DKQ)	Seals material, see section 3: - = NBR PE = FKM BT = HNBR
C = flow controlled when solenoid is de-energized O = flow controlled when solenoid is energized		Options: K = with lock key for the setting knob V = without by-pass check valve	Type of solenoid: for DHQ: I = solenoid OI for AC and DC supply with cURus certification for DKQ: E = solenoid AE for AC and DC supply with cURus certification	
	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 00 = without flow control valve			

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	/1	/6	/11	/16	/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, SEALS and HYDRAULIC FLUID - for other fluids not included in below table, consult our technical office

Assembly position / location	Any position		
Subplate surface finishing	Roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)		
Ambient temperature	Standard execution = -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 ² /s - max allowed range 2.8 ÷ 500 mm ² /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 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

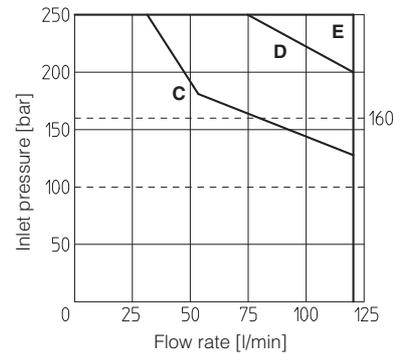
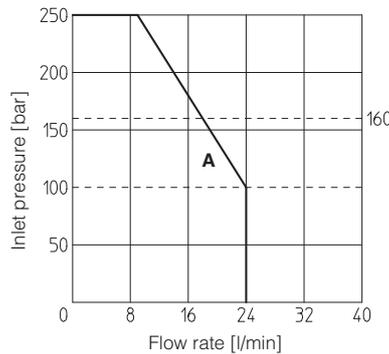
A = DHQ with OI solenoid

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

ISO 4401: 2005
Mounting surface: 4401-03-02-0-05
 Diameter of ports P, A, B, T: Ø = 7,5 mm (max)
 Seals: 4 OR 108

Mass: 2,5 kg

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

ISO 4401: 2005
Mounting surface: 4401-05-04-0-05
 Diameter of ports P, A, B, T: Ø = 11,2 mm (max)
 Seals: 5 OR 2050

Mass: 3 kg

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 666