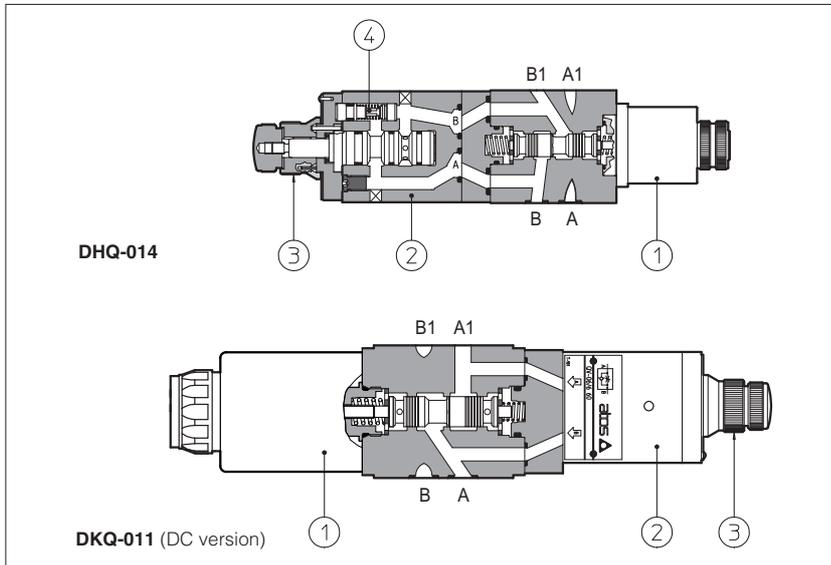


# Modular fast/slow valves type **DHQ** and **DKQ**

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:

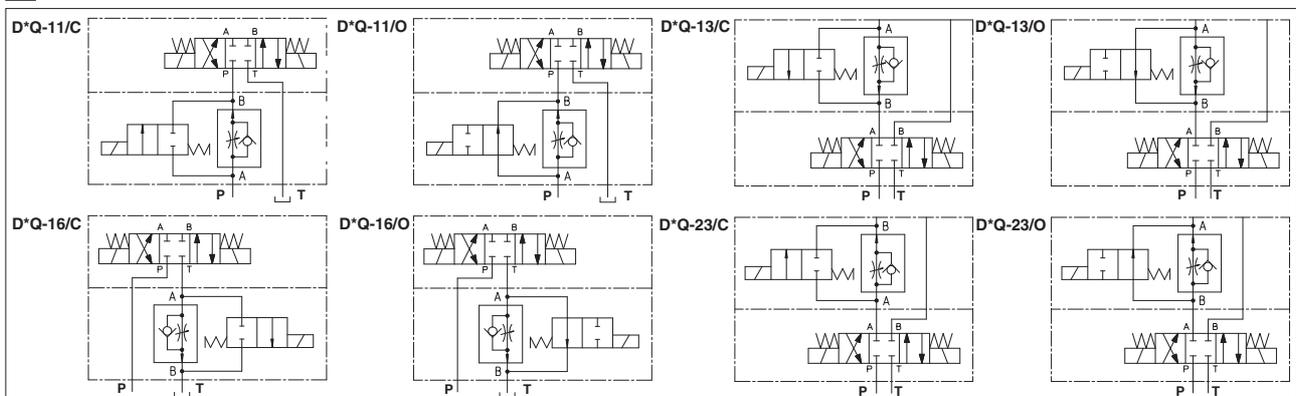
**ISO 4401 size 06 and 10**

Max pressure: up to **250 bar**

## 1 MODEL CODE

<b>DHQ-0</b>	<b>13</b>	/	<b>C</b>	/	<b>6</b>	/	<b>K</b>	-	<b>I</b>	<b>X</b>	<b>24DC</b>	<b>**</b>	/	<b>*</b>
Modular flow control unit, pressure compensated, size: <b>DHQ-0</b> = 06 <b>DKQ-0</b> = 10											Supply voltage, see section 4	Series number		Seals material, see section 3: - = NBR <b>PE</b> = FKM <b>BT</b> = HNBR
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 (1): See section 7 for available connectors, to be ordered separately <b>-00</b> = solenoid valve without coils (for DHQ) <b>-00-AC</b> = AC solenoid valve without coils (for DKQ) <b>-00-DC</b> = DC solenoid valve without coils (for DKQ)				
<b>C</b> = flow controlled when solenoid is de-energized <b>O</b> = flow controlled when solenoid is energized										Type of solenoid: for DHQ: <b>I</b> = solenoid OI for AC and DC supply with <b>cURus</b> certification for DKQ: <b>E</b> = solenoid AE for AC and DC supply with <b>cURus</b> certification				
										Options: <b>K</b> = with lock key for the setting knob <b>V</b> = without by-pass check valve				
										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 <b>00</b> = 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 <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, 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 <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 (β10 ≥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	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**

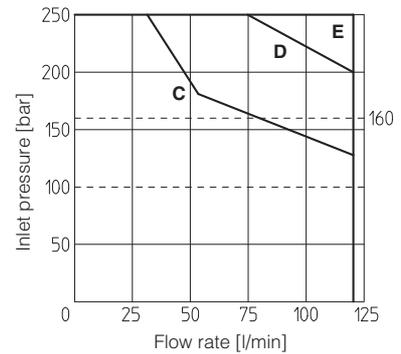
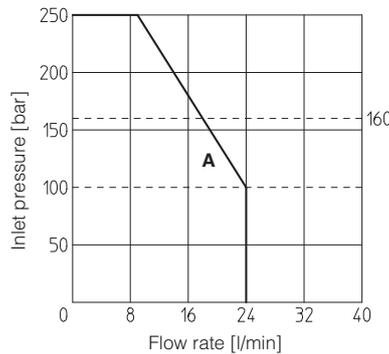
A = DHQ with OI solenoid

**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

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**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