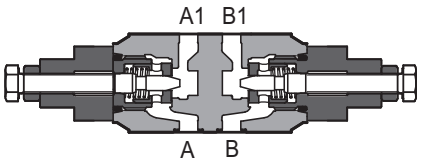
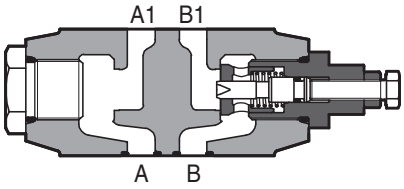
Modular throttle valves type HQ, KQ

flow control, ISO 4401 sizes 06 and 10



HQ-012



KQ-014

HQ and **KQ** are flow throttling valves, not compensated, and with check valve to allow free reverse flow.
The flow adjustement is performed by turning the setting screw.
Clockwise rotation increases the throttling (passage reduced).

Valve size and max flow:
HQ-0 = size 06, flow up to 80 l/min
KQ-0 = size 10, flow up to 160 l/min

Mounting surface:
ISO 4401 size 06 and **10**
Max pressure: **350 bar** (HQ)
315 bar (KQ)

1 MODEL CODE

HQ-0	13	**	/	*

Modular flow control valve, size:
HQ-0 = 06
KQ-0 = 10

Configuration, see section 2
meter OUT control:
12 = double, acting on port A and B
13 = single, acting on port A
14 = single, acting on port B

meter IN control:
22 = double, acting on port A and B
23 = single, acting on port A
24 = single, acting on port B

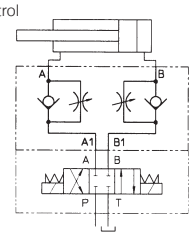
Series number

Seals material, see section 3:
- = NBR
PE = FKM
BT = HNBR

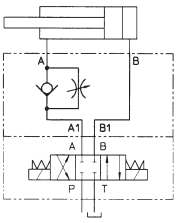
2 VALVE CONFIGURATION

Meter OUT control

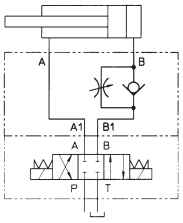
HQ-012
KQ-012



HQ-013
KQ-013

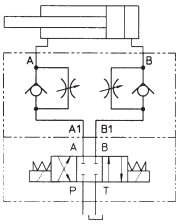


HQ-014
KQ-014

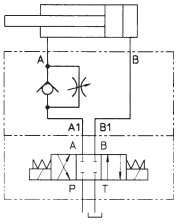


Meter IN control

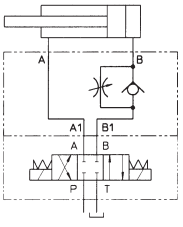
HQ-022
KQ-022



HQ-023
KQ-023



HQ-024
KQ-024

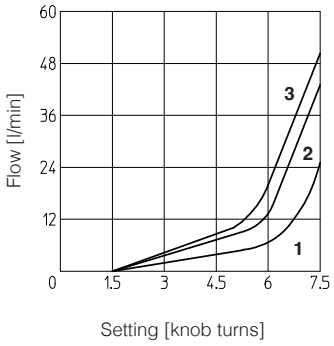


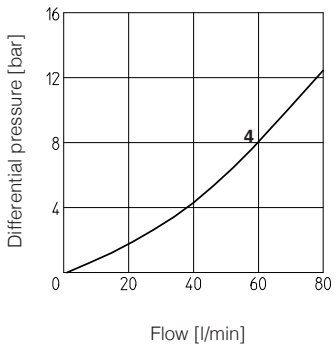
3 MAIN CHARACTERISTICS, SEALS and HYDRAULIC FLUID - for other fluids not included in below table, consult our technical office

Assembly position / location	Any position		
Subplate surface finishing	Roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)		
MTTFd values according to EN ISO 13849	150 years, for further details see technical table P007		
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 ÷ +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 mm^2/s - max allowed range 2.8 ÷ 500 mm^2/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 OF HQ-0 based on mineral oil ISO VG 46 at 50°C

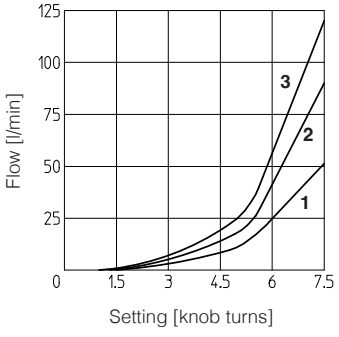
1 = Regulation diagram at Δp 10 bar
2 = Regulation diagram at Δp 30 bar
3 = Regulation diagram at Δp 50 bar
4 = Q/Δp diagram for free flow through the non-return valve

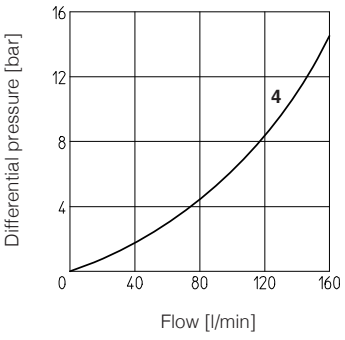




5 DIAGRAMS OF KQ-0 based on mineral oil ISO VG 46 at 50°C

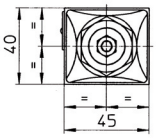
1 = Regulation diagram at Δp 10 bar
2 = Regulation diagram at Δp 30 bar
3 = Regulation diagram at Δp 50 bar
4 = Q/Δp diagram for free flow through the non-return valve

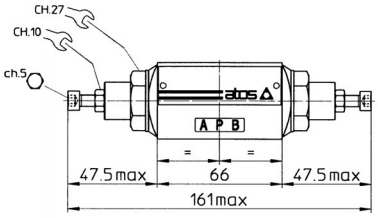




6 INSTALLATION DIMENSIONS OF HQ-0 VALVES [mm]

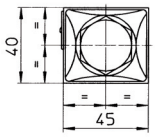
HQ-012
HQ-022

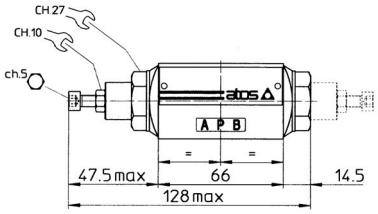




Mass: 1,1 Kg

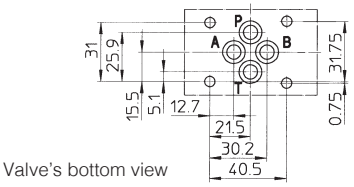
HQ-013
HQ-014
HQ-023
HQ-024





In version -014 and -024 the regulating element is on side of port B (dotted line) instead of side of port A.

Mass: 1,2 Kg



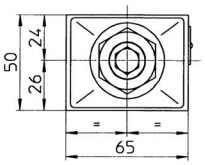
Valve's bottom view

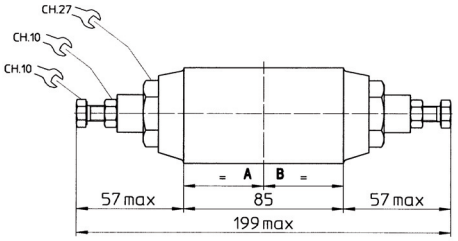
ISO 4401: 2005
Mounting surface: 4401-03-02-0-05
Diameter of ports A, B, P, T: Ø = 7,5 mm (max)
Seals: 4 OR 108

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

7 INSTALLATION DIMENSIONS OF KQ-0 VALVES [mm]

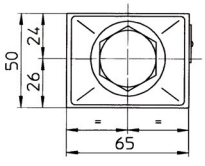
KQ-012
KQ-022

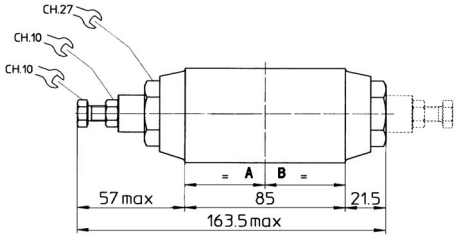




Mass: 2 Kg

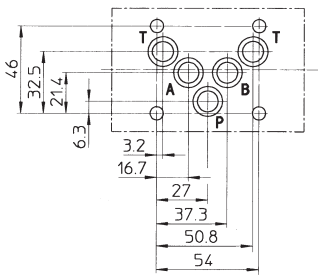
KQ-013
KQ-014
KQ-023
KQ-024





In version -014 and -024 the regulating element is on side of port B (dotted line) instead of side of port A.

Mass: 2,2 Kg



Valve's bottom view

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

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