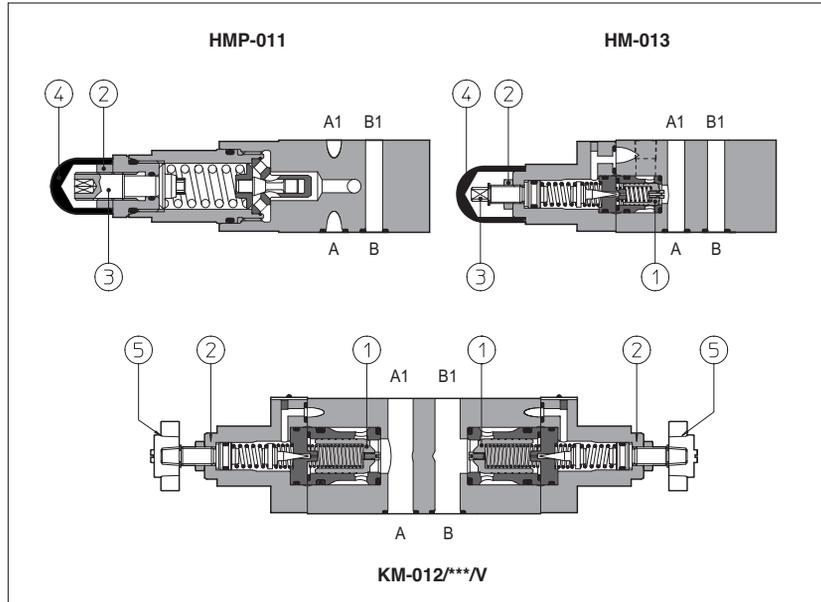


Modular relief valves type HMP, HM, KM

ISO 4401 sizes 06 and 10



HMP are direct operated pressure relief valves.

HM and **KM** are double stage pressure relief valves with balanced poppet ①.

The pressure adjustment is operated by loosening the locking nut ② and turning the screw ③ protected by cap ④. Optional versions with setting adjustment by handwheel ⑤ instead of the screw are available on request. Clockwise rotation increases the pressure.

Valve size and max flow:

- HMP** = size 06, max flow: 35 l/min
- HM** = size 06, max flow: 60 l/min
- KM** = size 10, max flow: 120 l/min

Mounting surface: **ISO 4401 size 06, 10**
Max pressure: up to **350 bar**

1 MODEL CODE

HM	-	011	/	210	/	V	/	**	/	*
Modular pressure relief valve size:								Series number		Seals material, see section ③:
HMP = 06										- = NBR
HM = 06										PE = FKM
KM = 10										BT = HNBR
Options:										
V = setting adjustment by handwheel instead of a grub screw protected by cap										
Only for HMP:										
R = reduced leakage for special applications										
VF = regulating knob										
VS = regulating knob with safety locking										
Pressure range										
HMP:			HM and KM:							
50 = 2÷ 50 bar			50 = 4÷ 50 bar							
100 = 3÷ 100 bar			100 = 5÷ 100 bar							
210 = 10÷ 210 bar			210 = 5÷ 210 bar							
350 = 15÷ 350 bar			350 = 5÷ 350 bar							

2 HYDRAULIC CHARACTERISTICS

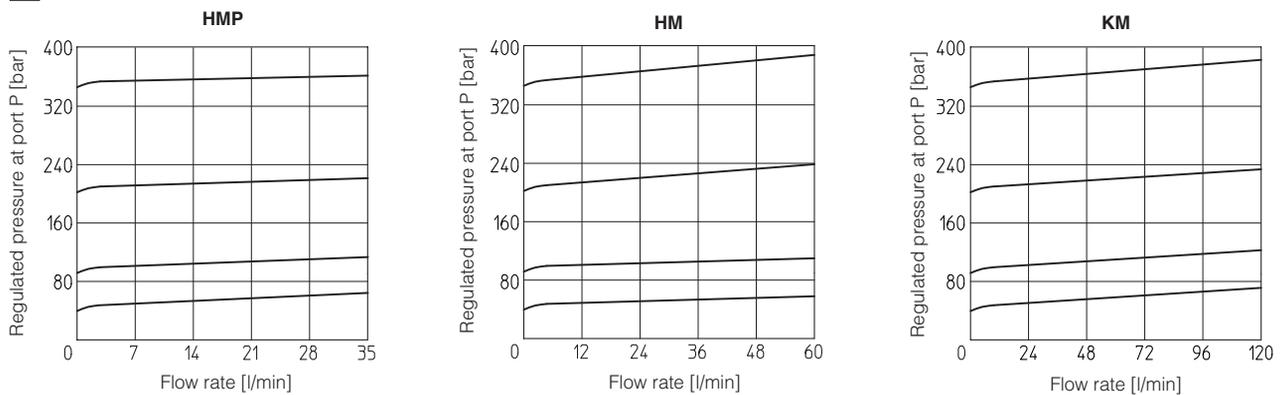
Hydraulic configuration

Valve model		HMP	HM	KM
Max flow	[l/min]	35	60	120
Pressure range	[bar]	2÷50; 3÷100; 10÷210; 15÷350	4÷50; 5÷100; 5÷210; 5÷350	

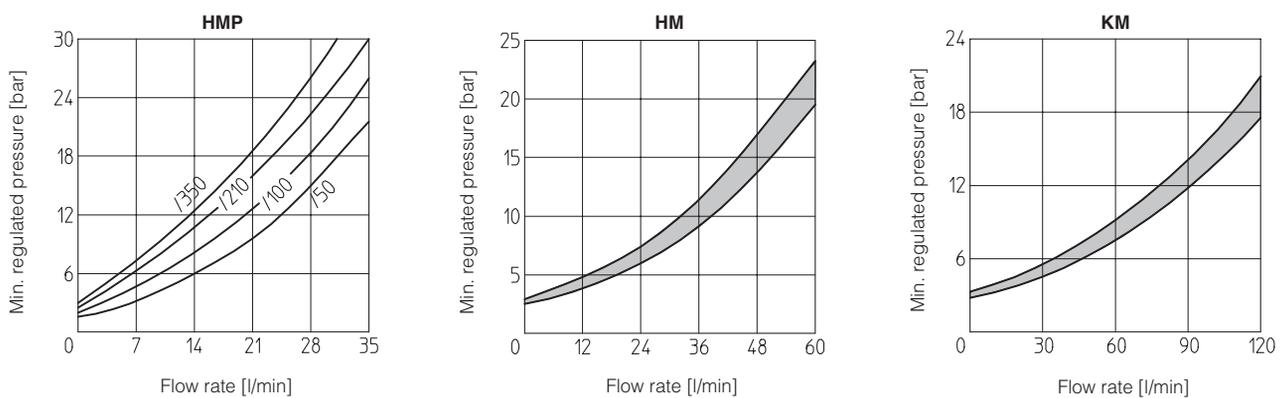
3 MAIN CHARACTERISTICS, SEALS and HYDRAULIC FLUIDS - for other fluids not included in below table, consult our technical office

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 ÷ +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 (β25 ≥75 recommended)		
Hydraulic fluid	Suitable seals type	Classification	Ref. Standard
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLDP	DIN 51524
Flame resistant without water	FKM	HFDU, HFDR	ISO 12922
Flame resistant with water	NBR, HNBR	HFC	

4 REGULATED PRESSURE VERSUS FLOW DIAGRAMS (Based on mineral oil ISO VG 46 at 50°C)

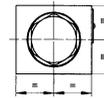
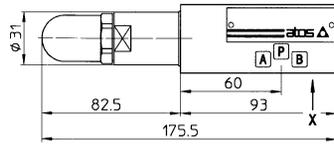
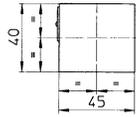


5 MINIMUM PRESSURE VERSUS FLOW DIAGRAMS (Based on fluid viscosity of 25 mm²/s at 40°C)



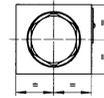
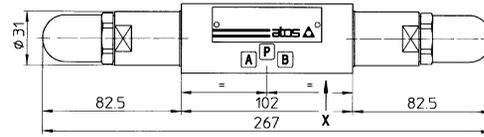
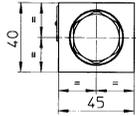
6 INSTALLATION DIMENSIONS OF HMP VALVES [mm]

HMP-011



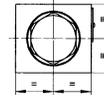
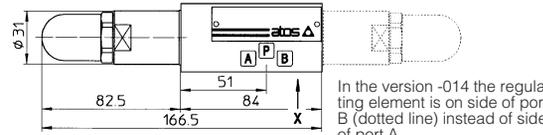
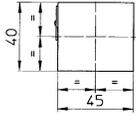
Mass: 1,4 Kg

HMP-012



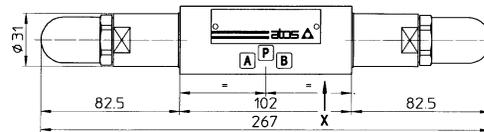
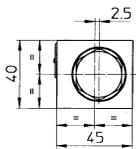
Mass: 1,7 Kg

**HMP-013
HMP-014**



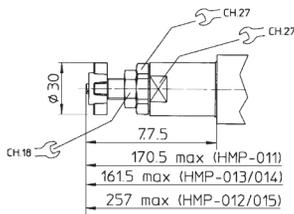
Mass: 1,2 Kg

HMP-015



Mass: 1,7 Kg

Adjustment device for option /V

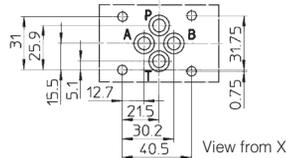


ISO 4401: 2005

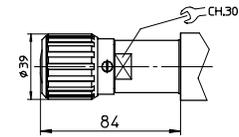
Mounting surface: 4401-03-02-0-05

Diameter of ports A, B, P, T: $\varnothing = 7,5$ mm

Seals: 4 OR 108



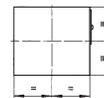
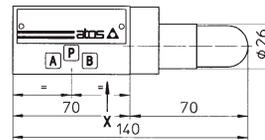
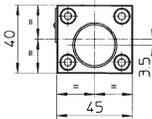
Adjustment device for option /VF and /VS



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

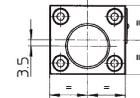
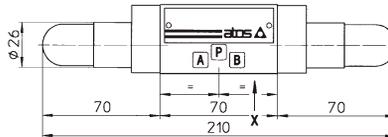
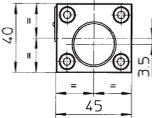
7 INSTALLATION DIMENSIONS OF HM VALVES [mm]

**HM-011
HM-014**



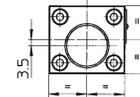
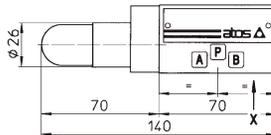
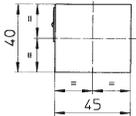
Mass: 1,1 Kg

**HM-012
HM-015**



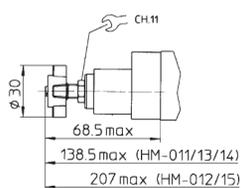
Mass: 1,3 Kg

HM-013



Mass: 1,1 Kg

Adjustment device for option /V

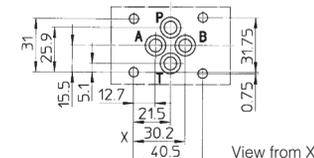


ISO 4401: 2005

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

Diameter of ports A, B, P, T: $\varnothing = 7,5$ mm

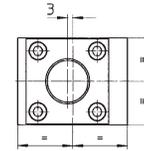
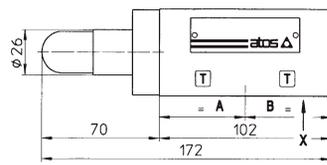
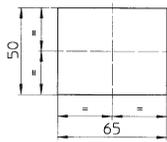
Seals: 4 OR 108



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

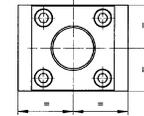
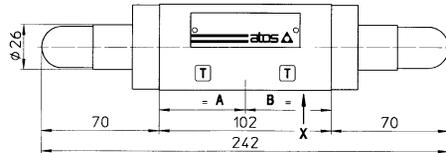
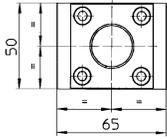
8 INSTALLATION DIMENSIONS OF KM VALVES [mm]

KM-011



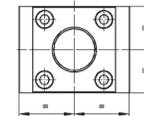
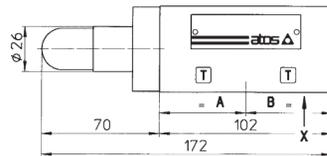
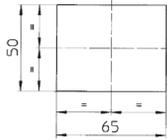
Mass: 2,5 Kg

KM-012



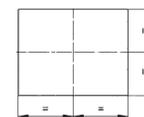
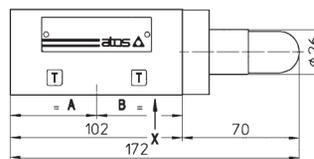
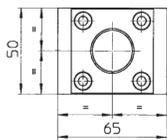
Mass: 2,8 Kg

KM-013



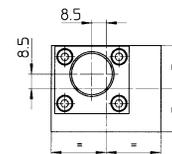
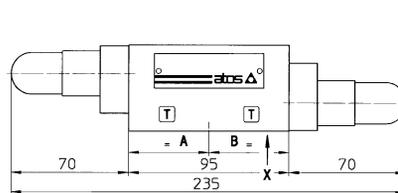
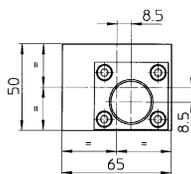
Mass: 2,5 Kg

KM-014



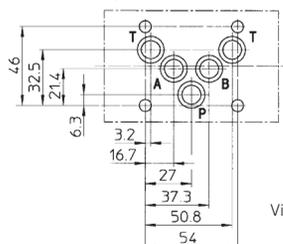
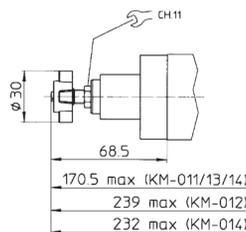
Mass: 2,5 Kg

KM-015



Mass: 2,5 Kg

Adjustement device for option /V



View from X

ISO 4401: 2005

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

Diameter of ports A, B, P, T: $\varnothing = 11,2$ mm

Seals: 5 OR 2050

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