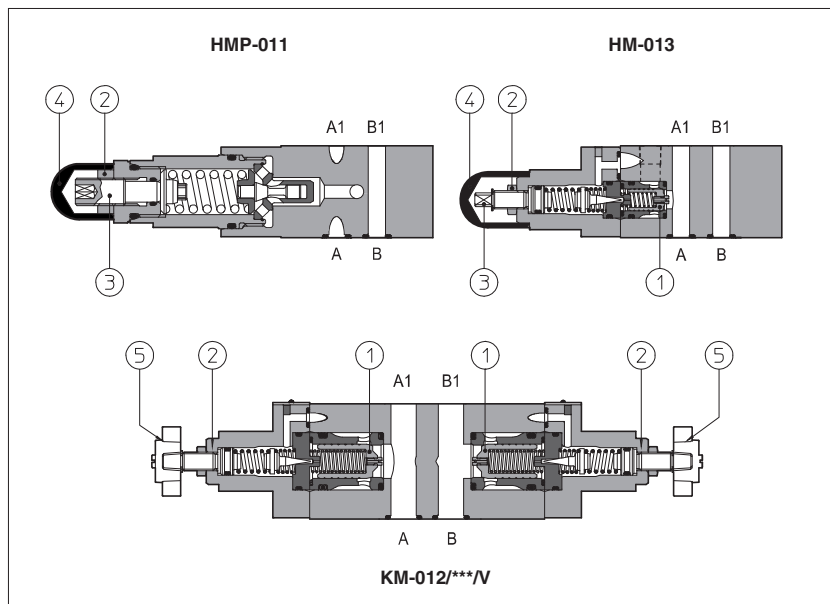




Modular relief valves type HMP, HM, KM

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.

HMP = ISO 4401 size 06 interface; max flow: 35 l/min; max pressure up to 350 bar.

HM = ISO 4401 size 06 interface; max flow: 60 l/min; max pressure up to 350 bar.

KM = ISO 4401 size 10 interface; max flow: 120 l/min; max pressure up to 350 bar.

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

1 MODEL CODE

HM

-

011

/

210

IV

**

/*

Modular pressure relief valve size:
HMP = 06
HM = 06
KM = 10

Seals material:
omit for NBR (mineral oil & water glycol)
PE = FPM

Series number

Options:

IV = setting adjustment by handwheel instead of a grub screw protected by cap

Only for HMP:

IR = reduced leakage for special applications

IVF = regulating knob

IVS = regulating knob with safety locking

Configuration, see section 2

011 = single; acting on port P, discharge to port T
012 = double, acting on ports A and B, discharge to port T
013 = single, acting on port A, discharge to port T
014 = single, acting on port B, discharge to port T
015 = double, acting on ports A and B, with the relieved pressure cross-discharged

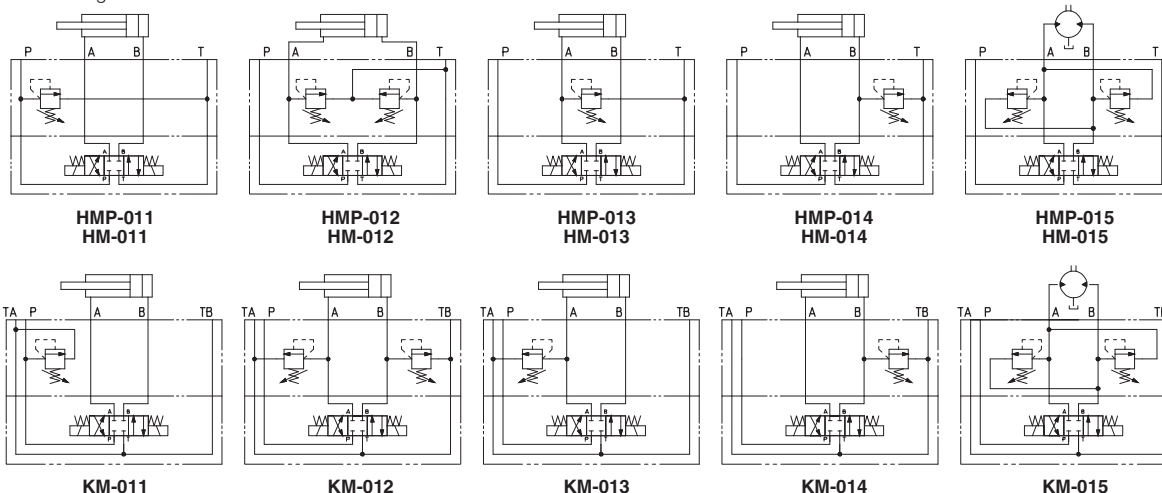
Pressure range

for HMP:
50 = 2÷ 50 bar
100 = 3÷100 bar
210 = 10÷210 bar
350 = 15÷350 bar

for HM and KM:
50 = 4÷ 50 bar
100 = 5÷100 bar
210 = 5÷210 bar
350 = 5÷350 bar

2 HYDRAULIC CHARACTERISTICS

Hydraulic configuration

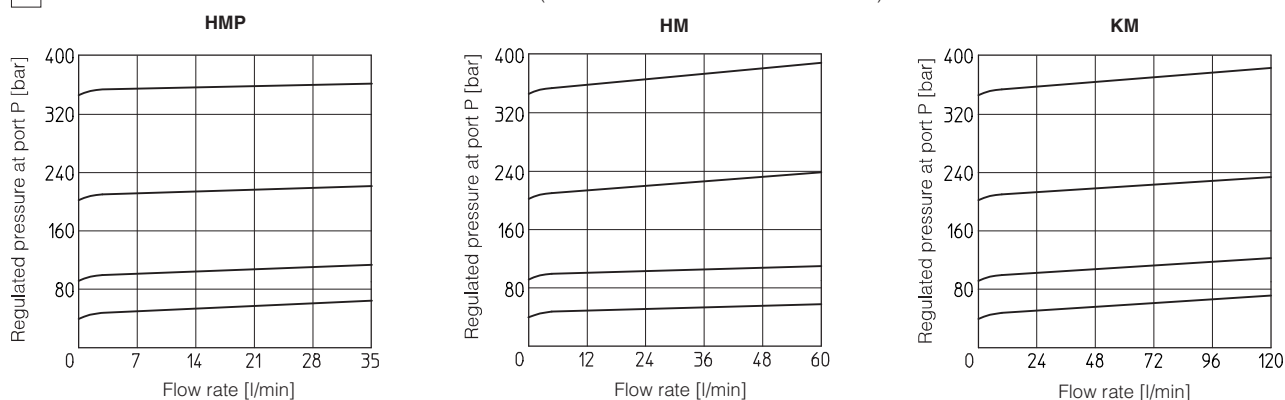


Valve model		HMP	HM	KM
Max flow	[l/min]	35	60	120
Pressure range	[bar]	2÷50; 3÷100; 10÷210; 15÷350	4÷50; 5÷100; 5÷210; 5÷350	

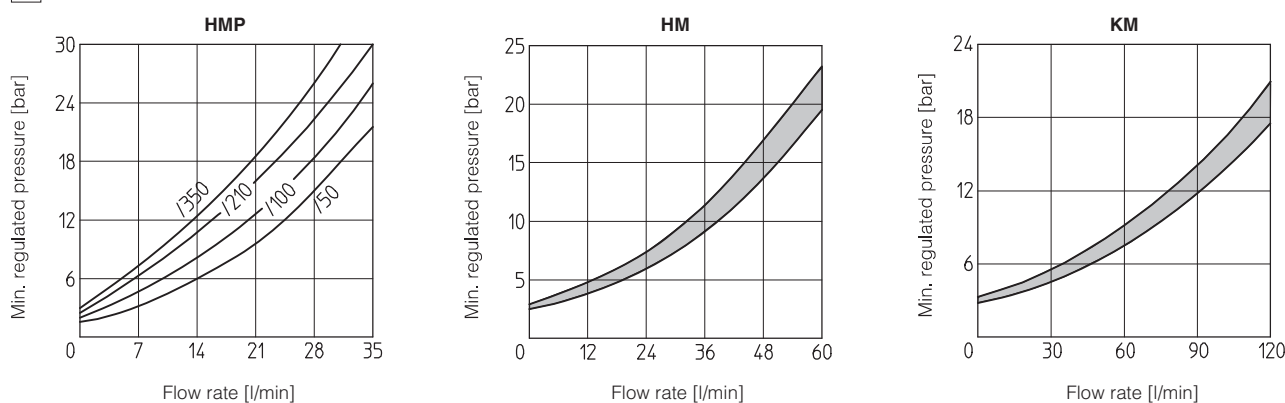
3 MAIN CHARACTERISTICS OF MODULAR PRESSURE RELIEF VALVE TYPE HMP, HM, KM

Assembly position / location	Any position
Subplate surface finishing	Roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	-20°C to +70°
Fluid	Hydraulic oil as per DIN 51524 ... 535; for other fluids see section 1
Recommended viscosity	15 ÷ 100 mm ² /s at 40°C (ISO VG 15 ÷ 100)
Fluid contamination class	ISO 4401 class 21/19/16 NAS 1638 class 10 (filters at 25 µm value with β ₂₅ ≥ 75 recommended)
Fluid temperature	-20°C +60°C (standard seals and water glycol) -20°C +80°C (/PE seals)

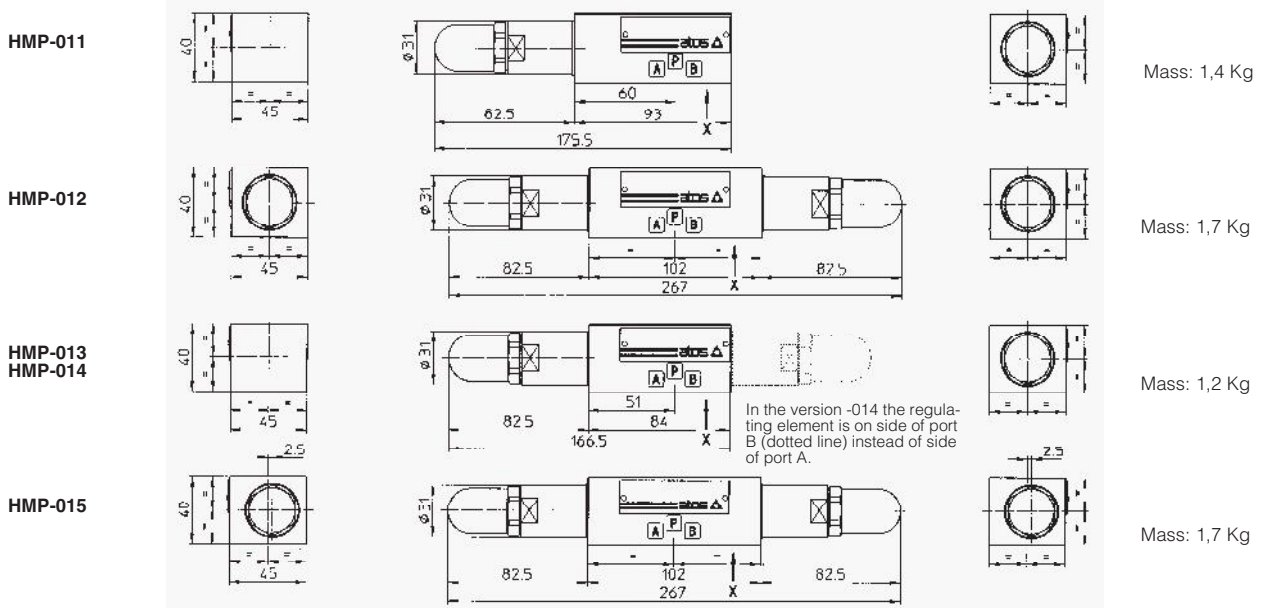
4 REGULATED PRESSURE VERSUS FLOW DIAGRAMS (Based on mineral oil ISO VG 46 at 50°C)



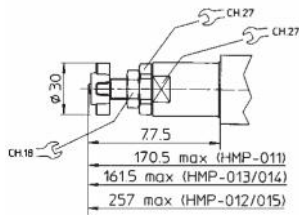
5 MINIMUM PRESSURE VERSUS FLOW DIAGRAMS (Based on fluid viscosity of 25 mm²/s at 40°C)



6 INSTALLATION DIMENSIONS OF HMP VALVES [mm]



Adjustment device for option /V

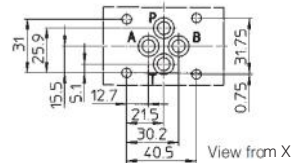


ISO 4401: 2005

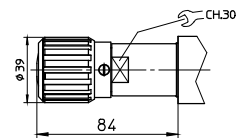
Mounting surface: 4401-03-02-0-05

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

Seals: 4 OR 108

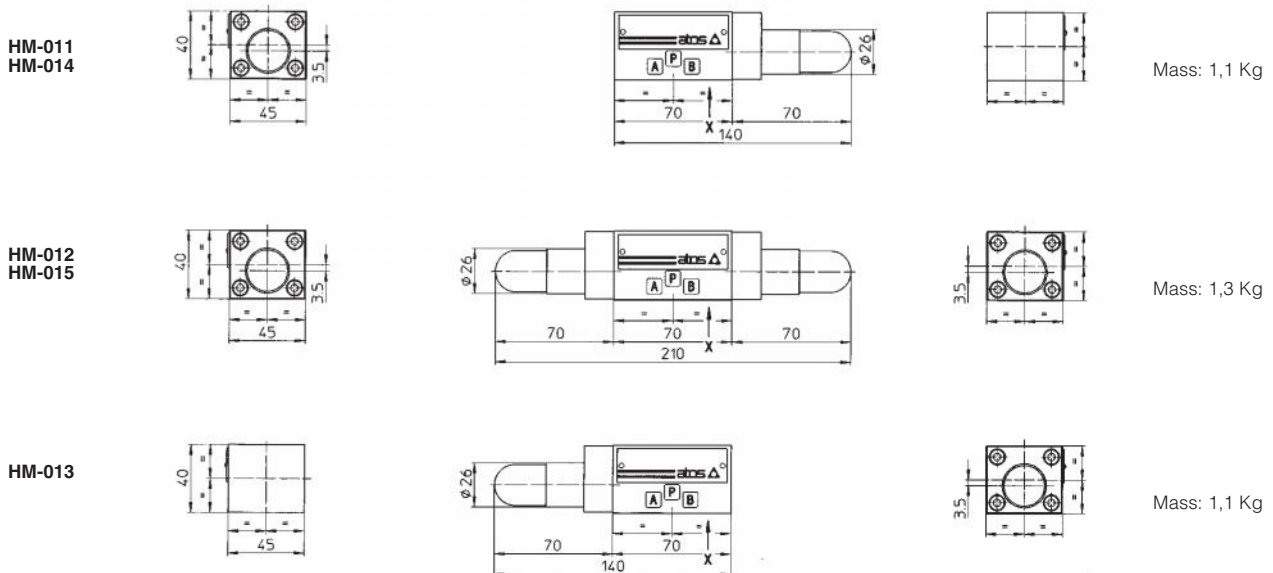


Adjustment device for option /VF and /VS

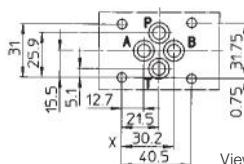
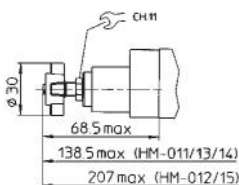


Fastening bolts: n° 4 socket head screws M5. The lenght depends on number and type of modular elements associated.

7 INSTALLATION DIMENSIONS OF HM VALVES [mm]



Adjustment device for option /V



ISO 4401: 2005

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

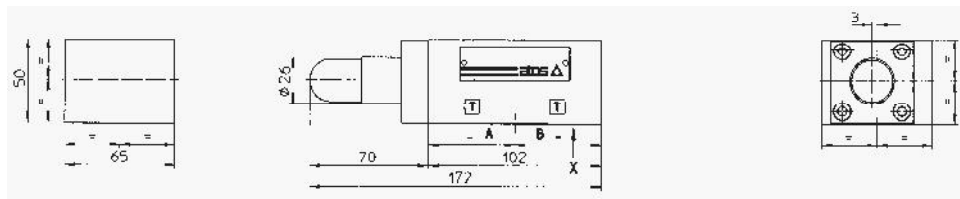
Diameter of ports A, B, P, T: $\varnothing = 7,5$ mm

Seals: 4 OR 108

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

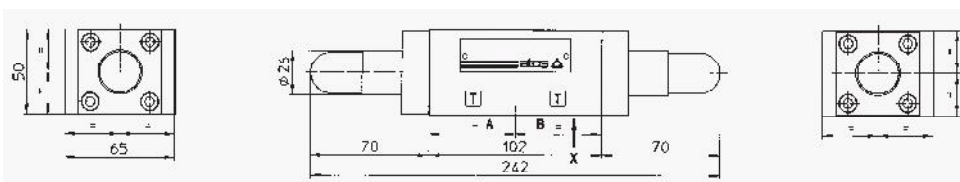
8 INSTALLATION DIMENSIONS OF KM VALVES [mm]

KM-011



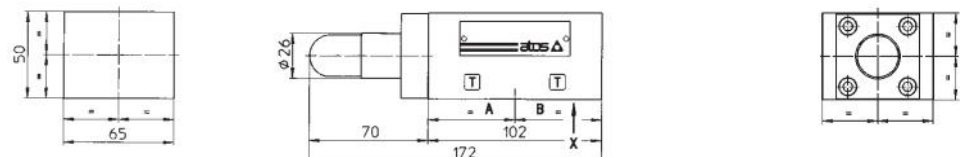
Mass: 2,5 Kg

KM-012



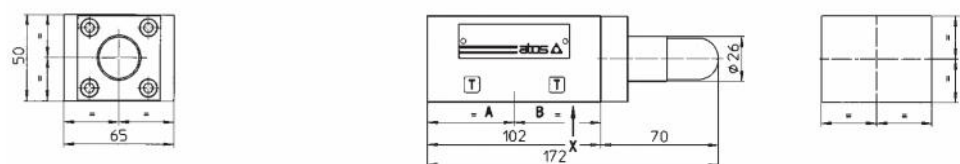
Mass: 2,8 Kg

KM-013



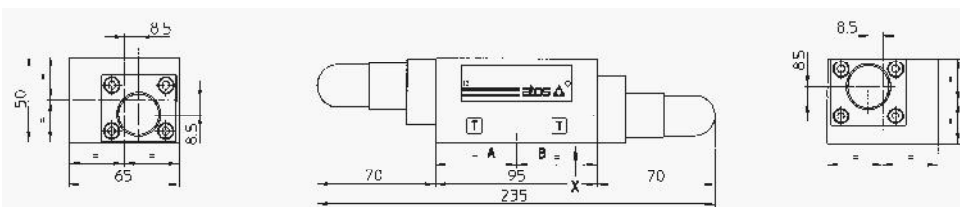
Mass: 2,5 Kg

KM-014



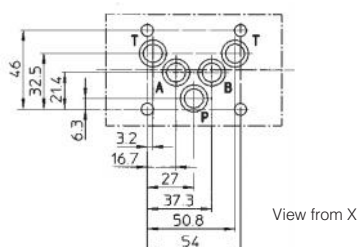
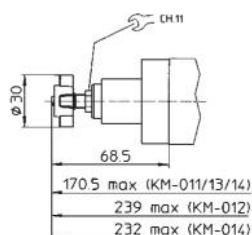
Mass: 2,5 Kg

KM-015



Mass: 2,5 Kg

Adjustment device for option /V



ISO 4401: 2005

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

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

Seals: 5 OR 2050

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