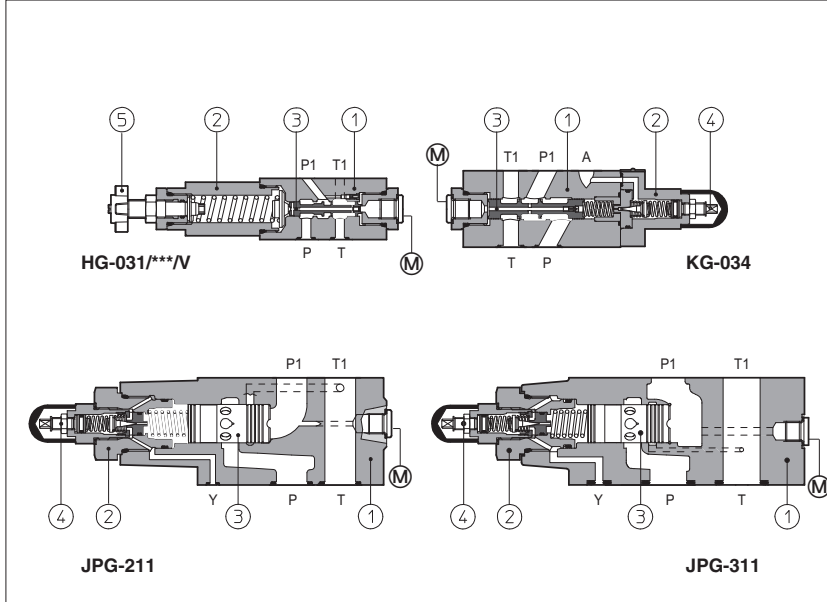


Modular reducing valves type HG, KG, JPG-2 and JPG-3

spool type, ISO 4401 sizes 06, 10, 16 and 25



HG, KG, JPG are pressure reducing valves, spool type ③, designed to operate in oil hydraulic systems.

HG are direct, three way valves;

KG are double stage ① ②, three way valves;

JPG are double stage ① ②, two way valves.

Pressure adjustment is operated by loosening the locking nut and turning the setting screw ④ in the normal model.

Optional versions with a handwheel ⑤ are available on request.

Clockwise rotation increases the pressure.

HG = ISO 4401 size 06 interface: flow up to 50 l/min; pressure adjustment up to 210 bar.

KG = ISO 4401 size 10 interface: flow up to 100 l/min; pressure adjustment up to 210 bar.

JPG-2 = ISO 4401 size 16 interface: flow up to 250 l/min; pressure adjustment up to 210 bar.

JPG-3 = ISO 4401 size 25 interface: flow up to 300 l/min; pressure adjustment up to 210 bar.

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

1 MODEL CODE

HG-0

Modular pressure reducing valve, size:

- HG-0 = 06
- KG-0 = 10
- JPG-2 = 16
- JPG-3 = 25

Configuration, see section 2

two way (only for JPG):

11 = reduced pressure on P port

Note: JPG is available only in configuration 11

31

/ 210

/V

**

/*

Synthetic fluids:
WG = water glycol
PE = phosphate ester

Series number

Options:

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

Only for HG:

NF = regulating knob

NVS = regulating knob with safety locking

Pressure range for HG

- 32 = 3 - 32 bar
- 50 = 2 - 50 bar
- 75 = 10 - 75 bar
- 100 = 20 - 100 bar
- 210 = 50 - 210 bar

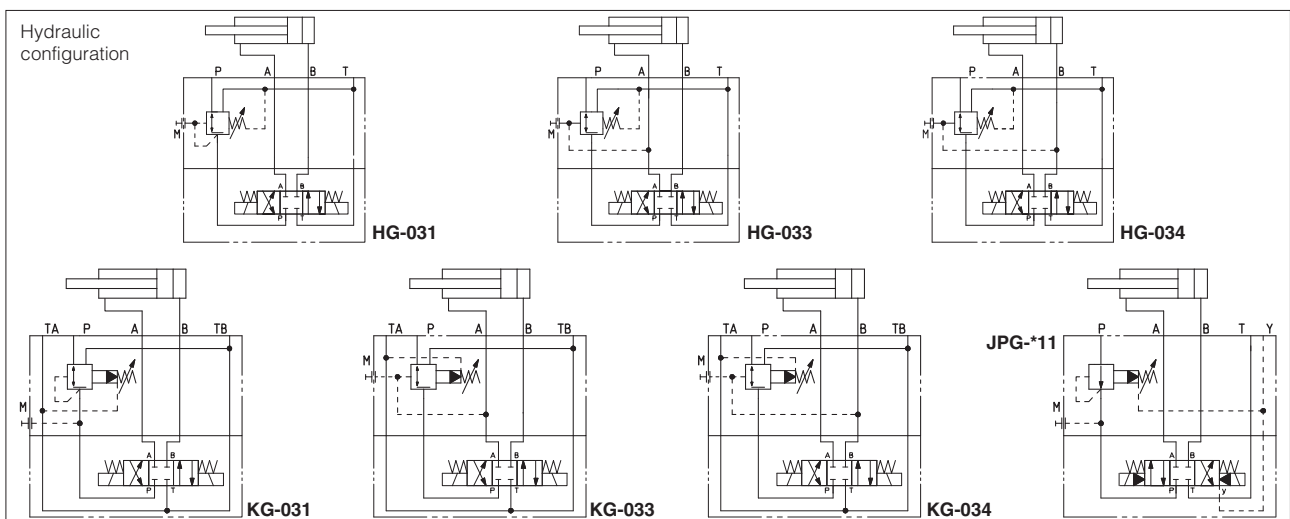
Pressure range for KG

- 100 = 7 - 100 bar
- 210 = 8 - 210 bar

Pressure range for JPG

- 100 = 6 - 100 bar
- 210 = 70 - 210 bar

2 HYDRAULIC CHARACTERISTICS



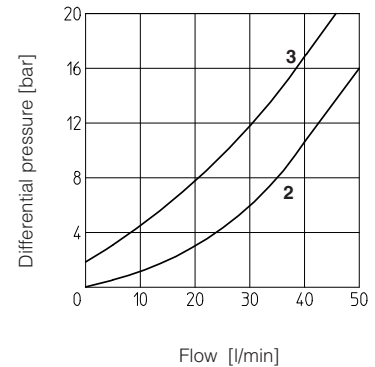
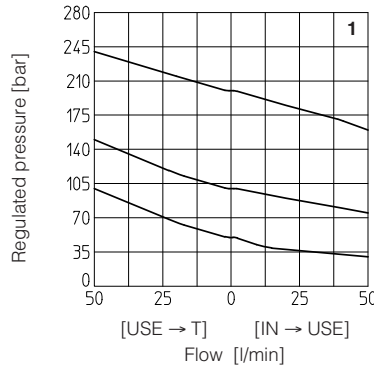
Valve model	HG-03*/32	HG-03*/50	HG-03*/75	HG-03*/100	HG-03*/210	KG-03*/100	KG-03*/210	JPG-211/100	JPG-211/210	JPG-311/100	JPG-311/210
Max flow [l/min]	50					100		250		300	
Pressure range [bar]	3 ÷ 32	2 ÷ 50	10 ÷ 75	20 ÷ 100	50 ÷ 210	7 ÷ 100	8 ÷ 210	6 ÷ 100	70 ÷ 210	6 ÷ 100	70 ÷ 210
Max inlet pressure [bar]	350					315		315		315	
Max pressure on port T [bar]	160					160		160		160	

3 MAIN CHARACTERISTICS OF MODULAR PRESSURE REDUCING VALVES TYPE HG, KG, JPG

Assembly position	Any position. Note: JPG cannot be associated with directional valves having hydraulic centring device (/M) because JPG don't have L drain port.
Subplate surface finishing	Roughness index $\sqrt{0.4}$, flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	-20°C to +70°C
Fluid	Hydraulic oil as per DIN 51524 ... 535; for other fluids see section I
Recommended viscosity	15 ÷ 100 mm ² /s at 40°C (ISO VG 15 ÷ 100)
Fluid contamination class	ISO 19/16, achieved with in line filters at 25 µm value and $\beta_{25} \geq 75$ (recommended)
Fluid temperature	-20°C +60°C (standard and /MG seals) -20°C +80°C (/PE seals)

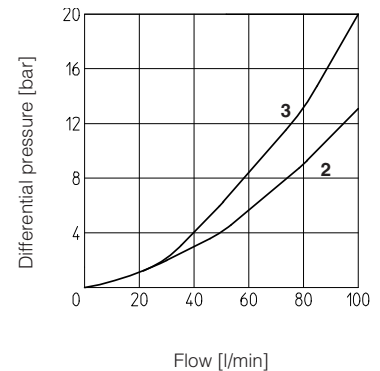
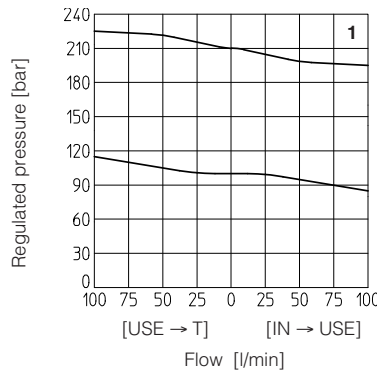
4 DIAGRAMS OF HG-03* based on mineral oil ISO VG 46 at 50°C

- 1** = regulated pressure variation versus flow:
- between use port and discharge port
- between inlet port and use port
- 2** = differential pressure variation versus flow between inlet port and use port
- 3** = differential pressure variation versus flow between use port and discharge port



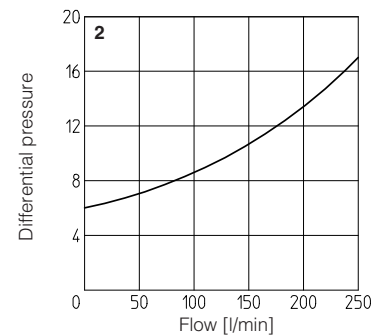
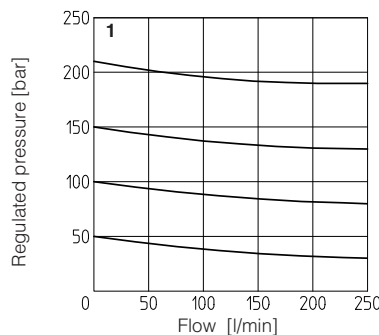
5 DIAGRAMS OF KG-03* based on mineral oil ISO VG 46 at 50°C

- 1** = regulated pressure variation versus flow:
- between use port and discharge port
- between inlet port and use port
- 2** = differential pressure variation versus flow between inlet port and use port
- 3** = differential pressure variation versus flow between use port and discharge port



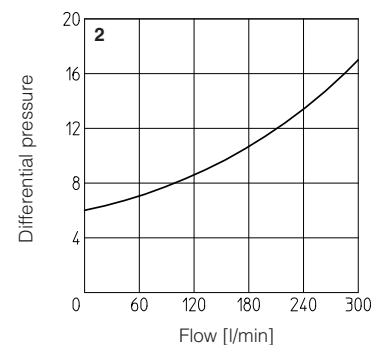
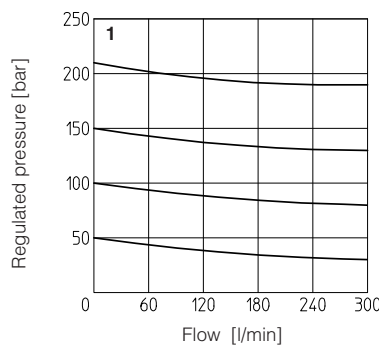
6 DIAGRAMS OF JPG-211 based on mineral oil ISO VG 46 at 50°C

- 1** = regulated pressure variation versus flow between inlet port and use port
- 2** = differential pressure variation versus flow between use port and discharge port



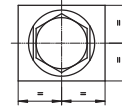
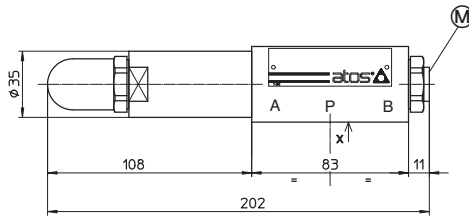
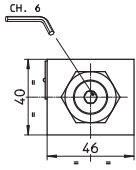
7 DIAGRAMS OF JPG-311 based on mineral oil ISO VG 46 at 50°C

- 1** = regulated pressure variation versus flow between inlet port and use port
- 2** = differential pressure variation versus flow between use port and discharge port



8 INSTALLATION DIMENSIONS OF HG-0 VALVES [mm]

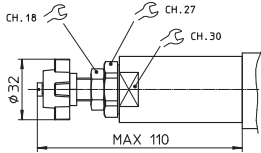
HG-03*



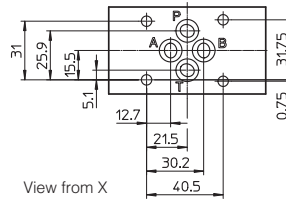
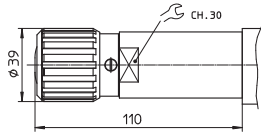
Ⓜ = Pressure gauge port = G 1/4"

Mass: 2,3 Kg

Adjustment device for option /V



Adjustment device for option /VF and /VS



ISO 4401: 2005

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

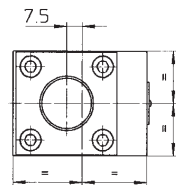
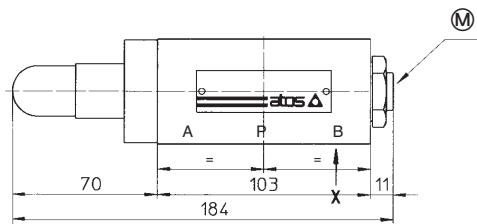
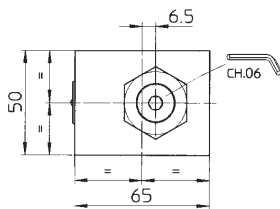
Diameter of ports A, B, P, T: $\varnothing = 7,5$ mm

Seals: 4 OR 108

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

9 INSTALLATION DIMENSIONS OF KG-0 VALVES [mm]

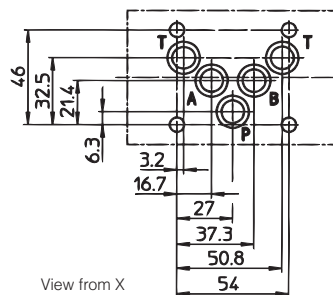
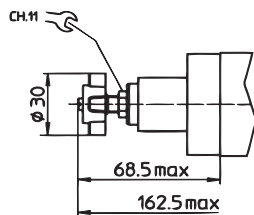
KG-03*



Ⓜ = Pressure gauge port = G 1/4"

Mass: 3,8 Kg

Adjustment device for option /V



ISO 4401: 2005

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

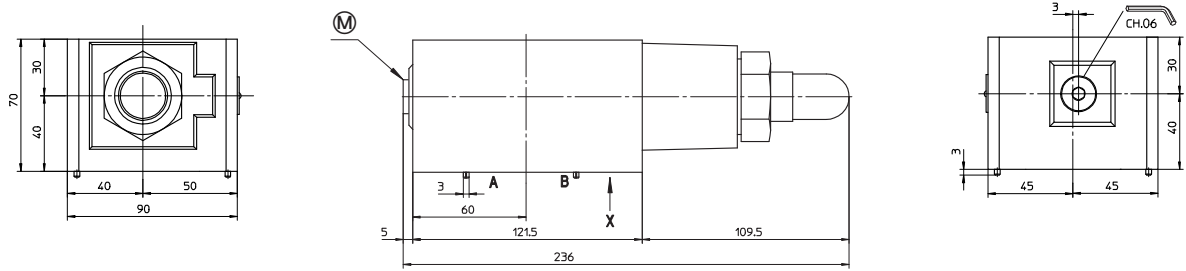
Diameter of ports A, B, P, T: $\varnothing = 11,2$ mm

Seals: 5 OR 2050

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

10 INSTALLATION DIMENSIONS OF JPG-2 VALVES [mm]

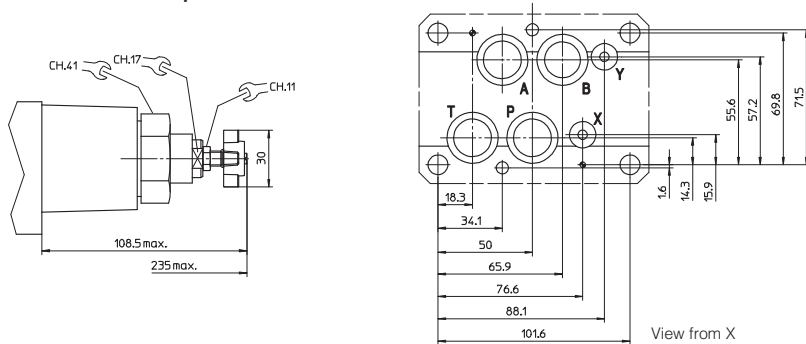
JPG-211



Ⓜ = Pressure gauge port = G 1/4"

Mass: 9 Kg

Adjustment device for option /V



ISO 4401: 2005

Mounting surface: 4401-07-07-0-05

Diameter of ports A, B, P, T: $\varnothing = 20$ mm

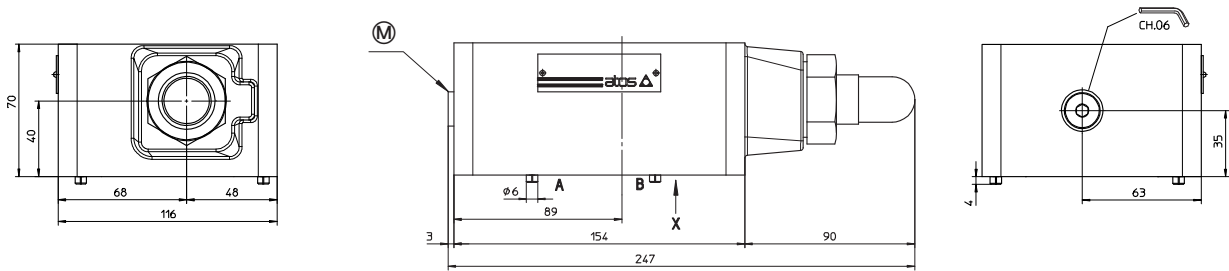
Diameter of ports X, Y: $\varnothing = 7$ mm

Seals: 4 OR 130: 2 OR 109

Fastening bolts: n° 4 socket head screws M10 and n° 2 M6. The length depends on number and type of modular elements associated.

11 INSTALLATION DIMENSIONS OF JPG-3 VALVES [mm]

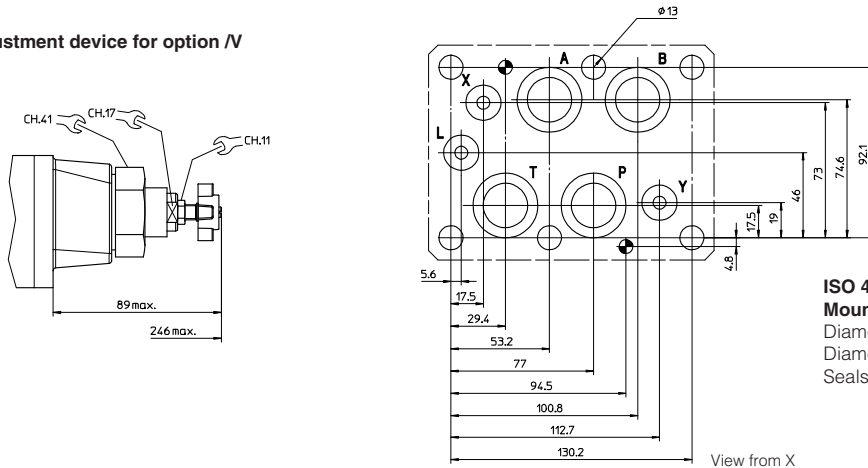
JPG-311



Ⓜ = Pressure gauge port = G 1/4"

Mass: 9 Kg

Adjustment device for option /V



ISO 4401: 2005

Mounting surface: 4401-08-08-0-05

Diameter of ports A, B, P, T: $\varnothing = 24$ mm

Diameter of ports X, Y: $\varnothing = 7$ mm

Seals: 4 OR 130: 2 OR 109

Fastening bolts: n° 6 socket head screws M12. The length depends on number and type of modular elements associated.