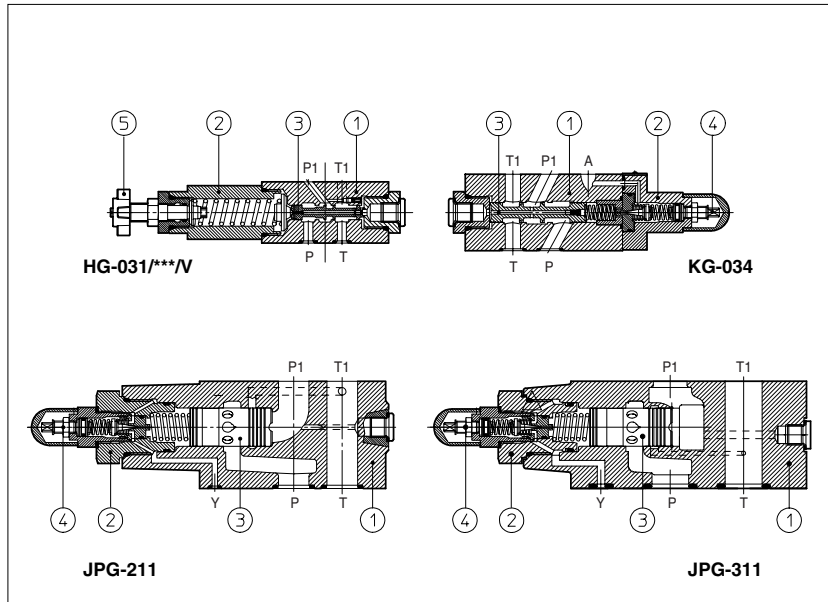


Modular reducing valves type HG, KG, JPG-2 and JPG-3

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

three way (only for HG-0 and KG-0):

31 = reduced pressure on P port

33 = reduced pressure on A port

34 = reduced pressure on B port

Note: JPG is available only in configuration 11

31

/ 210

/V

**

/*

Design number

Options:

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

VS = with safety handwheel (only for HG)

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

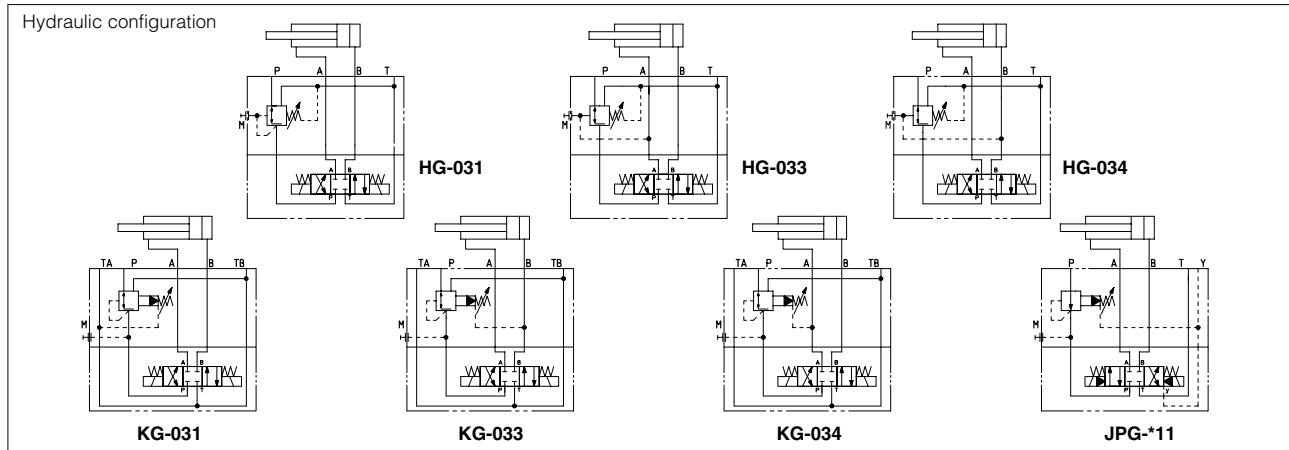
210 = 8 - 210 bar

Pressure range for JPG

100 = 6 - 100 bar

210 = 70 - 210 bar

2 HYDRAULIC CHARACTERISTICS



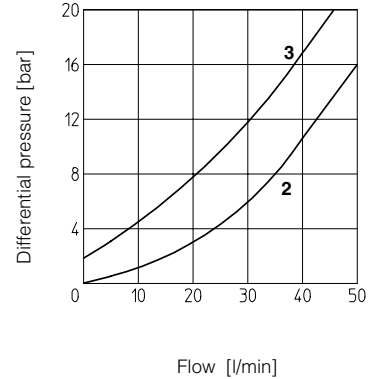
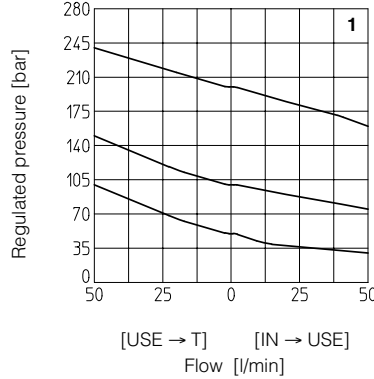
Valve model	HG-03*/32	HG-03*/50	HG-03*/75	HG-03*/100	HG-03*/210	KG-03*/100	KG-03*/210	JPG-211/100	JPG-211/210	JPG-311/100	JPG-311/210
Max flow [l/min]	50					100		250		300	
Pressure range [bar]	3 ÷ 32	2 ÷ 50	10 ÷ 75	20 ÷ 100	50 ÷ 210	7 ÷ 100	8 ÷ 210	6 ÷ 100	70 ÷ 210	6 ÷ 100	70 ÷ 210
Max inlet pressure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

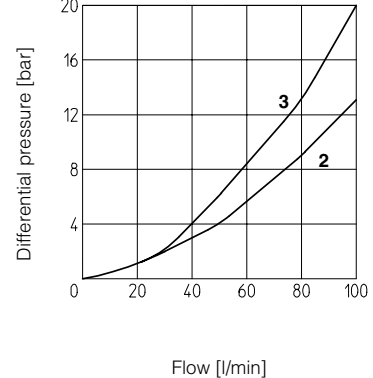
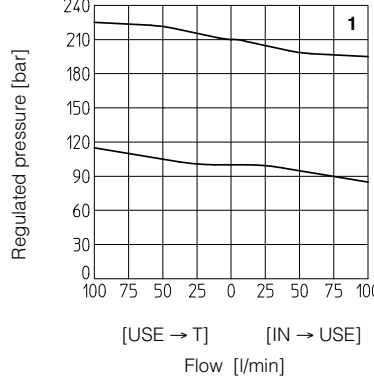
4 DIAGRAMS OF HG-03* based on mineral oil ISO VG 46 at 50°C

- 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



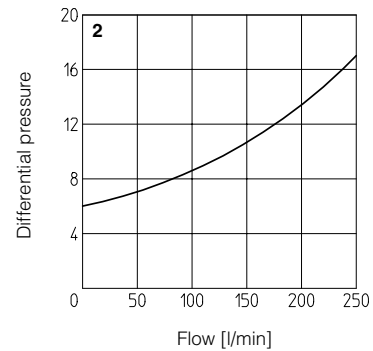
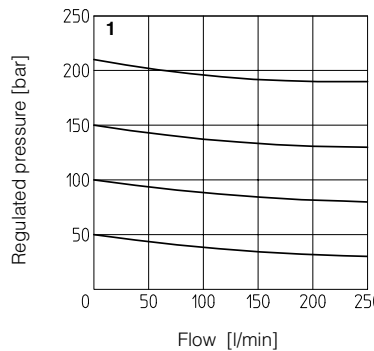
5 DIAGRAMS OF KG-03* based on mineral oil ISO VG 46 at 50°C

- 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



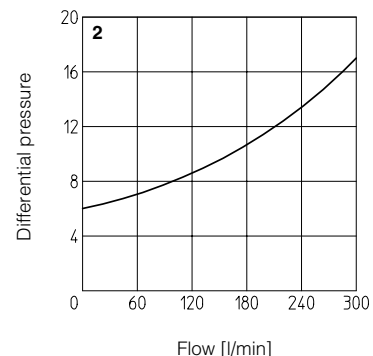
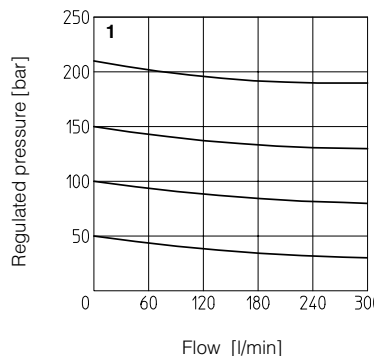
6 DIAGRAMS OF JPG-211 based on mineral oil ISO VG 46 at 50°C

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



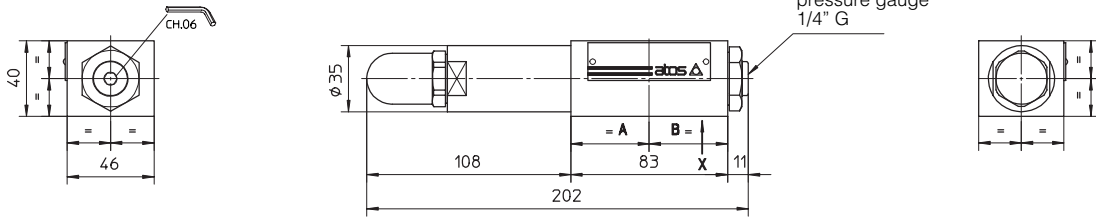
7 DIAGRAMS OF JPG-311 based on mineral oil ISO VG 46 at 50°C

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



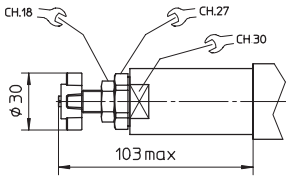
8 INSTALLATION DIMENSIONS OF HG-0 VALVES [mm]

HG-03*

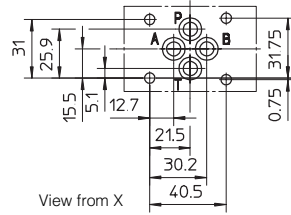
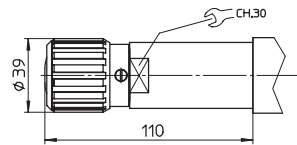


Adjustment device for option /V

Mass: 2,3 Kg



Adjustment device for option /VS



Mounting surface

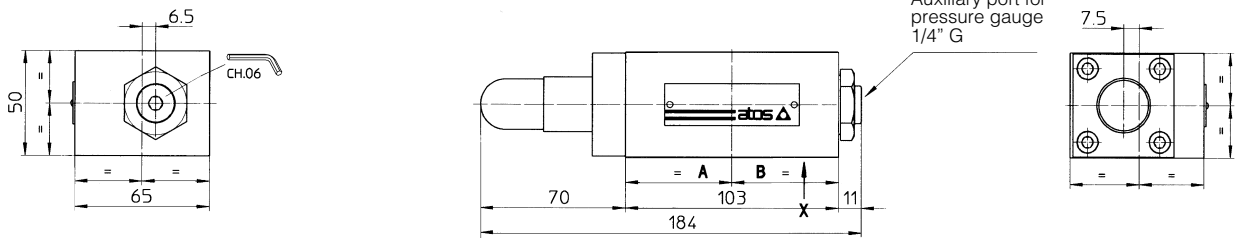
ISO 4401-AB-03-4 size 06

Diameter of ports A, B, P, T: $\varnothing = 7,5$ mm (max)
Seals: 4 OR 108

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

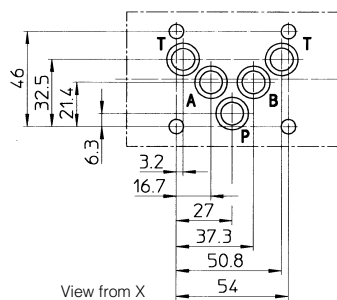
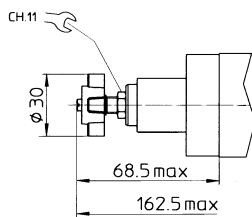
9 INSTALLATION DIMENSIONS OF KG-0 VALVES [mm]

KG-03*



Mass: 3,8 Kg

Adjustment device for option /V



Mounting surface

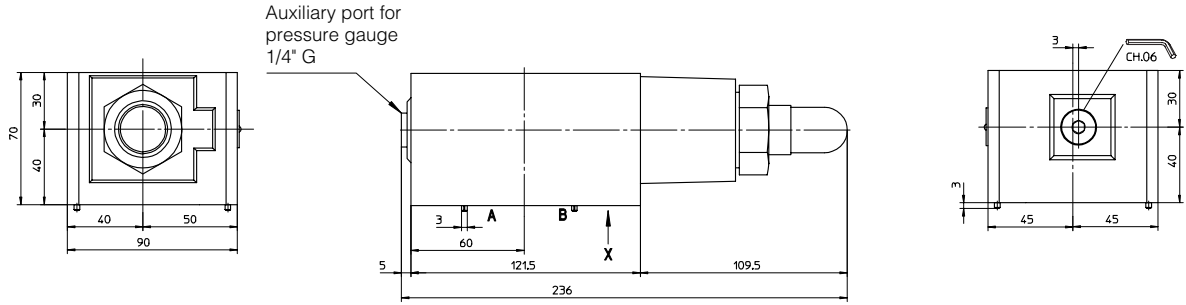
ISO 4401-AC-05-4 size 10

Diameter of ports A, B, P, T: $\varnothing = 11,2$ mm (max)
Seals: 5 OR 2050

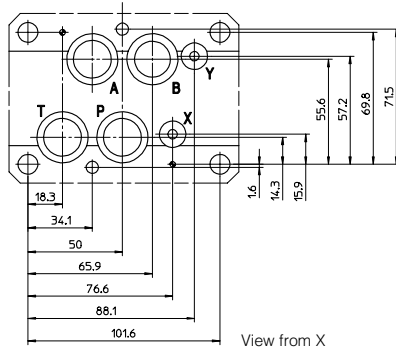
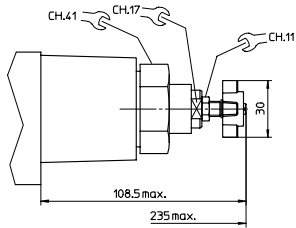
Fastening bolts: n° 4 socket head screws M6. The length depends on number and type of modular elements associated.

10 INSTALLATION DIMENSIONS OF JPG-2 VALVES [mm]

JPG-211



Adjustment device for option /V



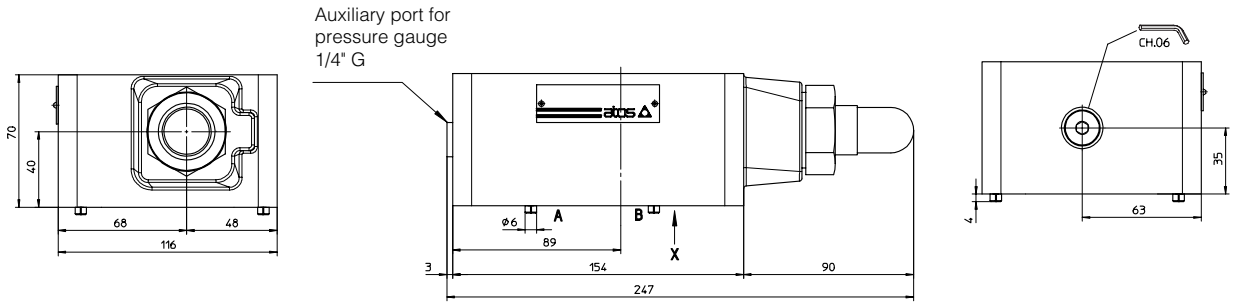
Mounting surface
ISO 4401-AD-07-4 size 16
 Diameter of ports A, B, P, T: $\varnothing = 20$ mm
 Diameter of ports X, Y: $\varnothing 7$ mm
 Seals: 4 OR 130: 2 OR 109

Mass: 9 Kg

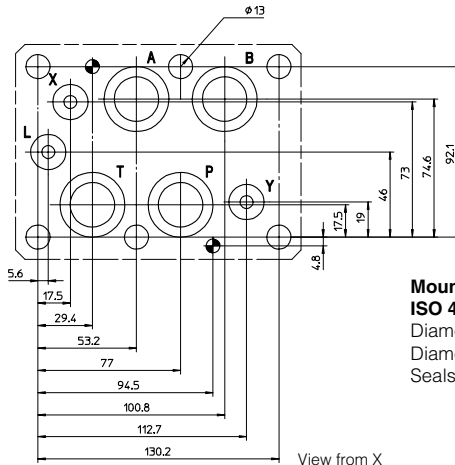
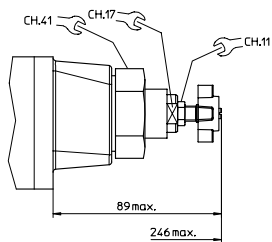
Fastening bolts: n° 4 socket head screws M10 and n° 2 M6. The length depends on number and type of modular elements associated.

11 INSTALLATION DIMENSIONS OF JPG-3 VALVES [mm]

JPG-311



Adjustment device for option /V



Mounting surface
ISO 4401-AE-08-4 size 25
 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

Mass: 9 Kg

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