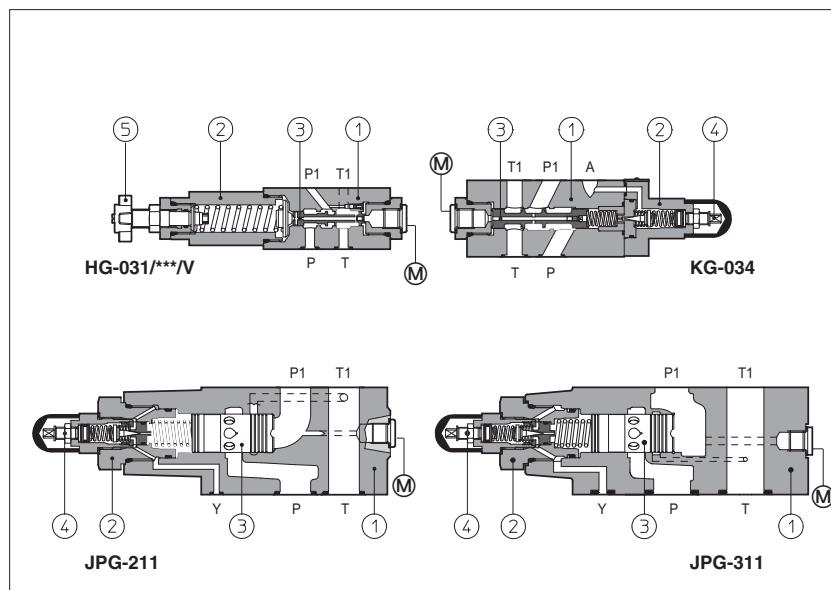


## Modular reducing valves type HG, KG, JPG-2 and JPG-3

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



### 1 MODEL CODE

<b>HG-0</b>	<b>31</b>	<b>210</b>	<b>/ V</b>	<b>**</b>	<b>*</b>
Modular pressure reducing valve, size: <b>HG-0 = 06</b> <b>JPG-2 = 16</b> <b>KG-0 = 10</b> <b>JPG-3 = 25</b>				Series number	Seals material, see section 3: - = NBR <b>PE</b> = FKM <b>BT</b> = HNBR
Configuration, see section 2: two way ( <b>only for JPG</b> ): <b>11</b> = reduced pressure on P port three way ( <b>only for HG-0 and KG-0</b> ): <b>31</b> = reduced pressure on P port <b>33</b> = reduced pressure on A port <b>34</b> = reduced pressure on B port			Options: <b>V</b> = setting adjustment by handwheel instead of a grub screw protected by cap Only for HG: <b>VF</b> = regulating knob/ <b>VS</b> = regulating knob with safety locking		
		Pressure range	<b>HG</b>	<b>KG</b>	<b>JPG</b>
		<b>32</b> = 3 - 32 bar <b>100</b> = 20 - 100 bar	<b>100</b> = 7 - 100 bar	<b>100</b> = 6 - 100 bar	<b>210</b> = 8 - 210 bar
		<b>50</b> = 2 - 50 bar <b>210</b> = 50 - 210 bar	<b>210</b> = 8 - 210 bar	<b>210</b> = 70 - 210 bar	<b>75</b> = 10 - 75 bar

### 2 HYDRAULIC CHARACTERISTICS

Hydraulic configuration	HG-031	HG-033	HG-034	KG-031	KG-033	KG-034	JPG-*11
Valve model	HG-03*/32	HG-03*/50	HG-03*/75	HG-03*/100	HG-03*/210	KG-03*/100	JPG-211/100
Max flow [l/min]			50			100	250
Pressure range [bar]	3 ÷ 32	2 ÷ 50	10 ÷ 75	20 ÷ 100	50 ÷ 210	7 ÷ 100	70 ÷ 210
Max inlet pressure [bar]			350			315	315
Max pressure on port T [bar]			160			160	160

**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		
Compliance	RoHS Directive 2011/65/EU as last update by 2015/65/EU REACH Regulation (EC) n°1907/2006		
Ambient temperature	<b>Standard</b> = -30°C ÷ +80°C <b>/PE</b> option = -20°C ÷ +70°C <b>/BT</b> 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 ( <b>/PE</b> option) = -20°C ÷ +80°C HNBR seals ( <b>/BT</b> option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C		
Recommended viscosity	15 ÷ 100 mm²/s - max allowed range 2.8 ÷ 500 mm²/s		
Max fluid contamination level	ISO4406 class 20/18/15 NAS1638 class 9, see also filter section at www.atos.com or KTF catalog		
<b>Hydraulic fluid</b>	<b>Suitable seals type</b>	<b>Classification</b>	<b>Ref. Standard</b>
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 HG-03\***

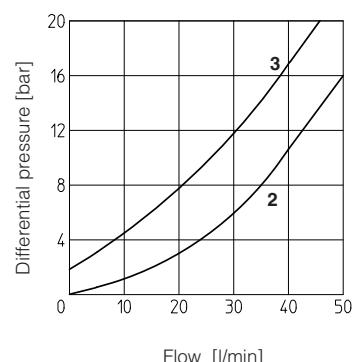
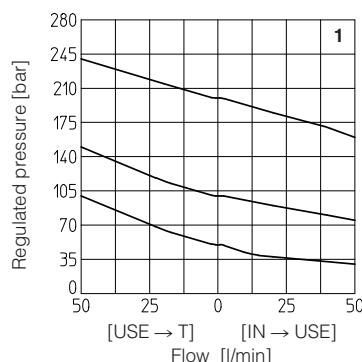
based on mineral oil ISO VG 46 at 50°C

**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\***

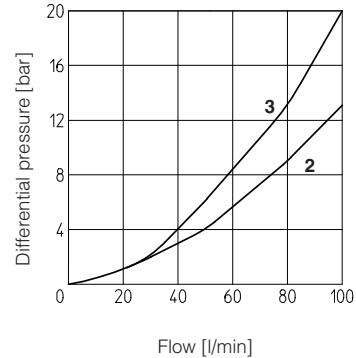
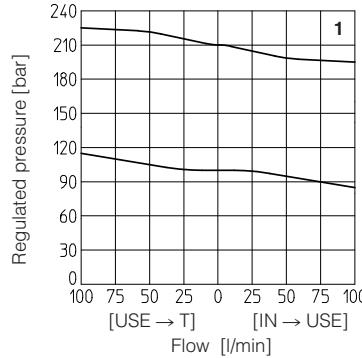
based on mineral oil ISO VG 46 at 50°C

**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

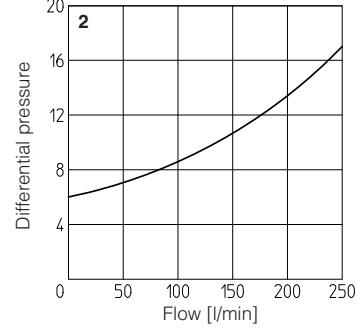
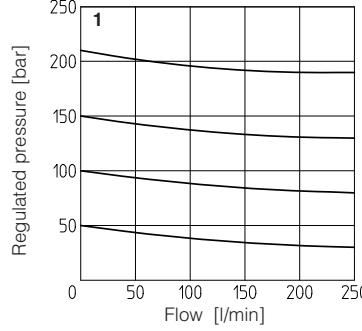


**6 DIAGRAMS OF JPG-211**

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

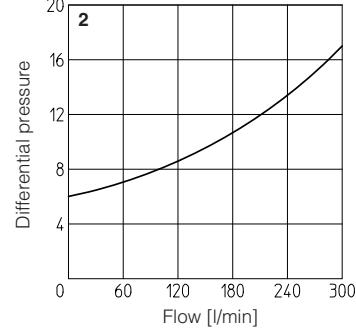
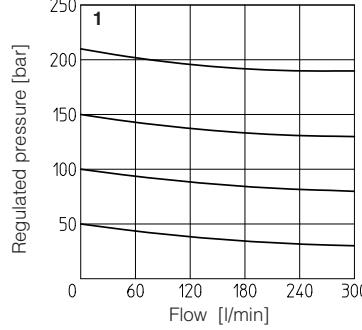


**7 DIAGRAMS OF JPG-311**

based on mineral oil ISO VG 46 at 50°C

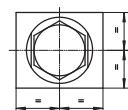
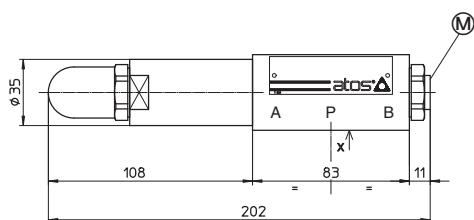
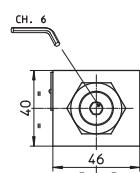
**1** = regulated pressure variation versus flow between inlet port and use port

**2** = differential pressure variation versus flow between use port and discharge port



## 8 INSTALLATION DIMENSIONS OF HG-0 VALVES [mm]

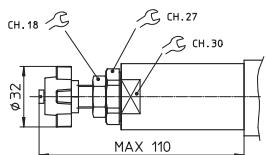
**HG-03\***



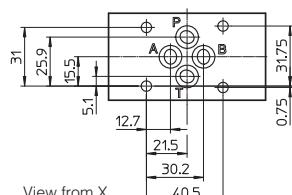
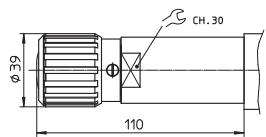
(M) = Pressure gauge port = G 1/4"

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**

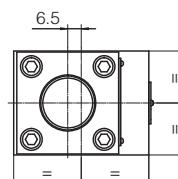
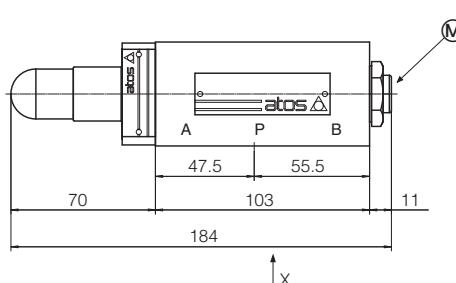
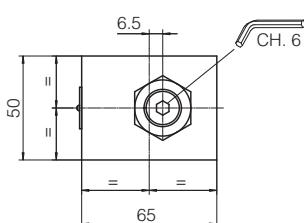
Diameter of ports A, B, P, T: Ø = 7,5 mm

Seals: 4 OR 108

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

## 9 INSTALLATION DIMENSIONS OF KG-0 VALVES [mm]

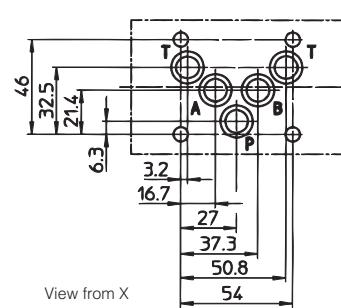
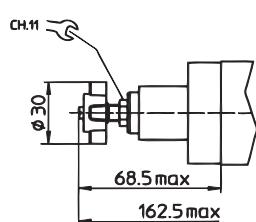
**KG-03\***



(M) = 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**

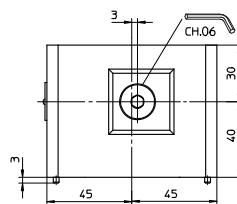
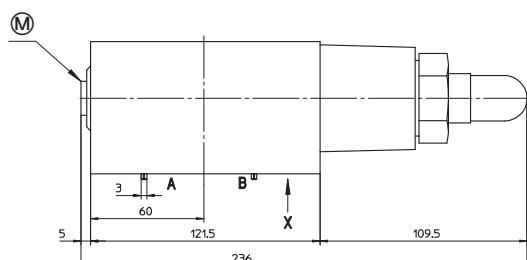
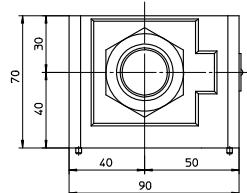
Diameter of ports A, B, P, T: Ø = 11,2 mm

Seals: 5 OR 2050

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

**10 INSTALLATION DIMENSIONS OF JPG-2 VALVES [mm]**

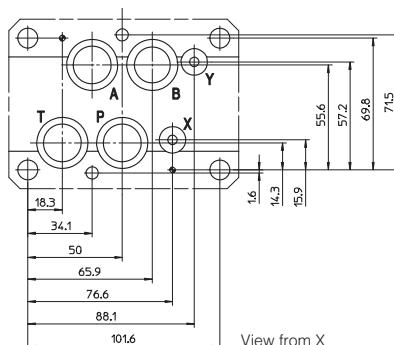
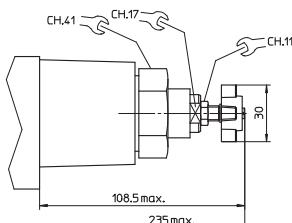
**JPG-211**



(M) = 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: Ø = 20 mm

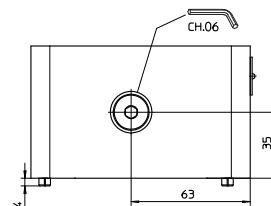
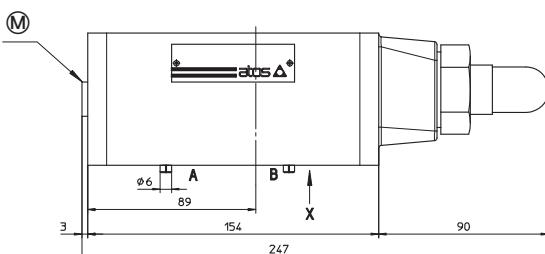
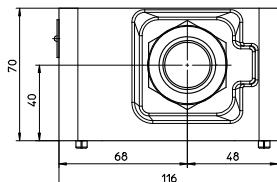
Diameter of ports X, Y: Ø 7 mm

Seals: 4 OR 130: 2 OR 109

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

**11 INSTALLATION DIMENSIONS OF JPG-3 VALVES [mm]**

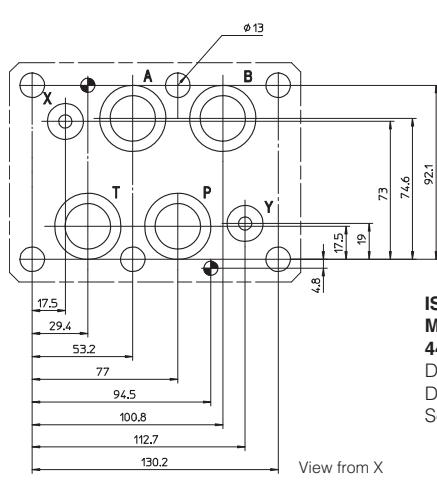
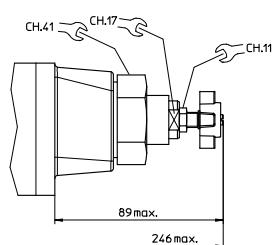
**JPG-311**



(M) = Pressure gauge port = G 1/4"

Mass: 9 Kg

**Adjustment device for option /V**



**ISO 4401: 2005**

**Mounting surface:**

**4401-08-08-0-05 (without port L)**

Diameter of ports A, B, P, T: Ø = 24 mm

Diameter of ports X, Y: Ø 7 mm

Seals: 4 OR 4112: 2 OR 3056

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