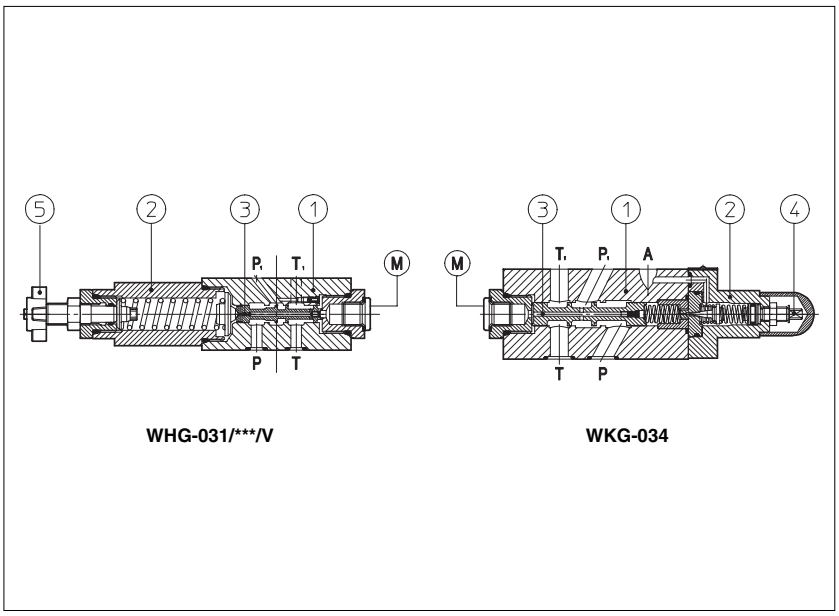
Modular reducing valves type WHG and WKG

spool type, ISO 4401 sizes 06 and 10



WHG-031/*/V** **WKG-034**

WHG and WKG are pressure reducing valves, spool type ③, designed to operate in oil hydraulic systems.

WHG are direct, three way valves;

WKG are double stage ① ②, three 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.

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

WKG = ISO 4401 size 10 interface: flow up to 100 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

WHG-0	**31**	**210**	**/V**	******	**/***

WHG-0 Modular pressure reducing valve, size:
WHG-0 = 06
WKG-0 = 10

31 Configuration, see section 2
31 = reduced pressure on P port
33 = reduced pressure on A port

210 Pressure range for WHG
32 = 3 - 32 bar
50 = 2 - 50 bar
75 = 10 - 75 bar
100 = 20 - 100 bar
210 = 50 - 210 bar

Pressure range for WKG
100 = 7 - 100 bar
210 = 8 - 210 bar

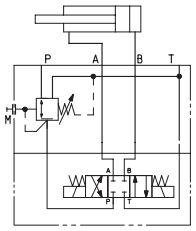
/V Options:
/V = setting adjustment by handwheel instead of a grub screw protected by cap

****** Design number

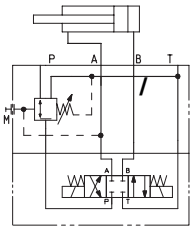
/* Synthetic fluids:
PE = phosphate ester

2 HYDRAULIC CHARACTERISTICS

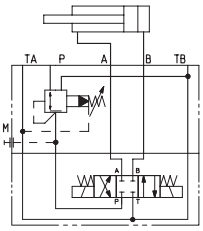
Hydraulic configuration



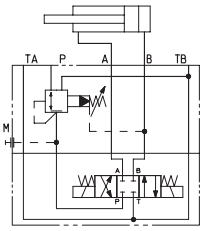
WHG-031



WHG-033



WKG-031



WKG-033

Valve model		WHG-03*/32	WHG-03*/50	WHG-03*/75	WHG-03*/100	WHG-03*/210	WKG-03*/100	WKG-03*/210
Max flow	[l/min]	50					100	
Pressure range	[bar]	3 ÷ 32	2 ÷ 50	10 ÷ 75	20 ÷ 100	50 ÷ 210	7 ÷ 100	8 ÷ 210
Max inlet pressure	[bar]	350					315	
Max pressure on port T	[bar]	160					160	

3 MAIN CHARACTERISTICS OF MODULAR PRESSURE REDUCING VALVES TYPE WHG and WKG

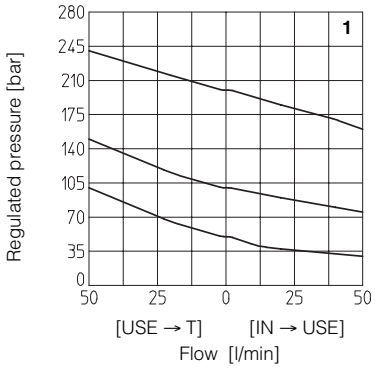
Assembly position	Any position. Note: JPG cannot be associated with directional valves having hydraulic centring device (/M) because JPG don't have L drain port.
Subplate surface finishing	Roughness index $\sqrt{}^{0.4}$,flatness ratio 0,01/100 (ISO 1101)
Ambient temperature	-20°C to +70°
Fluid	Hydraulic oil as per DIN 51524 ... 535; for other fluids see section 1
Recommended viscosity	15 ÷100 mm²/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 seals) -20°C +80°C (/PE seals)

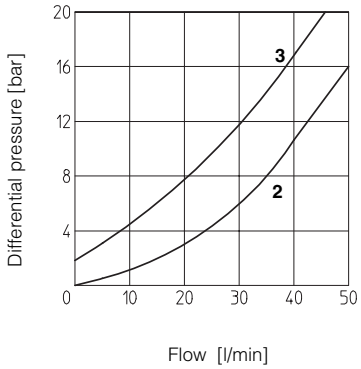
4 DIAGRAMS OF WHG-03* based on mineral oil ISO VG 46 at 50°C

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



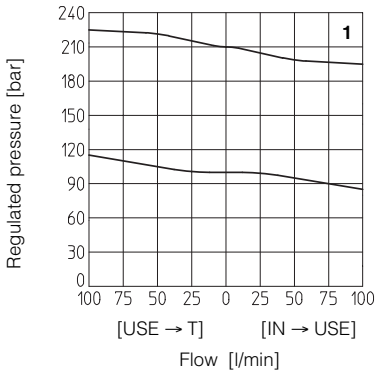


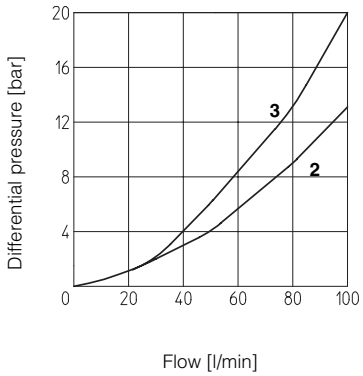
5 DIAGRAMS OF WKG-03* based on mineral oil ISO VG 46 at 50°C

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

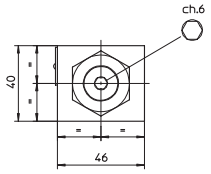
3 = differential pressure variation versus flow between use port and discharge port

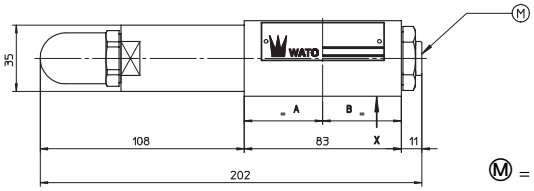


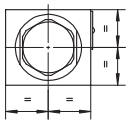


6 INSTALLATION DIMENSIONS OF WHG-0 VALVES [mm]

WHG-03*



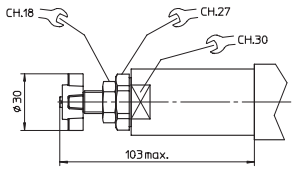


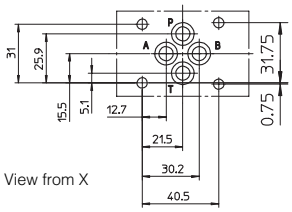


Ⓜ = Pressure gauge port = G 1/4"

Mass: 2,3 Kg

Adjustment device for option /V



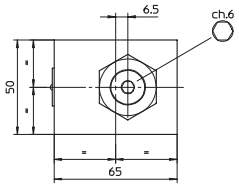


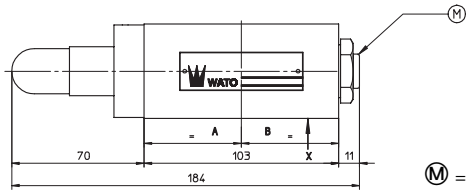
Mounting surface
ISO 4401-AB-03-4 size 06
Diameter of ports A, B, P, T: Ø = 7,5 mm (max)
Seals: 4 OR 108

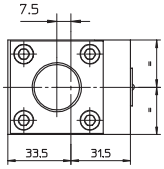
Fastening bolts: n° 4 socket head screws M5. The lenght depends on number and type of modular elements associated.

7 INSTALLATION DIMENSIONS OF WKG-0 VALVES [mm]

WKG-03*



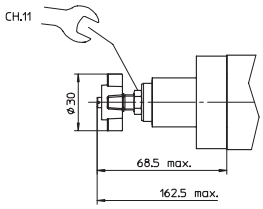


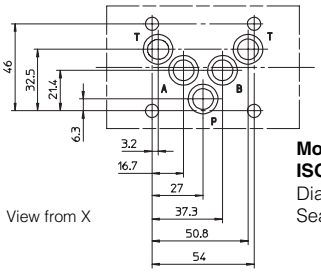


Ⓜ = Pressure gauge port = G 1/4"

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: Ø = 11,2 mm (max)
Seals: 5 OR 2050

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