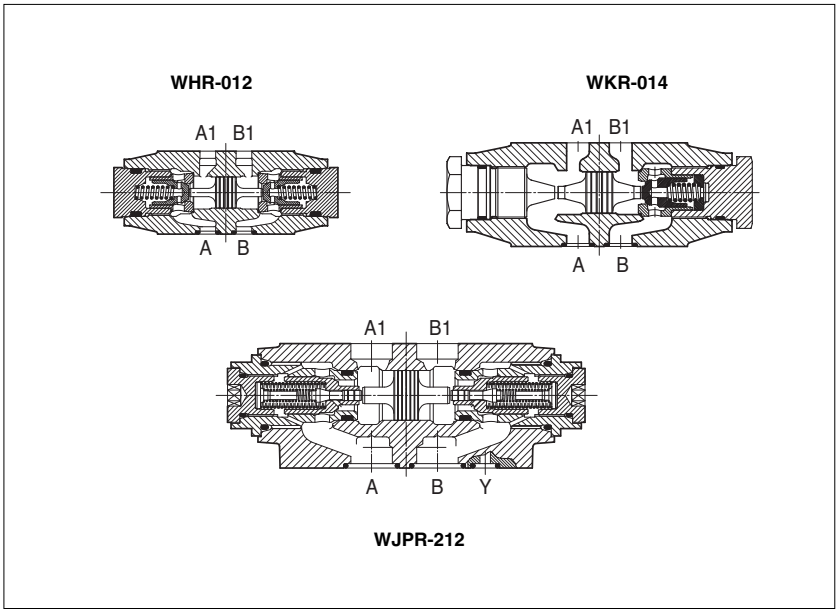
Modular check valves type WHR, WKR, WJPR

direct or pilot operated, ISO 4401 sizes 06, 10 and 16



WHR and WKR are modular check valves available as direct or pilot operated models.
WJPR are modular pilot operated check valves.

WHR-0 = ISO 4401 size 06 interface: flow up to 60 l/min, pressure up to 350 bar.

WKR-0= ISO 4401 size 10 interface: flow up to 120 l/min, pressure up to 315 bar.

WJPR-2 = ISO 4401 size 16 interface: flow up to 200 l/min, pressure up to 350 bar.

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

1 MODEL CODE

WHR-0	12	/4	**	/*

WHR-0
Modular check valve, size:
WHR-0 = 06
WKR-0 = 10
WJPR-2 = 16

12
Configuration, see section 2
direct operated (not available for WJPR):
11 = single, acting on port P
16 = single, acting on port T
pilot operated:
12 = double, acting on port A and B
13 = single, acting on port A
14 = single, acting on port B

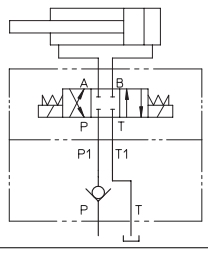
/4

******
Design number

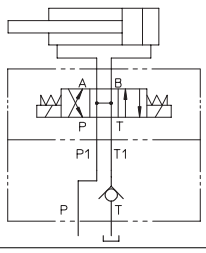
/*
Synthetic fluids:
PE = phosphate ester

2 VALVE CONFIGURATION

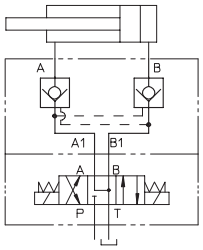
WHR-011
WKR-011



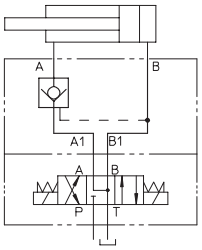
WHR-016
WKR-016



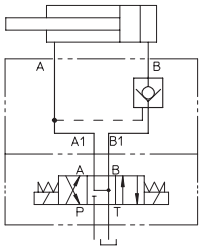
WHR-012
WKR-012
WJPR-212
WJPR-312



WHR-013
WKR-013
WJPR-213
WJPR-313



WHR-014
WKR-014
WJPR-214
WJPR-314



The pilote pressure applied through ports A or B opens the valve acting on ports B and A, respectively.
The minimum pilot pressure is a function of the area ratio, see the following table.

VALVE TYPE	AREA RATIO
WHR	3,3:1
WKR	3,3:1
WJPR-2	13,6:1 (standard version equipped with decompression system)

3 MAIN CHARACTERISTICS OF MODULAR CHECK VALVES TYPE WHR, WKR, WJPR

Assembly position	Any position
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)

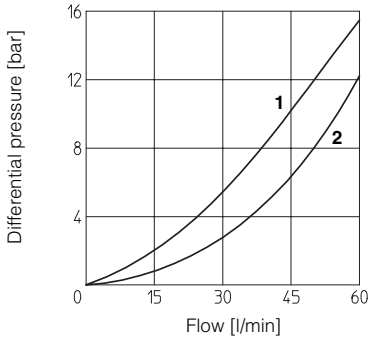
4 DIAGRAMS OF WHR-0 based on mineral oil ISO VG 46 at 50°C

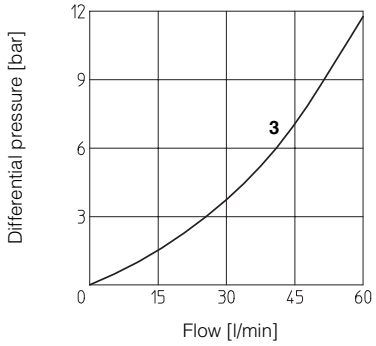
Flow through check valve:

1 = A→A1; B→B1 of
WHR-012, WHR-013, WHR-014

2 = A1→A; B1→B of
WHR-012, WHR-013, WHR-014

3 = WHR-011, WHR-016





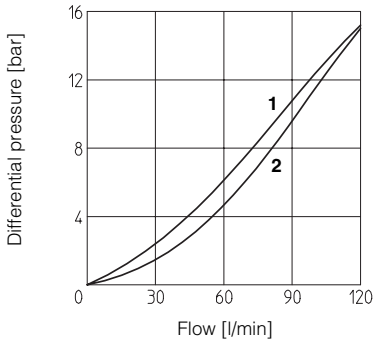
5 DIAGRAMS OF WKR-0 based on mineral oil ISO VG 46 at 50°C

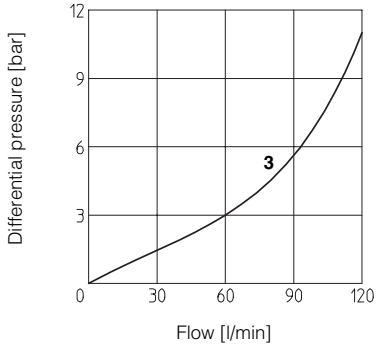
Flow through check valve:

1 = A→A1; B→B1 of
WKR-012, WKR-013, WKR-014

2 = A1→A; B1→B of
WKR-012, WKR-013, WKR-014

3 = WKR-011, WKR-016



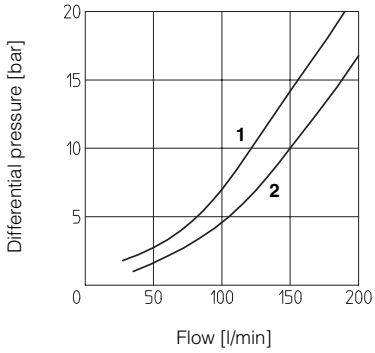


6 DIAGRAMS OF WJPR-2 based on mineral oil ISO VG 46 at 50°C

Flow through check valve:

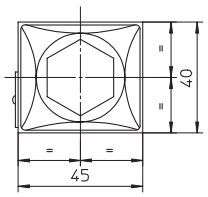
1 = A→A1; B→B1 of
WJPR-212, WJPR-213, WJPR-214

2 = A1→A; B1→B of
WJPR-212, WJPR-213, WJPR-214

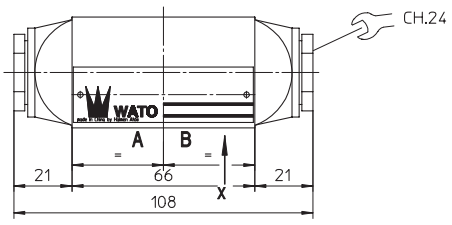


7 INSTALLATION DIMENSIONS OF WHR-0 VALVES [mm]

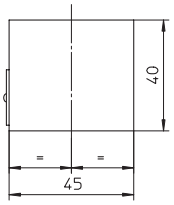
WHR-012
WHR-013
WHR-014



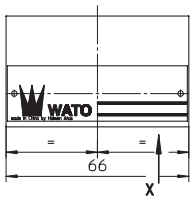
Mass: 1 Kg



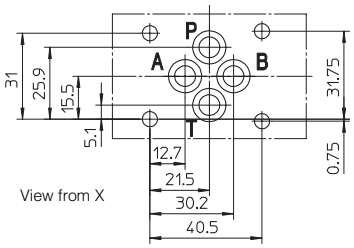
WHR-011
WHR-016



Mass: 0,7 Kg



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

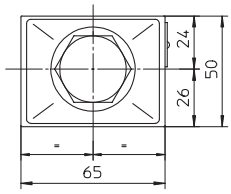


Fastening bolts: n° 4 socket head screws M5. The lenght depends on number and type of modular elements associated.

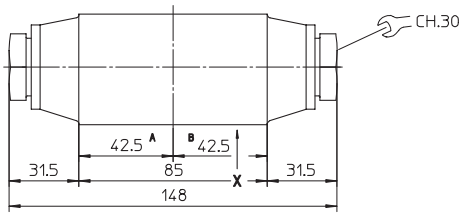
8 INSTALLATION DIMENSIONS OF WKR-0 VALVES [mm]

WKR-013
WKR-014

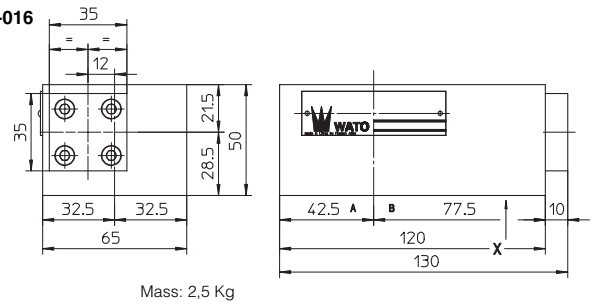
LATERAL VIEW



Massa: 2,3 Kg

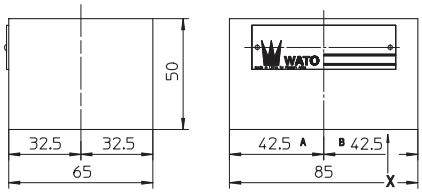


WKR-016



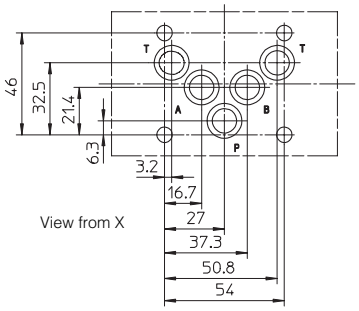
Mass: 2,5 Kg

WKR-011



Mass: 1,7 Kg

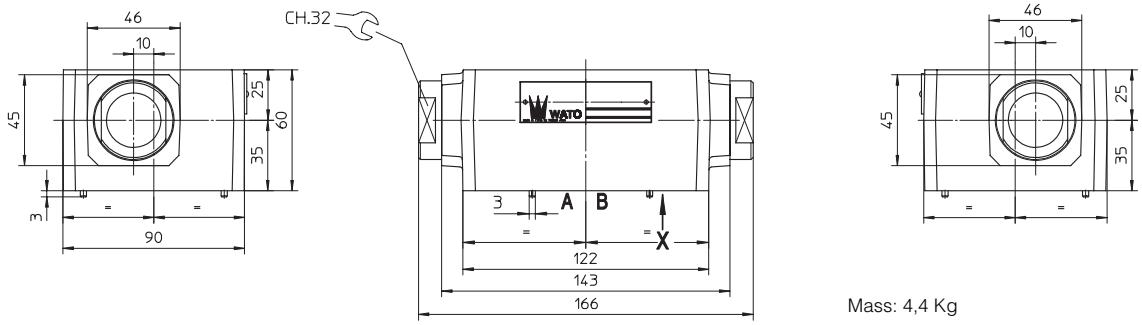
Mounting surface
ISO 4401-AC-05-4 size 10
Diameter of ports, A, B, P, T: Ø = 11,2 mm (max)
Seals: 5 OR 2050



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

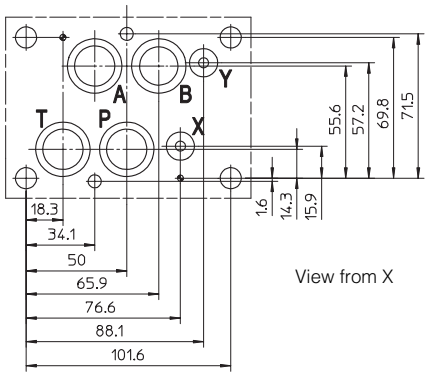
9 INSTALLATION DIMENSIONS OF WJPR-2 VALVES [mm]

WJPR-212
WJPR-213
WJPR-214



Mass: 4,4 Kg

Mounting surface
ISO 4401-AD-07-4 size 16
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



View from X

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