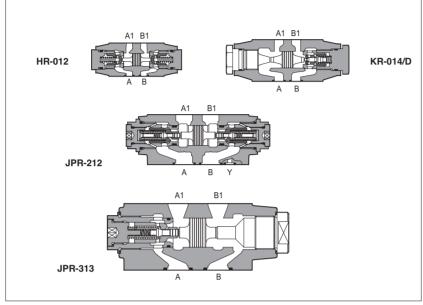


Modular check valves type HR, KR, JPR

direct or pilot operated, ISO 4401 sizes 06, 10, 16 and 25



HR, KR are check valves available as direct or pilot operated models. JPR are pilot operated check valves.

Optional versions with decompression are available on request for some models of

HR-0 = size 06: flow up to 60 l/min, pressure up to 350 bar.

KR-0 = size 10: flow up to 120 l/min, pressure up to 315 bar.

JPR-2 = size 16: flow up to 200 l/min, pressure up to 350 bar.

JPR-3 = size 25: flow up to 300 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

HR-0

Modular check valve, size: HR-0 = 06**JPR-2** = 16

JPR-3 = 25 **KR-0** = 10

Configuration, see section 2 direct operated (only for HR and KR):

02 = double, acting on port A and B

03 = single, acting on port A

04 = single, acting on port B

11 = single, acting on port P

16 = single, acting on port T

12

pilot operated:

12 = double, acting on port A and B

13 = single, acting on port A

14 = single, acting on port B

Series number Seals material, see section 3: = NBR PE = FKM

Options (only for KR-012, -013, -014):

D = with decompression (only with cracking pressure standard = 1 bar

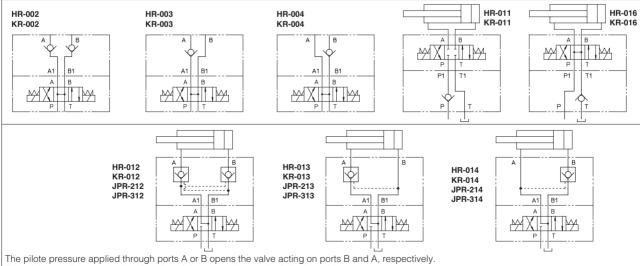
Spring cracking pressure:

for HR and KR - = 0,5 bar (std.) **4** = 4 bar for JPR

- = 0.5 bar (std)

2 = 2 bar **8** = 8 bar

2 VALVE CONFIGURATION



The minimum pilot pressure is a function of the area ratio, see the following table.

VALVE TYPE	AREA RATIO		
HR	3,3:1		
KR	3,3:1 (standard); 11:1 (option /D decompression system)		
JPR-2	13,6:1 (standard version equipped with decompression system)		
JPR-3	17:1 (standard version equipped with decompression system)		

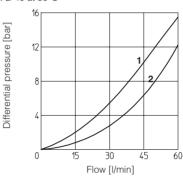
3 MAIN CHARACTERISTICS, SEALS and HYDRAULIC FLUID - for other fluids not included in below table, consult our technical office

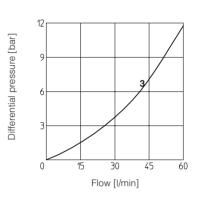
Assembly position / location	Any position			
Subplate surface finishing	Roughness index Ra 0,4 - flatness ratio 0,01/100 (ISO 1101)			
MTTFd values according to EN ISO 13849	150 years, for further details see technical table P007			
Ambient temperature	Standard execution = -30°C ÷ +70°C /PE option = -20°C ÷ +70°C /BT 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 (/PE option)= -20°C ÷ +80°C HNBR seals (/BT 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			
Fluid contamination class	ISO 4406 class 21/19/16 NAS 1638 class 10, in line filters of 25 μm (β25 ≥75 recommended)			
Hydraulic fluid	Suitable seals type	Classification	Ref. Standard	
Mineral oils	NBR, FKM, HNBR	HL, HLP, HLPD, HVLP, HVLPD	DIN 51524	
Flame resistant without water	FKM	HFDU, HFDR	100 1000	
Flame resistant with water	NBR, HNBR	HFC	ISO 12922	

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

Flow through check valve:

- $1 = A \rightarrow A_1$; B→B₁ of HR-012, HR-013, HR-014
- $2 = A_1 \rightarrow A$; $B_1 \rightarrow B$ of HR-012, HR-013, HR-014
- **3** = HR-011, HR-016

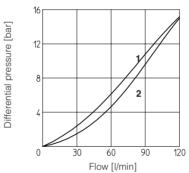


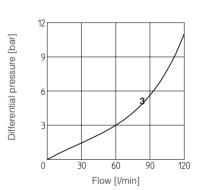


5 DIAGRAMS OF KR-0 based on mineral oil ISO VG 46 at 50°C

Flow through check valve:

- $1 = A → A_1; B → B_1 \text{ of } KR-012, KR-013, KR-014$
- $2 = A_1 \rightarrow A$; $B_1 \rightarrow B$ of KR-012, KR-013, KR-014
- **3** = KR-011, KR-016

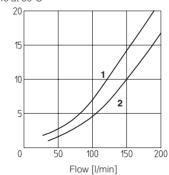




6 DIAGRAMS OF JPR-2 based on mineral oil ISO VG 46 at 50°C

Flow through check valve:

- $\mathbf{1} = A \rightarrow A_1$; $B \rightarrow B_1$ of JPR-212, JPR-213, JPR-214
- 2 = A₁→A; B₁→B of JPR-212, JPR-213, JPR-214

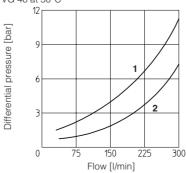


Differential pressure [bar]

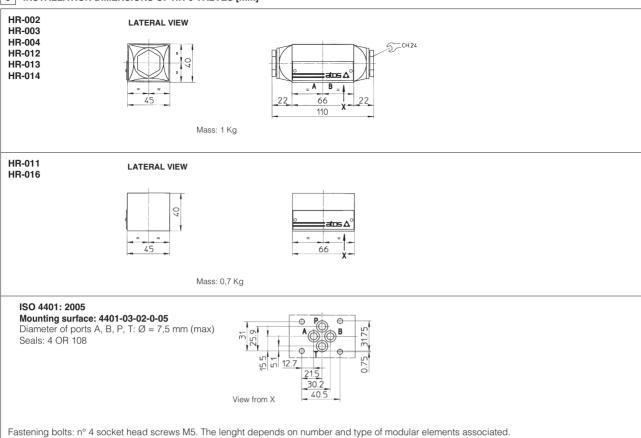
7 DIAGRAMS OF JPR-3 based on mineral oil ISO VG 46 at 50°C

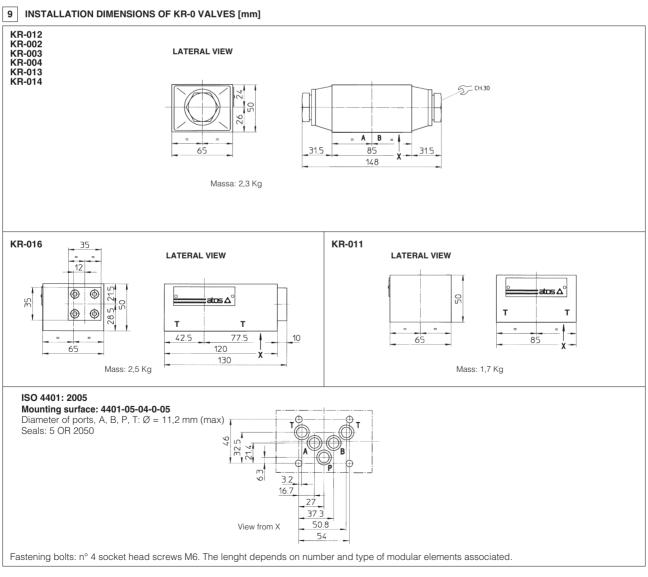
Flow through check valve:

- **1** = A→A1; B→B1 of JPR-312, JPR-313, JPR-314
- **2** = A₁→A; B₁→B of JPR-312, JPR-313, JPR-314

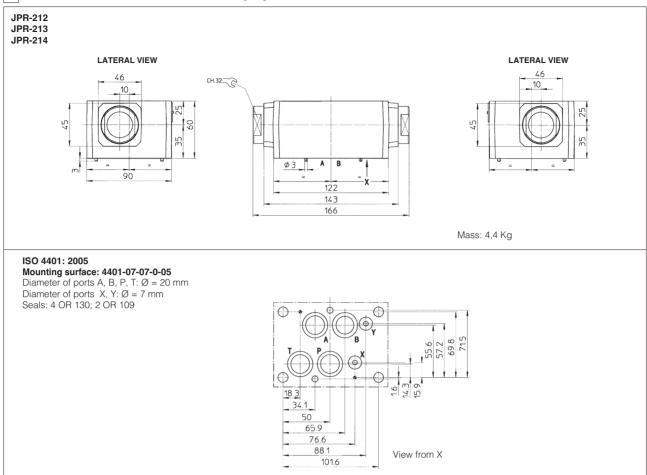


8 INSTALLATION DIMENSIONS OF HR-0 VALVES [mm]





10 INSTALLATION DIMENSIONS OF JPR-2 VALVES [mm]



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 JPR-3 VALVES [mm]

