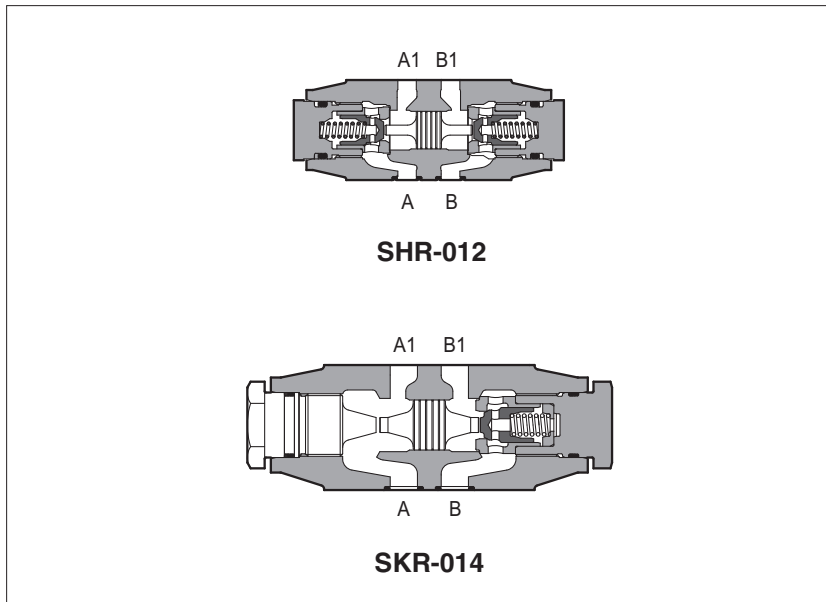


# Modular check valves type SHR, SKR

direct or pilot operated, ISO 4401 sizes 06 and 10



**SHR, SKR** are check valves available in direct or pilot operated models.

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

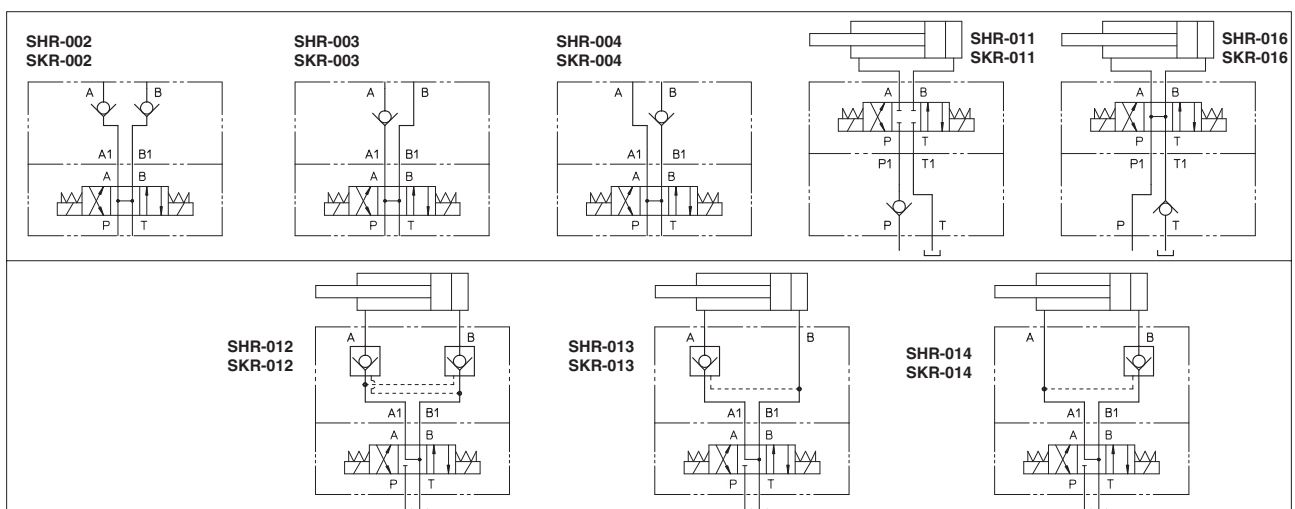
**SKR-0** = size 10: flow up to 120 l/min, pressure up to 315 bar.

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

## 1 MODEL CODE

|  |           |   |          |   |   |  |
|--|-----------|---|----------|---|---|--|
| <b>SHR-0</b>   | <b>12</b> | /   | <b>4</b> | <b>**</b>   | / | <b>*</b>   |
| Modular check valve, size:<br><b>SHR-0</b> = 06<br><b>SKR-0</b> = 10   |           |   |          | Series number   |   | Seals material, see section 3:<br>- = NBR<br><b>PE</b> = FKM<br><b>BT</b> = HNBR |
| Configuration, see section 2<br>direct operated:<br><b>02</b> = double, acting on port A and B<br><b>03</b> = single, acting on port A<br><b>04</b> = single, acting on port B<br><b>11</b> = single, acting on port P<br><b>16</b> = single, acting on port T |           | pilot operated:<br><b>12</b> = double, acting on port A and B<br><b>13</b> = single, acting on port A<br><b>14</b> = single, acting on port B |          | Spring cracking pressure:<br>- = 0,5 bar (std.) <b>4</b> = 4 bar<br><b>2</b> = 2 bar <b>8</b> = 8 bar |   |  |

## 2 VALVE CONFIGURATION



The pilot 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 |
|------------|------------|
| SHR        | 3,3:1      |
| SKR        | 3,3:1      |

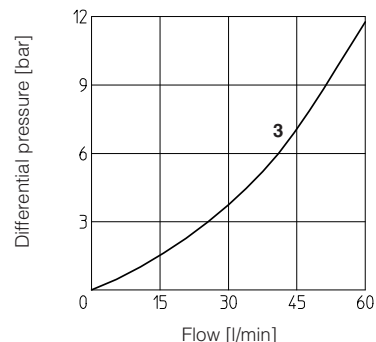
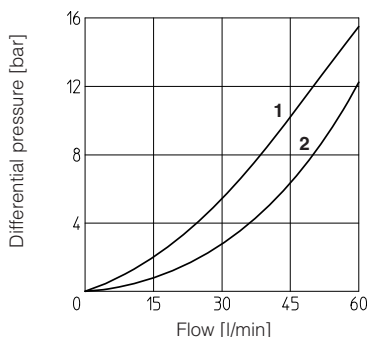
**3 MAIN CHARACTERISTICS, SEALS and HYDRAULIC FLUID** - for other fluids not included in below table, consult our technical office

|  |   |                            |                      |
|--|---|----------------------------|----------------------|
| 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<br>/PE option = -20°C ÷ +70°C<br>/BT option = -40°C ÷ +70°C  |                            |                      |
| Seals, recommended fluid temperature   | NBR seals (standard) = -20°C ÷ +80°C, with HFC hydraulic fluids = -20°C ÷ +50°C<br>FKM seals (/PE option) = -20°C ÷ +80°C<br>HNBR seals (/BT option) = -40°C ÷ +60°C, with HFC hydraulic fluids = -40°C ÷ +50°C |                            |                      |
| Recommended viscosity                  | 15 ÷ 100 mm <sup>2</sup> /s - max allowed range 2.8 ÷ 500 mm <sup>2</sup> /s  |                            |                      |
| Max fluid contamination level          | ISO4406 class 20/18/15 NAS1638 class 9, see also filter section at <a href="http://www.atos.com">www.atos.com</a> 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 SHR-0** based on mineral oil ISO VG 46 at 50°C

Flow through check valve:

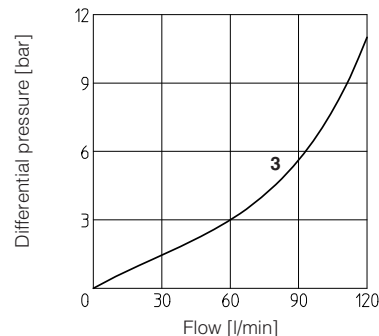
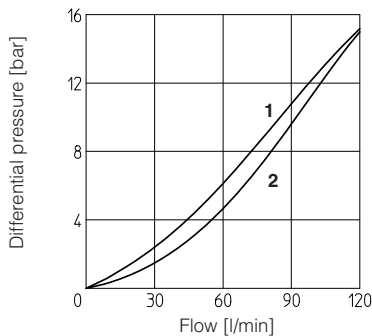
- 1** = A→A<sub>1</sub>; B→B<sub>1</sub> of SHR-012, SHR-013, SHR-014
- 2** = A<sub>1</sub>→A; B<sub>1</sub>→B of SHR-012, SHR-013, SHR-014
- 3** = SHR-011, SHR-016



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

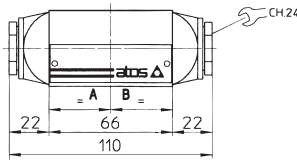
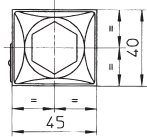
Flow through check valve:

- 1** = A→A<sub>1</sub>; B→B<sub>1</sub> of SKR-012, SKR-013, SKR-014
- 2** = A<sub>1</sub>→A; B<sub>1</sub>→B of SKR-012, SKR-013, SKR-014
- 3** = SKR-011, SKR-016



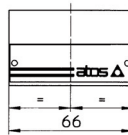
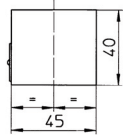
6 INSTALLATION DIMENSIONS OF SHR-0 VALVES [mm]

SHR-002  
SHR-003  
SHR-004  
SHR-012  
SHR-013  
SHR-014



Mass: 1 Kg

SHR-011  
SHR-016

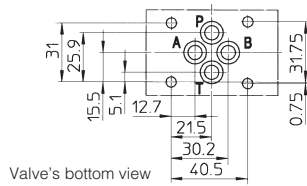


Mass: 0,7 Kg

ISO 4401: 2005

Mounting surface: 4401-03-02-0-05

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

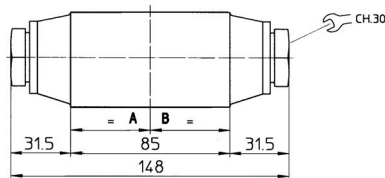
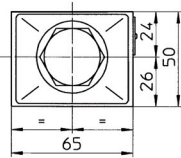


Valve's bottom view

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

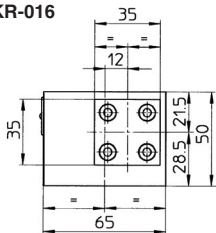
7 INSTALLATION DIMENSIONS OF SKR-0 VALVES [mm]

SKR-012  
SKR-002  
SKR-003  
SKR-004  
SKR-013  
SKR-014

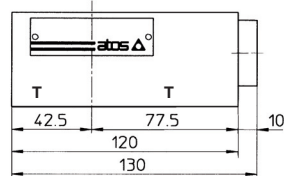


Massa: 2,3 Kg

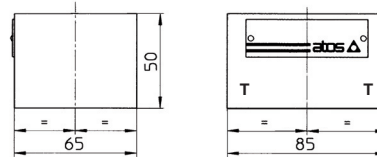
SKR-016



Mass: 2,5 Kg



SKR-011

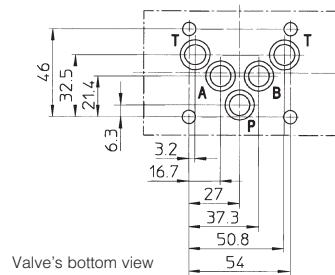


Mass: 1,7 Kg

ISO 4401: 2005

Mounting surface: 4401-05-04-0-05

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



Valve's bottom view

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