Modular reducing valves type HG, KG, JPG-2 and JPG-3
spool type, ISO 4401 sizes 06, 10, 16 and 25

HG, KG, JPG are pressure reducing valves, spool type , designed to operate in oil hydraulic systems. HG are direct, three way valves; KG are double stage , three way valves; JPG are double stage , two way valves. Clockwise rotation increases the pressure.
Valve size and max flow:
HG = size 06 flow up to 50 l/min;
KG = size 10 flow up to 100 l/min;
JPG-2 =size 16 flow up to 250 l/min;
JPG-3 =size 25 flow up to 300 l/min;

Mounting surface:
ISO 4401 size 06, 10, 16 and 25
Max pressure: 350 bar for HG
315 bar for KG and JPG

1 MODEL CODE

HG-0
HG-0 = 06
KG-0 = 10
JPG-0 = 25

2 HYDRAULIC CHARACTERISTICS

Pressure range
HG
32 = 3 - 32 bar
50 = 2 - 50 bar
75 = 10 - 75 bar
KG
100 = 7 - 100 bar
210 = 8 - 210 bar
JPG
100 = 6 - 100 bar
210 = 70 - 210 bar
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 2015/55/EU
| REACH Regulation (EC) n°1907/2006
Ambient temperature | Standard = -30°C ÷ +80°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
Max fluid contamination level | ISO4406 class 20/18/15 NAS1638 class 9, see also filter section at www.atos.com or KTF catalog

<table>
<thead>
<tr>
<th>Hydraulic fluid</th>
<th>Suitable seals type</th>
<th>Classification</th>
<th>Ref. Standard</th>
</tr>
</thead>
<tbody>
<tr>
<td>Mineral oils</td>
<td>NBR, FKM, HNBR</td>
<td>HL, HLP, HLPD, HVLP, HVLPD</td>
<td>DIN 51524</td>
</tr>
<tr>
<td>Flame resistant without water</td>
<td>FKM</td>
<td>HFDU, HFDR</td>
<td>ISO 12922</td>
</tr>
<tr>
<td>Flame resistant with water</td>
<td>NBR, HNBR</td>
<td>HFC</td>
<td></td>
</tr>
</tbody>
</table>

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*

Adjustment device for option /V

Adjustment device for option /VF and /VS

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

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

Mass: 2.3 Kg

9 INSTALLATION DIMENSIONS OF KG-0 VALVES [mm]

KG-03*

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

Mass: 3.8 Kg

Fastening bolts: n° 4 socket head screws M6. The length depends on number and type of modular elements associated.
**INSTALLATION DIMENSIONS OF JPG-2 VALVES [mm]**

**JPG-211**

- **Mass:** 9 Kg
- **Fastening bolts:** n° 4 socket head screws M10 and n° 2 M6. The length depends on number and type of modular elements associated.
- **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

View from X

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

**JPG-311**

- **Mass:** 9 Kg
- **Fastening bolts:** n° 6 socket head screws M12. The length depends on number and type of modular elements associated.
- **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 130: 2 OR 109

View from X