Features

1. 2-in-1 operation allows a simpler circuit configuration. Combination valve that provides both pressure reducing and counter balance functions.

2. Pressure adjustment using a single screw (bolt).

3. Compact and lightweight valve that can be mounted using the same methods as a 01, 03 size solenoid valve.

Specifications

<table>
<thead>
<tr>
<th></th>
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<th></th>
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</tr>
</thead>
<tbody>
<tr>
<td>GR-G01-A1-20 A2</td>
<td>1/8</td>
<td>21 (214) P port</td>
<td>0.8 to 7 (8.2 to 71.4) 3.5 to 14 (35.7 to 143)</td>
<td>1.5</td>
<td>ISO 4401-03-02-0-05</td>
<td></td>
</tr>
<tr>
<td>GR-G03-A1-(B)-20 A2</td>
<td>3/8</td>
<td>50</td>
<td>1.0 to 7 (10.2 to 71.4) 3.5 to 14 (35.7 to 143)</td>
<td>3.5</td>
<td>ISO 4401-05-04-0-05</td>
<td></td>
</tr>
</tbody>
</table>

Explanation of model No.

- Design number:
  - Note: For 03 size, relationship between mounting bolts and design number is indicated as J20: M6, 20: M8.

- Auxiliary symbol:
  - B: External drain (03 size only)
  - K: With handle

- Pressure adjustment range 1, 2

- Control port: A port

- Nominal diameter (size)

- Mounting method G: Gasket type

- Balancing valve

Installation Dimension Drawings

GR-G01-A*-20

GR-G03-A*-B-20

- Note 1. For size 03, an escape valve with piping from the drain discharge port is standard for the drain (GR-G03-A*-B-20).
- To change from internal drain to external drain, install a plug (NPTF 1/16) in part S, and remove the drain discharge port plug (RC 1/4).
- In this case, however, the B port cannot be used as the tank port.
- 2. Dimensions in parentheses show dimensions with handle (K type).

Handling

1. To adjust pressure, loosen the lock nut and then rotate the adjusting screw (bolt) clockwise (rightward) to increase pressure or counterclockwise (leftward) to decrease it.

2. For the 01 size, draining is from the gasket side B port.

3. For the drain of a 03 size valve when auxiliary symbol B is specified, run a pipe from the drain discharge port directly to the tank. The drain discharge port can also be plugged for direct draining from the gasket side B port. In the case of modification, be sure to change the valve type marking on the nameplate. When using drain piping, use a tightening torque of 22 to 25N·m (215 to 245kgf·cm) for pipe joints.

4. The drain of 03 size valve that does not have a B auxiliary symbol can be directly from the T port.

5. Make sure that drain back pressure is no greater than 0.2MPa (2.0kgf/cm²).

6. When an adjustment handle is required for pressure adjustment block, insert K for the type specification.

7. Set the difference between the pressure at the primary circuit (port P) and the secondary circuit (port A) at 0.5MPa (5 kgf/cm²).

8. Use the following table for specification when a sub plate is required.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Pipe Outlet Size</th>
<th>Weight kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>MSA-01Y-10</td>
<td>3/8</td>
<td>1.2</td>
</tr>
<tr>
<td>MS-03-30</td>
<td>3/8</td>
<td>3.8</td>
</tr>
<tr>
<td>MS-03X-30</td>
<td>1/2</td>
<td></td>
</tr>
</tbody>
</table>

- The following are the bundled mounting bolts.

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Bolt Dimensions</th>
<th>Q'ty</th>
<th>Tightening Torque N·m[kgf·cm]</th>
</tr>
</thead>
<tbody>
<tr>
<td>GR-G01-A*-20</td>
<td>M5×45</td>
<td>4</td>
<td>5 to 7 (51 to 71)</td>
</tr>
<tr>
<td>GR-G03-A*-20</td>
<td>M8×30</td>
<td>4</td>
<td>20 to 25 (205 to 255)</td>
</tr>
<tr>
<td>GR-G03-A*-J20</td>
<td>M6×50</td>
<td>4</td>
<td>10 to 13 (102 to 133)</td>
</tr>
</tbody>
</table>

Note: For mounting bolts, use bolts of 12.9 strength classification or equivalent.

Adjusting Handle (Option)
Performance Curves

Hydraulic Operating Fluid Kinematic Viscosity 32mm²/s

Setting Pressure – Drain Flow Rate Characteristics

Pressure – Flow Rate Characteristics

Cross-sectional Drawings

Note) The materials and hardness of the O-ring conforms with JIS B2401.

Seal Part List (Kit Model Number RJBS-G01)

Seal Part List (Kit Model Number RJBS-G03)