BALANCED PISTON TYPE
RELIEF VALVE (WITH ISO TYPE)

RI Series Relief Valve
(ISO Mounting, Balanced Piston Type)

40 to 320ℓ/min
35MPa

Features

1. High pressure capacity balanced piston relief valve.
2. Optimum pressure control for hydraulic circuit allows operation as a safety valve.
3. A vent port enables remote control of pressure and use of an unloading circuit.
4. ISO standard mounting service (see table below).

Specifications

<table>
<thead>
<tr>
<th>Model No.</th>
<th>Nominal Diameter (Size)</th>
<th>Maximum Working Pressure MPa(kgf/cm²)</th>
<th>Maximum Flow Rate ℓ/min</th>
<th>Pressure adjustment range MPa(kgf/cm²)</th>
<th>Weight kg</th>
<th>Gasket Surface Dimensions</th>
</tr>
</thead>
<tbody>
<tr>
<td>RI-G06-C-20</td>
<td>3/8</td>
<td>40</td>
<td>0.15 to 3.5 (1.5 to 35.7)</td>
<td>4.5</td>
<td>ISO 6264-09-0-97</td>
<td></td>
</tr>
<tr>
<td>RI-G06-1-20</td>
<td>3/4</td>
<td>320</td>
<td>0.8 to 7 (8.2 to 71.4)</td>
<td>5.6</td>
<td>ISO 6264-09-0-97</td>
<td></td>
</tr>
</tbody>
</table>

Features

1. To adjust pressure, loosen the lock nut and then rotate the handle clockwise (rightward) to increase pressure or counterclockwise (leftward) to decrease it.
2. Make sure that tank port back pressure is no greater than 0.2MPa (2.0kgf/cm²).
3. For use as a safety valve, use a pressure override that is higher than the required circuit pressure.
4. When using a remote control valve, connect piping to the relief valve port. Pipe capacity can cause vibration. Use of thick iron pipe with an inside diameter of no more than 4mm and a connection length of no more than three meters is recommended.
5. The following are the bundled mounting bolts.
6. A small control flow rate can cause pressure instability. Use a control flow rate that is at least 8 ℓ/min. Use a drain type relief valve in the case of a flow rate that is less than the minimum flow rate.

Explanation of model No.

RI – G 06 – 1 – 20

- Design number
- Pressure adjustment range C, 1, 3, 5
- Nominal diameter (size)
- Mounting method G: Gasket type
- RI series relief valve

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

Handling

1. To adjust pressure, loosen the lock nut and then rotate the handle clockwise (rightward) to increase pressure or counterclockwise (leftward) to decrease it.
2. Make sure that tank port back pressure is no greater than 0.2MPa (2.0kgf/cm²).
3. For use as a safety valve, use a pressure override that is higher than the required circuit pressure.
4. When using a remote control valve, connect piping to the relief valve port. Pipe capacity can cause vibration. Use of thick iron pipe with an inside diameter of no more than 4mm and a connection length of no more than three meters is recommended.
5. The following are the bundled mounting bolts.
6. A small control flow rate can cause pressure instability. Use a control flow rate that is at least 8 ℓ/min. Use a drain type relief valve in the case of a flow rate that is less than the minimum flow rate.
Installation Dimension Drawings

RI-G**-*-20

Model No. | A | B | C | D | E | F | G | H | J | K | L | a | b
---|---|---|---|---|---|---|---|---|---|---|---|---|---
RI-G03-*-20 | 132 | 78 | 32 | 80 | 149.5 | 106 | 43.5 | 31 | 53.8 | 13 | 53.8 | 20 | 14
RI-G06-*-20 | 137 | 83 | 36 | 100 | 158.5 | 119 | 39.5 | 37 | 66.7 | 15 | 70 | 26 | 17.5

Sub Plate MRI-03*-10
(Maximum Operating Pressure: 25MPa)

Sub Plate MRI-06*-10
(Maximum Operating Pressure: 25MPa)

Attach a plug when the vent (X) port is not used.

Model No. | A
---|---
MRI-03-10 | 3/8
MRI-03X-10 | 1/2
MRI-06-10 | 3/4
MRI-06X-10 | 1

Model No. | YF | YH
---|---|---
MRI-06-10 | 92.5 | 13.2
MRI-06X-10 | 100.7 | 4.7

Pressure Control Valve
Performance Curves

Pressure - Flow Rate Characteristics

RI-G03-C-20

RI-G06-*-20

Pressure Control Valve

Hydraulic Operating Fluid Kinematic Viscosity 32mm²/s

Pressure - Flow Rate Characteristics

RI-G03-*-20

RI-G06-*-20

Performance Curves

Note) The performance curves do not include T port back pressure.

Cross-sectional Drawing

RI-G**-*-20

Seal Part List (Kit Model Number REBS-***)

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Part Name</th>
<th>Nominal Diameter/Part Number G03</th>
<th>G06</th>
<th>Q'ty</th>
</tr>
</thead>
<tbody>
<tr>
<td>22</td>
<td>O-ring</td>
<td>NBR-90 P8</td>
<td></td>
<td>1</td>
</tr>
<tr>
<td>23</td>
<td>O-ring</td>
<td>NBR-90 P9</td>
<td>NBR-90 P9</td>
<td>3</td>
</tr>
<tr>
<td>24</td>
<td>O-ring</td>
<td>NBR-90 P10A</td>
<td>NBR-90 P10A</td>
<td>1</td>
</tr>
<tr>
<td>25</td>
<td>O-ring</td>
<td>NBR-70-1 P11</td>
<td>NBR-70-1 P11</td>
<td>1</td>
</tr>
<tr>
<td>26</td>
<td>O-ring</td>
<td>NBR-90 P18</td>
<td>NBR-90 P28</td>
<td>2</td>
</tr>
<tr>
<td>27</td>
<td>O-ring</td>
<td>NBR-90 G25</td>
<td>NBR-90 P28</td>
<td>1</td>
</tr>
<tr>
<td>28</td>
<td>O-ring</td>
<td>NBR-90 G30</td>
<td>NBR-90 P32</td>
<td>2</td>
</tr>
<tr>
<td>29</td>
<td>Backup ring</td>
<td>T2-P10A</td>
<td>T2-P10A</td>
<td>1</td>
</tr>
<tr>
<td>30</td>
<td>Backup ring</td>
<td>T2-G30</td>
<td>T2-P32</td>
<td>1</td>
</tr>
</tbody>
</table>

Note) The materials and hardness of the O-ring conforms with JIS B2401.
For the *** part of the kit number, specify the valve size (G03, G06).