Type C2 Low-pressure Reducing Valve

Features
- These normally closed type valves are capable of pressure control from the low pressure range because of a structure that supplies the pilot flow rate from the primary side of the valve to the built-in flow rate adjusting valve.

Nomenclature

1. Applicable fluid code
   - No designation: Petroleum-based hydraulic fluid, water-glycol hydraulic fluid
   - F: Phosphate ester hydraulic fluid

2. Model No.
   - C2GL: Type C2 low-pressure reducing valve

3. Connections
   - G: Gasket mount type

4. Nominal diameter
   - 03: 3/8
   - 06: 3/4

Specifications

<table>
<thead>
<tr>
<th>Model code</th>
<th>Nominal diameter</th>
<th>Maximum operating pressure MPa (kgf/cm²)</th>
<th>Pressure adjustment range MPa (kgf/cm²)</th>
<th>Maximum flow rate L/min</th>
<th>Drainage rate L/min</th>
<th>Mass kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2GL-G03-1-10</td>
<td>3/8</td>
<td>25 (250)</td>
<td>Up to 7 (Up to 70)</td>
<td>80</td>
<td>0.5 to 0.6</td>
<td>5.6</td>
</tr>
<tr>
<td>C2GL-G03-2-10</td>
<td>3/8</td>
<td></td>
<td>Up to 16 (Up to 160)</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>C2GL-G06-1-10</td>
<td>3/4</td>
<td></td>
<td>Up to 7 (Up to 70)</td>
<td>160</td>
<td></td>
<td>8.4</td>
</tr>
<tr>
<td>C2GL-G06-2-10</td>
<td>3/4</td>
<td></td>
<td>Up to 16 (Up to 160)</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Note: *1 The minimum adjustment pressure varies depending on the flow rate. See the flow rate - pressure characteristics for details.

<table>
<thead>
<tr>
<th>Model code</th>
<th>Pressure change MPa (kgf/cm²) per handle revolution</th>
</tr>
</thead>
<tbody>
<tr>
<td>C2GL-G××-1</td>
<td>2.5 (25) /revolution</td>
</tr>
<tr>
<td>C2GL-G××-2</td>
<td>4.6 (46) /revolution</td>
</tr>
</tbody>
</table>

Sub-plate model code
- The sub-plate is not provided with the valve. Order it separately as required by specifying the model code given in the table below.

<table>
<thead>
<tr>
<th>Model code</th>
<th>Nominal diameter</th>
<th>Connection port diameter</th>
<th>Mass kg</th>
</tr>
</thead>
<tbody>
<tr>
<td>JGB-03M</td>
<td>3/8</td>
<td>Rc3/8</td>
<td>1.6</td>
</tr>
<tr>
<td>JGB-03M04</td>
<td></td>
<td>Rc3/8</td>
<td></td>
</tr>
<tr>
<td>JGB-06M</td>
<td>3/4</td>
<td>Rc3/4</td>
<td>3.9</td>
</tr>
<tr>
<td>JGB-06M08</td>
<td></td>
<td>Rc1</td>
<td></td>
</tr>
</tbody>
</table>

Refer to Page S-6 for the dimensions of the sub-plate.
Handling

- Directly connect the drain piping to the tank without merging it with other tank piping.
- To ensure good pressure reducing performance, set the primary side main circuit pressure and the secondary pressure reducing circuit pressure such that there is a minimum difference of 1 MPa (10 kgf/cm²).
- When using the valve in combination with a direct operated relief valve for remote control, connect the remote control valve to the vent port.

Since excessive internal volume of the vent piping may lead to vibration, use steel pipes with an inner diameter of 4 mm maximum and thick walls for piping.

Performance curves (viscosity: 32 mm²/s {cSt})

- C2GL-G03

Flow rate - Pressure characteristics

Solid line: With a primary pressure of 25 MPa (250 kgf/cm²)
Dashed line: With a primary pressure of 16 MPa (160 kgf/cm²)

Flow rate - Pressure characteristics

Note: The minimum adjustment pressure at 0 L/min is 0.15 MPa (1.5 kgf/cm²).

Pressure drop characteristics

Solid line: With a primary pressure of 25 MPa (250 kgf/cm²)
Dashed line: With a primary pressure of 16 MPa (160 kgf/cm²)

Flow rate - Pressure characteristics

Note: The minimum adjustment pressure at 0 L/min is 0.15 MPa (1.5 kgf/cm²).

C2GL-G06

Flow rate - Pressure characteristics

Solid line: With a primary pressure of 25 MPa (250 kgf/cm²)
Dashed line: With a primary pressure of 16 MPa (160 kgf/cm²)

Flow rate - Pressure characteristics

Note: The minimum adjustment pressure at 0 L/min is 0.15 MPa (1.5 kgf/cm²).

Pressure drop characteristics

Solid line: With a primary pressure of 25 MPa (250 kgf/cm²)
Dashed line: With a primary pressure of 16 MPa (160 kgf/cm²)

Flow rate - Pressure characteristics

Note: The minimum adjustment pressure at 0 L/min is 0.15 MPa (1.5 kgf/cm²).
### External dimension diagram

**C2GL-G**

![External dimension diagram](image)

- **Model No.**
  - C2GL-G03
  - C2GL-G06

- **Dimensions**
  - A: 157.8
  - A': 182
  - A**: 147.5
  - B: 107
  - C: 116
  - D: 159
  - E: 117
  - F: 77
  - G: 30
  - H: 88
  - J: 137
  - K: 44
  - L: 16
  - M: 24

- **Pressure adjusting handle**
  - (clockwise: pressure increase)

- **External drain port**
  - (port Y)

- **Secondary side port**
  - (port A)

- **Primary side port**
  - (port B)

- **Vent port**
  - (port X)

- **External dimension diagram**

- **Symbol of option type**
  - H

### Sectional structural diagram

**C2GL-G**

![Sectional structural diagram](image)

### Sealing part table

<table>
<thead>
<tr>
<th>Part No.</th>
<th>Name</th>
<th>Quantity</th>
<th>Part specifications</th>
<th>Part specifications</th>
</tr>
</thead>
<tbody>
<tr>
<td>24</td>
<td>O-ring</td>
<td>2</td>
<td>JIS B 2401 1B P20</td>
<td>JIS B 2401 1B P28</td>
</tr>
<tr>
<td>25</td>
<td>O-ring</td>
<td>2</td>
<td>JIS B 2401 1B P12</td>
<td>JIS B 2401 1B P12</td>
</tr>
<tr>
<td>26</td>
<td>O-ring</td>
<td>2</td>
<td>AS568-020 (NBR, Hs90)</td>
<td>AS568-122 (NBR, Hs90)</td>
</tr>
<tr>
<td>27</td>
<td>Backup ring</td>
<td>4</td>
<td>Bias cut for AS568-020</td>
<td>Bias cut for AS568-122</td>
</tr>
<tr>
<td>28</td>
<td>O-ring</td>
<td>1</td>
<td>AS568-215 (NBR, Hs90)</td>
<td>AS568-222 (NBR, Hs90)</td>
</tr>
<tr>
<td>29</td>
<td>O-ring</td>
<td>2</td>
<td>AS568-015 (NBR, Hs90)</td>
<td>AS568-013 (NBR, Hs90)</td>
</tr>
<tr>
<td>30</td>
<td>Backup ring</td>
<td>2</td>
<td>Bias cut for AS568-013</td>
<td>Bias cut for AS568-013</td>
</tr>
<tr>
<td>31</td>
<td>O-ring</td>
<td>2</td>
<td>JIS B 2401 1B P14</td>
<td>JIS B 2401 1B P14</td>
</tr>
<tr>
<td>32</td>
<td>O-ring</td>
<td>4</td>
<td>JIS B 2401 1B P9</td>
<td>JIS B 2401 1B P9</td>
</tr>
</tbody>
</table>