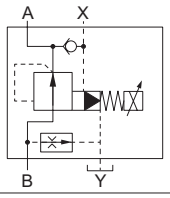
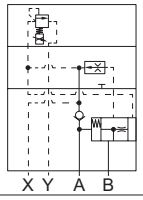
# Type C2 Solenoid Operated Proportional Low-pressure Reducing Valve

JIS graphic symbols for hydraulic system

Simplified symbols




Detailed symbols




## 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

※ - C2GLP - G 03 - ※※ - 10 - ※ ※

| 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
|---|---|---|---|---|---|---|---|

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

**2 Model No.**
C2GLP: Type C2 solenoid operated proportional low-pressure reducing valve

**3 Connections**
G: Gasket mount type

**4 Nominal diameter**
03: ⅜

**5 Pressure adjustment range**
03: Up to 3.5 MPa {Up to 35 kgf/cm$^2$}
1: Up to 7 MPa {Up to 70 kgf/cm$^2$}
2: UP to 16 MPa {UP to 160 kgf/cm$^2$}

**6 Design No.**
**(The design No. is subject to change)**

**7 Option code**
No designation: DIN connector mounting position: Top
L: DIN connector mounting position, left side
R: DIN connector mounting position, right side

**8 Solenoid codes**
No designation: DC 24 V solenoid
N: DC 12 V solenoid

## 8: Solenoid code and applicable driver model code

| Solenoid codes | Solenoid | Rated current (20°C) mA | Coil resistance (20°C) Ω | Applicable driver | |
|---|---|---|---|---|---|
| | | | | Model code | Power supply voltage |
| No designation | DC 24 V solenoid | 850 | 26 | KC-6-10 | AC 100, 200, 220 V (Common for 50 and 60 Hz) |
| N | DC 12 V solenoid | 1700 | 6.5 | ZH-6-10 | DC 24 V |

## Specifications

| Model code | Nominal diameter | Maximum operating pressure MPa {kgf/cm$^2$} | Pressure adjustment range *1 MPa {kgf/cm$^2$} | Maximum flow rate L/min | Drainage rate L/min | Hysteresis | Repeatability | Mass kg |
|---|---|---|---|---|---|---|---|---|
| C2GLP-G03-03-10 | ⅜ | 25 {250} | Up to 3.5 {Up to 35} | 80 | 0.5 to 0.6 | No greater than 3% of the maximum adjusting pressure | No greater than 1% of the maximum adjusting pressure | 6.4 |
| C2GLP-G03- 1-10 | | | Up to 7 {Up to 70} | | | | | |
| C2GLP-G03- 2-10 | | | Up to 16 {Up to 160} | | | | | |

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

## 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.

| Model code | Nominal diameter | Connection port diameter | Mass kg |
|---|---|---|---|
| JGB-03M | 3/8 | Rc3/8 | 1.6 |
| JGB-03M04 | | Rc1/2 | |

Refer to Page S-7 for the dimensions of the sub-plate.

## Accessories

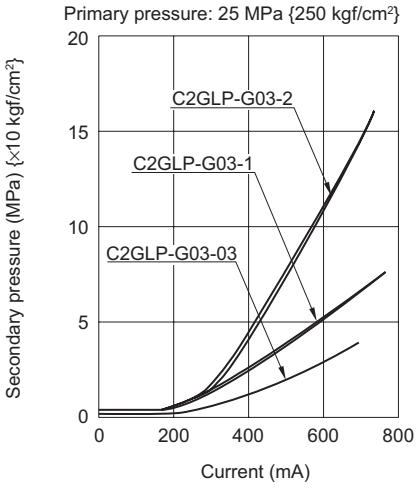
| Hexagon socket head cap bolt | Number | Tightening torque N·m {kgf·cm} |
|---|---|---|
| M10 × 60 | 4 | 51 to 68 {510 to 680} |

## Handling

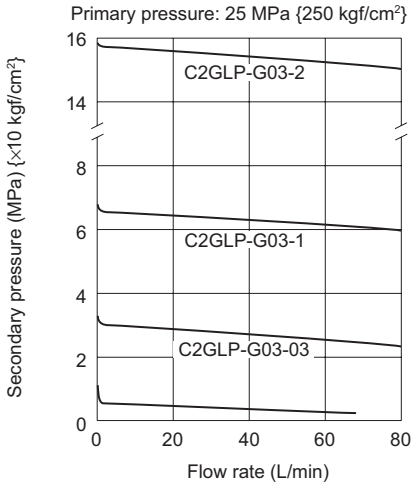
- Directly connect the drain piping to the tank without merging it with other tank piping.
- To achieve stable pressure control, completely remove air by loosening the air bleeding screw and fill the inside of the valve with fluid.
- To ensure good pressure reducing performance, set the primary side main circuit pressure and the secondary pressure reducing circuit pressure such that there is a minimum difference of 1 MPa {10 kgf/cm$^2$}.
- The minimum pressure adjusting screw (manual adjusting screw) is factory adjusted before shipment but it can be used to adjust the pressure when electric current cannot be applied to the solenoid during initial adjustment or due to electrical failure. Before adjusting the pressure with the pressure adjusting screw, check and note the initial position of the screw. The pressure is increased by turning the screw clockwise. After recovering the normal operation status, return the screw to the initial position and tighten the lock nut.

## Performance curves (viscosity: 32 mm$^2$/s {cSt})

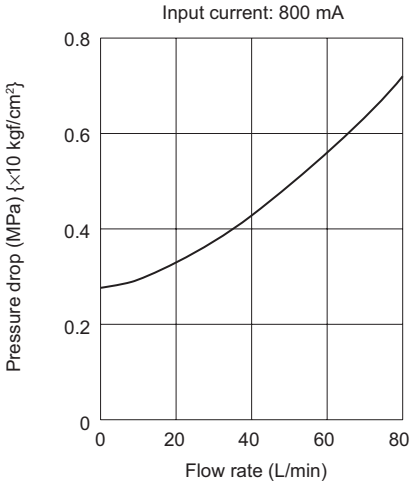
Input current - pressure characteristics



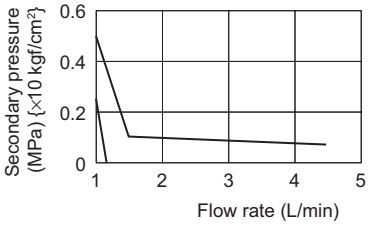

Flow rate - pressure characteristics




Pressure drop characteristics



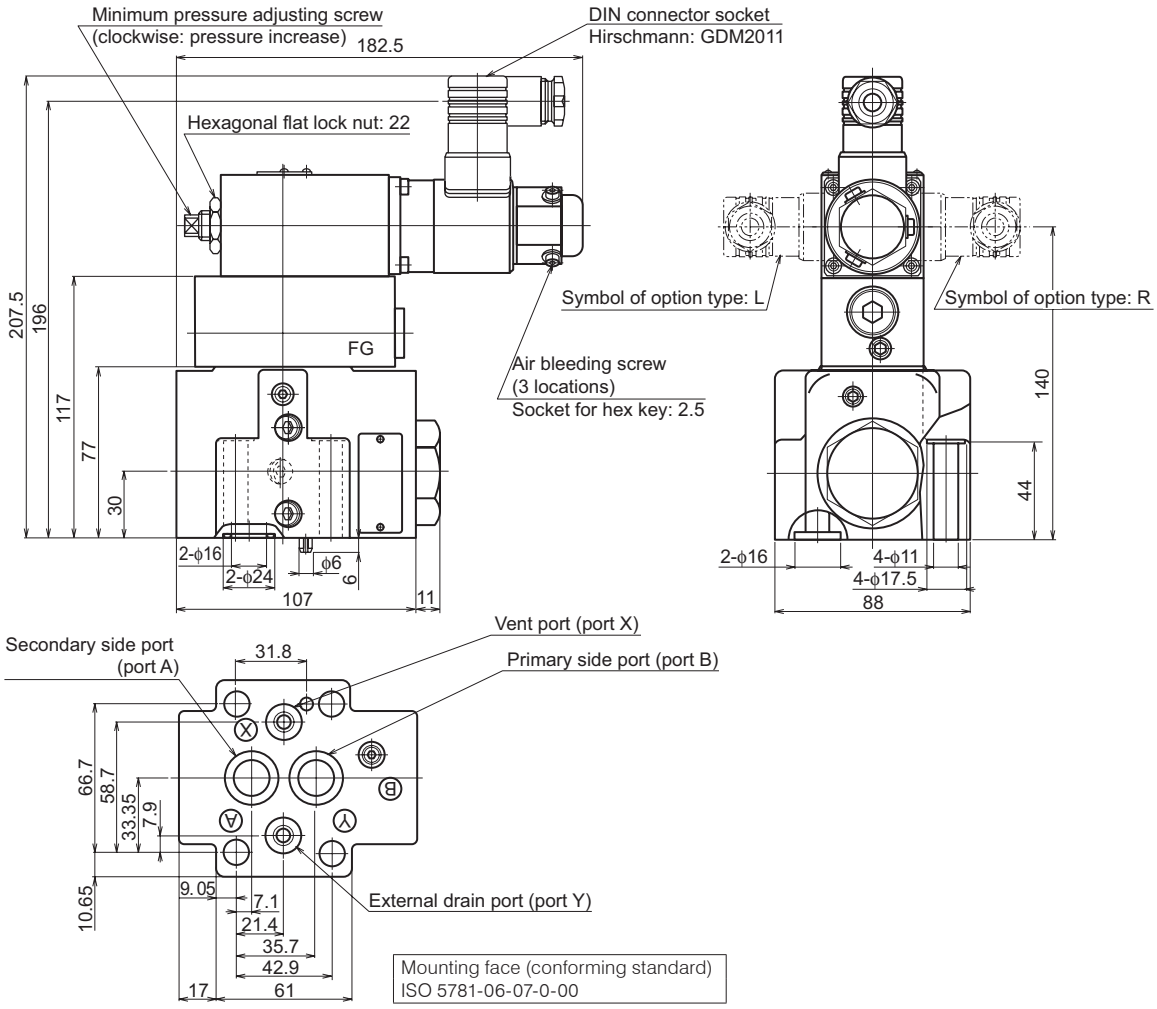

Flow rate - pressure characteristics




Note: The minimum adjustment pressure at 0 L/min is 0.28 MPa {2.8 kgf/cm$^2$}.

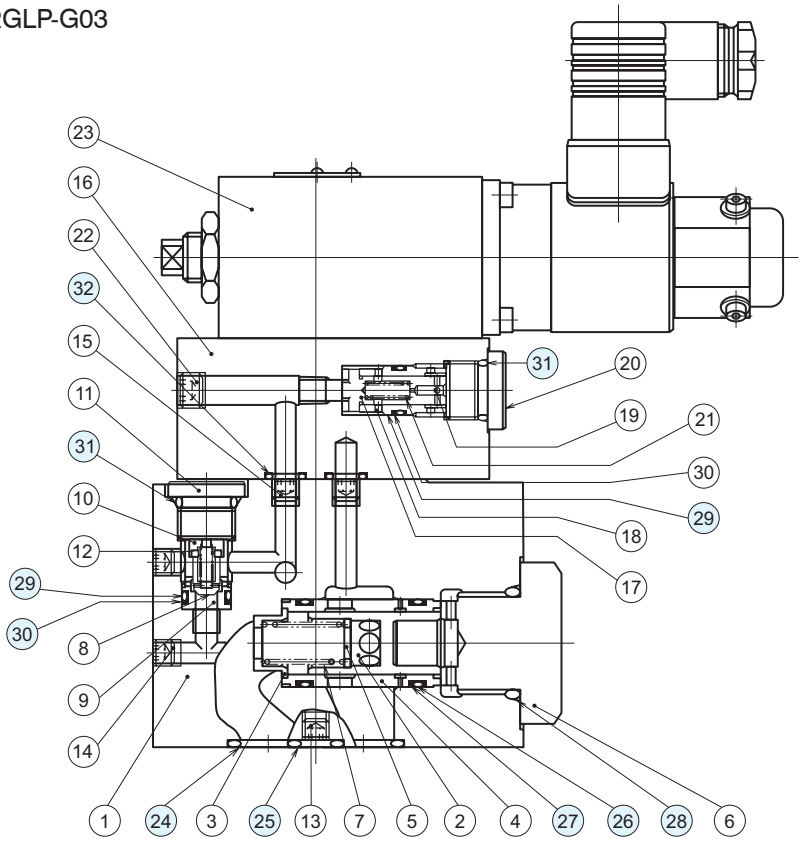
# External dimension diagram

C2GLP-G03




# Sectional structural diagram

C2GLP-G03




Sealing part table

| Part No. | Name | Quantity | Part specifications |
|---|---|---|---|
| 24 | O-ring | 2 | JIS B 2401 1B P20 |
| 25 | O-ring | 2 | JIS B 2401 1B P12 |
| 26 | O-ring | 2 | AS568-020 (NBR, Hs90) |
| 27 | Backup ring | 4 | Spiral for AS568-020 |
| 28 | O-ring | 1 | AS568-215 (NBR, Hs90) |
| 29 | O-ring | 2 | AS568-013 (NBR, Hs90) |
| 30 | Backup ring | 2 | Bias cut for AS568-013 |
| 31 | O-ring | 2 | JIS B 2401 1B P14 |
| 32 | O-ring | 4 | JIS B 2401 1B P9 |