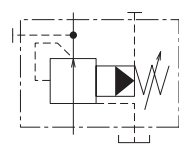


# Low-pressure Reducing Valve



JIS graphic symbols for hydraulic system



## Features

- Used to set the pressure of a certain range of a hydraulic circuit lower than the main circuit.
- Maintains the secondary side pressure regardless of changes in the primary side main circuit pressure.
- The branch circuit pressure can be controlled remotely by connecting a relief valve for remote control to the vent port.
- A structure to prevent surge pressure is available as an option.

## Nomenclature

※ - **SGB** - **G 03** - **1** - **20** - ※ ※

1      2      3   4      5      6      7

### 1 Applicable fluid code

No designation: Petroleum-based hydraulic fluid, water-glycol hydraulic fluid

F: Phosphate ester hydraulic fluid

### 2 Basic model SGB: S series low-pressure reducing valve

### 3 Connection type G: Gasket mount type

### 4 Nominal diameter 03: 3/8

### 5 Pressure adjustment range

1: 0.15 to 7 MPa {1.5 to 70 kgf/cm<sup>2</sup>}

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

### 7 Option code

No designation: Without surge pressure prevention structure  
 SP: With surge pressure prevention structure

## Specifications

Model code	Nominal diameter	Maximum operating pressure MPa {kgf/cm <sup>2</sup> }	Pressure adjustment range MPa {kgf/cm <sup>2</sup> }	Maximum flow rate L/min	Mass kg
SGB-G03-1-20	3/8	14 {140}	0.15 to 7 {1.5 to 70}	30	3.0

Model code	Pressure change MPa {kgf/cm <sup>2</sup> } per handle revolution
SGB-G03-1	2.3 {23}/revolution

## 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
SGB-03M	3/8	Rc3/8	1.5

Refer to Page S-5 for the dimensions of the sub-plate.

## Accessories (gasket mount type)

Hexagon socket head cap bolt	Quantity	Tightening torque N·m {kgf·cm}
M10 × 45	4	48 to 63 {480 to 630}

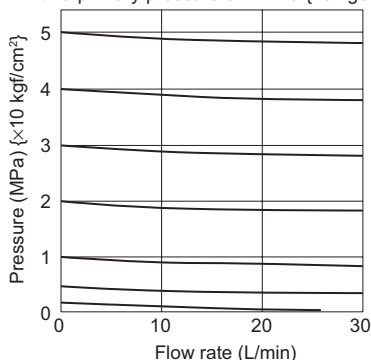
## Handling

- 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 0.4 MPa {4 kgf/cm<sup>2</sup>}.
- If a reducing valve with check valve is required, order SMC-03-05-10 on Page E-65 separately and stack it on the valve.

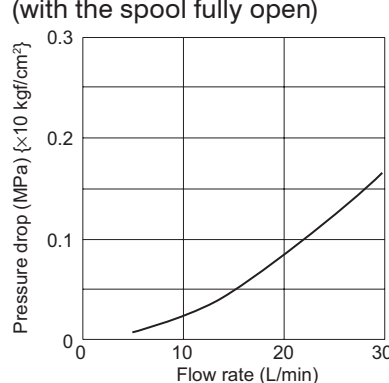
## Performance curves (viscosity: 32 mm<sup>2</sup>/s {cSt})

Flow rate - Pressure characteristics

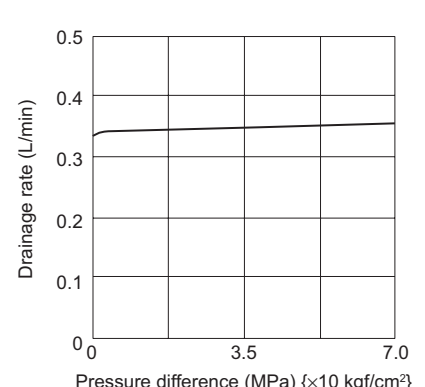
With a primary pressure of 7 MPa {70 kgf/cm<sup>2</sup>}



Pressure drop characteristics (with the spool fully open)



Drainage rate characteristics



## Contact Details

Before using the product, please check the guide pages at the front of this catalog.

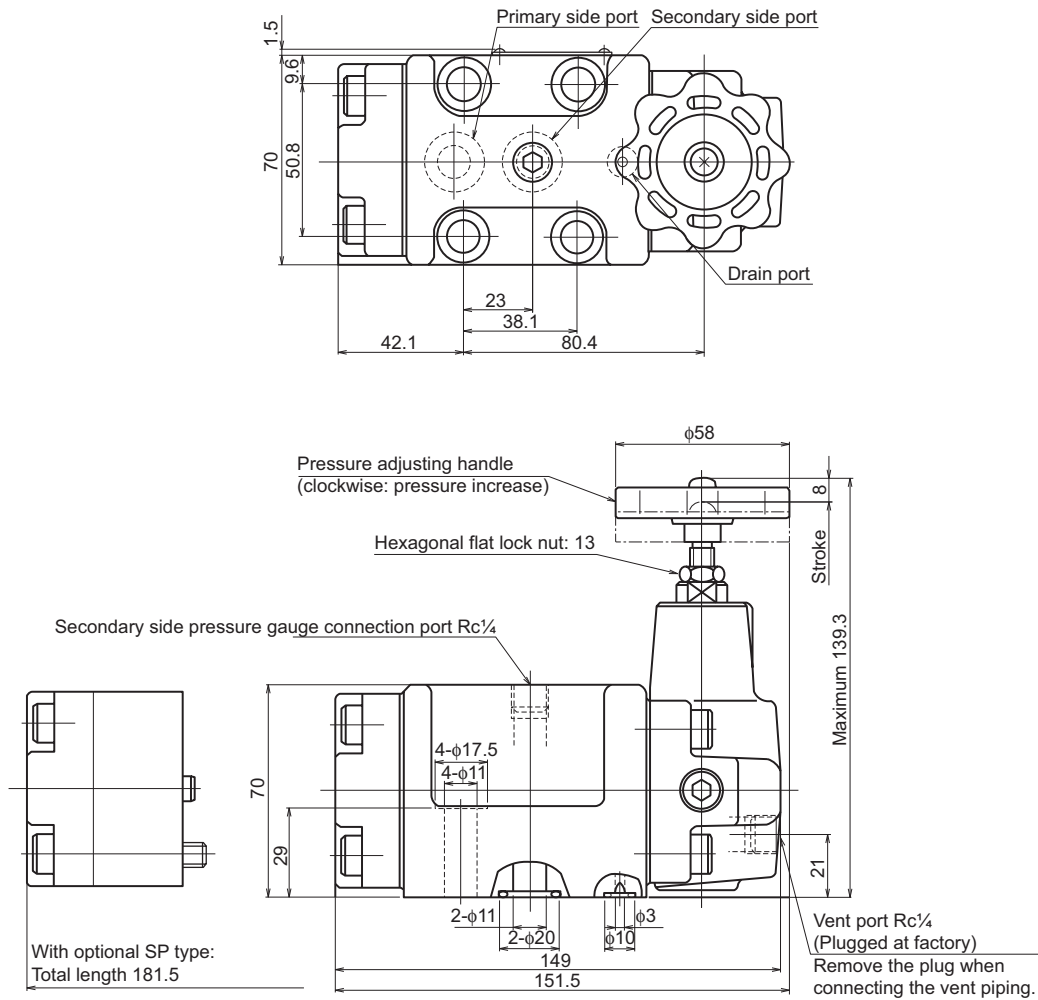
Internet

<http://www.daikinpmc.com/en/>

For latest information, PDF catalogs and operation manuals

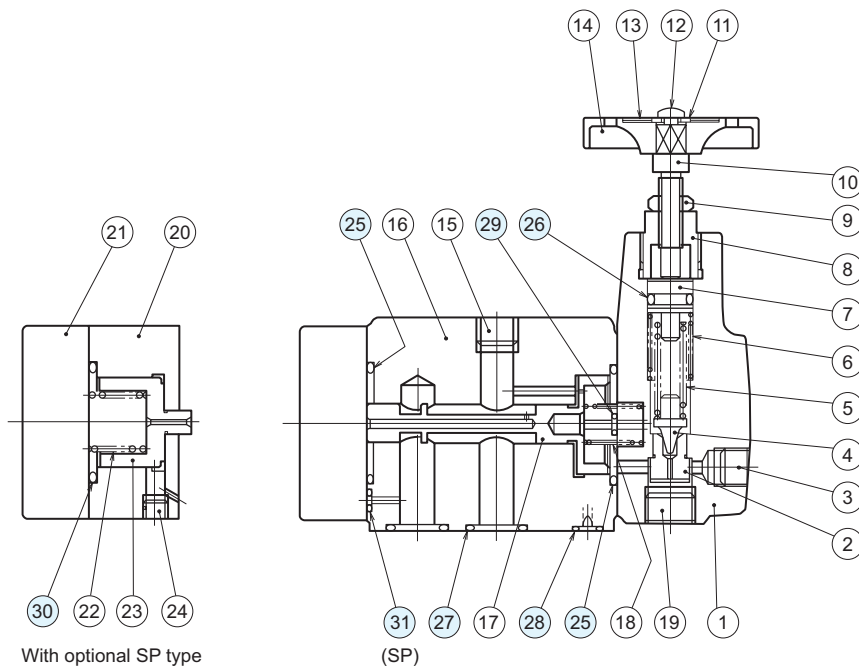
## External dimension diagram

SGB-G03



## Sectional structural diagram

SGB-G03



Sealing part table

Part No.	Name	Quantity	Part specifications
25	O-ring	2	JIS B 2401 1BG35
26	O-ring	1	JIS B 2401 1AP11
27	O-ring	2	JIS B 2401 1BP16
28	O-ring	1	JIS B 2401 1BP7
29	O-ring	1	JIS B 2401 1BP4
30	O-ring	SP type: 1	JIS B 2401 1P34
31	O-ring	SP type: 1	JIS B 2401 1BP4