

## Contact Details

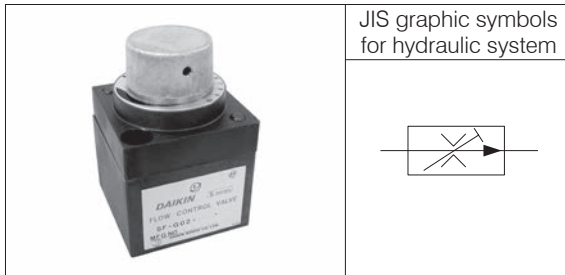
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# Flow Control Valves (with Pressure/Temperature Compensation Control)



JIS graphic symbols for hydraulic system

## Features

- The valves with pressure/temperature compensation control can maintain the set flow rate regardless of changes in the load pressure and fluid temperature.
- Capable of flow rate control from the minimal flow rate of 0.01 L/min.
- Adopts a structure that minimizes occurrences of jumping.

## Nomenclature

※ - SF - G 02 - ※※※ - 15

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### 1 Applicable fluid code

No designation: Petroleum-based hydraulic fluid, water-glycol hydraulic fluid  
F: Phosphate ester hydraulic fluid

### 2 Model No.

SF: S series flow control valve

### 3 Connections

G: Gasket mount type

### 4 Nominal diameter

02: ¼

### 5 Maximum control flow rate

002: 0.2 L/min  
006: 0.6 L/min  
030: 3 L/min  
060: 6 L/min  
150: 15 L/min

### 6 Design No.

(The design No. is subject to change)

## Specifications

Model code	Nominal diameter	Maximum operating pressure MPa {kgf/cm <sup>2</sup> }	Flow rate adjustment range L/min	Mass kg
SF-G02-002-15	¼	7 {70}	0.01 to 0.2	0.8
SF-G02-006-15			0.01 to 0.6	
SF-G02-030-15			0.01 to 3	
SF-G02-060-15			0.01 to 6	
SF-G02-150-15			0.01 to 15	

## Sub-plate model code

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

Model code	Nominal diameter	Connection port diameter	Mass kg
SF-02M	¼	Rc¼	0.5

Refer to Page S-8 for the dimensions of the sub-plate.

## Accessories

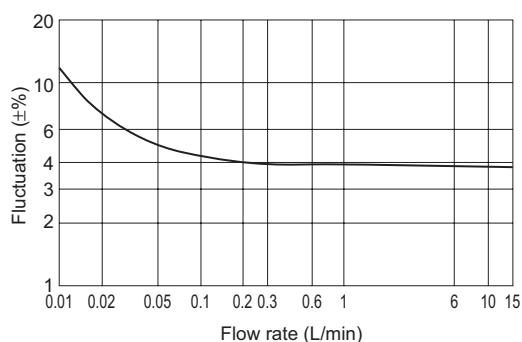
Hexagon socket head cap bolt	Quantity	Tightening torque N·m {kgf·cm}
M6 × 50	2	10 to 12.5 {100 to 125}

## Handling

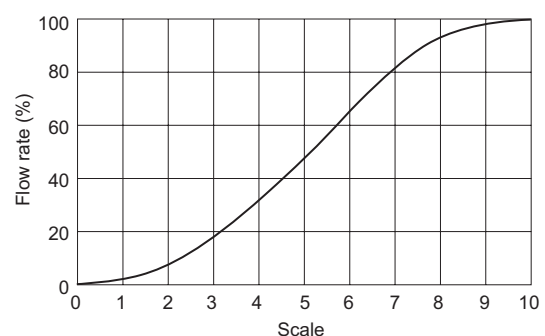
- Use the valve in combination with a line filter with a filtration accuracy of 10 μm or better. When controlling flow rate of 0.02 L/min or less, ensure that the contamination of the hydraulic fluid goes no higher than NAS contamination class 8.
- To ensure good pressure compensation performance, maintain a pressure difference of 1 MPa {10 kgf/cm<sup>2</sup>} minimum between the inlet and outlet ports.
- When a flow control valve with check valve is required, order SMC-02-05-10 on Page F-19 separately and stack it with the valve.

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

Flow rate - Pressure fluctuation characteristics  
Pressure difference between inlet and outlet ports:  
1 to 7 MPa {10 to 70 kgf/cm<sup>2</sup>}



Scale - Flow rate characteristics  
Pressure difference between inlet and outlet ports:  
3.5 MPa {35 kgf/cm<sup>2</sup>}



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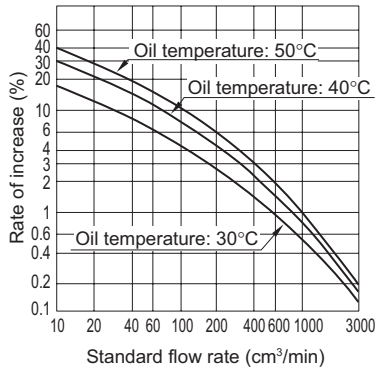
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## Performance curves

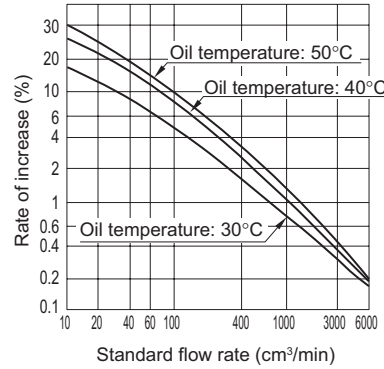
Fluid temperature - Flow rate characteristics

Oil usable	Pressure difference between inlet and outlet ports	Standard flow rate
Equivalent to ISO VG32	3 MPa {30 kgf/cm <sup>2</sup> }	Flow rate at fluid temperature of 20°C

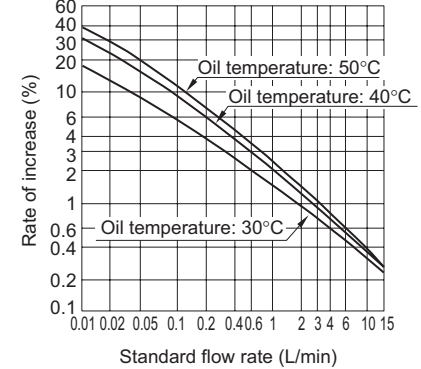
SF-G02-030



SF-G02-060

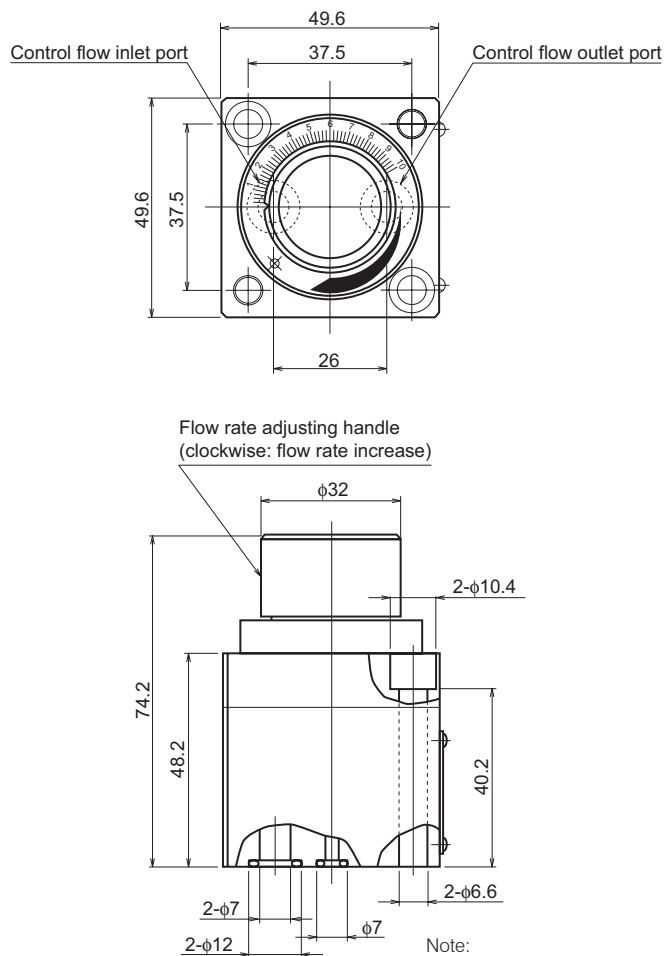


SF-G02-150



## External dimension diagram

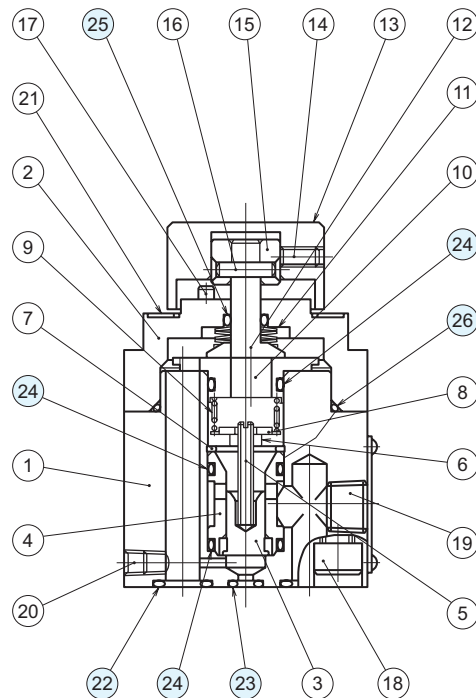
SF-G02



Note:  
This port has no influence on the operation of the valve, but seal it with the gasket face.

## Sectional structural diagram

SF-G02



Sealing part table

Part No.	Name	Quantity	Part specifications
22	O-ring	2	JIS B 2401 1A P9
23	O-ring	1	JIS B 2401 1A P4
24	O-ring	3	AS568-014 (NBR,Hs70)
25	O-ring	1	JIS B 2401 1A P6
26	O-ring	1	AS568-028 (NBR,Hs70)