

## Contact Details

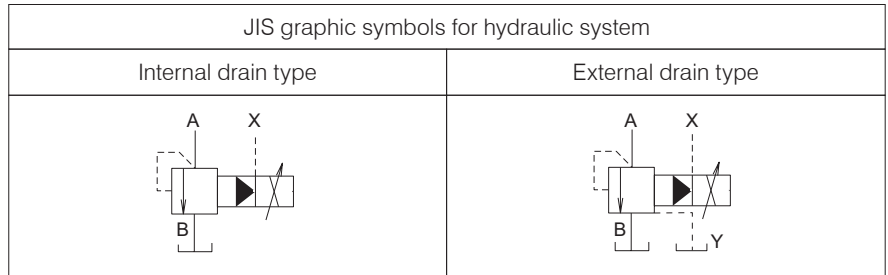
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# Type C2 Solenoid Operated Proportional Relief Valve



## Features

- Enables proportional pressure control of the hydraulic circuit in reference to the input current.

## Nomenclature

※ - **C2RP** - **G** ※ ※ - ※ - **10** - ※ ※ ※  
1    2    3 4    5    6    7 8 9

### 1 Applicable fluid code

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

### 2 Model No.

C2RP: Type C2 solenoid operated proportional relief valve

### 3 Connections

G: Gasket mount type

### 4 Nominal diameter

03:  $\frac{3}{8}$   
06:  $\frac{3}{4}$

### 5 Pressure adjustment range

1: Up to 7 MPa {Up to 70 kgf/cm<sup>2</sup>}  
2: Up to 16 MPa {Up to 160 kgf/cm<sup>2</sup>}  
3: Up to 25 MPa {Up to 250 kgf/cm<sup>2</sup>}

### 6 Design No.

(The design No. is subject to change)

### 7 Drainage code

No designation: Internal drain type  
E: External drain type

### 8 Option code

No designation: DIN connector mounting position: Top  
L: DIN connector mounting position, left side  
R: DIN connector mounting position, right side

### 9 Solenoid codes

No designation: DC 24 V solenoid  
N: DC 12 V solenoid

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## 9: 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	Pressure adjustment range *1 MPa {kgf/cm <sup>2</sup> }	Maximum flow rate L/min	Hysteresis	Repeatability	Mass kg
C2RP-G03-1-10	$\frac{3}{8}$	Up to 7 {Up to 70}	160	No greater than 3% of the maximum adjusting pressure	No greater than 1% of the maximum adjusting pressure	6.3
C2RP-G03-2-10		Up to 16 {Up to 160}				
C2RP-G03-3-10		Up to 25 {Up to 250}				
C2RP-G06-1-10	$\frac{3}{4}$	Up to 7 {Up to 70}	400	No greater than 3% of the maximum adjusting pressure	No greater than 1% of the maximum adjusting pressure	9.1
C2RP-G06-2-10		Up to 16 {Up to 160}				
C2RP-G06-3-10		Up to 25 {Up to 250}				

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

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## 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	
JGB-06M	3/4	Rc3/4	3.9
JGB-06M08		Rc1	

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

## Accessories

Model No.	Hexagon socket head cap bolt	Quantity	Tightening torque N·m {kgf·cm}
C2RP-G03	M10 × 60	4	51 to 68 {510 to 680}
C2RP-G06	M10 × 75	4	51 to 68 {510 to 680}

## Handling

- Directly connect the tank piping of the valve 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.
- 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.
- The safety valve is set to the value shown in the table below (at the maximum flow rate).

Model code	Safety valve pressure setting MPa {kgf/cm <sup>2</sup> }	Pressure change MPa {kgf/cm <sup>2</sup> } per screw revolution
C2RP-G**×-1	10{100}	2.5 {25}/revolution
C2RP-G**×-2	19{190}	4.6 {46}/revolution
C2RP-G**×-3	28{280}	7.9 {79}/revolution

- Use the valve with a flow rate of 12 L/min minimum since the pressure setting may be unstable if the flow rate is too low.

## Drain type setting guide

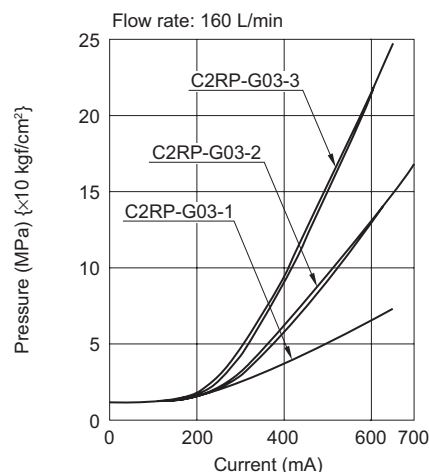
- Either the internal or external drain type can be set by fitting/removing plugs. When the valve is set as the external drain type, connect the piping directly from the external drain port (port Y) to the tank.

	Internal drain type	External drain type	Hexagon socket taper thread plug	Tightening torque N·m {kgf·cm}
Plug A	Plugged	Not plugged	NPTF <sup>1</sup> / <sub>6</sub>	6 to 7.5 {60 to 75}
Plug B	Not plugged	Plugged		

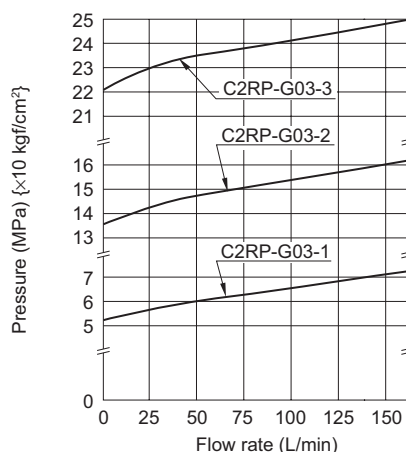
## Performance curves (viscosity: 32 mm<sup>2</sup>/s {cSt})

### ● C2RP-G03

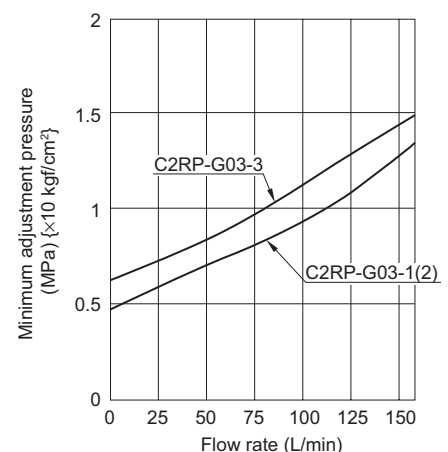
Input current -  
Pressure characteristics



Flow rate -  
Pressure characteristics



Minimum adjustment  
pressure characteristics



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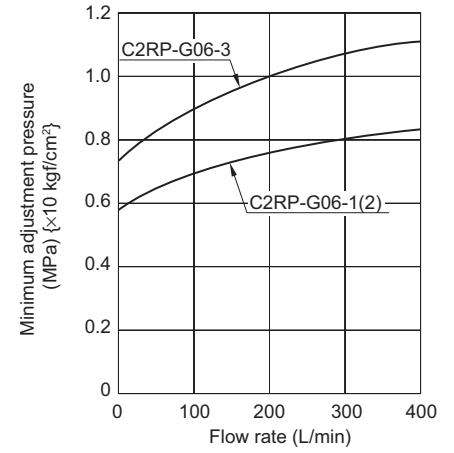
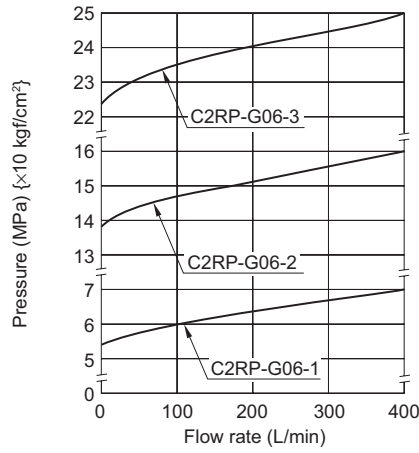
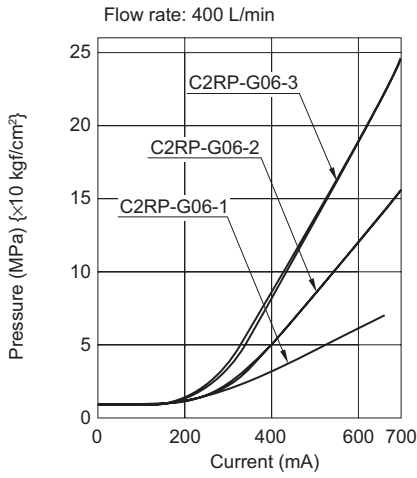
## Performance curves (viscosity: 32 mm<sup>2</sup>/s {cSt})

### ● C2RP-G06

Input current - pressure characteristics

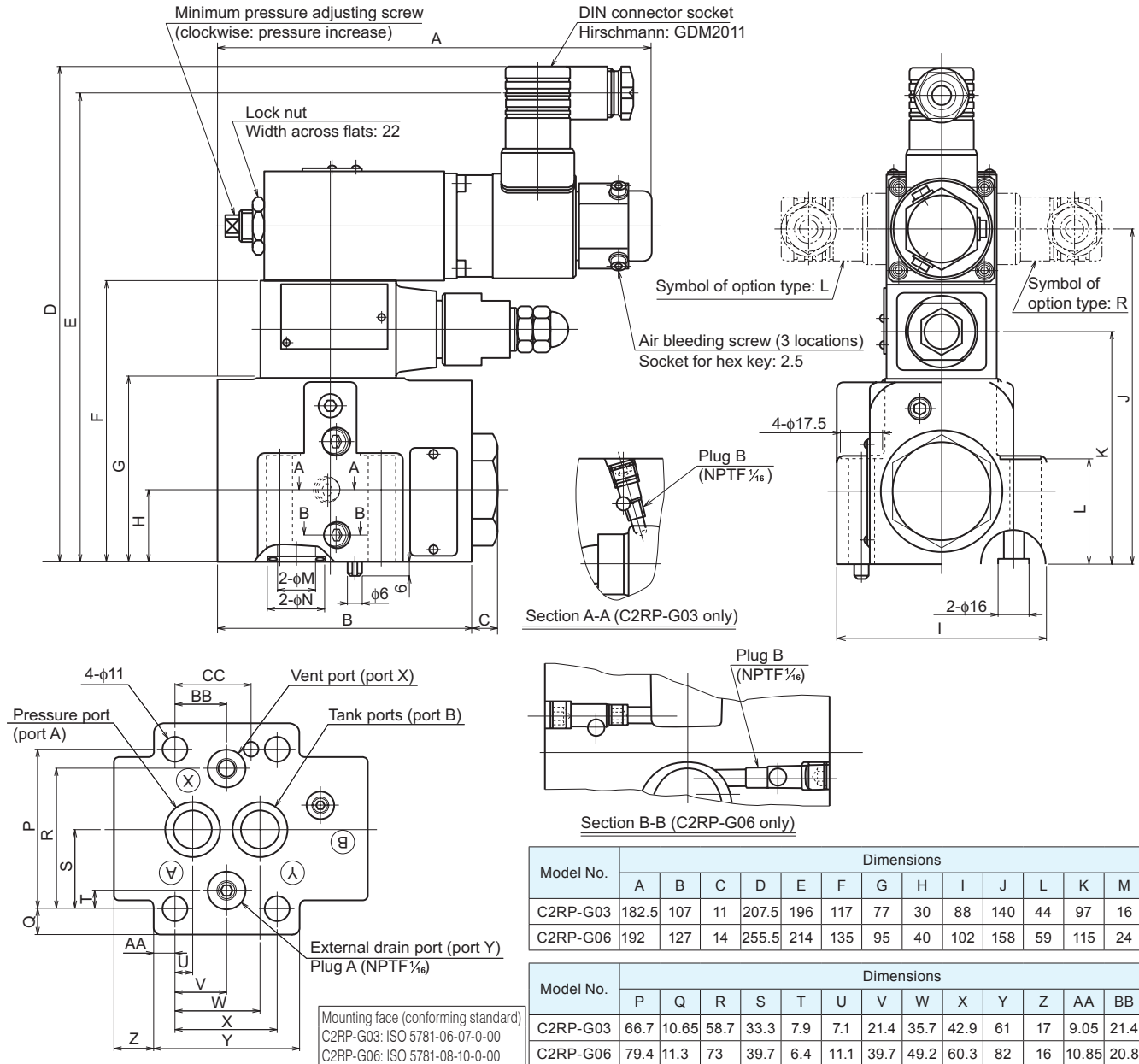
Flow rate - pressure characteristics

Minimum adjustment pressure characteristics



## External dimension diagram

### C2RP-G03 (G06)



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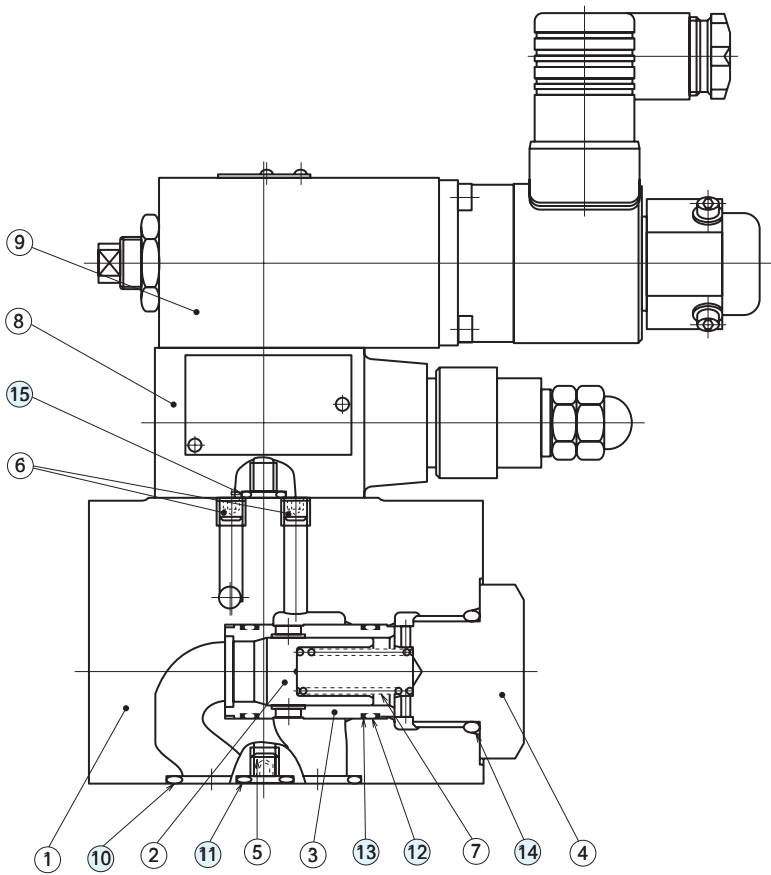
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## Sectional structural diagram

C2RP-G03 (G06)



Sealing part table

Part No.	Name	Quantity	Part specifications	
			C2RP-G03	C2RP-G06
10	O-ring	2	JIS B 2401 1B P20	JIS B 2401 1B P28
11	O-ring	2	JIS B 2401 1B P12	JIS B 2401 1B P12
12	O-ring	2	AS568-020 (NBR, Hs90)	AS568-122 (NBR, Hs90)
13	Backup ring	4	Spiral for AS568-020	Spiral for AS568-122
14	O-ring	1	AS568-215 (NBR, Hs90)	AS568-222 (NBR, Hs90)
15	O-ring	2	JIS B 2401 1B P9	JIS B 2401 1B P9