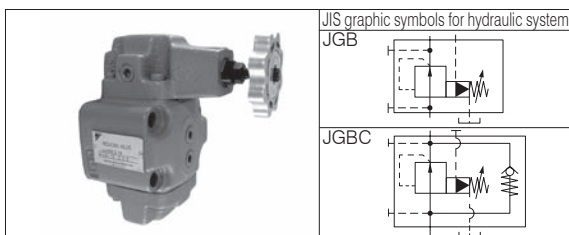


Reducing Valve/Reducing Valve with Check Valve



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.

Nomenclature

⌘ - **JGB** ⌘ - ⌘ ⌘ - ⌘ - ⌘ ⌘

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 Model No.

JGB: J series reducing valve

3 Check valve code

No designation: Without check valve
 C: With check valve

4 Connections

G: Gasket mount type
 T: Screw connection type
 F: Flange connection type

5 Nominal diameter

03: 3/8
 06: 3/4
 10: 1 1/4
 16: 2

6 Pressure adjustment range

1: 0.8 to 7 MPa { 8 to 70 kgf/cm² }
 3: 3.5 to 21 MPa {35 to 210 kgf/cm² }

7 Design No.

(The design No. is subject to change)

10: Gasket mount type (G), screw connection type (T)
 <With nominal diameter 03 (3/8)>
 11: Gasket mount type (G), screw connection type (T)
 <With nominal diameter of 06 (3/4), 10 (1 1/4)>
 20: Flange mount type (F)
 <With nominal diameter of 06 (3/4), 10 (1 1/4)>
 21: Flange mount type (F)
 <With nominal diameter of 16 (2)>

Specifications

Model code			Nominal diameter	Maximum operating pressure MPa {kgf/cm ² }	Pressure adjustment range MPa {kgf/cm ² }	Maximum flow rate L/min	Drainage rate L/min
Gasket mount type (G)	Screw connection type (T)	Flange mount type (F)					
JGB(C)-G03-1-10	JGB(C)-T03-1-10	-	3/8	21 {210}	0.8 to 7 { 8 to 70 }	50	0.8 to 1
JGB(C)-G03-3-10	JGB(C)-T03-3-10	-			3.5 to 21 {35 to 210}		
JGB(C)-G06-1-11	JGB(C)-T06-1-11	JGBC-F06-1-20	3/4		0.8 to 7 { 8 to 70 }	120	0.9 to 1.1
JGB(C)-G06-3-11	JGB(C)-T06-3-11	JGBC-F06-3-20			3.5 to 21 {35 to 210}		
JGB(C)-G10-1-11	JGB(C)-T10-1-11	JGBC-F10-1-20	1 1/4		0.8 to 7 { 8 to 70 }	280	1.2 to 1.5
JGB(C)-G10-3-11	JGB(C)-T10-3-11	JGBC-F10-3-20			3.5 to 21 {35 to 210}		
-	-	JGBC-F16-1-21	2	0.8 to 7 { 8 to 70 }	500	2 to 2.4	
-	-	JGBC-F16-3-21		3.5 to 21 {35 to 210}			

Model code	Pressure change MPa {kgf/cm ² } per handle revolution	Model code	Pressure change MPa {kgf/cm ² } per handle revolution
JGB(C)-⌘⌘⌘-1	2.3 {23}/revolution	JGBC-F16-1	2.1 {21}/revolution
JGB(C)-⌘⌘⌘-3	5.9 {59}/revolution	JGBC-F16-3	5.2 {52}/revolution

Mass (kg)

Model No.	JGB	JGBC	Model No.	JGB	JGBC	Model No.	JGBC
JGB(C)-G03	3.9	4.2	JGB(C)-T03	3.3	3.6	JGBC-F06	6.8
JGB(C)-G06	6.2	6.6	JGB(C)-T06	5.7	6.1	JGBC-F10	13.8
JGB(C)-G10	11.8	13.1	JGB(C)-T10	10	11.3	JGBC-F16	37.7

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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	
JGB-10M	1 1/4	Rc1 1/4	6.7
JGB-10M12		Rc1 1/2	

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

Accessories

Connections	Model No.	Hexagon socket head cap bolt	Number	Tightening torque N·m {kgf·cm}
Gasket mount type	JGB(C)-G03	M10 × 75	4	48 to 63 {480 to 630}
	JGB(C)-G06	M10 × 85	4	
	JGB(C)-G10	M10 × 105	6	
Flange connection type	Flange (JIS B 2291 SSA), O-ring, mounting bolts			

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.
- The orientation of the pressure adjusting handle can be changed by rearranging the covers. (See external dimension diagrams [I], [II] and [III].)

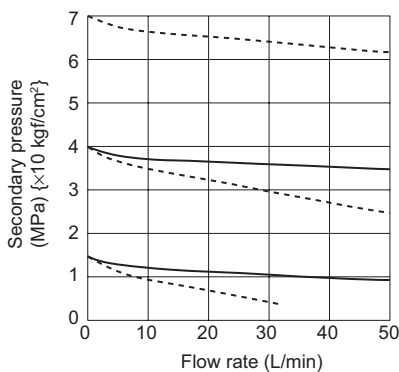
Performance curves (viscosity: 32 mm²/s {cSt})

- Flow rate - Pressure characteristics

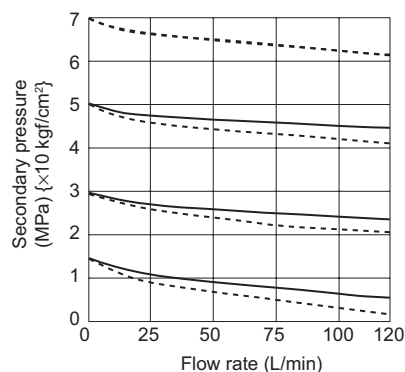
Solid line: With a primary pressure of 7 MPa {70 kgf/cm²}

Dashed line: With a primary pressure of 21 MPa {210 kgf/cm²}

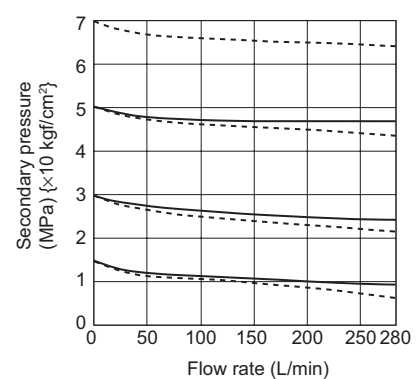
JGB(C)-×03



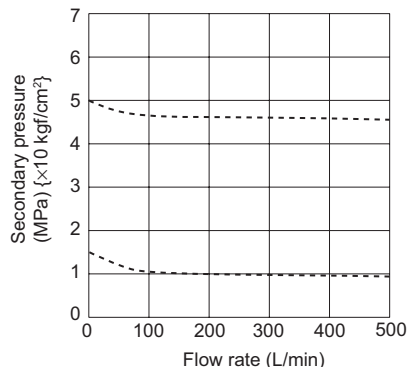
JGB(C)-×06



JGB(C)-×10



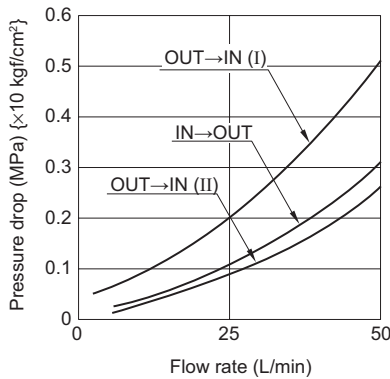
JGBC-F16



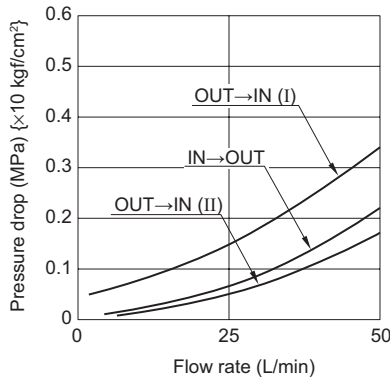
Performance curves (viscosity: 32 mm²/s {cSt})

● Pressure drop characteristics

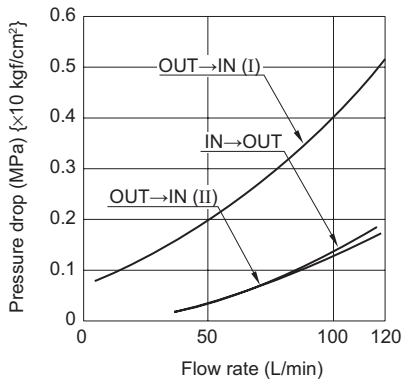
JGB(C)-G03



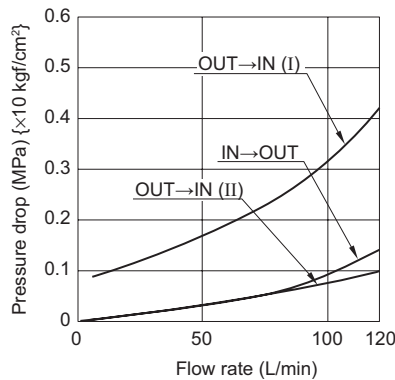
JGB(C)-T03



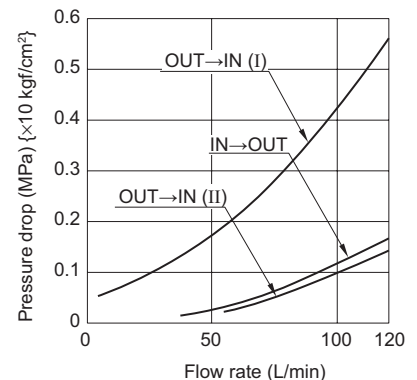
JGB(C)-G06



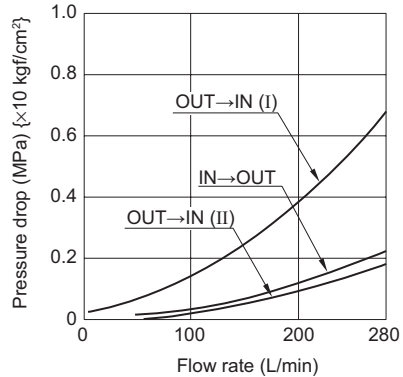
JGB(C)-T06



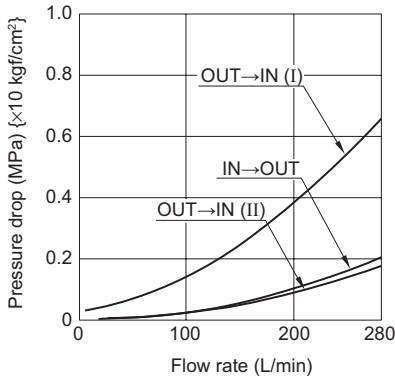
JGBC-F06



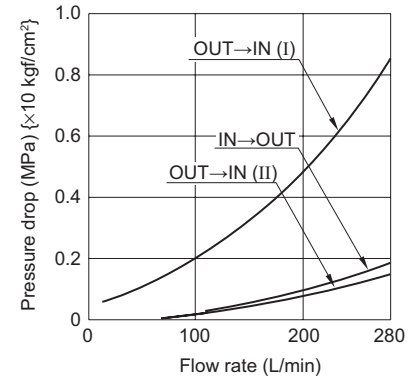
JGB(C)-G10



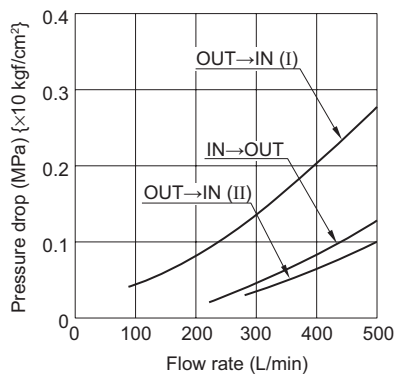
JGB(C)-T10



JGBC-F10



JGBC-F16



Note:

OUT → IN (I): Passing resistance of the check valve only

OUT → IN (II): Passing resistance of both the check valve and reducing valve spool (fully open)

IN → OUT: Passing resistance of the reducing valve spool (fully open) only

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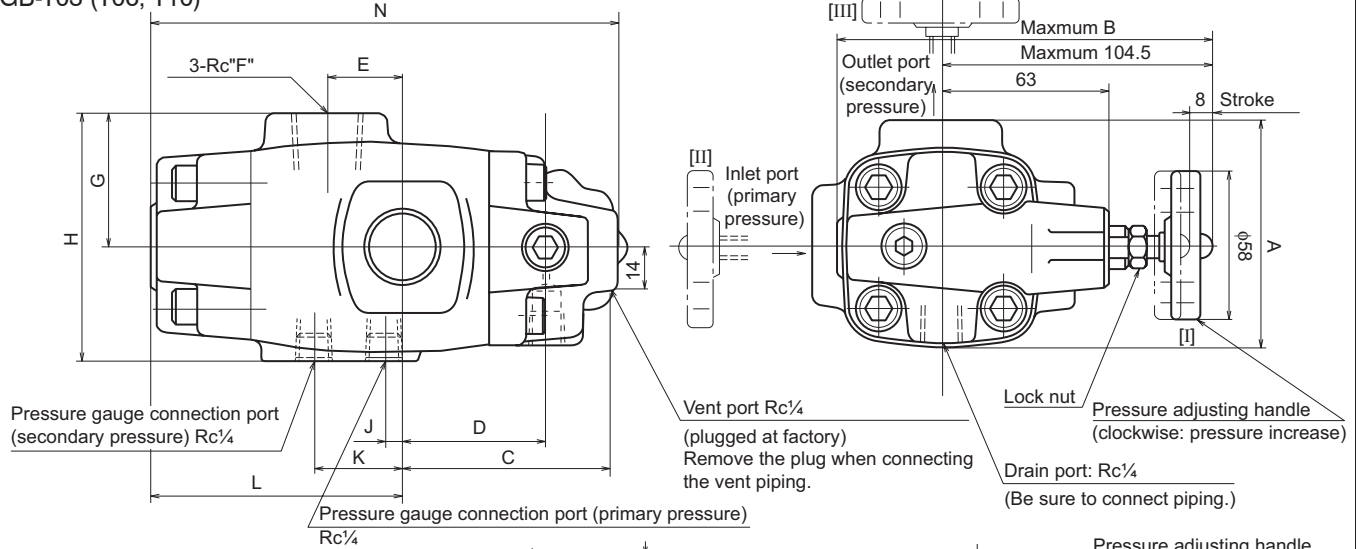
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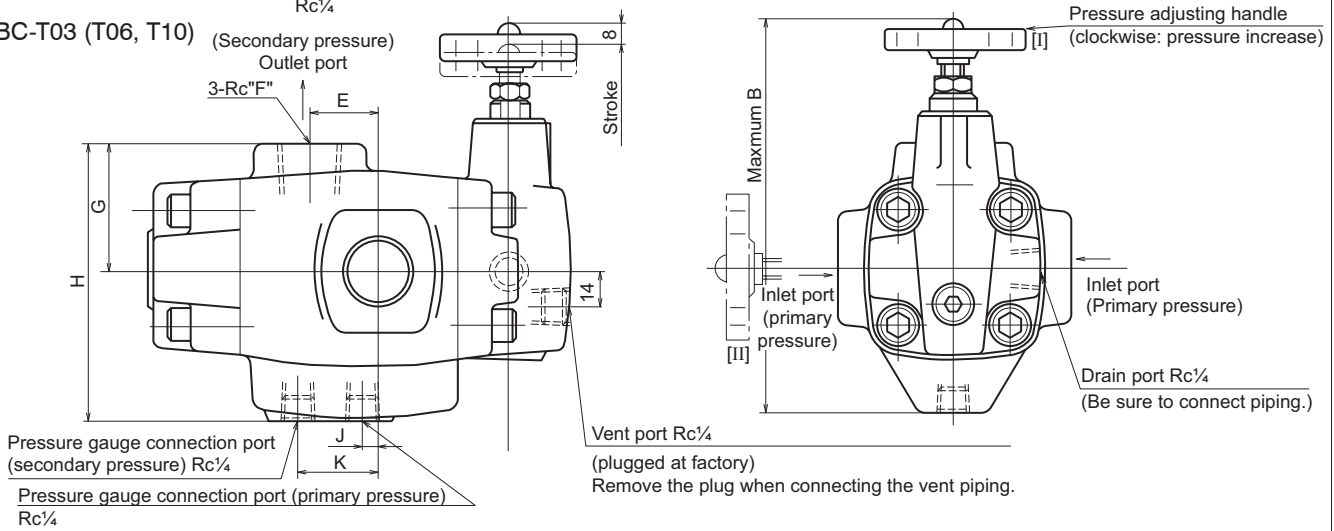
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External dimension diagram

JGB-T03 (T06, T10)



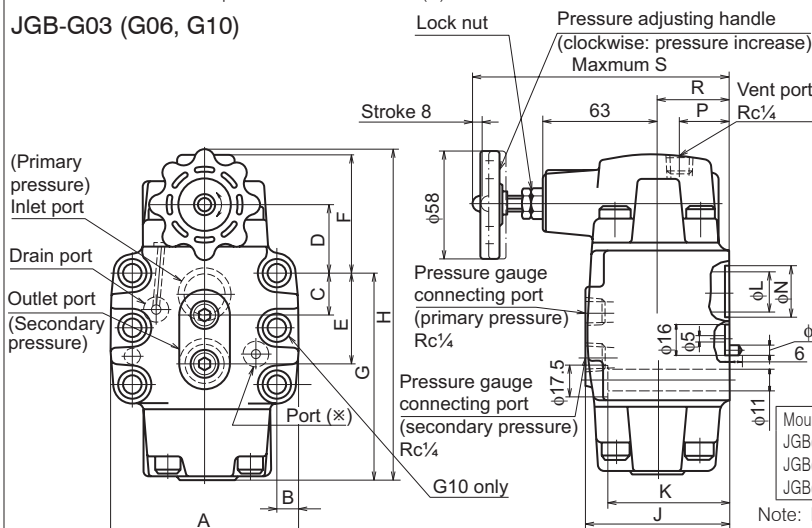
JGBC-T03 (T06, T10)



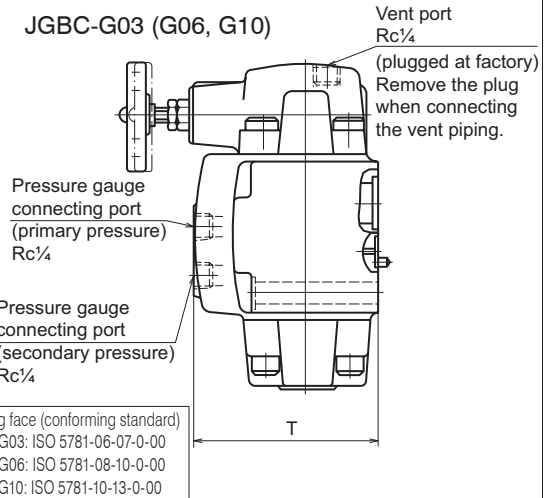
Model No.	A	B	C	D	E	F	G	H	J	K	L	N
JGB(C)-T03	70	136.5 (158.5)	71	43.5	23	$\frac{3}{8}$	40	72 (94)	3.5	22.5	75	147.5
JGB(C)-T06	95	141.5 (164.5)	80.5	54.5	27	$\frac{3}{4}$	50	87 (110)	5.5	29.5	93.5	177
JGB(C)-T10	108	152 (184.5)	95	70	28	$1\frac{1}{4}$	68.5	116 (148.5)	5.5	35.5	108.5	207.5

Dimensions in parentheses are for JGB(C)-T \times .

JGB-G03 (G06, G10)



JGBC-G03 (G06, G10)



Model No.	A	B	C	D	E	F	G	H	J	K	L	N	P	R	S	T
JGB(C)-G03	88	10.7	16.4	30.6	35.4	58.1	87.9	147.5	70	59	14	24	21	35	139.5	89
JGB(C)-G06	102	11.4	23.6	36.4	47.6	62.4	111.6	177	80	69	22	32	26	40	144.5	100
JGB(C)-G10	122	12.6	35	40.5	65	65.5	138	207.5	102	91	28	40	37	51	155.5	131

Contact Details

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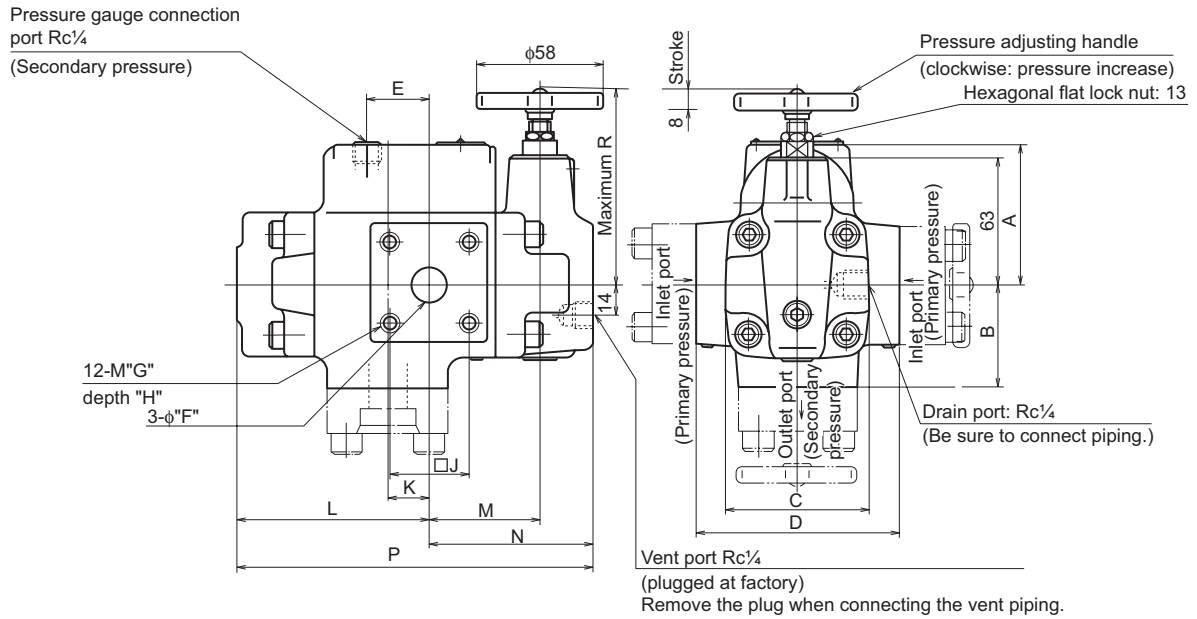
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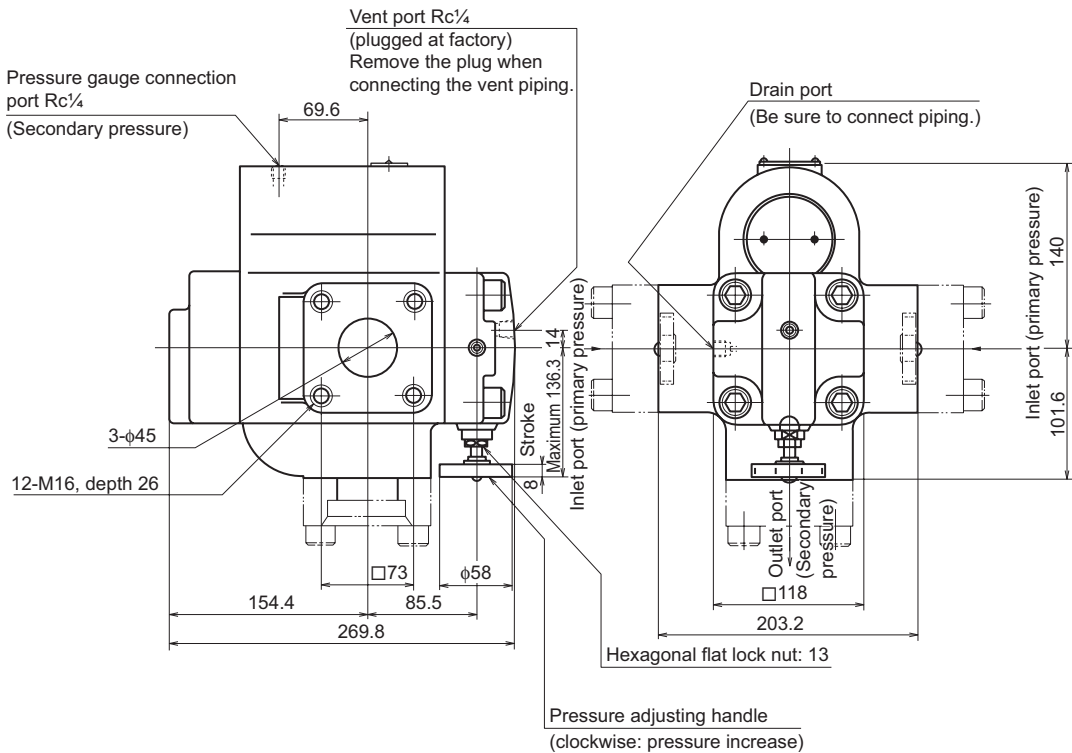
External dimension diagram

JGBC-F06 (F10)



Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	R
JGBC-F06	69	50	70	100	31	18	10	20	40	21	95	54	80	175	104.5
JGBC-F10	91	63	94	126	39.5	30	12	20	56	28	110.5	68	93.5	204	116.5

JGBC-F16



Contact Details

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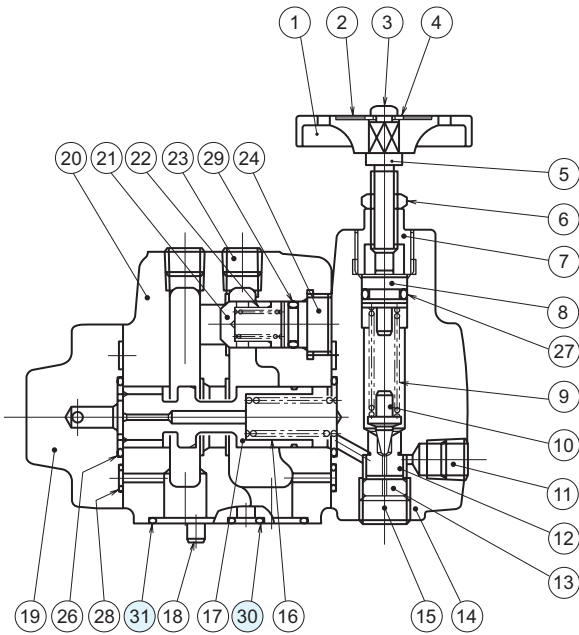
Internet

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

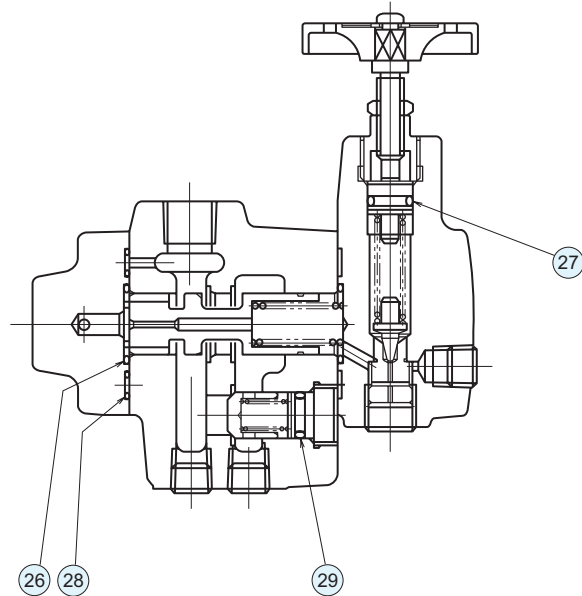
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Sectional structural diagram

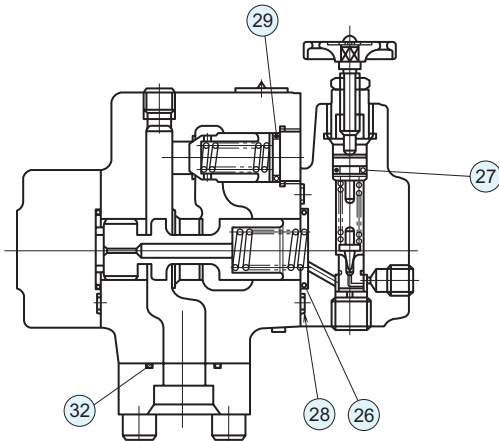
JGBC-G**



JGBC-T**



JGBC-F**



Sealing part table

Part No.	Name	Quantity	Part specifications							
			JGB-G03	JGBC-G03	JGB-T03	JGBC-T03	JGB-G06	JGBC-G06	JGB-T06	JGBC-T06
26	O-ring	2	JIS B 2401 1BP22	JIS B 2401 1BP22	JIS B 2401 1BP22	JIS B 2401 1BP22	JIS B 2401 1BG30	JIS B 2401 1BG30	JIS B 2401 1BG30	JIS B 2401 1BG30
27	O-ring	1	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11
28	O-ring	4	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6
29	O-ring	1	-	JIS B 2401 1BP11	-	JIS B 2401 1BP11	-	JIS B 2401 1BP14	-	JIS B 2401 1BP14
30	O-ring	2	JIS B 2401 1BP12	JIS B 2401 1BP12	-	-	JIS B 2401 1BP12	JIS B 2401 1BP12	-	-
31	O-ring	2	JIS B 2401 1BP20	JIS B 2401 1BP20	-	-	JIS B 2401 1BP26	JIS B 2401 1BP26	-	-

Part No.	Name	Quantity	Part specifications							
			JGBC-F06	JGB-G10	JGBC-G10	JGB-T10	JGBC-T10	JGBC-F10	JGBC-F16	
26	O-ring	2	JIS B 2401 1BG30	JIS B 2401 1BG40	JIS B 2401 1BG40	JIS B 2401 1BG40	JIS B 2401 1BG40	JIS B 2401 1BG40	JIS B 2401 1BG60	
27	O-ring	1	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	JIS B 2401 1AP11	
28	O-ring	4/2 (F)	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	JIS B 2401 1BP6	-	
29	O-ring	1	JIS B 2401 1BP16	-	JIS B 2401 1BP22	-	JIS B 2401 1BP22	JIS B 2401 1BG25	JIS B 2401 1BP38	
30	O-ring	2	-	JIS B 2401 1BP12	JIS B 2401 1BP12	-	-	-	-	
31	O-ring	2	-	JIS B 2401 1BG35	JIS B 2401 1BG35	-	-	-	-	
32	O-ring	3	JIS B 2401 1BG30	-	-	-	-	JIS B 2401 1BG40	JIS B 2401 1BG60	