



Flow Control Modular Valve (Pressure and temperature compensated)

5.2 to 52.8 gpm
3045, 3625, 5075 psi

Features

This modular valve is used to control actuator speed and for other flow control valve applications.

A wide range of models are available for A and B port control, A or B port control, and

P port control.

A pressure compensation mechanism ensures that the control flow rate does not change, even when there is pressure fluctuation.

The control flow rate remains stable, even when fluid temperature changes. Maximum Operating Pressure: 3045, 3625, 5075 psi

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure psi	Control Flow Rate gpm	Check Valve Cracking pressure psi	Weight lbs	Gasket Surface Dimensions
OF-G01-P20-20	1/8	3045	.02 to 5.2(differential pressure: 1000 psi) .07 to 5.2(differential pressure: 3045 psi)	--	2.6	ISO 4401-03-02-0-94
OCF-G01-W40-X-30 A40 B40		3625	.02 to 10.5(differential pressure: 1000 psi) .13 to 10.5(differential pressure: 3625 psi)	.02	3.7	
OCF-G01-W40-Y-30 A40 B40				11.6	3.7	
					3.3	
OF-G03-P60-J50	3/8	3625	.07 to 15.8(differential pressure: 1000 psi) .13 to 15.8(differential pressure: 3625 psi)	--	6.8	ISO 4401-05-04-0-94
OCF-G03-W60-X-J50 A60 B60				14.5	11	
OCF-G03-W60-Y-J50 A60 B60					14.5	
				11		
OFH-G04-W200-X-10 A200 B200	1/2	5075	2.6 to 52.8(differential pressure: 3045 psi) 3.9 to 52.8(differential pressure: 3625 psi) 5.2 to 52.8(differential pressure: 5075 psi)	14.5	24.4	ISO 4401-07-06-0-94
OFH-G04-W200-Y-10 A200 B200				14.5	22.4	
					24.4	
					22.4	

• Handling

- For flow rate control, make sure that the pressure differential between the input port and output port is at least 145 psi. See the Flow Rate - Minimum Differential Pressure Characteristics for information about the OCF-G01 and OFF-G04 maximum control flow rate.
- The control flow rate is increased by

counter clockwise (leftward) rotation of the flow rate control knob.
3 Pressure rate control knob rotation resistance will increase as the pressure increases. However, do not use a spanner or other tool that fits around the knob to turn it. Instead, insert a 5mm hex spanner into the hex hole in the

- center of the knob and rotate it that way.
- After adjusting the flow rate, fix it in place by turning the lock screw on the end of the knob to the right.
- Note that a sub plate and installation bolts are not included. See pages H4 and F87-89 if these items are required.
- 04 series modular valves do not have an L (DR2) drain port, so they cannot be used in combination with pressure center type solenoid valves (D).
- Flow rate fluctuation is $\pm 5\%$ within the temperature range of 68°F to 140°F.

Understanding Model Numbers

01, 03 size

OCF - G 03 - W 60 - Y - J50

Design number

Note: For 01 size, 30, 20

For 03 size, relationship between mounting bolts and design number is indicated as J50: M6, 50: M8

Control Mechanism X: Meter-in Y: Meter-out

Maximum control flow rate

Control port W: A, B ports A: A port P: P port B: B port

Nominal diameter (size) 01, 03

Mounting method G: gasket type

Flow control modular valve

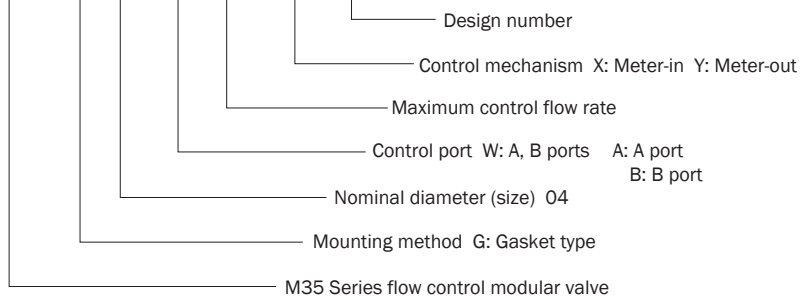
OCF: with check valve

OF: without check valve (P port control)

Understanding Model Numbers

04 size

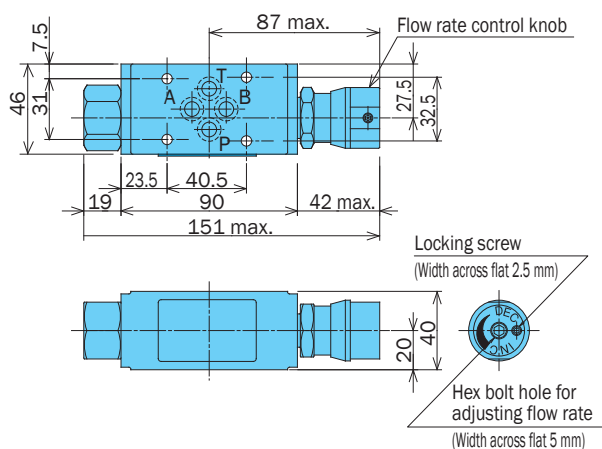
OFH - G 04 - W 200 - Y - 10



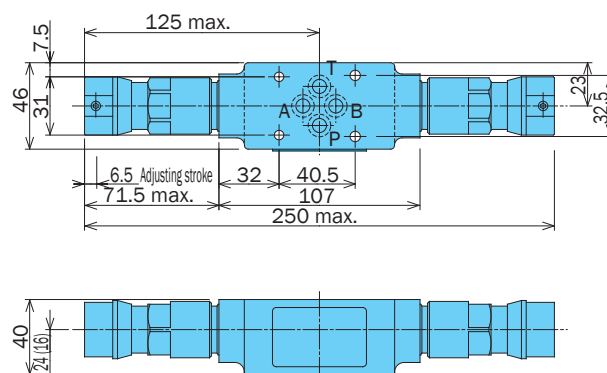
Installation Dimension Drawings

Note: The control flow rate is increased by counter clockwise (leftward) rotation of the flow rate control knob.

OF-G01-P20-20

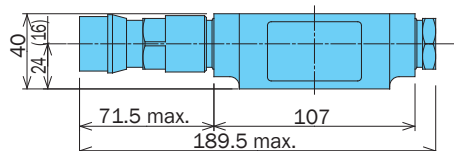


OCF-G01-W40-X/Y-30



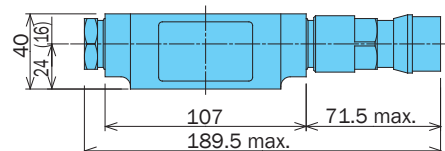
Note: Dimensions in the parentheses are for the OCF-G01-W40-X-30.

OCF-G01-A40-X/Y-30



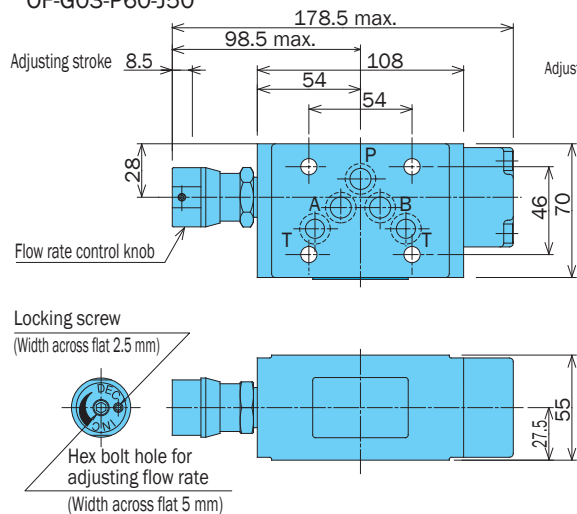
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OCF-G01-B40-X/Y-30

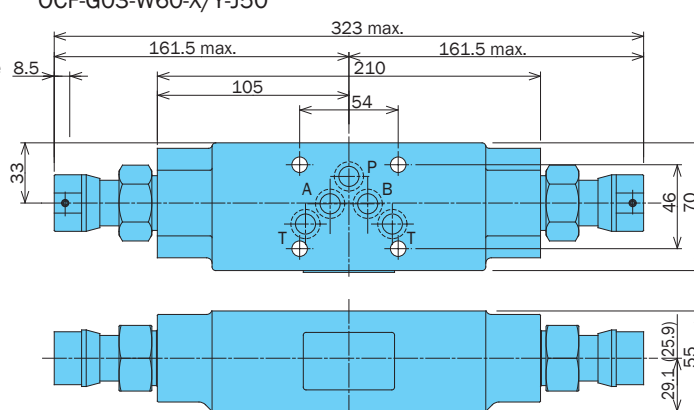


Note: Dimensions in the parentheses are for the OCF-G01-B40-X-30.

OF-G03-P60-J50

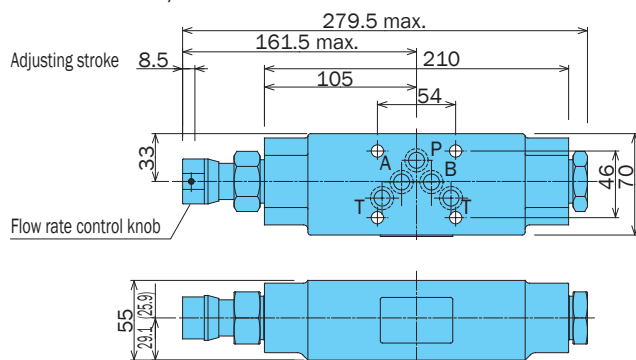


OCF-G03-W60-X/Y-J50



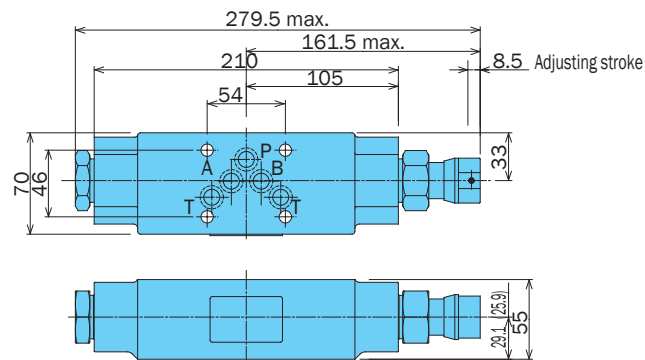
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OCF-G03-A60-X/Y-J50



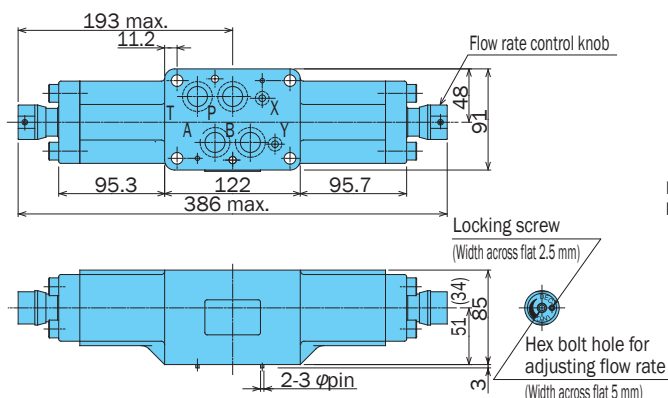
Note:
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OCF-G03-B60-X/Y-J50



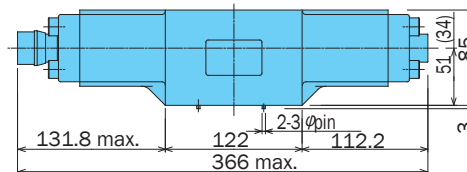
Note:
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OFH-G04-W200-X/Y-10



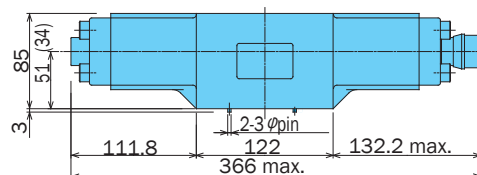
Note:
Dimensions in the parentheses are for the OFH-G04-W200-X-10.

OFH-G04-A200-X/Y-10



Note:
Dimensions in the parentheses are for the OCF-G04-A200-X-10

OFH-G04-B200-X/Y-10



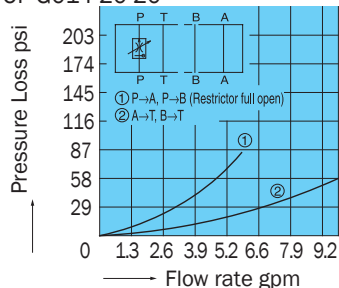
Note:
Dimensions in the parentheses are for the OFH-G04-B200-X-10.

Performance Curves

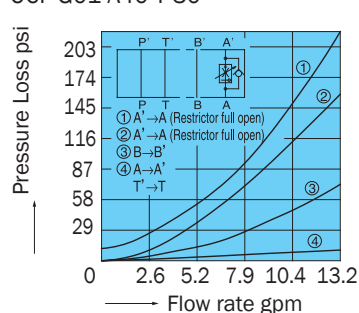
Hydraulic Operating Fluid Viscosity 32 centistokes

Pressure Loss Characteristics

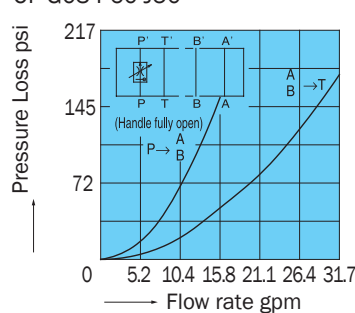
OF-G01-P20-20



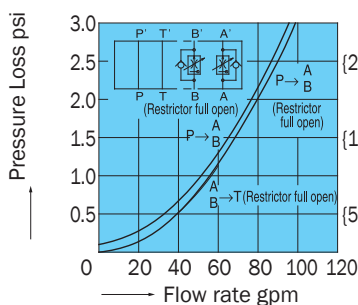
OCF-G01-A40-Y-30



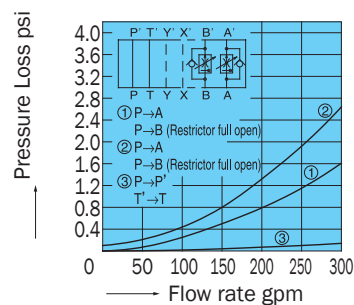
OF-G03-P60-J50



OCF-G03-W60-Y-J50

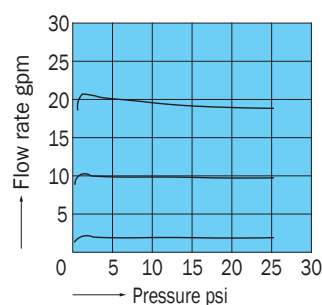


OFH-G04-W200-Y-10

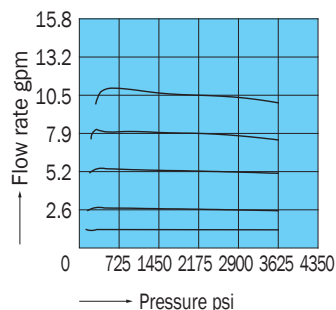


Pressure - Control Flow Rate Characteristics

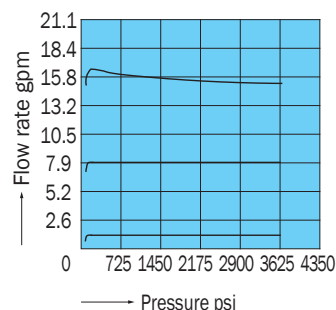
OF-G01-P20-20



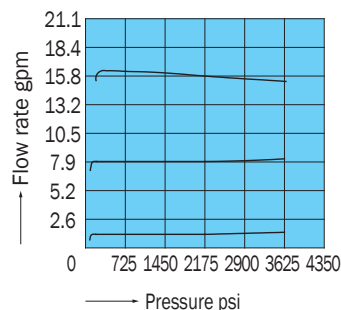
OCF-G01-*40-*-30



OF-G03-P60-J50

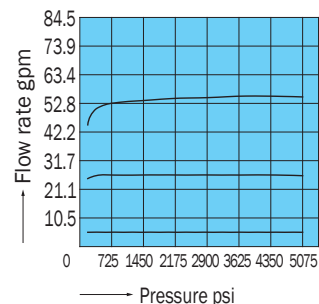


OCF-G03-W60-*-J50

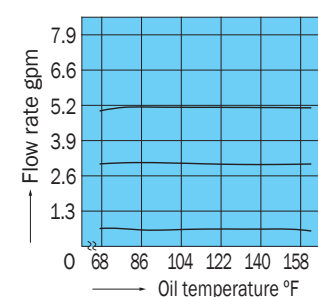


Fluid Temperature - Control Flow Rate Characteristics

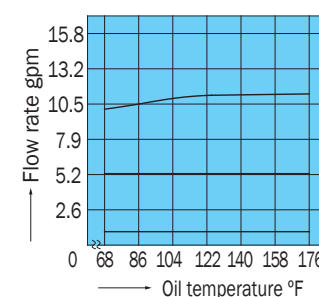
OFH-G04-W200-*-10



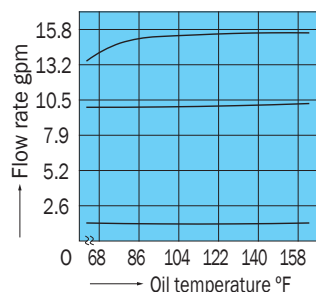
OF-G01-P20-20



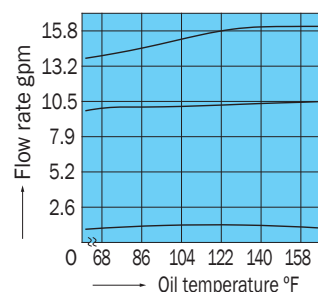
OCF-G01-*40-*-30



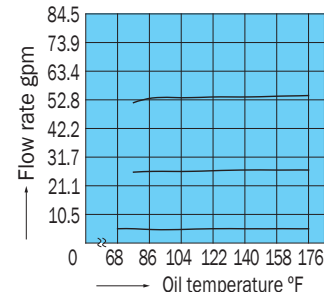
OF-G03-P60-J50



OCF-G03-W60-*-J50

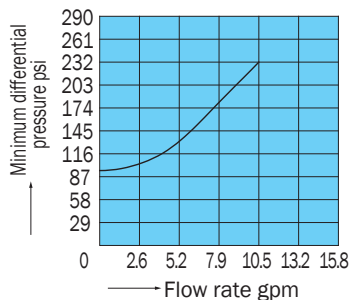


OFH-G04-W200-*-10

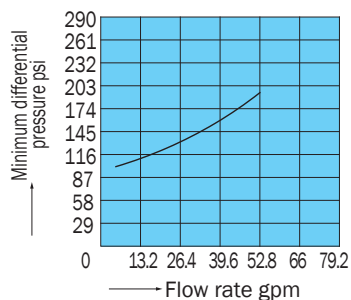


Flow Rate - Minimum Differential Pressure Characteristics

OCF-G01-*40-*-30

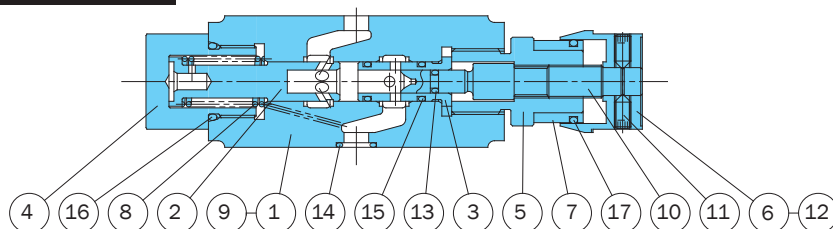


OFH-G04-W200-Y-10



Cross-sectional Drawing

OF-G01-P20-20

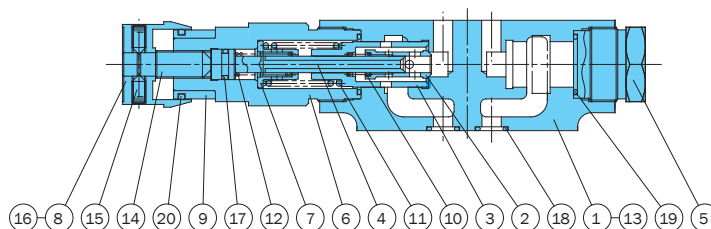


Seal Part List (Kit Model Number BFBS-01FP)

Part No.	Part Name	Part Number	Q'ty
			P
13	O-ring	1B-P4	1
14	O-ring	1B-P9	4
15	O-ring	1B-P9	2
16	O-ring	1B-P20	1
17	O-ring	1A-P21	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

OCF-G01-A40-Y-30



Seal Part List (Kit Model Number BFCS-01CF*)

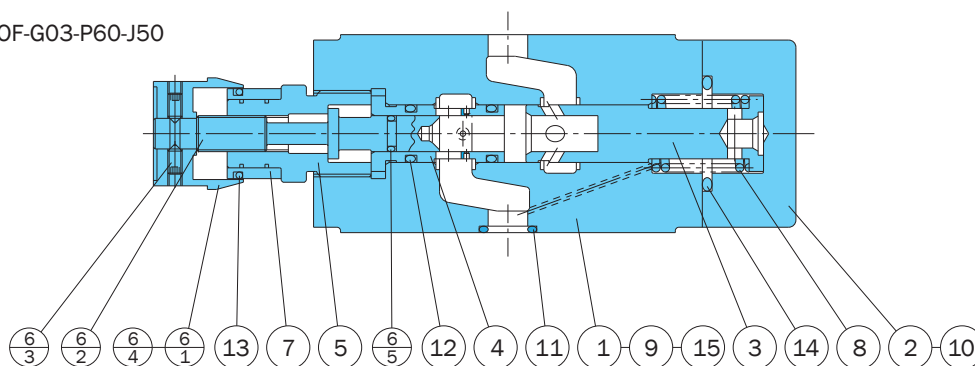
Part No.	Part Name	Part Number	Q'ty		
			W	A	B
17	O-ring	1A-P8	2	1	1
18	O-ring	1B-P9	4	4	4
19	O-ring	AS568-018(Hs90)	2	2	2
20	O-ring	1A-P21	1	1	1

Note:

1. O-ring 1A/B-** refers to JIS B2401-1A/B.

2. Specify W, A, or B for the asterisk (*) in the kit model number.

OF-G03-P60-J50



Seal Part List (Kit Model Number BFES-03FP)

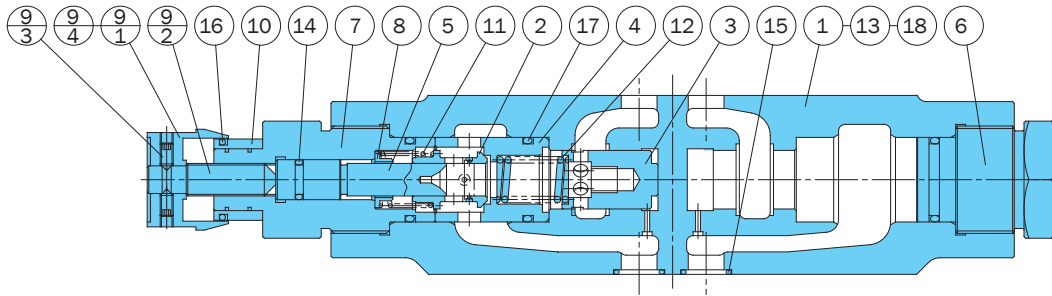
Part No.	Part Name	Part Number	Q'ty
			PC
6-s	O-ring	1A-P7	1
11	O-ring	AS568-014(Hs90)	5
12	O-ring	1B-P12	2
13	O-ring	1A-P21	1
14	O-ring	1B-P26	1

Note: O-ring 1A/B-** refers to JIS B2401-1A/B.

Part No.	Part Name
1	Body
2	Piston
3	Sleeve
4	Bushing
5	Retainer
6	Knob
7	Dial
8	Spring
9	Plate
10	Screw
11	Screw
12	Screw
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	O-ring

Part No.	Part Name
1	Body
2	Throttle
3	Piston
4	Rod
5	Bushing
6	Retainer
7	Guide
8	Knob
9	Dial
10	Spring
11	Spring
12	Spring
13	Plate
14	Screw
15	Screw
16	Screw
17	O-ring
18	O-ring
19	O-ring
20	O-ring

Part No.	Part Name
1	Body
2	Cover
3	Piston
4	Sleeve
5	Retainer
6	Screw kit
6-1	Knob
6-2	Screw
6-3	Screw
6-4	Screw
6-5	O-ring
7	Dial
8	Spring
9	Plate
10	Screw
11	O-ring
12	O-ring
13	O-ring
14	O-ring
15	Pin



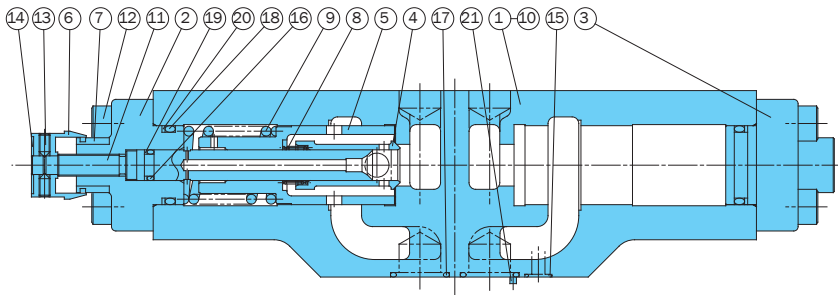
Part No.	Part Name
1	Body
2	Throttle
3	Piston
4	Sleeve
5	Rod
6	Bushing
7	Retainer
8	Guide
9	Screw kit
9 ₁	Knob
9 ₂	Screw
9 ₃	Screw
9 ₄	Screw
10	Dial
11	Spring
12	Spring
13	Plate
14	O-ring
15	O-ring
16	O-ring
17	O-ring
18	Pin

Seal Part List (Kit Model Number BFES-03CF*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
14	O-ring	1A-P10	2	1	1
15	O-ring	AS568-014(Hs90)	5	5	5
16	O-ring	1A-P21	2	1	1
17	O-ring	1B-P22	4	3	3

Note:

1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Specify W, A, or B for the asterisk (*) in the kit model number.



Part No.	Part Name
1	Body
2	Cover
3	Cover
4	Throttle
5	Piston
6	Knob
7	Dial
8	Spring
9	Spring
10	Plate
11	Screw
12	Screw
13	Screw
14	Screw
15	O-ring
16	O-ring
17	O-ring
18	O-ring
19	Backup ring
20	Backup ring
21	Pin

Seal Part List (Kit Model Number BFKS-04CF*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
15	O-ring	AS568-012(Hs90)	2	2	2
16	O-ring	1B-P10A	2	1	1
17	O-ring	AS568-118(Hs90)	4	4	4
18	O-ring	1B-P30	2	2	2
19	Backup ring	T2-P10A	2	1	1
20	Backup ring	T2-P30	2	2	2

Note:

1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. Backup ring indicates JIS B 2407-T2-**.
3. Specify W, A, or B for the asterisk (*) in the kit model number.