

Direct Relief Modular Valve

20 to 50ℓ/min
0.8 to 21,25,35MPa

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Features

- ① This modular relief valve provides maximum pressure control for a hydraulic circuit.
- ② Wide ranging applicability
Maximum Working Pressure: 25, 35 MPa {255, 357kgf/cm²}
- Pressure Adjustment Range: 0.8 to 21, 25, 35 MPa {8.2 to 255, 357kgf/cm²}

Specifications

Model No.	Nominal Diameter (Size)	Maximum Working Pressure MPa{kgf/cm ² }	Maximum Flow Rate ℓ/min	Pressure Adjustment Range MPa{kgf/cm ² }	Weight kg	Gasket Surface Dimensions
ORD-G01-W1-20 W3	1/8	25{255}	20	0.8 to 7{ 8.2 to 71.4}	1.5	ISO 4401-03-02-0-05
3.5 to 21{35.7 to 214}						
0.8 to 7{ 8.2 to 71.4}						
ORD-G01-A1-20 A3				3.5 to 21{35.7 to 214}	1.4	
ORD-G01-B1-20 B3				3.5 to 21{35.7 to 214}	1.4	
ORD-G03-W1-J50 W3	3/8	25{255}	30	0.8 to 7{ 8.2 to 71.4}	4.8	ISO 4401-05-04-0-05
3.5 to 25{35.7 to 255}						
0.8 to 7{ 8.2 to 71.4}						
ORD-G03-A1-J50 A3				3.5 to 25{35.7 to 255}	4.0	
ORD-G03-B1-J50 B3				3.5 to 25{35.7 to 255}	4.0	
ORH-G04-DW1-10 DW3 DW5	1/2	35{357}	50	0.8 to 7{ 8.2 to 71.4}	6.5	ISO 4401-07-06-0-05
3.5 to 25{35.7 to 255}						
7 to 35{71.4 to 357}						
ORH-G04-DA1-10 DA3 DA5				3.5 to 25{35.7 to 255}	6.5	
ORH-G04-DB1-10 DB3 DB5				7 to 35{71.4 to 357}	6.5	

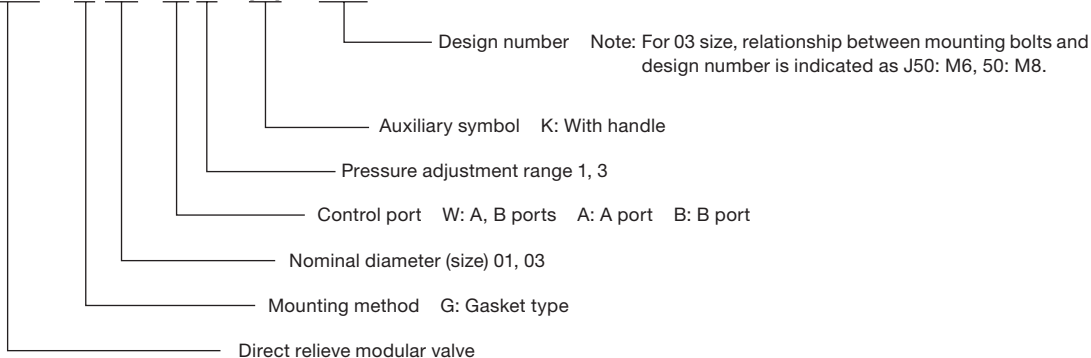
● Handling

- ① The pressure adjustment range is expressed in terms of cracking pressure.
- ② For use as a safety valve, use a pressure override that is higher than the required circuit pressure.
- ③ Tank port back pressure changes cracking pressure by the corresponding amount.
- ④ Note that a sub plate and installation bolts are not included. See pages D-90 through D-95 if these items are required.
- ⑤ 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).

Explanation of model No.

01, 03 size

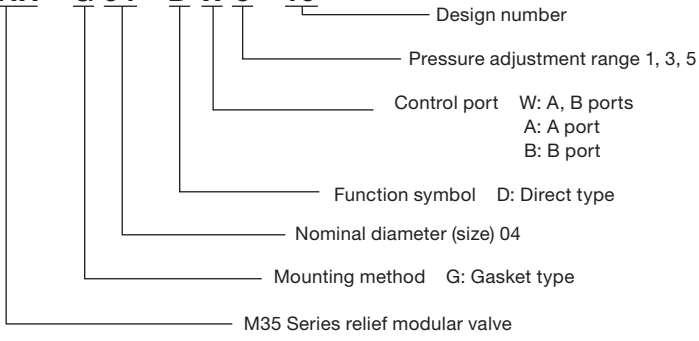
ORD - G 03 - W 3 - (K) - J50



Explanation of model No.

04 size

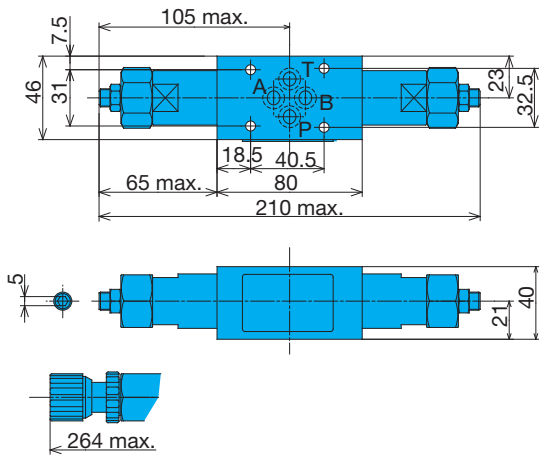
ORH - G 04 - D W 5 - 10



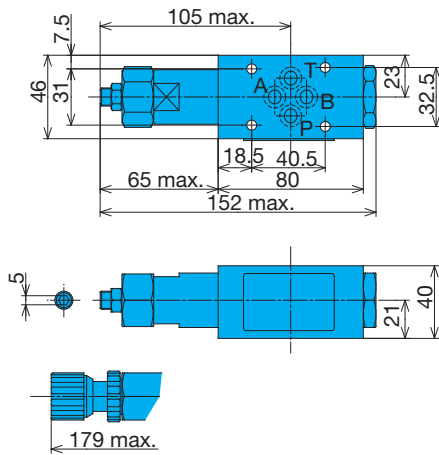
Installation Dimension Drawings

Note) Pressure is increased by clockwise (rightward) rotation of the adjusting screw (bolt), and decreased by counterclockwise (leftward) rotation.

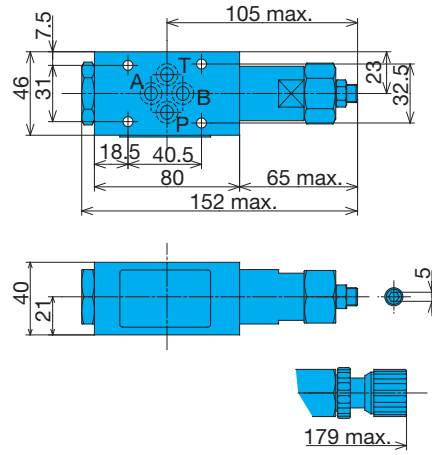
ORD-G01-W*-20



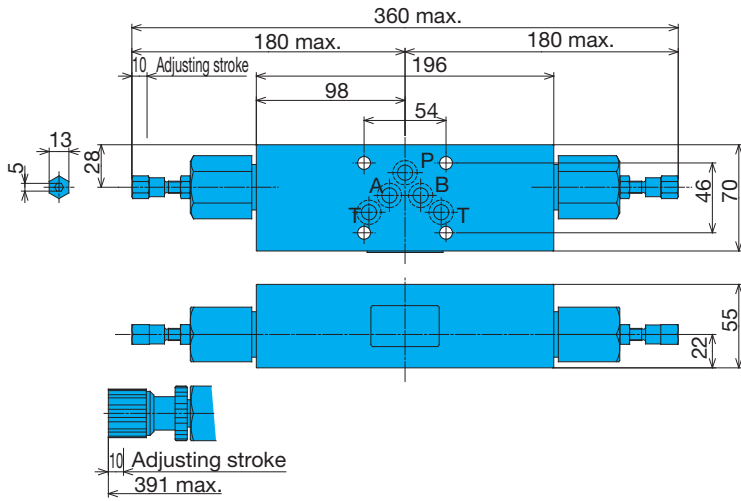
ORD-G01-A*-20



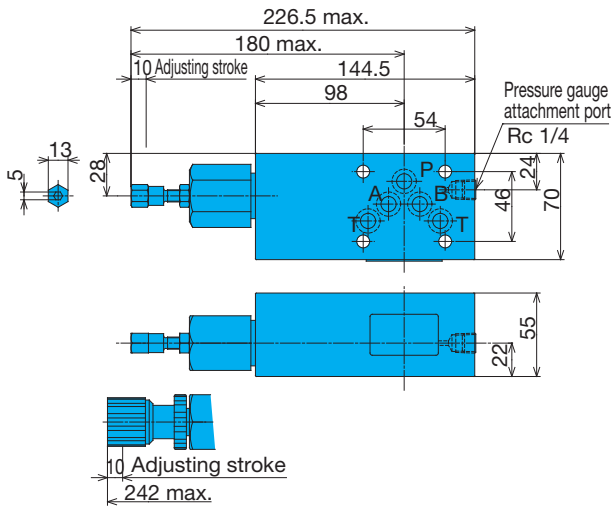
ORD-G01-B*-20



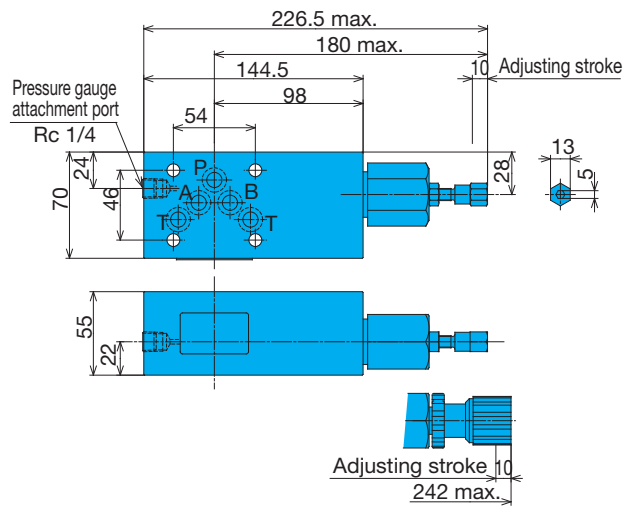
ORD-G03-W*-J50



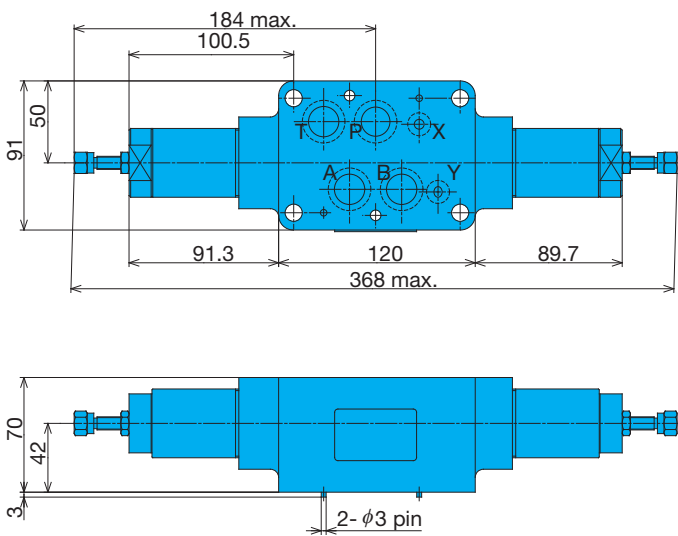
ORD-G03-A*-J50



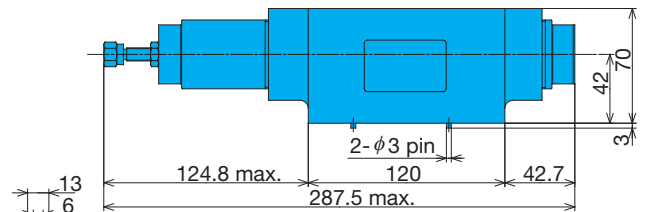
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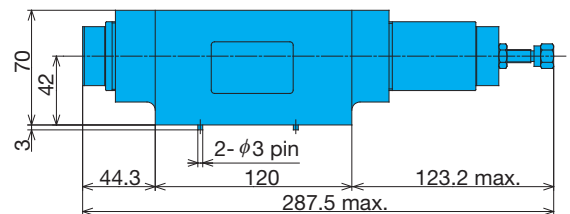
ORH-G04-DW*-10



ORH-G04-DA*-10



ORH-G04-DB*-10

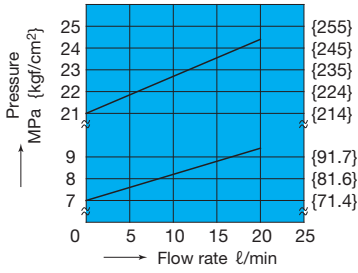


Performance Curves

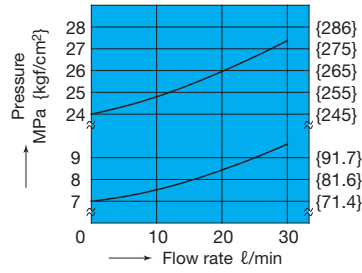
Differential Hydraulic Fluid Kinematic Viscosity 32mm²/s

Pressure – Flow Rate Characteristics

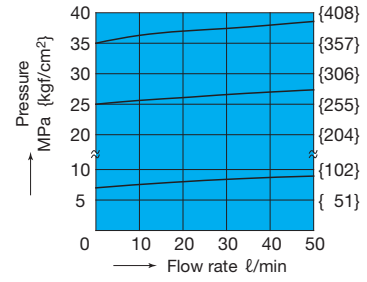
ORD-G01-**-20



ORD-G03-**-J50

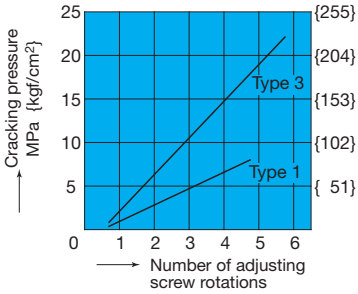


ORH-G04-DW*-10

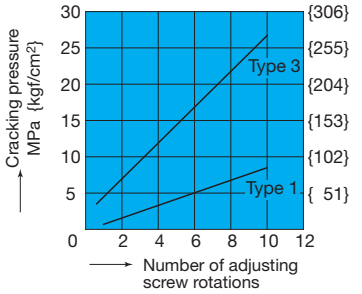


Number of Adjusting Screw Rotations – Pressure Characteristics

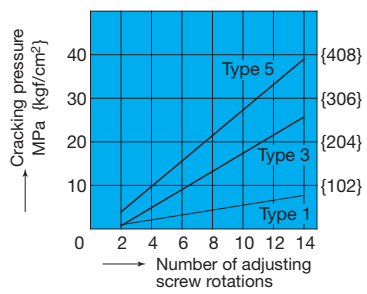
ORD-G01-**-20



ORD-G03-**-J50

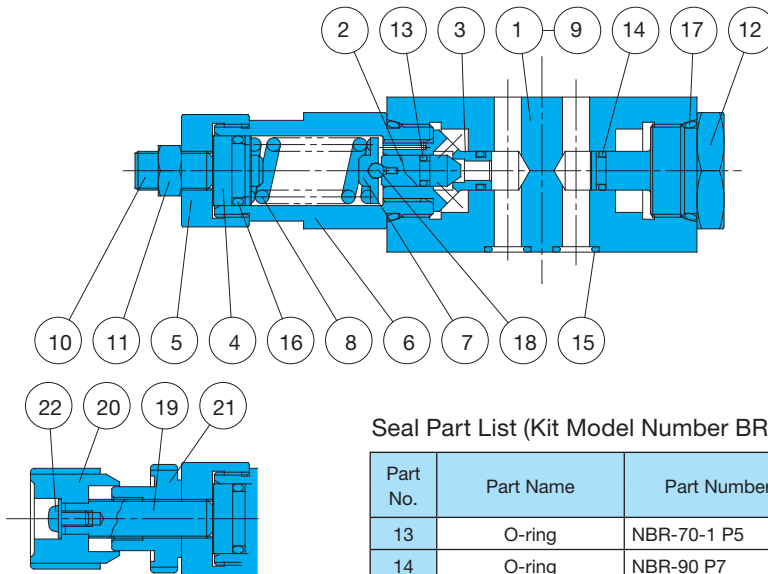


ORH-G04-DW*-10



Cross-sectional Drawings

ORD-G01-A*-20



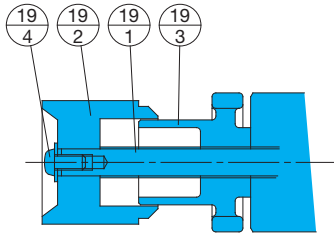
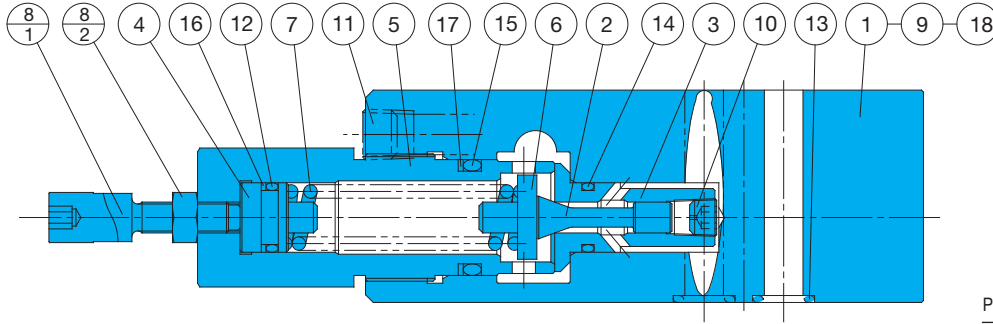
Seal Part List (Kit Model Number BRBS-01RD*-0A)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
13	O-ring	NBR-70-1 P5	2	1	1
14	O-ring	NBR-90 P7	2	2	2
15	O-ring	AS568-012(NBR-90)	4	4	4
16	O-ring	NBR-90 P14	2	1	1
17	O-ring	NBR-90 P22	2	2	2

Note) 1.The materials and hardness of the O-ring conform with JIS B2401.
2.Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Poppet
3	Seat
4	Plunger
5	Bushing
6	Retainer
7	Guide
8	Spring
9	Plate
10	Screw
11	Nut
12	Bushing
13	O-ring
14	O-ring
15	O-ring
16	O-ring
17	O-ring
18	Ball
19	Screw
20	Knob
21	Nut
22	Screw

ORD-G03-A*-J50



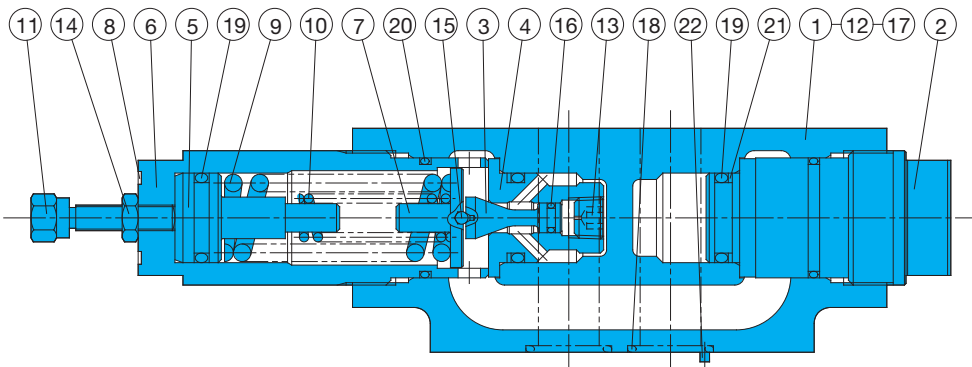
Seal Part List (Kit Model Number BRES-03RD*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
12	O-ring	NBR-70-1 P14	1	1	2
13	O-ring	AS568-014(NBR-90)	5	5	5
14	O-ring	NBR-90 P14	1	1	2
15	O-ring	NBR-90 P24	1	1	2
16	Backup ring	T2-P14	1	1	2
17	Backup ring	T2-P24	1	1	2

Note) 1.The materials and hardness of the O-ring conform with JIS B2401.
 2.Backup ring indicates JIS B2407-T2-**.
 3.Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Poppet
3	Seat
4	Plunger
5	Retainer
6	Guide
7	Spring
8	Screw kit
8-1	Screw
8-2	Nut
9	Plate
10	Orifice
11	Plug
12	O-ring
13	O-ring
14	O-ring
15	O-ring
16	Backup ring
17	Backup ring
18	Pin
19	Handle kit
19-1	Screw
19-2	Knob
19-3	Nut
19-4	Screw

ORH-G04-DA*-10



Seal Part List (Kit Model Number BRKS-04RD*)

Part No.	Part Name	Part Number	Q'ty		
			W	A	B
16	O-ring	NBR-70-1 P6	2	1	1
17	O-ring	AS568-012(NBR-90)	2	2	2
18	O-ring	AS568-118(NBR-90)	4	4	4
19	O-ring	NBR-90 P22A	4	3	3
20	O-ring	AS568-125(NBR-70-1)	2	2	2
21	Backup ring	T2-P22A	2	2	2

Note) 1.The materials and hardness of the O-ring conform with JIS B2401.
 2.Backup ring indicates JIS B2407-T2-**.
 3.Specify W, A, or B for the asterisk (*) in the kit model number.

Part No.	Part Name
1	Body
2	Plug
3	Poppet
4	Seat
5	Plunger
6	Retainer
7	Guide
8	Plate
9	Spring
10	Spring
11	Screw
12	Plate
13	Choke
14	Nut
15	Ball
16	O-ring
17	O-ring
18	O-ring
19	O-ring
20	O-ring
21	Backup ring
22	Pin