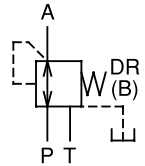


Balancing Valve (Pressure Reducing and Relief Valve)

30 to 50 ℓ /min
14MPa



Features

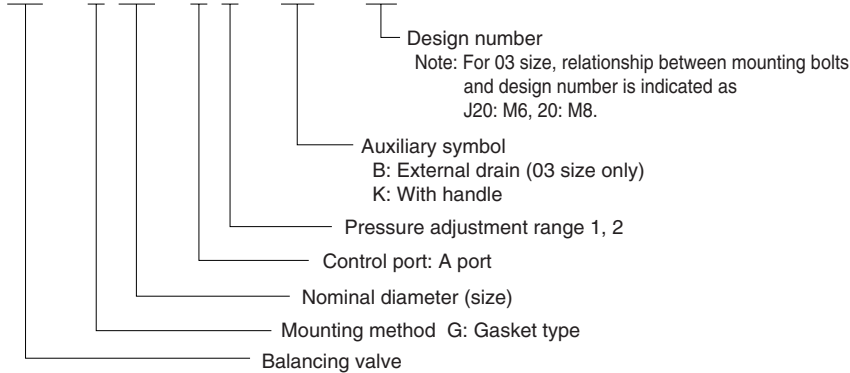
- ① 2-in-1 operation allows a simpler circuit configuration. Combination valve that provides both pressure reducing and counter balance functions.
- ② Pressure adjustment using a single screw (bolt).
- ③ Compact and lightweight valve that can be mounted using the same methods as a 01, 03 size solenoid valve.

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
GR-G01-A1-20 A2	1/8	21{214} P port	30	0.8 to 7{ 8.2 to 71.4 } 3.5 to 14{35.7 to 143 }	1.5	ISO 4401-03-02-0-94
GR-G03-A1-(B)-20 A2	3/8		50	1.0 to 7{10.2 to 71.4 } 3.5 to 14{35.7 to 143 }	3.5	ISO 4401-05-04-0-94

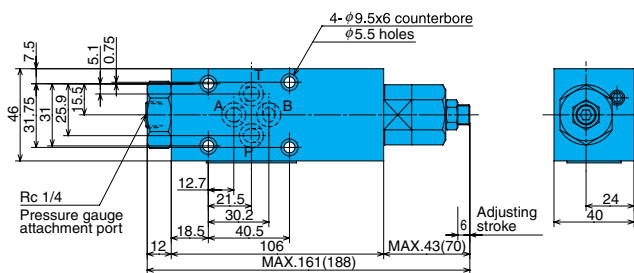
Understanding Model Numbers

GR - G 03 - A 1 - BK - 20

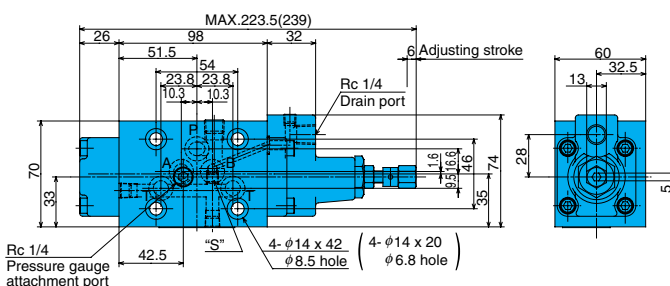


Installation Dimension Drawings

GR-G01-A*-20



GR-G03-A*-B-20



- Note) 1. For size 03, an escape valve with piping from the drain discharge port is standard for the drain (GR-G03-A*-B-20). To change from internal drain to external drain, install a plug (NPTF 1/16) in part S, and remove the drain discharge port plug (RC 1/4). To change from external drain to internal drain, install a plug (RC 1/4) into the drain discharge port, and remove the S part plug (NPTF 1/15). In this case, however, the B port cannot be used as the tank port.
2. Dimensions in parentheses show dimensions with handle (K type).

● Handling

- ① To adjust pressure, loosen the lock nut and then rotate the adjusting screw (bolt) clockwise (rightward) to increase pressure or counterclockwise (leftward) to decrease it.
- ② For the 01 size, draining is from the gasket side B port.
- ③ For the drain of a 03 size valve when auxiliary symbol B is specified, run a pipe from the drain discharge port directly to the tank. The drain discharge port can also be plugged for direct draining from the gasket side B port. In the case of modification, be sure to change the valve type marking on the nameplate. When using drain piping, use a tightening torque of 22 to 25N•m {215 to 245kgf•cm} for pipe joints.
- ④ The drain of 03 size valve that does not have a B auxiliary symbol can be directly from the T port.
- ⑤ Make sure that drain back pressure is no greater than 0.2MPa {2.0kgf/cm²}.
- ⑥ When an adjustment handle is required for pressure adjustment block, insert K for the type specification.
- ⑦ Set the difference between the pressure at the primary circuit (port P) and the secondary circuit (port A) at least 0.5 MPa {5 kgf/cm²}.
- ⑧ Use the following table for specification when a sub plate is required.

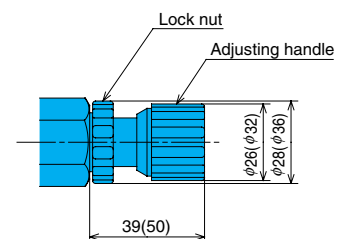
Model No.	Pipe Outlet Size	Weight kg
MSA-01Y-10	3/8	1.2
MS-03-30	3/8	3.8
MS-03X-30	1/2	

- ⑨ The following are the bundled mounting bolts.

Model No.	Bolt Dimensions	Q'ty	Tightening Torque N•m(kgf•cm)
GR-G01-A*-20	M5 x 45	4	5 to 7 {51 to 71}
GR-G03-A*-20	M8 x 30	4	20 to 25 {205 to 255}
GR-G03-A*-J20	M6 x 50	4	10 to 13 {102 to 133}

Note) For mounting bolts, use 12T or equivalent.

Adjusting Handle (Option)

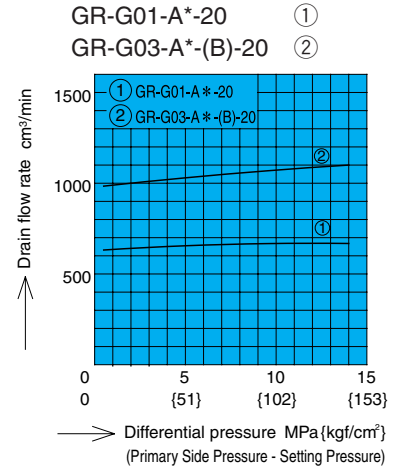
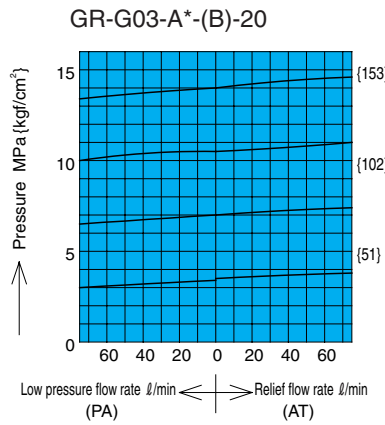
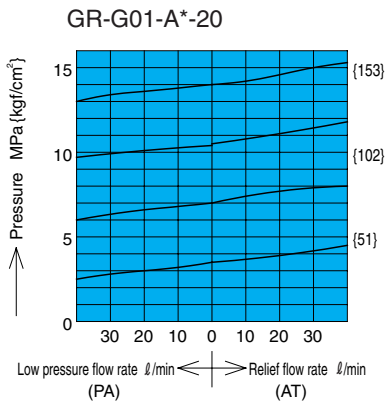


Performance Curves

Hydraulic Operating Fluid Viscosity 32mm²/s

Pressure – Flow Rate Characteristics

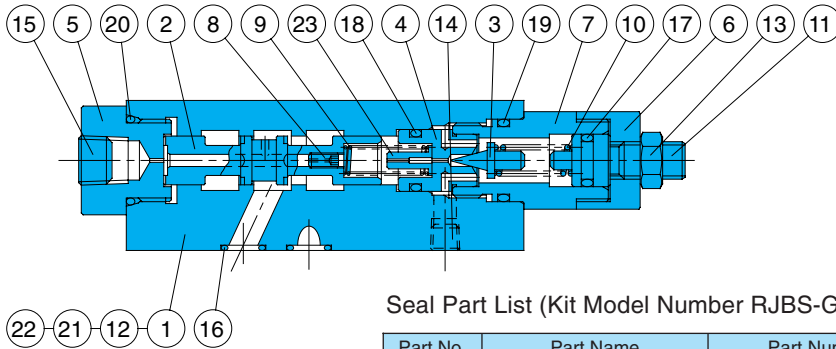
Setting Pressure – Drain Flow Rate Characteristics



Cross-sectional Drawing

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

GR-G01-A*-20

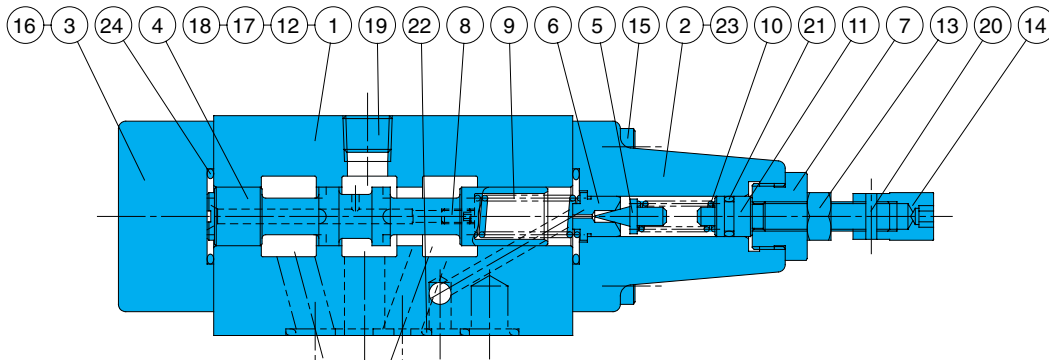


Seal Part List (Kit Model Number RJBS-G01)

Part No.	Part Name	Part Number	Q'ty
16	O-ring	1B-P9	4
17	O-ring	1A-P10A	1
18	O-ring	1B-P12.5	1
19	O-ring	1B-P18	1
20	O-ring	1B-P20	1

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

GR-G03-A*-B-20



Seal Part List (Kit Model Number RJBS-G03)

Part No.	Part Name	Part Number	Q'ty
21	O-ring	1A-P8	1
22	O-ring	1B-P12	5
23	O-ring	1B-P9	1
24	O-ring	1B-P22	2

Part No.	Part Name
1	Body
2	Cover (A)
3	Cover (B)
4	Spool
5	Poppet
6	Seat
7	Retainer
8	Choke
9	Spring
10	Spring
11	Screw
12	Plate
13	Nut
14	Nut
15	Screw
16	Screw
17	Plug
18	Plug
19	Plug
20	Pin
21	O-ring
22	O-ring
23	O-ring
24	O-ring