

Solenoid Controlled Relief Valves (High Pressure Type)

The solenoid controlled relief valve is a combination of a pilot operated relief valve and a solenoid operated directional valve. It is used for no-load pump operation by using electric signals or, together with a remote control relief valve, for two or three pressure control of the hydraulic system. This valve is able to adjust pressure up to maximum 35 MPa.



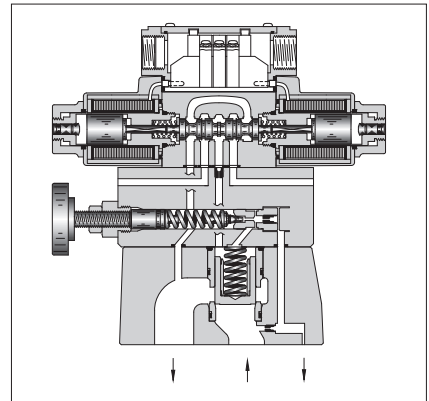
Specifications

Model Numbers	Max. Operating Pres. MPa	Pres. Adj. Range MPa	Max. Flow L/min
B3SG-03-**-**-**-10	35	★ - 35	250
B3SG-06-**-**-**-10			500

★ For minimum adjustment pressures and other characteristics, see page C-15.

Approx. Mass

Model Numbers	Double Sol.	Single Sol.	With Vent Restrictor
B3SG-03	6.0 kg	5.5 kg	6.6 kg
B3SG-06	7.0 kg	6.5 kg	7.6 kg



Model Number Designation

A-	B3S	G	-03	-V	-2B3A	-A100	-N	-10
With Vent*1 Restrictor	Series Number	Type of Mounting	Valve Size	High Venting*2 Pres. Feature	Vent Type*3	Coil Type*4	Type of Electrical Con.	Design Number
A : With Vent Restrictor (Option) (Omit if not required)	B3S : Solenoid Controlled Relief Valves (High Pressure Type)	G : Sub-plate Mounting	03	V : For High Venting Pressure Feature (Omit if not required)	2B3A 2B3B 2B2B 2B2 3C2 3C3	AC : A100, A120 A200, A240 DC : D12 , D24 D48 AC→DC Rectified : R100 , R200	None: Terminal Box Type N : With Plug-in Connector (DIN) (Option)	10
			06					10

★1. Models with vent restrictor are applicable only for the vent type 2B3A and 2B3B. For details, see page C-23 "Option".

★2. Use high venting pressure types to reduce changeover time from unloading to onloading.

★3. The details of the vent types are the same as for solenoid controlled relief valves BST/BSG. See page C-18 "Vent Types".

★4. The coil codes are the same as for solenoid operated directional valve DSG-01. See the Solenoid Ratings on page C-52.

Request

The coil type numbers in the shaded column are handled as optional extras.
In case these coils are required to be chosen, please confirm the time of delivery with us before ordering.

Accessories

Mounting Bolts

Valve Model Numbers	Socket Head Cap Screw
B3SG-03	M12×40L 4 Pcs.
B3SG-06	M16×50L 4 Pcs.

Type of Electrical Conduit Connection

Electrical conduit connection is same as solenoid operated directional valve DSG-01. For details, see page C-51.

Sub-plates

Valve Model Numbers	Sub-plate Model Numbers	Thread Size Rc	Approx. Mass kg
B3SG-03	BGM-03-20	3/8	2.4
	BGM-03X-20	1/2	3.1
B3SG-06	BGM-06-20	3/4	4.7
	BGM-06X-20	1	5.7

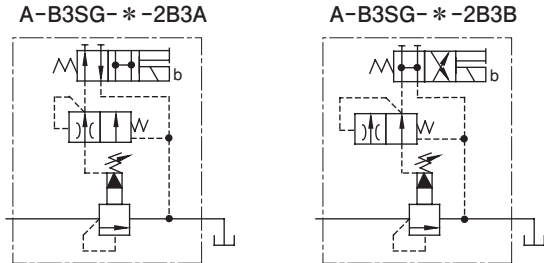
- Sub-plates are available. Specify the sub-plate model number from the table above. When sub-plates are not used, the mounting surface should have a good machined finish. (1/16")
- The sub-plates are those for pilot operated relief valves. For dimensions, see page C-9.

Option

Models with Vent Restrictor

The type with a vent restrictor has a vent restrictor in vent types 2B3A and 2B3B added between a relief valve and a solenoid operated directional valve. It prevents shock to the main circuit by gradually lowering the venting pressure in the shift from the set pressure to unloading.

Unloading pressure are the same as without a vent restrictor.



Instructions

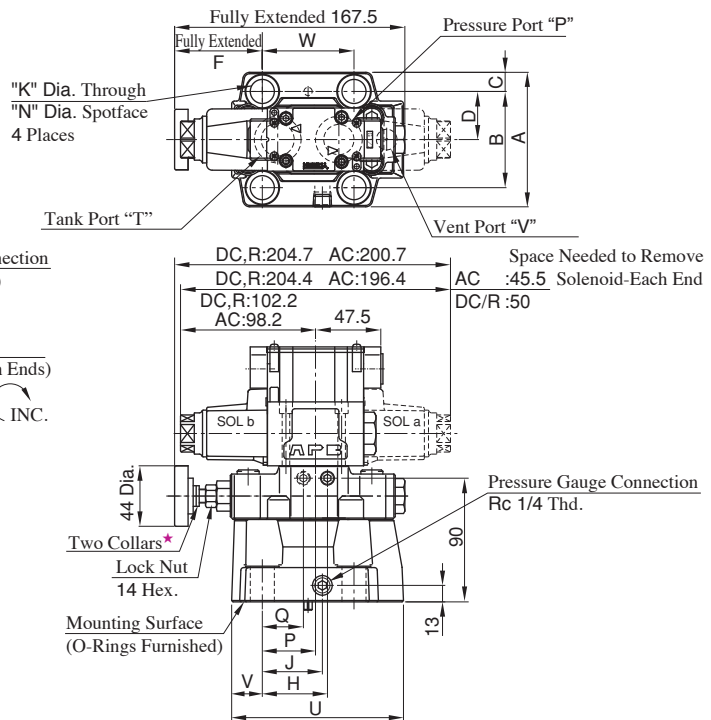
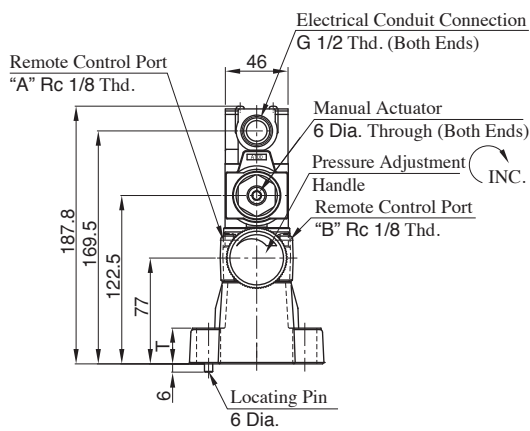
- When control in the vent circuit, if the internal volume of the vent line is too large, chattering is likely to occur. Thus, as far as possible reduce the inside diameter and the length of the pipe.
- To adjust the pressure, loosen the lock nut and turn the handle slowly clockwise for higher pressures or anti-clockwise for lower pressures. Pressure change of one handle revolution is about 7 MPa. After adjustments, do not forget to tighten the lock nut.
- Piping of the tank line should not be connected to any tank line of the other valves, but connected directly to the reservoir.
- With a small flow, the setting pressure may be unstable. Use with the minimum flow rate as the below chart.

Valve Size	Min. Flow
03	8 L/min
06	

B3SG-03, 06

Mounting Surface
 B3SG-03 : ISO 6264-06-09-1-97
 B3SG-06 : ISO 6264-08-13-1-97

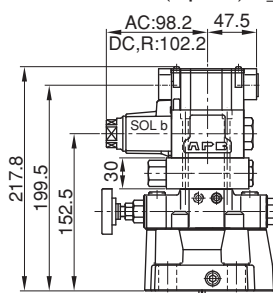
★ Pressure is limited by collars fitted. If a working pressure cannot be attained, remove some collars. One collar is equivalent to 14 MPa.



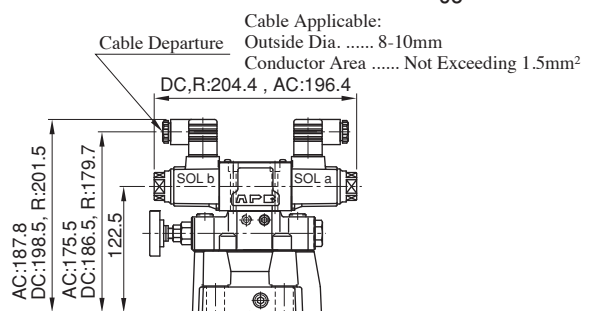
Model Numbers	A	B	C	D	E	F	H	J	K	N	P	Q	T	U	V	W
B3SG-03	76	53.8	11.1	26.9	53.8	74.6	36.6	29.3	13.5	21	27.9	19.1	21.5	111	31.2	53.8
B3SG-06	100	70	15	35	66.7	63.8	47.4	43.7	17.5	27	38.7	29.9	26	125	22.3	66.7

Note: For dimensions of the valve mounting surface, see the dimensional drawing (page C-9) of the sub-plate used together.

Models with Vent Restrictor (Option) A-B3SG-03, 06

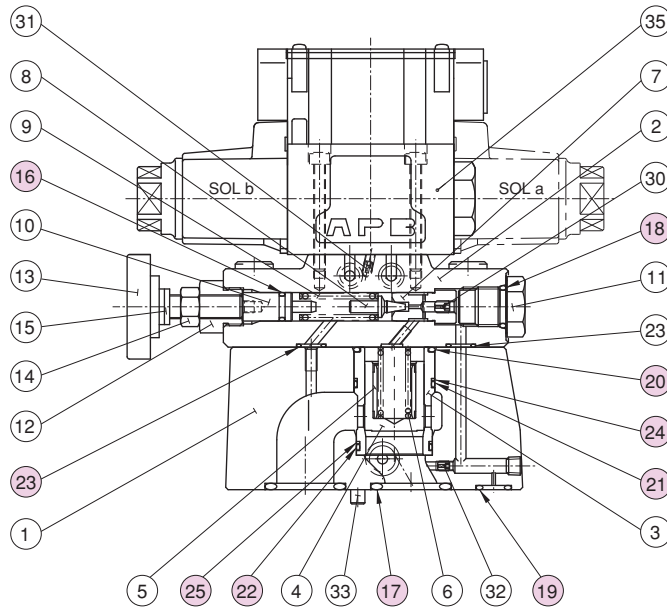


Models with Plug-in Connector (Option) B3SG-03-06-*-*-*-N



List of Seals

B3SG-03, 06

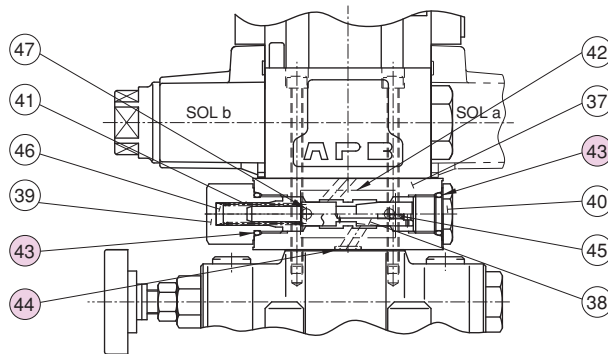


B3SG-03, 06

Item	Name of Parts	Part Numbers		Qty.
		B3SG-03	B3SG-06	
16	O-Ring	OR NBR-70-1 P9-N	OR NBR-70-1 P9-N	1
17	O-Ring	OR NBR-90 P18-N	OR NBR-90 P28-N	2
18	O-Ring	OR NBR-90 P14-N	OR NBR-90 P14-N	1
19	O-Ring	OR NBR-90 P9-N	OR NBR-90 P11-N	1
20	O-Ring	AS568-123 (NBR-90)	AS568-123 (NBR-90)	1
21	O-Ring	AS568-025 (NBR-90)	AS568-025 (NBR-90)	1
22	O-Ring	AS568-024 (NBR-90)	AS568-024 (NBR-90)	1
23	O-Ring	AS568-012 (NBR-90)	AS568-012 (NBR-90)	2
24	Back-up Ring	SO-BRB-34	SO-BRB-34	1
25	Back-up Ring	SO-BRB-32	SO-BRB-32	1

Note: The Pilot Valve for item ⑳, see “Solenoid Operated Directional Valves, DSG-01 Series” of the catalogue “E: Directional Controls”.

**A-B3SG-03, 06
(Models with Vent
Restrictor)**



A-B3SG-03, 06

Item	Name of Parts	Part Numbers	Qty.
43	O-Ring	OR NBR-90 P14-N	2
44	O-Ring	OR NBR-90 P8-N	2