

Pilot Operated Relief Valves

These valves protect the hydraulic system from excessive pressure, and can be used to maintain constant pressure in a hydraulic system. Remote control and unloading are permitted by using vent circuits.

Specifications

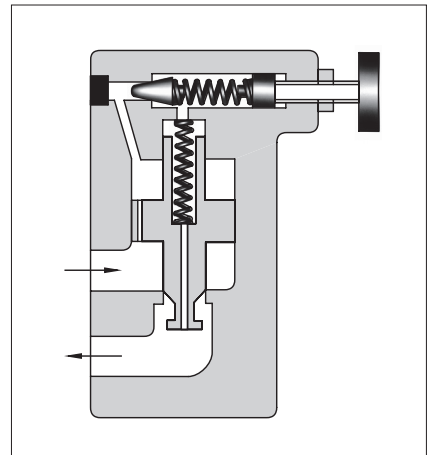
Model Numbers		Max. Operating Pressure MPa	Pres. Adj. Range MPa	Max. Flow L/min	Approx. Mass kg	
Threaded Connection	Sub-plate Mounting				BT Type	BG Type
BT-03- *-32	BG-03- *-32	25	★ - 25	100	5.0	4.7
BT-06- *-32	BG-06- *-32			200	5.0	5.6
BT-10- *-32	BG-10- *-32			400	8.5	8.7

- ★ Refer to the minimum adjustment pressure characteristics on page C-10.
- For large flow valves (flange connect type), please contact us.

Model Number Designation

B	T	-03	-V	-32
Series Number	Type of Mounting	Valve Size	High Venting * Pres. Feature	Design Number
B : Pilot Operated Relief Valves	T : Threaded Connection	03	V : For High Venting Pressure Feature (Omit if not required)	32
		06		32
		10		32
	G : Sub-plate Mounting	03		32
		06		32
		10		32

- ★ Use high venting pressure type to reduce the changeover time from unload to onload.



Graphic Symbols



Vent Connection

Accessories

Mounting Bolts

Valve Model Numbers	Socket Head Cap Screw
BG-03	M12×70L...2 Pcs., M12×95L...2 Pcs.
BG-06	M16×60L...2 Pcs., M16×80L...2 Pcs.
BG-10	M20×70L...2 Pcs., M20×90L...2 Pcs.

Sub-plates

Valve Model Numbers	Sub-plate Model Numbers	Thread Size Rc	Approx. Mass kg
BG-03	BGM-03-20	3/8	2.4
	BGM-03X-20	1/2	3.1
BG-06	BGM-06-20	3/4	4.7
	BGM-06X-20	1	5.7
BG-10	BGM-10-20	1 1/4	8.4
	BGM-10X-20	1 1/2	10.3

- 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. (1/8")

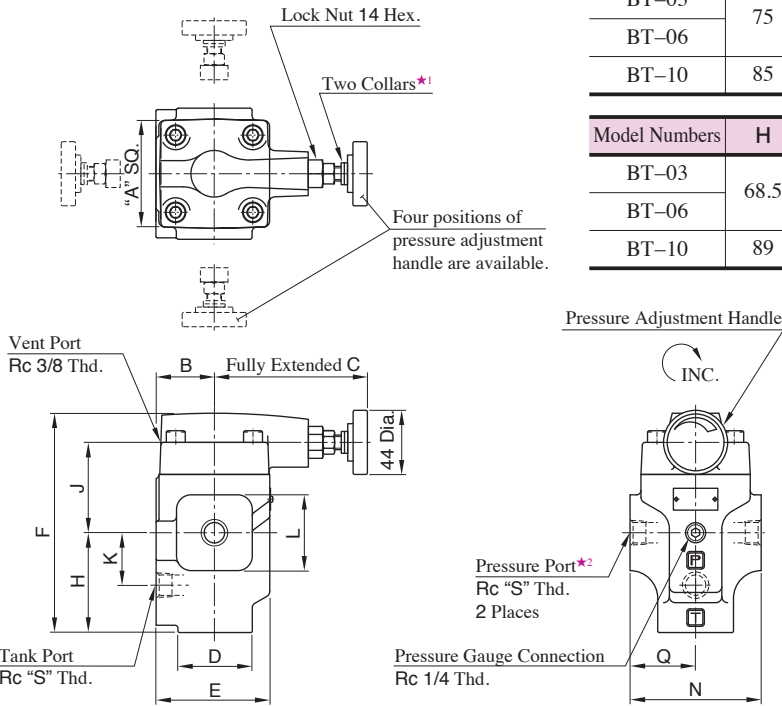
Instructions

- If a remote control relief valve is used in the vent circuit, see page C-5. In addition, 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. 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 a flow rate above the minimum flow as the right chart.

Valve Size	Min. Flow
03	8 L/min
06	
10	15 L/min

BT-03, 06, 10



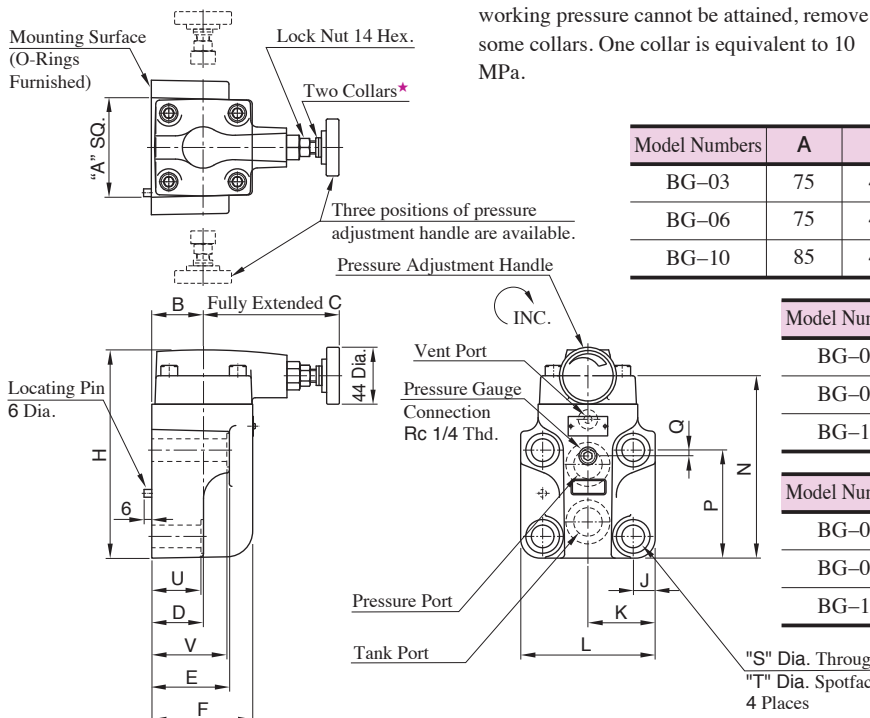
Model Numbers	A	B	C	D	E	F
BT-03	75	40	105	52	78	150.5
BT-06						
BT-10	85	50	101	80	96	183

Model Numbers	H	J	K	L	N	Q	S
BT-03	68.5	62	36	52	90	45	3/8
BT-06							3/4
BT-10	89	74	49	80	120	60	1 1/4

★1. Pressure is limited by collars fitted. If a working pressure cannot be attained, remove some collars. One collar is equivalent to 10 MPa.

★2. There are two threaded connection pressure ports. They can be connected each other in-line; one as inlet and the other as an outlet or the valve can be used by plugging one of the pressure ports.

BG-03, 06, 10



★ Pressure is limited by collars fitted. If a working pressure cannot be attained, remove some collars. One collar is equivalent to 10 MPa.

Mounting Surface
 BG-03 : ISO 6264-06-09-1-97
 BG-06 : ISO 6264-08-13-1-97
 BG-10 : ISO 6264-10-17-1-97

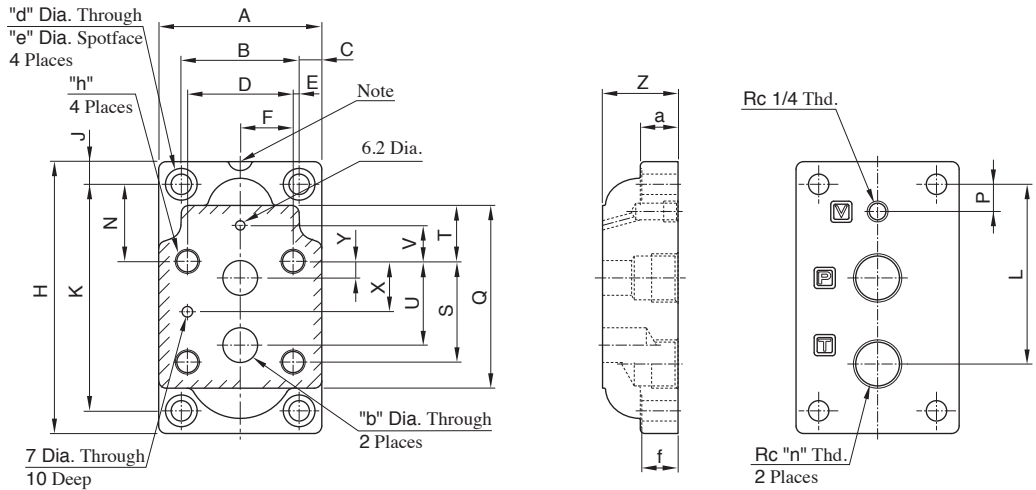
Model Numbers	A	B	C	D	E	F	H
BG-03	75	40	105	57	78	78	137
BG-06	75	40	105	40	60	78	161
BG-10	85	45	101	47	67	84	195

Model Numbers	J	K	L	N	P
BG-03	14.1	41	82	117	77
BG-06	17	52	104	141	83.5
BG-10	20.7	62	124	175	110

Model Numbers	Q	S	T	U	V
BG-03	22	13.5	21	55	77
BG-06	4.5	17.5	26	38	58
BG-10	6	21.5	32	45	65

"S" Dia. Through
 "T" Dia. Spotface
 4 Places

Sub-plate
BGM-03, 03X
06, 06X
10, 10X



Note) There is the cavity only for BGM- * X.

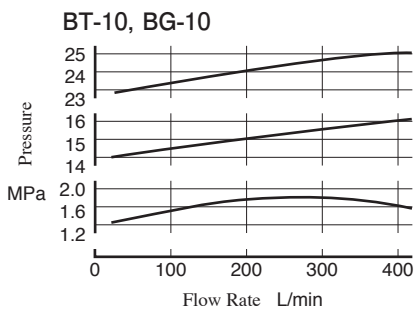
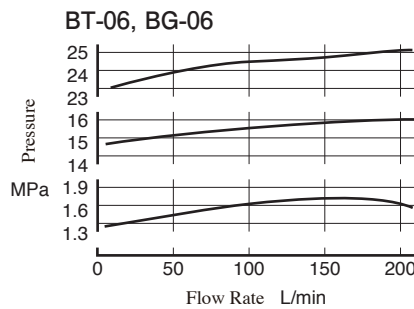
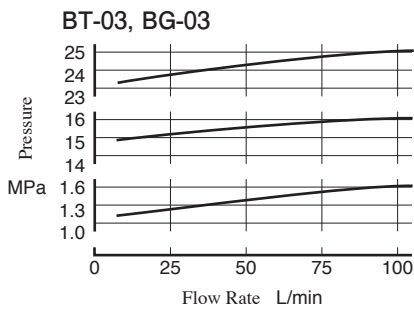
Model Numbers	A	B	C	D	E	F	H	J	K	L	N	P	Q	S
BGM-03	86	60	13	53.8	3.1	26.9	149	13	123	86	32	26	97	53.8
BGM-03X										95		21		
BGM-06	108	78	15	70	4	35	180	15	150	106.5	51	27.2	121	66.7
BGM-06X										119		18		
BGM-10	126	94	16	82.6	5.7	41.3	227	16	195	138.2	62	30.2	154	88.9
BGM-10X										158		17		

Model Numbers	T	U	V	X	Y	Z	a	b	d	e	f	h	n
BGM-03	19	47.4	0	22	22	32	20	14.5	11	17.5	19	M12 Thd. 20 Deep	3/8
BGM-03X						40							1/2
BGM-06	37	55.5	23.8	33.4	11	40	25	23	13.5	21	24	M16 Thd. 25 Deep	3/4
BGM-06X						50							1
BGM-10	42	76.2	31.8	44.5	12.7	50	32	28	17.5	26	31	M20 Thd. 28 Deep	1 1/4
BGM-10X						63							1 1/2

Pilot Operated Relief Valves

Nominal Override Characteristics

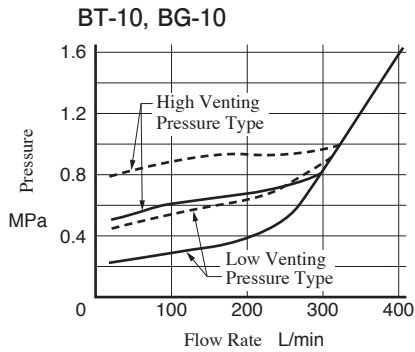
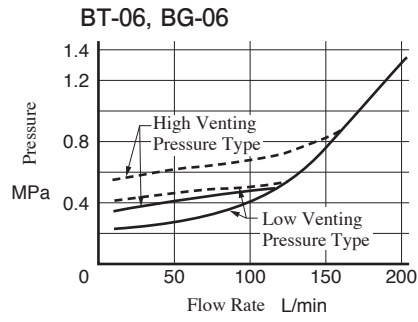
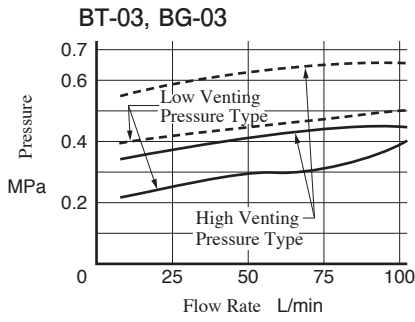
Hydraulic Fluid: Viscosity : 35 mm²/s
 Specific Gravity : 0.850



Min. Adj. Pressure & Vent Pressure vs. Flow

Hydraulic Fluid: Viscosity : 35 mm²/s
Specific Gravity : 0.850

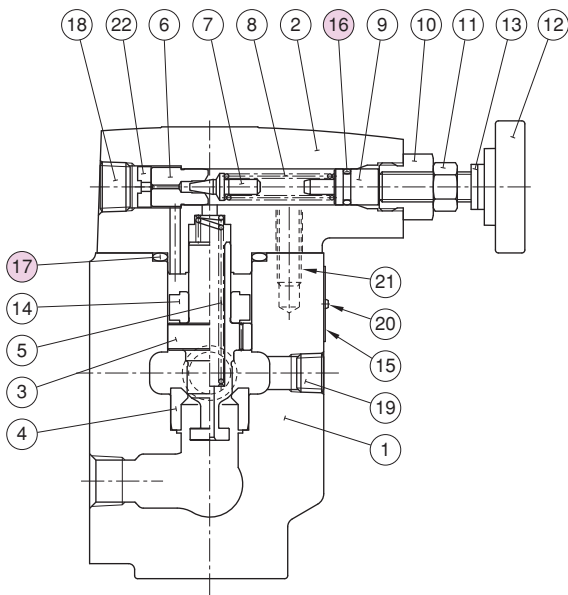
— Vent Pressure
- - - Min. Adjustment Pressure



Note) Venting Pressure is the relieving pressure when the vent port open to tank port.

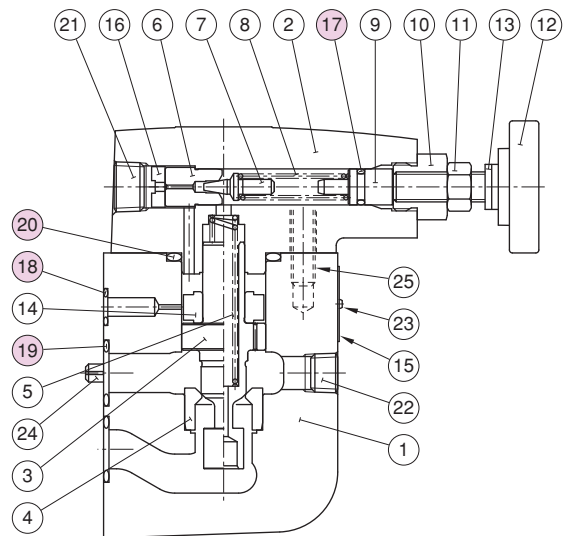
List of Seals

BT-03, 06, 10



Item	Name of Parts	Part Numbers			Qty.
		BT-03	BT-06	BT-10	
16	O-Ring	OR NBR-70-1 P9-N	OR NBR-70-1 P9-N	OR NBR-70-1 P9-N	1
17	O-Ring	OR NBR-90 P32-N	OR NBR-90 P32-N	OR NBR-90 P32-N	1

BG-03, 06, 10



Item	Name of Parts	Part Numbers			Qty.
		BG-03	BG-06	BG-10	
17	O-Ring	OR NBR-70-1 P9-N	OR NBR-70-1 P9-N	OR NBR-70-1 P9-N	1
18	O-Ring	OR NBR-90 P9-N	OR NBR-90 P11-N	OR NBR-90 P9-N	1
19	O-Ring	OR NBR-90 P18-N	OR NBR-90 P28-N	OR NBR-90 P32-N	2
20	O-Ring	OR NBR-90 P32-N	OR NBR-90 P32-N	OR NBR-90 P42-N	1