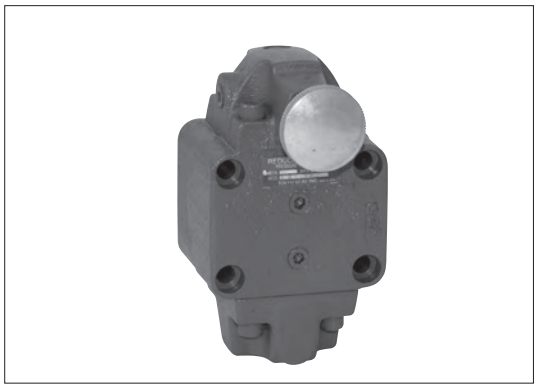
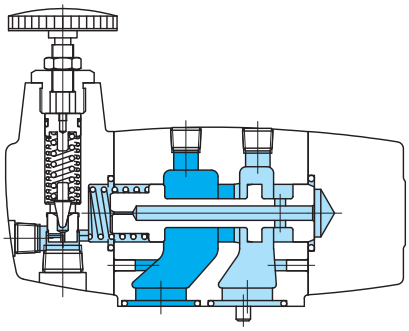
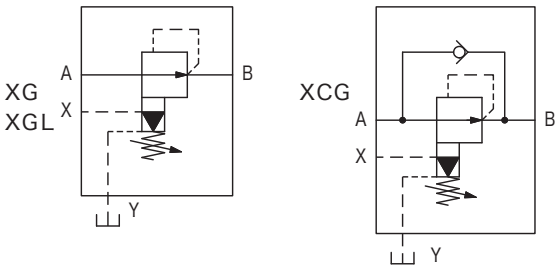
Pressure reducing valves (with check valve) X(C)G, XGL





Functional Symbols



- Valve is used to set pressure in branch circuit lower than pressure of the main circuit.
- By connecting remote control valve (CGR-02, C-175, etc.) to vent port, branch circuit pressure can be set remotely.
- Reducing valve with check valve will allow free flow from the reduced pressure circuit B to main circuit A.

Model Code

(F3)-X(C)G-03-F-20-JA-J

1 | 2 | 3 | 4 | 5

1 Hydraulic fluid
Omit: mineral oil based fluid, water-glycol based fluid
F3: phosphate ester fluid

2 Pressure reducing valve
XG: Gasket mounting
XGL: Gasket mounting (for low pressure)
Reducing valve with check valve
XCG: Gasket mounting

3 Size
Refer to “Specifications”.

4 Pressure adjustment range
Refer to “Specifications”.

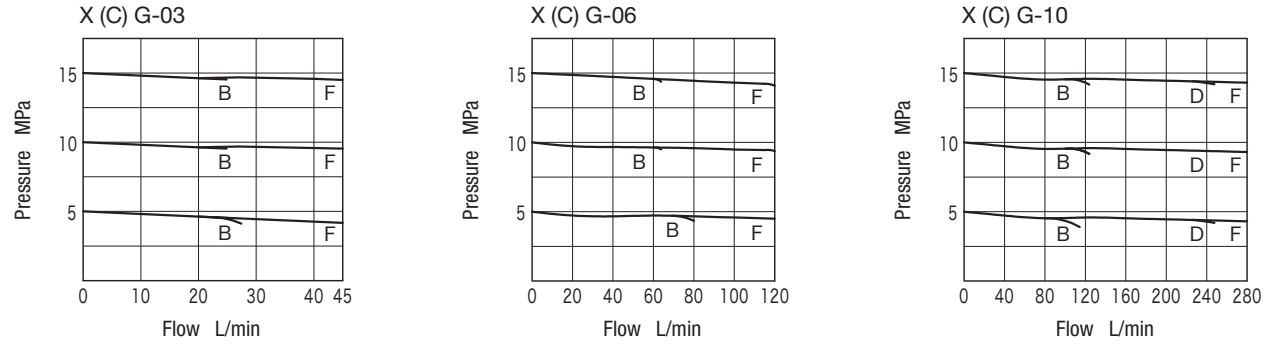
5 Design no.
10: XGL-03
20: X(C)G-03, 06, 10

Specifications

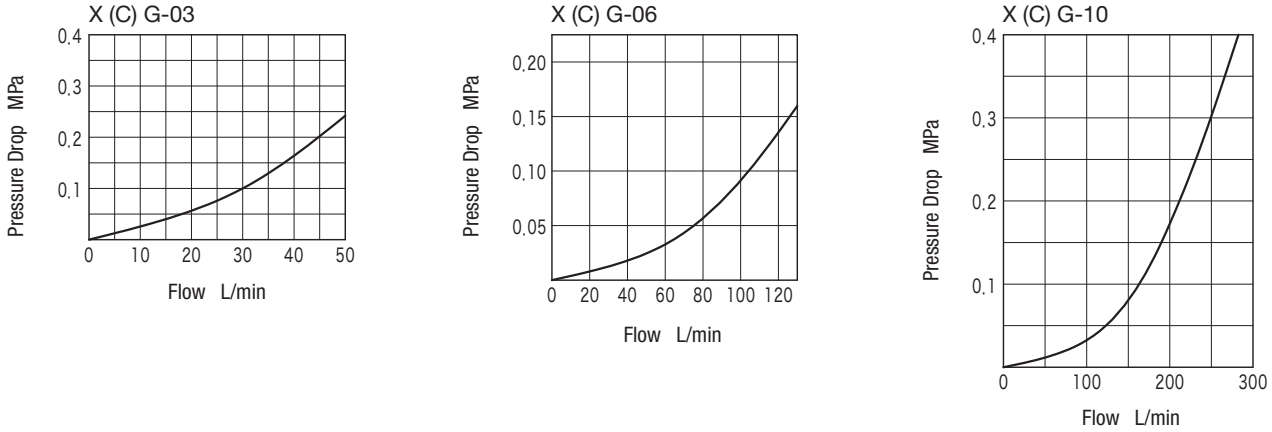
Model Code	Size	Max. Working Pressure MPa	Max. Flow L/min	Pressure Adjustment Ranges		Weight kg	
				Code	MPa	XG	XCG
X(C)G-03	03	21	23	B	0.56～20	4.0	4.2
			50	F	1.05～20		
X(C)G-06	06		57	B	0.56～20	6.0	6.5
			110	F	1.4 ～20		
X(C)G-10	10		95	B	0.7 ～20	12	13
			190	D	1.16～20		
			280	F	1.58～20		
XGL-03	03	14	30	B	0.18～ 7	4.0	

Characteristics Curve (at 20 mm²/s) (typical examples)

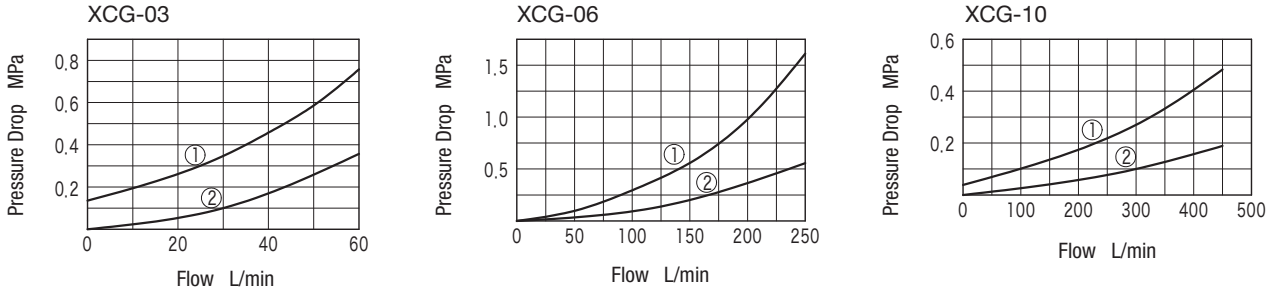
● Flow–Pressure Characteristics



● Pressure Drop Characteristics (before reducing, high pressure port to reduced pressure port)



● Pressure Drop Characteristics (check valve free flow direction, reducing port to high pressure port)
① main valve closed, ② main valve open



Notes on Operation

- For optimum reducing operation, pressure differential of at least 1 MPa should be maintained between the high pressure (primary) side and the reduced pressure (secondary) side.
- Do not connect drain line with other tank lines and return drain directly to tank. Ensure that end of the piping is always below the fluid level.
- Loosen the lock nut and turn handle clockwise to increase the setting pressure and counterclockwise to decrease the setting pressure.

Mounting Bolts (JIS B 1176, Strength Class 12.9)

Valve Model	Hex Socket Bolts		Qty
	Metric Thread	Unified Thread	
X(C)G-03	M10×70	3/8-16UNC×69.8	4
X(C)G-06	M10×85	3/8-16UNC×82.5	4
X(C)G-10	M10×110	3/8-16UNC×107.9	6
XGL-03	M8×75	5/16-18UNC×76.2	4

- Mounting bolts must be ordered separately.
- Mounting bolt tightening torque
  X(C)G-03/06/10: 54 to 66 N·m
  XGL-03: 27 to 33 N·m

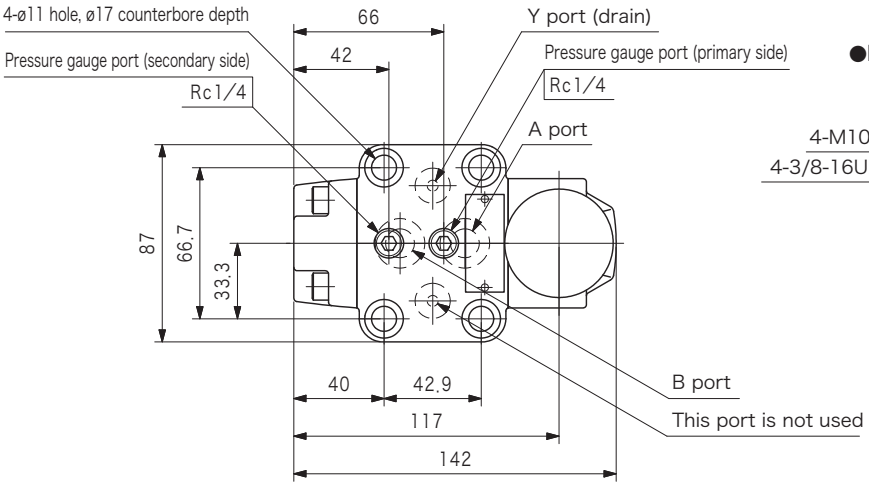
Subplate

Valve Model	Subplate	Connection Port Diameter Rc
X (C) G–03	RXGM–03–20–JA–J	3/8
	RXGM–03X–20–JA–J	1/2
X (C) G–06	RXGM–06–20–JA–J	3/4
	RXGM–06X–20–JA–J	1
X (C) G–10	RXGM–10–20–JA–J	1–1/4
	RXGM–10X–20–JA–J	1–1/2
XGL–03	XGLM–03–10–JA–J	3/8

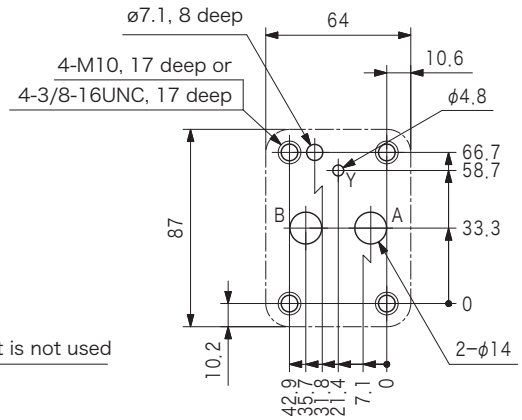
- Subplate must be ordered separately.
- Hex socket bolts for mounting valve included (unified thread).
- See page R6-3 – 6-4 for dimensions.

Dimensions

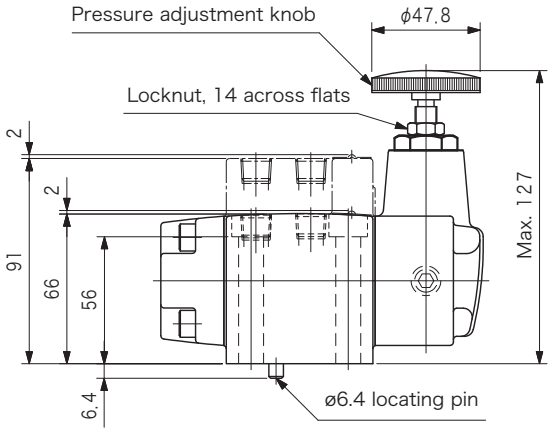
X(C)G-03

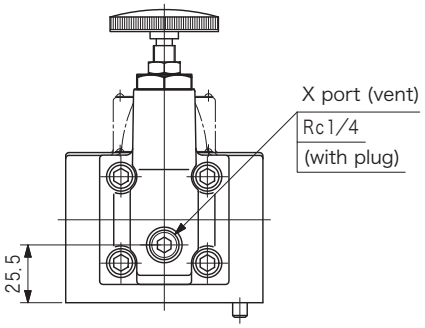


●Mounting dimensions

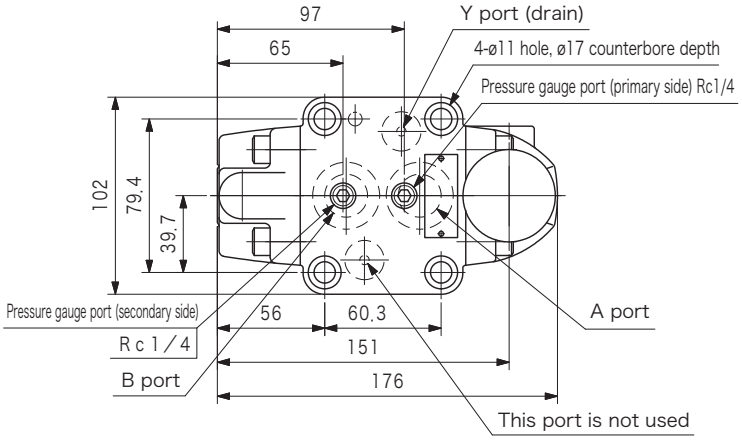


Note: Dashed line for XCG-03

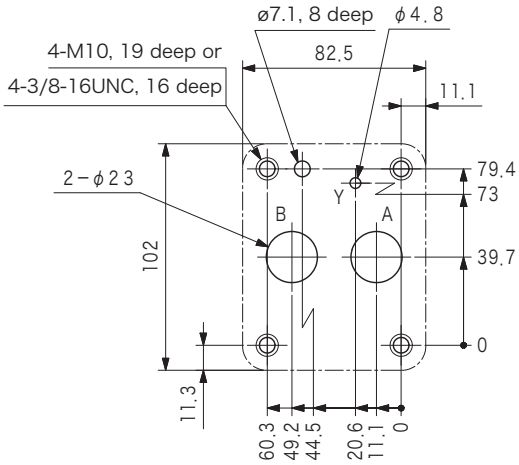




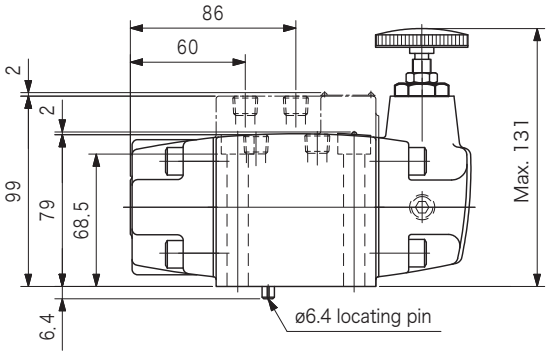
X(C)G-06

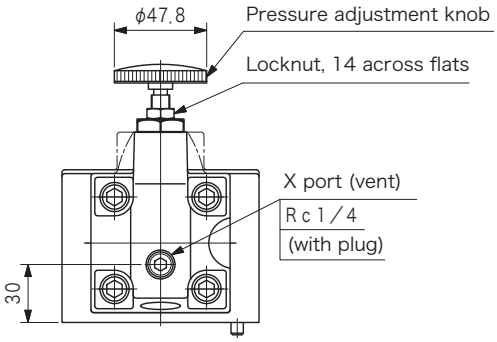


●Mounting dimensions



Note: Dashed line for XCG-06

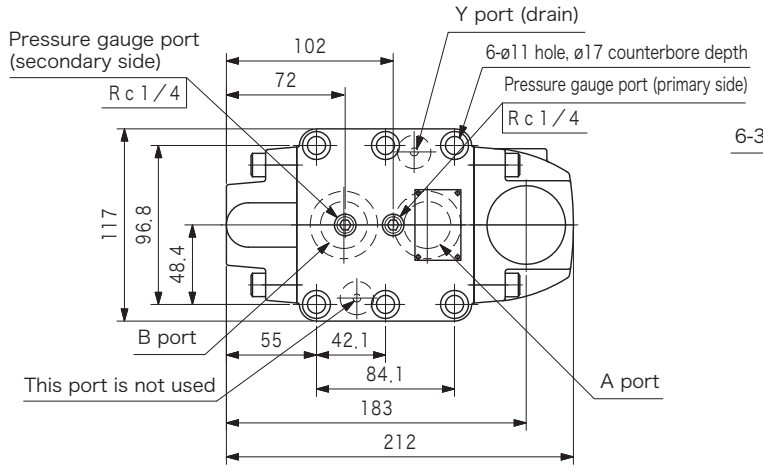


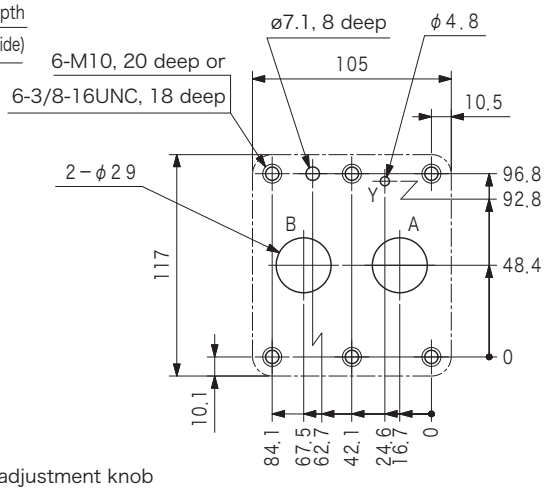


Dimensions

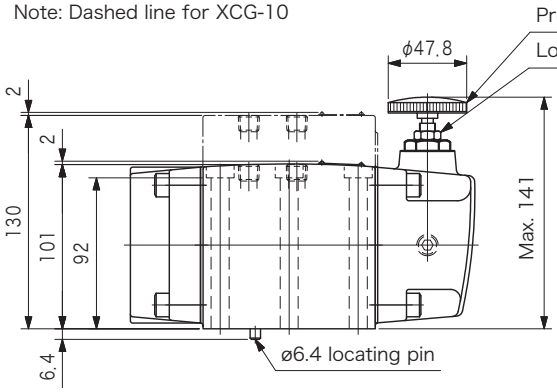
X(C)G-10

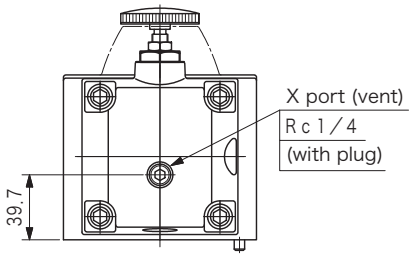
●Mounting dimensions





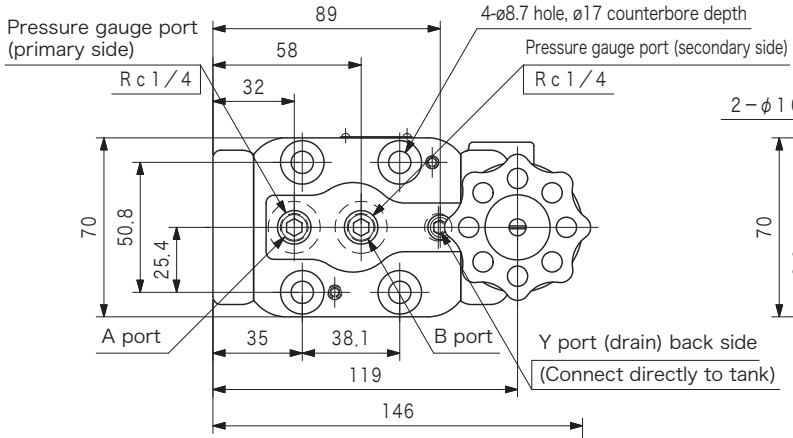
Note: Dashed line for XCG-10

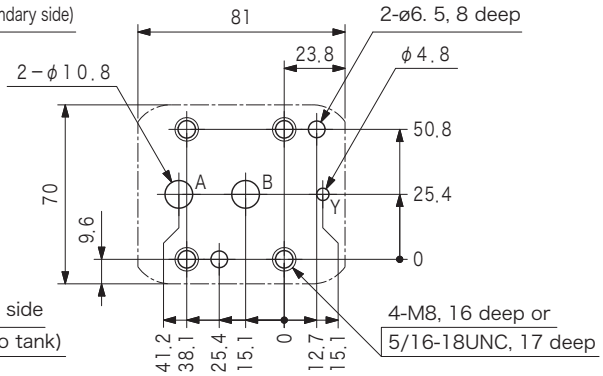


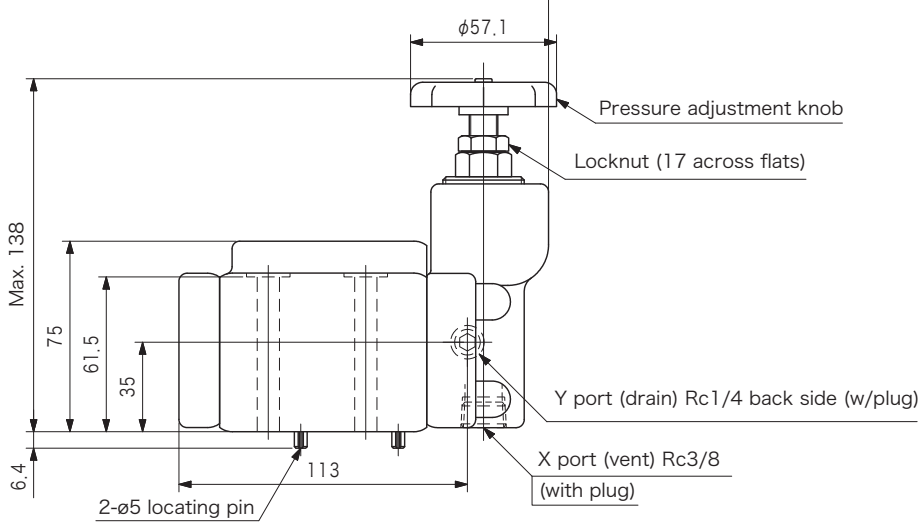


XGL-03

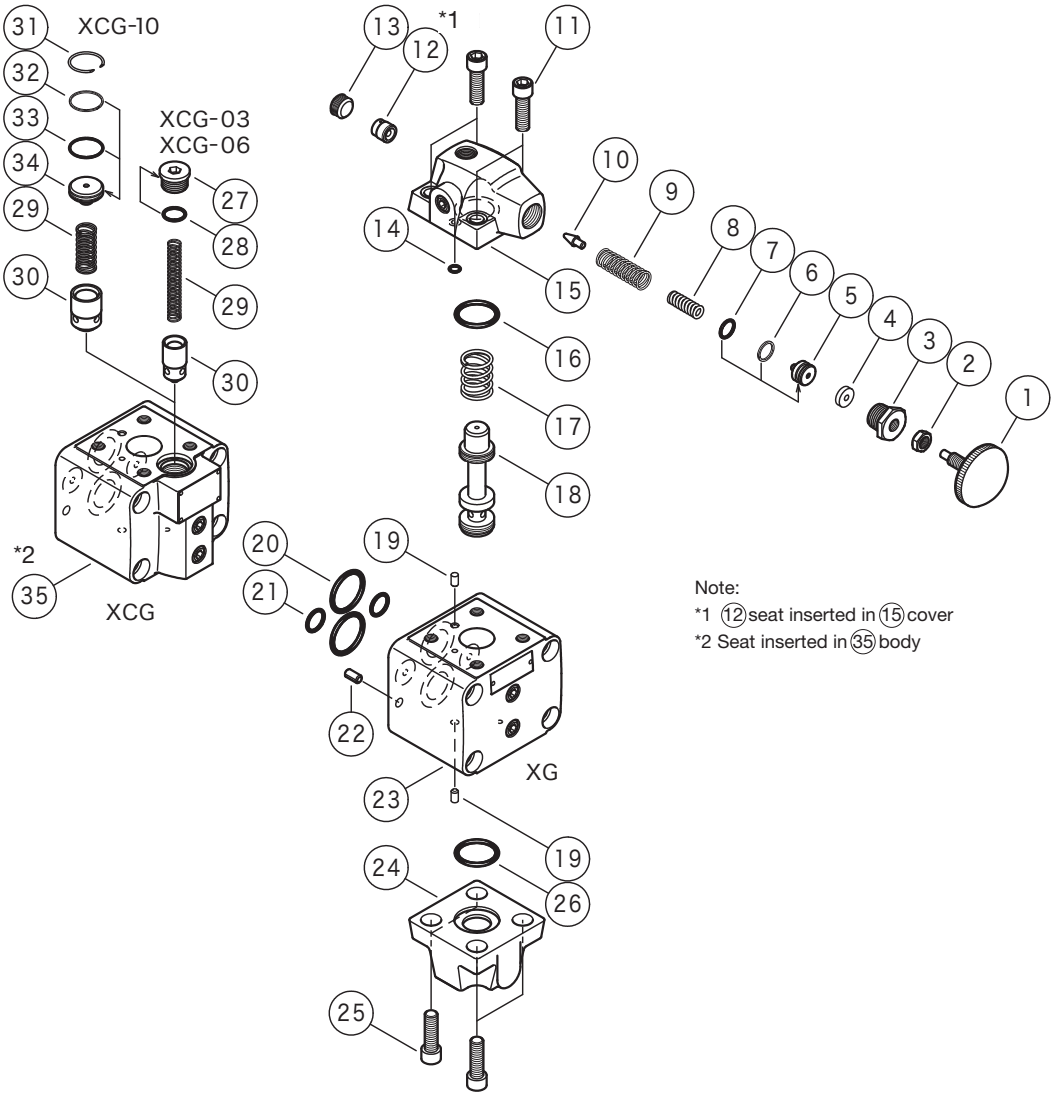
●Mounting dimensions







Construction



(17) Spring

Code \ Size	03	06	10
B	VP350854	VP322653	VP359342
D	————	————	VP359340
F	VP350855	VP348614	VP359341

X (C) G-06

No.	Name	Part No.	Standard	Qty
6	Backup ring	48197572	MS28774–014	1
7	O-ring	007901417	AS568–014 (NBR, Hs70)	1
14	O-ring	007901019	AS568–010 (NBR, Hs90)	1
16	O-ring	007921519	AS568–215 (NBR, Hs90)	1
20	O-ring	007921619	AS568–216 (NBR, Hs90)	2
21	O-ring	007911419	AS568–114 (NBR, Hs90)	2
26	O-ring	007921519	AS568–215 (NBR, Hs90)	1
28	O-ring*3	007990819	AS568–908 (NBR, Hs90)	1

*3 Used in XCG

X (C) G-03

No.	Name	Part No.	Standard	Qty
6	Backup ring	48197572	MS28774–014	1
7	O-ring	007901417	AS568–014 (NBR, Hs70)	1
14	O-ring	007900819	AS568–008 (NBR, Hs90)	1
16	O-ring	007911819	AS568–118 (NBR, Hs90)	1
20	O-ring	007911519	AS568–115 (NBR, Hs90)	2
21	O-ring	007911119	AS568–111 (NBR, Hs90)	2
26	O-ring	007911819	AS568–118 (NBR, Hs90)	1
28	O-ring*3	007990619	AS568–906 (NBR, Hs90)	1

*3 Used in XCG

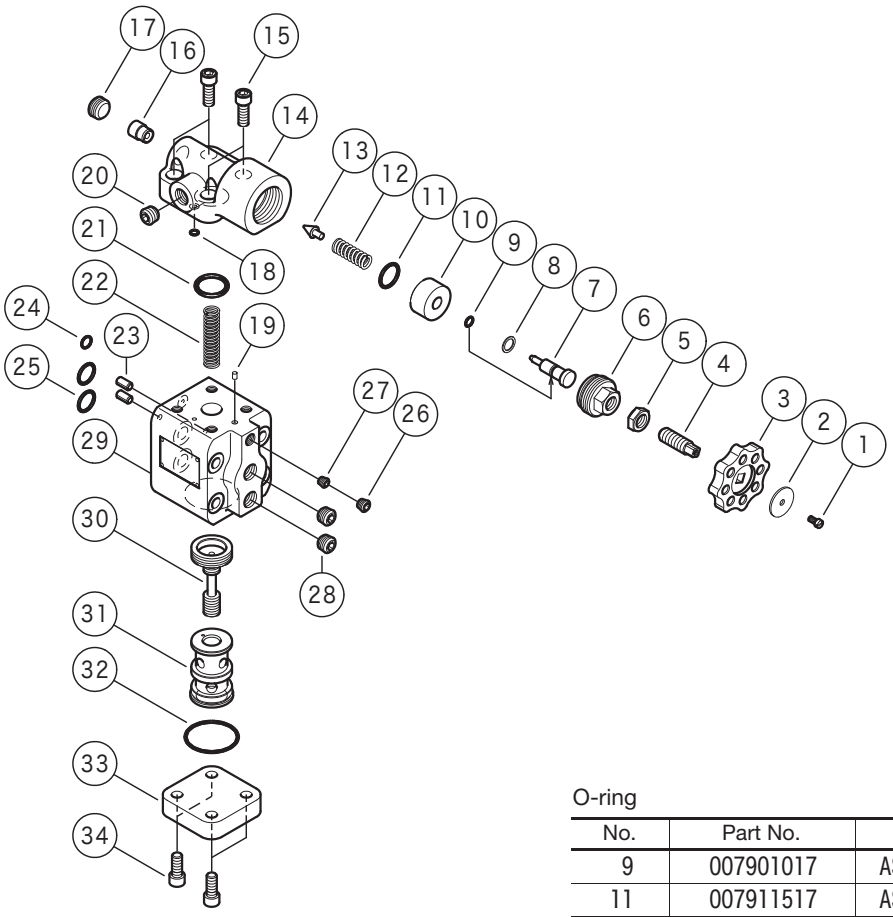
X (C) G-10

No.	Name	Part No.	Standard	Qty
6	Backup ring	48197572	MS28774–014	1
7	O-ring	007901417	AS568–014 (NBR, Hs70)	1
14	O-ring	007911019	AS568–110 (NBR, Hs90)	1
16	O-ring	007922219	AS568–222 (NBR, Hs90)	1
20	O-ring	007922019	AS568–220 (NBR, Hs90)	2
21	O-ring	007911419	AS568–114 (NBR, Hs90)	2
26	O-ring	007922219	AS568–222 (NBR, Hs90)	1
32	Backup ring*3	48197582	MS28774–024	1
33	O-ring*3	007902419	AS568–024 (NBR, Hs90)	1

*3 Used in XCG

Construction

XGL–03



O-ring

No.	Part No.	Standard	Qty
9	007901017	AS568–010 (NBR, Hs70)	1
11	007911517	AS568–115 (NBR, Hs70)	1
18	007900817	AS568–008 (NBR, Hs70)	1
21	007921117	AS568–211 (NBR, Hs70)	1
24	007901117	AS568–011 (NBR, Hs70)	1
25	007911417	AS568–114 (NBR, Hs70)	2
32	007912817	AS568–128 (NBR, Hs70)	1

Note: ⑯ inserted in ⑭