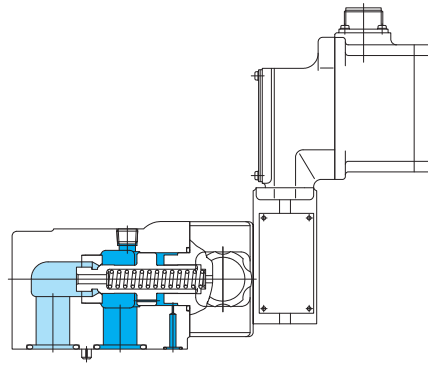
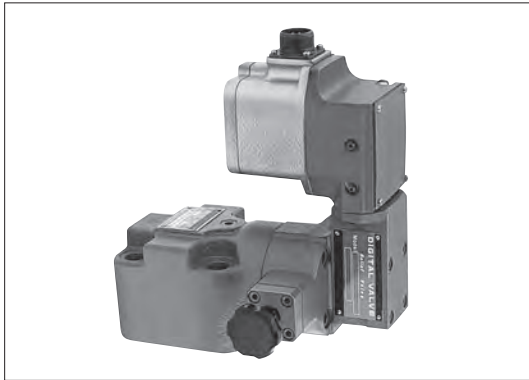
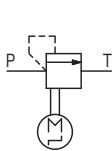


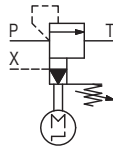
Digital relief valves D-CG



Functional Symbols



D-CG-02



D-CG-03~10

Model Code

D-CG-02-C-250-20

1 2 3 4 5

- 1 Digital relief valve
- 2 Size
See "Specifications"
- 3 Pressure adjustment range
See "Specifications"
- 4 Maximum number of steps
100: 100 or 200 steps (2-phase motor)*
250: 250 steps (5-phase motor)
- 5 Design no.
20: D-CG-02
21: D-CG-03/06/10

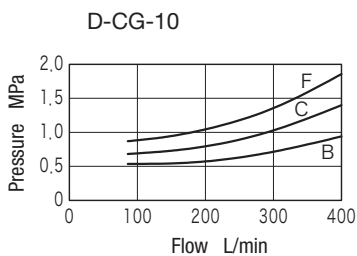
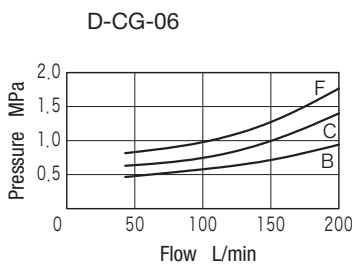
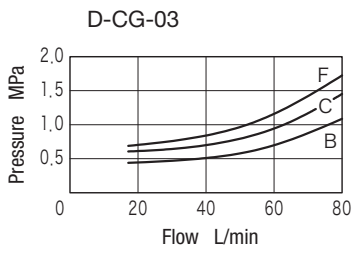
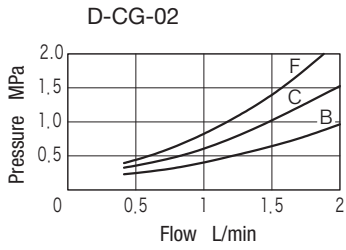
Specifications

Size		02	03	06	10	
Maximum working pressure	MPa	21				
Rated flow	L/min	1	40	100	200	
Maximum flow	L/min	2	80	200	400	
Maximum adjustable pressure	MPa	Pressure adjustment range symbols	B	7	7	7
			C	14	14	14
			F	21	21	21
Minimum control pressure		The minimum control pressure depends on the flow so refer to the characteristics curves on page K1-2 for further details.				
Hysteresis		Less than 0.1% of maximum control pressure				
Repeatability		Less than 0.1% of maximum control pressure				
Temperature drift • ISO VG 32 hydraulic fluid or equivalent Indicated are the percentages for the maximum control pressure when the temperature changes in the 30°C to 60°C range.	Pressure adjustment range symbols	B	Less than 4%	Less than 6%	Less than 6%	Less than 6%
		C	Less than 3%	Less than 3%	Less than 4%	Less than 4%
		F	Less than 4%	Less than 1%	Less than 1.5%	Less than 2%
Resolution (maximum no. of steps)	2-phase energization system		100 (2-phase motors)*			
	1-2-phase energization system		200 (2-phase motors)*			
	4-phase energization system		250 (5-phase motors)			
Response		The valve response is significantly affected by the performance of the controller and driver used. For further details, refer to the operating instructions of our controllers and drivers.				
Valve to valve variation		±3% or less than maximum control pressure				
Tank port allowable back pressure	MPa	1 or less				
Filter (nominal filtration grain size)	µm	25 or less				
Weight	kg	3.1	7.9	10	13.6	

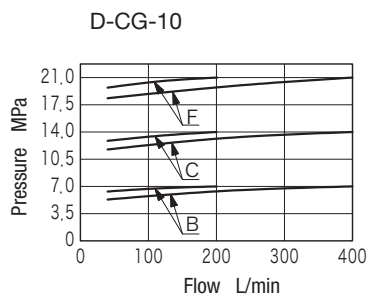
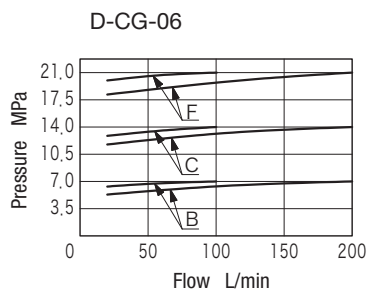
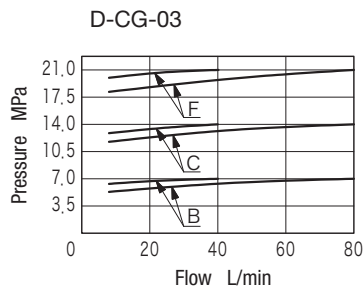
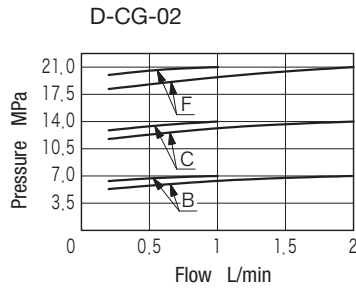
* This was previously referred to as a 4-phase motor (the motor itself has remained unchanged).

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

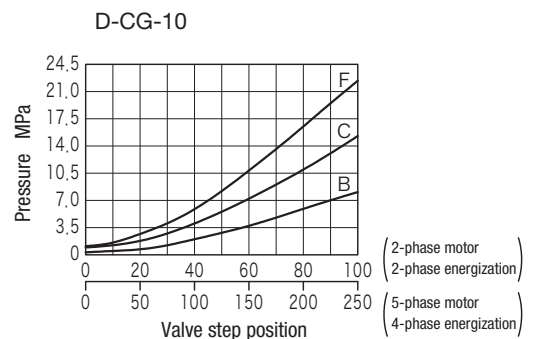
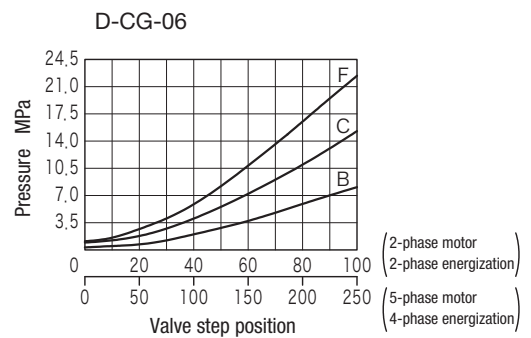
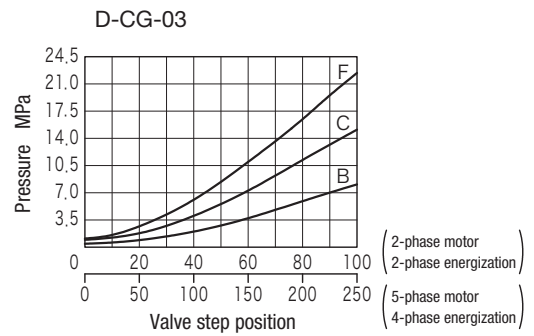
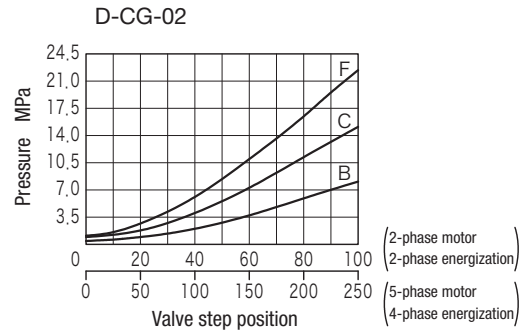
● Minimum control pressure characteristics



● Pressure override characteristics



● Valve step position – pressure characteristics



Notes on Operation

- When the reset signal is input, the minimum control pressure is set by the reset mechanism which is built into the valve.
- It is possible to adjust the valve's origin point by performing adjustments inside the valve, but re-adjustment is not necessary since the adjustment was completed prior to shipment from the factory.

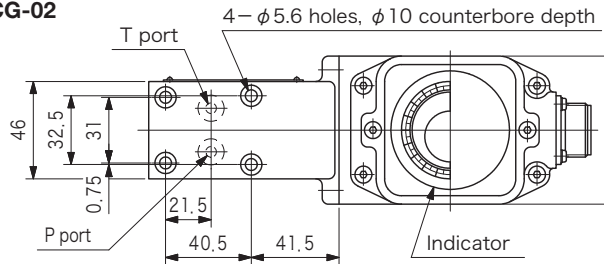
Subplates and Mounting Bolts (JIS B 1176 Strength Grade 12.9 or Equivalent)

Valve	Mounting Bolts		No. of Bolts	Subplate	Connection Port Diameter Rc
	Metric Thread	Unified Thread			
D-CG-02	M5 × 45	—	4	DGMS-3-1E-10-T-JA-J* DGVM-3-10-T-JA-J*	3/8
D-CG-03	M12 × 80	1/2-13UNC × 82.5	4	TCGMT-03-10-JA-J	3/8
D-CG-06	M16 × 85	5/8-11UNC × 82.5	4	CGM-06-10-JA-J	3/4
D-CG-10	M20 × 100	3/4-10UNC × 101.6	4	CGM-10-10-JA-J	1-1/4

- The mounting bolts are not provided with the valve bodies and must be ordered separately.
- Subplate must be ordered separately. Mounting bolts are provided. (Not applicable to models indicated with *) (Unified thread)
- For further details of the dimensions, refer to pages R6-2 and R6-6.
- Mounting bolt tightening torque
 D-CG-02: 7~8 N·m
 D-CG-03: 72~88 N·m
 D-CG-06: 90~110 N·m
 D-CG-10: 180~220 N·m

Dimensions

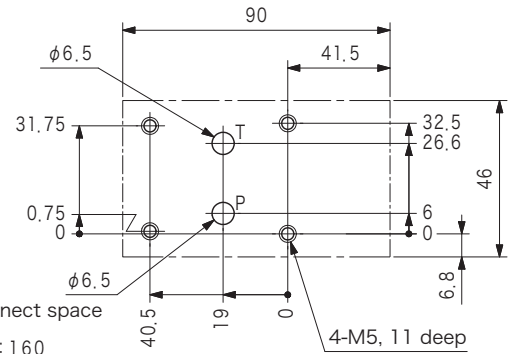
D-CG-02



Receptacle: MS3102A16S-1P

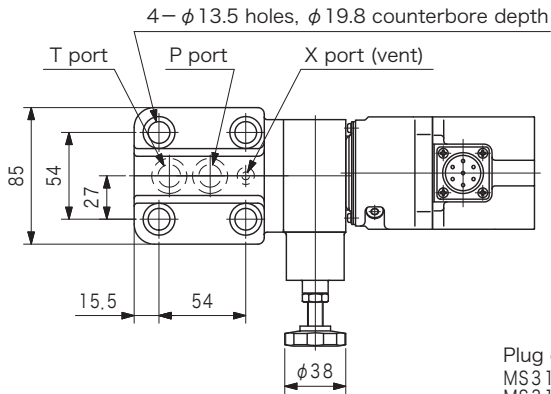
Use the MS3106B16S-1S or MS3108B16S-1S for the plug and the MS3057-8A for the cable clamp. These parts are not provided as parts of the valve body.

• Mounting Dimensions



Plug connect/disconnect space
 MS3106B16S-1S: 160
 MS3108B16S-1S: 65

D-CG-03

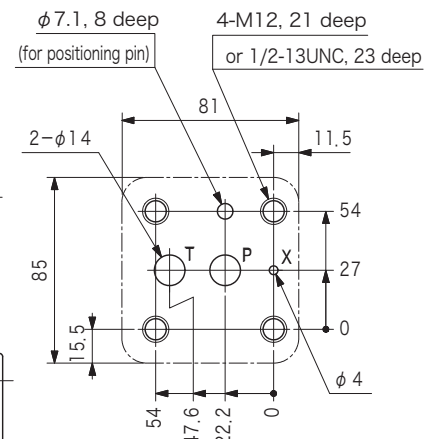


Receptacle: MS3102A16S-1P

Use the MS3106B16S-1S or MS3108B16S-1S for the plug and the MS3057-8A for the cable clamp. These parts are not provided as parts of the valve body.

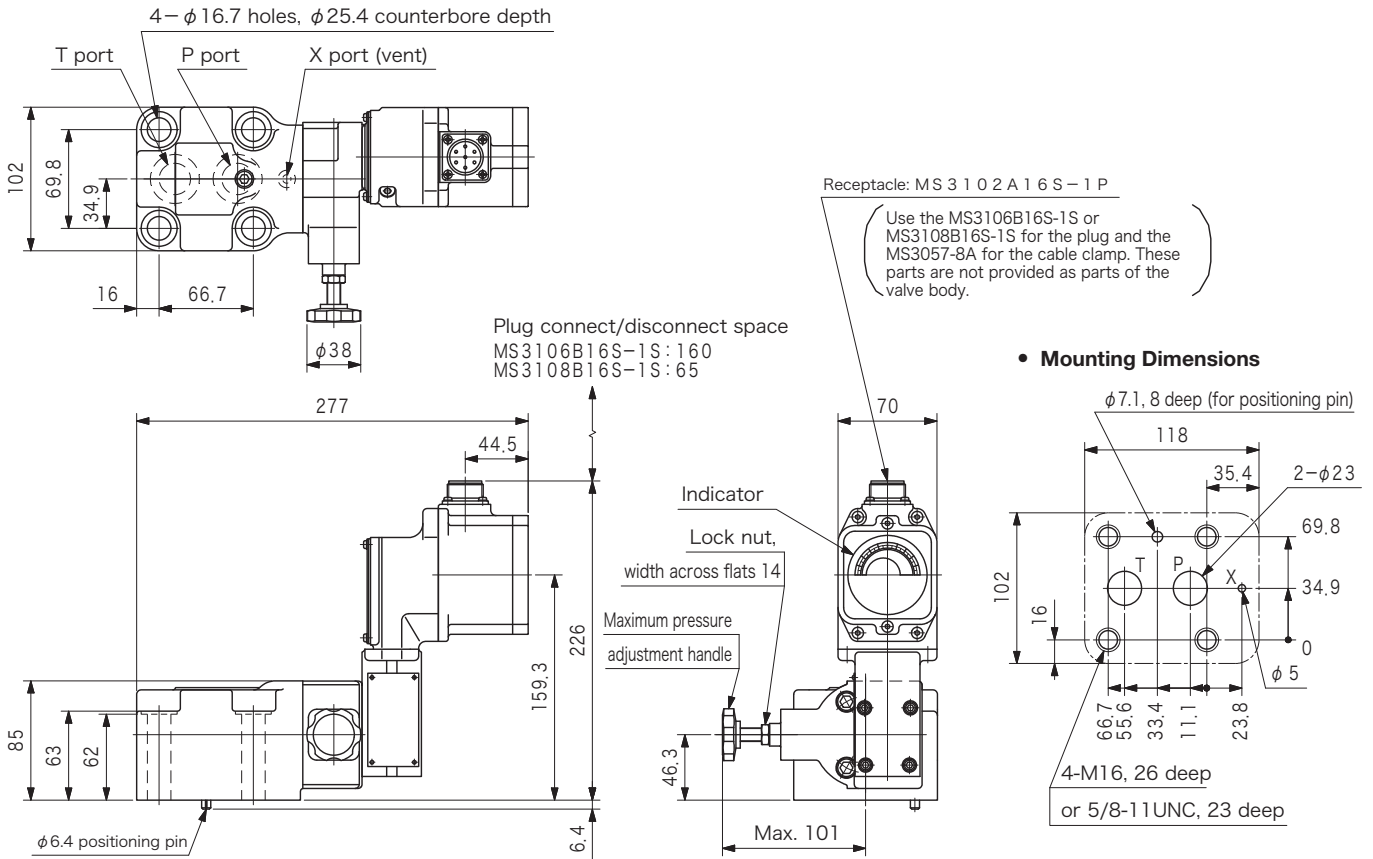
Plug connect/disconnect space
 MS3106B16S-1S: 160
 MS3108B16S-1S: 65

• Mounting Dimensions

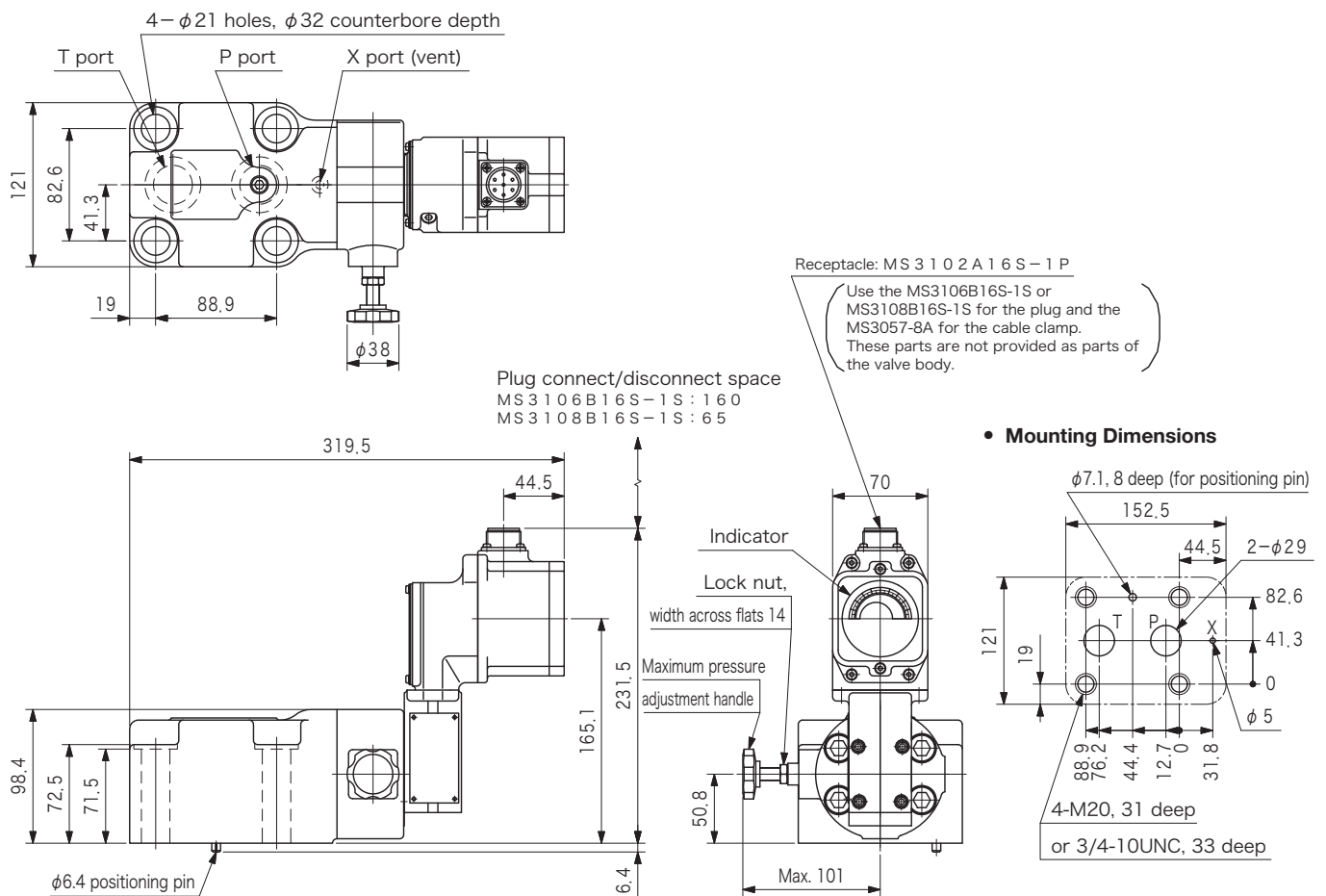


Dimensions

D-CG-06

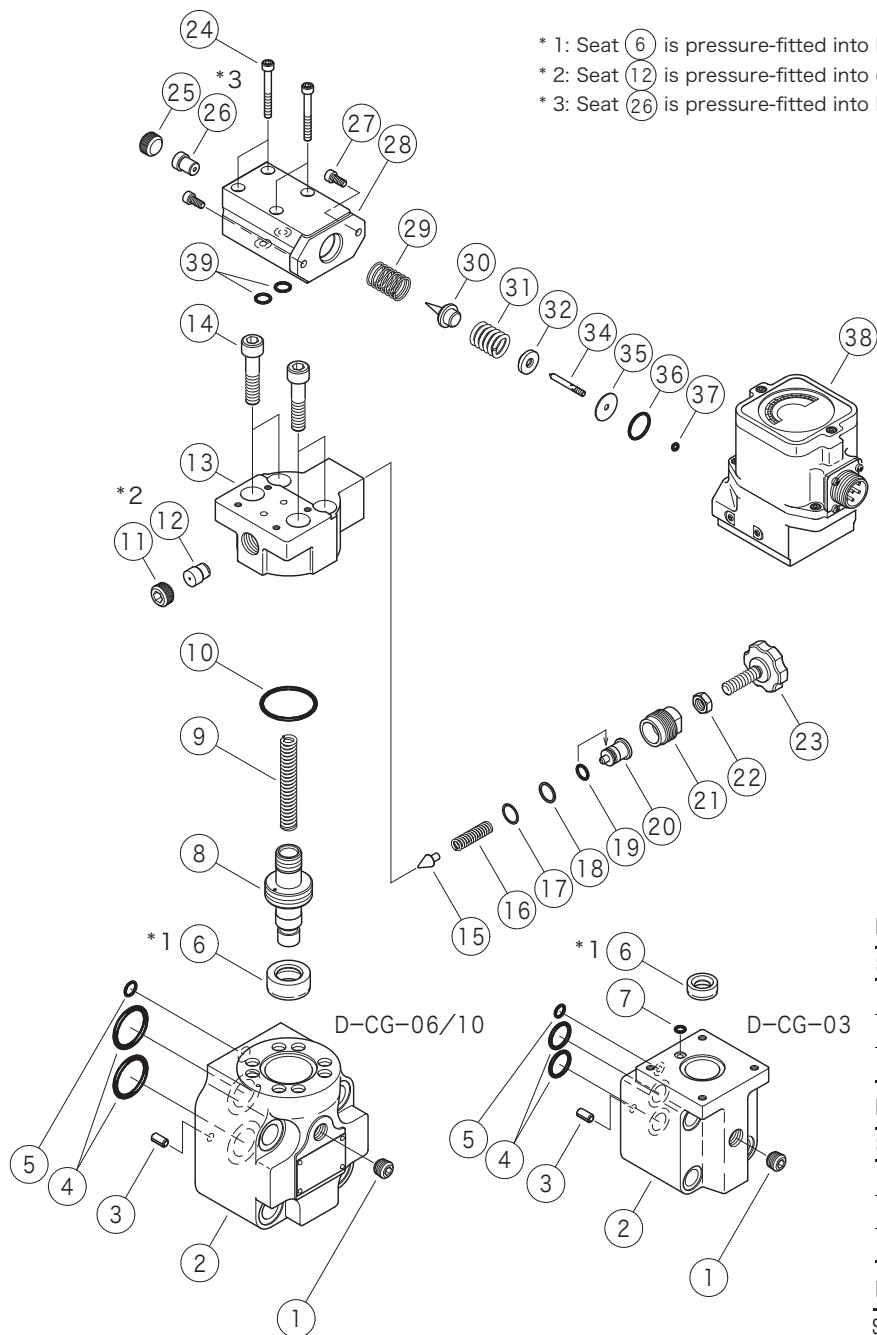


D-CG-10



Construction

D-CG-02 (configured with numbers 25 to 39)



* 1: Seat (6) is pressure-fitted into body (2).
 * 2: Seat (12) is pressure-fitted into cover (13).
 * 3: Seat (26) is pressure-fitted into body (28).

D-CG-02

Symbol	Seat (26)	Spring (31)
B	VA25549	VA25552
C	VA26023	VA25551
F	VA24813	VA25551

D-CG-03

Symbol	Spring (16)	Seat (26)	Spring (31)
B	VP2280	40013327	VA25553
C	VA15049	VA25550	VA24816
F	VP2281	VA24813	VA24816

D-CG-06

Symbol	Spring (16)	Seat (26)	Spring (31)
B	VP2280	VA25549	VA25552
C	VA15049	VA26023	VA25551
F	VP2281	VA24813	VA25551

D-CG-10

Symbol	Spring (16)	Seat (26)	Spring (31)
B	VP2280	VA25549	VA25553
C	VA15049	VA25550	VA24816
F	VP2281	VA24813	VA24816

O-rings

D-CG-02

No.	Part Number	Standard	Qty
36	007901817	AS568-018 (NBR, Hs70)	1
37	007900717	AS568-007 (NBR, Hs70)	1
39	007901217	AS568-012 (NBR, Hs70)	2

D-CG-03

No.	Part Number	Standard	Qty
4	007911519	AS568-115 (NBR, Hs90)	2
5	007901119	AS568-011 (NBR, Hs90)	1
7	007900919	AS568-009 (NBR, Hs90)	1
10	007912219	AS568-122 (NBR, Hs90)	1
19	007901217	AS568-012 (NBR, Hs70)	1

Note: Parts (36), (37) and (39) are the same as the ones for the D-CG-02.

D-CG-06

No.	Part Number	Standard	Qty
4	007921619	AS568-216 (NBR, Hs90)	2
5	007901219	AS568-012 (NBR, Hs90)	1
10	VA11168	—	1
19	007901217	AS568-012 (NBR, Hs70)	1

Note: Parts (36), (37) and (39) are the same as the ones for the D-CG-02.

D-CG-10

No.	Part Number	Standard	Qty
4	007922019	AS568-220 (NBR, Hs90)	2
5	007901219	AS568-012 (NBR, Hs90)	1
10	007922419	AS568-224 (NBR, Hs90)	1
19	007901217	AS568-012 (NBR, Hs70)	1

Note: Parts (36), (37) and (39) are the same as the ones for the D-CG-02.