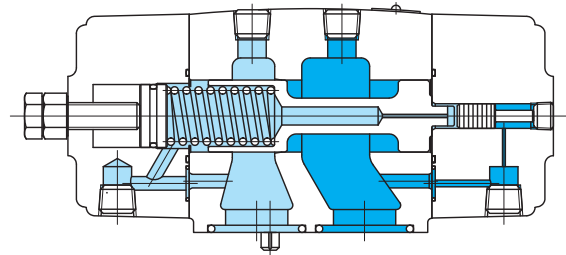


Direct pressure control valves (sequence, counterbalance, relief, unload valves) R(C)G



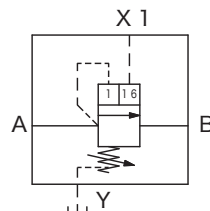
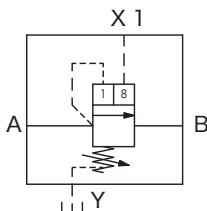
- This is a direct acting type pressure adjustment valve and depending on the internal or external pilot pressure and drain combinations can be used as sequence, counterbalance, relief, or unload valves.
- As sequence or counterbalance valve, reverse flow from secondary side to primary side is enabled with an integrated check valve.
- As sequence valve, valve is used to control multiple actuators which operate in succession. When pressure in primary side A exceeds setting pressure, pressurized flow is delivered to secondary side B.
- As counterbalance valve, valve generates pressure in the actuator return side to prevent runaway loads caused by gravity, etc. Pressurized oil is not released until primary side A pressure exceeds the setting pressure.
- As relief valve, in addition to functioning as a safety valve to prevent excessive pressure in the circuit, it acts to maintain fixed maximum circuit pressure. Pressurized oil is released to tank when pressure in primary side A exceeds the setting pressure.
- As unload valve, pressurized oil is released to tank when external pilot pressure exceeds the pressure setting to unload the circuit.

Functional Symbols

		Type 1	Type 2	Type 3	Type 4	
		Internal Pilot			External Pilot	
		Internal Drain	External Drain		Internal Drain	
Gasket Mounting	RG	Relief Valve 	Sequence Valve 	Sequence Valve 	Unload Valve 	
	RCG	Counterbalance Valve 	Sequence Valve w/Check Valve 	Sequence Valve w/Check Valve 	Counterbalance Valve 	

P Type with auxiliary pilot function (typical example RG-2)

- For pressure adjustment range A, B, D
- For pressure adjustment range F



- If the auxiliary pilot port is used, for pressure adjustment range F, valve will operate at 1/16 the setting pressure; for pressure adjustment range A, B, D, valve will operate at 1/8 the setting pressure. The pressure of the auxiliary pilot port should be 14 MPa or less.
- For P type auxiliary pilot port, there is no X, Y, Z pressure adjustment range.

Model Code

(F3)-R(C)G-03-B(P)1-22-JA-(S100)-J

1

2

3

4

5

6

7

8

1 Hydraulic fluid

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

2 Pressure control valve

RG1: Gasket mounting
Pressure control valve with check valve
RCG: Gasket mounting

3 Size

Refer to "Specifications".

4 Pressure adjustment range

Refer to "Specifications".

5 Auxiliary pilot port

Omit: no auxiliary pilot port (standard)
P: Auxiliary pilot port
(Pressure adjustment range: A, B, D and F only)

6 Valve function

Refer to "Functional Symbols".

7 Design no.

8 Control code

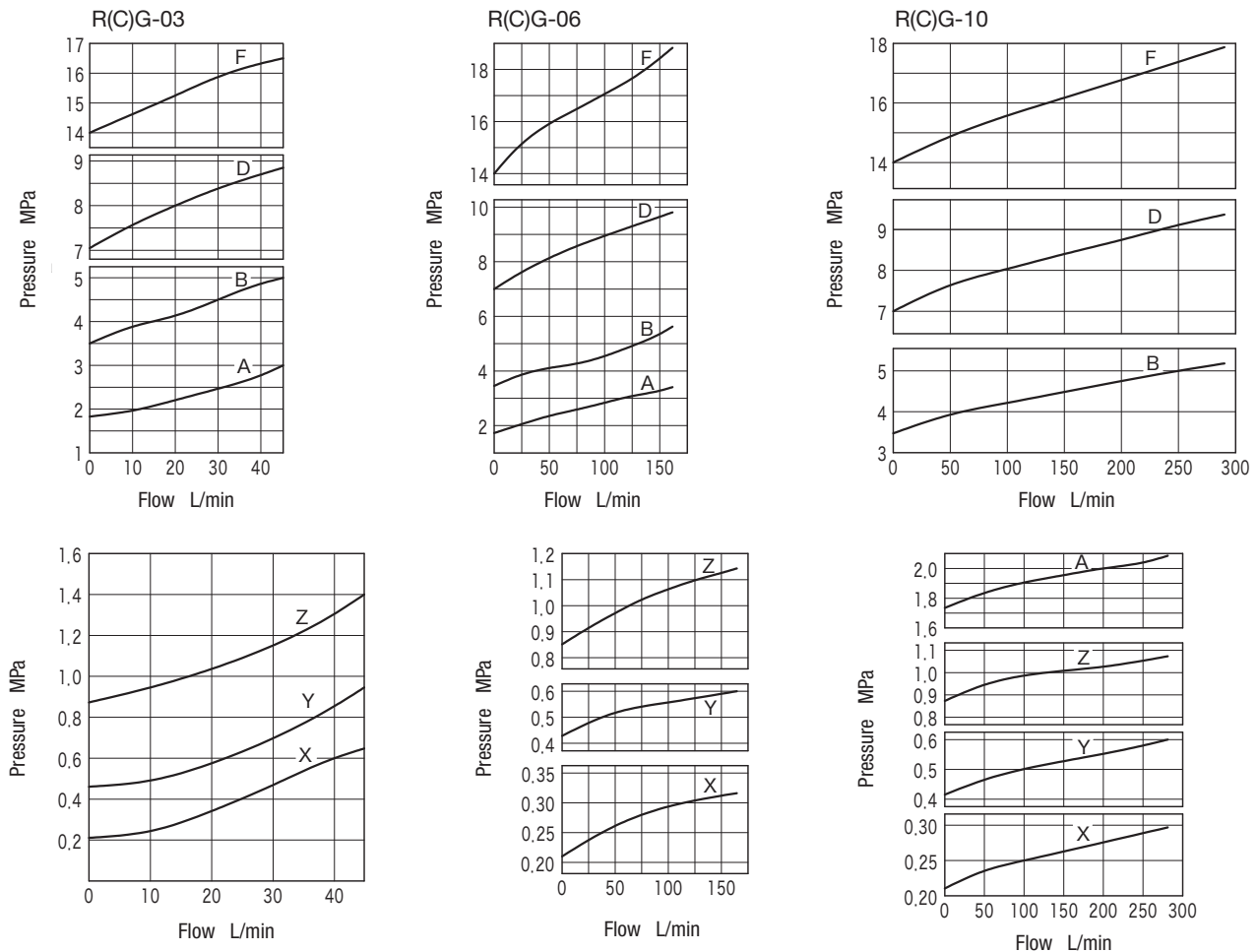
03, 06 sizes only

Specifications

Model Code	Size	Max. Working Pressure MPa	Maximum Flow L/min	Press. Adjustment Range MPa	Weight kg	
					RG	RCG
R(C)G-03	03	21	45	X : 0.07~ 0.21 Y : 0.14~ 0.42 Z : 0.25~ 0.88 A : 0.53~ 1.75 B : 0.88~ 3.5 D : 1.75~ 7 F : 3.5 ~14	3.5	4
R(C)G-06	06		115		6.5	7
R(C)G-10	10		285		12	13

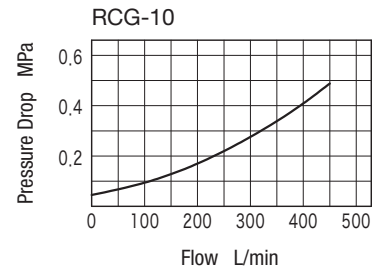
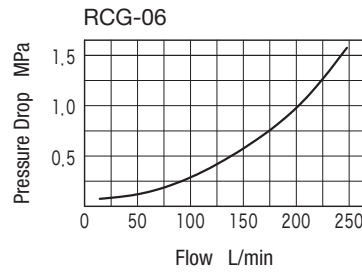
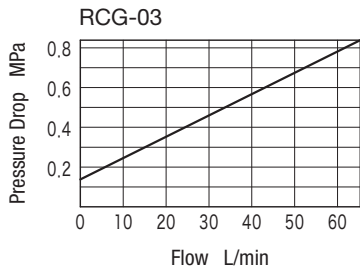
Characteristics Curve (at 20 mm²/s) (typical examples)

● Flow-Pressure Characteristics



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

● Pressure Drop Characteristics (check valve free flow direction)



Notes on Operation

- The drain line of the type 2, 3 function valve and secondary line of the type 1 relief valve, type 4 unload valve should be returned directly to the tank. Ensure that end of the piping is always below the fluid level.
- The setting pressure of this valve should be at least 2 MPa lower than other relief valves in the circuit.
- Loosen the lock nut and turn pressure adjustment screw clockwise to increase the setting pressure and counterclockwise to decrease the setting pressure.

Mounting Bolts (JIS B 1176, Strength Class 12.9)

Valve Model	Metric Thread	Unified Thread	Qty
R (C) G-03	M10 × 70	3/8-16UNC × 69.8	4
R (C) G-06	M10 × 85	3/8-16UNC × 82.5	4
R (C) G-10	M10 × 110	3/8-16UNC × 107.9	6

- Mounting bolts must be ordered separately.
- Tightening torque of mounting bolts
R (C) G-03/06/10: 54 to 66 N·m

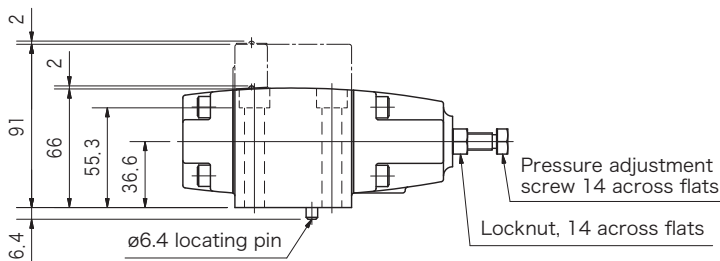
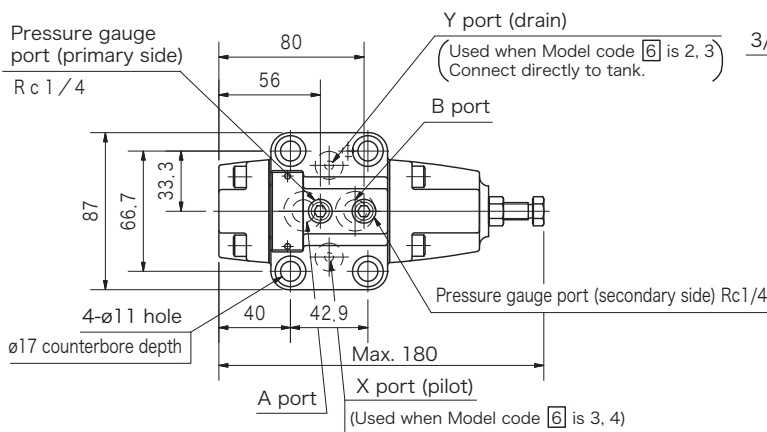
Subplate

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

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

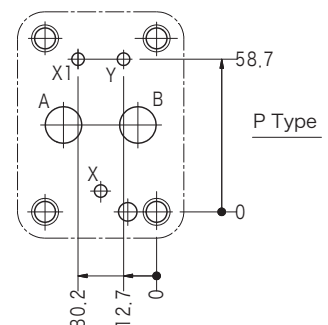
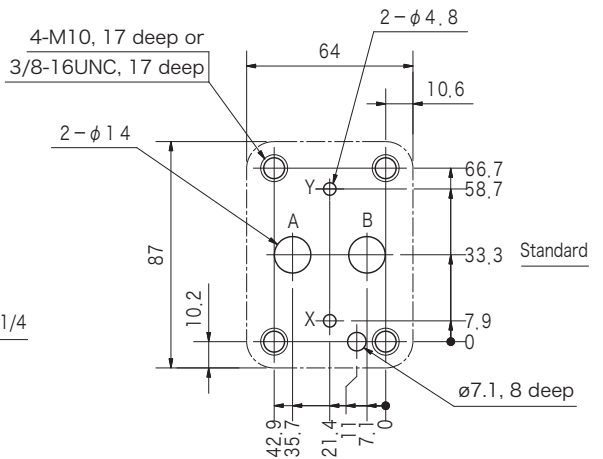
Dimensions

R(C)G-03



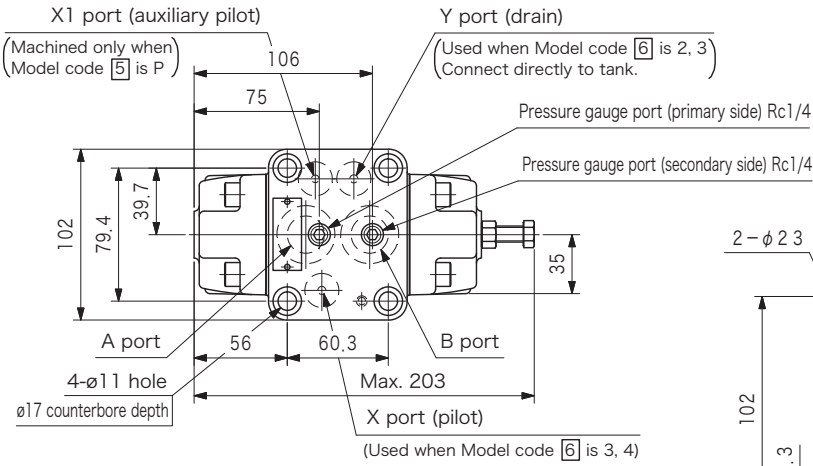
Note: Dashed line for RCG-03

● Mounting dimensions

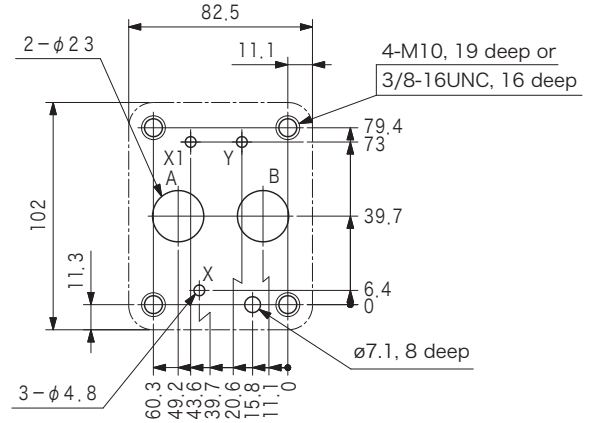


Dimensions

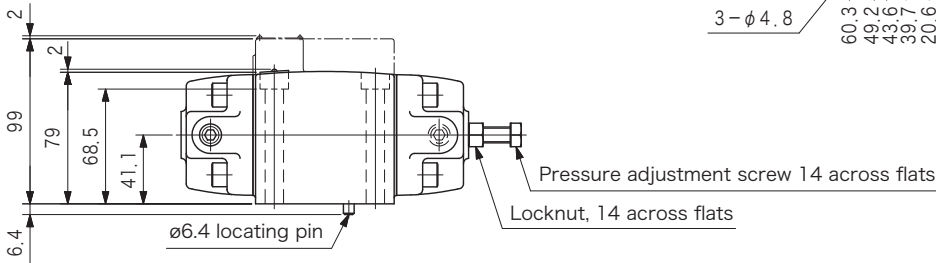
R(C)G-06



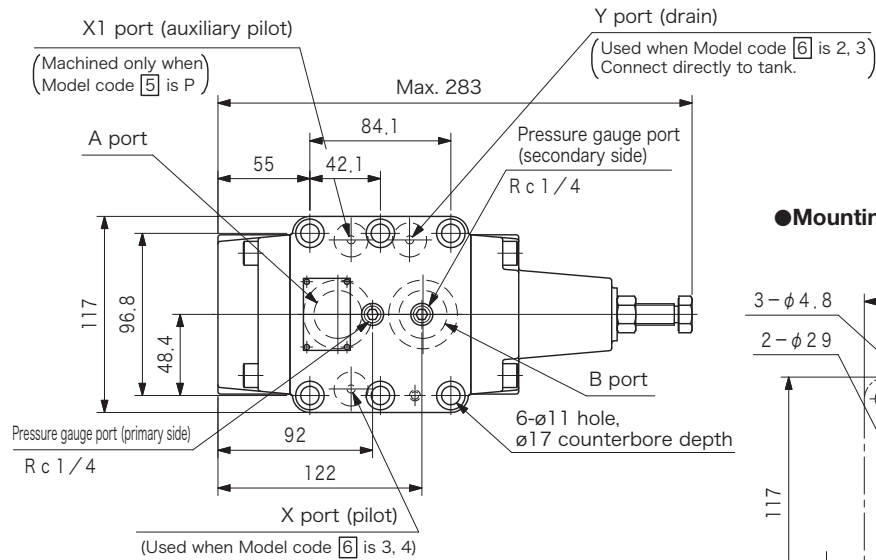
● Mounting dimensions



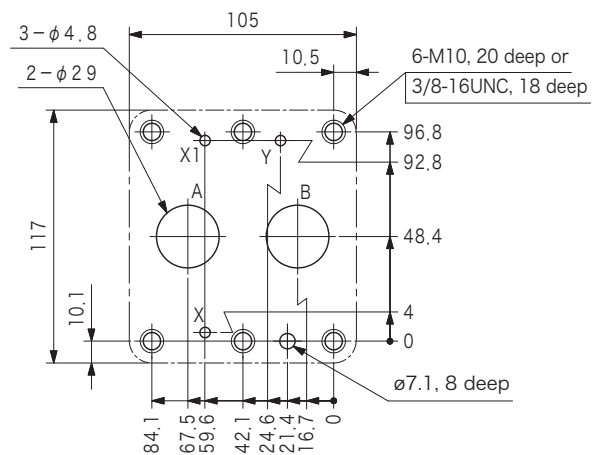
Note: Dashed line for RCG-06



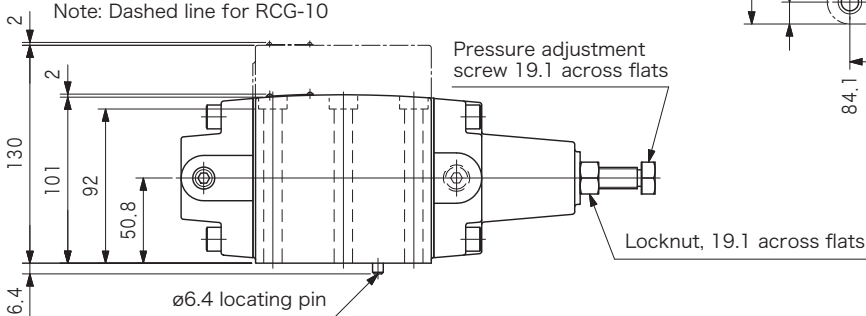
R(C)G-10

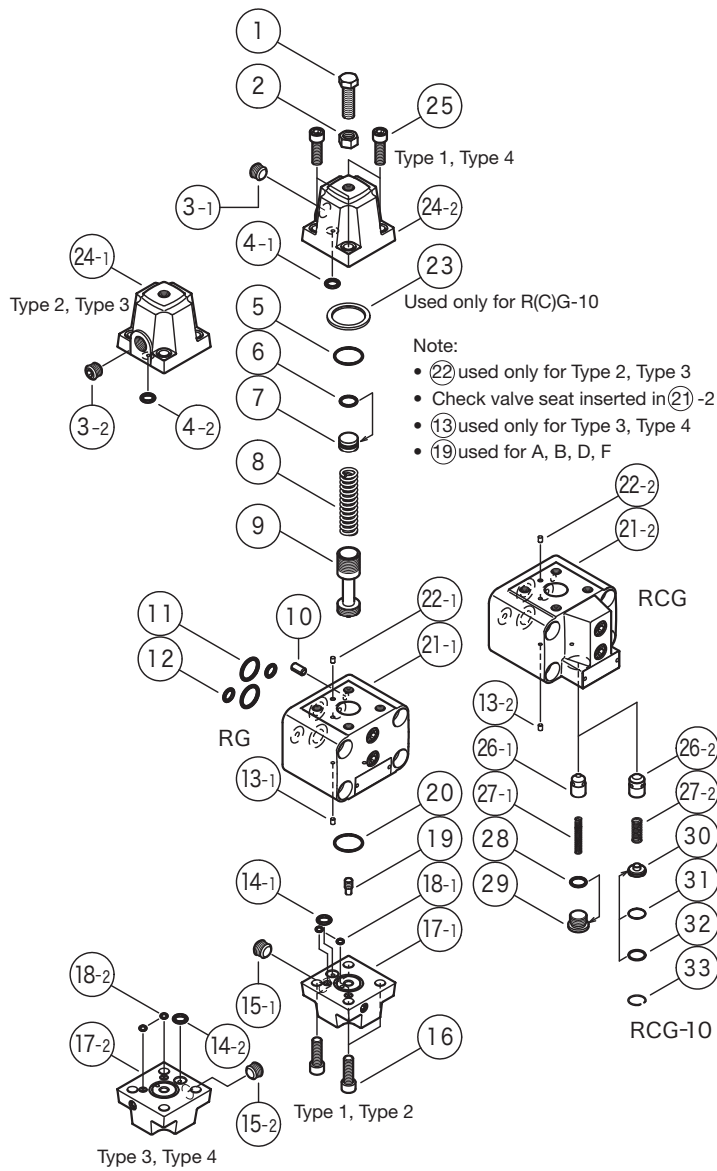


● Mounting dimensions



Note: Dashed line for RCG-10





R (C) G-03 O-rings

No.	Part No.	Standard	Qty	
			Standard	P type
4	007901119	AS568-011 (NBR, Hs90)	1	1
5	007902019	AS568-020 (NBR, Hs90)	1	1
6	007901417	AS568-014 (NBR, Hs70)	1	1
11	007911519	AS568-115 (NBR, Hs90)	2	2
12	007911119	AS568-111 (NBR, Hs90)	2	3
14	007901119	AS568-011 (NBR, Hs90)	1	1
18	007900719	AS568-007 (NBR, Hs90)	—	2
20	007902019	AS568-020 (NBR, Hs90)	1	1
28	007990619	AS568-906 (NBR, Hs90)	1	1

R (C) G-06 O-rings

No.	Part No.	Standard	Qty	
			Standard	P type
4	007901219	AS568-012 (NBR, Hs90)	1	1
5	007902519	AS568-025 (NBR, Hs90)	1	1
6	007901819	AS568-018 (NBR, Hs90)	1	1
11	007921619	AS568-216 (NBR, Hs90)	2	2
12	007911419	AS568-114 (NBR, Hs90)	2	3
14	007901219	AS568-012 (NBR, Hs90)	1	1
18	007900919	AS568-009 (NBR, Hs90)	—	2
20	007902519	AS568-025 (NBR, Hs90)	1	1
28	007990819	AS568-908 (NBR, Hs90)	1	1

R (C) G-10

No.	Name	Part No.	Standard	Qty	
				Standard	P type
4	O-ring	007911019	AS568-110 (NBR, Hs90)	1	1
5	O-ring	007922219	AS568-222 (NBR, Hs90)	1	1
6	O-ring	007902119	AS568-021 (NBR, Hs90)	1	1
11	O-ring	007922019	AS568-220 (NBR, Hs90)	1	1
12	O-ring	007911419	AS568-114 (NBR, Hs90)	2	3
14	O-ring	007911019	AS568-110 (NBR, Hs90)	1	1
18	O-ring	007911019	AS568-110 (NBR, Hs90)	—	2
20	O-ring	007922219	AS568-222 (NBR, Hs90)	1	1
31	O-ring	007902419	AS568-024 (NBR, Hs90)	1	1
32	Backup ring	48197582	MS28774-024	1	1