



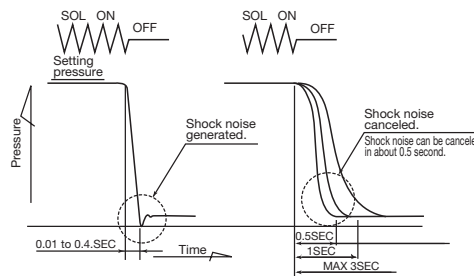
### RI Series Solenoid Controlled Relief Valve

150 to 320ℓ/min  
35MPa

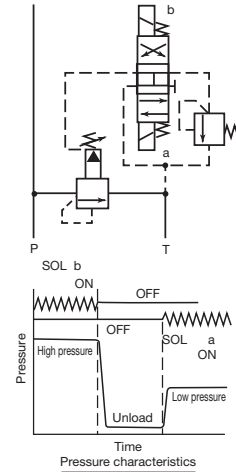
#### Features

- This valve adds a wet type solenoid valve to a balanced type piston type relief valve to form a hydraulic device unload circuit.
- The shockless type has an internal structure that prevents shock generated during unloading. This valve can also be used in a pressure relief circuit, and has a maximum adjustment time of three seconds. See the pressure relief circuit example.
- A two-pressure control circuit can be configured by adding a relief modular valve. Contact your agent for more information.

(Pressure Relief Circuit Example)



(Two-pressure Control Circuit Example)



#### Specifications

Model No.	Nominal Diameter (Size)	Maximum Flow Rate ℓ/min	Maximum Working Pressure MPa(kgf/cm <sup>2</sup> )	Pressure adjustment range MPa(kgf/cm <sup>2</sup> )	Weight kg	Gasket Surface Dimensions	JIS Symbol	Used Solenoid Valve Model Number
RIS-G03-AQ3-**-21 5	3/8	150	35 {357} P, X Ports	Type 1 0.8 to 7 {8.2 to 71.4} Type 3 3.5 to 25 {35.7 to 255} Type 5 3.5 to 35 {35.7 to 357}	6.0	ISO 6264-06-09-0-97		SS-G01-A3X-**-31
RIS-G06-AQ3-**-21 5	3/4	320			7.1	ISO 6264-08-13-0-97		
RIS-G03-AR3-**-21 5	3/8	150			6.0	ISO 6264-06-09-0-97		SS-G01-AR-**-31
RIS-G06-AR3-**-21 5	3/4	320			7.1	ISO 6264-08-13-0-97		

#### Shockless Type

RIS-G03-3-F-**-21 5	3/8	150	35 {357} P, X Ports	Type 1 1 to 7 {10.2 to 71.4}	7.0	ISO 6264-06-09-0-97		SS-G01-A3X-**-31
RIS-G06-3-F-**-21 5	3/4	320		Type 3 3.5 to 25 {35.7 to 255}	8.1	ISO 6264-08-13-0-97		

Note) For electrical specifications, see the SS type solenoid valve item on page E-1.

#### ● Handling

- To adjust pressure, loosen the lock nut and then rotate the handle clockwise (rightward) to increase pressure or counterclockwise (leftward) to decrease it.
- To adjust the time from onload to unload, loosen the lock nut and rotate the restrictor adjusting bolt clockwise (rightward) to make the time longer, or counterclockwise (leftward) to make it shorter.
- Make sure that tank port back pressure is no greater than 0.2MPa {2.0kgf/cm<sup>2</sup>}.
- The \*\* before the design number in the model number of the solenoid valve used shows voltage. See the voltage symbols in the model number explanation.

- A small control flow rate can cause pressure instability. Use a control flow rate that is at least 8ℓ/min. Use a drain type relief valve in the case of a flow rate that is less than the minimum flow rate.
- Use 90 to 110% of rated voltage.
- Use the following table for specification when a sub plate is required. Maximum operating pressure is 25MPa {255kgf/cm<sup>2</sup>}.

Model No.	Pipe Diameter	Weight kg	Applicable Pump Model
MRI-03-10	3/8	2.6	RIS-G03
MRI-03X-10	1/2		
MRI-06-10	3/4	3.5	RIS-G06
MRI-06X-10	1		

- The following are the bundled mounting bolts.

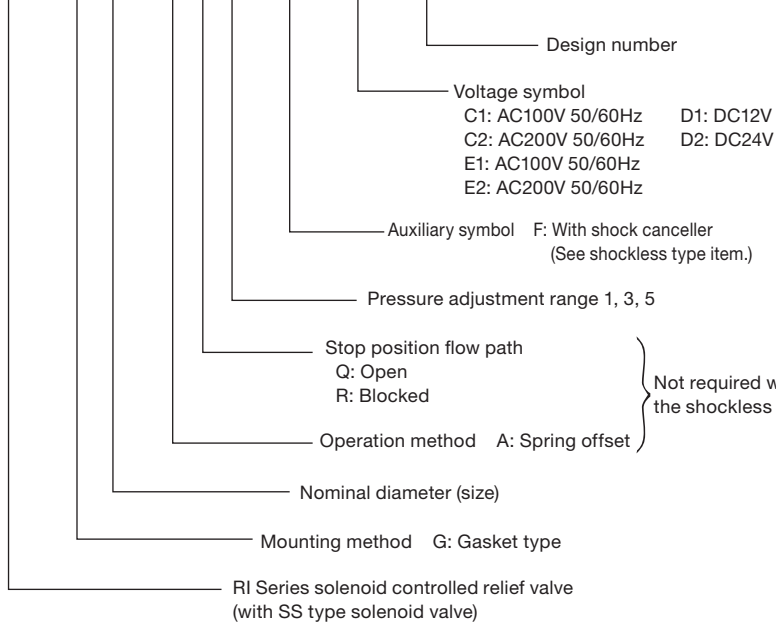
Model No.	Bolt Dimensions	Q'ty	Tightening Torque N·m(kgf·cm)
RIS-G03-**-**-21	M12×50ℓ	4	75 to 95 {765 to 969}
RIS-G06-**-**-21	M16×60ℓ	4	190 to 235 {1940 to 2400}

Note) For mounting bolts, use bolts of 12.9 strength classification or equivalent.

- The coil surface temperature increases if this pump is kept continuously energized. Install the valve so there is not chance of it being touched directly by hand.

## Explanation of model No.

**RIS - G 06 - A Q 1 - (F) - C1 - 21**

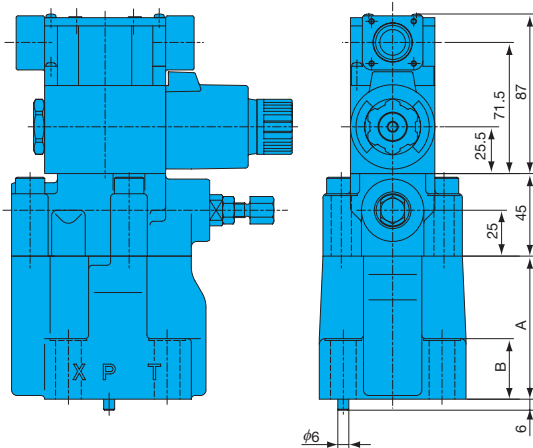
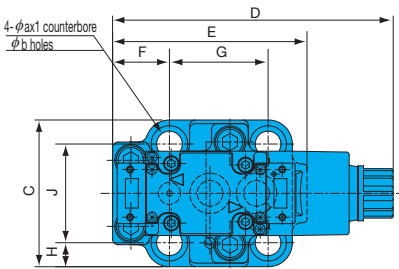


Other auxiliary symbols G, N, and Q (R is omitted) can be used (enter them in alphabetic order if there are 2 or more).

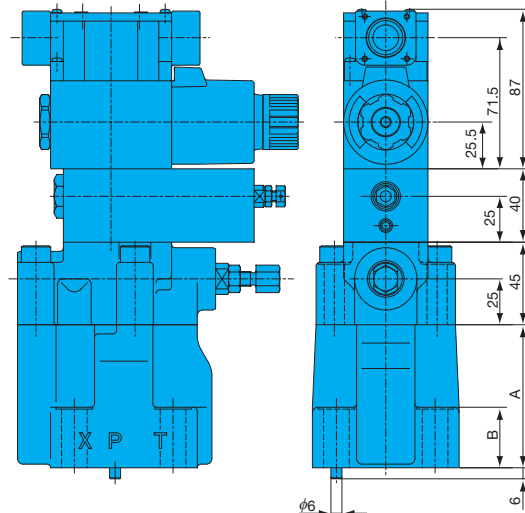
Not required with the shockless type.

## Installation Dimension Drawings

RIS-G\*\*-A\*\*-\*\*-21



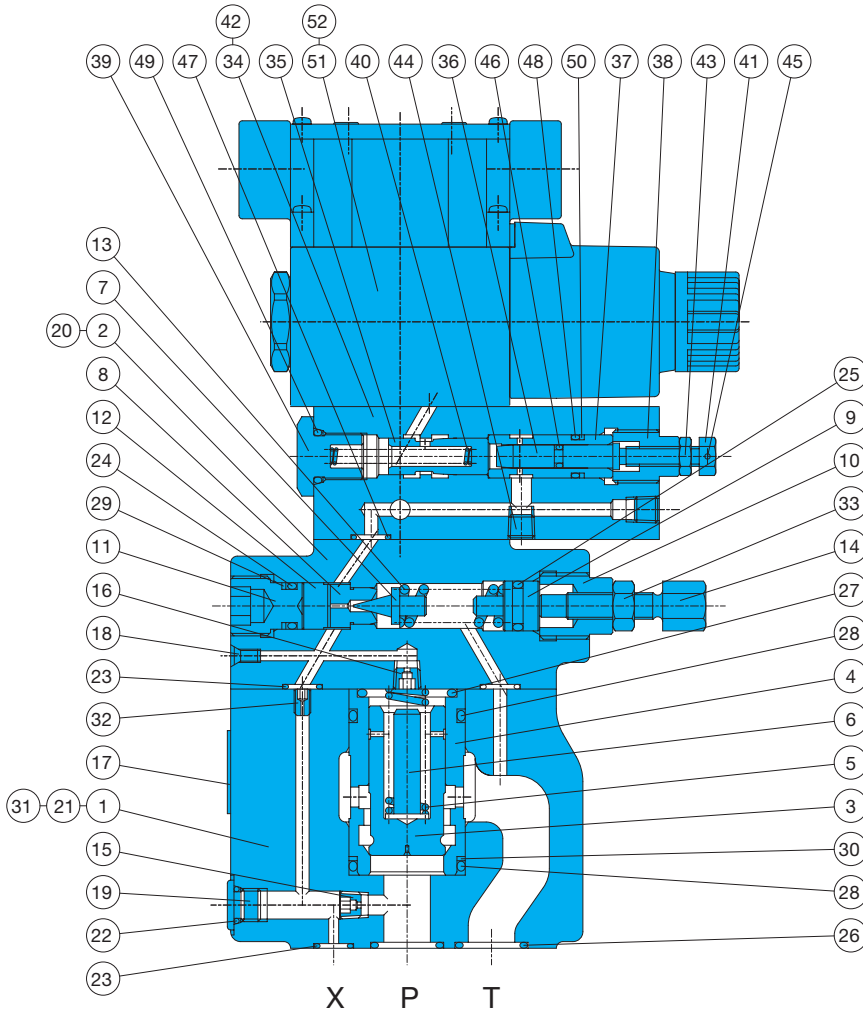
RIS-G\*\*-F\*\*-\*\*-21



Model No.	A	B	C	D	E	F	G	H	J	a	b
RIS-G03-**-**-21	78	32	80	153 (160)	106	31	53.8	13.1	53.8	20	14
RIS-G06-**-**-21	83	36	100	162 (169)	119	37	66.7	15	70	26	17.5

Note) 1. For gasket surface dimensions, see RI-G\*\*-\*\* on page F-5.  
 2. Figures in (parenthesis) are for the DC solenoid valve.

## Cross-sectional Drawing



Part No.	Part Name
1	Body
2	Cover
3	Poppet
4	Sleeve
5	Spring
6	Spacer
7	Poppet
8	Seat
9	Plunger
10	Retainer
11	Plug
12	Collar
13	Spring
14	Handle assy
15	Orifice
16	Orifice
17	Plate

Part No.	Part Name
18	Plug
19	Plug
20	Screw
21	Pin
22	O-ring
23	O-ring
24	O-ring
25	O-ring
26	O-ring
27	O-ring
28	O-ring
29	Backup ring
30	Backup ring
31	Screw
32	Choke
33	Nut
34	Body

Part No.	Part Name
35	Spool
36	Throttle
37	Sleeve
38	Retainer
39	Guide
40	Spring
41	Nut
42	Plate
43	Nut
44	Plug
45	Pin
46	O-ring
47	O-ring
48	O-ring
49	O-ring
50	Backup ring
51	Solenoid Valves
52	Screw

### Seal Part List (Kit Model Numbers: Main REBS-\*\*\*, Restrictor Valve DFS-01H)

Component Parts	Part No.	Part Name	Nominal Diameter/Part Number		Q'ty
			G03	G06	
Main	22	O-ring	NBR-90 P8	NBR-90 P8	1
	23	O-ring	NBR-90 P9	NBR-90 P9	3
	24	O-ring	NBR-90 P10A	NBR-90 P10A	1
	25	O-ring	NBR-70-1 P11	NBR-70-1 P11	1
	26	O-ring	NBR-90 P18	NBR-90 P28	2
	27	O-ring	NBR-90 G25	NBR-90 P28	1
	28	O-ring	NBR-90 G30	NBR-90 P32	2
	29	Backup ring	T2-P10A	T2-P10A	1
	30	Backup ring	T2-G30	T2-P32	1
	Restrictor Valve	46	O-ring	NBR-90 P4	
47		O-ring	NBR-90 P9		2
48		O-ring	NBR-90 P10		1
49		O-ring	NBR-90 P12.5		1
50		Backup ring	T2-P10		1

- Note) 1. The materials and hardness of the O-ring conforms with JIS B2401.  
 2. For the \*\*\* part of the kit number, specify the valve size (G03, G06).  
 3. The restrictor valve kit is required only when a shockless valve is included.  
 4. SS (SA)-G01 pilot valve seal is available separately. For details, see pages E-11 (E-23).