Solenoid Controlled Relief Valve

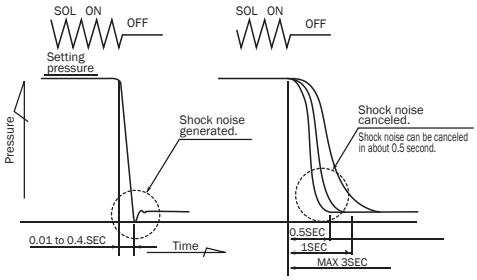
7.9 to 100 gpm
3045 psi

Features

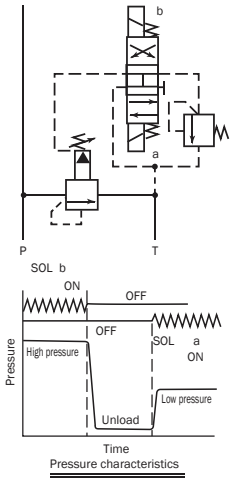
This valve adds a wet type solenoid valve to a balanced type piston type relief valve to form a hydraulic device unload circuit. The shockless type has an internal structure that prevents shock generated during unloading. This valve can also be used in a pressure relief circuit, and has a maximum adjustment 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)

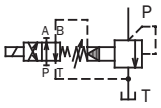
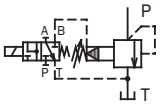


(Two-pressure Control Circuit Example)

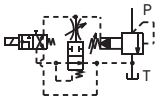


Pressure characteristics

Specifications

Model No.		Nominal Diameter (Size)	Maximum Working Pressure psi	Maximum Flow Rate gpm	Pressure adjustment range psi	Weight lbs		JIS Symbol	Used Solenoid Valve Model Number
Screw Mounting	Gasket Mounting					T Type	G Type		
RSS (RSA) -T03-AQ 1/3-**-15	RSS (RSA) -G03-AQ 1/3-**-15	3/8	3045 P, X Ports	21	Type 1 0.8 to 7 116 to 1015	7	9.9		SS (SA) -G01-A3X-**-31
RSS (RSA) -T06-AQ 1/3-**-E23	RSS (RSA) -G06-AQ 1/3-**-E23	3/4		45		8.8	14		
RSS (RSA) -T10-AQ 1/3-**-E23	RSS (RSA) -G10-AQ 1/3-**-E23	1¼		100		19.4	22		
RSS (RSA) -T03-AR 1/3-**-15	RSS (RSA) -G03-AR 1/3-**-15	3/8		21	Type 3 3.5 to 21 507 to 3045	7	9.9		SS (SA) -G01-AR-**-31
RSS (RSA) -T06-AR 1/3-**-E23	RSS (RSA) -G06-AR 1/3-**-E23	3/4		45		8.8	14		
RSS (RSA) -T10-AR 1/3-**-E23	RSS (RSA) G10-AR 1/3-**-E23	1¼		100		19.4	22		

Shockless Type

RSS (RSA) -T03-1/3-F-**-15	RSS (RSA) -G03-1/3-F-**-15	3/8	3045 P, X Ports	21	Type 1 1 to 7 145 to 1015 Type 3 3.5 to 21 507 to 3045	9.2	12		SS (SA) -G01-A8X0-**-31
RSS (RSA) -T06-1/3-F-**-E23	RSS (RSA) -G06-1/3-F-**-E23	3/4		45		11	16.3		
RSS (RSA) -T10-1/3-F-**-E23	RSS (RSA) G10-1/3-F-**-E23	1¼		100		21.6	26.4		

Note: For information about electrical specifications, see the SS type and SA type solenoid valve items on pages D-4 and D-16.

• Handling

1 To adjust pressure, loosen the lock nut and then rotate the adjusting bolt clockwise (rightward) to increase pressure or counterclockwise (leftward) to decrease it.
2 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.
3 Make sure that tank port back pressure is no greater than 29 psi.
4 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.
5 Pressure becomes unstable when at slow control flow rates. Use a flow rate of no less than 2.1 gpm for the 03, 06 sizes, and 2.6 gpm for the 10 size.
6 Use 90 to 110% of rated voltage.
7 The pressure adjustment range for the high vent type is 188 psi. Note that RSS (RSA) -T/G03 is not a high vent type.
8 Use the following table for specification when a sub plate is required.

Model No.	Pipe Diameter	Weight lbs	Applicable Valve Type
MR-03-E10	3/8	3.5	RSS (RSA) -G03-***-**-15
MR-06-E20	3/4	7.7	RSS (RSA) -G06-***-**-23
MR-06X-E20	1		
MR-10-E20	1¼	18.7	RSS (RSA) -G10-***-**-23
MR-10X-E20	1½		

Note: See page relief valve page item on I-3 for dimensions.

9 The following are the bundled mounting bolts.

Model No.	Bolt Dimensions	Q'ty	Tightening Torque ft lbs
RSS (RSA) -G03-***-**-15	3/8 - 16	4	33 to 40.5
RSS (RSA) -G06-***-**-23	5/8 - 11	4	140 to 173
RSS (RSA) -G10-***-**-23	7/8 - 9	4	272 to 339

Note: For mounting bolts, use 12T or equivalent.

10 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.

Understanding Model Numbers

RSS (RSA) – G 06 – A Q 1 – (H) – C1 * 23

- Design number
- E: Unified thread
- Voltage symbol
  - C1: AC100V 50/60Hz
  - C2: AC200V 50/60Hz
  - D1: DC12V
  - D2: DC24V
  - E1: AC100V 50/60Hz
  - E2: AC200V 50/60Hz
- Auxiliary symbol
  - H: High vent (excluding 03 size)
  - F: With shock canceller (See shockless type item.)
- Pressure adjustment range 1, 3
- Stop position flow path
  - Q: Open
  - R: Blocked

  Not required with the shockless type.
- Operation method A: Spring offset
- Nominal diameter (size)
- Mounting method T: Screw connection type, G: Gasket type
- Solenoid controlled relieve valve (with SA type solenoid valve)
- Solenoid controlled relieve valve (with SS type solenoid valve)

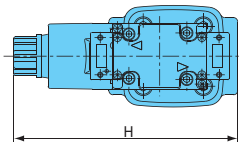
Other auxiliary symbols can be used (enter them in alphabetic order if there are 2 or more).

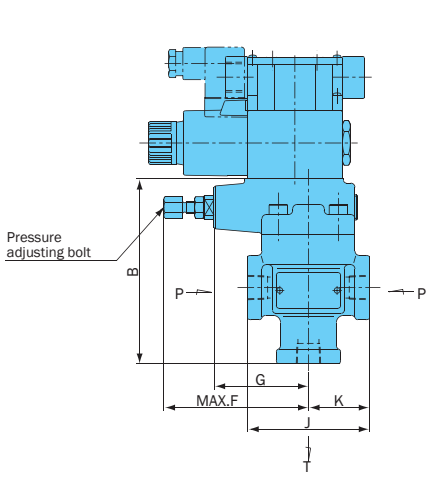
With SS type solenoid valve	G, N, Q (R is omitted).
With SA type solenoid valve	GR, J, N, Q, R

Installation Dimension Drawings

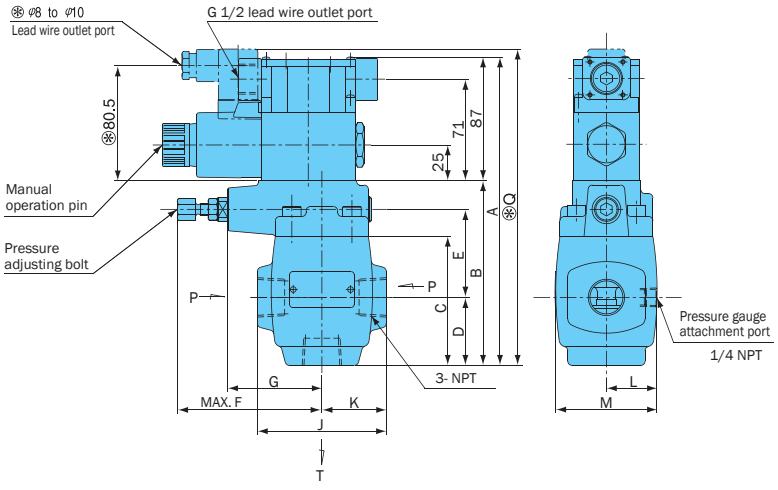
RSS (RSA) -T**-A**-**-E23

Note: Dimensions marked with ⊛ are for the RSA type.
Note: Dimensions in parentheses apply in the case of a DC solenoid valve.





RSS (RSA) -T03-A**-**-15

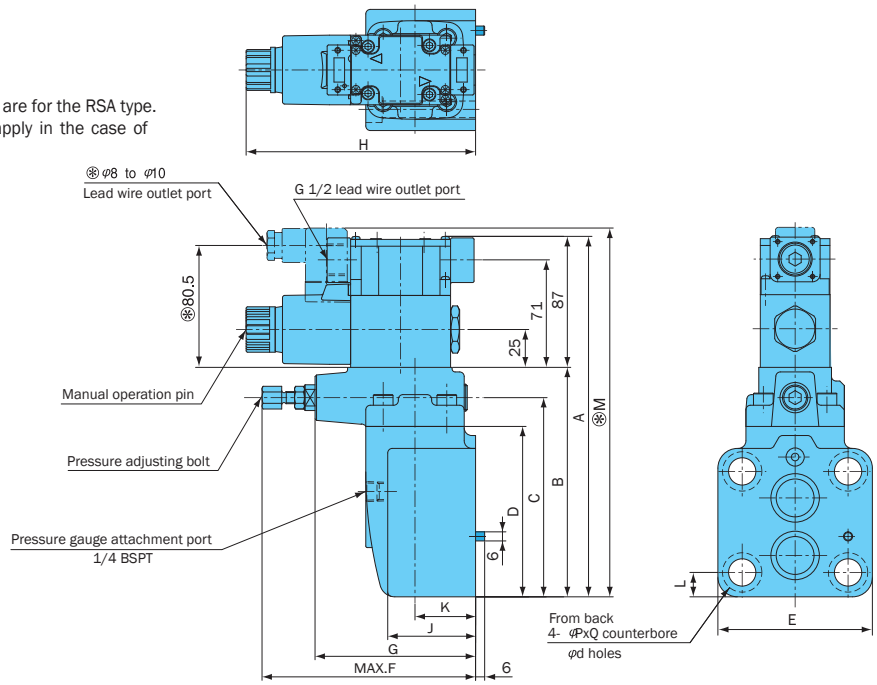


RSS (RSA) -T 06 10 -A**-**-E23

Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Q
RSS (RSA) -T03-A**-**-15	214.5	129	90	53	56	101	66	154 (161)	85	42.5	32.5	65	3/8	221.5
RSS (RSA) -T06-A**-**-E23	214.5	129	90	47.5	61.5	101	66	156.5 (163.5)	90	45	35.5	71	3/4	221.5
RSS (RSA) -T10-A**-**-E23	239	153.5	111.5	62	72	98	63	164.5 (171.5)	125	62.5	47	94	1 1/4	246

RSS (RSA) -G**-A**-**-E23

Note: Dimensions marked with ⊛ & are for the RSA type.
Note: Dimensions in parentheses apply in the case of a DC solenoid valve.

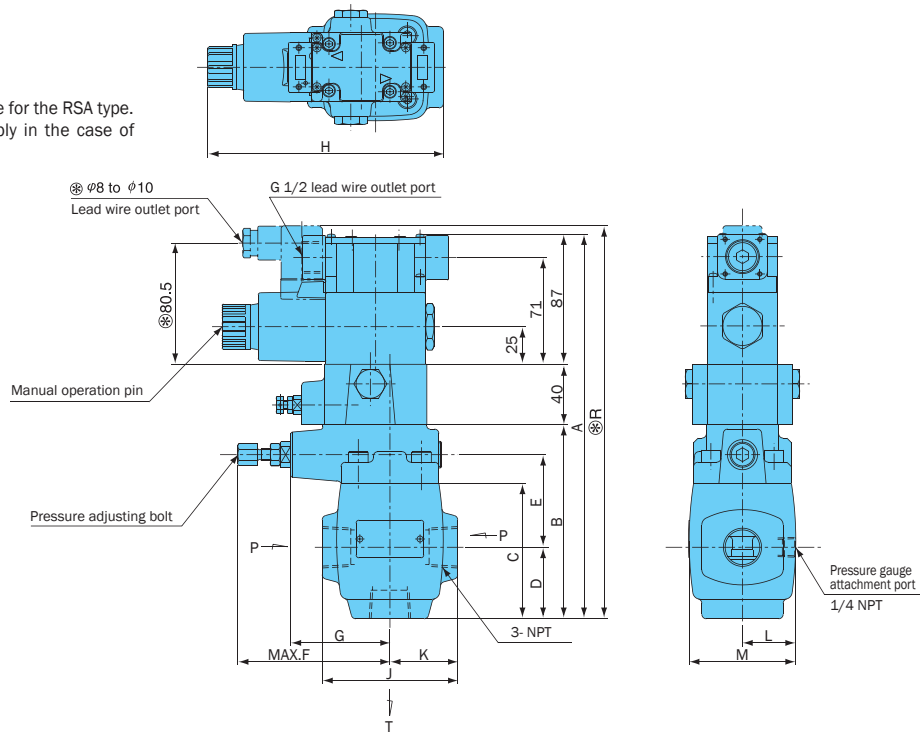


Model No.	A	B	C	D	E	F	G	H	J	K	L	P	Q	d	M
RSS (RSA) -G03-A**-**-15	214.5	129	109	90	80	141	106	150.5 (157.5)	72.5	40	13	17.5	10.8	11	221.5
RSS (RSA) -G06-A**-**-E23	237	151.5	131.5	112.5	102	141	106	151.5 (158.5)	58	40	16.1	26	1	18	244
RSS (RSA) -G10-A**-**-E23	248	162.5	143	120.5	127	148	113	152 (159)	80	50	17.7	32	1	22	255

Note: For gasket surface dimensions, see R-G**-* 12/20.

RSS (RSA) -T**-*-F-**-E23

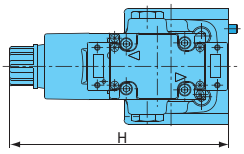
Note: Dimensions marked with ⊛ & are for the RSA type.
Note: Dimensions in parentheses apply in the case of a DC solenoid valve.

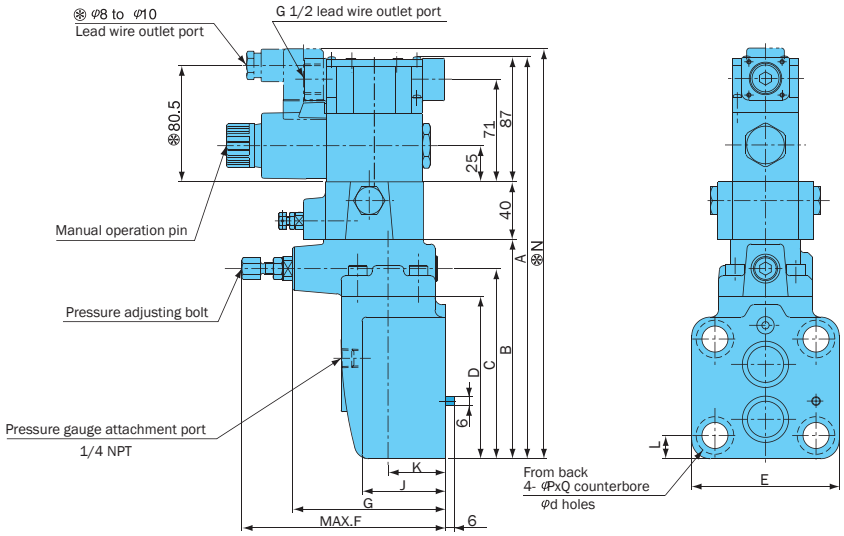


Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	Q	R
RSS (RSA) -T03-*-F-**-15	254.5	129	90	53	56	101	66	154 (161)	85	42.5	32.5	65	32	3/8	261.5
RSS (RSA) -T06-*-F-**-E23	254.5	129	90	47.5	61.5	101	66	156.5 (163.5)	90	45	35.5	71	33	3/4	261.5
RSS (RSA) -T10-*-F-**-E23	279	153.5	111.5	62	72	98	63	164.5 (171.5)	125	62.5	47	94	32.5	1¼	286

RSS (RSA) -G**-*-F-**-23

Note: Dimensions marked with ⊛ & are for the RSA type.
Note: Dimensions in parentheses apply in the case of a DC solenoid valve.



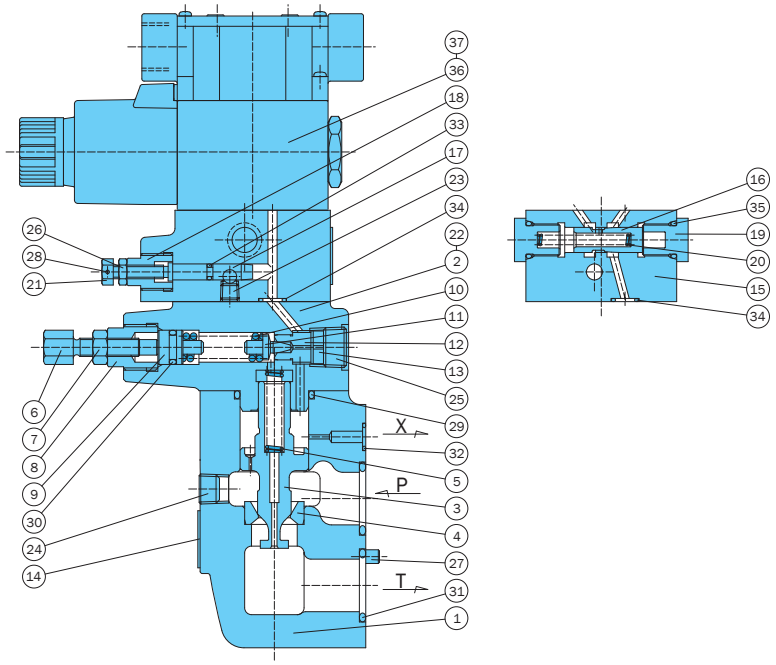


Model No.	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	d
RSS (RSA) -G03-*-F-**-15	254.5	129	109	90	80	141	106	150.5 (157.5)	72.5	40	13	32	261.5	17.5	10.8	11
RSS (RSA) -G06-*-F-**-23	277	151.5	131.5	112.5	102	141	106	151.5 (158.5)	58	40	16.1	33	284	26	1	18
RSS (RSA) -G10-*-F-**-23	288	162.5	143	120.5	127	148	113	152 (159)	80	50	17.7	32.5	295	32	1	22

Note: For gasket surface dimensions, see R-G**-* 12/20.

Cross-sectional Drawing

RSS-G**-*-F-**-23



Part No.	Part Name	Part No.	Part Name
1	Body	20	Spring
2	Cover	21	Nut
3	Spool	22	Screw
4	Seat	23	Plug
5	Spring	24	Plug
6	Screw	25	Plug
7	Nut	26	Nut
8	Retainer	27	Spring pin
9	Plunger	28	Spring pin
10	Spring	29	O-ring
11	Poppet	30	O-ring
12	Seat	31	O-ring
13	Collar	32	O-ring
14	Nameplate	33	O-ring
15	Body	34	O-ring
16	Spool	35	O-ring
17	Throttle	36	Solenoid Valves
18	Retainer	37	Screw
19	Spring guide		

Seal Parts List (Kit Model Number RSBS-***F)

Part No.	Part Name	Type/Part Number			Q'ty
		RSS-G03-*-F-**-15	RSS-G06-*-F-**-23	RSS-G10-*-F-**-23	
29	O-ring	1B-G30	1B-G30	1B-G40	1
30	O-ring	1A-P11	1A-P11	1A-P11	1
31	O-ring	1B-P20	1B-P26	1B-G35	2
32	O-ring	1B-P7	1B-P9	1B-P9	1
33	O-ring	1B-P4	1B-P4	1B-P4	1
34	O-ring	1B-P9	1B-P9	1B-P9	2
35	O-ring	1B-P12.5	1B-P12.5	1B-P12.5	2

Note: 1. O-ring 1A/B-** refers to JIS B2401-1A/B.
2. For the *** part of the kit number, specify the valve size (G03, G06, G10).
3. SS (SA)-G01 pilot valve seal is available separately. For details, see pages D-14 (D-26).