

How to Order Valves

SQ1 **1** **3** **0** **5** **C6**

Type of actuation

1	2 position single
2	2 position double (Latching) Metal seal Rubber seal
	2 position double (Double solenoid) ⁽¹⁾ Metal seal Rubber seal
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
A ⁽²⁾	4 position dual 3 port valve N.C. N.C.
B ⁽²⁾	4 position dual 3 port valve N.O. N.O.
C ⁽²⁾	4 position dual 3 port valve N.C. N.O.

Note 1) For double solenoid specification, the function symbol below is "D".
Note 2) Only rubber seal types are applicable.

Seal

0	Metal seal
1	Rubber seal

Function

Nil	Standard type (1.0 W DC)
D	2 position double (Double solenoid specifications)
K ⁽¹⁾	High pressure type (1.0 MPa, 1.0 W DC) [Applicable to metal seal only]
N	Negative COM
Y ⁽¹⁾	Low wattage type (0.5 W DC)
R ⁽²⁾	External pilot specifications

Note 1) Except double (latching) type.
Note 2) Except dual 3 port valves.
Note 3) When two or more symbols are specified, indicate them alphabetically.

With/Without manifold block

Nil	M	MB
Without manifold block 	With manifold block 	With manifold block, built-in back pressure check valve
• When ordering with manifolds • When only valves are required.	* Lead wire is not included. * Lead wire is not included.	
For adding stations		

Port plug mounting port

Nil	None
A	Port 4(A)
B	Port 2(B)

Cylinder port

C3	One-touch fitting for $\phi 3.2$	Side ported	
C4	One-touch fitting for $\phi 4$		
C6	One-touch fitting for $\phi 6$		
M5	M5 thread	Note) Top ported	
L3	One-touch fitting for $\phi 3.2$		
L4	One-touch fitting for $\phi 4$		
L6	One-touch fitting for $\phi 6$		
L5	M5 thread		

Note) Can be changed to side ported configuration.

Manual override

Nil	B ^{Note)}
Non-locking push type (Tool required)	Locking type (Tool required)

Note) Except double (latching) type.

Coil voltage

5	24 VDC
6	12 VDC

Note) Light/Surge voltage suppressor is built-in.

- VQC
- SQ**
- VQ0
- VQ4
- VQ5
- VQZ
- VQD

Series SQ1000

Valve Specifications

Model

Series	Number of solenoids	Model		Flow characteristic						Response time (ms) ⁽²⁾		Weight (g)	
				1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R1/R2)			Standard: 1 W	Low wattage		
				C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv				
SQ1000	2 position	Single	Metal seal	SQ1130	0.62	0.10	0.14	0.63	0.11	0.14	12 or less	15 or less	80
			Rubber seal	SQ1131	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	80
		Double (Latching)	Metal seal	SQ1230	0.62	0.10	0.14	0.63	0.11	0.14	15 or less	—	80
			Rubber seal	SQ1231	0.79	0.20	0.19	0.80	0.20	0.19	20 or less	—	80
		Double (Double solenoid)	Metal seal	SQ1230D	0.62	0.10	0.14	0.63	0.11	0.14	10 or less	13 or less	95
			Rubber seal	SQ1231D	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	95
	3 position	Closed center	Metal seal	SQ1330	0.58	0.12	0.14	0.63	0.11	0.14	20 or less	26 or less	100
			Rubber seal	SQ1331	0.64	0.20	0.15	0.58	0.26	0.16	25 or less	33 or less	100
		Exhaust center	Metal seal	SQ1430	0.58	0.12	0.14	0.60	0.14	0.14	20 or less	26 or less	100
			Rubber seal	SQ1431	0.64	0.20	0.15	0.80	0.20	0.19	25 or less	33 or less	100
		Pressure center	Metal seal	SQ1530	0.62	0.12	0.14	0.63	0.14	0.14	20 or less	26 or less	100
			Rubber seal	SQ1531	0.79	0.21	0.19	0.59	0.20	0.14	25 or less	33 or less	100
	4 position	Dual 3 port valve	Rubber seal	SQ1^A_B31^C	0.59	0.28	0.15	0.59	0.28	0.15	25 or less	33 or less	95

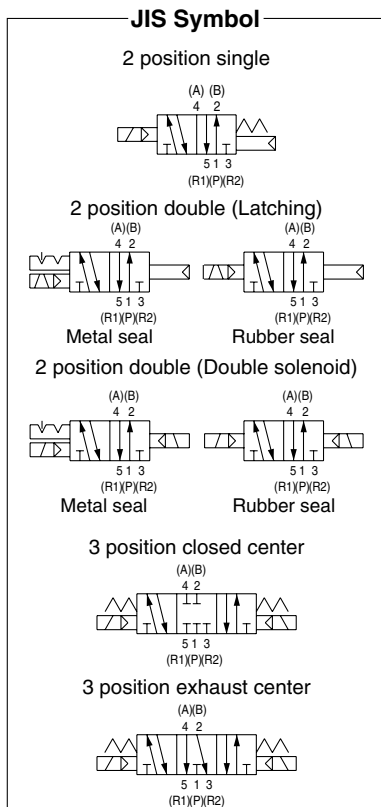
Note 1) Values for the cylinder port size of C6.
 Note 2) Based on JIS B 8375-1981. (Values with a supply pressure of 0.5 MPa and light/surge voltage suppressor. Values fluctuate depending on the pressure and air quality.)



Specifications

Valve specifications	Valve construction	Metal seal	Rubber seal	
	Fluid	Air/Inert gas		
	Maximum operating pressure	0.7 MPa (High pressure type: 1.0 MPa) ⁽³⁾		
	Min. operating pressure	Single	0.1 MPa	0.15 MPa
		Double (Latching)	0.18 MPa	0.18 MPa
		Double (Double solenoid)	0.1 MPa	0.1 MPa
		3 position	0.1 MPa	0.2 MPa
	4 position	—	0.15 MPa	
	Ambient and fluid temp.	-10 to 50°C ⁽¹⁾		
	Lubrication	Not required		
Pilot valve manual override	Push type/Locking type (Tool required)			
Vibration/Impact resistance ⁽²⁾	30/150 m/s ²			
Protection structure	Dust tight			
Solenoid specifications	Coil rated voltage	12 VDC, 24 VDC		
	Allowable voltage fluctuation	±10% of rated voltage		
	Coil insulation type	Equivalent to class B		
	Power consumption (Current)	24 VDC	1 W DC (42 mA), 0.5 W DC (21 mA) ⁽⁴⁾	
	12 VDC	1 W DC (83 mA), 0.5 W DC (42 mA) ⁽⁴⁾		

Note 1) Use dry air to prevent condensation when operating at low temperatures.
 Note 2) Vibration resistance: No malfunction occurred in a one-sweep test between 45 and 2000 Hz. Test was performed at both energized and de-energized states in the axial direction and at the right angles to the main valve and armature. (Values at the initial period)
 Impact resistance: No malfunction occurred when it is tested with a drop tester in the axial direction and at the right angles to the main valve and armature in both energized and de-energized states every once for each condition. (Values at the initial period)
 Note 3) Metal seal type only. [Except double (latching) type.]
 Note 4) Values for the low wattage (0.5 W) specifications.



Series SQ1000/2000

Manifold Option for SQ1000/SQ2000

Negative Common Specifications

The following valve part numbers are for negative common specifications. Manifold part numbers are the same as the standard except L kit. Also, negative COM specifications are not available for the S kit.

● How to order negative COM valves (Example)

SQ1130 **N** -5-C6

• Negative common specifications

● How to order negative COM manifold (Example)

SS5Q13 - **08** **LD1** **N** - **DN**

Stations

Option

Kit type

DIN rail mounting style

• Negative common specifications

Inch-size One-touch Fittings

For One-touch fittings in inch sizes, use the following part numbers. Also, the color of the release button is orange.

● How to order valves (Example)

SQ1130- 5 - **N7**

Port location

Cylinder port

Port location		Symbol	N1	N3	N7	N9
Nil	Side ported	Applicable tubing O.D. (Inch)	ø1/8"	ø5/32"	ø1/4"	ø5/16"
L	Top ported	4(A), 2(B) port	●	●	●	—
		SQ1000	●	●	●	—
		SQ2000	—	●	●	●

● How to order manifold (Example)

Add "00T" at the end of the part number.

SS5Q13- **08** **FD0** - **DN** - **00T**

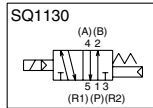
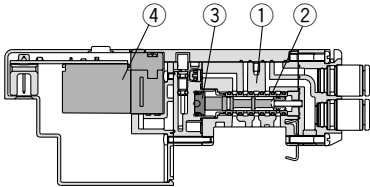
• 1 (P), 3 (R) port in inch size
 { SQ1000: ø5/16" (N9)
 { SQ2000: ø3/8" (N11)

Series SQ1000/2000

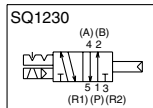
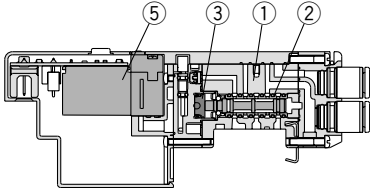
Construction: Series SQ1000 Plug-in Type Main Parts and Pilot Valve Assembly

Metal seal type

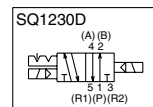
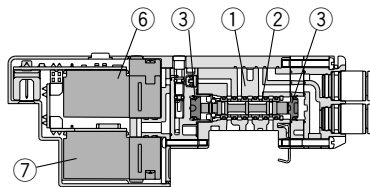
Single: SQ1130



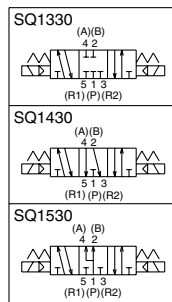
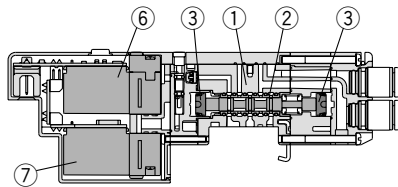
Double (Latching): SQ1230



Double (Double solenoid): SQ1230D



3 position: SQ1 $\frac{3}{5}$ 30



Component Parts

No.	Description	Material
①	Body	Zinc die-casted
②	Spool/Sleeve	Stainless steel (Metal seal)
③	Spool	Aluminum (Rubber seal)
③	Piston	Resin

Pilot Valve Assembly ^{Note)}

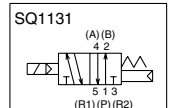
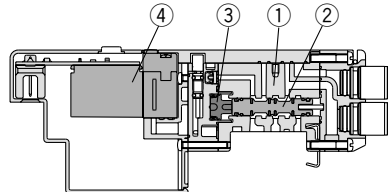
No.	Model	SQ1□3□
④	For single	VQ110S ^(K) 5 _(Y) - 6 (N)J11(B)
⑤	For double (Latching)	VQ110SL- ⁵ 6 J12 Negative COM: VQ110SN- ⁵ 6 J12
⑥	For double (Double solenoid) on A side For 3P, Dual 3 port on A side	VQ110S ^(K) 5 _(Y) - 6 (N)J13(B)
⑦	For double (Double solenoid) on B side For 3P, Dual 3 port on B side	VQ111S ^(K) 5 _(Y) - 6 (N)J14



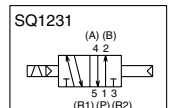
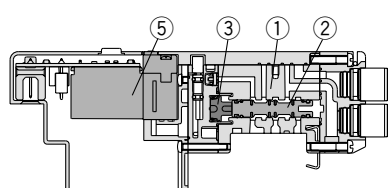
Note) Nil: Standard
 B : Locking type manual override
 N : Negative COM specifications
 Y : Low wattage specifications

Rubber seal type

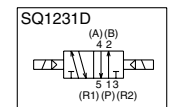
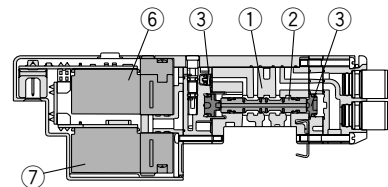
Single: SQ1131



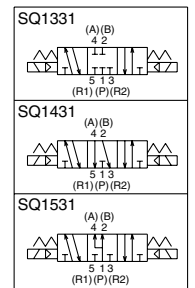
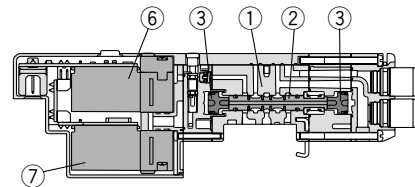
Double (Latching): SQ1231



Double (Double solenoid): SQ1231D



3 position: SQ1 $\frac{3}{5}$ 31



Dual 3 port valve: SQ1 $\frac{A}{B}{C}$ 31

