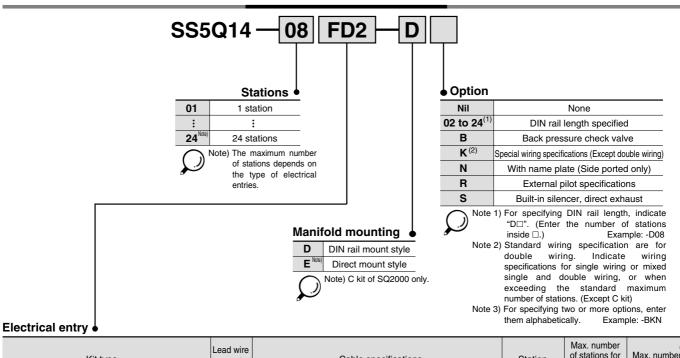


Series SQ1000 **Plug Lead Unit**

How to Order Manifold



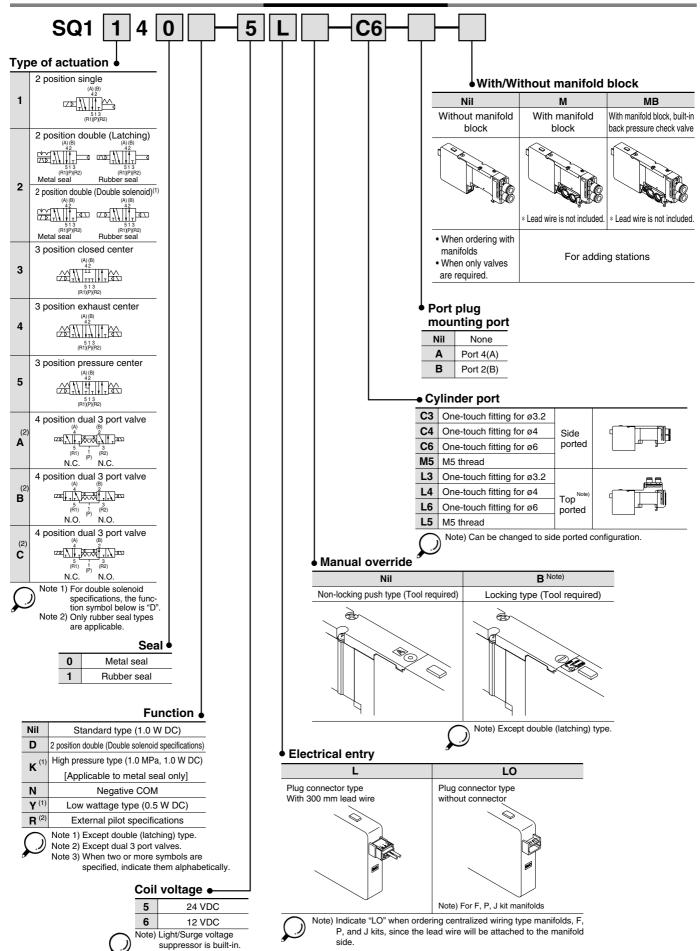
Electrical entry •						
Kit type		Lead wire connector location	Cable specifications	Station	Max. number of stations for special wiring specifications	Max. number of solenoids
F kit U side	FD0		D-sub connector (25P) kit, without cable			
	FD1	D side	D-sub connector (25P) kit, with 1.5 m cable	1 to 12 stations	04 1 11	24
D-sub Dside	FD2	Diside	D-sub connector (25P) kit, with 3.0 m cable	1 to 12 stations	24 stations	24
Connector kit	FD3		D-sub connector (25P) kit, with 5.0 m cable			
P kit	PD0		Flat ribbon cable (26P) kit, without cable			
	PD1	(1)	Flat ribbon cable (26P) kit, with 1.5 m cable	1 1- 10 -1-1	24 stations	24
	PD2	D side	Flat ribbon cable (26P) kit, with 3.0 m cable	1 to 12 stations		24
(26P)	PD3		Flat ribbon cable (26P) kit, with 5.0 m cable			
Flat ribbon cable connector kit (26P)	PDC]	Flat ribbon cable (20P) kit, without cable	1 to 9 stations	18 stations	18
Flat ribbon cable (20P) (PC Wiring System compatible)	JD0	D side	Flat ribbon cable (20P) PC Wiring System compatible	1 to 8 stations	16 stations	16
C kit	С	_	Connector kit	1 to 24 stations	_	_
Connector kit						

Note 1) Separately order the 20P type cable assembly for the P kit.

Note 2) The maximum number of stations should not be more than the maximum number of solenoids. (The number of solenoids are counted as: 1 for single solenoids and 2 for type 3P and 4P double solenoids.)

Plug Lead Unit Series SQ1000

How to Order Valves



VQC

SQ

VQ0

VQ4

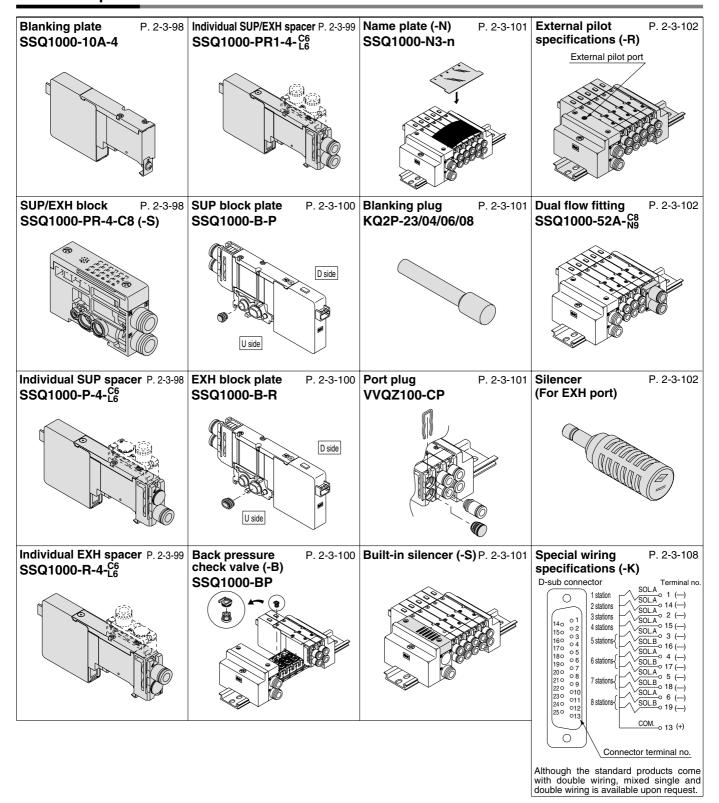
VQ5

VQZ

VQD

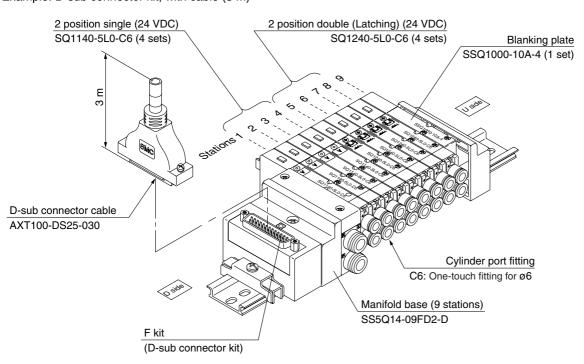
Series SQ1000

Manifold Option



How to Order Manifold Assembly (Example)

Example: D-sub connector kit, with cable (3 m)



SS5Q14-09FD2-D 1 set (F kit 9 station manifold base)

* SQ1140-5L0-C6 4 sets (2 position single)

* SQ1240-5L0-C6 4 sets (2 position double [latching])

* SSQ1000-10A-4 1 set (Blanking plate)

► The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Add the valve and option part numbers in order starting from the first station on the D side. When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

VQC

SQ

VQ0

VQ4 VQ5

V07

VQZ

VQD

Series SQ1000

Valve Specifications

Model

							Flow oha	racteristics			Response	time (ms) ⁽²⁾	Weight (g)
Series		Number of solenoids	Mode	I	1 → 4	$\frac{1}{2}$ (P \rightarrow A	N/B)	4/2 → 5/3	$B (A/B \rightarrow$	R1/R2)	Standard:	Low	
		3016110103			C [dm3/(s·bar)]	b	Cv	C [dm3/(s·bar)]	b	Cv	1 W	wattage	(9)
		Cinala	Metal seal	SQ1140	0.62	0.10	0.14	0.63	0.11	0.14	12 or less	15 or less	80
	ū	Single	Rubber seal	SQ1141	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	80
	position	Double	Metal seal	SQ1240	0.62	0.10	0.14	0.63	0.11	0.14	15 or less		80
	2 po	(Latching)	Rubber seal	SQ1241	0.79	0.20	0.19	0.80	0.20	0.19	20 or less		80
	,	Double (Double	Metal seal	SQ1240D	0.62	0.10	0.14	0.63	0.11	0.14	10 or less	13 or less	95
		solenoid)	Rubber seal	SQ1241D	0.79	0.20	0.19	0.80	0.20	0.19	15 or less	20 or less	95
SQ1000		Closed	Metal seal	SQ1340	0.58	0.12	0.14	0.63	0.11	0.14	20 or less	26 or less	100
301000	ر	center	Rubber seal	SQ1341	0.64	0.20	0.15	0.58	0.26	0.16	25 or less	33 or less	100
	position	Exhaust	Metal seal	SQ1440	0.58	0.12	0.14	0.60	0.14	0.14	20 or less	26 or less	100
		center	Rubber seal	SQ1441	0.64	0.20	0.15	0.80	0.20	0.19	25 or less	33 or less	100
	3	Pressure	Metal seal	SQ1540	0.62	0.12	0.14	0.63	0.14	0.14	20 or less	26 or less	100
		center	Rubber seal	SQ1541	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 ₆ 41	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



JIS Symbol 2 position single 2 position double (Latching) (A) (B) (A) (B) (R1)(P)(R2) (R1)(P)(R2) Rubber seal 2 position double (Double solenoid) Metal seal Rubber seal

3 position closed center

(R1)(P)(R2)

3 position exhaust center

(A)(B)

Specifications

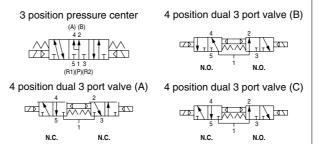
	Valv	e construction		Metal seal	Rubber seal				
	Flui	d		Air/Ine	ert gas				
	Max	dimum operating	pressure	0.7 MPa (High pres	sure type: 1.0 MPa) ⁽³⁾				
	sure	Single		0.1 MPa	0.15 MPa				
ions	press	Double (Latchi	ing)	0.18 MPa	0.18 MPa				
icati	ating	Double (Doubl	e solenoid)	0.1 MPa	0.1 MPa				
ecif	Single Double (Latch Double (Double) Double (Double) Double (Double) Double (Double) Double (Double) Double (Double)			0.1 MPa	0.2 MPa				
ds ə	Min.	4 position		_	0.15 MPa				
Valve specifications	Aml	pient and fluid te	emperature	−10 to 50°C ⁽¹⁾					
	Lub	rication		Not re	quired				
	Pilo	t valve manual o	override	Push type/Locking type (Tool required)					
	Vibr	ation/Impact res	sistance (2)	30/150	0 m/s ²				
	Prof	tection structure		Dust	tight				
"	Coil	rated voltage		12 VDC,	24 VDC				
fi di	Allo	wable voltage fl	uctuation	±10% of ra	ted voltage				
Solenoid	Coil	insulation type		Equivalent	to class B				
Solenoid specifications	Powe	er consumption	24 VDC	1 W DC (42 mA), 0	.5 W DC (21 mA) (4)				
<u> </u>	(Curr	•	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) specification.



Plug Lead Unit Series SQ1000

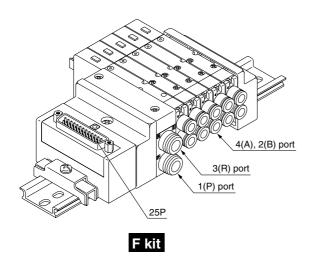
Manifold Specifications

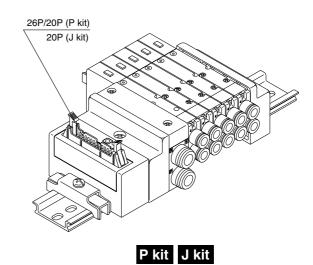
Base model		g specific		Applicable solenoid	Type of connection		(3) Applicable	5 station	1 station
base model	1(P), 3(R)	Port location	4(A), 2(B) Port size	valve	Type of connection	stations	weight (g)	weight (g)	
	C8	0:4-	C3 (For ø3.2) C4 (For ø4)		F kit: D-sub connector		1 to 12 stations	420	20
	(For ø8)	Side	C6 (For ø6) M5 (M5 thread)		P kit: Flat ribbon cable	26P	1 to 12 stations	420	20
SS5Q14-	Option		ivis (ivis triread)	SQ1□40		20P	1 to 9 stations	720	
333414	Built-in silencer,	Top (2)	L3 (For ø3.2) L4 (For ø4)	SQ1□41	J kit: Flat ribbon cable PC Wiring System comp	oatible	1 to 8 stations	420	20
	\direct exhaust/		L6 (For Ø6) L5 (M5 thread)		C kit: Connector kit		1 to 12 stations	460	35

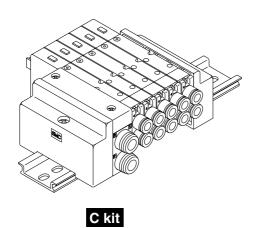
Note 1) One-touch fittings in inch sizes are also available. For details, refer to page 2-3-110. Note 2) Can be changed to side ported configuration.

Note 3) An optional specification for special wiring is available to increase the maximum number of stations. Refer to page 2-3-108 for details.

Note 4) Except valves. For valve weight, refer to page 2-3-104.







VQC

SQ

VQ0

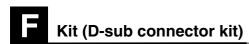
VQ4

VQ5

VQZ

VQD

Series SQ1000



- Simplification and labor savings for wiring work can be achieved by using a D-sub connector for the electrical connection.
- Using connector for flat ribbon cable (25P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.

D-sub connector (25 pins)

Manifold Specifications

	Po	Porting specifications										
Series	Port	Port	number of									
	location	1(P), 3(R)	4(A), 2(B)	stations								
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations (24 as an option)								

Valves are numbered from the D side.

Electrical wiring specifications

AXT100-DS25-020

D-sub connector cable assemblies can be ordered with manifolds. Refer to manifold ordering.

Cable 0.3 mm² x 25 cores O.D. ø1.4 ≅ø10 Seal (length indication) Molded cover 2-M2.6 x 0.45 SMC Connector DB-25SF-N manufactured by Japan Aviation 55 Electronics Industry, Ltd. Socket side Terminal no. 47.04

D-sub Connector Cable Assembly Terminal No.

Dot

Terminal Lead wire

Cable assembly •

Number	color	marking
1	Black	None
2	Brown	None
3	Red	None
4	Orange	None
5	Yellow	None
6	Pink	None
7	Blue	None
8	Purple	White
9	Gray	Black
10	White	Black
11	White	Red
12	Yellow	Red
13	Orange	Red
14	Yellow	Black
15	Pink	Black
16	Blue	White
17	Purple	None
18	Gray	None
19	Orange	Black
20	Red	White
21	Brown	White
22	Pink	Red
23	Gray	Red
24	Black	White
25	White	None

D-sub Connector Cable Assembly (Option)

Cable length (L)	Assembly part no.	Note			
1.5 m	AXT100-DS25-015	0-1-1-			
3 m	AXT100-DS25-030	Cable 0.3 mm ² x 25 cores			
5 m	AXT100-DS25-050	0.5 IIIIF X 25 COIES			

- * For other commercial connectors, use a 25 pins type with female connector conforming to MII -C-24308
- * Cannot be used for transfer wiring.

characteristics

Item	Characteristics
Conductor resistance Ω/km , 20°C	65 or less
Voltage limit VAC, 1 min.	1000
Insulation resistance MΩ/km, 20°C	5 or less

Note) The minimum bending radius for D-sub connector cables is 20 mm.

Connector manufacturers' example

- · Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- · Hirose Electric Co., Ltd.

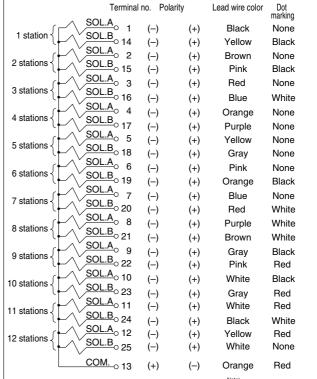
D-sub connector

011 012 013

As the standard electrical wiring specifications, 0 double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station 140 150 160 170 180 190 200 210 220 230 240 250 02 03 04 05 06 07 08 09 for 12 stations or less, regardless of valve and option types. Mixed single and double wiring is available as an option For details, refer to page 2-3-108.

Connector terminal no.

Lead wire colors for D-sub connector assembly AXT100-DS25-015



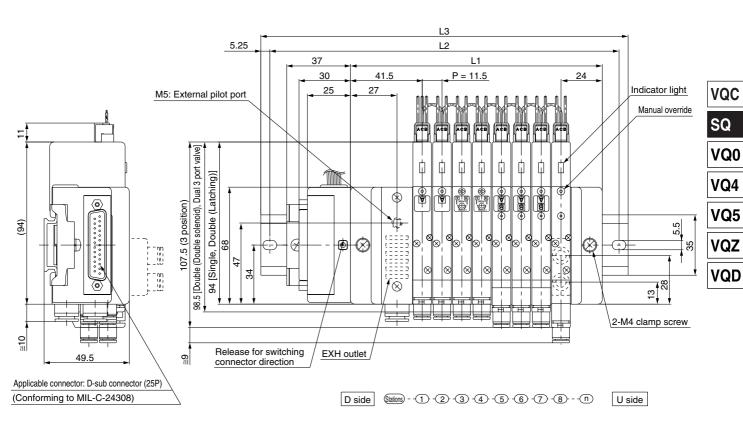
Positive common Negative common Note) specifications specifications

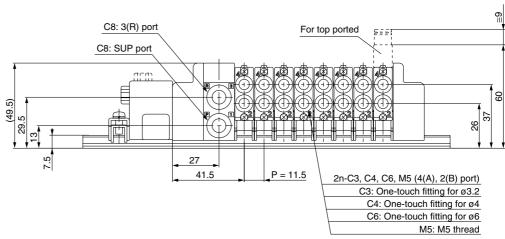
Note) When using the negative common specifications, use valves for negative common.





Plug Lead Unit Series SQ1000





Dimensions

Formula: L1 = 11.5n + 54 n: Stations (Maximum 24 stations)

L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238	249.5	261	272.5	284	295.5	307	318.5	330
L2	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	375	387.5
L3	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	385.5	398

Series SQ1000



Kit (Flat ribbon cable connector)

- Simplification and labor savings for wiring work can be achieved by using a MIL type for the electrical connection.
- Using connector for flat ribbon cable (26P, 20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.

Manifold Specifications

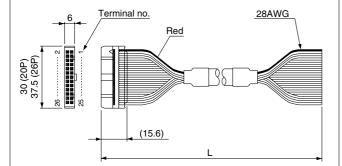
	P	Maximum							
Series	Series Port Port size								
	location	1(P), 3(R)	4(A), 2(B)	stations					
SQ1000	Side, Top	C8	C3, C4, C6, M5	12 stations (24 as an option)					

Flat ribbon cable (26 pins, 20 pins)

Cable assembly •

AXT100-FC 20 - 2

Type 26P flat ribbon cable connector assemblies can be ordered with manifolds. Refer to manifold ordering.



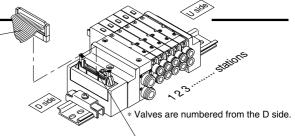
Flat Ribbon Cable Connector Assembly (Option)

Cable	Assembly part no.									
length (L)	26P	20P								
1.5 m	AXT100-FC26-1	AXT100-FC20-1								
3 m	AXT100-FC26-2	AXT100-FC20-2								
5 m	AXT100-FC26-3	AXT100-FC20-3								

- * For other commercial connectors, use a 26 pins or 20 pins with strain relief conforming to MIL-C-83503.
- * Cannot be used for transfer wiring

Connector manufacturers' example

- Hirose Electric Co., Ltd.
- Sumitomo 3M Limited
- Fujitsu Limited
- Japan Aviation Electronics Industry, Ltd.
- J.S.T. Mfg. Co., Ltd.
- Oki Electric Cable Co,. Ltd.



Electrical wiring specifications

Flat ribbon cable connector

26 🗆 🗆 25

24 🗆 🗆 23

22 🗆 🗆 21

20 🗆 🗆 19 18 🗆 🗆 17

16 🗆 🗆 15

14 🗆 🗆 13

12 0 0 11

10 🗆 🗆 9 8 🗆 🗆 7 6 🗆 🗆 5

4 🗆 🗆 3 2 🗆 🗆 1 Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station, regardless of valve and option Mixed single and double wiring is available as an option. For details, refer to page 2-3-108.

Connector terminal no.

Triangle mark indicator position

<26P> <20P> Terminal no. Polarity Terminal no. Polarity SOL.A_o 1 SOL.A_○ 1 (-)(+)SOL.B₀ 2 SOL.B₀ 2 1 station 1 station -(-)(+)(-)(+) SOL A 3 SOL.A 3 (-)(+)(-)(+) SOL.B₀ 4 SOL.B_o 4 2 stations 2 stations (-)(+)(-)(+)SOL.A_{o 5} SOL.A_{o 5} (+)(-)(+)SOLB₀6 SOL.B_o 6 3 stations (-)(+)(-)(+)SOL.A_{o 7} SOL.A_o 7 (-)(-)(+)SOL.B_o 8 SOL.B_o 8 4 stations 4 stations (-)(+)(-)(+) SOL.A_o 9 SOL.A_{o 9} (-)(+)(-)(+)SOL.B₀₁₀ 5 stations SOL.B₀₁₀ 5 stations (-)

SOL.A₀₁₁ SOL.A₀₁₁ (-)(+)(+)SOL.B₀₁₂ 6 stations SOL.B₀₁₂ (+)(-)(+)SOL.A₀₁₃ SOL.A_{o13} (-)(+) (+)SOL.B_{○14} SOL.B₀₁₄ 7 stations 7 stations (+)(-)(-)(+)SOL.A₀₁₅ SOL.A₀₁₅ (-)(+)(+)8 stations 8 stations

SOL.B₀₁₆ SOL.B_{○16} (+) (-)(-)(+)SOL.A₀₁₇ SOL.A_{o17} (+)(-)(+)SOL.B₀18 SOL.B₀₁₈ 9 stations 9 stations -(+)(+) SOL.A₀₁₉ COM. - ○19 (+)(+) 10 stations SOL.B₀₂₀ (+)

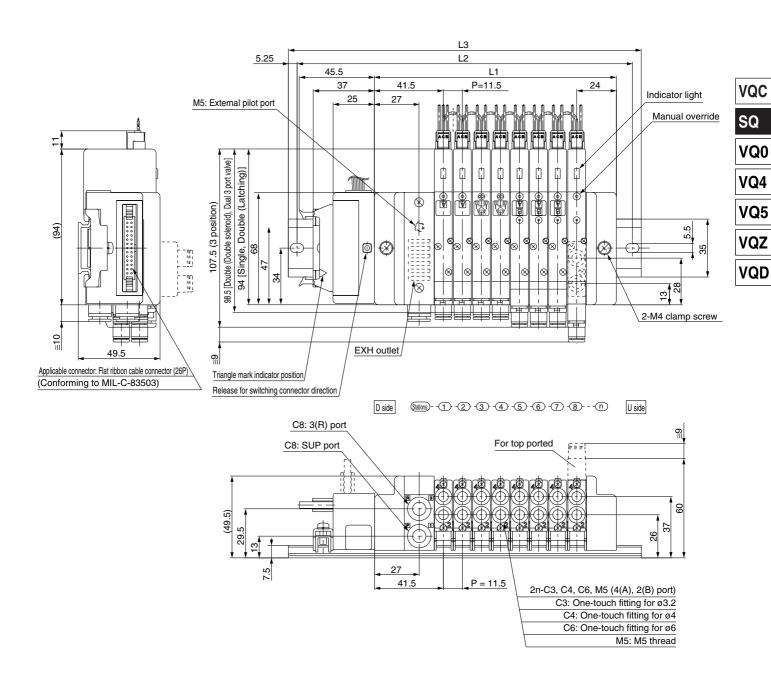
COM. 020 (+) SOL.A₀₂₁ (-)(+) Note Negative 11 stations SOL.B₀₂₂ (-)(+)SOL.A₀₂₃ common common (-)specifications specifications 12 stations SOL.B₀₂₄ (+)COM. 025 (-)COM. ○26

Positive Negative specifications specifications

(+)

Note) When using the negative common specifications, use valves for negative common.

Plug Lead Unit Series SQ1000

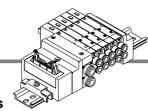


Dimensions Formula: L1 = 11.5n + 54 n: Stations (Maximum 24 stations															ations)									
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238	249.5	261	272.5	284	295.5	307	318.5	330
L2	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300	312.5	325	337.5	350	362.5	375	375	387.5
L3	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5	385.5	398

Series SQ1000



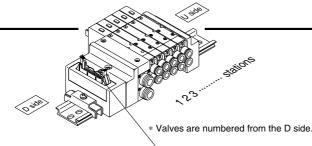
Kit (PC wiring system compatible flat ribbon cable kit)



- PC Wiring System compatible.
- Using connector for flat ribbon cable (20P) conforming to MIL standard permits the use of connectors put on the market and gives a wide interchangeability.
- Top or side entry for the connector can be changed freely, allowing later changes according to the mounting space.

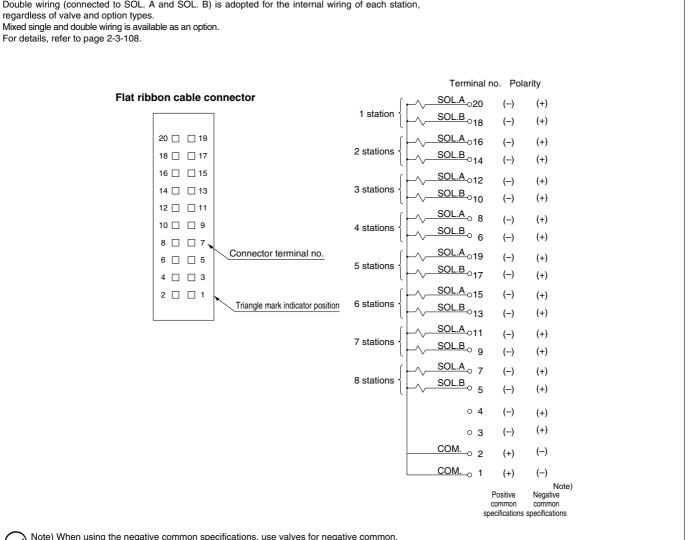
Manifold Specifications

	F	Maximum				
Series	Port	Port	size	number of		
	location	1(P), 3(R)	4(A), 2(B)	stations		
SQ1000	Side, Top	C8	C3, C4, C6, M5	8 stations (16 as an option)		



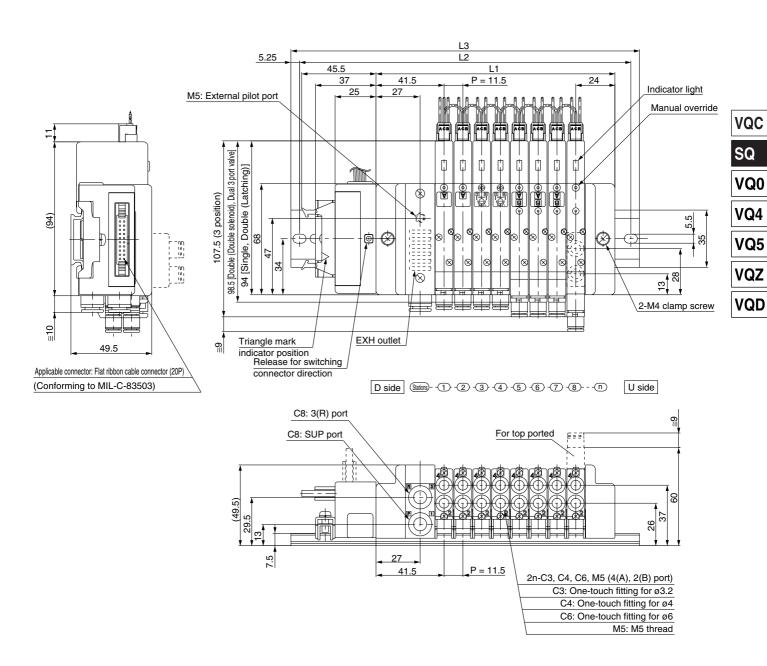
Electrical wiring specifications

Double wiring (connected to SOL. A and SOL. B) is adopted for the internal wiring of each station,



Note) When using the negative common specifications, use valves for negative common. For details about the PC Wiring System, refer to catalog CAT.ES02-20 separately.

Plug Lead Unit Series SQ1000



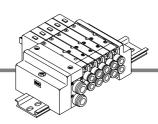
Dimensions Formula: L1 = 11.5n + 54 n: Stations (Maximum 16 stations)								ations)								
L	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	65.5	77	88.5	100	111.5	123	134.5	146	157.5	169	180.5	192	203.5	215	226.5	238
L2	125	137.5	150	162.5	175	187.5	200	212.5	225	237.5	237.5	250	262.5	275	287.5	300
L3	135.5	148	160.5	173	185.5	198	210.5	223	235.5	248	248	260.5	273	285.5	298	310.5

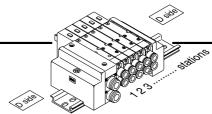
Series SQ1000

C Kit (Connector)

Standard with lead wires connected to each valve individually. Manifold Specifications

		Maximum			
Series	Port Port size			number of	
	location	1(P), 3(R)	4(A), 2(B)	stations	
SQ1000	Side, Top	C8	C3, C4, C6, M5	24 stations	





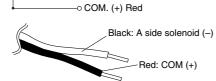
* Valves are numbered from the D side.

Wiring Specifications: Positive COM Specifications

Since lead wires are connected to the valves as shown below, connect each wire to the power supply.

Single solenoid

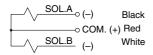
SOL.A ○ (-) Black

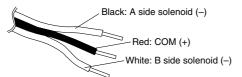


Double solenoid

Lead wire color

Lead wire color





Plug connector lead wire length The lead wire length of the valves with lead wire is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly. Example) For lead wire length of 1000 mm: SQ1140-5LO-C6...3 pcs. AXT661-14AL-10...3 pcs.

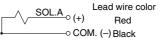
Connector Assembly Part No.

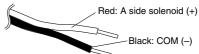
Single solenoid	Double solenoid
AXT66	1-12AL
AXT661-14AL	AXT661-13AL
AXT661-14AL-6	AXT661-13AL-6
AXT661-14AL-10	AXT661-13AL-10
AXT661-14AL-20	AXT661-13AL-20
AXT661-14AL-30	AXT661-13AL-30
	AXT661-14AL-6 AXT661-14AL-6 AXT661-14AL-10 AXT661-14AL-20

● Wiring Specifications: Negative COM Specifications (Option)

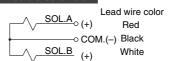
Since lead wires are connected to the valves as shown below, connect each wire to the power supply.

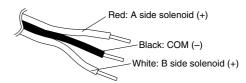
Single solenoid





Double solenoid





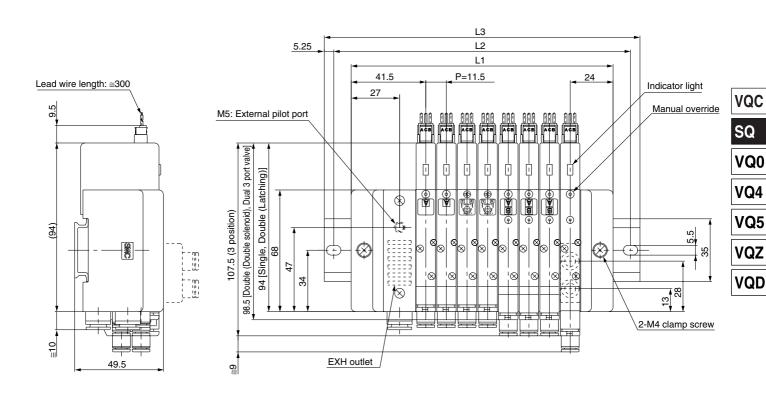
Plug connector lead wire length The lead wire length of the valves with lead wire is 300 mm. When ordering a lead wire length of 600 mm or longer, list the part numbers for the valve without connector and the connector assembly. Example) For lead wire length of 1000 mm: SQ1140-5LO-C6......3 pcs. AXT661-14ANL-10....3 pcs.

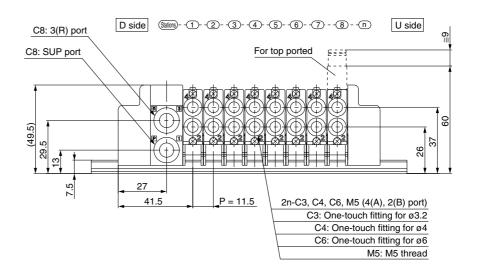
Connector Assembly Part no.

Lead wire length	Single solenoid	Double solenoid					
Socket only (3 pcs.)	AXT66	1-12AL					
300 mm	AXT661-14ANL	AXT661-13ANL					
600 mm	AXT661-14ANL-6	AXT661-13ANL-6					
1000 mm	AXT661-14ANL-10	AXT661-13ANL-10					
2000 mm	AXT661-14ANL-20	AXT661-13ANL-20					
3000 mm	AXT661-14ANL-30	AXT661-13ANL-30					

Note) When using the negative common specifications, use valves for negative common.

Plug Lead Unit Series SQ1000





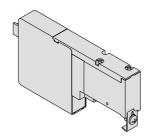
Dimensions Formula: L1 = 11.5n + 54 n: Stations (Maximum 24 stations) 1 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 2 3 4 5 6 7 8 9 65.5 77 88.5 100 111.5 123 134.5 146 157.5 169 180.5 192 203.5 215 226.5 238 249.5 261 272.5 284 295.5 307 318.5 330 237.5 250 262.5 275 287.5 300 312.5 325 337.5 350 L2 112.5 125 137.5 150 162.5 175 175 187.5 200 212.5 225 350 87.5 100 L3 135.5 148 160.5 173 185.5 185.5 198 210.5 223 235.5 248 260.5 273 285.5 298 310.5 323 335.5 348 360.5 360.5

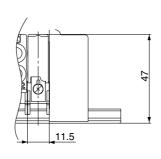
Manifold Option Parts for SQ1000

Blanking plate

SSQ1000-10A-4

It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.







TTT

SUP/EXH block

SSQ1000-PR-4-C8-□

Nil Standard
R External pilot specifications
S Built-in silencer



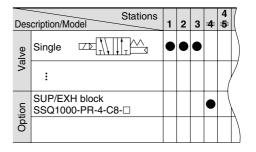
Note) When specifying both options, indicate "-RS".

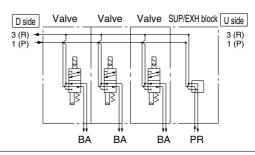
 Specify the spacer mounting position on the manifold specification sheet.

For standard type manifolds, the SUP/EXH block is mounted on the D side.

It is added to the manifold to increase SUP/EXH capacity.

- * The number of SUP/EXH blocks that can be added is limited to two sets, one between manifold stations and another on the U side of the manifold, due to the length of the lead wire.
- * SUP/EXH blocks are not included in the number of manifold stations.





SSQ1000-P-4- C6 Port location

C6 Side ported
L6 Top ported

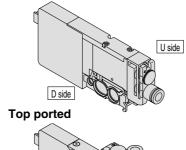
This is used as a supply port for different pressures when using different pressures in the same manifold (for one station). Both sides of the station which is used with supply pressure from the individual SUP spacer are shut off. (Refer to application example.)

 Specify the spacer mounting position and SUP passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

(Two pieces of SUP block plate that shut off the supply pressure are included with the individual SUP spacer, therefore, it is not necessary to order them separately.)

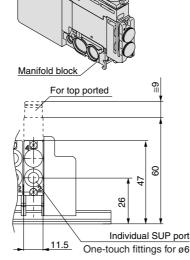
- Electrical wiring is also connected to the manifold station with the individual EXH spacer.
- * By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual SUP spacer to the individual EXH spacer).
- * The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
- * Model no with manifold block: SSQ1000-P-4- $_{L6}^{C6}$ -M

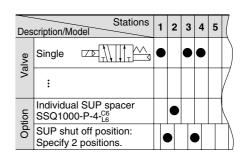
Side ported



D side

U side





SUP block plate (Ordering not required) (Ordering not required)

D side Valve spacer Valve Valve Uside 3 (R) 1 (P)

BA P BA BA BA



Plug Lead Unit Series SQ1000/2000

Individual EXH spacer

SSQ1000-R-4- C6

◆Port location

C6 Side ported L6 Top ported

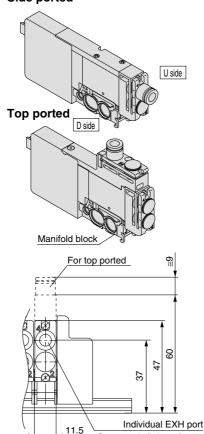
This is used to exhaust an individual valve when the exhaust from a valve interferes with other stations in the circuit (used for one station). Both sides of the station which is to be individually exhausted are shut off. (Refer to application example.)

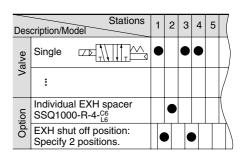
* Specify the spacer mounting position and EXH passage shut off positions on the manifold specification sheet. Two shut off positions are required per unit.

(Two pieces of EXH block plate that shut off the exhaust are included with the individual EXH spacer, therefore, it is not necessary to order them separately.)

- * Electrical wiring is also connected to the manifold station with the individual EXH spacer.
- * By changing the fitting shown in the drawing and the block plates, the spacer's specification can be changed later (from the individual EXH spacer to the individual SUP spacer).
- * The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
- * Model no. with manifold block: SSQ1000-R-4-^{C6}-M

Side ported





EXH block plate EXH block plate (Ordering not required) (Ordering not required) Individual EXF D side Valve spacer Valve Valve U side 3 (R) 1 (P) ВА R ВА ВА

VQC

SQ

VQ0 VQ4

....

VQ5

VQZ

VQD

Individual SUP/EXH spacer

SSQ1000-PR1-4- C6

Port location

C6 Side ported
L6 Top ported

This has both functions of the individual SUP and EXH spacers above.

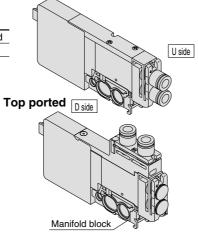
(Refer to application example.)

* Specify the spacer mounting position and SUP and EXH passage shut off positions on the manifold specification sheet. Two shut off positions each for SUP and EXH are required per unit.

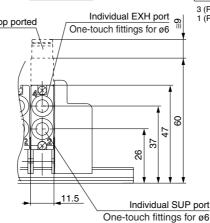
(Two pieces each of block plate that shut off the SUP and EXH passages are included with the individual SUP/EXH spacer.)

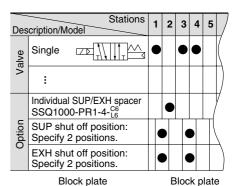
- * Electrical wiring is also connected to the manifold station with the individual EXH spacer.
- * By changing the fitting shown in the drawing and the block plates, the spacer's specification For top ported can be changed later.
- * The number of spacers is not limited when ordered with the manifold. However, when adding individual for F, P, and J kits, it is limited to two units, one between manifold stations and another on the U side, due to the length of the lead wire.
- * Model no. with manifold block: SSQ1000-PR1-4- $^{C6}_{1.6}$ - \underline{M}

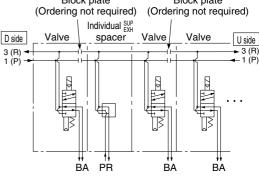
Side ported



One-touch fittings for ø6









Manifold Option Parts for SQ1000

SUP block plate

SSQ1000-B-P

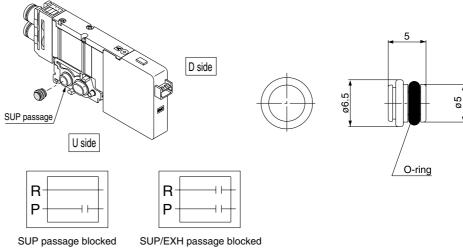
When supplying two different pressures, high and low, to one manifold, this is used between stations with different pressures. Also, it is used with an individual SUP spacer to shut off the air supply.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When a SUP passage is shut off with a SUP block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when SUP block plates are ordered with manifolds.



EXH block plate

SSQ1000-B-R

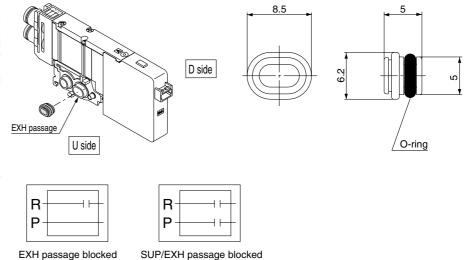
When the exhaust from a valve interferes with other stations in the circuit, this is used between stations to separate exhausts. Also, it is used with an individual EXH spacer to shut off the exhaust of individual valves.

* Specify the station position on the manifold specification sheet.

<Shut off label>

When an EXH passage is shut off with an EXH block plate, a label is attached for external confirmation of the shut off position (one label each).

* Shut off labels are applied when EXH block plates are ordered with manifolds.

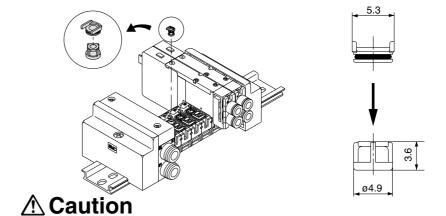


Back pressure check valve [-B]

SSQ1000-BP

This prevents cylinder malfunction caused by the exhaust from other valves.It is inserted into the R (EXH) port of the valve that is affected. It is especially effective when using single acting cylinders or exhaust center type solenoid valves.

- * When installing back pressure check valves only on the stations required, enter the part number and specify the station positions on a manifold specification sheet.
- * When installing back pressure check valves on all of the stations, indicate "-B" at the end of the manifold part number.



- Although the back pressure check valve is an assembly part with a check valve mechanism, a small amount of air leakage is allowed. Therefore, take care not to restrict the exhaust air from the exhaust port.
- The effective area of valves is about 20% less when the back pressure check valve is installed.
- 3. Since 4 port specification valves (5 (R1) and 3 (R2) are common) are used, back pressure cannot be prevented with dual 3 port valves.



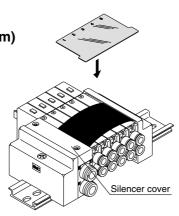
Plug Lead Unit Series SQ1000/2000

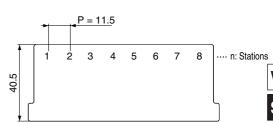
Name plate [-N]

SSQ1000-N3-Stations (1 to maximum)

This is a clear resin plate for applying solenoid valve function description labels, etc. To install, bend the plate slightly as shown and insert into the slots on the end plate side. Also, the plate is difficult to bend for manifolds with only a few stations, therefore, remove the silencer cover to install it.

* When ordering with manifolds, add "-N" at the end of the manifold number.





VQC

SQ

VQ0

VQ4

VQ5

Blanking plug (For One-touch fitting)

23 .04 .06 .08

This is inserted into cylinder ports and SUP and EXH ports that are not used.

Purchasing order is available in units of 10 pieces.

A A

Dimensions

Applicable fittings size (ød)	Model	Α	L	D
3.2	KQ2P-23	16	31.5	3.2
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10

VQZ

VQD

Port plug

VVQZ100-CP

This is used to close the cylinder ports when changing a 5 port valve to a 3 port valve.

* Add "A" or "B" at the end of the valve part number when ordering with valves.

Example) SQ1141-5L-C6-A (N.O. specifications)

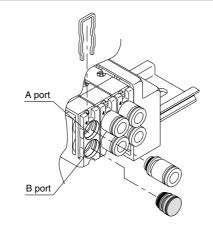
4 (A) port plug

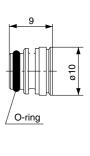
Example) SQ1141-5L-C6-B (N.C. specifications)

2 (B) port plug

Example) SQ1141-5L-C6-B-M

(B port plug with manifold block)





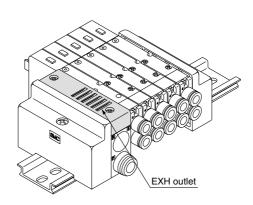
Direct EXH outlet, built-in silencer [-S]

The EXH outlet is placed on the top side of the manifold end plate. The built-in silencer provides highly effective noise reduction. (Noise reduction of 30 dB)



Note) Note that when excessive drainage occurs in the air supply, the drainage will be released along with the exhaust.

- * Add "-S" at the end of the manifold part number when ordering with manifolds.
- * For precautions on handling and how to replace elements, refer to page 2-3-5.





Manifold Option Parts for SQ1000

External pilot specifications [-R]

This can be used when the air pressure is 0.1 to 0.2 MPa lower than the minimum operating pressure of the solenoid valves or used for vacuum specifications.

Add "R" to the part numbers of manifolds and valves to indicate the external pilot specification.

An M5 port will be installed on the top side of the manifold's SUP/EXH block.

How to order valves (Example)

SQ1140 R -5L-C6

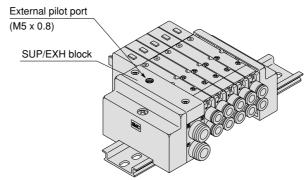
External pilot specifications

How to order manifold (Example)

* Indicate "R" for an option.

SS5Q14-08FD1-DR

External pilot specifications



Note 1) Not applicable for dual 3 port valves.

Note 2) Indicate "RY" for low wattage types.

Note 3) Valves with the external pilot specifications have a pilot EXH with individual exhaust specifications and EXH can be pressurized. However, the pressure supplied from EXH should be 0.4 MPa or lower.

Dual flow fitting

SSQ1000-52A-C8

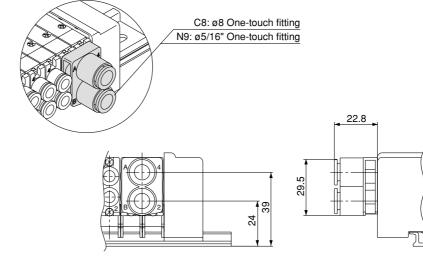
→Port size

C8	ø8
N9	ø5/16"

To drive a large bore cylinder, two valve stations are operated simultaneously to double the air flow. This fitting is used on the cylinder ports in this situation. Available sizes are Ø8 and Ø5/16" One-touch fitting.

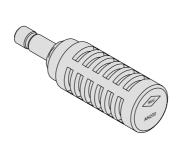
* When ordering with valves, specify the valve part number without One-touch fitting and list the dual flow fitting part number.

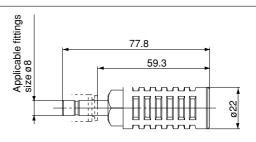
Example) Valve part number (without One-touch fitting part number)



Silencer (For EXH port)

This is inserted into the centralized type EXH port (One-touch fitting).





Specifications

Series	Model	Effective area (mm²) (Cv factor)	Noise reduction (dB)	
SQ1000	AN200-KM8	20 (1.1)	30	





Manifold Option Parts for SQ1000/SQ2000

Special Wiring Specifications

In the internal wiring of F kit, P kit, and J kit, double wiring (connected to SOL. A and SOL. B) is adopted for each station regardless of the valve and option types. Mixed single and double wiring is available as an option.

1. How to order

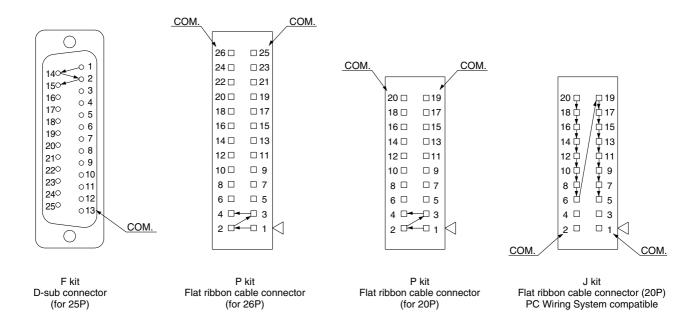
Indicate option symbol "-K" in the manifold part number and be sure to specify station positions for single or double wiring on the manifold specification sheet.

Example) **SS5Q14-09 FD0 - DKS**

Others, option symbols: to be indicated alphabetically.

2. Wiring specifications

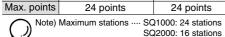
Connector terminal numbers are connected from solenoid station 1 on the A side in the order indicated by the arrows without skipping any terminal numbers.



3. Maximum stations

The maximum number of manifold stations is determined by the number of solenoids. Count one point for a single solenoid type and two points for a double solenoid type. Determine the number of stations so that the total number of solenoids is no more than the maximum points in the table below.

Kit	F kit (D-sub connector)	P (Flat ribbon ca	kit ble connector)	J kit Flat ribbon cable PC Wiring System compatible
Туре	FD□ 25P	PD□ 26P	PDC 20P	JD0 20P
Max. points	24 points	24 points	18 points	16 points



Special DIN Rail Length (DIN rail mounting (-D) only)

The standard DIN rail provided is approximately 30 mm longer than the overall length of the manifold with a specified number of stations. The following options are also available.

DIN rail length longer than the standard type (for stations to be added later, etc.)

In the manifold part number, specify "-D" for the manifold mounting symbol and add the number of required stations after the symbol.

Example) SS5Q14- 08FD0 - D09BNK

8 station manifold

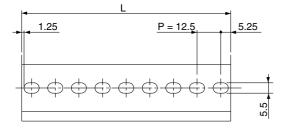
Option symbols (alphabetically)

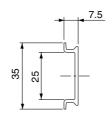
DIN rail for 9 stations

Ordering DIN rail only

DIN rail part number

AXT100- DR - n Note) For "n", enter a number from the "No." line in the table below. For L dimension, refer to the dimensions of each kit.



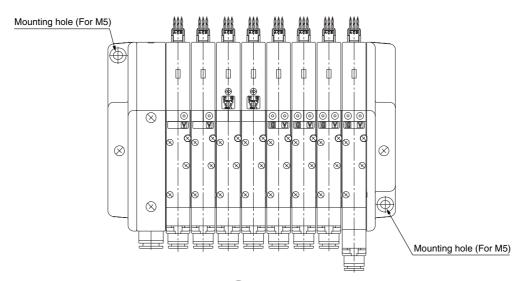


L Dimension L = 12.5 x n + 10.5

No.	1	2	3	4	5	6	7	8	9	10
L dimension	23	35.5	48	60.5	73	85.5	98	110.5	123	135.5
No.	11	12	13	14	15	16	17	18	19	20
L dimension	148	160.5	173	185.5	198	210.5	223	235.5	248	260.5
No.	21	22	23	24	25	26	27	28	29	30
L dimension	273	285.5	298	310.5	323	335.5	348	360.5	373	385.5
No.	31	32	33	34	35	36	37	38	39	40
L dimension	398	410.5	423	435.5	448	460.5	473	485.5	498	510.5

Direct Mounting Style (-E) (SQ2000 C kit only)

Manifold is mounted by using mounting holes of both sides of the manifold. DIN rail is not sticking out of the edge of end plate.



VQC SQ

VQ0

VQ4

VQ5

VQZ

VQD

Manifold Option for SQ1000/SQ2000

Negative Common Specifications

The following valve part numbers are for negative COM specifications. Manifold part numbers are the same as standard.

How to order negative COM valves (Example)

SQ1140 N -5L-C6

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)

SQ1140-5L- N7

Port location

Cylinder port

Nil	Side ported
L	Top ported

Symbo	ol	N1	N3	N7	N9
Applicable tubing	ø1/8"	ø5/32"	ø1/4"	ø5/16"	
4(A), 2(B) port	SQ1000	•	•	•	_
	SQ2000	_	•	•	•

How to order manifold (Example)

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

SS5Q14-08FD0-DN - 00T

1 (P), 3 (R) port in inch size SQ1000: Ø5/16" (N9) SQ2000: Ø3/8" (N11)

Plug Lead Unit Series SQ1000/2000

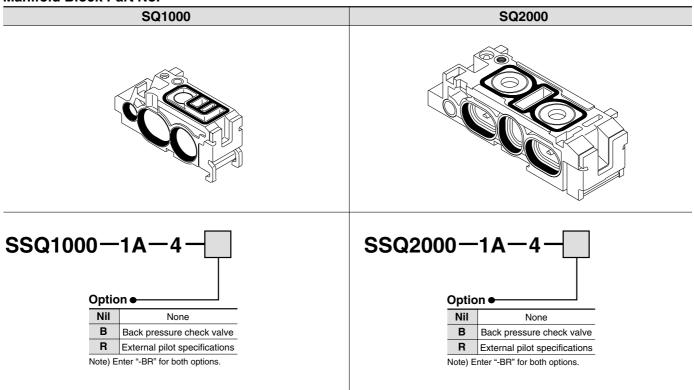
How to Add Manifold Stations for SQ1000/SQ2000

1. How to Add Manifold Stations

What to order

• Valves with manifold block (refer to pages 2-3-71 and 2-3-85) or the manifold blocks shown below. For F kit, P kit, and J kit, also order the lead wire assemblies in the next section.

Manifold Block Part No.



VQC

SQ

VQ0

VQ4

VQ5

VQZ

VQD

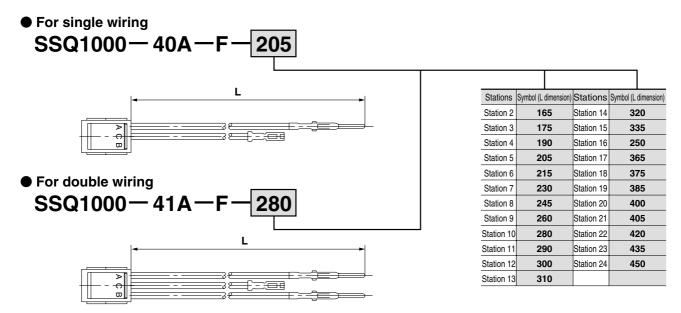
How to Add Manifold Stations for SQ1000/SQ2000

For F kit, P kit, J kit

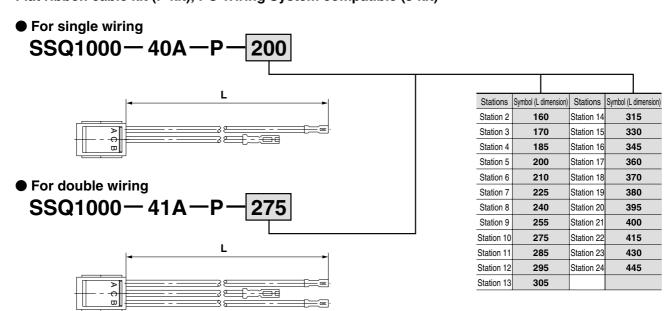
What to order: Lead wire assembly

SQ1000

D-sub connector kit (F kit)



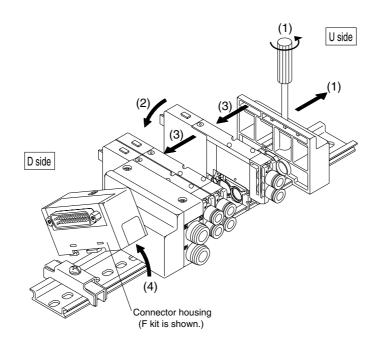
Flat ribbon cable kit (P kit), PC Wiring System compatible (J kit)



How to Add Manifold Stations for SQ1000/SQ2000

Steps for adding stations

- (1) Loosen the clamp screw on the U side end plate and open the manifold.
- (2) Mount the manifold block or valve with manifold block to be added.
- (3) Press on the end plate to eliminate any space between the manifold blocks and tighten the clamp screw. | (Proper tightening torque: 0.8 to 1.0 N·m)
- (4) In the case of F kit, P kit or J kit, remove the connector housing from the DIN rail and connect the wiring.

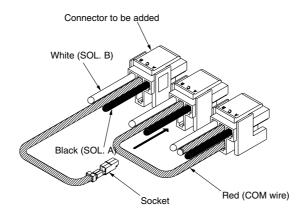


Plug Lead Unit Series SQ1000/2000

2. Connection Method

(1) Connecting common wire

Insert the red lead wire (common wire) of the connector to be added into the adjacent connector as shown in the drawing below. After inserting,



VQC

SQ

VQ0

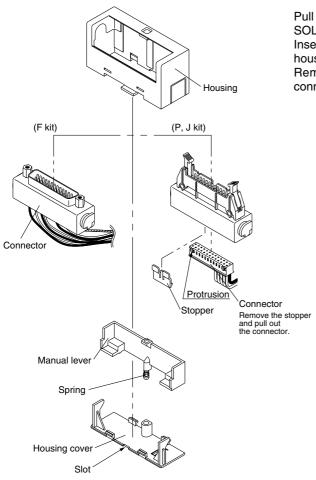
VQ4

VQ5

VQZ

VQD

(2) Pulling out connector



Pull out the connector to connect the lead wires for SOL. A and SOL. B.

Insert a flat head screwdriver into the slot of the housing cover and remove it.

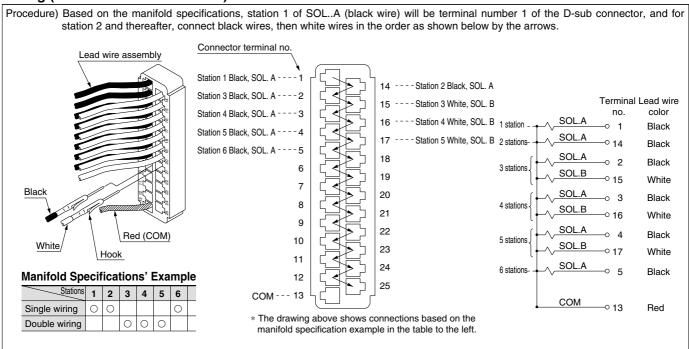
Remove the manual lever and pull out the connector.

F, P, J kit

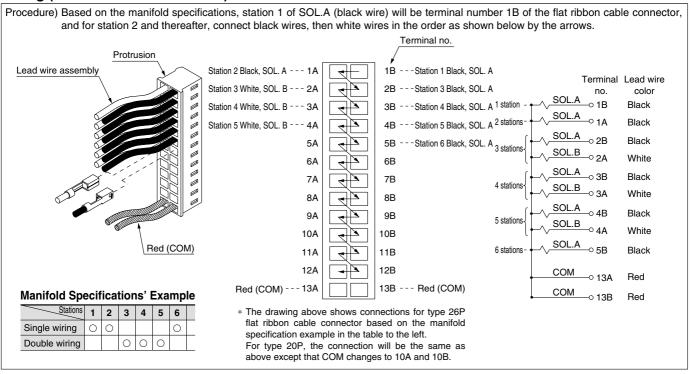
How to Add Manifold Stations for SQ1000/SQ2000

- (3) Connector connection/Connect the black and white lead wire pins to the positions shown below in accordance with each kit.
- - 2. Do not pull the lead wire forcefully when connecting. Also, take care that lead wires do not get caught between manifolds or when remounting the housing.

Wiring (F kit: D-sub connector kit)

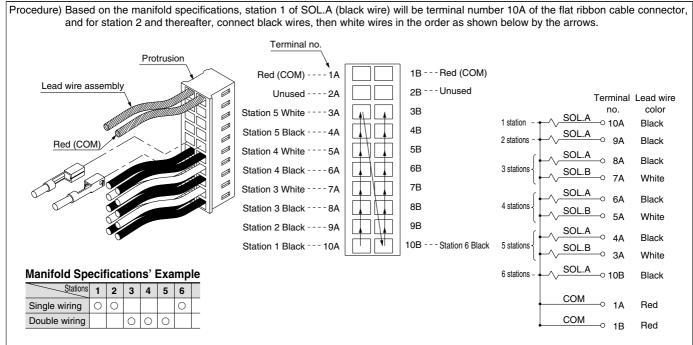


Wiring (P kit: Flat ribbon cable kit)



Plug Lead Unit Series SQ1000/2000

Wiring (J kit: Flat ribbon cable, PC Wiring System compatible)



VQC

SQ

VQ0

VQ4

VQ5

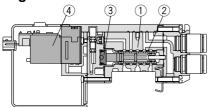
VQZ

VQD

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

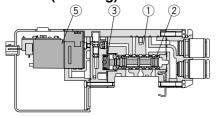
Metal seal type

Single: SQ1140



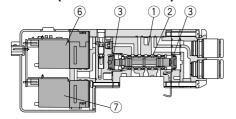


Double (Latching): SQ1240



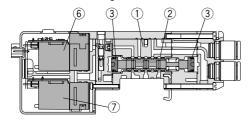


Double (Double solenoid): SQ1240D





3 position: $SQ1\frac{3}{5}$ 40



SQ1340	SQ1440	SQ1540
(A)(B) 42	(A)(B) 4.2	(A) (B) 4 2
		↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑ ↑
5 1 3 (R1) (P)(R2)	5 1 3 (R1) (P)(R2)	(R1) (P)(R2)

Component Parts

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

Pilot Valve Assembly Note)

No.	Model	SQ1□4□	
4	For single	VQ110 ^(K) _(Y) - ⁵ ₆ (N)J1(B)	
(5)	For double (Latching)	VQ110L- ⁵ ₆ J2 Negative COM: VQ110N- ⁵ ₆ J2	
(6)	For double (Double solenoid) on A side	VQ110 ^(K) _(Y) - ⁵ ₆ (N)J3(B)	
	For 3P, Dual 3 port on A side		
(7)	For double (Double solenoid) on B side	-VQ111 ^(K) _(Y) - ⁵ ₆ (N)J4	
<i>(</i>)	For 3P, Dual 3 port on B side		

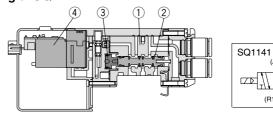


Note) Nil: Standard

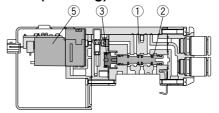
- B: Locking type manual override
- K : High pressure specifications (metal seal only)
- N : Negative common specifications Y : Low wattage specifications

Rubber seal type

Single: SQ1141

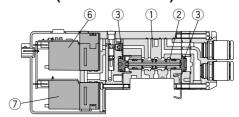


Double (Latching): SQ1241



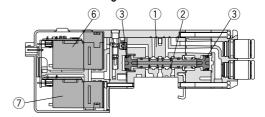


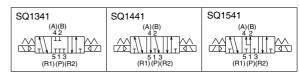
Double (Double solenoid): SQ1241D



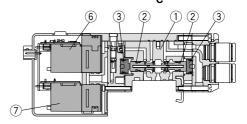


3 position: SQ1³/₄41





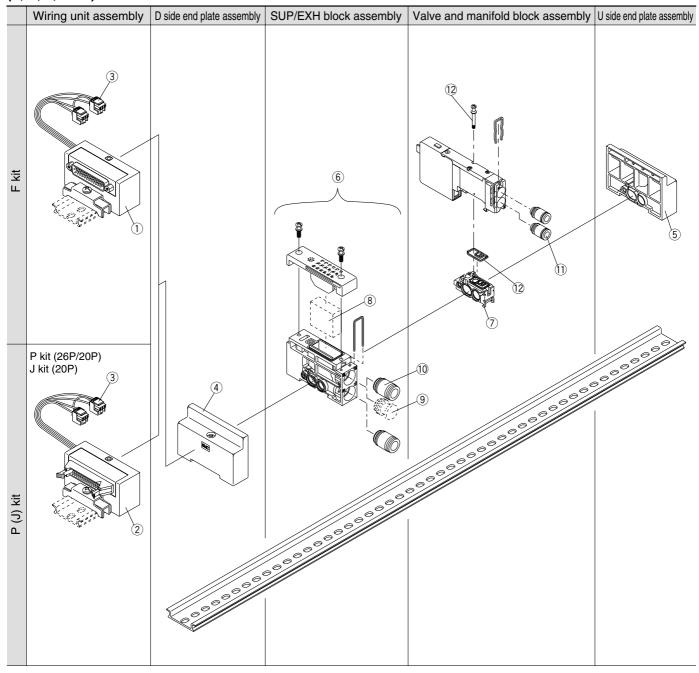
Dual 3 port valve: SQ1 A 41



SQ1A41		SQ1B41		SQ1C41	
4	2	4	2	4	2
5	3	5 🗀	3	5 —	3
N.C.	N.C.	N.O.	N.O.	N.C.	N.O.

Exploded View of Manifold: SQ1000 (Plug lead type manifold) SS5Q14

(F, P, J, C kit)

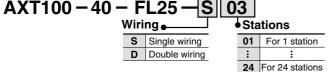


Plug Lead Unit Series SQ1000/2000

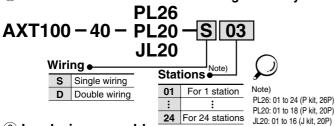
Manifold Spare Parts

Refer to pages 2-3-112 to 2-3-117 of "How to Add Manifold Stations" regarding the mounting of each spare parts.

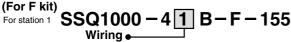
< 1 D-sub connector housing assembly>



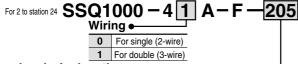
< 2 Flat ribbon cable connector housing assembly>



< 3 Lead wire assembly >



0 For single (2-wire) for double (3-wire)



Lead wire length●

Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)
Station 2	165	Station 8	245	Station 14	320	Station 20	400
Station 3	175	Station 9	260	Station 15	335	Station 21	405
Station 4	190	Station 10	280	Station 16	250	Station 22	420
Station 5	205	Station 11	290	Station 17	365	Station 23	435
Station 6	215	Station 12	300	Station 18	375	Station 24	450
Station 7	230	Station 13	310	Station 19	385		

(For P, J kit)

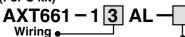
For single (2-wire)

〕 1	000 - 4 1 A - P - 200)
0	For single (2-wire)	
1	For double (3-wire)	

Lead wire length •

Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)	Stations	L dimension (mm)
Station 2	160	Station 8	240	Station 14	315	Station 20	395
Station 3	170	Station 9	255	Station 15	330	Station 21	400
Station 4	185	Station 10	275	Station 16	345	Station 22	415
Station 5	200	Station 11	285	Station 17	360	Station 23	430
Station 6	210	Station 12	295	Station 18	370	Station 24	445
Station 7	225	Station 13	305	Station 19	380		

(For C kit)



For double (3-wire) For single (2-wire)

Leau	wire lengti
Symbol	L dimension (mm)
Nil	300
6	600
10	1000

1500

2000

2500

3000 5000

15

20

25

30

50

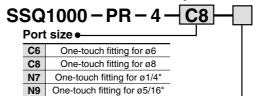
< 4 D side end plate assembly>

SSQ1000 - 3A - 4

< 5 U side end plate assembly>

$$SSQ1000 - 2A - 4$$

< 6 SUP/EXH block assembly>



	O-1-1-		
	Option	1	
	Nil	Common exhaust type	
	R	External pilot	
	S	Built-in silencer, direct exhaust	
Note) Enter "-RS" for both options.			

VQC

SQ

VQ0

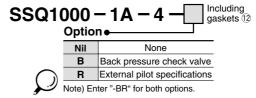
VQ4

VQ5

VQZ

VQD

< Manifold block assembly>



< 8 Element>



Note) Part number for a 10 piece set of elements. Refer to page 2-3-5 for replacement procedures.

< 9 Port plug>

VVQZ2000 - CP

< 10 Fitting assembly>

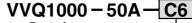
(For P. R port)

`VV		-51	A —	C8

Port	t size ●	
C6	One-touch fitting for ø6	
C8	One-touch fitting for ø8	
N7	One-touch fitting for ø1/4"	
N9	One-touch fitting for ø5/16"	
Note)	Purchasing order is available in ι	inits of 10 pieces

<11 Fitting assembly>

(For cylinder port)



Port size •				
СЗ	One-touch fitting for ø3.2			
C4	One-touch fitting for ø4			
C6	One-touch fitting for ø6			
M5	M5 thread			
N1	One-touch fitting for ø1/8"			
N3	One-touch fitting for ø5/32"			
N7	One-touch fitting for ø1/4"			

Note) Purchasing order is available in units of 10 pieces

< (12) Gasket and screw assembly>





