

# Series SY3000/5000 Base Mounted Monifold Stacking Type/DIN Rail Mounted Individual Wiring

## How to Order Manifold

**SS5Y 3 - 45 - 05 U - C6**

Series	Valve stations
3 SY3000	02 2 stations
5 SY5000	⋮ ⋮
	20 20 stations

### SUP/EXH block assembly mounting position

Symbol	Mounting position	Applicable no. of stations
U	U side	2 to 10 stations
D	D side	2 to 10 stations
B	(Both sides)	2 to 20 stations
M*	Special specifications	

\* For special specifications, indicate separately on the manifold specification sheet.

### A, B port size

#### One-touch fitting (Metric size)

Symbol	Port size	Applicable series
C4	One-touch fitting for $\phi 4$	SY3000
C6	One-touch fitting for $\phi 6$	
M	Mixed	SY5000
C4	One-touch fitting for $\phi 4$	
C6	One-touch fitting for $\phi 6$	
C8	One-touch fitting for $\phi 8$	
M	Mixed	

#### One-touch fitting (Inch size)

Symbol	Port size	Applicable series
N3	One-touch fitting for $\phi 5/32$ "	SY3000
N7	One-touch fitting for $\phi 1/4$ "	
M	Mixed	SY5000
N3	One-touch fitting for $\phi 5/32$ "	
N7	One-touch fitting for $\phi 1/4$ "	
N9	One-touch fitting for $\phi 5/16$ "	
M	Mixed	

\* In the case of mixed specifications (M), indicate separately on the manifold specification sheet.

### Option

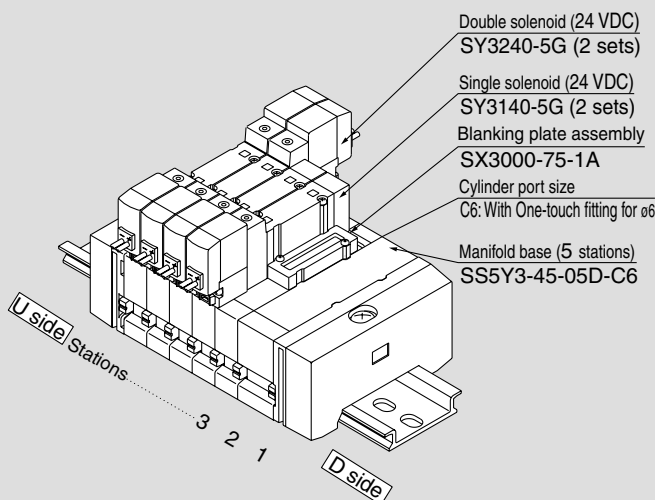
When a longer DIN rail is desired than the specified stations, specify the station number to be required. (20 stations at maximum)



For external pilot specifications and built-in silencer, refer to catalog on page 1-4-194.

## How to Order Valve Manifold Assembly

### Ordering example



**SS5Y3-45-05D-C6** 1 set (Type 45, 5 stations manifold base part no.)  
 \* **SX3000-75-1A** 1 set (Blanking plate assembly part no.)  
 \* **SY3140-5G** 2 sets (Single solenoid part no.)  
 \* **SY3240-5G** 2 sets (Double solenoid part no.)

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

The valve arrangement is numbered as the 1st. station from D side regardless of the mounting position of SUP/EXH block assembly. In ordering, specify the part nos. in the order from the 1st. station on D side. Besides, when the arrangement will be complicated, fill out the manifold specification sheet to instruct us.

## How to Order Valves

SY 5 2 40 [ ] 5 L [ ] [ ]

Series

3	SY3000
5	SY5000

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center

Coil specifications

Nil	Standard
T	With power saving circuit (24, 12 VDC only)

\* Power saving circuit is not available in the case of "D", "DO" or "W□" type.

Rated voltage

DC	
5	24 VDC
6	12 VDC
V	6 VDC
S	5 VDC
R	3 VDC

AC (Hz) 50/60	
1	100 VAC
2	200 VAC
3	110 VAC [115 VAC]
4	220 VAC [230 VAC]

\* DC specifications of type "D" and "DO" is only available with 12 and 24 VDC.  
 \* For type "W□", DC voltage is only available.  
 \* "D" and "DO" only available for SY5000.

Manual override

Nil	Non-locking push type
D	Push-turn locking slotted type
E	Push-turn locking lever type

Light/Surge voltage suppressor

Electrical entry for G, H, L, M, W

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor
Z	With light/surge voltage suppressor
R	With surge voltage suppressor (Non-polar type)
U	With light/surge voltage suppressor (Non-polar type)

\* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.  
 \* For "R" and "U", DC voltage is only available.  
 \* Power saving circuit is only available in the "Z" type.

Electrical entry for D

Nil	Without light/surge voltage suppressor
S	With surge voltage suppressor (Non-polar type)
Z	With light/surge voltage suppressor (Non-polar type)

\* "DOZ" is not available.  
 \* For AC voltage valves there is no "S" option. It is already built-in to the rectifier circuit.

Electrical entry

24, 12, 6, 5, 3 VDC/100, 110, 200, 220 VAC			24, 12 VDC/ 100, 110, 200, 220 VAC	24, 12, 6, 5, 3 VDC
Grommet	L plug connector	M plug connector	DIN terminal	M8 connector
G: Lead wire length 300 mm H: Lead wire length 600 mm	L: With lead wire (Length 300 mm) LN: Without lead wire LO: Without connector	M: With lead wire (Length 300 mm) MN: Without lead wire MO: Without connector	(SY5000) D: With connector DO: Without connector	WO: Without connector cable

\* "LN", "MN" type: with 2 sockets.  
 \* D and DO only available for SY5000.  
 \* DIN terminal type "Y" conforming to DIN43650C standard is also available. For details, refer to page 1-4-201.  
 \* For connector cable of M8 connector, refer to page 1-4-209.

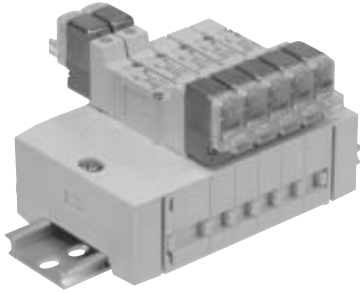
SV

SZ

SY

SYJ

SX



## Manifold Specifications

Model	<b>SS5Y3-45</b>		<b>SS5Y5-45</b>	
Applicable valve	<b>SY3□40</b>		<b>SY5□40</b>	
Manifold type	Stacking type/DIN rail mounted			
P (SUP)/R (EXH)	Common SUP, Common EXH			
Valve stations	2 to 20 stations <sup>Note 1)</sup>			
A, B port	Location	Base		
Porting specifications	Direction	Side		
Port size	P, R port	C8 (One-touch fitting for ø8)	C10 (One-touch fitting for ø10)	
	A, B port	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6)	C4 (One-touch fitting for ø4) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	
Manifold base weight W (g), n: Stations	2 to 10 stations: W = 22n + 118 11 to 20 stations: W = 22n + 140		2 to 10 stations: W = 47n + 156 11 to 20 stations: W = 47n + 190	



Note 1) For more than 11 stations, supply pressure to P port on both sides and exhaust from R port on both sides.

## Flow Characteristics

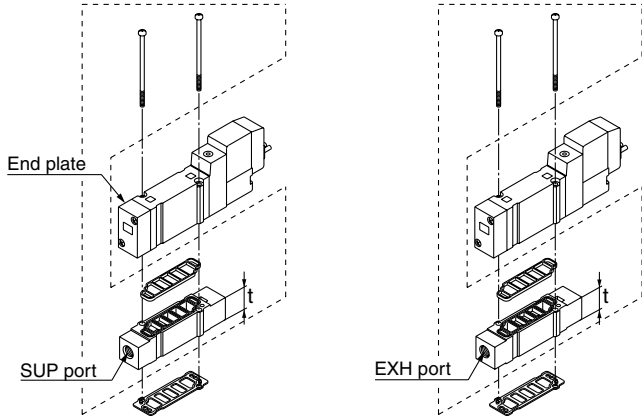
Model	Port size		Flow characteristics					
	1, 5, 3 (P, EA, EB)	4, 2 (A, B)	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)		
			C (dm <sup>3</sup> /s.bar)	b	Cv	C (dm <sup>3</sup> /s.bar)	b	Cv
<b>SS5Y3-45</b>	C8	C6	0.88	0.21	0.22	0.95	0.18	0.22
<b>SS5Y5-45</b>	C10	C8	2.2	0.24	0.53	2.5	0.18	0.58



Note) The value is for manifold base with 5 stations and individually operated 2 position type.

## Manifold Option

▪ Individual SUP spacer assembly    ▪ Individual EXH spacer assembly



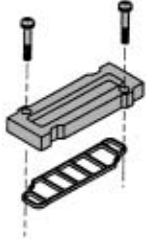
Series	Assembly part no.	Port size	t
SY3000	SY3000-38-2A	M5 x 0.8	11
SY5000	SY5000-38-16*A	1/8	15

Note) The SUP port may be either on the lead wire side or on the end plate side.

Series	Assembly part no.	Port size	t
SY3000	SY3000-39-2A	M5 x 0.8	11
SY5000	SY5000-39-16*A	1/8	15

Note) The EXH port may be either on the lead wire side or on the end plate side.

▪ Blanking plate assembly



Series	Assembly part no.
SY3000	SX3000-75-1A
SY5000	SX5000-76-5A

\* Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

**Caution**

Mounting screw tightening torques

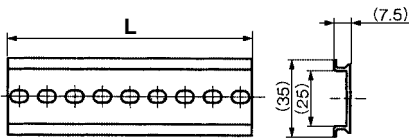
M2: 0.16 N·m  
M3: 0.8 N·m  
M4: 1.4 N·m

▪ Dimensions/DIN rail

VZ1000-11-1-□

Refer to L dimensions

\* Fill in □ with an appropriate no. listed on the table of DIN rail dimensions shown below.



No.	0	1	2	3	4	5	6	7	8	9	10
L Dimension	98	110.5	123	135.5	148	160.5	173	185.5	198	210.5	223
No.	11	12	13	14	15	16	17	18	19	20	21
L Dimension	235.5	248	260.5	273	285.5	298	310.5	323	335.5	348	360.5
No.	22	23	24	25	26	27	28	29	30	31	32
L Dimension	373	385.5	398	410.5	423	435.5	448	460.5	473	485.5	498
No.	33	34	35	36	37	38	39	40	41	42	43
L Dimension	510.5	523	535.5	548	560.5	573	585.5	598	610.5	623	635.5
No.	44	45	46	47	48	49	50	51	52	53	54
L Dimension	648	660.5	673	685.5	698	710.5	723	735.5	748	760.5	773
No.	55	56	57	58	59	60	61	62	63	64	65
L Dimension	785.5	798	810.5	823	835.5	848	860.5	873	885.5	898	910.5
No.	66	67	68	69	70	71					
L Dimension	923	935.5	948	960.5	973	985.5					

\* Refer to L1 dimension on pages starting with page 1-4-126 for lengths that correspond to the number of manifold stations.

▪ SUP block disk

By installing a SUP block disk in the pressure supply passage of a manifold valve, it is possible to supply two or more different high and low pressures to one manifold.



Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

▪ SUP block disk

By installing an EXH block disk in the exhaust passage of a manifold valve, it is possible to divide the valve's exhaust so that it does not affect another valve. (Two block disks are needed to divide both exhausts.)



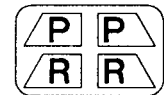
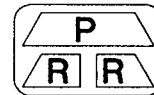
Series	Part no.
SY3000	SX3000-77-1A
SY5000	SX5000-77-1A

▪ L Label for block disk

The labels shown below are used on manifold stations containing SUP/EXH block disk(s) to show their location. (3 pcs. each)

VZ3000-123-1A

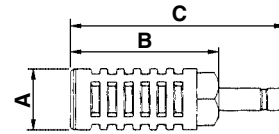
Label for SUP block disk    Label for EXH block disk    Label for SUP/EXH block disk



Note) When a block disk is concurrently ordered by specifying on the manifold specification sheet, etc., a label will be stuck on the position where block disk is mounted.

▪ Silencer with One-touch fitting

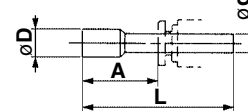
The silencer plugs directly into the One-touch fittings of the manifold.



Series	Model	Effective area	A	B	C
For SY3000 (ø8)	AN203-KM8	14 mm <sup>2</sup>	ø16	26	51
For SY5000 (ø10)	AN200-KM10	26 mm <sup>2</sup>	ø22	53.8	80.8
	AN300-KM10	30 mm <sup>2</sup>	ø25	70	97

▪ L Plug (white)

These are inserted in unused cylinder ports and SUP, EXH ports. Purchasing order is available in units of 10 pieces.



Dimensions

Applicable fittings size ød	Model	A	L	D
4	KQ2P-04	16	32	6
6	KQ2P-06	18	35	8
8	KQ2P-08	20.5	39	10
10	KQ2P-10	22	43	12
1/8"	KQ2P-01	16	31.5	5
5/32"	KQ2P-03	16	32	6
1/4"	KQ2P-07	18	35	8.5
5/16"	KQ2P-09	20.5	39	10

## Manifold Option

### How to Order Interface Regulator (SY3000/5000 only)

#### Series SY3000

ARBY3000-05-P-2

#### Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

#### Pressure gauge connection port

05	Pressure gauge (G15-10-01) [for odd number station]
06	Pressure gauge (G15-10-01) [for even number station]
M1	Plug (M-5P)

\* In the case of Series ARBY3000 with a pressure gauge when mounting on the manifold, use caution that the part numbers are different between the odd no. stations and the even no.

#### Series SY5000

ARBY5000-00-P-2

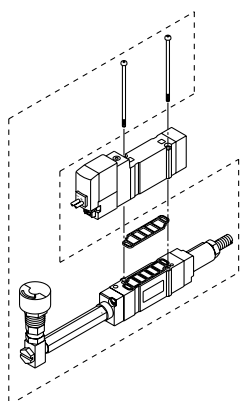
#### Regulating port

P	P port
A1	A port (P controlled type, A port regulation)
B1	B port (P controlled type, B port regulation)

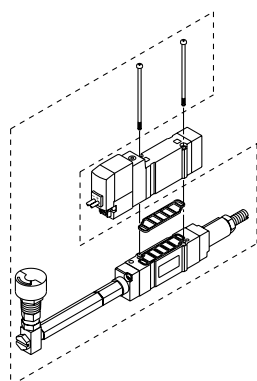
#### Pressure gauge connection port

00	Pressure gauge (G15-10-01)
M1	Plug (M-5P)

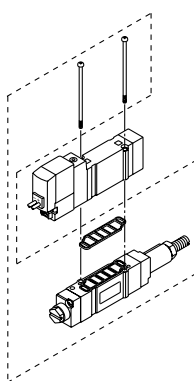
ARBY3000-05-□-2  
(For mounting odd number stations)



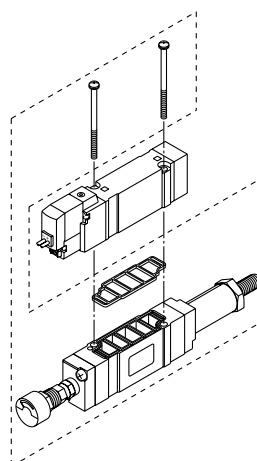
ARBY3000-06-□-2  
(For mounting even number stations)



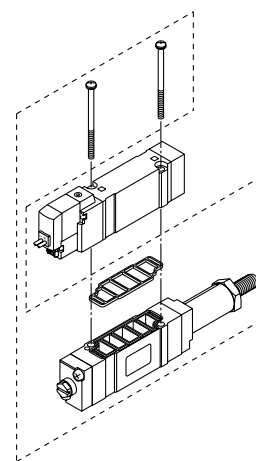
ARBY3000-M1-□-2



ARBY5000-00-□-2



ARBY5000-M1-□-2



### Accessory

Series	Round head combination screw	Gasket
ARBY3000	SY3000-23-10 (M2336)	SX3000-57-4
ARBY5000	M3 x 48.5, Matt nickel plated	SX5000-57-6

### Caution

Mounting screw tightening torques

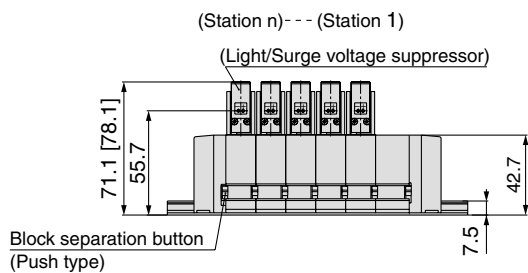
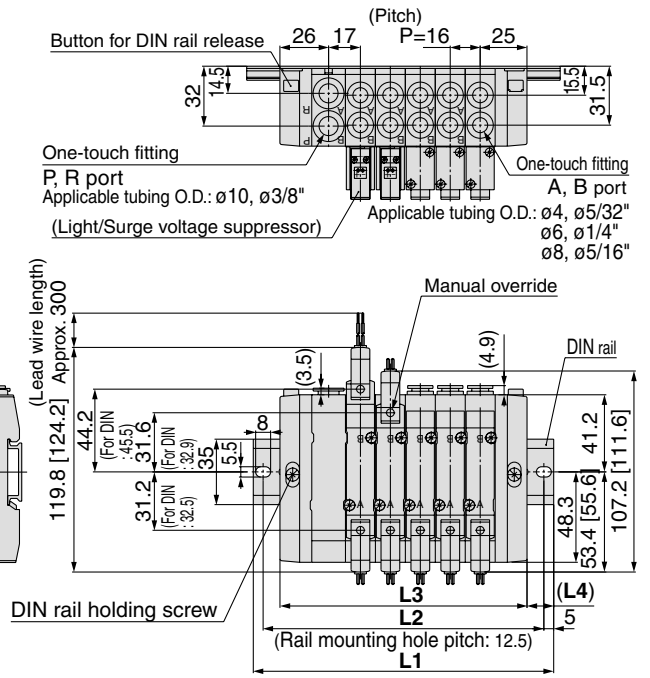
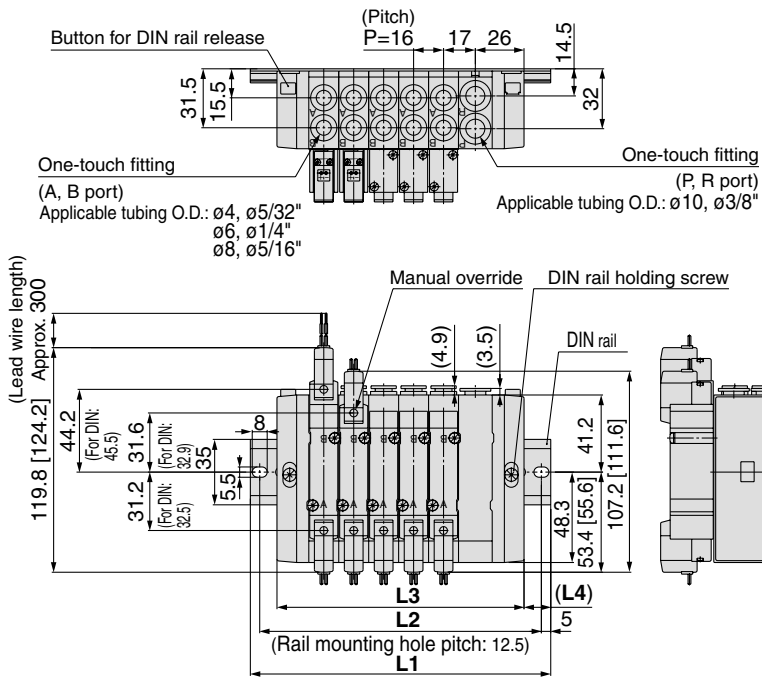
M2: 0.17 N·m  
M3: 0.8 N·m



**Dimensions: Series SY5000**

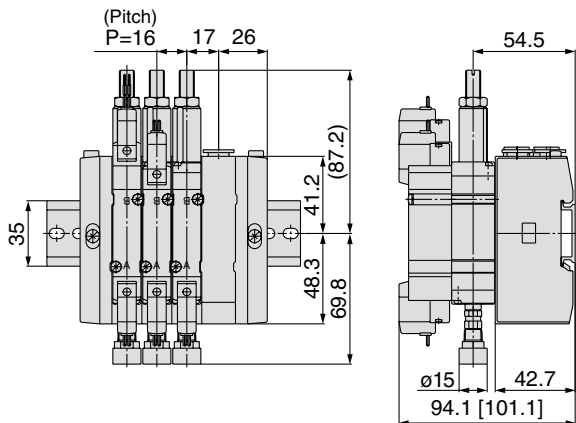
**SS5Y5-45- Stations D-** C4, N3  
C6, N7  
C8, N9

**SS5Y5-45- Stations U-** C4, N3  
C6, N7  
C8, N9



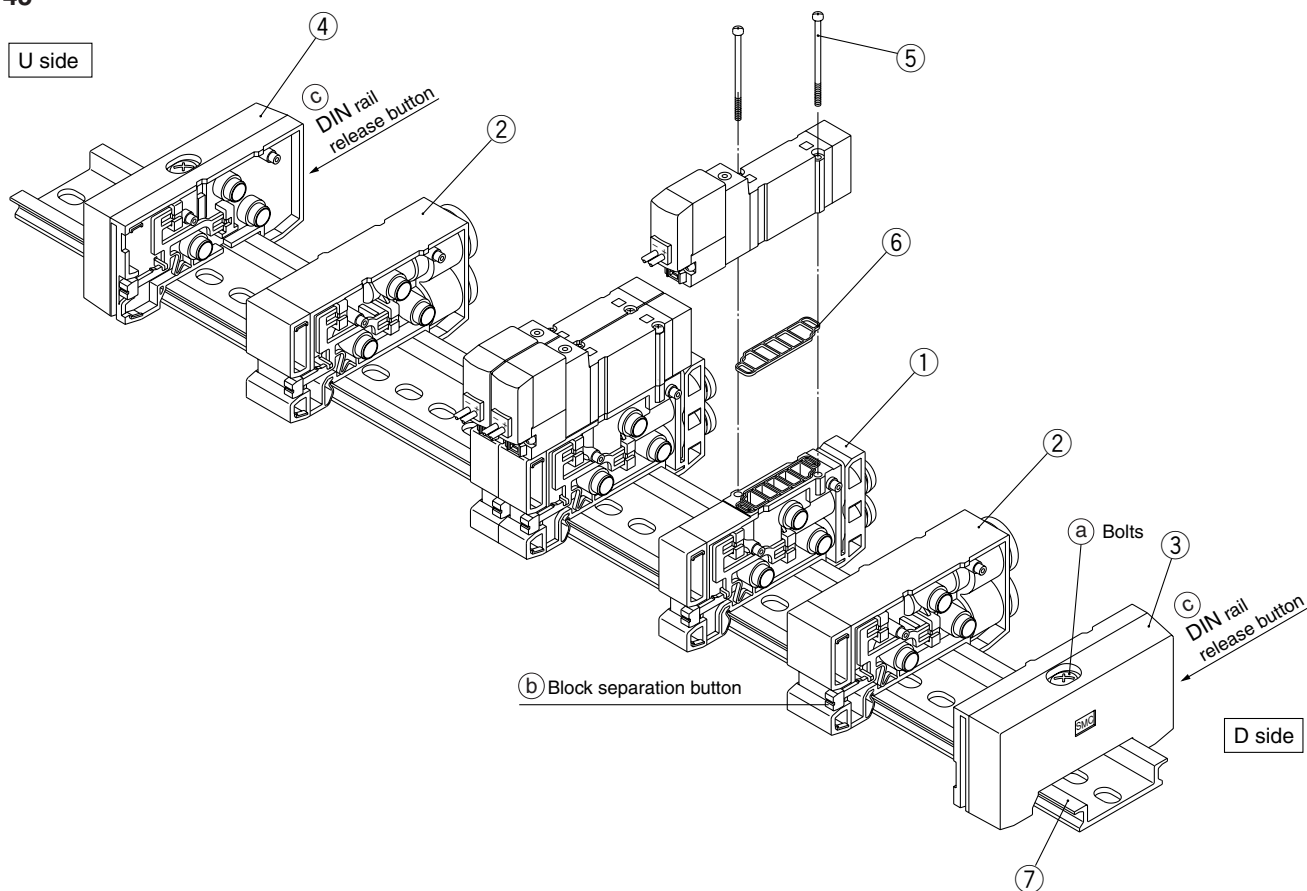
Stations n	2 stations	3	4	5	6	7	8	9	10 stations
<b>L1</b>	110.5	135.5	148	160.5	173	198	210.5	223	235.5
<b>L2</b>	100	125	137.5	150	162.5	187.5	200	212.5	225
<b>L3</b>	84	100	116	132	148	164	180	196	212
<b>L4</b>	13	17.5	16	14	12.5	17	15	13.5	11.5

**With interface regulator (with gauge)**



**DIN Rail Manifold Exploded View**

**Type 45**



**Replacement Parts**

No.	Description	Part no.		Note
		SY3000	SY5000	
①	Manifold block assembly	SX3000-50-1A-□□	SX5000-50-1A-□□	□□: SY3000 (Metric size) C4: With One-touch fitting for ø4 (Inch size) N3: With One-touch fitting for ø 5/32" SY5000 (Metric size) C4: With One-touch fitting for ø4 (Inch size) N3: With One-touch fitting for ø 5/32" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø 1/4" C6: With One-touch fitting for ø6 N7: With One-touch fitting for ø 1/4" C8: With One-touch fitting for ø8 N9: With One-touch fitting for ø 5/16" (Gasket 6 is supplied as an accessory.)
②	SUP/EXH block assembly	(Metric size) SX3000-51-1A (Inch size) SX3000-51-15A	(Metric size) SX3000-51-1A (Inch size) SX5000-51-15A	P, R port SY3000 (Metric size) With One-touch fitting for ø8 (Inch size) With One-touch fitting for ø5/16" P, R port SY5000 (Metric size) With One-touch fitting for ø10 (Inch size) With One-touch fitting for ø3/8"
③	End block assembly R	SX3000-52-1A	SX5000-52-1A	For D side
④	End block assembly R	SX3000-53-1A	SX5000-53-1A	For U side
⑤	Round head combination screw	SY3000-23-4	M3 x 26 (Matt nickel plated)	
⑥	Gasket	SX3000-57-4	SX5000-57-6	
⑦	DIN rail	VZ1000-11-1-□		Refer to page 1-4-123.



## DIN Rail Manifold Exploded View

### How to Increase Manifold Base Station expansion is possible at any position.

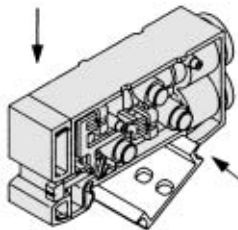
- 1 Loosen bolt (a) fixing the manifold base until it begins to turn idly. (While pressing DIN rail releasing buttons (c), at two locations, separate the manifold base from the DIN rail.)
- 2 Press manifold block assembly dividing button (b), that are at the location where manifold bases are to be added, until button (b) locks, and then separate the block assemblies.
- 3 Mount additional manifold block assembly on the DIN rail as shown in the Fig. (1).
- 4 Press the block assemblies until a click sound is produced, and tighten the bolts (a) to fix them to the DIN rail.  
**⚠ Caution** (Tightening torque: 1.4 N·m)  
 (While lightly holding the blocks after fixing an end block on one side, tighten the other end block for for better sealing.)

#### ⚠ Caution

Note 1) When there are 10 or fewer manifold block assemblies, and more are added to make a total of 11 or more, a supply/exhaust block assembly must also be added.

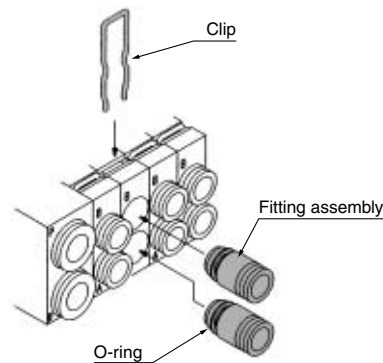
Note 2) When disassembly and assembly are performed, air leakage may result if connections between blocks and tightening of the end block's holding screw, is inadequate. Before supplying air, confirm that there are no gaps, etc. between blocks, and that manifold blocks are securely fastened to the DIN rail. Then supply air and confirm that there is no air leakage before operating.

Fig. (1) Block mounting procedure



Hook the DIN rail here and press down in the direction of the arrow until a click sound is heard.

### How to Change Fitting Assembly



Type 45 manifold permits change in the A and B port sizes by changing the manifold block fitting assembly. After removing the valve, remove the clip with a screwdriver, etc. For mounting a new fitting assembly, insert it and then insert a clip until it will not come out of the manifold block.

#### Fitting Assembly Part No.

##### Metric size

SY3000	One-touch fitting for $\phi 4$	VVQ1000-50A-C4
	One-touch fitting for $\phi 6$	VVQ1000-50A-C6
SY5000	One-touch fitting for $\phi 4$	VVQ1000-51A-C4
	One-touch fitting for $\phi 6$	VVQ1000-51A-C6
	One-touch fitting for $\phi 8$	VVQ1000-51A-C8

##### Inch size

SY3000	One-touch fitting for $\phi 5/32''$	VVQ1000-50A-N3
	One-touch fitting for $\phi 1/4''$	VVQ1000-50A-N7
SY5000	One-touch fitting for $\phi 5/32''$	VVQ1000-51A-N3
	One-touch fitting for $\phi 1/4''$	VVQ1000-51A-N7
	One-touch fitting for $\phi 5/16''$	VVQ1000-51A-N9



Note 1) P and R ports cannot be changed.

Note 2) Use caution that O-rings must be free from scratches and dust. Otherwise, air leakage may result.

SV

SZ

SY

SYJ

SX