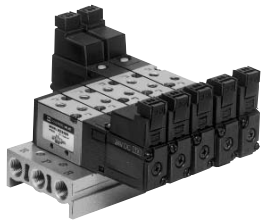
Series VZ3000/Body Ported
Manifold Specifications

Manifold Standard



Manifold Specifications

Model		Type 20
Manifold type		Single base/B mount
P(SUP)/R(EXH)		Common SUP/Common EXH
Valve stations		2 to 20 stations
4(A), 2(B) port location		Valve
Port size	1(P), 3/5(R) port	Rc 1/8
	4(A), 2(B) port	M5 x 0.8, C4, C6

Flow Characteristics

Manifold			Port size		Flow characteristics					
			1(P), 5/3(R) port	2(B), 4(A) port	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R)		
					C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
Body ported For internal pilot	**Type VV5Z3-20**	**VZ3□2□**	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19
			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24

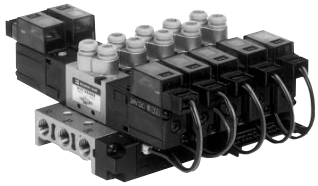
Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-20-031..... 1 pc. (Manifold base)
∗VZ3120-5G-M5..... 2 pcs. (Valve)
∗DXT192-13-1A ..... 1 pc. (Blanking plate assembly)
└→ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Flat Ribbon Cable Manifold

- **One-touch wiring to consolidate connection of external wires.**
- **Clean appearance**
  The flat cable provides wiring on a printed circuit board to the individual valves at the manifold base, enabling the consolidation of external wiring at a touch through a 26 pins MIL connector.



Flat Ribbon Cable Manifold Specifications

Model		Type 20P
Manifold type		Single base/B mount
P(SUP), R(EXH)		Common SUP/Common EXH
Valve stations		3 to 12 stations
4(A), 2(B) port location		Valve
Port size	1(P), 3/5(R) port	Rc 1/8
	4(A), 2(B) port	M5 x 0.8, C4, C6
Applicable flat ribbon cable connector		Socket: 26 pins MIL, with strain relief (Conforming to MIL-C-83503)
Internal wiring		+ COM (For – COM specifications, specify them separately.)
Applicable valve model		VZ3□23-$^{1}_{3}_{5}_{6}$MOZ□-$^{M5}_{C4}_{C6}$
Rated voltage		100 VAC 50/60 Hz, 110 VAC 50/60 Hz, 24 VDC, 12 VDC

Note) Withstand voltage specifications of wiring unit part is equivalent to JIS C 0704 class 1.

Flow Characteristics

Manifold			Port size		Flow characteristics					
			1(P), 5/3(R) port	2(B), 4(A) port	1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R)		
					C [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv
Body ported For internal pilot	**Type VV5Z3-20P**	**VZ3□23**	1/8	M5 x 0.8	0.46	0.39	0.12	0.75	0.32	0.19
			1/8	C4	0.62	0.33	0.16	0.83	0.27	0.20
			1/8	C6	0.79	0.36	0.21	0.91	0.36	0.24

Note) Value at manifold base mounted, 2 position single operating

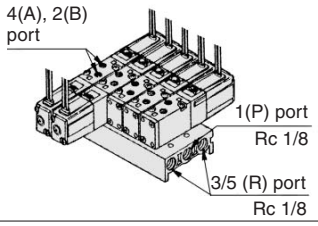
How to Order Manifold

Instruct by specifying the valves, blanking plate assembly and connector assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-20P-07..... 1 pc. (Manifold base)
∗VZ3123-5MOZ-C4..... 3 pcs. (Valve)
∗VZ3223-5MOZ-C4..... 3 pcs. (Valve)
∗DXT192-13-3A..... 1 pc. (Blanking plate assembly)
∗DXT192-52-1-4A..... 3 pcs. (Connector assembly)
∗DXT192-52-2-4A..... 3 pcs. (Connector assembly)
└→ The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Common SUP/Common EXH

Type 20
How to Order

VV5Z3 − 20 − 05 1 − ☐



Stations

02	2 stations
⋮	⋮
20	20 stations

P, R port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

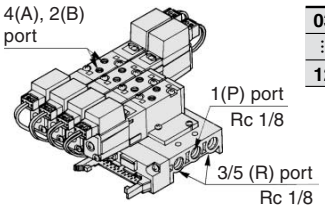
Applicable solenoid valve

VZ3□2□-□ G/L/M/D □□- M5/C4/C6

Applicable blanking plate assembly
DXT192-13-1A
Individual EXH spacer assembly
DXT192-21-1A
Individual SUP spacer assembly
DXT192-40-2A

Flat Ribbon Cable Type 20P
How to Order

VV5Z3 − 20P − 05 ☐



Stations

03	3 stations
⋮	⋮
12	12 stations

P, R port thread type

Nil	Rc
00F	G
00N	NPT
00T	NPTF

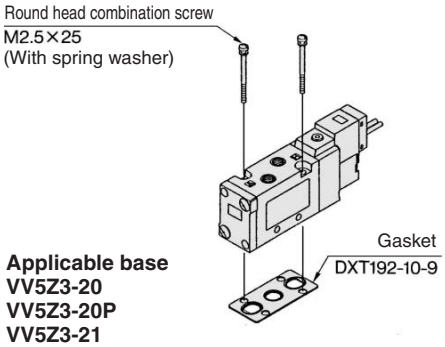
Applicable solenoid valve

VZ3□23- 1/3/5/6 MOZ□- M5/C4/C6

Applicable blanking plate assembly
DXT192-13-3A
Applicable connector assembly
DXT192-52-1-⊠A
(For 2 position single)
DXT192-52-2-⊠A
(For 2 position double, 3 position)
Refer to the page 3-10-33 regarding how to order applicable connector assemblies. (1: 100 VAC, 3: 110 VAC, 4: DC).

Option

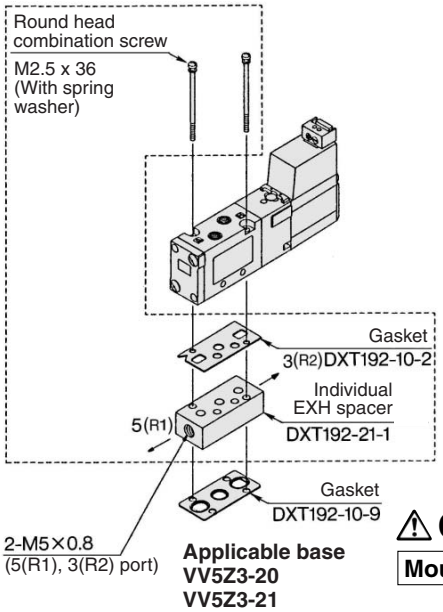
Combinations of Solenoid Valve, Gasket and Manifold Base



Applicable base
VV5Z3-20
VV5Z3-20P
VV5Z3-21

Individual EXH Spacer Assembly

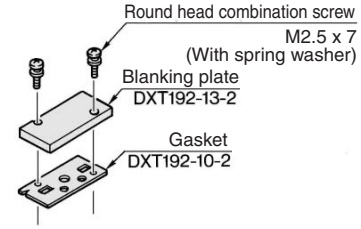
DXT192-21-1A



Applicable base
VV5Z3-20
VV5Z3-21

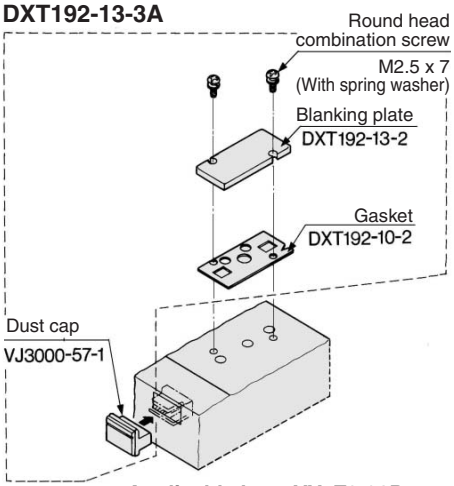
Blanking Plate Assembly

DXT192-13-1A



Applicable base
VV5Z3-20
VV5Z3-21

DXT192-13-3A



Applicable base VV5Z3-20P

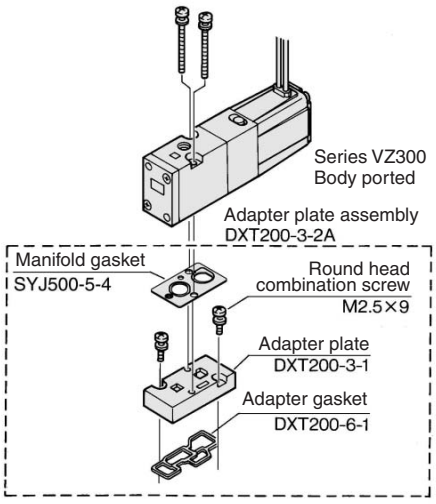
Note) Please contact SMC when using an individual SUP spacer assembly, an individual EXH spacer assembly, or an adapter plate assembly on type 20P.

Option

Installation of the VZ300 Valve on the VZ3000 Manifold

- Use of an adaptor plate makes it possible to mount Series VZ300 on the manifold base of Series VZ3000.
- The mounting direction is shown in the diagram below. Mount the solenoid so that it will be on the same side as the single solenoid of the Series VZ3000.

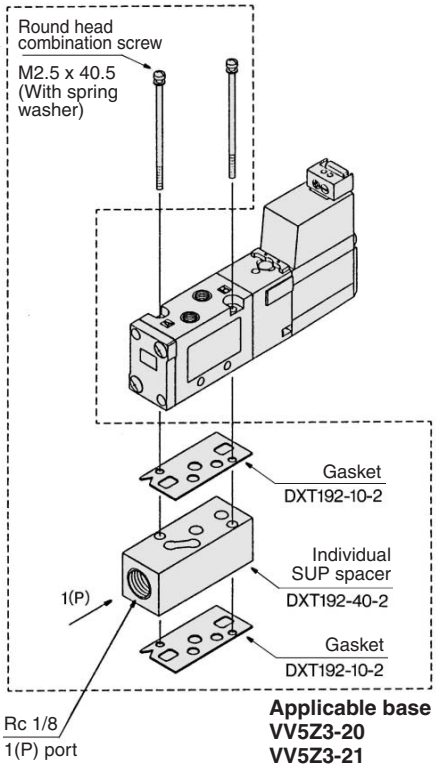
Adapter plate assembly
DXT200-3-2A



Applicable base
VV5Z3-20
VV5Z3-21

Individual SUP Spacer Assembly

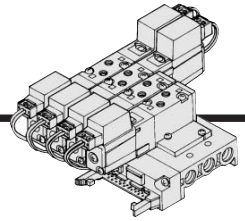
DXT192-40-2A



Applicable base
VV5Z3-20
VV5Z3-21

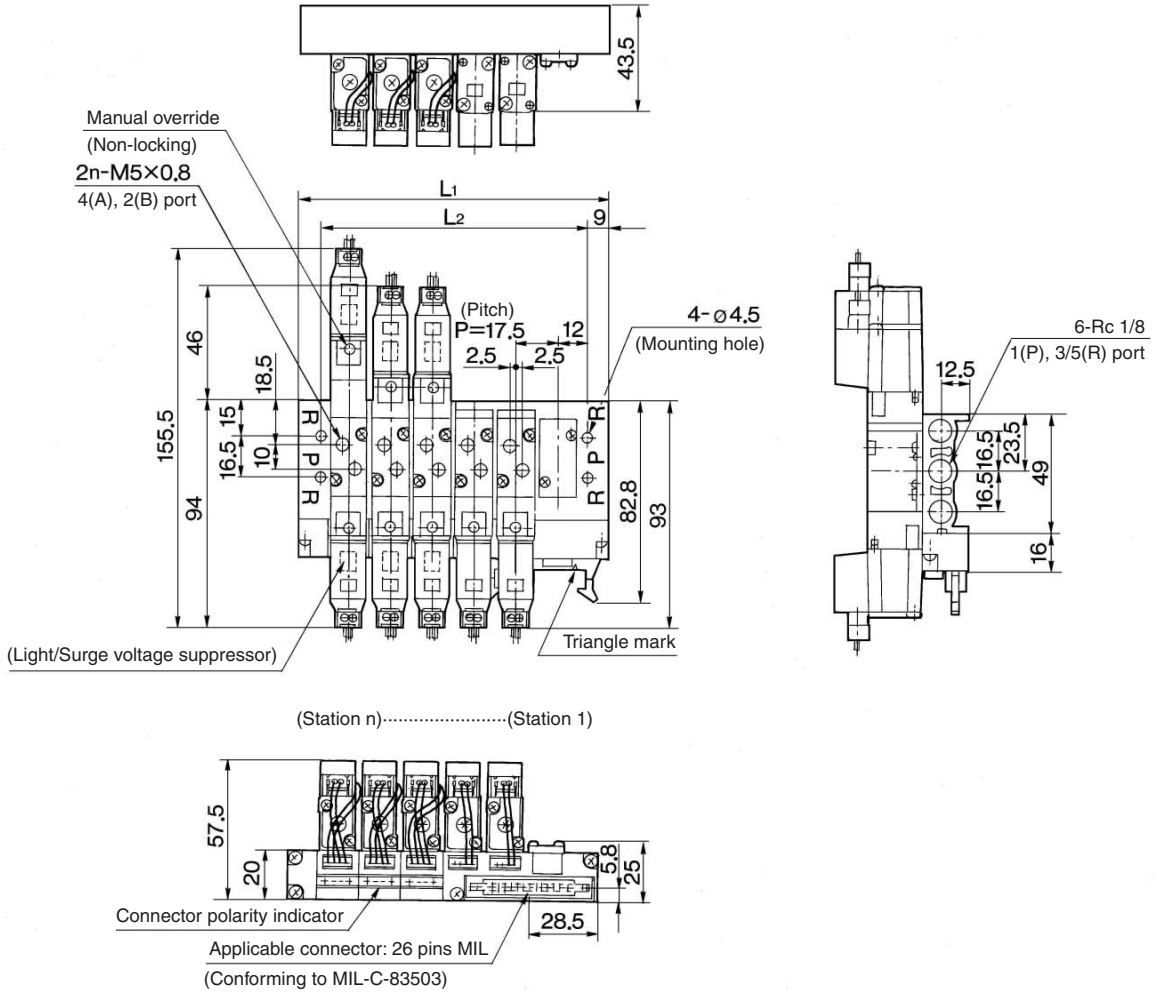
⚠ Caution

Mounting Screw Tightening Torques **M2.5: 0.45 N·m**



Type 20P Flat Ribbon Cable Manifold

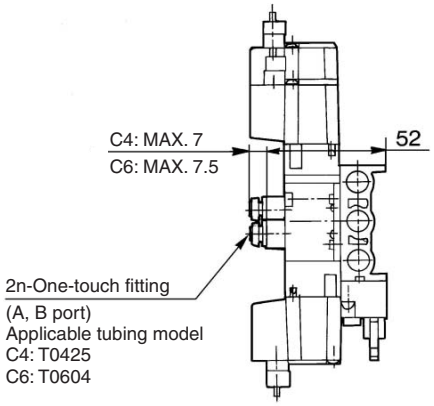
VV5Z3-20P-Station



(mm)

Stations	3	4	5	6	7	8	9	10	11	12
L_1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L_2	59	76.5	94	111.5	129	146.5	164	181.5	199	216.5

Built-in One-touch fittings



Series VZ3000/Base Mounted
Manifold Specifications

Manifold Standard

Manifold Specifications

Model		Type 40	Type 41	Type 42	Type 43
Manifold type		Single base/B mount			
P(SUP)/R(EXH)		Common SUP/Common EXH			
Valve stations		2 to 20 stations			
4(A), 2(B) port Porting specifications	Position	Base	Base		
	Direction	Bottom	Side		
Port size	1(P), 3/5(R) port	Rc 1/8		Rc 1/4	Rc 1/8
	4(A), 2(B) port	M5 x 0.8		Rc 1/8 C6 (One-touch fitting for ø6) B7 (One-touch fitting for 1/4")	C4 (One-touch fitting for ø4) B3 (One-touch fitting for 5/32")

Flow Characteristics

Manifold		Port size 1(P), 5/3(R) port	Port size 2(B), 4(A) port	Flow characteristics 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	Flow characteristics 4/2 → 5/3 (A/B → R) C [dm³/(s·bar)]	b	Cv
VV5Z3-40	**VZ3□4□**	1/8	M5 x 0.8	0.55	0.35	0.15	0.64	0.26	0.16
VV5Z3-41		1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17
VV5Z3-42-01		1/4	1/8	0.74	0.22	0.18	0.82	0.31	0.21
VV5Z3-42-C6		1/4	C6	0.71	0.24	0.17	0.80	0.29	0.20
VV5Z3-43		1/8	C4	0.55	0.29	0.14	0.74	0.32	0.19

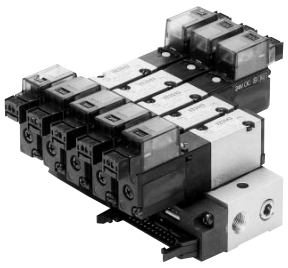
Note) Value at manifold base mounted, 2 position single operating

How to Order Manifold

Instruct by specifying the valves and blanking plate assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-40-031-M5·····1 pc. (Manifold base)
∗VZ3140-5G-M5·····2 pcs. (Valve)
∗DXT192-13-1A·····1 pc. (Blanking plate assembly)
VV5Z3-43-031-C4·····1 pc. (Manifold base)
∗VZ3140-5LZ·····1 pc. (Valve)
∗VZ3240-5LZ·····1 pc. (Valve)
∗DXT192-13-1A·····1 pc. (Blanking plate assembly)
→The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Flat Ribbon Cable Manifold

- **One-touch wiring to consolidate connection of external wires.**
- **Clean appearance**
  The flat cable provides wiring on a printed circuit board to the individual valves at the manifold base, enabling the consolidation of external wiring at a touch through a 26 pins MIL connector.



Flat Ribbon Cable Manifold Specifications

Model		Type 41P	Type 43P
Manifold type		Single base/B mount	
P(SUP), R(EXH)		Common SUP/Common EXH	
Valve stations		3 to 12 stations	
4(A), 2(B) port location	Position	Base	
	Direction	Side	
Port size	1(P), 3/5(R) port	Rc 1/8	Rc 1/8
	4(A), 2(B) port	M5 x 0.8	C4 (One-touch fitting for ø4)
Applicable flat ribbon cable connector		Socket: 26 pins MIL, with strain relief (Conforming to MIL-C-83503)	
Internal wiring		+COM specifications (For –COM specifications, specify them separately.)	
Applicable valve model		VZ3□43-$\frac{1}{3}\frac{3}{5}\frac{}{6}$MOZ□-VZ3□53-$\frac{1}{3}\frac{3}{5}\frac{}{6}$MOZ□	
Rated voltage		100 VAC 50/60 Hz, 110 VAC 50/60 Hz, 24 VDC, 12 VDC	

Note) Withstand voltage specifications of wiring unit part is equivalent to JIS C 0704 class 1.

Flow Characteristics

Manifold		Port size 1(P), 5/3(R) port	Port size 2(B), 4(A) port	Flow characteristics 1 → 4/2 (P → A/B) C [dm³/(s·bar)]	b	Cv	Flow characteristics 4/2 → 5/3 (A/B → R) C [dm³/(s·bar)]	b	Cv
VV5Z3-41P	**SYJ5□43**	1/8	M5 x 0.8	0.59	0.35	0.16	0.68	0.23	0.17
VV5Z3-43P		1/8	C4	0.59	0.29	0.14	0.74	0.32	0.19

Note) Value at manifold base mounted, 2 position single operating

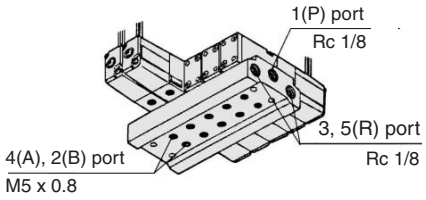
How to Order Manifold

Instruct by specifying the valves, blanking plate assembly and connector assembly to be mounted on the manifold along with the manifold base model no.
(Example) VV5Z3-43P-07-C4·····1 pc. (Manifold base)
∗VZ3143-5MOZ····· 3 pcs. (Valve)
∗VZ3243-5MOZ····· 3 pcs. (Valve)
∗DXT192-13-3A····· 1 pc. (Blanking plate assembly)
∗DXT192-52-1-4A····· 3 pcs. (Connector assembly)
∗DXT192-52-2-4A····· 3 pcs. (Connector assembly)
→The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Common SUP/Common EXH

Note) For more than 8 stations, supply air to both sides of 1(P) port and exhaust air from both sides of 3/5(R) port.

Type 40



How to Order

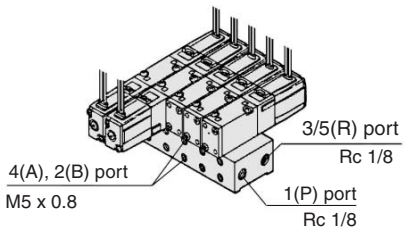
VV5Z3 − 40 − 05 2 − M5 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
M5	M5 x 0.8

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Type 41



How to Order

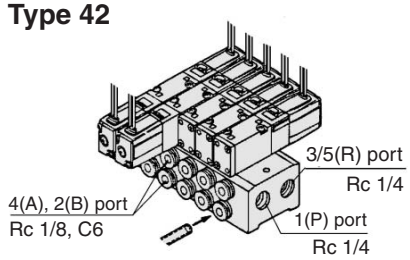
VV5Z3 − 41 − 05 1 − M5 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
M5	M5 x 0.8

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Type 42



How to Order

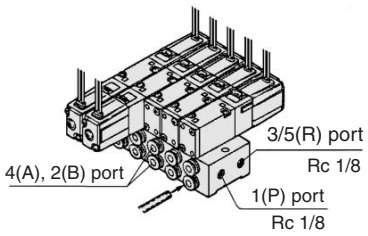
VV5Z3 − 42 − 05 1 − C6 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
01	Rc 1/8
C6	One-touch fitting for ø6
B7	One-touch fitting for 1/4"

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Type 43



How to Order

VV5Z3 − 43 − 05 1 − C4 □

Stations	
02	2 stations
⋮	⋮
20	20 stations

4(A), 2(B) port size	
C4	One-touch fitting for ø4
B3	One-touch fitting for 5/32"

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Applicable solenoid valve

VZ3□4□-□ G L M D □□

VZ3□5□-□ G L M D □□

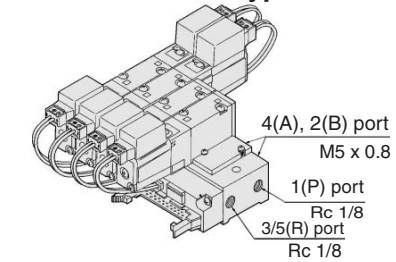
Applicable blanking plate assembly
DXT192-13-1A

Applicable individual EXH spacer assembly
DXT192-21-1A

Applicable individual SUP spacer assembly
(Except VV5Z3-40 type)
DXT192-40-1A

Applicable interface regulator
ARBZ3000-00-P

Flat ribbon cable type 41P



How to Order

VV5Z3 − 41P − 05 − M5 □

Stations	
03	3 stations
⋮	⋮
12	12 stations

4(A), 2(B) port size	
M5	M5 x 0.8

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Applicable solenoid valve

VZ3□43- 1 3 5 6 MOZ□

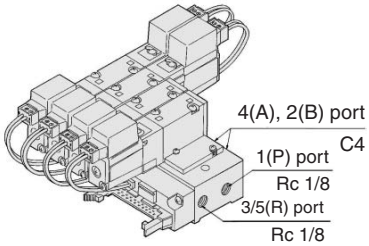
VZ3□53- 1 3 5 6 MOZ□

Applicable blanking plate assembly
DXT192-13-3A

Applicable connector assembly
DXT192-52-1-∗A
(For 2 position single)
DXT192-52-2-∗A
(For 2 position double, 3 position)
∗ 1: 100 VAC, 3: 110 VAC, 4: DC

For "How to order applicable connector assemblies", refer to page 3-3-7.

Flat ribbon cable type 43P



How to Order

VV5Z3 − 43P − 05 − C4 □

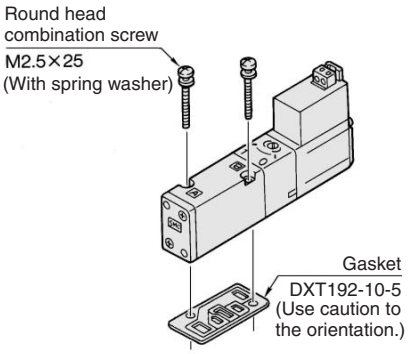
Stations	
03	3 stations
⋮	⋮
12	12 stations

4(A), 2(B) port size	
C4	One-touch fitting for ø4
B3	One-touch fitting for 5/32"

1(P), 3/5(R) port thread type	
Nil	Rc
F	G
N	NPT
Z	NPTE

Option/Standard Manifold, Flat Ribbon Cable Manifold

Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



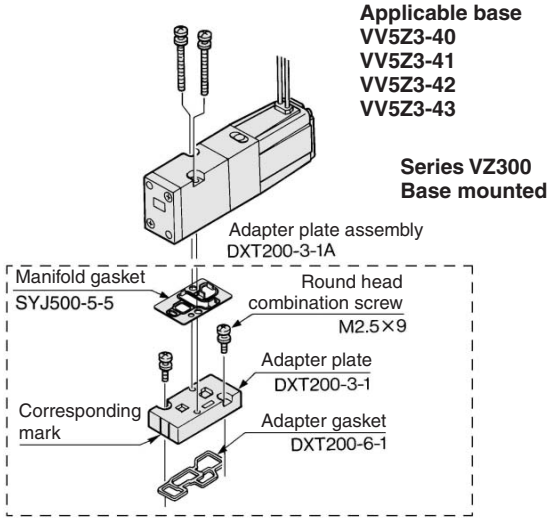
Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43
VV5Z3-41P
VV5Z3-43P

Installation of the VZ300 Valve on the VZ3000 Manifold

- Use of an adaptor plate makes it possible to mount Series VZ300 on the manifold base of Series VZ3000.
- The mounting direction is shown in the diagram below. Mount the solenoid so that it will be on the same side as the single solenoid of the Series VZ3000.
- 2(A) port of 3 port valve should be 2(B) port of manifold base.

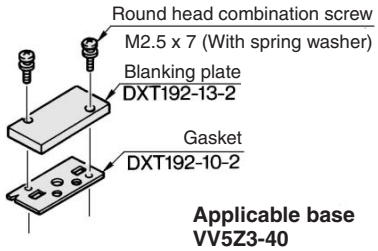
Adapter Plate Assembly DXT200-3-1A

Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43



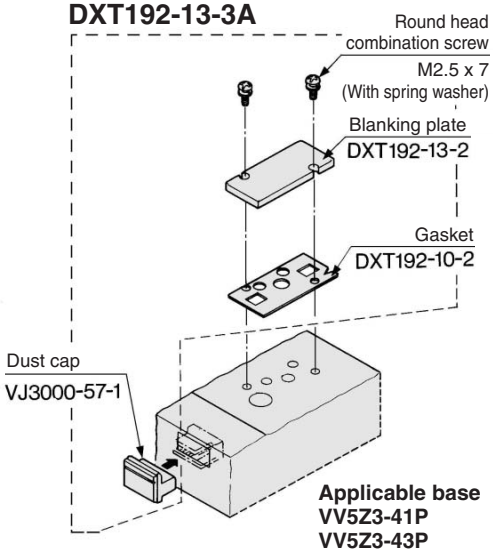
Blanking Plate Assembly

DXT192-13-1A



Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43

DXT192-13-3A

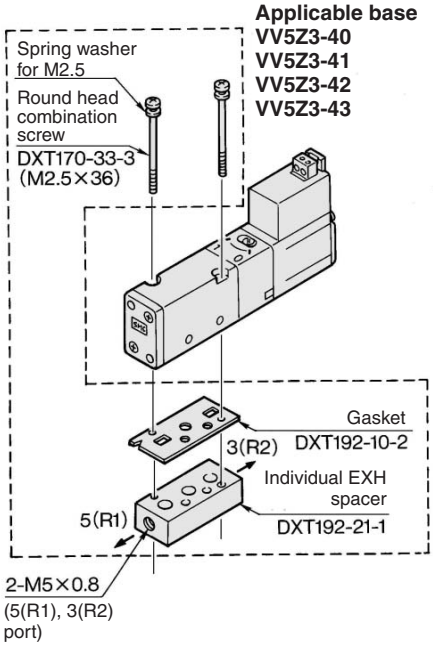


Applicable base
VV5Z3-41P
VV5Z3-43P

Individual EXH Spacer Assembly

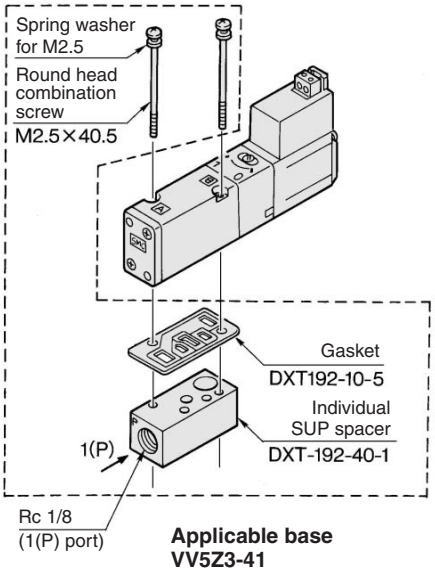
DXT192-21-1A

Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43



Individual SUP Spacer Assembly

DXT192-40-1A

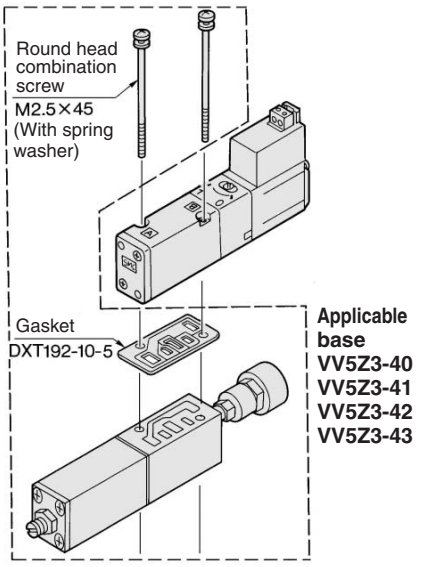


Applicable base
VV5Z3-41
VV5Z3-42
VV5Z3-43

Interface regulator (P port regulation)

Interface regulator can be placed on top of the manifold base to reduce the pressure of each of the valves.

ARBZ3000-00-P



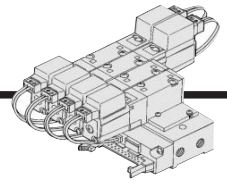
Applicable base
VV5Z3-40
VV5Z3-41
VV5Z3-42
VV5Z3-43

Before using, refer to page 3-3-8.

Note) Please contact SMC when using an individual EXH spacer assembly, an individual SUP spacer assembly, an adapter plate assembly, or an interface regulator on 41P and 43P types.

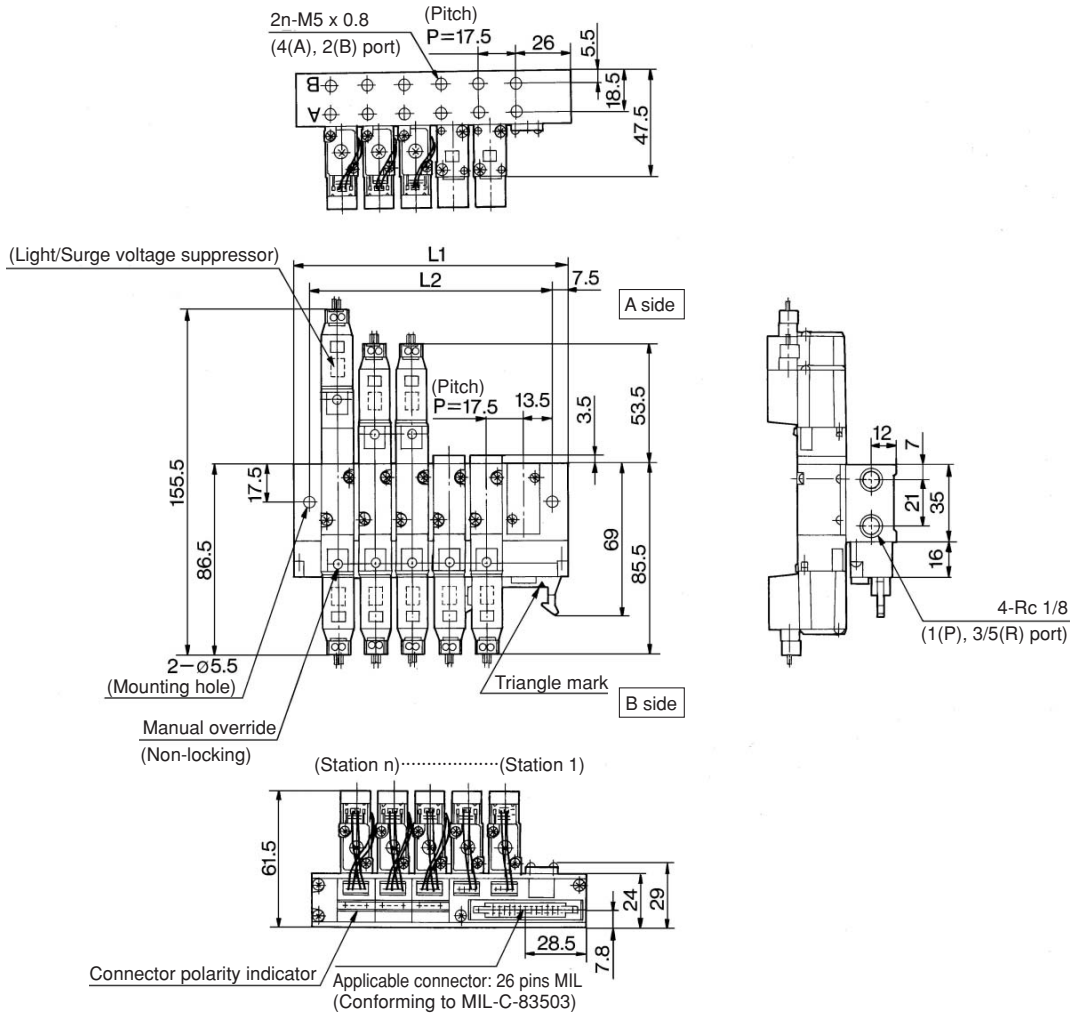
⚠ Caution

Mounting Screw Tightening Torques **M2.5: 0.45 N·m**

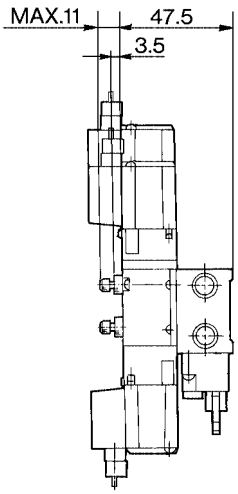


Type 41P Flat Ribbon Cable Manifold: Side Ported

VV5Z3-41P-Station-M5

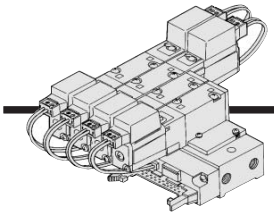


Built-in speed controllers



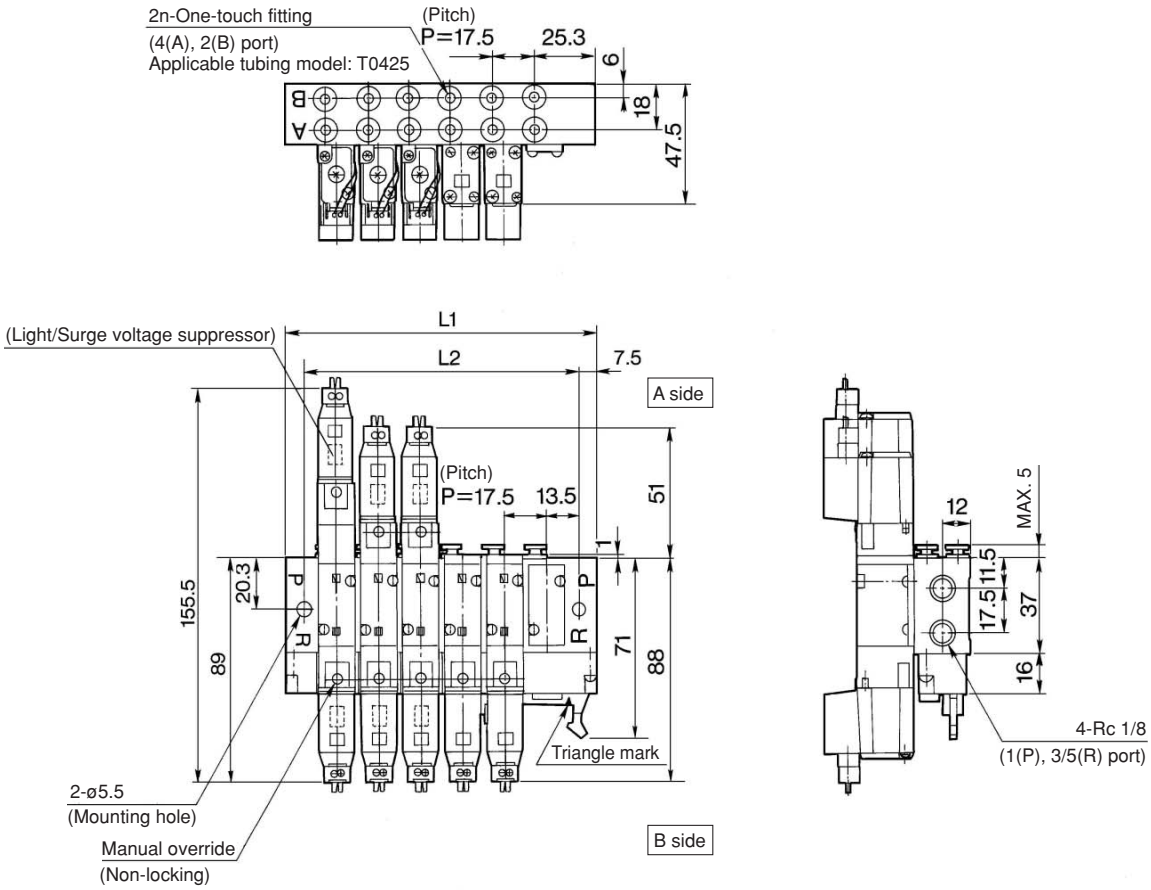
(mm)

Stations	3	4	5	6	7	8	9	10	11	12
L_1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L_2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5



Type 43P Flat Ribbon Cable Manifold: Side Ported

VV5Z3-43P-Station-C4



Built-in speed controllers

(mm)

Stations	3	4	5	6	7	8	9	10	11	12
L_1	77	94.5	112	129.5	147	164.5	182	199.5	217	234.5
L_2	62	79.5	97	114.5	132	149.5	167	184.5	202	219.5