

# 5 Port Solenoid Valve Body Ported Series VZ5000

## How to Order

**Body ported VZ5** 1 2 0 5 L [ ] [ ] 01 [ ] [ ]

**Type of actuation**

- 1: 2 position single solenoid (A) (B) (R<sub>1</sub>) (P) (R<sub>2</sub>)
- 2: 2 position double solenoid (A) (B) (R<sub>1</sub>) (P) (R<sub>2</sub>)
- 3: 3 position closed center (A) (B) (R<sub>1</sub>) (P) (R<sub>2</sub>)
- 4: 3 position exhaust center (A) (B) (R<sub>1</sub>) (P) (R<sub>2</sub>)
- 5: 3 position pressure center (A) (B) (R<sub>1</sub>) (P) (R<sub>2</sub>)

**Body option**

- 0: Individual exhaust for the pilot valve
- 3: Common exhaust type for main and pilot valve

**Rated voltage**

1	100 VAC, 50/60 Hz
2	200 VAC, 50/60 Hz
3*	110 VAC, 50/60 Hz
4*	220 VAC, 50/60 Hz
5*	24 VDC
6	12 VDC
9*	Other

**Electrical entry**

Grommet	L plug connector	M plug connector	DIN terminal
<b>G:</b> Lead wire length 300 mm	<b>L:</b> With lead wire (Length 300 mm)	<b>M:</b> With lead wire (Length 300 mm)	<b>D:</b> With connector
<b>H:</b> Lead wire length 600 mm	<b>LN:</b> Without lead wire	<b>LO:</b> Without connector	<b>DO:</b> Without connector

**Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

**4(A), 2(B) port size**

01	Rc 1/8
C6	One-touch fitting for ø6
C8	One-touch fitting for ø8

Note) P, R1, R2 port: Rc 1/8

**Manual override**

- Nil: Non-locking push type
- B: Locking type B (Slotted)
- C: Locking type C (Manual)

**Light/Surge voltage suppressor**

Nil	None
Z*	With light/surge voltage suppressor
S	With surge voltage suppressor

**Option**

- F: With foot bracket (2 position single type only)

Note) Do not remove the factory installed bracket from models with the bracket option.

\* Type "LN", "MN": With 2 sockets.

\* Not available for "GZ", "HZ" and "DOZ"

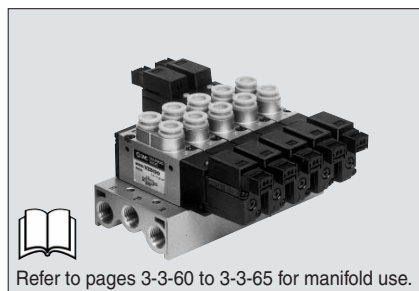
- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

# Series VZ5000

Applicable for cylinder actuation (up to  $\phi 50$ ).

Compact size  
(Width: 18 mm)

Low power consumption:  
1.8 W DC



Refer to pages 3-3-60 to 3-3-65 for manifold use.



**Made to Order Specifications**  
(For details, refer to page 3-3-85.)

## Specifications

Fluid	Air	
Operating pressure range (MPa)	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50°C (No freezing. Refer to page 3-13-4.)	
Response time (ms) <sup>(1)</sup> (at the pressure of 0.5 MPa)	2 position single, double	20 or less
	3 position	50 or less
Max. operating frequency (Hz)	2 position single, double	10
	3 position	3
Effective area	Refer to the table below.	
Manual override <sup>(2)</sup>	Non-locking push type, Locking slotted type, Locking lever type	
Pilot exhaust method	Individual pilot exhaust type, Common exhaust (pilot and main valve) type	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact/Vibration resistance (m/s <sup>2</sup> ) <sup>(3)</sup>	300/50	
Enclosure	Dustproof	

Note 1) Based on dynamic performance test, JIS B 8375-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor)

Note 2) When operating the locking type manually, apply torque of 0.2 N·m or less.

Note 3) 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)

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)

## Solenoid Specifications

\* Option

Electrical entry	Grommet (G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D)	
Coil rated voltage (V)	AC 50/60 Hz	100, 200, 24*, 48*, 110*, 220*
	DC	24, 6*, 12*, 48*
Allowable voltage fluctuation (%)	-15 to +10% of rated voltage	
Power consumption (W) <sup>Note)</sup> [Current mA]	DC 1.8 (With indicator light 2.1) [24 VDC: 75 (With indicator light 87.5)]	
Apparent power (VA) <sup>Note)</sup> [Current mA]	AC	Inrush 4.5/50 Hz, 4.2/60 Hz [ 100 VAC: 45/50 Hz, 42/60 Hz 200 VAC: 22.5/50 Hz, 21/60 Hz ]
		Holding 3.5/50 Hz, 3/60 Hz [ 100 VAC: 35/50 Hz, 30/60 Hz 200 VAC: 17.5/50 Hz, 15/60 Hz ]
Surge voltage suppressor	DC: Diode, AC: ZNR	
Indicator light	DC: LED (Red), AC: Neon bulb	

Note) At rated voltage

# 5 Port Solenoid Valve Body Ported Series VZ5000

## Flow Characteristics/Weight

Valve model	Type of actuation		Port size		Flow characteristics <sup>Note)</sup>						Weight (g)
			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 [dm³/(s·bar)]	b	Cv	C [dm³/(s·bar)]	b	Cv	
VZ5□20-□-01	2 position	Single	Rc 1/8	Rc 1/8	2.2	0.36	0.58	2.4	0.34	0.63	120
		Double			160						
	3 position	Closed center			1.8	0.37	0.45	2.0	0.35	0.49	160
		Exhaust center			1.2	0.50	0.34	3.0[1.3]	0.35[0.52]	0.73[0.39]	
Pressure center	3.0 [0.83]	0.37[0.50]	0.78[0.25]	1.8	0.37	0.45					
VZ5□20-□-C6	2 position	Single	Rc 1/8	C6 (One-touch fitting for ø6)	1.6	0.33	0.4	2.2	0.32	0.53	
		Double			160						
	3 position	Closed center			1.4	0.27	0.35	1.9	0.33	0.49	160
		Exhaust center			1.1	0.37	0.27	2.5[1.3]	0.32[0.54]	0.61[0.38]	
Pressure center	1.8 [0.78]	0.36[0.40]	0.45[0.22]	1.6	0.30	0.39					
VZ5□20-□-C8	2 position	Single	Rc 1/8	C8 (One-touch fitting for ø8)	2.0	0.39	0.52	2.3	0.34	0.61	
		Double			160						
	3 position	Closed center			1.7	0.35	0.42	2.0	0.29	0.49	160
		Exhaust center			1.2	0.38	0.33	2.6[1.3]	0.35[0.49]	0.67[0.38]	
Pressure center	1.9 [0.86]	0.57[0.46]	0.59[0.25]	1.7	0.39	0.42					

Note) [ ]: Denotes the normal position. Exhaust center: 4/2 → 5/3, Pressure center: 1 → 4/2

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

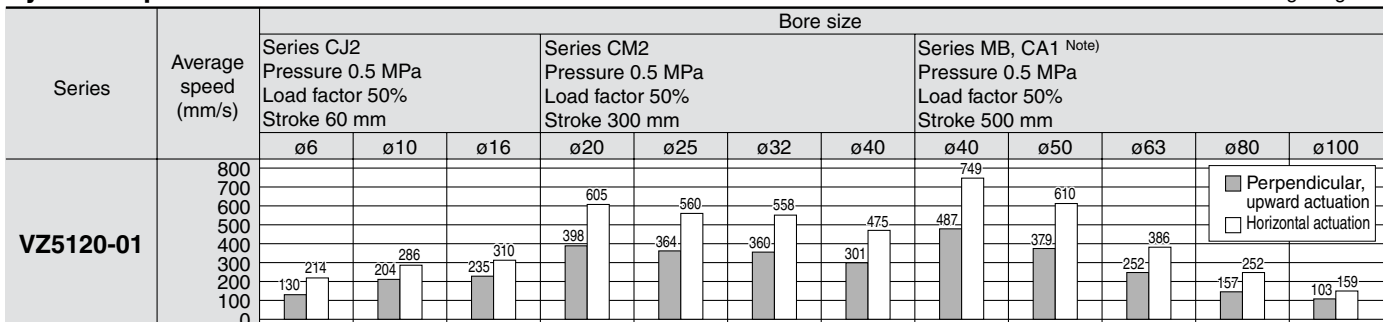
EVS

VFN

## Cylinder Speed Chart

Use as a guide for selection.

Please confirm the actual conditions with SMC Sizing Program.



\* It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.

\* The average velocity of the cylinder is what the stroke is divided by the total stroke time.

\* Load factor: ((Load weight x 9.8)/Theoretical force) x 100%

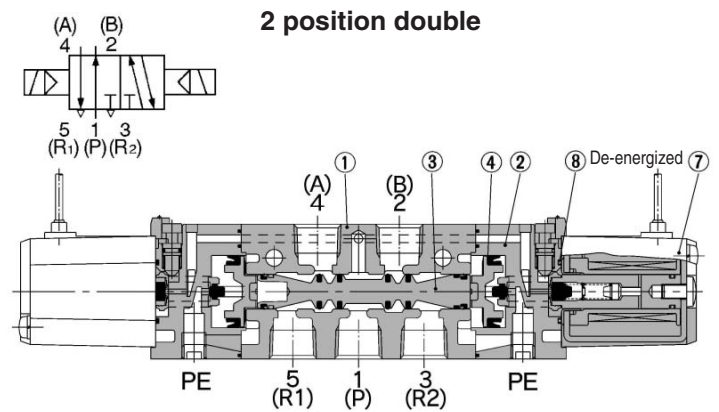
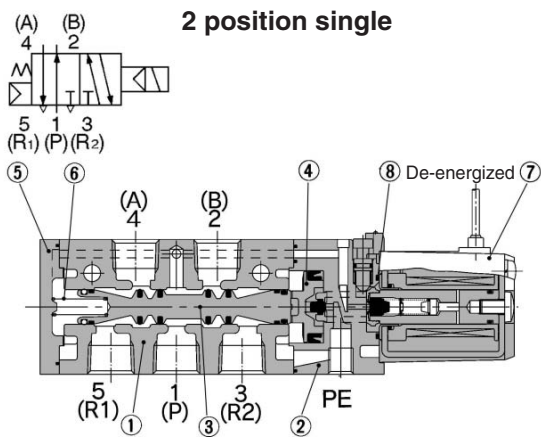
Note) The Series CA1 has been changed to the Series CA2.

## Conditions

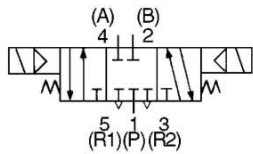
	Body ported	Series CJ2	Series CM2	Series MB
VZ5120-01	Tube bore x Length	ø6 x 1 m	ø6 x 1 m	ø12 x 1 m
	Speed controller	AS2301F-06	AS3301F-06	AS4001F-12
	Silencer	AN110-01	AN200-02	

# Series VZ5000

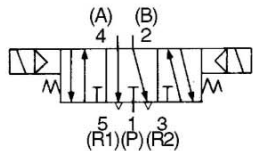
## Construction



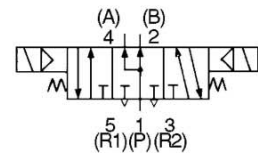
3 position closed center



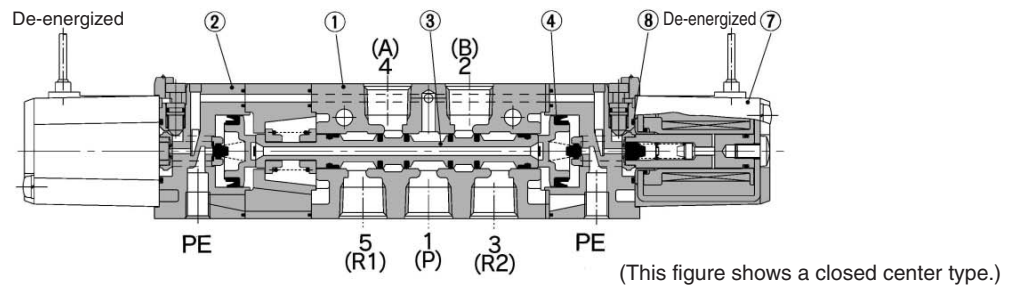
3 position exhaust center



3 position pressure center



**3 position closed center/exhaust center/pressure center**



### Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver
②	Piston plate	Resin	Black
③	Piston	Resin	
④	Spool valve	Aluminum, HNBR	
⑤	End cover	Resin	Black painted
⑥	Spool spring	Stainless steel	

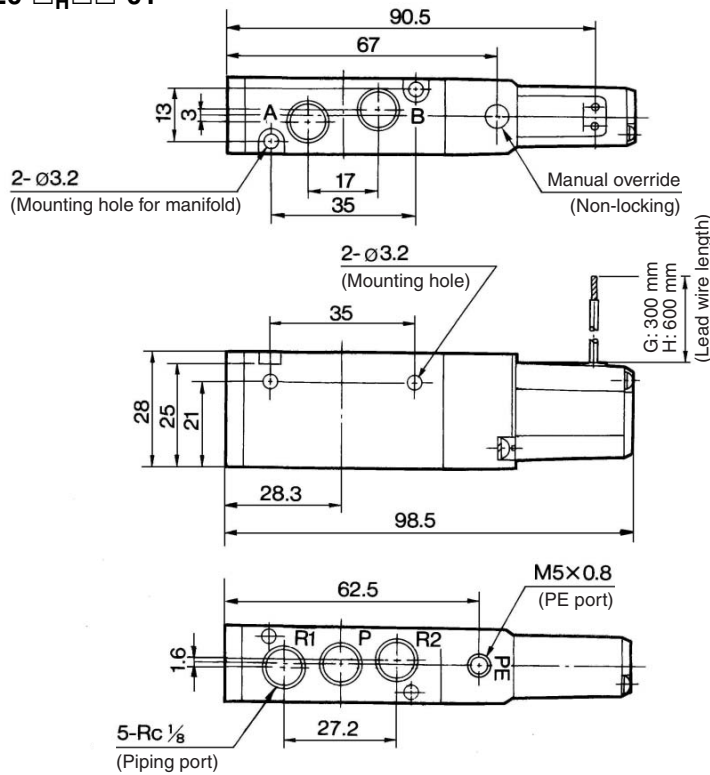
### Replacement Parts

No.	Description	Material	Part no.	Note
⑦	Solenoid assembly	Epoxy/Stainless steel	DXT170-C-□□□	
⑧	O-ring	NBR	13 x 11 x 1	Common with Series VZ <sub>3</sub> 000

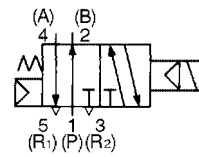
# 5 Port Solenoid Valve Body Ported Series VZ5000

## 2 Position Single

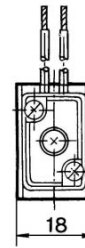
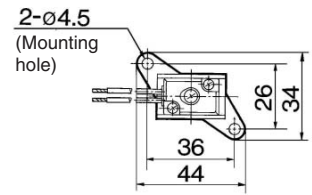
**Grommet (G), (H)**  
VZ5120-□G□□-01



VZ5120



**Foot bracket**  
VZ5120-□G□□-01-F



VK

VZ

VF

VFR

VP4

VZS

VFS

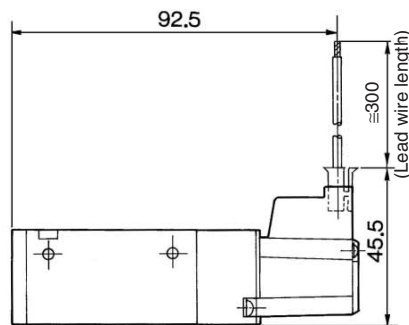
VS4

VQ7

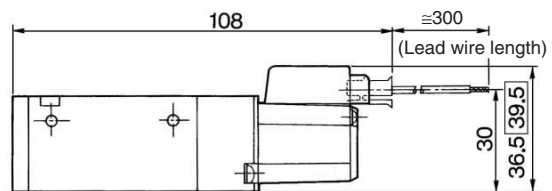
EVS

VFN

**L plug connector (L)**  
VZ5120-□L□□-01

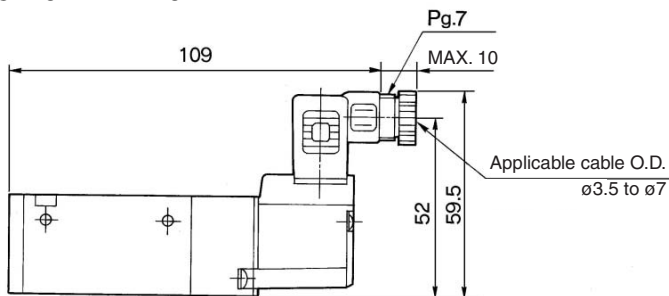


**M plug connector (M)**  
VZ5120-□M□□-01



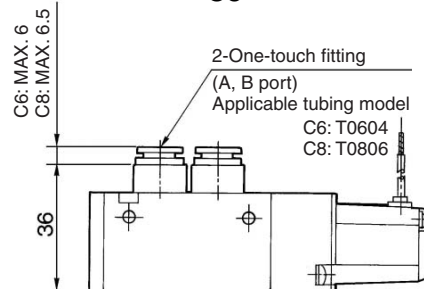
□: With light/surge voltage suppressor

**DIN terminal (D)**  
VZ5120-□D□□-01



**Built-in One-touch fittings**

VZ5120-□□□□-C6  
C8

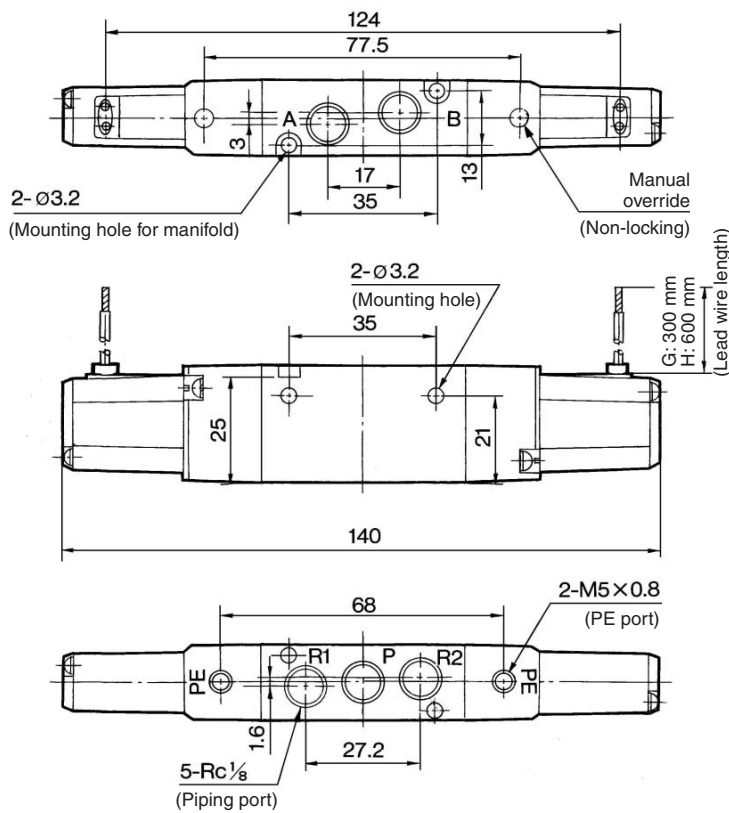


# Series VZ5000

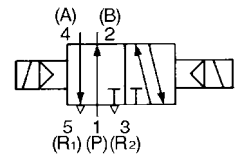


## 2 Position Double

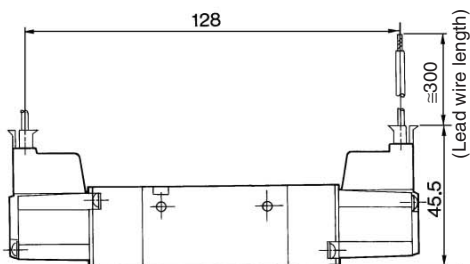
Grommet (G), (H)  
VZ5220-□<sup>G</sup>□□-01



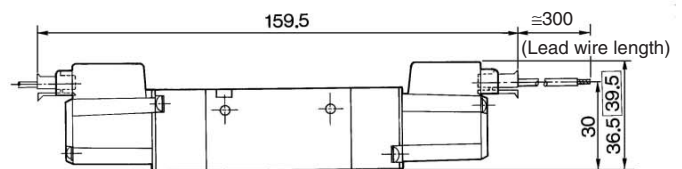
VZ5220



L plug connector (L)  
VZ5220-□L□□-01

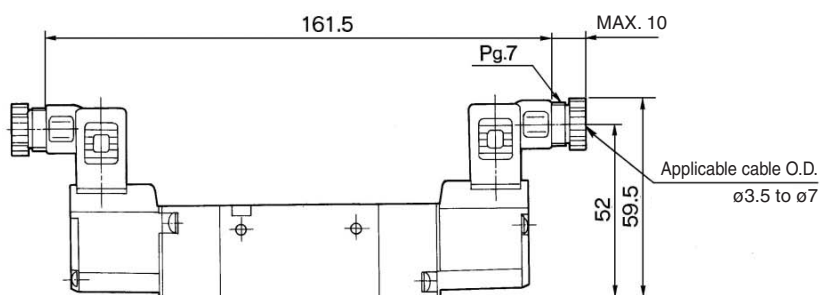


M plug connector (M)  
VZ5220-□M□□-01

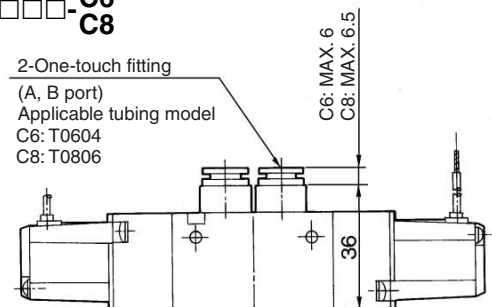


□: With light/surge voltage suppressor

DIN terminal (D)  
VZ5220-□D□□-01



Built-in One-touch fittings  
VZ5220-□□□□-C6  
C8

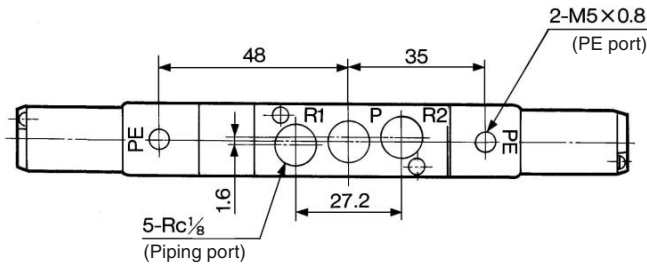
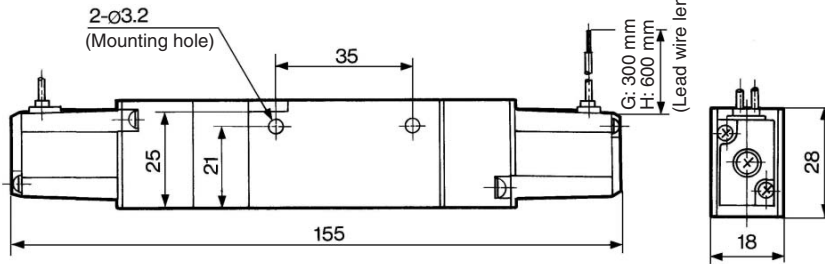
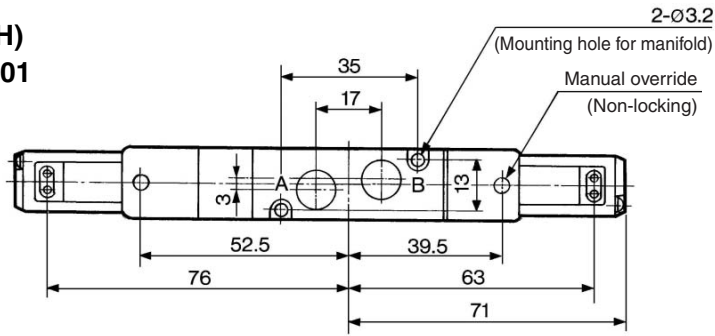


# 5 Port Solenoid Valve Body Ported Series VZ5000

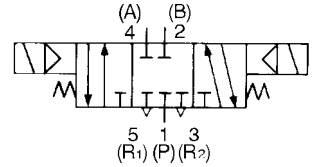


## 3 Position Closed Center/Exhaust Center/Pressure Center

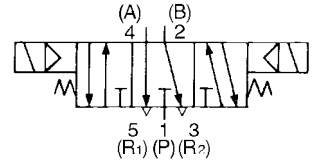
Grommet (G), (H)  
VZ5<sup>3</sup>/<sub>4</sub>20-□G□□-01



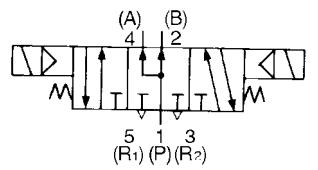
VZ5320



VZ5420



VZ5520



VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

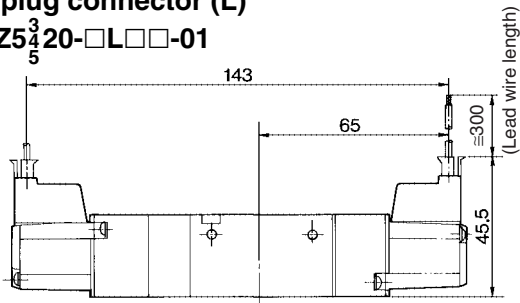
VQ7

EVS

VFN

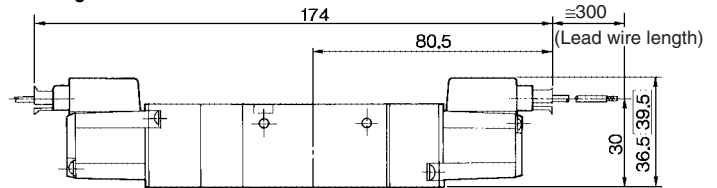
L plug connector (L)

VZ5<sup>3</sup>/<sub>4</sub>20-□L□□-01



M plug connector (M)

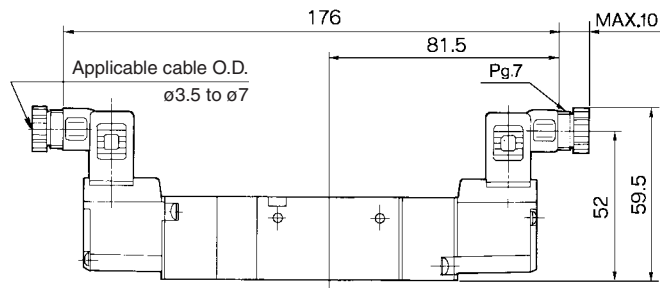
VZ5<sup>3</sup>/<sub>4</sub>20-□M□□-01



□: With light/surge voltage suppressor

DIN terminal (D)

VZ5<sup>3</sup>/<sub>4</sub>20-□D□□-01

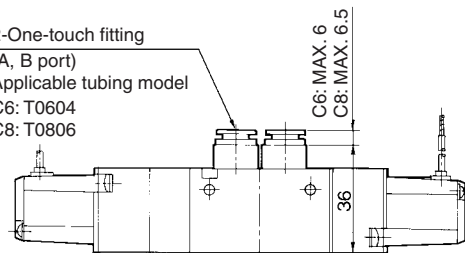


Built-in One-touch fittings

VZ5<sup>3</sup>/<sub>4</sub>20-□□□□-C6  
C8

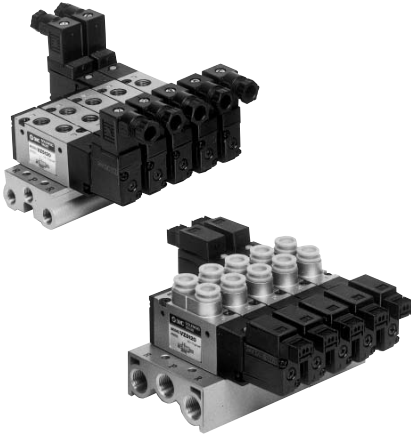
2-One-touch fitting

(A, B port)  
Applicable tubing model  
C6: T0604  
C8: T0806



# Series VZ5000/Body ported Manifold Specifications

## Manifold Standard



### Manifold Specifications

Model		Type 20	Type 21
Manifold type		Single base/B mount	
P(SUP)/R(EXH)		Common SUP/Common EXH	
Valve stations		2 to 15 stations	2 to 20 stations
4(A), 2(B) port location		Valve	
Port size	1(P), 3/5(R) port	Rc 1/8	Rc 1/4
	4(A), 2(B) port	Rc 1/8, C6, C8	

### 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 [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv
VV5Z5-20-01	1/8	1/8	2.2	0.35	0.57	2.3	0.26	0.55
VV5Z5-20-C6	1/8	C6	1.4	0.32	0.37	2.0	0.25	0.49
VV5Z5-20-C8	1/8	C8	1.7	0.38	0.45	2.1	0.25	0.51
VV5Z5-21-01	1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54
VV5Z5-21-C6	1/4	C6	1.4	0.32	0.36	2.1	0.24	0.50
VV5Z5-21-C8	1/4	C8	1.8	0.37	0.50	2.1	0.20	0.50

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) VV5Z5-20-031.....1 pc. (Manifold base)

\*VZ5120-5G-01.....2 pcs. (Valve)

\*DXT199-22-1A.....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 21P
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 1/4
	4(A), 2(B) port	Rc 1/8, C6, C8
Applicable flat ribbon cable connector		Socket: 26 pins MIL, with strain relief (Conforming to MIL-C-83503)
Internal wiring		+COM (For -COM, please contact SMC separately.)
Applicable solenoid valve		VZ5□23- $\frac{1}{3}$ MOZ□-VZ3□- $\frac{01}{C8}$
Rated voltage		100 VAC 50/60 Hz, 110 VAC 50/60 Hz, 24 VDC, 12 VDC

Note) Withstand voltage specification 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 [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv
VV5Z5-21P-01	1/4	1/8	2.1	0.36	0.55	2.3	0.26	0.54
VV5Z5-21P-C6	1/4	C6	1.4	0.32	0.36	2.1	0.24	0.50
VV5Z5-21P-C8	1/4	C8	1.8	0.37	0.50	2.1	0.20	0.50

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) VV5Z5-21P-07.....1 pc. (Manifold base)

\*VZ5123-5MOZ-C8.... 3 pcs. (Valve)

\*VZ5223-5MOZ-C8.... 3 pcs. (Valve)

\*DXT199-22-3A..... 1 pc. (Blanking plate assembly)

\*DXT192-52-1-4A..... 3 pcs. (Connector assembly)

\*DXT192-52-2-4A..... 3 pcs. (Connector assembly)

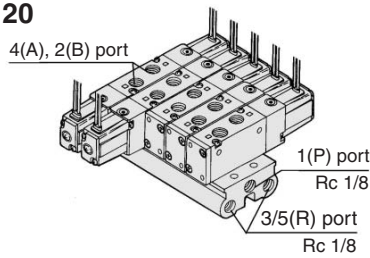
↳The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.



# 5 Port Solenoid Valve Body Ported Series VZ5000

## Common SUP/Common EXH

### Type 20



Note) For more than 6 stations, supply air to both sides of P port and exhaust air from both sides of R port.

### How to Order

**VV5Z5 - 20 - 05 1 -**   

Stations		P, R port thread type	
02	2 stations	Nil	Rc
⋮	⋮	00F	G
15	15 stations	00N	NPT
		00T	NPTF

### Applicable solenoid valve

VZ5□2□□□□<sup>G</sup>□□□□<sup>01</sup><sub>D</sub>□□□□<sup>C6</sup><sub>C8</sub>

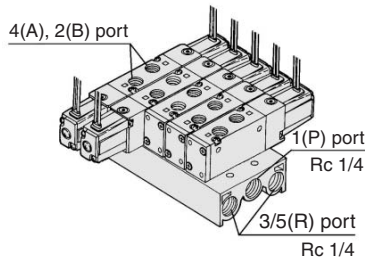
### Applicable blanking plate assembly

DXT199-22-1A

### Applicable individual EXH spacer assembly

DXT199-29-1A

### Type 21



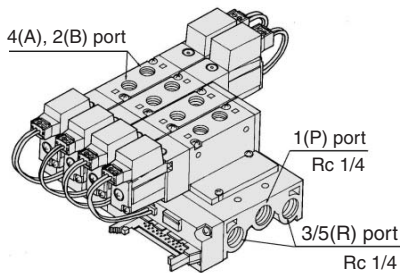
### How to Order

**VV5Z5 - 21 - 05 1 -**   

Stations		P, R port thread type	
02	2 stations	Nil	Rc
⋮	⋮	00F	G
20	20 stations	00N	NPT
		00T	NPTF

Note) For more than 10 stations, supply air to both sides of P port and exhaust air from both sides of R port.

### Flat Ribbon Cable Type 21P



### How to Order

**VV5Z5 - 21P - 05** -   

Stations		P, R port thread type	
03	3 stations	Nil	Rc
⋮	⋮	00F	G
12	12 stations	00N	NPT
		00T	NPTF

### Applicable solenoid valve

VZ5□23-<sup>1</sup>□□□□<sup>01</sup><sub>05</sub>□□□□<sup>C6</sup><sub>C8</sub>

### Applicable blanking plate assembly

DXT199-22-3A

### Applicable connector assembly

DXT192-52-1-□□A

(For 2 position single)

DXT192-52-1-□□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.

Note) For more than 10 stations, supply air to both sides of 1(P) port and exhaust air from both sides of 3 and 5(R) port.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

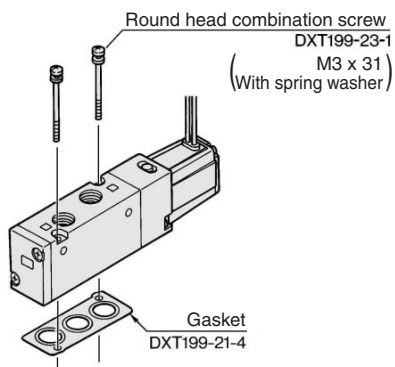
EVS

VFN

# Series VZ5000

## Option

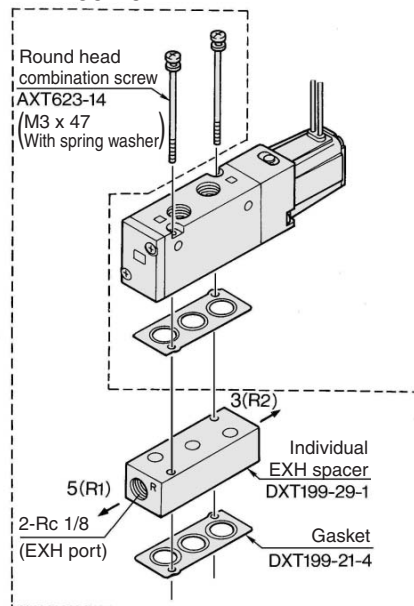
### Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



Applicable base  
VV5Z5-20  
VV5Z5-21  
VV5Z5-21P

### Individual EXH Spacer Assembly

#### DXT199-29-1A



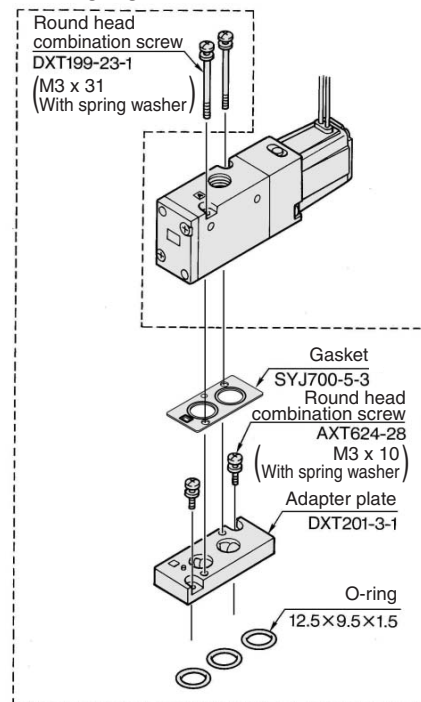
Applicable base  
VV5Z5-20  
VV5Z5-21

Note) Please contact SMC when using an individual EXH spacer assembly, an individual or an adapter plate assembly on VV5Z5-21P.

### Installation of the VZ500 Valve on the VZ5000 Manifold

- Use of an adaptor plate makes it possible to mount Series VZ500 on the manifold base of Series VZ5000.
- 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 VZ5000.

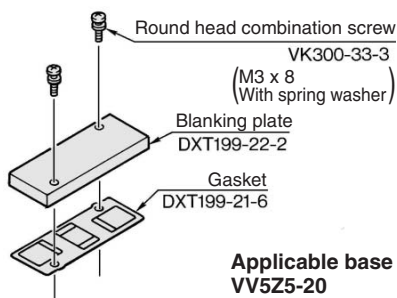
### Adapter plate assembly DXT201-3-1A



Applicable base  
VV5Z5-20  
VV5Z5-21

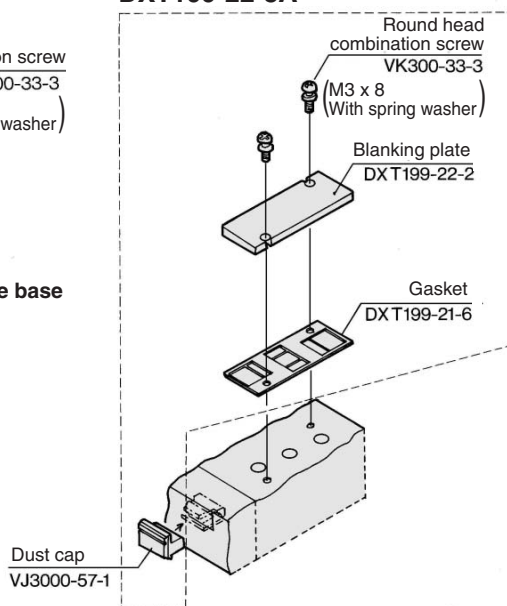
### Blanking Plate Assembly

#### DXT199-22-1A



Applicable base  
VV5Z5-20  
VV5Z5-21

#### DXT199-22-3A



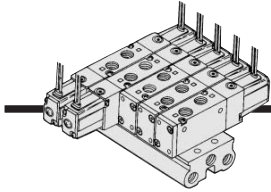
Applicable base  
VV5Z5-21P

### Caution

Mounting Screw Tightening Torques

M3: 0.8 N·m

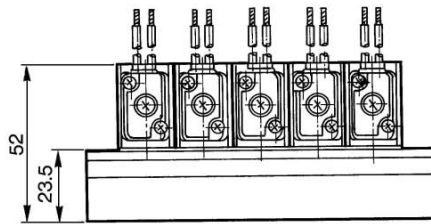
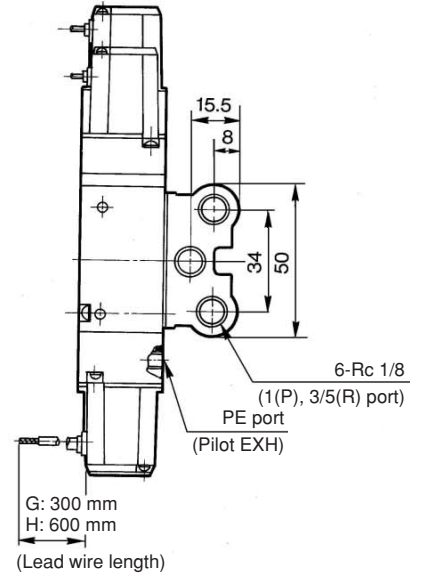
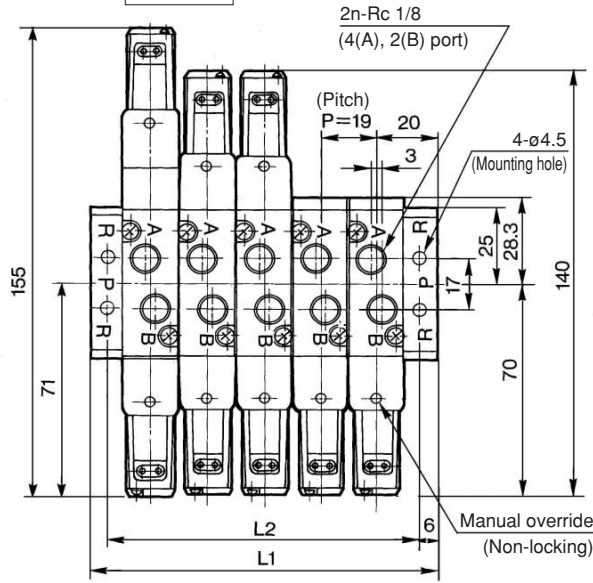
# 5 Port Solenoid Valve Body Ported Series VZ5000



## Type 20 Manifold

### VV5Z5-20-Station 1

Grommet (G), (H)

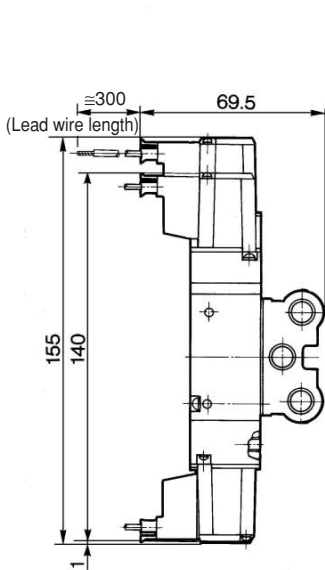


- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

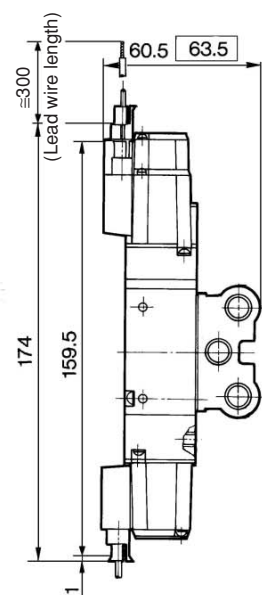
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15
L <sub>1</sub>	59	78	97	116	135	154	173	192	211	230	249	268	287	306
L <sub>2</sub>	47	66	85	104	123	142	161	180	199	218	237	256	275	294

(mm)

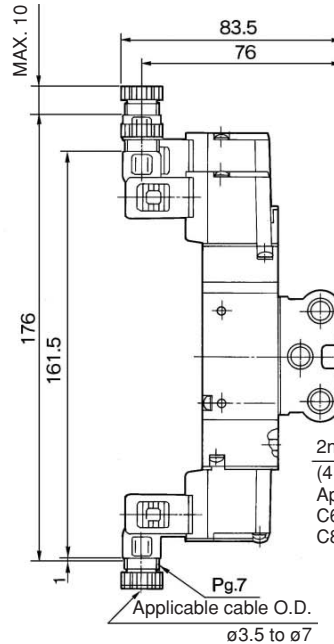
### L plug connector (L)



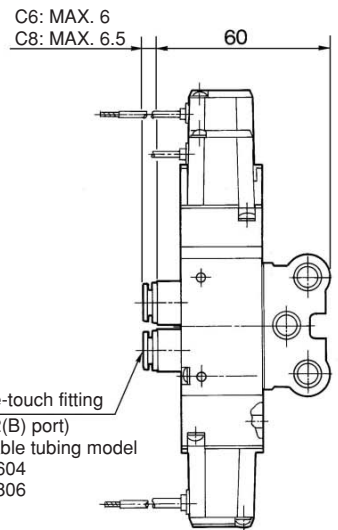
### M plug connector (M)



### DIN terminal (D)

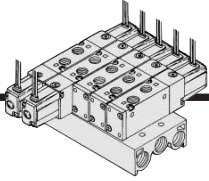


### Built-in One-touch fittings



□: With light/surge voltage suppressor

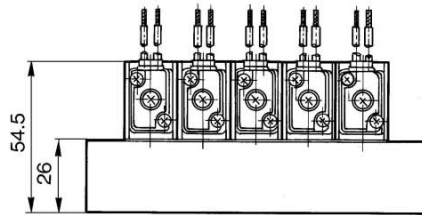
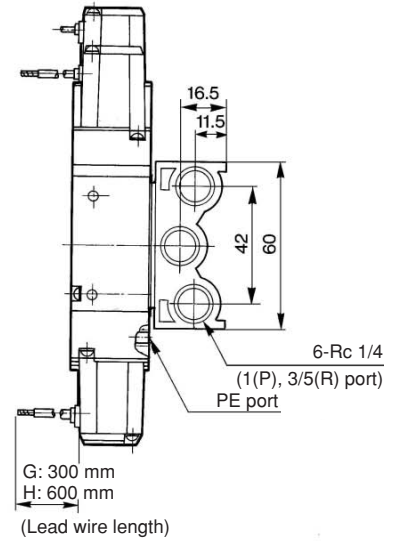
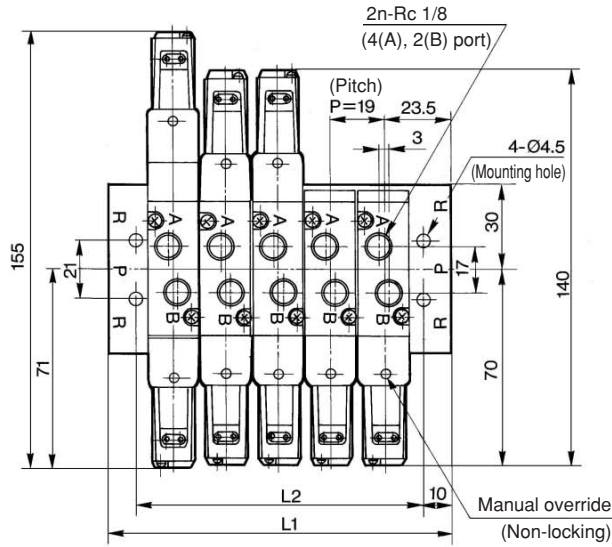
# Series VZ5000



## Type 21 Manifold

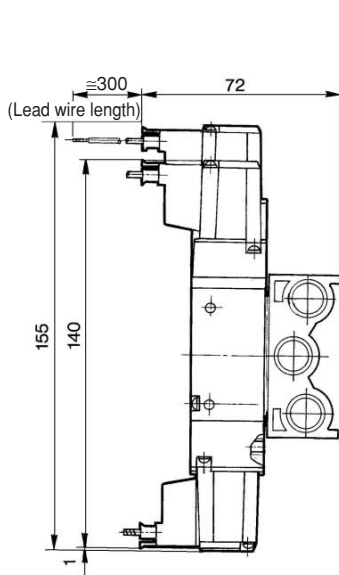
### VV5Z5-21-Station 1

#### Grommet (G), (H)

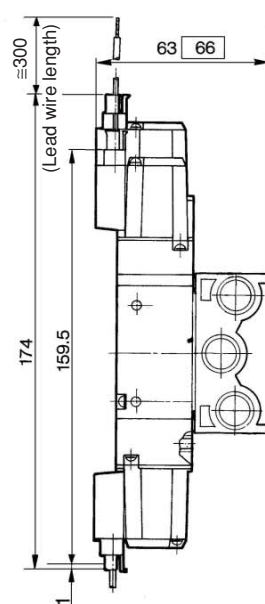


Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L <sub>2</sub>	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

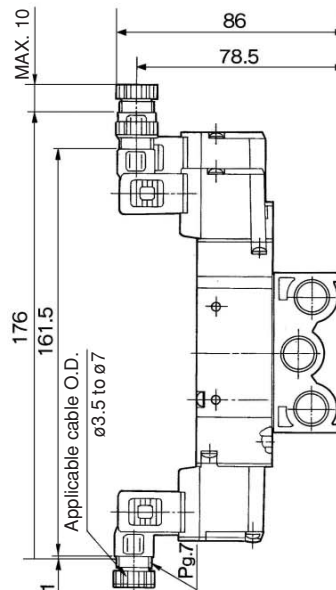
#### L plug connector (L)



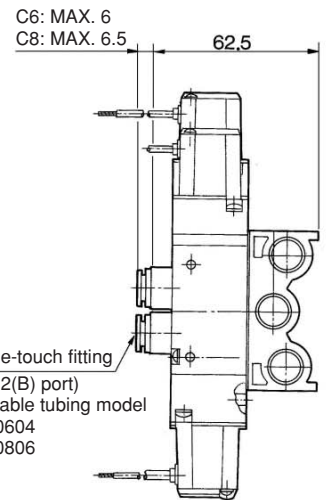
#### M plug connector (M)




#### DIN terminal (D)

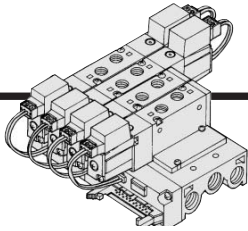


#### Built-in One-touch fittings



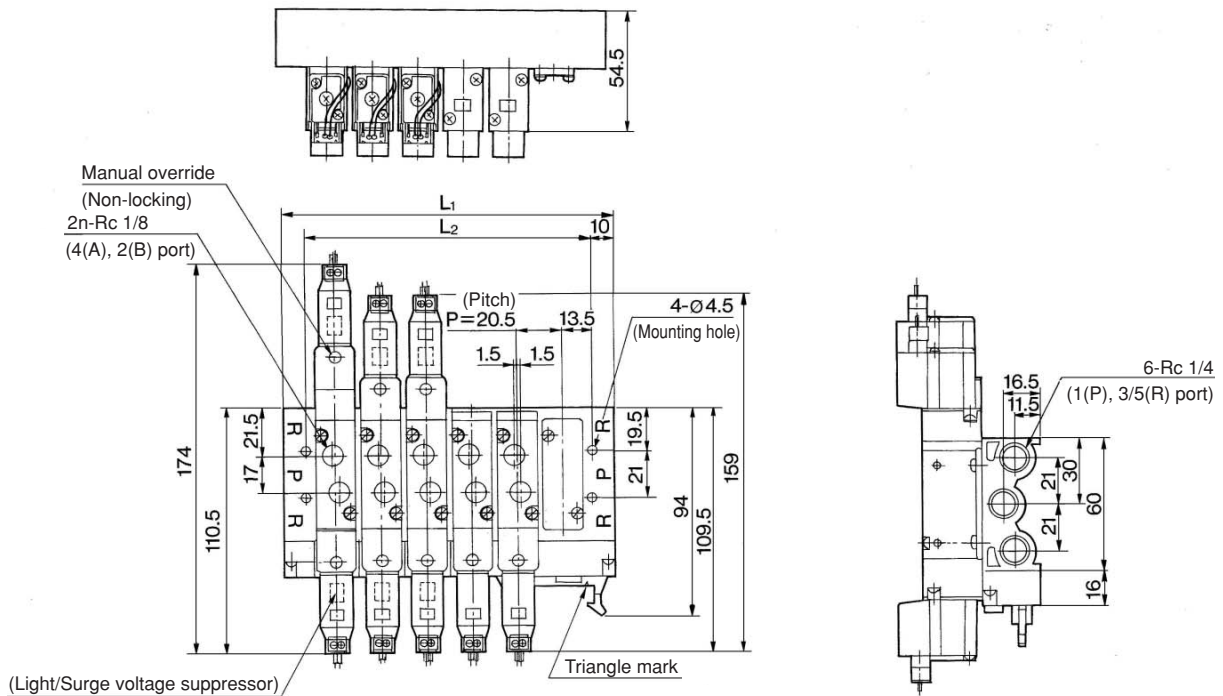
 □: With light/surge voltage suppressor

# 5 Port Solenoid Valve Body Ported Series VZ5000

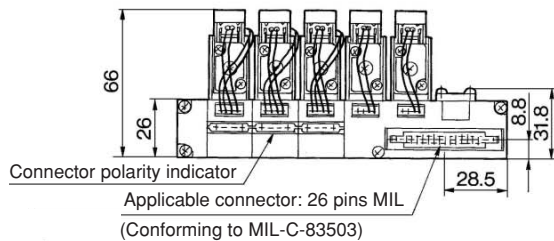


## Type 21P Manifold

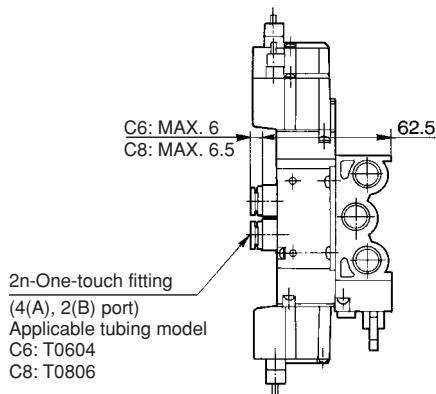
VV5Z5-21P-Station



(Station n).....(Station 1)



### Built-in One-touch fittings



Stations	3	4	5	6	7	8	9	10	11	12
L <sub>1</sub>	88	108.5	129	149.5	170	190.5	211	231.5	252	272.5
L <sub>2</sub>	68	109	109	129.5	150	170.5	191	211.5	232	252.5

(mm)

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN

# 5 Port Solenoid Valve Base Mounted Series VZ5000

## How to Order

**Plug-in** VZ5 1 4 3 — 5 F Z

**Non plug-in** VZ5 1 4 0 — 5 L

**Type of actuation**

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

**Body option**

- 0: Individual exhaust for the pilot valve
- 3: Common exhaust type for main and pilot valve

**Rated voltage**

1	100 VAC, 50/60 Hz
2	200 VAC, 50/60 Hz
3*	110 VAC, 50/60 Hz
4*	220 VAC, 50/60 Hz
5*	24 VDC
6	12 VDC
9*	Other

\* Option

**Electrical entry**

Grommet	L plug connector	M plug connector	DIN terminal
<b>G:</b> Lead wire length 300 mm	<b>L:</b> With lead wire (Length 300 mm)	<b>M:</b> With lead wire (Length 300 mm)	<b>D:</b> With connector
<b>H:</b> Lead wire length 600 mm	<b>LN:</b> Without lead wire	<b>LO:</b> Without connector	<b>DO:</b> Without connector

\* Type "LN", "MN": With 2 sockets.

**Thread type**

Nil	Rc
F	G
N	NPT
T	NPTF

**Port size**

- Nil: Without sub-plate
- 01: Rc 1/8 With sub-plate <sup>Note</sup>
- 02: Rc 1/4 With sub-plate

Note 5(R1), 3(R2) port: Rc 1/4

**Manual override/Plug-in type**

- Nil: Non-locking push type
- B: Locking type B (Slotted)
- C: Locking type C (Manual)

**Manual override/Non plug-in type**

- Nil: Non-locking push type
- B: Locking type B (Slotted)
- C: Locking type C (Manual)

**Light/Surge voltage suppressor**

Nil	None
Z*	With light/surge voltage suppressor
S	With surge voltage suppressor

\* Not available for "GZ", "HZ" and "DOZ"

Note) Please contact SMC in the case of without indicator light.

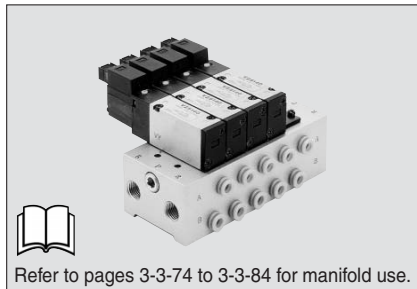
- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

# Series VZ5000

Applicable for cylinder actuation (up to  $\phi 50$ ).

Compact size  
(Width: 18 mm)

Low power consumption:  
1.8 W DC



**Made to Order Specifications**  
(For details, refer to page 3-3-85.)

## Specifications

Fluid	Air	
Operating pressure range (MPa)	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.15 to 0.7
Ambient and fluid temperature (°C)	-10 to 50°C (No freezing. Refer to page 3-13-4.)	
Response time (ms) <sup>(1)</sup> (at the pressure of 0.5 MPa)	2 position single, double	20 or less
	3 position	50 or less
Max. operating frequency (Hz)	2 position single, double	10
	3 position	3
Effective area	Refer to the table below.	
Manual override <sup>(2)</sup>	Non-locking push type, Locking slotted type, Locking lever type	
Pilot exhaust	Individual pilot exhaust, Common exhaust (pilot and main valve) Common exhaust port for the pilot and main valve	
Lubrication	Not required	
Mounting orientation	Unrestricted	
Impact /Vibration resistance (m/s <sup>2</sup> ) <sup>(3)</sup>	300/50	
Enclosure	Dustproof	

Note 1) Based on dynamic performance test, JIS B 8374-1981. (Coil temperature: 20°C, at rated voltage, without surge suppressor)

Note 2) When operating the locking type manually, apply torque of 0.2 N·m or less.

Note 3) 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)

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)

## Solenoid Specifications

Electrical entry	Grommet (G)/(H), L plug connector (L), M plug connector (M), DIN terminal (D)		
Coil rated voltage (V)	AC 50/60 Hz	100, 200, 24*, 48*, 110*, 220*	
	DC	24, 6*, 12*, 48*	
Allowable voltage fluctuation (%)	-15 to +10% of rated voltage		
Power consumption (W) <sup>(1)</sup> [Current mA]	DC	1.8 (With indicator light 2.1) [24 VDC: 75 (With indicator light 87.5)]	
Apparent power (VA) <sup>(1)</sup> [Current mA]	AC	Inrush	4.5/50 Hz, 4.2/60 Hz [ 100 VAC: 45/50 Hz, 42/60 Hz 200 VAC: 22.5/50 Hz, 21/60 Hz ]
		Holding	3.5/50 Hz, 3/60 Hz [ 100 VAC: 35/50 Hz, 30/60 Hz 200 VAC: 17.5/50 Hz, 15/60 Hz ]
Surge voltage suppressor	DC: Diode, AC: ZNR <sup>(2)</sup>		
Indicator light	DC: LED (Red), AC: Neon bulb		

Note 1) At rated voltage

Note 2) Plug-in should be ZNR

# 5 Port Solenoid Valve Base Mounted Series VZ5000

## Flow Characteristics/Weight

Valve model	Type of actuation		Port size		Flow characteristics <sup>(1)</sup>						Weight (g) <sup>(2)</sup>
			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	
VZ5□40-□-01	2 position	Single	Rc 1/8	Rc 1/8	2.3	0.45	0.57	2.8	0.37	0.71	200(120)
		Double			240(160)						
	3 position	Closed center			1.9	0.36	0.48	2.1	0.46	0.57	240(160)
		Exhaust center			1.2	0.48	0.35	3.4[1.3]	0.36[0.57]	0.86[0.41]	
Pressure center	3.3[0.85]	0.43[0.54]	0.78[0.25]	2.1	0.45	0.56					
VZ5□40-□-02	2 position	Single	Rc 1/4	Rc 1/4	2.3	0.41	0.61	2.9	0.35	0.74	200(120)
		Double			240(160)						
	3 position	Closed center			1.9	0.46	0.50	2.2	0.44	0.60	240(160)
		Exhaust center			1.3	0.45	0.35	3.7[1.4]	0.27[0.56]	0.87[0.43]	
Pressure center	3.6[0.83]	0.23[0.55]	0.84[0.25]	2.1	0.47	0.58					

Note 1) [ ]: Denotes the normal position. Exhaust center: 4/2 → 5/3, Pressure center: 1 → 4/2  
 Note 2) ( ): Without sub-plate.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

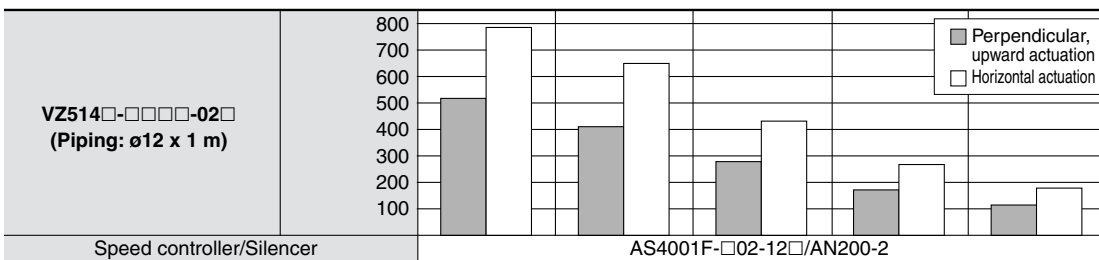
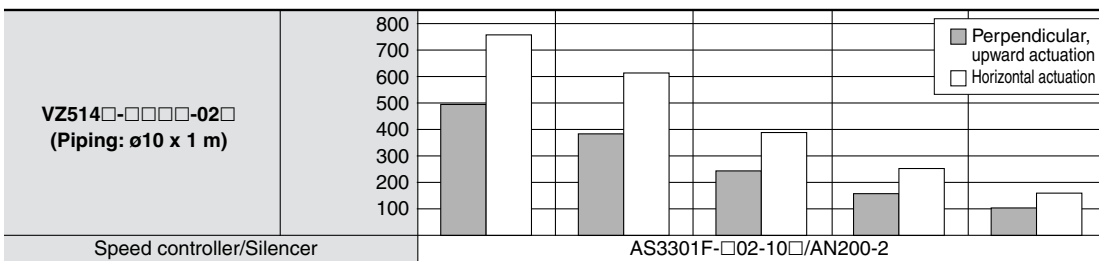
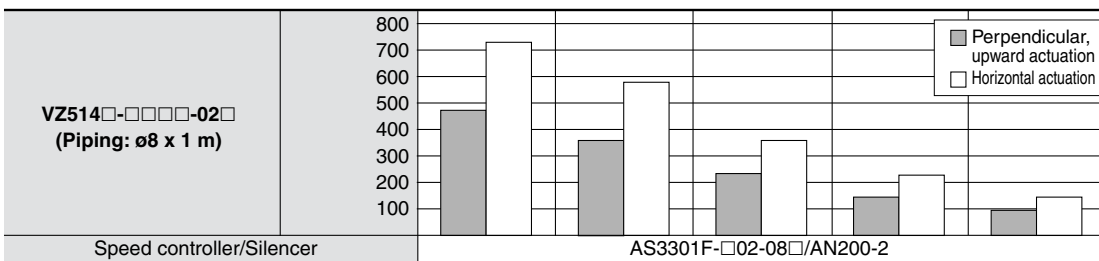
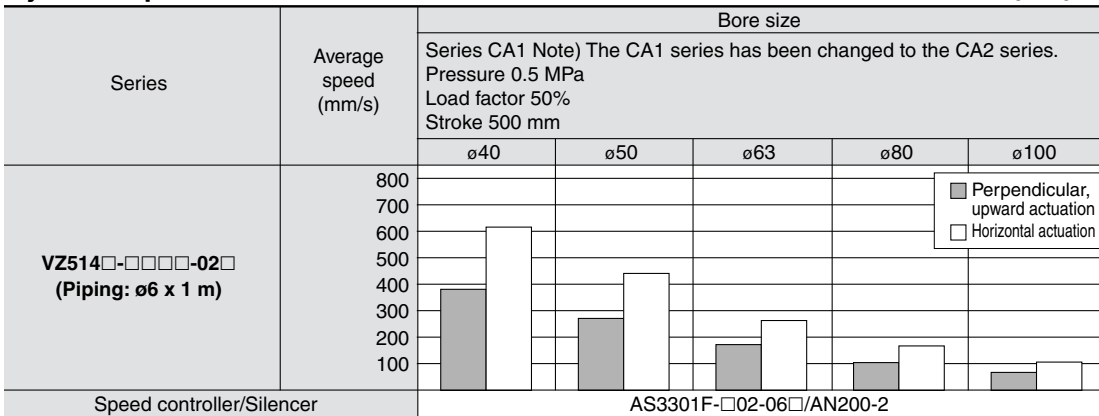
VQ7

EVS

VFN

## Cylinder Speed Chart

Use as a guide for selection.  
 Please confirm the actual conditions with SMC Sizing Program.

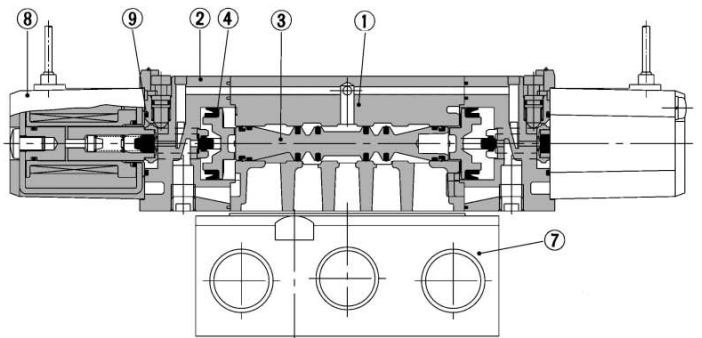
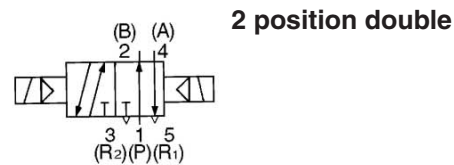
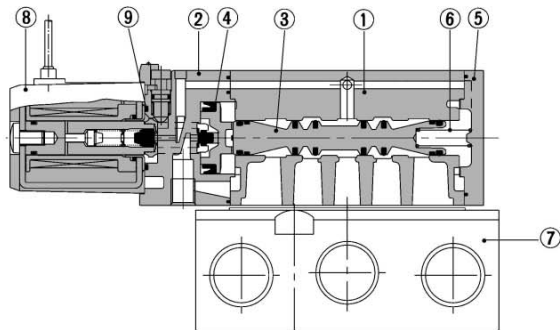
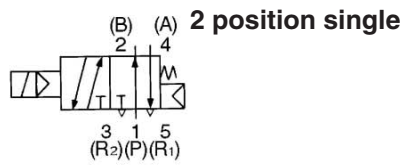


\* It is when the cylinder is extending that is meter-out controlled by speed controller which is directly connected with cylinder, and its needle valve with being fully open.  
 \* The average velocity of the cylinder is what the stroke is divided by the total stroke time.  
 \* Load factor: ((Load weight x 9.8)/Theoretical force) x 100%

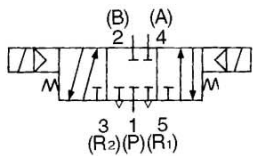


# Series VZ5000

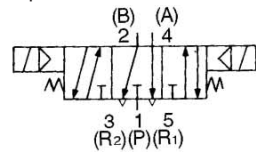
## Construction



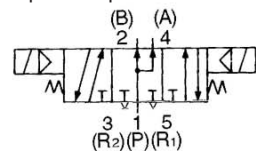
3 position closed center



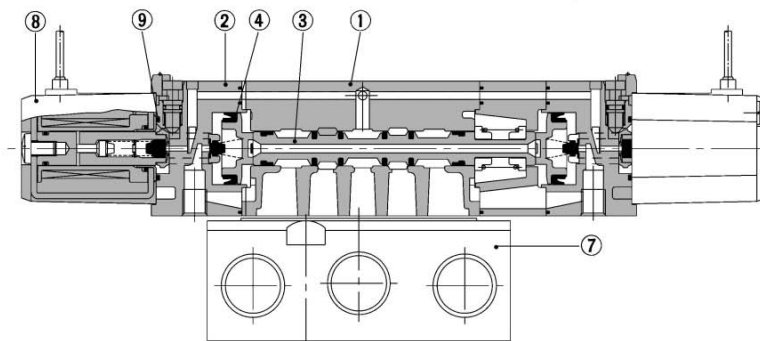
3 position exhaust center



3 position pressure center



**3 position closed center/exhaust center/pressure center**



(This figure shows a closed center type.)

## Component Parts

No.	Description	Material	Note
①	Body	Aluminum die-casted	Platinum silver
②	Piston plate	Resin	Black
③	Piston	Aluminum, HNBR	
④	Spool valve	Resin	
⑤	End cover	Resin	Black painted
⑥	Spool spring	Stainless steel	

## Replacement Parts

No.	Description	Material	Part no.	Note
⑦	Sub-plate	Aluminum die-casted	DXT199-7-1*P DXT199-7-2*P	Rc 1/8 Rc 1/4
⑧	Solenoid assembly	Epoxy/Stainless steel	DXT170-C-□□□	
⑨	O-ring	NBR	13 x 11 x 1	Common with Series VZ <sub>3</sub> 000

\* Thread type  
Nil: Rc  
F: G  
N: NPT  
T: NPTF

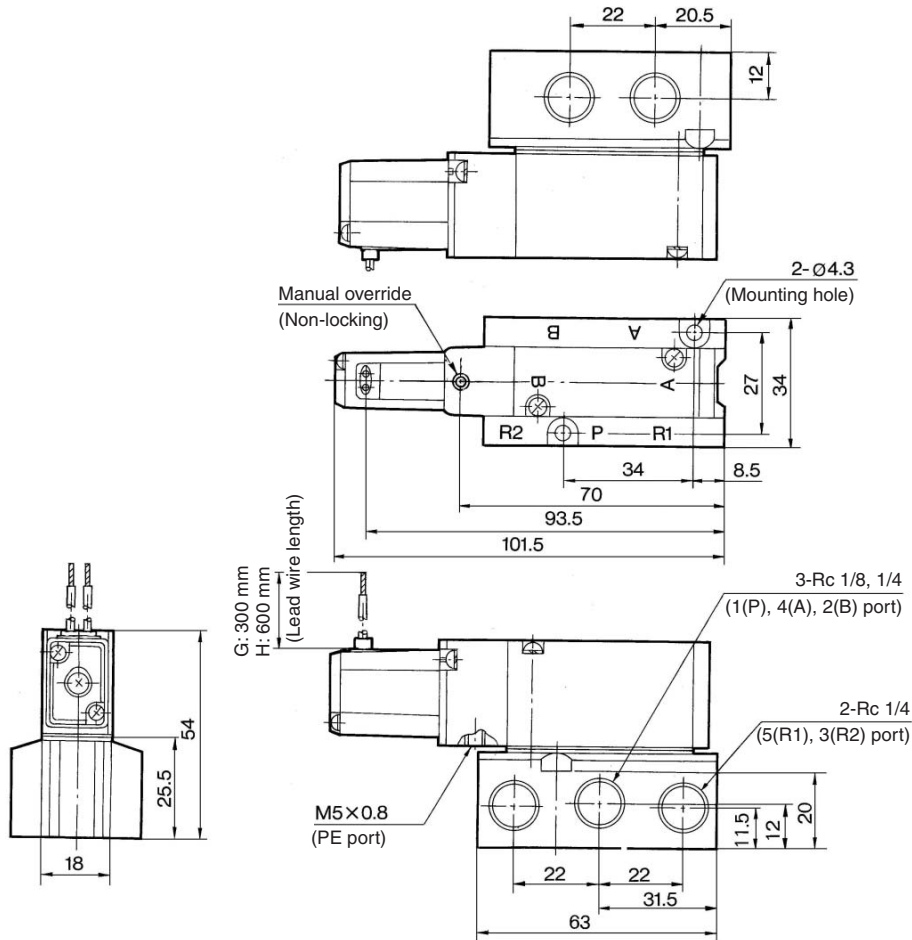
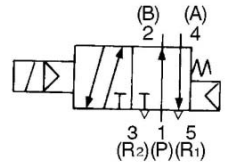
# 5 Port Solenoid Valve Base Mounted Series VZ5000



## 2 Position Single

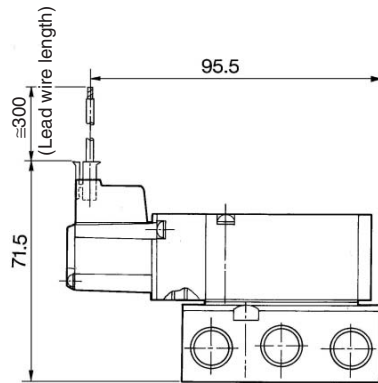
Grommet (G), (H)  
VZ5140-□G□□-01

VZ5140

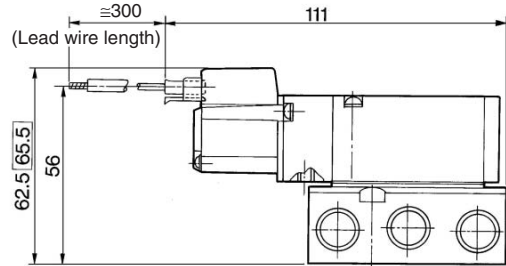


- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

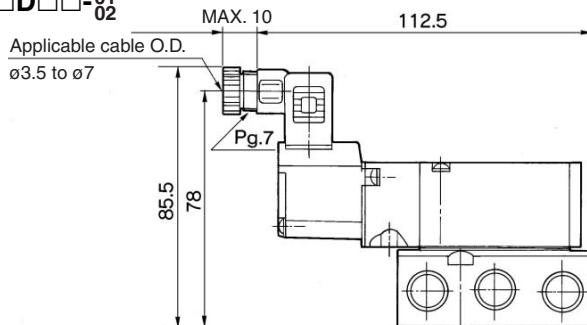
L plug connector (L)  
VZ5140-□L□□-01



M plug connector (M)  
VZ5140-□M□□-01



DIN terminal (D)  
VZ5140-□D□□-01



□: With light/surge voltage suppressor

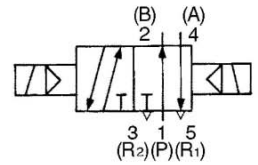
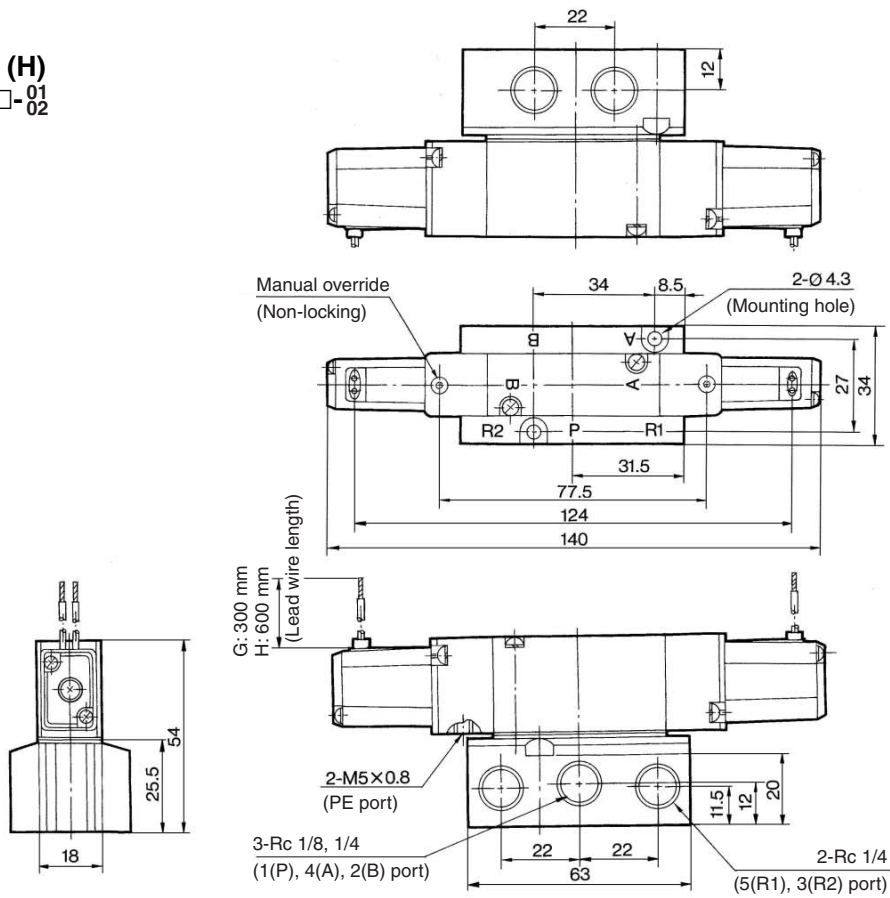
# Series VZ5000



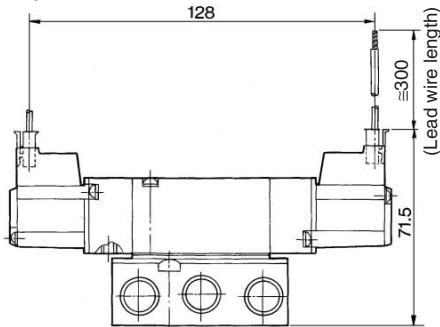
## 2 Position Double

Grommet (G), (H)  
VZ5240-□G□□-01  
□H□□-02

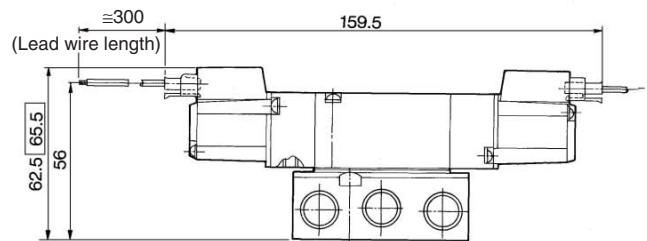
VZ5240



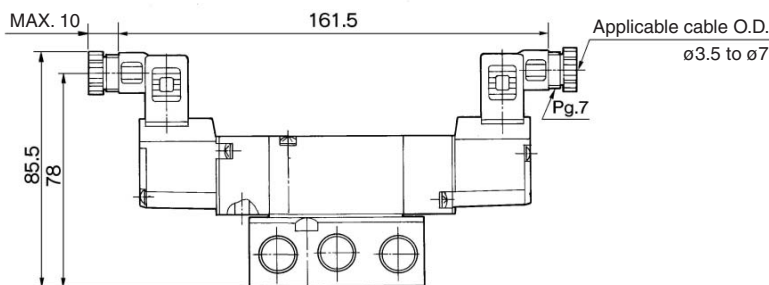
L plug connector (L)  
VZ5240-□L□□-01  
□□-02



M plug connector (M)  
VZ5240-□M□□-01  
□□-02



DIN terminal (D)  
VZ5240-□D□□-01  
□□-02



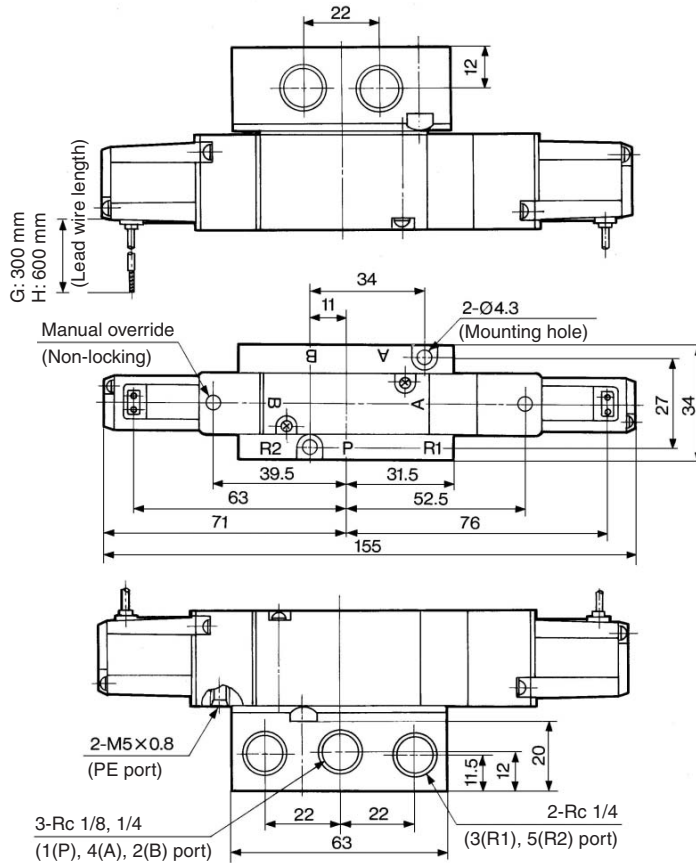
□: With light/surge voltage suppressor

# 5 Port Solenoid Valve Base Mounted Series VZ5000

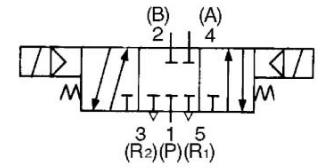


## 3 Position Closed Center/Exhaust Center/Pressure Center

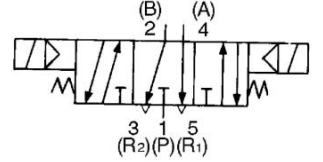
**Grommet (G), (H)**  
VZ5<sup>3</sup>/<sub>4</sub>40-□G□□-01  
5



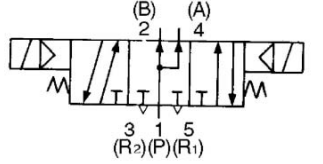
VZ5340



VZ5440



VZ5540



VK

VZ

VF

VFR

VP4

VZS

VFS

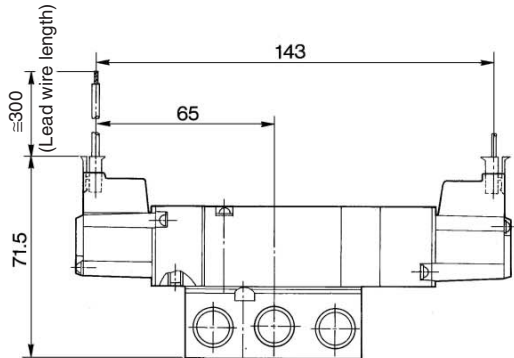
VS4

VQ7

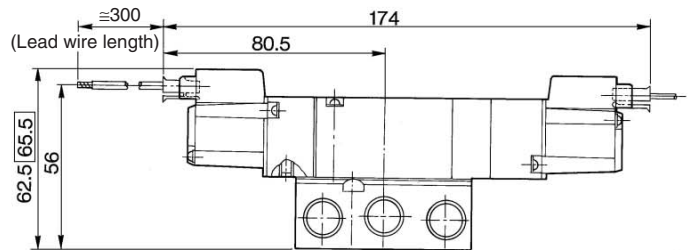
EVS

VFN

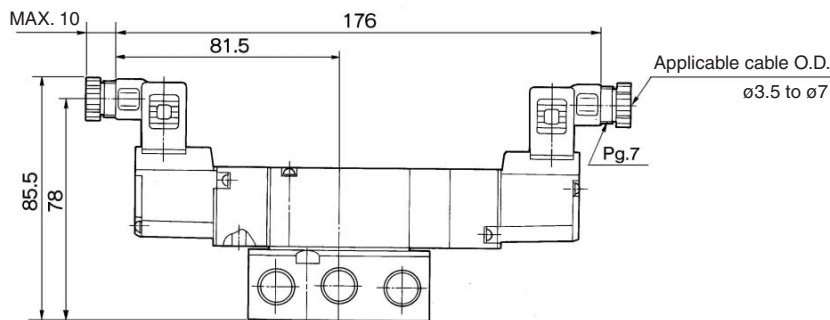
**L plug connector (L)**  
VZ5<sup>3</sup>/<sub>4</sub>40-□L□□-01  
5



**M plug connector (M)**  
VZ5<sup>3</sup>/<sub>4</sub>40-□M□□-01  
5



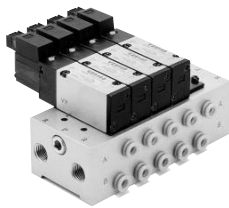
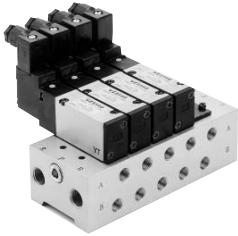
**DIN terminal (D)**  
VZ5<sup>3</sup>/<sub>4</sub>40-□D□□-01  
5



□: With light/surge voltage suppressor

# Series VZ5000/Base Mounted Manifold Specifications

## Manifold Standard



### Manifold Specifications

Model		Type 40	Type 41	Type 42
Manifold type		Single base/B mount		
P(SUP), R(EXH)		Common SUP and EXH		
Valve stations		2 to 20		
4(A), 2(B) port porting specifications	Position	Base	Base	
	Direction	Bottom	Side	
1(P), 3/5(R) port		Rc 1/4		
Port size	4(A), 2(B) port	Rc 1/8		01 (Rc 1/8) C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8) B7 (One-touch fitting for 1/4") C9 (One-touch fitting for 5/16")

### 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 [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv		
VV5Z5-40	VZ5□4□	1/4	1/8	2.1	0.28	0.51	2.5	0.23	0.59
VV5Z5-41		1/4	1/8	2.0	0.30	0.50	2.2	0.30	0.55
VV5Z5-42-C6		1/4	C6	1.5	0.32	0.38	2.2	0.23	0.52
VV5Z5-42-C8		1/4	C8	1.9	0.24	0.46	2.2	0.26	0.53

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.

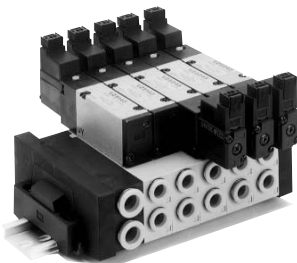
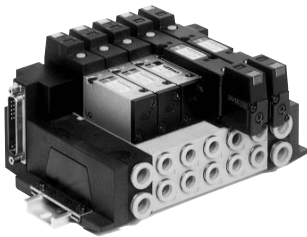
(Example) VV5Z5-41-031-01.....1 pc. (Manifold base)

\*VZ5140-5G.....2 pcs. (Valve)

\*DXT199-22-1A.....1 pc. (Blanking plate assembly)

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

## DIN Rail Manifold



### Manifold Specifications

Model		Type 45	Type 45F
Manifold type		Stacking type non plug-in type	Stacking type plug-in type
P(SUP), R(EXH)		Common SUP and EXH	
Valve stations		2 to 20	
4(A), 2(B) port porting specifications	Position	Base	
	Direction	Side	
Port size	1(P), 3/5(R) port	C10 (One-touch fitting for ø10)	
	4(A), 2(B) port	C6 (One-touch fitting for ø6) C8 (One-touch fitting for ø8)	
Connector		—	MIL-C-24308 Applicable for D-sub connector JIS-X-5101
Internal wiring		—	COM <sup>Note)</sup>

Note) It is available at +COM or -COM.

### 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 [dm <sup>3</sup> /(s·bar)]	b	Cv	C [dm <sup>3</sup> /(s·bar)]	b	Cv		
VV5Z5-45	VZ5□4□	C10	C6	1.5	0.31	0.38	2.2	0.17	0.52
		C10	C8	2.1	0.26	0.51	2.2	0.15	0.52

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) VV5Z5-45FD-06-C8C.....1 pc. (Manifold base)

\*VZ5143-5FZ.....2 pcs. (Valve)

\*VZ5243-5FZ.....3 pcs. (Valve)

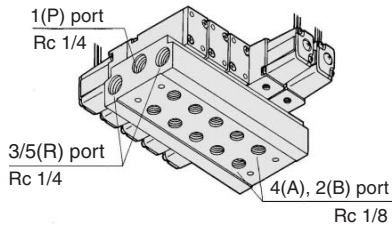
\*VZ5000-65-1A.....1 pc. (Blanking plate assembly)

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

# 5 Port Solenoid Valve Base Mounted Series VZ5000

## Common SUP/Common EXH

### Type 40



How to Order

**VV5Z5 - 40 - 05 2 - 01**

Stations	4(A), 2(B) Port size	P, R port thread type	
02 2 stations	01 Rc 1/8	Nil	Rc
...		F	G
20 20 stations		N	NPT
		T	NPTF

Note) For more than 10 stations, supply air to both sides of 1(P) port and exhaust air from both sides of 3 and 5(R) port.

Applicable solenoid valve

VZ5□4□-□□□□  
G  
D

Applicable blanking plate assembly  
DXT199-22-1A

Applicable individual EXH spacer assembly  
DXT199-29-2A

Applicable individual SUP spacer assembly  
DXT199-35-1A

Applicable interface regulator  
ARBZ5000-00-P

VK

VZ

VF

VFR

VP4

VZS

VFS

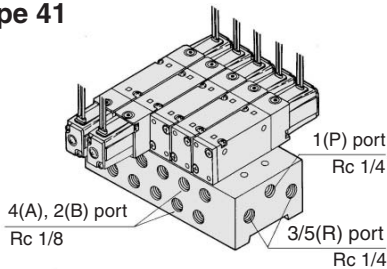
VS4

VQ7

EVS

VFN

### Type 41



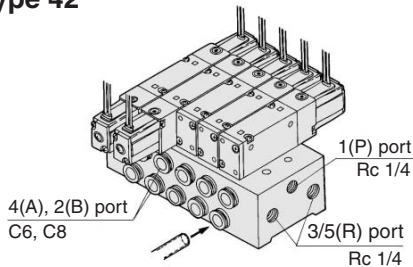
How to Order

**VV5Z5 - 41 - 05 1 - 01**

Stations	4(A), 2(B) Port size	P, R port thread type	
02 2 stations	01 Rc 1/8	Nil	Rc
...		F	G
20 20 stations		N	NPT
		T	NPTF

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

### Type 42



How to Order

**VV5Z5 - 42 - 05 1 - C6**

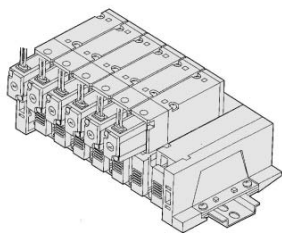
Stations	A, B port size	P, R port thread type	
02 2 stations	C6 One-touch fitting for ø6 C8 One-touch fitting for ø8 B7 One-touch fitting for 1/4" B9 One-touch fitting for 5/16"	Nil	Rc
...		F	G
20 20 stations		N	NPT
		T	NPTF

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

## DIN Rail Manifold

### Common SUP/Common EXH

#### Type 45 (Non plug-in type)



How to Order

**VV5Z5 - 45 - 05 D - C8 C**

Stations	02 2 stations	...	20 20 stations
----------	---------------	-----	----------------

SUP/EXH block mounting position

Symbol	Position	Applicable 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	Special specifications

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

4 (A), 2 (B) port size

C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
M*	Mixed

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

Applicable solenoid valve

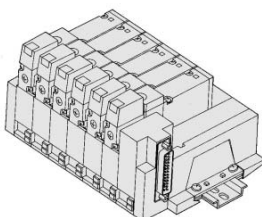
VZ5□4□-□□□□  
G  
D

Applicable blanking plate assembly  
VZ5000-65-2A

DIN rail length specified

Nil	Standard length	
3	For 3 stations	(Specify a longer rail than the standard length.)
...	...	...
20	For 20 stations	(Specify a longer rail than the standard length.)

#### Type 45F (Plug-in type)



How to Order

**VV5Z5 - 45F D - 05 C8 C**

Connector mounting direction

Symbol	Mounting direction	Applicable stations
U	U side	2 to 10 stations
D	D side	
B	Both sides	

Stations	02 2 stations	...	20 20 stations
----------	---------------	-----	----------------

SUP/EXH block mounting position

Nil	For 2 to 10 stations : One side (Same as direction of connector mount) For 11 to 20 stations: Both sides
B	For 2 to 10 stations: Both sides
M*	Special specifications

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

4(A), 2(B) port size

C6	One-touch fitting for ø6
C8	One-touch fitting for ø8
M*	Mixed

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

Applicable solenoid valve

VZ5□43-□F□□

Applicable blanking plate assembly  
VZ5000-65-1A

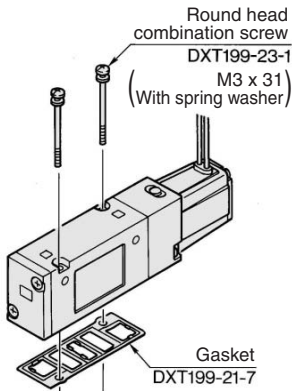
DIN rail length specified

Nil	Standard length	
3	For 3 stations	(Specify a longer rail than the standard length.)
...	...	...
20	For 20 stations	(Specify a longer rail than the standard length.)

# Series VZ5000

## Option/Standard Manifold

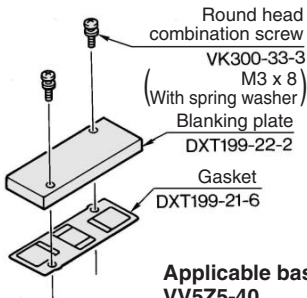
### Combinations of Solenoid Valve, Manifold Gasket and Manifold Base



Applicable base  
VV5Z5-40  
VV5Z5-41  
VV5Z5-42

### Blanking Plate Assembly

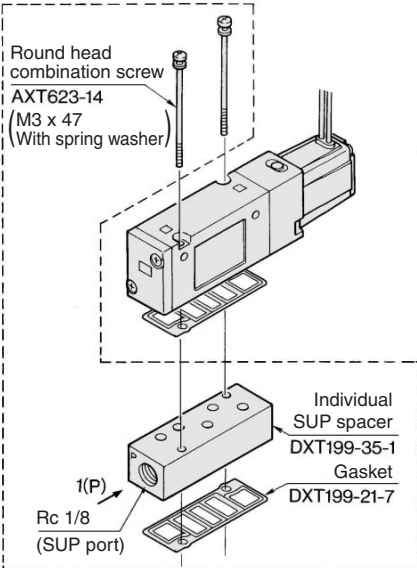
#### DXT199-22-1A



Applicable base  
VV5Z5-40  
VV5Z5-41  
VV5Z5-42

### Individual SUP Spacer Assembly

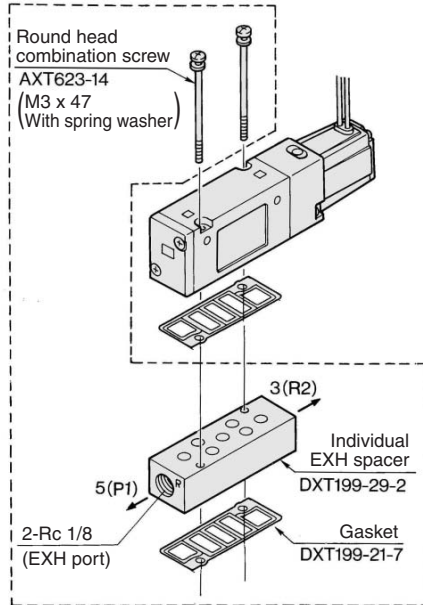
#### DXT199-35-1A



Applicable base  
VV5Z5-40  
VV5Z5-41  
VV5Z5-42

### Individual EXH Spacer Assembly

#### DXT199-29-2A

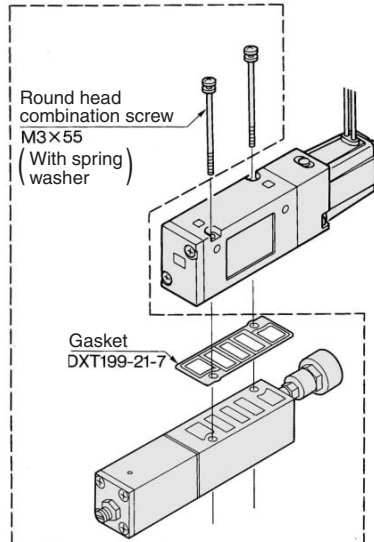


Applicable base  
VV5Z5-40  
VV5Z5-41  
VV5Z5-42

### Interface Regulator (P port regulation)

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

#### ARBZ5000-00-P



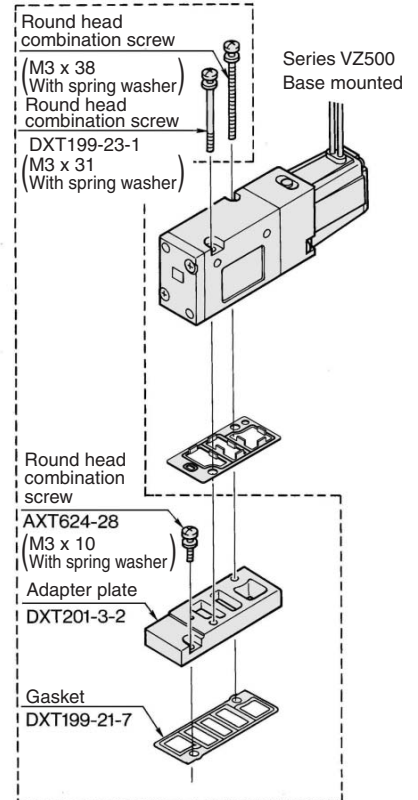
Before using, refer to page 3-3-8.

Applicable base  
VV5Z5-40  
VV5Z5-41  
VV5Z5-42

### Installation of the VZ500 Valve on the VZ5000 Manifold

- Use of an adaptor plate makes it possible to mount Series VZ500 on the manifold base of Series VZ5000.
- 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 VZ5000.
- In the case of base mounting, 2(A) port of 3 port valve should be 2(B) port of manifold base.

### Adapter Plate Assembly DXT201-3-2A



Applicable base  
VV5Z5-40  
VV5Z5-41  
VV5Z5-42

### ⚠ Caution

Mounting Screw Tightening Torques

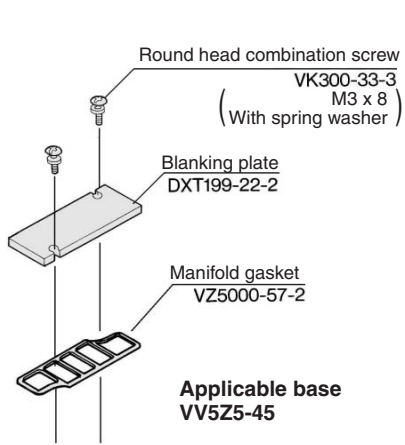
M3: 0.8 N·m

# 5 Port Solenoid Valve Base Mounted Series VZ5000

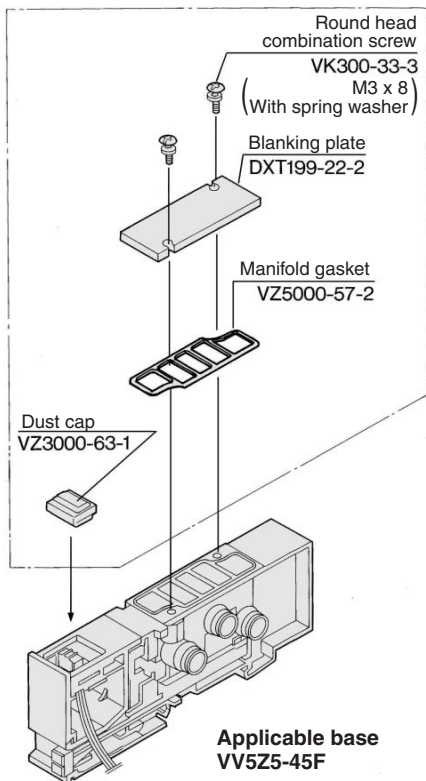
## Option/DIN Rail Manifold

### Blanking Plate Assembly

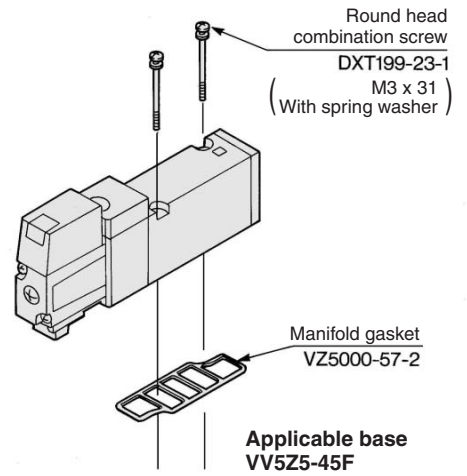
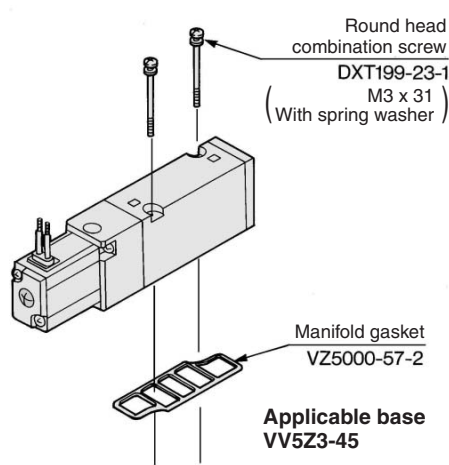
#### VZ5000-65-2A



#### VZ5000-65-1A



### Combination of Solenoid Valve, Gasket and Manifold Base



### 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.

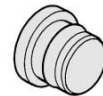
#### VZ5000-68-1A



### EXH 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.

#### VZ5000-68-1A



### Applicable Plug Assembly (D-sub connector cable assembly)

Cable length	Assembly part no.	Component parts
1.5 m	VVZS3000-21A-1	Plug MIL standard D-sub connector Number of terminals: 25 Cable: 25 cores x 0.3 mm <sup>2</sup>
3 m	VVZS3000-21A-2	
5 m	VVZS3000-21A-3	
8 m	VVZS3000-21A-4	



For details, refer to page 3-3-8.

### ⚠ Caution

#### Mounting Screw Tightening Torques

M2.5: 0.32 N·m  
(For stacking type manifold)

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

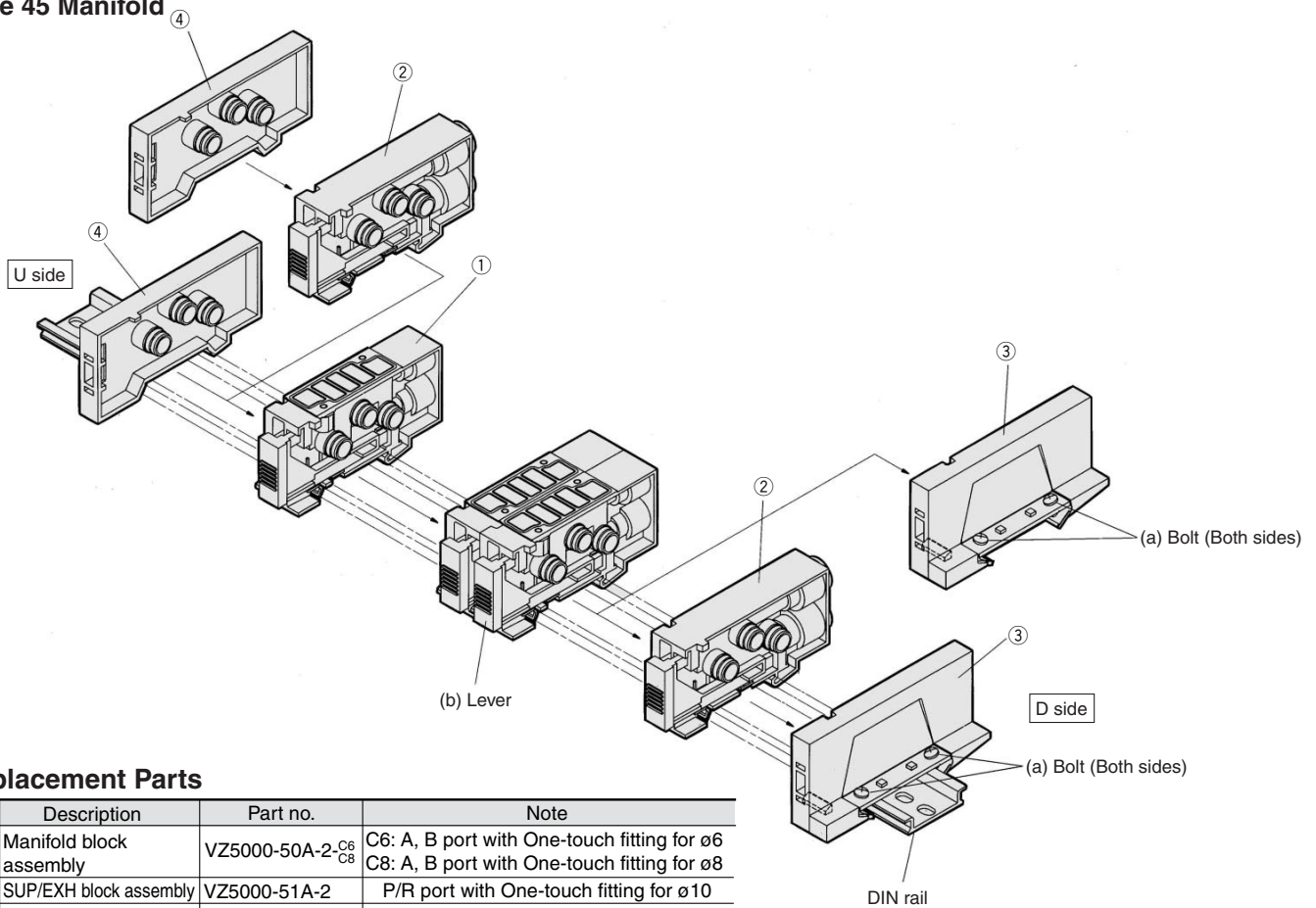
VFN



# Series VZ5000

## Exploded View/DIN Rail Manifold

### Type 45 Manifold



### Replacement Parts

No.	Description	Part no.	Note
①	Manifold block assembly	VZ5000-50A-2- <sup>C6</sup> / <sub>C8</sub>	C6: A, B port with One-touch fitting for $\phi 6$ C8: A, B port with One-touch fitting for $\phi 8$
②	SUP/EXH block assembly	VZ5000-51A-2	P/R port with One-touch fitting for $\phi 10$
③	End block assembly	VZ5000-52A-2D	For D side
④	End block assembly	VZ5000-52A-2U	For U side

### How to Increase Manifold Base

Station expansion is possible at any position.

- (1) Loosen (both) bolts (a), which are securing the manifold onto the DIN rail, 1 to 2 turns.  
(To remove the manifold base from the DIN rail, loosen the bolts 4 to 5 turns.)
- (2) Press lever (b) to disconnect the manifold block assembly at the location in which you wish to place an additional manifold block assembly. (However, there are no levers between ① and ④ or between ③ and ④. They can be disconnected by merely pulling them apart.)
- (3) Mount additional manifold block assembly on the DIN rail as shown in the Fig. (2).
- (4) Press the block assemblies and tighten the bolts (a) to fix them to the DIN rail.


 Note) 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.

Fig. (1)

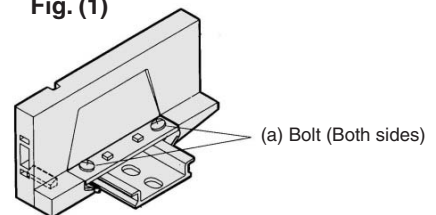
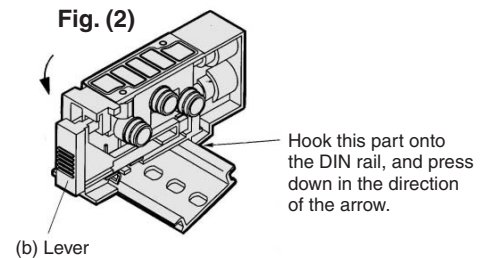
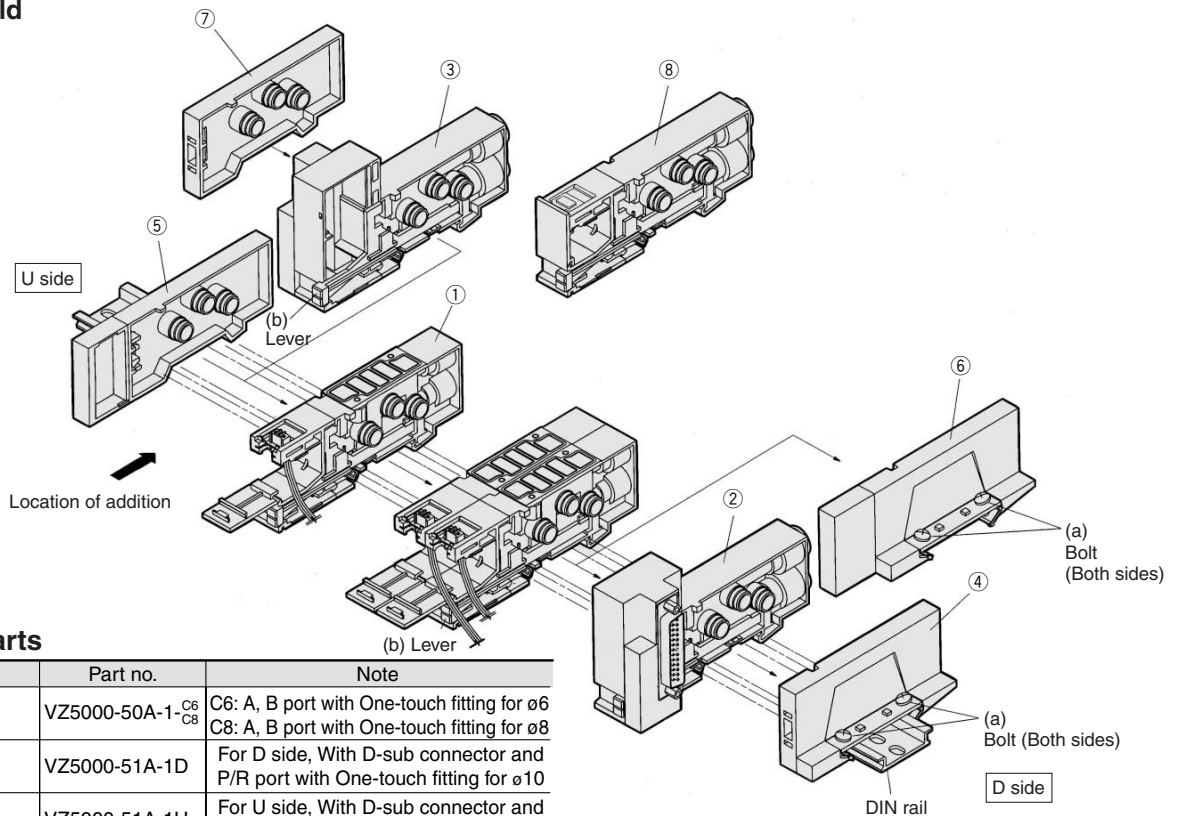


Fig. (2)



## Exploded View/DIN Rail Manifold

### Type 45F Manifold



### Replacement Parts

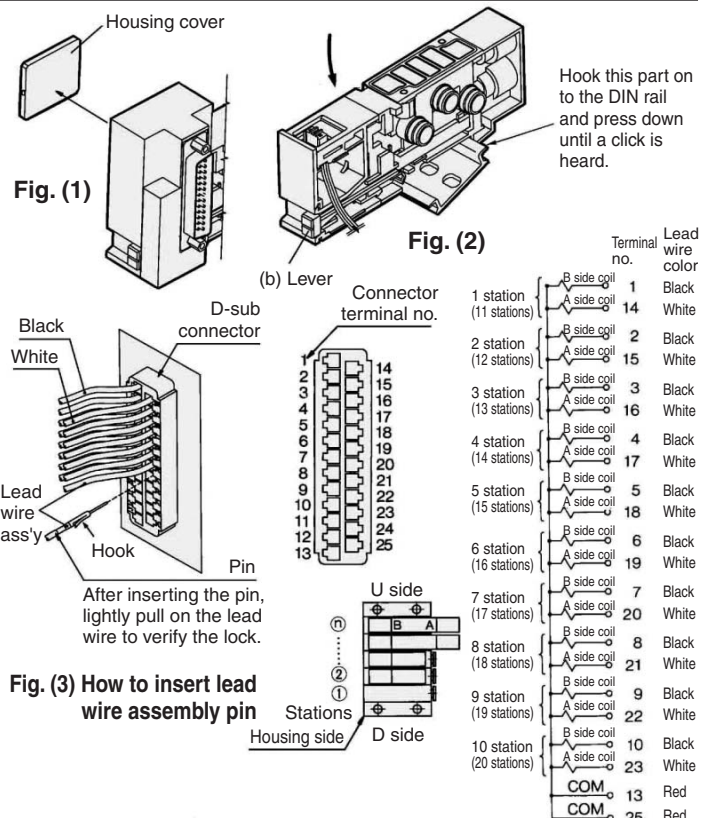
No.	Description	Part no.	Note
①	Manifold block assembly	VZ5000-50A-1-C6 C8	C6: A, B port with One-touch fitting for $\phi 6$ C8: A, B port with One-touch fitting for $\phi 8$
②	SUP/EXH block assembly	VZ5000-51A-1D	For D side, With D-sub connector and P/R port with One-touch fitting for $\phi 10$
③	SUP/EXH block assembly	VZ5000-51A-1U	For U side, With D-sub connector and P/R port with One-touch fitting for $\phi 10$
④	End block assembly	VZ5000-52A-2D	For D side, set with ②
⑤	End block assembly	VZ5000-52A-1U	For U side
⑥	End block assembly	VZ5000-52A-1D	For D side
⑦	End block assembly	VZ5000-52A-2U	For U side, set with ③
⑧	SUP/EXH block assembly	VZ5000-51A-1M	Without D-sub connector, For indicated location P/R port with One-touch fitting for $\phi 10$

### How to Increase Manifold Base

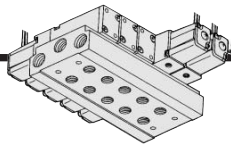
To add a manifold block assembly, add it to the U side so that the terminal number of the D-sub connector and the valve link position will be in accordance with the circuit diagram.

- (1) Loosen (both) bolts (a), which are securing the manifold onto the DIN rail, 1 to 2 turns. (To remove the manifold base from the DIN rail, loosen the bolts 4 to 5 turns.)
- (2) Using a flat screwdriver, press lever (b) to disengage the link of the manifold block assembly on the U side or the D side from the SUP/EXH block assembly or from the end block assembly. (However, there are no levers between ⑤ and ①. They can be disconnected by merely pulling them apart.)
- (3) Remove the housing cover from the D-sub connector portion of the SUP/EXH block assembly. (Refer to Fig. (1).)
- (4) Following the procedure shown in Fig. (2), mount the manifold block assembly to be added onto the DIN rail. As shown in Fig. (3), insert the pin of the lead wire assembly into the D-sub connector, and attach the round crimped terminal to the screw that connects the wires.
- (5) Press the block assemblies and tighten the bolts (a) to fix them to the DIN rail.

**Note** 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.



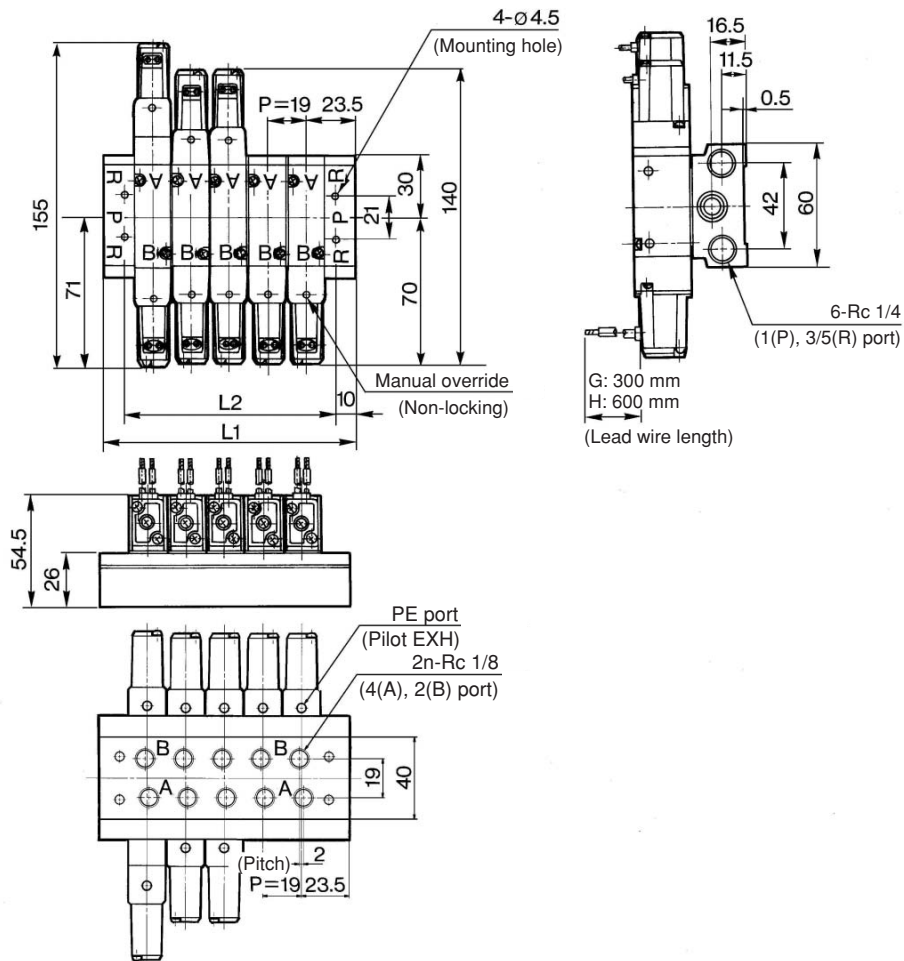
# Series VZ5000



## Type 40 Manifold: Bottom Ported

VV5Z5-40-Station 2-01

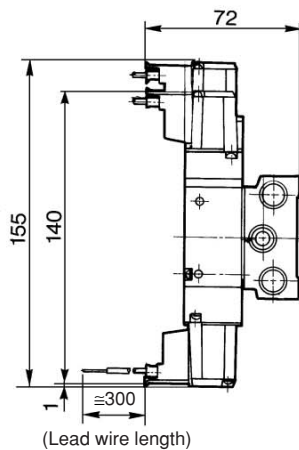
Grommet (G), (H)



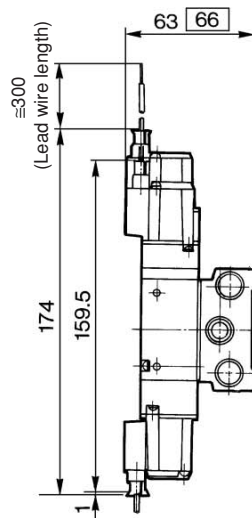
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389	408
L <sub>2</sub>	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388

(mm)

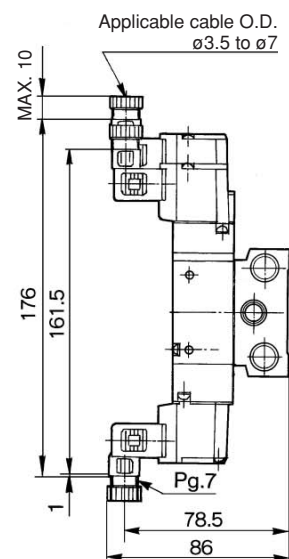
L plug connector (L)



M plug connector (M)

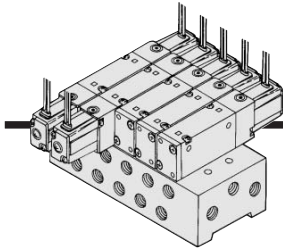


DIN terminal (D)



□: With light/surge voltage suppressor

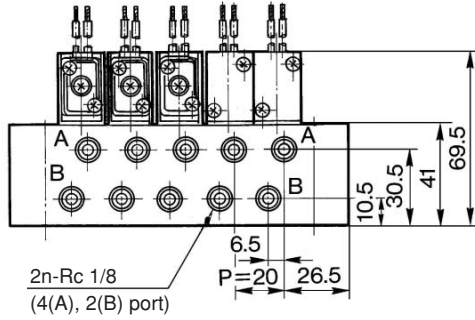
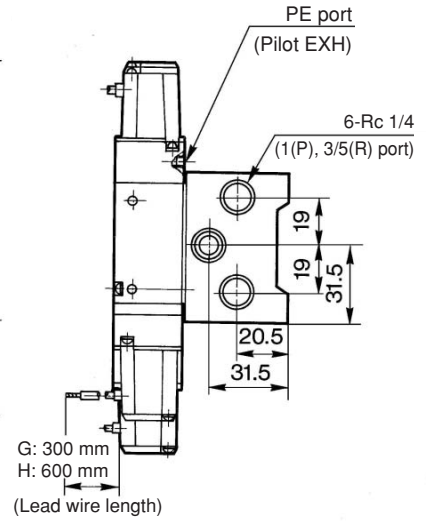
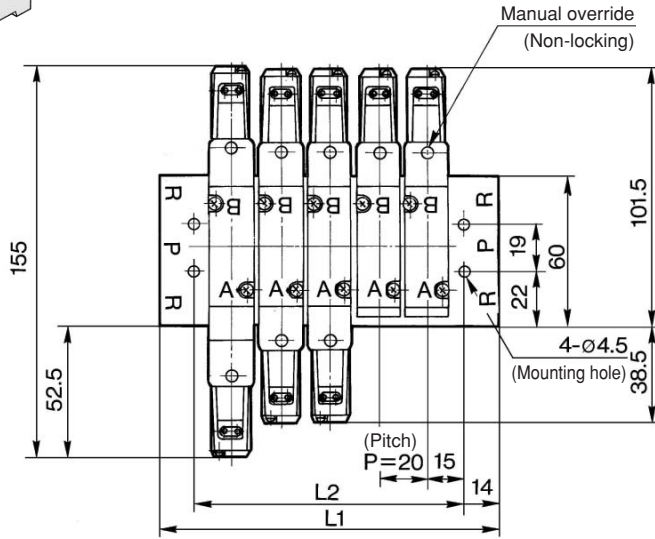
# 5 Port Solenoid Valve Base Mounted Series VZ5000



## Type 41 Manifold: Side Ported

VV525-41-Station 1-01

Grommet (G), (H)

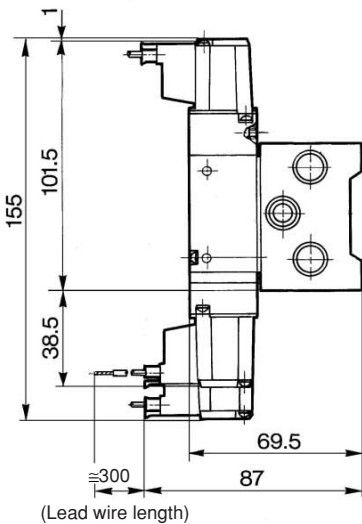


- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

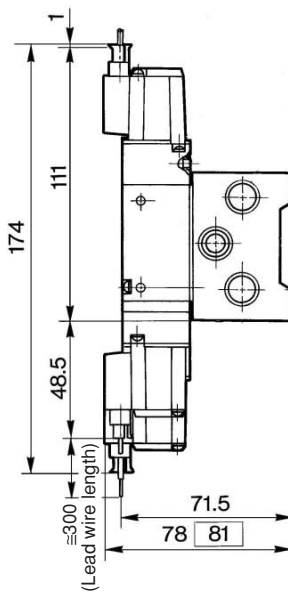
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	78	98	118	138	158	178	198	218	238	258	278	298	318	338	358	378	398	418	438
L <sub>2</sub>	50	70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410

(mm)

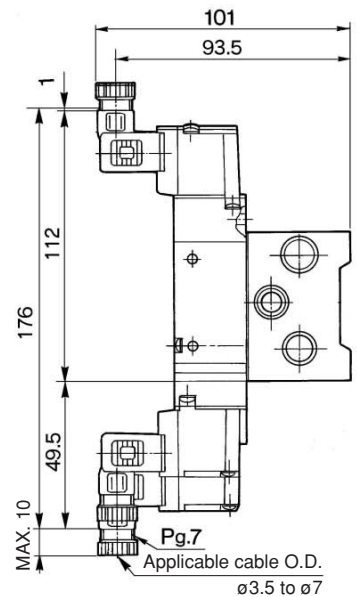
### L plug connector (L)



### M plug connector (M)



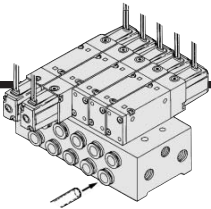
### DIN terminal (D)



□: With light/surge voltage suppressor

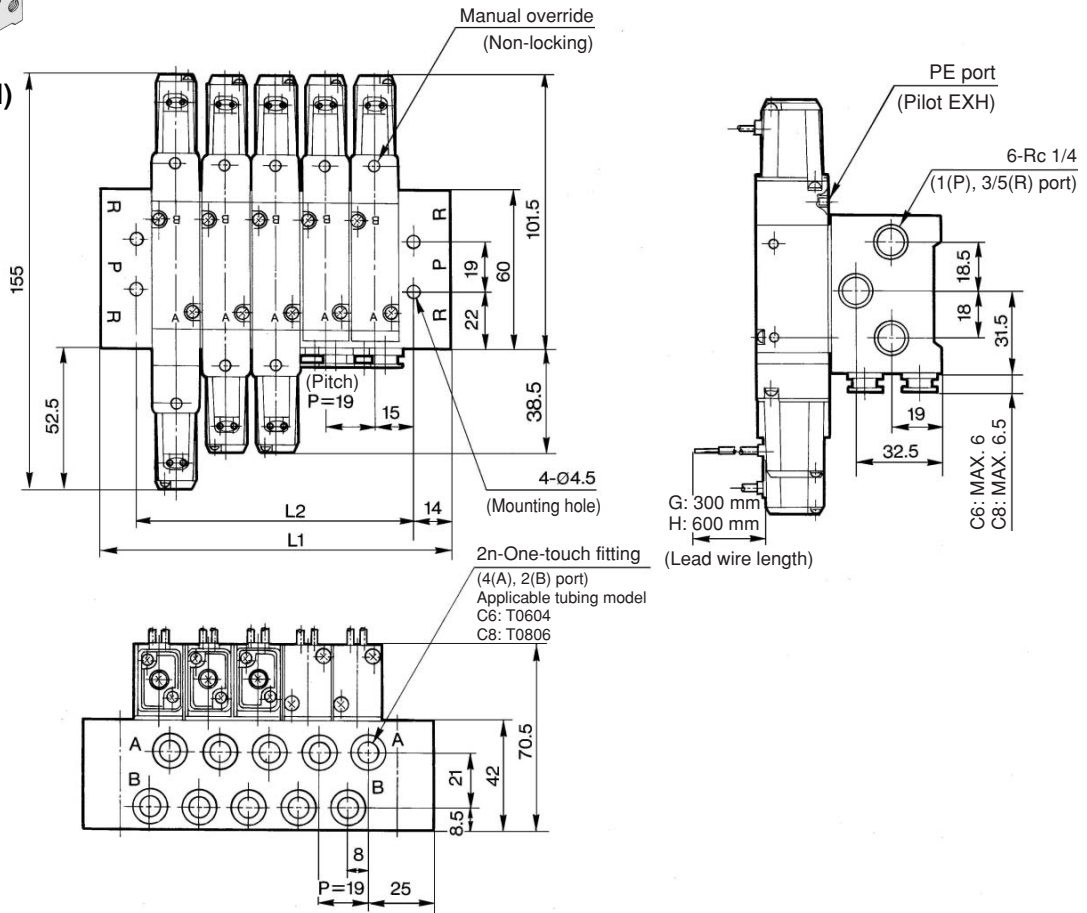
# Series VZ5000

## Type 42 Manifold: Side Ported



VV5Z5-42-Station 1- $\begin{matrix} C6 \\ C8 \end{matrix}$

Grommet (G), (H)



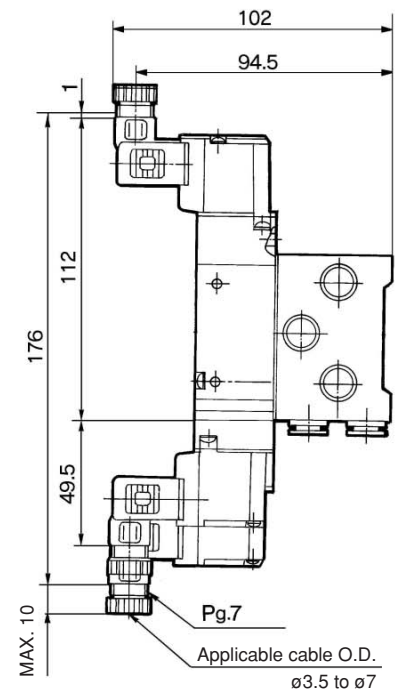
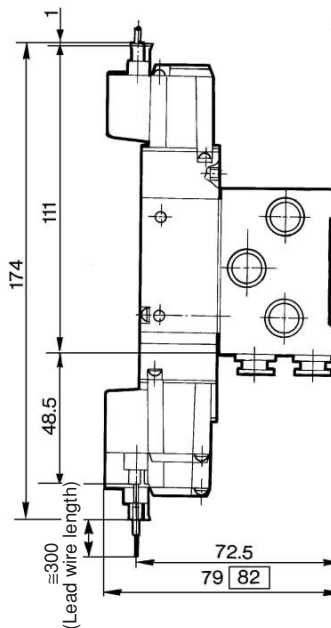
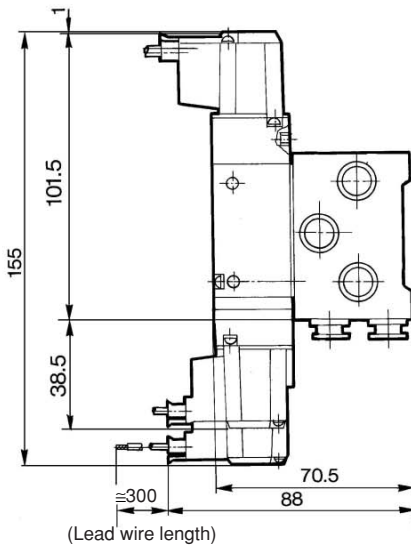
Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	77	96	115	134	153	172	191	210	229	248	267	286	305	324	343	362	381	400	419
L <sub>2</sub>	49	68	87	106	125	144	163	182	201	220	239	258	277	296	315	334	353	372	391

(mm)

### L plug connector (L)

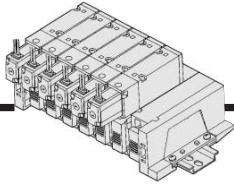
### M plug connector (M)

### DIN terminal (D)



□: With light/surge voltage suppressor

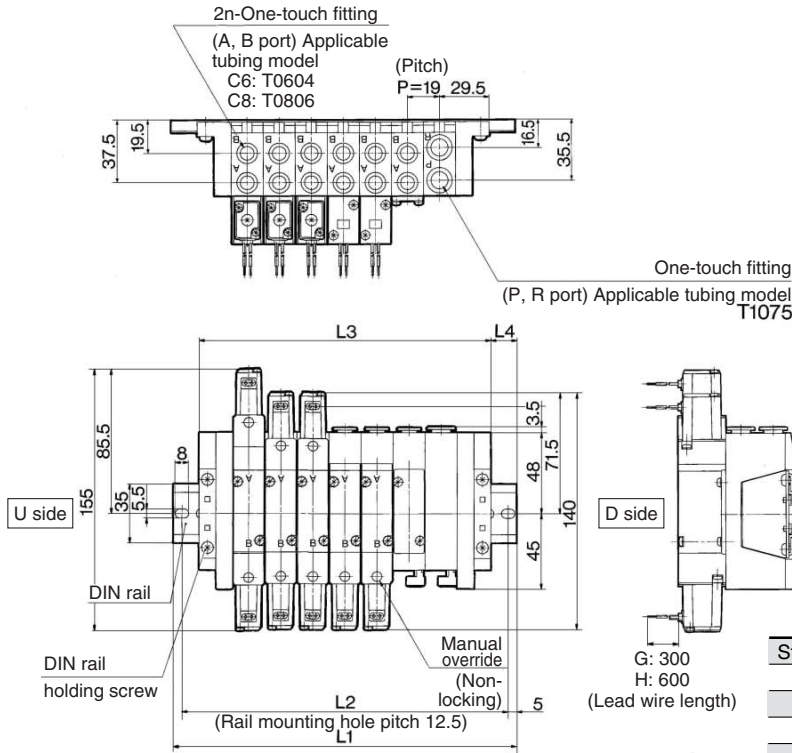
# 5 Port Solenoid Valve Base Mounted Series VZ5000



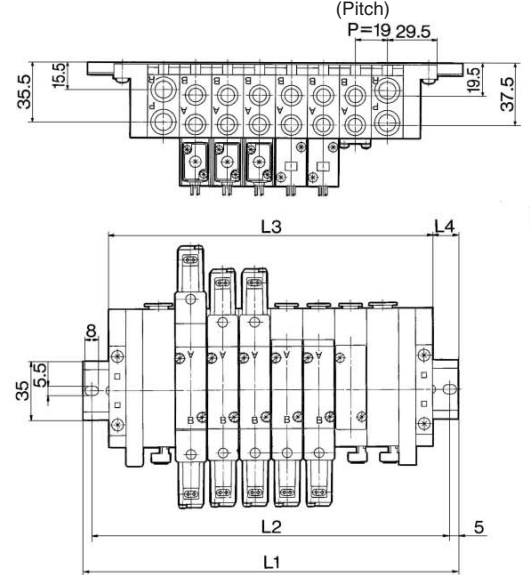
## Type 45 DIN Rail Manifold (Non Plug-in): Side Ported

VV525-45-Station D- C6C  
C8C

### Grommet (G), (H)



VV525-45-Station B- C6C  
C8C



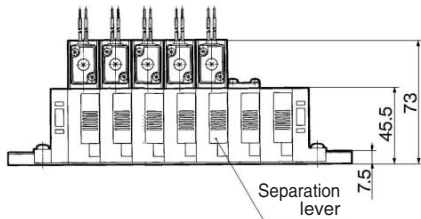
- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

Stations	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	148	160.5	185.5	198	223	235.5	260.5	273	298
L <sub>2</sub>	137.5	150	175	187.5	212.5	225	250	262.5	287.5
L <sub>3</sub>	116	135	154	173	192	211	230	249	268
L <sub>4</sub>	16	13	16	12.5	15.5	12.5	15.5	12	15

(mm)

Stations	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	310.5	335.5	348	373	385.5	410.5	423	448	473	485.5
L <sub>2</sub>	300	325	337.5	362.5	375	400	412.5	437.5	462.5	475
L <sub>3</sub>	287	306	325	344	363	382	401	420	439	458
L <sub>4</sub>	12	15	11.5	14.5	11.5	14.5	11	14	17	14

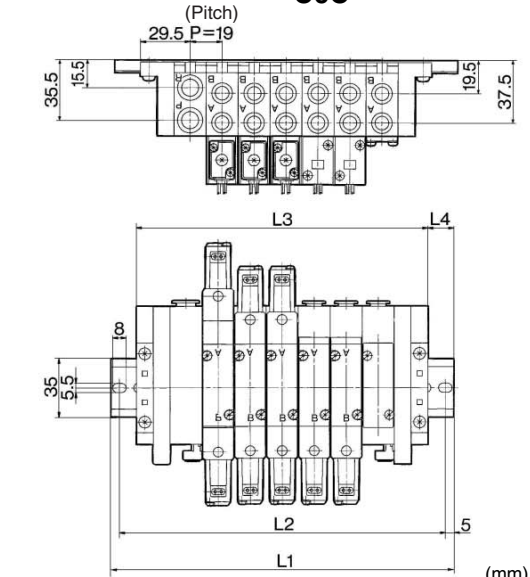
(Station n).....(Station 1)



Stations	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	123	148	160.5	185.5	198	223	235.5	260.5	273
L <sub>2</sub>	112.5	137.5	150	175	187.5	212.5	225	250	262.5
L <sub>3</sub>	97	116	135	154	173	192	211	230	249
L <sub>4</sub>	13	16	13	16	12.5	15.5	12.5	15.5	12

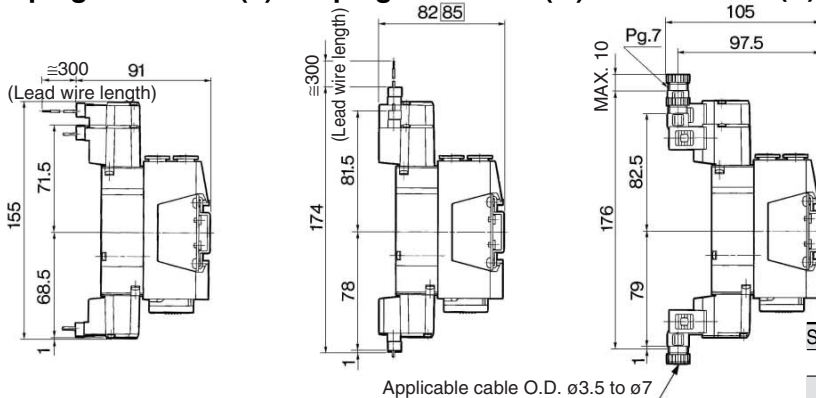
(mm)

VV525-45-Station U- C4C  
C6C

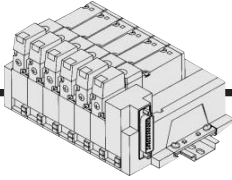


Stations	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	123	148	160.5	185.5	198	223	235.5	260.5	273
L <sub>2</sub>	112.5	137.5	150	175	187.5	212.5	225	250	262.5
L <sub>3</sub>	97	116	135	154	173	192	211	230	249
L <sub>4</sub>	13	16	13	16	12.5	15.5	12.5	15.5	12

### L plug connector (L) M plug connector (M) DIN terminal (D)

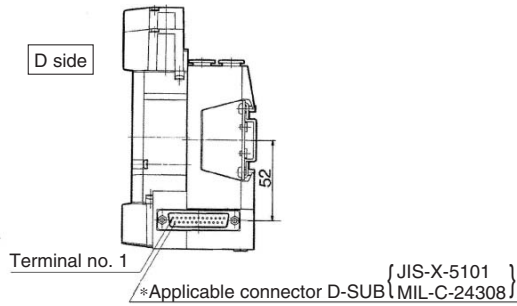
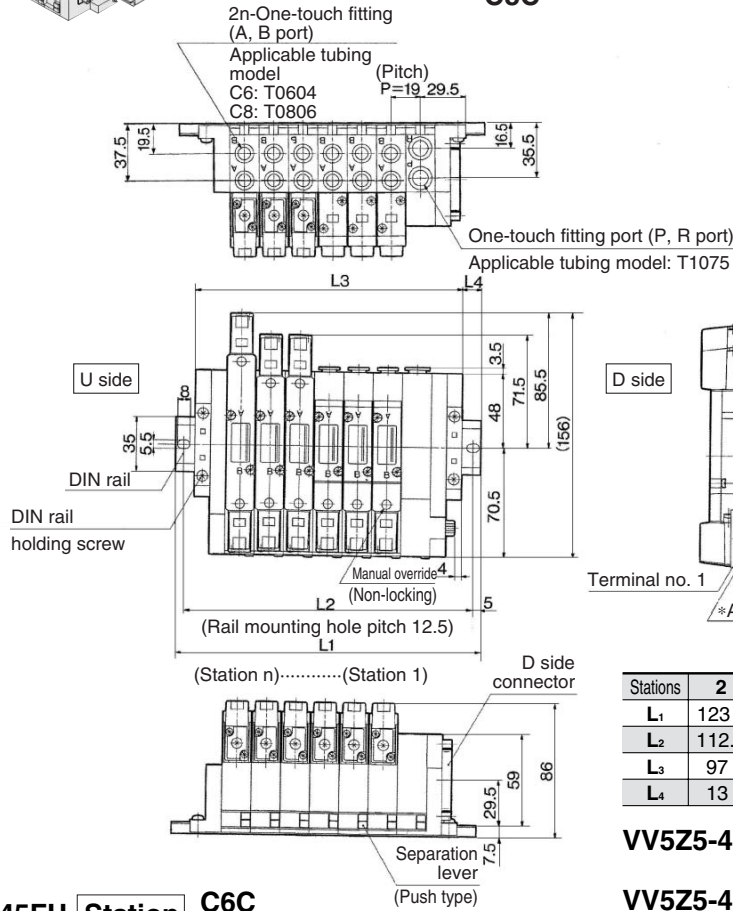


# Series VZ5000



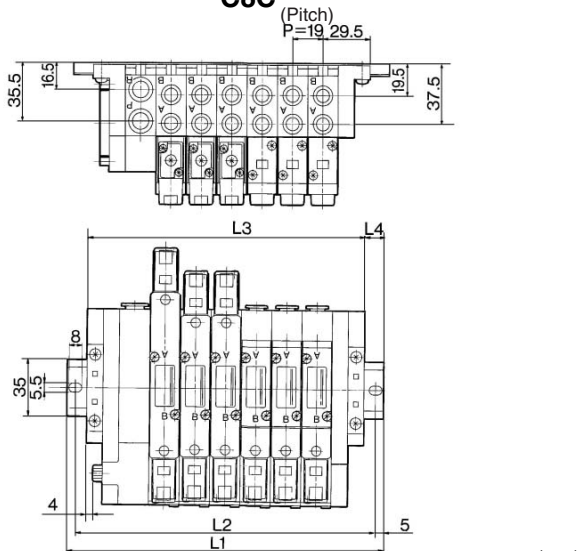
## Type 45F DIN Rail Manifold (Plug-in): Side Ported

**VV5Z5-45FD-Station - C6C  
C8C**



Stations	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	123	148	160.5	185.5	198	223	235.5	260.5	273
L <sub>2</sub>	112.5	137.5	150	175	187.5	212.5	225	250	262.5
L <sub>3</sub>	97	116	135	154	173	192	211	230	249
L <sub>4</sub>	13	16	13	16	12.5	15.5	12.5	15.5	12

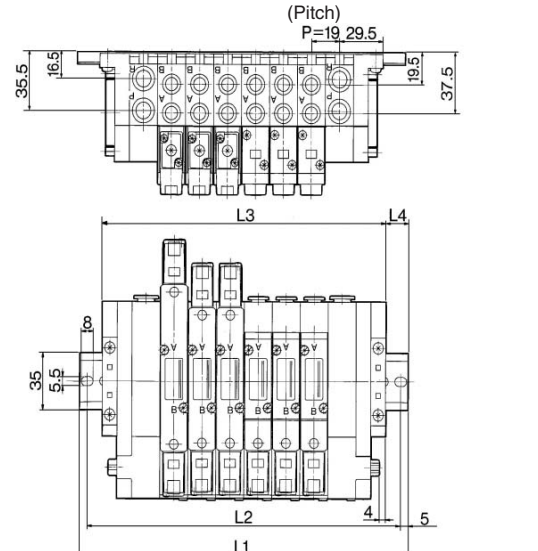
**VV5Z5-45FU-Station - C6C  
C8C**



Stations	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	123	148	160.5	185.5	198	223	235.5	260.5	273
L <sub>2</sub>	112.5	137.5	150	175	187.5	212.5	225	250	262.5
L <sub>3</sub>	97	116	135	154	173	192	211	230	249
L <sub>4</sub>	13	16	13	16	12.5	15.5	12.5	15.5	12

**VV5Z5-45FD<sub>D</sub>-Station B- C6C  
C8C (2 to 10 stations)**

**VV5Z5-45FB-Station - C6C  
C8C (11 to 20 stations)**



Stations	2	3	4	5	6	7	8	9	10
L <sub>1</sub>	148	160.5	185.5	198	223	235.5	260.5	273	298
L <sub>2</sub>	137.5	150	175	187.5	212.5	225	250	262.5	287.5
L <sub>3</sub>	116	135	154	173	192	211	230	249	268
L <sub>4</sub>	16	13	16	12.5	15.5	12.5	15.5	12	15

Stations	11	12	13	14	15	16	17	18	19	20
L <sub>1</sub>	310.5	335.5	348	373	385.5	410.5	423	448	473	485.5
L <sub>2</sub>	300	325	337.5	362.5	375	400	412.5	437.5	462.5	475
L <sub>3</sub>	287	306	325	344	363	382	401	420	439	458
L <sub>4</sub>	12	15	11.5	14.5	11.5	14.5	11	14	17	14

# Made to Order Specifications:

Please contact SMC for detailed specifications, dimensions, and delivery.

## 1. Solenoid Valve: External Pilot Specifications

### Applicable solenoid valve series

VZ3000/5000

(Non plug-in type only)

### Model no.

VZ<sub>5</sub><sup>3</sup> □ □ 0-□ □ □ □ (-□) - X20

Entry is the same as standard products.

### Specifications

Operating pressure range (MPa)	Main pressure	-100 kPa to 0.7
	External pilot pressure	0.15 to 0.7
Pilot exhaust method		Pilot valve individual exhaust

### Dimensions

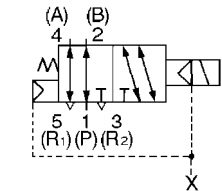
VZ3000: 8 mm longer

VZ5000: 8 mm longer

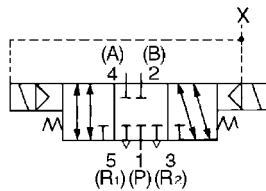
### JIS Symbol

Body ported

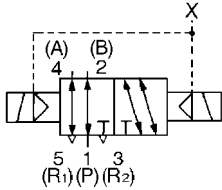
2 position single



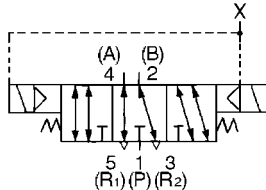
3 position closed center



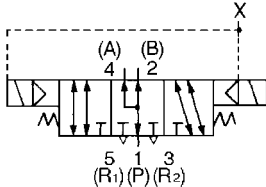
2 position double



3 position exhaust center



3 position pressure center



VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN