



5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series **VZS3000**

Model

Type of actuation	Model	Port size Rc	Flow characteristics						Max. operating cycle (CPM) ⁽¹⁾	Response time (ms) ⁽²⁾	Weight (kg) ⁽³⁾	
			1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → R1/R2)						
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv				
2 position	Single	VZS3150	1/4	2.6	0.17	0.58	2.4	0.09	0.53	1200	18 or less	0.22
	Double	VZS3250	1/4	2.6	0.17	0.58	2.4	0.09	0.53	1200	13 or less	0.27
3 position	Closed center	VZS3350	1/4	2.5	0.17	0.56	2.4	0.11	0.52	500	26 or less	0.28
	Exhaust center	VZS3450	1/4	2.5	0.17	0.56	2.4	0.11	0.49	500	26 or less	0.28
	Pressure center	VZS3550	1/4	2.8	0.12	0.60	2.4	0.16	0.53	500	26 or less	0.28
	Double check	VZS3650	1/4	1.1	—	—	1.2	—	—	420	32 or less	0.43



Note 1) Min. operating cycle is based on JIS B 8375 (One time per 30 days).
 Note 2) Response time is based on JIS B 8375-1981. (0.5 MPa, without light/surge voltage suppressor)
 Note 3) For VZS3□50-□FZ-01 Note 4) "Note 1" and "Note 2" are with controlled clean air.

Reduction of wiring cost
MIL standard D-sub connector
with one-touch connection
 (Plug-in type)

Compact and large valve capacity: Width 18 mm
Flexible to increase and decrease manifold stations
 (Stacking type manifold base)

High frequency/Long service life (more than 30 mil. times)
Possible to use in non-lubrication and dry air
 (Metal seal structure)

Different variations for connection
 Grommet type
 L, M plug connector type: Individual take out of A and B sides
 K plug connector type: Common take out of A and B sides
 DIN terminal type: Individual take out of A and B sides

A little power consumption:
1.8 W DC
For serial transmission



Plug-in type



Non plug-in type

Standard Specifications

Valve specifications	Fluid	Air/Inert gas		
	Maximum operating pressure	1.0 MPa		
	Minimum operating pressure	0.1 MPa		
	Proof pressure	1.5 MPa		
	Ambient and fluid temperature	-10 to 50°C ⁽¹⁾		
	Lubrication	Non-lube ⁽²⁾		
	Pilot valve manual override	Non-locking push type (Flush)		
	Shock/Vibration resistance (m/s ²)	150/50 ⁽³⁾		
Electricity specifications	Enclosure	Dustproof (Degrees of protection 0) ⁽⁴⁾		
	Coil rated voltage	100, 200 VAC, 50/60 Hz; 24 VDC		
	Allowable voltage fluctuation	-15 to +10% of rated voltage		
	Coil insulation type	Class E or equivalent (120°C) ⁽⁵⁾		
	Apparent power (AC)	Inrush	4.5 VA/50 Hz, 4.2 VA/60 Hz	
		Holding	3.5 VA/50 Hz, 3 VA/60 Hz	
	Power consumption (DC)	1.8 W		
	Electrical entry	Plug-in type (FZ)		
Non plug-in type Grommet (G), Plug connector (L, M, KZ) DIN terminal (D)				

Note 1) Use dry air at low temperatures.
 Note 2) Use turbine oil Class 1 (ISO VG32), if lubricated.
 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 8.3 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)

Note 4) Based on JIS C 0920.
 Note 5) Based on JIS C 4003.

Option Specifications

Coil rated voltage	24, 48, 110, 220 VAC (50/60 Hz)
	6, 12, 48 VDC
Manual override	Locking type (Tool required)
Option	With light/surge voltage suppressor ^{Note)}

Note) Plug-in, K plug connector type is standard with light/surge voltage suppressor.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN

How to Order

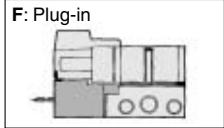
Light/Surge voltage suppressor

Z	With light/surge voltage suppressor
S	With surge voltage suppressor

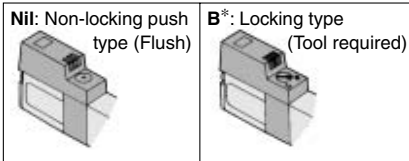
Note) Light/Surge voltage suppressor is provided as standard.



Electrical entry



Pilot valve manual override



* Option

Port size

Nil	Without sub-plate
01	Rc 1/8
02	Rc 1/4

Plug-in

VZS3 2 50 - 1 F Z 01

Non plug-in

VZS3 2 50 - 5 G 01

Symbol

1	2 position single	
2	2 position double	
3	3 position closed center	
4	3 position exhaust center	
5	3 position pressure center	
6	3 position double check	

Coil 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

Option

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



Note) Indicator light is not available for grommet type. With light/surge voltage suppressor is provided as standard for K plug connector type.

* "DOZ" is not available.

Thread type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

Electrical entry

G: Grommet Lead wire length 300 mm	L: L plug connector With lead wire	LN: L plug connector Without lead wire	LO: L plug connector Without connector	D: DIN terminal
H: Grommet Lead wire length 600 mm	M: M plug connector With lead wire	MN: M plug connector Without lead wire	MO: M plug connector Without connector	DO: DIN terminal
	KZ: K plug connector With lead wire	KZN: K plug connector Without lead wire	KZO: K plug connector Without connector	

How to Order Pilot Valve Assembly

SCZS3 A L 2 1

Series VZS3000

Applicable model

A	Single/Double A side
B	Double B side
3A	3 position A side
3B	3 position B side

Electrical entry, Light/Surge voltage suppressor

Symbol	Electrical entry	Body type
F <small>Note)</small>	Plug-in	Plug-in type
G	Grommet	Non plug-in type
GS	Grommet, With surge voltage suppressor	
L	L plug connector	
LZ	L plug connector, With light/surge voltage suppressor	
M	M plug connector	
MZ	M plug connector, With light/surge voltage suppressor	
K <small>Note)</small>	K plug connector	
D	DIN terminal	
DZ	DIN terminal, With light/surge voltage suppressor	

Coil 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

Manual override

Nil	Non-locking push type (Flush)
B*	Locking type (Tool required)

* Option



Note) Since F and K types are attached without lamp cover, it should be arranged separately.

How to Order Light Cover Assembly

AXT171-3 1 A 5 FZ

VZS3000 Light cover assembly

Applicable model

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center
5	3 position pressure center
6	3 position double check

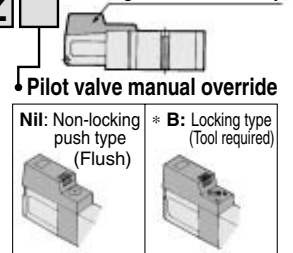
Voltage

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

Plug-in type
K plug connector

Light cover assembly



Pilot valve manual override

Nil: Non-locking push type (Flush)	B: Locking type (Tool required)
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* Option

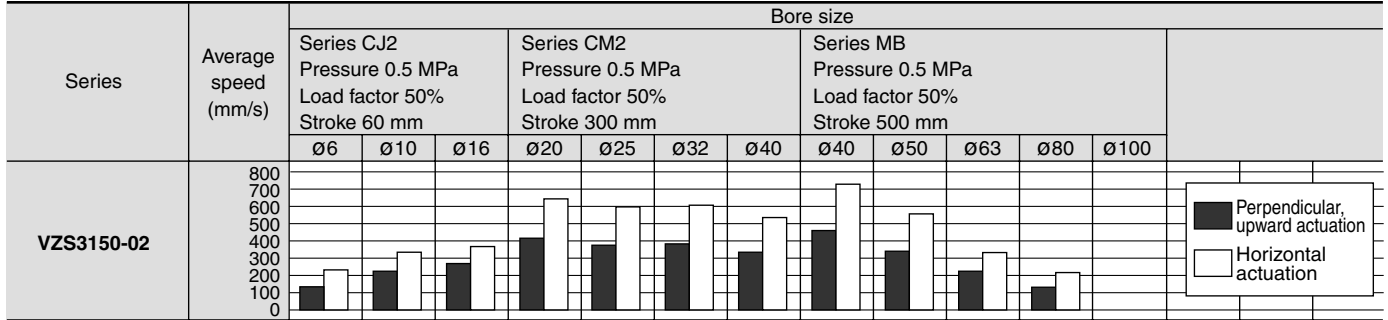
Electrical entry, Light/Surge voltage suppressor

FZ	Plug-in With light/surge voltage suppressor
FS	Plug-in With surge voltage suppressor
KZ	K plug connector With light/surge voltage suppressor
KS	K plug connector With light/surge voltage suppressor

5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series VZS3000

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

Cylinder Speed Chart



- * 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%

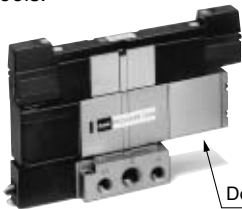
Conditions

		Series CJ2	Series CM2	Series MB
VZS3150-02	Tube bore x Length	T0604 x 1 m	T0806 x 1 m	
	Speed controller	AS3001F-06	AS3001F-08	
	Silencer	AN101-01		

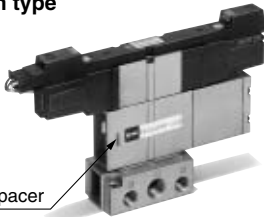
Double Check Spacer/Specifications

Can hold an intermediate cylinder position for an extended time

If the double check spacer with a built-in double check valve is combined, it will enable the cylinder to stop in the intermediate stroke and maintain its position for a long time without being affected by the leakage between the spools.



Plug-in type



Non plug-in type

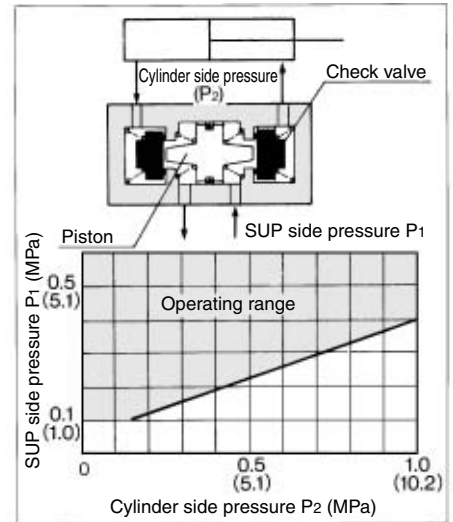
Specifications

Double check spacer part no.	Plug-in type		Non plug-in type	
		VVZS3000-22A-1		VVZS3000-22A-2
Applicable valve model	VZS3450-□FZ		VZS3450-□ ^G _L ^M _{KZ} ^D	
Leakage 0.5 MPa	Solenoid one side energized	1(P)	5(R1) 3(R2)	210 Ncm ³ / min or less
		4(A) 2(B)	5(R1) 3(R2)	0
	Solenoid both sides energized	1(P)	5(R1) 3(R2)	210 Ncm ³ / min or less
		4(A) 2(B)	5(R1) 3(R2)	0

⚠ Caution

In the case of 3 position double check (VZS3650), check the leakage from piping and fittings in between valve and cylinder by means of synthetic detergent solutions, and ensure that there is no such leakage found there. Also check the leakage from cylinder seal and piston seal. If there is any leakage, sometimes the cylinder, when valve is de-energized, can move without stopping at intermediate position.

Check Valve Operating Pressure/Characteristics



- The combination of VZS3150, VZS3250 and a double check spacer can be used as prevention of falling at the stroke end but cannot hold the intermediate position of the cylinder.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

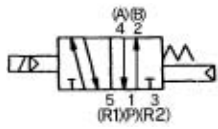
EVS

VFN

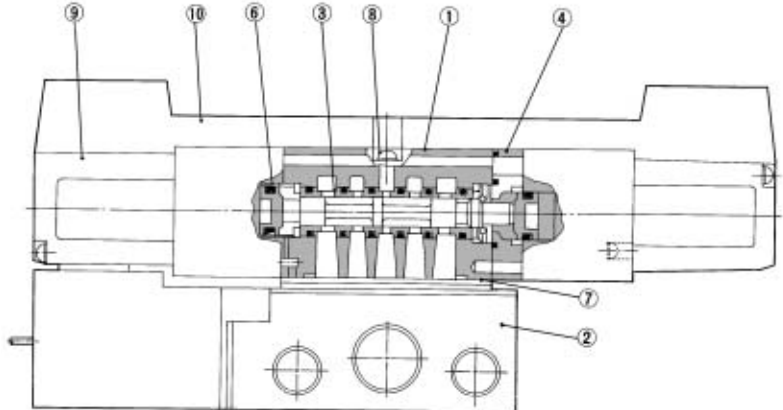
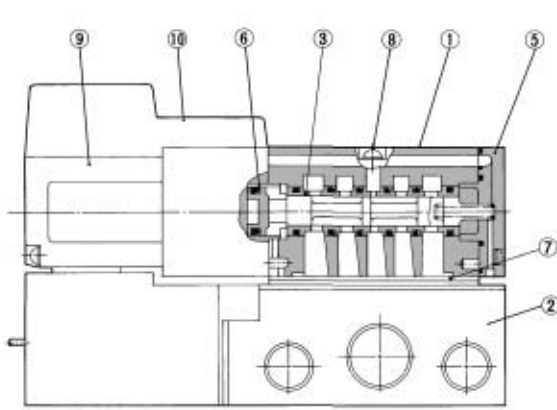
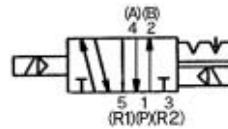
Series VZS3000

Construction

2 position single

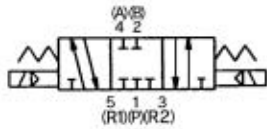


2 position double

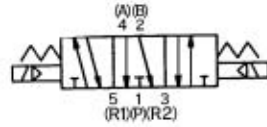


3 position closed center/exhaust center/pressure center

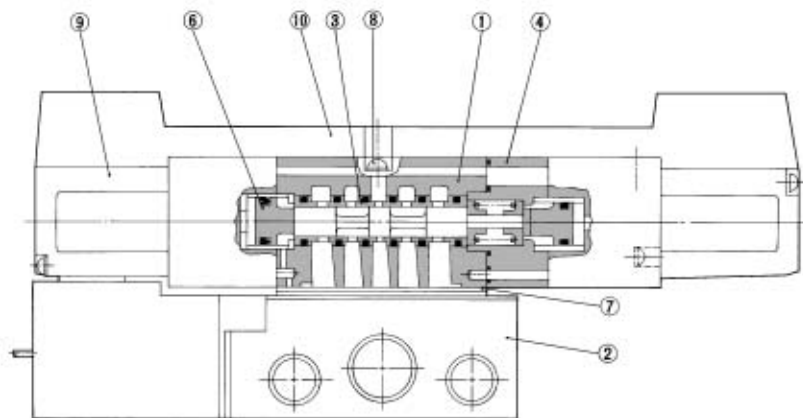
Closed center



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	Sub-plate	Aluminum die-casted	Platinum silver
③	Spool/Sleeve	Stainless steel	—
④	Adapter plate	Resin	Black
⑤	End plate	Resin	Black
⑥	Piston	Resin	—

Replacement Parts

No.	Description	Material	Part no.
⑦	Gasket	NBR	BG-VZS3000-1 (Groove gasket 1 pc. Round head combination screw 2 pcs.)
⑧	Round head combination screw	Carbon steel	BG-VZS3000 (Gasket 1 pc., Round head combination screw 3 pcs.) <small>Note</small>
⑨	Pilot valve assembly	—	Refer to "How to Order Pilot Valve Assembly" on page 3-7-24.
⑩	Light cover assembly	—	Refer to "How to Order Light Cover Assembly" on page 3-7-24.

Note) Refer to page 3-7-6.

Sub-plate Assembly

Plug-in	VZS3000-P ⁰¹ <input type="checkbox"/>
Non plug-in	VZS3000-S ⁰¹ <input type="checkbox"/>

* Mounting bolt and gasket are not attached.

: Thread type

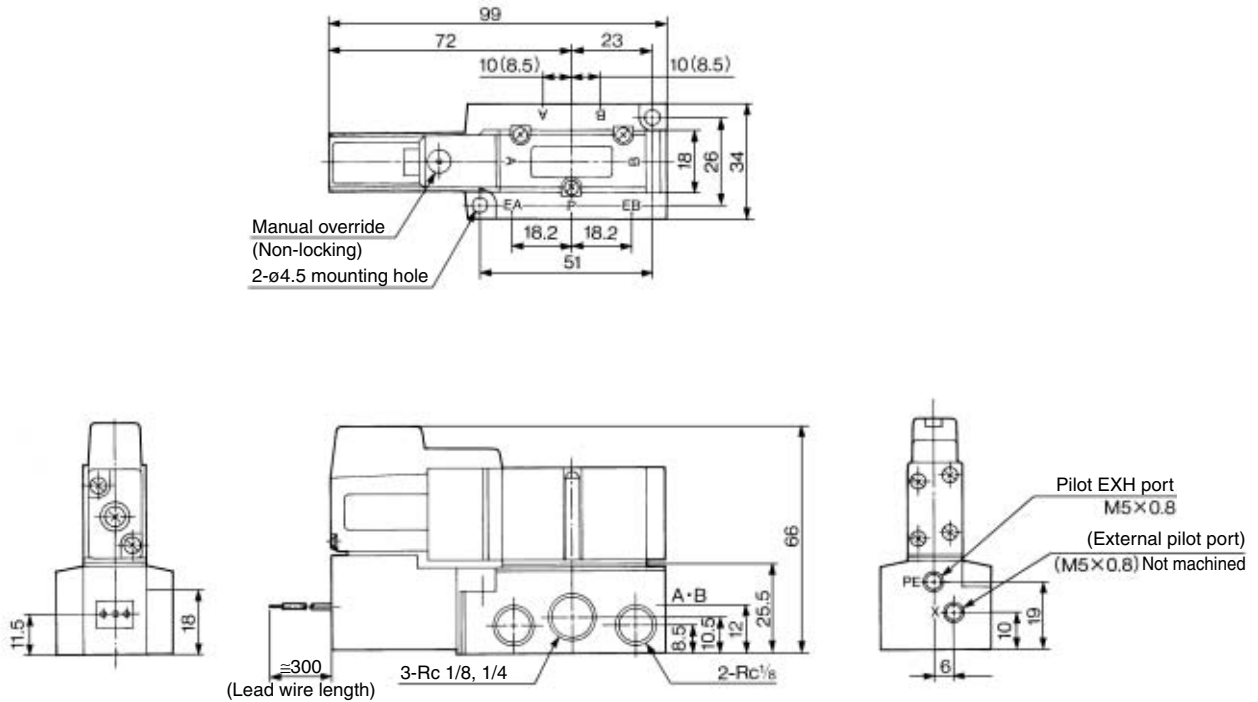
Thread Type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series VZS3000

Plug-in 2 position single/double, 3 position closed center/exhaust center/pressure center/double check

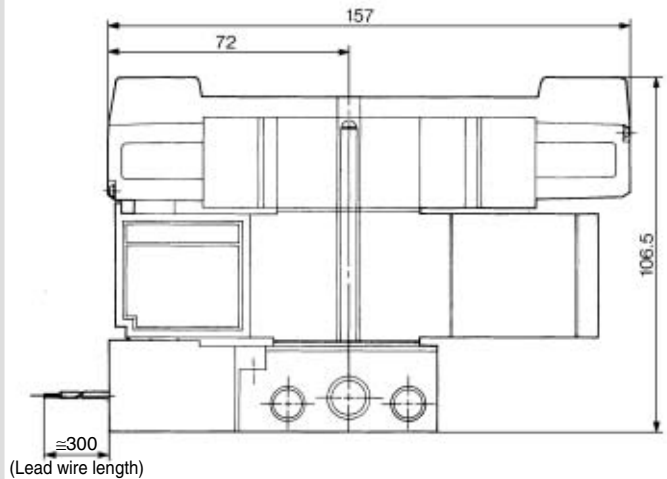
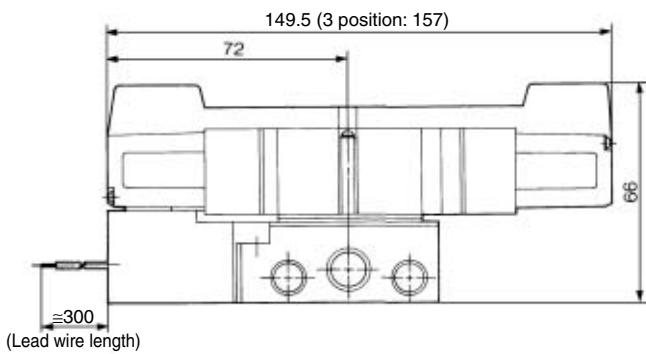
2 position single: VZS3150-□FZ-⁰¹/₀₂



() : Rc 1/8

2 position double: VZS3250-□FZ-⁰¹/₀₂
 3 position closed center: VZS3350-□FZ-⁰¹/₀₂
 3 position exhaust center: VZS3450-□FZ-⁰¹/₀₂
 3 position pressure center: VZS3550-□FZ-⁰¹/₀₂

3 position double check: VZS3650-□FZ-⁰¹/₀₂



* Other dimensions are the same as the single type.

* Other dimensions are the same as the single type.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

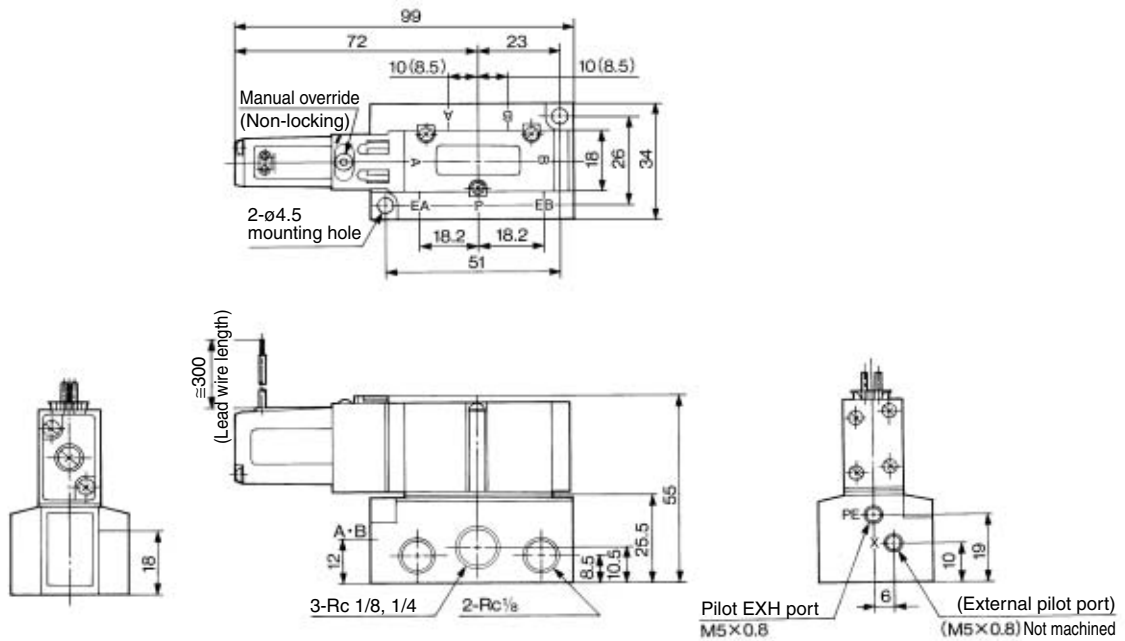
EVS

VFN

Series VZS3000

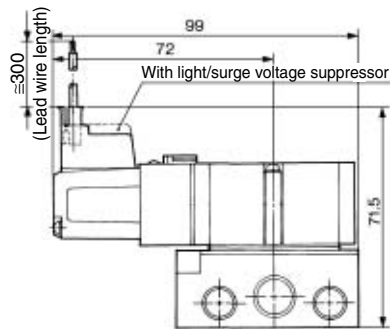
Non Plug-in 2 position single

Grommet: VZS3150-□_H(S)-⁰¹/₀₂



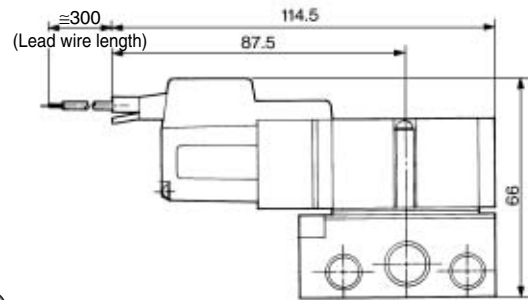
(): Rc 1/8

L plug connector: VZS3150-□L(Z)-⁰¹/₀₂



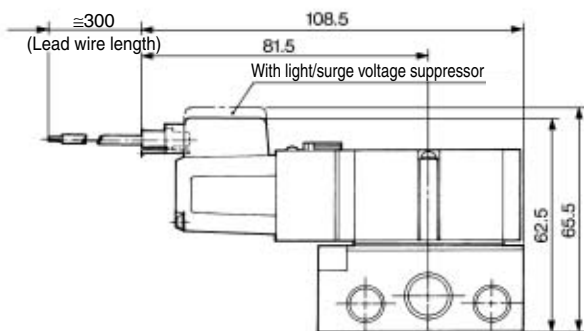
* Other dimensions are the same as the grommet type.

K plug connector: VZS3150-□KZ-⁰¹/₀₂



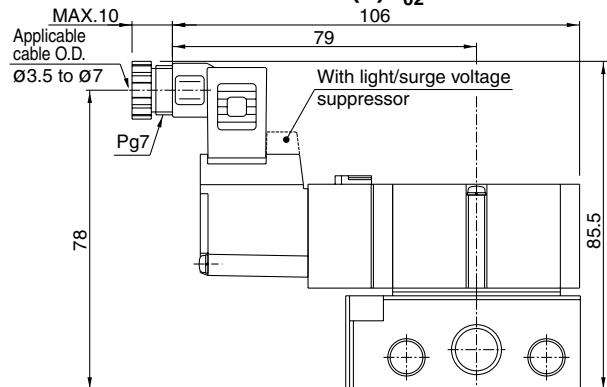
* Other dimensions are the same as the grommet type.

M plug connector: VZS3150-□M(Z)-⁰¹/₀₂



* Other dimensions are the same as the grommet type.

DIN terminal: VZS3150-□D(Z)-⁰¹/₀₂



* Other dimensions are the same as the grommet type.

5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series VZS3000

Non Plug-in 2 position double, 3 position closed center/exhaust center/pressure center

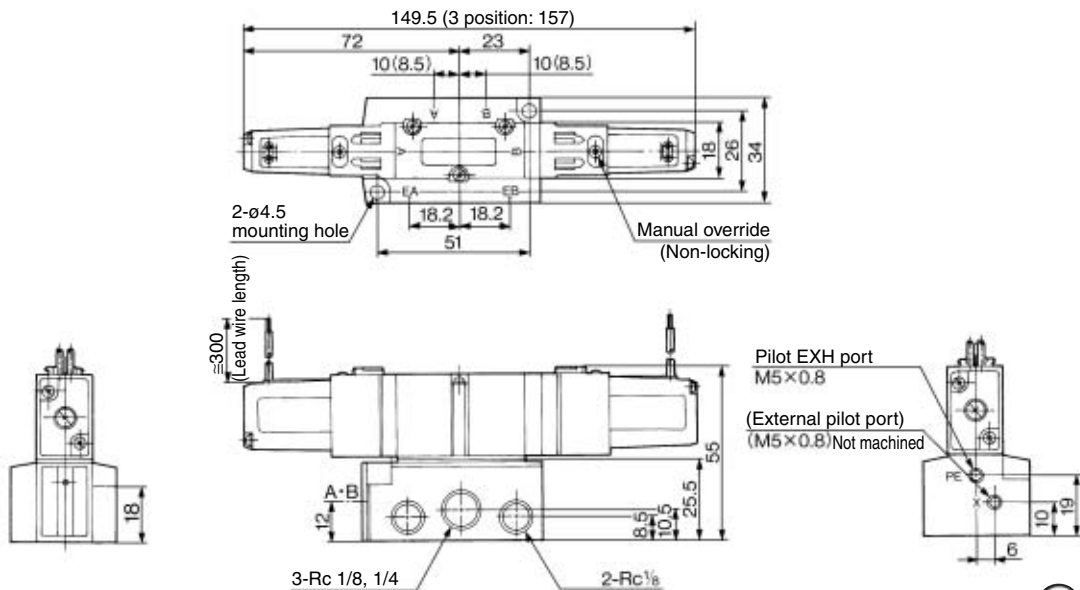
Grommet

2 position double: VZS3250-□G_{H(S)}-01/02

3 position exhaust center: VZS3450-□G_{H(S)}-01/02

3 position closed center: VZS3350-□G_{H(S)}-01/02

3 position pressure center: VZS3550-□G_{H(S)}-01/02



* () : Rc 1/8

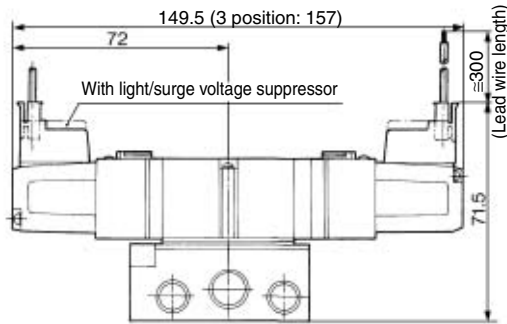
L plug connector

2 position double: VZS3250-□L(Z)-01/02

3 position closed center: VZS3350-□L(Z)-01/02

3 position exhaust center: VZS3450-□L(Z)-01/02

3 position pressure center: VZS3550-□L(Z)-01/02



* Other dimensions are the same as the grommet type.

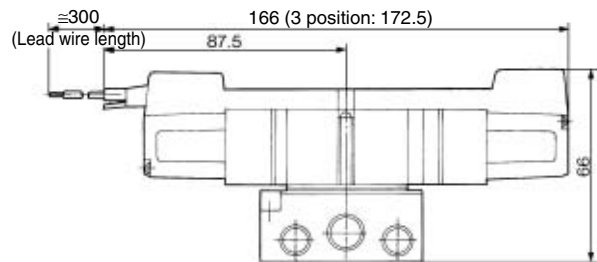
K plug connector

2 position double: VZS3250-□KZ-01/02

3 position closed center: VZS3350-□KZ-01/02

3 position exhaust center: VZS3450-□KZ-01/02

3 position pressure center: VZS3550-□KZ-01/02



* Other dimensions are the same as the grommet type.

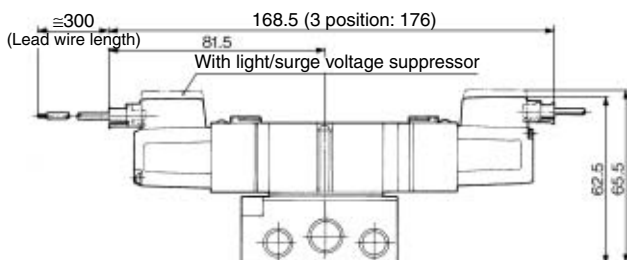
M plug connector

2 position double: VZS3250-□M(Z)-01/02

3 position closed center: VZS3350-□M(Z)-01/02

3 position exhaust center: VZS3450-□M(Z)-01/02

3 position pressure center: VZS3550-□M(Z)-01/02



* Other dimensions are the same as the grommet type.

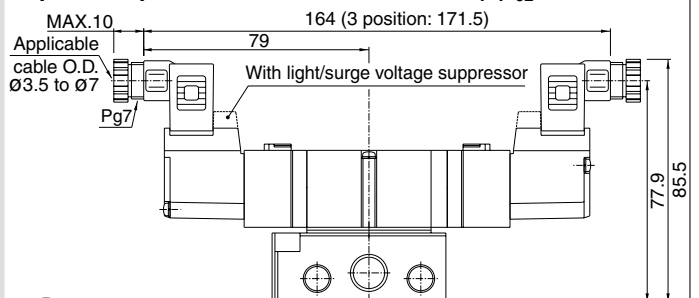
DIN terminal

2 position double: VZS3250-□D(Z)-01/02

3 position closed center: VZS3350-□D(Z)-01/02

3 position exhaust center: VZS3450-□D(Z)-01/02

3 position pressure center: VZS3550-□D(Z)-01/02



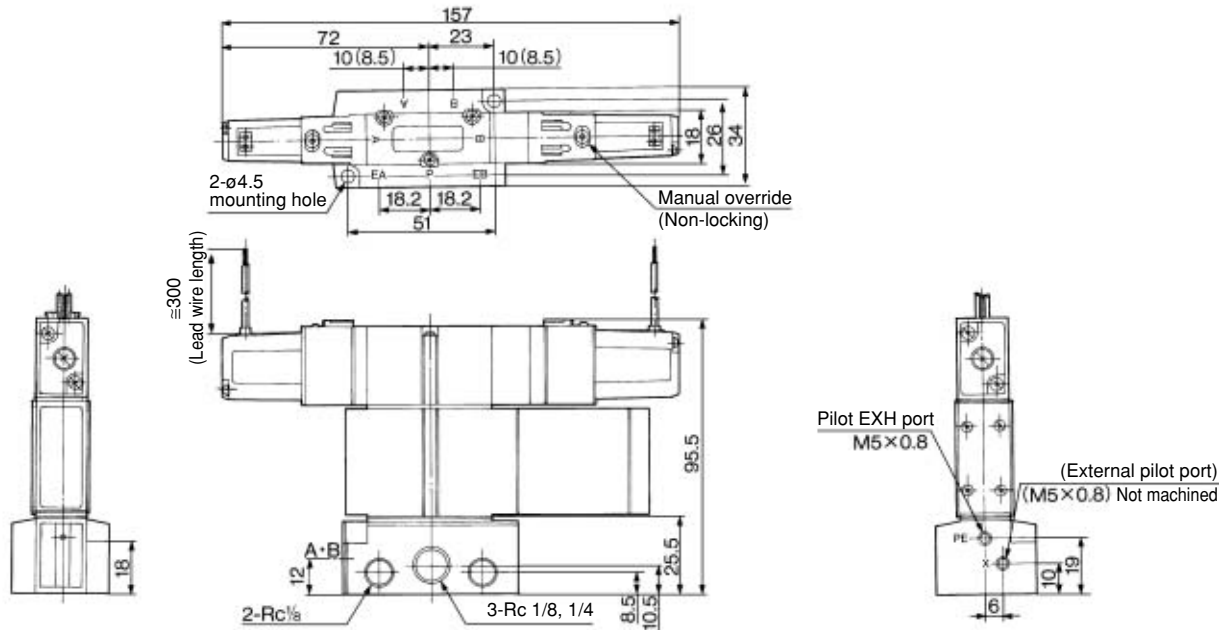
* Other dimensions are the same as the grommet type.

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

Series VZS3000

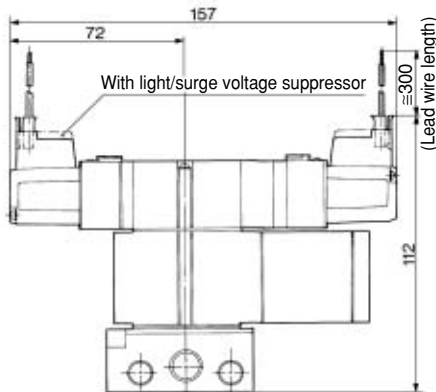
Non Plug-in 3 position double check

Grommet: VZS3650-□^G_{H(S)}-⁰¹₀₂



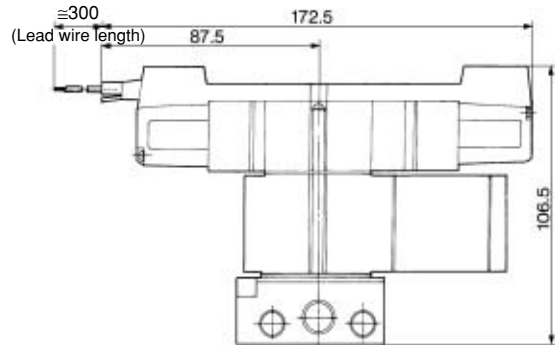
() : Rc 1/8

L plug connector: VZS3650-□^L(Z)-⁰¹₀₂



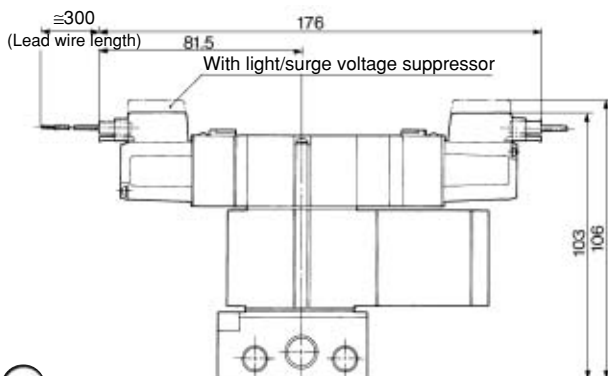
* Other dimensions are the same as the grommet type.

K plug connector: VZS3650-□^{KZ}-⁰¹₀₂



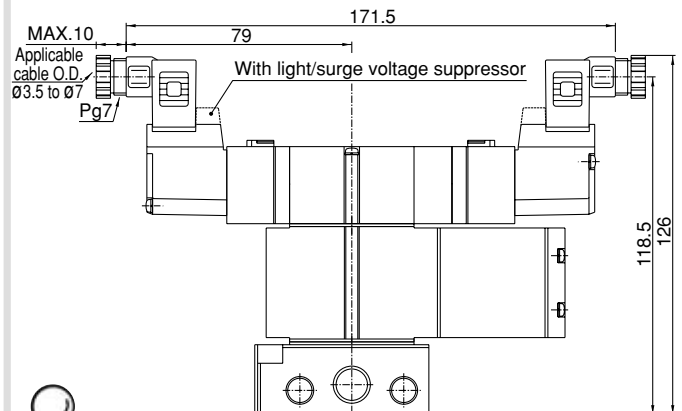
* Other dimensions are the same as the grommet type.

M plug connector: VZS3650-□^M(Z)-⁰¹₀₂



* Other dimensions are the same as the grommet type.

DIN terminal: VZS3650-□^D(Z)-⁰¹₀₂



* Other dimensions are the same as the grommet type.

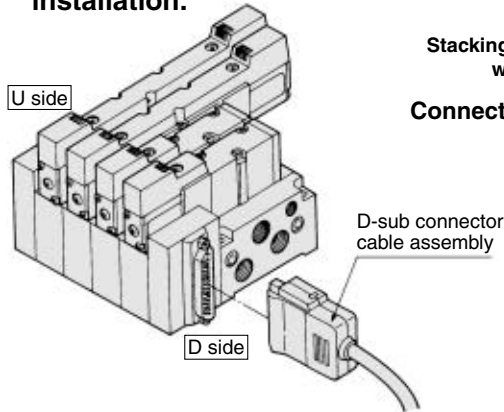
Series VZS3000

Manifold Specifications

Plug-in Type: Stacking Type Manifold Base with D-sub Connector

Refer to page 3-7-4 for wiring specifications.

- Wide range of interchangeability (D-sub connector (25P) conforming to MIL standard)
- Quick wiring permits easier installation.



VV5ZS3 - 51F D - 06 1 - 02

Series VZS3000 Manifold
Plug-in type
Stacking type manifold base with D-sub connector

Connector mounting direction

Symbol	Connector mounting position	Applicable stations
D	D side	2 to 8
U	U side	2 to 8
B	Both sides	9 to 16

Stations

02	2 stations
⋮	⋮
16*	16 stations

* Max. 16 stations.

Thread type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

Port size

01	Rc 1/8
02	Rc 1/4
C6	Embedded type One-touch fitting Applicable tubing O.D.: ø6
C8	Embedded type One-touch fitting Applicable tubing O.D.: ø8

Symbol

Symbol	Passage		Porting specifications
	1(P)	5(R1), 3(R2)	4(A), 2(B)
1	Common	Common	Side

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

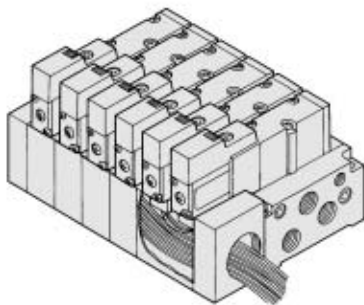
EVS

VFN

Plug-in Type: Stacking Type Manifold Base with Attachment Plug Lead Wire

Refer to page 3-7-4 for wiring specifications.

- The insert plug is attached to the manifold block and lead wire is plugged in with valve side. Please connect with corresponding power side.



VV5ZS3 - 51G - 06 1 - C6

Series VZS3000 Manifold
Plug-in type
Stacking type manifold base with attachment plug lead wire

Stations

02	2 stations
⋮	⋮
15*	15 stations

* Max. 15 stations.

Thread type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

Port size

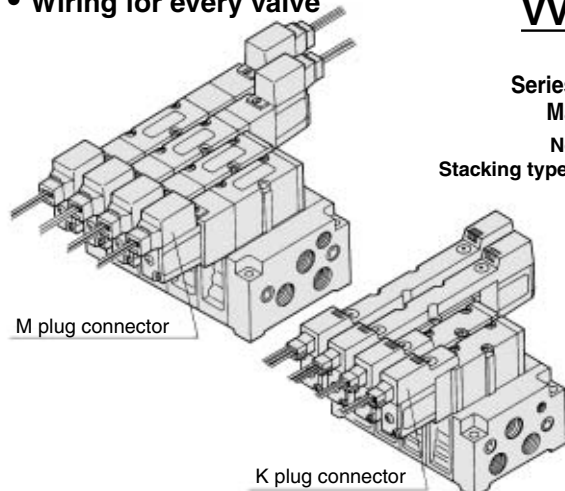
01	Rc 1/8
02	Rc 1/4
C6	Embedded type One-touch fitting Applicable tubing O.D.: ø6
C8	Embedded type One-touch fitting Applicable tubing O.D.: ø8

Symbol

Symbol	Passage		Porting specifications
	1(P)	5(R1), 3(R2)	4(A), 2(B)
1	Common	Common	Side

Non Plug-in Type: Stacking Type Manifold Base

- Wiring for every valve



VV5ZS3 - 51 - 06 1 - C8

Series VZS3000 Manifold
Non plug-in type
Stacking type manifold base

Stations

02	2 stations
⋮	⋮
24	24 stations

* Max. 24 stations.

Thread type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

Port size

01	Rc 1/8
02	Rc 1/4
C6	Embedded type One-touch fitting Applicable tubing O.D.: ø6
C8	Embedded type One-touch fitting Applicable tubing O.D.: ø8


Symbol

Symbol	Passage		Porting specifications
	1(P)	5(R1), 3(R2)	4(A), 2(B)
1	Common	Common	Side

Series VZS3000

Manifold Specifications

Base model	Wiring	Porting specifications		Port size Rc	Stations	Applicable valve model
		4(A), 2(B) Port	1(P), 5(R1) 3(R2)			
Plug-in type VV5ZS3-51F VV5ZS3-51G	<ul style="list-style-type: none"> With D-sub connector With attachment plug lead wire 	Side	1/4	1/8, 1/4	* 2 to 16 stations	VZS3□50-□FZ
Non plug-in type VV5ZS3-51	<ul style="list-style-type: none"> Grommet L plug connector M plug connector K plug connector DIN terminal 					C4

 * With attachment plug lead wire terminal: 15 stations max.

Flow Characteristics at the Number of Manifold Stations (Operated single/double type individually)

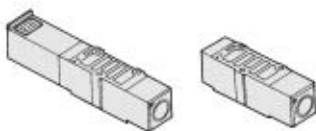
Passage/Stations		Station 1	Station 5	Station 10	Station 15	Station 20
1 → 4/2 (P → A/B)	C [dm ³ /(s·bar)]	2.7	2.7	2.7	2.7	2.6
	b	0.15	0.16	0.16	0.15	0.20
	Cv	0.62	0.61	0.61	0.61	0.63
4/2 → 5/3 (A/B → R1/R2)	C [dm ³ /(s·bar)]	2.8	2.8	2.9	2.9	2.9
	b	0.10	0.12	0.12	0.12	0.12
	Cv	0.65	0.66	0.66	0.66	0.66

Manifold Option Parts Assembly

Individual SUP spacer

An individual SUP spacer set on manifold block can form SUP port for every valve.

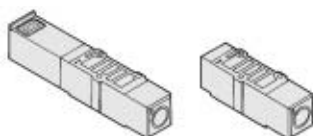
Body type	Plug-in type	Non plug-in type	
Part no.	Rc 1/8	VVZS3000-P-01-1	VVZS3000-P-01-2
	Rc 1/4	VVZS3000-P-02-1	VVZS3000-P-02-2



Individual EXH spacer

An individual EXH spacer set on manifold block can form EXH port for every valve.

Body type	Plug-in type	Non plug-in type	
Part no.	Rc 1/4	VVZS3000-R-02-1	VVZS3000-R-02-2



SUP block disk

When supplying manifold with more than two different pressures, high and low, insert a block disk in between stations subjected to different pressures.

Body type	Plug-in type	Non plug-in type
Part no.	AXT625-12A	



EXH block disk

When valve exhaust affects the other stations on the circuit or when the reverse pressure valve is used to standard manifold valve, insert EXH block disk in between stations to separate valve exhaust.

Body type	Plug-in type	Non plug-in type
Part no.	AXT625-12A	




Interface regulator (P port regulation)

Spacer Interface regulators can be placed on top of the manifold block to reduce the pressure of each of the valves.

Body type	Plug-in type	Non plug-in type
Part no.	ARBZS3000-00-P-1	ARBZS3000-00-P-2



-  (Note) • Apply pressure from the P port of the base to operate the interface regulator.
- To use concurrently with a double check spacer, assemble in the following order: the valve, the interface regulator, and the double check spacer.

How to Order Manifold Assembly

Please indicate manifold base type, corresponding valve, and option parts.

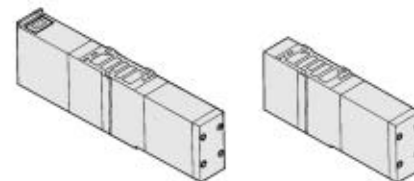
(Example)

- Plug-in type (At 6 stations)
(Manifold base) VV5ZS3-51FD-061-01.....1
(2 position single) VZS3150-5FZ.....3
(2 position double) VZS3250-5FZ2
(Blanking plate) VVZS3000-10A-11
- Non plug-in type (At 6 stations)
(Manifold base) VV5ZS3-51-061-01.....1
(2 position single) VZS3150-5G.....5
(3 position exhaust center) VZS3450-5G...1
(Individual EXH spacer) VVZS3000-R-02-2...1

Double check spacer

If the double check spacer with a built-in double check valve is combined, it will enable the cylinder to stop in the intermediate stroke and maintain its position for a long time without being affected by the leakage between the spools.

Body type	Plug-in type	Non plug-in type
Part no.	VVZS3000-22A-1	VVZS3000-22A-2



Blanking plate

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

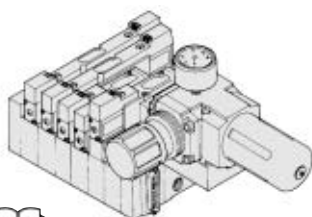
Body type	Plug-in type	Non plug-in type
Part no.	VVZS3000-10A-1	VVZS3000-10A-2



Manifold Option

With control unit

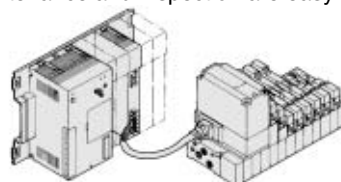
- Plug-in base type/Non plug-in base type
- Filter, regulation valve, pressure switch and air release valve all combine to form one unit.
 - Piping processes are eliminated.



For details, refer to pages 3-7-35 and 3-7-36.

With serial interface unit for serial transmission

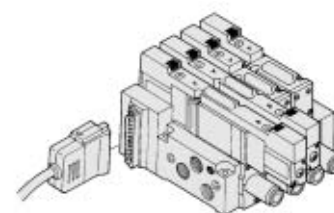
- Plug-in base type
- Solenoid valve wiring process reduced considerably.
 - Disperse installation possible.
Manifold solenoid valve: 32 stations (512 points) max.
 - Maintenance and inspection are easy.



For details, please contact SMC.

With coaxial fitting

- Plug-in base type/Non plug-in base type
- Piping man-hours reduced
 - One-touch piping
 - 1/2 the number of tubes

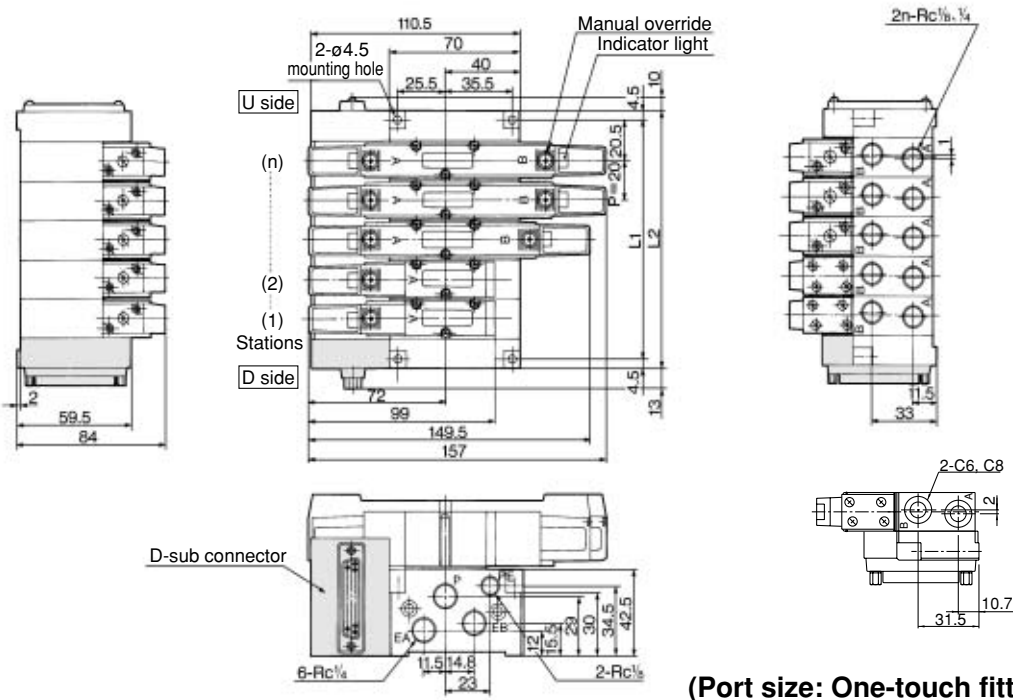


For details, please contact SMC.

5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series VZS3000

Manifold Plug-in type

With D-sub connector: VV5ZS2-51F□ - Station 1- Port size

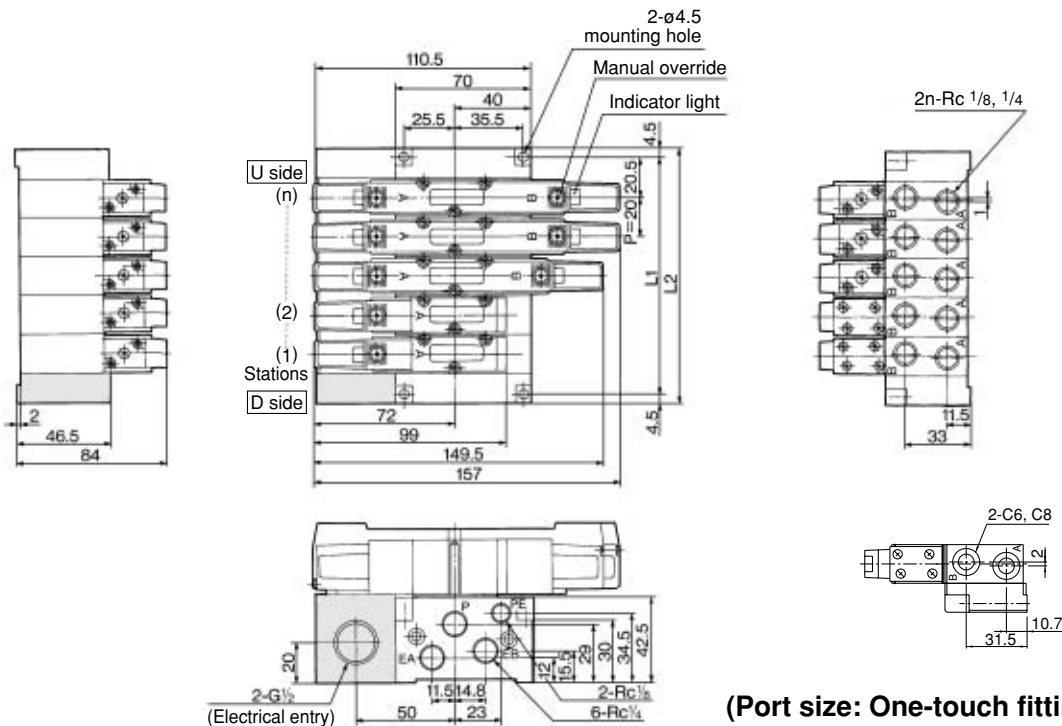


(Port size: One-touch fitting type)

n: Stations

L	Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	Formula
L1		61	81	101	121	141	161	181	201	221	241	261	281	301	321	341	20n + 21
L2		70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	20n + 30

Insert plug with lead wire: VV5ZS2-51G□ - Station 1- Port size



(Port size: One-touch fitting type)

n: Stations

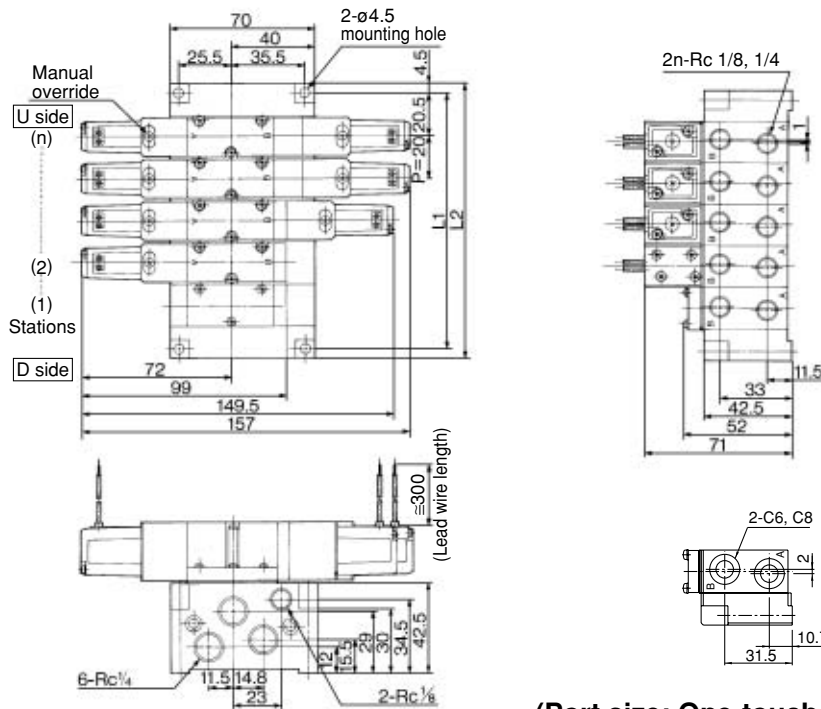
L	Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Formula
L1		61	81	101	121	141	161	181	201	221	241	261	281	301	321	20n + 21
L2		70	90	110	130	150	170	190	210	230	250	270	290	310	330	20n + 30

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

Series VZS3000

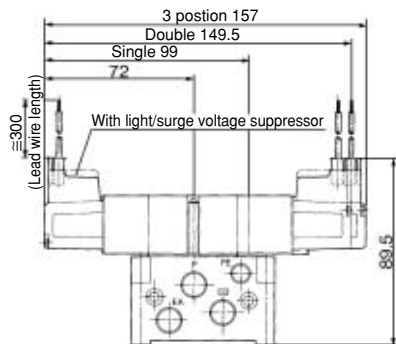
Manifold Non plug-in type

VV5ZS3-51- Station 1- Port size
Grommet (G)

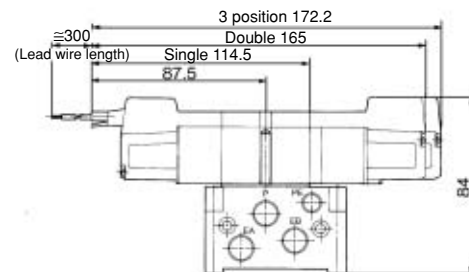


(Port size: One-touch fitting type)

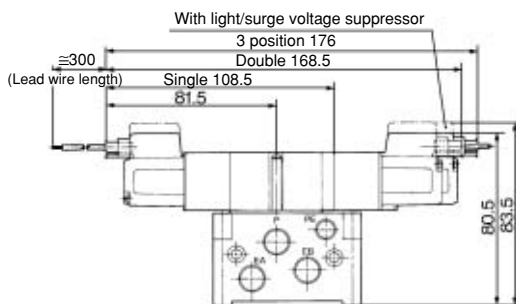
Plug connector (L)



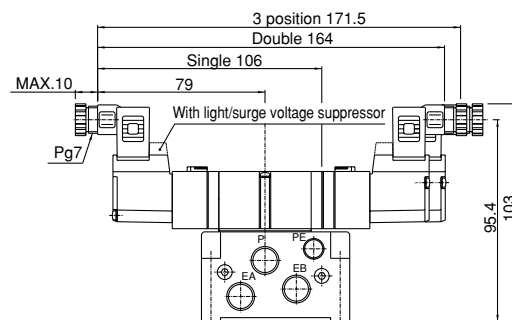
Plug connector (K)



Plug connector (M)



DIN terminal (D)



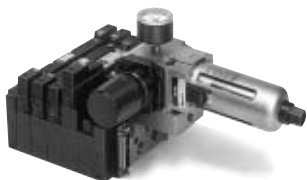
n: Stations

L \ Stations	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	Formula
L1	61	81	101	121	141	161	181	201	221	241	261	281	301	321	341	361	381	401	421	441	461	481	501	20n + 21
L2	70	90	110	130	150	170	190	210	230	250	270	290	310	330	350	370	390	410	430	450	470	490	510	20n + 30

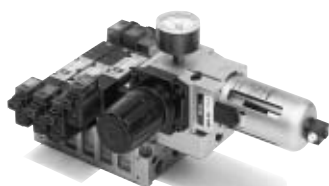
5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series VZS3000

Manifold with Control Unit

- Control unit (Filter, Regulator, Pressure switch, Air release valve) are all standardized in the one unit, and can be mounted on the manifold base without any attachments.
- Piping processes are eliminated.



Plug-in type



Non plug-in type

Caution

When using an air filter with auto-drain or manual override drain, mount the filter vertically.

Manifold Specifications

Base model	Wiring	Porting specifications		Port size		Stations	Applicable valve model
		A, B port	P, EA, EB	A, B			
Plug-in type VV5ZS3-51F VV5ZS3-51G	<ul style="list-style-type: none"> With D-sub connector With attachment plug lead wire 	Side	Rc 1/4	Rc 1/8, 1/4		* 2 to 16 stations	VZS3□50-□FZ
Non plug-in type VV5ZS3-51	<ul style="list-style-type: none"> Grommet L plug connector M plug connector K plug connector 			C6			2 to 24 stations

* With attachment plug lead wire: 15 stations max.

Control Unit Specifications

Air filter (With auto-drain/With manual drain)	
Filtration degree	5 μm
Regulator	
Set pressure (Outlet pressure)	0.05 to 0.85 MPa
Pressure switch	
Set pressure range: OFF	0.1 to 0.4 MPa
Differential pressure	0.08 MPa
Contact	1a
Max. switch capacity	2 VA AC, 2 W DC
Max. operating current	24 VAC, DC or less: 50 mA 100 VAC, DC: 20 mA
Operating voltage	100 VAC, DC or less
Air release valve (Single only)	
Operating pressure range	0.1 to 1.0 MPa

Control Unit/Option

Blanking plate	MP2-2 (With control unit/Filter regulator)
	VVZS2000-15A (With pressure switch)
	VVZS3000-24A-10-1/2 (Release valve)
Filter element	111511-5B
Pressure switch	Plug-in type VVZS2000-14A
	Non plug-in type IS1000-00-X204

How to Order

VV5ZS3-51F D-08 1-01 □ AP 5

Series VZS3000 Manifold

Base type/Electrical entry

51F	Plug-in type: Stacking type manifold base with D-sub connector
51G	Plug-in type: Stacking type manifold base with attachment plug lead wire
51	Non plug-in type: Stacking type manifold base

Connector mounting direction

Symbol	With connector	Applicable base	Applicable stations
Nil	None	51	2 to 24
		51G	2 to 15
D	D side	51F	2 to 8
			9 to 16
U	U side		
B	Both sides		

Stations

02	2 stations
⋮	⋮
24	24 stations

Note) Maximum stations
51F...16 stations
51G...15 stations
51...24 stations

Symbol

Symbol	Passage		Porting specifications
	1(P)	5(R1), 3(R2)	4(A), 2(B)
1	Common	Common	Side

Thread type

Standard	Nil	Rc
	N	NPT
Option	T	NPTF
	F	G

Port size

01	Rc 1/8
02	Rc 1/4
C6	Embedded type One-touch fitting Applicable tubing O.D.: ø6
C8	Embedded type One-touch fitting Applicable tubing O.D.: ø8

Coil voltage of air release valve

Nil	None	Note) How to take out the lead wire of air release valve is the same method as the other valve equipped on the same manifold.
1	100 VAC, 50/60 Hz	
2	200 VAC, 50/60 Hz	
5	24 VDC	
9*	Other	

* Option

Control unit types

Symbol	Nil	A	AP	M	MP	F	G	C	E
Control equipment									
Air filter regulator with auto-drain	—	●	●	—	—	●	—	—	—
Air filter regulator with manual drain	—	—	—	●	●	—	●	—	—
Air release valve	—	●	●	●	●	—	—	●	●
Pressure switch	—	—	●	—	—	—	—	—	—
Blanking plate (Air release valve)	—	—	—	—	—	●	●	—	—
Blanking plate (Filter regulator)	—	—	—	—	—	—	—	●	—
Blanking plate (Pressure switch)	—	●	—	●	—	●	●	●	—
Number of manifold blocks required for mounting (Stations)	—	2						1	

Note) Operating voltage of pressure switch: 100 VAC, 100 VDC or less.

Please indicate manifold base type, corresponding valve, and option parts.

<Example>

- Plug-in type with D-sub connector (Manifold base) VV5ZS3-51FD-091-01-MP5...1 (2 position single) VZS3150-5FZ...5 (2 position double) VZS3250-5FZ...2

* 2 stations are needed to mount control unit.

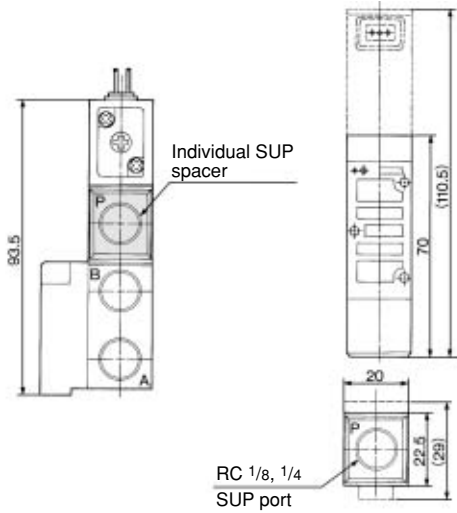
- Non plug-in type (Manifold base) VV5ZS3-50-071-01-M5...1 (2 position single) VZS3150-5G...5

* 2 stations are needed to mount control unit.

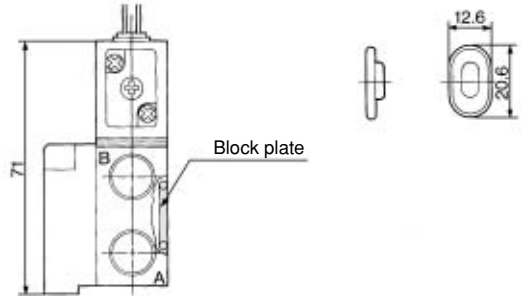
5 Port Pilot Operated Solenoid Valve Metal Seal, Plug-in/Non Plug-in Series VZS3000

Manifold Option Parts Plug-in type, Non plug-in type

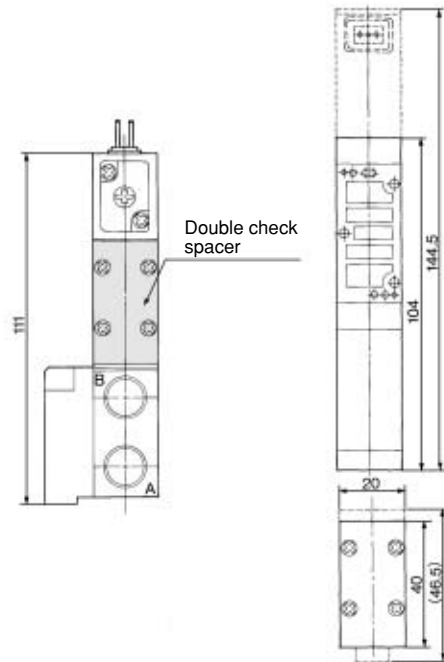
Individual SUP spacer
 Plug-in type: VVZS3000-P-01-1
 Non plug-in type: VVZS3000-P-02-2



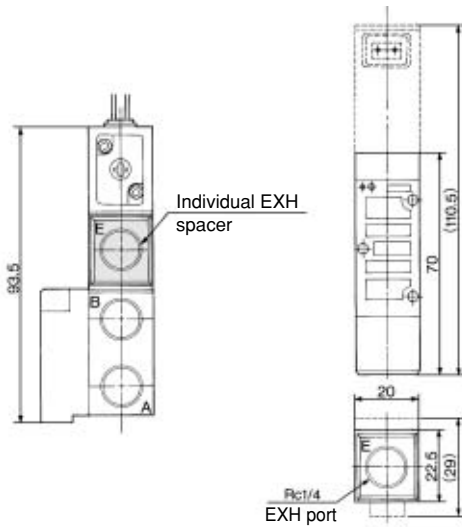
SUP block disk : AXT625-12A
EXH blocking plate



Double check spacer
 Plug-in type: VVZS3000-22A-1
 Non-plug-in type: VVZS3000-22A-2



Individual EXH spacer
 Plug-in type: VVZS3000-R-02-1
 Non plug-in type: VVZS3000-R-02-2

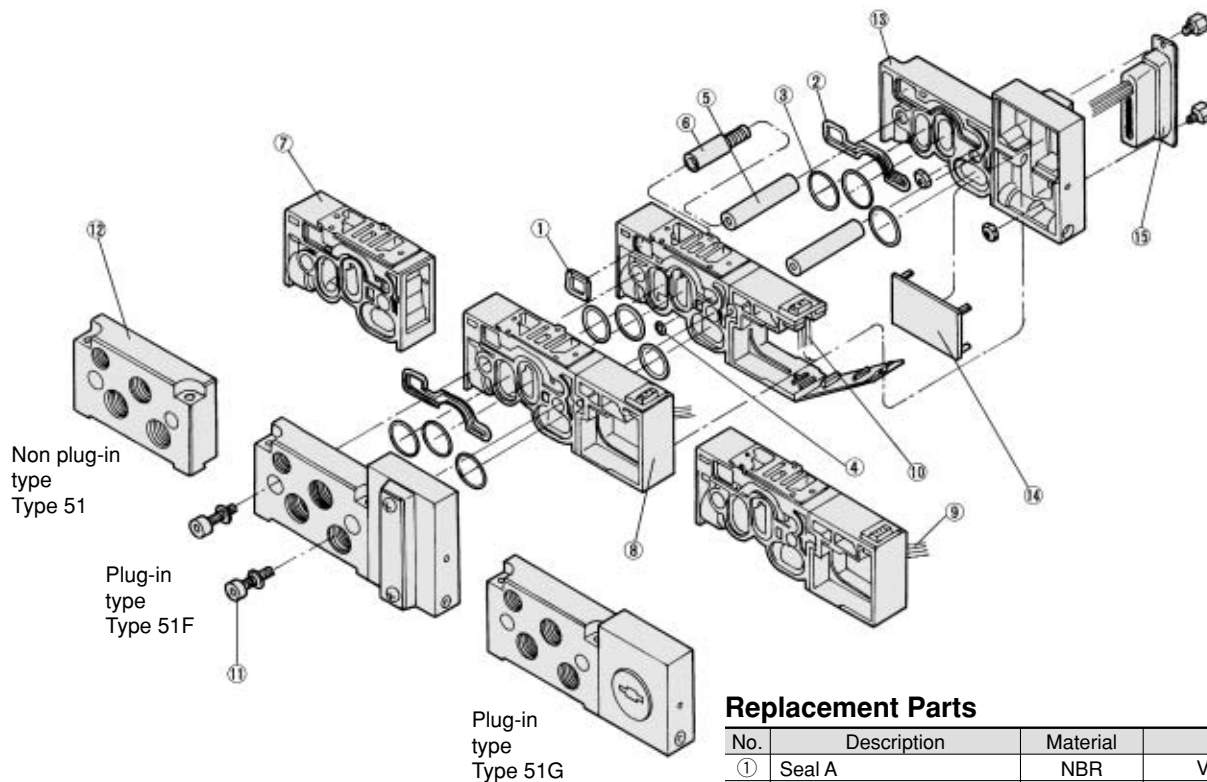


- VK
- VZ
- VF
- VFR
- VP4
- VZS
- VFS
- VS4
- VQ7
- EVS
- VFN

() : Plug-in type

Series VZS3000

Exploded View of Manifold



Replacement Parts

No.	Description	Material	Part no.
①	Seal A	NBR	VVZS3000-4-1
②	Seal B	NBR	VVZS3000-4-2
③	O-ring	NBR	18 x 15 x 1.5
④	O-ring	NBR	7.5 x 4.5 x 1.5
⑤	Tie-rod	Carbon steel	VVZS3000-5-n ⁽¹⁾
⑥	Tie-rod for station addition	Carbon steel	VVZS3000-5-1-1 ⁽²⁾

Note 1) n: Stations

Note 2) Manifold block assembly is attached with tie-rod for increasing stations.

Description	Applicable manifold base	Assembly part no.	Component parts
Manifold block assembly	Plug-in type With attachment plug lead wire: Type 51G	VVZS3000-4-1-Port size ⁽¹⁾	Manifold block ⑦, Junction box ⑧, Lead wire assembly ⑨ Tie-rod ⑥, O-ring ③, ④, Seal A ①
	Non plug-in base type: Type 51	VVZS3000-1A-2-Port size ⁽¹⁾	Manifold block ⑦, Tie-rod ⑥, O-ring ③, ④, Seal A ①
	Plug-in type With D-sub connector: Type 51F*	VVZS3000-1A-3-Port size ⁽¹⁾ (-1) ⁽²⁾	Manifold block ⑦, Junction box ⑧, Lead wire assembly ⑩ Tie-rod ⑥, O-ring ③, ④, Seal A ①



Note 1) Bore -01: Rc 1/8, -C6: Embedded type One-touch fitting for ø6, -C8: Embedded type One-touch fitting for ø8.

Note 2) Refer to page 3-7-5 for the model of D-sub connector type manifold block assembly.

How to Increase Manifold Base

Arrange an applied manifold block assembly.

1. Loosen the bolt ⑪ and remove the end plate ⑫ or ⑬ in the side added with manifold block.

2. Joint the tie-rod ⑥ to increase stations and add manifold block assembly. (Put packing B ② on the surface contacting to the end plate.)

3. For a style with a D-sub connector, open the cover ⑭ and insert the pin of lead wire assembly ⑩ as shown in the right figure.

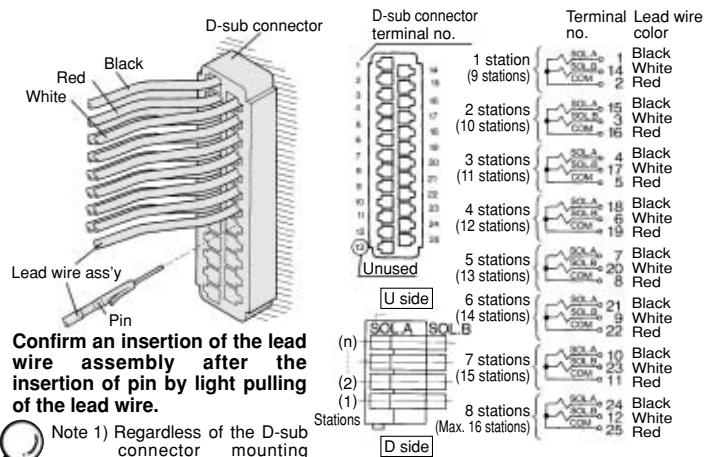
4. Mount the end plate ⑫ and ⑬ and tighten the bolt ⑪.



Note 1) Be careful that the packing and the O-ring do not fall out of the groove.

Note 2) The tightening torque of bolt ⑪ should be 2 to 2.2 N.

Insertion Method for Pin of D-Sub Connector



Confirm an insertion of the lead wire assembly after the insertion of pin by light pulling of the lead wire.



Note 1) Regardless of the D-sub connector mounting position, stations are to be counted from D side as the 1st one.

Note 2) D-sub connector can use up to 8 stations in on side fitting (Type F_D^D). More than 9 stations are for both sides fitting (Type FB).

() is for the case of a D-sub connector for both sides (Type FB).