Manifold Specifications

Manifold Specifications

Base model	Wiring	Porting specifications	Port	size	Stations	Applicable
base model	vviinig	A, B port	P, EA, EB	A, B	Stations	valve model
Plug-in type	With terminal block				2 to 15	
VV5FR2-01□	With multi-connectorWith D-sub connector				2 to 8	VFR2□00-□F
Non plug-in type VV5FR2-10	Grommet Grommet terminal Conduit terminal DIN terminal L plug connector M plug connector	Note) Side/Bottom	1/4	1/ ₈ , 1/ ₄ C6, C8	2 to 15	VFR2□10-□G VFR2□10-□E VFR2□10-□T VFR2□10-□D VFR2□10-□L VFR2□10-□M

Note) Side ported and bottom ported cannot be taken at the same time.

How to Order Manifold Assembly

<Example> Plug-in type with terminal block (6 stations, one-piece junction cover)

VV5FR2-01T1-061-02 1 set (Manifold base part no.) *VFR2100-5FZ 3 sets (2 position single part no.) *VFR2200-5FZ2 sets (2 position double part no.) *VVFS2000-10A 1 set (Blanking plate assembly part no.) The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

Valve arrangement is counted from the D side.

When ordering, specify the part nos. in order from the 1st. station in the D side. When entry of part numbers becomes complicated, indicate on the manifold <Example> Non plug-in type: 6 stations

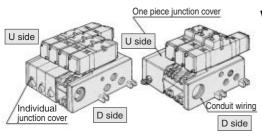
VV5FR2-10-061-01 1 set (Manifold base part no.) *VFR2110-5D 5 sets (2 position single part no.) *VFR2410-5D 1 set (3 position exhaust part no.) *VVFS2000-R-01-2..... 1 set (Individual EXH spacer part no.) The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

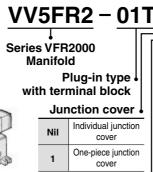
Valve arrangement is counted from the D side.

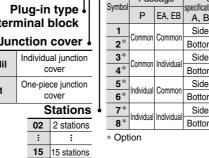
When ordering, specify the part nos. in order from the 1st. station in the D side. When entry of part numbers becomes complicated, indicate on the manifold

Plug-in Type: With Terminal Block

· Since lead wires of solenoid valve are connected with the terminals on upper surface of terminal block corresponding lead wires from power source can be wired at the bottom of terminal block.







Symbol · Porting A, B Side Bottom Bottom **Bottom Bottom**

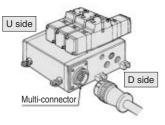
Thread Port size type Symbol P, EA, EB A, B * Nil 01 1/8 1/4 02 One-touch C6 fitting for ø6 One-touch C8 fitting for ø8 М Mixed

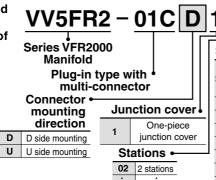
 For bottom ported, 1/8 is only available.

Plug-in Type: With Multi-connector (For wiring specifications, refer to page 3-5-8.)

Master connection of power and solenoid valves.

Quick wiring permits ease of installation.





* Max. 8 stations

)	1 -	Onbol	5 ·	1 -	01	rt size]	• Thi	read e
Ш		Pas	sage	Porting	•	P, EA, EB	-	Nil	Rc
Ш	Symbol	Р	EA, EB	specification A, B	01		1/8	F	G
۱,	1			Side	02		1/4	N	NPT
<u>r↓</u>	2 *	Common	mmon Common	Bottom	C6	1/4	One-touch fitting for ø6	Т	NPTI
	3 *			Side			<u> </u>		
er	4 *	Common	Individual	Bottom	C8		One-touch fitting for ø8		
	5 *		_	Side	M		Mixed		
	6 *	Individual	Common	Bottom			ottom porte	he	
	7 *	Land State and	Landing data and	Side	()		only availa		
	8 *	Individual	Individual	Bottom			•		
	* Option								

08 8 stations

VK VZ

VP4

VZS

VFS

VS4

VQ7

EVS

VFN

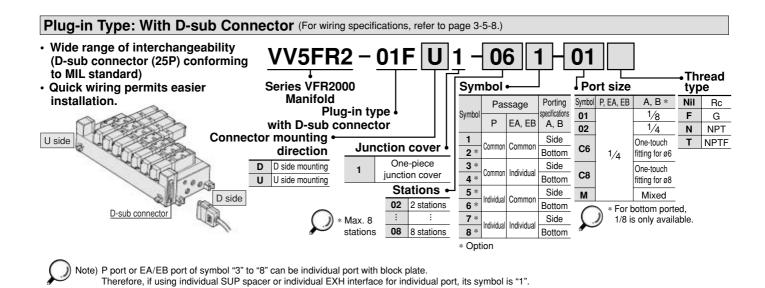
Rc

G

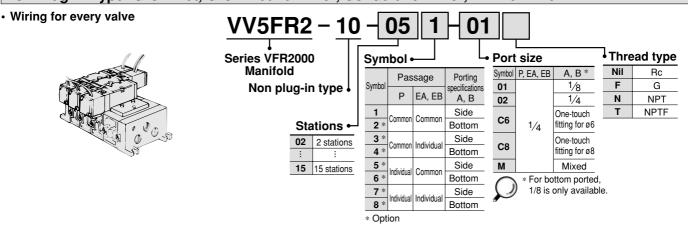
NPT

NPTF

F



Non Plug-in Type: Grommet, Grommet Terminal, Conduit Terminal, DIN Terminal



Note) P port or EA/EB port of symbol "3" to "8" can be individual port with block plate.

Therefore, if using individual SUP spacer or individual EXH spacer for individual port, its symbol is "1".

Manifold/Option Parts Assembly

Individual SUP spacer

Setting individual SUP spacer on the manifold block enables individual SUP port for each valve.

Body type		Plug-in type	Non plug-in type
10	Rc ¹ /8	VVFS2000-P-01-1	VVFS2000-P-01-2
Part	Rc1/4	VVFS2000-P-02-1	VVFS2000-P-02-2





Individual EXH spacer

Setting individual EXH spacer on the manifold block enables individual EXH port for each valve.

Body type		Plug-in type	Non plug-in type
0	Rc ¹ /8	VVFS2000-R-01-1	VVFS2000-R-01-2
Part	Rc1/4	VVFS2000-R-02-1	VVFS2000-R-02-2





SUP block disk

When supplying manifold with more than two different kinds of pressure, 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.	AXT6	25-12A

EXH block disk

When valve exhaust affects the other stations in the circuit, insert EXH block disk in between stations to separate valve exhaust.

Body type	Plug-in type	Non plug-in type
Part no.	AXT6	25-12A



Throttle valve spacer

Needle valve set on the manifold block can control cylinder speed by throttling exhaust.

Body type	Plug-in type	Non plug-in type	
Part no.	VVFS2000-20A-1	VVFS2000-20A-2	

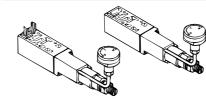




Interface regulator

Interface regulator set on the manifold block can regulate pressure for each valve. (Refer to "Flow Characteristics" on page 3-5-6 before operation.)

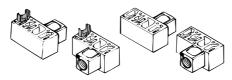
Body type	Plug-in type	Non plug-in type	
P port regulation	ARBF2000-00-P-1	ARBF2000-00-P-2	



Air release valve spacer

Valve VFR21□0 (single) can be used as air release valve by combining with release valve spacer.

Body type	Plug-in type	Non plug-in type				
Part no.	VVFS2000-24A-1 R	VVFS2000-24A-2 h				
Note) L: U side mount R: D side mount						

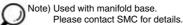


SUP stop valve spacer Note)

If SUP stop valve spacer is set, valve can be removed for maintenance without stopping air pressure supply for other valves.

Body type	Plug-in type	Non plug-in type
Part no.	VVFS2000-37A-1	VVFS2000-37A-2

(Height will be 23.2 mm higher.)



Blanking plate

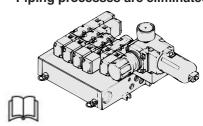
It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

Body type	Plug-in type	Non plug-in type
Part no.	VVFS20	000-10A

Manifold Option

With control unit Plug-in/Non Plug-in type

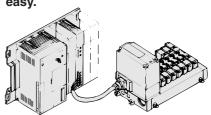
- Filter, regulation valve, pressure switch and air release valve all combine to form one unit.
- Piping processes are eliminated.



For details, refer to page 3-5-24.

With serial interface unit for serial transmission Plug-in type

- Solenoid valve wiring process reduced considerably.
- Disperse installation possible. Manifold solenoid valve: 8 stations max, 32 positions (512 solenoids).
- Maintenance and inspection are easy.



For details, refer to "Serial Transmission" catalog separately.

VK

VZ

VF VER

VD4

VP4

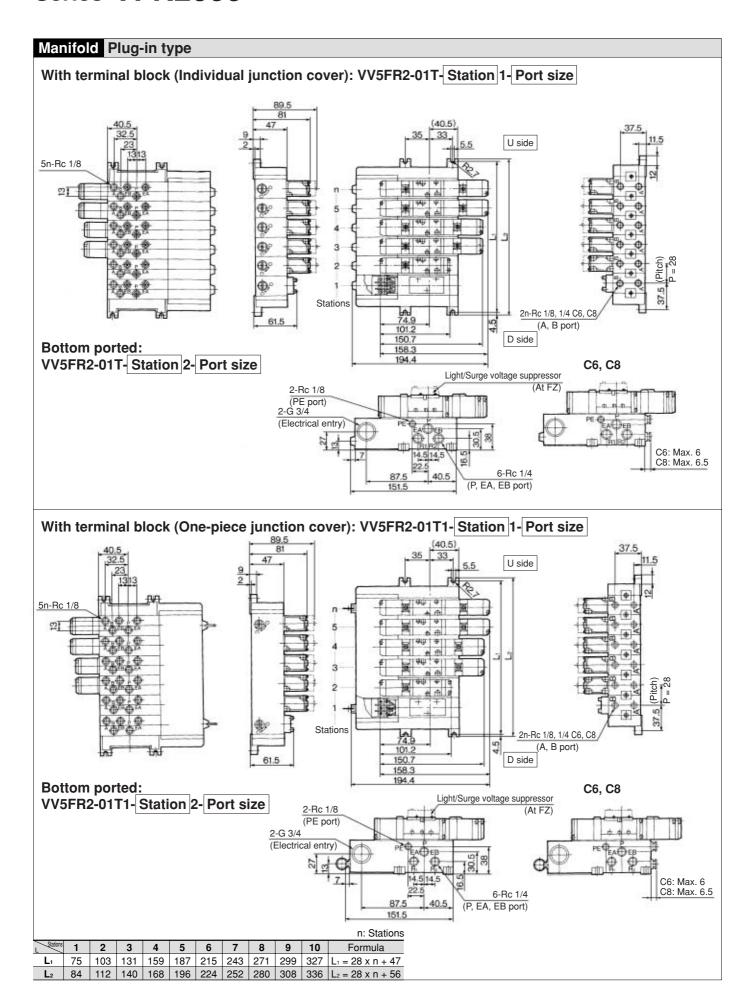
VZS

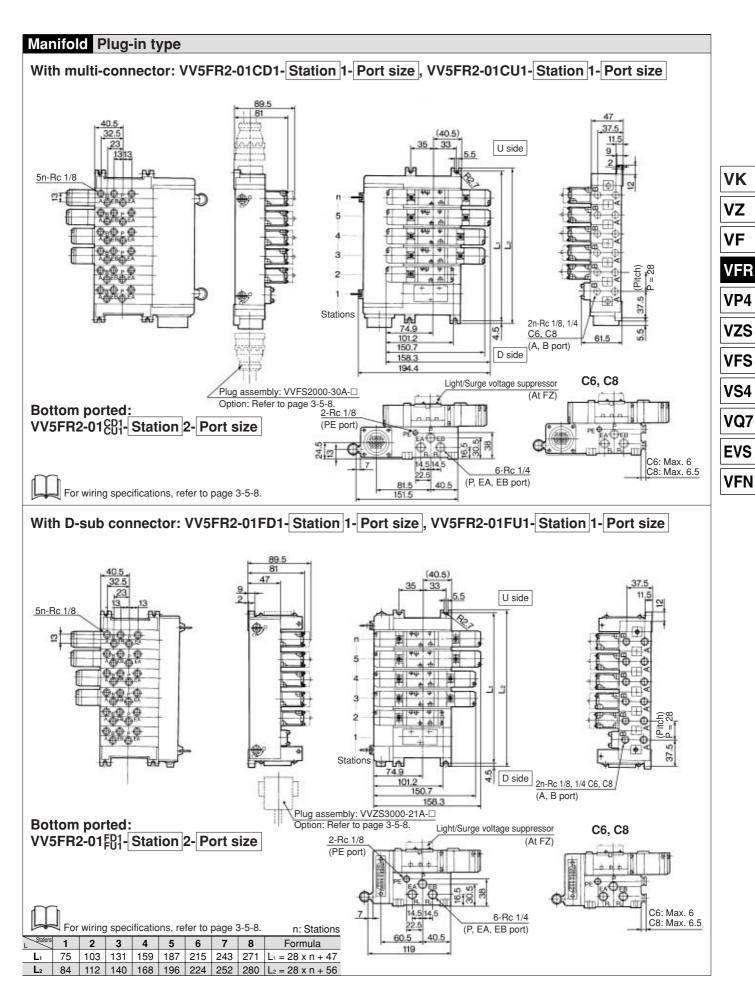
VFS

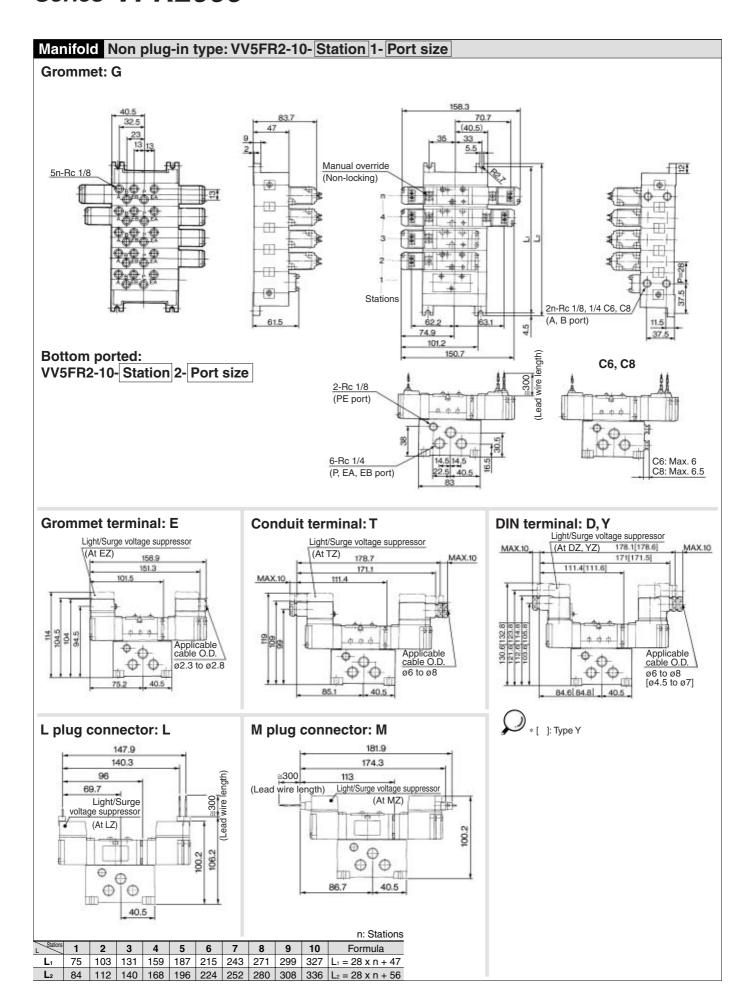
VS4

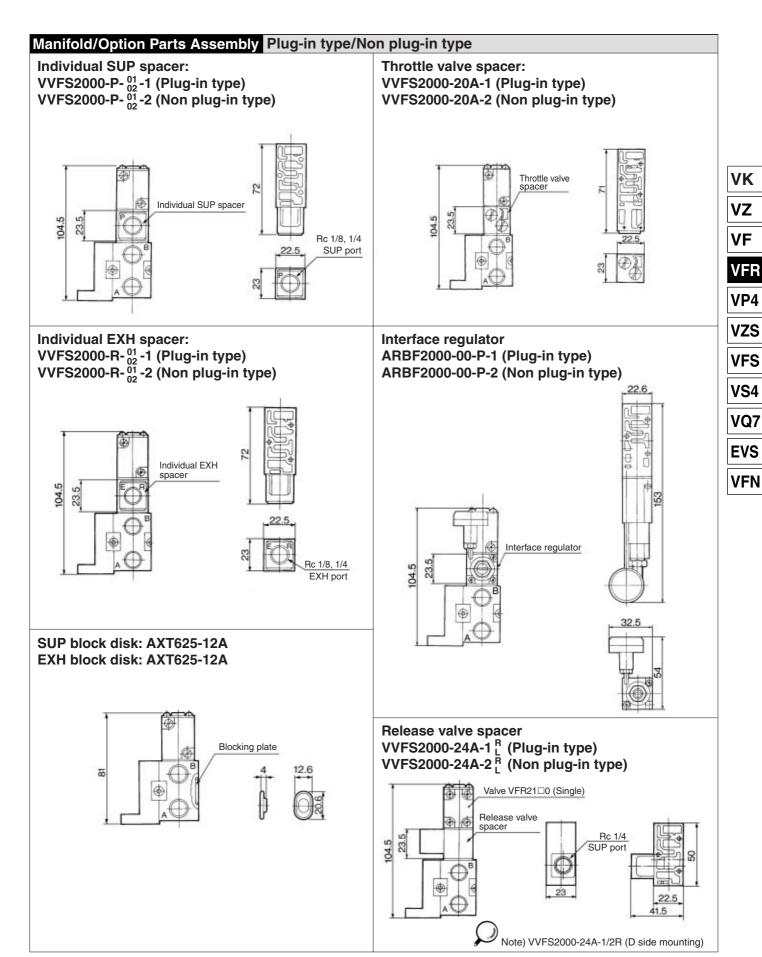
VQ7 EVS

VFN









Manifold with Control Unit -

- Control unit (Filter, Regulator, Pressure switch, Air release valve) are all standardized to 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

Air filter with auto-drain or manual drain must be mounted with the air filter at the bottom.

Manifold Specifications

Manifold	Plug-in type: VV5FR2-01□		Non plug-in type: VV5FR2-10	
	With terminal block		Grommet, Grommet terminal	
Wiring	With mul	ti-connector	Conduit terminal, DIN terminal	
	With D-sub connector		L plug connector, M plug connector	
Applicable valve	VFR2□00-□F		VFR2□10-□G, VFR2□10-□E	
model			VFR2□10-□T, VFR2□10-□DY	
model			VFR2□10-□L, VFR2□10-□M	
Doubles enseitiestiese	Common SUP, Common EXH			
Porting specifications Rc	A, B port	A, B port Side: Rc ¹ /8, ¹ /4, C6, C8, Bottom: Rc ¹ /8 (Option)		
nc .	P, EA, EB port	P, EA, EB port Side: Rc ¹ / ₄ , Bottom: Rc ¹ / ₈ (Option)		
Stations	2 to 15 stations * (With multi-connector/D-sub connector: 2 to 8 stations)			

* Including station of control unit

Control Unit Specifications

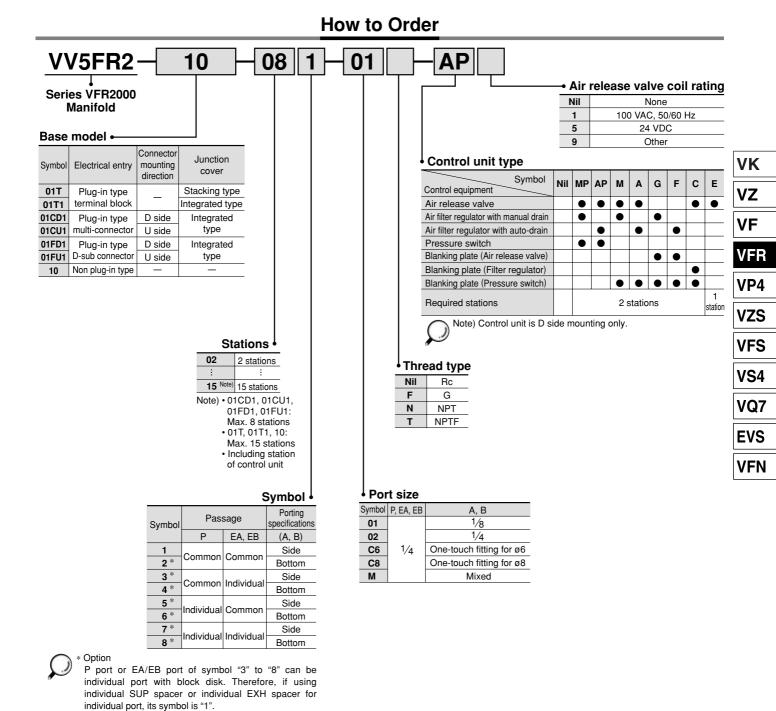
Air filter (With auto-drain/With manual drain)		
Filtration degree	5 μm	
Regulator		
Set pressure	0.05 to 0.85 MPa	
(Outlet pressure)	0.03 to 0.83 Wil a	
Pressure switch		
Set pressure	0.1 to 0.6 MPa	
range: OFF	0.1 to 0.6 MPa	
Differential	0.08 MPa	
Contact	1a	
Indicator light	LED (RED)	
Max. switch capacity	2 VA AC, 2 W DC	
Max. operating	24 VAC, DC or less: 50 mA	
current	100 VAC, DC: 20 mA	
Inside voltage drop	4 V or less	
Air release valve (Single only)		
Operating	0.2 to 0.9 MPa	
pressure range	0.2 to 0.9 MFa	

Control Unit/Option

(1)	<plug-in type=""> VVFS2000-24A-1R (D side mounting)</plug-in>			
Air release valve spacer	VVFS2000-24A-11 (U side mounting)			
	<non plug-in="" type=""></non>			
	VVFS2000-24A-2R (D side mounting)			
	VVFS2000-24A-2L (U side mounting)			
Pressure (2) switch	IS1000P-2-1			
Blanking plate	For filter regulator	MP2-2		
	For pressure switch	MP3-2		
	For air release valve	AXT625-18A		
Filter element	111511-5B			

Note 1) Refer to "Manifold Option" on page 3-5-23.

Note 2) Pressure switch cannot be mounted later on non plug-in type.



How to Order Manifold Assembly

<Example> Plug-in type with terminal block

VV5FR2-01T1-091-02-MP5------ 1 set (Manifold base part no.) *VFR2100-5FZ-----5 sets (2 position single part no.) *VFR2200-5FZ······ 2 sets (2 position double part no.)

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

The 1st and 2nd station are used for control unit mounting.

When ordering, specify the part nos. in order from the 3rd. station in the D side. When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

<Example> Non plug-in type

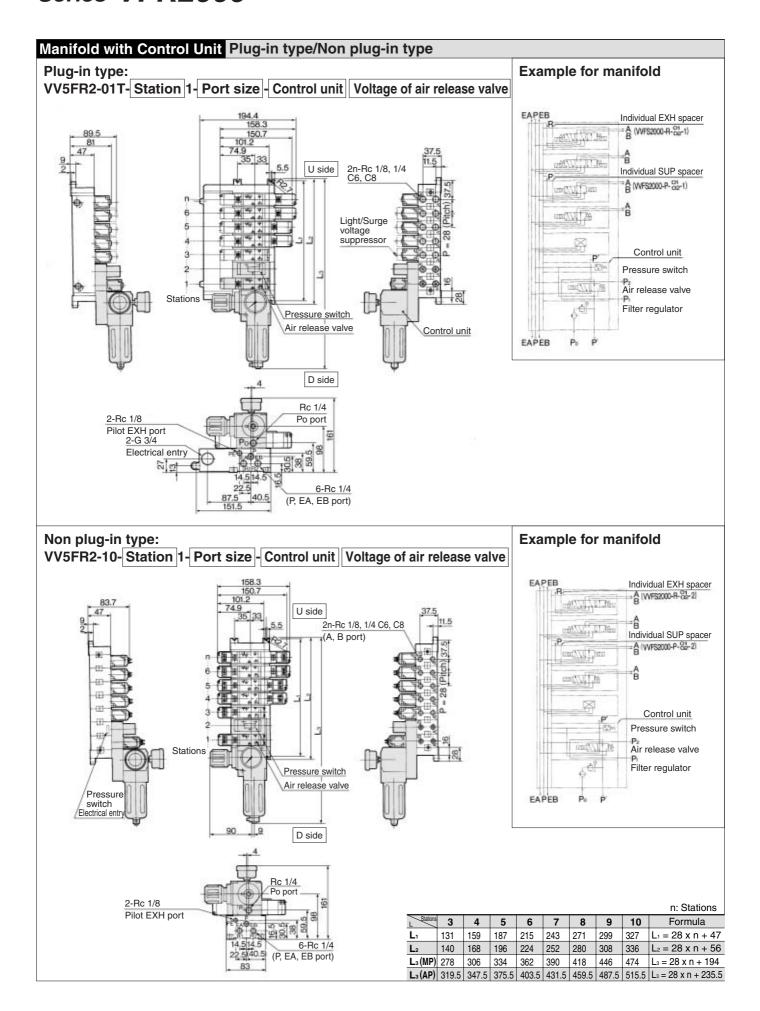
VV5FR2-10-071-01-M5------1 set (Manifold base part no.) *VFR2110-5D-----5 sets (2 position single part no.)

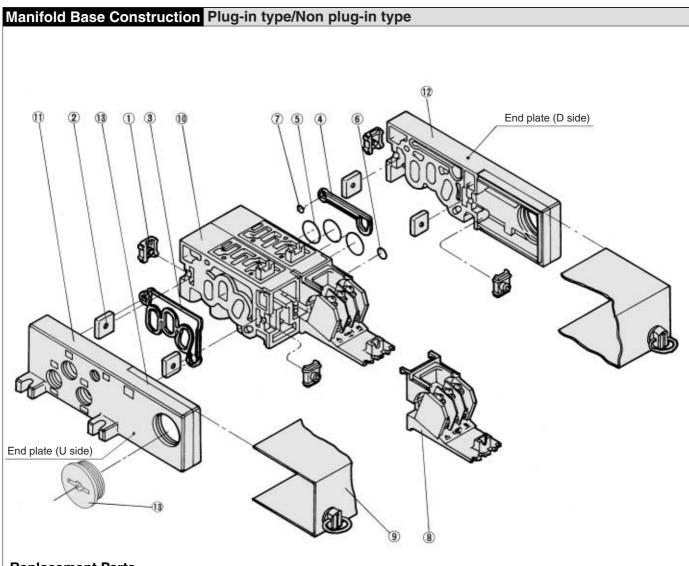
The asterisk denotes the symbol for assembly. Prefix it to the part nos. of the solenoid valve, etc.

The 1st and 2nd station are used for control unit mounting. When ordering, specify the part nos. in order from the 3rd. station in the D side.

When entry of part numbers becomes complicated, indicate on the manifold specification sheet.







Replacement Parts

No.	Description	Material	Part no.	
1	Connection fitting A	Steel plate		AXT625-4-1
2	Connection fitting B	Steel plate		AXT625-5
3	Gasket A	NBR		AXT625-17
4	Gasket B	NBR		AXT625-16
(5)	O-ring	NBR		18 x 15 x 1.5
6	O-ring	NBR		10.5 x 7.5 x 1.5
7	O-ring	NBR		8 x 5 x 1.5
8	Adapter plate assembly	_	For 01T	AXT625-28-1A
			For 01T1	(Terminal and adapter plate)
	Adapter plate	Resin	For 01C	AXT625-28-1
			For 01F	VVF2000-26-6
			For 01SU	AXT625-6

No.	Description	Material	Part no.		
			For 01T	AXT625-28-3A	
9	Junction cover assembly	_	For 01T1	AXT625-28-7A-Stations	
			For 01C	AX 1625-28-7A-[Stations]	
			For 01F	VVF2000-26-5A-Stations	
			For 01SU	AZ738-10A-Stations	
13	Rubber plug	NBR	For 01T	AXT623-22	
			For 01SU		

Replacement Parts: Sub Assembly

Note) Manifold Base/Construction: Plug-in type with terminal block.

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No.	Description	Assembly part no.	Component parts	Applicable manifold base	
10	Manifold block assembly (1)	AXT625-20A- ¹ _{C6} (2)	Manifold block ®, Metal joint ①, ②, O-ring ⑤, ⑥, ⑦ Terminal ®, Junction cover ⑨, Adaptor plate, Pin housing, Guide	Plug-in type	
		AXT625-10A- ¹ _{C6} (3)	Manifold block ®, Metal joint ®, O-ring \$, 6, 7	Non plug-in type	
UD I	End plate (U side) assembly	AXT625-2A-20	End plate (U) ①, Metal joint ①, ②, Gasket A ③, Guard ③	Plug-in type (For 01T) (3) With terminal block	
		AXT625-2A-10	End plate (U) ①, Metal joint ①, ②, Gasket A ③, Guard ③	Non plug-in type (For 10) (3)	
12	End plate (D side) assembly	AXT625-3A-20	End plate (D) ②, Metal joint ①, ②, Gasket B ④, Guard ③, Steel ball	Plug-in type (For 01T) (3) With terminal block	
		AXT625-3A-10	End plate (D) ①, Metal joint ①, ②, Gasket B ④, Guard ③, Steel ball	Non plug-in type (For 10) (3)	

Note 1) For side ported

Note 2) 1: A, B port size Rc $^{1}/_{8}$, 2: A, B port size Rc $^{1}/_{4}$ Note 3) Please contact SMC if parts except for $^{10}/^{01}$ 1701T1 are needed.



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