Manifold Specifications

Manifold Specifications

Base model	Wiring	Porting specifications	Port size		Stations	Applicable valve model
		A, B port	P, EA, EB	A, B		
Plug-in type VV5FR4-01□	• With terminal block	Side/Bottom	1/2	3/8, 1/2	2 to 10	VFR4□0□-□F
	• With multi-connector • With D-sub connector				2 to 8	
Non plug-in type VV5FR4-10	• Grommet terminal • DIN terminal				2 to 10	VFR4□1□-□E VFR4□1□-□D
Non plug-in type VV5FR4-40	• Grommet • Grommet terminal • Conduit terminal • DIN terminal					VFR4□4□-□G VFR4□4□-□E VFR4□4□-□T VFR4□4□-□D

How to Order Manifold Assembly

<Example> Plug-in type with terminal block: 6 stations

VV5FR4-01T-061-03·············· 1 set (Manifold base part no.)
∗VFR4100-5FZ······················ 3 sets (2 position single part no.)
∗VFR4200-5FZ······················ 2 sets (2 position double part no.)
∗VVFS4000-10A······················ 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 specification sheet.
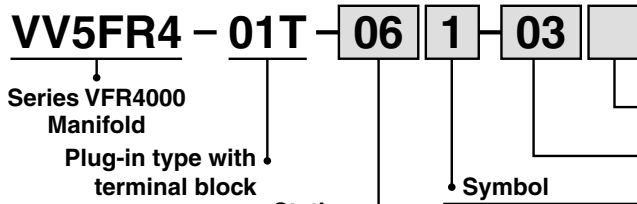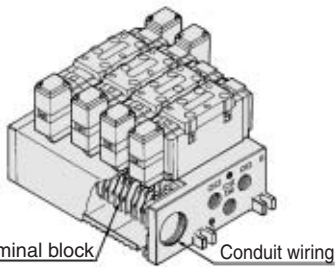
<Example> Non plug-in type: 6 stations

VV5FR4-10-061-03··············· 1 set (Manifold base part no.)
∗VFR4110-5D························ 5 sets (2 position single part no.)
∗VFR4410-5D························ 1 set (3 position exhaust center part no.)
∗VVF4000-R-04-2··················· 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 specification sheet.

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.

Terminal block   Conduit wiring

VV5FR4 – 01T – 06 1 – 03 □

Series VFR4000 Manifold

Plug-in type with terminal block

Stations

02	2 stations
⋮	⋮
10	10 stations

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2			Bottom ∗

∗ Option

Port size

Symbol	P, EA, EB	A, B ∗
03	1/2	3/8
04		1/2
M		Mixed

∗ For bottom ported: Rc 3/8 only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

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.

U side

D side

Multi-connector

VV5FR4 – 01C D – 05 1 – 03 □

Series VFR4000 Manifold

Plug-in type with multi-connector

Connector mounting direction

D	D side mounting
U	U side mounting

Stations

02	2 stations
⋮	⋮
08 ∗	8 stations

∗ Max: 8 stations

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2			Bottom ∗

∗ Option

Port size

Symbol	P, EA, EB	A, B ∗
03	1/2	3/8
04		1/2
M		Mixed

∗ For bottom ported: Rc 3/8 only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Series *VFR4000*

Plug-in Type: With D-sub Connector (For wiring specifications, refer to page 3-5-8.)

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

U side

D side
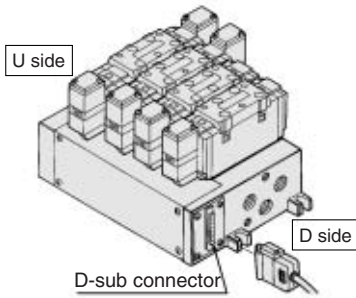
D-sub connector

VV5FR4 − 01F D − **06** 1 − **03** ☐

Series VFR4000 Manifold

Plug-in type with D-sub connector

Connector mounting direction

D	D side mounting
U	U side mounting

Stations

02	2 stations
⋮	⋮
08 *	8 stations

* Max: 8 stations

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2			Bottom *

* Option

Port size

Symbol	P, EA, EB	A, B *
03		3/8
04	1/2	1/2
M		Mixed

* For bottom ported: Rc 3/8 only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Non Plug-in Type: Grommet Terminal, DIN Terminal (Common electrical entry)

- **Individual wiring for every valve**

Grommet terminal   DIN terminal
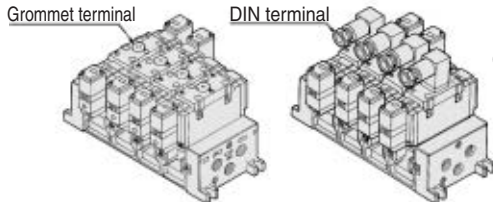
VV5FR4 − 10 − 05 1 − **03** ☐

Series VFR4000 Manifold

Non plug-in type Common electrical entry

Stations

02	2 stations
⋮	⋮
10	10 stations

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2			Bottom *

* Option

Port size

Symbol	P, EA, EB	A, B *
03		3/8
04	1/2	1/2
M		Mixed

* For bottom ported: Rc 3/8 only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Non Plug-in Type: Grommet, Grommet Terminal, Conduit Terminal, DIN Terminal (Individual electrical entry)

- **Individual wiring for every valve**
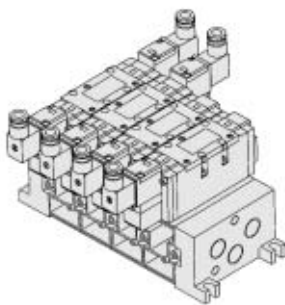
VV5FR4 − 40 − 05 1 − **03** ☐

Series VFR4000 Manifold

Non plug-in type Individual electrical entry

Stations

02	2 stations
⋮	⋮
10	10 stations

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2			Bottom *

* Option

Port size

Symbol	P, EA, EB	A, B *
03		3/8
04	1/2	1/2
M		Mixed

* For bottom ported: Rc 3/8 only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Note) Manifold base is in common with VV5FR4-10.

Note) Manifold base is in common with Series VFS4000 but the connection of terminal block for plug-in type is different.
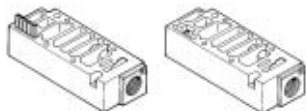
SMC

Manifold/Option Parts Assembly

Individual SUP spacer
Setting individual SUP spacer on the manifold block enables individual SUP port for each valve.
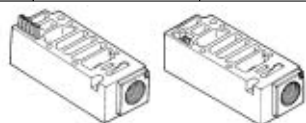
Body type	Plug-in type	Non plug-in type
Part no.	VVFS4000-P-03-1	VVFS4000-P-03-2

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
Part no.	VVFS4000-R-04-1	VVFS4000-R-04-2

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

Body type	Plug-in type	Non plug-in type
Part no.	AXT634-10A	

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

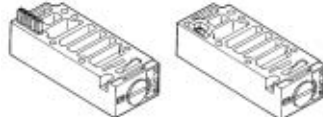| Body type	Plug-in type	Non plug-in type
Part no.	AXT634-11A	

EXH block disk   SUP block disk

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.	VVFS4000-20A-1	VVFS4000-20A-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.)

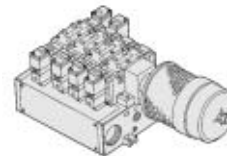| Body type	Plug-in type	Non plug-in type
P port regulation	ARBF4050-00-P-1	ARBF4050-00-P-2
A reduced pressure	ARBF4050-00-A-1	ARBF4050-00-A-2
B reduced pressure	ARBF4050-00-B-1	ARBF4050-00-B-2
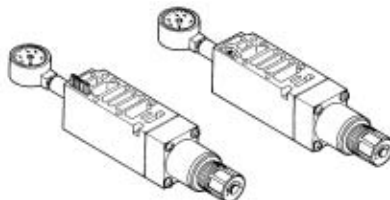
Blanking plate
It is used by attaching on the manifold block for being prepared for removing a valve for maintenance reasons or planning to mount a spare valve, etc.

Body type	Plug-in type	Non plug-in type
Part no.	VVFS4000-10A	

Manifold Option

With exhaust cleaner
- Valve exhaust noise dampening: 35 dB or more.
- Collects oil mist: collecting rate 99.9% or more
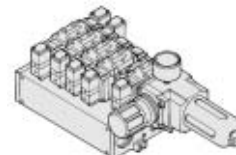- Piping process reduced.

For details, refer to page 3-5-68.

With control unit
Plug-in type/Non Plug-in type
- **Filter, regulation valve, pressure switch and air release valve are all combined to form one unit.**
- **Piping processes are eliminated.**

For details, refer to page 3-5-71.

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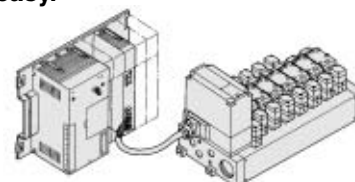
For details, refer to "Serial Transmission" catalog separately.

VK
VZ
VF
VFR
VP4
VZS
VFS
VS4
VQ7
EVS
VFN

Manifold **Plug-in type**

With terminal block: VV5FR4-01T- [Station] 1- [Port size]
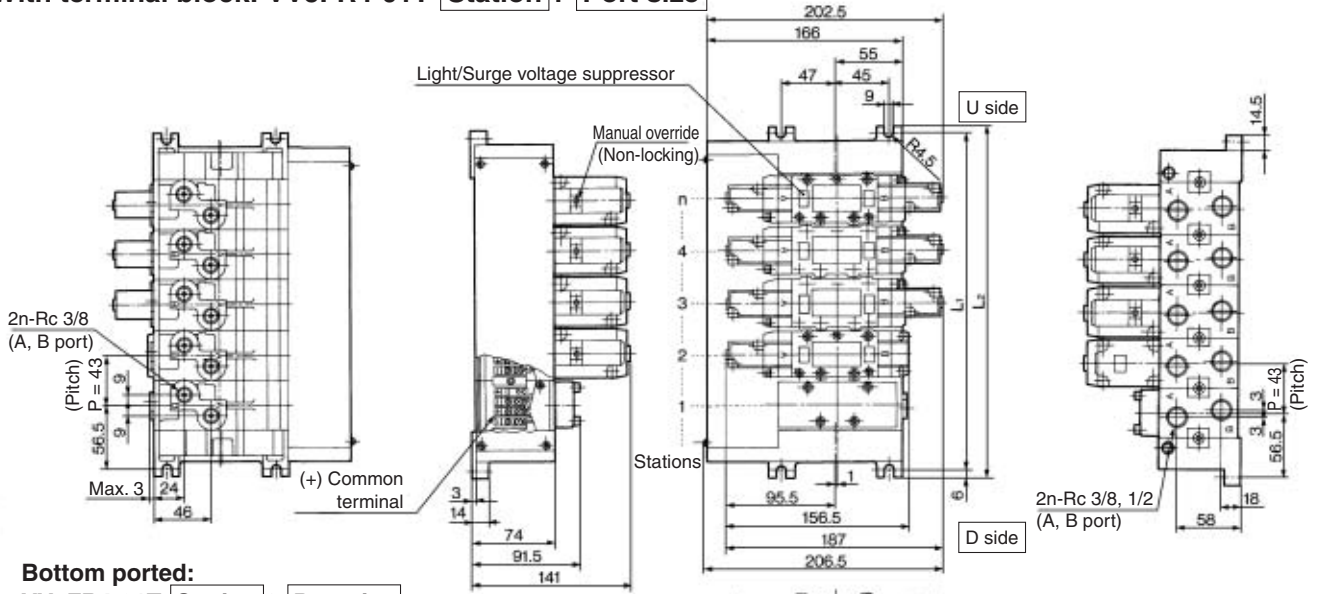
Light/Surge voltage suppressor

Manual override
(Non-locking)

2n-Rc 3/8
(A, B port)

(Pitch) P = 43

Max. 3

(+) Common terminal

U side

D side

Stations

2n-Rc 3/8, 1/2
(A, B port)

Bottom ported:
VV5FR4-01T- [Station] 2- [Port size]

2-Rc 1/8
(PE port)

2-G 1 1/4
(Electrical entry)

External pilot port

6-Rc 1/2
(P, EA, EB port)

n: Station

L \ Stations	2	3	4	5	6	7	8	9	10	Formula
L_1	156	199	242	285	328	371	414	457	500	$L_1 = 43 \times n + 70$
L_2	168	211	254	297	340	383	426	469	512	$L_2 = 43 \times n + 82$

With multi-connector: VV5FR4-01CD- [Station] 1- [Port size] , VV5FR4-01CU- [Station] 1- [Port size]

U side

Manual override
(Non-locking)

(Pitch) P = 43

Max. 3

2n-Rc 3/8
(A, B port)

Stations

Light/Surge voltage suppressor

D side

2n-Rc 3/8, 1/2
(A, B port)
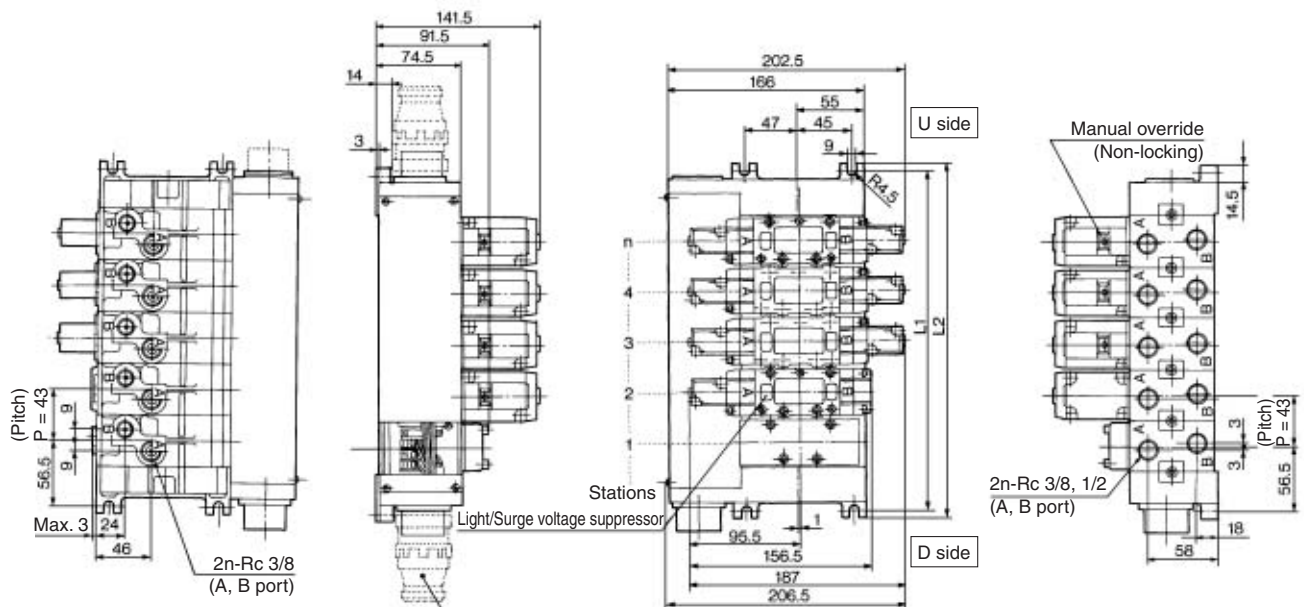
Bottom ported:
VV5FR4-01$^{CD}_{CU}$- [Station] 2- [Port size]

Plug assembly
(Option: Refer to page 3-5-8.)
VVFS2000-30A-□

External pilot port

2-Rc 1/8
(PE port)

6-Rc 1/2
(P, EA, EB port)

For wiring specifications, refer to page 3-5-8.

n: Station

L \ Stations	2	3	4	5	6	7	8	Formula
L_1	156	199	242	285	328	371	414	$L_1 = 43 \times n + 70$
L_2	168	211	254	297	340	383	426	$L_2 = 43 \times n + 82$

SMC

Manifold **Plug-in type**

With D-sub connector: VV5FR4-01FD- Station **1-** Port size **, VV5FR4-01FU-** Station **1-** Port size

Light/Surge voltage suppressor

U side

Manual override
(Non-locking)

Stations

2n-Rc 3/8
(A, B port)

Plug assembly
(Option: Refer to page 3-5-8.)
VVZS3000-21A-□

2n-Rc 3/8, 1/2
(A, B port)

D side
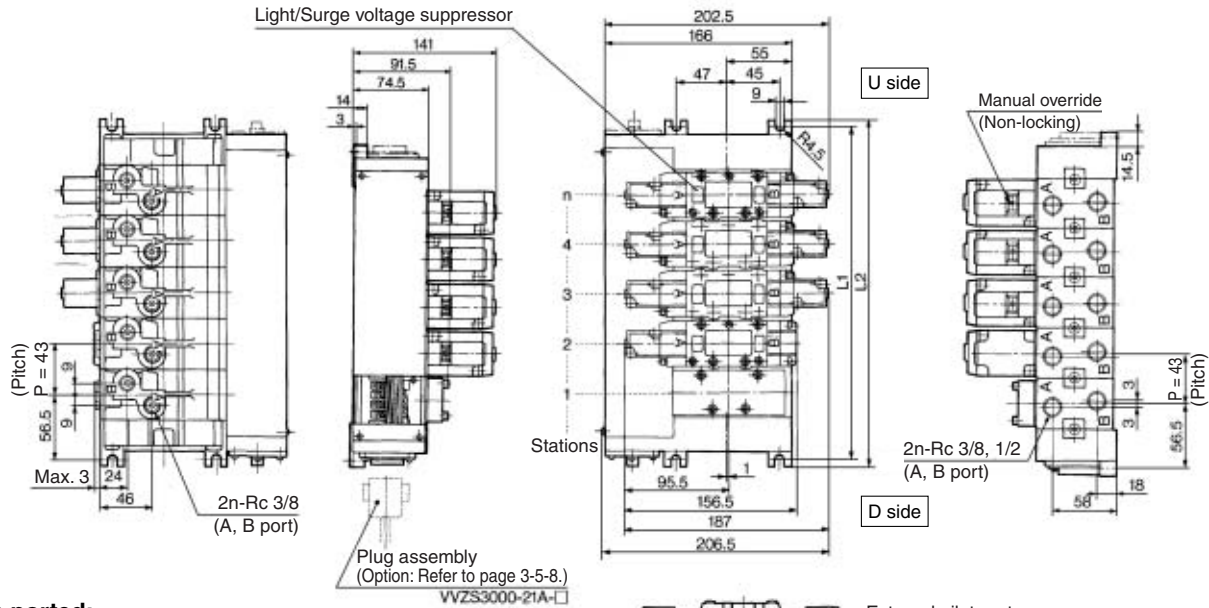
Bottom ported:
VV5FR4-01 $^{FD}_{FU}$- Station **2-** Port size

For wiring specifications, refer to page 3-5-8.

External pilot port

EA X EB R

P

2-Rc 1/8
(PE port)

6-Rc 1/2
(P, EA, EB port)

n: Station

L \ Stations	2	3	4	5	6	7	8	Formula
L₁	156	199	242	285	328	371	414	$L_1 = 43 \times n + 70$
L₂	168	211	254	297	340	383	426	$L_2 = 43 \times n + 82$

Manifold **Non plug-in type**

VV5FR4-10- Station **1-** Port size

Applicable cable O.D.
ø8 to ø10

Manual override
(Non-locking)

U side

Stations

Max. 3   46

2n-Rc 3/8
(A, B port)

2n-Rc 3/8, 1/2
(A, B port)

D side

Grommet with terminal

Bottom ported:
VV5FR4-10- Station **2-** Port size

G 1/2

External pilot port

2-Rc 1/8
(PE port)

EA   PE   R
X P

6-Rc 1/2
(P, EA, EB port)

EA   PE   R
X P

n: Station

L \ Stations	2	3	4	5	6	7	8	9	10	Formula
L₁	156	199	242	285	328	371	414	457	500	$L_1 = 43 \times n + 70$
L₂	168	211	254	297	340	383	426	469	512	$L_2 = 43 \times n + 82$

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN

Manifold Non plug-in type

VV5FR4-40-[Station]1-[Port size]

Manual override (Non-locking)

U side

D side

2n-Rc 3/8, 1/2
(A, B port)

2-Rc 1/8
(PE port)

≅ 300
(Lead wire length)

(External pilot port)

6-Rc 1/2
(P, EA, EB port)
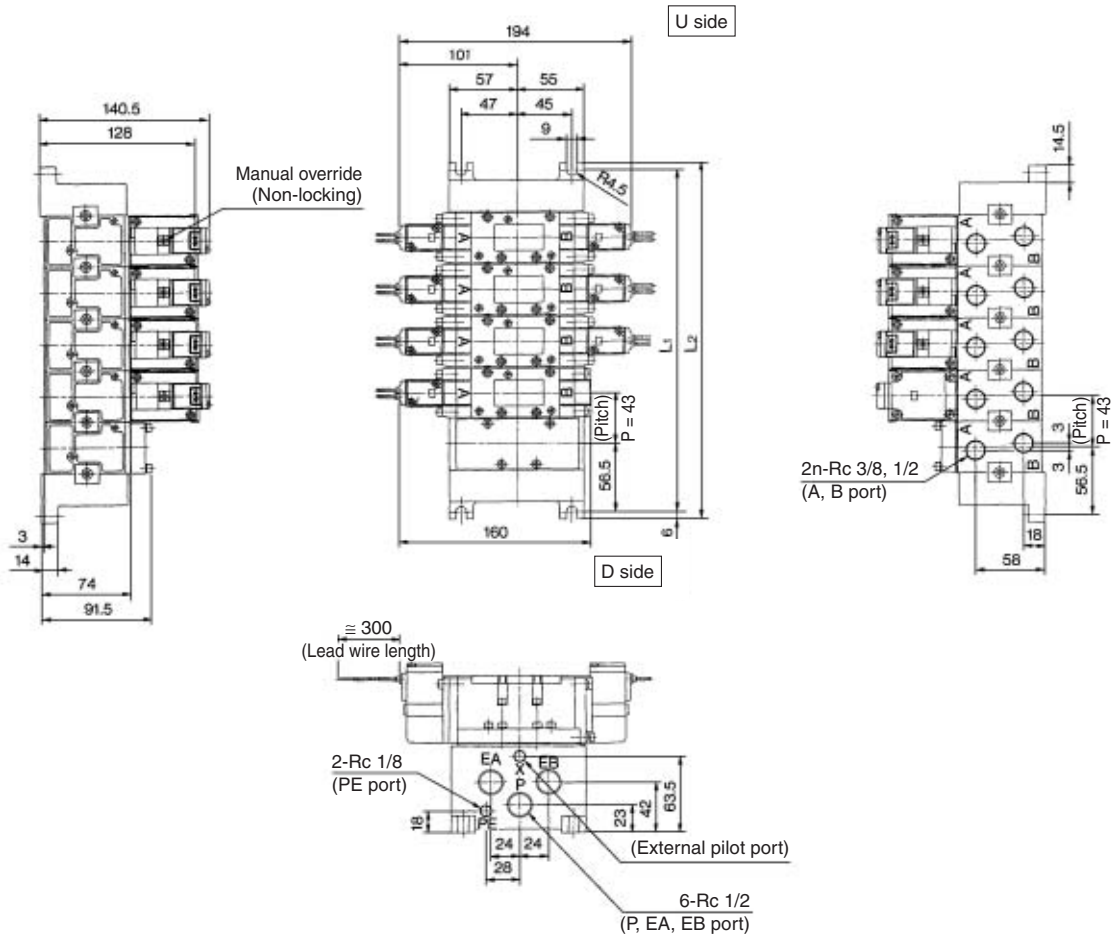
n: Stations

Stations	2	3	4	5	6	7	8	9	10	Formula
L₁	156	199	242	285	328	371	414	457	500	$L_1 = 43 \times n + 70$
L₂	168	211	254	297	340	383	426	469	512	$L_2 = 43 \times n + 82$

E: Grommet terminal

Applicable cable O.D.
ø2.3 to ø2.8

235 255
216 236
112 122
140.5
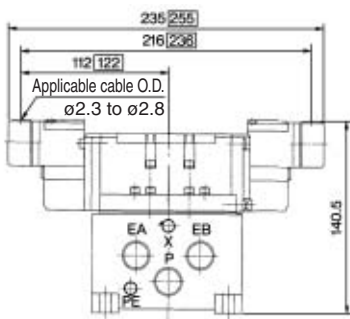
□: With light/surge voltage suppressor

T: Conduit terminal

Applicable cable O.D.
ø6 to ø8

245 265
225 245
116.5 126.5
Pg.9
Max. 10
151
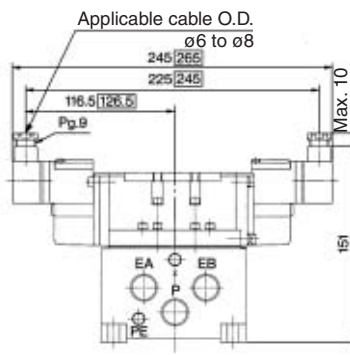
□: With light/surge voltage suppressor

D, Y: DIN terminal
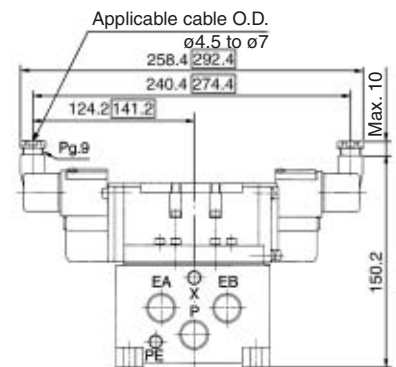
Applicable cable O.D.
ø4.5 to ø7

258.4 292.4
240.4 274.4
124.2 141.2
Pg.9
Max. 10
150.2

□: With light/surge voltage suppressor

SMC

Manifold/Option Parts Assembly | Plug-in type/Non plug-in type

Individual SUP spacer:
VVFS4000-P-03-1 (Plug-in type)
VVFS4000-P-03-2 (Non plug-in type)
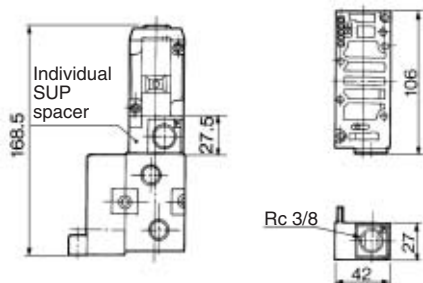
Interface regulator/P port regulation:
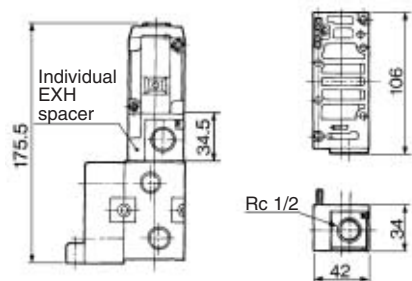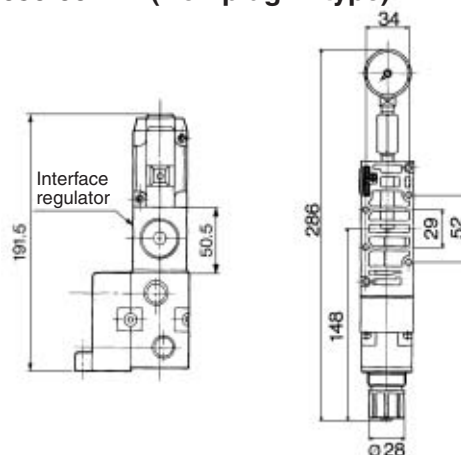**ARBF4050-00-P-1 (Plug-in type)**
ARBF4050-00-P-2 (Non plug-in type)
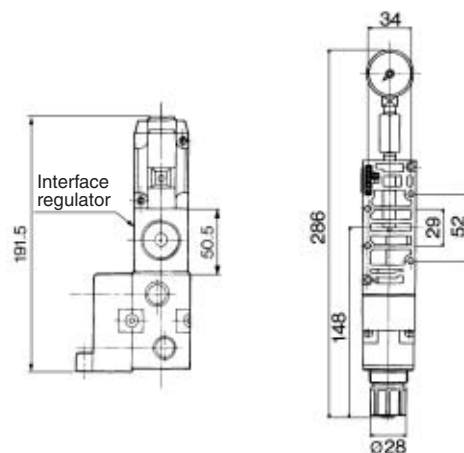
Individual EXH spacer:
VVFS4000-R-04-1 (Plug-in type)
VVFS4000-R-04-2 (Non plug-in type)

Interface regulator/A port regulation:
ARBF4050-00-A-1 (Plug-in type)
ARBF4050-00-A-2 (Non plug-in type)

SUP block disk: AXT634-10A
EXH block disk: AXT634-11A
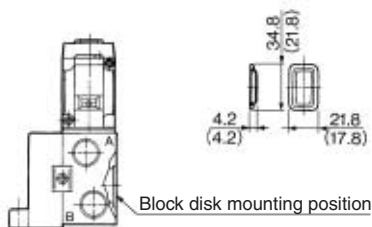
Note) Used with exclusive manifold block ( ): EXH block disk

Interface regulator/B port regulation:
ARBF4050-00-B-1 (Plug-in type)
ARBF4050-00-B-2 (Non plug-in type)
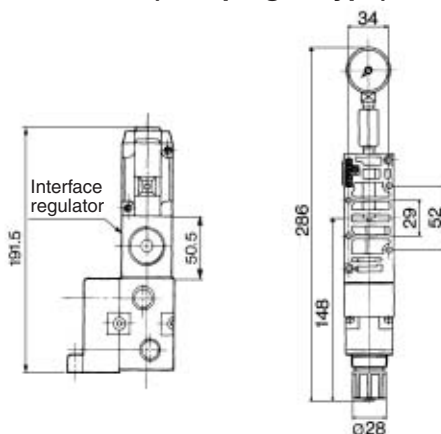
Throttle valve spacer:
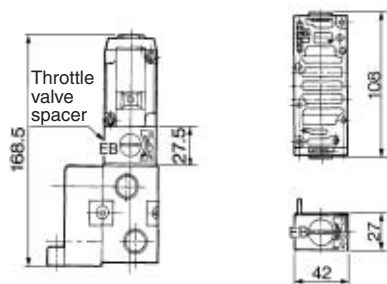**VVFS4000-20A-1 (Plug-in type)**
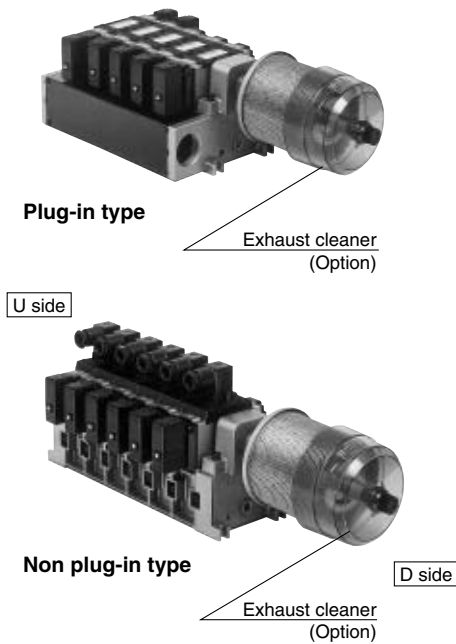**VVFS4000-20A-2 (Non plug-in type)**

Dimensions: FZ type dimensions of direct manual style are also the same.

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

Series *VFR4000*

Manifold with Exhaust Cleaner

- **Serves to protect working environment.**
- **Valve exhaust noise dampening: 35 dB or more.**
- **Collection rate of drainage and oil mist: 99.9% or more.**
- **Piping work is reduced.**

Plug-in type

Exhaust cleaner (Option)

U side

Non plug-in type

Exhaust cleaner (Option)

D side

Manifold Specifications

Manifold	Plug-in type: VV5FR4-01□	Non plug-in type: VV5FR4-10	Non plug-in type: VV5FR4-40
Wiring	With terminal block With multi-connector With D-sub connector	DIN terminal Grommet terminal	Grommet, Grommet terminal, Conduit terminal, DIN terminal
Applicable valve model	VFR4□0□-□F	VFR4□1□-□D VFR4□1□-□E	VFR4□4□-□G, VFR4□4□-□E VFR4□4□-□T, VFR4□4□-□D
Porting specifications Rc	Common SUP, Common EXH		
	A, B port	Side: Rc 3/8, 1/2 Bottom: Rc 3/8 (Option)	
	P port	Side: Rc 1/2 EXH Rc 1·1 1/2	
Stations	2 to 10 stations (With multi-connector/D-sub connector: 2 to 8 stations)		
Applicable exhaust cleaners	AMC610-10 (Port size: R 1), AMC810-14 (Port size: R 1 1/2) Note)		

Note) Use "AMC810-14" when used with 5 or more stations or in high frequency.
Exhaust cleaner "AMC610-10" and "AMC810-14" are not attached.

How to Order

VV5FR4 – **10** – □ – **06** **1** – **03** □ – **CD**

Series VFR4000 Manifold

Base type/ Electrical entry

01T	Plug-in type with terminal block
01C	Plug-in type with multi-connector
01F	Plug-in type with D-sub connector
10	Non plug-in type Common electrical entry
40	Non plug-in type Individual electrical entry

Connector mounting direction

Symbol	With connector	Applicable base
Nil	None	01T, 10, 40
D	D side mounting	01C, 01F
U	U side mounting	01C, 01F

Stations

02	2 stations
⋮	⋮
10 Note)	10 stations

Note) • Base 01T/10/40: 2 to 10 stations
• Base 01C/01F: 2 to 8 stations

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2	Common	Common	Bottom *

* Option

Port size

Symbol	P, EA, EB	A, B *
03		3/8
04	1/2	1/2
M		Mixed

* For bottom ported: Rc 3/8 only.

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Exhaust cleaner mounting direction

Symbol		Exhaust cleaner mounting direction
CD	D side	D side mounting
CU	U side	U side mounting

* Please indicate size or port size of exhaust cleaner.

How to Order Manifold Assembly

<Example> Plug-in type with terminal block (6 stations)

| VV5FR4-01T-061-03-CD········· 1 set (Manifold base part no.) |
| *VFR4100-5FZ························ 3 sets (2 position single part no.) |
| *VFR4200-5FZ························ 2 sets (2 position double part no.) |
| *VVFS4000-10A····················· 1 set (Blanking plate assembly part no.) |
| *AMC610-10····························· 1 set (Exhaust cleaner 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 specification sheet.

⚠ Caution
When using an exhaust cleaner, mount it downwards.

<Example> Non plug-in type: 6 stations

| VV5FR4-10-061-03-CU··········· 1 set (Manifold base part no.) |
| *VFR4210-5E························· 3 sets (2 position single part no.) |
| *VFR4210-5E························· 2 sets (2 position double part no.) |
| *VVFS4000-10A····················· 1 set (Blanking plate assembly part no.) |
| *AMC810-14························· 1 set (Exhaust cleaner 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.
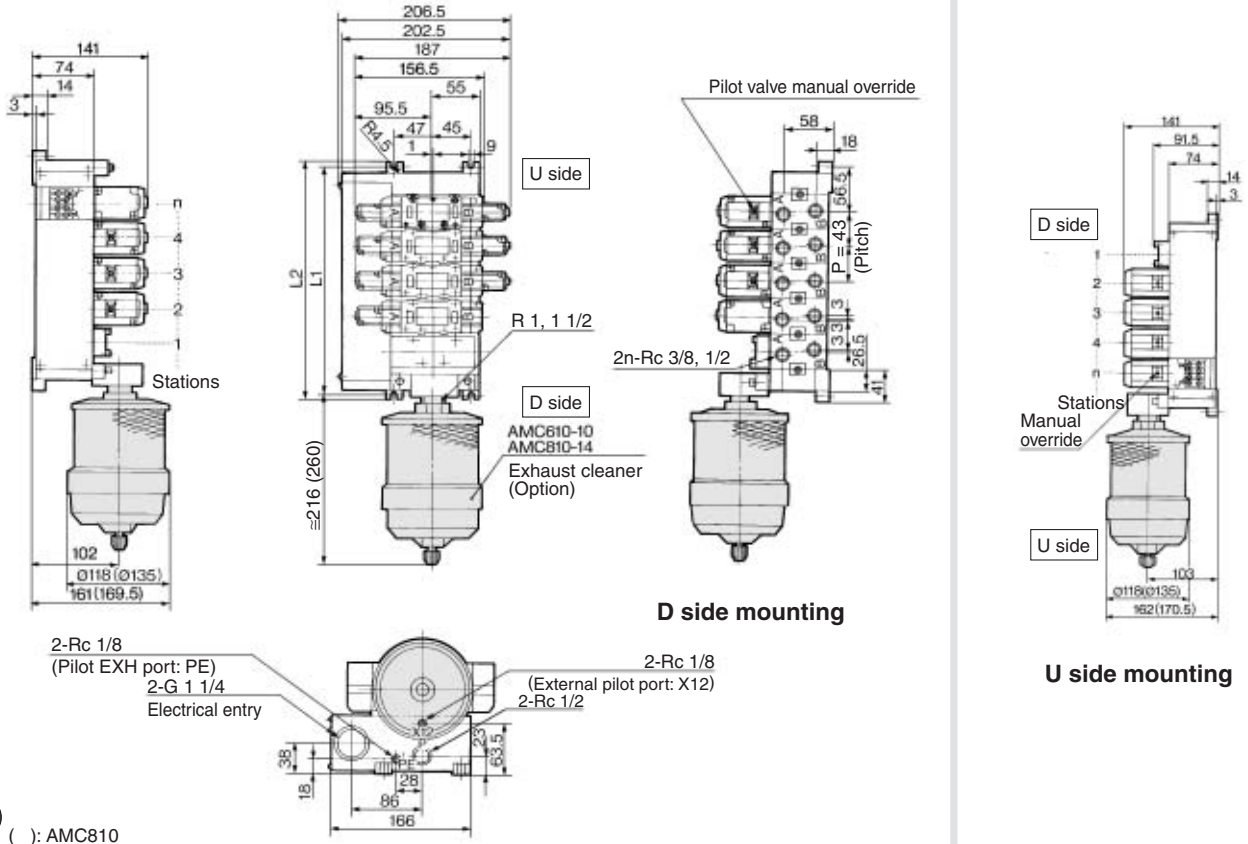When entry of part numbers becomes complicated, indicate on the manifold specification sheet.

📖 Refer to Best Pneumatics Vol. 5 for Exhaust Cleaner details.

SMC

Manifold with Exhaust Cleaner | Plug-in type/Non plug-in type

Plug-in type: VV5FR4-01T- Stations **1-** Port size **-CD/CU**

U side

R 1, 1 1/2

D side

2n-Rc 3/8, 1/2

Pilot valve manual override

P = 43 (Pitch)

D side mounting

AMC610-10
AMC810-14
Exhaust cleaner
(Option)

Stations

2-Rc 1/8
(Pilot EXH port: PE)
2-G 1 1/4
Electrical entry

2-Rc 1/8
(External pilot port: X12)
2-Rc 1/2

( ): AMC810

D side
Stations
Manual override
U side

U side mounting

Non plug-in type: VV5FR4-10- Stations **1-** Port size **-CD/CU**

U side

R 1, 1 1/2

D side

2n-Rc 3/8, 1/2

Pilot valve manual override

P = 43 (Pitch)

D side mounting

AMC610-10
AMC810-14
Exhaust cleaner
(Option)

Stations
P

2-Rc 1/8
Pilot EXH port: PE

2-Rc 1/8
External pilot port: X12

2-Rc 1/2

( ): AMC810

D side
Stations
Manual override
U side

U side mounting
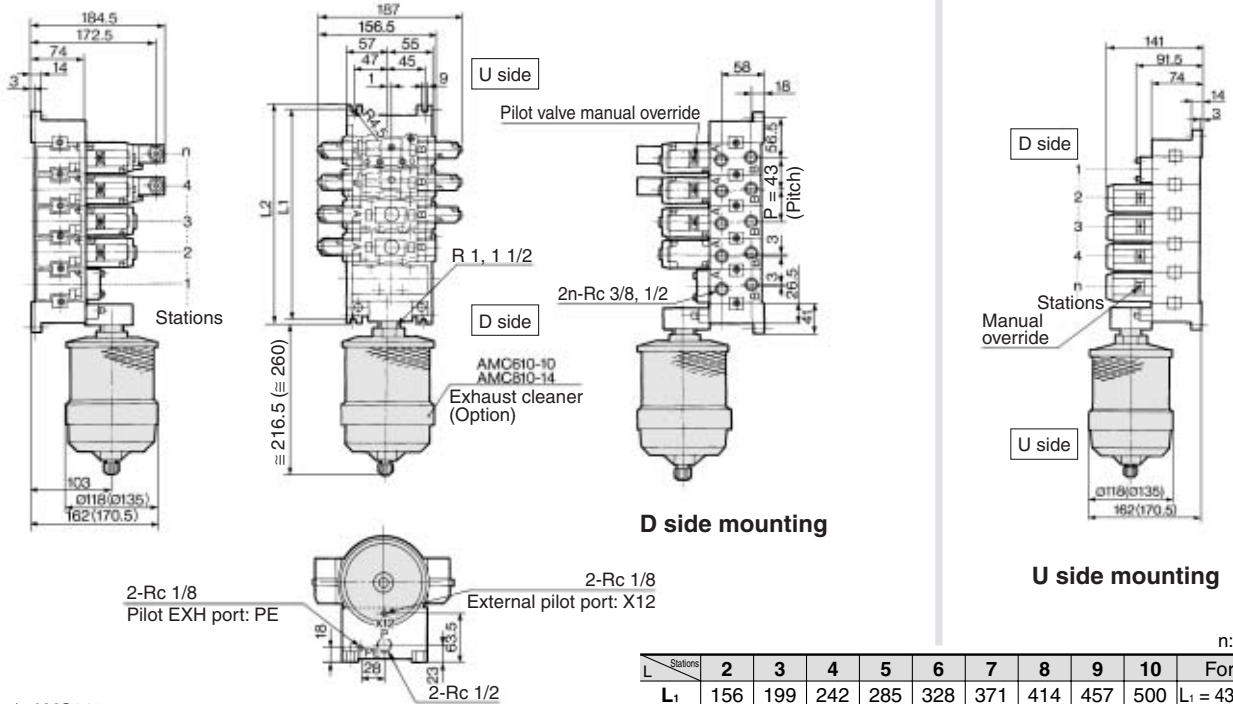
n: Station

L \ Stations	2	3	4	5	6	7	8	9	10	Formula
L₁	156	199	242	285	328	371	414	457	500	$L_1 = 43 \times n + 70$
L₂	168	211	254	297	340	383	426	469	512	$L_2 = 43 \times n + 82$

Series *VFR4000*

Manifold with Exhaust Cleaner | **Non plug-in type**

Non plug-in type: VV5FR4-40- Station **1-** Port size **-** CD/CU
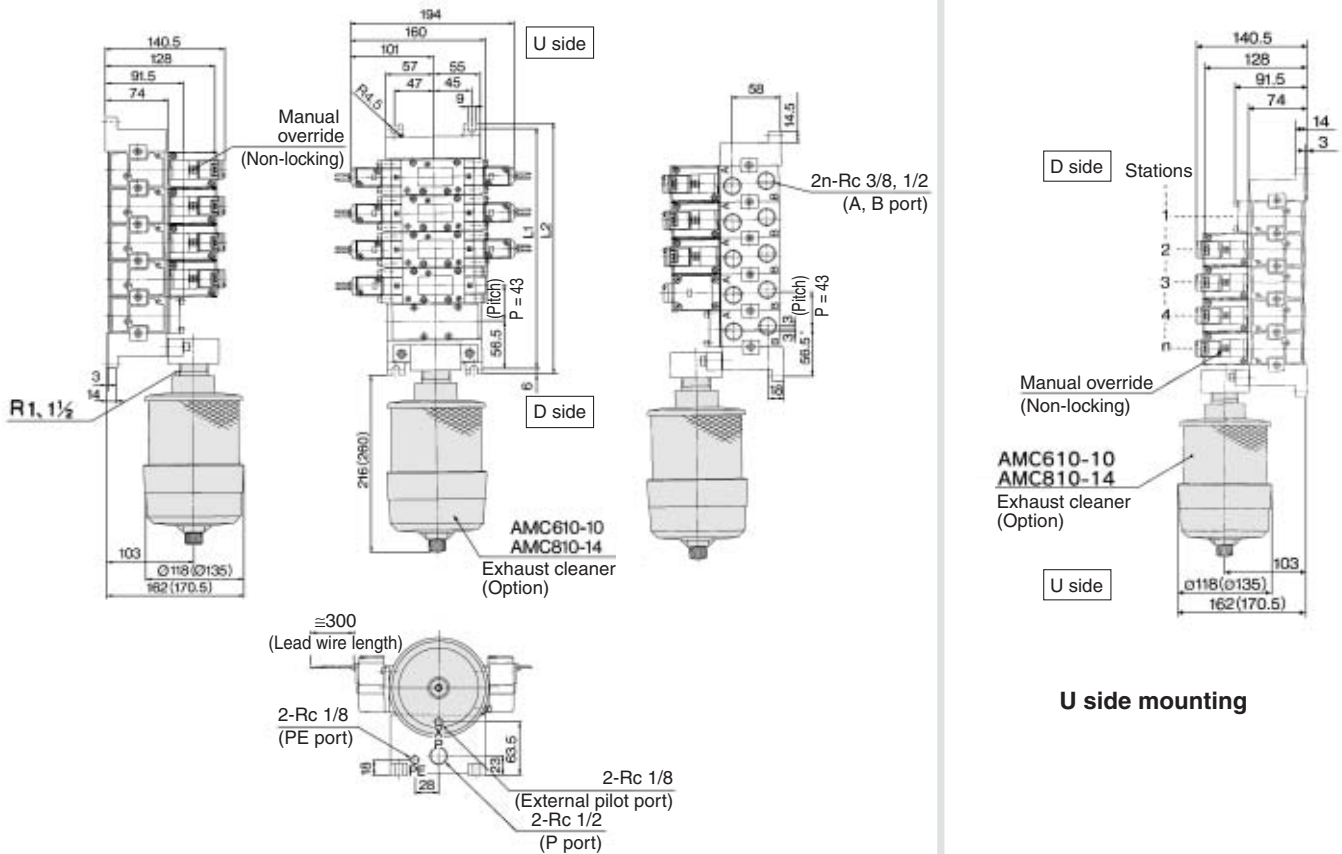
U side

Manual override
(Non-locking)

D side

2n-Rc 3/8, 1/2
(A, B port)

U side

D side

AMC610-10
AMC810-14
Exhaust cleaner
(Option)

R1, 1½

P = 43 (Pitch)

≧300
(Lead wire length)

2-Rc 1/8
(PE port)

2-Rc 1/8
(External pilot port)

2-Rc 1/2
(P port)

D side   Stations

Manual override
(Non-locking)

AMC610-10
AMC810-14
Exhaust cleaner
(Option)

U side

U side mounting

( ): AMC810

n: Station

L	Stations	2	3	4	5	6	7	8	9	10	Formula
L₁		156	199	242	285	328	371	414	457	500	$L_1 = 43 \times n + 70$
L₂		168	211	254	297	340	383	426	469	512	$L_2 = 43 \times n + 82$

SMC

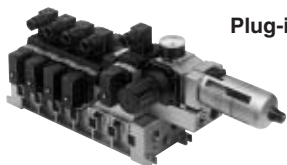# Manifold with Control Unit

- **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.**
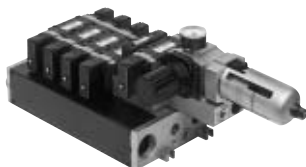
Plug-in type

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: VV5FR4-01□**	**Non plug-in type: VV5FR4-10**	**Non plug-in type: VV5FR4-40**
Wiring	With terminal block With multi-connector With D-sub connector	DIN terminal Grommet terminal	Grommet, Grommet terminal, Conduit terminal, DIN terminal
Applicable valve model	VFR4□0□-□F	VFR4□1□-□D VFR4□1□-□E	VFR4□4□-□G, VFR4□4□-□E VFR4□4□-□T, VFR4□4□-□D
Porting specifications	Common SUP, Common EXH		
	A, B port	Side: Rc $3/8$, $1/2$, Bottom: Rc $3/8$	
	P, EA, EB port	Side: Rc $1/2$	
Stations	2 to 10 (With multi-connector/D-sub connector: 2 to 8) *		

🔍 * Including station of control unit

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 0.6 MPa
Differential	0.08 MPa
Contact	1a
Indicator light	LED (RED)
Max. switch capacity	2 VA AC, 2 W DC
Max. operating current	24 VAC, DC or less: 50 mA 48 VAC, DC: 40 mA 100 VAC, DC: 20 mA
Inside voltage drop	4 V or less
Air release valve (Single only)	
Operating pressure range	0.2 to 0.9 MPa

Control Unit/Option

Air release valve spacer [1]	<Plug-in type> VVFS4000-24A-1R (D side mounting)	
	<Non plug-in type> VVFS4000-24A-2R (D side mounting)	
Pressure switch [2]	IS1000P-2-1	
Blanking plate	For filter regulator	MP2-3
	For pressure switch	MP3-2
	For air release valve	VVFS4000-24A-10
Filter element	11104-5B	

🔍 Note 1) Combining valve "VFR41□□" (single) and release valve spacer makes it possible to use this as an air release valve.
Note 2) Pressure switch cannot be mounted later on non plug-in type.

VK

VZ

VF

VFR

VP4

VZS

VFS

VS4

VQ7

EVS

VFN

Series **VFR4000**

How to Order

VV5FR4 — **01C** **D** — **08** **1** — **03** — **AP**

Series VFR4000 Manifold

Base type/Electrical entry

01T	Plug-in with terminal block
01C	Plug-in with multi-connector
01F	Plug-in type with D-sub connector
10	Non plug-in type (Common entry)
40	Non plug-in type (Individual entry)

Connector mounting direction

Symbol	With connector	Applicable base
Nil	None	01T, 10, 40
D	D side mounting	01C, 01F
U	U side mounting	

Stations

02	2 stations
⋮	⋮
10 Note)	10 stations

Note) • Base 01T/10/40: 2 to 10 stations
• Base 01C/01F: 2 to 8 stations
• Including stations of control unit.

Symbol

Symbol	Passage		Porting specifications (A, B)
	P	EA, EB	
1	Common	Common	Side
2			Bottom ∗

∗ Option

Port size

Symbol	P, EA, EB	A, B ∗
03	1/2	3/8
04		1/2
M		Mixed

∗ For bottom ported: only 3/8

Thread type

Nil	Rc
F	G
N	NPT
T	NPTF

Air release valve coil rating

Nil	None
1	100 VAC, 50/60 Hz
5	24 VDC
9	Other

Control unit type

Control equipment \ Symbol	Nil	MP	AP	M	A	G	F	C	E
Air release valve		●	●	●				●	●
Air filter regulator with manual drain		●		●		●			
Air filter regulator with auto-drain			●		●		●		
Pressure switch		●	●						
Blanking plate (Air release valve)					●	●			
Blanking plate (Filter regulator)								●	
Blanking plate (Pressure switch)			●	●	●	●	●		
Required stations		2 stations							1 station

Note) Control unit is D side mounting only.

How to Order Manifold Assembly

<Example> Plug-in type with terminal block

VV5FR4-01T-081-03-AP5········· 1 set (Manifold base part no.)
∗VFR4100-5FZ··························· 5 sets (2 position single part no.)
∗VFR4200-5FZ··························· 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

VV5FR4-10-061-03-A5············· 1 set (Manifold base part no.)
∗VFR4110-5D······························· 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.
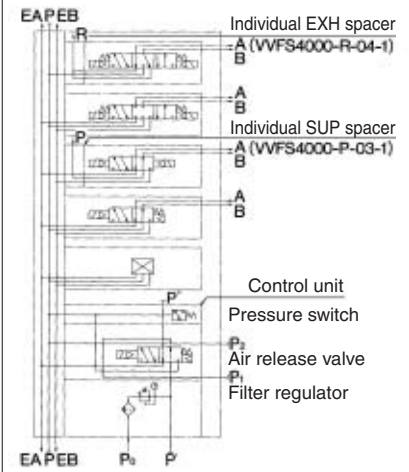
SMC

Manifold with Control Unit | Plug-in type/Non plug-in type

Plug-in type:

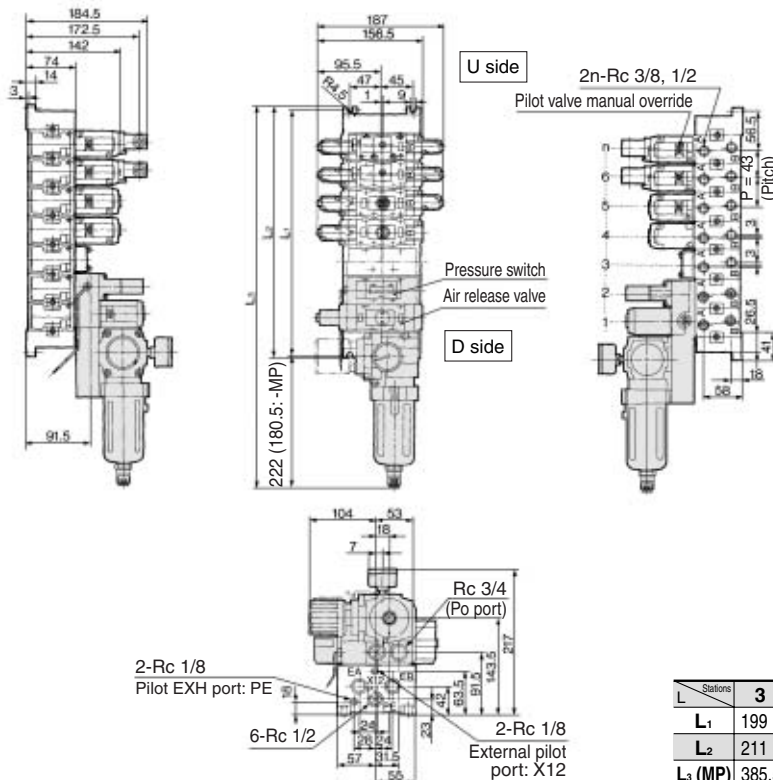**VV5FR4-01T-** Stations **1-** Port size **-AP** Voltage of air release valve
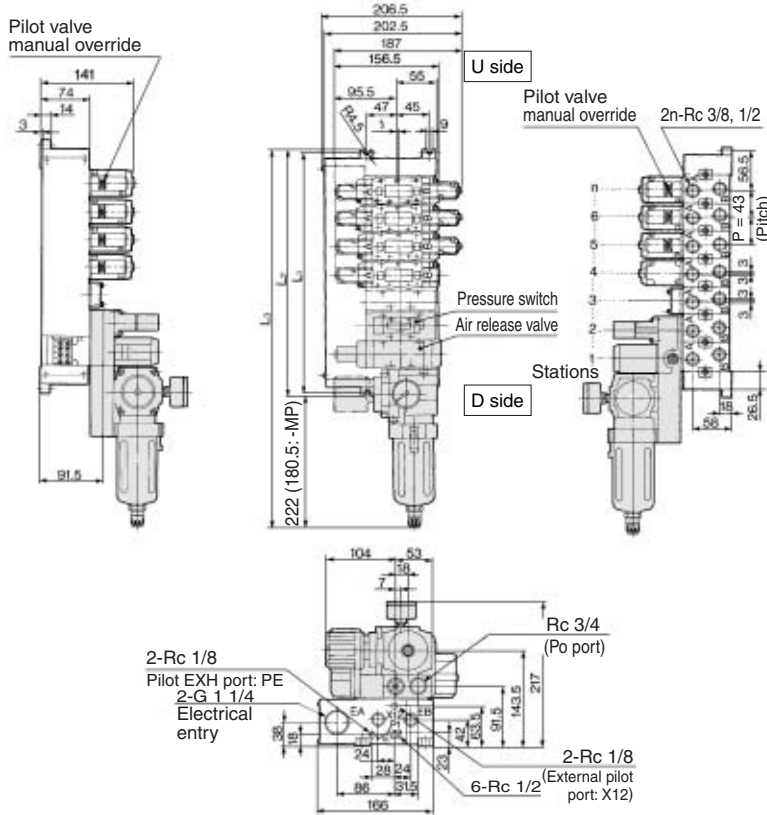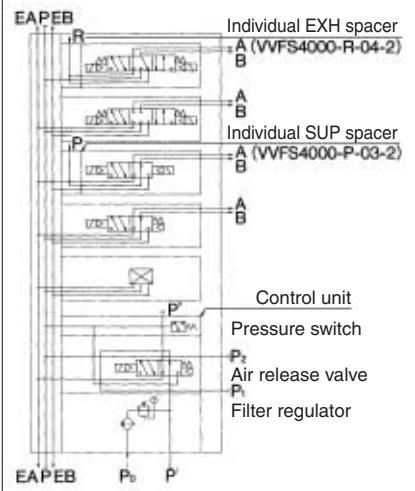

Example for manifold

VK
VZ
VF
VFR
VP4
VZS
VFS
VS4
VQ7
EVS
VFN

Non plug-in type:

VV5FR4-10- Stations **1-** Port size **-AP** Voltage of air release valve
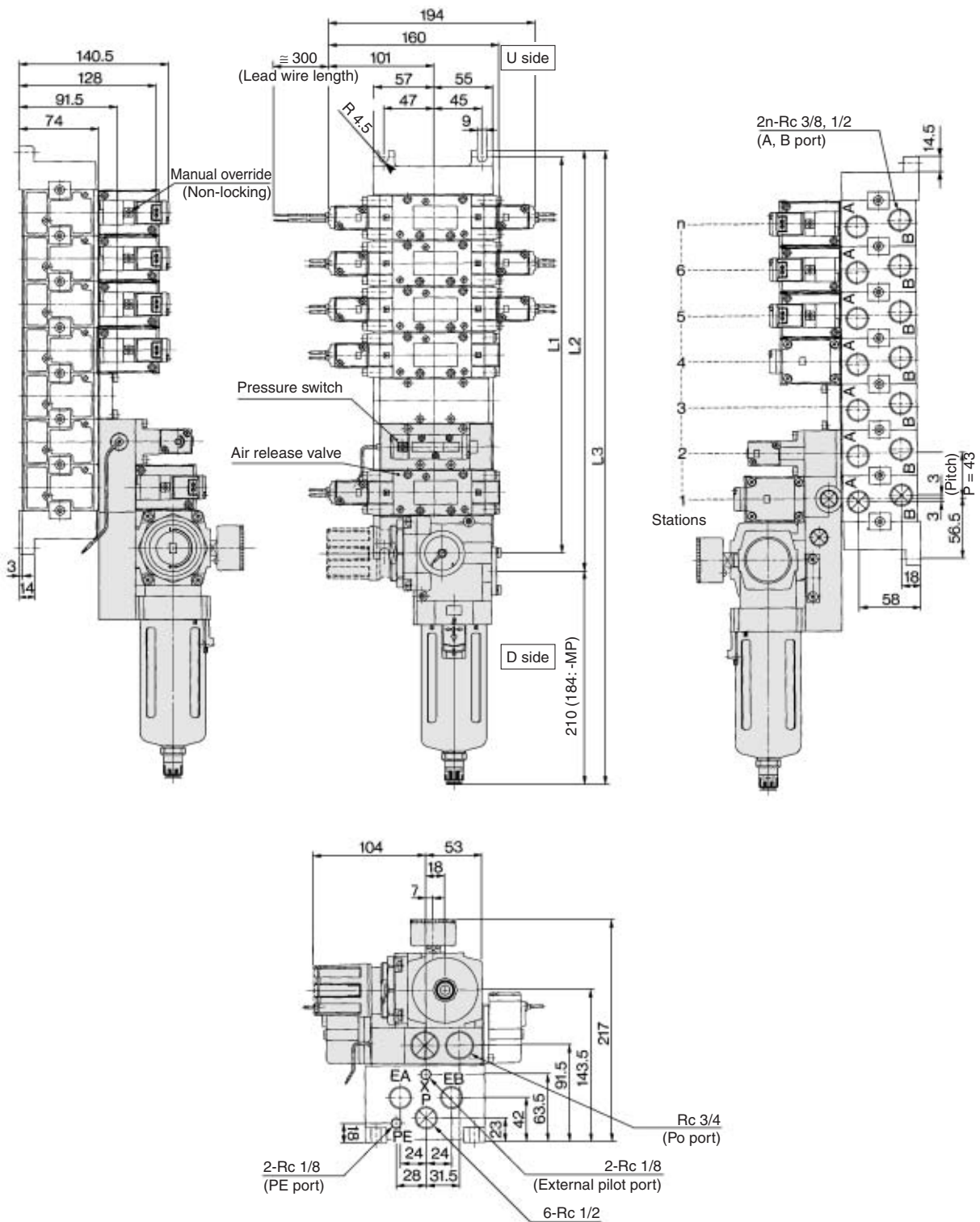

Example for manifold

n: Station

L \ Stations	3	4	5	6	7	8	9	10	Formula
L₁	199	242	285	328	371	414	457	500	L₁ = 43 x n + 70
L₂	211	254	297	340	383	426	469	512	L₂ = 43 x n + 82
L₃ (MP)	385.5	428.5	471.5	514.5	557.5	600.5	643.5	686.5	L₃ = 43 x n + 256.5
L₃ (AP)	427	470	513	556	599	642	685	728	L₃ = 43 x n + 298

SMC

3-5-73

Manifold with Control Unit | **Non plug-in type**

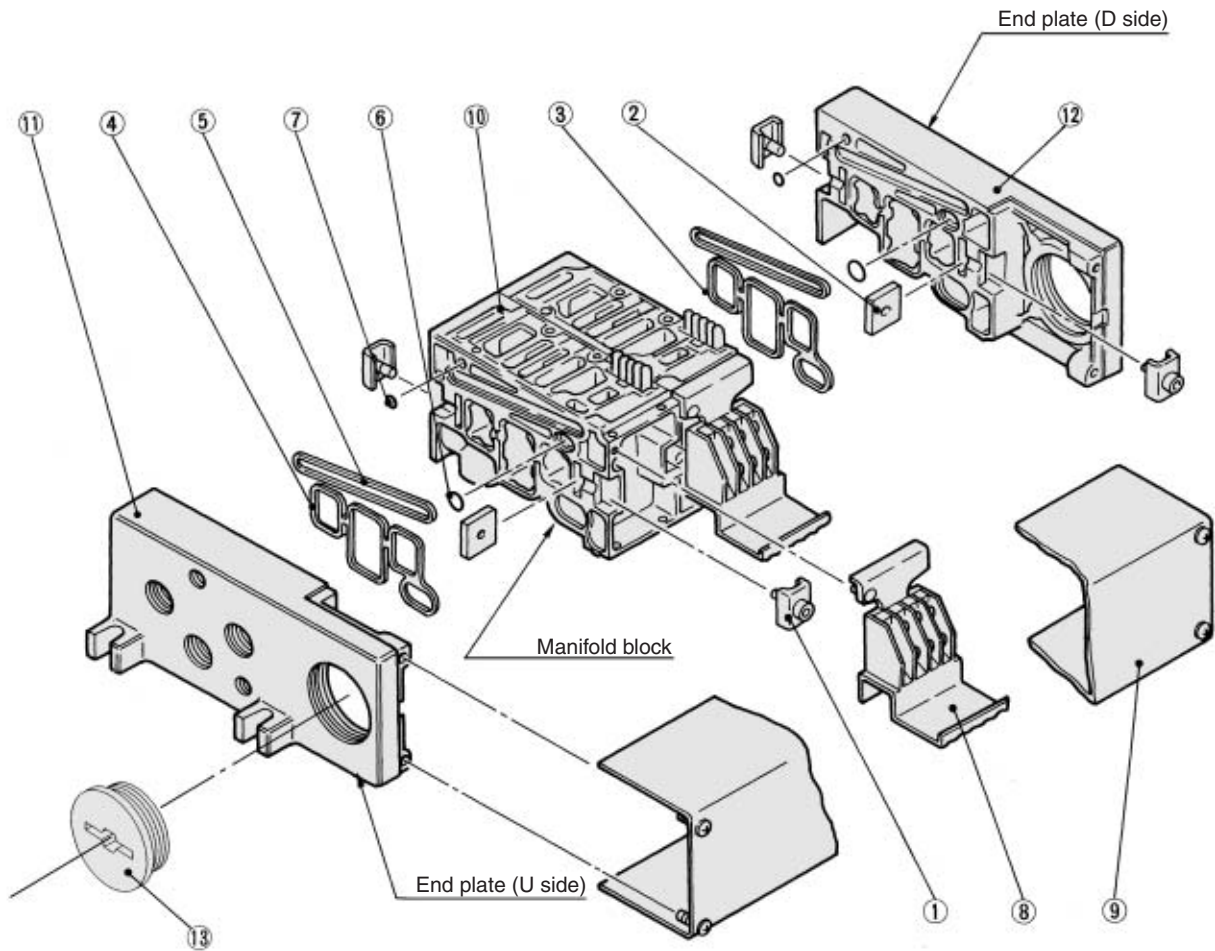Non plug-in type: VV5FR4-40- | Stations | 1- | Port size | -AP | Voltage of air release valve

140.5
128
91.5
74

Manual override
(Non-locking)

3
14

194
160
≅ 300
(Lead wire length)
101
57 55
47 45
9
R 4.5
U side

Pressure switch

Air release valve

L_1
L_2
L_3

D side

210 (184: -MP)

2n-Rc 3/8, 1/2
(A, B port)
14.5

n
6
5
4
3
2
1

Stations

A
B

3
3
(Pitch)
P = 43
56.5
18
58

104 53
18
7

217
143.5
91.5
63.5
42
23

EA EB
X
P
PE

Rc 3/4
(Po port)

2-Rc 1/8
(PE port)

24 24
28 31.5

2-Rc 1/8
(External pilot port)

6-Rc 1/2

n: Station

L \ Stations	3	4	5	6	7	8	9	10	Formula
L_1	199	242	285	328	371	414	457	500	$L_1 = 43 \times n + 70$
L_2	211	254	297	340	383	426	469	512	$L_2 = 43 \times n + 82$
L_3 (MP)	385.5	428.5	471.5	514.5	557.5	600.5	643.5	686.5	$L_3 = 43 \times n + 256.5$
L_3 (AP)	427	470	513	556	599	642	685	728	$L_3 = 43 \times n + 298$

SMC

Manifold Base Construction — Plug-in type/Non plug-in type

End plate (D side)

Manifold block

End plate (U side)

VK
VZ
VF
VFR
VP4
VZS
VFS
VS4
VQ7
EVS
VFN

Replacement Parts

No.	Description	Material	Part no.
①	Connection fitting A	Steel	VVF4000-5-1A
②	Connection fitting B	Steel	VVF4000-5-2
③	Gasket	NBR	VVF4000-7 (for end plate)
④	Gasket	NBR	VVF4000-7-1 (for manifold block)
⑤	Gasket	NBR	VVF4000-8
⑥	O-ring	NBR	AS568-011
⑦	O-ring	NBR	P-3
⑧	Terminal assembly	—	VFR4000-14-1A
⑨	Junction cover assembly	—	For 01T VVF4000-4A-[Stations]
			For 01SU AZ738-30A-[Stations]
⑬	Rubber plug	NBR	AXT336-9

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

Replacement Parts: Sub Assembly

No.	Description	Assembly part no.	Component parts	Applicable manifold base
⑩	Manifold block assembly Note)	VFR4000-19-1A-$^{03}_{04}$	Manifold block ⑩, Terminal ⑧, Connection bracket ①, ②, Gasket ④, ⑤, O-ring ⑥, ⑦, Receptacle assembly	Plug-in type
		VFR4000-19-2A-$^{03}_{04}$	Manifold block ⑩, Connection bracket ①, ②, Gasket ④, ⑤, O-ring ⑥, ⑦	Non plug-in type
⑪	End plate (U side) assembly	VVF4000-2A-1	End plate (U) ⑪, Metal joint ①, ②	Plug-in type
		VVF4000-2A-2	End plate (U) ⑪, Metal joint ①, ②	Non plug-in type
⑫	End plate (D side) assembly	VVF4000-3A-1	End plate (D) ⑫, Connection bracket ①, ②, Gasket ③, ④, O-ring ⑥, ⑦	Plug-in type
		VVF4000-3A-2	End plate (D) ⑫, Connection bracket ①, ②, Gasket ③, ⑤, O-ring ⑥, ⑦	Non plug-in type

Note) For side ported