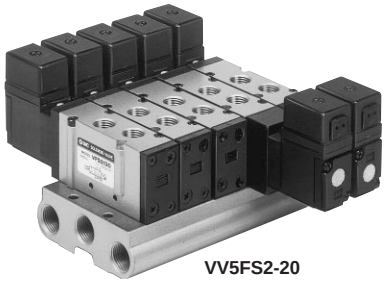
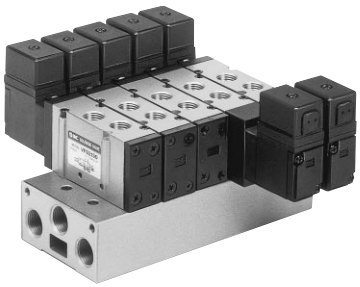
Series *VFS2000*
Manifold/Bar Style

Protection of the environment from pilot exhaust

Use of the VV5FS2-30 manifold can exhaust intensively the pilot exhaust gas to the base side, and can prevent environmental aggravation due to noise and oil mist.



VV5FS2-20



VV5FS2-30

Specifications

Manifold base	Bar manifold, Body ported
Stations	Max. 15

Port Specifications

Symbol	Port specification		Porting specification: Rc (PT)		
			Base	Valve	Base
	P	EA, EB	P	A, B	EA, EB
1	Common	Common	Side: 3/8	Top: 1/8, 1/4	Side: 3/8

Options

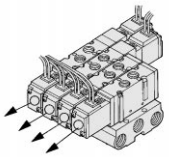
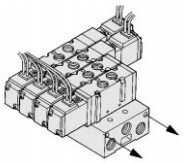
Blank plate assembly	VVFS2000-10A-1	With gasket, screws

How to Order Manifold Base

VV5FS2 – 20 – 05 – 1 – 03 □

Series VFS2000 Manifold

Base Model

Type	Pilot exhaust	Applicable valve
20	Individual EXH 	VFS2□20-□□-01/02
30	Common EXH 	VFS2□30-□□-01/02 ∗VFS2□20-□□-01/02 can be attached.

Stations

02	2 stations
⋮	⋮
15	15 stations

Symbol

	Port specification		Porting spec.
	P	EA, EB	A, B
1	Common Rc (PT) 3/8	Common Rc (PT) 3/8	Top porting Rc (PT) 1/8, 1/4

P, EA, EB Port size
03–Rc (PT) 3/8

Thread

—	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

∗Option

How to Order Manifold Base Assembly

Please indicate manifold base style, valve model, and blank plate.

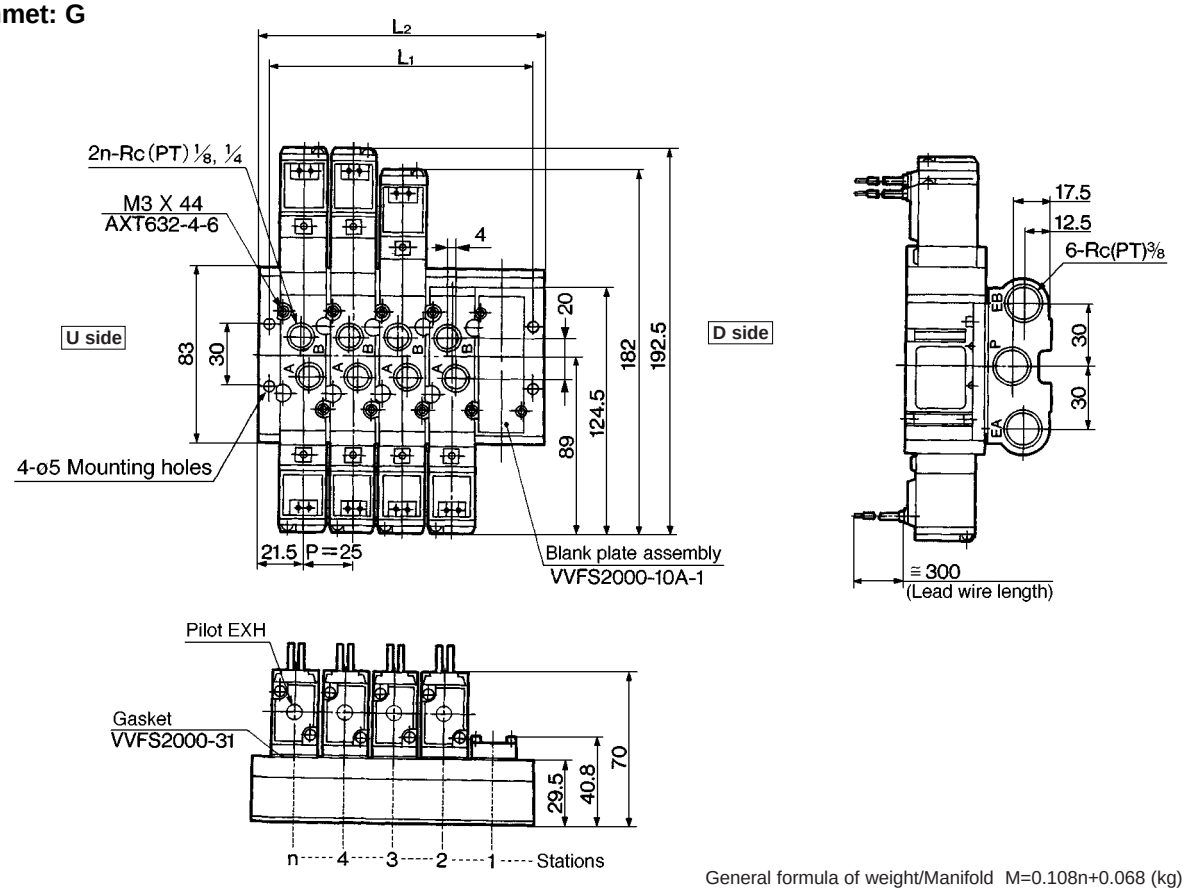
≪Example≫

(Manifold base)	**VV5FS2-20-061-03**	1
(2 position single)	**VFS2120-1D-02**	3
(2 position double)	**VFS2220-1D-02**	2
(Blank plate)	**VVFS2000-10A-1**	1

CAD

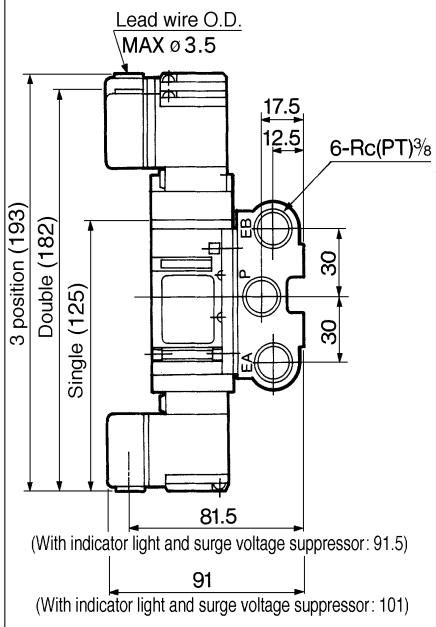
20 Type Manifold Pilot Individual Exhaust: VV5FS2-20-Station 1-03

Grommet: G

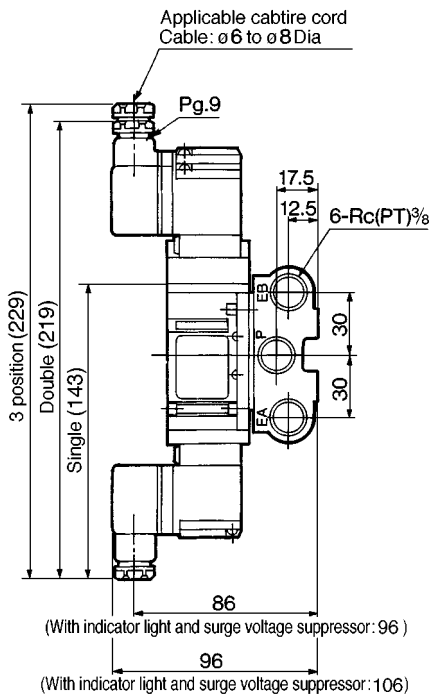


General formula of weight/Manifold M=0.108n+0.068 (kg) n: Station

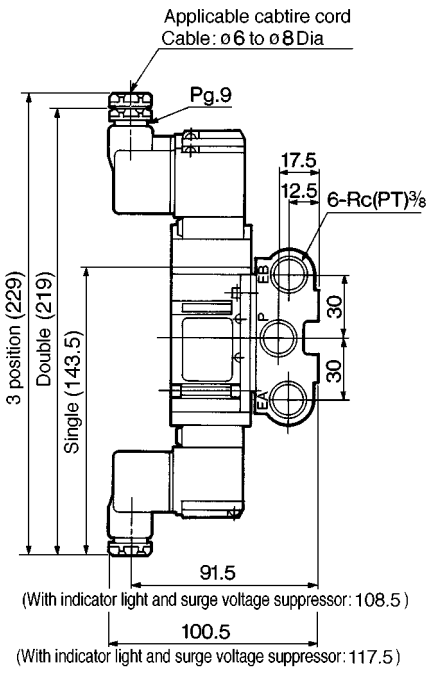
Grommet terminal: E, EZ



Conduit terminal: T, TZ



DIN connector: D, DZ



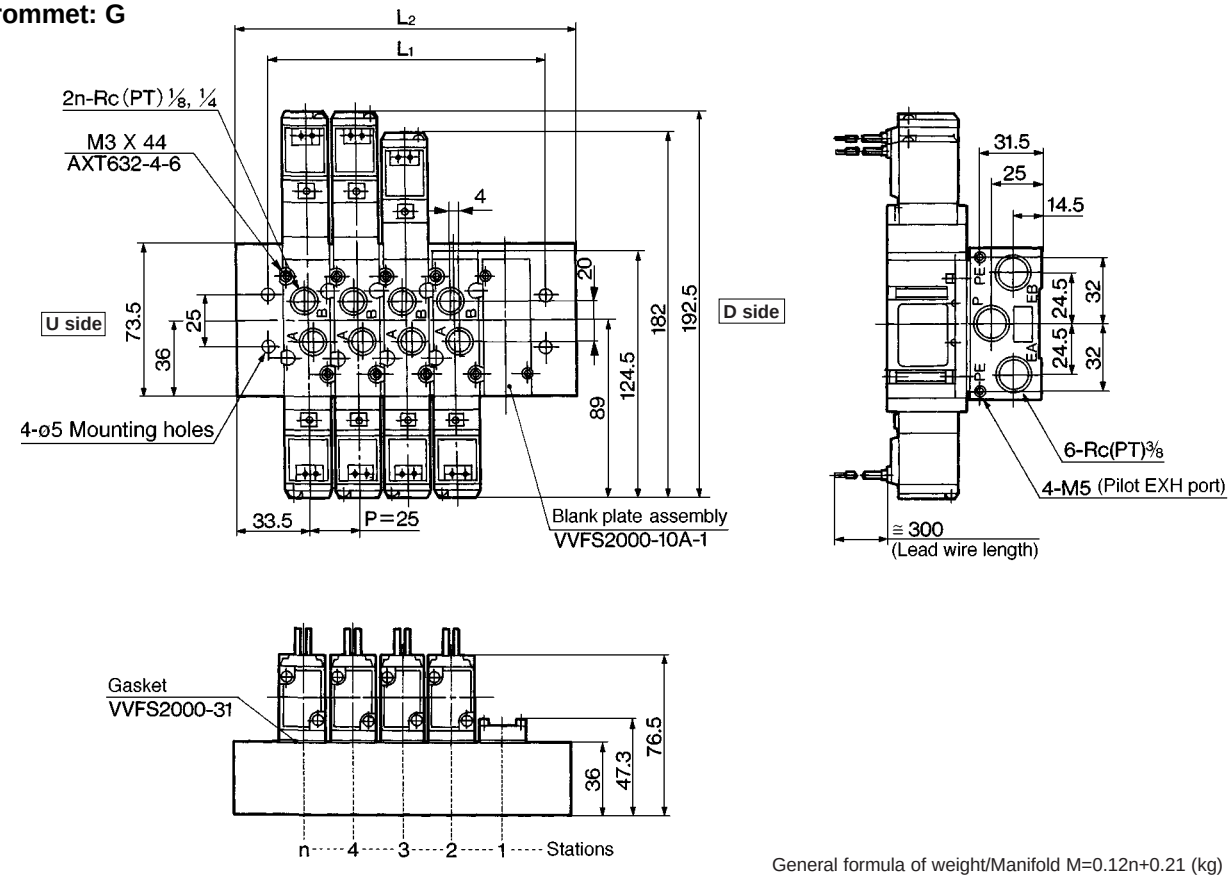
n: Station

L \ n	2	3	4	5	6	7	8	9	10	Equation
L1	58	83	108	133	158	183	208	233	258	L1=25 X n+8
L2	68	93	118	143	168	193	218	243	268	L2=25 X n+18

CAD

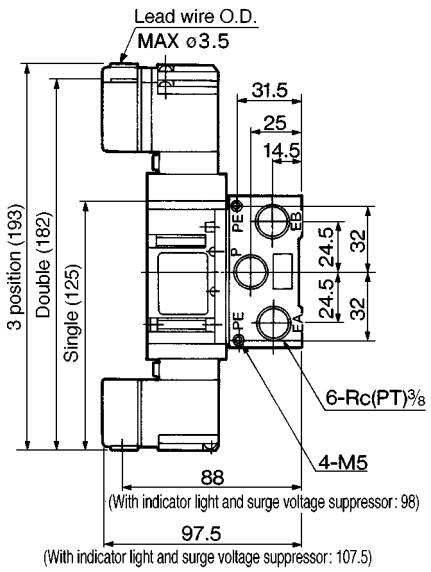
30 Type Manifold — Pilot Common Exhaust: VV5FS2-30- Station 1-03

Grommet: G

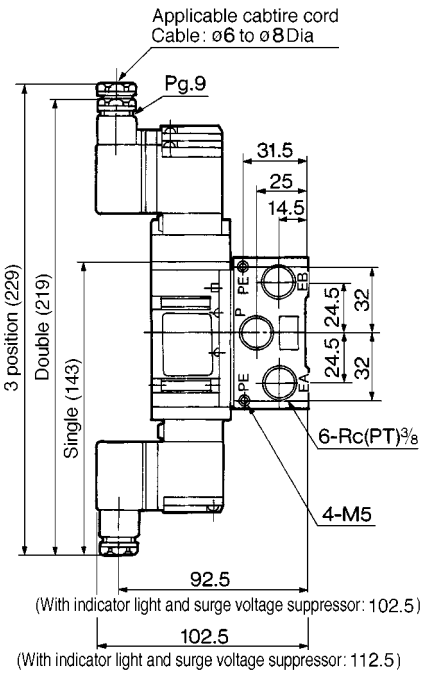


General formula of weight/Manifold M=0.12n+0.21 (kg) n: Station

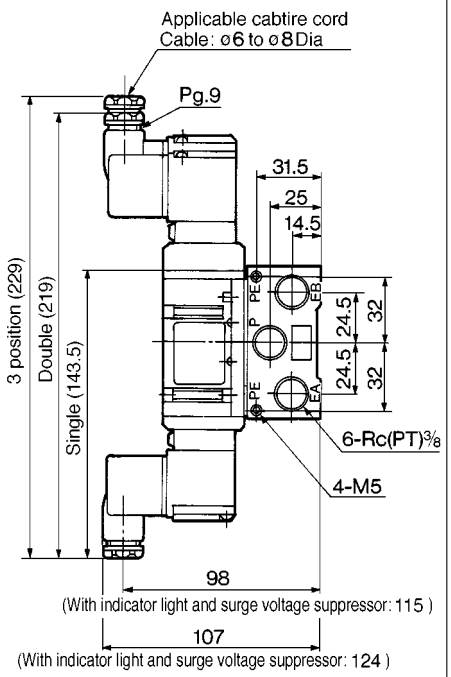
Grommet terminal: E, EZ



Conduit terminal: T, TZ



DIN connector: D, DZ



n: Station

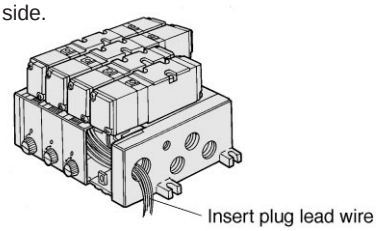
L \ n	2	3	4	5	6	7	8	9	10	Equation
L1	62	87	112	137	162	187	212	237	262	L1=25 X n+12
L2	92	117	142	167	192	217	242	267	292	L2=25 X n+42

Manifold

CAD

Plug-in: Insert Plug with Lead Wire

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



VV5FS2 − 01 − 06 | 1 − 01 |

Series VFS2000 Manifold

Plug-in
Insert plug with lead wire

Stations

02	2 stations
⋮	⋮
15	15 stations

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting A, B
1	Com.	Com.	Side
2*			Bottom
3*	Com.	Indi.	Side
4*			Bottom
5*	Indi.	Com.	Side
6*			Bottom
7*	Indi.	Indi.	Side
8*			Bottom

*Option

Thread

–	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

*Option

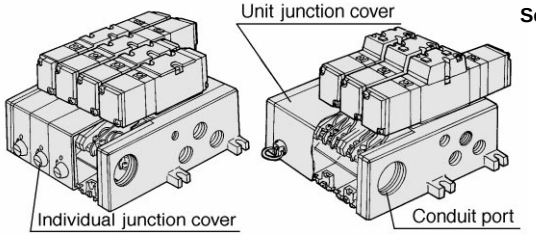
Port size

Symbol	P, EA, EB	A, B
01	Rc (PT) 1/4	Rc (PT)1/8
02		Rc (PT)1/4
M		Mix

*Bottom porting: 1/8 only.

Plug-in: 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.



VV5FS2 − 01T 1 − 08 | 1 − 02 |

Series VFS2000 Manifold

Plug-in with terminal block

Junction cover

—	Separate junction cover
1	One-piece junction cover

Stations

02	2 stations
⋮	⋮
15	15 stations

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting A, B
1	Com.	Com.	Side
2*			Bottom
3*	Com.	Indi.	Side
4*			Bottom
5*	Indi.	Com.	Side
6*			Bottom
7*	Indi.	Indi.	Side
8*			Bottom

*Option

Thread

–	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

*Option

Port size

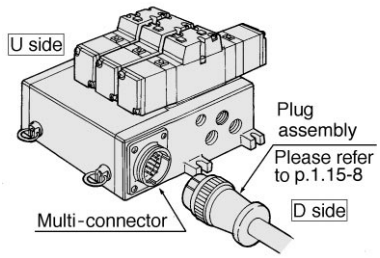
Symbol	P, EA, EB	A, B
01	Rc (PT) 1/4	Rc (PT)1/8
02		Rc (PT)1/4
M		Mix

*Bottom porting: 1/8 only.

Plug-in: With Multi-connector

(Wiring specifications: Please refer to p.1.15-8)

- Master connection of power and solenod valves.
- Quick wiring permits ease of installation.



VV5FS2 − 01C D | 1 − 05 | 2 − 01 |

Series VFS2000 Manifold

Plug-in With multi-connector

Mountind direction of connector

D	D side mounting
U	U side mounting

Junction cover

1	Unit junction cover

Stations

02	2 stations
⋮	⋮
08	8 stations

*Max: 8 stations.

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting A, B
1	Com.	Com.	Side
2*			Bottom
3*	Com.	Indi.	Side
4*			Bottom
5*	Indi.	Com.	Side
6*			Bottom
7*	Indi.	Indi.	Side
8*			Bottom

*Option

Thread

–	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

*Option

Port size

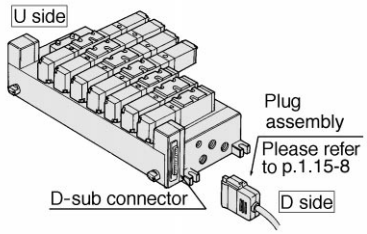
Symbol	P, EA, EB	A, B
01	Rc (PT) 1/4	Rc (PT)1/8
02		Rc (PT)1/4
M		Mix

*Bottom porting: 1/8 only.

Plug-in: With D-sub Connector

(Wiring specifications: Please refer to p.1.15-8)

- Wide range of interchangeability
  (MIL Spec DIN connector terminal-25 pcs attached.)
- Quick wiring permits easier installation.



VV5FS2 − 01F U | 1 − 06 | 1 − 01 |

Series VFS2000 Manifold

Plug-in with D-sub connector

Mountind direction of connector

D	D side mounting
U	U side mounting

Junction cover

1	One-piece junction cover

Stations

02	2 stations
⋮	⋮
08	8 stations

*Max: 8 stations.

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting A, B
1	Com.	Com.	Side
2*			Bottom
3*	Com.	Indi.	Side
4*			Bottom
5*	Indi.	Com.	Side
6*			Bottom
7*	Indi.	Indi.	Side
8*			Bottom

*Option

Thread

–	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

*Option

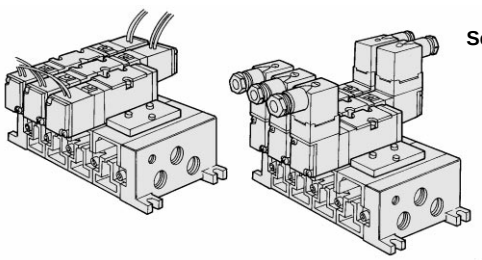
Port size

Symbol	P, EA, EB	A, B
01	Rc (PT) 1/4	Rc (PT)1/8
02		Rc (PT)1/4
M		Mix

*Bottom porting: 1/8 only.

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

- Wiring for every valve



VV5FS2 − 10 − 05 | 2 − 01 |

Series VFS2000 Manifold

Non plug-in

Stations

02	2 stations
⋮	⋮
15	8 stations

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting A, B
1	Com.	Com.	Side
2*			Bottom
3*	Com.	Indi.	Side
4*			Bottom
5*	Indi.	Com.	Side
6*			Bottom
7*	Indi.	Indi.	Side
8*			Bottom

*Option

Thread

–	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

*Option

Port size

Symbol	P, EA, EB	A, B
01	Rc (PT) 1/4	Rc (PT)1/8
02		Rc (PT)1/4
M		Mix

*Bottom porting: 1/8 only.

Note) The individual specification of the P port at the composition symbol 3 to 8 or the EA, EB, ports should be taken as individual port using a block plate. Therefore, if an individual port is using a single SUP spacer of option or a singel EXH spacer, the composition symbol mark is "1".

Manifold Specifications

Base Style	Wiring	Porting	Port size		No. of Stations	Applicable solenoid valve
		A, B port	P, EA, EB	A, B		
Plug-in **VV5FS2-01□**	● Insert plug with lead wire ● With terminal block ● With multi connector ● With D-sub connector	Side Bottom	1/4	1/8, 1/4	2 to 15	VFS2□00-□F
Non plug-in **VV5FS2-10**	● Grommet ● Grommet terminal ● Conduit terminal ● DIN connector					VFS2□10-□G VFS2□10-□E VFS2□10-□T VFS2□10-□D

∗With multi connector, or with D-sub connector: 8 stations max.

Manifold Stations and Effective Area (mm²) (Cv factor)

Porting/No. of stations	First station	Fifth station	Tenth station	Fifteenth station
P→A or B	12.4 (0.69)	12.4 (0.69)	12.3 (0.68)	12.2 (0.68)
A→EA, B→EB	14.6 (0.81)	14.6 (0.81)	14.6 (0.81)	14.5 (0.81)

∗2 position single. Port size: 1/4

How to Order Manifold

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

≪Example≫

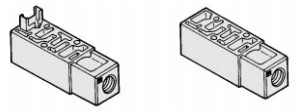
- Plug-in with terminal block - 6 stations
  (Manifold base)
  VV5FS2-01T1-061-02·····1
  (2 position single) VFS2100-5FZ ·····3
  (2 position double) VFS2200-5FZ ·····2
  (Blank plate) VVFS2000-10A ·····1
- Non plug-in - 6 stations
  (Manifold base mounted style)
  VV5FS2-10-061-01·····1
  (2 position single) VFS2100-5 ·····5
  (3 position exhaust center) VFS2410-5D ····1
  (Individual EXH spacer) VVFS2000-R-01-2 ····1

Manifold/Option Parts Assembly

Individual SUP spacer

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

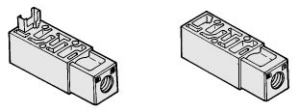
	Body	Plug-in	Non plug-in
Part No.	Rc (PT)1/8	VVFS2000-P-01-1	VVFS2000-P-01-2
	Rc (PT)1/4	VVFS2000-P-02-1	VVFS2000-P-02-2



Individual EXH spacer

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

	Body	Plug-in	Non plug-in
Part No.	Rc (PT)1/8	VVFS2000-R-01-1	VVFS2000-R-01-2
	Rc (PT)1/4	VVFS2000-R-02-1	VVFS2000-R-02-2



SUP block disk

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

Body	Plug-in	Non plug-in
Part No.	AXT625-12A	

EXH block disk

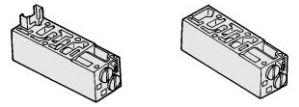
When valve exhaust affects the other stations on the circuit or when the reverse pressure valve is used to standard manifold valve, insert EXH block plate in between stations to separate valve exhaust.

Body	Plug-in	Non plug-in
Part No.	AXT625-12A	

Interface speed control

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

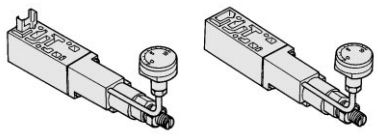
Body	Plug-in	Non plug-in
Part No.	VVFS2000-20A-1	VVFS2000-20A-2



Interface regulator

Interface regulator set on manifold block can regulate the pressure to each valve. Refer to p.1.15-6 for flow charactristic.

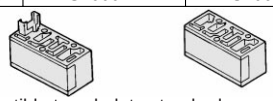
Body	Plug-in	Non plug-in
P port regulation	ARBF2000-00-P-1	ARBF2000-00-P-2



Air shuttoff valve spacer

When stopping supply air and releasing residual pressure after completion of work, actuators may move from original position. Air shuttoff valve spacer makes it possible to stop actuators in original position for extended periods.

Body	Plug-in	Non plug-in
Part No.	VVFS2000-21A-1	VVFS2000-21A-2



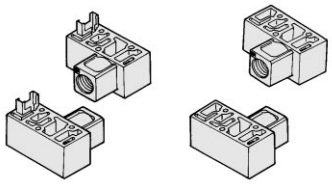
∗Incompatible to subplate standard.

Air release valve spacer

The concurrent use of air release valve spacer with VFS21□0 can release air.

Body	Plug-in	Non plug-in
Part No.	VVFS2000-24A-1$^{L}_{R}$	VVFS2000-24A-2$^{L}_{R}$

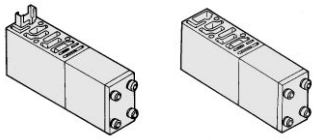
Note) L: U side mount R: D side mount



Double check spacer

The concurrent use of double check spacer with built-in double check valve can stop the cylinder at mid-position and hold for a long time without being affected by the air leakage across spool seals.

Body	Plug-in	Non plug-in
Part No.	VVFS2000-22A-1	VVFS2000-22A-2



Blank plate

When disassembling valve for maintenance purposes or when spare manifold stations are requied, install a blank plate on the manifold block.

Body	Plug-in	Non plug-in
Part No.	VVFS2000-10A	

Accessory

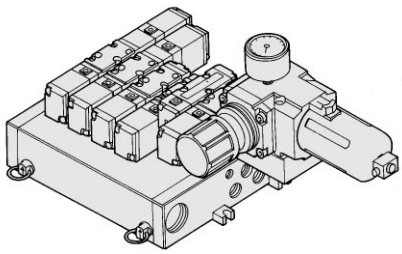
One pair of gasket and mounting thread is attached to every option parts assembly.

Manifold Options

With control unit

Plug-in/Non plug-in

- **Filter, regulation valve, pressure switch and air release valve are all combined to form one unit.**
- **Piping work eliminated.**

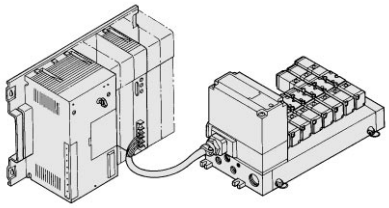


For more information, please refer to p.1.15-47.

With serial interface unit

Plug-in

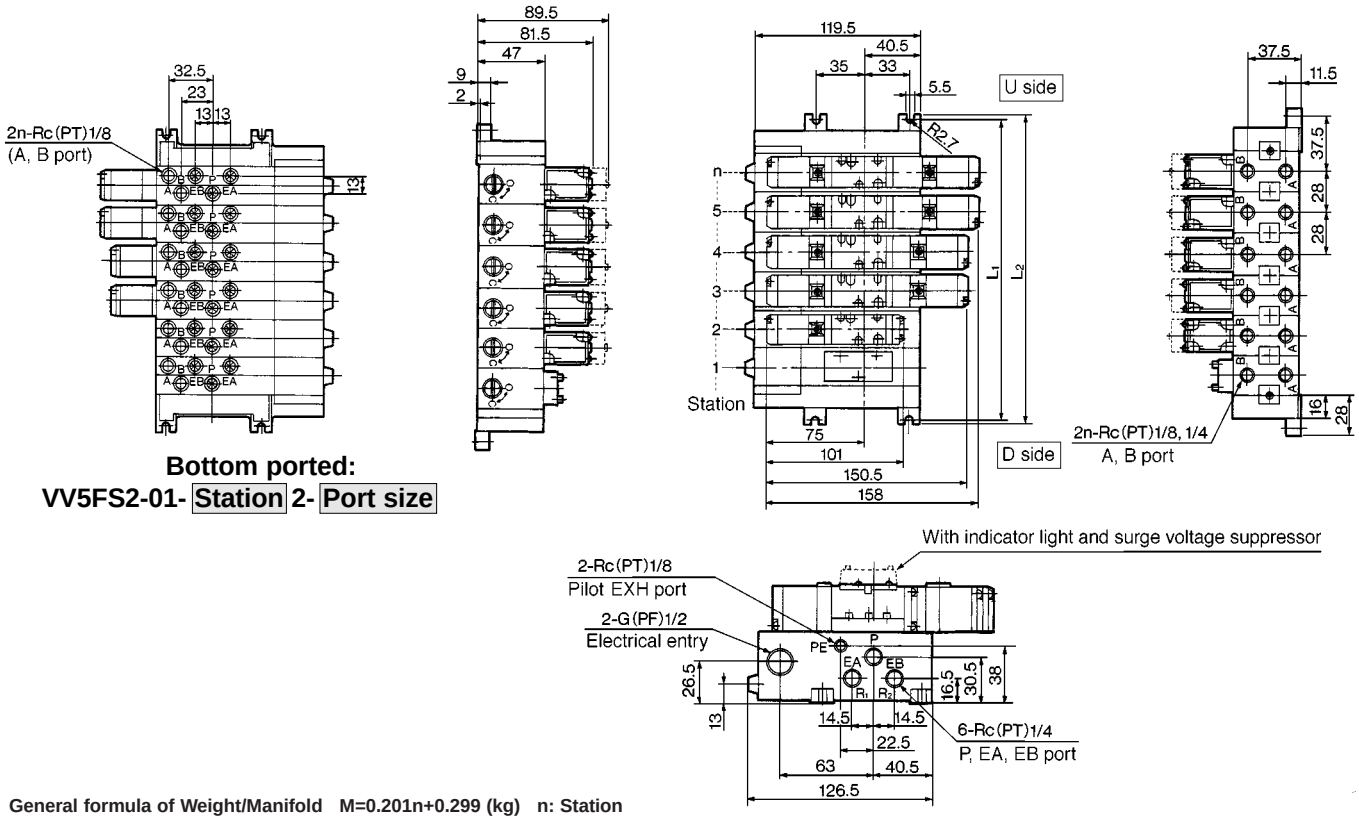
- **Solenoid valve wiring process reduced considerably.**
- **Disperse installation possible.**
  Manifold solenoid valve: 8 stations max, 32 positions (512 solenoids).
- **Maintenance and inspection are easy.**



CAD

Manifold Plug-in/Non Plug-in

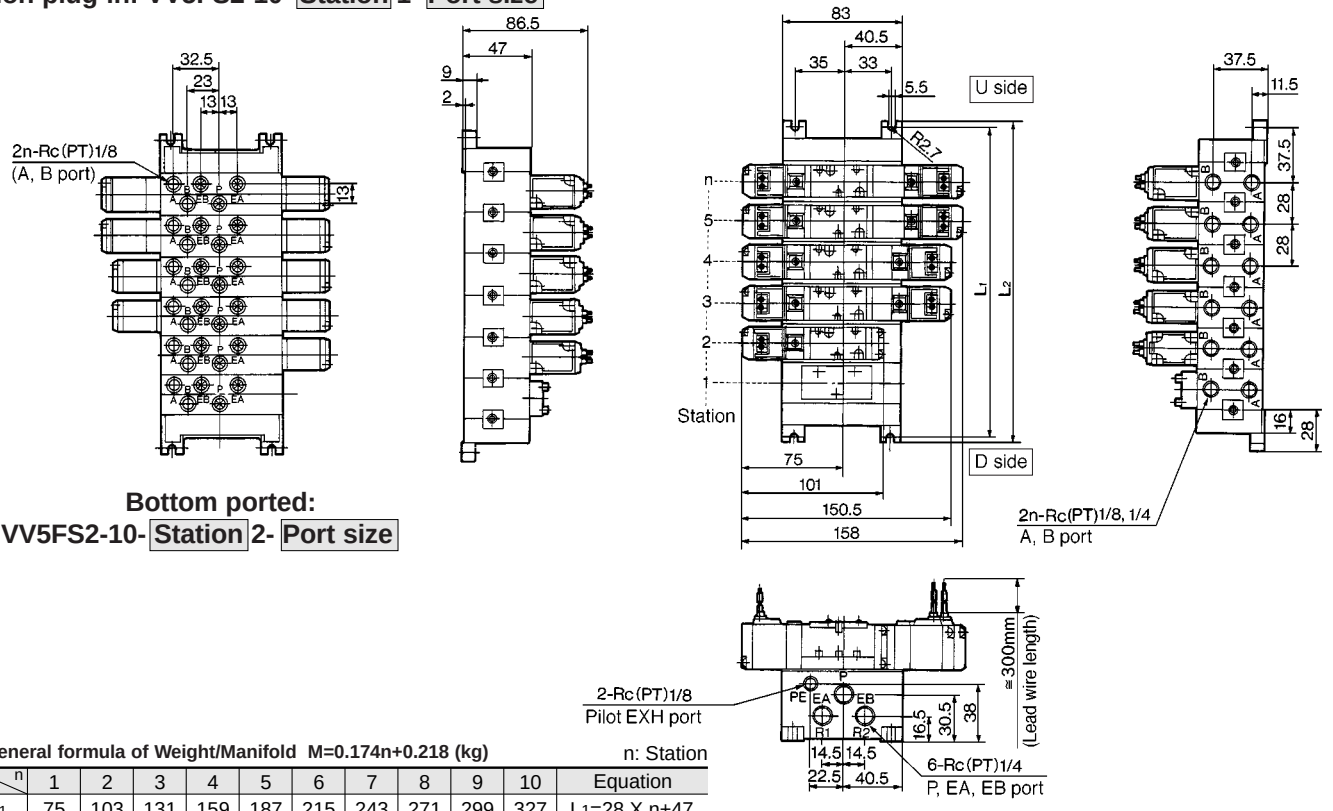
Plug-in (Insert plug with lead wire): VV5FS2-01- Station 1- Port size



Bottom ported:
VV5FS2-01- Station 2- Port size

General formula of Weight/Manifold M=0.201n+0.299 (kg) n: Station

Non plug-in: VV5FS2-10- Station 1- Port size



Bottom ported:
VV5FS2-10- Station 2- Port size

General formula of Weight/Manifold M=0.174n+0.218 (kg) n: Station

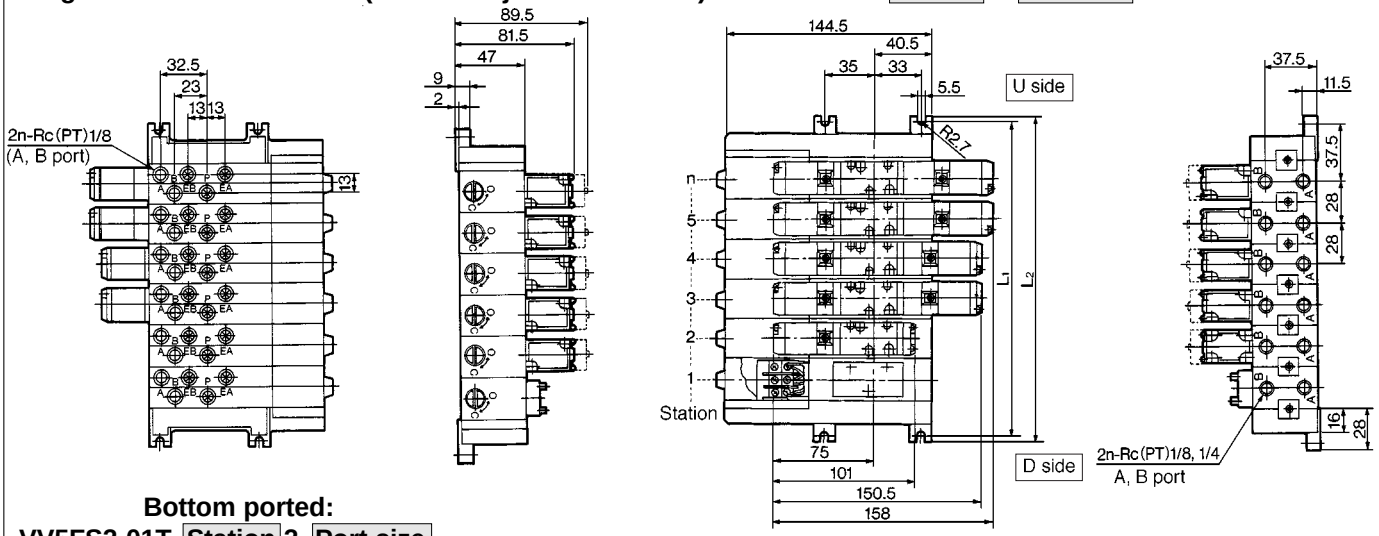
L \ n	1	2	3	4	5	6	7	8	9	10	Equation
L_1	75	103	131	159	187	215	243	271	299	327	L_1=28 X n+47
L_2	84	112	140	168	196	224	252	280	308	336	L_2=28 X n+56

CAD Plug-in ——— SV5FS22, #5 changed
Non plug-in ——— SV5FS22, #5

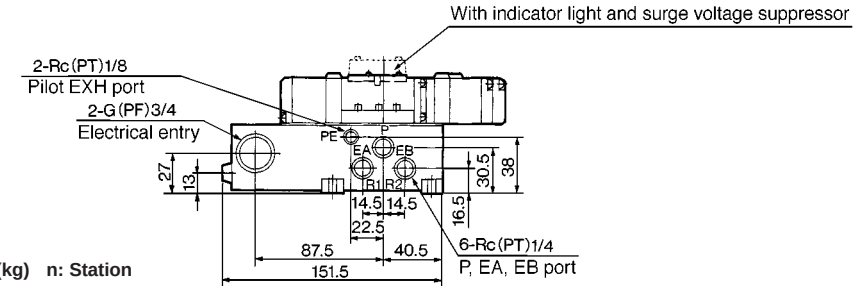
CAD

Manifold Plug-in: Individual/One-piece Junction Cover

Plug-in with terminal block (Individual junction covers): VV5FS2-01T- Station 1- Port size

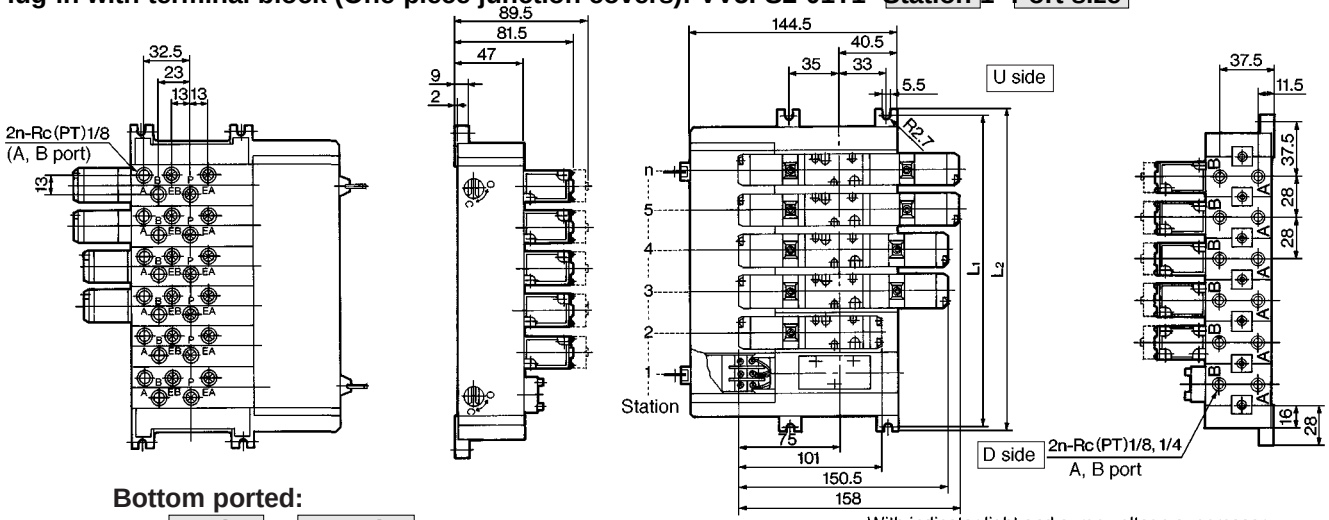


Bottom ported:
VV5FS2-01T- Station 2- Port size

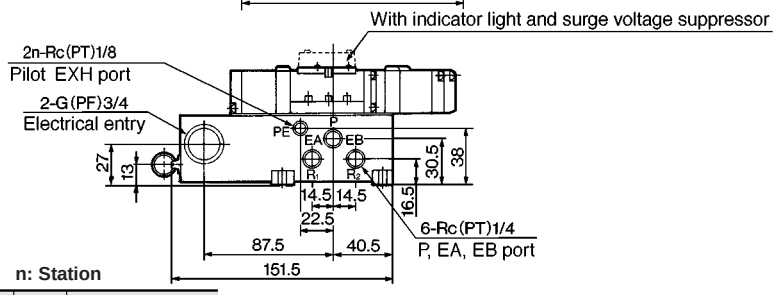


General formula of Weight/Manifold M=0.215n+0.35 (kg) n: Station

Plug-in with terminal block (One-piece junction covers): VV5FS2-01T1- Station 1- Port size



Bottom ported:
VV5FS2-01T1- Station 2- Port size



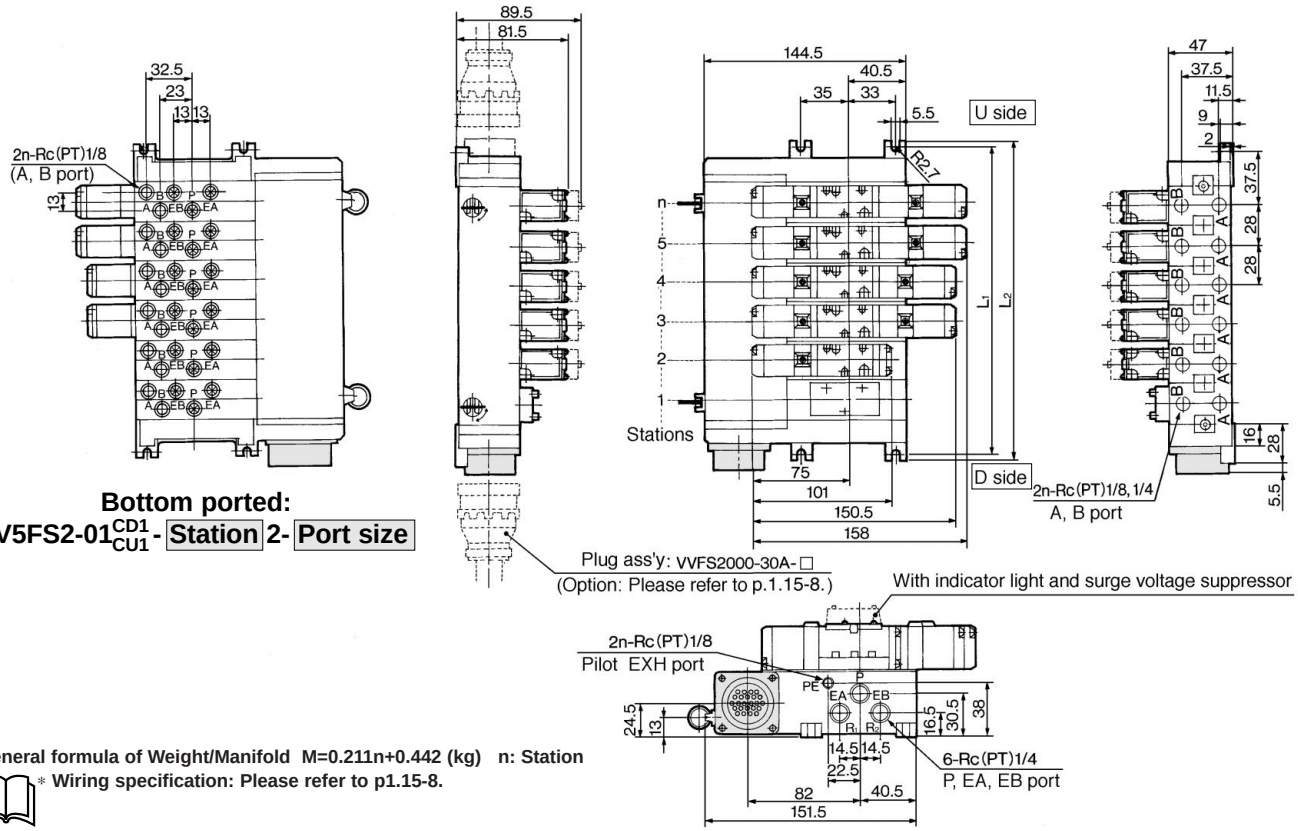
General formula of Weight/Manifold M=0.236n+0.354 (kg) n: Station

L \ n	1	2	3	4	5	6	7	8	9	10	Equation
L_1	75	103	131	159	187	215	243	271	299	327	L_1=28 X n+47
L_2	84	112	140	168	196	224	252	280	308	336	L_2=28 X n+56

CAD

Manifold Plug-in with Multi-connector/With D-Sub Connector

Plug-in with multi-connector: VV5FS2-01CD1- Station 1- Port size , VV5FS2-01CU1- Station 1- Port size

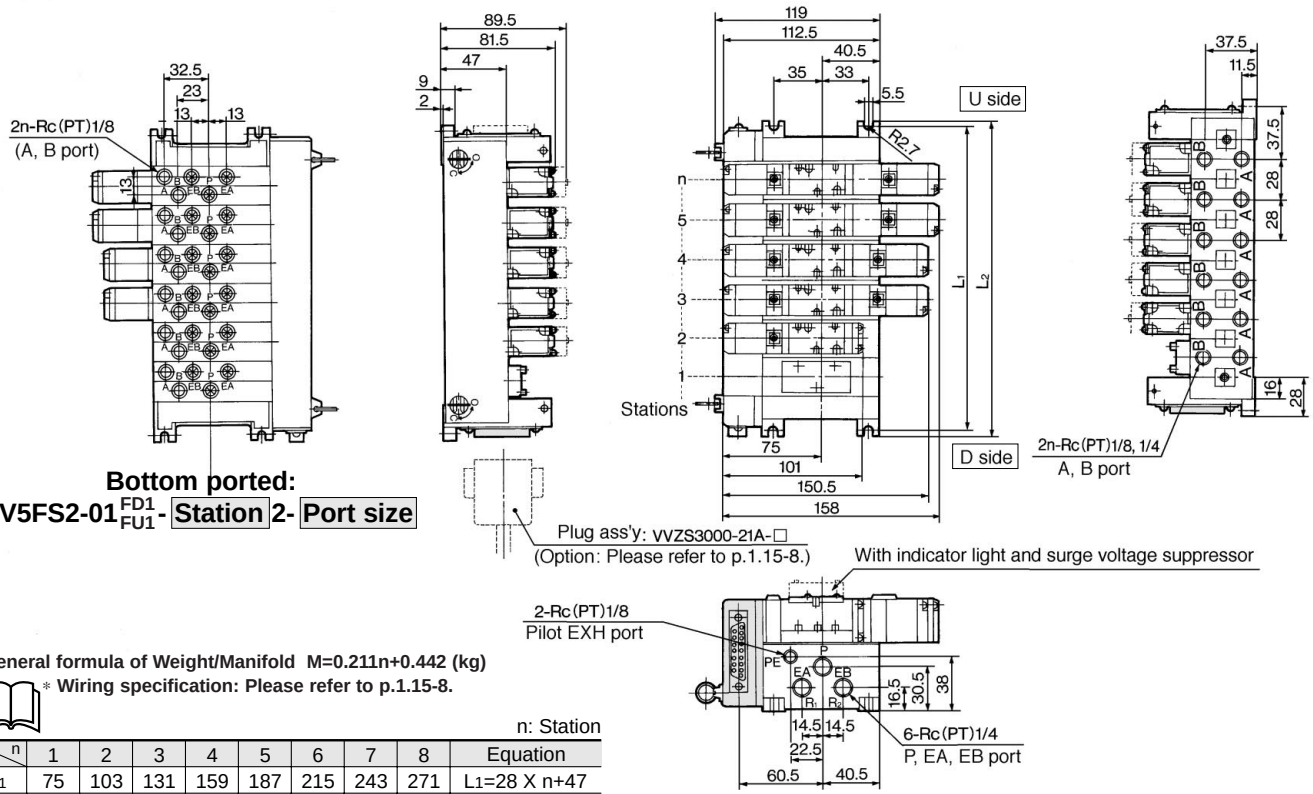


Bottom ported:
VV5FS2-01$^{CD1}_{CU1}$- Station 2- Port size

General formula of Weight/Manifold M=0.211n+0.442 (kg) n: Station

* **Wiring specification: Please refer to p1.15-8.**

Non plug-in with D-sub connector: VV5FS2-01FD1- Station 1- Port size , VV5FS2-01FU1- Station 1- Port size



Bottom ported:
VV5FS2-01$^{FD1}_{FU1}$- Station 2- Port size

General formula of Weight/Manifold M=0.211n+0.442 (kg)

* **Wiring specification: Please refer to p.1.15-8.**

n: Station

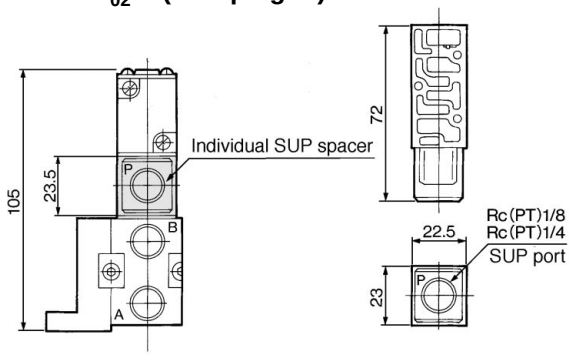
L \ n	1	2	3	4	5	6	7	8	Equation
L_1	75	103	131	159	187	215	243	271	L_1=28 X n+47
L_2	84	112	140	168	196	224	252	280	L_2=28 X n+56

CAD Plug-in ——— SV5FS22, #5 changed.

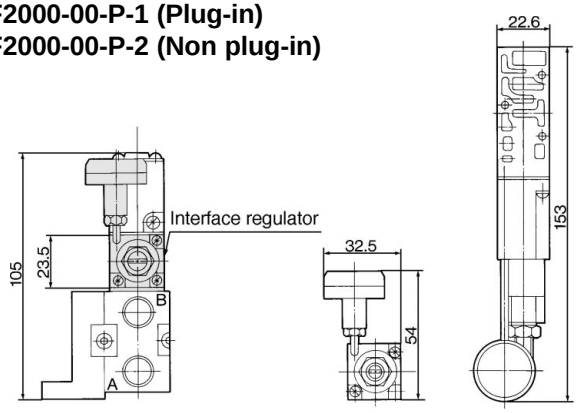
CAD

Manifold/Option Parts — Plug-in/Non Plug-in

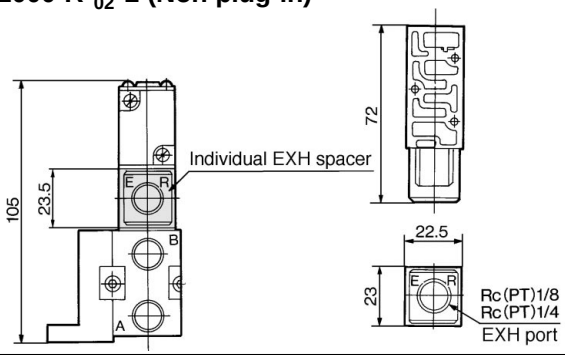
Individual SUP spacer:
VVFS2000-P-$^{01}_{02}$-1 (Plug-in)
VVFS2000-P-$^{01}_{02}$-2 (Non plug-in)



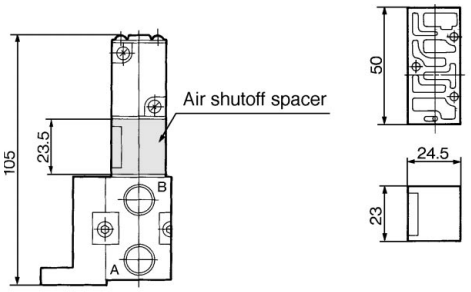
Interface regulator:
ARBF2000-00-P-1 (Plug-in)
ARBF2000-00-P-2 (Non plug-in)



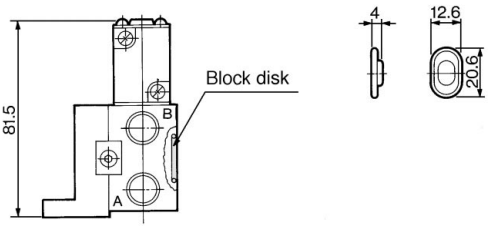
Individual EXH spacer:
VVFS2000-R-$^{01}_{02}$-1 (Plug-in)
VVFS2000-R-$^{01}_{02}$-2 (Non plug-in)



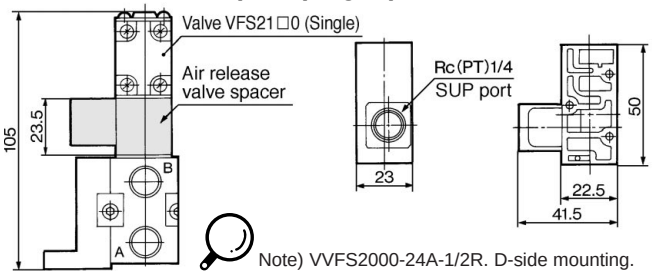
Air shutoff valve spacer:
VVFS2000-21A-1 (Plug-in)
VVFS2000-21A-2 (Non plug-in)



SUP/EXH block disk: AXT625-12A

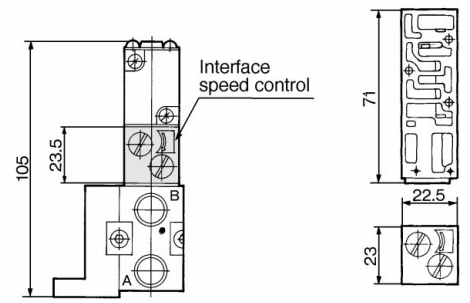


Air release valve spacer:
VVFS2000-24A-1$^{R}_{L}$ (Plug-in)
VVFS2000-24A-2$^{R}_{L}$ (Non plug-in)

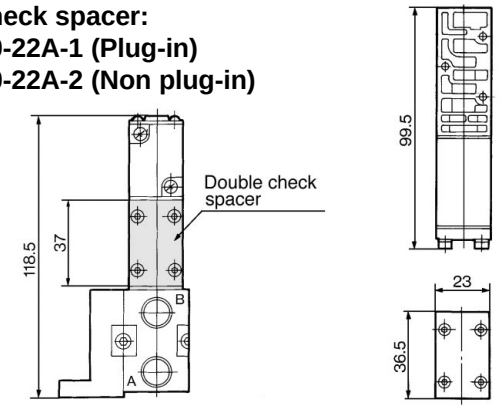


Note) VVFS2000-24A-1/2R. D-side mounting.

Interface speed control:
VVFS2000-20A-1 (Plug-in)
VVFS2000-20A-2 (Non plug-in)



Double check spacer:
VVFS2000-22A-1 (Plug-in)
VVFS2000-22A-2 (Non plug-in)



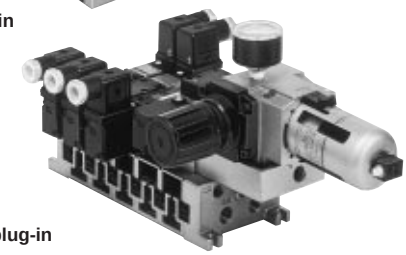
CAD

Individual SUP spacer ——— SV5FS22, #10, #001
Individual EXH spacer ——— SV5FS22, #10, #002
Interface speed control ——— SV5FS22, #10, #003
Interface regulator ——— SV5FS22, #10, #004
Air shutoff valve spacer ——— SV5FS22, #10, #005
Air release valve interface (Plug-in) ——— SV5FS22, #10, #006
Air release valve interface (Non plug-in) ——— SV5FS22, #10, #007
Double check spacer ——— SV5FS22, #10, #008

Manifold with Control Unit

- **Control units (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



Non plug-in

⚠ Precautions

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

Manifold specifications

Manifold style	Plug-in: VV5FS2-01□		Non plug-in: VV5FS2-10
Wiring	Insert plug with lead wire With terminal block With multi-connector With D-sub connector		Grommet Grommet terminal Conduit terminal DIN connector
Applicalbe valve	VFS2□00-□F		VFS2□10-□G, VFS2□10-□E VFS2□10-□T, VFS2□10-□D
Porting specifications	Common SUP, Common EXH		
	A, B port	Side: Rc(PT) 1/8, 1/4 Bottom: Rc(PT) 1/8 (Option)	
	P, EA, EB port	Side: Rc(PT) 1/4 Bottom: Rc(PT) 1/8 (Option)	
No. of stations	2 to 15*		

*With multi-connector, or D-sub connector: 8 stations max.

Control Unit/Specifications

Air filter (with auto drain/with manual drain)	
Filtration	5μm
Regulator	
Set Press (Secondary)	0.05 to 0.85MPa
Pressure switch (1)	
Set press. range: OFF	0.1 to 0.6MPa
Differential	0.08MPa or less
Contact	1a
Light	LED (Red)
Max. switch capacity	2V AC, 2W DC
Max. operating current	24V AC, DC. or less: 50mA 100V AC, DC: 20mA
Air release valve (Single only)	
Operating press. range	0.1 to 1.0MPa

Control unit/Options

Air release valve adaptor plate (2)	<Plug-in> VVFS2000-24A-1R (D side mounting) VVFS2000-24A-1L (U side mounting) <Non plug-in> VVFS2000-24A-2R (D side mounting) VVFS2000-24A-2L (U side mounting)	
Pressure switch (3)	IS1000P-2-1	
Blank plate	With control unit/Filter regulator	MP2-2
	Pressure switch	MP3-2
	Air release valve	AXT625-18A
Filter element	111511-5B	

Note 1) Voltage: 24V DC to 100V AC
Inner voltage drop: 4V
Note 2) Refer to manifold option parts on p.1.15-42.
Note 3) Non plug-in style cannot be mounted afterwards.

How to Order

Note) The manifold with plug-in attachment plug lead is applied to only individual style. Non plug-in has no junction cover.

VV5FS2 – 10 □ □ – 08 1 – 01 □ – AP □

Series VFS2000 Manifold

Base style/Wiring

01	Plug-in insert plug with lead wire
01T	Plug-in with terminal block
01C	Plug-in with multi-connector
01F	Plug-in with D-sub connector
10	Non plug-in

Connector mounting direction

Symbol	Connector mounting	Applicable base
—	None	01, 01T, 10
D	D side	01C, 01F
U	U side	

Junction cover

—	Individual style
1	Unit style

Individual: Base style 01, 01T
Unit: Base style 01T, 01C, 01F

Stations

02	2 stations
⋮	⋮
15*	15 stations

*Base style 01, 01T, 10: 2 to 15 stations
01C, 01F: 2 to 8 stations

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting (A, B)
1	Common	Common	Side
2*			Bottom
3*	Common	Individual	Side
4*			Bottom
5*	Individual	Common	Side
6*			Bottom
7*	Individual	Individual	Side
8*			Bottom

*Option
The individual specification of the P port in the composition symbol marks 3 to 8 or EA, EB ports should be taken as individual port using a block plate. Therefore, if an individual port is taken using a single SUP spacer of option or a single EXH spacer, the composition symbol mark is "1".

Thread

—	Rc (PT)
N*	NPT
T*	NPTF
F*	G (PF)

*Option

Port size

Symbol	P, EA, EB	A, B
01	Rc (PT) 1/4	Rc (PT) 1/8
02		Rc (PT) 1/4
M		Mix

Voltage of air release valve

—	None (F, G type only)
1	100V AC 50/60Hz
5	24V DC
9	Other

Control unit

Control equipment \ Symbol	—	A	AP	M	MP	F	G	C	E
Air filter with auto drain		●	●			●			
Air filter with manual drain				●	●		●		
Regulator		●	●	●	●	●	●		
Air release valve		●	●	●	●			●	●
Pressure switch			●		●				
Blank plate (Air release valve)						●	●		
Blank plate (Filter Regulator)								●	
Mounting manifold block		2 stations	2 stations	2 stations	2 stations	2 stations	2 stations	2 stations	1 station

Plase indicate manifold base mounting style, corresponding valve, and option parts.

≪Example≫

- Plug-in with terminal block

(Manifold base) **VV5FS2-01T1-091-02-MP** ····· 1
(2 position single) **VFS2100-5FZ** ····· 5
(2 position double) **VFS2200-5FZ** ····· 2
*2 stations are needed to mount control unit.

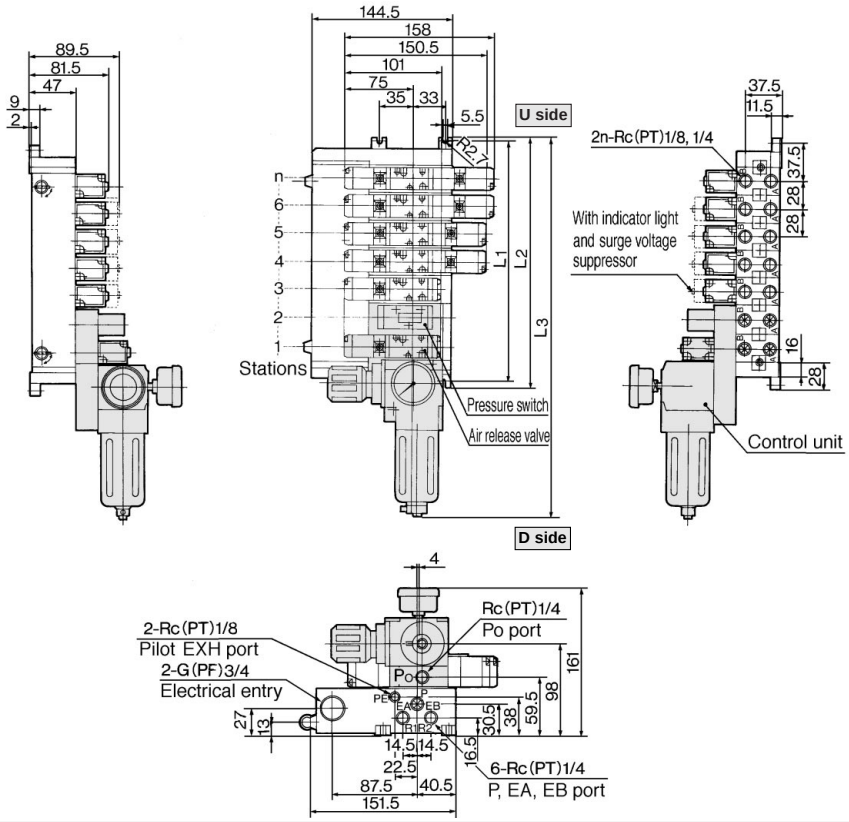
- Non plug-in

(Manifold base) **VV5FS2-10-071-01-M** ····· 1
(2 position single) **VFS2110-5D** ····· 5
*2 stations are needed to mount control unit.

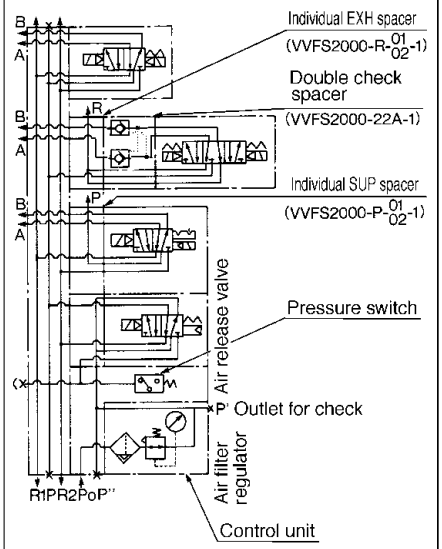
CAD

Manifold with Control Unit — Plug-in/Non Plug-in

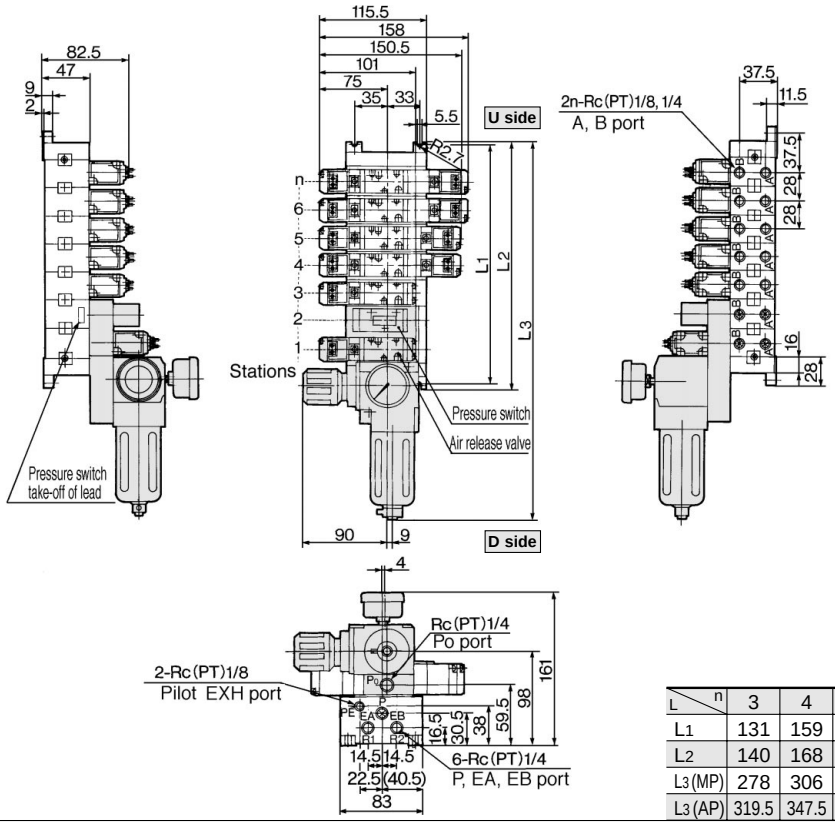
Plug-in: VV5FS2-01T- Station 1- Port size - Control unit



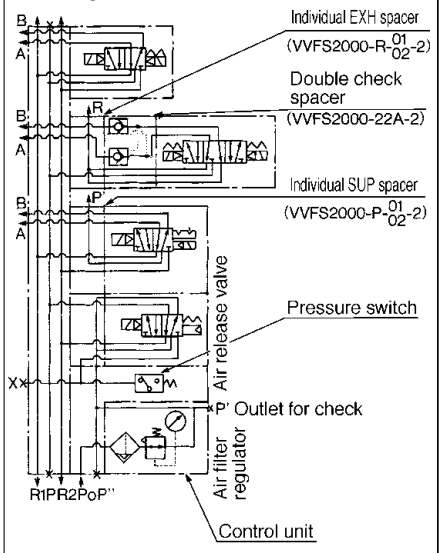
Example for manifold



Non Plug-in: VV5FS2-10- Station 1- Port size - Control unit



Example for manifold



n: Station

L \ n	3	4	5	6	7	8	9	10	Equation
L1	131	159	187	215	243	271	299	327	L1=28 X n+47
L2	140	168	196	224	252	280	308	336	L2=28 X n+56
L3(MP)	278	306	334	362	390	418	446	474	L3=28 X n+194
L3(AP)	319.5	347.5	375.5	403.5	431.5	459.5	487.5	515.5	L3=28 X n+235.5

CAD Manifold with control unit ———— SV5FS22, #7

Drip Proof Manifold (Equivalent to IP65)

Manifold Specifications

Model	VV5FS2-01WTB$^{U}_{D}$		VV5FS2-01W
Wiring	Common terminal box		Insert plug with lead wire
Applicable solenoid valve	VFS2□00-□F-X54		
Porting	Common SUP, Common EXH		
	A, B port	Side: Rc (PT)1/8, 1/4, Bottom: Rc (PT)1/8 (Option)	
	P, EA, EB port	Side: Rc (PT)1/4	
Stations	2 to 10		2 to 15

How to Order

Manifold

VV5FS2 − 01WTBU − 08 − 1 − 02

Plug-in drip proof manifold (Equivalent to IP65)

01WTBU	Common terminal box (U side mounting)
01WTBD	Common terminal box (D side mounting)
01W	Insert plug lead wire

Stations

02	2 stations
⋮	⋮
15	15 stations

Symbol

Symbol	Port specifications	Porting
	P, EA, EB	A, B
1	Common	Side
2*		Bottom

*Option

Connecting port size

Symbol	P, EA, EB	A, B
01	Rc (PT)1/4	Rc (PT)1/8
02		Rc (PT)1/4
M		Mix

*Bottom porting: Rc (PT)1/8 only

Valve

VFS2 − 1 − 00 − □ − 5 − F − □ − □ − X54

Configuration

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

Pilot

—	Internal pilot
R*	External pilot

*Option

Voltage

1	100V AC 50/60Hz
2	200V AC 50/60Hz
3*	110 to 120V AC 50/60Hz
4*	220V AC 50/60Hz
5	24V DC
6*	12V DC
7*	240V AC 50/60Hz
9*	Other

*Option

Optional

—	None
Z	With indicator light and surge voltage suppressor

Pilot valve manual override

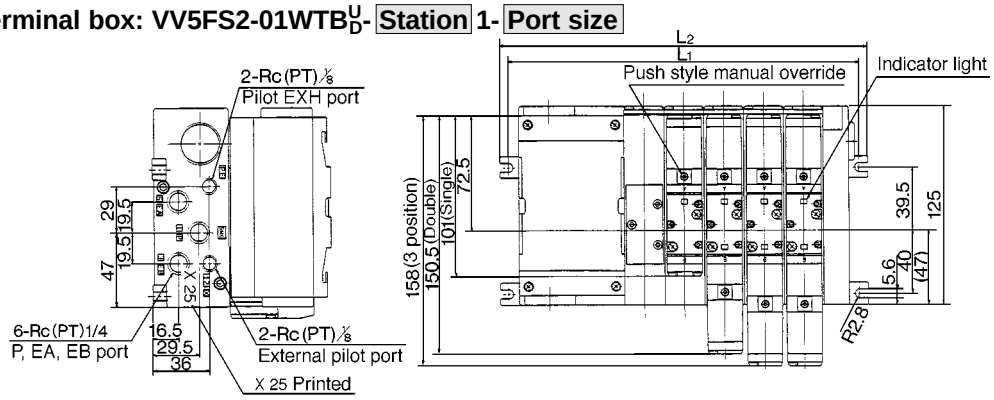
—	Non-locking push style (Flush)
A*	Non-locking push style (Extended)
B*	Locking style (Slotted)
C*	Locking style (Lever)

*Option

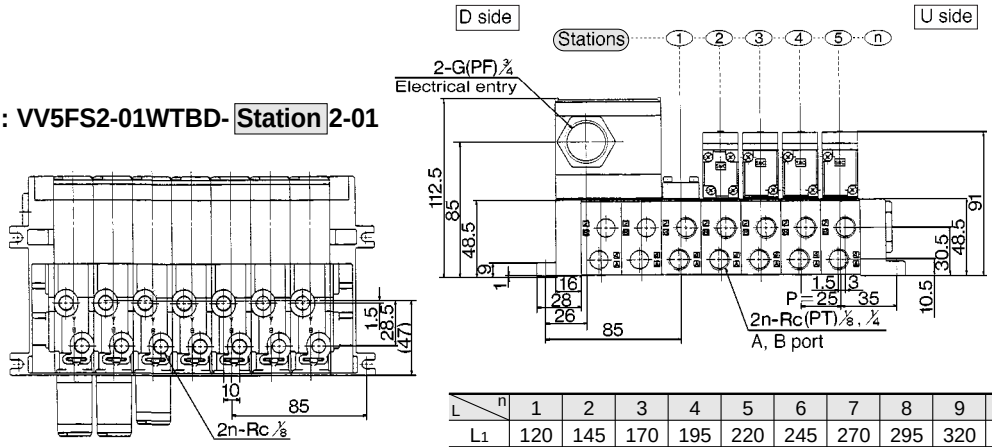
Drip proof

Drip Proof Manifold

With common terminal box: VV5FS2-01WTB$^{U}_{D}$- Station 1- Port size



Bottom ported: VV5FS2-01WTBD- Station 2-01

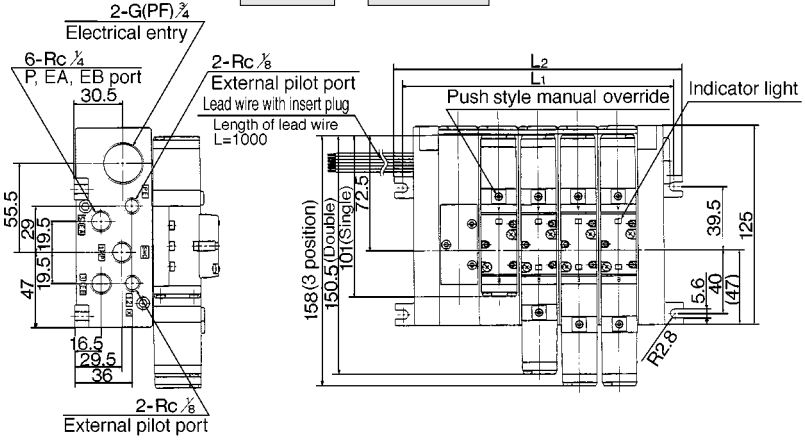


n: Station

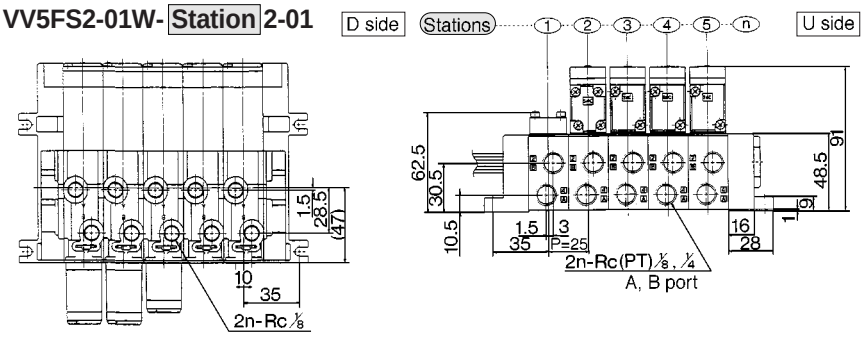
L \ n	1	2	3	4	5	6	7	8	9	10	Equation
L1	120	145	170	195	220	245	270	295	320	345	L1=25 X n+95
L2	131	156	181	206	231	256	281	306	331	356	L2=25 X n+106

*Terminal mounting stations are not included. Indicates Solenoid valve mounting stations.

With insert plug lead wire: VV5FS2-01W- Station 1- Port size



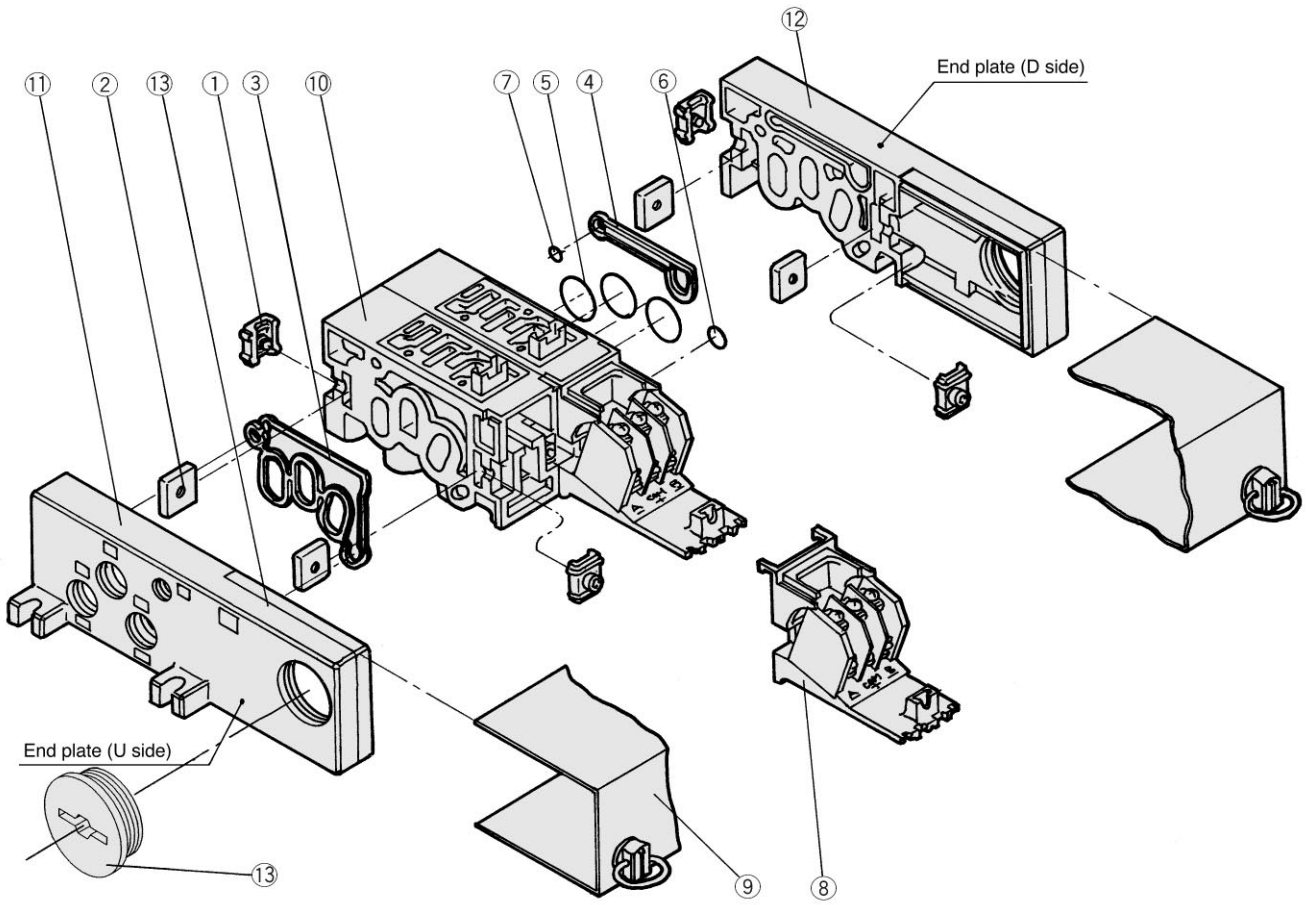
Bottom ported: VV5FS2-01W- Station 2-01



n: Station

L \ n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	Equation
L1	70	95	120	145	170	195	220	245	270	295	320	345	370	395	420	L1=25n+45
L2	81	106	131	156	181	206	231	256	281	306	331	356	381	406	431	L2=25n+56

Manifold Base Construction Plug-in/Non Plug-in



Replacement Parts

No.	Description	Material		Part No.
①	Metal joint A	Steel plate		AXT625-4-1
②	Metal joint 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	Resin	01	AXT625-6
	Adapter plate assembly	—	01T	AXT625-28-1A
			01T1	(Terminal section with adapter plate)
	Adapter plate	Resin	01C	AXT625-28-1
			01F	VVF2000-26-6
			01SU	AXT625-6

No.	Description	Material		Part No.
⑨	Junction cover assembly	—	01	AXT625-7A
			01T	AXT625-28-3A
			01T1	AXT625-28-7A-[stations]
			01C	
			01F	VVF2000-26-5A-[stations]
			01SU	AZ738-10A-[stations]
⑪	Rubber plug	NBR	01	AXT333-12
			01T 01SU	AXT625-22
	Plug	—	01W	EXP22S

- **For increasing the manifold bases, please order the manifold block assembly number of the principal part assembly ⑩ . For plug-in: The manifold base with terminal stand (integrated with a junction cover) is required with the ⑨ junction cover assembly.**

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

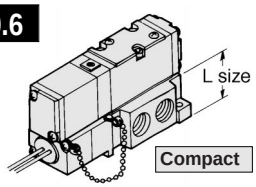
Replacement Parts sub assembly

No.	Description	Ass'y part No.	Components parts	Applicable manifold base
⑩	Manifold block assembly	AXT625-01A- 1 2 (1)	Manifold block ⑩, Metal joint ①, ②. O ring ⑤, ⑥, ⑦ Junction cover, Adapter plate, Pin housing, Guide, Insert plug lead wire	Plug-in Insert plug with lead wire
		AXT625-20A- 1 2 (1)	Manifold block ⑩, Metal joint ①, ②. O ring ⑤, ⑥, ⑦ Terminal ⑧. Junction cover ⑨, Adaptor plate, Pin housing, Guide	Plug-in with terminal block
		AXT625-10A- 1/2 (1)	Manifold block ⑪, Metal joint ①, ②, O ring ⑤, ⑥, ⑦	Non plug-in
⑪	End plate (U side) assembly	AXT625-2A	End plate (U) ⑪, Metal joint ①, ②, Gasket A ③, Guard ⑬	Plug-in Insert plug with lead wire
		AXT625-2A-20	End plate (U) ⑪, Metal joint ①, ②, Gasket A ③, Guard ⑬	Plug-in with terminal block
		AXT625-2A-10	End plate (U) ⑪, Metal joint ①, ②, Gasket A ③, Guard ⑬	Non plug-in
⑫	End plate (D side) assembly	AXT625-3A	End plate (U) ⑫, Metal joint ①, ②, Gasket B ④, Guard ⑬ Steel ball	Plug-in Insert plug with lead wire
		AXT625-3A-20	End plate (U) ⑫, Metal joint ①, ②, Gasket B ④, Guard ⑬ Steel ball	Plug-in with terminal block
		AXT625-3A-10	End plate (U) ⑫, Metal joint ①, ②, Gasket B ④, Guard ⑬ Steel ball	Non plug-in

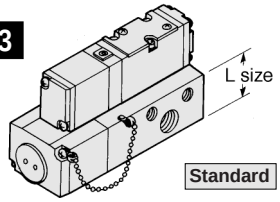
Note 1) A, B ports: 1/8, 1/4.

Light Compact Style Sub-plate/Cv: 0.6

Cv factor 0.6



Cv factor 0.83



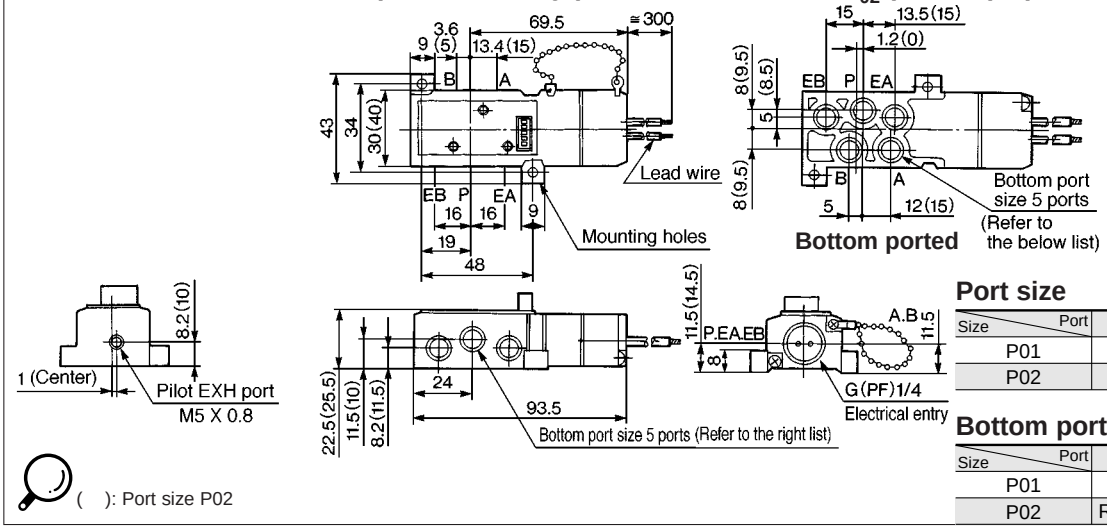
Sub-plate

Style	L (mm)	Weight (kg)	Cv factor Effective area (1)
Compact	25.5	0.13	10.8 (0.6)
Standard	31	0.2	15 (0.83)

Note 1) 2 position single. Rc(PT)1/4.

Sub-plate — Compact: Plug-in/Grommet (Insert plug with lead wire)

VFS2□00-□F-P01, P02 Sub-plate assembly part No.: VFS2000-CP-$^{01}_{02}$ (01: Rc (PT)1/8, 02: Rc (RT)1/4)



( ): Port size P02

Port size

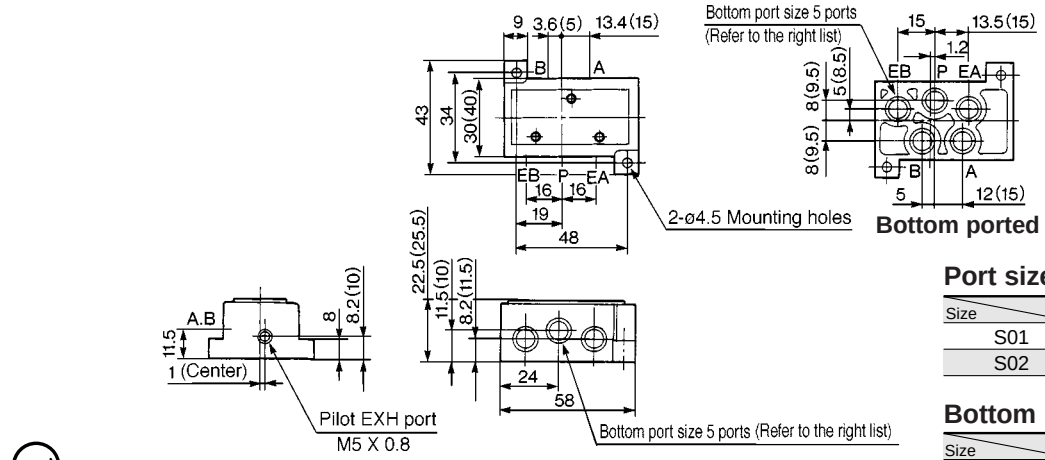
Size \ Port	P, A, B	EA, EB
P01	Rc (PT)1/8	Rc (PT)1/8
P02	Rc (PT)1/4	Rc (PT)1/8

Bottom ported size

Size \ Port	P, A, B	EA, EB
P01	Rc (PT)1/8	M5
P02	Rc (PT) 1/8, 1/4	Rc (PT)1/8

Sub-plate — Compact: Non Plug-in

VFS2□10-□□-S01, S02 Sub-plate assembly part No.: VFS2000-CS-$^{01}_{02}$ (01: Rc (PT)1/8, 02: Rc (PT)1/4)



( ): Port size S02

Port size

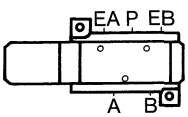
Size \ Port	P, A, B	EA, EB
S01	Rc (PT)1/8	Rc (PT)1/8
S02	Rc (PT)1/4	Rc (PT)1/8

Bottom ported size

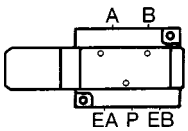
Size \ Port	P, A, B	EA, EB
S01	Rc (PT)1/8	M5
S02	Rc (PT)1/8, 1/4	Rc (PT)1/8

Precaution — Please pay attention to piping port location of sub-plate.

VFS2□□0-□□ $^{-P01, 02}_{-S01, 02}$: Compact



VFS2□□0-□□-$^{01}_{02}$: Standard



Wiring

Compact: Plug-in/Grommet
(Insert plug with lead wire)

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

Sol.	A side		B side	
Lead wire color	Red	Black	Brown	White

- No polarity.

HOW TO ORDER NVFS2000

NVFS 2 ○○ ○ — ○ F ○ ○ — ○ ○

POSITION
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 Perfect

BODY TYPE
0 .....Plug-In Type

PILOT OPERATOR
- .....Internal
R .....External (Special Order)

VOLTAGE
1 .....100VAC (Special Order)
2 .....200VAC (Special Order)
3 .....110VAC
4 .....220VAc
5 .....24VDC
6 .....12VDC
9 .....Others (Special Order)

ELECTRICAL ENTRY
F .....Through Base

OPTIONS
- .....None
Z .....With Indicator Light and Surge Voltage Suppressor

MANUAL OVERRIDE
- .....Non Locking Push Type (Flush)
*A ...Non Locking Push Type (Extended)
B .....Lock Type (Screw Type)
*C ...Lock Type (Lever)

Note) * Special Order

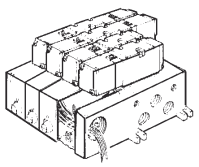
PORTING
- .....Side
*B ...Bottom
Note) *1/8 NPTF Only

PORT SIZE
- .....Without Subplate
01T ...1/8 NPTF
02T ...1/4 NPTF
* Bottom Ported
1/8 NPTF Only

HOW TO ORDER MANIFOLD

Plug in Type: Connector with Lead Wire (" wire harness")

●The insert plug is attached to the manifold block and is connected with valve side. Connect leads with corresponding power supply.



NVV5FS2-01-06 1-01T

Series NVFS2000 Manifold valve

Plug-in Type Connector with Lead wire
(AXT624-52A-D1-3)

Stations

02	2 stations
⋮	⋮
15	15 stations

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting Specifications (A,B)
1	Common	Common	Side Bottom
*2†	Mixed		

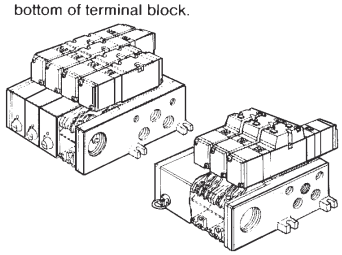
*Special Order
† Bottom porting specification with "-02T" is 1/8" P,A,B bottom and 1/4" A,B side.

Symbol	P, EA, EB	A, B
01T	¼NPTF	⅛NPTF
02T		¼NPTF

Unit type conduit cover: AXT625-28-3A
Unit type conduit retainer: AXT625-87

Plug-in Type: With Terminal Blocks

●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.



NVV5FS2 -01T 1-08 1-02T

Series NVFS2000 Manifold valve

Plug-in type With terminal block

Junction cover/ classification

–	Unit type individual station cover
1	One-pc. type cover

Note: Individual cover part no. above.

Stations

02	2 stations
⋮	⋮
15	15 stations

Port size

Symbol	P, EA, EB	A, B
01T	¼NPTF	⅛NPTF
02T		¼NPTF

Symbol

Symbol	Port specifications P	Port specifications EA, EB	Porting Specifications (A,B)
1	Common	Common	Side Bottom
*2†	Mixed		

*Special Order
† Bottom porting specification with "-02T" is 1/8" P,A,B bottom and 1/4" A,B side

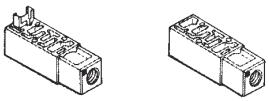
HOW TO ORDER MANIFOLD / OPTION PARTS ASSEMBLY

Manifold /Option Parts Ass'y

SUP Relocation spacer

An individual SUP spacer on manifold block can form individual P port for the valve.

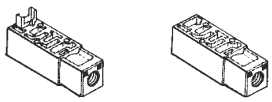
Body type		Plug-in type
Part No.	1/8NPTF	NVVFS2000-P-01T-1
	1/4NPTF	NVVFS2000-P-02T-1



EXH Relocation spacer

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

Body type		Plug-in type
Part No.	1/8NPTF	NVVFS2000-R-01T-1
	1/4NPTF	NVVFS2000-R-02T-1



SUP gallery block disc

When supplying manifold with more than one pressure, insert block disc in between stations subjected to different pressures.

Body type	Plug-in type	
Part No.	AXT625-12A	

EXH gallery block disc

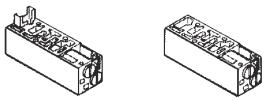
When valve exhaust affects the other stations on the circuit or when externally piloted, dual pressure valve is used on a standard manifold, insert EXH block disc(s) in between stations to isolate valve exhaust.

Body type	Plug-in type	
Part No.	AXT625-12A	

Interface speed control

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

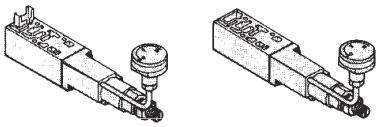
Body type	Plug-in type	
Part No.	NVVFS2000-20A-1	NVVFS2000-20A-2



Interface regulator

Spacer type regulator on manifold block controls supply pressure to the valve. With standard gauge.

Body type	Plug-in type
Pressure Regulation P	NARBF2000-00-P-1

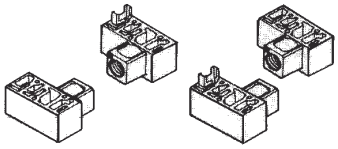


Air Shutoff valve spacer

The concurrent use of air shutoff valve spacer with NVFS21O0 controls supply of air pressure to the manifold (3-way dump valve). Specify location in **first (L)** or **last (R)** station of manifold.

Body type	Plug-in type
Part No.	NVVFS2000-24A-1 L/R

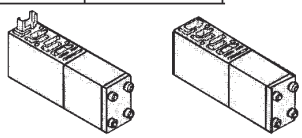
Note) L: U side mount R: D side mount



Double Check "Perfect" spacer

The concurrent use of perfect spacer with built-in double check valve can stop the cylinder at mid-position and hold for extended time without being affected by the air leakage across spool seals.

Body type	Plug-in type
Part No.	NVVFS2000-22A-1



Blank plate

When disassembling valve for maintenance purposes or when spare manifold stations are required, install Blank plate on the manifold block.

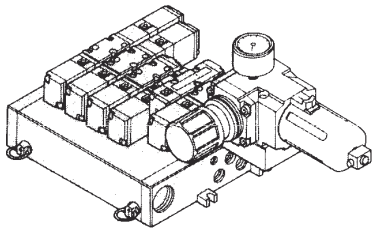
Body type	Plug-in type	
Part No.	VVFS2000-10A	

Manifold /Option

Control Unit

Plug-in type

- Filter/Regulator, Pressure switch, and Air shutoff valve all combine to form one unit.
- Piping work eliminated.



For more information,
Please refer to catalog N233