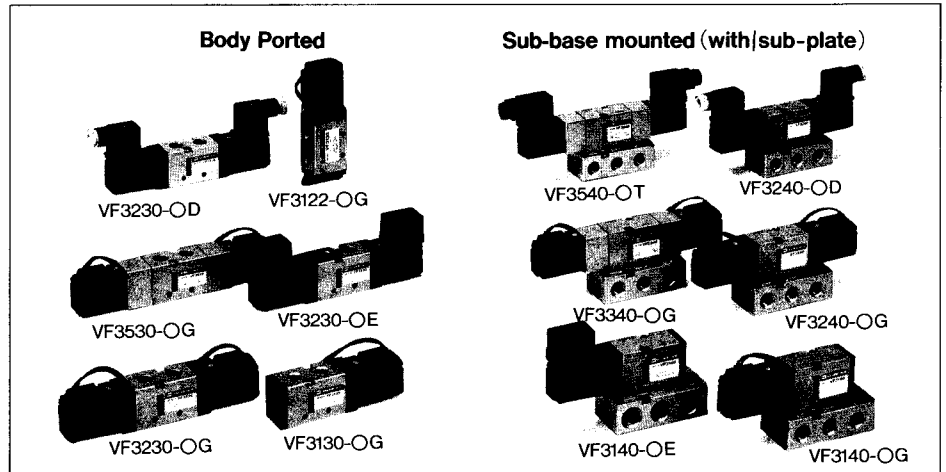
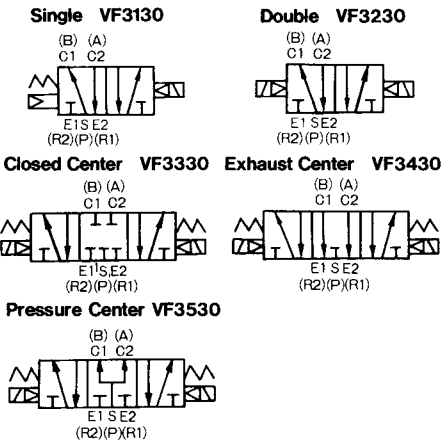


SMC 5 Port Pilot Type/Rubber Seal Series VF3000

- Compact size and light weight
— 26.4mm width
- Large flow capacity
— Cv1.0 (1/4)
- Low power consumption
— 1.8WDC

Symbol



Specifications

- Fluid — Air
- Operating pressure range 2 position single — 1.5~9kgf/cm²
2 position double — 1~9kgf/cm²
- Ambient and fluid temperature — Max. 50°C
- Response time 2 position single/double — 30ms or less (At 5kgf/cm²)
3 position — 50ms or less (At 5kgf/cm²)
- Max. operating cycle 2 position single/double — 5 C/S
3 position — 3cps
- Lubrication — Not required
- Manual override — Non-locking push type, Slotted locking type, Knob locking type
- Mounting position — Free
- Impact/Vibration resistance — 30G/5G (8.3~2000Hz)
- Enclosure — Dust proof
- Pilot exhaust — Individual exhaust, Common exhaust for main valve and pilot valve

Solenoid Specifications

- Electrical entry — Grommet, Grommet terminal, Conduit terminal, DIN connector
- Voltages AC — 100, 200, 12, 24, 48, 110, 220, 240V 50/60Hz
DC — 24, 6, 12, 48, 100, 110V
- Voltage allowance — -15~ +10% of rated voltage
- Insulation — Class B or equivalent
- Power consumption AC Inrush — 5.6VA (50Hz), 5.0VA (60Hz)
Holding — 3.4VA (50Hz), 2.3VA (60Hz)
DC — 1.8W/2W (With LED)
- Indicator light. Surge voltage suppressor circuit AC — ZNR (Varistor), Neon lamp (LED 100V or less)
DC — Diode, LED (Neon lamp 100V or more)

Accessories/Options

Description	Model	Application
Bracket	DXT031-40-3A	VF3122 type only
Silencer	AN110-01	1/8

Model

Piping	Type ⁽¹⁾	Position/Solenoid	Port size ⁽²⁾	Effective orifice (Cv factor) mm ²			Weight ⁽³⁾ (kgf)
				1/8	1/4	3/8	
Body ported (Possible to be mounted on 30 type manifold)	VF3130-●●-01-02	2/Single	1/8, 1/4	14.4 (0.8)	17.1 (0.95)	—	0.21
	VF3230-●●-01-02	2/Double		14.4 (0.8)	17.1 (0.95)	—	0.29
	VF3330-●●-01-02	3/Closed center		11.7 (0.65)	13.5 (0.75)	—	0.42
	VF3430-●●-01-02	3/Exhaust center		14.4 (0.8)	17.1 (0.95)	—	0.42
	VF3530-●●-01-02	3/Pressure center		14.4 (0.8) 9.9 (0.55) ⁽⁴⁾	16.2 (0.9) 10.8 (0.6) ⁽⁴⁾	—	0.42
Sub-base mounted (with/sub-plate)	VF3140-●●-02-03	2/Single	1/4, 3/8	—	16 (0.9)	18 (1.0)	0.37
	VF3240-●●-02-03	2/Double		—	16 (0.9)	18 (1.0)	0.45
	VF3340-●●-02-03	3/Closed center		—	12.5 (0.7)	14.5 (0.8)	0.58
	VF3440-●●-02-03	3/Exhaust center		—	16 (0.9)	18 (1.0)	0.58
	VF3540-●●-02-03	3/Pressure center		—	12.7 (0.7) 8.2 (0.45) ⁽⁴⁾	13.3 (0.75) 8.7 (0.45)	0.58

Note (1) If exhaust for main valve and pilot valve is common, model number will be VF3○23, VF3○33.

Mounting bracket is available only on VF3122 type.

(2) In case of body ported type, exhaust (EXH) port is only 1/8.

(3) Weight is for Grommet type.

(4) In center position the flow P→A.B is as shown.

Model For Manifold

Model*	Manifold			
	Type	Exhaust	CYL port	
VF3●30-●●-01-02	B mount	30	Common	Valve
VF3●40-●●		40	Common	Base
VF3●50-●●		50	Individual	Base
VF3●60-●●-01-02	S mount	60, 61	Common	Valve
VF3●70-●●-01-02		70, 71	Individual	Valve

* If exhaust for main valve and pilot valve is common, model number will be VF3○33, VF3○43, VF3○63.

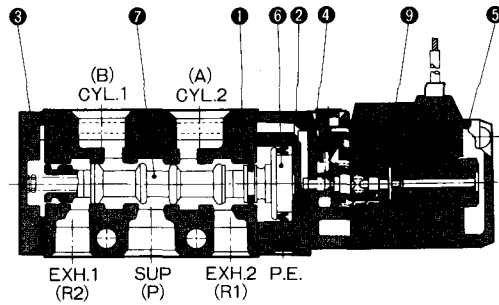
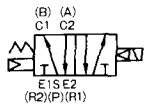
VF3○30 type valves can be mounted on manifold directly, but cannot be mounted on sub-plate for VF3○40 type.

Series VF3000

Construction/Parts List

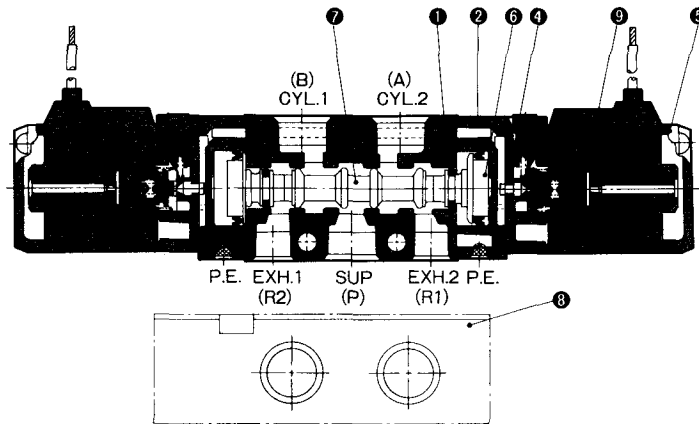
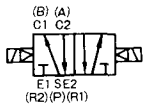
Single Solenoid

Symbol



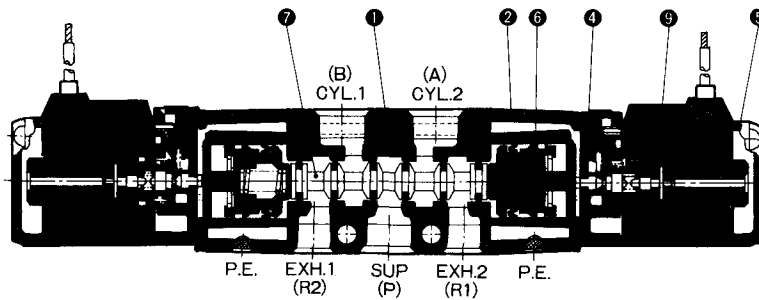
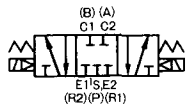
Double Solenoid

Symbol



3 Position Closed Center

Symbol



Main Parts

No.	Description	Material	Notes
①	Body	Aluminum die casting	Metallic paint
②	Adapter plate	Resin**	Black *
③	End cover	Aluminum die casting	Black
④	Pilot body	Polyacetal	
⑤	Pilot cover	Polyacetal	
⑥	Piston	Polyacetal*	
⑦	Spool	Aluminum·NBR	
⑧	Sub-plate	Aluminum die casting	Metallic

※3 position: Aluminum ※3 position: Aluminum die casting

*3 position: Metallic paint

Spare Parts

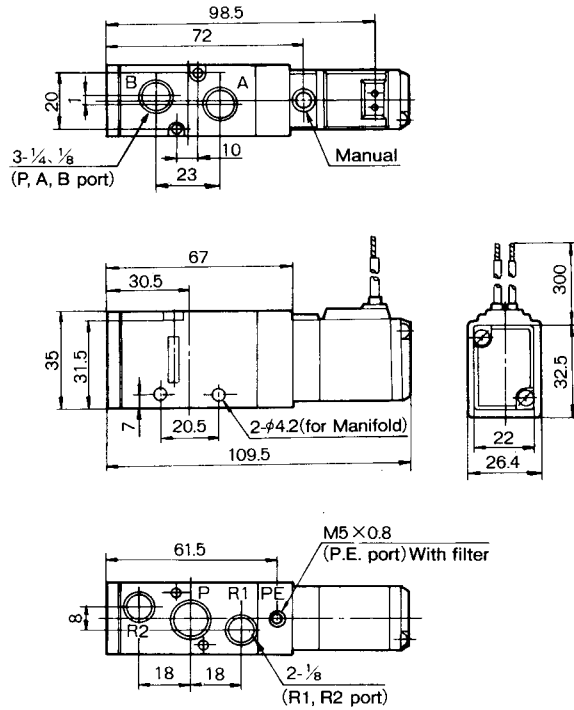
No.	Description	Material	Parts No.
⑨	Pilot valve assembly	—	SF4-〇〇〇-50*

※ Please refer to "How To Order Pilot Valve Assembly" on page 11

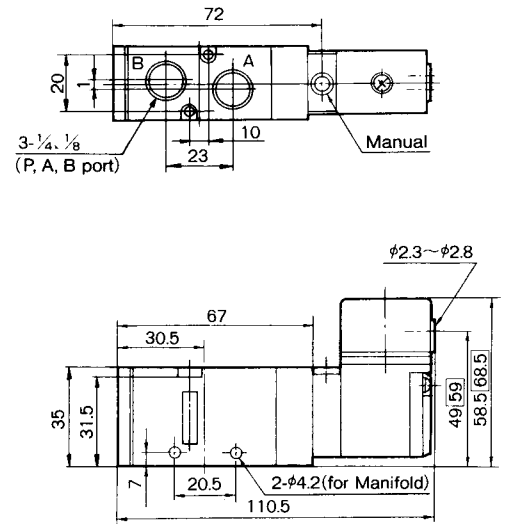
Series VF3000

Body Ported/Dimensions (mm) VF3130

Grommet/VF3130-OG

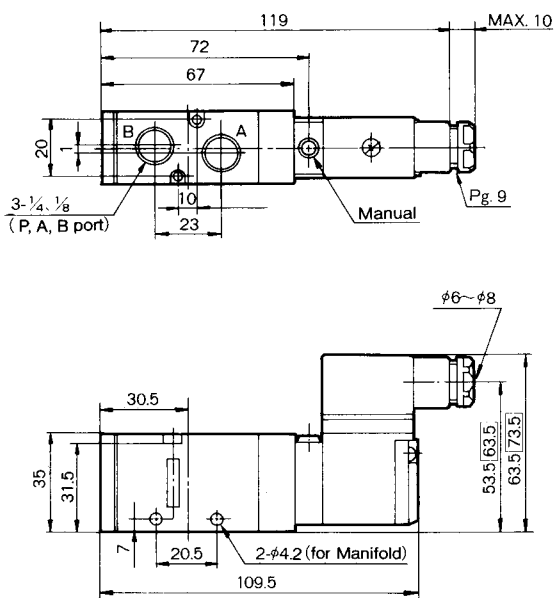


Grommet Terminal/VF3130-OE



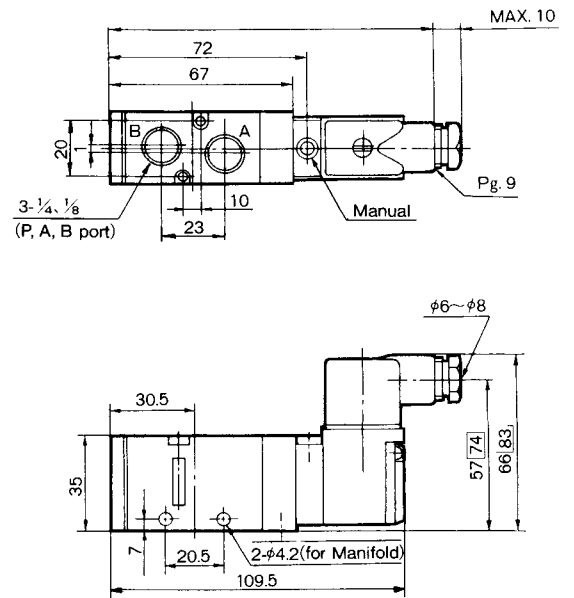
: with indicator light and surge voltage suppressor

Conduit Terminal/VF3130-OT



: with indicator light and surge voltage suppressor

DIN Connector/VF3130-OD



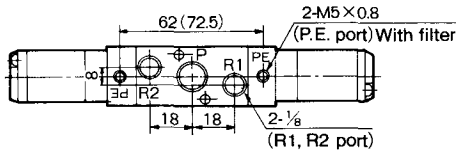
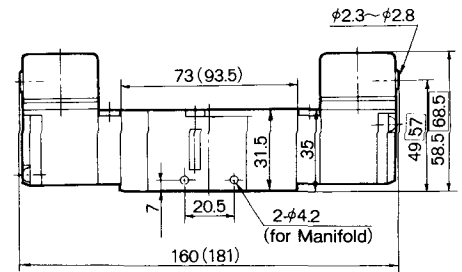
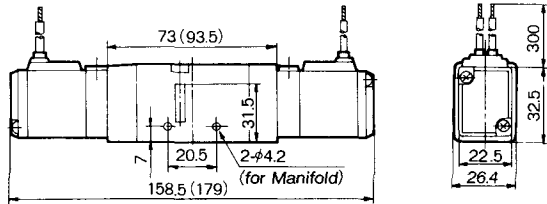
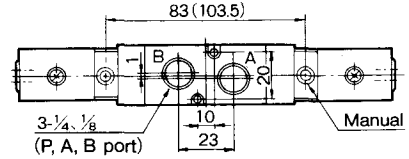
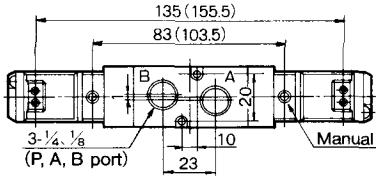
: with indicator light and surge voltage suppressor

Series VF3000

Body Ported/Dimensions (mm) VF3230, VF3330, VF3430, VF3530

Grommet/VF3230-○G, VF3330-○G, VF3430-○G, VF3530-○G

Grommet Terminal/VF3230-○E, VF3330-○E, VF3430-○E, VF3530-○E



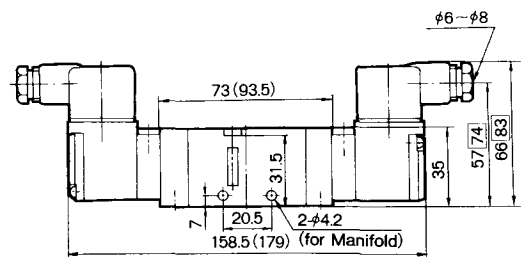
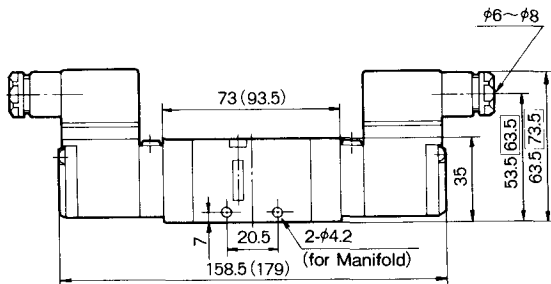
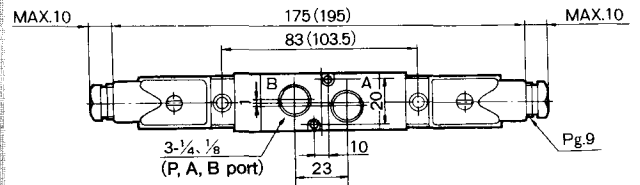
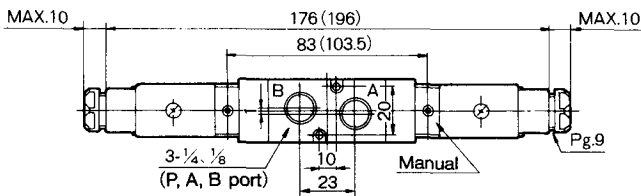
() : 3 position

□ : with indicator light and surge voltage suppressor

() : 3 position

Conduit Terminal/VF3230-○T, VF3330-○T, VF3430-○T, VF3530-○T

DIN Connector/VF3230-○D, VF3330-○D, VF3430-○D, VF3530-○D



() : 3 position

□ : with indicator light and surge voltage suppressor

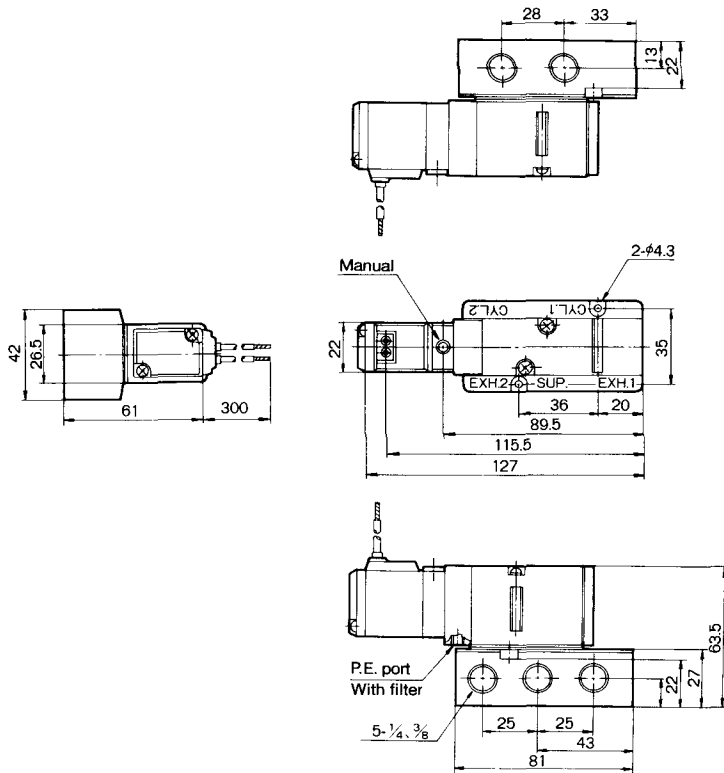
() : 3 position

□ : with indicator light and surge voltage suppressor

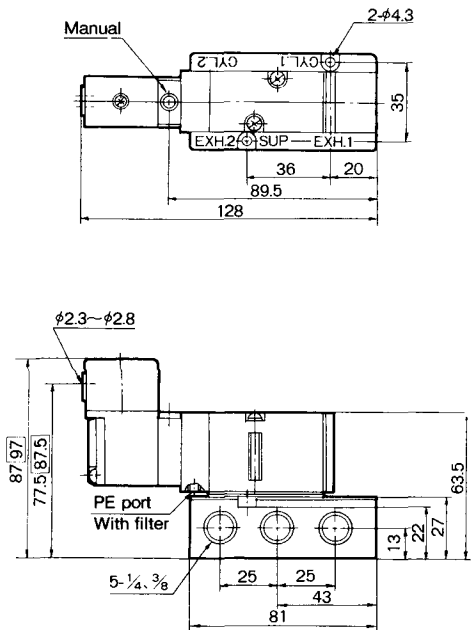
Series VF3000

Sub-Base Mounted/Dimensions (mm) VF3140

Grommet/VF3140-OG

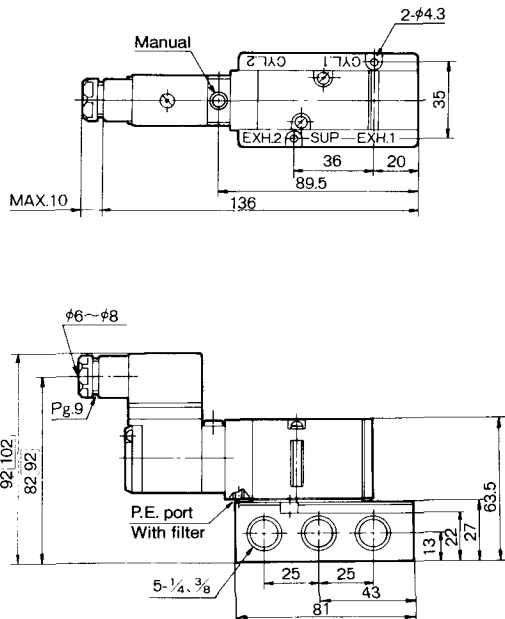


Grommet Terminal/VF3140-OE



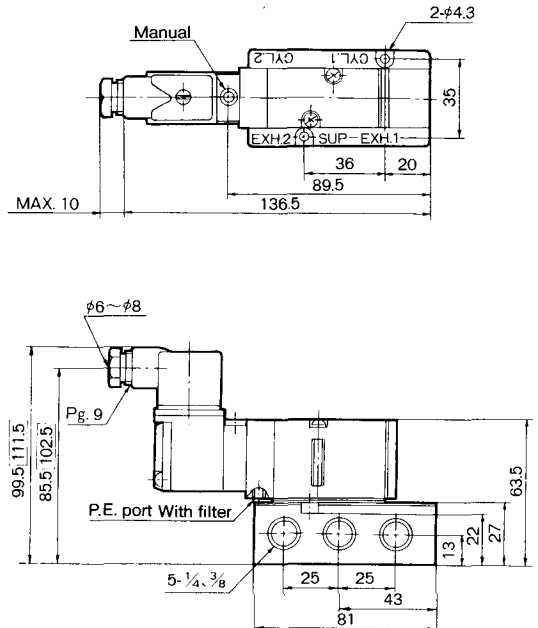
: with indicator light and surge voltage suppressor

Conduit Terminal/VF3140-OT



: with indicator light and surge voltage suppressor

DIN Connector/VF3140-OD



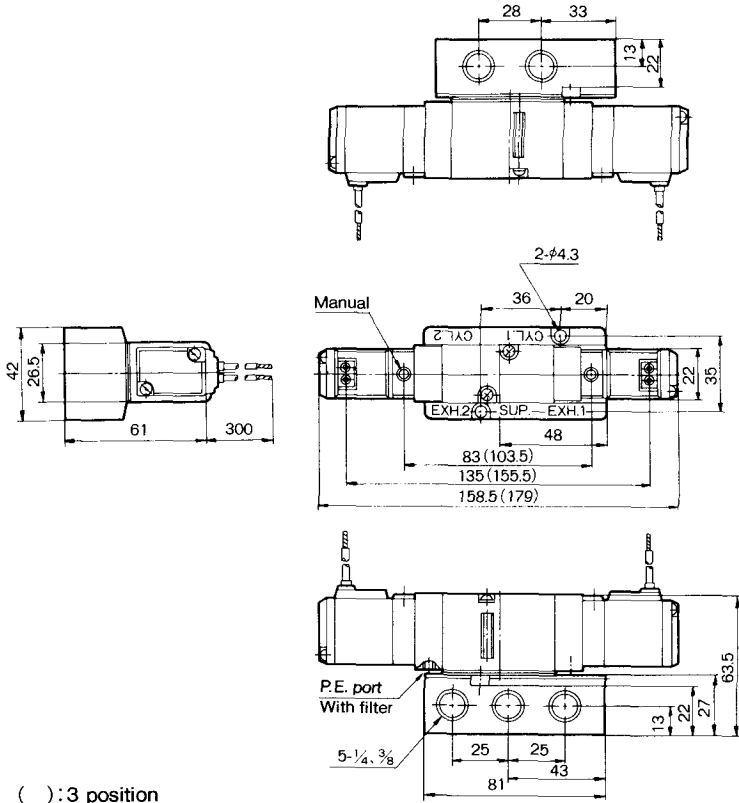
: with indicator light and surge voltage suppressor

Series VF3000

Sub-Base Mounted/Dimensions (mm) VF3240, VF3340, VF3440, VF3540

Grommet/VF3240-○G, VF3340-○G, VF3440-○G, VF3540-○G

Grommet Terminal/VF3240-○E, VF3340-○E, VF3440-○E, VF3540-○E

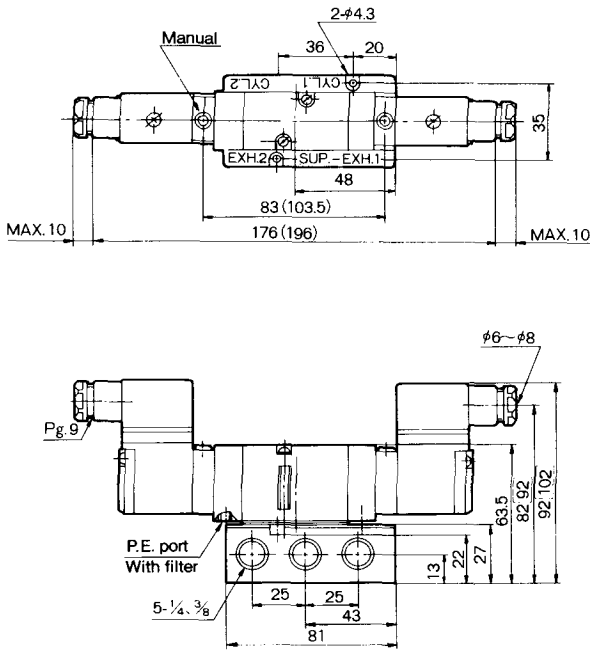


() : 3 position

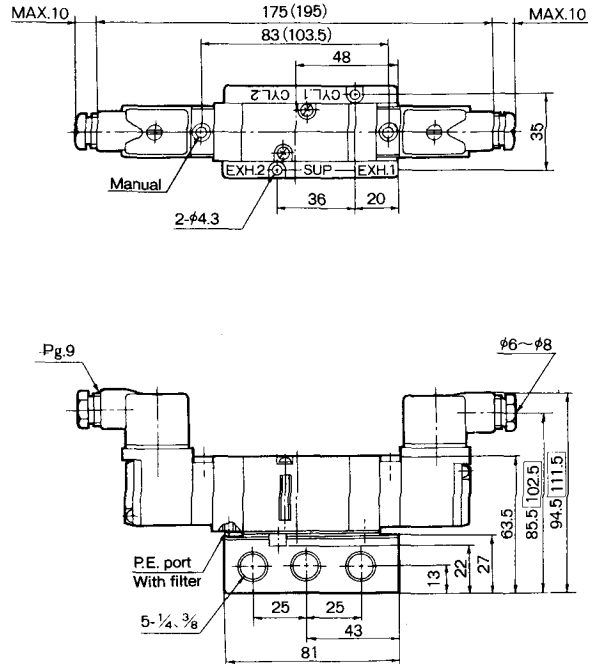
() : 3 position
 □ : with indicator light and surge voltage suppressor

Conduit Terminal/VF3240-○T, VF3340-○T, VF3440-○T, VF3540-○T

DIN Connector/VF3240-○, VF3340-○D, VF3440-○D, VF3540-○D



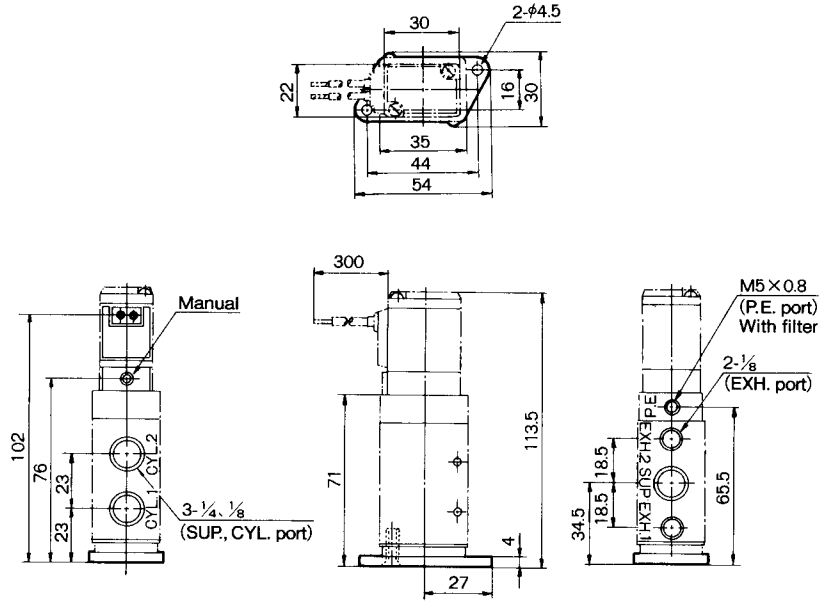
() : 3 position
 □ : with indicator light and surge voltage suppressor



() : 3 position
 □ : with indicator light and surge voltage suppressor

Bracket/Dimensions (mm)

(VF3122-OG-02-F)



Series VF3000

How To Order

E VF3 **1** **3** **0** **1** **G** **02**

Area code / Thread

Code	Applicable	Thread
Nil	Japan, Asia, Australia, UK	Rc (PT)
E	Europe	G (PF)

Option

F — With bracket
(VF3122 type only)

*Option has not been mounted.

Type of actuation

- 1 — 2 position/single solenoid
- 2 — 2 position/double solenoid
- 3 — 3 position, closed center/double solenoid
- 4 — 3 position, exhaust center/double solenoid
- 5 — 3 position, pressure center/double solenoid

Body type

- 2 — With bracket type
- 3 — For 30 type manifold, Body ported
- 4 — Sub-base mounted
(for 40 type manifold, with sub-plate type)
- 5 — For 50 type manifold
- 6 — For 60 and 61 type manifold
- 7 — For 70 and 71 type manifold

Body option

- 0 — Standard
- 2 — with screws for mounting bracket
- 3* — Common exhaust for main valve and pilot valve

*VF3033, 3043 and 3063 only

Voltage

- 1 — 100VAC %Hz
- 2 — 200VAC %Hz
- 3 — 110VAC %Hz
(common use with 115VAC %Hz)
- 4 — 220VAC %Hz
- 5 — 24VDC
- 6 — 12VDC
- 7 — 240VAC %Hz
- 9 — Others

Port size (SUP., CYL.)

- 01 — $\frac{1}{8}$
 - 02 — $\frac{1}{4}$
 - 03 — $\frac{3}{8}$ (with sub-plate type only)
- * $\frac{1}{8}$ port size not available on with sub-plate type.

Manual override

- Nil — Non-locking push type
- B — Slotted locking type
- C — Knob locking type

Electrical entry / Indicator light and surge voltage suppressor

G	Grommet (Lead wire length 300mm)
GS	Grommet (Lead wire length 300mm) With surge voltage suppressor
H	Grommet (Lead wire length 600mm)
HS	Grommet (Lead wire length 600mm) With surge voltage suppressor
E	Grommet terminal
EZ	Grommet terminal With indicator light and surge voltage suppressor
T	Conduit terminal
TZ	Conduit terminal With indicator light and surge voltage suppressor
D	DIN connector
DZ	DIN connector With indicator light and surge voltage suppressor
DO	DIN connector (Without connector)
DOZ	DIN connector (Without connector) With indicator light and surge voltage suppressor

How To Order Pilot Valve Assembly

SF4-**1** **EZ**

Voltage

- 1 — 100VAC %Hz
- 2 — 200VAC %Hz
- 3 — 110VAC %Hz
(common use with 115VAC %Hz)
- 4 — 220VAC %Hz
- 5 — 24VDC
- 6 — 12VDC
- 7 — 240VAC %Hz
- 9 — Others

Manual override

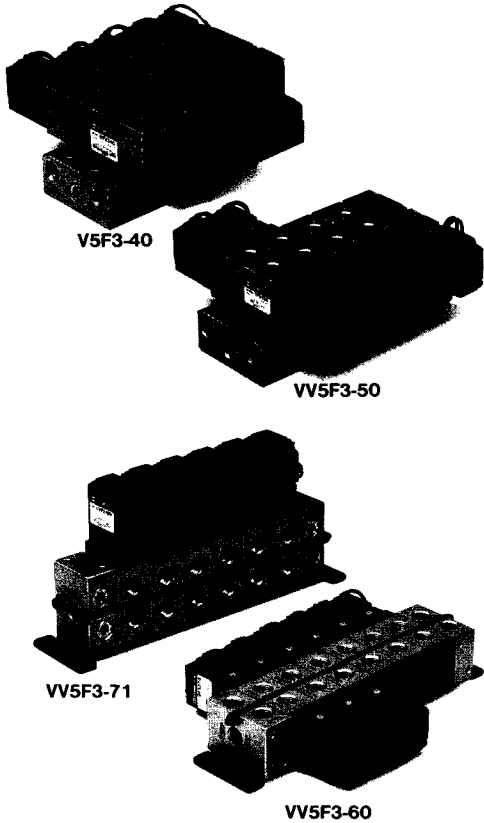
Nil — Non-locking push type

Electrical entry / Indicator light and surge voltage suppressor

G	Grommet (Lead wire length 300mm)
GS	Grommet (Lead wire length 300mm) With surge voltage suppressor
H	Grommet (Lead wire length 600mm)
HS	Grommet (Lead wire length 600mm) With surge voltage suppressor
E	Grommet terminal
EZ	Grommet terminal With indicator light and surge voltage suppressor
T	Conduit terminal
TZ	Conduit terminal With indicator light and surge voltage suppressor
D	DIN connector
DZ	DIN connector With indicator light and surge voltage suppressor
DO	DIN connector (Without connector)
DOZ	DIN connector (Without connector) With indicator light and surge voltage suppressor

Series VF3000 Manifold

Manifold



Manifold Specifications

Manifold type	B mount (Single Base Type)		S mount	
	Exhaust	Common	Individual	Common
Maximum stations	20 stations*		10 stations*	

*|If there are more than 8 stations for B mount and more than 4 stations for S mount, supply from both sides of supply (SUP.) Port and exhaust from both sides of exhaust (EXH.) Port.

Manifold type	Model	Exhaust*	Piping/Port location			Port size			Applicable valve
			SUP.	EXH.	CYL.	SUP.	EXH.	CYL.	
B mount	VV5F3-30	Common	Side/ Base	Side/ Base	Top/ Valve	1/4	1/4	1/8 1/4	VF3030 VF3033
	VV5F3-40	Common	Side/ Base	Side/ Base	Bottom/ Base	1/4	1/4	1/4	VF3040 VF3043
	VV5F3-50	Individual	Side/ Base	Top/ Valve	Bottom/ Base	1/4	1/4	1/4	VF3050
S mount	VV5F3-60	Common	Side/ Sideplate	Top/ Sideplate	Top/ Valve	1/4	1/4	1/8 1/4	VF3060 VF3063
	VV5F3-61	Common	Side/ Sideplate	Bottom/ Sideplate	Side/ Valve	1/4	1/4	1/8 1/4	VF3160 VF3163 (only single solenoid)
	VV5F3-70	Individual	Side/ Sideplate	Side/ Valve	Top/ Valve	1/4	1/4	1/8 1/4	VF3070
	VV5F3-71	Individual	Side/ Sideplate	Side/ Valve	Side/ Valve	1/4	1/4	1/8 1/4	VF3170 (only single solenoid)

*Supply type is all common.

Accessories

Description	Model No.	Applicable manifold
Spacer for individual exhaust*	DXT155-17-1A	VV5F3-30, 40
Blanking plate	DXT031-38-1A	VV5F3-30, 40, 50

*Spacer is used when it is necessary to exhaust from certain valves individually which are mounted on 20, 21 type manifolds.

How To Order Manifold Base

E VV5F3-40-05 2-02

Area code/Thread

Code	Applicable	Thread
Nil	Japan, Asia Australia, UK	Rc (PT)
E	Europe	G (PF)

Series VF3000 manifold

Manifold specifications

Code	Port location for CYL. port	Port size for EXH.	Applicable valve
30	Valve	1/4	VF3030 VF3033
40	Base	1/4	VF3040 VF3043
50	Base	1/4	VF3050
60	Valve	1/4	VF3060 VF3063
61	Valve	1/4	VF3160 VF3163
70	Valve	1/4	VF3070
71	Valve	1/4	VF3170

• CYL port for sub-plate (only 40, 50)

Component symbol

Code	Passage		Piping	Applicable manifold type
	SUP.	EXH.	CYL.	
1	Common	Common	Top (Side)	30, 60, 61
2	Common	Common	Bottom	40
3	Common	Individual	Top (Side)	70, 71
4	Common	Individual	Bottom	50

Stations*

02 — 2 stations
 :
 :
 20 — 20 stations
 *60, 61, 70, 71 type — Max. 10 stations.

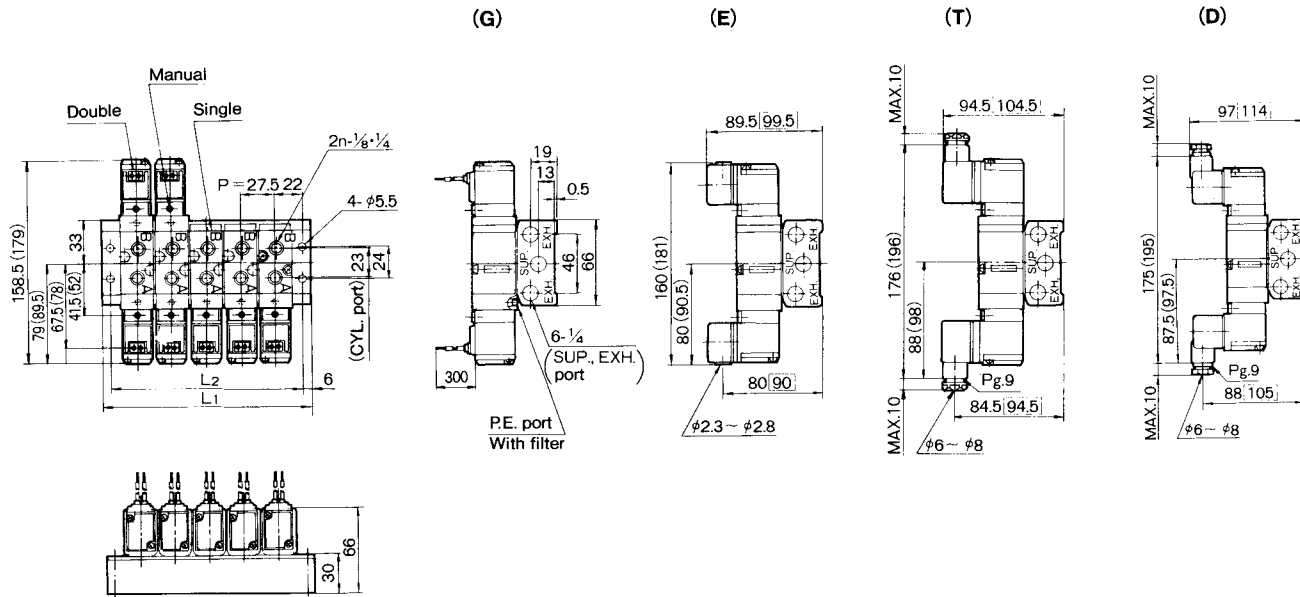
Note: Please order the appropriate valves and or blanking plate ass'y with manifold base.

(Example) 1pc VV5F3-40-05-02
 2pcs VF3140-1G
 2pcs VF3240-1G
 1pc DXT031-38-1A
 (Blanking plate ass'y)

Series VF3000 Manifold

B Mount Type/Dimensions(mm) VV5F3-30, VV5F3-40

Common Exhaust/VV5F3-30-001



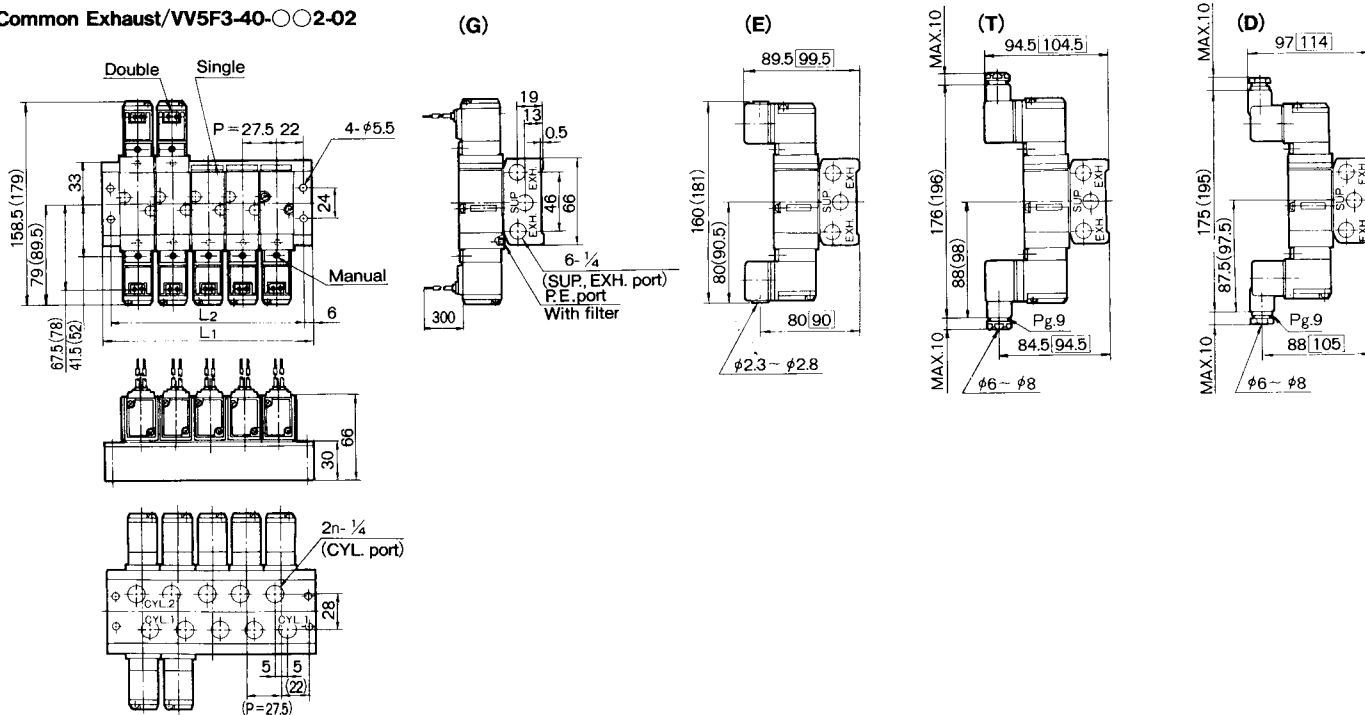
() : 3 position

□ : with indicator light and surge voltage suppressor

L: Dimensions (mm) n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	83.5	111	138.5	166	193.5	221	248.5	276	303.5	331	358.5	386	413.5	441	468.5	496	523.5	551	578.5
L ₂	71.5	99	126.5	154	181.5	209	236.5	264	291.5	319	346.5	374	401.5	429	456.5	484	511.5	539	566.5

Common Exhaust/VV5F3-40-002-02



() : 3 position

□ : with indicator light and surge voltage suppressor

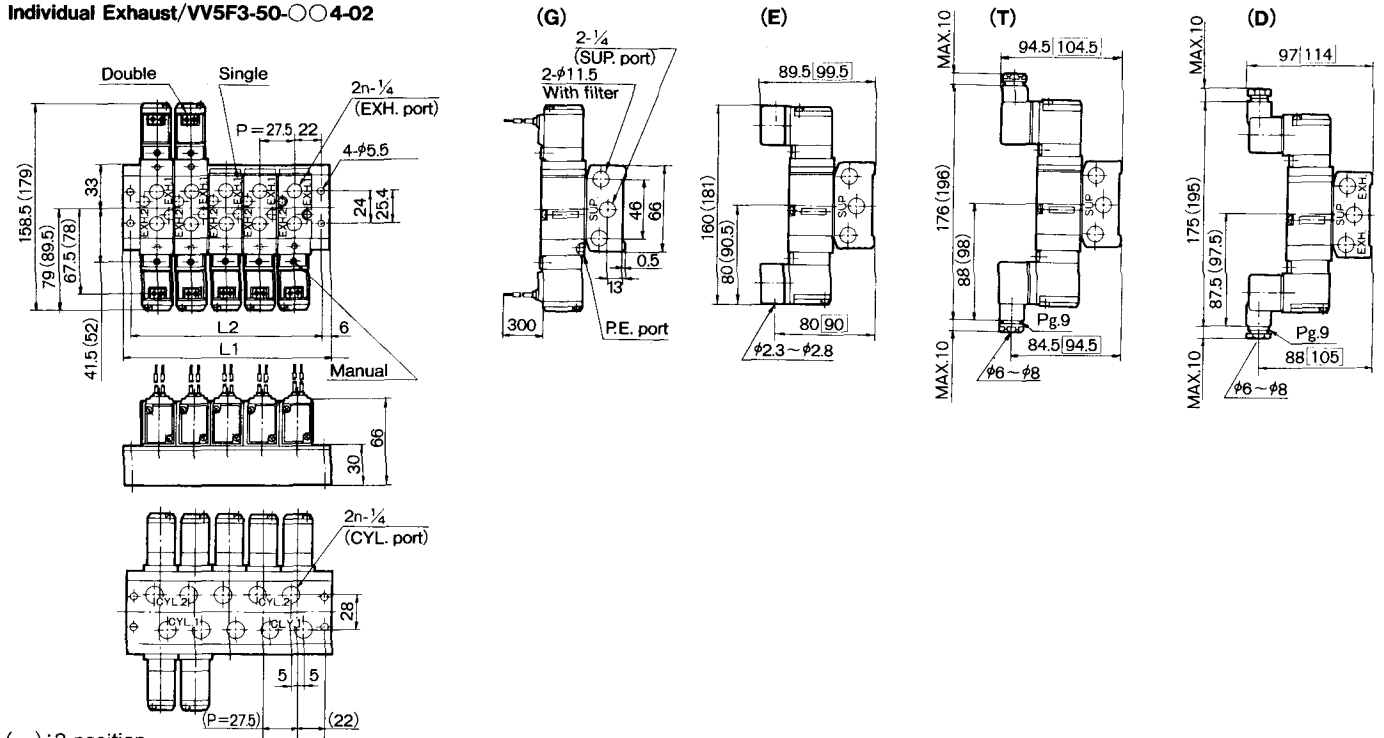
L: Dimensions (mm) n: Stations

L \ n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁	83.5	111	138.5	166	193.5	221	248.5	276	303.5	331	358.5	386	413.5	441	468.5	496	523.5	551	578.5
L ₂	71.5	99	126.5	154	181.5	209	236.5	264	291.5	319	346.5	374	401.5	429	456.5	484	511.5	539	566.5

Series VF3000 Manifold

B Mount Type/Dimensions(mm) VV5F3-50

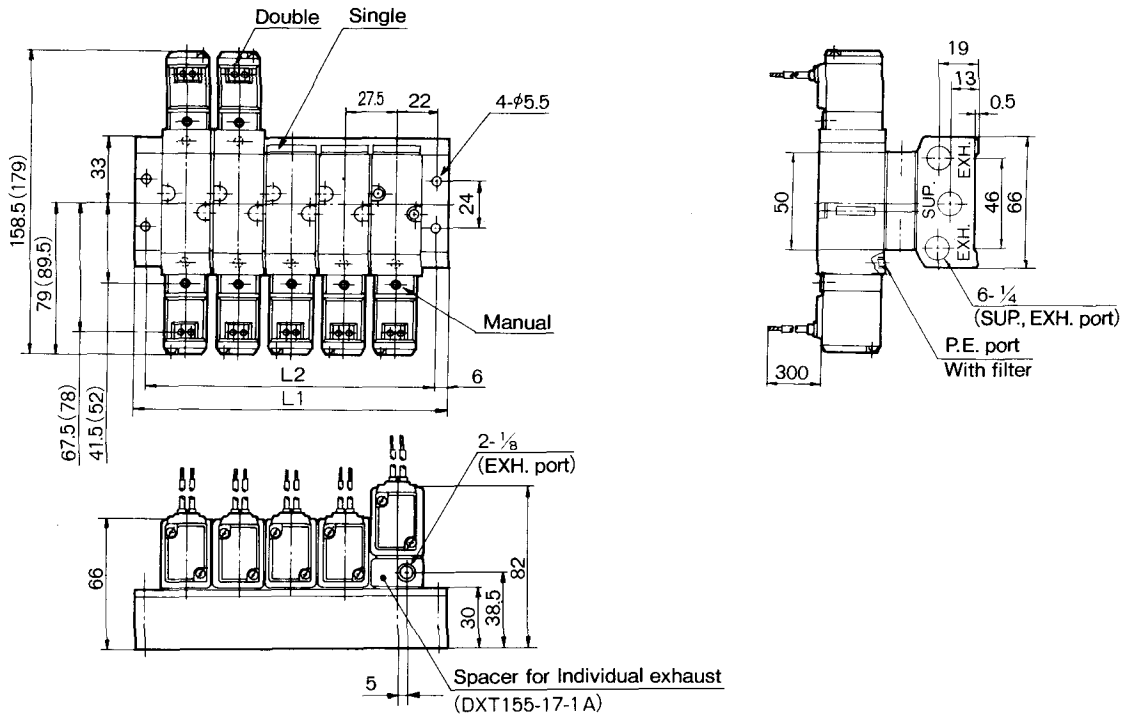
Individual Exhaust/VV5F3-50-○●4-02



() : 3 position
 □ : with indicator light and surge voltage suppressor

		L: Dimensions (mm) n: Stations																		
L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
L ₁		83.5	111	138.5	166	193.5	221	248.5	276	303.5	331	358.5	386	413.5	441	468.5	496	523.5	551	578.5
L ₂		71.5	99	126.5	154	181.5	209	236.5	264	291.5	319	346.5	374	401.5	429	456.5	484	511.5	539	566.5

Spacer For Individual Exhaust/Applicable Model: VV5F3-30, VV5F3-40



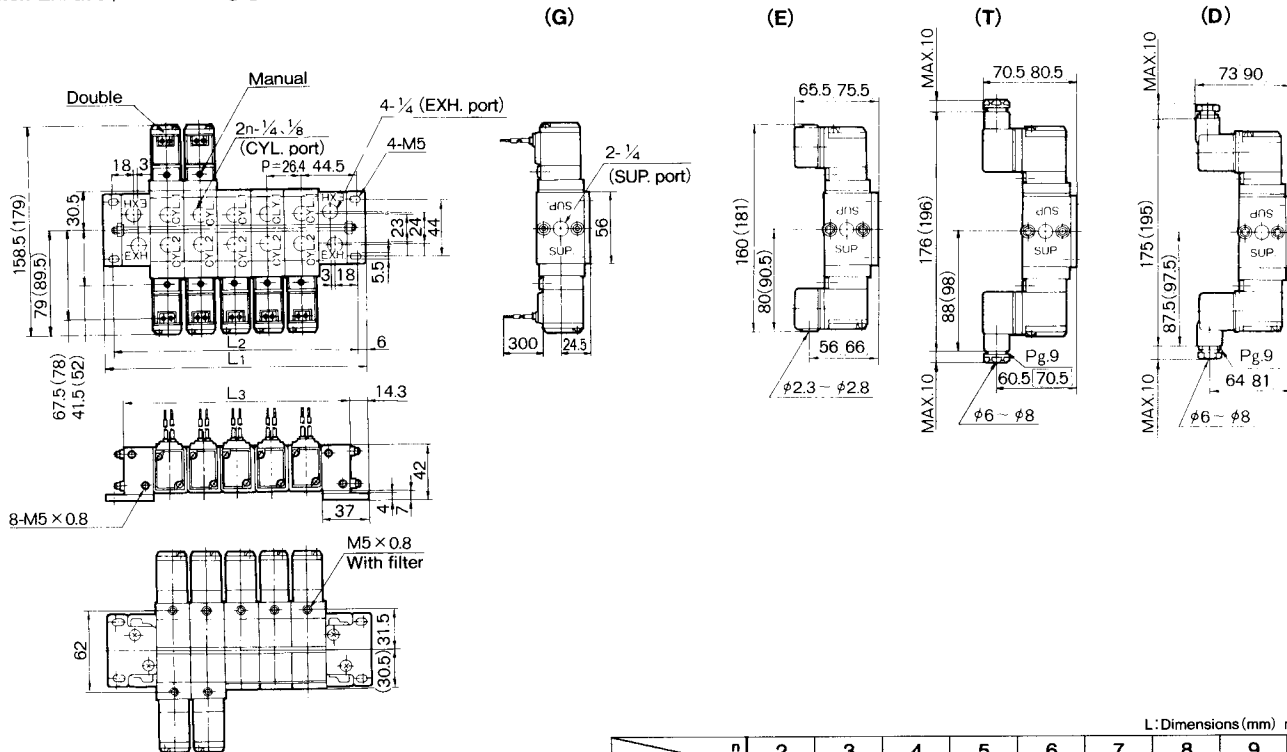
() : 3 position

		L: Dimensions (mm) n: Stations														
L	n	2	3	4	5	6	7	8	9	10	11	12	13	14	15	
L ₁		163	196	229	262	295	328	361	394	427	460	493	526	559	592	
L ₂		128	161	194	227	260	293	326	359	392	425	458	491	524	557	

VF3000 Series Manifold

S Mount Type/Dimensions(mm) VV5F3-60, VV5F3-61

Common Exhaust/VV5F3-60-○○1



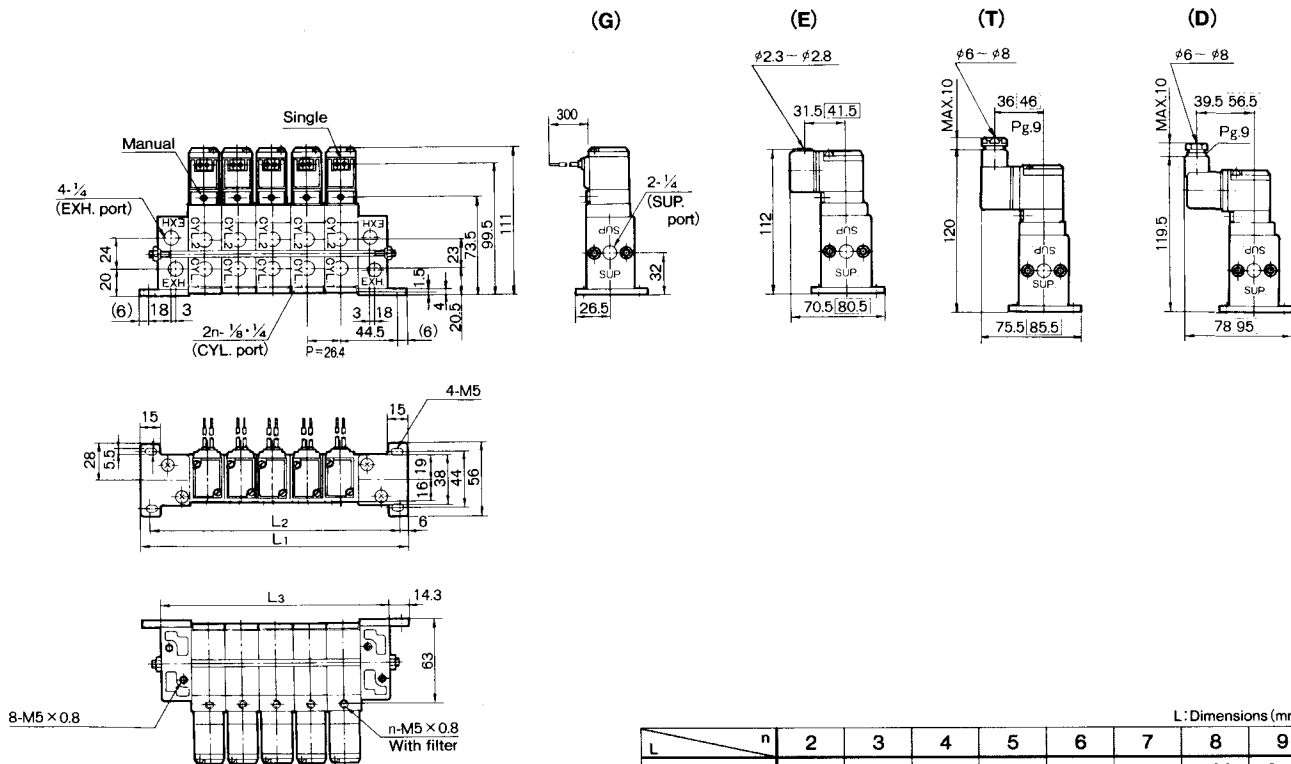
() : 3 position

□ : with indicator light and surge voltage suppressor

L: Dimensions (mm) n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L ₁	127.5	154	180	206.5	233	259.5	286	312	338.5
L ₂	115.5	142	168	194.5	221	247.5	274	300	326.5
L ₃	99	125	151.5	178	204.5	231	257	283.5	310

Common Exhaust/VV5F3-61-○○1



() : 3 position

□ : with indicator light and surge voltage suppressor

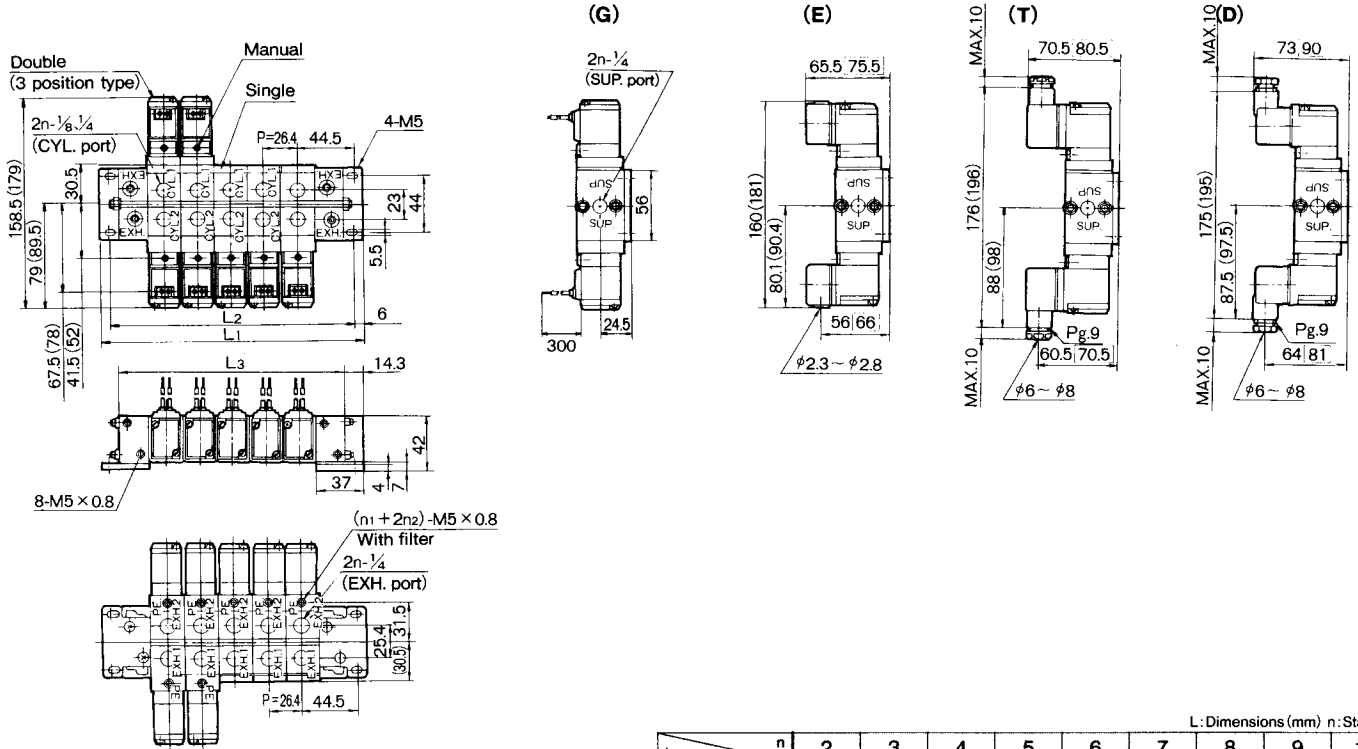
L: Dimensions (mm) n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L ₁	127.5	154	180	206.5	233	259.5	286	312	338.5
L ₂	115.5	142	168	194.5	221	247.5	274	300	326.5
L ₃	99	125	151.5	178	204.5	231	257	283.5	310

Series VF3000 Manifold

S Mount Type/Dimensions (mm) VV5F3-70, VV5F3-71

Individual Exhaust/VV5F3-70-○○3

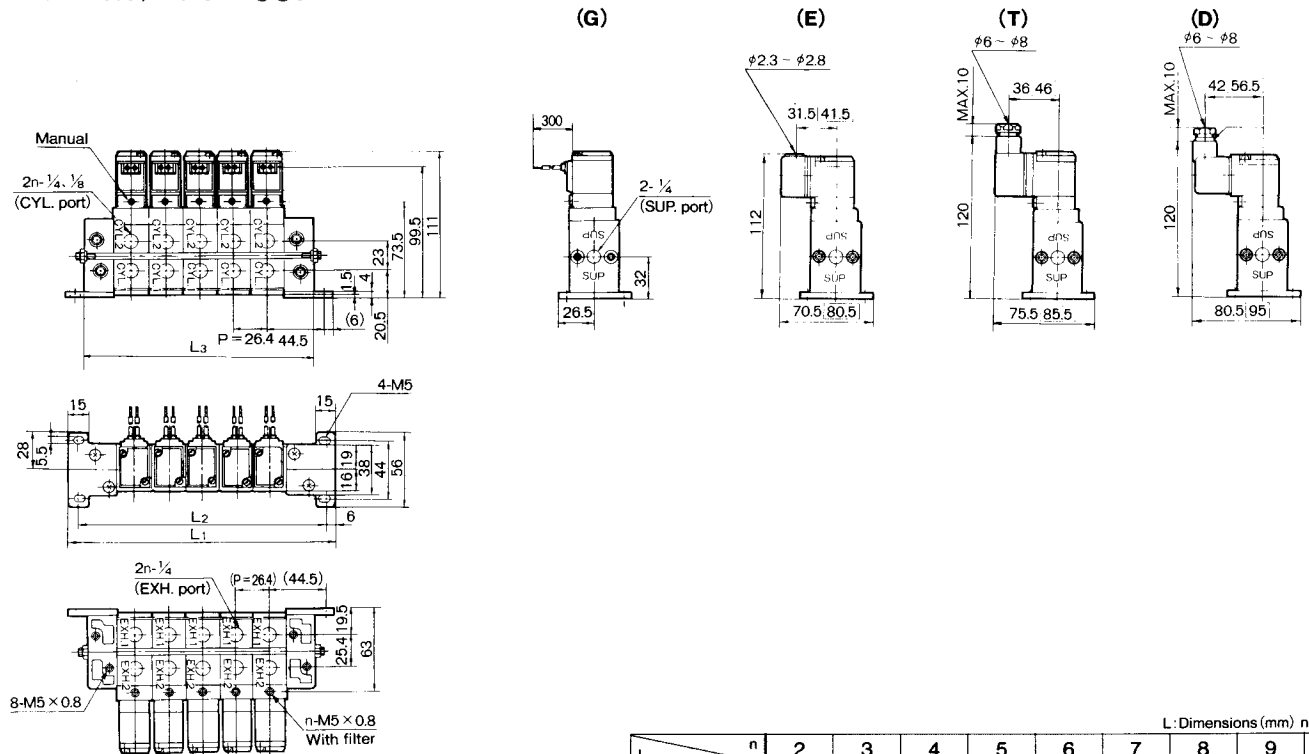


L: Dimensions (mm) n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L ₁	127.5	154	180	206.5	233	259.5	286	312	338.5
L ₂	115.5	142	168	194.5	221	247.5	274	300	326.5
L ₃	99	125	151.5	178	204.5	231	257	283.5	310

() : 3 position
 □ : with indicator light and surge voltage suppressor

Individual Exhaust/VV5F3-71-○○3



L: Dimensions (mm) n: Stations

L \ n	2	3	4	5	6	7	8	9	10
L ₁	127.5	154	180	206.5	233	259.5	286	312	338.5
L ₂	115.5	142	168	194.5	221	247.5	274	300	326.5
L ₃	99	125	151.5	178	204.5	231	257	283.5	310

() : 3 position
 □ : with indicator light and surge voltage suppressor