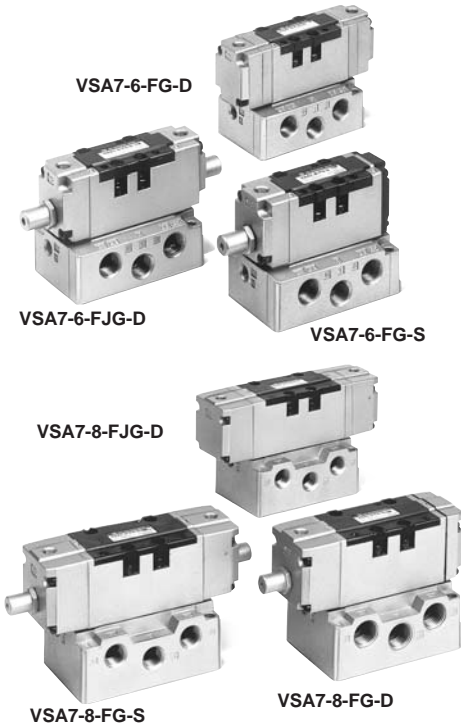


Air Operated/SIZE ① ②

Series VSA7-6/VSA7-8



	Single (FG-S)	Double (FG-D)	Reverse pressure* (YZ-S)
2 position			
3 position			

* Option

Specifications

Fluid	Air/Inert gas	
Max. operating pressure	1.0MPa	
Min. operating pressure ⁽³⁾	YZ-S, FG-S ⁽¹⁾	0.1MPa
	Others	0MPa
Proof pressure	1.5MPa	
Ambient and fluid temperature	-10 to -60°C ⁽²⁾	
Lubrication	Not required.	
Shock/Vibration resistance ⁽⁴⁾	150/50m/s ²	
Enclosure	Dust proof	
Manual override	Non-locking push style (Option)	
Pilot air pressure ⁽³⁾	0.1 to 1.0 to 10.2 MPa	



Note 1) Min. operating pressure should be equivalent to or lower than pilot supply pressure.

Note 2) Use dry air at the low temperatures.

Note 3) Use controlled clean air.

Note 4) Shock resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle directions of the main valve and armature, for both energized and de-energized states. (Value in the initial stage.)

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000 Hz. Test was performed at both energized and de-energized states to the axis and right angle directions of the main valve and armature. (Value in the initial stage.)

Model

Size ①	No. of positions	Model	Effective area (mm ²)(Nl/min)	Size ②	No. of positions	Model	Effective area (mm ²)(Nl/min)
2 (Single)	VSA7-6-FG-S	27 (1472.25)	2 (Single)	VSA7-8-FG-S	58(3140.80)		
2 (Double)	VSA7-6-FG-D	27 (1472.25)	2 (Double)	VSA7-8-FG-D	58(3140.80)		
3 (Closed)	VSA7-6-FHG-D	25.5 (1374.10)	3 (Closed)	VSA7-8-FHG-D	58(3140.80)		
3 (Exhaust)	VSA7-6-FJG-D	27 (1472.25)	3 (Exhaust)	VSA7-8-FJG-D	58(3140.80)		
3 (Pilot check)	VSA7-6-FPG-D	20 (1079.65)	3 (Pilot check)	VSA7-8-FPG-D	40(2159.30)		
3 (Pressure)	VSA7-6-FIG-D	25.5 (1374.10)	3 (Pressure)	VSA7-8-FIG-D	58(3140.80)		
2 (Reverse pressure)	VSA7-6-YZ-S	27 (1472.25)	2 (Reverse pressure)	VSA7-8-YZ-S	58(3140.80)		

How to Order

Ordering source area code

Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

Body size

6	SIZE①
8	SIZE②

Passage symbol

FG		FJG	
YZ		FPG	
FHG		FIG	

Pilot port position

S	Single
D	Double

Pilot port position

1	Pilot cover, PA/PB port
2	Sub-plate, 14X/12Y port (PE port)

Thread

-	Rc (PT)
F	G (PF)
N	NPT
T	NPTF

Port size

Symbol	Size①:Series VSA 7-6	Size②:Series VSA 7-8
A02	Side piping 1/4"	—
A03	Side piping 3/8"	Side piping 3/8"
A04	—	Side piping 1/2"
B02	Bottom piping 1/4"	—
B03	Bottom piping 3/8"	Bottom piping 3/8"
B04	—	Bottom piping 1/2"

* R port: 3/8"

Option (Manual override)

—	Without manual override
M	With manual override

SV

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VQC

SQ

VQ

VQ4

VQ5

VQZ

VQD

VFS

VS

VS7

VQ7

VSA7-6/VSA7-8

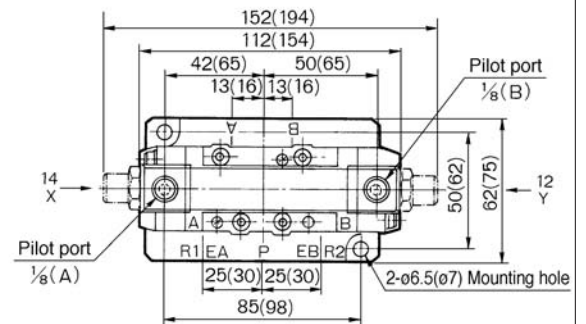
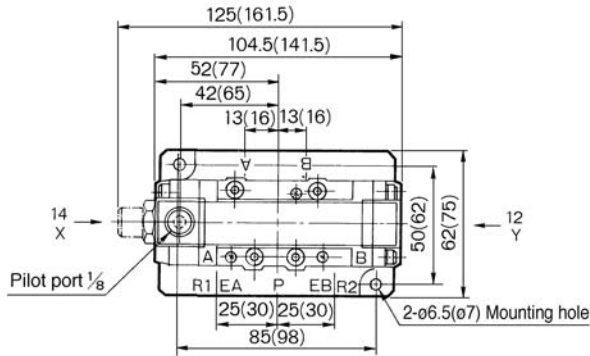
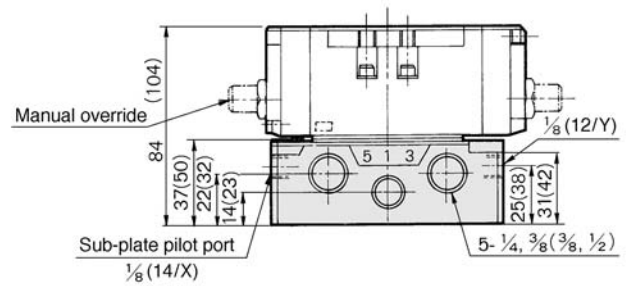
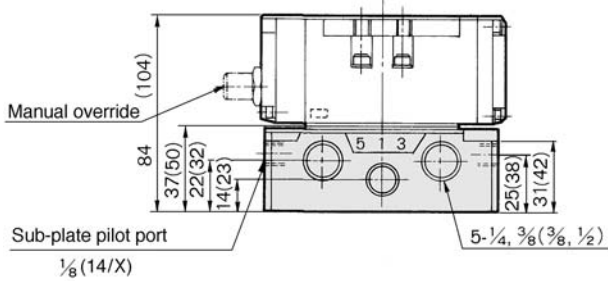
Air Operated/Dimensions

SIZE① VSA7-6-FG-S-□□-□
YG

SIZE② VSA7-8-FG-S-□□-□
YG

SIZE① VSA7-6-FG-D-□□-□

SIZE② VSA7-8-FG-D-□□-□



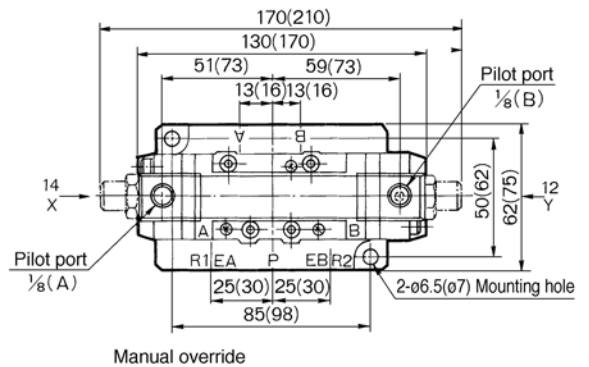
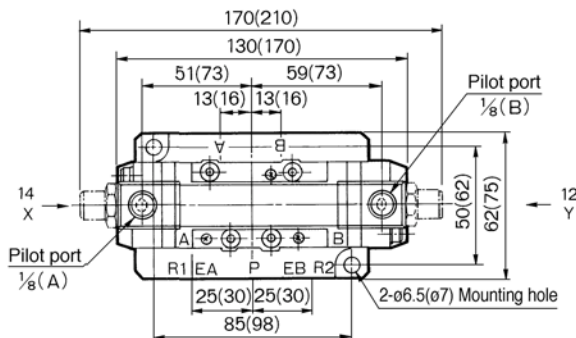
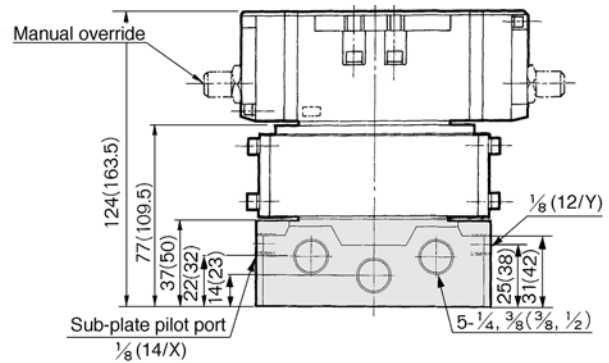
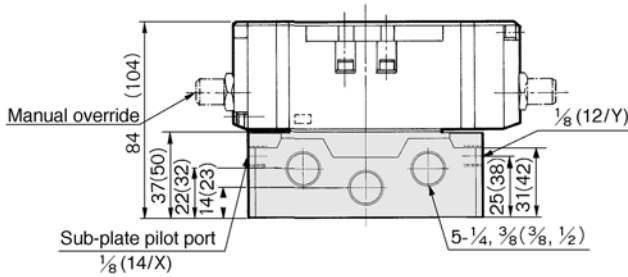
(): In case of VSA7-8

SIZE① VSA7-6-FHG-FJG-□□-□
FIG

SIZE② VSA7-8-FHG-FJG-□□-□
FIG

SIZE① VSA7-6-FPG-FPG-□□-□

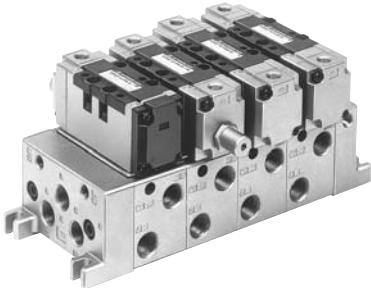
SIZE② VSA7-8-FPG-FPG-□□-□



(): In case of VSA7-8

Air Operated: SIZE 1 Manifold

Manifold: Series VVA71



Standard Specifications

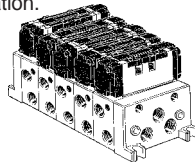
Manifold block size	ISO size 1	
Applicable valve	Series ISO size 1	
Stations	1 to 10*	
Piping	A, B port	1/4, 3/8 One-touch fitting: ø6, ø8, ø10
	P, R1, R2 port	3/8 One-touch fitting: ø12
Control unit	Air filter (Auto drain, Manual drain), Regulator, Pressure switch, Air release valve	
Individual SUP spacer	VV71-P-□(02: 1/4, 03: 3/8, C10: ø10)	
Individual EXH spacer	VV71-R-□(02: 1/4, 03: 3/8, C10: ø10)	
Block plate (Differential pressure style)	AXT502-14	

* Including F.R. Unit (equivalent to 2 stations).

The manifold Series VVA71 has a wide variety of functions and piping, compatible with virtually any application.

Common EXH Style

Every valve is supplied and exhausted by the same SUP and EXH ports running through the connected manifolds. This is the most popular configuration.



Multiple Pressure SUP Style

Allows supply of 2 or more different levels of pressures to one manifold.

Put in a gallery blank disc (AXT502-14) between the stations to operate at different pressures. A dual pressure supply can be applied to both the left and right sides of the manifold. If 3 or more pressures are supplied, the individual SUP spacer should be used.

Bottom Piping Style/1/4, 3/8 (A, B port)

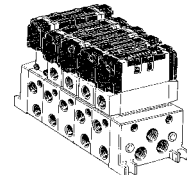
When side piping appearance is not acceptable or space is limited, either some of, or all ports, can be arranged with bottom piping.

Individual EXH Style

An individual EXH spacer (VVA71-R-□) mounted on the manifold block allows each valve to exhaust individually.

Individual SUP Style

An individual SUP spacer (VVA71-P-□) mounted on the manifold block allows each valve to be supplied individually.



How to Order

VVA71 5 03R 03D 1

Stations

1	1 station
⋮	⋮
10	10 stations*

* Including F.R. Unit (2 stations)

Pilot supply port

1	Valve body side	
2	Manifold block side	

Piping (A, B port)

02R	1/4 (Right)
03R	3/8 (Right)
02L	1/4 (Left)
03L	3/8 (Left)
02Y	1/4 (Bottom)
03Y	3/8 (Bottom)
C6R	One-touch fitting ø6 (Right)
C8R	One-touch fitting ø8 (Right)
C10R	One-touch fitting ø10 (Right)
C6L	One-touch fitting ø6 (Left)
C8L	One-touch fitting ø8 (Left)
C10L	One-touch fitting ø10 (Left)
*	Mix

* Indicate piping specifications.

Piping (P, R1, R2 port)

03D	3/8 (Bottom)
03U	3/8 (Top)
03B	3/8 (Both sides)
C12D	One-touch fitting ø12 (Bottom)
C12U	One-touch fitting ø12 (Top)
C12B	One-touch fitting ø12 (Both sides)
**	Mix

** Indicate piping specifications.

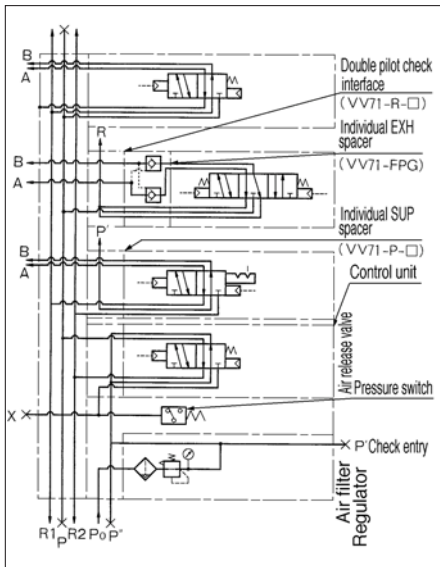
Control Unit

—	None
A	Filter with auto drain, regulator, air release valve*
AP	Filter with auto drain, regulator, air release valve, pressure switch
M	Filter with manual drain, regulator, air release valve*
MP	Filter with manual drain, regulator, air release valve, pressure switch
F	Filter with auto drain, regulator (air release valve blank plate)
G	Filter with manual drain, regulator (air release valve blank plate)
C	Air release valve* (filter, air release valve blank plate)
E	Air release valve*

* Indicate pilot supply port.

- 1 VSA7-6-FG-S-1
- 2 VSA7-6-FG-S-2

Manifold application example



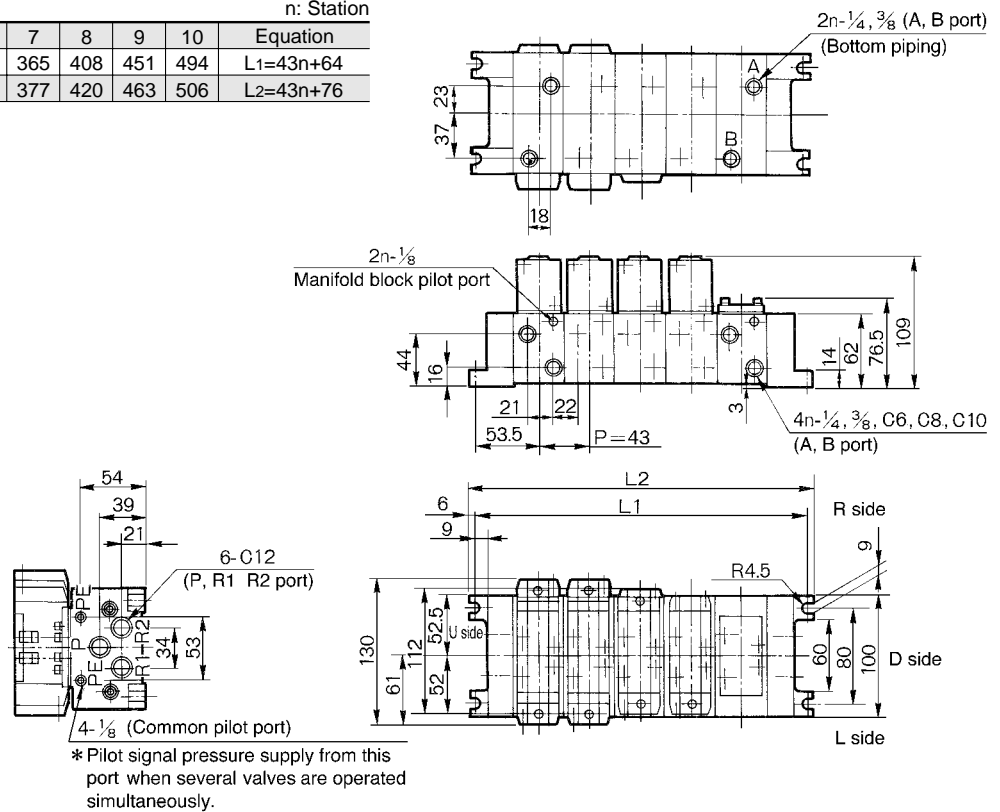
VSA7-6/VSA7-8

Manifold/Dimensions

L: Dimensions

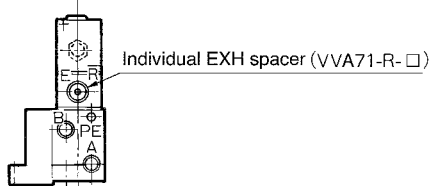
		n: Station									
L	n	2	3	4	5	6	7	8	9	10	Equation
L1		150	193	236	279	322	365	408	451	494	$L1=43n+64$
L2		162	205	248	291	334	377	420	463	506	$L2=43n+76$

Common EXH

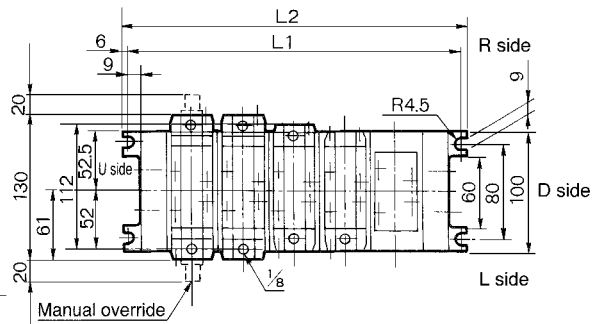
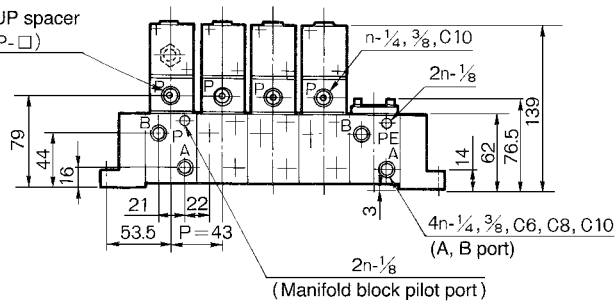


Individual SUP

(Individual EXH)



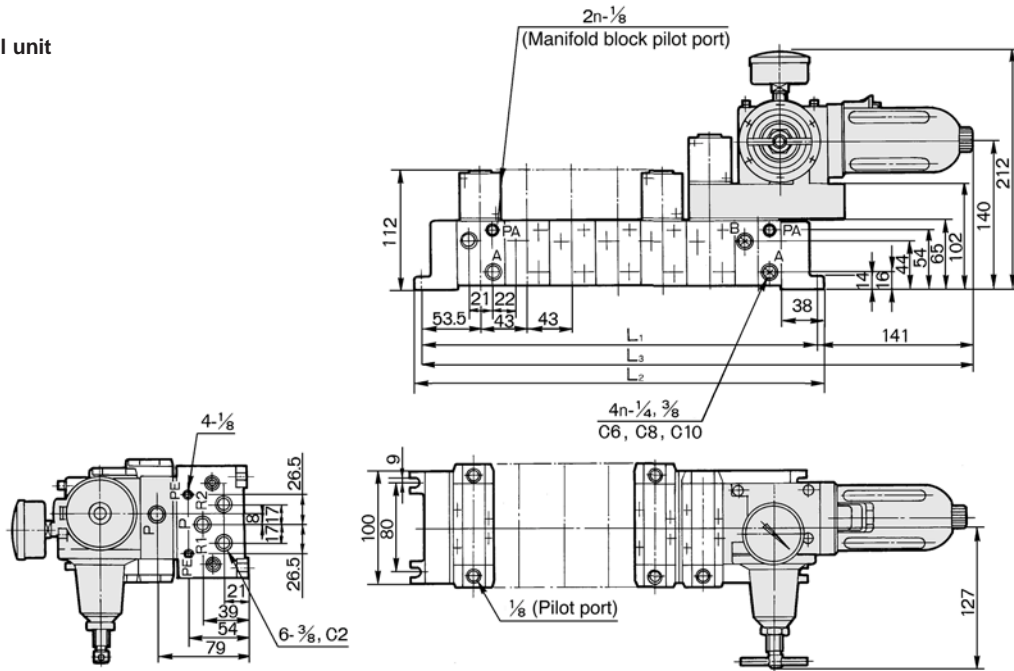
Individual SUP spacer
(VVA71-P-□)



VSA7-6/VSA7-8

Manifold/Dimensions

Control unit

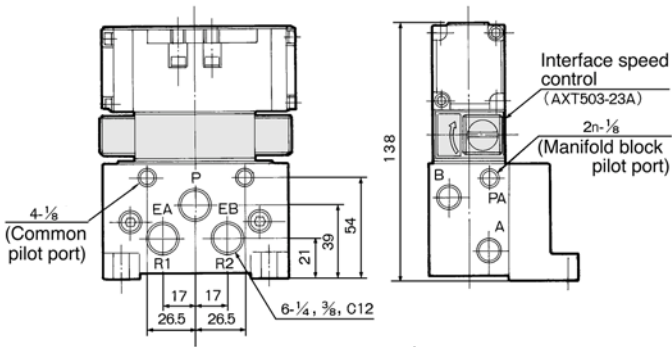


L: Dimensions

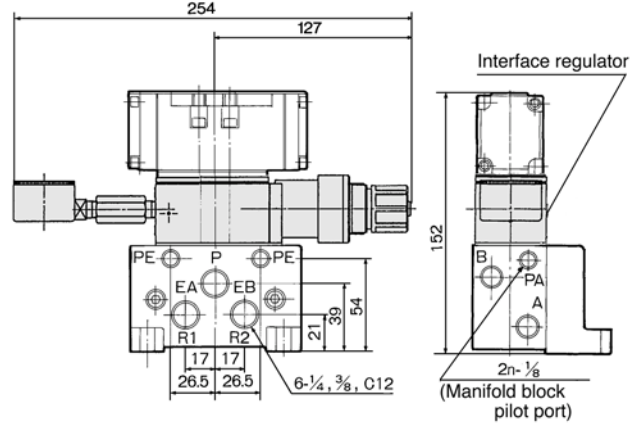
n: Station

n	2	3	4	5	6	7	8	9	10	Equation
L1	150	193	236	279	322	365	408	451	494	L1=43n+64
L2	162	205	248	291	334	377	420	463	506	L2=43n+76
L3	297	340	383	426	469	512	555	598	641	L3=43n+211

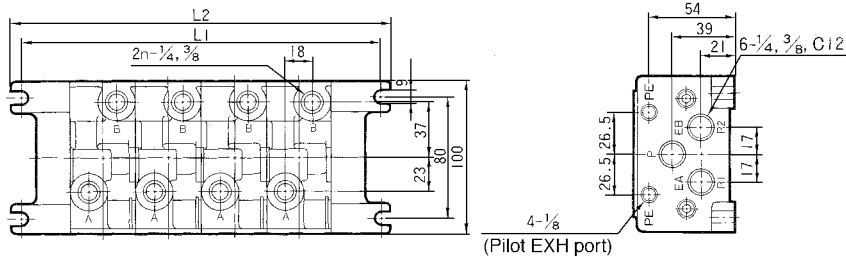
Interface Speed Control



Interface Regulator



Bottom Piping



SV

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VQC

SQ

VQ

VQ4

VQ5

VQZ

VQD

VFS

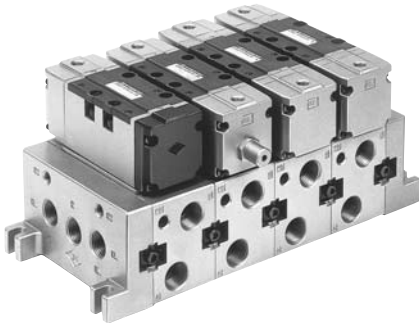
VS

VS7

VQ7

Air Operated: SIZE ② Manifold

Manifold: Series VVA72



Standard Specifications

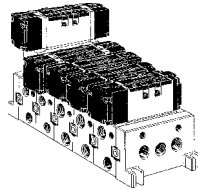
Manifold block size	ISO size 2	
Applicable valve	Series ISO size 2	
Stations	1 to 10*	
Piping	A, B port	3/8 1/2
	P, R1, R2 port	1/2 3/4
Individual SUP spacer	VV72-P-□	
Individual EXH spacer	VV72-R-□	
Block plate (Differential pressure style)	AXT512-14-1A (for P port)	
	AXT512-14-2A (for R1, R2 port)	

* Including F. R. Unit (equivalent to 2 stations).

The manifold Series VVA72□ has a wide variety of functions and piping, compatible with virtually any application.

Common EXH Style

Every valve is supplied and exhausted by the same SUP and EXH ports running through the connected manifolds. This is the most popular configuration.

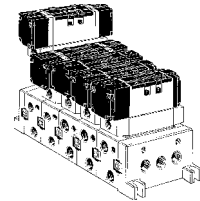


Individual EXH Style

¡An individual EXH spacer (VVA72-R-03/04) mounted on the manifold block allows each valve to exhaust individually.

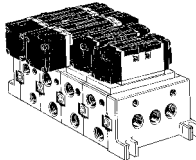
Individual SUP Style

¡An individual SUP spacer (VVA72-P-03/04) mounted on the manifold block allows each valve to be supplied individually.



V Type

V type allows combinations with valves of varying body size. (Interface adapter plate VVA72-V-1)



Multiple Pressure SUP Style

Allows supply of 2 or more different pressures to one manifold. ¡Put in a gallery blank disc (AXT502-14-1A) between the stations to operate at different pressures. A dual pressure supply can be applied to both the left and right sides of the manifold. If 3 or more pressures are supplied, the individual SUP spacer (VV71-P-□) should be used.

Bottom Piping Style/(3/8, 2/1)

When side piping appearance is not acceptable or space is limited, A or B port can be arranged with bottom piping.

How to Order

VVA72 5 03R □ 04D 1

Stations

1	1 station
⋮	⋮
10	10 stations*

Piping (A, B port)

03R	3/8 (Right)
04R	1/2 (Right)
03L	3/8 (Left)
04L	1/2 (Left)
03Y	3/8 (Bottom)
04Y	1/2 (Bottom)
*	Mix

* Indicate piping specifications.

Pilot supply port

1	Valve body side	
2	Manifold block side	

Piping (P, R1, R2 port)

04D	1/2 (Bottom)
04U	1/2 (Top)
04B	1/2 (Both sides)
06D	3/4 (Bottom)
06U	3/4 (Top)
06B	3/4 (Both sides)

Air release valve

—	Without air release valve
E	With air release valve*

* Indicates pilot supply port.

- 1 VSA7-6-FG-S-1
2 VSA7-6-FG-S-2

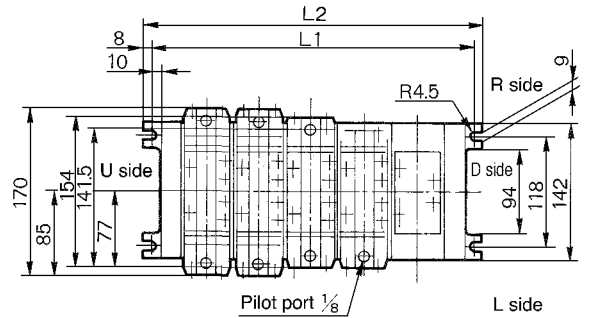
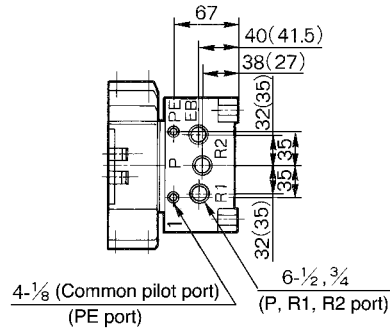
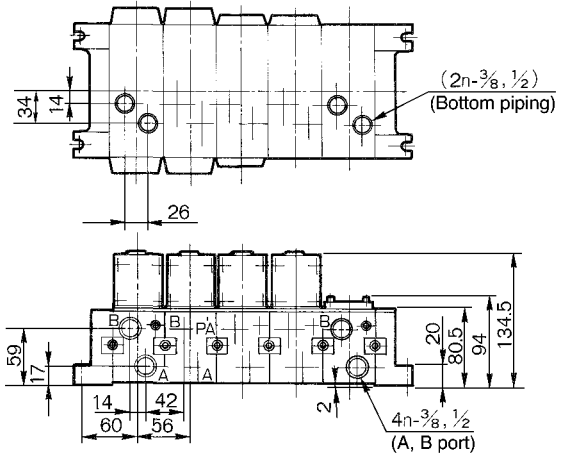
VSA7-6/VSA7-8

Manifold/Dimensions

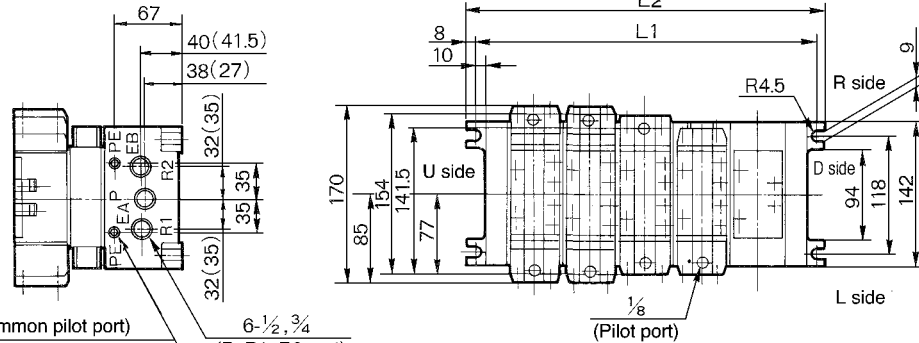
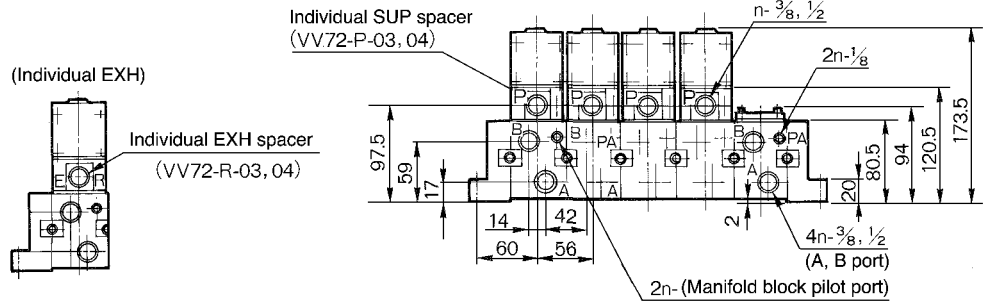
L: Dimensions

Size	L	n: Station									Equation
		2	3	4	5	6	7	8	9	10	
1/2	L1	176	232	288	344	400	456	512	568	624	$L_1=56n+64$
	L2	192	248	304	360	416	472	528	584	640	$L_2=56n+80$
3/4	L1	202	258	314	370	426	482	538	594	650	$L_1=56n+90$
	L2	218	274	330	386	442	498	554	610	666	$L_2=56n+106$

Common EXH



(): 3/4
Individual SUP



* Pilot signal pressure supply from this port when several valves are operated simultaneously.

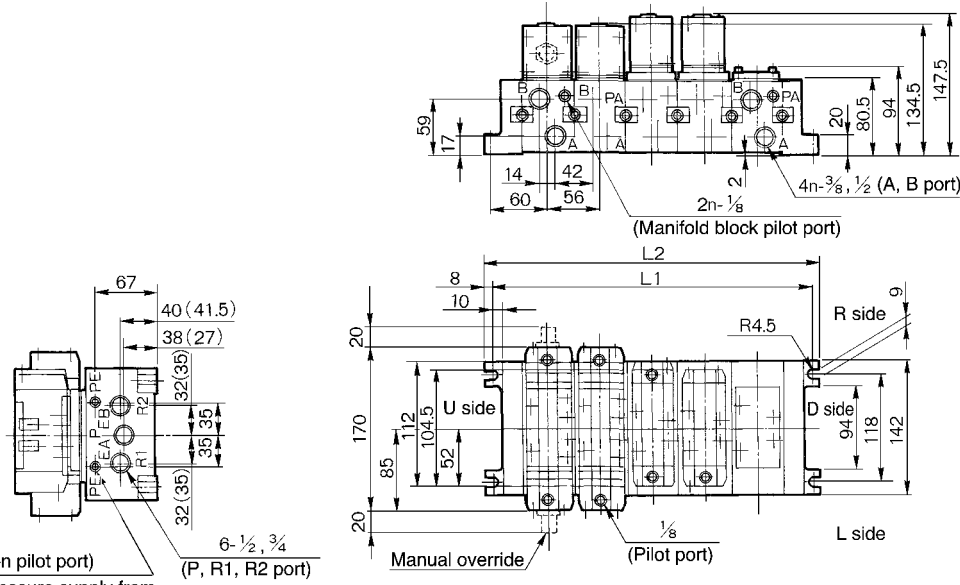
(): 3/4

- SV
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VQC
- SQ
- VQ
- VQ4
- VQ5
- VQZ
- VQD
- VFS
- VS
- VS7
- VQ7

VSA7-6/VSA7-8

Manifold/Dimensions

V Type



4-1/8 (Common pilot port)
 * Pilot signal pressure supply from this port when several valves are operated simultaneously.

L: Dimensions

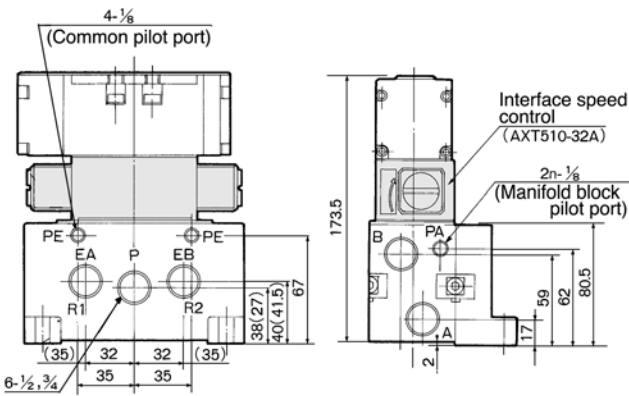
n: Station

Size	L	n										Equation
		1	2	3	4	5	6	7	8	9	10	
1/2	L1	176	232	288	344	400	456	512	568	624	L1=56n+64	
	L2	192	248	304	360	416	472	528	584	640	L2=56n+80	
3/4	L1	202	258	314	370	426	482	538	594	650	L1=56n+90	
	L2	218	274	330	386	442	498	554	610	666	L2=56n+106	

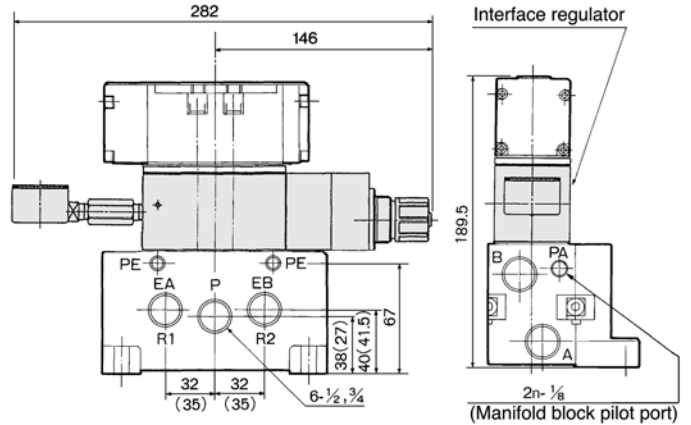


(): 3/4

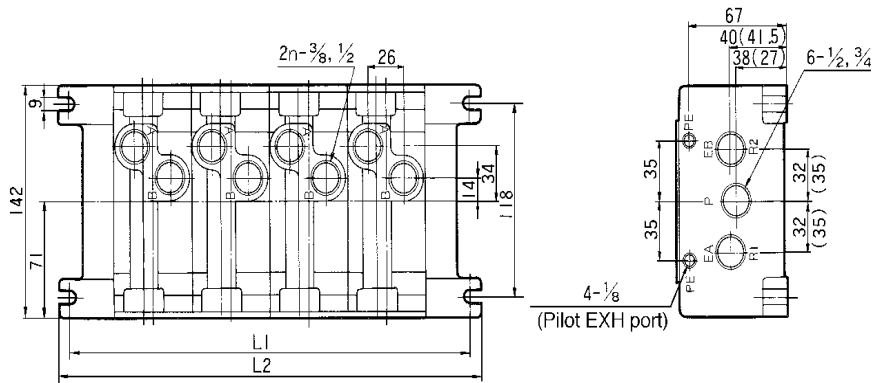
Interface Speed Control



Interface Regulator

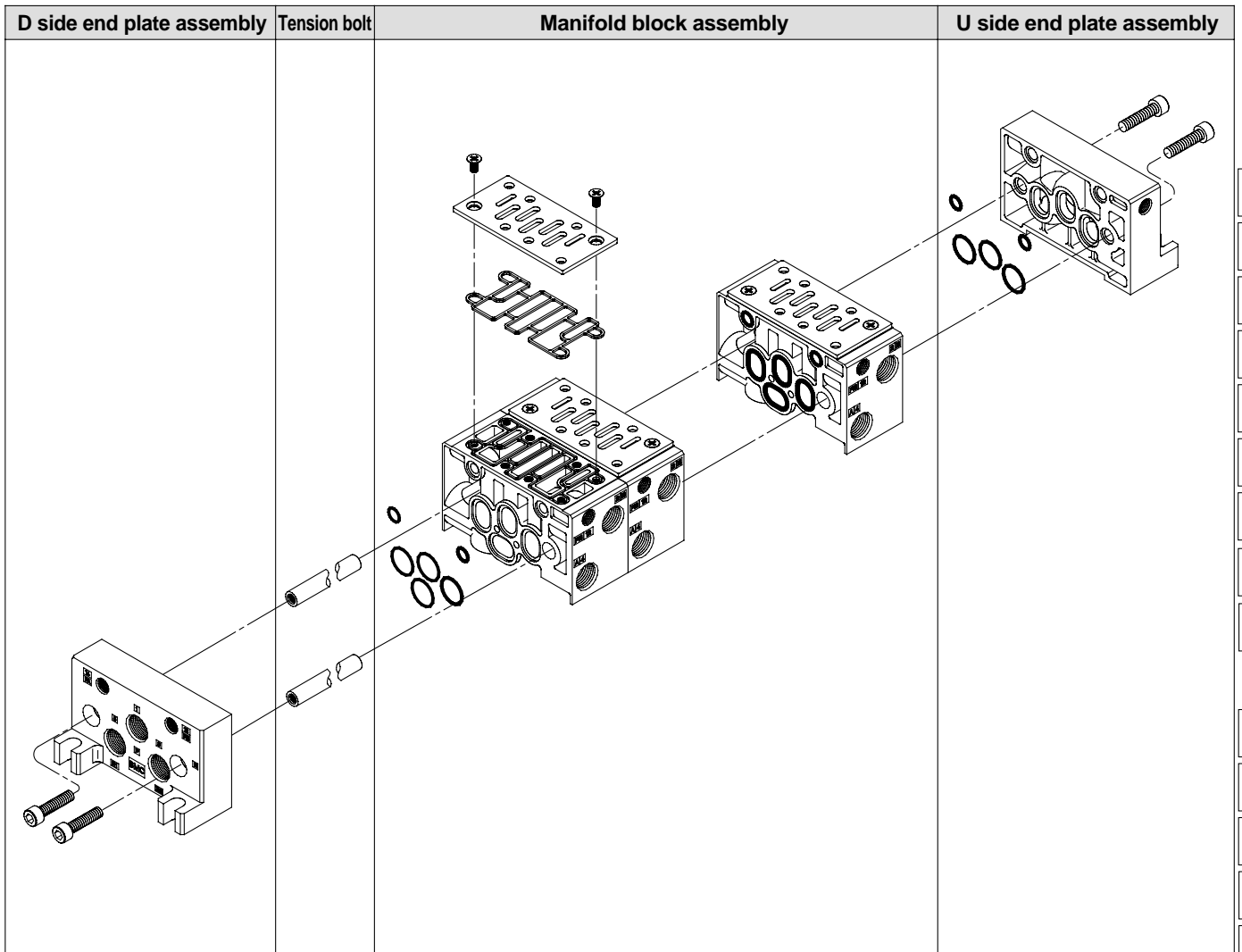


Bottom Piping



(): 3/4

Manifold Exploded View VS7-6



- SV
- SY
- SYJ
- SX
- VK
- VZ
- VF
- VFR
- VP7
- VQC
- SQ
- VQ
- VQ4
- VQ5
- VQZ
- VQD
- VFS
- VS
- VS7**
- VQ7

< End plate assembly >

E AXT502 - **A** - **□**

End plate position

L	L side
R	R side

Ordering source area code

Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

P, R port size

02	1/4
03	3/8
C12	ø12 One-touch fitting

< Tension bolt part number >

AXT502 - 34 - **□**

Number of stations

2	For 2 stations
3	For 3 stations
⋮	⋮
10	For 10 stations

Note) These tie-rods are solid pieces for each number of stations.

< Manifold block assembly >

* This manifold block assembly includes tension bolts for a single station addition.

E AXT502 - 1A - **□** - **□** - **□**

Wiring specification

A	Side
B	Bottom

Cylinder port position

L	L side
R	R side

Ordering source area code

Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

Cylinder port size

02	1/4
03	3/8
C6 Note 1)	ø6 One-touch fitting
C8 Note 1)	ø8 One-touch fitting
C10 Note 1)	ø10 One-touch fitting

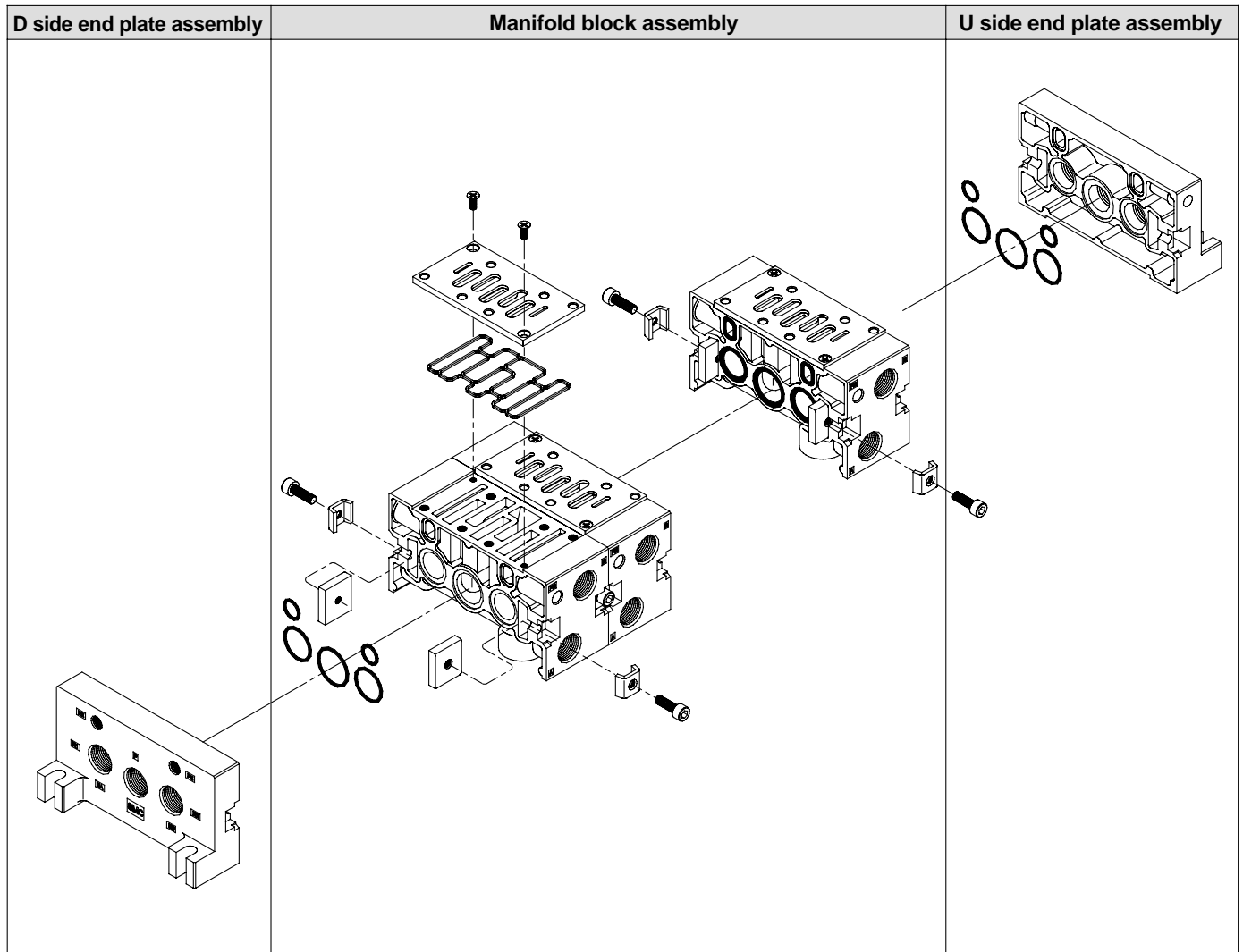
Note 1) Side ported only

< Manifold block replacement parts >

Part No.	Description	Qty.	Material
AXT502-19	O-ring	4	NBR
AXT502-20	O-ring	2	NBR
AXT502-22-2	Plate	1	SPCC
AXT502-31	Gasket	1	NBR
M4 X 8	Oval countersunk head screw	2	SWRH3

VS7-8

Manifold Exploded View VS7-8



< End plate assembly >

E AXT512 - **A** - **A**

End plate position

L	L side
R	R side

P, R port size

04	1/2
06	3/4
C12	ø12 One-touch fitting

Ordering source area code

Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

<Manifold block assembly>

E AXT512 - 1A - **A** - **A**

Wiring specification

A	Side
B	Bottom

Cylinder port position

L	L side
R	R side

Ordering source area code

Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

Cylinder port size

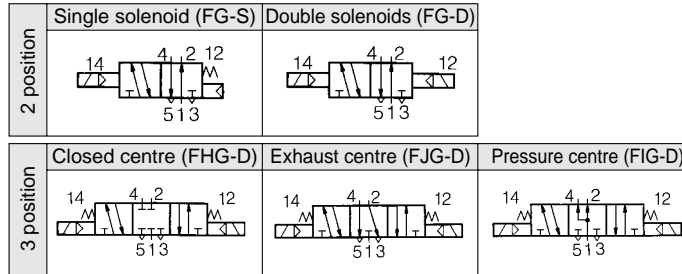
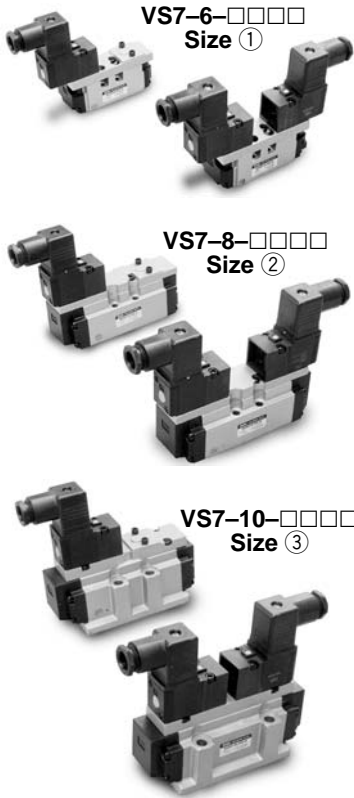
03	3/8
04	1/2

< Manifold block replacement parts >

Part No.	Description	Qty.	Material
AXT512-13	O-ring	2	NBR
AS568-022	O-ring	1	NBR
AS568-020	O-ring	2	NBR
AXT512-5	Gasket	1	NBR
AXT512-4	Plate	1	SPCC
M4X10	Oval countersunk head screw	2	SWRH3
AXT512-6-1	Connection fitting A	2	
AXT512-6-4	Connection fitting B	2	
AXT512-6-3	Hexagon socket head screw	2	

ISO CNOMO Standard Solenoid Valve Metal Seal - SIZES ①②③

Series VS7-6•8•10



Standard Specifications

Fluid		Air and inert gas	
Operating pressure (MPa)	Single	2 position	0.15 to 0.9
	Double	2 position 3 position	0.1 to 0.9 0.15 to 0.9
Ambient and fluid temperature		Max. 50°C	
Manual operation		Non-locking	
Electrical entry		DIN43650 connector	
Lubrication		Unnecessary (Turbine oil class 1 - ISO VG32 if used)	
Environmental protection rating		IP65	
Shock/Vibration resistance		300/50m/s ²	



Note 1) Shock resistance: No malfunction resulted from the impact test using a drop impact tester. The test was performed on the axis and right angle direction of the main valve and armature, for both energized and de-energized states.

Vibration resistance: No malfunction occurred in a one-sweep test between 8.3 and 2000Hz. Test was performed at both energized and de-energized states to the axis and right angle direction of the main valve and armature. (value in the initial stage.)

- Solenoid interface conforms to CNOMO.
- Manifold interface to ISO standards.
- Low power consumption: 1.8W per solenoid.
- Internal or external pilot supply.
- Available in ISO 1, 2 and 3 sizes.
- Large flow capacity.
- Fast response and long life.

Pilot Valve Specifications

Rated voltage (V)		100V AC 50/60Hz, 200V AC 50/60Hz, 24V DC, 12V DC	
Power consumption	DC (W)	1.8	
	AC Inrush current (VA)	5.4	
	AC Holding current (VA)	3.6	
Allowable voltage (V)		-15% to +10% of rated voltage	
Coil insulation		Class B (130°C) or equivalent	

Model

No. of positions	Model	Flow (Nl/min)	Max. operating frequency (Hz)	Response time (Ms)	Weight (g)
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Size ①

2 (Single)	VS7-6-FG-S-□-Q	1476	20	25	420
2 (Double)	VS7-6-FG-D-□-Q	1476	20	15	518
3 (Closed centre)	VS7-6-FHG-D-□-Q	1378	10	45	546
3 (Exhaust centre)	VS7-6-FJG-D-□-Q	1476	10	45	546
3 (Pressure centre)	VP7-6-FIG-D-□-Q	1080	10	45	546

Size ②

2 (Single)	VS7-8-FG-S-□-Q	3148	20	25	698
2 (Double)	VS7-8-FG-D-□-Q	3148	20	15	806
3 (Closed centre)	VS7-8-FHG-D-□-Q	3148	10	45	850
3 (Exhaust centre)	VS7-8-FJG-D-□-Q	3148	10	45	850
3 (Pressure centre)	VS7-8-FIG-D-□-Q	3148	10	45	850

Size ③

2 (Single)	VS7-10-FG-S-□-Q	4900	20	25	926
2 (Double)	VS7-10-FG-D-□-Q	4900	20	15	1026
3 (Closed centre)	VS7-10-FHG-D-□-Q	4690	10	45	1080
3 (Exhaust centre)	VS7-10-FJG-D-□-Q	4690	10	45	1080
3 (Pressure centre)	VS7-10-FIG-D-□-Q	4690	10	45	1080

SV

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VQC

SQ

VQ

VQ4

VQ5

VQZ

VQD

VFS

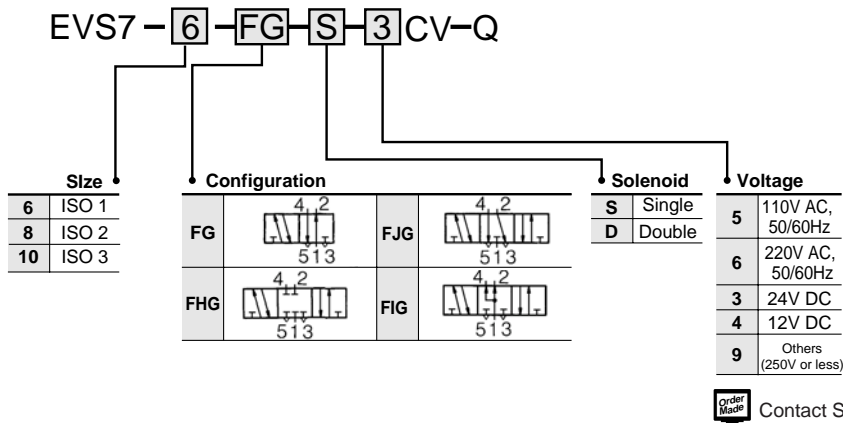
VS

VS7

VQ7

VS7-6•8•10

How to Order Valve



How to Order Sub-plate - Size ①

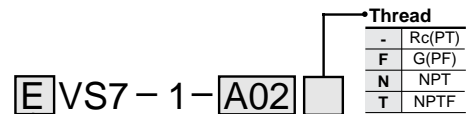
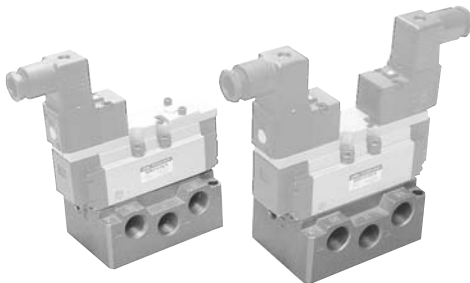


Specifications

Applicable solenoid valve	ISO size 1
Sub-plate size	ISO size 1
Piping*	Side piping, 1/4 3/8
	Bottom piping, 1/4 3/8
Weight	0.37kg

*) All R ports: 3/8

How to Order Sub-plate



Ordering source area code

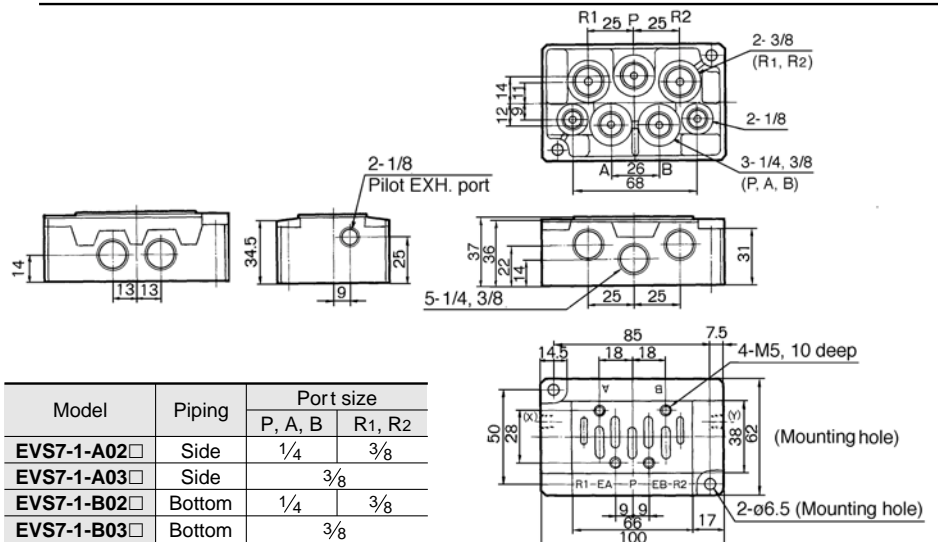
Code	areas
-	Japan, Asia Australia
E	Europe
N	North America

Piping and port size

A02	Side* 1/4
A03	Side 3/8
B02	Bottom* 1/4
B03	Bottom 3/8

*R port: 3/8

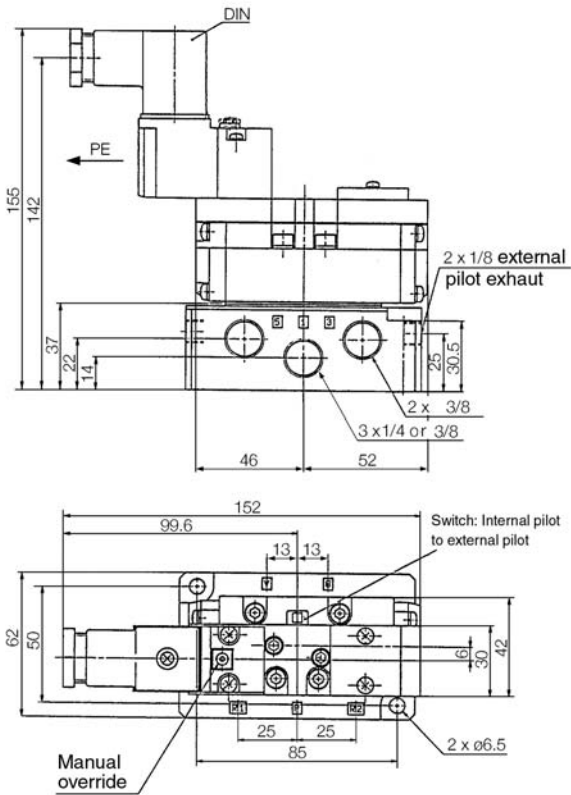
Dimensions



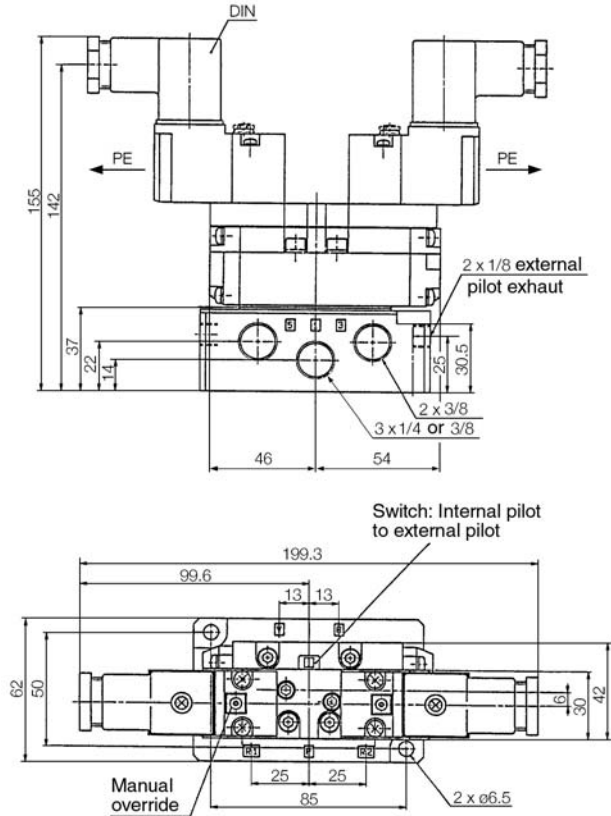
ISO/CNOMO type VS7-6•8•10

Dimensions with Sub-plate - Size ①

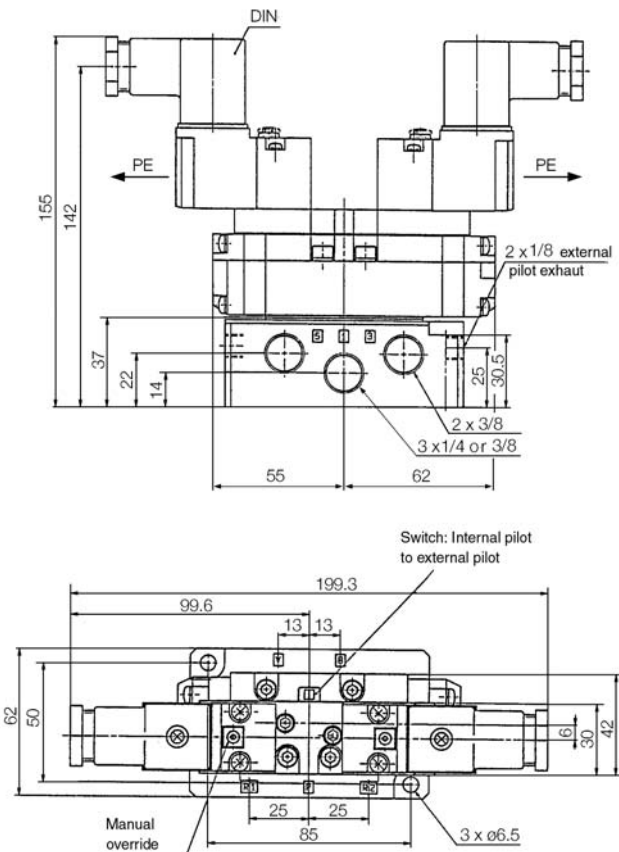
EVS7-6-FG-S-□CV-Q



EVS7-6-FG-D-□CV-Q



EVS7-6-FHG-D-□CV-Q • EVS7-6-FJG-D-□CV-Q • EVS7-6-FIG-D-□CV-Q



SV

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VQC

SQ

VQ

VQ4

VQ5

VQZ

VQD

VFS

VS

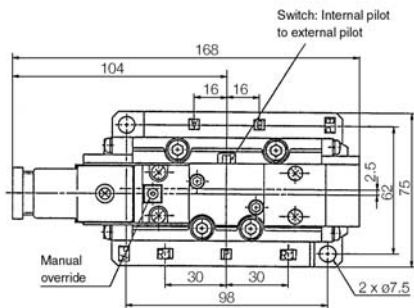
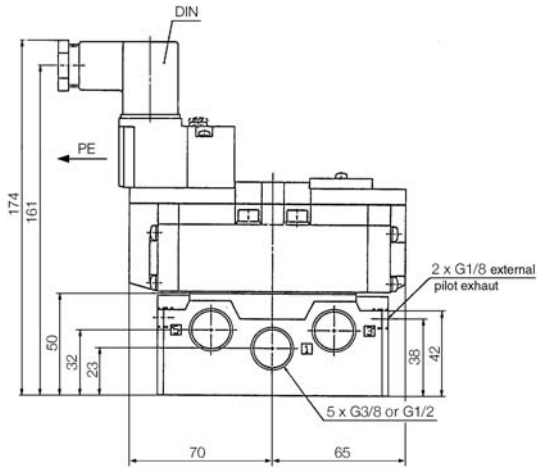
VS7

VQ7

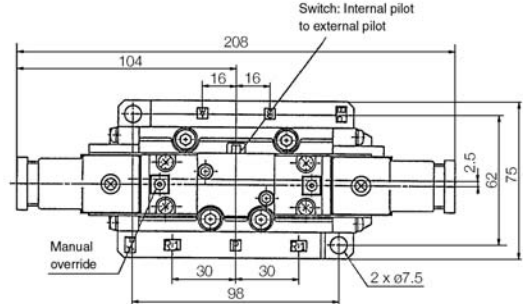
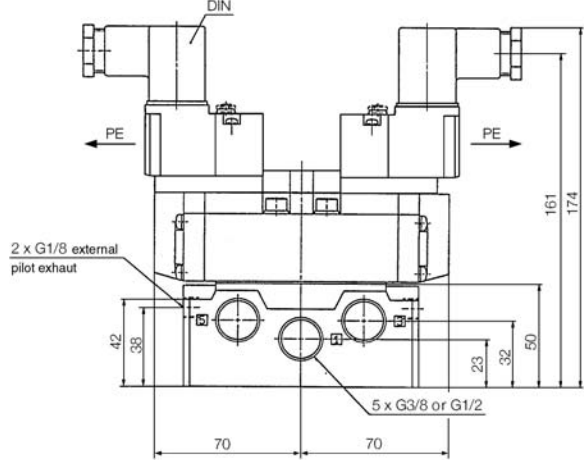
ISO/CNOMO type VS7-6•8•10

Dimensions with Sub-plate - Size ②

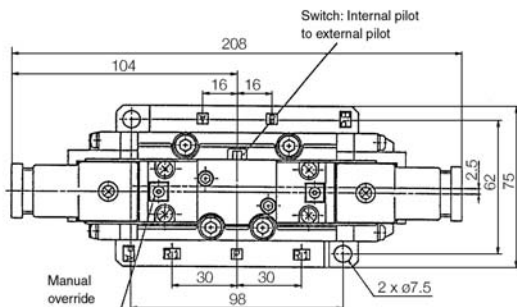
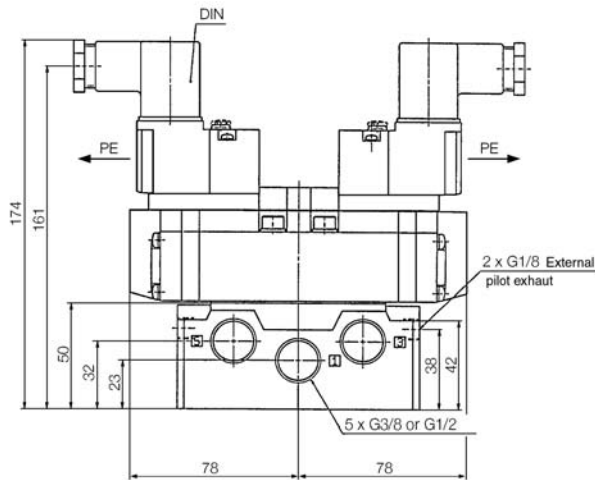
EVS7-8-FG-S-□CV-Q



EVS7-8-FG-D-□CV-Q



EVS7-8-FHG-D-□CV-Q • EVS7-8-FJG-D-□CV-Q • EVS7-8-FIG-D-□CV-Q



SV

SY

SYJ

SX

VK

VZ

VF

VFR

VP7

VQC

SQ

VQ

VQ4

VQ5

VQZ

VQD

VFS

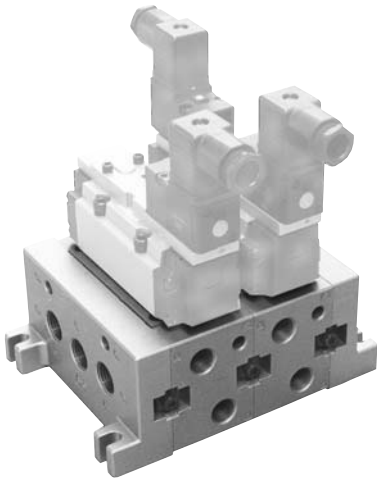
VS

VS7

VQ7

VS7-6•8•10

How to Order Manifold



Specifications



*) These are available for ISO1 and ISO2 size manifolds and are common to those and on the VS7-6/8 and VQ7-6/8 series valves. For more details on Specifications, options, how to order and dimensions please refer to these series.

How to Order Manifold



*) These are available for ISO1 and ISO2 size manifolds and are common to those and on the VS7-6/8 and VQ7-6/8 series valves. For more details on Specifications, options, how to order and dimensions please refer to these series.

Options



*) These are available for ISO1 and ISO2 size manifolds and are common to those and on the VS7-6/8 and VQ7-6/8 series valves. For more details on Specifications, options, how to order and dimensions please refer to these series.

Dimensions



*) These are available for ISO1 and ISO2 size manifolds and are common to those and on the VS7-6/8 and VQ7-6/8 series valves. For more details on Specifications, options, how to order and dimensions please refer to these series.