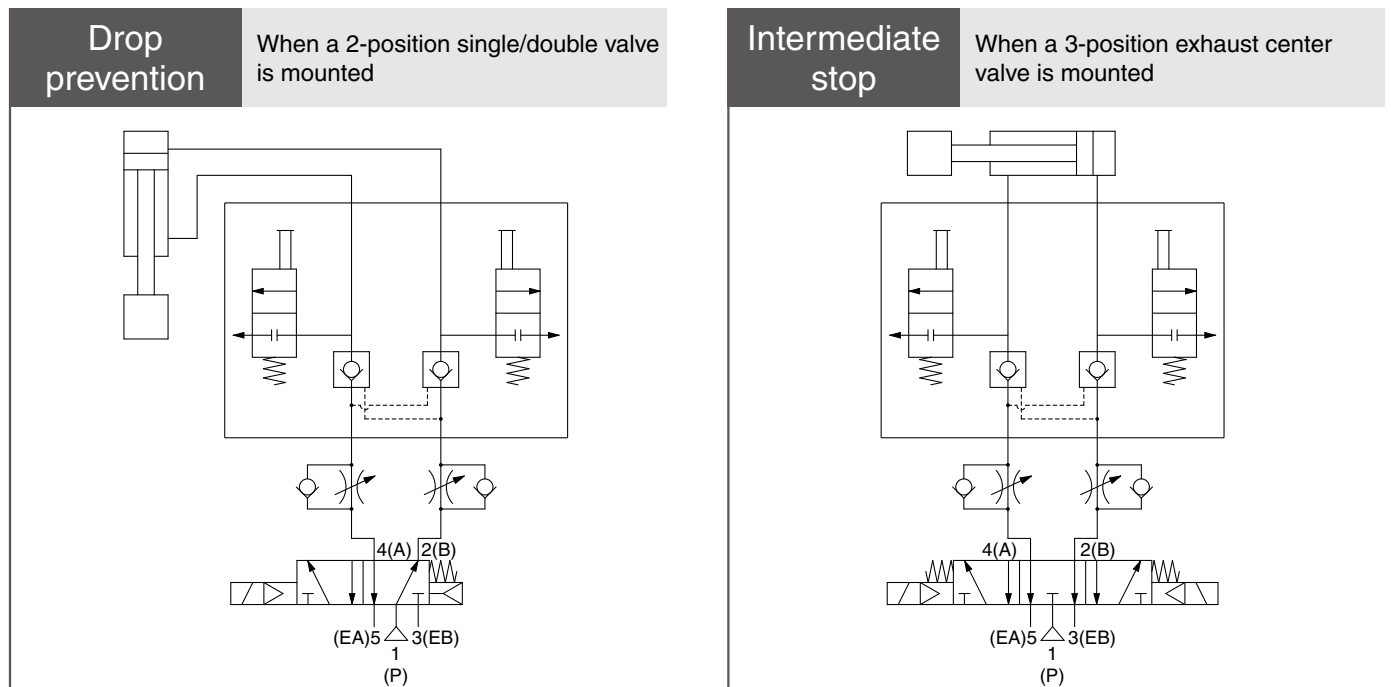


Separate Double Check Block



Drop prevention and temporary intermediate stops of cylinders are possible.

Example of Operating Circuit



* Shows the VV71-FPGR-□-X299 (with residual pressure release valve)

⚠ Caution

Please use the product in accordance with the specifications provided in the catalogs/operation manuals. It is your responsibility to check the suitability for your workpiece and equipment.

Variations

		Applicable bore size [mm]			
		ø40 or less	ø63 or less	ø100 or less	ø140 or less
Model		VQ1000-FPG-□□-□	VQ2000-FPG-□□-□	VV71-FPGR-□-X299	VV72-FPG-06□-X2
Appearance					
Type	Single unit	●	●	●	●
	Manifold	●	●	● (X296)	—
Residual pressure release valve		●	●	●	—

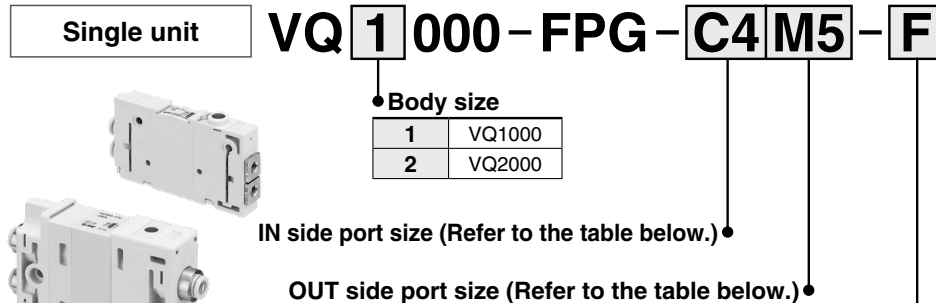
●: Yes —: None

VQ1000-FPG-□□-□/VQ2000-FPG-□□-□
VV71-FPGR-□-X299/X296
VV72-FPG-06□-X2



How to Order

Double check block with residual pressure release valve



IN side/OUT side port size

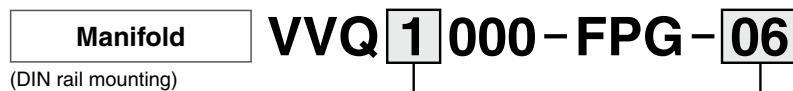
Symbol	Port size	VQ1000	VQ2000
M5	M5 thread	●	—
01	Rc1/8	—	●
02	Rc1/4	—	●
C3	ø3.2 One-touch fitting	●	—
C4	ø4 One-touch fitting	●	●
C6	ø6 One-touch fitting	●	●
C8	ø8 One-touch fitting	—	●
N3	ø5/32" One-touch fitting	●	—
N7	ø1/4" One-touch fitting	●	●
N9	ø5/16" One-touch fitting	—	●

Option	Description
Nil	None
D	DIN rail mounting (For manifold)
F	With bracket
N	Name plate

* When 2 or more symbols are specified, indicate them alphabetically.

<Bracket Assembly>

Part no.	Tightening torque
VQ1000-FPG-FB	0.22 to 0.25 N·m
VQ2000-FPG-FB	0.8 to 1.0 N·m



For VQ1000

01	1 station
⋮	⋮
16	16 stations

For VQ2000

01	1 station
⋮	⋮
16	16 stations

<Ordering example>

VVQ1000-FPG-06 ... 6-station manifold

* VQ1000-FPG-C4M5-D, 3 sets } Double check block single unit
 * VQ1000-FPG-C6M5-D, 3 sets }

- * Select the DIN rail mounting option (symbol "D") for the double check block single unit when ordering.
- * Select the same body size for the double check block and manifold. Different sizes cannot be mixed.

⚠ Caution

- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from being able to stop for long periods of time. Check for leakage using a neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston seal, and rod seal for air leakage.
- Since One-touch fittings allow slight air leakage, screw piping (with an M5 thread) is recommended when the cylinder is required to perform long intermediate stops.
- Combining a double check block with a 3-position closed center or pressure center solenoid valve is not possible.
- The M5 fitting assembly comes with the product but is not built into the double check block. After screwing in the M5 fittings, mount the assembly to the double check block.
- When fittings, etc., are being screwed into the double check block, tighten them with the torque below.

Connection threads	Proper tightening torque [N·m]
M5	0.8 to 1.2
Rc1/8	7 to 9
Rc1/4	12 to 14

- If the exhaust of the double check block is restricted too much, the cylinder may not operate properly and may not be able to perform intermediate stops.
- Set the cylinder load so that the cylinder pressure will be within 2 times that of the supply pressure.

How to Order

Double check block with residual pressure release valve

Single unit

VV71 - FPGR - □ - X299

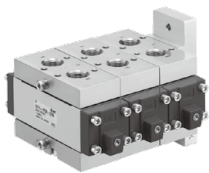


• Thread type

Nil	Rc
F	G

Manifold

VV71 - FPGR - □ - 3 - X296



• Thread type

Nil	Rc
F	G

• Stations

Symbol	Stations
1	1 station
2	2 stations
3	3 stations

<Hexagon socket head cap screw>

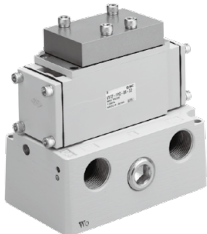
Stations	Part no.
1 station	CA01445
2 stations	AXT632-45-22
3 stations	AXT632-45-15

* The product number of the single unit does not need to be indicated when ordering the manifold.

Double check block

Single unit

VV72 - FPG - 06 □ - X2



• Thread type

Nil	Rc
F	G

⚠ Caution

- Air leakage from the pipe between the valve and cylinder or from the fittings will prevent the cylinder from being able to stop for long periods of time. Check for leakage using a neutral household detergent, such as dish washing soap. Also, check the cylinder's tube gasket, piston seal, and rod seal for air leakage.
- Combining a double check block with a 3-position closed center or pressure center solenoid valve is not possible.
- If the exhaust of the double check block is restricted too much, the cylinder may not operate properly and may not be able to perform intermediate stops.
- Set the cylinder load so that the cylinder pressure will be within 2 times that of the supply pressure.

Specifications

Model	VQ1000-FPG-□□-□	VQ2000-FPG-□□-□	VV71-FRGR-□-X299	VV72-FPG-06□-X2
Fluid	Air			
Proof pressure	1.5 MPa			
Operating pressure range	0.15 to 0.8 MPa		0.1 to 1.0 MPa	
Ambient and fluid temperatures	-5 to 50°C		5 to 60°C	
Sonic conductance [dm ³ /(s·bar)] [Effective area mm ²]	0.6 [3]	3.0 [15]	3.1 [15.5]	7.2 [36]
Port size	M5 ø3.2, ø4, ø6, ø5/32, ø1/4	Rc1/8, 1/4 ø6, ø8, ø1/4, ø5/16	Rc3/8 G3/8	Rc3/4 G3/4
Applicable cylinder size (Reference)	Up to ø40	Up to ø63	Up to ø100	Up to ø140
Pressure difference between the inlet side and outlet side (At a supply pressure of 0.5 MPa)*1	0.1 MPa	0.07 MPa	0.03 MPa	0.02 MPa

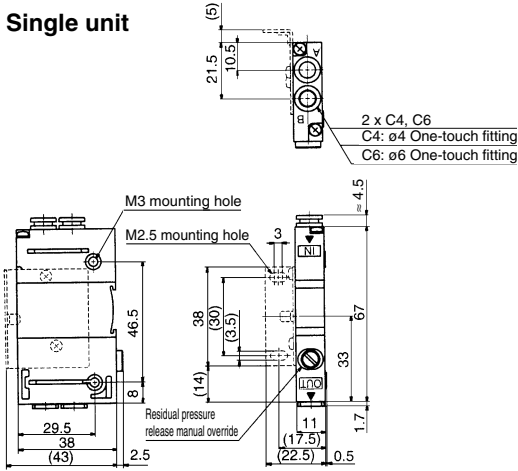
*1 Due to its construction, a pressure difference is generated between the inlet side and outlet side.

* The same applies to the manifold type.

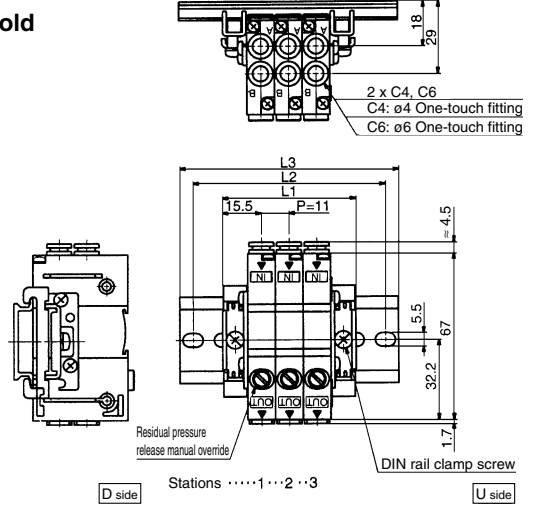
Dimensions

VQ1000-FPG-□□-□

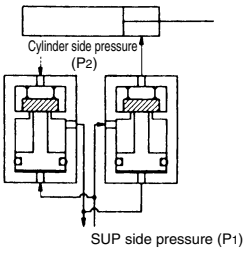
Single unit



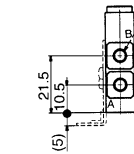
Manifold



<Circuit diagram>



- 2 x C3, C4, C6, M5
- C3: ø3.2 One-touch fitting
- C4: ø4 One-touch fitting
- C6: ø6 One-touch fitting
- M5: M5 thread

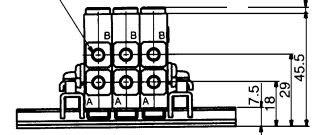


Dimensions Formula $L1 = 11n + 20$ n: Station (Maximum 24)

L/n	1	2	3	4	5	6	7	8	9	10	11	12
L1	31	42	53	64	75	86	97	108	119	130	141	152
L2	50	62.5	75	87.5	100	112.5	125	137.5	150	162.5	175	187.5
L3	60.5	73	85.5	98	110.5	123	135.5	148	160.5	173	185.5	198.5

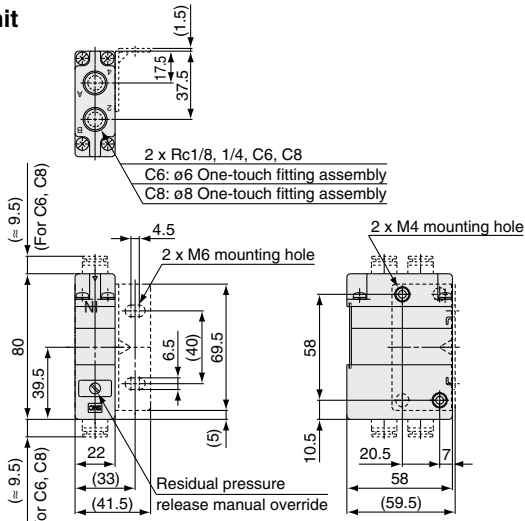
L/n	13	14	15	16	17	18	19	20	21	22	23	24
L1	163	174	185	196	207	218	229	240	251	262	273	284
L2	187.5	187.5	200	212.5	225	237.5	250	262.5	275	287.5	300	312.5
L3	198	198	210.5	223	235.5	248	260.5	273	285.5	298	310.5	323

- 2 x C3, C4, C6, M5
- C3: ø3.2 One-touch fitting
- C4: ø4 One-touch fitting
- C6: ø6 One-touch fitting
- M5: M5 thread

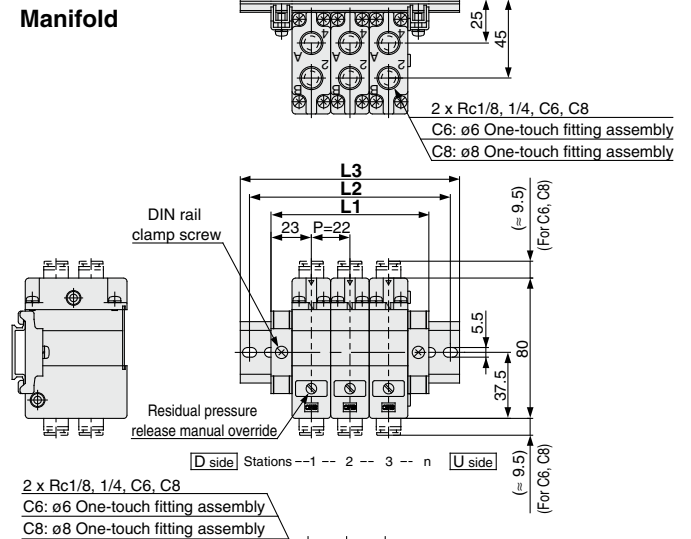


VQ2000-FPG-□□-□

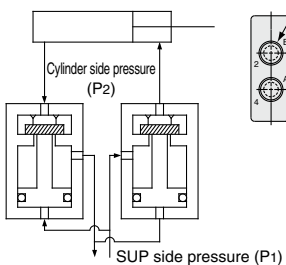
Single unit



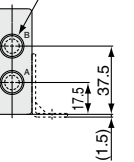
Manifold



<Circuit diagram>



- 2 x Rc1/8, 1/4, C6, C8
- C6: ø6 One-touch fitting assembly
- C8: ø8 One-touch fitting assembly



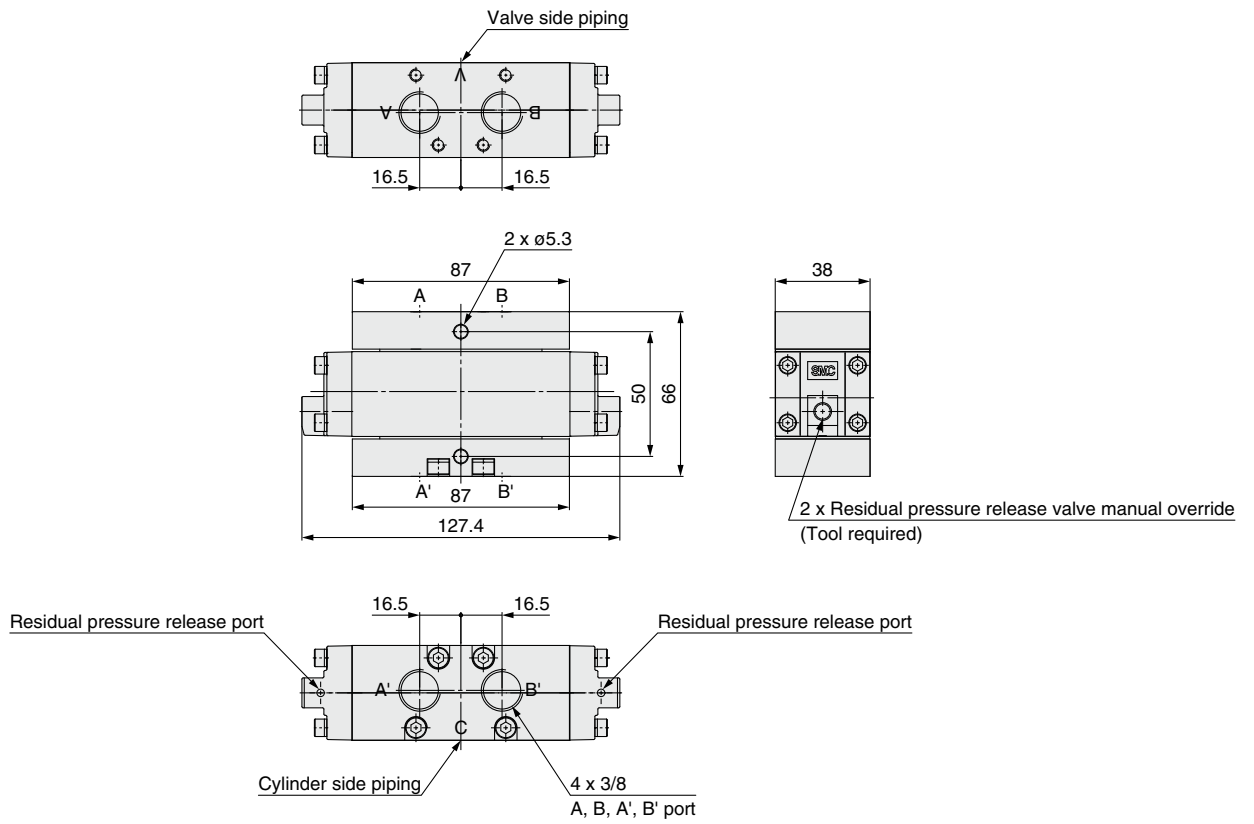
Dimensions

Formula $L1 = 22n + 24$ n: Station

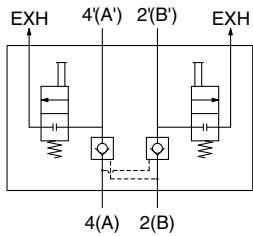
L/n	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16
L1	46	68	90	112	134	156	178	200	222	244	266	288	310	332	354	376
L2	75	87.5	112.5	137.5	162.5	175	200	225	250	262.5	287.5	312.5	337.5	362.5	375	400
L3	85.5	98	123	148	173	185.5	210.5	235.5	260.5	273	298	323	348	373	385.5	410.5

Dimensions

VV71-FPGR-□-X299

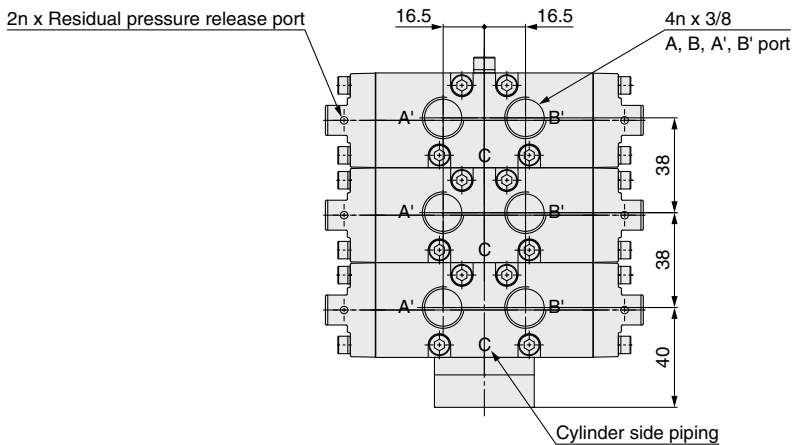
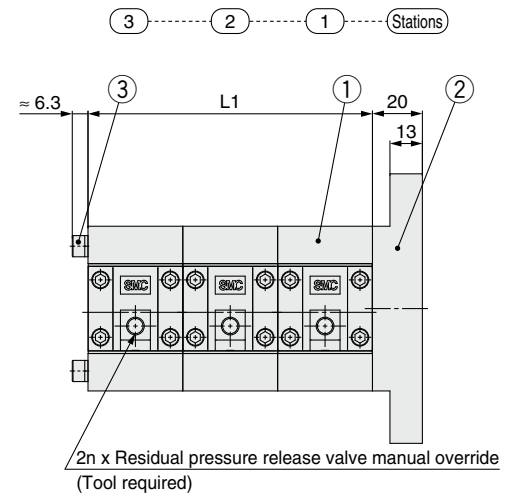
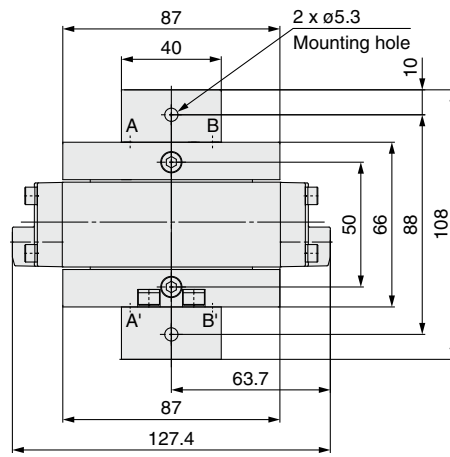
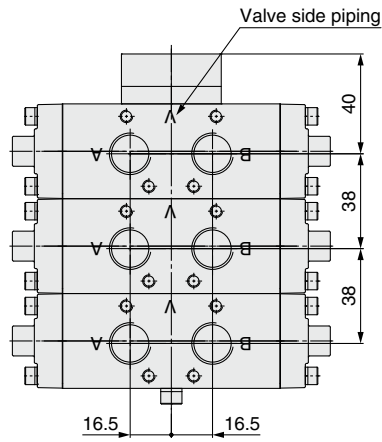


Symbol



Dimensions

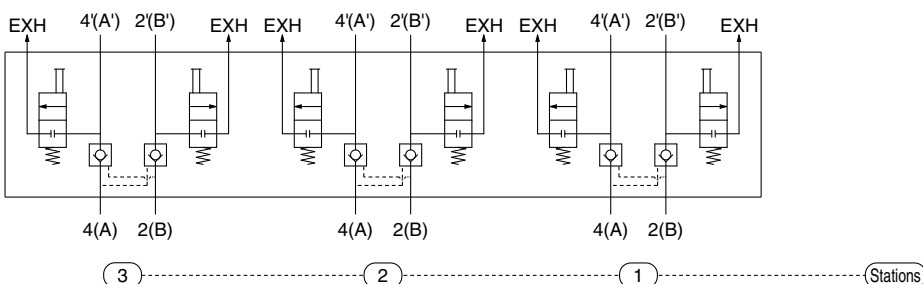
VV71-FPGR-□-X296



L1 Dimensions

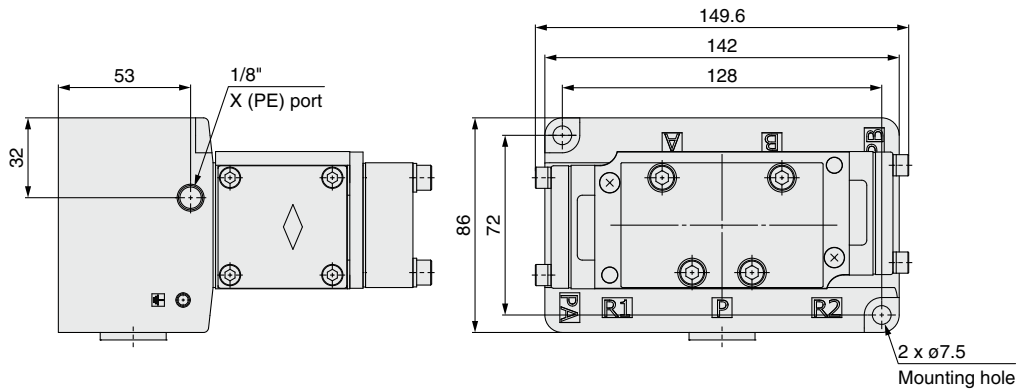
Stations	L1 Dimensions
1	38
2	76
3	114

Symbol

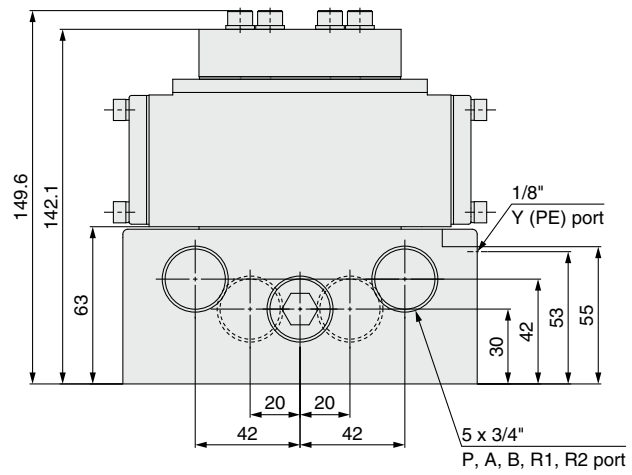
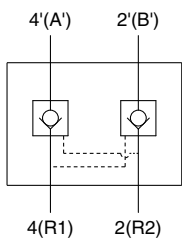



Dimensions

VV72-FPG-06□-X2



Symbol



 **Safety Instructions** Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.

SMC Corporation

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D-G