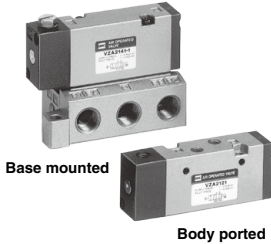


5 Port Air Operated Valve

VZA2000 Series



Specifications

Fluid	Air	
	Operating pressure range (MPa)	VZA2121, 2141 VZA2221, 2241
Pilot pressure range (MPa)	0.1 to 1.0	
Ambient and fluid temperature (°C)	-10 to 60 (No freezing.)	
Impact/Vibration resistance (m/s ²) ^{Note}	150/50	

Operating pressure ≤ Pilot pressure

Note) Impact resistance: No malfunction from test using drop impact tester, to axis and right angle directions of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)

Vibration resistance: No malfunction from test with 8.3 to 2000 Hz 1 sweep, to axis and right angle directions of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)

Model

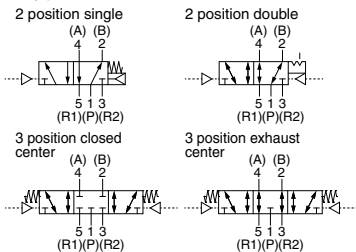
Valve model	Type of actuation	Port size	Flow rate characteristics						Pilot port size	Pilot port piping location	
			1→4/2(P→A/B)			4/2→5/3(A/B→EA/EB)					
			C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv			
Body ported VZA2121-M5 VZA2221-M5 VZA2321-M5 VZA2421-M5	2 position	M5 x 0.8	Single	0.60	0.43	0.15	0.59	0.30	0.15	M5 x 0.8	Body side
			Double	0.60	0.43	0.15	0.59	0.30	0.15		
	3 position		Closed center	0.56	0.15	0.13	0.59	0.22	0.14		
			Exhaust center	0.60	0.20	0.15	0.59	0.22	0.14		
Base mounted (With sub-plate)	2 position	Rc 1/8	Single	1.0	0.30	0.25	0.90	0.25	0.21	M5 x 0.8	Sub-plate side
			Double	1.0	0.30	0.25	0.90	0.25	0.21		Body side
	3 position		Closed center	0.90	0.25	0.21	0.71	0.30	0.19		Sub-plate side
			Exhaust center	0.90	0.25	0.21	0.71	0.30	0.19		Body side
				0.90	0.25	0.21	0.71	0.30	0.19		Sub-plate side
			0.90	0.25	0.21	0.71	0.30	0.19	Body side		

Note) Model number for base mounted type without sub-plate is VZA2□41- $\frac{1}{2}$.

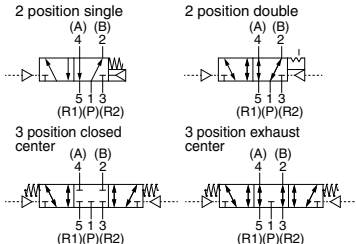
Compatibility with universal porting is possible except for with the single type.

Symbol

Body ported



Base mounted



* To order valves and blanking plate assembly mounted onto the manifold, list valves and blank plate assembly with manifold base part number.

<Example: Body ported>
VV5ZA2-20-051..... 1 pc.
 VZA2121-M5..... 1 pc.
 VZA2221-M5..... 3 pcs.
 VVZ2000-31A-2..... 1 pc.

<Example: Base mounted>
VV5ZA2-50-051-01..... 1 pc.
 VZA2141-2..... 1 pc.
 VZA2241-2..... 3 pcs.
 VVZ2000-31A-3..... 1 pc.

Sub-plate Assembly Part No.: VZA2000-S-01

* Mounting bolt and gasket are not included.

Thread type

	Nll	Rc
N	NPT	
T	NPTF	
F	G	

⚠ Caution

Be sure to read this before handling the products.
 Refer to page 8 for safety instructions and pages 9 to 15 for 3/4" 5 port solenoid valve precautions.

How to Order Manifold

VV5ZA2-50-05 1-01

VZA2000 Series
Manifold

Manifold specifications
(P, EA, EB port size)

Symbol	Piping type	P, EA, EB port size
20	Body ported	Rc1/8
50	Base mounted	

Stations

02	2 Stations
⋮	⋮
10	10 Stations

Thread type

Nil	Rc
N	NPT
T	NPTF
F	G

Cylinder port size on the base

Nil	Body ported 20 type
M5	M5 x 0.8
01	Rc1/8
C4	Built-in ø4 One-touch fitting
C6	Built-in ø6 One-touch fitting

Combination symbol (port specifications)

1	P, EA, EB common/side ported
---	------------------------------

How to Order Valve

VZA2 1 4 1-2

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center

Body type

2	Body ported
4	Base mounted

Pilot port piping type

Symbol	Body ported	Base mounted
Nil	Body side	—
1	—	Sub-plate side (Not available for manifolds)
2	—	Body side

Option

F	With foot bracket
---	-------------------

(Note) Only VZA2121-M5(single) applicable.

Thread type

Nil	Rc, M5
N	NPT
T	NPTF
F	G

Port size

Symbol	Body ported	Base mounted
Nil	—	Without sub-plate
M5	M5 x 0.8	—
01	—	1/8

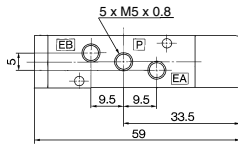
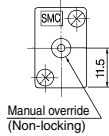
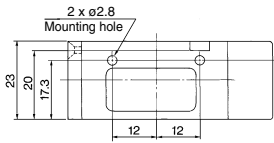
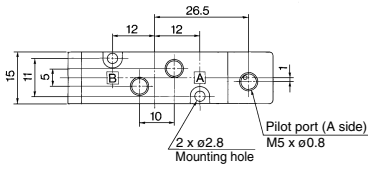
With Bracket

VZA2000	Air operated valve model	VZA2121-M5-F
	Bracket assembly part no.	VZ2000-37A-2

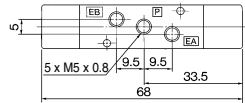
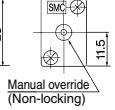
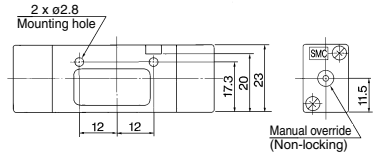
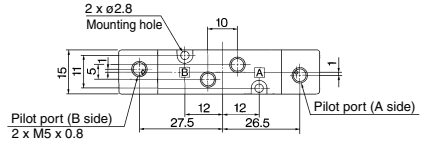
VZA2000 Series

Dimensions: Body Ported

2 position single: VZA2121-M5

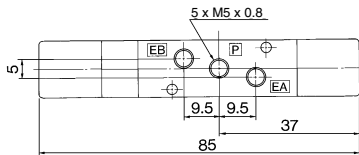
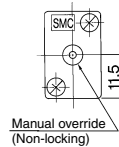
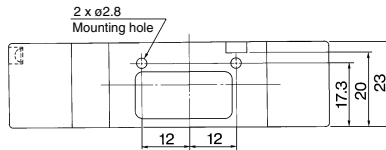
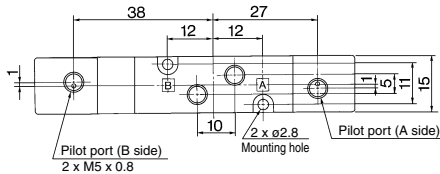


2 position double: VZA2221-M5



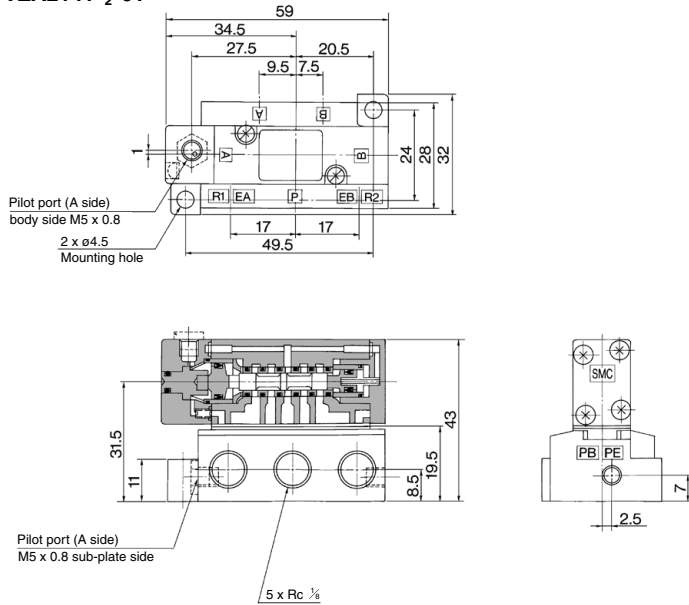
3 position closed center: VZA2321-M5

3 position exhaust center: VZA2421-M5

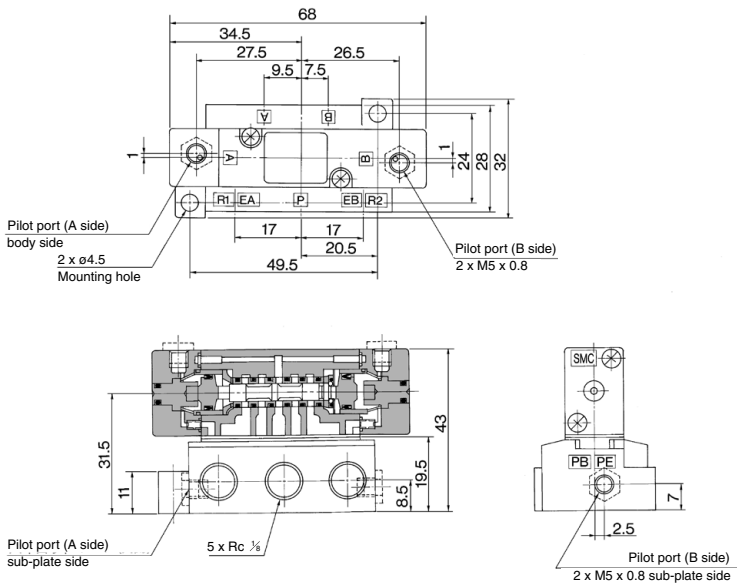


Dimensions: Base Mounted

2 position single: VZA2141- $\frac{1}{2}$ -01



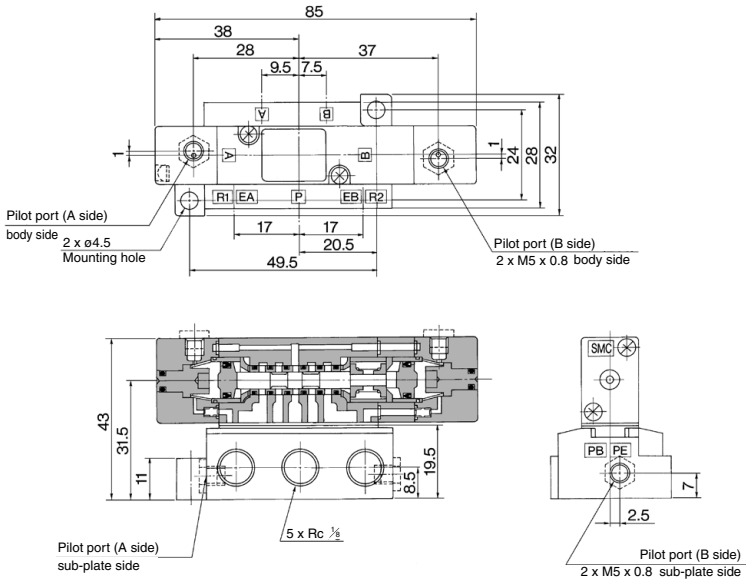
2 position double: VZA2241- $\frac{1}{2}$ -01



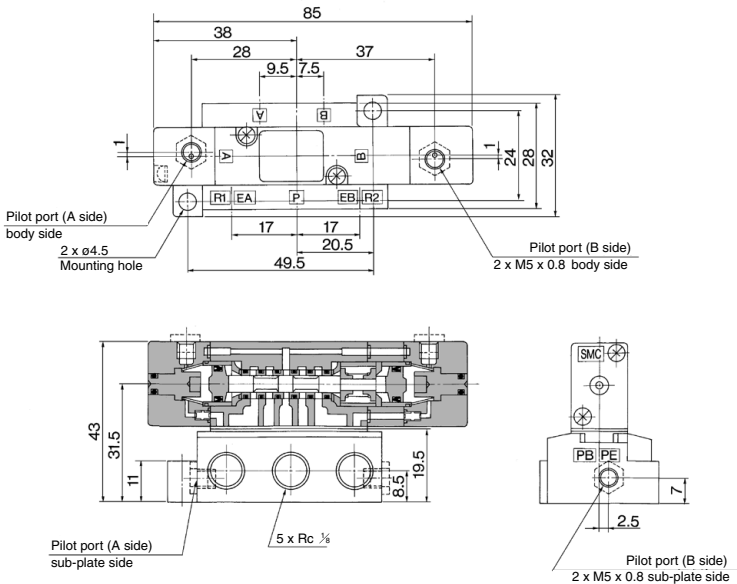
VZA2000 Series

Dimensions: Base Mounted

3 position closed center: VZA2341- $\frac{1}{2}$ -01



3 position exhaust center: VZA2441- $\frac{1}{2}$ -01



5 Port Air Operated Valve

VZA4000 Series



Base mounted

Body ported

Specifications

Fluid	Air	
Operating pressure range (MPa)	VZA4121, 4141	0.15 to 1.0
	VZA4 $\frac{3}{4}$ 21, 4 $\frac{3}{4}$ 41	0 to 1.0
Pilot pressure range (MPa)	VZA4121, 4141	0.15 to 1.0
	VZA4 $\frac{3}{4}$ 21, 4 $\frac{3}{4}$ 41	0.1 to 1.0
Ambient and fluid temperature (°C)	-10 to 60 (No freezing.)	
Impact/Vibration resistance (m/s ²) ^{Note)}	150/50	

Operating pressure ≤ Pilot pressure

Note) Impact resistance: No malfunction from test using drop impact tester, to axis and right angle directions of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)

Vibration resistance: No malfunction from test with 8.3 to 2000 Hz 1 sweep, to axis and right angle directions of main valve, each one time when pilot signal ON and OFF. (Value in the initial stage)

Model

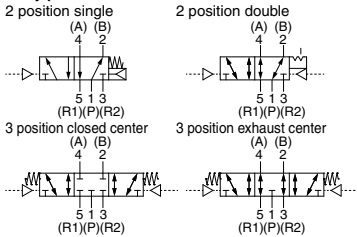
Valve model	Type of actuation		Port size Rc	Flow rate characteristics ⁽²⁾						Pilot port size	Pilot port piping location
				1→4/2(P→A/B)			4/2→5/3(A/B→EA/EB)				
				C [dm ³ /(s·bar)]	b	Cv	C [dm ³ /(s·bar)]	b	Cv		
Body ported	2 position	Single	1/8	2.0	0.14	0.49	1.7	0.25	0.44	M5 x 0.8	Body side
		Double		2.0	0.14	0.49	1.7	0.25	0.44		
	3 position	Closed center		1.9	0.15	0.47	1.7	0.25	0.44		
		Exhaust center		1.9	0.15	0.47	1.7	0.25	0.44		
Base mounted (With sub-plate)	2 position	Single	1/8	2.4	0.23	0.56	2.2	0.19	0.54	M5 x 0.8	Sub-plate side
			1/4	2.4	0.23	0.56	2.2	0.19	0.54		Body side
			1/8	2.4	0.23	0.56	2.2	0.19	0.54		Sub-plate side
			1/4	2.4	0.23	0.56	2.2	0.19	0.54		Body side
		Double	1/8	2.4	0.23	0.56	2.2	0.19	0.54		Sub-plate side
			1/4	2.4	0.23	0.56	2.2	0.19	0.54		Body side
			1/8	2.3	0.19	0.54	2.3	0.21	0.54		Sub-plate side
			1/4	2.3	0.19	0.54	2.3	0.21	0.54		Body side
	3 position	Closed center	1/8	2.3	0.21	0.52	2.2	0.22	0.52	Sub-plate side	
			1/4	2.3	0.21	0.52	2.2	0.22	0.52	Body side	
			1/8	2.3	0.21	0.52	2.2	0.22	0.52	Sub-plate side	
			1/4	2.3	0.21	0.52	2.2	0.22	0.52	Body side	

Compatibility with universal porting is possible except for with the single type.

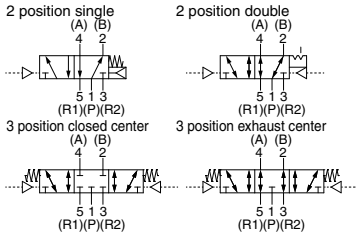
Note 1) Model number for base mounted type without sub-plate is VZA4□41-1.
Note 2) Value at the maximum port size

Symbol

Body ported



Base mounted



* To order valves and blanking plate assembly mounted onto the manifold, list valves and blanking plate assembly with manifold base part number.

<Example: Body ported>

VV5ZA4-20-081.....1 pc. VV5ZA4-50-081-02.....1 pc.
VZA4121-01.....4 pcs. VZA4141-2.....4 pcs.
VZA4221-01.....3 pcs. VZA4241-2.....3 pcs.
VVZ4000-31A-1.....1 pc. VVZ4000-31A-2.....1 pc.

Sub-plate Assembly Part No.: VZA4000-S-⁰¹₀₂□

* Mounting bolt and gasket are not included.

Thread type

NH	Rc
N	NPT
T	NPTF
F	G

Caution

Be sure to read this before handling the products.
Refer to page 8 for safety instructions and pages 9 to 15 for 3/4/5 port solenoid valve precautions.

VZA4000 Series

How to Order Manifold

VV5ZA4-50-08 1-02

VZA4000 Series
Manifold

Manifold specifications
(P, EA, EB port size)

Symbol	Piping type	P, EA, EB port size
20	Body ported	Rc1/4
50	Base mounted	

Stations

02	2 Stations
⋮	⋮
10	10 Stations

Thread type

Nil	Rc
N	NPT
T	NPTF
F	G

Cylinder port size on the base

Nil	Body ported 20 type
01	Rc1/8
02	Rc1/4
C6	Built-in ø6 One-touch fitting
C8	Built-in ø8 One-touch fitting

Combination symbol (port specifications)

1	P, EA, EB common/side ported
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How to Order Valve

VZA4 1 4 1-2

Type of actuation

1	2 position single
2	2 position double
3	3 position closed center
4	3 position exhaust center

Body type

2	Body ported
4	Base mounted

Pilot port piping type

Symbol	Body ported	Base mounted
Nil	Body side	—
1	—	Sub-plate side (Not available for manifolds)
2	—	Body side

Option

F	With foot bracket
---	-------------------

(Note) Only VZA4121-01 (single) applicable.

Thread type

Nil	Rc
N	NPT
T	NPTF
F	G

Port size

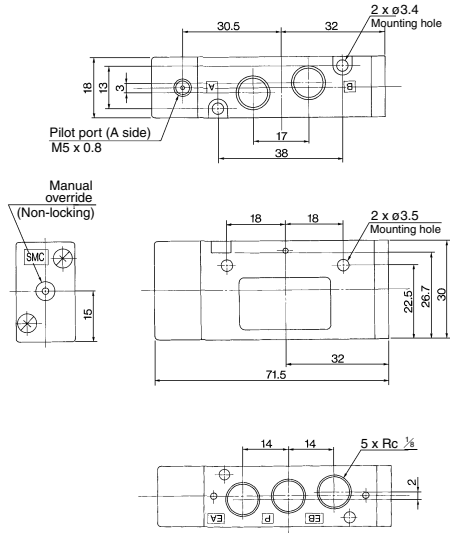
Symbol	Body ported	Base mounted
Nil	—	Without sub-plate
01	1/8	1/8
02	—	1/4

With Bracket

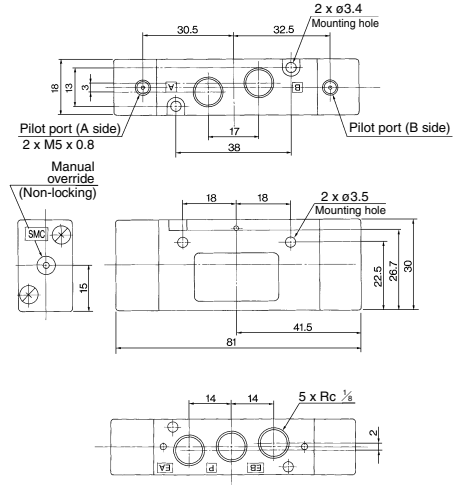
VZA4000	Air operated valve model	VZA4121-01-F
	Bracket assembly part no.	VZ4000-22A

Dimensions: Body Ported

2 position single: VZA4121-01

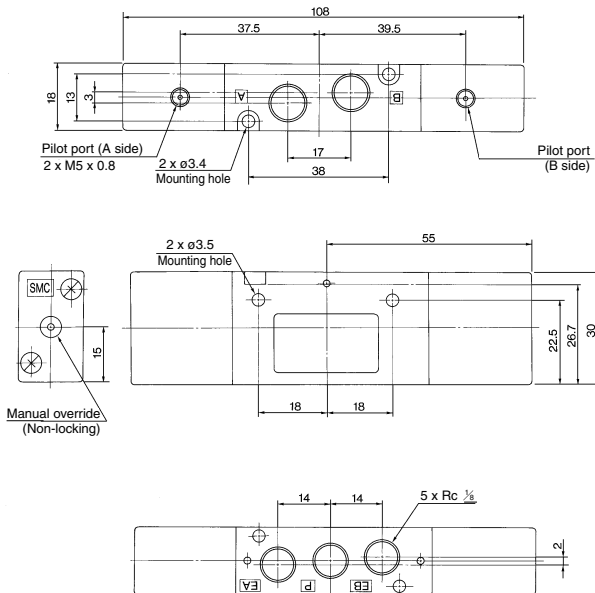


2 position double: VZA4221-01



3 position closed center: VZA4321-01

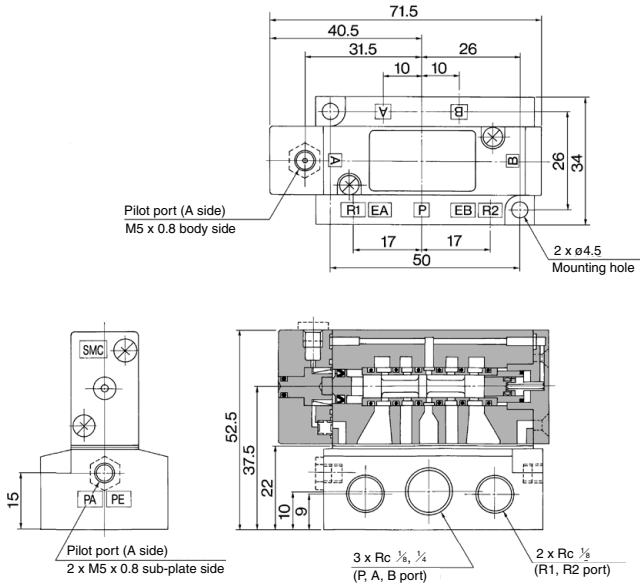
3 position exhaust center: VZA4421-01



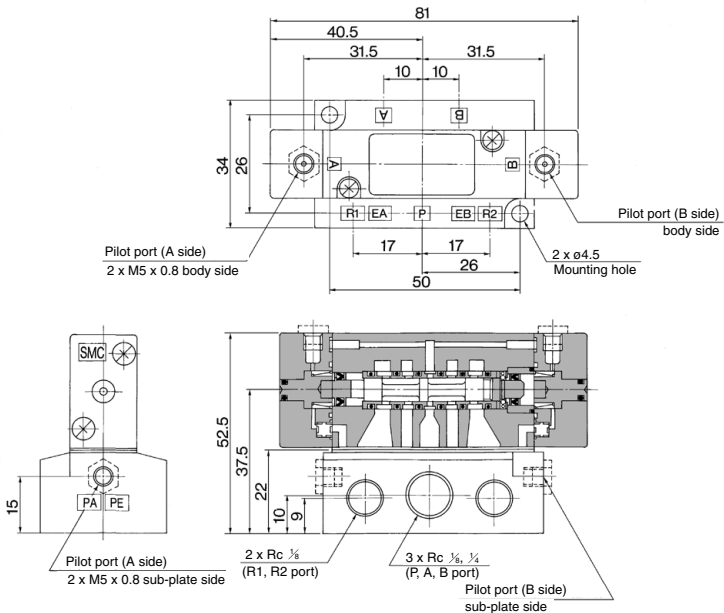
VZA4000 Series

Dimensions: Base Mounted

2 position single: VZA4141-□-01 02

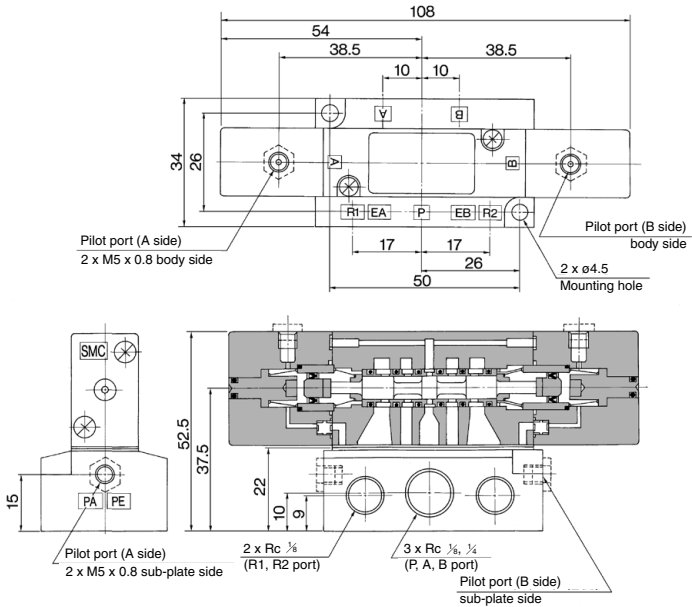


2 position double: VZA4241-□-01 02



Dimensions: Base Mounted

3 position closed center: VZA4341-□-01/02



3 position exhaust center: VZA4441-□-01/02

