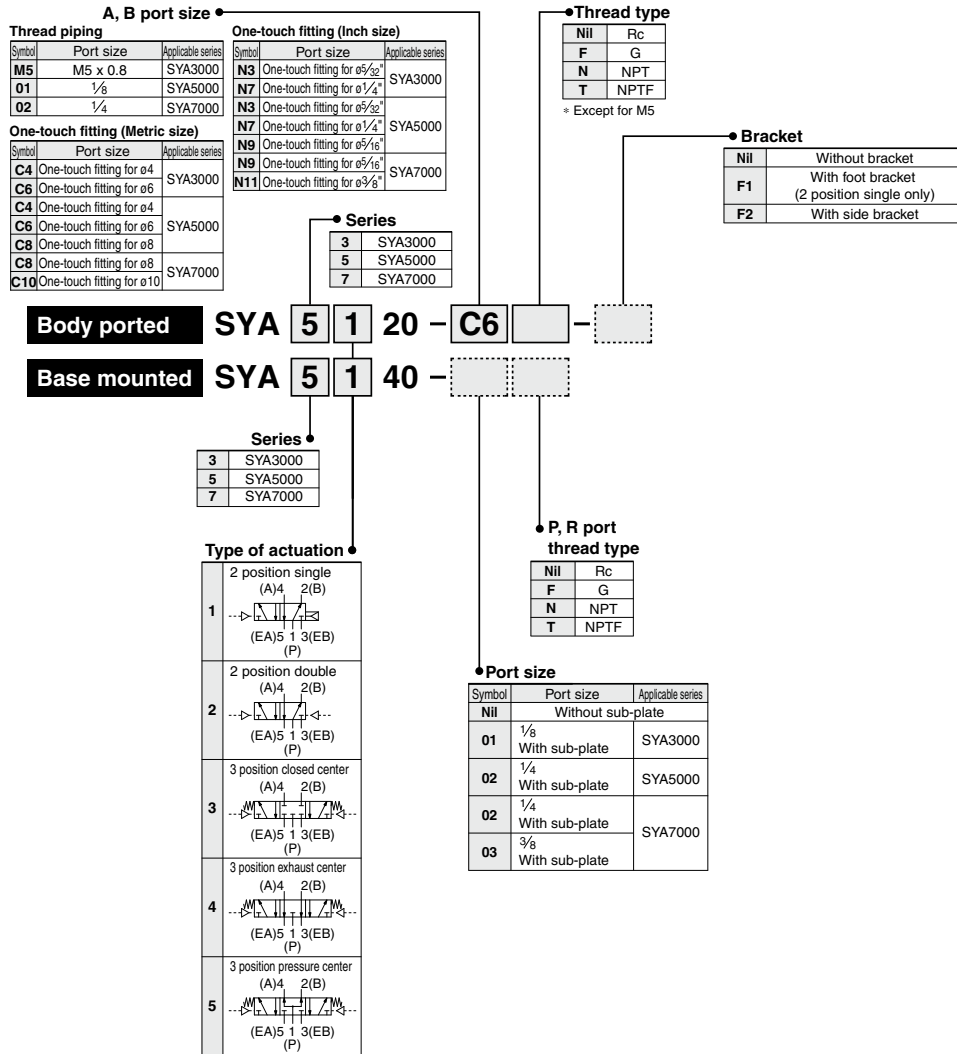


5 Port Air Operated Valve

Series SYA3000/5000/7000

How to Order



5 Port Air Operated Valve *Series SYA3000/5000/7000*

Specifications

Fluid		Air
Operating pressure range MPa	2 position single	0.15 to 0.7
	2 position double	-100 kPa to 0.7
	3 position	-100 kPa to 0.7
Pilot pressure range ^{Note 1)} MPa	2 position single	$(0.7 \times P + 0.1)$ to $0.7 P$: Operating pressure range
	2 position double	0.1 to 0.7
	3 position	0.2 to 0.7
Ambient and fluid temperature (°C)		-10 to 60 (No freezing.)
Manual override (Manual operation)		Non-locking push type
Lubrication		Not required
Mounting orientation		Unrestricted
Impact/Vibration resistance (m/s ²) ^{Note 2)}		150/30

Note 1) In case of single type, be certain that pressure within operating pressure range be supplied to supply port, because return pressure is introduced from supply port (1(P)) for activation.

Note 2) Impact 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, when pilot signal is ON and OFF. (Value in the initial state)

Vibration resistance: No malfunction occurred in one sweep test between 45 and 2000 Hz. Test was performed to axis and right angle directions of the main valve and armature when pilot signal is ON and OFF. (Value in the initial state)

⚠ Caution

Be sure to read before handling. Refer to front matter 53 for Safety Instructions and pages 3 to 8 for 3/4/5 Port Solenoid Valve Precautions.

How to Order Manifold Base

Same manifolds as series SY (Non plug-in style) are prepared.
(For 20, 41, 42 and 45 Types)

SS5YA³₅⁷ — Fill the same as SS5Y³₅⁷.
(Refer to pages 324, 376 and 422.)

* Specify the part numbers for valves and options together beneath the manifold base part number.

<Example>

SS5YA5-42-03-02 1 set (Type 42, 3 station manifold base part no.)

* SYA5140 1 set (Single air operated valve part no.)

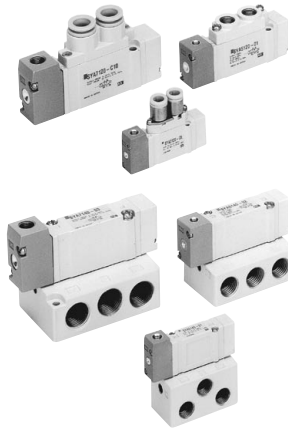
* SYA5240 1 set (Double air operated valve part no.)

* SY5000-26-20A 1 set (Blanking plate assembly part no.)

⊣ The asterisk denotes the symbol for assembly.

Prefix it to the part nos. of the solenoid valve, etc.

Note) When single body ported air operated valves are ordered, manifold mounting screws and gaskets are not included. Order them separately if necessary.
(For details, refer to pages 353 and 416.)



SYA

SYJA

VZA

VFA

VFRA

VPA4

VSA4

SYJA

VZA

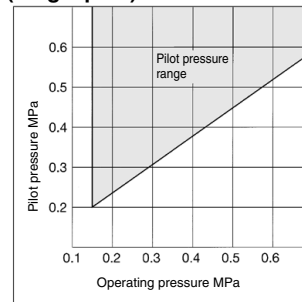
VTA

VGA

VPA

VPA3

Pilot Pressure Range (Single pilot)



Series SYA3000/5000/7000

Flow Characteristics/Weight

Model/Series SYA3□20 (Body ported)

Valve model	Type of actuation		Pilot port size	Port size		Flow characteristics						Weight (g)				
						1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)							
						P, EA, EB	A, B	Cv	C [dm ³ /(s·bar)]	b	Cv		C [dm ³ /(s·bar)]	b	Cv	
SYA3□20-M5	2 position	Single	M5 x 0.8	M5 x 0.8	M5 x 0.8	C4 (One-touch fitting for ø4)	0.61	0.44	0.16	0.64	0.45	0.18	35			
		Double					0.48	0.46	0.13	0.47	0.43	0.13	37			
	3 position	Exhaust center					0.47	0.42	0.13	0.47 [0.44]	0.41 [0.37]	0.13 [0.12]	39			
		Pressure center					0.50 [0.41]	0.48 [0.35]	0.15 [0.11]	0.47	0.43	0.13				
SYA3□20-C4	2 position	Single					M5 x 0.8	M5 x 0.8	C4 (One-touch fitting for ø4)	0.72	0.29	0.18	0.64	0.34	0.17	44
		Double								0.59	0.28	0.15	0.59	0.30	0.15	46
	3 position	Exhaust center								0.63	0.35	0.16	0.42 [0.41]	0.34 [0.37]	0.11 [0.11]	48
		Pressure center								0.76 [0.46]	0.42 [0.34]	0.21 [0.12]	0.59	0.29	0.15	
SYA3□20-C6	2 position	Single	M5 x 0.8	M5 x 0.8	C6 (One-touch fitting for ø6)	0.76				0.30	0.19	0.65	0.39	0.17	40	
		Double				0.76				0.55	0.24	0.60	0.33	0.16	42	
	3 position	Exhaust center				0.65				0.32	0.16	0.64 [0.42]	0.31 [0.36]	0.17 [0.11]	44	
		Pressure center				0.77 [0.49]				0.34 [0.43]	0.21 [0.15]	0.61	0.34	0.16		

Note) [] : denotes normal position.

Model/Series SYA3□40 (Base mounted)

Valve model	Type of actuation		Pilot port size	Port size	Flow characteristics ^{Note 1)}						Weight ^{Note 2)} (g)
					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	
SYA3□40-01□	2 position	Single	M5 x 0.8	1/8	1.0	0.30	0.24	1.1	0.30	0.26	69 (34)
		Double			0.77	0.28	0.18	0.85	0.30	0.19	71 (36)
	3 position	Exhaust center			0.73	0.31	0.18	1.1 [0.55]	0.26 [0.52]	0.24 [0.16]	73 (38)
		Pressure center			1.2 [0.51]	0.24 [0.45]	0.29 [0.14]	0.89	0.47	0.24	

Note 1) [] : denotes normal position.

Note 2) () : Without sub-plate.

5 Port Air Operated Valve *Series SYA3000/5000/7000*

Flow Characteristics/Weight

Model/Series SYA5□20 (Body ported)

Valve model	Type of actuation		Pilot port size	Port size		Flow characteristics						Weight (g)
						1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			
						P	EA, EB	A, B	C [dm ³ /(s·bar)]	b	Cv	
SYA5□20-01□	2 position	Single	M5 x 0.8	1/8	1/8	1.9	0.35	0.49	2.4	0.39	0.61	58
		Double				1.7	0.43	0.45	1.8	0.35	0.46	64
	3 position	Closed center				1.5	0.44	0.41	2.5 [1.5]	0.32 [0.43]	0.59 [0.40]	69
		Exhaust center				2.2 [0.91]	0.46 [0.58]	0.61 [0.28]	1.8	0.38	0.46	69
SYA5□20-C4	2 position	Single	M5 x 0.8	1/8	C4 (One-touch fitting for ø4)	0.75	0.43	0.20	0.85	0.64	0.30	82
		Double				0.74	0.40	0.19	0.84	0.57	0.28	87
	3 position	Closed center				0.75	0.36	0.19	0.84 [0.84]	0.64 [0.53]	0.30 [0.27]	93
		Exhaust center				0.78 [0.71]	0.44 [0.37]	0.21 [0.18]	0.84	0.57	0.27	93
SYA5□20-C6	2 position	Single	M5 x 0.8	1/8	C6 (One-touch fitting for ø6)	1.5	0.33	0.33	2.0	0.37	0.52	76
		Double				1.3	0.31	0.33	1.6	0.32	0.39	82
	3 position	Closed center				1.3	0.33	0.33	1.8 [1.4]	0.35 [0.37]	0.44 [0.35]	87
		Exhaust center				1.7 [0.80]	0.31 [0.47]	0.42 [0.23]	1.7	0.33	0.44	87
SYA5□20-C8	2 position	Single	M5 x 0.8	1/8	C8 (One-touch fitting for ø8)	1.9	0.21	0.45	2.3	0.29	0.57	68
		Double				1.6	0.29	0.39	1.7	0.38	0.46	74
	3 position	Closed center				1.4	0.38	0.39	2.0 [1.5]	0.37 [0.40]	0.52 [0.43]	79
		Exhaust center				2.2 [1.6]	0.32 [0.44]	0.56 [0.44]	1.8	0.41	0.50	79

Note) [] : denotes normal position.

SYA
SYJA
VZA
VFA
VFRA
VPA4
VSA4
SYJA
VZA
VTA
VGA
VPA
VPA3

Model/Series SYA5□40 (Base mounted)

Valve model	Type of actuation		Pilot port size	Port size		Flow characteristics ^{Note 1)}						Weight ^{Note 2)} (g)
						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	
SYA5□40-02□	2 position	Single	M5 x 0.8	1/4	2.4	0.41	0.64	2.8	0.29	0.66	105 (42)	
		Double			1.8	0.47	0.50	1.8	0.40	0.47	110 (47)	
	3 position	Closed center			1.4	0.55	0.44	3.0 [1.2]	0.33 [0.48]	0.72 [0.37]	115 (52)	
		Exhaust center			3.3 [0.84]	0.36 [0.60]	0.85 [0.28]	1.8	0.40	0.48	115 (52)	

Note 1) [] : denotes the normal position.

Note 2) () : denotes without sub-plate.

Model/Series SYA7□20 (Body ported)

Valve model	Type of actuation		Pilot port size	Port size		Flow characteristics						Weight (g)
						1 → 4/2 (P → A/B)			4/2 → 5/3 (A/B → EA/EB)			
						P	EA, EB	A, B	C [dm ³ /(s·bar)]	b	Cv	
SYA7□20-02□	2 position	Single	M5 x 0.8	1/4	1/4	4.1	0.23	0.93	3.3	0.33	0.81	94
		Double				2.9	0.31	0.70	2.4	0.38	0.63	100
	3 position	Closed center				2.5	0.39	0.65	3.4 [2.1]	0.35 [0.38]	0.82 [0.54]	110
		Exhaust center				4.3 [2.4]	0.23 [0.32]	0.97 [0.61]	2.2	0.39	0.58	110
SYA7□20-C8	2 position	Single	M5 x 0.8	1/4	C8 (One-touch fitting for ø8)	3.2	0.26	0.77	3.2	0.37	0.82	100
		Double				2.6	0.24	0.63	2.4	0.31	0.62	106
	3 position	Closed center				2.4	0.25	0.57	2.6 [1.9]	0.42 [0.46]	0.70 [0.56]	116
		Exhaust center				3.3 [2.4]	0.28 [0.22]	0.78 [0.57]	2.2	0.34	0.60	116
SYA7□20-C10	2 position	Single	M5 x 0.8	1/8	C10 (One-touch fitting for ø10)	3.8	0.26	0.86	3.2	0.34	0.82	97
		Double				2.8	0.27	0.67	2.4	0.21	0.59	103
	3 position	Closed center				2.5	0.25	0.59	2.7 [2.0]	0.38 [0.38]	0.70 [0.56]	113
		Exhaust center				3.8 [2.4]	0.25 [0.31]	0.89 [0.61]	2.3	0.38	0.61	113

Note) [] : denotes normal position.

Model/Series SYA7□40 (Base mounted)

Valve model	Type of actuation		Pilot port size	Port size		Flow characteristics ^{Note 1)}						Weight ^{Note 2)} (g)
						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	
SYA7□40-02□	2 position	Single	M5 x 0.8	1/4	4.1	0.41	1.1	4.1	0.29	1.0	202 (73)	
		Double			3.0	0.43	0.80	2.6	0.41	0.72	210 (81)	
	3 position	Closed center			2.6	0.42	0.71	4.7 [1.7]	0.35 [0.48]	1.1 [0.49]	218 (89)	
		Exhaust center			5.3 [2.3]	0.39 [0.49]	1.3 [0.65]	2.2	0.49	0.63	218 (89)	
SYA7□40-03	2 position	Single	M5 x 0.8	3/8	4.9	0.29	1.2	4.5	0.27	1.1	202 (73)	
		Double			3.0	0.40	0.80	2.6	0.45	0.73	210 (81)	
	3 position	Closed center			2.6	0.42	0.71	4.8 [1.7]	0.35 [0.48]	1.1 [0.49]	218 (89)	
		Exhaust center			5.3 [2.3]	0.31 [0.51]	1.3 [0.64]	2.3	0.45	0.66	218 (89)	

Note 1) [] : denotes the normal position.

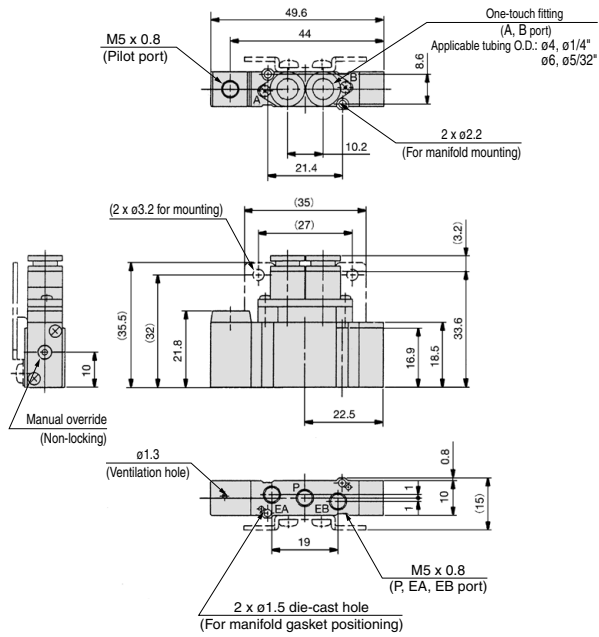
Note 2) () : denotes without sub-plate.



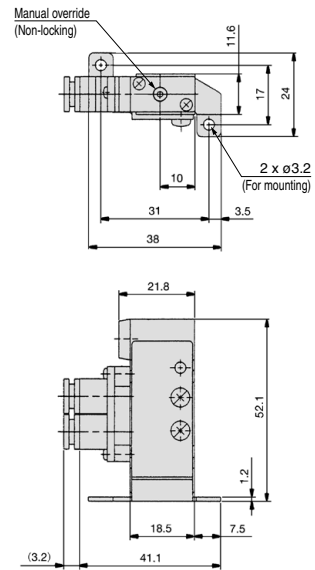
Series SYA3000/5000/7000

Dimensions/Series SYA3000: Body Ported

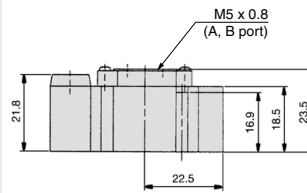
2 position single SYA3120-C4, N3 (-F2) C6, N7



Foot bracket SYA3120-C4, N3 -F1 C6, N7



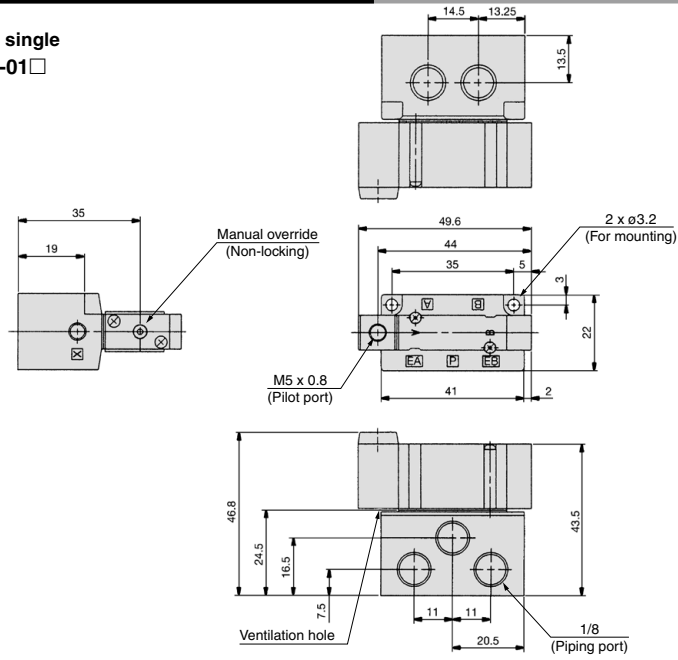
SYA3120-M5



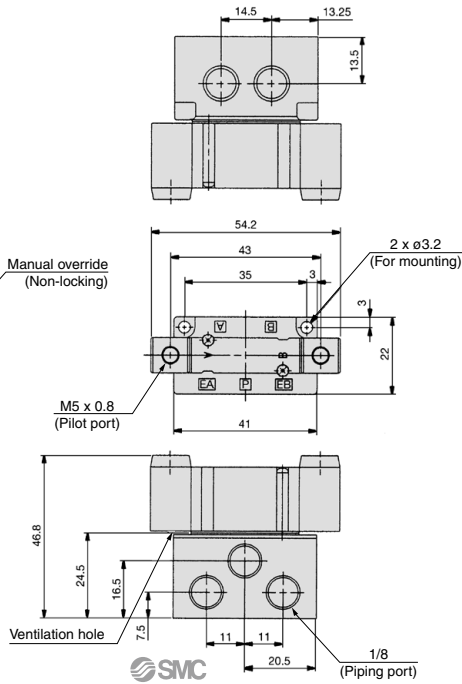
Series SYA3000/5000/7000

Dimensions/Series SYA3000: Base Mounted

2 position single
SYA3140-01□



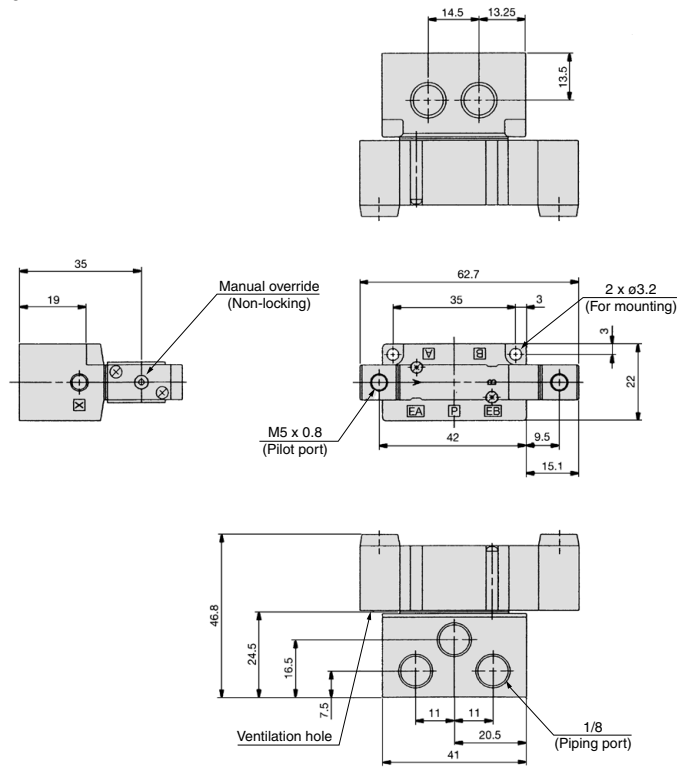
2 position double
SYA3240-01□



5 Port Air Operated Valve *Series SYA3000/5000/7000*

Dimensions/Series SYA3000: Base Mounted

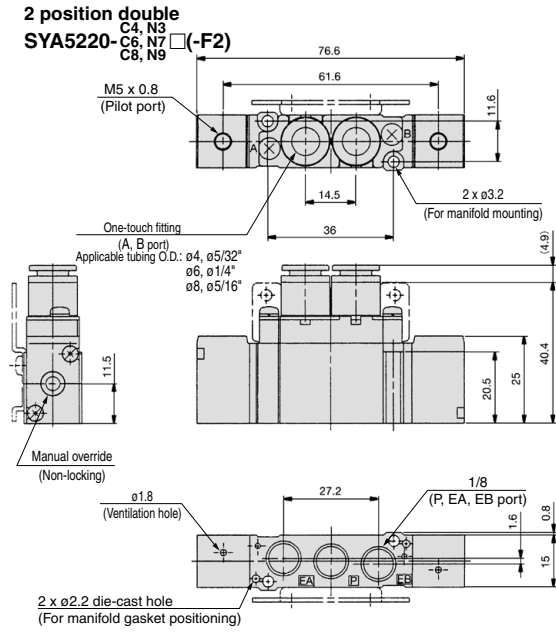
3 position closed center / exhaust center / pressure center
SYA3³₄40-01□



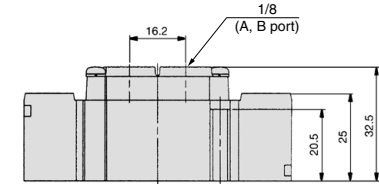
- SYA**
- SYJA
- VZA
- VFA
- VFRA
- VPA4
- VSA4
- SYJA
- VZA
- VTA
- VGA
- VPA
- VPA3

5 Port Air Operated Valve *Series SYA3000/5000/7000*

Dimensions/Series SYA5000: Body Ported



SYA5220-01



SYA

SYJA

VZA

VFA

VFRA

VPA4

VSA4

SYJA

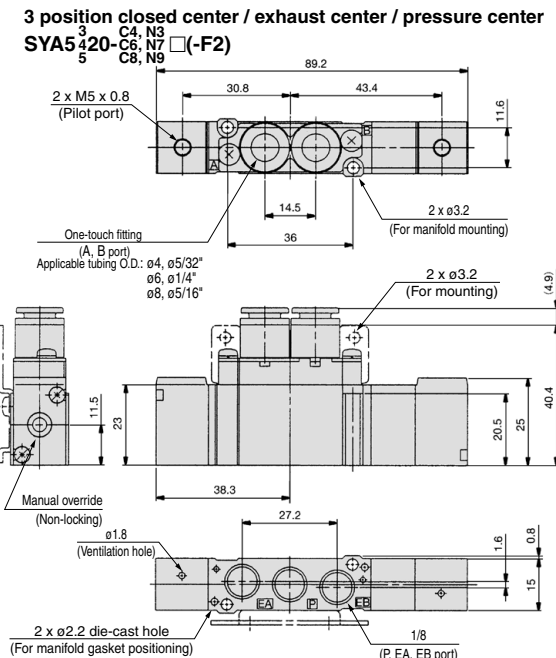
VZA

VTA

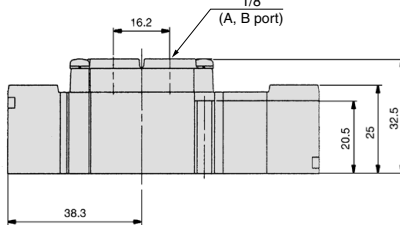
VGA

VPA

VPA3



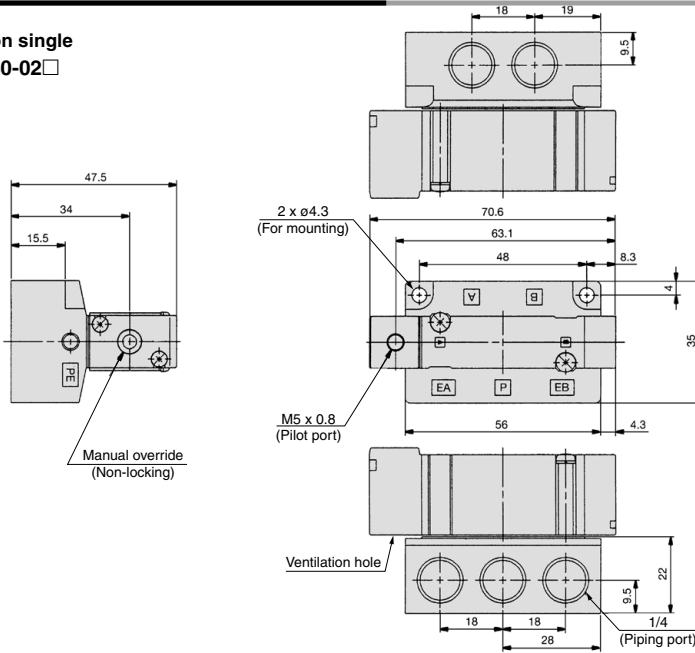
SYA5420-01



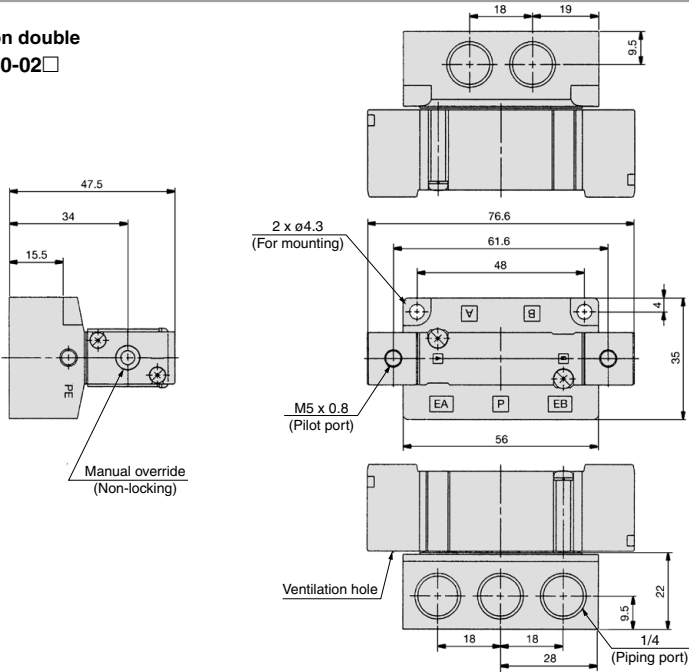
Series SYA3000/5000/7000

Dimensions/Series SYA5000: Base Mounted

2 position single
SYA5140-02□



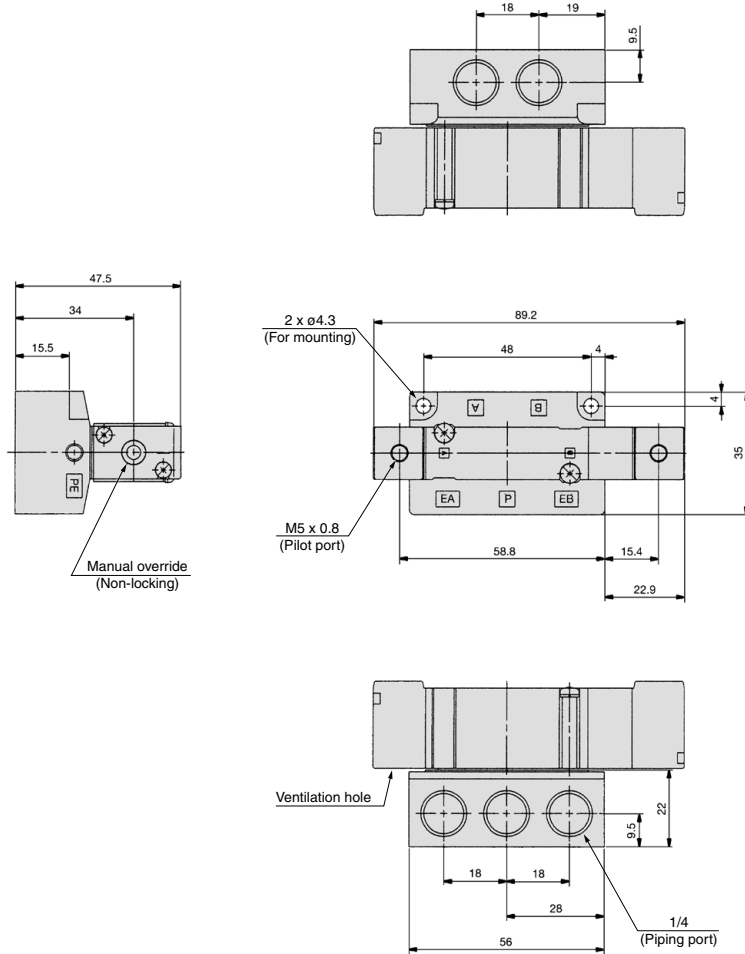
2 position double
SYA5240-02□



5 Port Air Operated Valve *Series SYA3000/5000/7000*

Dimensions/Series SYA5000: Base Mounted

3 position closed center / exhaust center / pressure center
 SYA5³/₅40-02□

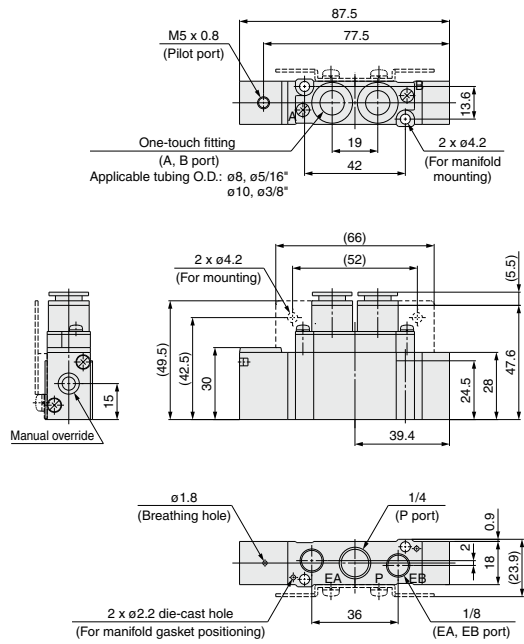


- SYA
- SYJA
- VZA
- VFA
- VFRA
- VPA4
- VSA4
- SYJA
- VZA
- VTA
- VGA
- VPA
- VPA3

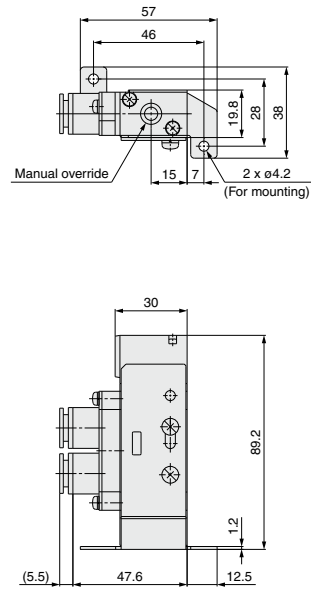
Series SYA3000/5000/7000

Dimensions/Series SYA7000: Body Ported

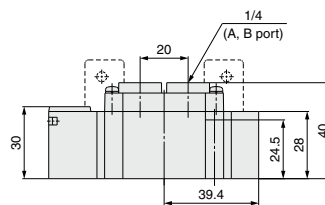
2 position single
SYA7120-^{C8, N9}_{C10, N11}□(-F2)



Foot bracket
SYA7120-^{C8, N9}_{C10, N11}□(-F1)



SYA7120-02□(-F2)

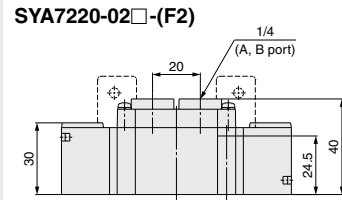
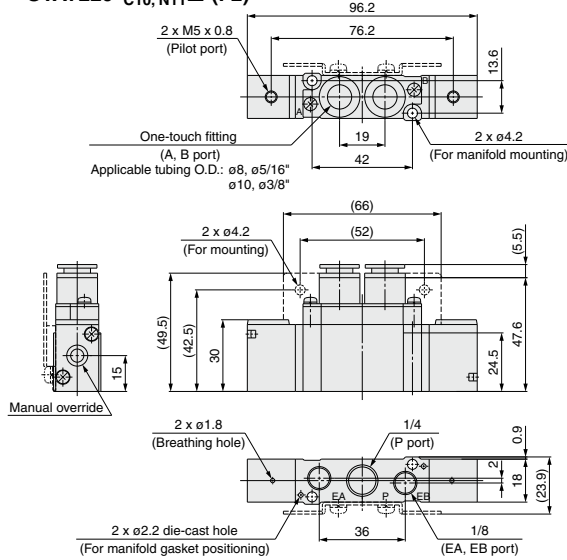


5 Port Air Operated Valve *Series SYA3000/5000/7000*

Dimensions/Series SYA7000: Body Ported

2 position double

SYA7220-^{C8, N9}_{C10, N11}□-(F2)



SYA

SYJA

VZA

VFA

VFRA

VPA4

VSA4

SYJA

VZA

VTA

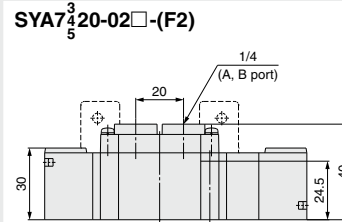
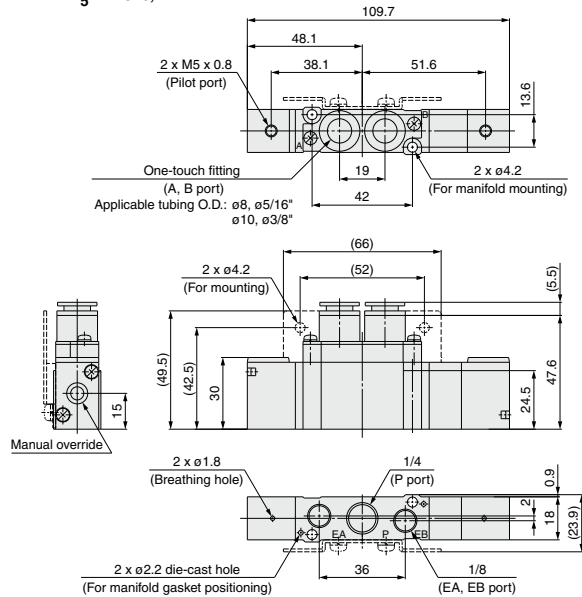
VGA

VPA

VPA3

3 position closed center / exhaust center / pressure center

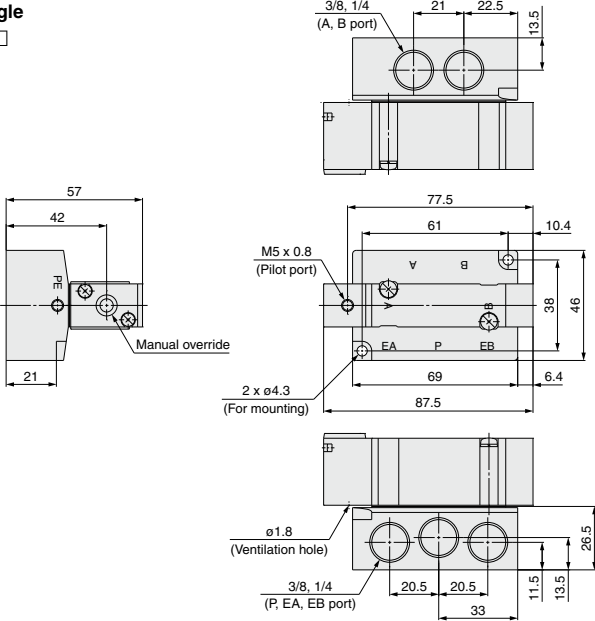
SYA7320-^{C8, N9}_{C10, N11}□-(F2)



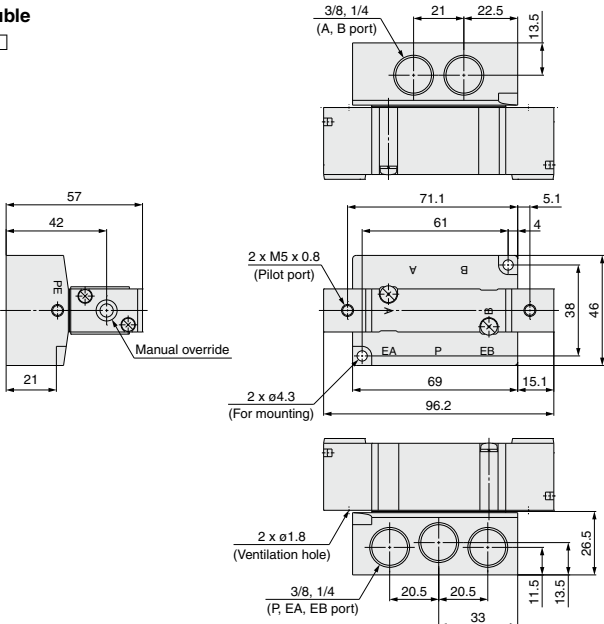
Series SYA3000/5000/7000

Dimensions/Series SYA7000: Base Mounted

2 position single
 SYA7140-⁰²/₀₃ □



2 position double
 SYA7240-⁰²/₀₃ □

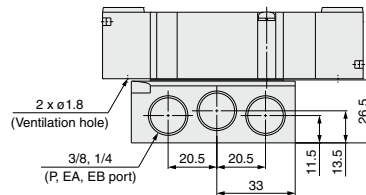
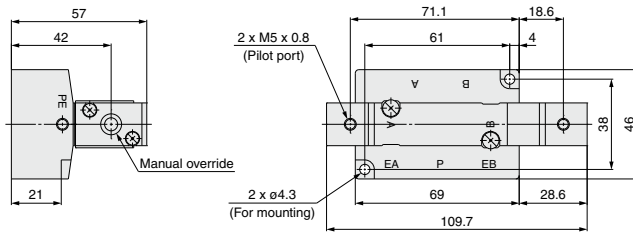
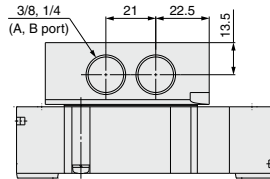


5 Port Air Operated Valve *Series SYA3000/5000/7000*

Dimensions/Series SYA7000: Base Mounted

3 position closed center / exhaust center / pressure center

SYA740-02□
3 5



SYA
SYJA
VZA
VFA
VFRA
VPA4
VSA4
SYJA
VZA
VTA
VGA
VPA
VPA3