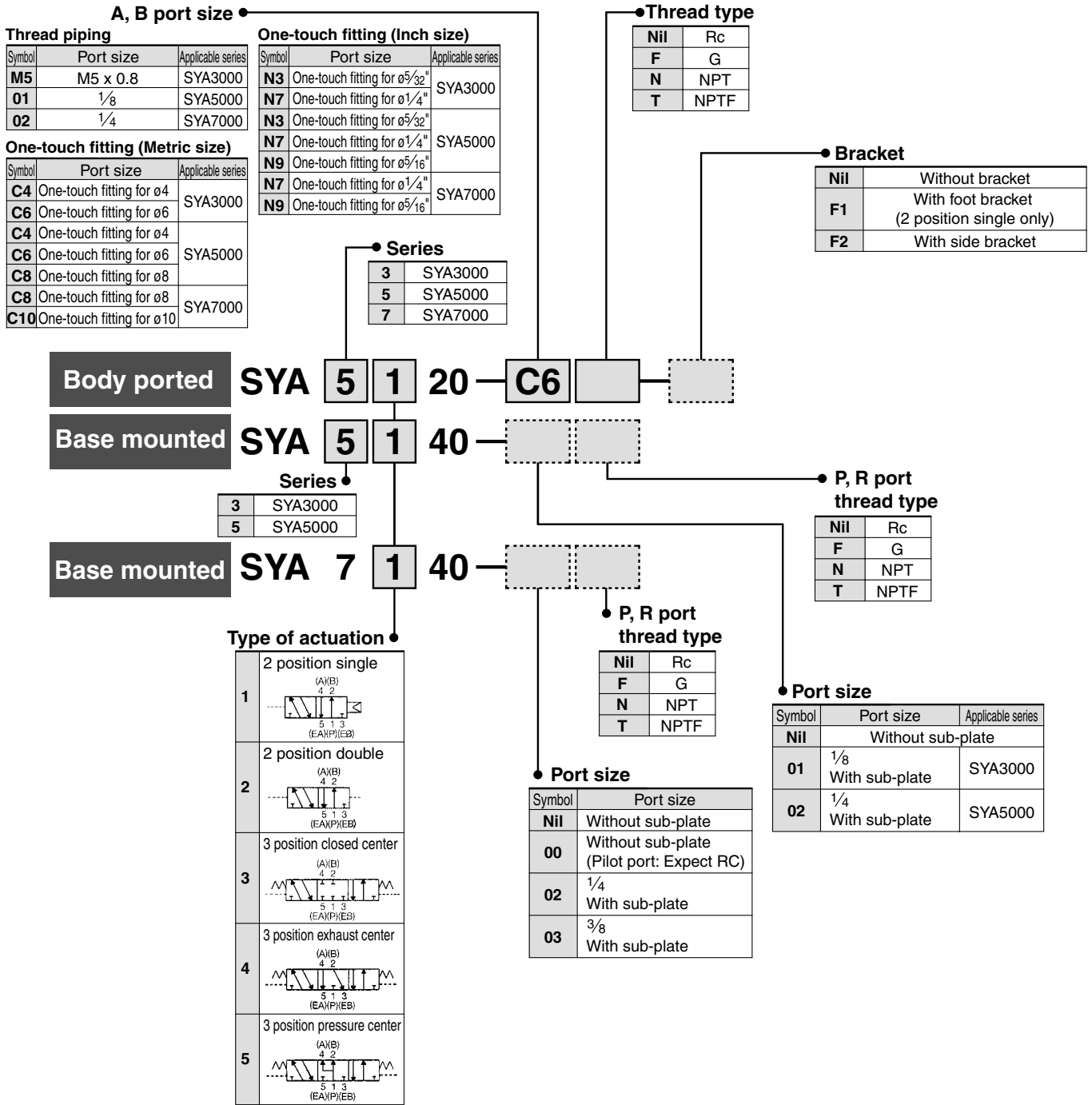


5 Port Air Operated Valve

Series SYA3000/5000/7000

How to Order




- A
- V□A
- A
- V□A
- VM
- VR
- VH
- VHS

Series SYA3000/5000/7000

Specifications

Fluid		Air
Operating pressure range MPa	2 position single	0.15 to 0.7
	2 position double	0.1 to 0.7
	3 position	0.2 to 0.7
Pilot pressure range <small>Note 1)</small> MPa	2 position single	(0.7 x P + 0.1) to 0.7P: Operating pressure range
	2 position double	
	3 position	
Ambient and fluid temperature (°C)		Max. 60
Manual override (Manual operation)		Non-locking push type
Lubrication		Not required
Mounting orientation		Unrestricted
Impact/Vibration resistance (m/s ²) <small>Note 2)</small>		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 8.3 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

For Safety Instructions and Solenoid Valve Precautions, refer to pages 5-11-2 to 5-11-6.

How to Order Manifold Base


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

SS5YA³₅-Fill the same as SS5Y³₅.


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

(Example)

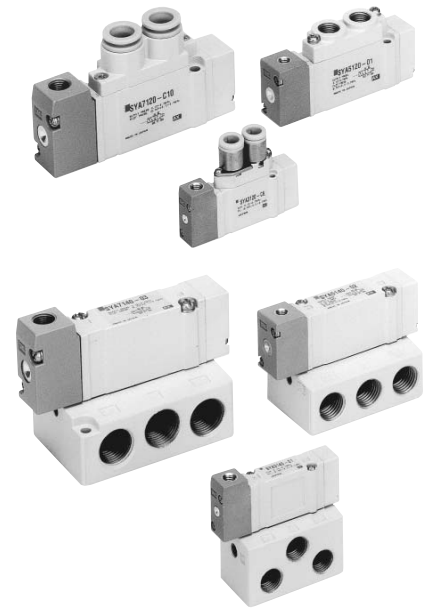
- SS5YA5-42-03-02 1 set (Type 42, 3 station manifold base part no.)
- * SYA5140 1 set (Single air operated valve part no.)
- * SYA5240 1 set (Double air operated valve part no.)
- * SY5000-26-2A 1 set (Blanking plate assembly part no.)

 The asterisk denotes the symbol for assembly.

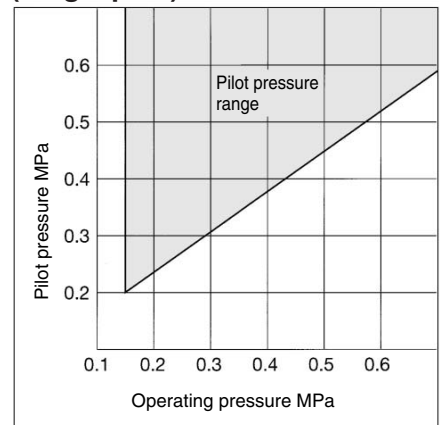
Prefix it to the part nos. of the solenoid valve, etc.

 Note) When single body ported air operated valves are ordered, manifold mounting bolts and gaskets are not included. Order them separately if necessary.

(For details, refer Best Pneumatics Vol. 1.)



Pilot Pressure Range (Single pilot)




5 Port Air Operated Valve Series SYA3000/5000/7000

Flow Characteristics/Weight

Model/Series SYA3□20 (Body ported)


Valve model	Type of actuation		Pilot port size (Nominal 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	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			0.61	0.44	0.16	0.64	0.45	0.18	35					
		Double												37					
	3 position	Closed center						M5 x 0.8	M5 x 0.8	C4 (One-touch fitting for ø4)	0.48	0.46	0.13	0.47	0.43	0.13	39		
		Exhaust center									0.47	0.42	0.13	0.47 (0.44)	0.41 (0.37)	0.13 (0.12)			
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																	46
	3 position	Closed center	M5 x 0.8	M5 x 0.8	C6 (One-touch fitting for ø6)	0.59	0.28						0.15	0.59	0.30	0.15	48		
		Exhaust center				0.63	0.35						0.16	0.42 (0.41)	0.34 (0.37)	0.11 (0.11)			
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																	42
	3 position	Closed center						M5 x 0.8	M5 x 0.8	C6 (One-touch fitting for ø6)	0.76	0.55	0.24	0.60	0.33	0.16	44		
		Exhaust center									0.65	0.32	0.16	0.64(0.42)	0.31 (0.36)	0.17 (0.11)			
Pressure center	0.77 (0.49)	0.34 (0.43)									0.21 (0.15)	0.61	0.34	0.16					

 Note) [] : Denotes normal position.

- S□A
- V□A
- S□A
- V□A
- VM
- VR
- VH
- VHS

Model/Series SYA3□40 (Base mounted)

Valve model	Type of actuation		Pilot port size (Nominal 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												71 (36)						
	3 position	Closed center						M5 x 0.8	1/8					0.77	0.28	0.18	0.85	0.30	0.19	73 (38)
		Exhaust center												0.73	0.31	0.18	1.1 (0.55)	0.26 (0.52)	0.24 (0.16)	
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.

Series SYA3000/5000/7000

Flow Characteristics/Weight

Model/Series SYA5□40 (Body ported)

Valve model	Type of actuation		Pilot port size (Nominal size)	Port size		Flow characteristics ^{Note)}						Weight (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□20-01□	2 position	Single	M5 x 0.8	1/8	Rc 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			
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	
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	
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	

Note) []: Denotes normal position.

Model/Series SYA5□40 (Base mounted)

Valve model	Type of actuation		Pilot port size (Nominal 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	

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 (Nominal size)	Port size		Flow characteristics						Weight (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□20-02□	2 position	Single	1/8	P port: 1/4 EA, EB port: 1/8	1/4	4.1	0.23	0.93	3.3	0.33	0.81	132		
		Double				2.9	0.31	0.70	2.4	0.38	0.63	177		
	3 position	Closed center				2.5	0.39	0.65	3.4 [2.1]	0.35 [0.38]	0.82 [0.54]	186		
		Exhaust center				4.3 [2.4]	0.23 [0.32]	0.97 [0.61]	2.2	0.39	0.58			
SYA7□20-C8	2 position	Single			1/8	P port: 1/4 EA, EB port: 1/8	C8 (One-touch fitting for ø8)	3.2	0.26	0.77	3.2	0.37	0.82	138
		Double						2.6	0.24	0.63	2.4	0.31	0.62	183
	3 position	Closed center						2.4	0.25	0.57	2.6 [1.9]	0.42 [0.46]	0.70 [0.56]	192
		Exhaust center						3.3 [2.4]	0.28 [0.22]	0.78 [0.57]	2.2	0.34	0.60	
SYA7□20-C10	2 position	Single	1/8	P port: 1/4 EA, EB port: 1/8			C10 (One-touch fitting for ø10)	3.8	0.26	0.86	3.2	0.34	0.82	135
		Double						2.8	0.27	0.67	2.4	0.21	0.59	180
	3 position	Closed center						2.5	0.25	0.59	2.7 [2.0]	0.38 [0.38]	0.70 [0.56]	189
		Exhaust center						3.8 [2.4]	0.25 [0.31]	0.89 [0.61]	2.3	0.38	0.61	

Note) []: Denotes normal position.

Model/Series SYA7□40 (Base mounted)

Valve model	Type of actuation		Pilot port size (Nominal 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	1/8	1/4	4.1	0.41	1.1	4.1	0.29	1.0	240 (111)
		Double			3.0	0.43	0.80	2.6	0.41	0.72	286 (157)
	3 position	Closed center			2.6	0.42	0.71	4.7 [1.7]	0.35 [0.48]	1.1 [0.49]	294 (165)
		Exhaust center			5.3 [2.3]	0.39 [0.49]	1.3 [0.65]	2.2	0.49	0.63	
SYA7□40-03	2 position	Single	1/8	3/8	4.9	0.29	1.2	4.5	0.27	1.1	240 (111)
		Double			3.0	0.40	0.80	2.6	0.45	0.73	286 (157)
	3 position	Closed center			7.2	0.34	1.7	13 [4.0]	0.23 [0.41]	2.8 [0.95]	294 (165)
		Exhaust center			5.3 [2.3]	0.31 [0.51]	1.3 [0.64]	2.3	0.45	0.66	

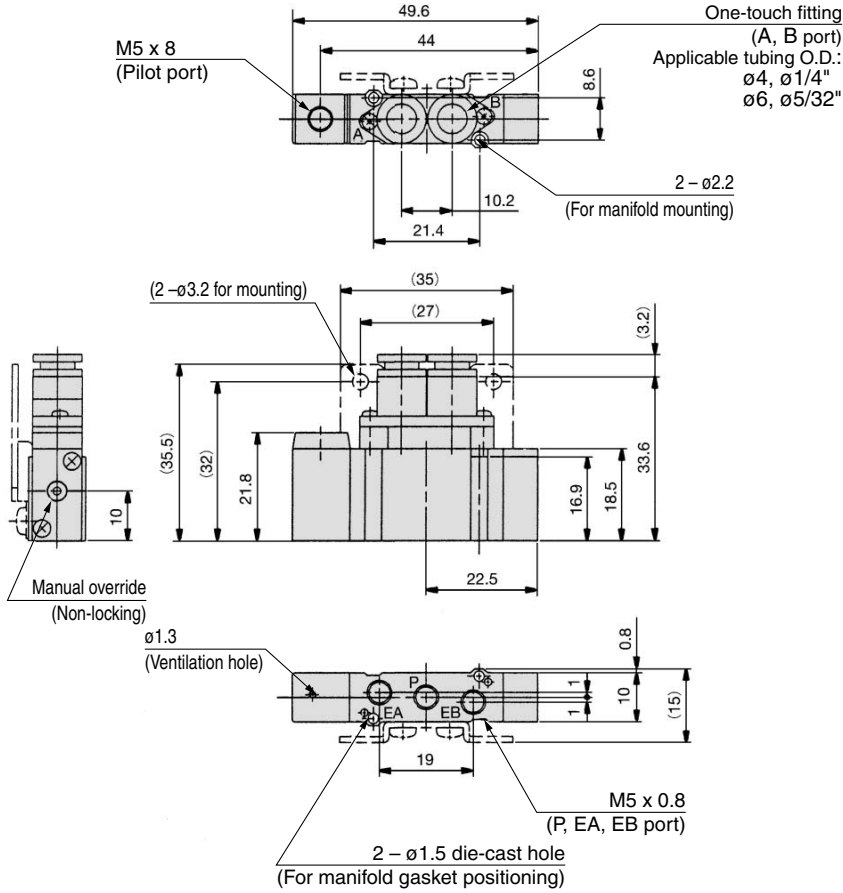
Note 1) []: Denotes the normal position.
Note 2) (): Denotes without sub-plate.

5 Port Air Operated Valve Series SYA3000/5000/7000

Series SYA3000: Body Ported

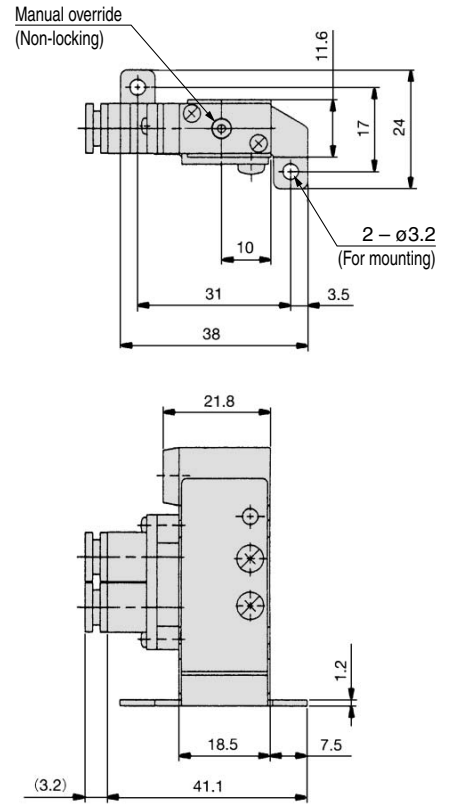
2 position single

SYA3120-C4, N3 (-F2)
C6, N7



Foot bracket

SYA3120-C4, N3 -F1
C6, N7



S□A

V□A

S□A

V□A

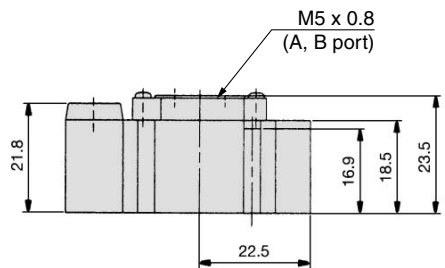
VM

VR

VH

VHS

SYA3120-M5

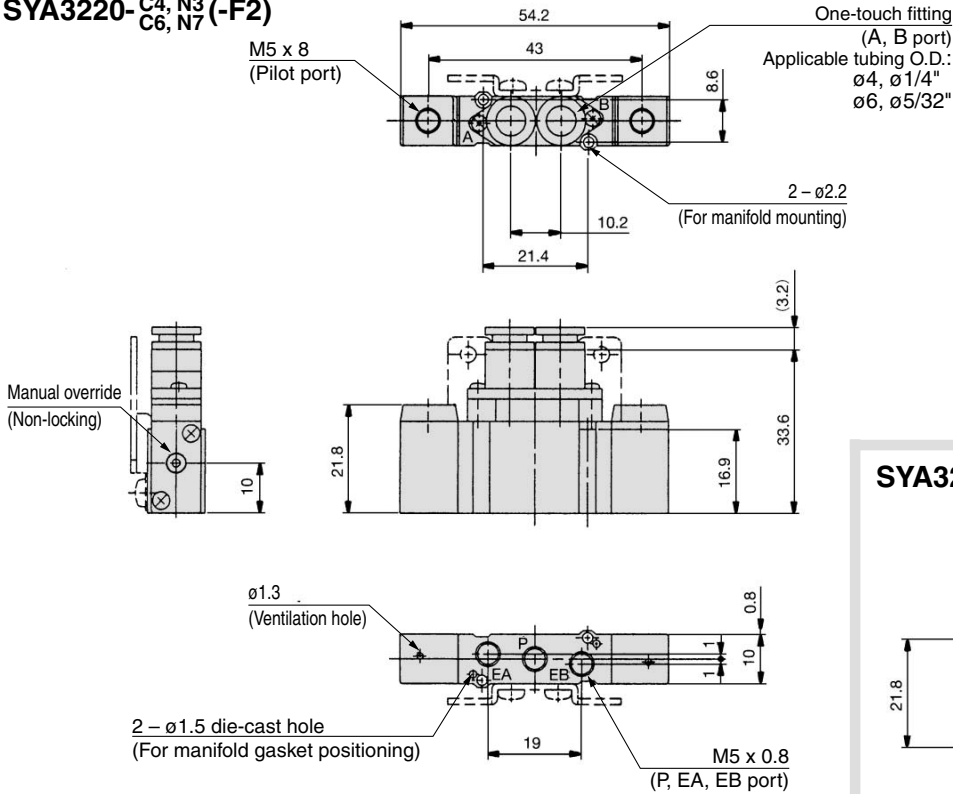


Series SYA3000/5000/7000

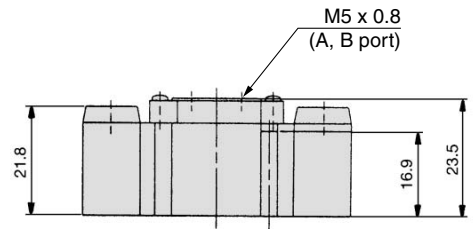
Series SYA3000: Body Ported

2 position double

SYA3220-C4, N3
C6, N7 (-F2)

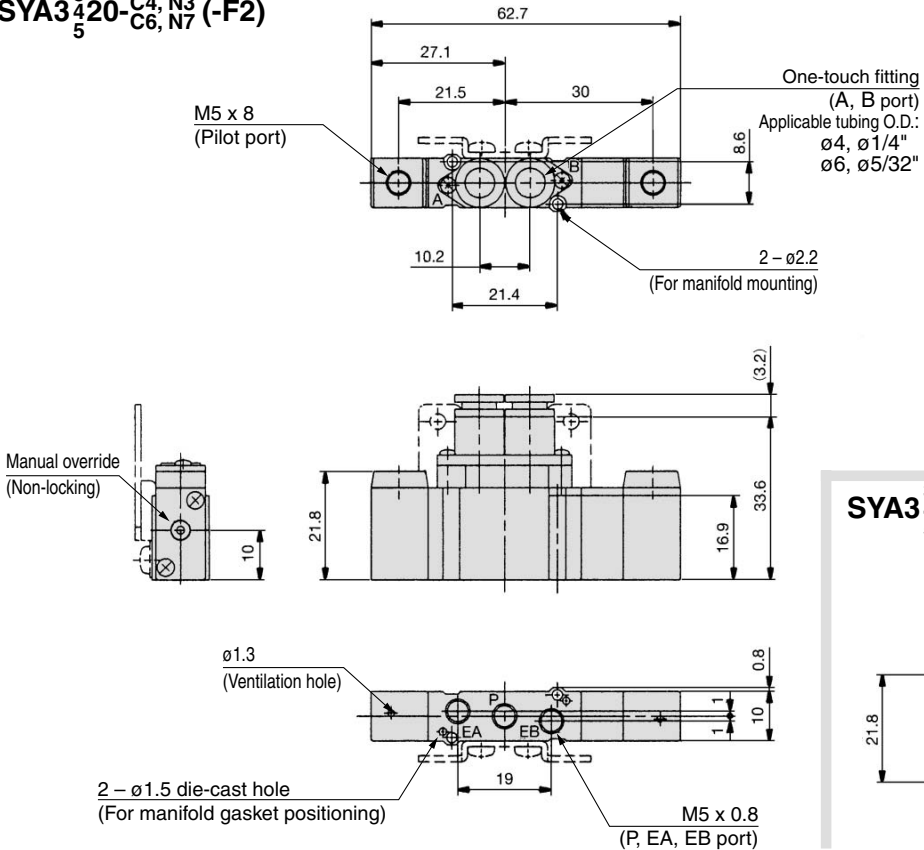


SYA3220-M5

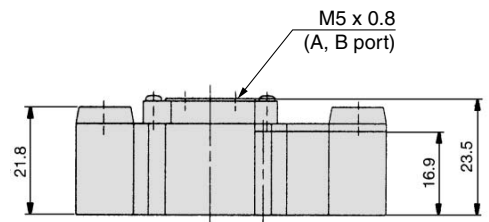


3 position closed center/exhaust center/pressure center

SYA3420-C4, N3
C6, N7 (-F2)

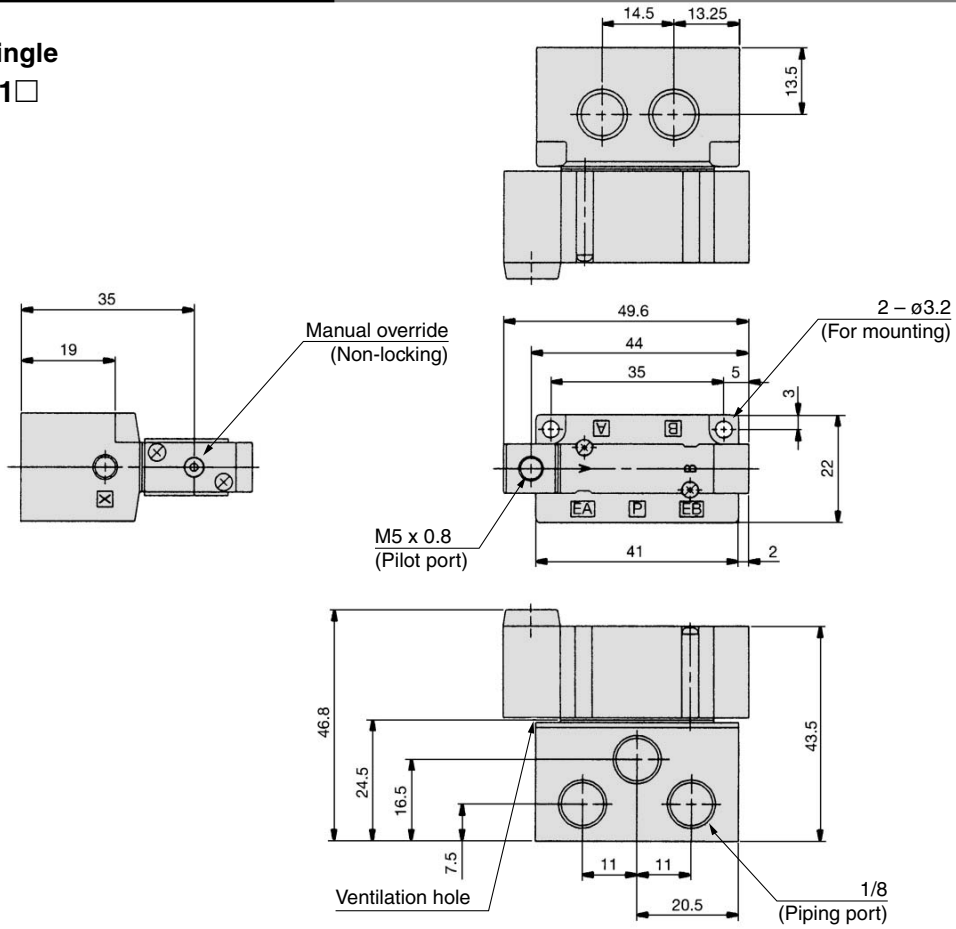


SYA3420-M5

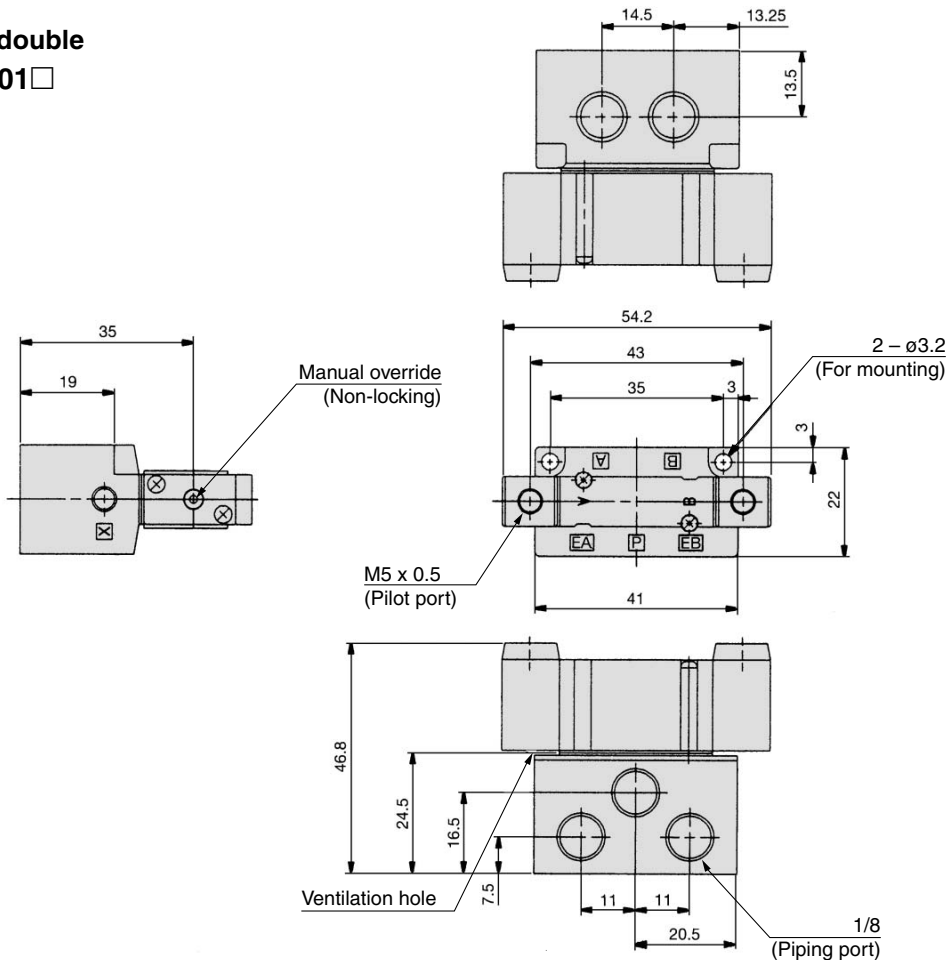


Series SYA3000: Base Mounted

2 position single
SYA3140-01□



2 position double
SYA3240-01□



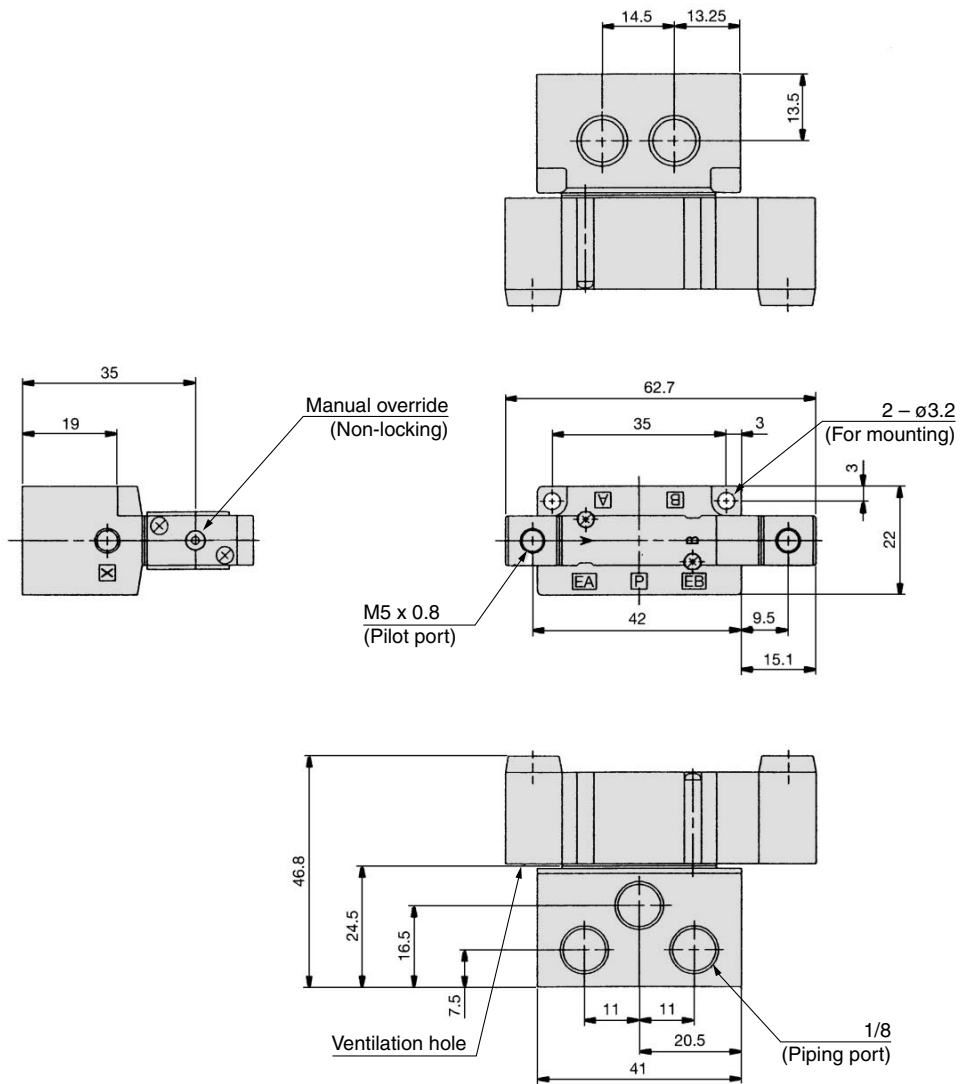
- S□A
- V□A
- S□A
- V□A
- VM
- VR
- VH
- VHS

Series SYA3000/5000/7000

Series SYA3000: Base Mounted

3 position closed center/exhaust center/pressure center

SYA3³₅40-01□

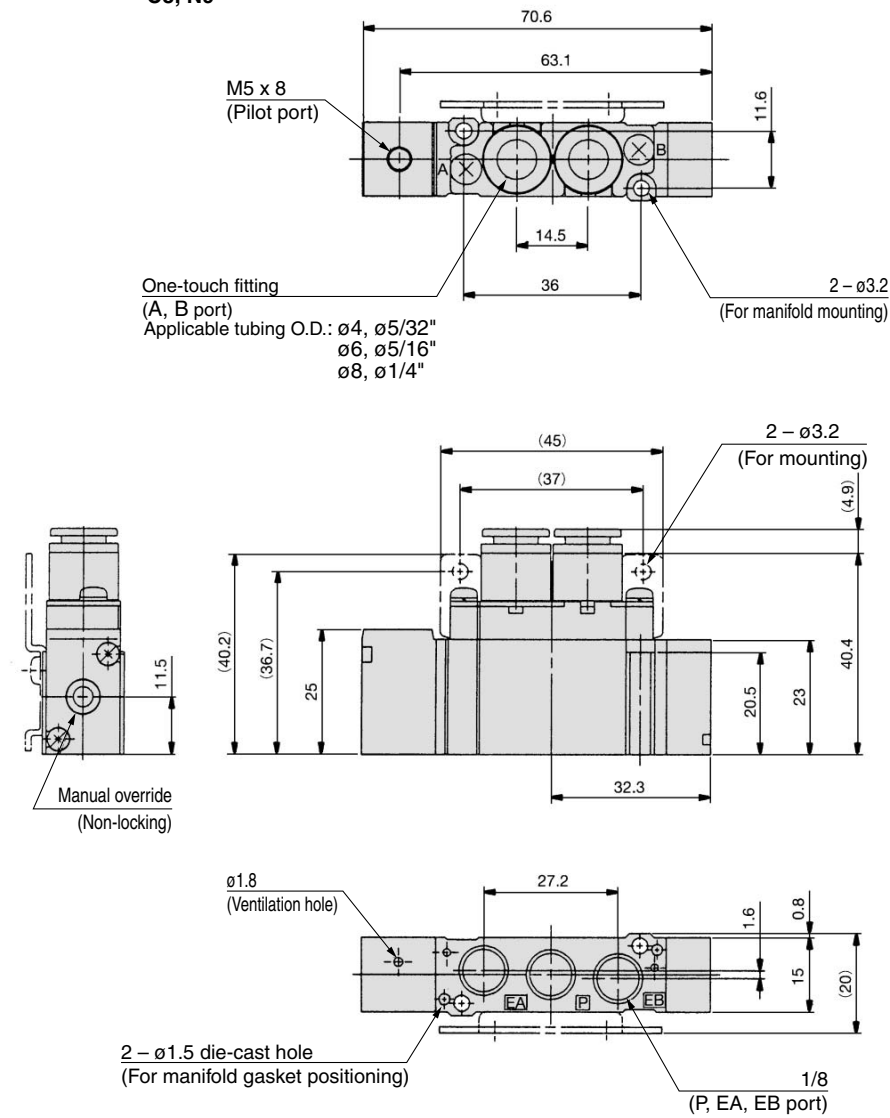


5 Port Air Operated Valve Series SYA3000/5000/7000

Series SYA5000: Body Ported

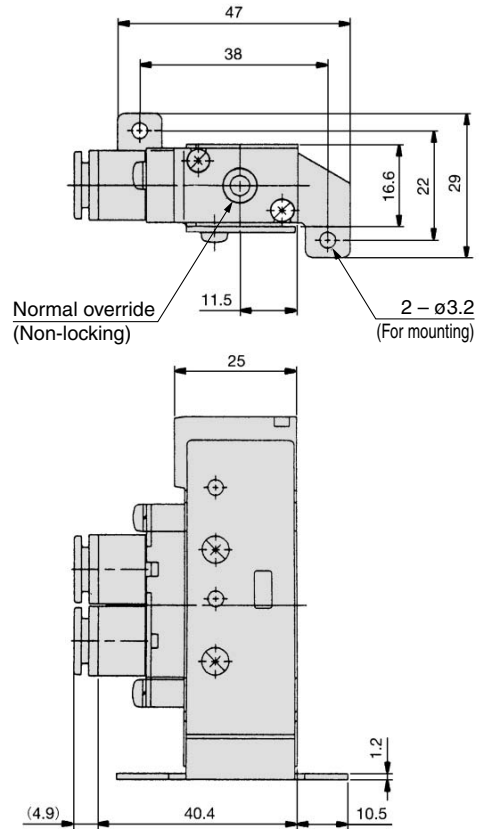
2 position single

SYA5120-^{C4, N3}_{C6, N7}□(-F2)
C8, N9



Foot bracket

SYA5120-^{C4, N3}_{C6, N7}□-F1
C8, N9



S□A

V□A

S□A

V□A

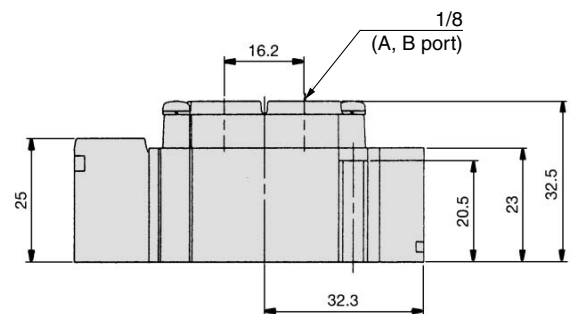
VM

VR

VH

VHS

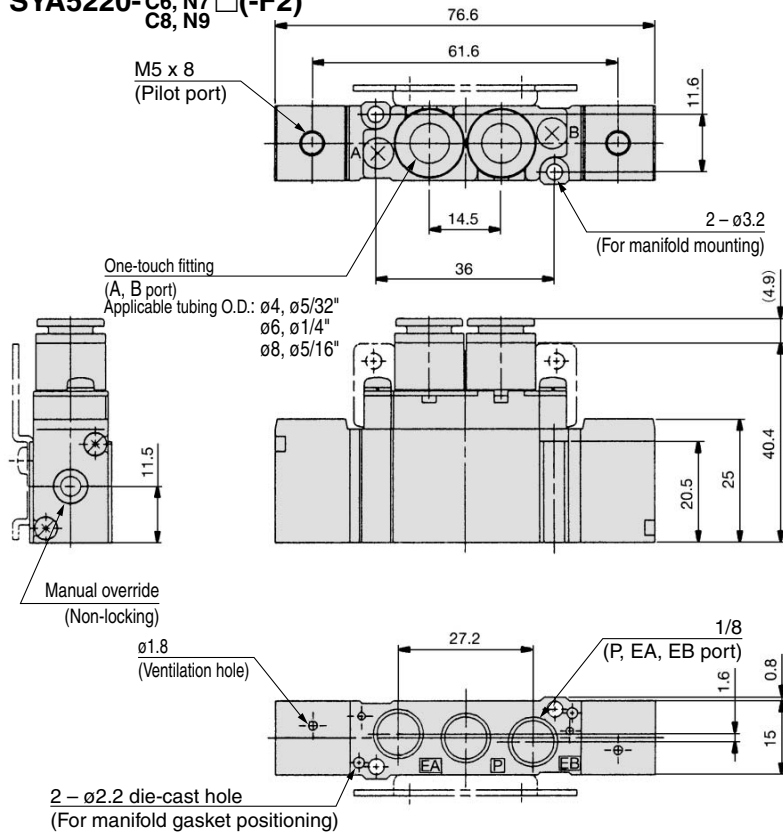
SYA5120-01□



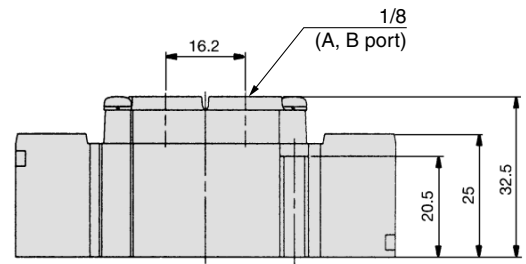
Series SYA3000/5000/7000

Series SYA5000: Body Ported

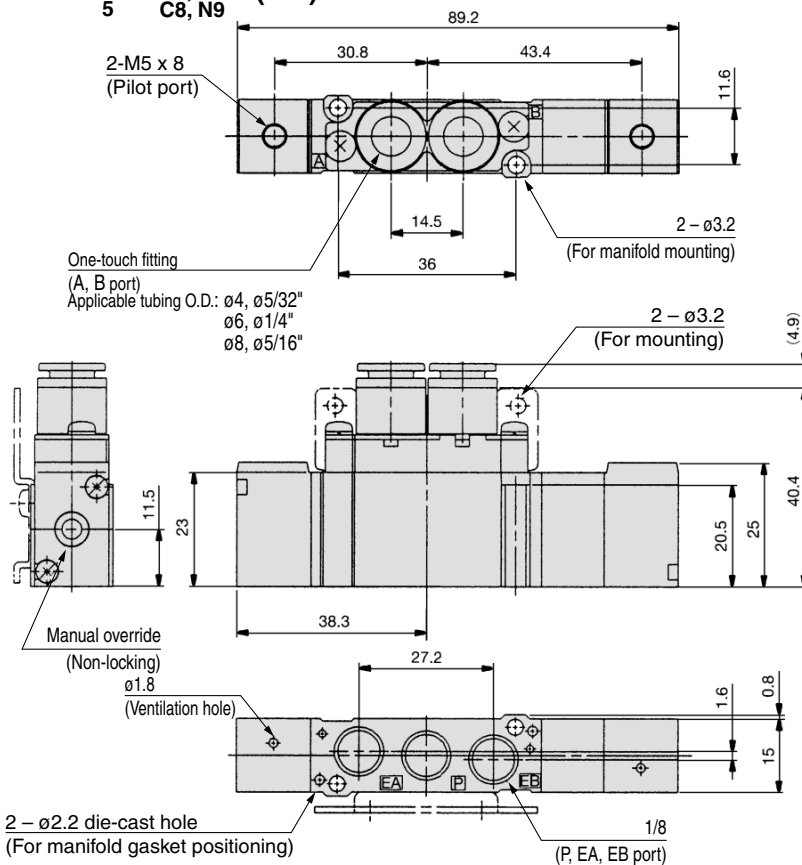
2 position double SYA5220-C4, N3 C6, N7 (-F2) C8, N9



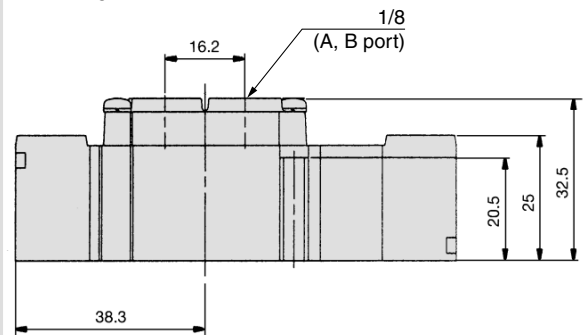
SYA5220-01



3 position closed center/exhaust center/pressure center SYA5420-C4, N3 C6, N7 (-F2) C8, N9

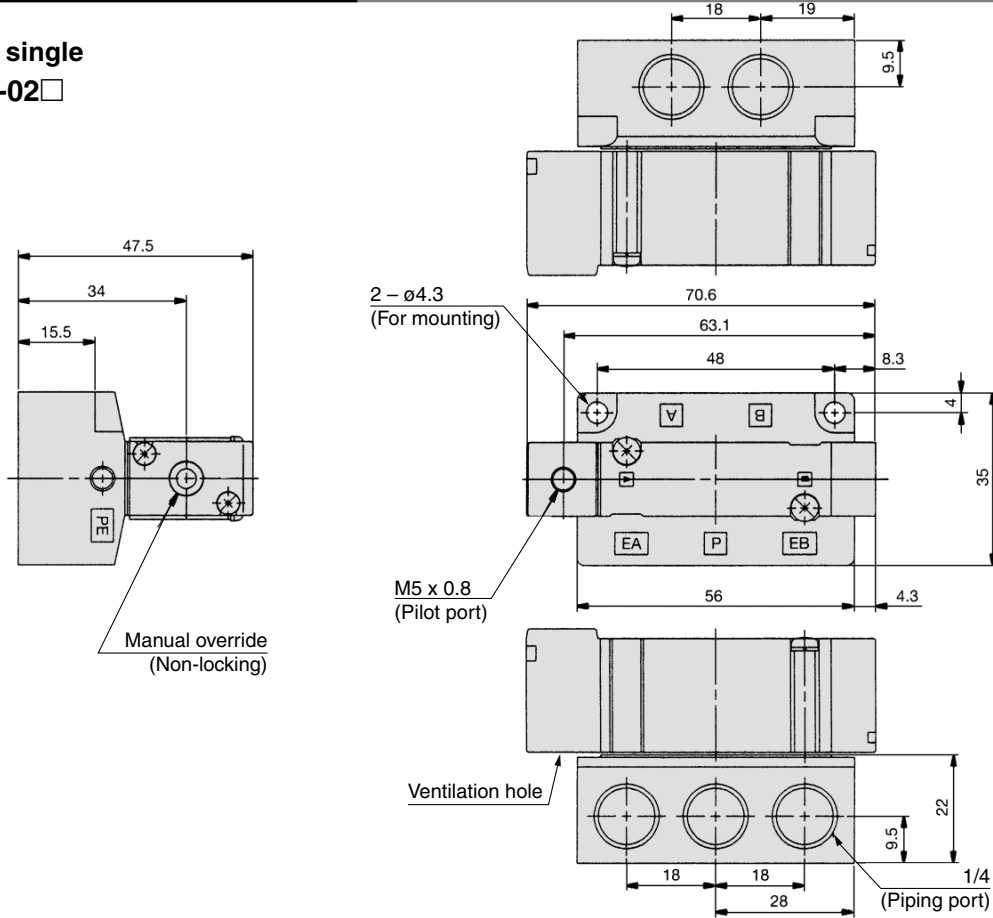


SYA5420-01



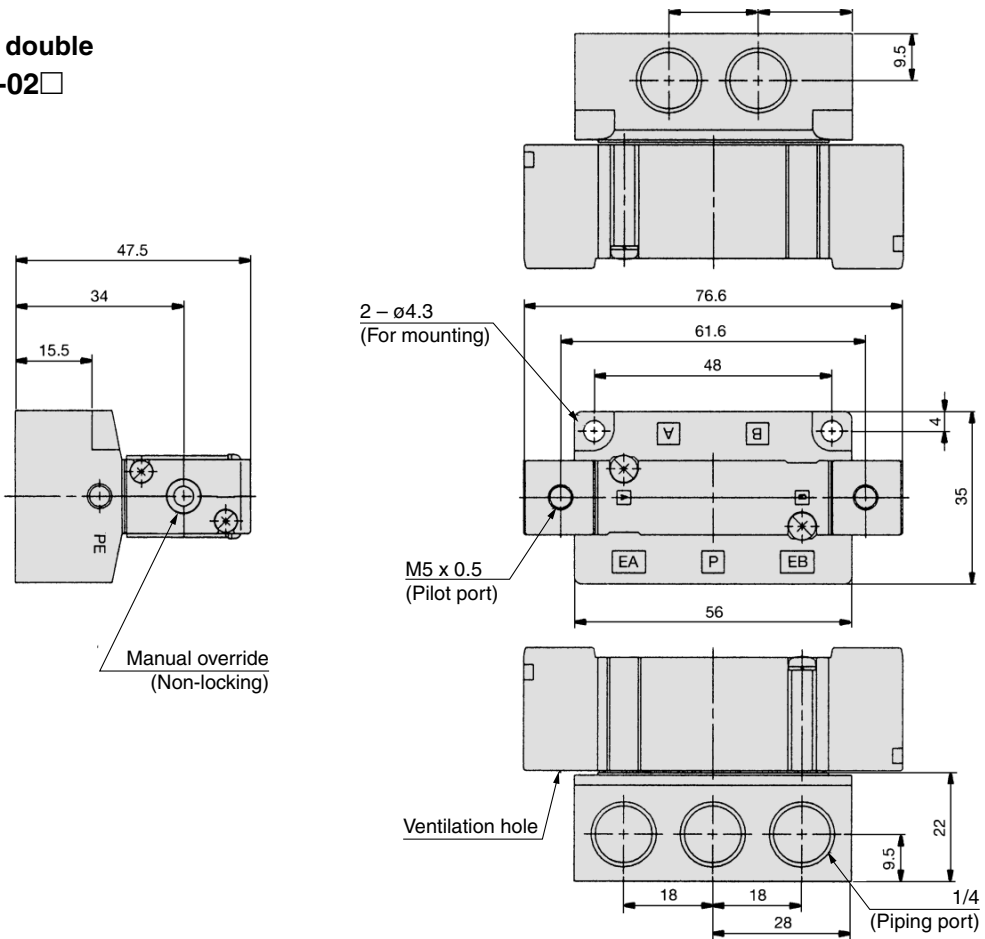
Series SYA5000: Base Mounted

2 position single
SYA5140-02□



- S□A
- V□A
- S□A
- V□A
- VM
- VR
- VH
- VHS

2 position double
SYA5240-02□

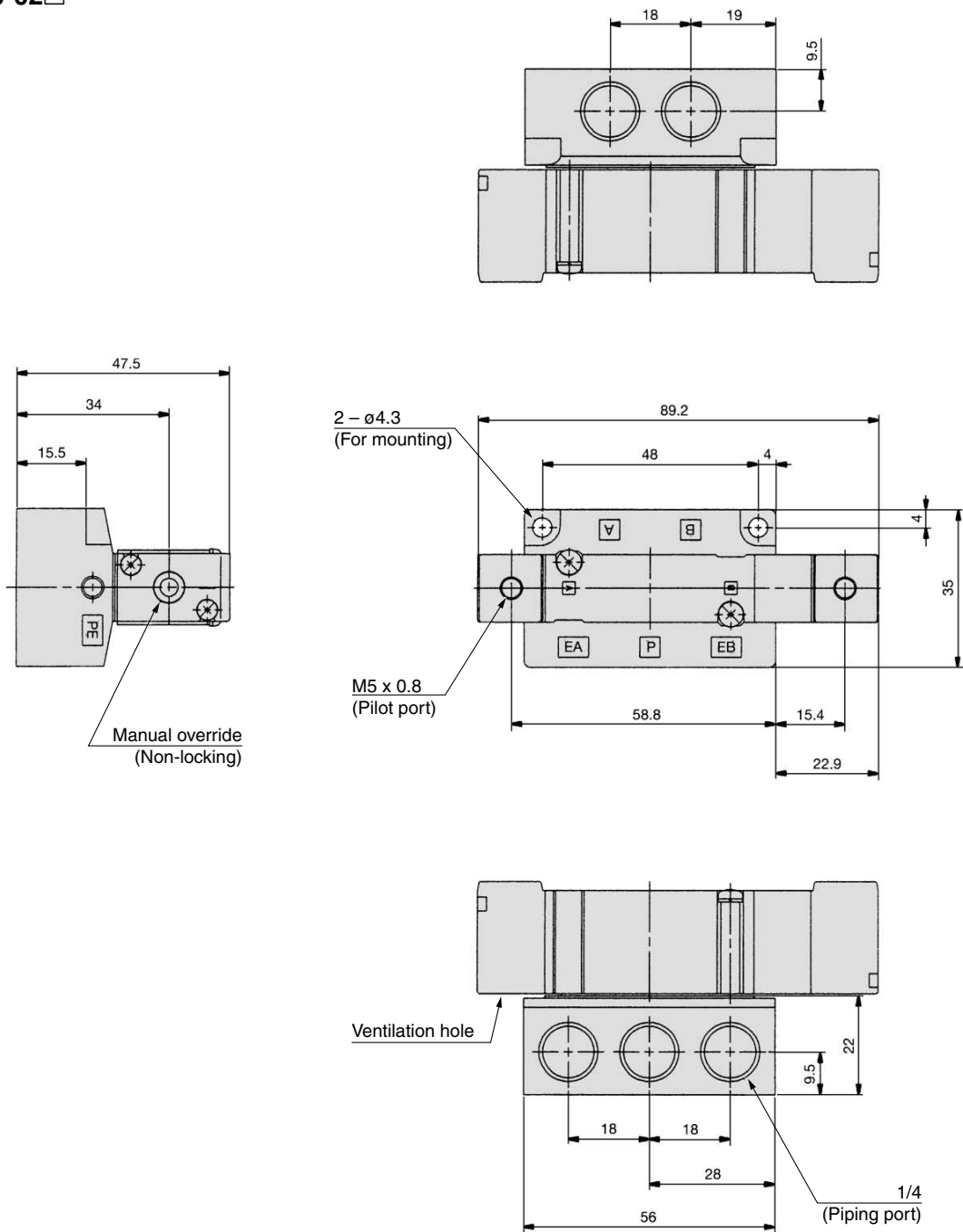


Series SYA3000/5000/7000

Series SYA5000: Base Mounted

3 position closed center/exhaust center/pressure center

SYA5³₄40-02□₅

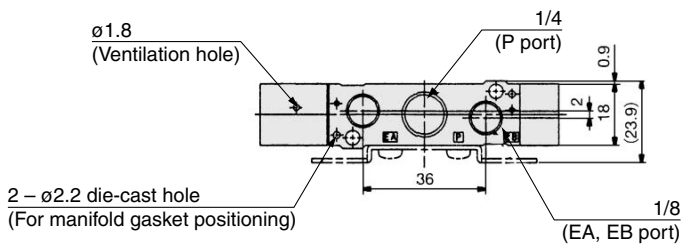
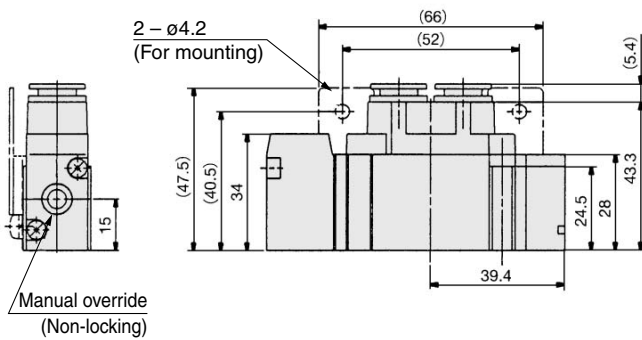
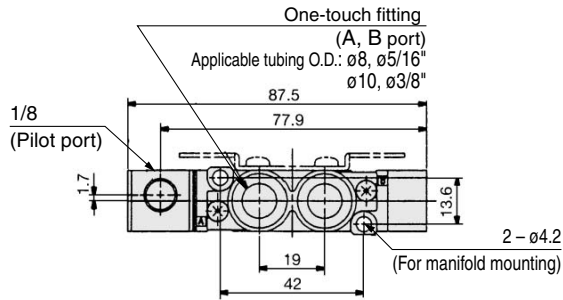


5 Port Air Operated Valve Series SYA3000/5000/7000

Series SYA7000: Body Ported

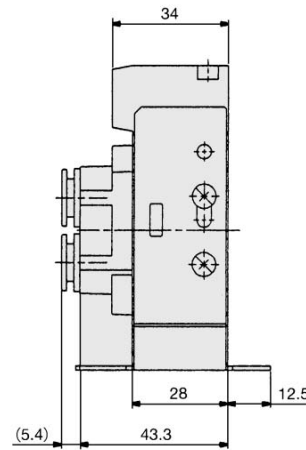
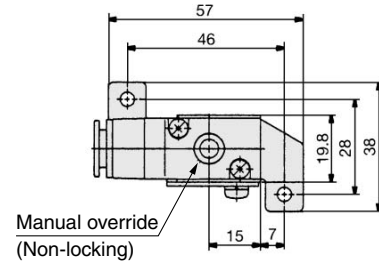
2 position single

SYA7120-^{C8, N9}_{C10, N11}□(-F2)

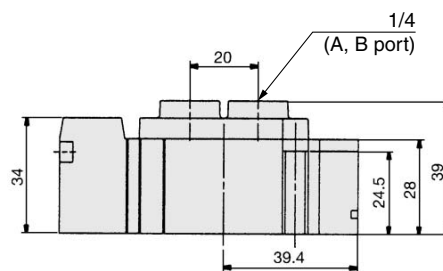


Foot bracket

SYA7120-^{C8, N9}_{C10, N11}□-F1



SYA7120-02□



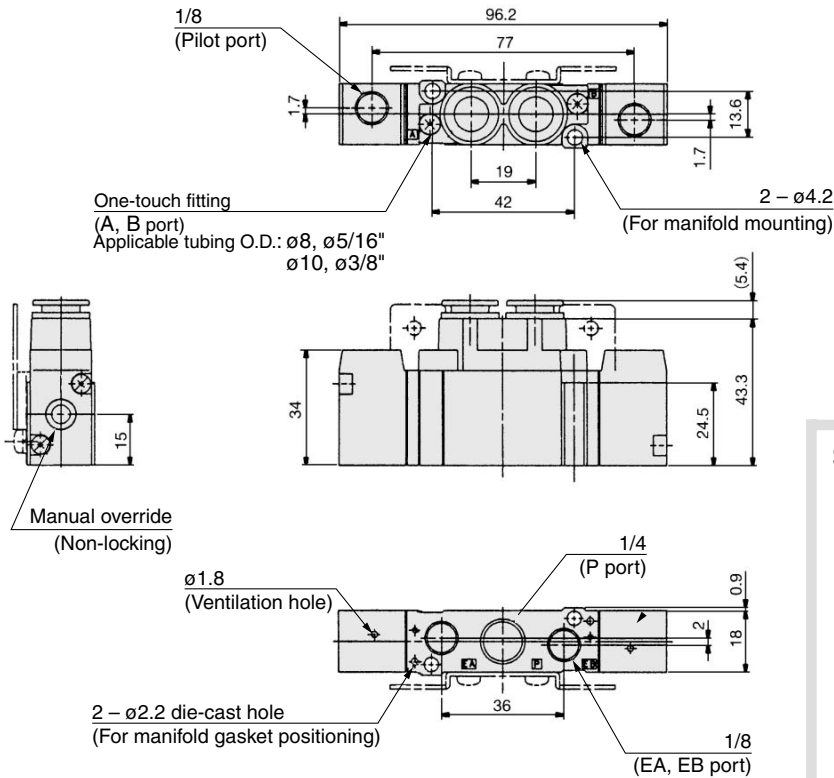
- S□A
- V□A
- S□A
- V□A
- VM
- VR
- VH
- VHS

Series SYA3000/5000/7000

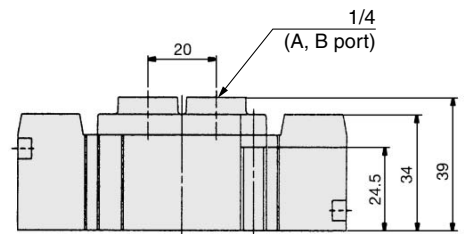
Series SYA7000: Body Ported

2 position double

SYA7220-^{C8, N9}
^{C10, N11} □

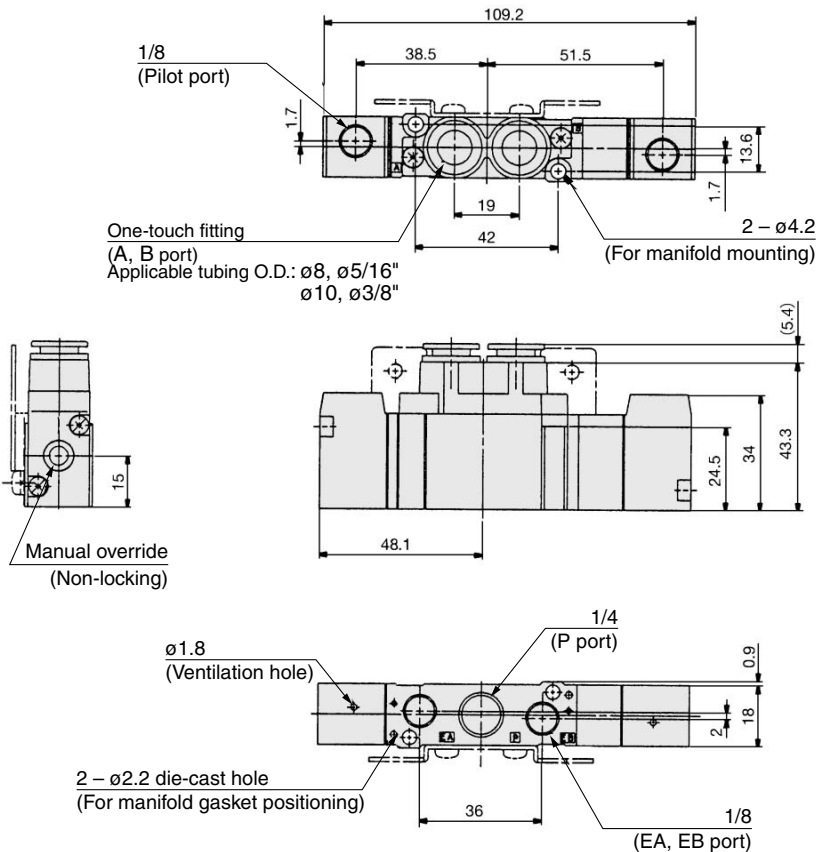


SYA7220-02

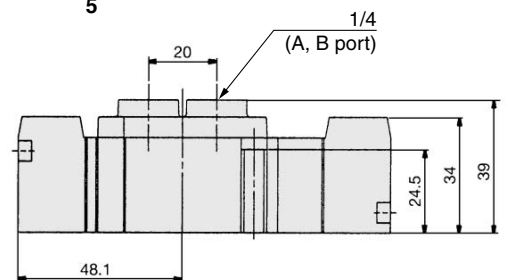


3 position closed center/exhaust center/pressure center

SYA7³₄₂₀₋₅-^{C8, N9}
^{C10, N11} □



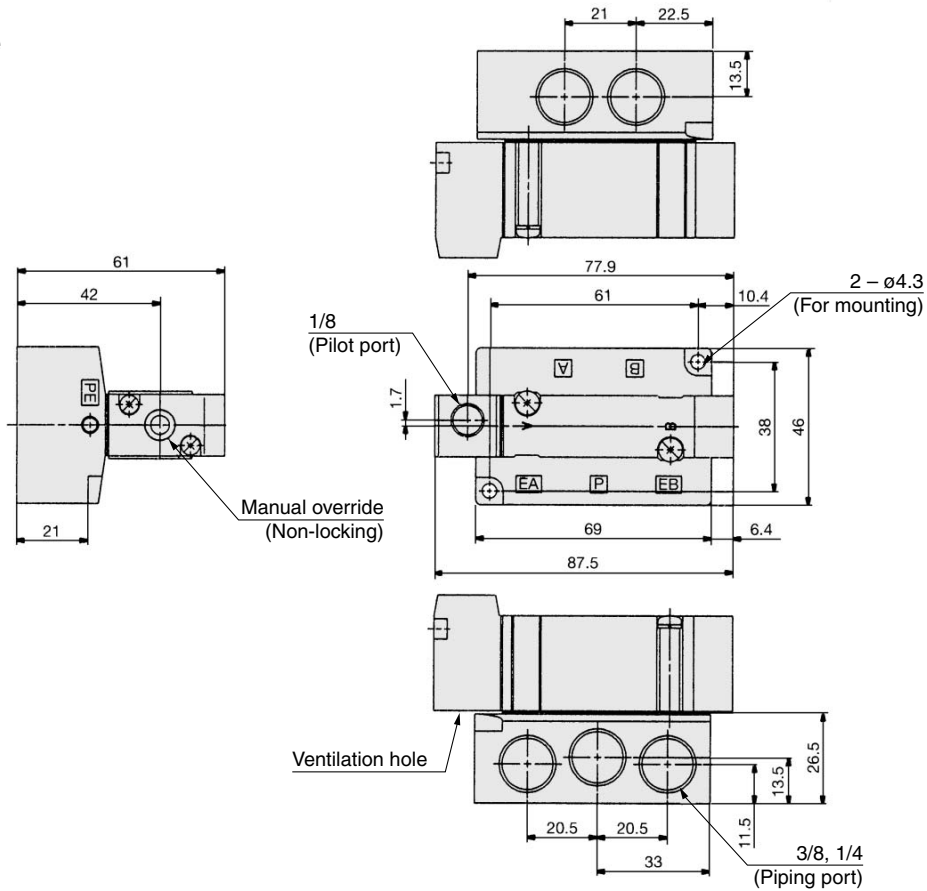
SYA7³₄₂₀₋₅-02 □



Series SYA7000: Base Mounted

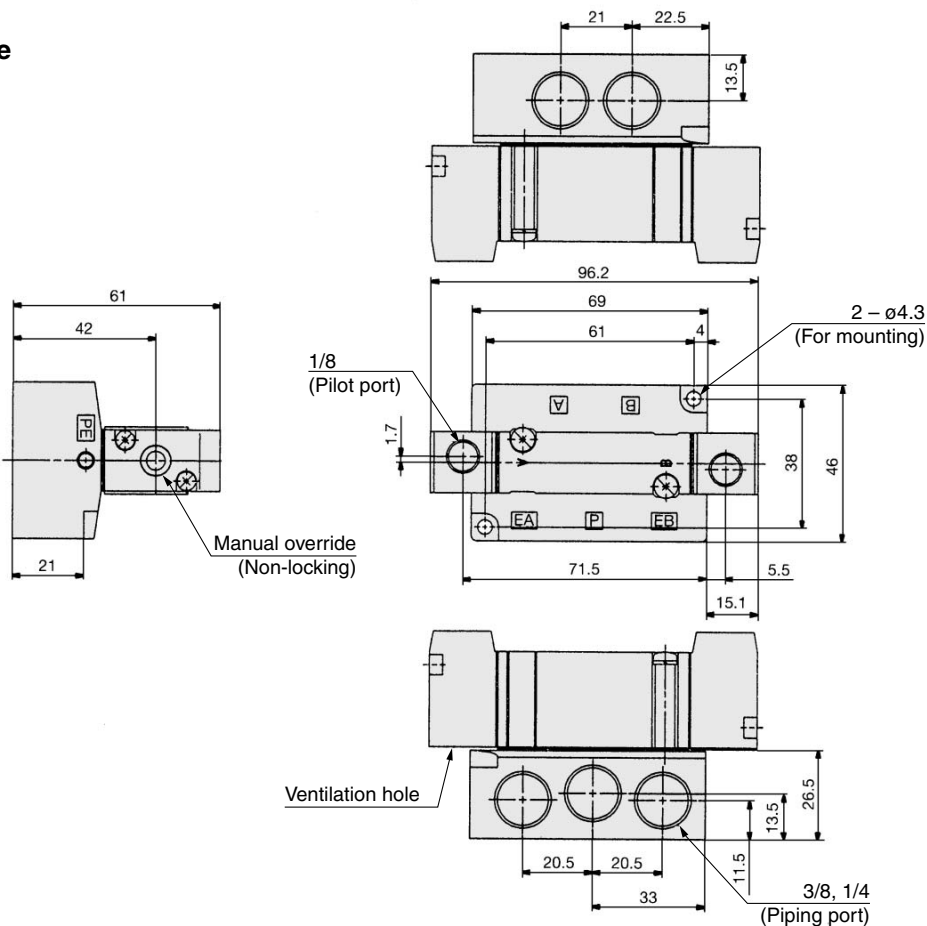
2 position single

SYA7140-⁰²₀₃ □



2 position double

SYA7240-⁰²₀₃ □



S□A
V□A
S□A
V□A
VM
VR
VH
VHS

Series SYA3000/5000/7000

Series SYA7000: Base Mounted

3 position closed center/exhaust center/pressure center

SYA7³4⁰²40-₅03 □

