

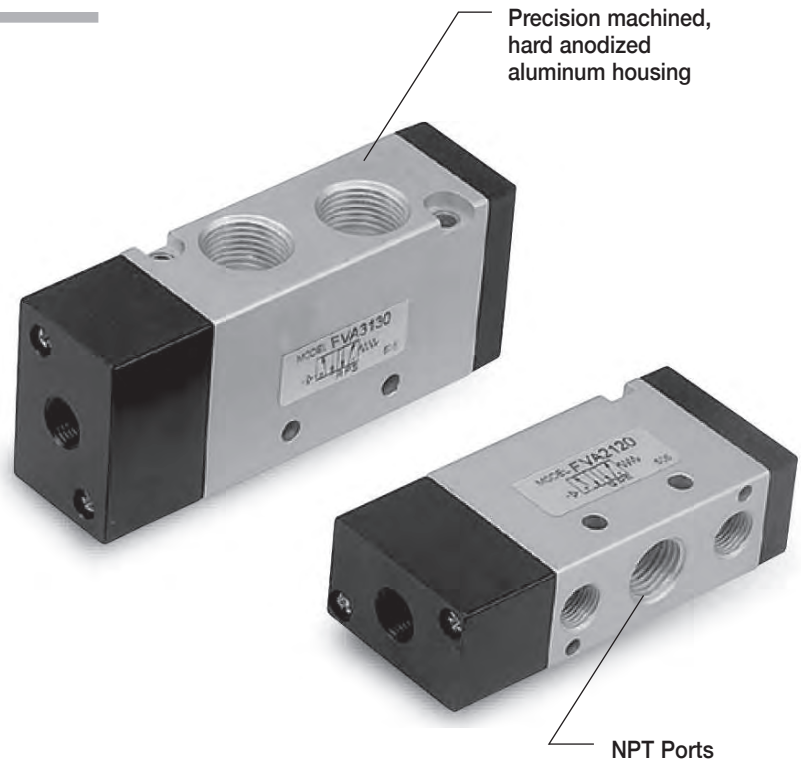
FABCO-AIR

Pneumatic Valves – FVA & FVEC Series



Features

1. Fast acting valves are designed for high flow.
2. Housings are precision machined and hard anodized for low friction.
3. Low friction seals have high abrasion resistance to provide longer service life.
5. Can be used with or without lubrication.
6. Available with or without manifolds.
See photos on front cover and page 4.




Specifications

Model	Configuration		Port size		Cv
			R,S	P,A,B	P → A/B
FVA1000	5 port 2 position	Single	1/8	1/8	0.67
		Double			
	5 port 3 position	Closed center	1/8	1/8	0.5
		Exhaust center Pressure center			
FVA2000	5 port 2 position	Single	1/8	1/4	1.0
		Double			
	5 port 3 position	Closed center	1/8	1/4	0.7
		Exhaust center Pressure center			
FVA3000	5 port 2 position	Single	1/4	3/8	1.68
		Double			
	5 port 3 position	Closed center	1/4	3/8	1.2
		Exhaust center Pressure center			
FVA4000	5 port 2 position	Single	1/2	1/2	2.8
		Double			
	5 port 3 position	Closed center	1/2	1/2	2.8
		Exhaust center Pressure center			

Model	FVA1000	FVA2000	FVA3000	FVA4000
Operating media	Compressed air or inert gas			
Min. pilot pressure	30 psi - single or double pilot			
Max. operating pressure	150 psi			
Temperature range	5°C(41°F) ~ +60°C(140°F)			
Lubrication	None required or use ISO VG32			
Response time	0.050 sec.			
Cylinder range	ø20~ø63mm		ø63~ø160mm	
Max. cycles/second	5 cps		4 cps	

How to order

FVA1	1	1	0	N	M2N
Series	Operation	Port size P, A, B	Piping	Port thread	Manifolds
FVA1	1 Single air operated 4 Way 	1 1/8 for FVA1	0 Without manifold	NPT	M2N~M10N
FVA2	2 Double air operated 4 Way 	2 1/4 for FVA2	1 With manifold		
FVA3	3 Closed center 4 Way 	3 3/8 for FVA3			
FVA4	4 Exhaust center 4 Way 	4 1/2 for FVA4			
	5 Pressure center 4 Way 				



Price list

Valve Prices		
Model #	Weight (g)	Price
FVA1110	80	-
FVA1210	90	-
FVA1310	110	-
FVA1410	110	-
FVA1510	110	-
FVA2120	150	-
FVA2220	160	-
FVA2320	270	-
FVA2420	270	-
FVA2520	270	-
FVA3130	240	-
FVA3230	250	-
FVA3330	390	-
FVA3430	390	-
FVA3530	390	-
FVA4140	480	-
FVA4240	780	-
FVA4340	900	-
FVA4440	900	-
FVA4540	900	-

Manifold Prices	
Series-Code#.....	Price
FVA1-M2N	-
FVA1-M3N	-
FVA1-M4N	-
FVA1-M5N	-
FVA1-M6N	-
FVA1-M7N	-
FVA1-M8N	-
FVA1-M9N	-
FVA1-M10 N	-
FVA2-M2N	-
FVA2-M3N	-
FVA2-M4N	-
FVA2-M5N	-
FVA2-M6N	-
FVA2-M7N	-
FVA2-M8N	-
FVA2-M9N	-
FVA2-M10N	-
FVA3-M2N	-
FVA3-M3N	-
FVA3-M4N	-
FVA3-M5N	-
FVA3-M6N	-
FVA3-M7N	-
FVA3-M8N	-
FVA3-M9N	-
FVA3-M10N	-
FVA4-M2N	-
FVA4-M3N	-
FVA4-M4N	-
FVA4-M5N	-
FVA4-M6N	-
FVA4-M7N	-
FVA4-M8N	-
FVA4-M9N	-
FVA4-M10N	-

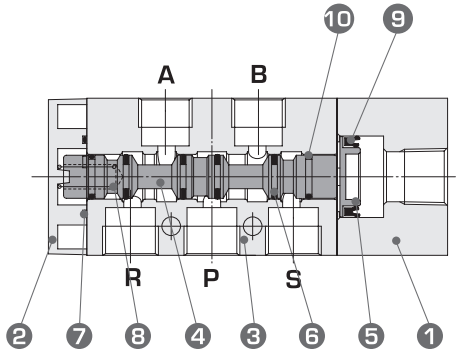
Manifold Block-Off Plates for unused/empty stations (includes seals & fasteners)		
Series	Part #	Price
FVA1	FVE01A	-
FVA2	FVE02A	-
FVA3	FVE03A	-
FVA4	FVE04A	-

Manifold Gasket Kit Replacement parts for valve-to-manifold assembly		
Series	Part #	Price
FVA1	FVE01032K	-
FVA2	FVE02032K	-
FVA3	FVE03032K	-
FVA4	FVE04032K	-

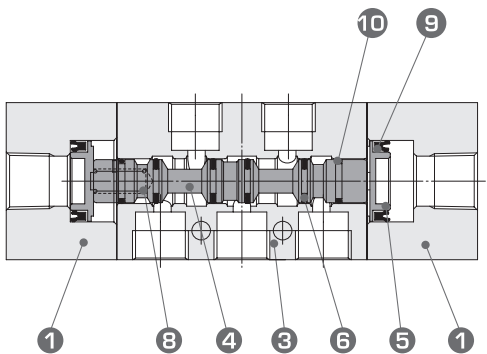
Manifolds available individually by ordering part number from above chart. (Includes seals & valve mounting screws.) All manifold ports are NPT.
Example: *FVA1-M2N* signifies NPT ports.

AIR PILOT VALVES – Construction

● Single Air Pilot



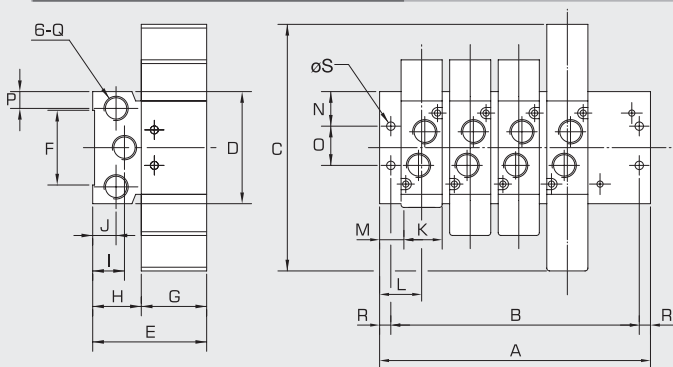
● Double Air Pilot



Parts list

No.	Name	Material	Remarks
①	Adaptor plate	Aluminum alloy	Anodized
②	End plate	Delrin	–
③	Body	Aluminum alloy	Hard anodized
④	Spool	Aluminum alloy	–
⑤	Piston	Synthetic resin	–
⑥	Spool seal	NBR	–
⑦	End plate seal	NBR	–
⑧	Air/Spring return	Delrin	Stainless steel
⑨	Piston seal	NBR	–
⑩	Spool seal	NBR	–

Manifold dimensions (mm)



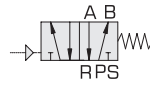
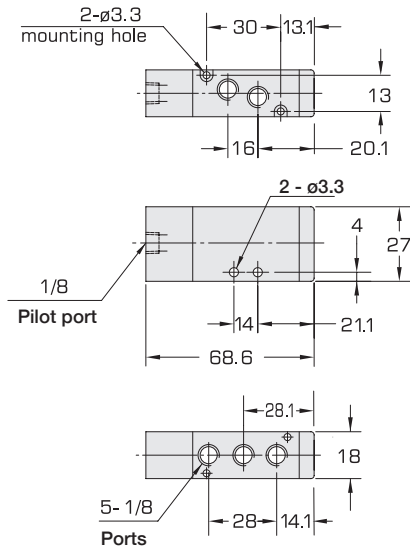
Manifolds	FVA1		FVA2		FVA3		FVA4	
	A	B	A	B	A	B	A	B
M2N	57	47	69	57	87	75	98	84
M3N	76	66	92	80	116	104	133	119
M4N	95	85	115	103	145	133	168	154
M5N	114	104	138	126	174	162	203	189
M6N	133	123	161	149	203	191	238	224
M7N	152	142	184	172	232	220	273	259
M8N	171	161	207	195	261	249	308	294
M9N	190	180	230	218	290	278	343	329
M10N	209	199	253	241	319	307	378	364

Series	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q*	R	S
FVA1	95.8	58	52	36	27	25	16	11	18	19	10	19	20	9	1/4	5	4.5
FVA2	111	65	61.5	33	35	26.5	16.5	12.5	22	23	12.5	21.5	22	11	1/4	6	5
FVA3	136	80	67.5	50	40	27.5	14.5	14.5	27	29	15.5	25.8	28.4	11.5	3/8	6	5
FVA4	168	100	89	68	50	39	20	20	34	31.25	14.25	34	32	18.5	1/2	7	5.5

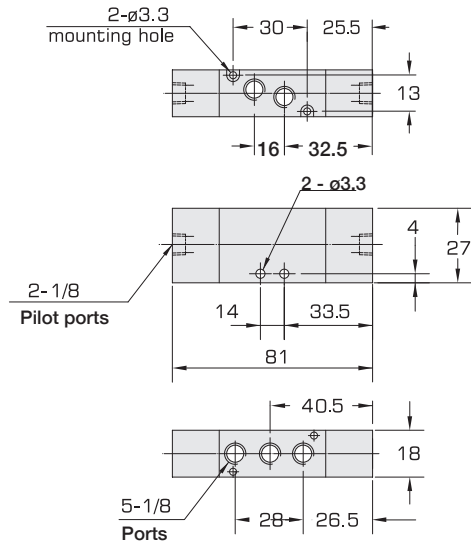
* All manifold ports are NPT

AIR PILOT VALVES – Dimensions (mm)

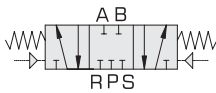
FVA1110 (1/8) Single Pilot Spring Return (Air Assist)



FVA1210 (1/8) Double Pilot



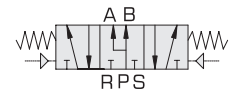
FVA1310 Closed Center



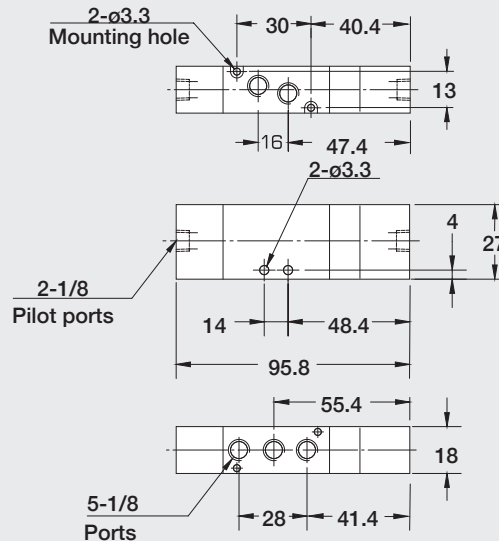
FVA1410 Exhaust Center



FVA1510 Pressure Center

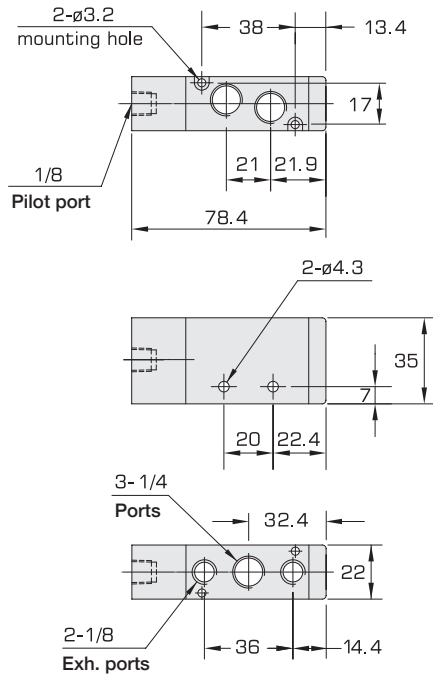
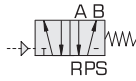


3 Position Valves

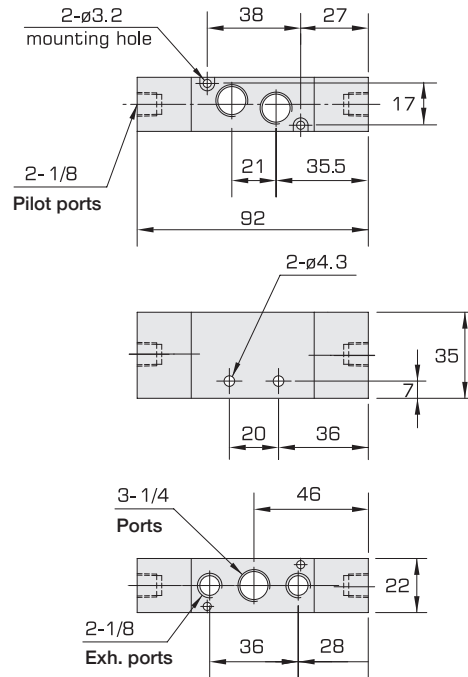


AIR PILOT VALVES – Dimensions (mm)

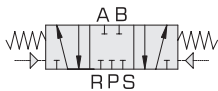
FVA2120 (1/4) Single Pilot Spring Return (Air Assist)



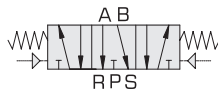
FVA2220 (1/4) Double Pilot



FVA2320 Closed Center



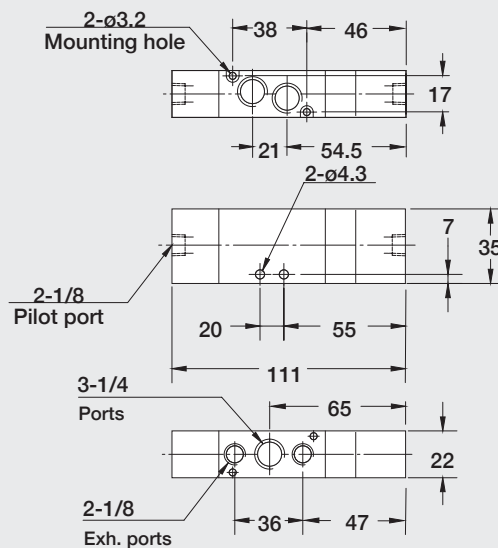
FVA2420 Exhaust Center



FVA2520 Pressure Center

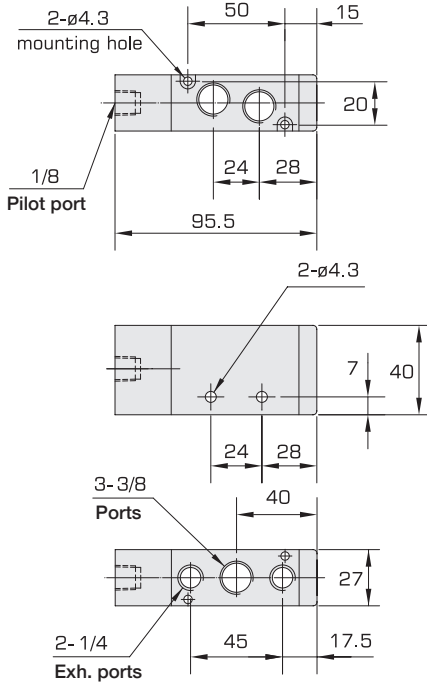
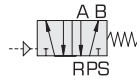


3 Position Valves

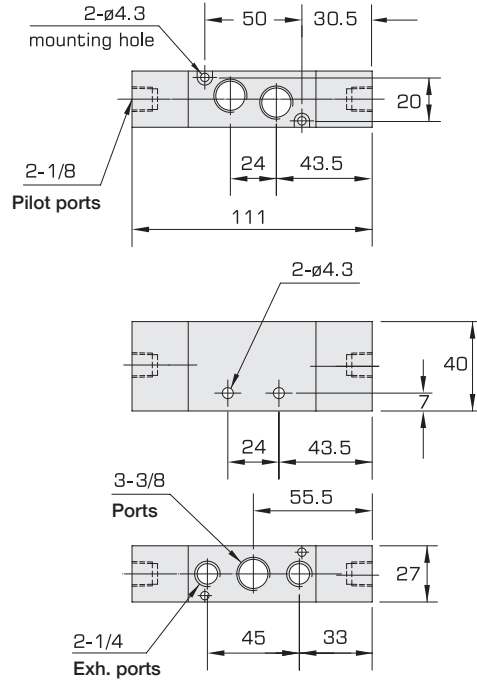
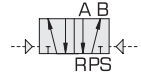


AIR PILOT VALVES – Dimensions (mm)

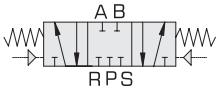
FVA3130 (3/8) Single Pilot Spring Return (Air Assist)



FVA3230 (3/8) Double Pilot



FVA3330 Closed Center



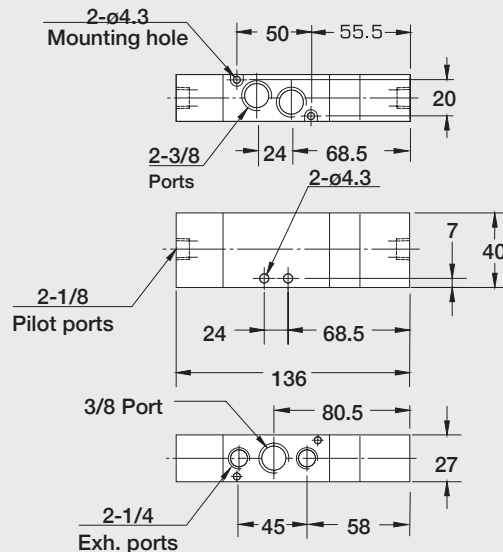
FVA3430 Exhaust Center



FVA3530 Pressure Center

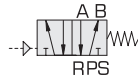
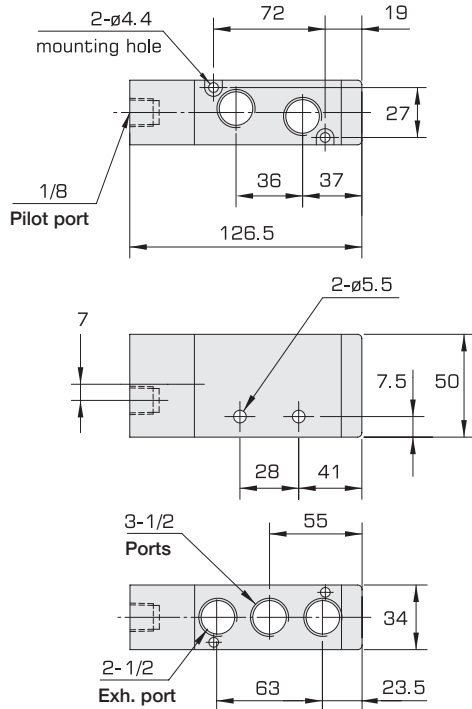


3 Position Valves

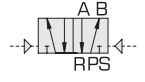
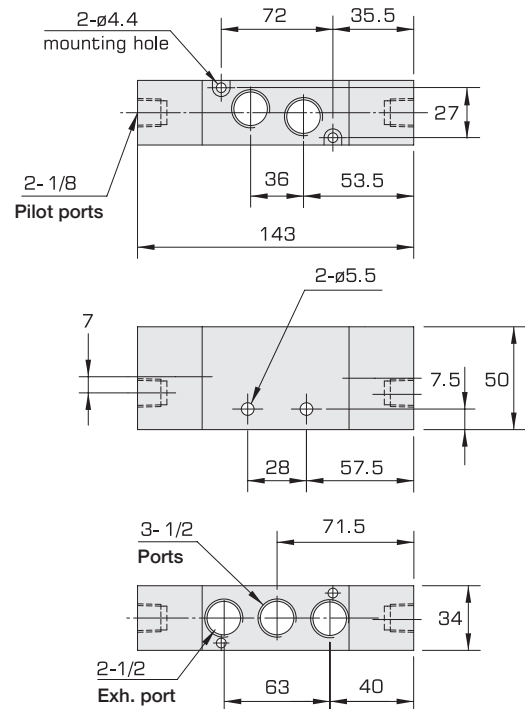


AIR PILOT VALVES – Dimensions (mm)

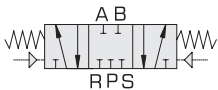
FVA4140 (1/2) Single Pilot Spring Return (Air Assist)



FVA4240 (1/2) Double Pilot



FVA4340 Closed Center



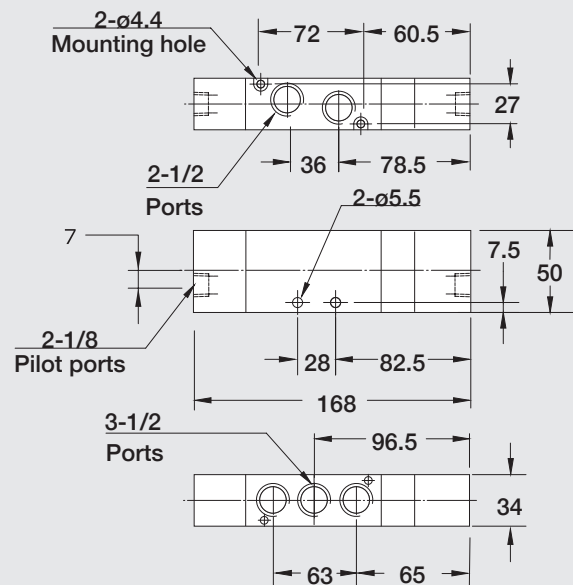
FVA4440 Exhaust Center

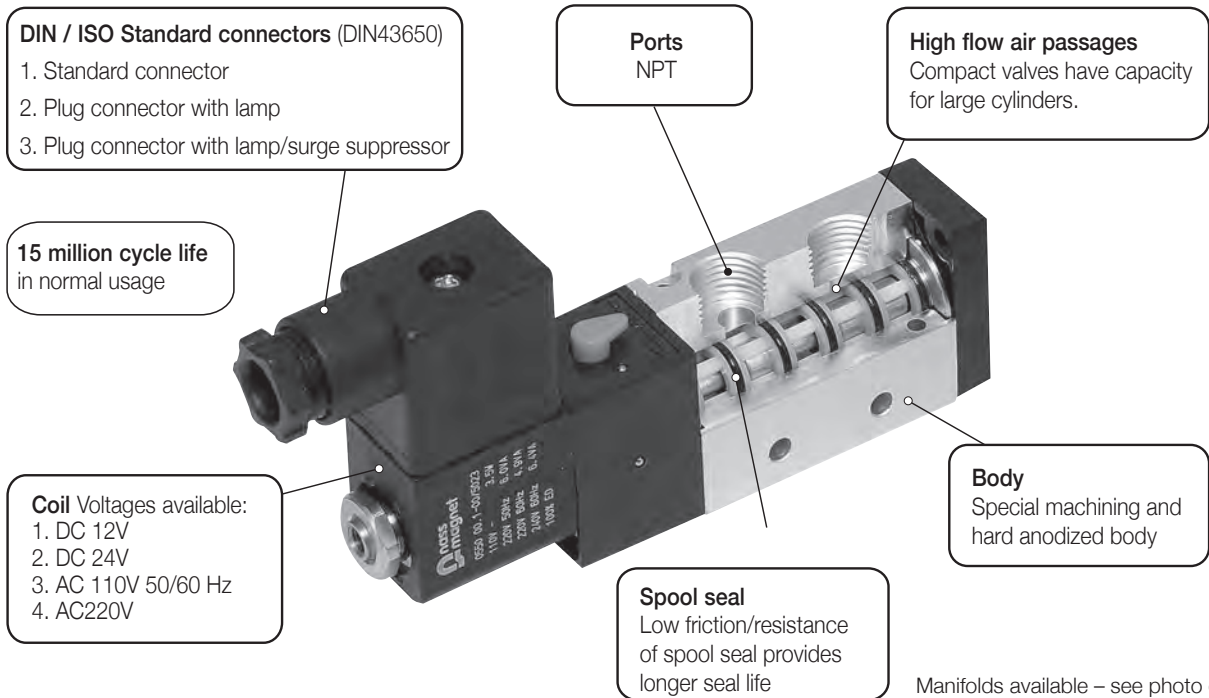


FVA4540 Pressure Center



3 Position Valves





Manifolds available – see photo on front cover and dimensions on page 11.

Specifications

Model	FVEC1000	FVEC2000	FVEC3000	FVEC4000
Operating media	Compressed air or inert gas			
Min. operating pressure	30 psi single or double solenoid			
Max. operating pressure	150 psi			
Temperature range	5°C(41°F) ~ +60°C(140°F)			
Lubrication	None required or use ISO VG32			
Response time	0.050 sec.			
Cylinder range	ø12-ø40mm	ø40-ø63mm	ø63-ø100mm	ø80-ø160mm
Electrical Connection	DIN 43650 electrical connector			
Voltage range	Rated voltage ± 10%			
Protection	IP65			
Coil insulation	Class F			
Power consumption	DC12V; 2.5W DC24V; 2.5W AC110V 50HZ; 4.8VA AC110V 60HZ; 4VA	DC12V; 2.5W DC24V; 2.5W AC110V 50HZ; 6.0VA AC110V 60HZ; 4.9VA AC220V 60HZ; 6.4VA	DC12V; 4.8W DC24V; 4.8W AC110V 50HZ; 8.4VA AC110V 60HZ; 6.8VA AC220V 60HZ; 8.5VA	

Model	Configuration	Port size		Cv	
		R,S	P,A,B	P → A/B	
FVEC1000	4 way 5 port 2 position	Single	1/8	1/8	0.67
		Double			
	4 way 5 port 3 position	Closed center Exhaust center Pressure center			0.5
	3 port 2 position	3 way normally closed			0.67
FVEC2000	4 way 5 port 2 position	Single	1/8	1/4	1.0
		Double			
	4 way 5 port 3 position	Closed center Exhaust center Pressure center			0.7
	3 port 2 position	3 way normally closed			1.0
FVEC3000	4 way 5 port 2 position	Single	1/4	3/8	1.68
		Double			
	4 way 5 port 3 position	Closed center Exhaust center Pressure center			1.2
	3 port 2 position	3 way normally closed			1.68
FVEC4000	4 way 5 port 2 position	Single	1/2	1/2	2.8
		Double			
	4 way 5 port 3 position	Closed center Exhaust center Pressure center			

How to order

FVEC1	1	1	0	N	A11	L	M2N
Series	Operation	Port size P, A, B	Piping	Port thread	Standard voltage	Electrical entry	Manifolds
FVEC1 FVEC2 FVEC3 FVEC4	1 Single solenoid 4 Way 	1 1/8 for FVEC1	0 Without manifold	NPT	A11 AC110V 50/60Hz	Leave blank Standard connector DIN 43650	M2N M3N M4N
	2 Double solenoid 4 Way 	2 1/4 for FVEC2	1 With manifold		A22 AC220V*	L Plug connector with lamp DIN 43650	M5N M6N M7N
	3 Closed center 4 Way 	3 3/8 for FVEC3			D12 DC 12V	S Plug connector with lamp & surge suppressor DIN 43650	M8N M9N M10N
	4 Exhaust center 4 Way 	4 1/2 for FVEC4			D24 DC 24V		
	5 Pressure center 4 Way 						
	6 Normally closed 3 Way 						

* Apply 240 VAC only intermittently.

Note: 3 way valves can be mounted on same manifold as 4 way valves.

Manifolds are available. See photo on the front cover and dimensions on page 11. Prices are below.

Price list

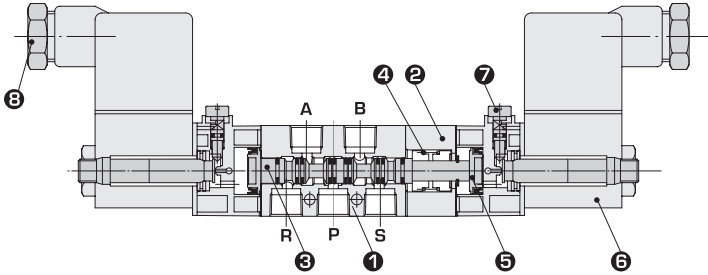
Valve Prices	Standard Connector			Connector with Lamp			Connector with Lamp & Suppression		
	Model #	Weight (g)	Price	Model #	Weight (g)	Price	Model #	Weight (g)	Price
FVEC1110	120	-	FVEC1110L	120	-	FVEC1110S	120	-	
FVEC1210	175	-	FVEC1210L	175	-	FVEC1210S	175	-	
FVEC1310	185	-	FVEC1310L	185	-	FVEC1310S	185	-	
FVEC1410	185	-	FVEC1410L	185	-	FVEC1410S	185	-	
FVEC1510	185	-	FVEC1510L	185	-	FVEC1510S	185	-	
FVEC1610	120	-	FVEC1610L	120	-	FVEC1610S	120	-	
FVEC2120	210	-	FVEC2120L	210	-	FVEC2120S	210	-	
FVEC2220	315	-	FVEC2220L	310	-	FVEC2220S	310	-	
FVEC2320	420	-	FVEC2320L	420	-	FVEC2320S	420	-	
FVEC2420	420	-	FVEC2420L	420	-	FVEC2420S	420	-	
FVEC2520	420	-	FVEC2520L	420	-	FVEC2520S	420	-	
FVEC2620	210	-	FVEC2620L	210	-	FVEC2620S	210	-	
FVEC3130	300	-	FVEC3130L	300	-	FVEC3130S	300	-	
FVEC3230	395	-	FVEC3230L	395	-	FVEC3230S	395	-	
FVEC3330	470	-	FVEC3330L	470	-	FVEC3330S	470	-	
FVEC3430	470	-	FVEC3430L	470	-	FVEC3430S	470	-	
FVEC3530	470	-	FVEC3530L	470	-	FVEC3530S	470	-	
FVEC3630	300	-	FVEC3630L	300	-	FVEC3630S	300	-	
FVEC4140	605	-	FVEC4140L	605	-	FVEC4140S	605	-	
FVEC4240	750	-	FVEC4240L	750	-	FVEC4240S	750	-	
FVEC4340	860	-	FVEC4340L	860	-	FVEC4340S	860	-	
FVEC4440	860	-	FVEC4440L	860	-	FVEC4440S	860	-	
FVEC4540	860	-	FVEC4540L	860	-	FVEC4540S	860	-	

Manifold Prices	Series-Code# . Price	Series-Code#.... Price	Series-Code#.... Price	Series-Code#..... Price			
	FVA1-M2N	-	FVA2-M2N	-	FVA3-M2N	-	FVA4-M2N
FVA1-M3N	-	FVA2-M3N	-	FVA3-M3N	-	FVA4-M3N	-
FVA1-M4N	-	FVA2-M4N	-	FVA3-M4N	-	FVA4-M4N	-
FVA1-M5N	-	FVA2-M5N	-	FVA3-M5N	-	FVA4-M5N	-
FVA1-M6N	-	FVA2-M6N	-	FVA3-M6N	-	FVA4-M6N	-
FVA1-M7N	-	FVA2-M7N	-	FVA3-M7N	-	FVA4-M7N	-
FVA1-M8N	-	FVA2-M8N	-	FVA3-M8N	-	FVA4-M8N	-
FVA1-M9N	-	FVA2-M9N	-	FVA3-M9N	-	FVA4-M9N	-
FVA1-M10N	-	FVA2-M10N	-	FVA3-M10N	-	FVA4-M10N	-

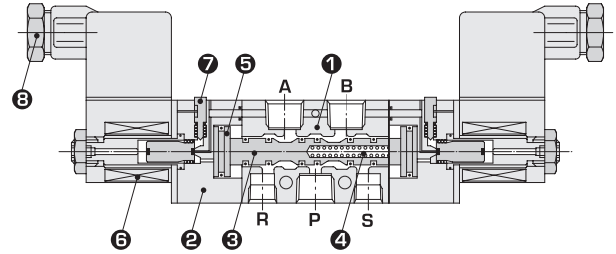
Manifolds are available individually by ordering part number from chart. (Includes seals & valve mounting screws.) All manifold ports are NPT. Example:
FVA1-M2N signifies NPT ports.

See page 3 for manifold block-off plates part numbers, manifold gasket kits and prices.

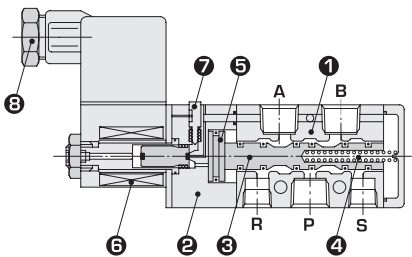
3 Position Double Solenoid



2 Position Double Solenoid



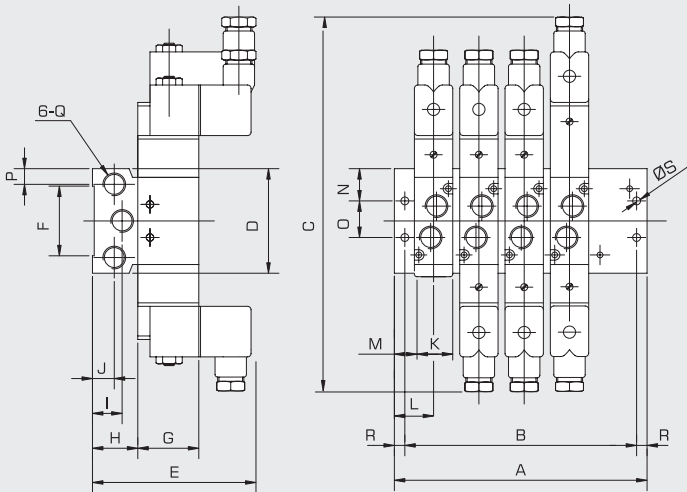
2 Position Single Solenoid



Parts list

No.	Description	Material	Note
1	Valve body	Aluminum alloy	Hard anodized
2	Pilot base	Synthetic resin	Black
3	Spool	Aluminum alloy	Anodized
4	Air/Spring return	Delrin	Stainless steel
5	Piston	Synthetic resin	-
6	Coil	Synthetic resin	Black
7	Manual push pin	Carbon steel	Electro-plated
8	Electrical connector	Synthetic resin	DIN 43650

Manifold dimensions (mm) with FVEC valves mounted



See manifold prices on page 10.
FVEC Series uses FVA manifolds.

Manifolds	FVA1		FVA2		FVA3		FVA4	
	A	B	A	B	A	B	A	B
M2N	57	47	69	57	87	75	98	84
M3N	76	66	92	80	116	104	133	119
M4N	95	85	115	103	145	133	168	154
M5N	114	104	138	126	174	162	203	189
M6N	133	123	161	149	203	191	238	224
M7N	152	142	184	172	232	220	273	259
M8N	171	161	207	195	261	249	308	294
M9N	190	180	230	218	290	278	343	329
M10N	209	199	253	241	319	307	378	364

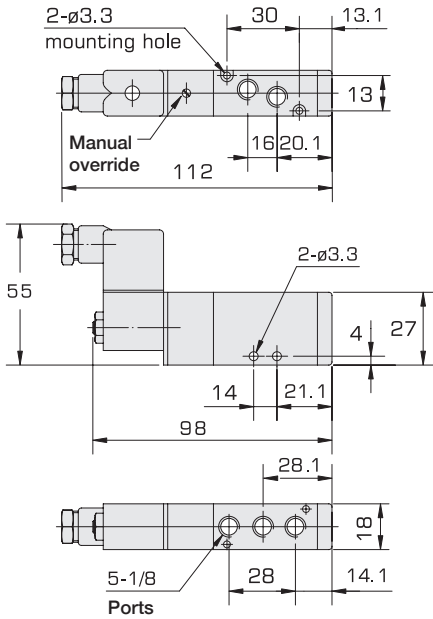
* All manifold ports are NPT

Series	C	D	E	F	G	H	I	J	K	L	M	N	O	P	Q*	R	S
FVA1	182.1	58	80	36	27	25	16	11	18	19	10	19	20	9	1/4	5	4.5
FVA2	213	65	93.8	33	35	26.5	16.5	12.5	22	23	12.5	21.5	22	11	1/4	6	5
FVA3	239	80	97.2	50	40	27.5	14.5	14.5	27	29	15.5	25.8	28.4	11.5	3/8	6	5
FVA4	270	100	113	68	50	39	20	20	34	31.25	14.25	34	32	18.5	1/2	7	5.5

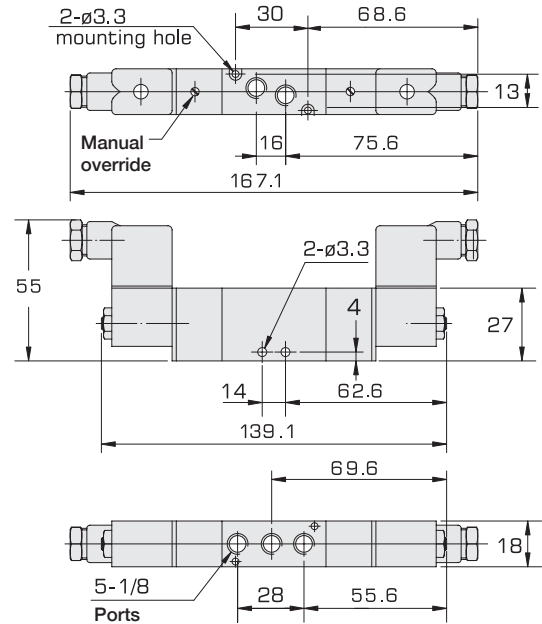
SOLENOID VALVES – Dimensions (mm)

4-Way, 2 Position

FVEC1110 (1/8)
4-Way Single Solenoid,
Spring Return (Air Assist)

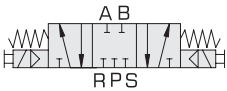


FVEC1210 (1/8)
4-Way Double Solenoid



4-Way, 3 Position (1/8)

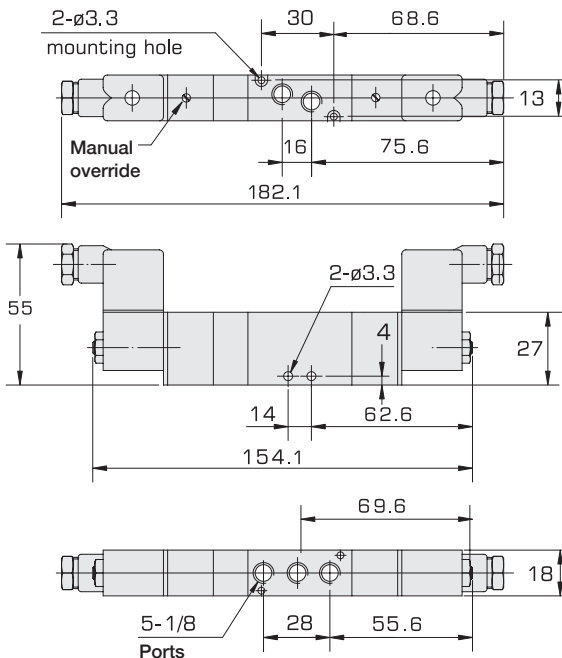
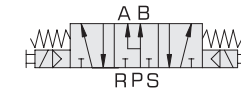
FVEC1310
Closed Center



FVEC1410
Exhaust Center

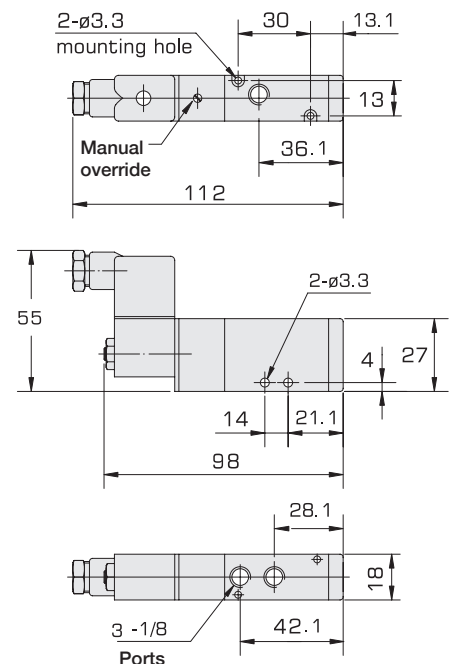
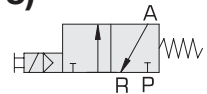


FVEC1510
Pressure Center



3-Way, Normally Closed

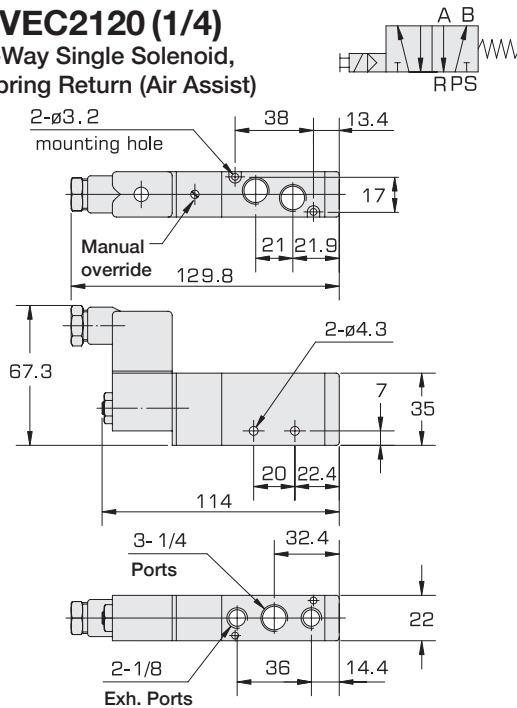
FVEC1610 (1/8)
Single Solenoid,
Spring Return,
(Air Assist)



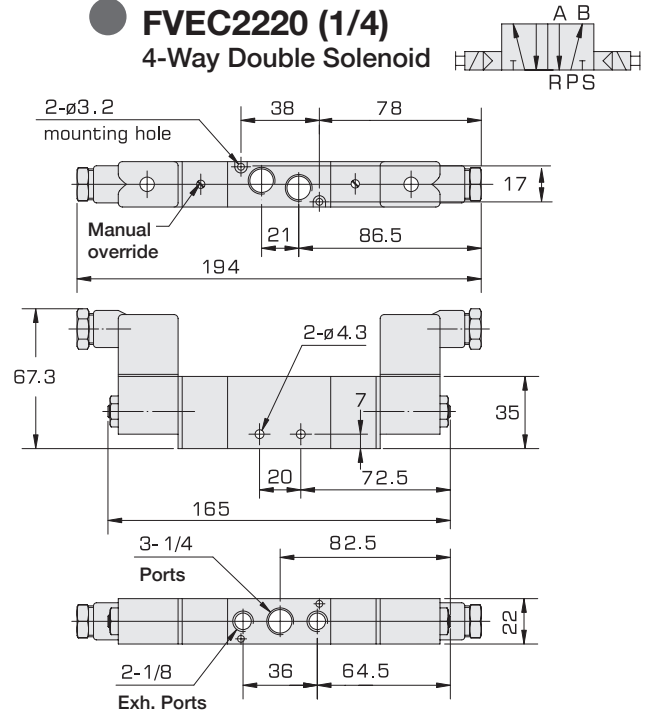
SOLENOID VALVES – Dimensions (mm)

4-Way, 2 Position

FVEC2120 (1/4) 4-Way Single Solenoid, Spring Return (Air Assist)



FVEC2220 (1/4) 4-Way Double Solenoid

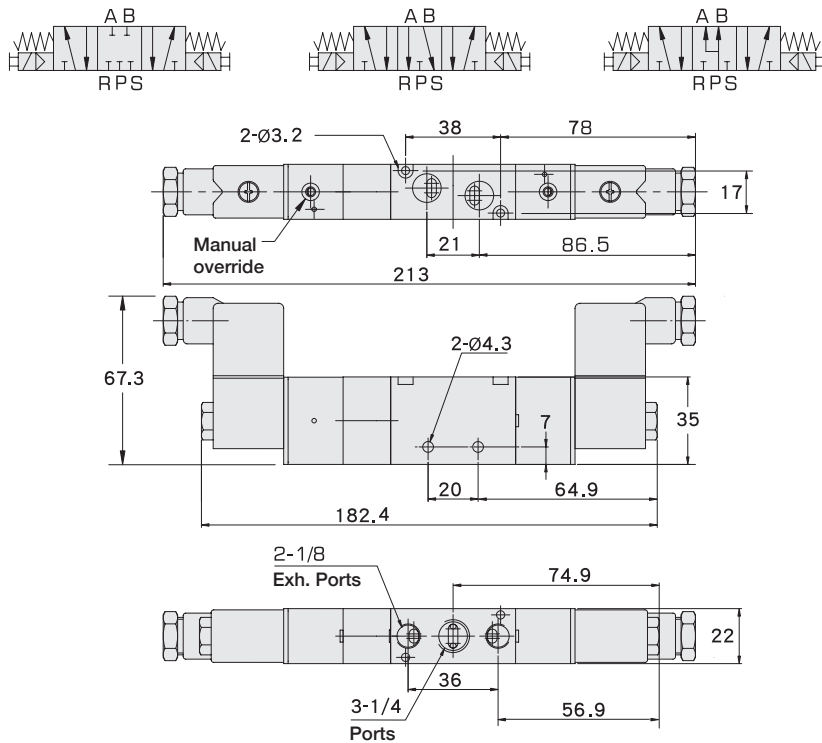


4-Way, 3 Position (1/4)

FVEC2320 Closed Center

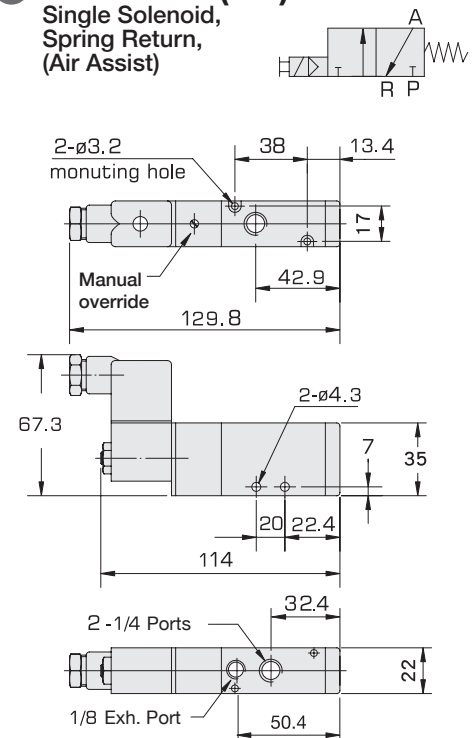
FVEC2420 Exhaust Center

FVEC2520 Pressure Center



3-Way, Normally Closed

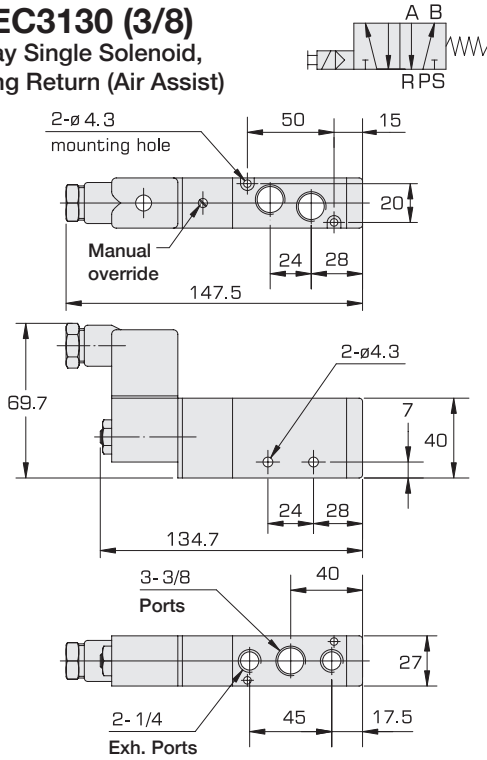
FVEC2620 (1/4) Single Solenoid, Spring Return, (Air Assist)



4-Way, 2 Position

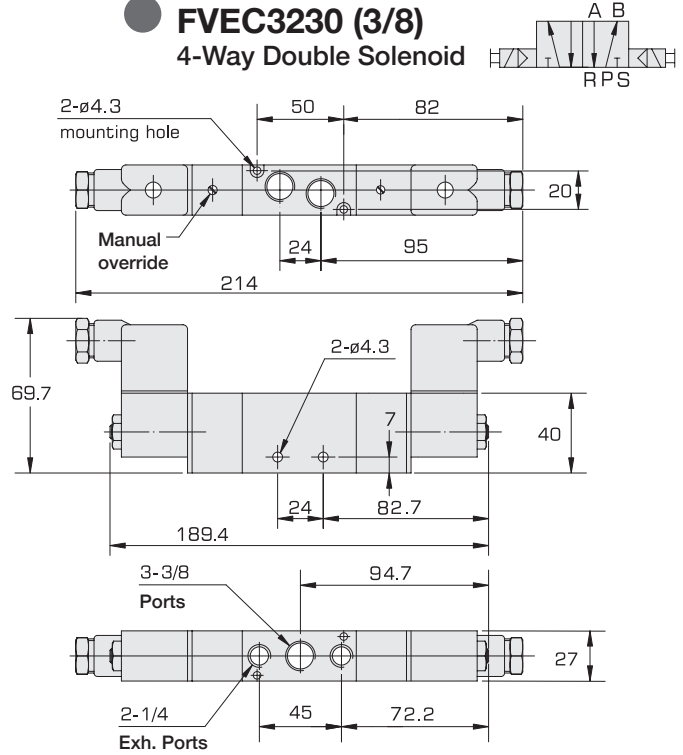
FVEC3130 (3/8)

4-Way Single Solenoid,
Spring Return (Air Assist)



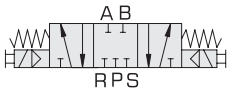
FVEC3230 (3/8)

4-Way Double Solenoid



4-Way, 3 Position (3/8)

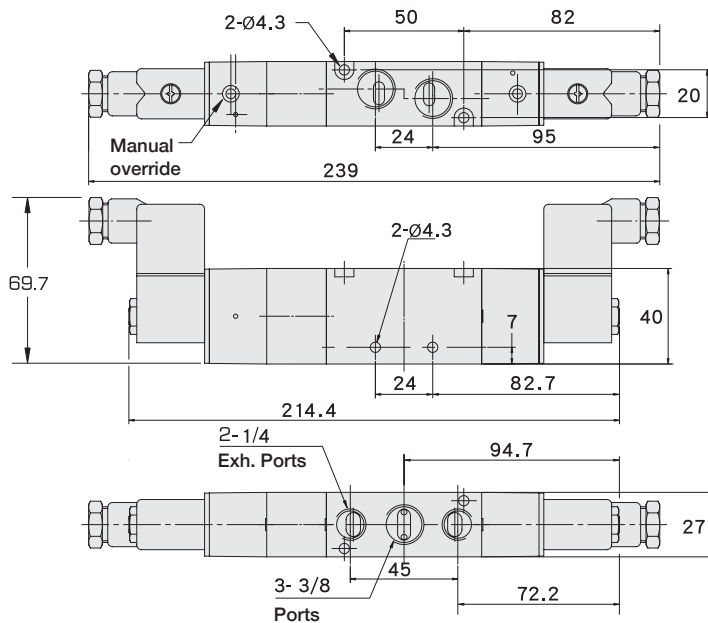
FVEC3330 Closed Center



FVEC3430 Exhaust Center



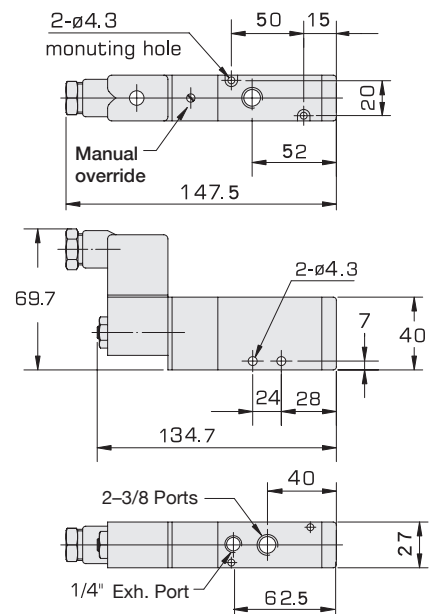
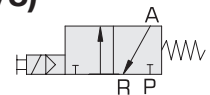
FVEC3530 Pressure Center



3-Way, Normally Closed

FVEC3630 (3/8)

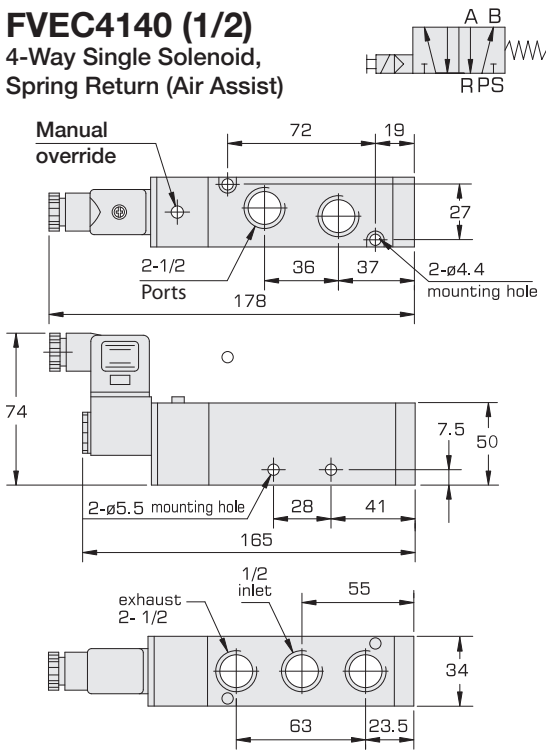
Single Solenoid,
Spring Return,
(Air Assist)



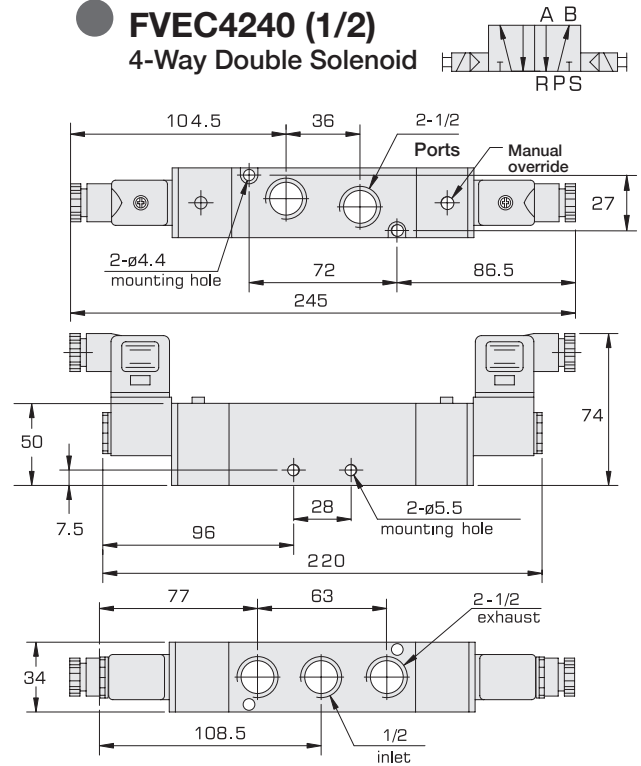
SOLENOID VALVES – Dimensions (mm)

4-Way, 2 Position

FVEC4140 (1/2)
4-Way Single Solenoid,
Spring Return (Air Assist)



FVEC4240 (1/2)
4-Way Double Solenoid

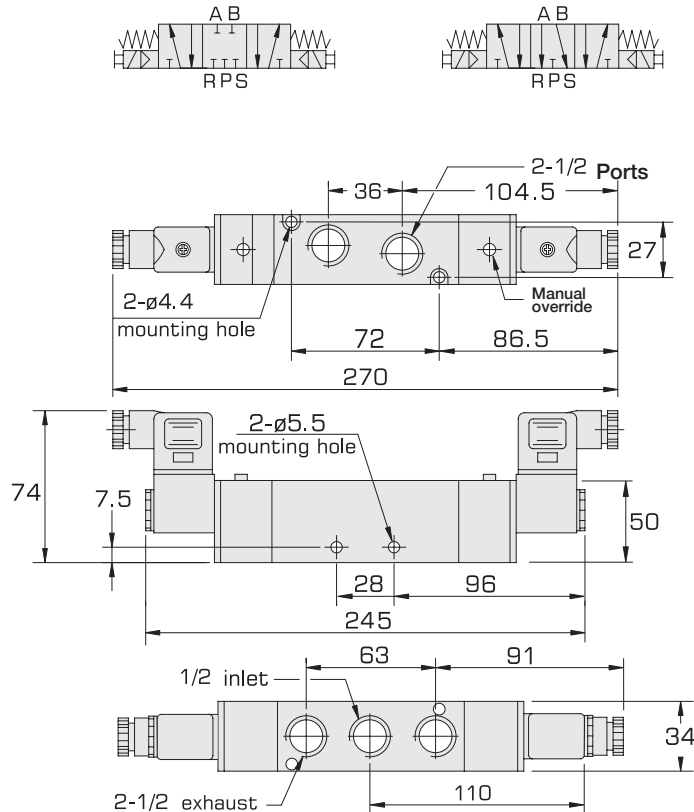


4-Way, 3 Position (1/2)

FVEC4340
Closed Center

FVEC4440
Exhaust Center

FVEC4540
Pressure Center



FABCO-AIR

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Cylinders, Valves and Accessories
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Air Cylinders
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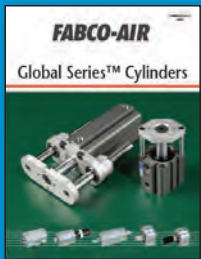
Compact Finger Slides
Catalog #FDH-10



ISO 6432 Cylinders
Catalog #FAE-09



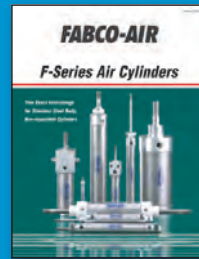
Stopper Cylinders
Catalog #ST-SC



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