



4SV Series Solenoid valve(5/2 way,5/3 way)

Compendium of 4SV Series

Inner exhaust structure
Special structure in the valve body, which can collect pilot airflow, and then exhaust intensively from R, S port.

Threaded type
Threaded type can integrate manifold to form valve group to save space.

Terminal
Special design for terminal, horizontal and vertical insertion can freely switch.

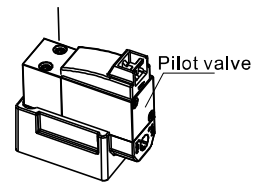
Multi-series and type
4SV100 , 4SV200 , 4SV300 , 4SV400 series are optional.

Die-cast molding with aluminum alloy for body
The shape of cavity is reasonable, which can increase flowing area and valve's flow.

M8 Grommet	
Grommet	
DIN Terminal	
Terminal	

Installation and Application

1. Don't throw or drop the solenoid valve when take it, to avoid breaking valve;
2. Because solenoid pilot valve is sophisticated component, can't crash pilot valve by outside force, otherwise solenoid valve break possibly;
3. Don't dismantle solenoid valve freely, if the screw M2.5 × 17 becomes loose, please tighten it by torque 0.4~0.45N.m;
4. About manual operation:
 - 4.1. Ensure no danger, prior to activating manual override;
 - 4.2. For push button option:
Activate by push the button in the direction shown
 - 4.3. For slotted option:
Activate by push the button in the direction shown.



With correct size screw driver: please turn to lock gently(Torque : 0.1N.m).

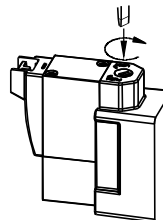
Attention



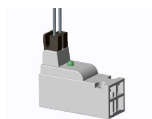
Normal position



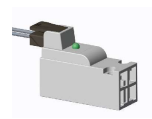
Locked position



- 4.4. Wiring instruction : Vertical plug type and parallel plug type are the same as plug, please insert wire line as up drawing by practicality.



Vertical plug wire



Parallel plug wire



Solenoid valve(5/2 way,5/3 way)

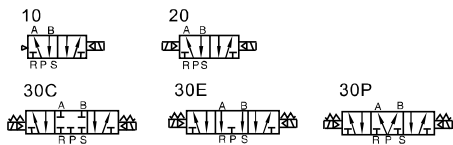
4SV Series



Specification

Model	4SV110	4SV120	4SV130	4SV210	4SV220	4SV230
Port size[Note1]	In=Out=Exhaust=M5(or=1/8")			In=Out=1/8"(or=1/4")Exhaust=1/8"		
Orifice size (Cv) [Note4]	06:10.2mm ² (0.6)		4SV130C06: 8.6mm ² (0.51)	08:17.0mm ² (1)		4SV230C08: 13.6mm ² (0.8)
Weight	84.4g	112.5g	121g	126g	156g	176g
Model	4SV310	4SV320	4SV330	4SV410	4SV420	4SV430
Port size[Note1]	In=Out=1/4"(or=3/8") Exhaust=1/4"			In=Out=Exhaust=1/2"		
Orifice size (Cv) [Note4]	10:31mm ² (1.8)		4SV330C10: 23mm ² (1.4)	15:57.6mm ² (3.2)		4SV430C10: 54.1mm ² (3.0)
Weight	208g	239.5g	265g	417.5g	453g	499g
Fluid	Air(to be filtered by 40μm filter element)					
Acting	Pilot					
Operating pressure	5/3 way		0.2~0.8MPa(29~114psi)			
	5/2 way		0.15~0.8MPa(21~114psi)			
Proof pressure	1.2MPa(175psi)					
Temperature	-20~70°C					
Material of body	Aluminum alloy					
Lubrication [Note2]	Not required					
Exhaust type of pilot valve	Main valve and pilot valve is centralized exhaust					
Max. frequency[Note3]	5 cycle/sec		3 cycle/sec		5 cycle/sec	
					3 cycle/sec	

Symbol



[Note1] G thread is available.

[Note2] Once lubricated air is used, continue with same medium to optimize valve life span. Lubricants like ISO VG32 or equivalent are recommended.

[Note3] The maximum actuation frequency is in the no-load state.

[Note4] Equivalent orifice S and Cv are all calculated from the flow rate data.

Product feature

1. Electrical entry is terminal, horizontal and vertical insertion can freely switch.
2. Inner exhaust structure, which can collect pilot airflow, and then exhaust intensively from R, S port.
3. Die-cast molding with aluminum alloy for body. The shape of cavity is reasonable, which can increase valve's flow.
4. Threaded type can integrate manifold to form valve group to save space.

Coil specification

Item	Specification				
Standard voltage	AC220V	AC110V	AC24V	DC24V	DC12V
Scope of voltage	AC: +15% ~ -10%			DC: ±10%	
Power of consumption	2.0VA			1.2W	
Protection	IP65				
Temperature classification	F Class				
Activating time	0.05 sec and below				

Ordering code

4SV 2 10 06 B □ □ □



① Model	4SV : 5 port 2(3) position solenoid valve					
② Code	1 : 100 Series	2 : 200 Series	3 : 300 Series	4 : 400 Series		
③ Valve type	10 : Single solenoid(5/2 Way)		20 : Double solenoid(5/2 Way)			
	30C : Double solenoid(5/3 way closed center)		30E : Double solenoid(5/3 way Exhaust center)			
	30P : Double solenoid(5/3 way pressure center)					
④ Port type	M5 : M5	06 : 1/8"	06 : 1/8"	08 : 1/4"	08 : 1/4"	10 : 3/8"
						15 : 1/2"
⑤ Voltage	A : AC220V B : DC24V C : AC110V E : AC24V F : DC12V					
⑥ Electrical entry	Blank:Terminal I:Grommet D:DIN Terminal M:M8 Grommet					
⑦ Wire length	Blank : 0.5m 200 : 2.0m					
⑧ Thread type	No this code			G: G Thread		

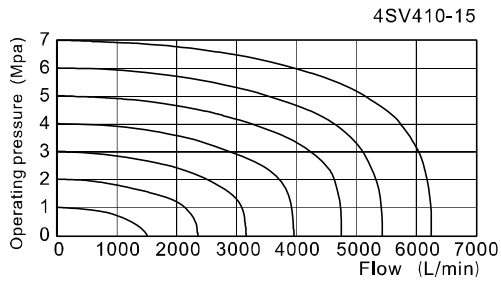
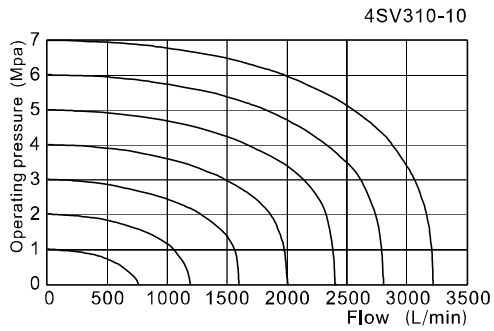
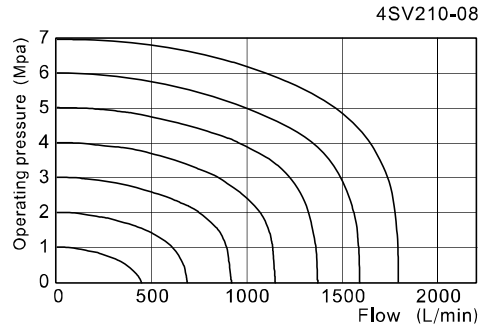
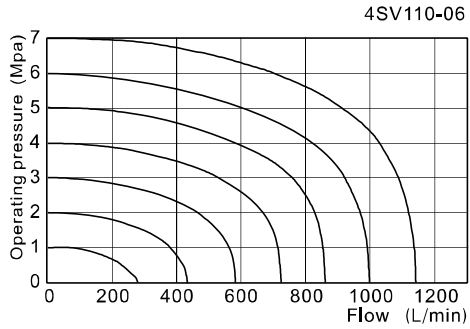
Note: 1. wire length only for terminal, 0.5m/2m are optional;

2. The wire length and M8 grommet length are 0.5m.

Solenoid valve(5/2 way,5/3 way)

4SV Series

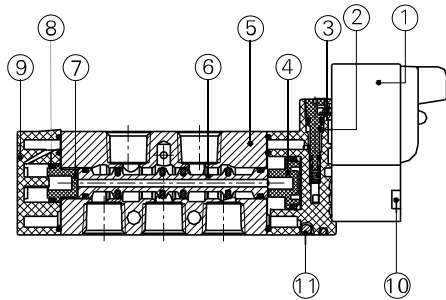
Flow chart



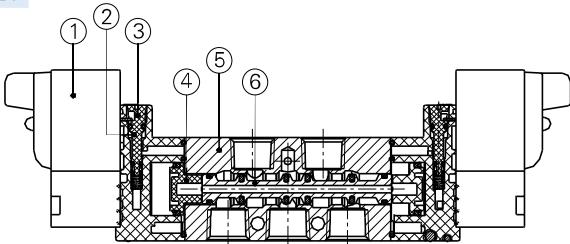
The data in flow rate chart are obtained from AirTAC lab.

Inner structure

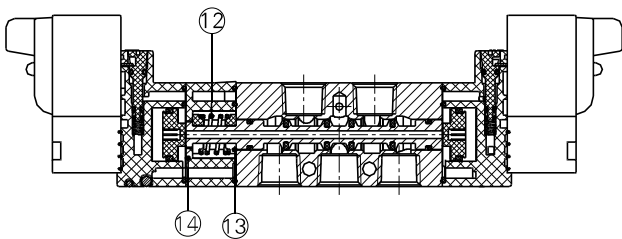
4SV110



4SV120



4SV130C



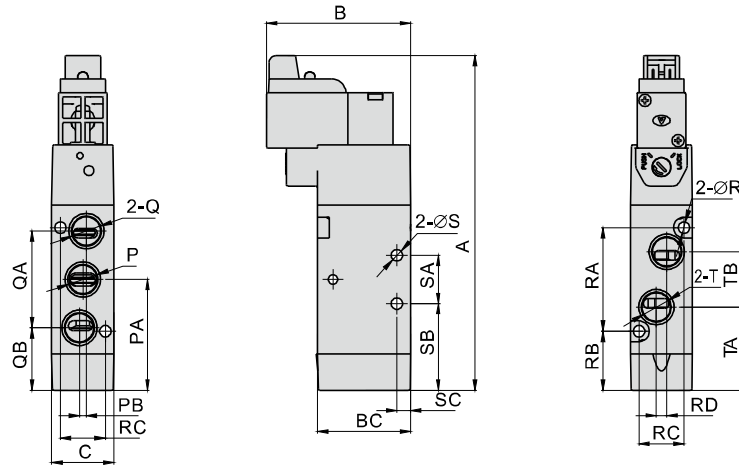
No.	Item	No.	Item	No.	Item
1	Pilot valve	6	Spool	11	Steel ball
2	Manual override	7	Little piston	12	Spring
3	Pilot kit	8	Gasket	13	Return holder
4	Big piston	9	Bottom cover	14	Side cover
5	Body	10	Bolt		

Solenoid valve(5/2 way,5/3 way)

4SV Series

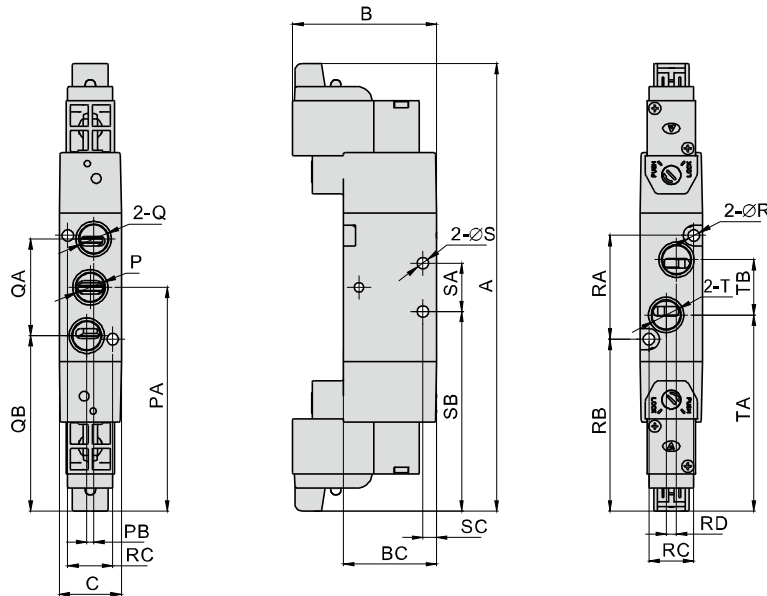
Dimensions

- 4SV110
- 4SV210
- 4SV310
- 4SV410



Model/Item	A	B	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	RD	S	SA	SB	SC
4SV110M5	97	41.5	27	18	M5×0.8	32	0	M5×0.8	27	18.5	M5×0.8	25	14	3.3	30	17	13	0	3.3	14	25	4
4SV11006	97	41.5	27	18	1/8"	32	2	1/8"	28	18	1/8"	24	16	3.3	30	17	13	3	3.3	14	25	4
4SV21006	106	41	35	22	1/8"	36	0	1/8"	36	18	1/8"	27	18	3.3	38	17	17	0	4.3	20	26	7
4SV21008	106	41	35	22	1/4"	36	0	1/8"	36	18	1/4"	25.5	21	3.3	38	17	17	3	4.3	20	26	7
4SV31008	126	43.5	40	27	1/4"	46.5	0	1/4"	45	24	1/4"	35.5	22	4.3	50	21.5	20	0	4.3	24	34.5	6.5
4SV31010	126	43.5	40	27	3/8"	46.5	0	1/4"	45	24	3/8"	34.5	24	4.3	50	21.5	20	4	4.3	24	34.5	6.5
4SV41015	159.5	50	50	34	1/2"	62.5	0	1/2"	63.5	31	1/2"	44.5	36	4.3	72	26.5	27	4	5.5	28	48.5	7.5

- 4SV120
- 4SV220
- 4SV320
- 4SV420

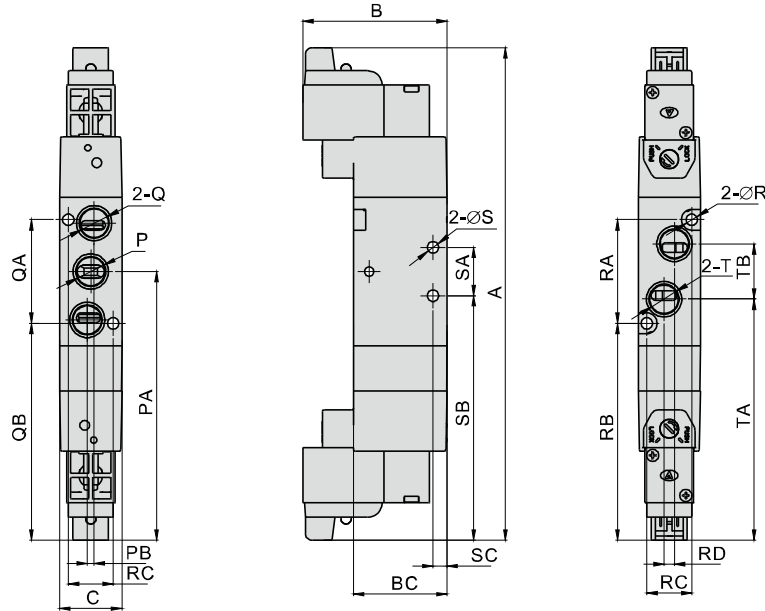


Model/Item	A	B	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	RD	S	SA	SB	SC
4SV120M5	129.5	41.5	27	18	M5×0.8	65	0	M5×0.8	27	51.5	M5×0.8	58	14	3.3	30	50	13	0	3.3	14	58	4
4SV12006	129.5	41.5	27	18	1/8"	65	2	1/8"	28	51	1/8"	57	16	3.3	30	50	13	3	3.3	14	58	4
4SV22006	139.5	41	35	22	1/8"	70	0	1/8"	36	52	1/8"	61	18	3.3	38	51	17	0	4.3	20	60	7
4SV22008	139.5	41	35	22	1/4"	70	0	1/8"	36	52	1/4"	59.5	21	3.3	38	51	17	3	4.3	20	60	7
4SV32008	159.5	43.5	40	27	1/4"	80	0	1/4"	45	57.5	1/4"	69	22	4.3	50	55	20	0	4.3	24	68	6.5
4SV32010	159.5	43.5	40	27	3/8"	80	0	1/4"	45	57.5	3/8"	68	24	4.3	50	55	20	4	4.3	24	68	6.5
4SV42015	159.5	50	50	34	1/2"	96.5	4	1/2"	63.5	65	1/2"	78.5	36	4.3	72	60.5	27	4	5.5	28	82.5	7.5

Solenoid valve(5/2 way,5/3 way)

4SV Series

- 4SV130
- 4SV230
- 4SV330
- 4SV430



Model/Item	A	B	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	RD	S	SA	SB	SC
4SV130M5	142.5	41.5	27	18	M5×0.8	78	0	M5×0.8	27	64.5	M5×0.8	71	14	3.3	30	63	13	0	3.3	14	71	4
4SV13006	142.5	41.5	27	18	1/8"	78	2	1/8"	28	64	1/8"	70	16	3.3	30	63	13	3	3.3	14	71	4
4SV23006	158.5	41	35	22	1/8"	89	0	1/8"	36	71	1/8"	80	18	3.3	38	70	17	0	4.3	20	79	7
4SV23008	158.5	41	35	22	1/4"	89	0	1/8"	36	71	1/4"	78.5	21	3.3	38	70	17	3	4.3	20	79	7
4SV33008	178.5	43.5	40	27	1/4"	99	0	1/4"	45	76.5	1/4"	88	22	4.3	50	74	20	0	4.3	24	87	6.5
4SV33010	178.5	43.5	40	27	3/8"	99	0	1/4"	45	76.5	3/8"	87	24	4.3	50	74	20	4	4.3	24	87	6.5
4SV43015	214.5	50	50	34	1/2"	117.5	4	1/2"	63.5	86	1/2"	99.5	36	4.3	72	81.5	27	4	5.5	28	103.5	7.5

4SV Series manifold



Specification

Item\Manifold Model	4SV100M	4SV200M	4SV300M	4SV400M
Fluid	Air (to be filtered by 40µm filter element)			
Temperature °C	-20~70°C			
Adaptable valve's series	4SV100 Series	4SV200 Series	4SV300 Series	4SV400 Series

Product feature

1. It is available to integrate the direction control valves of the same series to form valve group to save space and cost.
2. It is easy to examine when there are faults owing to the unified air intake and exhaust and unified wiring.
3. Flexible combination and strong expansion capability can make any combination or expansion of the numbers of direction control valves that are connected.

Ordering code

4SV100M 5F

Ordering code for manifold

① ② ③

① Model	4SV100M:4SV100 Series	4SV200M:4SV200 Series	4SV300M:4SV300 Series	4SV400M:4SV400 Series
② Number of stations	1F: 1Station 2F: 2Station 30F: 30Station			
③ Thread type	G: G Thread			

P-4SV100M-R2

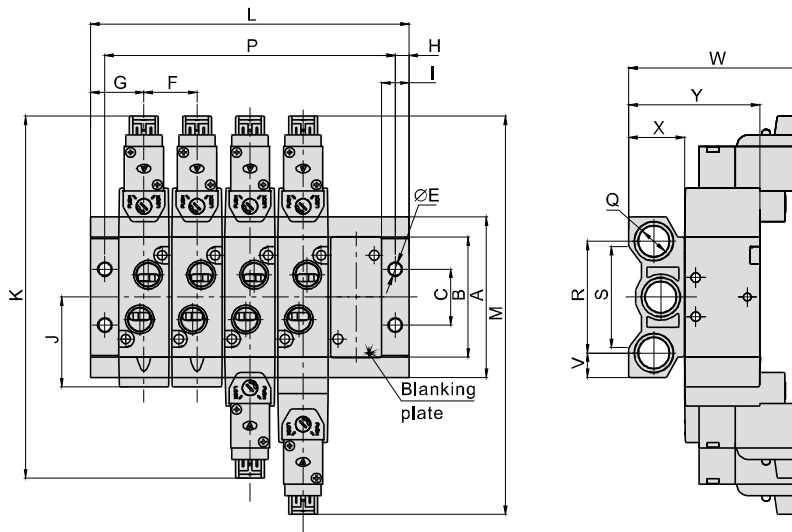
Ordering code for blank plate

① ②

① Model	4SV100M:4SV100 Series	4SV200M:4SV200 Series	4SV300M:4SV300 Series	4SV400M:4SV400 Series
② Code	R2: Blank plate for manifold			

[Note] 1. Manifold kits contains manifold, seal and screw; 2. Blank plate kits contains blank plate and screw.

Dimensions



Model\Item	A	B	C	E	F	G	H	I	J	K	M	Q	R	S	V	W	X	Y
4SV100M	57.5	43	20	4.5	19	19	5	10	32	129.5	142.5	1/4"	40	36	9	62.5	20	48
4SV200M	60	52	21	4.5	23	22	5	11	36	139.5	158.5	1/4"	42	38	9	64.5	22.5	58.5
4SV300M	75	64	26	4.5	28	26	5	12.5	46.5	159.5	178.5	3/8"	53	53	11	72.5	28	69
4SV400M	100	94	32	5.5	35	30.5	6	13.5	62.5	193.5	214.5	1/2"	68	71	16	84	33	84

Model\Item	L																			
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
4SV100M	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323	342	361	380	399
4SV200M	44	67	90	113	136	159	182	205	228	251	274	297	320	343	366	389	412	435	458	481
4SV300M	52	80	108	136	164	192	220	248	276	304	332	360	388	416	444	472	500	528	556	584
4SV400M	61	96	131	166	201	236	271	306	341	376	411	446	481	516	551	586	621	656	691	726

Model\Item	P																			
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
4SV100M	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389
4SV200M	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379	402	425	448	471
4SV300M	42	70	98	126	154	182	210	238	266	294	322	350	378	406	434	462	490	518	546	574
4SV400M	49	84	119	154	189	224	259	294	329	364	399	434	469	504	539	574	609	644	679	714