Solenoid valve(3/2 way)

4STV Series

Specification

Model	4STV110	4STV120	4STV210	4STV220
Port size[Note1]	In=Out=Exhaust=M5(or=1/8")		In=Out=Exhaust=1/8"(or=1/4")	
Orifice size (Cv) [Note4]	06:10.2mm²(0.6)		08:17.0mm²(1)	
Weight	74g	102g	114g	144g
Model	**4STV310**		**4STV320**	
Port size[Note1]	In=Out=Exhaust=1/4"(or=3/8")			
Orifice size (Cv) [Note4]	10:31mm²(1.8)			
Weight	171g		203g	
Fluid	Air(to be filtered by 40μm filter element)			
Acting	Pilot			
Operating pressure	0.15~0.8MPa(21~114psi)			
Proof pressure	1.2MPa(175psi)			
Temperature	-20~70℃			
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			

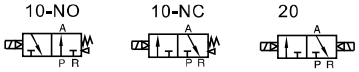
[Note1] G thread is available.

[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.

Symbol



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 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
Power of consumption	2.0VA			1.2W	
Scope of voltage	AC: +15% ~-10%			DC: ±10%	
Protection	IP65				
Temperature classification	F Class				
Activating time	0.05 sec and below				

Ordering code

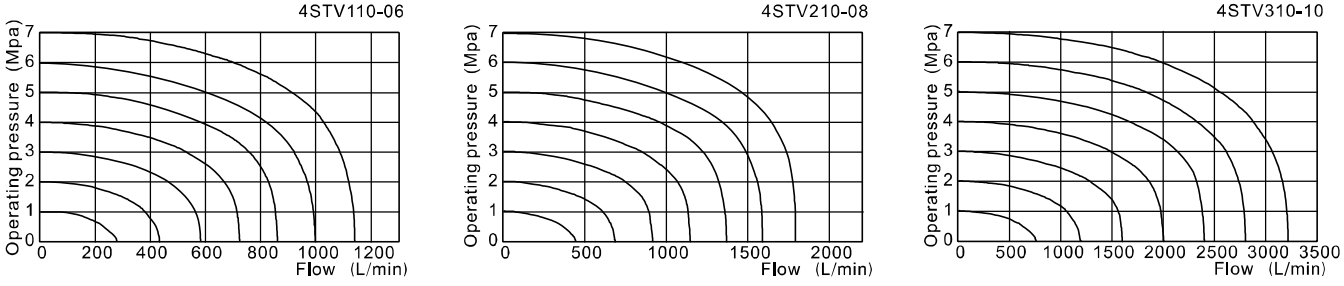
4STV 1 10 06 NC B □ □ □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧ ⑨

①**Model**	4STV: 3port 2position solenoid valve					
②**Code**	1 : 100 Series		2 : 200 Series		3 : 300 Series	
③**Valve type**	10 : Single solenoid 20 : Double solenoid					
④**Port type**	M5 : M5	06 : 1/8"	06 : 1/8"	08 : 1/4"	08 : 1/4"	10 : 3/8"
⑤**Acting type**	NC: Normally closed NO: Normally opened [Note : Double air control no this code]					
⑥**Voltage**	A : AC220V B : DC24V C : AC110V E : AC24V F : DC12V					
⑦**Electrical entry**	Blank:Terminal I:Grommet D:DIN Terminal M:M8 Grommet					
⑧**Wire length**	Blank: 0.5m 200 : 2.0m					
⑨**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.

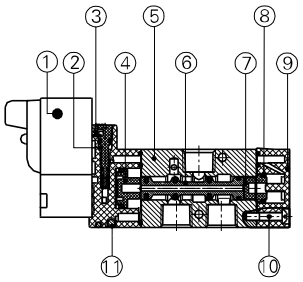
Flow chart



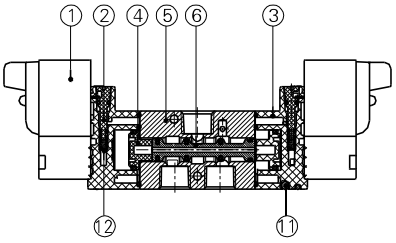
The data in flow rate chart are obtained from AirTAC lab.

Inner structure

4STV110



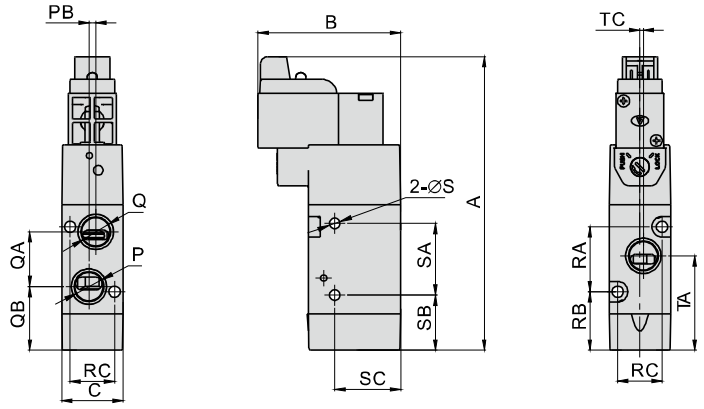
4STV120NC



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

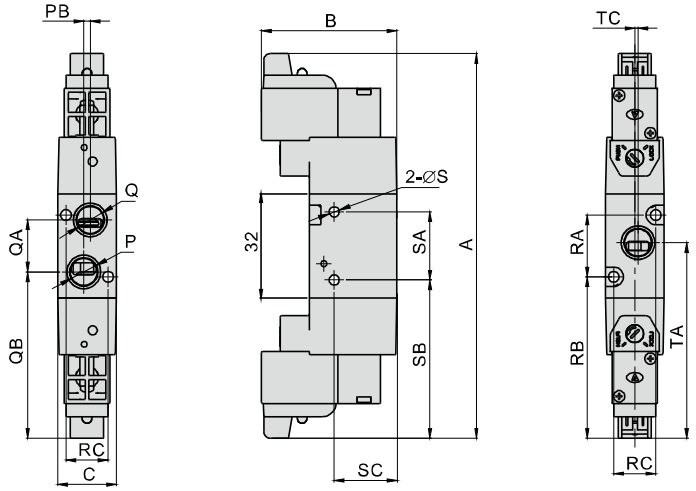
Dimensions

4STV110
4STV210
4STV310
4STV410



Model\Item	A	B	C	P	PB	Q	QA	QB	R	RA	RB	RC	S	SA	SB	SC	T	TA	TC
4STV110M5	86	41.5	18	M5×0.8	0	M5×0.8	14	19.5	3.3	19	17	13	3.1	21	16	19.3	M5×0.8	26.5	0
4STV11006	86	41.5	18	1/8"	1	1/8"	16	18.5	3.3	19	17	13	3.1	21	16	19.3	1/8"	27.5	1
4STV21006	98	41	22	1/8"	0	1/8"	21	21.5	3.3	30	17	17	4.3	25	19.5	26.5	1/8"	32	0
4STV21008	98	41	22	1/4"	1.5	1/4"	22.5	21	3.3	30	17	17	4.3	25	19.5	26.5	1/4"	33	1.5
4STV31008	109	43.5	27	1/4"	0	1/4"	21.5	27	4.3	35	20.5	20	4.3	30	23	29.5	1/4"	38	0
4STV31010	109	43.5	27	3/8"	2	3/8"	24	26	4.3	35	20.5	20	4.3	30	23	29.5	3/8"	38	2

4STV120
4STV220
4STV320
4STV420



Model\Item	A	B	C	P	PB	Q	QA	QB	R	RA	RB	RC	S	SA	SB	SC	T	TA	TB
4STV120M5	118.5	41.5	18	M5×0.8	0	M5×0.8	14	52.5	3.3	19	50	13	3.1	21	49	19.3	M5×0.8	59.5	0
4STV12006	118.5	41.5	18	1/8"	1	1/8"	16	51.5	3.3	19	50	13	3.1	21	49	19.3	1/8"	60.5	1
4STV22006	131.5	41	22	1/8"	0	1/8"	21	55.5	3.3	30	51	17	4.3	25	53.5	26.5	1/8"	66	0
4STV22008	131.5	41	22	1/4"	1.5	1/4"	22.5	54.5	3.3	30	51	17	4.3	25	53.5	26.5	1/4"	67	1.5
4STV32008	142.5	43.5	27	1/4"	0	1/4"	21.5	60.5	4.3	35	54	20	4.3	30	56.5	29.5	1/4"	71.5	0
4STV32010	142.5	43.5	27	3/8"	2	3/8"	24	59.5	4.3	35	54	20	4.3	30	56.5	29.5	3/8"	71.5	2

Solenoid valve(Accessories)

4STV Series manifold

Specification

Item\Manifold Model	4STV100M	4STV200M	4STV300M
Fluid	Air(to be filtered by 40μm filter element)		
Temperature ℃	-20~70℃		
Adaptable valve's series	4STV100 Series	4STV200 Series	4STV300 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 owning 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

4STV100M 5F □

Ordering code for manifold

①Model	4STV100M : 4STV100 Series manifold	4STV200M : 4STV200 Series manifold	4STV300M : 4STV300 Series manifold
②Number of stations	1F : 1Station 2F : 2Station ..... 30F : 30Station		
③Thread type	G: G Thread		

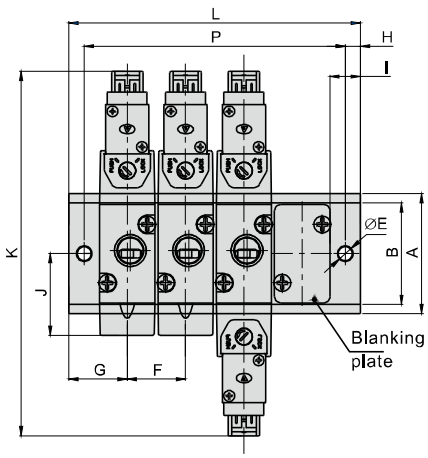
P-4STV100M-R2

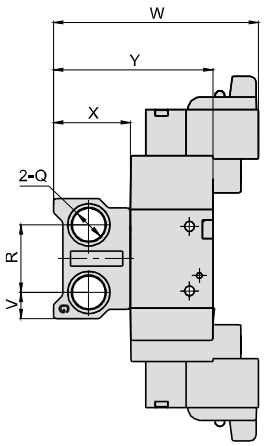
Ordering code for blank plate

①Model	4STV100M : 4STV100Series manifold	4STV200M : 4STV200Series manifold	4STV300M : 4STV300Series manifold
②Code	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	E	F	G	H	I	J	K	Q	R	V	W	X	Y
4STV100M	39	33	4.5	19	19	5	10	26.5	118.5	1/4"	22	8.5	67.5	25	53
4STV200M	45	41	4.5	23	23	6	12	32	131.5	1/4"	25	10	68.5	25	61
4STV300M	52	48	4.5	28	27	6	13.5	38	142.5	3/8"	28	12	73.5	29	70

Model\Item	L																			
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
4STV100M	38	57	76	95	114	133	152	171	190	209	228	247	266	285	304	323	342	361	380	399
4STV200M	46	69	92	115	138	161	184	207	230	253	276	299	322	345	368	391	414	437	460	483
4STV300M	54	82	110	138	166	194	222	250	278	306	334	362	390	418	446	474	502	530	558	586

Model\Item	P																			
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
4STV100M	28	47	66	85	104	123	142	161	180	199	218	237	256	275	294	313	332	351	370	389
4STV200M	34	57	80	103	126	149	172	195	218	241	264	287	310	333	356	379	402	425	448	471
4STV300M	42	70	98	126	154	182	210	238	266	294	322	350	378	406	434	462	490	518	546	574