

# 7V Series Solenoid valve(5/2 way,5/3 way)

## Compendium of 7V Series

### Inner exhaust structure

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

### Terminal

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

### Multi-port types are optional

Threaded type and quick connector type are optional, and can integrate manifold to form valve group to save space.



### Multi-series and type

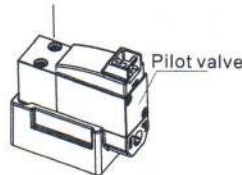
7V0500, 7V100, 7V200, 7V300 series are optional; one series have single solenoid 5/2 way(10), double solenoid 5/2 way (20), double solenoid 5/3 way (30C, 30E, 30P) are optional.

### Die-cast molding with aluminum alloy for body

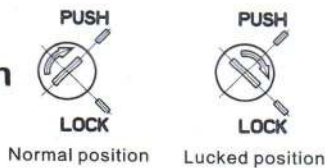
The shape of cavity is reasonable, which can increase flowing area and valve's flow.

## 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 dismantlè solenoid valve freely, if the screw(M1.6X14) becomes loose, please tighten it by torque 0.1~0.12N.m;
4. About manual operation:
  - 4.1. Ensure no danger, prior to activating manual override;
  - 4.2. For push button option:
    - 4.2.1. Activate by push the button in the direction shown
  - 4.3. For slotted option:
    - 4.3.1. Activate by push the button in the direction shown.
    - 4.3.2. With correct size screw driver: please turn to lock gently(Torque: 0.1N.m).



### Attention



- 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.



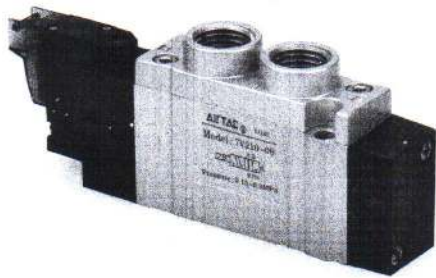
Vertical plug wire



Parallel plug wire

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

## 7V Series

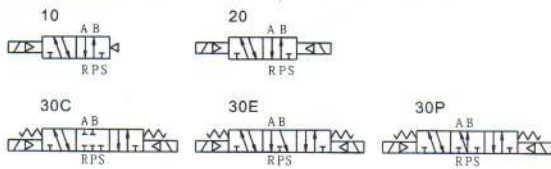


### Specification

Model		7V0510	7V0520	7V0530	7V110	7V120	7V130
Port size [Note1]	Thread type	In=Out=Exhaust=M5			In=Out=Exhaust=1/8"		
	Tube type	Port A=Port B=Φ4			Port A=Port B=Φ6(or Φ8)		
Orifice size (Cv value)		5.0mm <sup>2</sup> (0.28)	4.5mm <sup>2</sup> (0.25)		9.5mm <sup>2</sup> (0.55)	8.0mm <sup>2</sup> (0.4)	
Weight		80g	90g	100g	80g	90g	100g
Model		7V210	7V220	7V230			
Port size [Note1]	Thread type	In=Out=1/4" Exhaust=1/8"					
	Tube type	Port A=Port B=Φ8(or Φ10)					
Orifice size (Cv value)		14.0mm <sup>2</sup> (0.83)	11.0mm <sup>2</sup> (0.61)				
Weight		120g	135g	145g			
Fluid		Air(to be filtered by 40μm filter element)					
Acting		Pilot					
Operating pressure	5/3 way	0.2-0.8MPa(29~114psi)					
	Others	0.15-0.8MPa(21~114psi)					
Proof pressure		1.5MPa(215psi)					
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	3 cycle/sec	3 cycle/sec

[Note1] PT thread, NPT thread and G thread are available.  
 [Note2] Once lubricated air is used, continue with same medium to optimise valve life s  
 Lubricants like ISO VG32 or equivalent are recommended.  
 [Note3] The maximum actuation frequency is in the no-load state.

### 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, 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 and quick connector type are optional, and can integrate manifold to form valve group to save space.

### Coil specification

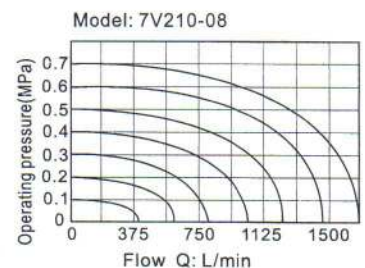
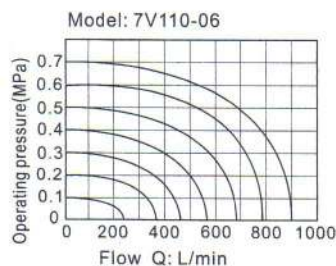
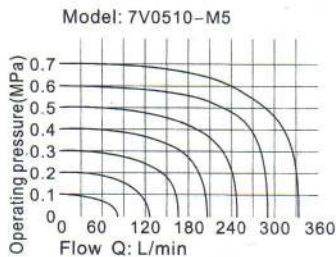
Item	Specification			
Standard voltage	AC220V	AC110V	DC24V	DC12V
Scrop of voltage	AC: +15% ~-10%		DC: ±10%	
Power of consumption	1.1VA		0.9W	
Protection	Dustproof			
Temperature classification	F Class			
Electrical entry	Terminal			
Activating time	0.05 sec and below			

### Ordering code

7V 2 10 J 08 B 050 □  
 ① ② ③ ④ ⑤ ⑥ ⑦ ⑧

① Model	7V: 5 port 2(3) position solenoid valve		
② Code	05: 0500 Series	1: 100 Series	2: 200 Series
③ Valve type	10: Single solenoid(5/2 Way)	20: Double solenoid(5/2 Way)	30C: Double solenoid(5/3 way closed cen
	30E: Double solenoid(5/3 way Exhaust center)	30P: Double solenoid(5/3 way pressure center)	
④ Port type	Blank: Thread type J: Tube type		
⑤ Port size	M5: M5	06: 1/8"	08: 1/4"
	04: Φ4mm	06: Φ6mm/08: Φ8mm	08: Φ8mm/10: Φ10mm
⑥ Voltage	A: AC220V	B: DC24V	C: AC110V F: DC12V
⑦ Line's length	050: 0.5m 200: 2.0m		
⑧ Thread type	No this code	Blank: PT thread	G: G Thread T: NPT Thread

### Flow chart

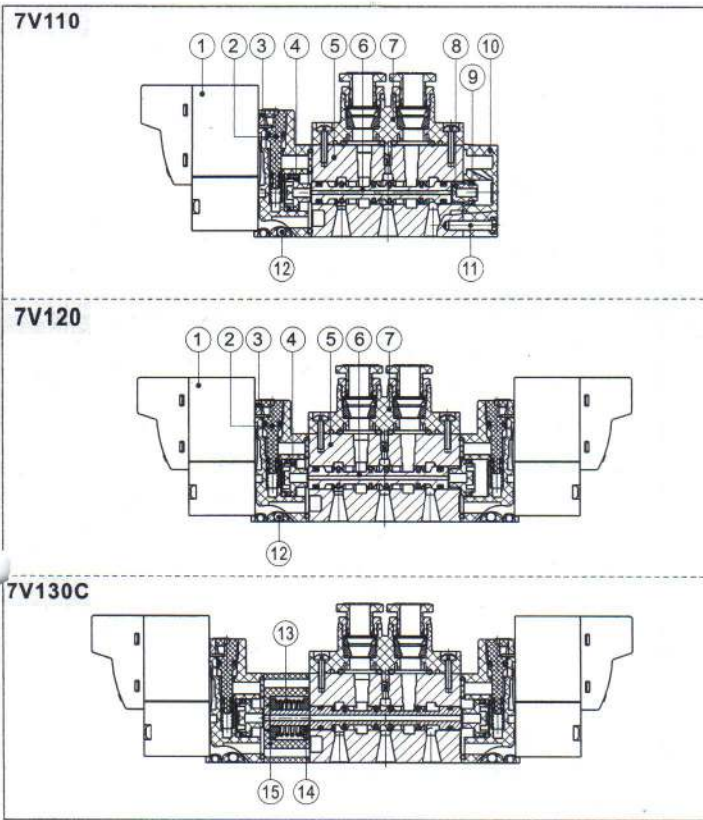


# Solenoid valve (5/2 way, 5/3 way)

**AIRTAC**

## 7V Series

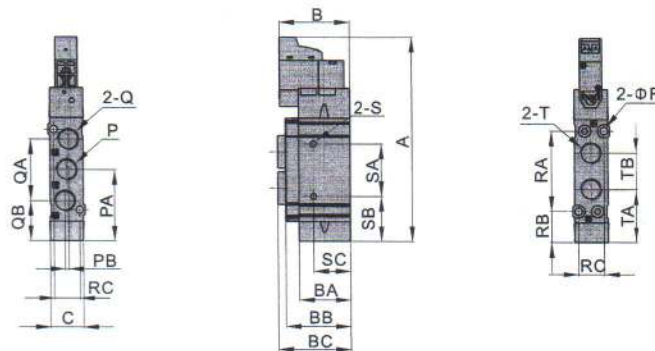
### Inner structure



No.	Item	No.	Item	No.	Item
1	Pilot valve	6	Spool	11	Bolt
2	Manual override	7	Connecting block	12	Steel ball
3	Pilot kit	8	Little piston	13	Spring
4	Big piston	9	Gasket	14	Return holder
5	Body	10	Bottom cover	15	Side cover

### Dimensions

7V0510  
7V110  
7V210

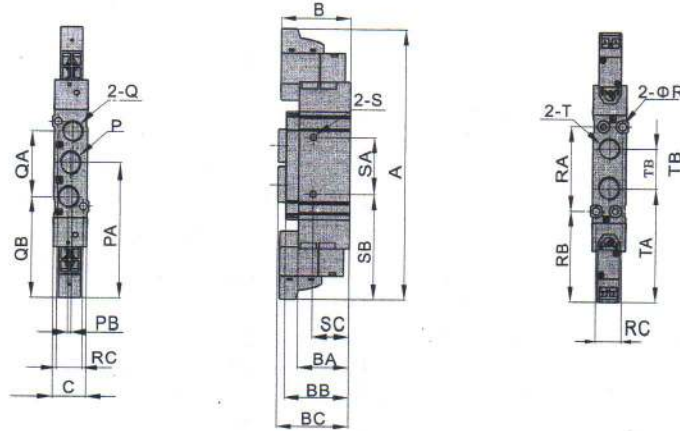


Model/Item	A	B	BA	BB	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	S	SA	SB	SC	
7V0510M5	73	30.5	18.5	23	23.5	10	M5X0.8	22.5	1	M5X0.8	19	13	M5X0.8	17.5	10.5	2.1	21.5	12	8.6	M3X0.5	9.5	17.8	4	
7V0510J04					32.5		Oval hole			Oval hole			Φ4(tube)							-				-
7V11006	92.5	31.5	23	29	32.5	15	1/8"	32.5	1.6	1/8"	27	18.5	1/8"	24	16	3.2	36	14.5	11.6	M3X0.5	23.5	20.5	16.5	
7V110J06					40		Oval hole			Φ6(tube)			-							-				-
7V110J08					41.5		Oval hole			Φ8(tube)			-							-				-
7V21008					40		1/4"			1/4"			-							-				-
7V210J08	106	33	28	34	46.5	18	Oval hole	39	3	1/4"	36	21	Φ8(tube)	29	20	4.3	42	18	13.6	M4X0.7	20	29	7	
7V210J10					49		Oval hole			Φ10(tube)			-							-				-

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

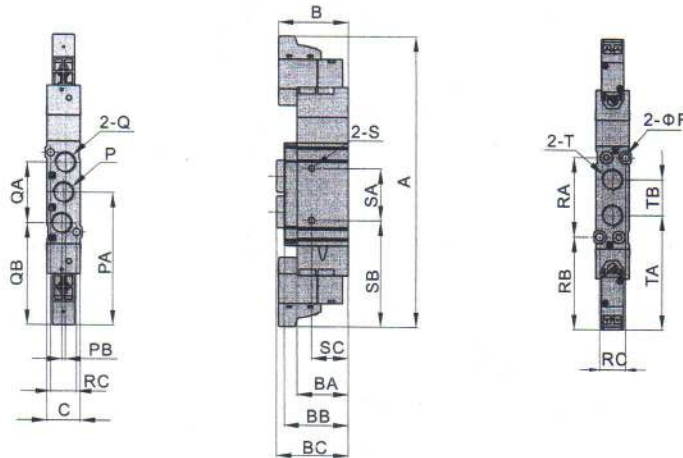
## 7V Series

7V0520  
7V120  
7V220



Model/Item	A	B	BA	BB	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	S	SA	SB
7V0520M5	101.5	30.5	18.5	23	23.5	10	M5X0.8	50.5	1	M5X0.8	19	41	M5X0.8	45.5	10.5	2.1	21.5	12	8.6	M3X0.5	9.5	17.8
7V0520J04					32.5		Oval hole			Oval hole			Φ4(tube)							-	-	-
7V12006	120.5	31.5	23	29	32.5	15	1/8"	60.5	1.6	1/8"	27	46.5	1/8"	52	16	3.2	36	14.5	11.6	M3X0.5	23.5	48.5
7V120J06					40		Oval hole			Oval hole			Φ6(tube)							-	-	-
7V120J08					41.5		Oval hole			Oval hole			Φ8(tube)							-	-	-
7V22008	134	33	28	34	40	18	1/4"	67	3	1/4"	36	49	1/4"	57	20	4.3	42	18	13.6	M4X0.7	20	57
7V220J08					46.5		Oval hole			Oval hole			Φ8(tube)							-	-	-
7V22008J10					49		Oval hole			Oval hole			Φ10(tube)							-	-	-

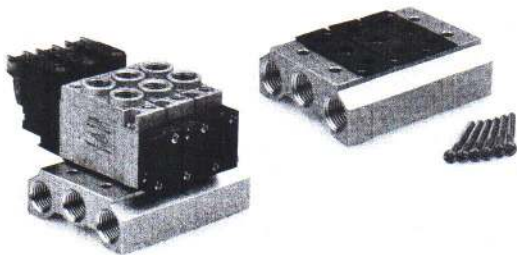
7V0530  
7V130  
7V230



Model/Item	A	B	BA	BB	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	S	SA	SB
7V0530M5	110	30.5	18.5	23	23.5	10	M5X0.8	50.5	1	M5X0.8	19	41	M5X0.8	45.5	10.5	2.1	21.5	12	8.6	M3X0.5	9.5	45.8
7V0530J04					32.5		Oval hole			Oval hole			Φ4(tube)							-	-	-
7V13006	132	31.5	23	29	32.5	15	1/8"	60.5	1.6	1/8"	27	46.5	1/8"	52	16	3.2	36	14.5	11.6	M3X0.5	23.5	48.5
7V130J06					40		Oval hole			Oval hole			Φ6(tube)							-	-	-
7V130J08					41.5		Oval hole			Oval hole			Φ8(tube)							-	-	-
7V23008	147	33	28	34	40	18	1/4"	67	3	1/4"	36	49	1/4"	57	20	4.3	42	18	13.6	M4X0.7	20	57
7V230J08					46.5		Oval hole			Oval hole			Φ8(tube)							-	-	-
7V230J10					49		Oval hole			Oval hole			Φ10(tube)							-	-	-

# Solenoid valve(Accessories)

## 7V Series manifold



### Specification

Item\Manifold Model	7V0500M	7V100M	7V200M
Fluid	Air(to be filtered by 40 μm filter element)		
Temperature	-20~70°C		
Adaptable valve's series	7V0500 Series	7V100 Series	7V200 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

**7V100M 5F T** Ordering code for manifold



① Model	7V0500M: 7V0500 Series manifold	7V100M: 7V100 Series manifold	7V200M: 7V200 Series manifold
② Number of stations	1F: 1 Station 2F: 2 Station 3F: 3 Station ..... 16F: 16 Station		
③ Thread type	Blank: PT thread G: G Thread T: NPT Thread		

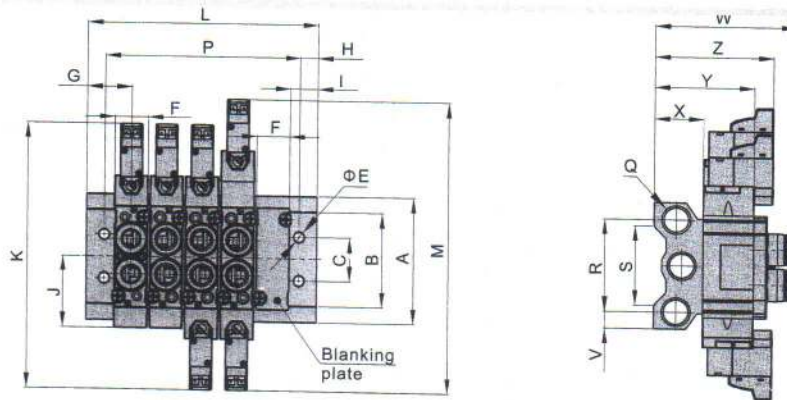
**P-7V100M R2** Ordering code for blank plate



① Model	7V0500M: 7V0500 Series manifold	7V100M: 7V100 Series manifold	7V200M: 7V200 Series manifold
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	Z		
7V0500M	46	32	16	4.5	10	17.5	7.5	12.5	22.5	102	110	1/8"	32	26	7	23.5(M5)	32.5(J04)		17	35.5	47.5
7V100M	57.5	43	20	4.5	15	20	8	12.5	32	121	132	1/8"	40	36	9	32.5(O6)	40(J06)	41.5(J08)	22	45	53.5
7V200M	60	52	21	4.5	18	22	8.5	13	39	134	147	1/4"	42	38	9	40(O8)	46.5(J08)	49(J10)	24	52	57

Model\Item	L															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
7V0500M	35	45.5	56	66.5	77	87.5	98	109	119	130	140	150.5	161	172	182	192.5
7V100M	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264	280
7V200M	44	63	82	101	120	139	158	177	196	215	234	253	272	291	310	329

Model\Item	P															
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F
7V0500M	20	30.5	41	51.5	62	72.5	83	93.5	104	115	125	135.5	146	157	167	177.5
7V100M	24	40	56	72	88	104	120	136	152	168	184	200	216	232	248	264
7V200M	27	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312