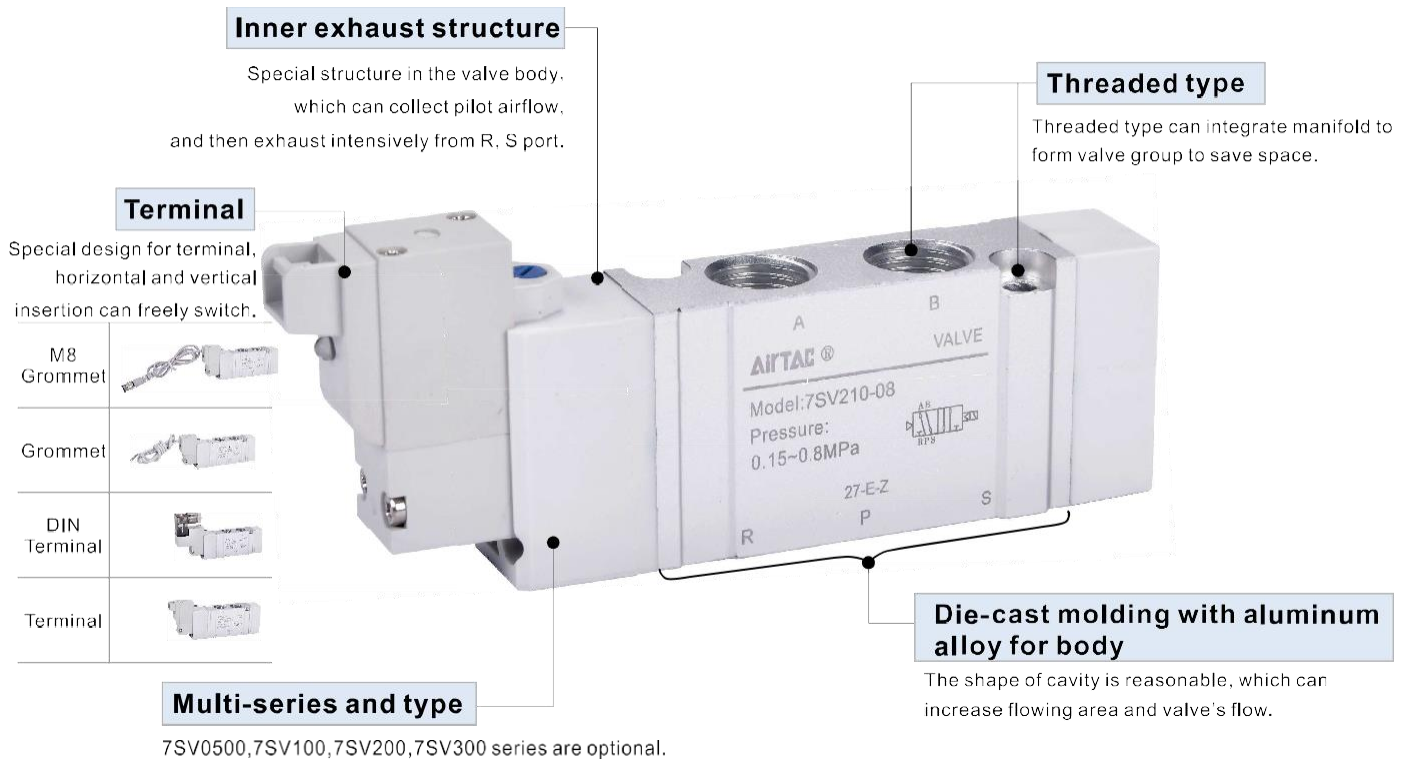


VTE® - 7SV Series Solenoid Valve (5/2 way, 5/3 way)



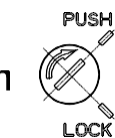
Compendium of 7SV Series



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 (7SV0500 → M1.6X14) becomes loose, please tighten it by torque 0.1~0.12N.m; if the screw (7SV100/200/300 → 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).

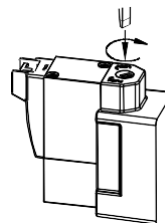
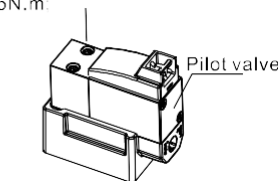
! Attention



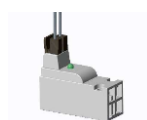
Normal position



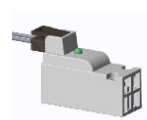
Locked position



- 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



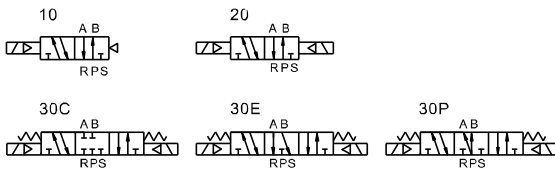
Parallel plug wire

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

7SV Series



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 can integrate manifold to form valve group to save space.

Ordering code

7SV 2 10 08 B □ □ □

① ② ③ ④ ⑤ ⑥ ⑦ ⑧

①Model	7SV: 5 port 2(3) position solenoid valve			
②Code	05: 0500 Series	1: 100 Series	2: 200 Series	3: 300 Series
③Valve 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)	
④Port type	30P : Double solenoid(5/3 way pressure center)			
	M5: M5	06: 1/8"	08: 1/4"	10: 3/8"
⑤Voltage	A: AC220V C: AC110V	B: DC24V F: DC12V	A: AC220V E: AC24V	
			B: DC24V F: DC12V	
⑥Port type	Blank:Terminal I:Grommet M:M8 Grommet	Blank:Terminal I:Grommet D:DIN Terminal M:M8 Grommet		
⑦Wire length	Blank:0.5m 200:2m			
⑧Thread type	No this code	Blank: PT Thread	G: G Thread	T: NPT Thread

Note: 1. wire length only for terminal, 0.5m/2m are optional;
 2. The wire length and M8 grommet length are 0.5m.
 3. 7SV0500 series solenoid valve adopts CPSV10 pilot valve,
 without DIN terminal for electrical entry, standard voltage: DC24V DC12V AC220V AC110V

Specification

Model	7SV0510	7SV0520	7SV0530	7SV110	7SV120	7SV130
Port size[Note1]	In=Out=Exhaust=M5			In=Out=Exhaust=1/8"		
Orifice size (Cv) [Note4]	M5:4.25mm ² (0.25)		7SV0530M5: 3.7mm ² (0.2)	06:12.3mm ² (0.7)		7SV130C06: 10mm ² (0.5)
Weight	31.5g	45g	48g	69.5g	95.5g	101.5g
Model	7SV210	7SV220	7SV230	7SV310	7SV320	7SV330
Port size[Note1]	In=Out=1/4" Exhaust=1/8"			In=Out=3/8" Exhaust=1/4"		
Orifice size (Cv) [Note4]	08:17.9mm ² (1.05)		7SV230C08: 16.2mm ² (0.9)	10:38.4mm ² (2.25)		7SV330C10: 30.5mm ² (1.8)
Weight	105g	132g	143.5g	240g	268.5g	317.5g
Fluid	Air(to be filtered by 40μm filter element)					
Acting	Pilot					
Operating pressure	5/3 way	0.2~0.8MPa(29~114psi)				
	5/2way	0.15~0.8MPa(21~114psi)				
Proof pressure	1.2MPa(175psi)					
Temperature	-10~50℃					
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

[Note1] PT, NPT thread and G thread are 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.

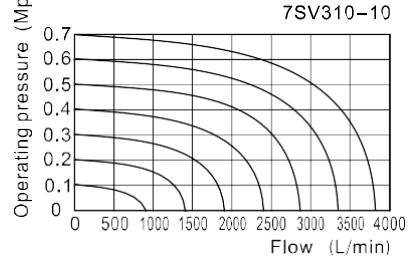
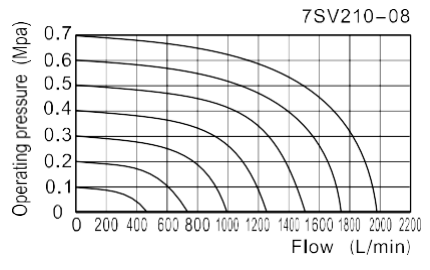
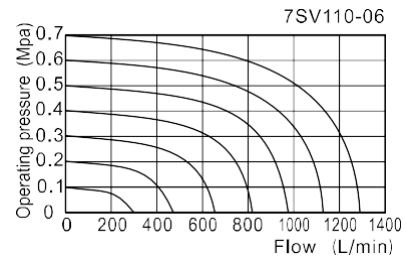
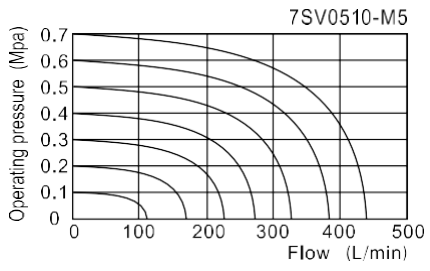
Coil specification

Item		Specification				
CPSV10	Standard voltage	AC220V	AC110V		DC24V	DC12V
	Power of consumption	2.0VA			1W	
CPSV15	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		FClass				
Activating time		0.05 sec and below				

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

7SV Series

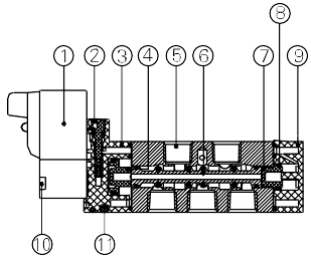
Flow chart



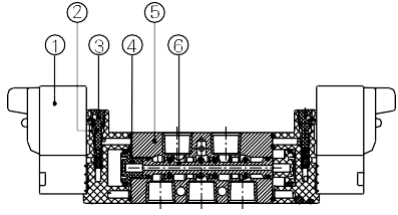
The data in flow rate chart are obtained from AirTAC lab.

Inner structure

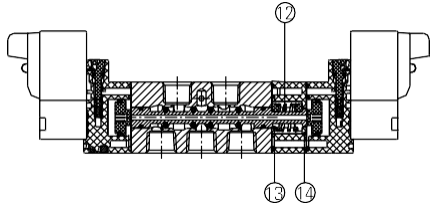
7SV110



7SV120



7SV130C



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)

7SV Series

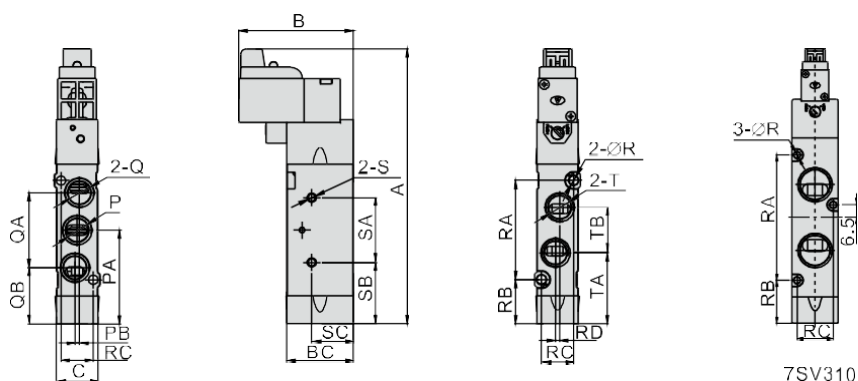
Dimensions

7SV0510

7SV110

7SV210

7SV310



7SV310

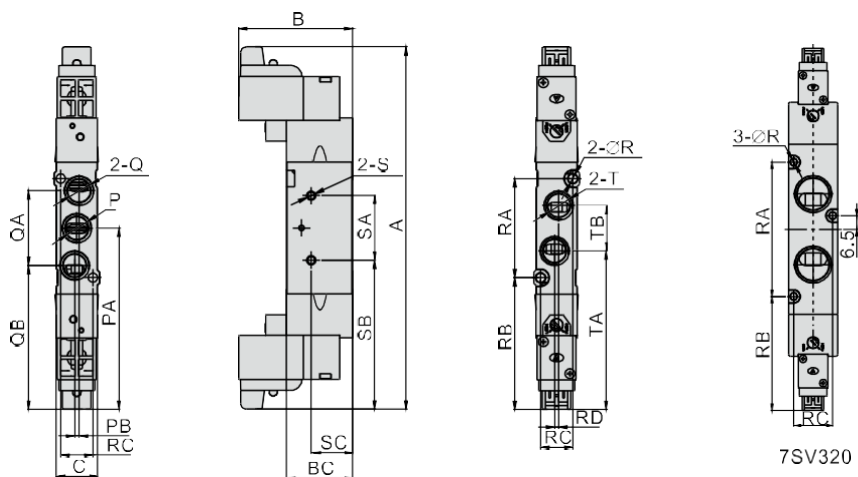
Model\Item	A	B	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	RD	S	SA	SB	SC
7SV0510M5	74.5	32.5	21	10	M5×0.8	22.5	1	M5×0.8	19	13	M5×0.8	17	11	2.1	21.4	12	8.6	1	M3×0.5Dp:3	9.5	18	4
7SV11006	100	41.5	24	15	1/8"	34	1.5	1/8"	27	20.5	1/8"	26	16.5	3.2	36	16	11.6	1.5	M3×0.5Dp:3	23.5	22.5	15
7SV21008	110	43	32.5	18	1/4"	39	3	1/8"	36	21	1/4"	29	20	4.1	42	18	13.7	2	M4×0.7Dp:5	20	29	7
7SV31010	140.5	46	46	23.5	3/8"	54	0	1/4"	50	29	3/8"	37	33.5	3.2	64	22	18.4	0	Ø4.3	24.9	41.5	8

7SV0520

7SV120

7SV220

7SV320



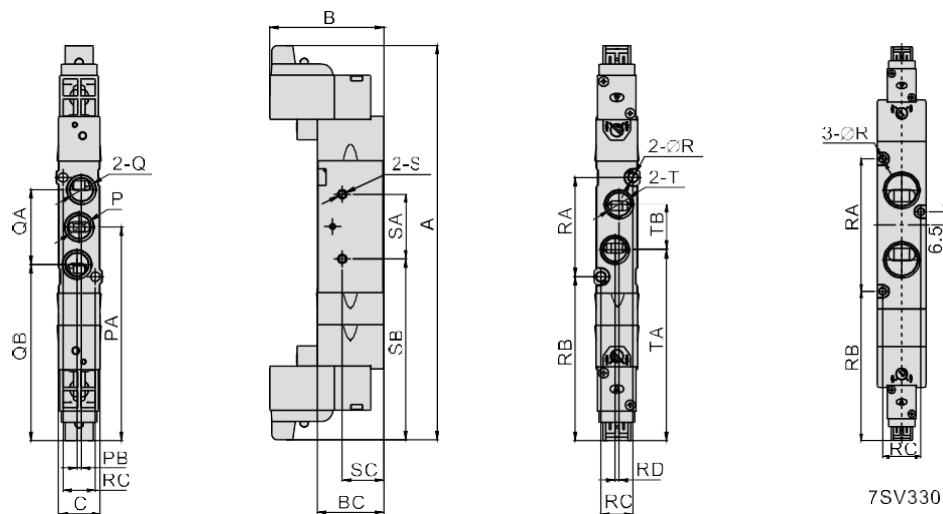
7SV320

Model\Item	A	B	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	RD	S	SA	SB	SC
7SV0520M5	103.5	32.5	21	10	M5×0.8	51.5	1	M5×0.8	19	42	M5×0.8	46	11	2.1	21.4	41	8.6	1	M3×0.5Dp:3	9.5	47	4
7SV12006	131.5	41.5	24	15	1/8"	66	1.5	1/8"	27	52	1/8"	57.5	16.5	3.2	36	48	11.6	1.5	M3×0.5Dp:3	23.5	54	15
7SV22008	142	43	32.5	18	1/4"	71	3	1/8"	36	53	1/4"	61	20	4.1	42	50	13.7	2	M4×0.7Dp:5	20	61	7
7SV32010	172.5	46	46	23.5	3/8"	86.5	0	1/4"	50	61.5	3/8"	69.5	33.5	3.2	64	54.5	18.4	0	Ø4.3	24.9	74	8

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

7SV Series

7SV0530
7SV130
7SV230
7SV330



Model\Item	A	B	BC	C	P	PA	PB	Q	QA	QB	T	TA	TB	R	RA	RB	RC	RD	S	SA	SB	SC
7SV0530M5	112	32.5	21	10	M5×0.8	60	1	M5×0.8	19	50.5	M5×0.8	54.5	11	2.1	21.4	49.5	8.6	1	M3×0.5Dp:3	9.5	55.5	4
7SV13006	143.5	41.5	24	15	1/8"	77.5	1.5	1/8"	27	64	1/8"	69.5	16.5	3.2	36	59.5	11.6	1.5	M3×0.5Dp:3	23.5	66	15
7SV23008	155.5	43	32.5	18	1/4"	84.5	3	1/8"	36	66.5	1/4"	74.5	20	4.1	42	63.5	13.7	2	M4×0.7Dp:5	20	74.5	7
7SV33010	190.5	46	46	23.5	3/8"	104.5	0	1/4"	50	79.5	3/8"	87.5	33.5	3.2	64	72.5	18.4	0	∅4.3	24.9	92	8

Solenoid valve(Accessories)

7SV Series manifold



Specification

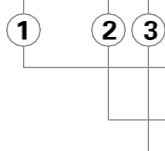
Item\Manifold Model	7SV0500M	7SV100M	7SV200M	7SV300M
Fluid	Air(to be filtered by 40µm filter element)			
Temperature °C	-20~70℃			
Adaptable valve's series	7SV0500 Series	7SV100 Series	7SV200 Series	7SV300 Series

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.

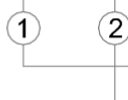
Ordering code

7SV100M 5F ☐ Ordering code for manifold



①Model	7SV0500M:7SV0500Series manifold		7SV100M:7SV100Series manifold	
	7SV200M:7SV200Series manifold		7SV300M:7SV300Series manifold	
②Number of stations	1F: 1Station 2F: 2Station 30F: 30Station			
③Thread type	Blank: PT G: G Thread T: NPT Thread			

P-7SV100M - R2 Ordering code for blank plate



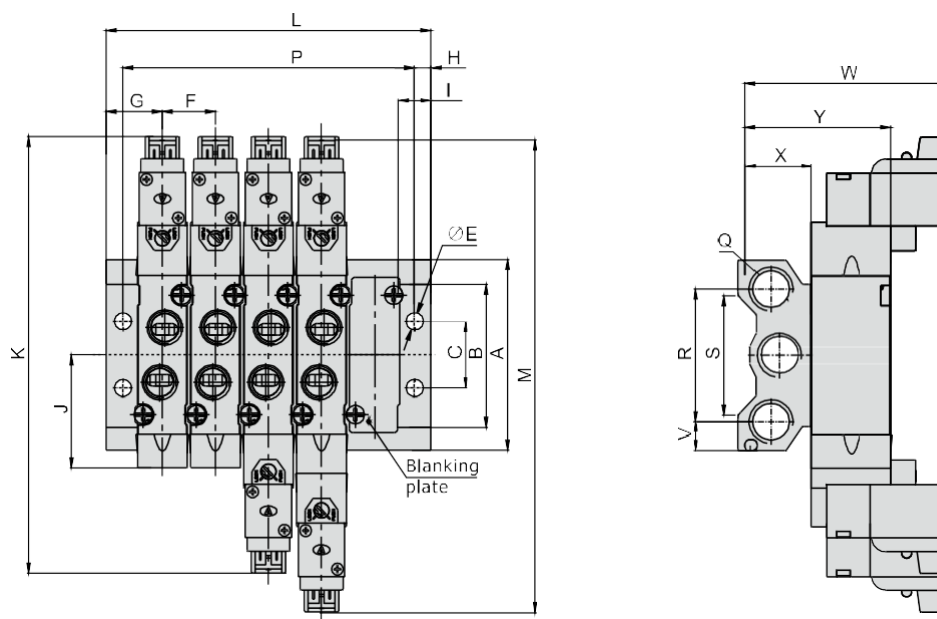
① Model	7SV0500M: 7SV0500 Series manifold	7SV100M: 7SV100 Series manifold	7SV200M: 7SV200 Series manifold	7SV300M: 7SV300 Series manifold
② Code	R2: Blank plate for manifold			

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

Solenoid valve(Accessories)

7SV Series manifold

Dimensions



Model\Item	A	B	C	E	F	G	H	I	J	K	M	Q	R	S	V	W	X	Y
7SV0500M	46	32	16	4.5	10.5	15	5	10	22.5	103.5	112	1/8"	32	26	7	49.5	17	35.5
7SV100M	57.5	43	20	4.5	16	17	5	9.5	34	131.5	143.5	1/4"	40	36	9	63.5	22	46
7SV200M	60	52	21	4.5	19	18.5	5	9.5	39	142	155.5	1/4"	42	38	9	67	24	56.5
7SV300M	85	75	26	4.5	24	24	5	12	54	172.5	190.5	3/8"	57	58	14	73	27	73

Model\Item	L																			
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
7SV0500M	30	40.5	51	61.5	72	82.5	93	103.5	114	124.5	135	145.5	156	166.5	177	187.5	198	208.5	219	229.5
7SV100M	34	50	66	82	98	114	130	146	162	178	194	210	226	242	258	274	290	306	322	338
7SV200M	37	56	75	94	113	132	151	170	189	208	227	246	265	284	303	322	341	360	379	398
7SV300M	48	72	96	120	144	168	192	216	240	264	288	312	336	360	384	408	432	456	480	504

Model\Item	P																			
	1F	2F	3F	4F	5F	6F	7F	8F	9F	10F	11F	12F	13F	14F	15F	16F	17F	18F	19F	20F
7SV0500M	20	30.5	41	51.5	62	72.5	83	93.5	104	114.5	125	135.5	146	156.5	167	177.5	188	198.5	209	219.5
7SV100M	24	40	56	72	88	104	120	136	152	168	184	200	214	232	248	264	280	296	312	328
7SV200M	27	46	65	84	103	122	141	160	179	198	217	236	255	274	293	312	331	350	369	388
7SV300M	38	62	86	110	134	158	182	206	230	254	278	302	326	350	374	398	422	446	470	494

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