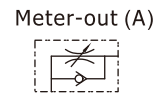


# Accessories—Speed controllers(Stainless steel) **AIRTAC**

## PSA, PSL, PSS series



### Ordering code

**PSL 6 01 A - S**

① ② ③ ④ ⑤

#### ① Model

PSL: Speed controller



PSS: Universal speed controller



#### ② Port size

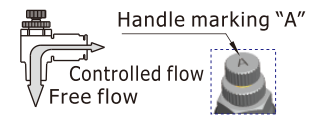
4:  $\Phi$ 4mm  
6:  $\Phi$ 6mm  
8:  $\Phi$ 8mm  
10:  $\Phi$ 10mm  
12:  $\Phi$ 12mm

#### ③ Thread connection

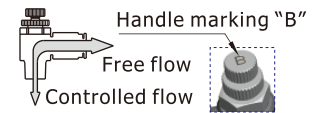
Thread	Adaptable port size
M5: M5X0.8	$\Phi$ 4, $\Phi$ 6
01: PT1/8	$\Phi$ 4, $\Phi$ 6
02: PT1/4	$\Phi$ 8, $\Phi$ 10
03: PT3/8	$\Phi$ 12
04: PT1/2	

#### ④ Control method

A: Meter-out



B: Meter-in



#### ⑤ Material

S: SUS304

**PSA 6 - S**

① ② ③

### Product feature

1. Stainless steel 304 material can be used in prohibiting copper condition.
2. The silencer is small size, and light weight with small installation space.
3. Excellent flow characteristics, high sensitivity and easy to adjust.
4. The silencer brass body adopts a special nickel-plating process, which has good corrosion resistance and anti-pollution property.
5. Anti-drop structure is designed on the regulating rod.
6. The sealant being coated on threaded portion can ensure no leakage of the threaded connection part.
7. The inserting direction of universal speed controller can be adjusted in 360°.

#### ① Model

PSA: Straight speed controller



#### ② Port size

4:  $\Phi$ 4mm  
6:  $\Phi$ 6mm  
8:  $\Phi$ 8mm  
10:  $\Phi$ 10mm  
12:  $\Phi$ 12mm

#### ③ Material

S: SUS304

### Table for interface port and tube O.D.

Product series	Thread type	Port size					Product series	Thread type	Port size				
		$\Phi$ 4	$\Phi$ 6	$\Phi$ 8	$\Phi$ 10	$\Phi$ 12			$\Phi$ 4	$\Phi$ 6	$\Phi$ 8	$\Phi$ 10	$\Phi$ 12
PSS	M5	●					PSA	-	●	●	●	●	●
	PT1/8		●	●				M5	●	●	●		
	PT1/4		●	●	●			PT1/8	●	●	●		
	PT3/8				●	●		PT1/4		●	●	●	
PSL	PT1/2					●	PT3/8		●	●	●	●	
						●	PT1/2			●	●	●	

### Specification

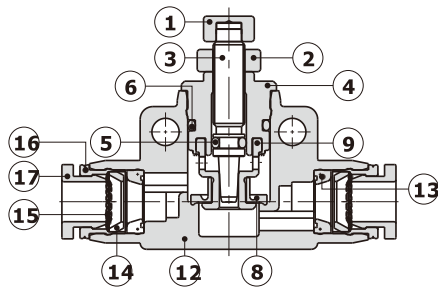
<b>Operating pressure range</b>	<b>0~10kgf/cm<sup>2</sup>(0~1.0MPa)</b>
Negative pressure	-750mmHg(10Torr)
Proof pressure	1.5MPa
Ambient and fluid temperature (°C)	-20~70
Applicable tubing	Soft nylon or polyurethane

# Accessories—Speed controllers(Stainless steel) **AIRTAC**

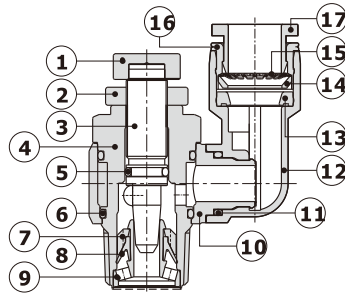
## PSA, PSL, PSS series

### Inner structure

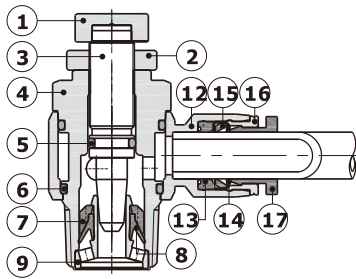
#### PSA Series



#### PSS Series



#### PSL Series

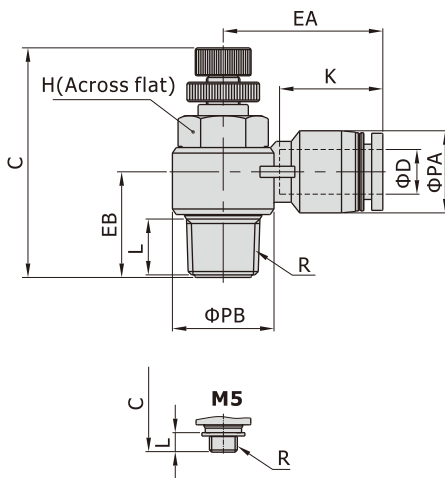


NO.	Name	NO.	Name
1	Adjusting cap	10	Plastic body
2	Locking cap	11	O-ring
3	Throttling column	12	Plastic body
4	Throttling body	13	O-ring
5	O-ring	14	Locating seat
6	O-ring	15	Spring gasket
7	Holder	16	Locating ring
8	O-ring	17	Plastic interface
9	Throttling sleeve		

### Dimensions

#### PSL Series

[Unit: mm]



Model\Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						max	min					
PSL4M5□-S	4	M5×0.8	9	10	3.5	30	27.5	14	19	9.5	8	6
PSL401□-S		PT1/8	9	14	7.5	41.5	35	14	20.5	15	11	15.5
PSL6M5□-S	6	M5×0.8	12.5	10	3.5	30	27.5	16.5	23.5	11.5	8	7.5
PSL601□-S		PT1/8	12.5	14	7.5	41.5	35	16.5	23	15.5	11	16.5
PSL602□-S		PT1/4	12.5	18	10	47.5	41	16.5	25	18	14	30
PSL603□-S	8	PT3/8	12.5	22.5	11	52.5	45.5	16.5	27	20	19	55
PSL801□-S		PT1/8	15	14	7.5	41.5	35	18.5	26.5	16.5	11	17
PSL802□-S		PT1/4	15	18	10	47.5	41	18.5	28.5	19	14	31
PSL803□-S		PT3/8	15	22.5	11	52.5	45.5	18.5	29.5	20	19	55.5
PSL804□-S	10	PT1/2	15	28	14	58.5	51.5	18.5	32	25	24	89
PSL1002□-S		PT1/4	18	18	10	47.5	41	21	31	20.5	14	32.5
PSL1003□-S		PT3/8	18	22.5	11	52.5	45.5	21	33	21.5	19	57.5
PSL1004□-S	12	PT1/2	18	28	14	58.5	51.5	21	35.5	25.5	24	90.5
PSL1203□-S		PT3/8	21	22.5	11	52.5	45.5	23	36	23.5	19	59.5
PSL1204□-S		PT1/2	21	28	14	58.5	51.5	23	38	27	24	92.5

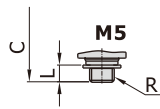
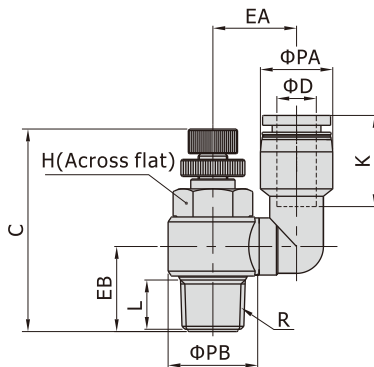
[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

# Accessories—Speed controllers(Stainless steel) **AIRTAC**

## PSA, PSL, PSS series

### PSS Series

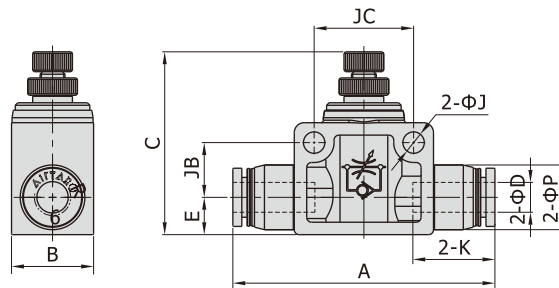
[Unit: mm]



Model\Item [Note1]	ΦD	R	ΦPA	ΦPB	L	C		K	EA	EB	H	Weight (g)
						max	min					
PSS4M5□-S	4	M5×0.8	9	10	3.5	30	27.5	14	12.5	9.5	8	7.5
PSS601□-S	6	PT1/8	12.5	14	7.5	41.5	35	17	17	15	11	18
PSS602□-S		PT1/4	12.5	18	10	47.5	41	17	19	17.5	14	32.5
PSS801□-S	8	PT1/8	15	14	7.5	41.5	35	18.5	17	15	11	19
PSS802□-S		PT1/4	15	18	10	47.5	41	18.5	19	17.5	14	37.5
PSS1002□-S	10	PT1/4	18	18	10	47.5	41	21	20.5	17.5	14	35
PSS1003□-S		PT3/8	18	22.5	11	52.5	45.5	21	24	20	19	61.5
PSS1203□-S	12	PT3/8	21	22.5	11	52.5	45.5	23	25.5	20	19	65
PSS1204□-S		PT1/2	21	28	14	58.5	51.5	23	28	25	24	98.5

[Note1] "□" stands for A or B. A indicates meter-out type while B indicates meter-in type. The two types are with the same overall dimension.

### PSA Series



[Unit: mm]

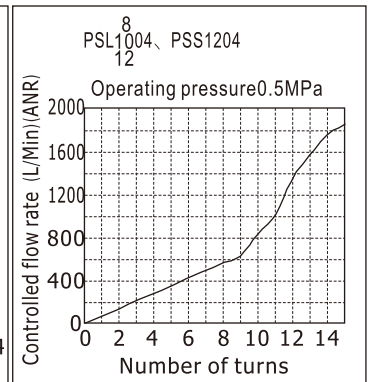
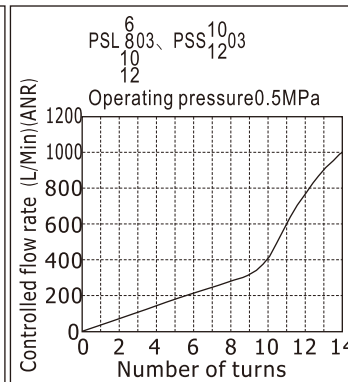
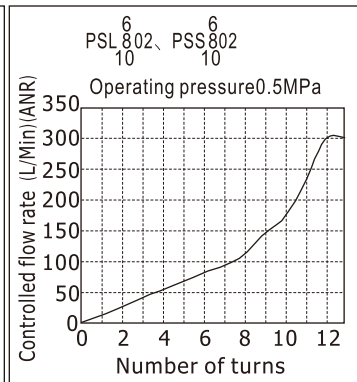
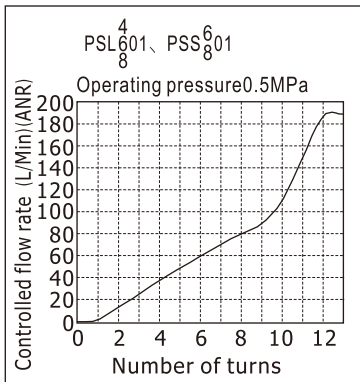
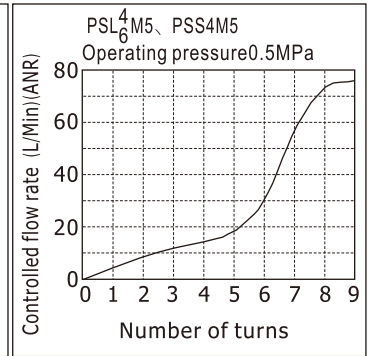
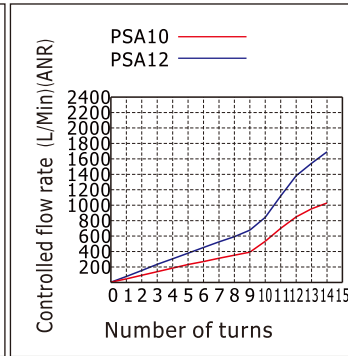
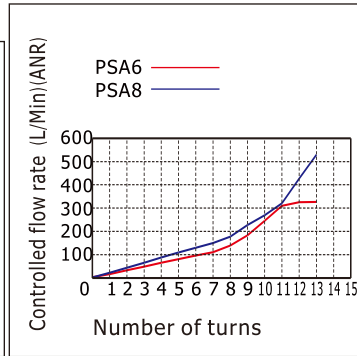
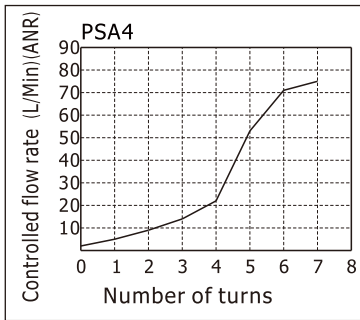
Model\Item	ΦD	A	B	C		ΦP	E	K	ΦJ	JB	JC	Weight (g)
				max	min							
PSA4-S	4	41	11	29	26.5	9.5	7	14	3.2	6	14	7.5
PSA6-S	6	52.5	16.5	43.5	36.5	13	7.5	16.5	4.3	11	20	18
PSA8-S	8	59.5	16.5	47	40	15	8.5	18.5	4.3	11	22	23
PSA10-S	10	69	21	53.5	46.5	18	10.5	21	4.3	14.5	26	41.5
PSA12-S	12	78.5	26	58.5	51	21.5	12	23	4.3	17.5	32	66



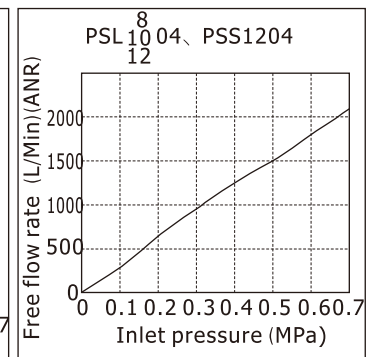
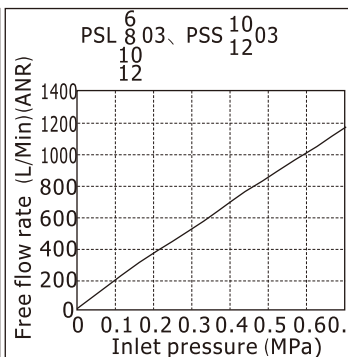
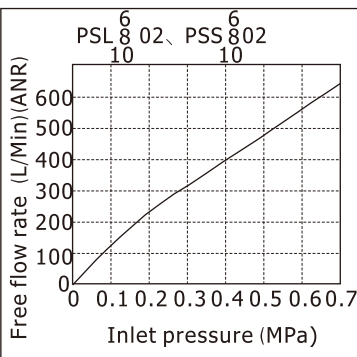
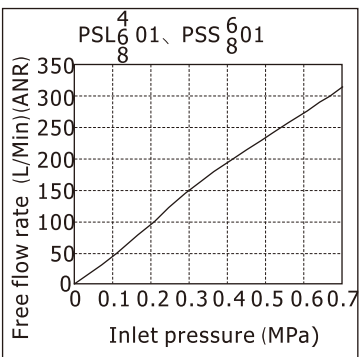
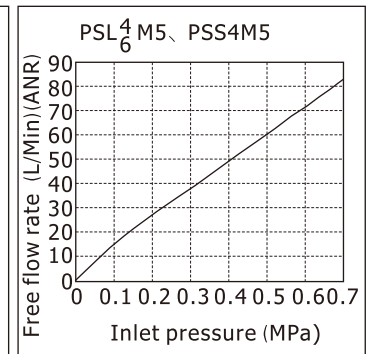
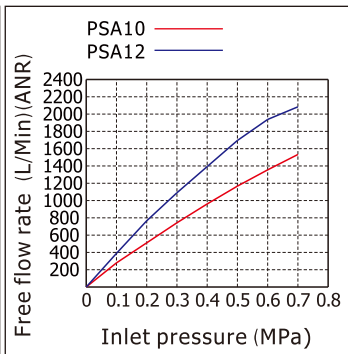
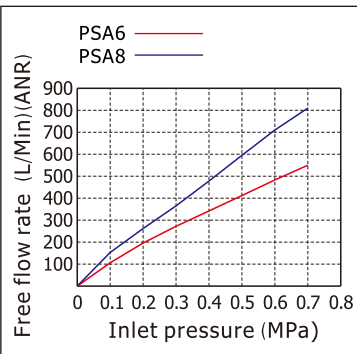
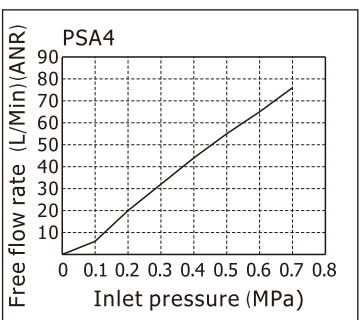
## PSA, PSL, PSS series

### Flowrate characteristic

#### Controlled flow rate



#### Free flow rate







## PSA, PSL, PSS series

### Selection, Installation and Operation

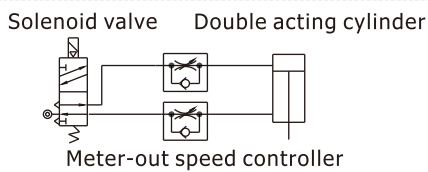
#### Selection

- The speed controller has meter-out type and meter-in type:

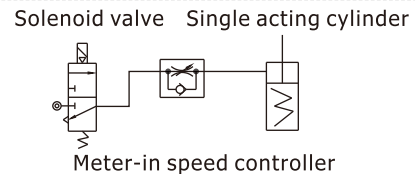
	Working principle	Product identification
	<p><b>A: Meter-out</b></p> <ol style="list-style-type: none"> <li>The air flow is controlled from the threaded end to tubing connection end.</li> <li>The air flow is free from the tubing connection end to the threaded end.</li> </ol>	<p>Handle marking "A"</p> 
	<p><b>B: Meter-in</b></p> <ol style="list-style-type: none"> <li>The air flow is free from the threaded end to tubing connection end.</li> <li>The air flow is controlled from the tubing connection end to the threaded end.</li> </ol>	<p>Handle marking "B"</p> 

- Select the different control method according to the actual requirement. The meter-out type is the first priority.

#### 2.1. The application example of the meter-out speed controller



#### 2.2. The application example of the meter-in speed controller



#### Installation

- Installation and removal of tubing:

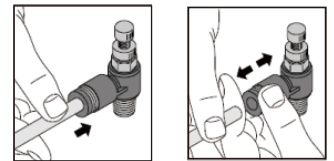
##### 1.1. Installation of tubing

Grasp the tubing and slowly push it into the fitting until it comes to a stop. The tubing will be locked by the spring gasket.

##### 1.2. Removal of tubing

Push the release button to open the spring gasket so that the tubing can be released.

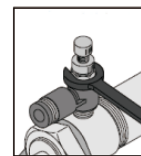
Note: When remove the tubing, make sure the pressure in the tubing is Zero.



##### 2. Mounting of the speed controller

Mount the speed controller into the inlet and outlet port of the cylinder with a wrench.

Note: Please refer to the fittings for the tightening torque and thread screw-in depth.



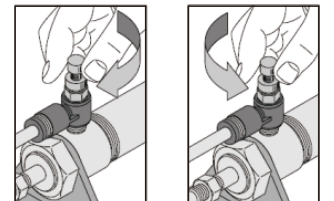
#### Operation

##### 1. Adjustment of the cylinder speed

- 1.1. Make sure the speed controller is turned off before applying air pressure. The cylinder may fly out due to the high speed if the air is inlet when the speed controller is turned on.

- 1.2. Adjust the speed by opening the needle slowly from the fully closed state.

When a needle valve is turned clockwise, the air flow through is reduced and the actuator speed decreases. When a needle valve is turned counter-clockwise, the air flow through is increased and the actuator speed increases.



##### 2. Operation of the speed controller

- 2.1. Do not use tools such as pliers to rotate the handle. Do not apply excessive force or shock when the needle is at the place of top or bottom. It can cause damage or air leakage.

- 2.2. A certain amount of leakage is allowed in the closed state of the speed controller. It is not designed for the use as stop valve with zero air leakage.