

# Speed Controller with One-touch Fittings

# Series AS

In-line Style

## Minimizes installation time and cost

Reduce the mounting height and enables compact machinery design. Effective area is larger than the former model.

## Application to inch size tubing

- **Metric size** (Release bushing: White color)  
 $\phi 3.2, \phi 4, \phi 6, \phi 8, \phi 10, \phi 12$
- **Inch size** (Release bushing: Orange color)  
 $\phi 1/8", \phi 5/32", \phi 3/16", \phi 1/4", \phi 5/16", \phi 3/8", \phi 1/2"$

## Operating pressure 1MPa max.

## Applicable tube material

Nylon, Soft nylon and Polyurethane tubing

## Retainer prevents accidental loss of needle

## Optional: Hexagonal lock nut, Nickel plated option

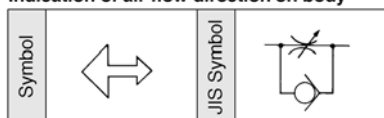
## Number of needle rotations has been increased (8 to 10 turns)

The increased number of needle rotations (8 to 10 turns) permits easy control at low speed.

In-line style



Indication of air flow direction on body



## Model

Model	Applicable tube O.D.												Applicable cylinder bore size (mm)		
	Metric size						Inch size								
	3.2	4	6	8	10	12	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"		1/2"	
AS1001F	●	●	●				●	●							6, 10, 16, 20
AS2001F		●	●					●	●	●					20, 25, 32
AS2051F			●	●					●	●	●				20, 25, 32, 40
AS3001F			●	●	●	●				●	●	●			40, 50, 63
AS4001F					●	●						●	●		63, 80, 100

Note) ●: Nickel plated model is standard.

## Specifications

Proof pressure	1.5MPa
Max. operating pressure	1MPa
Min. operating pressure	0.1MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Number of needle rotations	10 turns (8 turns <sup>(1)</sup> )
Applicable tubes <sup>(2)</sup>	Nylon, Soft nylon, Polyurethane
Option	Hexagonal lock nut, Nickel plated <sup>(3)</sup>

Note 1) AS1001F

Note 2) Pay attention to the maximum operating pressure when soft nylon or polyurethane is used. (Refer to p. 2.4-2 and 2.4-3 in "Best Pneumatics No.4" for further information.)

Note 3) Brass parts are all electroless nickel plated.

## Air Flow/Effective Area

Model	AS1001F	AS2001F	AS2051F	AS3001F	AS4001F						
Applicable tube O.D.	Metric size	$\phi 3.2, \phi 4, \phi 6$	$\phi 4$	$\phi 6$	$\phi 6$	$\phi 8$	$\phi 6$	$\phi 8$	$\phi 10, \phi 12$	$\phi 10$	$\phi 12$
	Inch size	$\phi 1/8", \phi 5/32"$	$\phi 5/32"$	$\phi 3/16", \phi 1/4"$	$\phi 3/16"$	$\phi 1/4, \phi 5/16$	$\phi 1/4$	$\phi 5/16$	$\phi 3/8"$	$\phi 3/8"$	$\phi 1/2"$
Controlled (Free) Flow	Air flow (l/min(ANR))	100	130	230	290	460	420	660	920	1050	1390
	Effective area (mm <sup>2</sup> )	1.5	2	3.5	4.5	7	6.5	10	14	16	21

Note) Supply pressure: 0.5MPa, Temperature: 20°C.

## How to Order

AS 400 1F — 12 K

Body size

100	M5
200	1/8
205	1/4
300	3/8
400	1/2

With One-touch fittings

Option\*

-	None
K	Hexagonal lock nut
N	Electroless nickel plated

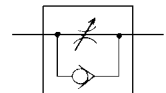
\*Indicate symbols in alphabetical order if two options or more desired.

Applicable tube O.D.

Metric size	Inch size
23 $\phi 3.2^*$	01 $\phi 1/8"$
04 $\phi 4$	03 $\phi 5/32"$
06 $\phi 6$	05 $\phi 3/16"$
08 $\phi 8$	07 $\phi 1/4"$
10 $\phi 10$	09 $\phi 5/16"$
12 $\phi 12$	11 $\phi 3/8"$
	13 $\phi 1/2"$

\*Use  $\phi 1/8"$  tubing.

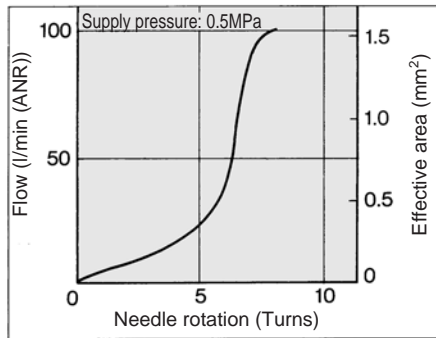
JIS Symbol



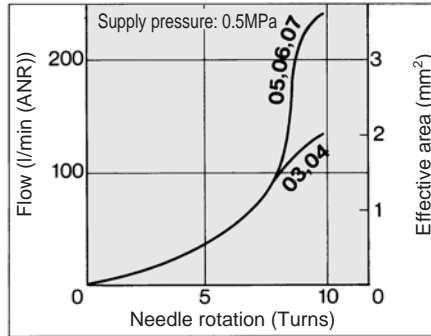
# With One-touch Fittings: In-line Style Series AS

## Needle Valve/Flow Characteristic

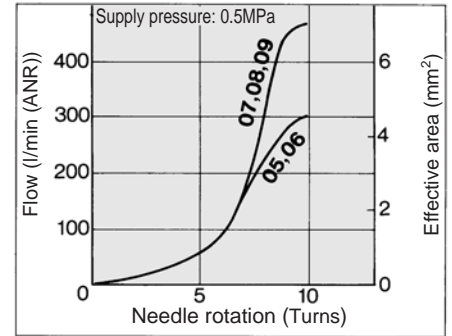
**AS1001F**



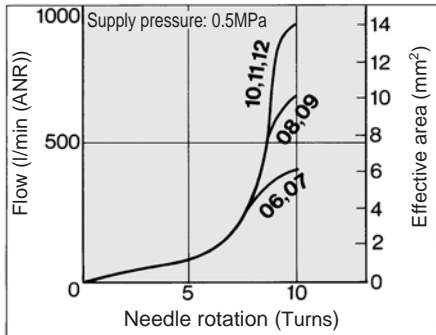
**AS2001F**



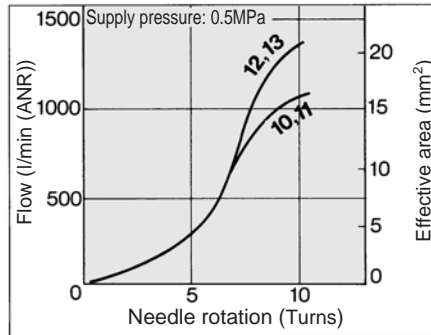
**AS2051F**



**AS3001F**



**AS4001F**



### ⚠ Caution

Be sure to read before handling.  
 Refer to p.0-20 and 0-21 for Safety Instructions and common precautions on the products mentioned in this catalogue, and refer to p.4.0-3 to 4.0-5 for precautions on every series.

**AS**

**ASN**

**AQ**

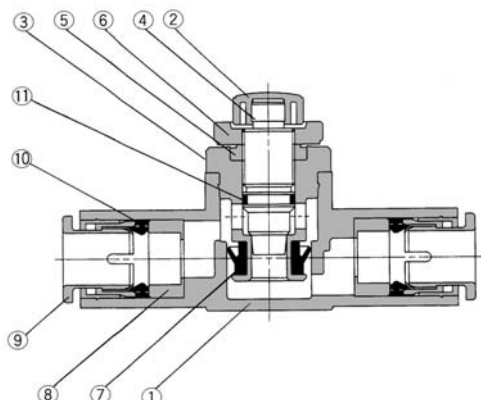
**ASV**

**AK**

**ASS**

# Series AS

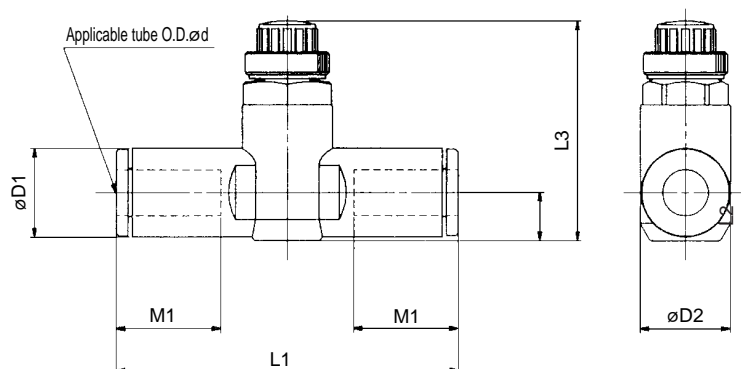
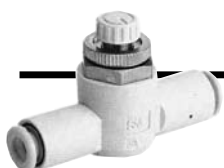
## Construction



### Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Handle	PBT	
③	Body B	Brass	Electroless nickel plated
④	Needle	Brass	Electroless nickel plated
⑤	Needle guide	Brass	Electroless nickel plated
⑥	Lock nut	Brass <sup>(1)</sup>	Electroless nickel plated
⑦	U-packing	NBR	
⑧	Spacer	Brass <sup>(2)</sup>	
⑨	Cassette	POM, Stainless steel	
⑩	Packing	NBR	
⑪	O ring	NBR	

Note 1) AS2 □□1F: Steel  
 Note 2) ø3.2, ø4, ø6, ø1/8", ø5/32" (Except for AS3001F-006): POM



### Metric

Model	Tube O.D. d	D1	D2	L1	L2	L3		M1	Weight (g)
						MAX.	MIN.		
AS1001F-23	3.2	8.4	10	38.0	4.5	23.5	20.7	12.7	6
AS1001F-04	4	9.3		39.2	5.2	24.2	21.4	7	
AS1001F-06	6	11.6	11.8	40.7	6.2	25.2	22.4	13.5	8
AS2001F-04	4	9.3		40.7	5.2	32.6	27.6	12.7	12
AS2001F-06	6	11.6	14.8	44.8	6.3	33.7	28.7	13.5	13
AS2051F-06	6	12.8		53.2	6.7	35.2	30.2	17	26
AS2051F-08	8	15.2	19.8	59.8	8.1	36.5	31.5	18	31
AS3001F-06	6	12.8		59	7.4	38.3	33.3	17	18
AS3001F-08	8	15.2	26.5	64.4	8.2	39.1	34.1	18	21
AS3001F-10	10	18.5		71.6	9.8	40.6	35.6	21	32
AS3001F-12	12	20.9	82	76	11	41.8	36.8	22	33
AS4001F-10	10	18.5		51.1	11.3	43.6	21	36	
AS4001F-12	12	20.9	52.1	11.3	44.6	22	40		

### Inch

Model	Tube O.D. d	D1	D2	L1	L2	L3		M1	Weight (g)
						MAX.	MIN.		
AS1001F-01	1/8"	8.4	10	38	4.5	23.5	20.7	12.7	6
AS1001F-03	5/32"	9.3		39.2	5.2	24.2	21.4	7	
AS2001F-03	5/32"	9.3	11.8	40.7	5.2	32.6	27.6	12.7	12
AS2001F-05	3/16"	11.4		50	6.2	33.6	28.6	16.5	18
AS2001F-07	1/4"	13.2	14.8	52.2	7.1	34.5	29.5	17	21
AS2051F-05	3/16"	11.4		52.2	6.2	34.6	29.6	16.5	24
AS2051F-07	1/4"	13.2	19.8	54.4	7.1	35.5	30.5	17	26
AS2051F-09	5/16"	15.2		59.8	8.1	36.5	31.5	18	31
AS3001F-07	1/4"	13.2	26.5	59	7.4	38.3	33.3	17	42
AS3001F-09	5/16"	15.2		64.4	8.2	39.1	34.1	18	46
AS3001F-11	3/8"	17.9	83.1	70.8	9.5	40.3	35.3	21	53
AS4001F-11	3/8"	17.9		76.9	10.3	51	43.5	21	97
AS4001F-13	1/2"	21.7	83.1	11.6	52.4	44.9	22	106	

### In-line Style

File	Model	Detail No.					
		Tube O.D.					
		3.2	4	6	8	10	12
SAS01F1N	AS1001F-□	#1	#2	#3	—	—	—
	AS2001F-□	—	#4	#5	—	—	—
	AS2051F-□	—	—	#6	#7	—	—
	AS3001F-□	—	—	—	#8	#9	#10
	AS4001F-□	—	—	—	—	#11	#12

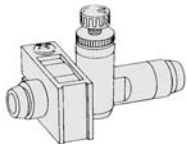
# Holder Series *TMH*

A holder for securing a speed controller (in-line style) with a One-touch fitting.

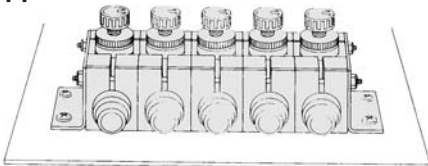
Universal mounting



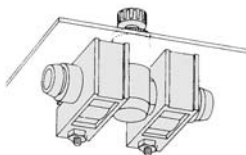
The holder can be used to secure an individual part.



Adaptable for a manifold application.<sup>(1)</sup>



Can be mounted to a panel.



## Specifications

Ambient temperature	-20 to 60°C
Material	Polypropylene
Color	White

Accessory: Round head Phillips screw for mounting (Black zinc chromated).

Model		Size (nominal X height)	Piece
Metric	Inch		
TMH-23J	TMH-01J	M3 X 15	1
TMH-04J	TMH-03J		
TMH-06J	TMH-05		
TMH-06	TMH-07	M4 X 25	
TMH-08	TMH-09		
TMH-10	TMH-11	M4 X 35	
TMH-12	TMH-13		

## Correspondence of In-line Speed Controller and Holder

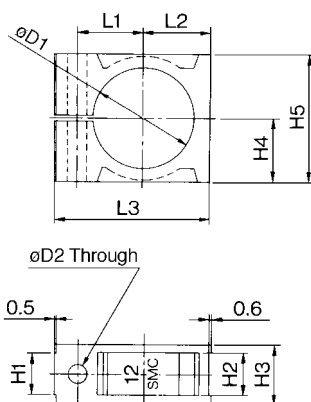
### Metric

Body size	Tube size	Applicable tube					
		23	04	06	08	10	12
		ø3.2	ø4	ø6	ø8	ø10	ø12
AS1001F	TMH-23J						
AS2001F			TMH-04J	TMH-06J			
AS2051F				TMH-06	TMH-08		
AS3001F						TMH-10	TMH-12
AS4001F							

### Inch

Body size	Tube size	Applicable tube						
		01	03	05	07	09	11	13
		ø1/8"	ø5/32"	ø3/16"	ø1/4"	ø5/16"	ø3/8"	ø1/2"
AS1001F	TMH-01J							
AS2001F			TMH-03J					
AS2051F				TMH-05	TMH-07			
AS3001F						TMH-09		
AS4001F							TMH-11	TMH-13

## Dimensions



Model		øD1	øD2	H1	H2	H3	H4	H5	L1	L2	L3	Symbol
Metric	Inch											
TMH-23J	TMH-01J	8.4							7.2	6.6	18	1/8J
TMH-04J	TMH-03J	9.3	3.3	4.5	4.6	7.5	6	12	7.2	6.6	18	1/32J
—	TMH-05	11.7	3.3	6.3	6.4	9.3	7.7	15.4	8.5	8.3	21	3/16
TMH-06J	—	11.6										6
TMH-06	—	13.1										1/4
—	TMH-07	13.5	4.3	7.1	7.2	11	10	20	11	10.6	26.5	8
TMH-08	TMH-09	15.5										5/16
TMH-10	—	18.5										10
—	TMH-11	18.8										3/8
TMH-12	—	21.2										12
—	TMH-13	22	4.3	9.5	9.6	14	14	28	14.2	14.6	34	1/2

Note 1) Mounting bracket is not available. This is an application example.

AS

ASN

AQ

ASV

AK

ASS