

# Speed Controller with One-touch Fittings In-line Type *Series AS*

## Minimizes installation time and cost

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

## ø2 size added to applicable tubing sizes

- **Metric size** (Release button: White color)  
ø2, ø3.2, ø4, ø6, ø8, ø10, ø12
- **Inch size** (Release button: Orange color)  
ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

## Maximum operating pressure 1 MPa max.

## Applicable tubing materials

Nylon, soft nylon, and polyurethane tubing are applicable.

## Retainer prevents accidental loss of needle.

## Option

**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 speeds.

## In-line type

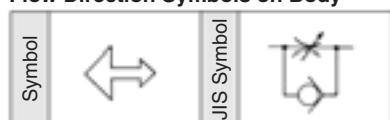


Applicable tubing O.D. ø2



**Made to Order**  
(Refer to page 431 for details.)

## Flow Direction Symbols on Body



## Model

Model	Applicable tubing O.D.														Applicable cylinder bore size (mm)
	Metric size							Inch size							
	2	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 <sup>(1)</sup>
AS2001F			●	●					●	●	●				20, 25, 32
AS2051F				●	●					●	●	●			20, 25, 32, 40
AS3001F				●	●	●	●				●	●	●		40, 50, 63
AS4001F						●	●						●	●	63, 80, 100

Note 1) AS1001F-02 applicable cylinder bore sizes are 2.5, 4, 6.

Note 2) ● Marking is electroless nickel plated, provided as standard. (N specifications)

## Specifications

<b>Fluid</b>	Air
<b>Proof pressure</b>	1.5 MPa (1.05 MPa <sup>(1)</sup> )
<b>Max. operating pressure</b>	1 MPa (0.7 MPa <sup>(1)</sup> )
<b>Min. operating pressure</b>	0.1 MPa
<b>Ambient and fluid temperature</b>	-5 to 60°C (No freezing)
<b>Number of needle rotations</b>	10 turns (8 turns <sup>(2)</sup> )
<b>Applicable tubing material <sup>(3)</sup></b>	Nylon, Soft nylon, Polyurethane <sup>(4)</sup>
<b>Option</b>	Hexagonal lock nut, Electroless nickel plated <sup>(5)</sup>

Note 1) In case of AS1001F-02

Note 2) In case of AS1001F type. AS1001F-02: 10 turns.

Note 3) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used. (Refer to pages 371 and 372 for details.)

Note 4) In case of AS1001F-02, polyurethane only.

Note 5) Brass parts are all electroless nickel plated.

## Flow Rate and Effective Area

Model	AS1001F	AS2001F	AS2051F	AS3001F	AS4001F
Tubing O.D.	Metric size	ø2 ø3.2, ø4, ø6	ø4 ø6 ø8	ø6 ø8 ø10, ø12	ø10 ø12
	Inch size	— ø1/8", ø5/32" ø3/16", ø1/4"	ø5/32" ø3/16", ø1/4" ø3/16"	ø1/4", ø5/16" ø1/4" ø5/16"	ø3/8" ø3/8" ø1/2"
Controlled flow	Air flow l/min (ANR)	20 100 130 230 290 460 420 660 920 1050 1390			
(Free flow)	Effective area (mm <sup>2</sup> )	0.3 1.5 2 3.5 4.5 7 6.5 10 14 16 21			

Note) Flow rate values are measured at 0.5 MPa and 20°C.

## How to Order

**AS 400 1F - 12**

### Body size

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

With One-touch fittings

### Option\*

Nil	None
K	Hexagonal lock nut
N	Electroless nickel plated

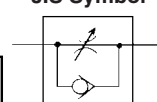
\* If more than one option is required, write option part numbers in the order of "K", "N".

### Applicable tubing O.D.

Metric size	Inch size
02 ø2	01 ø1/8"
23 ø3.2*	03 ø5/32"
04 ø4	05 ø3/16"
06 ø6	07 ø1/4"
08 ø8	09 ø5/16"
10 ø10	11 ø3/8"
12 ø12	13 ø1/2"

\* Use ø1/8" tube.

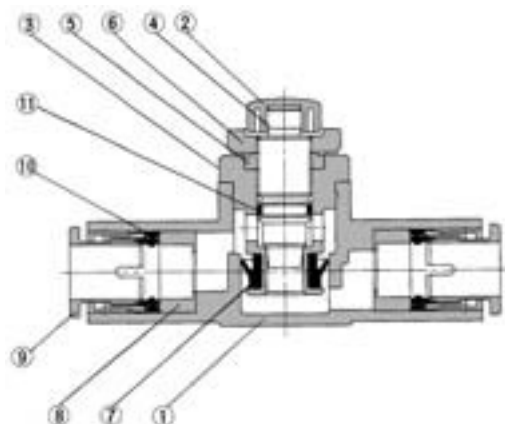
### JIS Symbol



**Made to Order**  
Refer to page 431 for details.

# Series AS

## Construction

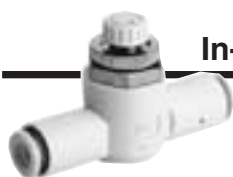


### Component Parts

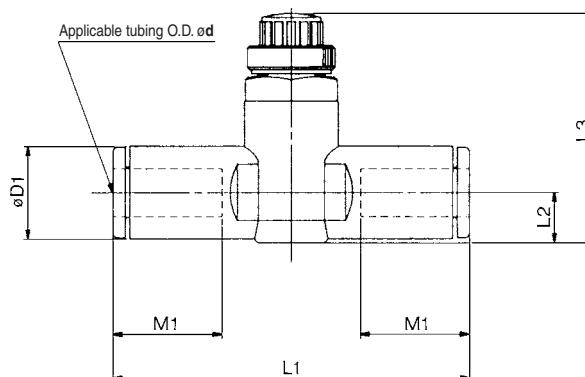
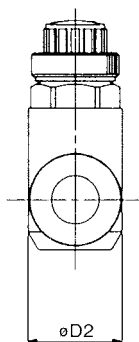
No.	Description	Material	Note
1	Body A	PBT	
2	Handle	PBT <sup>(1)</sup>	
3	Body B	Brass	Electroless nickel plated
4	Needle	Brass	Electroless nickel plated
5	Needle guide	Brass	Electroless nickel plated
6	Lock nut	Brass <sup>(2)</sup>	Electroless nickel plated
7	U seal	HNBR	
8	Spacer	—	
9	Cassette	—	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

Note 1) AS1001F-02 is made of electroless nickel plated brass.

Note 2) AS□□1F type is made of steel.



### In-line Type



### Metric Size

Model	Applicable tubing O.D. ød	D1	D2	L1	L2	L3 <sup>(1)</sup>		M1	Mass (g)
						Max.	Min.		
AS1001F-02	2	6	6	25.4	3.4	20.9	18.4	8.8	3
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		40.7	6.2	25.2	22.4	13.5	8
AS2001F-04	4	9.3	11.8	40.7	5.2	32.6	27.6	12.7	12
AS2001F-06	6	11.6		44.8	6.3	33.7	28.7	13.5	13
AS2051F-06	6	12.8	14.8	53.2	6.7	35.2	30.2	17	22
AS2051F-08	8	15.2		59.8	8.1	36.5	31.5	18	25
AS3001F-06	6	12.8	19.8	59	7.4	38.3	33.3	17	36
AS3001F-08	8	15.2		64.4	8.2	39.1	34.1	18	40
AS3001F-10	10	18.5		71.6	9.8	40.6	35.6	21	44
AS3001F-12	12	20.9	26.5	76	11	41.8	36.8	22	48
AS4001F-10	10	18.5		77.7	11.3	51.1	43.6	21	85
AS4001F-12	12	20.9		82.1		52.1	44.6	22	89

Note 1) Reference dimensions

### Inch Size

Model	Applicable tubing O.D. ød	D1	D2	L1	L2	L3 <sup>(1)</sup>		M1	Mass (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
AS1001F-05	3/16"	11.4	10	48.7	6.2	25.2	22.4	16.5	12
AS1001F-07	1/4"	12		40.7				13.7	9
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	16
AS2051F-05	3/16"	11.4		52.2	6.2	34.6	29.6	16.5	24
AS2051F-07	1/4"	13.2		54.4	7.1	35.5	30.5	17	22
AS2051F-09	5/16"	15.2	19.8	59.8	8.1	36.5	31.5	18	25
AS3001F-07	1/4"	13.2		59	7.4	38.3	33.3	17	36
AS3001F-09	5/16"	15.2		64.4	8.2	39.1	34.1	18	40
AS3001F-11	3/8"	17.9	26.5	70.8	9.5	40.3	35.3	21	52
AS4001F-11	3/8"	17.9		76.9	10.3	51	43.5	21	93
AS4001F-13	1/2"	21.7		83.1	11.6	52.4	44.9	22	106

Note 1) Reference dimensions