

# Speed Controller with One-touch Fittings

## Series AS

### In-line Type

#### 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)  
 $\phi 1/8$ ",  $\phi 5/32$ ",  $\phi 3/16$ ",  $\phi 1/4$ ",  $\phi 5/16$ ",  $\phi 3/8$ ",  $\phi 1/2$ "

#### Maximum operating pressure 1 MPa max.

#### Applicable tubing materials

Nylon, soft nylon, and polyurethane tubing are applicable.

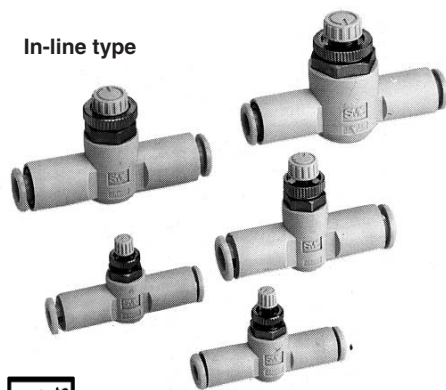
#### Retainer prevents accidental loss of needle.

#### Option

Hexagonal lock nut,  
Nickel plated option

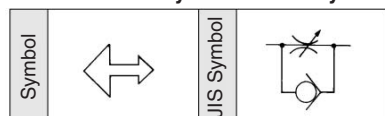
#### Number of needle rotations has been increased (8 to 10 turns)

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



P. 15-11-3

#### Flow Direction Symbols on Body



15-9-10

#### Model

Model	Applicable tubing 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) ● Marking is electroless nickel plated, provided as standard. (N specifications)

#### Specifications

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

Note 1) In the case of AS1001F

Note 2) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used. (Refer to pages 15-6-3 to 15-6-5 for details.)

Note 3) Brass parts are all electroless nickel plated.

#### Flow Rate and Effective Area

Model	AS1001F	AS2001F	AS2051F	AS3001F	AS4001F						
Tubing 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	$\phi 1/8$ ", $\phi 5/32$ " $\phi 3/16$ ", $\phi 1/4$ "	$\phi 5/32$ "	$\phi 3/16$ ", $\phi 1/4$ "	$\phi 3/16$ "	$\phi 1/4$ ", $\phi 5/16$ "	$\phi 1/4$ "	$\phi 5/16$ "	$\phi 3/8$ "	$\phi 3/8$ "	$\phi 1/2$ "
Controlled flow (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) Flow rate values are measured at 0.5 MPa and 20°C.

#### How to Order

AS 400 1F — 12 K

#### 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

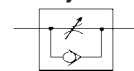
\* If more than one option is required, write option part numbers in the order of "K", "N".

#### Applicable tubing O.D.

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

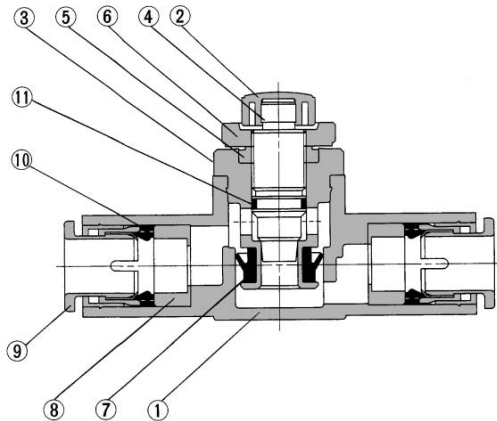
\* Use  $\phi 1/8$ " tube.

#### JIS Symbol



# Series AS

## Construction



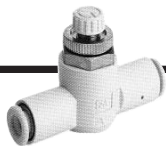
## Component Parts

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 seal	HNBR	
⑧	Spacer	PBT <sup>(2)</sup>	
⑨	Cassette	POM, Stainless steel	
⑩	Packing	NBR	
⑪	O-ring	NBR	

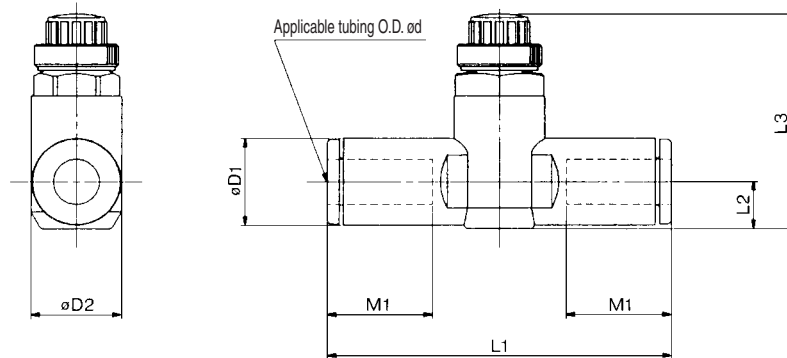
Note 1) AS2□□1F type is made of steel.

Note 2)  $\phi 3/16"$ ,  $\phi 3/8"$ ,  $\phi 1/2"$  are made of brass.

AS1001F ( $\phi 3.2$ ,  $\phi 4$ ,  $\phi 6$ ,  $\phi 1/8"$ ,  $\phi 5/32"$ ,  $\phi 1/4"$ ),  
AS2001F ( $\phi 4$ ,  $\phi 6$ ,  $\phi 5/32"$ ) are POM.



## In-line Type



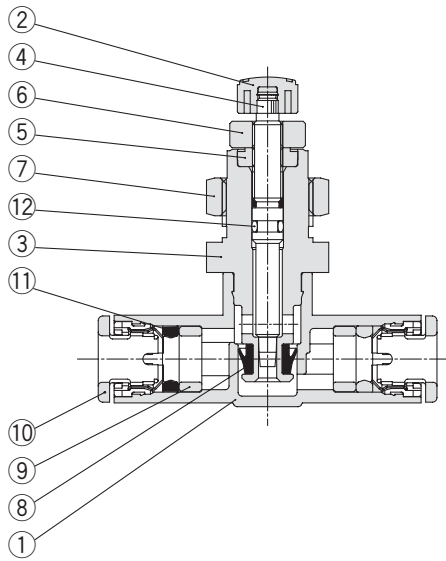
## Metric Size

Model	Applicable tubing O.D. ød	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		40.7	6.2	25.2	22.4	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	26
AS2051F-08	8	15.2		59.8	8.1	36.5	31.5	18	31
AS3001F-06	6	12.8	19.8	59	7.4	38.3	33.3	17	18
AS3001F-08	8	15.2		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	26.5	76	11	41.8	36.8	22	33
AS4001F-10	10	18.5		51.1	43.6	21	36		
AS4001F-12	12	20.9	82	11.3	52.1	44.6	22	40	

## Inch Size

Model	Applicable tubing O.D. ød	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	
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		52.2	7.1	34.5	29.5	17	21
AS2051F-05	3/16"	11.4	14.8	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	26
AS2051F-09	5/16"	15.2	19.8	59.8	8.1	36.5	31.5	18	31
AS3001F-07	1/4"	13.2		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	26.5	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	

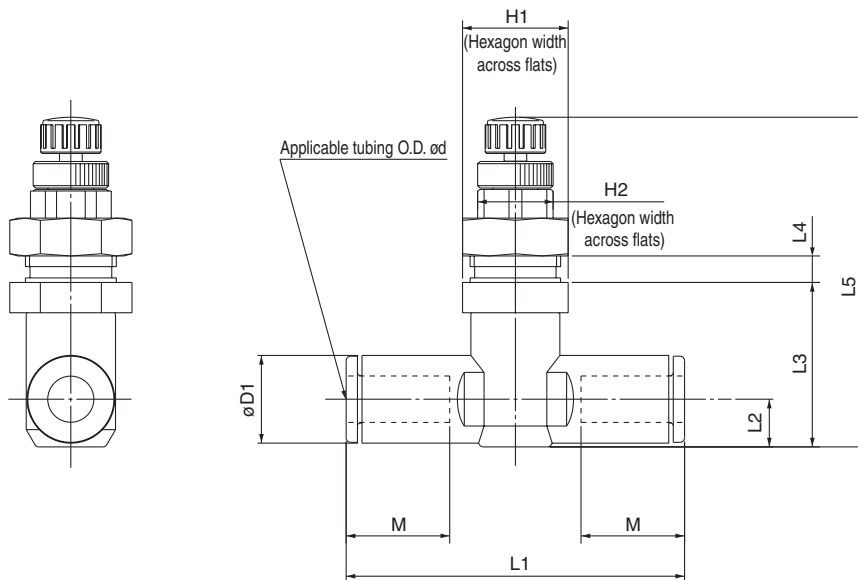
## Construction



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	Electroless nickel plated
⑦	Panel nut	Brass	Electroless nickel plated
⑧	U seal	HNBR	
⑨	Spacer	PBT <sup>(Note)</sup>	
⑩	Cassette	POM, Stainless steel	
⑪	Packing	NBR	
⑫	O-ring	NBR	

(Note) AS1001F(ø3.2, ø4, ø6, ø1/8", ø5/32", ø1/4"), AS2001F(ø4, ø6, ø5/32") are made of POM. ø3/16", ø3/8", ø1/2" are made of brass (Electroless nickel plated).

## Dimensions



### Metric Size

Model	d		H1	H2	L1	L2	L3	L4 Max.	L5		M	Panel-cut dimensions	
	Max.	Min.							Max.	Min.			
AS1001F-23-3	3.2	8.4	12	8	38	4.5	16.8	3.5	37.6	34.4	12.7	10.5	
AS1001F-04-3	4	9.3			39.2	5.2	17.4		38.2	35			
AS1001F-06-3	6	11.6			40.7	6.2	18.5		39.3	36.1			13.5
AS2001F-04-3	4	9.3	14	10	40.7	5.2	20.7	3.5	48	42.5	12.7	12.5	
AS2001F-06-3	6	11.6			44.8	6.3	21.8		49.1	43.6			13.5
AS2051F-06-3	6	12.8	17	13	53.2	6.7	25.7	3.5	53.5	48.1	17	15.5	
AS2051F-08-3	8	15.2			59.8	8.1	27		54.8	49.4			18
AS3001F-06-3	6	12.8	21	16	59	7.4	31.3	3.5	60.1	54.7	17	18.5	
AS3001F-08-3	8	15.2			64.4	8.2	32.1		60.9	55.5			18
AS3001F-10-3	10	18.5			71.6	9.8	33.7		62.5	57.1			21
AS3001F-12-3	12	20.9			76	11	34.9		63.7	58.3			22
AS4001F-10-3	10	18.5	27	21	82	11.3	35	3.5	69.3	61	21	24.5	
AS4001F-12-3	12	20.9			76	11	34.9		63.7	58.3			22

### Inch Size

Model	d		H1	H2	L1	L2	L3	L4 Max.	L5		M	Panel-cut dimensions
	Max.	Min.							Max.	Min.		
AS1001F-01-3	1/8"	8.4	12	8	38	4.5	16.8	3.5	37.6	34.4	12.7	10.5
AS1001F-03-3	5/32"	9.3			39.2	5.2	17.4		38.2	35		
AS1001F-05-3	3/16"	11.4			48.7	6.2	18.5		39.3	36.1		
AS1001F-07-3	1/4"	12			40.7			13.7				
AS2001F-03-3	5/32"	9.3	14	10	40.7	5.2	20.7	3.5	48	42.5	12.7	12.5
AS2001F-05-3	3/16"	11.4			50	6.2	21.6		48.9	43.4		
AS2001F-07-3	1/4"	13.2			52.2	7.1	22.5		49.8	44.3	17	
AS2051F-05-3	3/16"	11.4	17	13	52.2	6.2	25.2	3.5	53	47.6	16.5	15.5
AS2051F-07-3	1/4"	13.2			54.4	7.1	26		53.8	48.4		
AS2051F-09-3	5/16"	15.2			59.8	8.1	27		54.8	49.4	18	
AS3001F-07-3	1/4"	13.2	21	16	59	7.4	31.3	3.5	60.1	54.7	17	18.5
AS3001F-09-3	5/16"	15.2			64.4	8.2	32.1		60.9	55.5		
AS3001F-11-3	3/8"	17.2			70.8	9.5	33.3		62.1	56.7	21	
AS4001F-11-3	3/8"	17.9	27	21	76.9	10.3	34.9	3.5	69.2	60.9	21	24.5
AS4001F-13-3	1/2"	21.7			83.1	11.6	36.3		70.6	62.3		