

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.

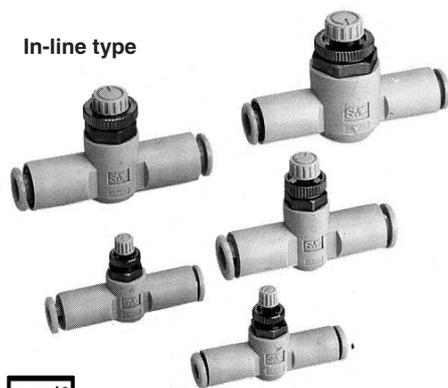
Retainer prevents accidental loss of needle.

Option

Hexagonal lock nut,
Nickel plated option

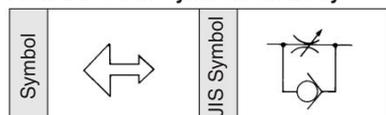
Number of needle rotations has been increased (8 to 10 turns)

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 ⁽¹⁾)
Applicable tubing material ⁽²⁾	Nylon, Soft nylon, Polyurethane
Option	Hexagonal lock nut, Electroless nickel plated ⁽³⁾

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 ²)	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

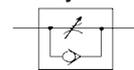
* If more than one option is required, write option part numbers in the order of "K", "N".

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	$\phi 1/2$ "

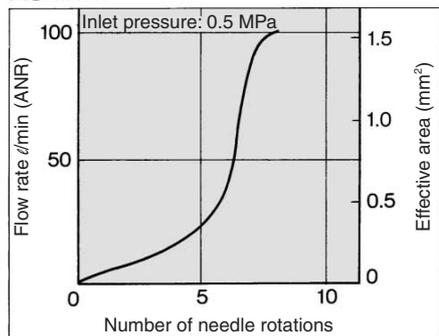
* Use $\phi 1/8$ " tube.

JIS Symbol

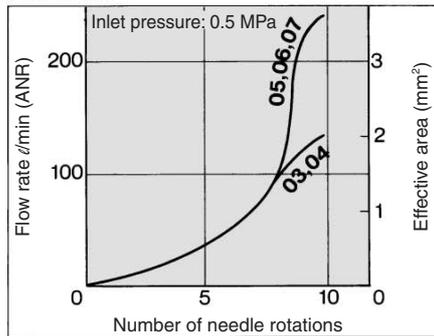


Needle Valve/Flow Characteristics

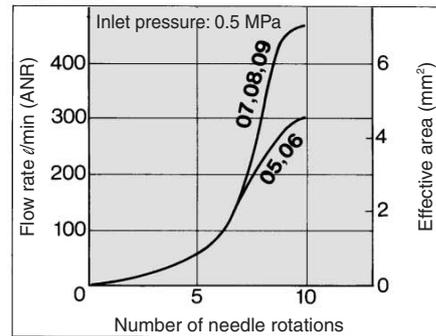
AS1001F



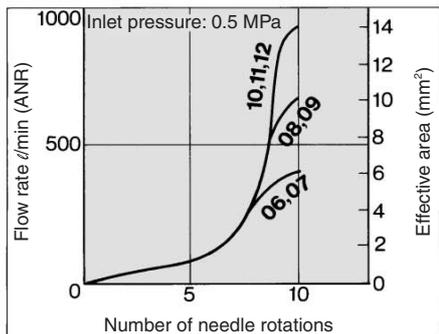
AS2001F



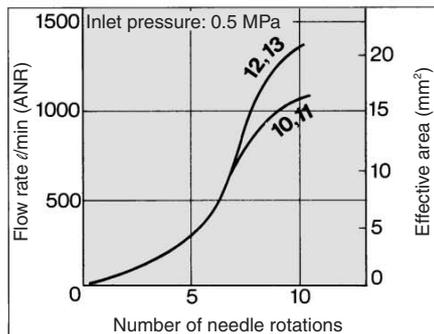
AS2051F



AS3001F



AS4001F



⚠ Caution

Be sure to read before handling. Refer to pages 15-18-3 to 15-18-4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to pages 15-8-6 to 15-8-8 for Precautions on every series.

AS

ASP

ASN

AQ

ASV

AK

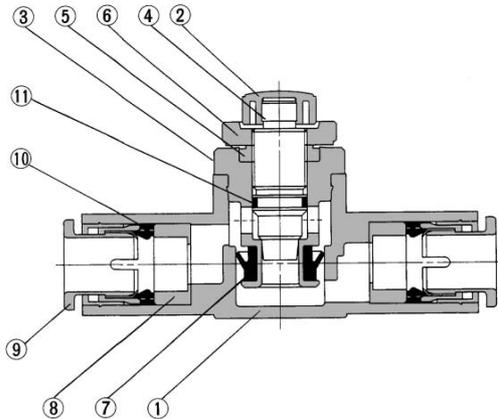
ASS

ASR

ASF

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 ⁽¹⁾	Electroless nickel plated
⑦	U seal	HNBR	
⑧	Spacer	PBT ⁽²⁾	
⑨	Cassette	POM, Stainless steel	
⑩	Packing	NBR	
⑪	O-ring	NBR	

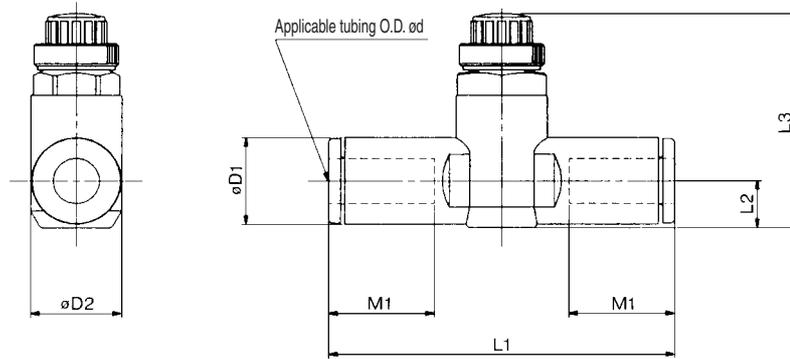
Note 1) AS2□□1F type is made of steel.

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		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	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		