

# Speed Controller for Low Speed Operation with One-touch Fitting In-line Type

# AS-FM Series



## Model

Model	Applicable tubing O.D.								
	Metric size				Inch size				
	3.2	4	6	8	1/8"	5/32"	3/16"	1/4"	5/16"
AS1001FM	●	●	●		●	●	●	●	
AS2001FM		●	●			●	●	●	
AS2051FM			●	●			●	●	●

## 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)
Applicable tubing material <sup>(1)</sup>	Nylon, Soft nylon, Polyurethane

Note 1) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used.

(Refer to pages 464 and 465 for details.)

Note 2) Brass parts are all electroless nickel plated. The handle of the M5 type is black zinc chromate plated.

## Flow Rate and Sonic Conductance

### Flow Direction Symbols on Body



Model	AS1001FM	AS2001FM	AS2051FM			
Tubing O.D.	Metric size	ø3.2, ø4, ø6	ø4	ø6	ø6	ø8
	Inch size	ø1/8", ø5/32", ø3/16", ø1/4"	ø5/32"	ø3/16", ø1/4"	ø3/16"	ø1/4", ø5/16"
Controlled flow	Flow rate (L/min (ANR))	7	12		38	
	Sonic conductance dm <sup>3</sup> /(s bar)	0.02	0.04		0.12	
	Critical pressure ratio	0.2	0.2		0.2	
Free flow	Flow rate (L/min (ANR))	100	130	230	290	460
	Sonic conductance dm <sup>3</sup> /(s bar)	0.3	0.4	0.7	0.9	1.4
	Critical pressure ratio	0.25				

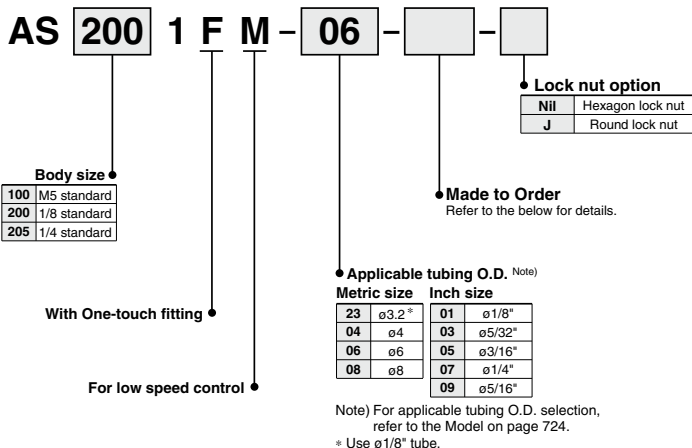
Note) Flow rate values are measured at 0.5 MPa and 20°C.

## Caution

Be sure to read this before handling the products. Refer to back page 50 for Safety Instructions and pages 543 to 546 for Flow Control Equipment Precautions.

**Made to Order**  
(Refer to page 725 for details.)

### How to Order



### Made to Order



Lubricant: Vaseline

**X12**

Ex.) AS2001FM-04-X12

Grease-free (Seal: Fluorine Coated) + Throttle Valve (Without Check Valve)

**X21**

Ex.) AS2001FM-04-X21

Note 1) Not particle-free

Throttle Valve (Without Check Valve)

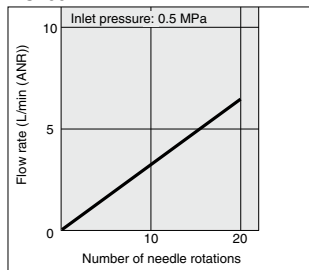
**X214**

Ex.) AS2001FM-04-X214

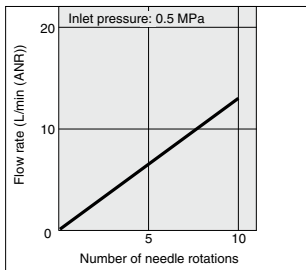
### Needle Valve/Flow Rate Characteristics

Note) The flow rate characteristics are representative values.

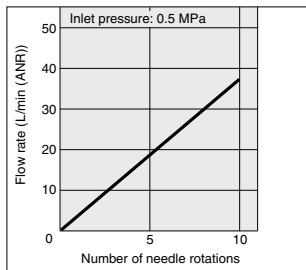
AS1001FM



AS2001FM



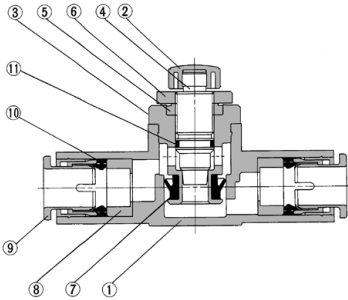
AS2051FM



- AS-F
- TMH
- ASD
- AS
- AS-FE
- KE
- AS-FG
- AS-FP
- AS-FM
- AS-D
- AS-T
- ASP
- ASN
- AQ
- ASV
- AK
- VCHC
- ASR
- ASQ

# AS-FM Series

## Construction



## Component Parts

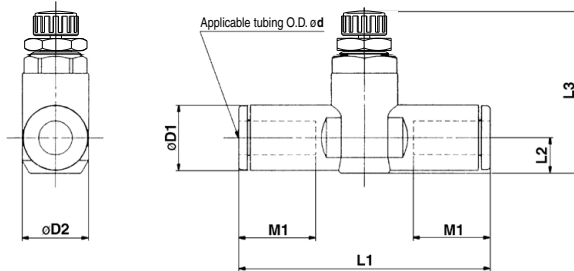
No.	Description	Material	Note
1	Body A	PBT	
2	Handle	PBT (1)	Black
3	Body B	Brass	Electroless nickel plated
4	Needle	Brass	Electroless nickel plated
5	Needle guide	Brass	Electroless nickel plated
6	Lock nut	Steel (3)	Zinc chromated (2)
7	U seal	HNBR	
8	Spacer	—	
9	Cassette	—	
10	Seal	NBR	
11	O-ring	NBR	

Note 1) AS1001FM type is made of brass (black zinc chromate plated).

Note 2) The round lock nut is electroless nickel plated.

Note 3) For round lock nut, only the AS1001FM uses brass.

## Dimensions



### Metric Size

Model	d	D1	D2	L1	L2	L3		M1	Weight (g)
						Max.	Min.		
AS1001FM-23	3.2	8.4	10.5	38	4.5	30.1	24.9	12.7	6
AS1001FM-04	4	9.3		39.2	5.2	30.7	25.5	7	7
AS1001FM-06	6	11.6	12.3	40.7	6.2	31.8	26.6	13.7	8
AS2001FM-04	4	9.3		40.7	5.2	32.6	27.6	12.7	12
AS2001FM-06	6	11.6	15.5	44.8	6.3	33.7	28.7	13.7	13
AS2051FM-06	6	12.8		53.2	6.7	35.2	30.2	17	26
AS2051FM-08	8	15.2		59.8	8.1	36.5	31.5	18	31

### Inch Size

Model	d	D1	D2	L1	L2	L3 (1)		M1	Weight (g)
						Max.	Min.		
AS1001FM-01	1/8"	8.4	10.5	38	4.5	30.1	24.9	12.7	6
AS1001FM-03	5/32"	9.3		39.2	5.2	30.7	25.5	7	7
AS1001FM-05	3/16"	11.4	12.3	48.7	6.2	31.8	26.6	16.5	8
AS1001FM-07	1/4"	12		40.7	5.2	32.6	27.6	13.7	9
AS2001FM-03	5/32"	9.3	15.5	40.7	5.2	32.6	29.6	12.7	12
AS2001FM-05	3/16"	11.4		50	6.2	33.6	28.6	16.5	18
AS2001FM-07	1/4"	13.2		52.2	7.1	34.5	29.5	17	21
AS2051FM-05	3/16"	11.4	15.5	52.2	6.2	34.6	29.6	16.5	24
AS2051FM-07	1/4"	13.2		54.4	7.1	35.5	30.5	17	26
AS2051FM-09	5/16"	15.2		59.8	8.1	36.5	31.5	18	31

Note 1) Reference dimensions