

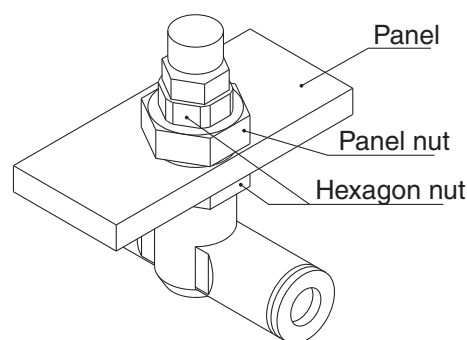
# Speed Controller with One-touch Fittings

## In-line Type/Panel Mount Type

RoHS

- Panel mount thickness: 3.5 mm at the maximum
- Easy installation and removal

Installation of hexagon nuts on panel nuts up and down in two locations enables user to mount or remove it depending upon the situation.



**AS□□□1F-3 Series**



EMC-AS1F-3-01A-UK

# Speed Controller with One-touch Fittings In-line Type/Panel Mount Type

# AS□□□1F-3 Series

RoHS



## Model

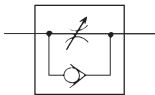
Model	Applicable tubing O.D.												
	Metric size						Inch size						
	3.2	4	6	8	10	12	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"	1/2"
AS1001F	●	●	●				●	●	●	●			
AS2001F		●	●					●	●	●			
AS2051F			●	●					●	●	●		
AS3001F			●	●	●	●			●	●	●	●	
AS4001F					●	●						●	●

## 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.  
Note 2) Brass parts are all electroless nickel plated.

### Symbol



### Flow Direction Symbols on Body



**Made to Order**  
(For details, refer to page 3.)

Symbol	Specifications
-X12	Lubricant: Vaseline
-X21	Grease-free (Seal: Fluorine-coated) + Throttle valve (Without check valve)
-X214	Throttle valve (Without check valve)

## Flow Rate and Sonic Conductance

Model	AS1001F	AS2001F	AS2051F	AS3001F	AS4001F						
Tubing O.D.	Metric size	Ø 3.2, Ø 4, Ø 6	Ø 4	Ø 6	Ø 6	Ø 8	Ø 6	Ø 8	Ø 10, Ø 12	Ø 10	Ø 12
	Inch size	Ø 1/8", Ø 5/32", Ø 3/16", Ø 1/4"	Ø 5/32"	Ø 3/16", Ø 1/4"	Ø 3/16"	Ø 1/4", Ø 5/16"	Ø 1/4"	Ø 5/16"	Ø 3/8"	Ø 3/8"	Ø 1/2"
Controlled flow	Flow rate (l/min(ANR))	100	130	230	290	460	420	660	920	1050	1390
	Sonic conductance (dm <sup>3</sup> /(s·bar))	0.28	0.36	0.64	0.8	1.3	1.2	1.8	2.6	2.9	3.9
Critical pressure ratio	Controlled flow	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
	Free flow	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25

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

## How to Order

AS **200** 1 F - **06** - **3** - **□** - **□**

**Body size**

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

**Panel mount type**

**Lock nut option**

-	Hexagon lock nut
J	Round lock nut

**Made to Order**  
Refer to page 3 for details.

**Applicable tubing O.D.** <sup>Note)</sup>

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

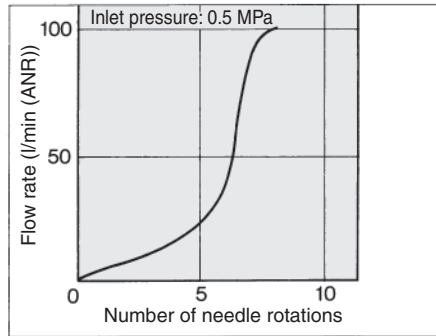
**With One-touch fittings**

Note) For applicable tubing O.D. selection, refer to the Model.  
\* Use Ø 1/8" tube.

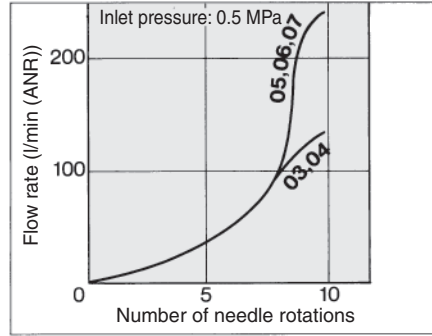
**Needle Valve/Flow Rate Characteristics**

Note) The flow rate characteristics are representative values.

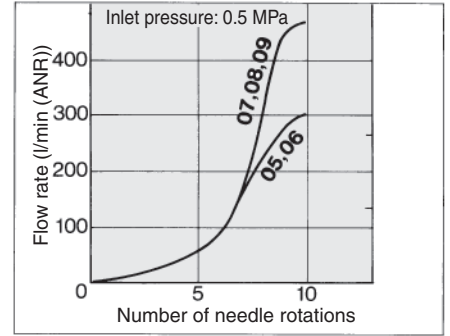
**AS1001F**



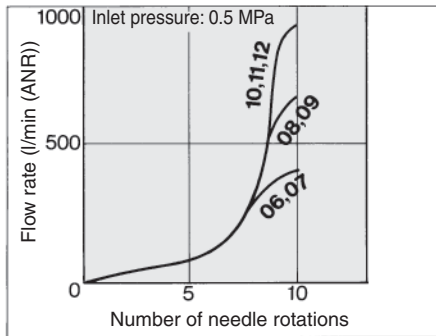
**AS2001F**



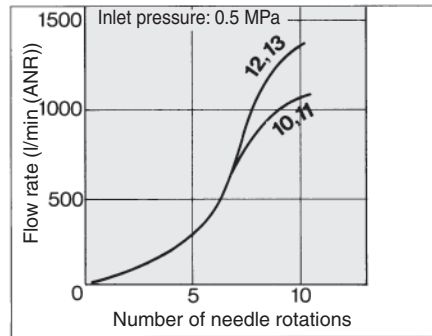
**AS2051F**



**AS3001F**



**AS4001F**



**Made to Order**



Lubricant: Vaseline

**X12**

Ex.) AS2001F-04-3-X12

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

**X21**

Ex.) AS2001F-04-3-X21

Note) Not particle-free

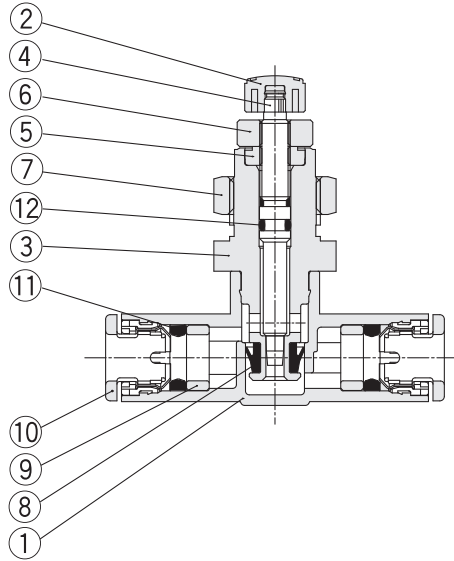
Throttle Valve (Without Check Valve)

**X214**

Ex.) AS2001F-04-3-X214

# AS□□□1F-3 Series

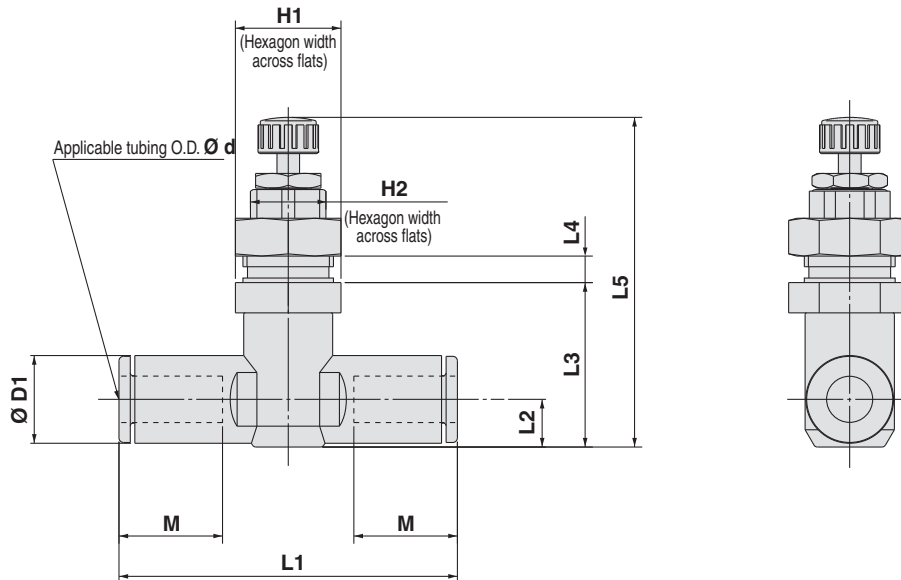
## Construction



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	Steel <sup>(1)</sup>	Zinc chromated
7	Panel nut	Brass	Electroless nickel plated
8	U seal	HNBR	
9	Spacer	—	
10	Cassette	—	
11	Packing	NBR	
12	O-ring	NBR	

Note 1) Option: The round lock nut is made of electroless nickel plated brass.

## Dimensions



### Metric Size

Model	d	D1	H1	H2	L1	L2	L3	L4	L5 <sup>(1)</sup>		M	Panel-cut dimensions	Weight (g)
									Max.	Min.			
AS1001F-23-3	3.2	8.4			38	4.5	16.8		37.6	34.4			18
AS1001F-04-3	4	9.3	12	8	39.2	5.2	17.4	3.5	38.2	35	12.7	10.5	19
AS1001F-06-3	6	11.6			40.7	6.2	18.5		39.3	36.1	13.5		20
AS2001F-04-3	4	9.3	14	10	40.7	5.2	20.7	3.5	48	42.5	12.7	12.5	28
AS2001F-06-3	6	11.6			44.8	6.3	21.8		49.1	43.6	13.5		29
AS2051F-06-3	6	12.8	17	13	53.2	6.7	25.7	3.5	53.5	48.1	17	15.5	49
AS2051F-08-3	8	15.2			59.8	8.1	27		54.8	49.4	18		54
AS3001F-06-3	6	12.8			59	7.4	31.3		60.1	54.7	17		85
AS3001F-08-3	8	15.2	21	16	64.4	8.2	32.1	3.5	60.9	55.5	18	18.5	88
AS3001F-10-3	10	18.5			71.6	9.8	33.7		62.5	57.1	21		99
AS3001F-12-3	12	20.9			76	11	34.9		63.7	58.3	22		100
AS4001F-10-3	10	18.5	27	21	77.7	11.3	35	3.5	69.3	61	21	24.5	167
AS4001F-12-3	12	20.9			82.1		36		70.3	62	22		171

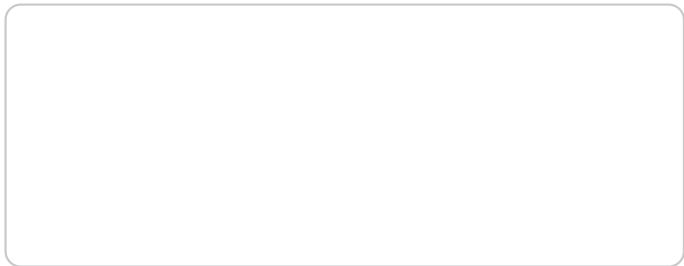
Note 1) Reference dimensions

### Inch Size

Model	d	D1	H1	H2	L1	L2	L3	L4	L5 <sup>(1)</sup>		M	Panel-cut dimensions	Weight (g)
									Max.	Min.			
AS1001F-01-3	1/8"	8.4			38	4.5	16.8		37.6	34.4			18
AS1001F-03-3	5/32"	9.3	12	8	39.2	5.2	17.4	3.5	38.2	35	12.7	10.5	19
AS1001F-05-3	3/16"	11.4			48.7	6.2	18.5		39.3	36.1	16.5		24
AS1001F-07-3	1/4"	12			40.7						13.7		21
AS2001F-03-3	5/32"	9.3	14	10	40.7	5.2	20.7	3.5	48	42.5	12.7	12.5	28
AS2001F-05-3	3/16"	11.4			50	6.2	21.6		48.9	43.4	16.5	12.5	34
AS2001F-07-3	1/4"	13.2			52.2	7.1	22.5		49.8	44.3	17		37
AS2051F-05-3	3/16"	11.4	17	13	52.2	6.2	25.2	3.5	53	47.6	16.5	15.5	47
AS2051F-07-3	1/4"	13.2			54.4	7.1	26		53.8	48.4	17	15.5	49
AS2051F-09-3	5/16"	15.2			59.8	8.1	27		54.8	49.4	18		54
AS3001F-07-3	1/4"	13.2	21	16	59	7.4	31.3	3.5	60.1	54.7	17	18.5	84
AS3001F-09-3	5/16"	15.2			64.4	8.2	32.1		60.9	55.5	18	18.5	88
AS3001F-11-3	3/8"	17.2			70.8	9.5	33.3		62.1	56.7	21		95
AS4001F-11-3	3/8"	17.9	27	21	76.9	10.3	34.9	3.5	69.2	60.9	21	24.5	175
AS4001F-13-3	1/2"	21.7			83.1	11.6	36.3		70.6	62.3	22		188

Note 1) Reference dimensions





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