

# Speed Controller with One-touch Fitting

## Series AS

### Elbow Type/Universal Type

#### Minimizes installation time and cost

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

#### Tube swivels 360°

Universal type permits 360° piping swivel.

#### 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.

#### Model

Elbow type	Universal type	Port size	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"		
AS12□1F-M3	AS13□1F-M3	M3 x 0.5	●	●								●	●					2.5, 4, 6
AS12□1F-M5	AS13□1F-M5	M5 x 0.8	●	●	●							●	●	●	●			6, 10, 16, 20
AS12□1F-U10/32	AS13□1F-U10/32	10-32 UNF	●	●	●							●	●	●	●			6, 10, 16, 20
AS22□1F-01	AS23□1F-01	R 1/8	●	●	●	●	● <sup>(1)</sup>					●	●	●	●			20, 25, 32
AS22□1F-02	AS23□1F-02	R 1/4		●	●	●	●					●	●	●	●	●		20, 25, 32, 40
AS32□1F-02	AS33□1F-02	R 1/4			●	●	●	●					●	●	●	●		40, 50, 63
AS32□1F-03	AS33□1F-03	R 3/8			●	●	●	●					●	●	●	●		40, 50, 63
AS42□1F-04	AS43□1F-04	R 1/2					●	●								●	●	63, 80, 100

Note 1) \* Elbow type only

Note 2) Meter-out and meter-in types can be visually differentiated by the lock nut.

The lock nut on the meter-out type is electroless nickel plated, while the meter-in type is black zinc chromate plated.

Note 3) ● Marking is electroless nickel plated, provided as standard. (N specifications)

#### Specifications

Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure	1 MPa
Mini. 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	With seal, Hexagon lock nut <sup>(3)</sup> , Electroless nickel plated <sup>(4)</sup>

Note 1) In the case of AS12□1F-M5, AS12□1F-U10/32, AS13□1F-M5, AS13□1F-U10/32

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) M3, M5, and 10-32UNF type ports are not available with seal.

Note 4) Brass parts are all electroless nickel plated.

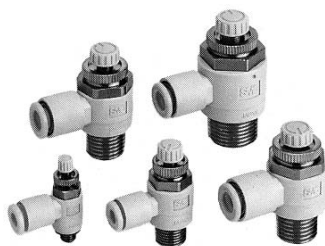
#### Flow Rate and Effective Area

Model	AS12□1F-M3 AS13□1F-M3	AS12□1F-M5 AS13□1F-M5	AS22□1F-01 AS23□1F-01	AS22□1F-02 AS23□1F-02	AS32□1F AS33□1F	AS42□1F AS43□1F
	Metric size $\phi 3.2, \phi 4$	Metric size $\phi 3.2, \phi 4, \phi 6$	Metric size $\phi 3.2, \phi 4, \phi 6, \phi 8, \phi 10$	Metric size $\phi 4, \phi 6, \phi 8, \phi 10$	Metric size $\phi 6, \phi 8, \phi 10, \phi 12$	Metric size $\phi 10, \phi 12$
Tubing O.D.	Inch size $\phi 1/8"$ $\phi 5/32"$	Inch size $\phi 1/8", \phi 3/16"$ $\phi 1/4", \phi 5/32"$	Inch size $\phi 1/8"$ $\phi 3/16", \phi 1/4"$ $\phi 5/16"$	Inch size $\phi 5/32", \phi 3/16"$ $\phi 1/4", \phi 5/16"$ $\phi 3/8"$	Inch size $\phi 1/4", \phi 5/16"$ $\phi 3/8"$	Inch size $\phi 3/8", \phi 1/2"$
Controlled flow (Free flow)	Flow rate $\dot{V}$ (ANR) 20	Flow rate $\dot{V}$ (ANR) 100	Flow rate $\dot{V}$ (ANR) 180	Flow rate $\dot{V}$ (ANR) 230	Flow rate $\dot{V}$ (ANR) 260 390	Flow rate $\dot{V}$ (ANR) 460 660 790
	Effective area (mm <sup>2</sup> ) 0.3	Effective area (mm <sup>2</sup> ) 1.5	Effective area (mm <sup>2</sup> ) 2.7	Effective area (mm <sup>2</sup> ) 3.5	Effective area (mm <sup>2</sup> ) 4 6 7	Effective area (mm <sup>2</sup> ) 10 12 14 24 26

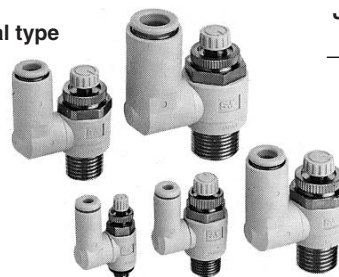
Note 1) Flow rate values are measured at 0.5 MPa and 20°C.

Note 2) U10/32 has the same specification as M5.

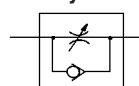
#### Elbow type



#### Universal type



#### JIS Symbol



#### Flow Direction Symbols on Body

	Meter-out type	Meter-in type
Symbol		
JIS Symbol		

#### 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.



P. 15-11-3

## How to Order

**AS 2 2 0 1F — 01 — 06 S**

### Body size

1	M3, M5 standard
2	1/8, 1/4 standard
3	3/8 standard
4	1/2 standard

### Option

Nil	None
S	With seal
K	Hexagonal lock nut
N	Electroless nickel plated

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

### Type

2	Elbow
3	Universal

### Applicable tubing O.D.

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

\*Use ø1/8" tube.

### Control type

0	Meter-out
1	Meter-in

### Port size

M3	M3 x 0.5
M5	M5 x 0.8
U10/32	10-32 UNF
01	1/8
02	1/4
03	3/8
04	1/2

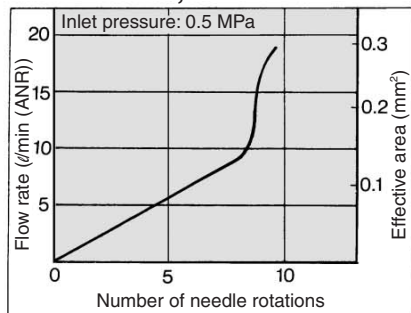
### With One-touch fitting

### Thread type

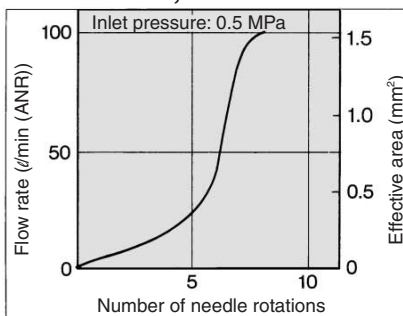
Nil	Metric thread (M3, M5)
	Unified thread (10-32 UNF)
N	R
	NPT

## Needle Valve/Flow Characteristics

**AS1201F-M3, AS1211F-M3  
AS1301F-M3, AS1311F-M3**

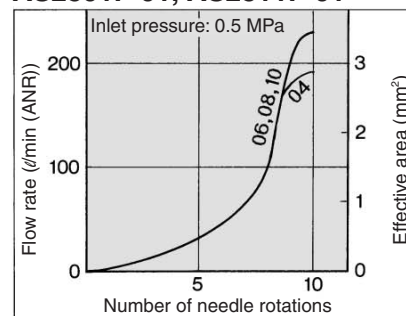


**AS1201F-M5, AS1211F-M5  
AS1301F-M5, AS1311F-M5**

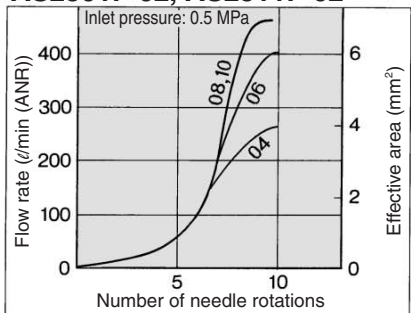


Note) "U10/32" is the same as "M5".

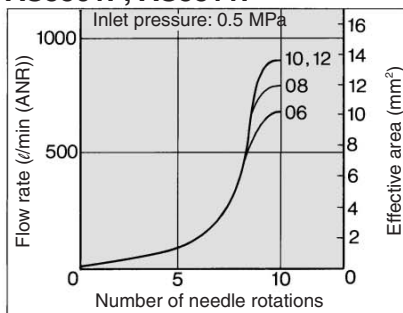
**AS2201F-01, AS2211F-01  
AS2301F-01, AS2311F-01**



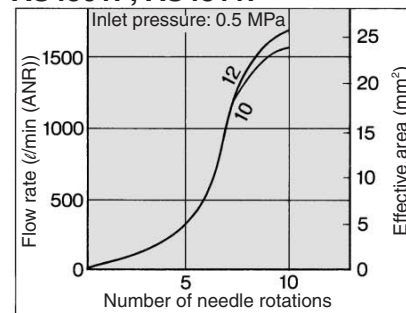
**AS2201F-02, AS2211F-02  
AS2301F-02, AS2311F-02**



**AS3201F, AS3211F  
AS3301F, AS3311F**



**AS4201F, AS4211F  
AS4301F, AS4311F**

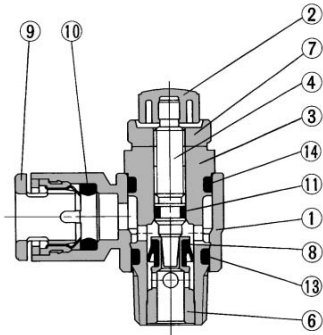


- AS
- ASP
- ASN
- AQ
- ASV
- AK
- ASS
- ASR
- ASF

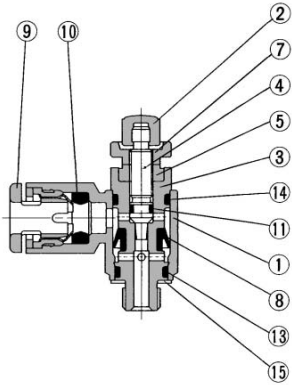
# Series AS

## Construction

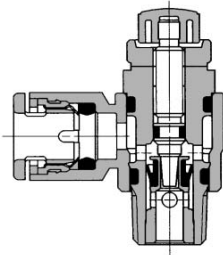
**Elbow type  
Meter-out type**



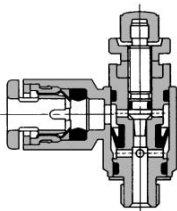
**M3 port  
M5 port  
U10/32 port**



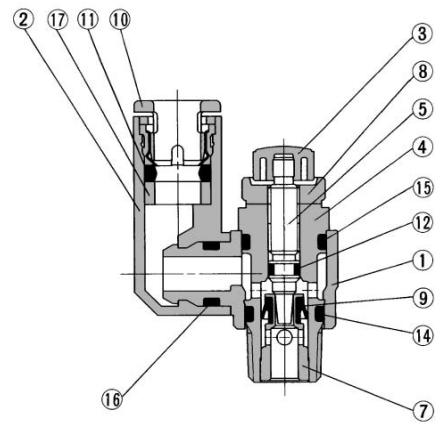
**Meter-in type**



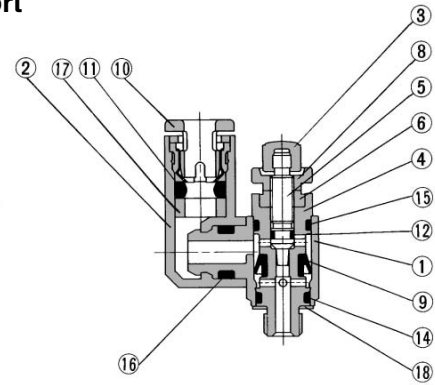
**M3 port  
M5 port  
U10/32 port**



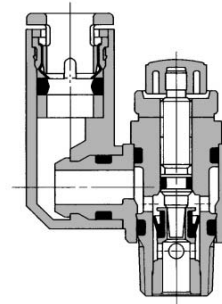
**Universal type  
Meter-out type**



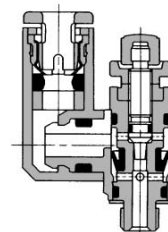
**M3 port  
M5 port  
U10/32 port**



**Meter-in type**

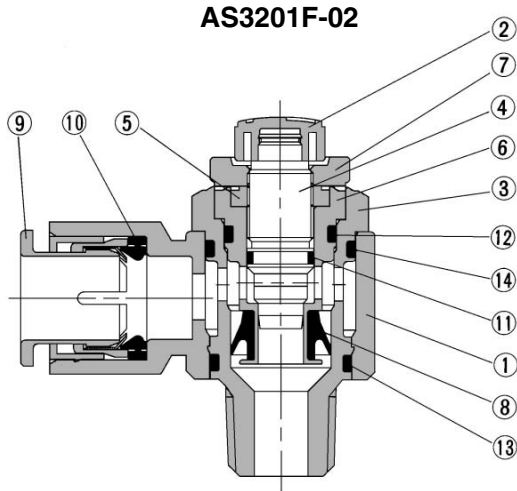


**M3 port  
M5 port  
U10/32 port**

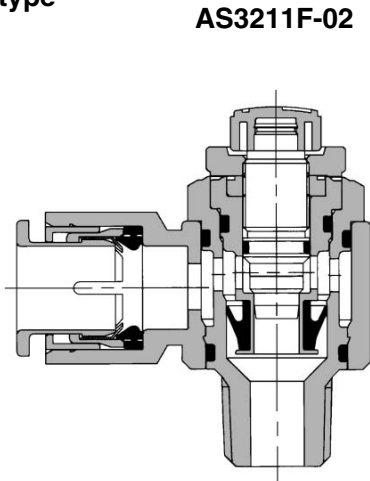


## Construction

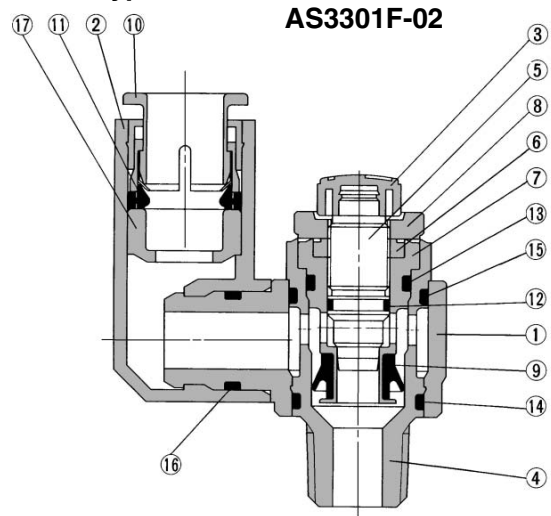
### Elbow type Meter-out type



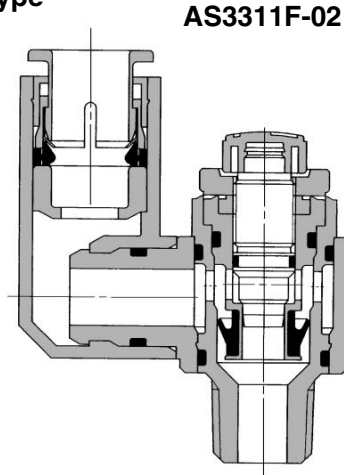
### Meter-in type



### Universal type Meter-out type



### Meter-in type



### Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Handle	PBT	
③	Body B	Brass <sup>(1)</sup>	Electroless nickel plated
④	Needle	Brass	Electroless nickel plated
⑤	Needle guide	Brass	Electroless nickel plated
⑥	Seat ring	Brass	<sup>(2)</sup>
⑦	Lock nut	Brass <sup>(3)</sup>	Electroless nickel plated <sup>(4)</sup>
⑧	U-packing	HNBR	
⑨	Cassette	POM	
⑩	Seal	NBR	
⑪	O-ring	NBR	
⑫	O-ring	NBR	
⑬	O-ring	NBR	
⑭	O-ring	NBR	
⑮	Gasket	NBR	

Note 1) AS12□1F-M3 is made of stainless steel.

Note 2) AS22□1F, AS32□1F-02: Electroless nickel plated.

Note 3) AS2□□1F type is made of steel.

Note 4) Meter-in type is black zinc chromate plated.

### Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Elbow body	PBT	
③	Handle	PBT	
④	Body B	Brass <sup>(1)</sup>	Electroless nickel plated
⑤	Needle	Brass	Electroless nickel plated
⑥	Needle guide	Brass	Electroless nickel plated
⑦	Seat ring	Brass	<sup>(2)</sup>
⑧	Lock nut	Brass <sup>(3)</sup>	Electroless nickel plated <sup>(4)</sup>
⑨	U seal	HNBR	
⑩	Cassette	POM, Stainless steel	
⑪	Seal	NBR	
⑫	O-ring	NBR	
⑬	O-ring	NBR	
⑭	O-ring	NBR	
⑮	O-ring	NBR	
⑯	O-ring	NBR	
⑰	Spacer	PBT <sup>(5)</sup>	
⑱	Gasket	NBR, Stainless steel	

Note 1) AS13□1F-M3 is made of stainless steel.

Note 2) AS23□1F, AS33□1F-02: Electroless nickel plated.

Note 3) AS2□□1F type is made of steel.

Note 4) Meter-in type is black zinc chromate plated.

Note 5)  $\phi 3/16"$ ,  $\phi 3/8"$ ,  $\phi 1/2"$  are made of brass

AS13□1F ( $\phi 3.2$ ,  $\phi 4$ ,  $\phi 6$ ,  $\phi 1/8"$ ,  $\phi 5/32$ ,  $\phi 1/4$ ),

AS23□1F-□01 ( $\phi 3.2$ ,  $\phi 4$ ,  $\phi 6$ ,  $\phi 1/8"$ ,  $\phi 5/32$ ) are POM.

AS

ASP

ASN

AQ

ASV

AK

ASS

ASR

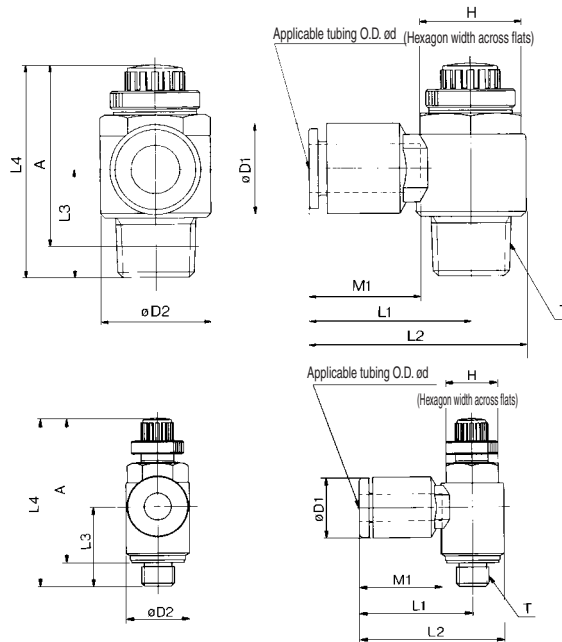
ASF

# Series AS



## Elbow Type

M3 port  
M5 port  
U10/32 port



### Metric Size

Model	Applicable tubing O.D. ød	T	H <sup>(1)</sup>	D1	D2	L1	L2	L3	L4		A <sup>(2)</sup>		M1	Weight (g)
									Max.	Min.	Max.	Min.		
AS12□1F-M3-23	3.2	M3 x 0.5	5.5	8.4	7.2	16.1	19.7	10.5	26.6	24.1	24	21.5	12.7	4
AS12□1F-M3-04	4			9.3										
AS12□1F-M5-23	3.2	M5 x 0.8 10-32UNF	8	8.4	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-23				9.3										
AS12□1F-M5-04	4	M5 x 0.8 10-32UNF	8	9.3	9.6	17.3	22.1	11.7	28.6	25.8	25	22.2	13.5	7
AS12□1F-U10/32-04	6			11.6										
AS12□1F-M5-06	6	M5 x 0.8 10-32UNF	8	11.6	9.6	18.1	22.9	11.7	28.6	25.8	25	22.2	13.5	7
AS12□1F-U10/32-06				6										
AS22□1F-01-23	3.2	1/8	12 (12.7)	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	13.5	16
AS22□1F-01-04	4			9.3		20.4	27.5							
AS22□1F-01-06	6	8	12 (12.7)	11.6	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	18.5	19
AS22□1F-01-08	8			15.2		25.3	32.4							
AS22□1F-01-10	10	10	12 (12.7)	18.5	14.2	33.1	40.2	15	36.1	31.1	32.1	27.1	21	21
AS22□1F-02-04	4			18.5		33.1	40.2							
AS22□1F-02-06	6	6	17 (17.5)	10.4	18.5	25.2	34.4	18.2	40.4	35.4	34.4	29.4	16	32
AS22□1F-02-08	8			12.8		25.2	34.4							
AS22□1F-02-10	10	10	17 (17.5)	15.2	18.5	27.2	36.4	20	40.4	35.4	34.4	29.4	18.5	34
AS32□1F-02-06	6			15.2		27.2	36.4							
AS32□1F-02-08	8	8	19	12.8	23	27.8	39.3	21.8	48.8	43.8	42.8	37.8	17	60
AS32□1F-02-10	10			15.2		29.5	41							
AS32□1F-02-12	12	12	19	18.5	23	31.8	43.3	20.9	46.5	41.5	40.2	35.2	18.5	63
AS32□1F-03-06	6			20.9		32.8	44.3							
AS32□1F-03-08	8	8	3/8	12.8	23	27.8	39.3	20.9	46.5	41.5	40.2	35.2	17	55
AS32□1F-03-10	10			15.2		29.5	41							
AS32□1F-03-12	12	12	3/8	18.5	23	31.8	43.3	20.9	46.5	41.5	40.2	35.2	18.5	61
AS42□1F-04-10	10			20.9		32.8	44.3							
AS42□1F-04-12	12	12	1/2	24	28.6	33.6	47.9	25.4	57.6	50.1	49.6	42.1	21	100
AS42□1F-04-12	12			20.9		34.6	48.9							

Note 1) ( ) are the dimensions of NPT thread.

Note 2) Reference thread dimensions after installation.

### Inch Size

Model	Applicable tubing O.D. ød	T	H <sup>(1)</sup>	D1	D2	L1	L2	L3	L4		A <sup>(2)</sup>		M1	Weight (g)
									Max.	Min.	Max.	Min.		
AS12□1F-M3-01	1/8"	M3 x 0.5	5.5	8.4	7.2	16.1	19.7	10.5	26.6	24.1	24	21.5	12.7	4
AS12□1F-M3-03	5/32"			9.3										
AS12□1F-M5-01	1/8"	M5 x 0.8	8	8.4	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-01	1/8"			9.3										
AS12□1F-M5-03	5/32"	M5 x 0.8	8	8.4	9.6	17.3	22.1	11.7	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-03	5/32"			9.3										
AS12□1F-M5-05	3/16"	M5 x 0.8	8	11.4	12	21.3	26.1	11.7	28.6	25.8	25	22.2	16.5	7
AS12□1F-U10/32-05	3/16"			9.6										
AS22□1F-M5-07	1/4"	M5 x 0.8	12	18.3	18.3	23.1	23.1	11.7	28.6	25.8	25	22.2	13.5	7
AS12□1F-U10/32-07	1/4"			18.3										
AS22□1F-01-01	1/8"	1/8	12 (12.7)	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	13.5	16
AS22□1F-01-03	5/32"			9.3		20.4	27.5							
AS22□1F-01-05	3/16"	1/8	12 (12.7)	11.4	14.2	23.1	30.2	14.3	36.1	31.1	32.1	27.1	16.5	17
AS22□1F-01-07	1/4"			13.2		23.9	31							
AS22□1F-01-09	5/16"	1/8	12 (12.7)	15.2	14.2	25.3	32.4	15	36.1	31.1	32.1	27.1	21	21
AS22□1F-02-03	5/32"			15.2		25.3	32.4							
AS22□1F-02-05	3/16"	1/8	17 (17.5)	10.4	18.5	25.2	34.4	18.2	40.4	35.4	34.4	29.4	16	32
AS22□1F-02-07	1/4"			13.2		23.1	30.2							
AS22□1F-02-09	5/16"	1/8	17 (17.5)	15.2	18.5	27.2	36.4	20	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-11	3/8"			17.9		33.9	43.2							
AS32□1F-02-07	1/4"	1/8	19	13.2	23	27.8	39.3	21.8	48.8	43.8	42.8	37.8	17	60
AS32□1F-02-09	5/16"			15.2		29.5	41							
AS32□1F-02-11	3/8"	1/8	19	17.9	23	31.8	43.3	20.9	46.5	41.5	40.2	35.2	18.5	63
AS32□1F-03-07	1/4"			17.9		31.8	43.3							
AS32□1F-03-09	5/16"	3/8	3/8	13.2	23	27.8	39.3	20.9	46.5	41.5	40.2	35.2	17	55
AS32□1F-03-11	3/8"			15.2		29.5	41							
AS42□1F-04-11	3/8"	1/2	24 (23.8)	17.9	28.6	33.6	47.9	25.4	57.6	50.1	49.6	42.1	21	100
AS42□1F-04-13	1/2"			21.7		35.2	49.5							

Note 1) ( ) are the dimensions of NPT thread.

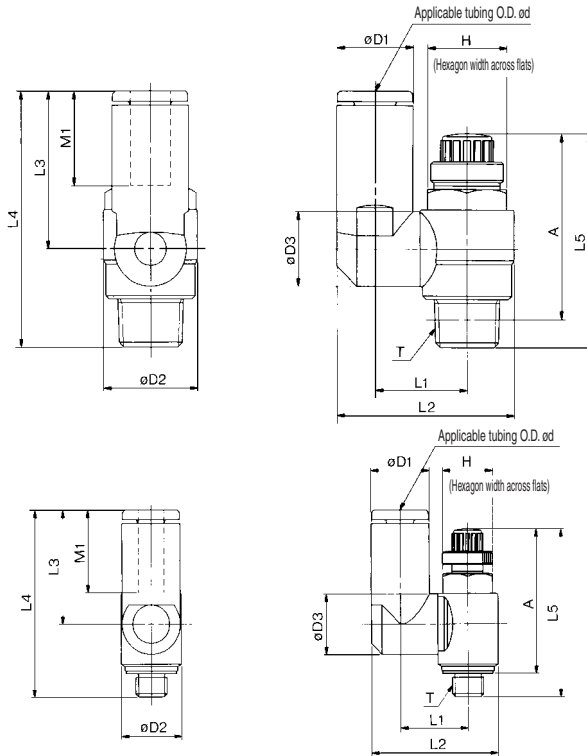
Note 2) Reference thread dimensions after installation.

# Speed Controller with One-touch Fitting Elbow Type/Universal Type **Series AS**



## Universal Type

M3 port  
M5 port  
U10/32 port



### Metric Size

Model	Applicable tubing O.D. ød	T	H <sup>(1)</sup>	D1	D2	D3	L1	L2	L3	L4	L5		A <sup>(2)</sup>		M1	Weight (g)
											Max.	Min.	Max.	Min.		
AS13□1F-M3-23	3.2	M3 x 0.5	5.5	8.4	7.2	7.2	10.1	17.9	17.6	28.3	26.6	24.1	24	21.5	12.7	4
AS13□1F-M3-04	4			9.3				18.3	17.9	28.6					5	
AS13□1F-M5-23	3.2	M5 x 0.8	8	8.4	9.6	9.3	10.8	19.8	17.5	28.7	28.6	25.8	25	22.2	12.7	7
AS13□1F-U10/32-23	10-32UNF															
AS13□1F-M5-04	4	M5 x 0.8		9.3				20.3								
AS13□1F-U10/32-04	4	10-32UNF														
AS13□1F-M5-06	6	M5 x 0.8		11.6				21.4	20.6	31.8					13.5	
AS13□1F-U10/32-06	6	10-32UNF														
AS23□1F-01-23	3.2	1/8	12	8.4	14.2	9.3	13.1	24.4	17.5	31.8	36.1	31.1	32.1	27.1	12.7	17
AS23□1F-01-04	4			9.3				24.9								
AS23□1F-01-06	6		(12.7)	11.6				10.9	14	26.9	22.9	37.2			13.5	21
AS23□1F-01-08	8			15.2				12.9	16.2	30.9	28.2	41.7			18.5	21
AS23□1F-02-04	4	1/4	17	10.4	18.5	12.9	18.4	34	25.2	42.6	40.4	35.4	34.4	29.4	16	32
AS23□1F-02-06	6			12.8				34								
AS23□1F-02-08	8		(17.5)	15.2				18.3	35.2	28.2	45.6			18.5	36	
AS23□1F-02-10	10			18.5				20.2	38.7	31	48.4			21	40	
AS33□1F-02-06	6	3/8	19	12.8	23	12.9	20.6	38.5	25.2	50	48.8	43.8	42.8	37.8	17	60
AS33□1F-02-08	8			15.2				39.7								
AS33□1F-02-10	10			18.5				23	43.7	32.6	54.4			21	67	
AS33□1F-02-12	12			20.9				23	44.9	34.4	56.2			22	69	
AS33□1F-03-06	6	1/2	24	12.8	28.6	12.9	20.6	38.5	25.2	46.1	57.6	50.1	49.6	42.1	17	56
AS33□1F-03-08	8			15.2				39.7								
AS33□1F-03-10	10		(23.8)	18.5				23	43.7	32.6	53.5			21	63	
AS33□1F-03-12	12			20.9				23	44.9	34.4	55.3			22	65	
AS43□1F-04-10	10	1/2	(23.8)	16.2	28.6	16.2	25.8	49.4	32.6	58	57.6	50.1	49.6	42.1	21	104
AS43□1F-04-12	12			19.4				26.8								

Note 1) ( ) are the dimensions of NPT thread  
Note 2) Reference thread dimensions after installation.

### Inch Size

Model	Applicable tubing O.D. ød	T	H <sup>(1)</sup>	D1	D2	D3	L1	L2	L3	L4	L5		A <sup>(2)</sup>		M1	Weight (g)
											Max.	Min.	Max.	Min.		
AS13□1F-M3-01	1/8"	M3 x 0.5	5.5	8.4	7.2	7.2	10.1	17.9	17.6	28.3	26.6	24.1	24	21.5	12.7	4
AS13□1F-M3-03	5/32"			9.3				18.3	17.9	28.6					5	
AS13□1F-M5-01	1/8"	M5 x 0.8	8	8.4	9.6	9.3	10.8	19.8	17.5	28.7	28.6	25.8	25	22.2	12.7	7
AS13□1F-U10/32-01	1/8"	10-32UNF														
AS13□1F-M5-03	5/32"	M5 x 0.8		9.3				20.3								
AS13□1F-U10/32-03	5/32"	10-32UNF														
AS13□1F-M5-05	3/16"	M5 x 0.8	8	11.4	9.6	9.3	10.8	21.3	23.3	34.5	28.6	25.8	25	22.2	16.5	8
AS13□1F-U10/32-05	3/16"	10-32UNF														
AS13□1F-M5-07	1/4"	M5 x 0.8		12				21.6	20.7	31.9					13.7	
AS13□1F-U10/32-07	1/4"	10-32UNF														
AS23□1F-01-01	1/8"	1/8	12	8.4	14.2	9.3	13.1	24.4	17.5	31.8	36.1	31.1	32.1	27.1	12.7	17
AS23□1F-01-03	5/32"			9.3				24.9								
AS23□1F-01-05	3/16"		(12.7)	11.6				10.9	14	26.8	23.9	31.8			16.5	18
AS23□1F-01-07	1/4"			13.2				12.9	16.2	29.9	25.6	37.2			17	19
AS23□1F-01-09	5/16"			15.2				12.9	16.2	30.9	28.2	41.7			18.5	21
AS23□1F-02-03	5/32"	1/4	17	10.4	18.5	12.9	18.4	34	25.2	42.6	40.4	35.4	34.4	29.4	16	32
AS23□1F-02-05	3/16"			11.6				34.2								
AS23□1F-02-07	1/4"		(17.5)	13.2				12.9	18.3	35.2	28.2	48.4			16.5	33
AS23□1F-02-09	5/16"			15.2				20.2	38.7	31	47			21	40	
AS23□1F-02-11	3/8"			18.5										21	40	
AS33□1F-02-07	1/4"	3/8	19	13.2	23	12.9	20.6	38.7	25.6	50	48.8	43.8	42.8	37.8	17	60
AS33□1F-02-09	5/16"			15.2				39.7								
AS33□1F-02-11	3/8"			18.5				16.2	23	43.7	32.6	56.2			21	69
AS33□1F-03-07	1/4"			13.2				12.9	20.6	38.7	25.6	46.1			17	56
AS33□1F-03-09	5/16"	1/2	24	15.2	28.6	12.9	20.6	39.7	28.2	49.1	46.5	41.5	40.2	35.2	18.5	59
AS33□1F-03-11	3/8"			18.5				43.7								
AS43□1F-04-11	3/8"		(23.8)	18.5				16.2	25.8	49.4	32.6	55.3			21	104
AS43□1F-04-13	1/2"			21.7				19.4	26.8	52	36.3	58			22	106

Note 1) ( ) are the dimensions of NPT thread.  
Note 2) Reference thread dimensions after installation.

AS

ASP

ASN

AQ

ASV

AK

ASS

ASR

ASF