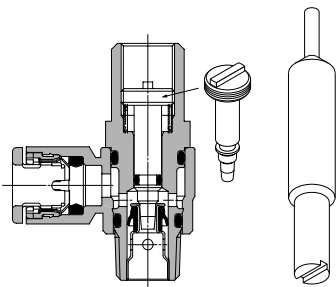


# Tamper Proof Speed Controller with One-touch Fitting

## Series AS□□□1F-T Elbow Type/Universal Type

Able to adjust flow by a special tool  
Prevention of an unnecessary manual operation



Special tool  
Part number: AS-T-1

### 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

Note 1) In the case of AS12□1F-M5 and AS12□1F-U10/32 types  
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) Brass parts are all electroless nickel plated, provided as standard.

### 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-M5	AS13□1F-M5	M5 x 0.8	●	●	●													6, 10, 16, 20
AS22□1F-01	AS23□1F-01	R 1/8	●	●	●	●	●											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
AS12□1F-U10/32	AS13□1F-U10/32	10-32 UNF								●	●	●	●					6, 10, 16, 20
AS22□1F-N01	AS23□1F-N01	NPT 1/8								●	●	●	●	●				20, 25, 32
AS22□1F-N02	AS23□1F-N02	NPT 1/4									●	●	●	●	●			20, 25, 32, 40
AS32□1F-N02	AS33□1F-N02	NPT 1/4										●	●	●				40, 50, 63
AS32□1F-N03	AS33□1F-N03	NPT 3/8											●	●	●			40, 50, 63
AS42□1F-N04	AS43□1F-N04	NPT 1/2													●	●		63, 80, 100

Note 1) \* Elbow type only

Note 2) Meter-out and meter-in types can be visually differentiated by the flow direction symbol on the resin body.

### Elbow type



### Universal type



### How to Order

AS 2 2 1 1 F - 01 - 06 S T

#### Body size

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

#### Type

2	Elbow
3	Universal

#### Control

0	Meter-out
1	Meter-in

With One-touch fitting

#### Port size

M5	M5 x 0.8
01	R 1/8
02	R 1/4
03	R 3/8
04	R 1/2
U10/32	10-32 UNF
N01	NPT 1/8
N02	NPT 1/4
N03	NPT 3/8
N04	NPT 1/2

#### Tamper proof

Speed Controller requires a special tool for flow adjustment. Order separately with part number, AS-T-1.

#### With seal

Note) In case that connecting port is either M5 or 10-32 UNF thread, it is not available with seal. With gasket is provided as standard.

#### Applicable tubing O.D.

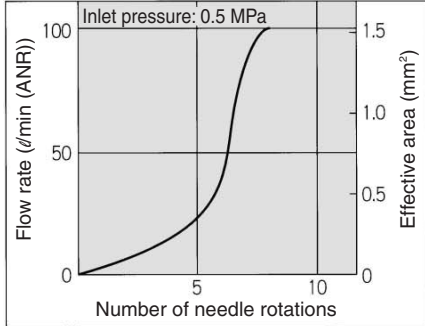
Metric size	Inch size
23	ø3.2"
01	ø1/8"
04	ø4
03	ø5/32"
06	ø6
05	ø3/16"
08	ø8
07	ø1/4"
10	ø10
09	ø5/16"
12	ø12
11	ø3/8"
13	ø1/2"

\* Use ø1/8" tube.

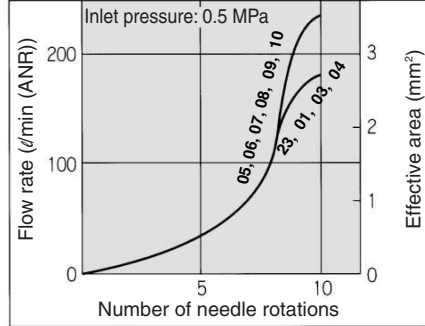
# Tamper Proof Speed Controller With One-touch Fitting, Elbow Type/Universal Type

## Needle Valve/Flow Characteristics

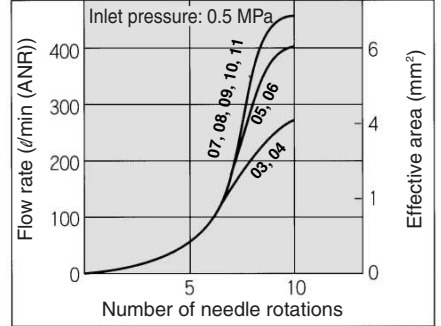
**AS12□1F  
AS13□1F**



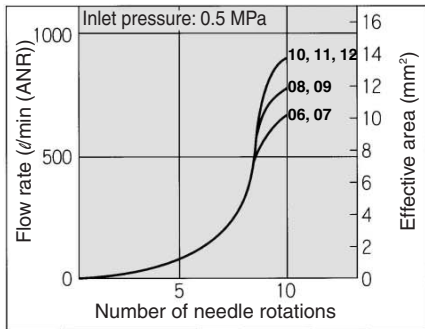
**AS22□1F-□01  
AS23□1F-□01**



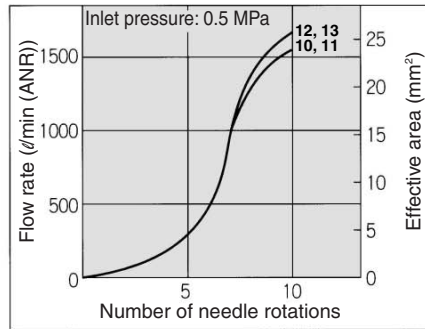
**AS22□1F-□02  
AS23□1F-□02**



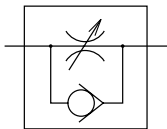
**AS32□1F  
AS33□1F**



**AS42□1F  
AS43□1F**



**JIS Symbol**



**Flow Direction Symbols on Body**

	Meter-out type	Meter-in type
Symbol		
JIS Symbol		

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

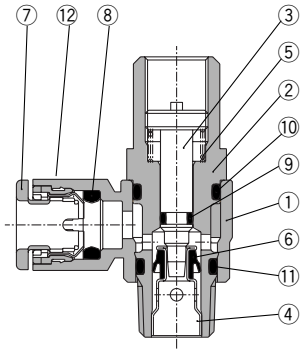
## Flow Rate and Effective Area

Model		AS12□1F AS13□1F	AS22□1F-□01 AS23□1F-□01	AS22□1F-□02 AS23□1F-□02			AS32□1F AS33□1F	AS42□1F AS43□1F				
Tubing O.D.	Metric size	ø3.2, ø4, ø6	ø3.2, ø4 ø6, ø8, ø10	ø4	ø6	ø8, ø10	ø6	ø8	ø10, ø12	ø10	ø12	
	Inch size	ø1/8", ø5/32" ø3/16", ø1/4"	ø1/8" ø5/32" ø3/16", ø1/4" ø5/16"	ø5/32"	ø3/16"	ø1/4", ø5/16" ø3/8"	ø1/4"	ø5/16"	ø3/8"	ø3/8"	ø1/2"	
Controlled flow (Free flow)	Flow rate (l/min (ANR))	100	180	230	260	390	460	660	790	920	1580	1710
	Effective area (mm <sup>2</sup> )	1.5	2.7	3.5	4	6	7	10	12	14	24	26

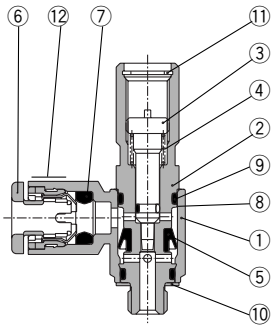
(Note) Flow rate values are at a pressure of 0.5 MPa and a temperature of 20°C.

## Construction

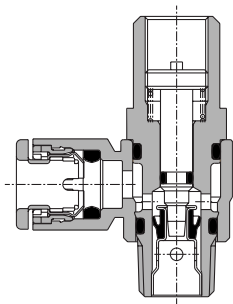
**Elbow type  
Meter-out type**



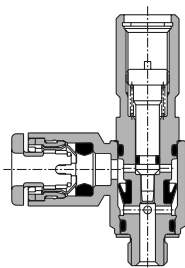
**M5 type  
U10/32 type**



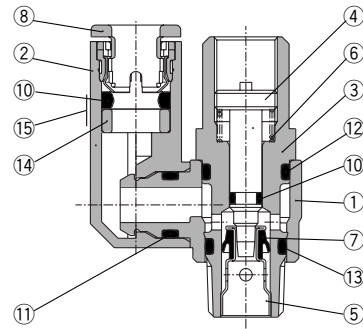
**Meter-in type**



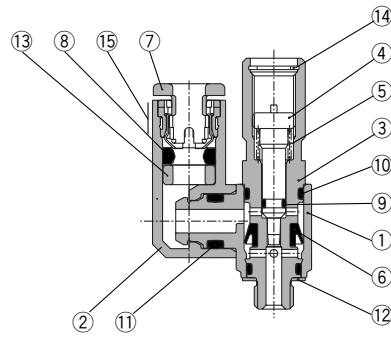
**M5 type  
U10/32 type**



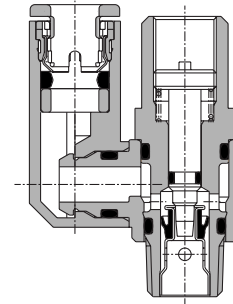
**Universal type  
Meter-out type**



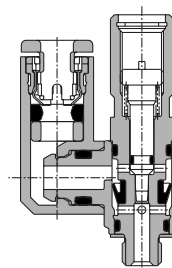
**M5 type  
U10/32 type**



**Meter-in type**



**M5 type  
U10/32 type**



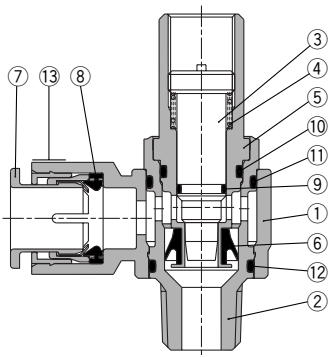
# Tamper Proof Speed Controller

## With One-touch Fitting, Elbow Type/Universal Type

### Construction

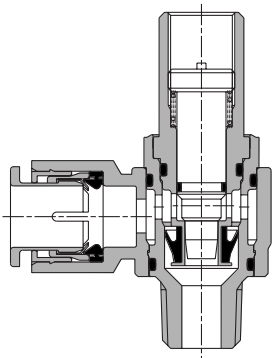
#### Elbow type Meter-out type

**AS3201F-02**



#### Meter-in type

**AS3211F-02**



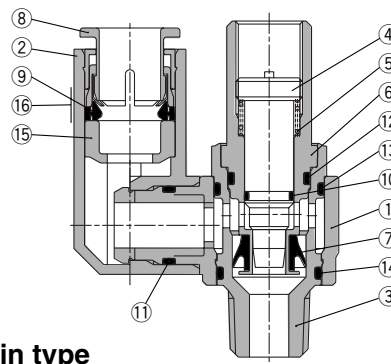
#### Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Body B	Brass	Electroless nickel plated
③	Needle	Brass	Electroless nickel plated
④	Seat ring	Brass	Electroless nickel plated
⑤	Spring	Steel wire	
⑥	U seal	HNBR	
⑦	Cassette	POM, Stainless steel (Note)	
⑧	Seal	NBR	
⑨	O-ring	NBR	
⑩	O-ring	NBR	
⑪	O-ring	NBR	
⑫	O-ring	NBR	
⑬	Gasket	NBR, Stainless steel	
⑭	Retaining ring for hole type C	Tool steel	

Note)  $\phi 10$ ,  $\phi 12$ ,  $\phi 3/8$ ",  $\phi 1/2$ " are made of POM, stainless steel, and brass (Electroless nickel plated).

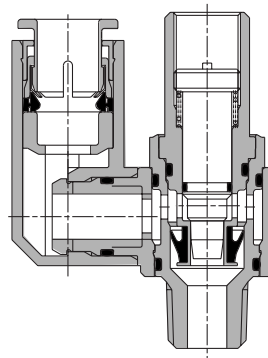
#### Universal type Meter-out type

**AS3301F-02**



#### Meter-in type

**AS3311F-02**



#### Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Elbow body	PBT	
③	Body B	Brass	Electroless nickel plated
④	Needle	Brass	Electroless nickel plated
⑤	Seat ring	Brass	Electroless nickel plated
⑥	Spring	Steel wire	
⑦	U seal	HNBR	
⑧	Cassette	POM, Stainless steel (1)	
⑨	Seal	NBR	
⑩	O-ring	NBR	
⑪	O-ring	NBR	
⑫	O-ring	NBR	
⑬	O-ring	NBR	
⑭	O-ring	NBR	
⑮	Spacer	POM (2)	
⑯	Gasket	NBR, Stainless steel	
⑰	Retaining ring for hole type C	Tool steel	

Note 1)  $\phi 3/16$ ",  $\phi 5/16$ ",  $\phi 3/8$ ",  $\phi 1/2$ " are made of POM, stainless steel, brass (Electroless nickel plated).

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

AS

ASP

ASN

AQ

ASV

AK

ASS

ASR

ASF



# Tamper Proof Speed Controller with One-touch Fittings

## Series AS□□□1F-T

In-line Type



### 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

Note 1) In the case of AS1001F type

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.)

### 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

AS

ASP

ASN

AQ

ASV

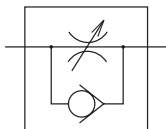
AK

ASS

ASR

ASF

JIS Symbol



### Flow Rate and Effective Area

Model		AS1001F	AS2001F	AS2051F	AS3001F			AS4001F			
Tubing O.D.	Metric size	ø3.2, ø4, ø6	ø4	ø6	ø6	ø8	ø6	ø8	ø10, ø12	ø10	ø12
	Inch size	ø1/8", ø5/32" ø3/16", ø1/4"	ø5/32"	ø3/16" ø1/4"	ø3/16"	ø1/4" ø5/16"	ø1/4"	ø5/16"	ø3/8"	ø3/8"	ø1/2"
Controlled flow (Free flow)	Flow rate (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 200 1F — 06 T

#### 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

#### Tamper proof

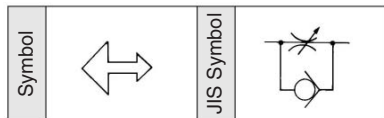
Note) Speed controller requires a special tool for flow adjustment. Order separately with part number, AS-T-1.

#### Applicable tubing O.D.

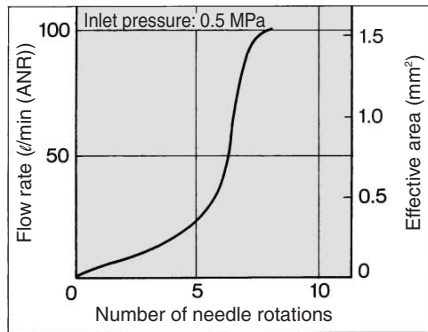
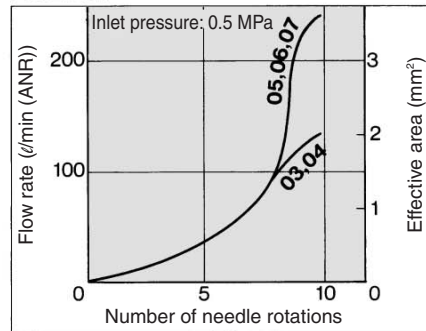
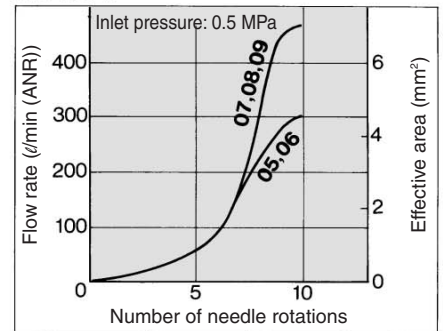
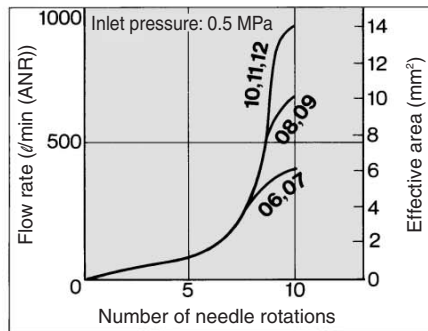
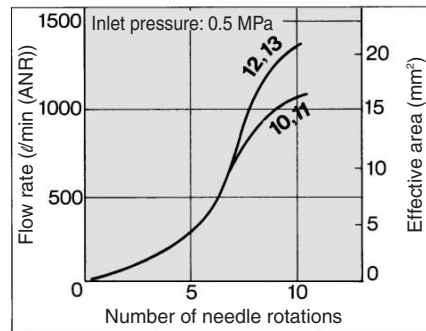
Metric size		Inch size	
23	ø3.2 *	01	ø1/8"
04	ø4	03	ø5/32"
06	ø6	05	ø3/16"
08	ø8	07	ø1/4"
10	ø10	09	ø5/16"
12	ø12	11	ø3/8"
		13	ø1/2"

\* Use ø1/8" tube.

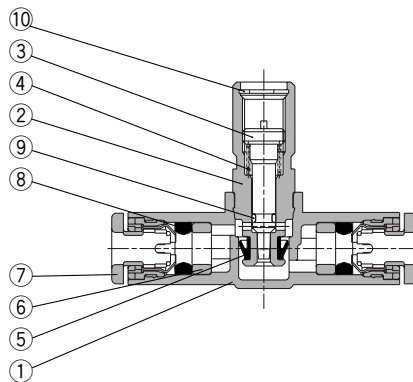
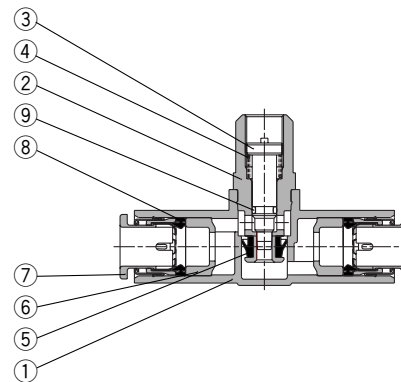
Flow Direction Symbols on Body



## Needle Valve/Flow Characteristics

**AS1001F**

**AS2001F**

**AS2051F**

**AS3001F**

**AS4001F**


## Construction

**AS1001F**

**AS2001F to AS4001F**


### Component Parts

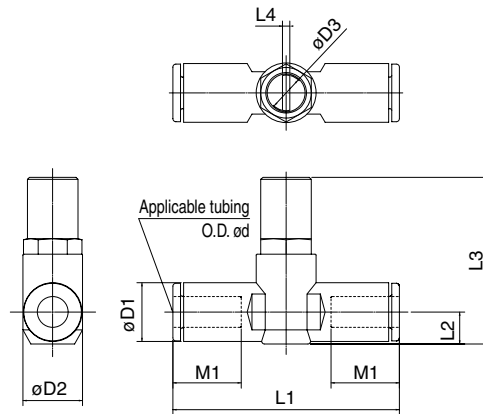
No.	Description	Material	Note
①	Body A	PBT	
②	Body B	Brass	Electroless nickel plated
③	Needle	Brass	Electroless nickel plated
④	Spring	Steel wire	
⑤	U seal	HNBR	
⑥	Spacer	POM <sup>(1)</sup>	
⑦	Cassette	POM, Stainless steel <sup>(2)</sup>	
⑧	Seal	NBR	
⑨	O-ring	NBR	
⑩	Retaining ring for hole type C	Tool steel	

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

Note 2)  $\phi 3/16"$ ,  $\phi 5/16"$ ,  $\phi 3/8"$ ,  $\phi 1/2"$  are made of POM, stainless steel, brass (Electroless nickel plated).

## Tamper Proof Speed Controller With One-touch Fittings, In-line Type

### Dimensions



#### Metric Size

Model	d	D1	D2	D3	L1	L2	L3	L4	M1
AS1001F-23T	3.2	8.4	10	4.5	38	4.5	26	0.7	12.7
AS1001F-04T	4	9.3			39.2	5.2	26.6		13.5
AS1001F-06T	6	11.6	11.8	7	40.7	6.2	27.7	1.5	12.7
AS2001F-04T	4	9.3			44.8	6.3	31.9		13.5
AS2001F-06T	6	11.6	14.8	7	53.2	6.7	35.2	1.5	17
AS2051F-06T	6	12.8			59.8	8.1	36.5		18
AS2051F-08T	8	15.2	19.8	9.5	59	7.4	45	1.5	17
AS3001F-06T	6	12.8			64.4	8.2	45.8		18
AS3001F-08T	8	15.2	26.5	12	71.6	9.8	47.3	1.5	21
AS3001F-10T	10	18.5			76	11	48.5		22
AS3001F-12T	12	20.9	26.5	12	82	11.3	55.4	1.5	21
AS4001F-10T	10	18.5							56.4
AS4001F-12T	12	20.9							22

#### Inch Size

Model	d	D1	D2	D3	L1	L2	L3	L4	M1
AS1001F-01T	1/8"	8.4	10	4.5	38	4.5	26	0.7	12.7
AS1001F-03T	5/32"	9.3			39.2	5.2	26.6		13.5
AS1001F-05T	3/16"	11.4	11.8	7	40.7	6.2	27.7	1.5	12.7
AS1001F-07T	1/4"	12			44.8	6.3	31.9		13.5
AS2001F-03T	5/32"	9.3	14.8	7	53.2	6.7	35.2	1.5	17
AS2001F-05T	3/16"	11.4			59.8	8.1	36.5		18
AS2001F-07T	1/4"	13.2	19.8	9.5	59	7.4	45	1.5	17
AS2051F-05T	3/16"	11.4			64.4	8.2	45.8		18
AS2051F-07T	1/4"	13.2	26.5	12	71.6	9.8	47.3	1.5	21
AS2051F-09T	5/16"	15.2			76	11	48.5		22
AS3001F-07T	1/4"	13.2	26.5	12	82	11.3	55.4	1.5	21
AS3001F-09T	5/16"	15.2							56.4
AS3001F-11T	3/8"	17.9							21
AS4001F-11T	3/8"	17.9	26.5	12	82	11.3	55.4	1.5	21
AS4001F-13T	1/2"	21.7							56.4

AS

ASP

ASN

AQ

ASV

AK

ASS

ASR

ASF



# Tamper Proof Dual Speed Controller with One-touch Fitting

## Series ASD□□□F-T



### 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

Note 1) In the case of ASD230F type

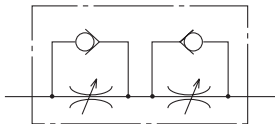
Note 2) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used.  
(Refer to pages 15-6-3 to 15-6-5 for details.)

Note 3) Brass parts are all electroless nickel plated, provided as standard.

### Model

Model	Port size	Applicable tubing O.D.														
		Metric size					Inch size									
		4	6	8	10	12	1/8"	5/32"	3/16"	1/4"	5/16"	3/8"				
ASD230F-M5	M5 x 0.8	●	●													
ASD330F-01	R 1/8		●	●												
ASD430F-02	R 1/4		●	●	●											
ASD530F-02	R 1/4		●	●	●	●										
ASD530F-03	R 3/8		●	●	●	●										
ASD630F-04	R 1/2				●	●										
ASD230F-U10/32	10-32 UNF						●	●	●	●						
ASD330F-N01	NPT 1/8								●	●	●					
ASD430F-N02	NPT 1/4									●	●	●				●
ASD530F-N02	NPT 1/4										●	●	●			●
ASD530F-N03	NPT 3/8											●	●	●		●
ASD630F-N04	NPT 1/2															●

### JIS Symbol



### Flow Direction Symbols on Body

	Meter-out type	Meter-in type
Symbol		
JIS Symbol		

### Flow Rate and Effective Area

Model		ASD230F	ASD330F	ASD430F		ASD530F			ASD630F	
Tubing O.D.	Metric size	ø4, ø6	ø6, ø8	ø6	ø8, ø10	ø6	ø8	ø10, ø12	ø10	ø12
	Inch size	ø1/8" ø5/32" ø3/16" ø1/4"	ø3/16" ø1/4"	—	ø1/4" ø5/16" ø3/8"	ø1/4"	ø5/16"	ø3/8"	—	ø3/8"
Controlled flow (Free flow)	Flow rate (l/min (ANR))	75	175	295	350	500	600	700	1200	1300
	Effective area (mm <sup>2</sup> )	1.1	2.7	4.5	5.3	7.6	9.1	10.7	18.3	19.8

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

# Tamper Proof Dual Speed Controller with One-touch Fitting

## How to Order

**ASD 3 3 0 F — 01 — 06 S T**

**Body size**

2	M5 standard
3	1/8 standard
4	1/4 standard
5	3/8 standard
6	1/2 standard

**Type**

3	Universal
---	-----------

With One-touch fitting

**Tamper proof**

Note) Speed controller requires a special tool for flow adjustment. Order separately with part number, AS-T-1.

**With seal**

Note) In case that connecting port is either M5 or 10-32 UNF thread, it is not available with seal. With gasket is provided as standard.

**Applicable tubing O.D.**

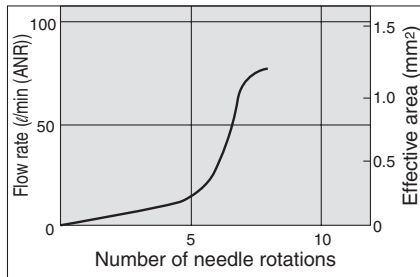
Metric size		Inch size	
04	ø4	01	ø1/8"
06	ø6	03	ø5/32"
08	ø8	05	ø3/16"
10	ø10	07	ø1/4"
12	ø12	09	ø5/16"
		11	ø3/8"

**Port size**

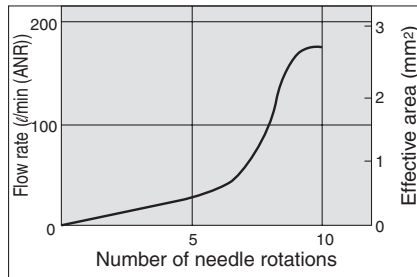
M5	M5 x 0.8
01	R 1/8
02	R 1/4
03	R 3/8
04	R 1/2
U10/32	10-32 UNF
N01	NPT 1/8
N02	NPT 1/4
N03	NPT 3/8
N04	NPT 1/2

## Needle Valve/Flow Characteristics

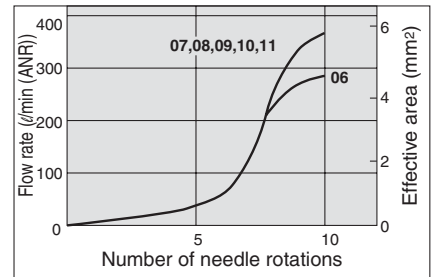
**ASD230F**



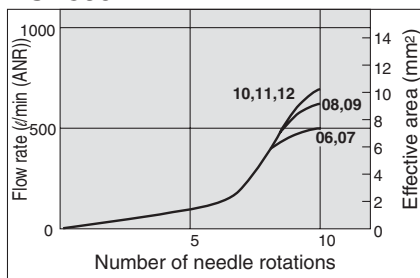
**ASD330F**



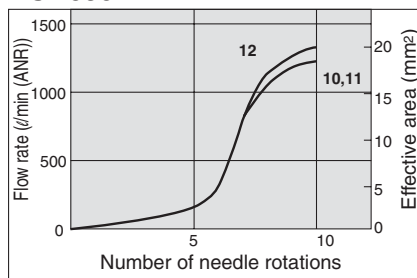
**ASD430F**



**ASD530F**



**ASD630F**



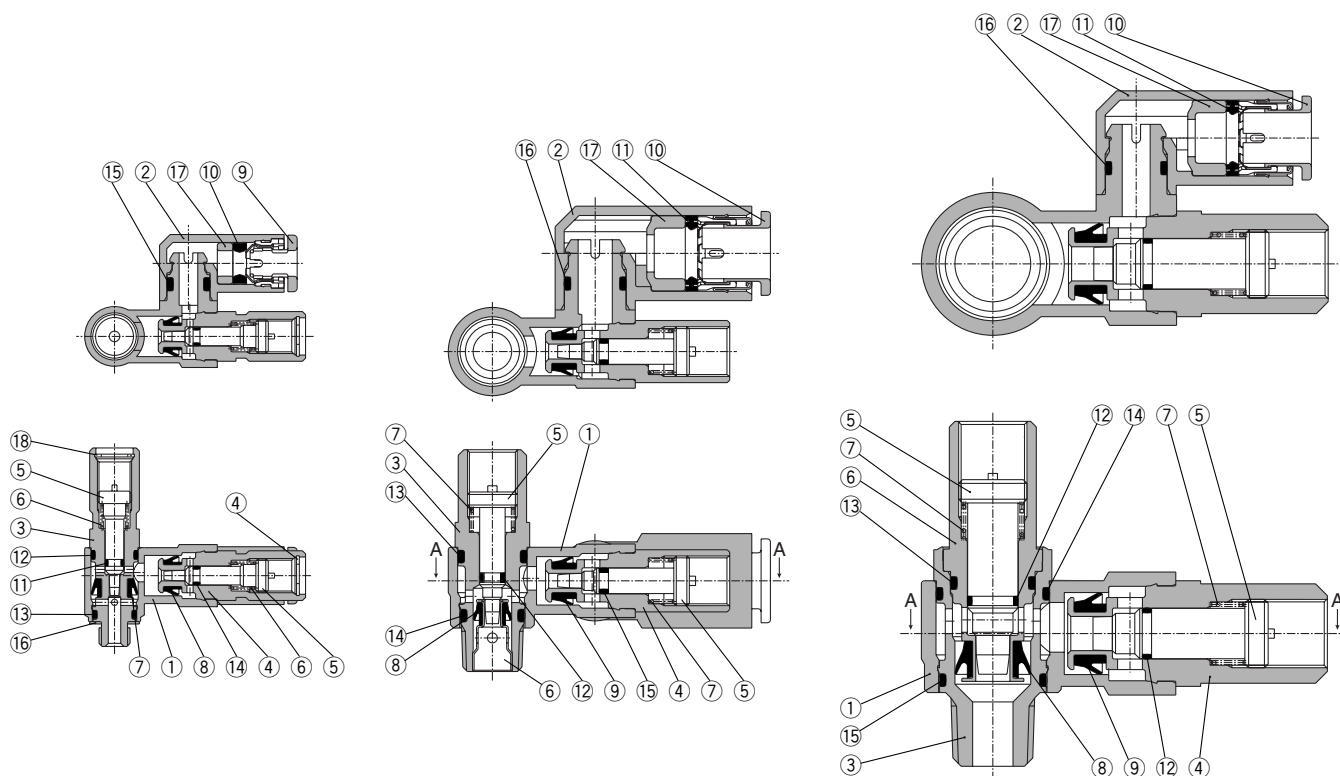
- AS
- ASP
- ASN
- AQ
- ASV
- AK
- ASS
- ASR
- ASF

## Construction

### ASD230F

### ASD330F/430F ASD530F/630F

### ASD530F-02



## Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Elbow body	PBT	
③	Body B	Brass	Electroless nickel plated
④	Body B	Brass	Electroless nickel plated
⑤	Needle	Brass	Electroless nickel plated
⑥	Seat ring	Brass	Electroless nickel plated
⑦	Spring	Steel wire	
⑧	U seal	HNBR	
⑨	U seal	HNBR	
⑩	Cassette	POM, Stainless steel <sup>(1)</sup>	
⑪	Seal	NBR	
⑫	O-ring	NBR	

No.	Description	Material	Note
⑬	O-ring	NBR	
⑭	O-ring	NBR	
⑮	O-ring	NBR	
⑯	O-ring	NBR	
⑰	Spacer	POM <sup>(2)</sup>	
⑱	Gasket	NBR, Stainless steel	
⑲	Retaining ring for hole type C	Tool steel	

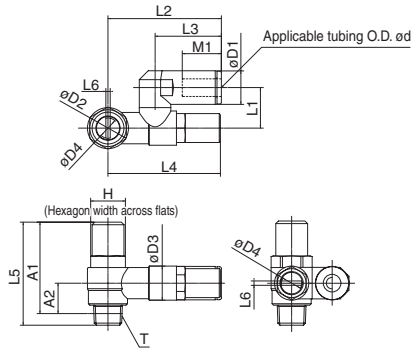
Note 1)  $\phi 3/16''$ ,  $\phi 5/16''$ ,  $\phi 3/8''$ ,  $\phi 1/2''$  are made of POM, stainless steel, brass (Electroless nickel plated).

Note 2)  $\phi 3/16''$ ,  $\phi 3/8''$ ,  $\phi 1/2''$  are made of brass (Electroless nickel plated).

# Tamper Proof Dual Speed Controller with One-touch Fitting

## Dimensions

### Metric size

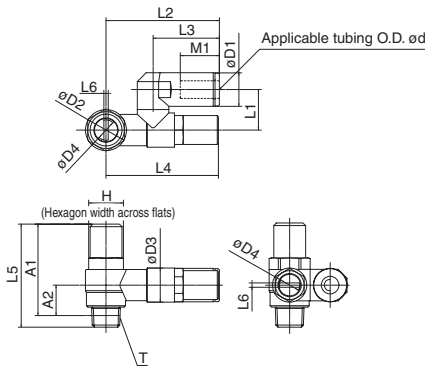


### Metric Size

Model	d	T	H	D1	D2	D3	D4	L1	L2	L3	L4	L5	L6	A1*	A2*	M1
ASD230F-M5-04T	4	M5 x 0.8	8	9.3	9.6	10	4.5	11.7	29.4	17.5	30.7	31	0.7	27.4	7.8	12.9
ASD230F-M5-06T	6			32.5					20.6	13.7						
ASD330F-01-06ST	6	R 1/8	12	11.6	14.2	11.8	7	14	38.5	22.9	38.9	35.6	1.5	31.6	10.6	13.7
ASD330F-01-08ST	8			15.2					38.2	18.5						
ASD430F-02-06ST	6	R 1/4	17	12.8	18.5	15	7	18	43.5	25.2	41.7	40.7	1.5	34.7	11	17
ASD430F-02-08ST	8			15.2					28.2	18.5						
ASD430F-02-10ST	10			18.5					31	21						
ASD530F-02-06ST	6			12.8					48.3	25.2						53.7
ASD530F-02-08ST	8	15.2	28.2	18.5												
ASD530F-02-10ST	10	18.5	32.6	21												
ASD530F-02-12ST	12	20.9	34.4	22												
ASD530F-03-06ST	6	R 3/8	19	12.8	23	19.8	9.5	20.3	48.3	25.2	53.7	53.7	1.5	47.4	14	17
ASD530F-03-08ST	8			15.2					28.2	18.5						
ASD530F-03-10ST	10			18.5					32.6	21						
ASD530F-03-12ST	12			20.9					34.4	22						
ASD630F-04-10ST	10	R 1/2	24	18.5	28.6	26.5	12	25.9	64.3	32.6	69.1	63.8	1.5	55.8	18.6	21
ASD630F-04-12ST	12			20.9					34.4	22						

\* Reference dimensions of M5 x 0.8, R threads after installation.

### Inch size



### Inch Size

Model	d	T	H	D1	D2	D3	D4	L1	L2	L3	L4	L5	L6	A1*	A2*	M1
ASD230F-U10/32-01T	1/8"	10-32 UNF	8	8.4	9.6	10	4.5	11.7	29.4	17.5	30.7	31	0.7	27.4	7.8	12.9
ASD230F-U10/32-03T	5/32"			35.2					23.3	16.5						
ASD230F-U10/32-05T	3/16"			11.4					20.7	13.5						
ASD230F-U10/32-07T	1/4"	NPT 1/8	12.7	12	14.2	11.8	7	14	38.5	23.9	38.9	35.6	1.5	31.6	10.6	16.5
ASD330F-N01-05ST	3/16"			11.6					25.6	17						
ASD330F-N01-07ST	1/4"			13.2					28.2	18.5						
ASD330F-N01-09ST	5/16"	NPT 1/4	17.5	15.2	18.5	15	7	18	43.9	25.6	41.7	40.7	1.5	34.7	11	17
ASD430F-N02-07ST	1/4"			13.2					28.2	18.5						
ASD430F-N02-09ST	5/16"			15.2					31	21						
ASD430F-N02-11ST	3/8"			18.5					49.3	25.2						53.7
ASD530F-N02-07ST	1/4"	13.2	28.2	18.5												
ASD530F-N02-09ST	5/16"	15.2	32.6	21												
ASD530F-N02-11ST	3/8"	18.5	34.4	22												
ASD530F-N03-07ST	1/4"	NPT 3/8	19	13.2	23	19.8	9.5	20.3	48.7	25.6	53.7	53.7	1.5	47.4	14	17
ASD530F-N03-09ST	5/16"			15.2					28.2	18.5						
ASD530F-N03-11ST	3/8"			18.5					32.6	21						
ASD630F-N04-11ST	3/8"	NPT 1/2	23.8	18.5	28.6	26.5	12	25.9	64.3	32.6	69.1	63.8	1.5	55.8	18.6	21

\* Reference dimensions of 10-32 UNF and NPT threads after installation.

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

# Tamper Proof Speed Controller Standard Type

## Series AS□2□0-T

Elbow Type (Metal Body)



### Model/ Specifications

Specifications	Model	AS12□0-M5	AS12□0-U10/32	AS22□0-□01	AS22□0-□02	AS32□0-□02	AS32□0-□03	AS42□0-□04
Port size		M5 x 0.8	10-32 UNF	1/8	1/4	1/4	3/8	1/2
Applicable cylinder bore size (mm)		6, 10, 16, 20, 25		20, 25, 32, 40		32, 40, 50, 63		80, 100
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		8 turns		10 turns				
Controlled flow (Free flow)	Flow rate (l/min (ANR))	105		230	460		920	1700
	Effective area (mm <sup>2</sup> )	1.6		3.5	7		14	26

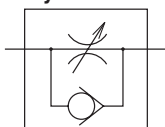
Note 1) Flow rate values are measured at 0.5 MPa and 20°C.

Note 2) Meter-out and meter-in types can be visually differentiated by the flow direction symbol on the resin body.

Note 3) Brass parts are all electroless nickel plated, provided as standard.

### How to Order

JIS Symbol



AS 2 2 0 0 - 01 - S T

#### Body size

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

#### Type

2	Elbow
---	-------

#### Control

0	Meter-out
1	Meter-in

#### Tamper proof

Note) Speed controller requires a special tool for flow adjustment. Order separately with part number, AS-T-1.

#### With seal

Note) When connecting port is either M5 or 10-32 UNF thread, it is not available with seal. With gasket is provided as standard.

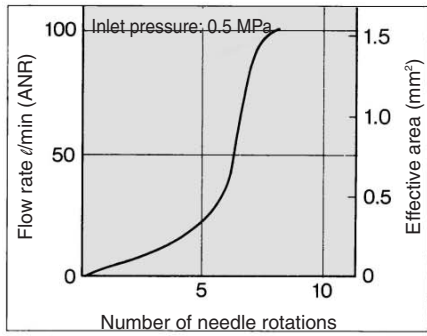
#### Port size

Symbol	Cylinder side	In the side of solenoid valve
M5	M5 x 0.8	M5 x 0.8
01	R 1/8	Rc 1/8
02	R 1/4	Rc 1/4
03	R 3/8	Rc 3/8
04	R 1/2	Rc 1/2
F01	R 1/8	G 1/8
F02	R 1/4	G 1/4
F03	R 3/8	G 3/8
F04	R 1/2	G 1/2
U10/32	10-32 UNF	10-32 UNF
N01	NPT 1/8	NPT 1/8
N02	NPT 1/4	NPT 1/4
N03	NPT 3/8	NPT 3/8
N04	NPT 1/2	NPT 1/2

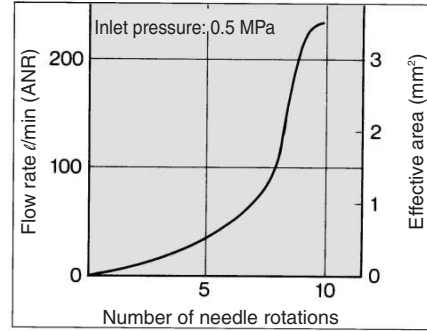
# Tamper Proof Speed Controller Standard Type, Elbow Type (Metal Body)

## Needle Valve/Flow Characteristics

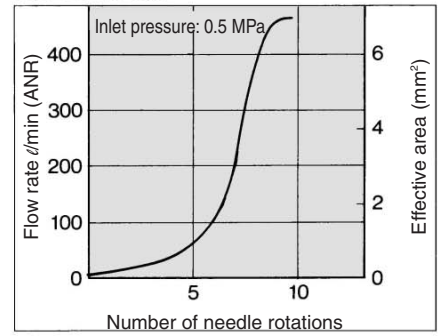
**AS12□0-M5·AS12□0-U10/32**



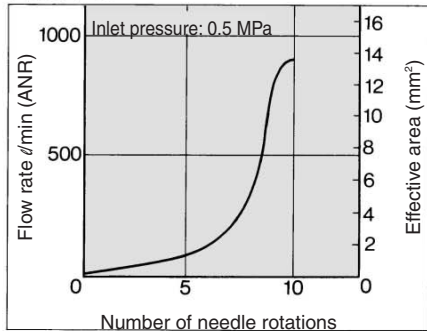
**AS22□0-01**



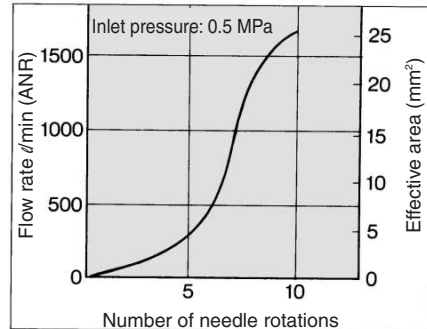
**AS22□0-02**



**AS32□0**

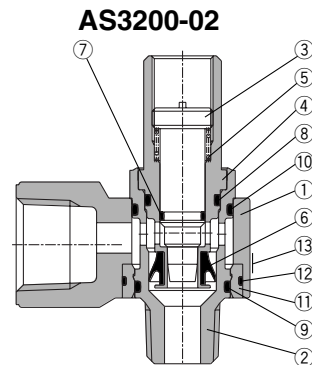
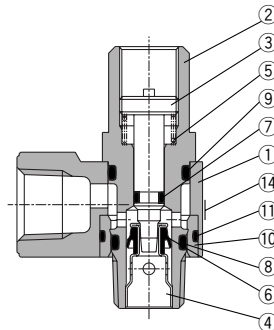
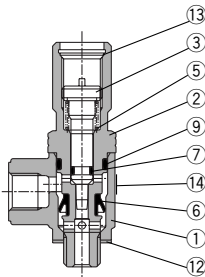


**AS42□0**

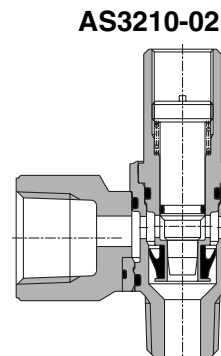
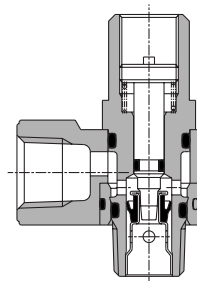
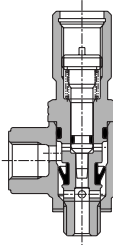


## Construction

**Meter-out type  
M5 type  
U10/32 port**



**Meter-in type  
M5 type  
U10/32 port**



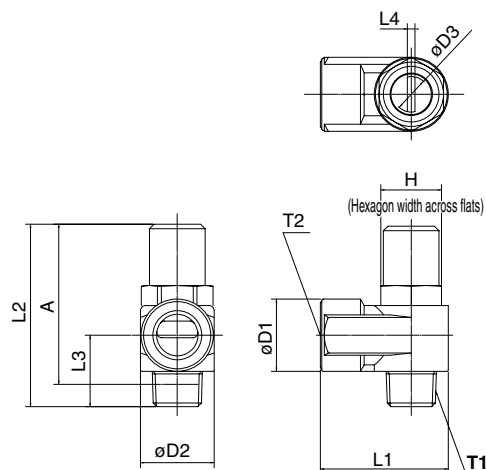
## Component Parts

No.	Description	Material	Note
①	Body A	Zinc alloy	
②	Body B	Brass	Electroless nickel plated
③	Needle	Brass	Electroless nickel plated
④	Seat ring	Brass	Electroless nickel plated
⑤	Spring	Steel wire	
⑥	U seal	HNBR	
⑦	O-ring	NBR	

No.	Description	Material	Note
⑧	O-ring	NBR	
⑨	O-ring	NBR	
⑩	Bushing	PBT	
⑪	O-ring	NBR	
⑫	Gasket	NBR, Stainless steel	
⑬	Retaining ring for hole type C	Tool steel	

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

## Dimensions



## Dimensions

Model	T1	T2	H	D1	D2	D3	L1	L2	L3	L4	A*
AS12□0-M5-T	M5 x 0.8	M5 x 0.8	8	9	9	4.5	10	31	10.3	0.7	27.4
AS12□0-U10/32-T	10-32 UNF	10-32 UNF									
AS22□0-01-ST	R 1/8	Rc 1/8	12	14.3	14.6	7	18	35.6	14.1	1.5	31.6
AS22□0-F01-ST		G 1/8									
AS22□0-N01-ST	NPT 1/8	NPT 1/8	12.7	18	19.5	7	27.2	40.7	18	1.5	36.7
AS22□0-02-ST	R 1/4	Rc 1/4									
AS22□0-F02-ST		G 1/4	17	18	19.5	7	27.2	40.7	18	1.5	36.7
AS22□0-N02-ST	NPT 1/4	NPT 1/4									
AS32□0-02-ST	R 1/4	Rc 1/4	19	22.5	24.3	9.5	30	55.3	22.4	1.5	49.3
AS32□0-F02-ST		G 1/4									
AS32□0-N02-ST	NPT 1/4	NPT 1/4	19	22.5	24.3	9.5	30	53.7	20.8	1.5	47.4
AS32□0-03-ST	R 3/8	Rc 3/8									
AS32□0-F03-ST		G 3/8	19	22.5	24.3	9.5	30	53.7	20.8	1.5	47.4
AS32□0-N03-ST	NPT 3/8	NPT 3/8									
AS42□0-04-ST	R 1/2	Rc 1/2	24	27.5	28.5	12	38.5	63.8	26.7	1.5	55.8
AS42□0-F04-ST		G 1/2									
AS42□0-N04-ST	NPT 1/2	NPT 1/2	23.8	27.5	28.5	12	38.5	63.8	26.7	1.5	55.8

\* Reference thread dimensions after installation.