

# Speed Controller: Standard Type

# Series AS

## Elbow Type (Metal Body)

### Minimizes installation time and cost

Fittings and tubing are not necessary because this type screws directly into the actuator. Thus, piping labor and cost can be eliminated.

### Body swivels 360°

Swivel type allows free setting of piping.

### Speed may be accurately controlled even at low speeds.

### Able to control and set a constant speed easily.

### Retainer prevents accidental loss of needle.



### Model/Specifications

Specifications	Model	AS1200-M3	AS1400-M3	AS12□0-M5	AS12□0-U10/32	AS22□0-01	AS22□0-02	AS32□0-03	AS42□0-04
Port size		M3 x 0.5	M5 x 0.8	10-32UNF	1/8	1/4	3/8	1/2	
Applicable cylinder bore size (mm)		2.5, 4, 6	6, 10, 15, 20, 25	20, 25, 32, 40	32, 40, 50, 63	80, 100			
Proof pressure		1.05 MPa	1.5 MPa						
Max. operating pressure		0.7 MPa	1 MPa						
Min. operating pressure		0.1 MPa	0.1 MPa						
Ambient and fluid temperature		-5 to 60°C (No freezing)							
Number of needle rotation		10 turns	8 turns	10 turns					
Option		—		Hexagonal lock nut	With seal, Hexagonal lock nut, Nickel plated				
Weight (g)		3	6	10	29	64	106	181	
Controlled flow (Free flow)	Flow rate ℓ/min (ANR)	20		105	230	460	920	1700	
	Effective area (mm <sup>2</sup> )	0.3		1.6	3.5	7	14	26	

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

Note 2) Meter-in type not available on AS1200-M3, AS1400-M3.

Note 3) Distinction between meter-out/meter-in types by appearance.

Those are distinguished by the lock nut. The meter-out type is electroless nickel plated, while the meter-in type is black zinc chromate plated.

Note 4) AS1200, AS1400, AS22□0 are electroless nickel plated as standard. (N specifications)

### How to Order

AS 2 2 0 0 — 01 — S

**Body size**

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

**Type**

2	Direct cylinder elbow type
4	Direct cylinder flat elbow type

**Control type**

0	Meter-out
1	Meter-in

**Thread type**

Symbol	Cylinder side	Tube side
Nil	R	Rc
	Metric thread (M3, M5)	
Unified thread (10-32UNF)		
N	NPT	
F	G*	

**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".

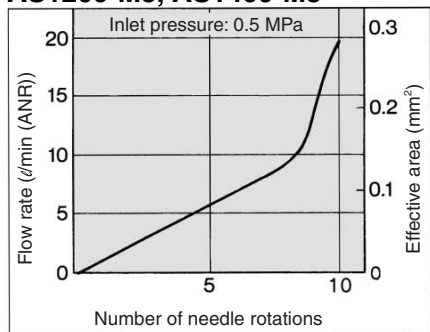
**Bore size**

Symbol	Bore size	Applicable series
M3	M3 x 0.5	AS1200-M3 AS1400-M3
M5	M5 x 0.8	AS12□0-M5
U10/32	10-32UNF	AS12□0-U10/32
01	1/8	AS22□0-01
02	1/4	AS22□0-02
03	3/8	AS32□0-03
04	1/2	AS42□0-04

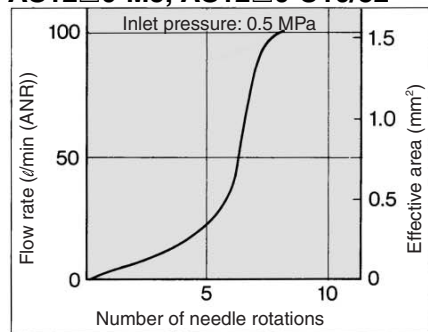
\* Male thread comes with R thread.

**Needle Valve/Flow Characteristics**

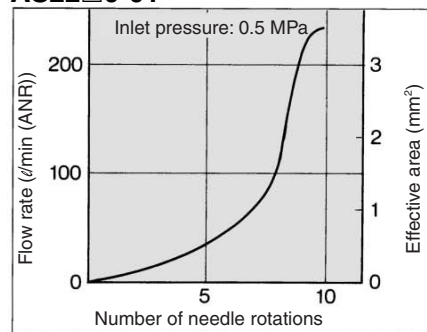
**AS1200-M3, AS1400-M3**



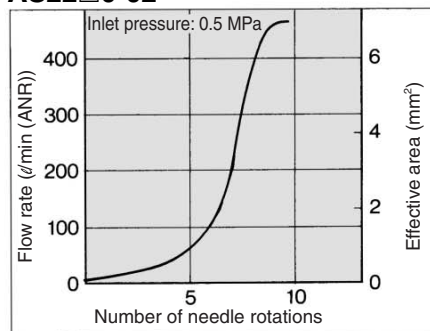
**AS12□0-M5, AS12□0-U10/32**



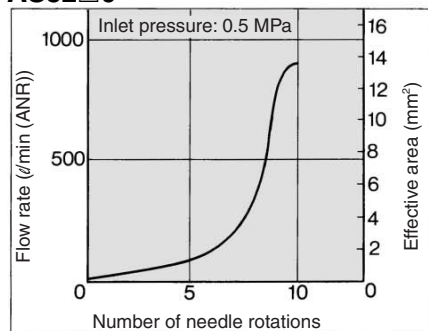
**AS22□0-01**



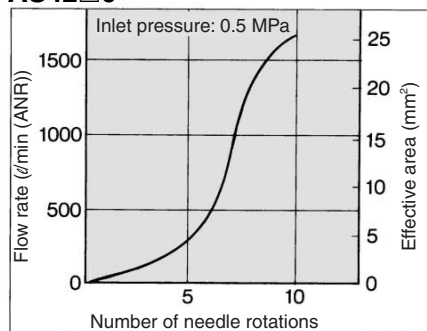
**AS22□0-02**



**AS32□0**



**AS42□0**



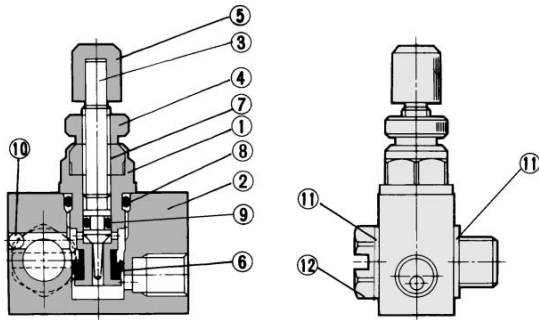
**⚠ Caution**

**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: AS1400-M3



### Component Parts

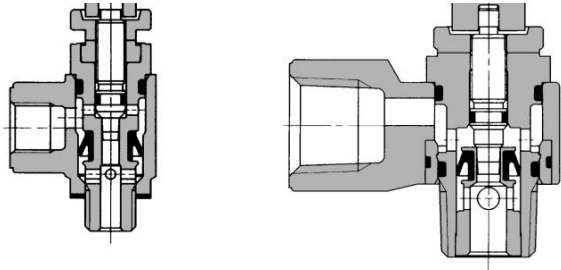
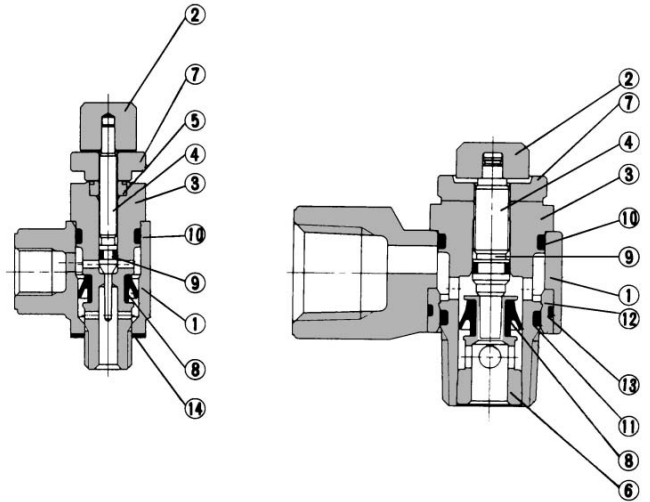
No.	Description	Material	Note
①	Body B	Brass	Electroless nickel plated
②	Body A	Brass	Electroless nickel plated
③	Needle	Brass	Electroless nickel plated
④	Lock nut	Brass	Electroless nickel plated
⑤	Handle	Brass	Electroless nickel plated
⑥	U seal	HNBR	
⑦	Needle guide	Brass	Electroless nickel plated
⑧	O-ring	NBR	
⑨	O-ring	NBR	
⑩	Steel ball	Chromium bearing steel	
⑪	Gasket	PVC	
⑫	Joint	Brass	Electroless nickel plated

## Construction: AS1200-M3, AS12□0-M5, AS22□0/32□0/42□0

### Meter-out type

AS1200-M3, M5, U10/32

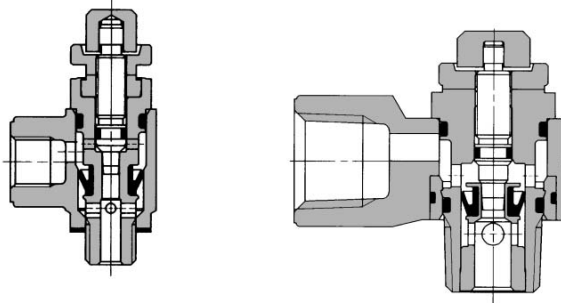
AS2200, 3200, 4200



### Meter-in type

AS1210-M5, U10/32

AS2210, 3210, 4210



### Component Parts

No.	Description	Material	Note
①	Body A	Zinc alloy	
②	Handle	Brass	Electroless nickel plated
③	Body B	Brass	Electroless nickel plated
④	Needle	Brass	Electroless nickel plated
⑤	Needle guide	Brass	Electroless nickel plated
⑥	Seat ring	Brass	(1)
⑦	Lock nut	Brass(2)	Electroless nickel plated(3)
⑧	U seal	NBR	
⑨	O-ring	NBR	
⑩	O-ring	NBR	
⑪	O-ring	NBR	
⑫	Bushing	PBT	01 to 04 type
⑬	O-ring	NBR	01 to 04 type
⑭	Gasket	PVC	M3 type
		NBR, Stainless steel	M5, U10/32 type

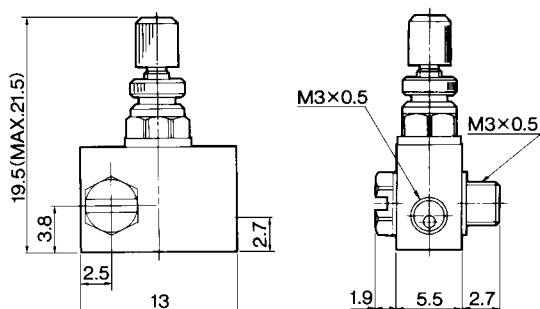
Note 1) AS22□0 type is electroless nickel plated.

Note 2) AS22□0 type is made of steel.

Note 3) Meter-in type is black zinc chromate plated.

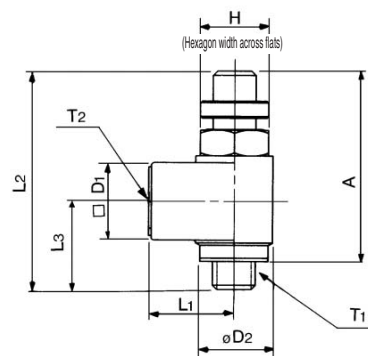
# Speed Controller: Standard Type Elbow Type (Metal Body) **Series AS**

## Dimensions: AS1400-M3

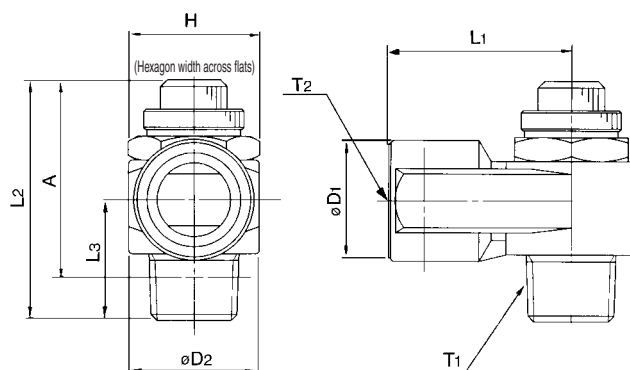


## Dimensions: AS-1200-M3, AS12□0-M5, AS22□0, 32□0, 42□0

AS1200-M3  
AS12□0-M5  
AS12□0-U10/32



## AS22□0, 32□0, 42□0



AS

ASP

ASN

AQ

ASV

AK

ASS

ASR

ASF

### Dimensions

Model	T1	T2	H <sup>(1)</sup>	L1	L2		L3	D1	D2	A <sup>(2)</sup>	
					Max.	Min.				Max.	Min.
AS1200-M3	M3 x 0.5	M3 x 0.5	4.5	6.6	23.5	21.5	8	5	5	20.5	18.5
AS1200-M5	M5 x 0.8	M5 x 0.8	8	10	28.3	25.5	10.3	9	9	25	22.2
AS1200-U10/32	10-32 UNF	10-32 UNF									
AS22□0-01	1/8	1/8	12 (12.7)	18	36.4	31.4	14.1	14.3	14.6	32.4	27.4
AS22□0-02	1/4	1/4	17 (17.5)	27.2	40.8	35.8	18	18	19.5	34.8	29.8
AS32□0-03	3/8	3/8	19	30	46.9	41.9	20.8	22.5	24.3	40.6	35.6
AS42□0-04	1/2	1/2	24 (23.8)	38.5	55.6	50.6	26.7	27.5	28.5	47.4	42.4

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

Note 2) Reference thread dimensions after installation.