

Speed Controller: Standard Type In-line Type

AS Series

RoHS

Compact size saves space.

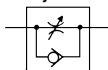
Speed may be accurately controlled even at low speeds.

Constant speed easily set.

Retainer prevents an accidental loss of needle.



Symbol



⚠ Caution

Be sure to read this before handling the products.
Refer to page 11 for safety instructions and pages 19 to 22 for flow control equipment precautions.

Model/Flow Rate and Effective Area

Model	Port size	Free flow			Controlled flow			Weight (g)
		Flow rate (L/min (ANR))	Sonic conductance (dm ³ /(s·bar))	Critical pressure ratio	Flow rate (L/min (ANR))	Sonic conductance (dm ³ /(s·bar))	Critical pressure ratio	
AS1000-M3	M3 x 0.5	20	0.06	0.15	20	0.06	0.2	4.7
AS1000-M5	M5 x 0.8	90	0.25		80	0.22		33
AS2000-01	1/8	340	0.94	0.35	250	0.7	0.2	90
AS2000-02	1/4	340	0.94		250	0.7		115
AS3000-02	1/4	810	2.3		810	2.3		130
AS3000-03	3/8	810	2.3		810	2.3		124
AS4000-02	1/4	1,670	4.6		1,670	4.6		221
AS4000-03	3/8	1,670	4.6		1,670	4.6		214
AS4000-04	1/2	1,670	4.6		1,670	4.6		205
AS5000-02	1/4	2,840	7.9		2,840	7.9		242
AS5000-03	3/8	4,270	11.9		4,270	11.9		233
AS5000-04	1/2	4,270	11.9		4,270	11.9		224

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

Specifications

Fluid	Air
Proof pressure (Note)	1.5 MPa (1.05 MPa)
Max. operating pressure (Note)	1 MPa (0.7 MPa)
Min. operating pressure (Note)	0.05 MPa (0.1 MPa)
Ambient and fluid temperature	-5 to 60°C (No freezing)

Note) (): Values for AS1000.

Accessory

Description	Part no.	Applicable model
Nipple	M-5N	AS1000-M5

Note) AS1000 with nipple: AS1000-M5-N

How to Order

AS 1 000 - [] M5 - [] - []

Body size

1	M3, M5 standard
2	1/8, 1/4 standard
3	3/8 standard
4	1/2 standard
5	1/2 standard

Thread type

Nil	Metric thread (M3, M5)
	Rc
N	NPT
F	G

Bore size

Bore size	Applicable series
M3	M3 x 0.5 AS1000
M5	M5 x 0.8 AS1000
01	1/8 AS2000
02	1/4 AS2000, 3000, 4000, 5000
03	3/8 AS3000, 4000, 5000
04	1/2 AS4000, 5000

Lock nut option

Nil	Hexagon lock nut
J (3)	Round lock nut

Note 3) Only for AS1000

Option

Nil	Standard (-5 to 60°C)
H (1)	High temperature (-5 to 80°C)
L (2)	Low temperature (-30 to 60°C)
N (3)	With nipple

Note 1) AS5000 is available as special.

AS1000 is not applicable.

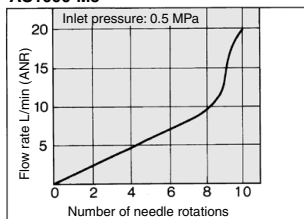
Note 2) AS1000, AS2000 are not applicable.

Note 3) Only for AS1000-M5

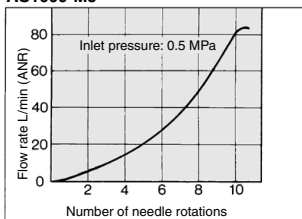
Needle Valve/Flow Rate Characteristics

Note) The flow rate characteristics are representative values.

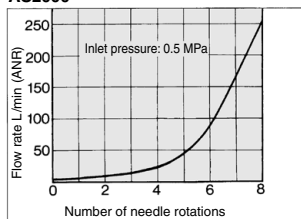
AS1000-M3



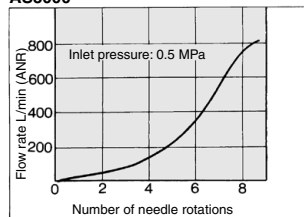
AS1000-M5



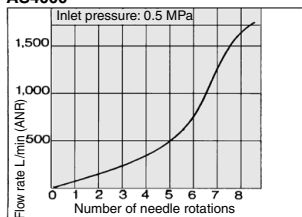
AS2000



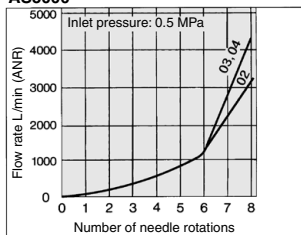
AS3000



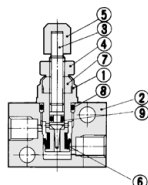
AS4000



AS5000



Construction: AS1000-M3

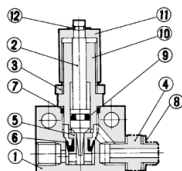


Component Parts

No.	Description	Material	Note
1	Body B	Brass	Electroless nickel plated
2	Body	Brass	Electroless nickel plated
3	Needle	Brass	Electroless nickel plated
4	Lock nut	Steel ^(Note)	Zinc chromated
5	Handle	Brass	Electroless nickel plated
6	U seal	HNBR	
7	Needle guide	Brass	Electroless nickel plated
8	O-ring	NBR	4.5 x 3 x 0.75
9	O-ring	NBR	2.2 x 0.8 x 0.7

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

Construction: AS1000-M5



Component Parts

No.	Description	Material	Note
1	Body	Zinc alloy	
2	Needle	Stainless steel	
3	Lock nut	Steel ^(Note)	
4	Nipple	Stainless steel	

No.	Description	Material	Note
9	O-ring	NBR	
10	Needle guide	Brass	Electroless nickel plated
11	Handle	Brass	Electroless nickel plated
12	E type snap ring	Steel	

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

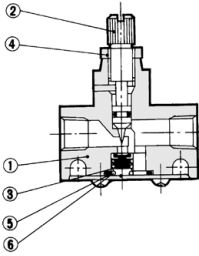
Replacement Parts

No.	Description	Material	Part no.	Note
5	Valve seat	Brass	1429138	
6	U seal	HNBR	142964-3	
7	O-ring	NBR	KA00327	ø9 x ø7 x ø1
8	Gasket	NBR/Stainless steel	M-5G2	

Note) Construction drawing: AS1000-M5-N
In case of AS1000-M5, nipples and gaskets are not attached.

AS Series

Construction: AS2000/3000



Component Parts

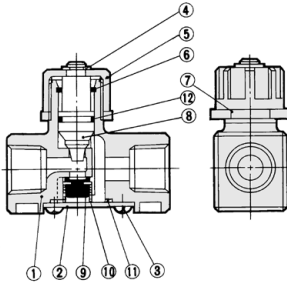
No.	Description	Parts no.	
		AS2000	AS3000
1	Body	Zinc alloy	Aluminum alloy
2	Needle *	Brass	Brass
4	Lock nut *	Brass	Carbon steel

* Electroless nickel plated

Replacement Parts

No.	Description	Material	Parts no.	
			AS2000	AS3000
3	Valve	NBR, Brass	143022	14283
5	O-ring	NBR	143021	14284
6	Spring	Stainless steel	143023	14282

Construction: AS4000



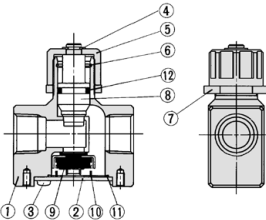
Component Parts

No.	Description	Material
1	Body	Aluminum alloy
2	Cap	Rolled steel
3	Cross-recessed head cap screw	Steel wire
4	E type snap ring	Stainless steel
5	Handle	Zinc alloy
6	Ring	Steel wire
7	Lock nut	Zinc alloy
8	Needle	Aluminum alloy
12	O-ring	NBR

Replacement Parts

No.	Description	Material	Parts no.
9	Valve	NBR, Brass	143145
10	Spring	Stainless steel	143146
11	O-ring	NBR	143147

Construction: AS5000



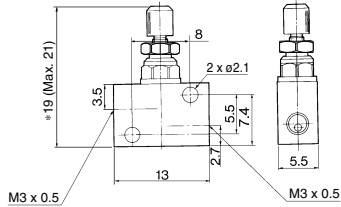
Component Parts

No.	Description	Material
1	Body	Aluminum alloy
2	Cap	Rolled steel
3	Cross-recessed head cap screw	Steel wire
4	E type snap ring	Stainless steel
5	Handle	Zinc alloy
6	Ring	Stainless steel
7	Lock nut	Zinc alloy
8	Needle	Aluminum alloy
12	O-ring	NBR

Replacement Parts

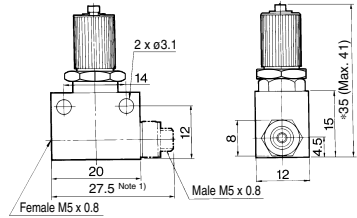
No.	Description	Material	Parts no.
9	Valve	NBR, Stainless steel	14143
10	Spring	Stainless steel	14144
11	Seal	NBR	14147

Dimensions: AS1000-M3



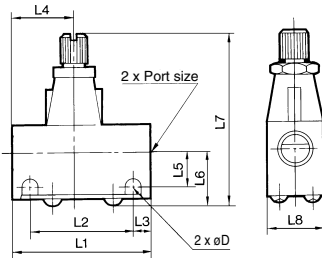
* Reference dimensions

Dimensions: AS1000-M5



* Reference dimensions
Note 1) Dimension for AS1000-M5-N

Dimensions: AS2000/3000

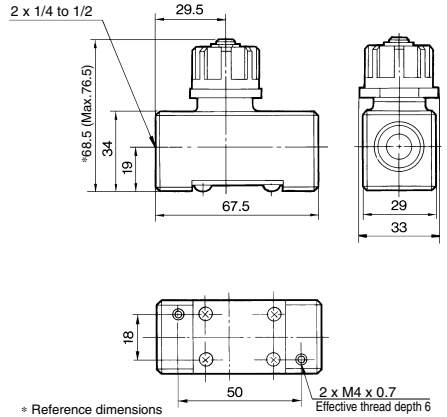


Dimensions

Model	Bore size	L1	L2	L3	L4	L5	L6	L7 (1)		L8	D
								Max.	Min.		
AS2000-01	1/8	40	30	5	17	10	15.5	54.5	50	16	4.5
AS2000-02	1/4	40	30	5	23	11.5	17	56	51.5	20	4.5
AS3000-02, 03	1/4, 3/8	56	45.5	5.25	25	13.2	20.6	68	61	26	5.5

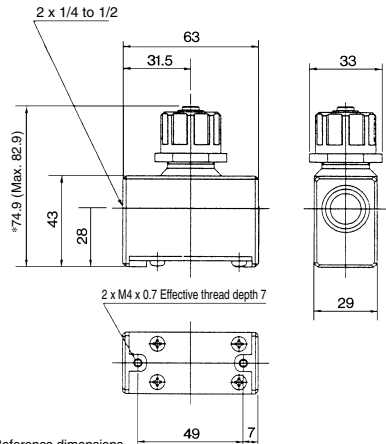
Note 1) L7: Reference dimensions

Dimensions: AS4000



* Reference dimensions

Dimensions: AS5000



* Reference dimensions