

Speed Controller: Standard Type In-line Type

Series AS

RoHS

Compact size saves space.

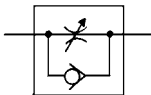
Speed may be accurately controlled even at low speeds.

Constant speed easily set.

Retainer prevents an accidental loss of needle.



JIS Symbol



Caution

Be sure to read before handling.
Refer to front matters 58 and 59 for
Safety Instructions and pages 412 to 414
for Flow Control Equipment Precautions.

Model/Flow Rate and Effective Area

Model	Port size	Free flow		Controlled flow		Applicable cylinder bore size (mm)	Mass (g)
		Flow rate (l/min (ANR))	Effective area (mm ²)	Flow rate (l/min (ANR))	Effective area (mm ²)		
AS1000-M3	M3 x 0.5	20	0.3	20	0.3	2.5, 4, 6	4.7
AS1000-M5	M5 x 0.8	90	1.4	80	1.2	6, 10, 16, 20, 25	33
AS2000-01	1/8	340	5.2	250	3.8	20, 25, 32, 40	90
AS2000-02	1/4	340	5.2	250	3.8		115
AS3000-02	1/4	810	12.3	810	12.3	32, 40, 50, 63	130
AS3000-03	3/8	810	12.3	810	12.3		124
AS4000-02	1/4	1,670	25.5	1,670	25.5	40, 50, 63 80, 100	221
AS4000-03	3/8	1,670	25.5	1,670	25.5		214
AS4000-04	1/2	1,670	25.5	1,670	25.5		205
AS5000-02	1/4	2,840	44	2,840	44	40, 50, 63 80, 100	242
AS5000-03	3/8	4,270	66	4,270	66		233
AS5000-04	1/2	4,270	66	4,270	66		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)
Number of needle rotations (Note)	8 turns (10 turns (Note))

Note) (): Values for AS1000.

Accessory

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

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)
N	Rc
F	NPT

Lock nut option

Nil	Hexagon lock nut
J ⁽³⁾	Round lock nut

Note 3) Only for AS1000

Option

H ⁽¹⁾	High temperature (-5 to 80°C)
L ⁽²⁾	Low temperature (-30 to 60°C)

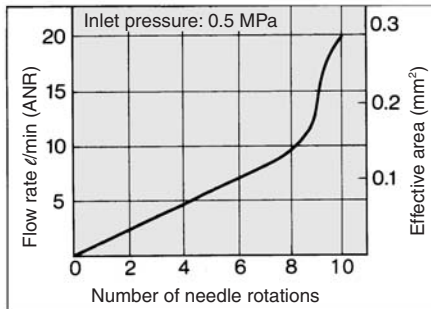
Note 1) AS5000 is available as special.
AS1000 is not applicable.
Note 2) AS1000, AS2000 are not applicable.

Bore size

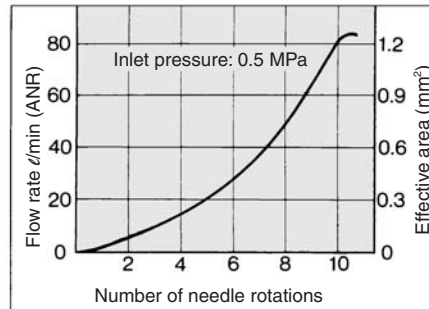
Bore size	Applicable series
M3	M3 x 0.5 AS1000
M5	M5 x 0.8 AS1000
01	Rc 1/8 AS2000
02	Rc 1/4 AS2000, 3000, 4000, 5000
03	Rc 3/8 AS3000, 4000, 5000
04	Rc 1/2 AS4000, 5000

Needle Valve/Flow Characteristics

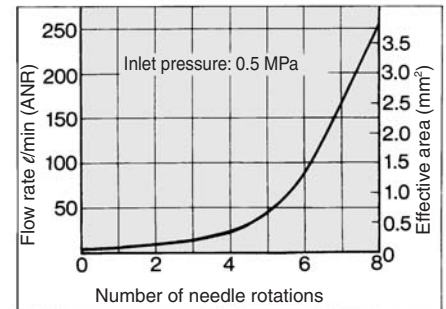
AS1000-M3



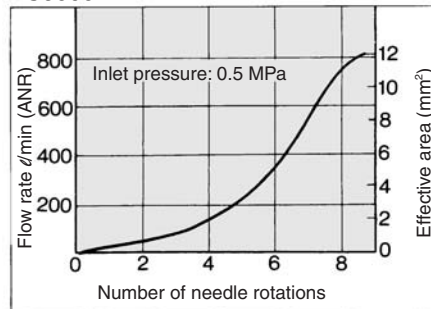
AS1000-M5



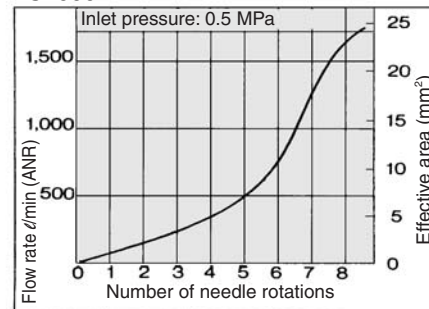
AS2000



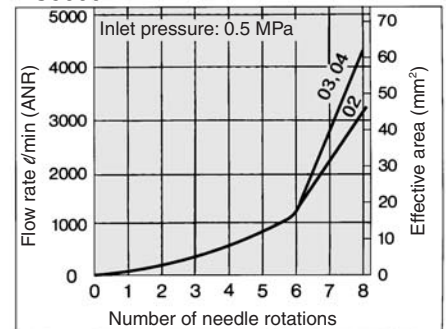
AS3000



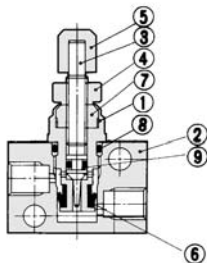
AS4000



AS5000



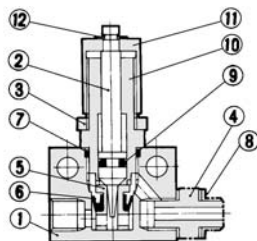
Construction: AS1000-M3



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	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

Construction: AS1000-M5



Component Parts

No.	Description	Material
1	Body	Zinc alloy
2	Needle	Stainless steel
3	Lock nut *	Steel
4	Nipple	Stainless steel

* Zinc chromated

Replacement Parts

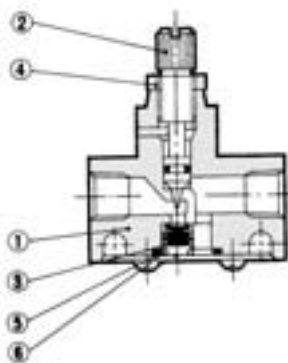
No.	Description	Material	Part no.
5	Valve seat	Brass	1429138
6	U seal	HNBR	142964-3
7	O-ring	NBR	ø9 x ø7 x ø1
8	Gasket	PVC	M-5G1

Note) Construction drawing: AS-1000-M5-N
In case of AS1000-M5, nipples and gaskets are not attached.

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	Black oxidized coated

Series AS

Construction: AS2000/3000



Component Parts

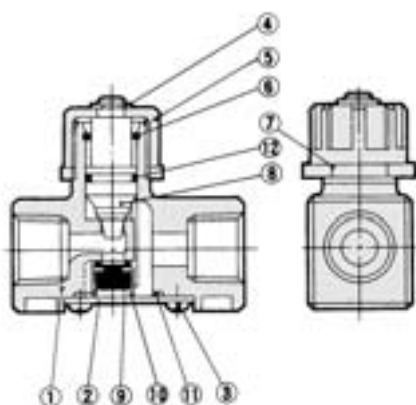
No.	Description	Model	
		AS2000	AS3000
1	Body	Zinc alloy	Aluminum alloy
2	Needle *	Brass	Brass
4	Lock nut *	Brass	Carbon steel

* Electroless nickel plated

Replacement Parts

No.	Description	Model	
		AS2000	AS3000
3	Valve	143022	14283
5	O-ring	143021	14284
6	Spring	143023	14282

Construction: AS4000



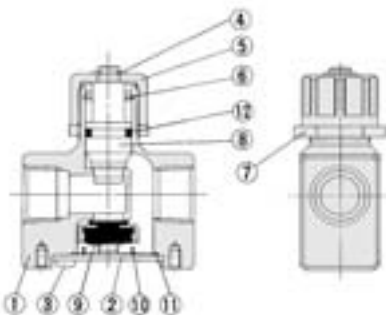
Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Chromated
2	Cap	Rolled steel	Zinc chromated
3	Cross-recessed head cap screw	Steel wire	4 x 0.7 x 8
4	E type snap ring	Stainless steel	JIS B 2805 Nominal 6
5	Handle	Zinc alloy	Black zinc chromate plated
6	Ring	Steel wire	Zinc chromated
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



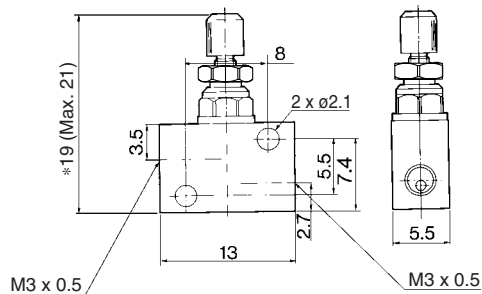
Component Parts

No.	Description	Material	Note
1	Body	Aluminum alloy	Chromated
2	Cap	Rolled steel	Nickel plated
3	Cross-recessed head cap screw	Steel wire	M4 x 0.7 x 8 Nickel plated
4	E type snap ring	Stainless steel	JIS B 2805 Nominal 6
5	Handle	Zinc alloy	Chromated
6	Ring	Stainless steel	
7	Lock nut	Zinc alloy	Chromated
8	Needle	Aluminum alloy	Chromated
12	O-ring	NBR	

Replacement Parts

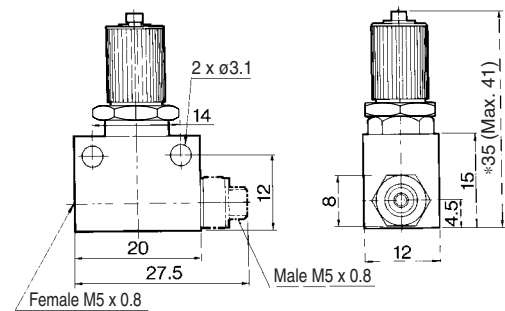
No.	Description	Material	Parts no.
9	Valve	NBR, Stainless steel	14143
10	Spring	Stainless steel	14144
11	Seal	NBR	14147

Dimensions: AS1000-M3



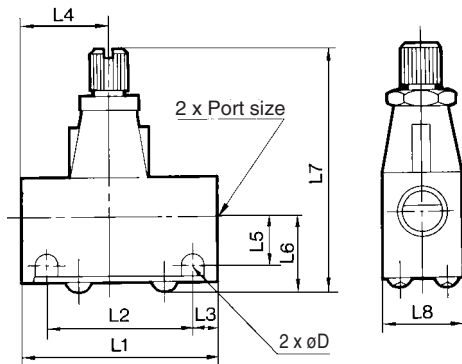
* Reference dimensions

Dimensions: AS1000-M5



* Reference dimensions

Dimensions: AS2000/3000

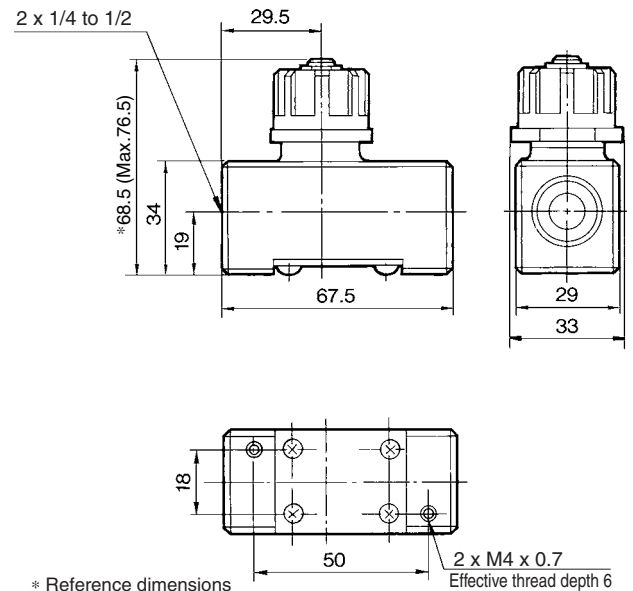


Dimensions

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

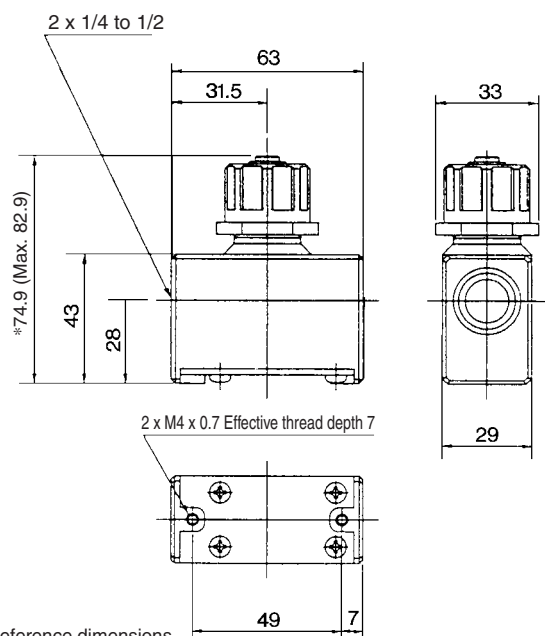
Note 1) L7: Reference dimensions

Dimensions: AS4000



* Reference dimensions

Dimensions: AS5000



* Reference dimensions

AS

ASP

ASN

AQ

ASV

AK

VCHC

ASS

ASR
ASQ

KE

TMH