

Speed Controller: Standard Type

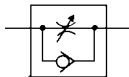
Series AS

In-line Type

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



Model/Flow Rate and Effective Area

Model	Port size	Free flow		Controlled flow		Applicable cylinder bore size (mm)	Weight (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 <small>note)</small>	1.5 MPa (1.05 MPa)
Max. operating pressure <small>note)</small>	1 MPa (0.7 MPa)
Min. operating pressure <small>note)</small>	0.05 MPa (0.1 MPa)
Ambient and fluid temperature	-5 to 60°C (No freezing)
Number of needle rotations <small>note)</small>	8 turns (10 turns)

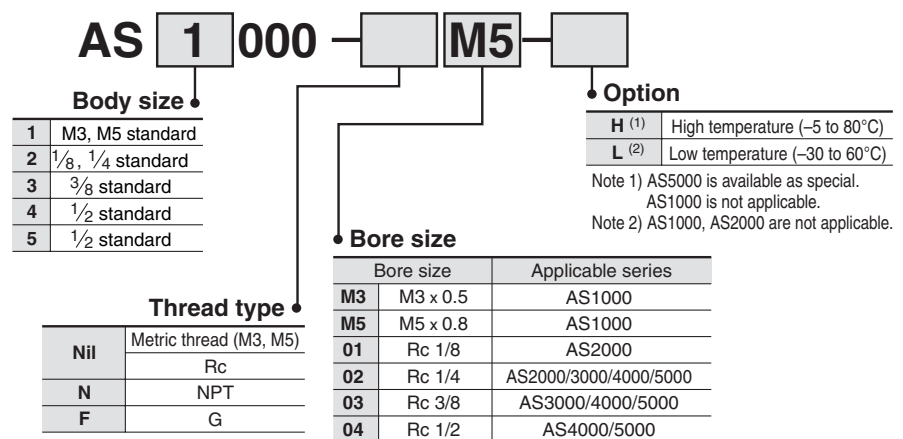
Note) (): Values for AS1000.

Accessory

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

Note) AS1000 with nipple: AS1000-M5-N

How to Order

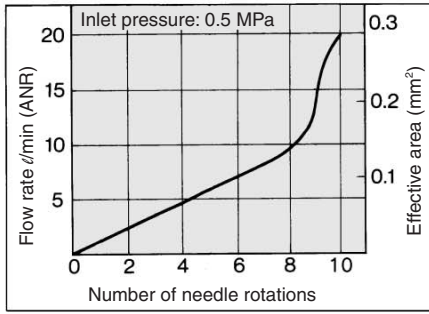


⚠ Caution

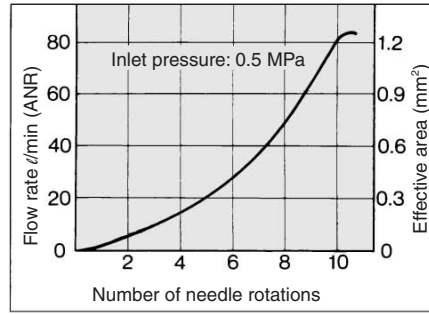
Be sure to read before handling. Refer to pages 15-18-3 to 15-18-4 for Safety Instructions and Common Precautions on the products mentioned in this catalog, and refer to pages 15-8-6 to 15-8-8 for Precautions on every series.

Needle Valve/Flow Characteristics

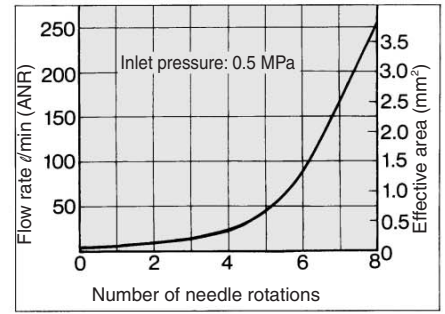
AS1000-M3



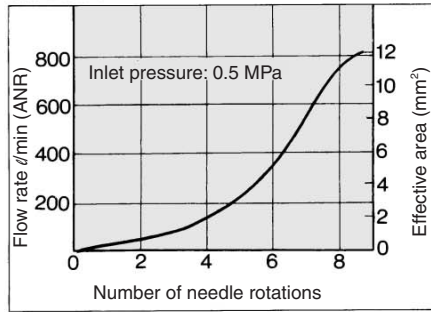
AS1000-M5



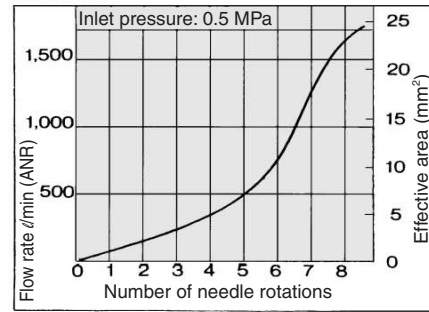
AS2000



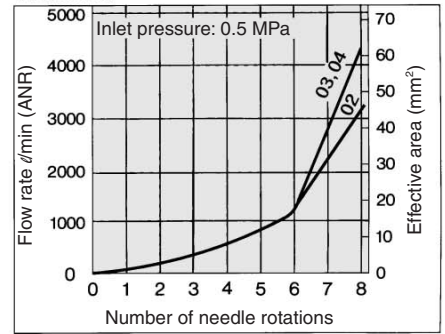
AS3000



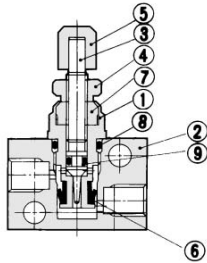
AS4000



AS5000



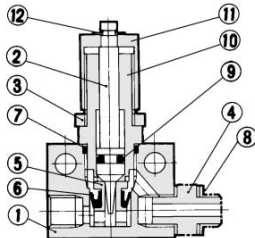
Construction: AS1000-M3



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	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	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 *	Brass
④	Nipple	Stainless steel

* Electroless nickel plated

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

Replacement Parts

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

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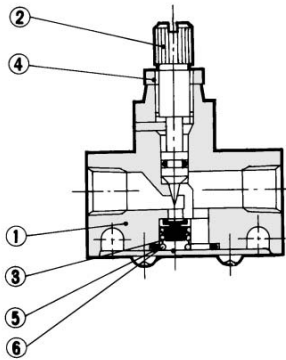
ASS

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ASF

Series AS

Construction: AS2000/3000



Component Parts

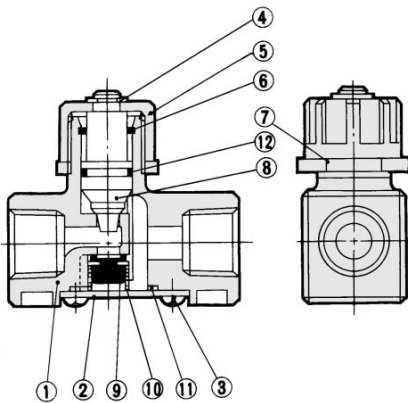
No.	Description	Model	
		AS2000	AS3000
①	Body	Zinc alloy	Aluminum alloy
②	Needle *	Brass	Brass
④	Lock nut *	Brass	Carbon steel

Replacement Parts

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

* Electroless nickel plated

Construction: AS4000



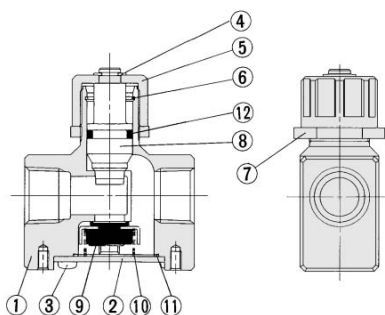
Component Parts

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	143112

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

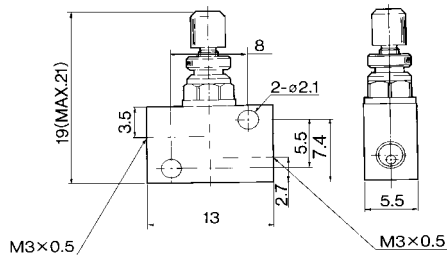
No.	Description	Material	Note
①	Body	Aluminum alloy	Chromated
②	Cap	Rolled steel	Nickel plated
③	Cross-recessed head cap screw	Steel wire	M4 x 0.7 x 8 Nickel plated
④	E type snap ring	Stainless steel	JIS B 2805 Nominal 6
⑤	Handle	Zinc alloy	Chromated
⑥	Ring	Stainless steel	
⑦	Lock nut	Zinc alloy	Chromated
⑧	Needle	Aluminum alloy	Chromated
⑫	O-ring	NBR	JIS B 2401 P12

Replacement Parts

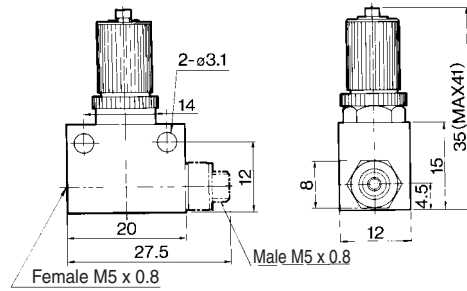
No.	Description	Material	Parts no.
⑨	Valve	NBR, Stainless steel	14143
⑩	Spring	Stainless steel	14144
⑪	Seal	NBR	14147

Speed Controller: Standard Type In-line Type **Series AS**

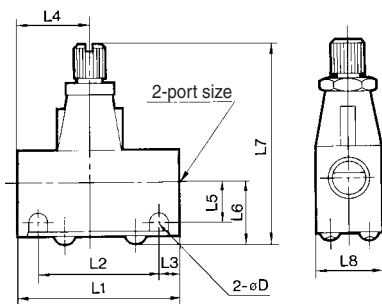
Dimensions: AS1000-M3



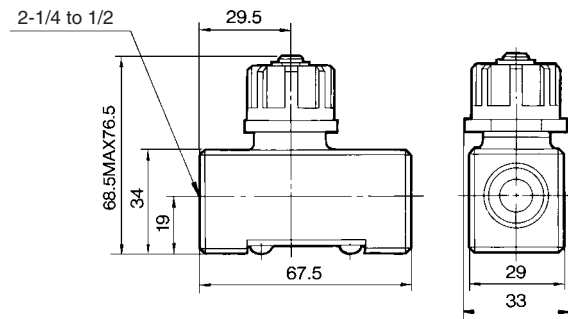
Dimensions: AS1000-M5



Dimensions: AS2000/3000

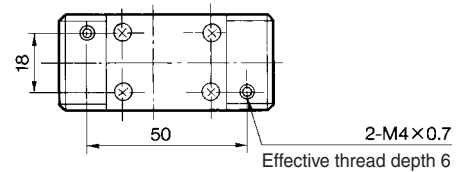


Dimensions: AS4000

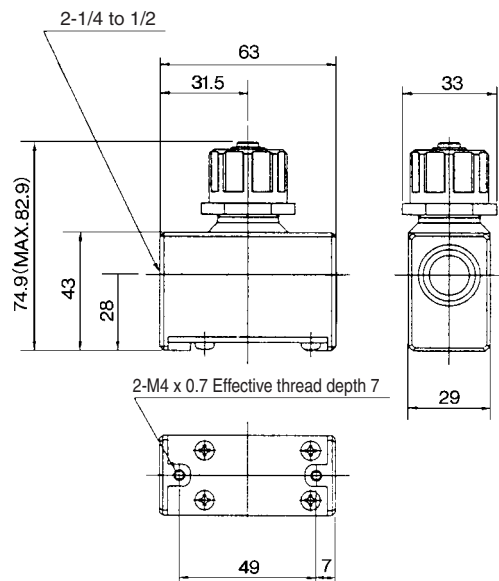


Dimensions

Model	Bore size	L1	L2	L3	L4	L5	L6	L7		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



Dimensions: AS5000



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Speed Controller: Standard Type

Series AS

In-line Push Locking Type

Lock speed setting, with the touch of a button

It can be locked only by pushing the handle after adjustment.

Convenient opening indication scale

The opening indication scale for the needle valve is provided on the handle to facilitate speed adjustments.

Easy speed control at low flow volume ranges

Possible to control the mass velocity

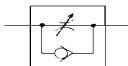
Constant handle constructed of metal to withstand heavy usage

In addition to the standard handle made of resin, a heavy-duty metal handle is also available.

Retainer prevents an accidental loss of needle



JIS Symbol

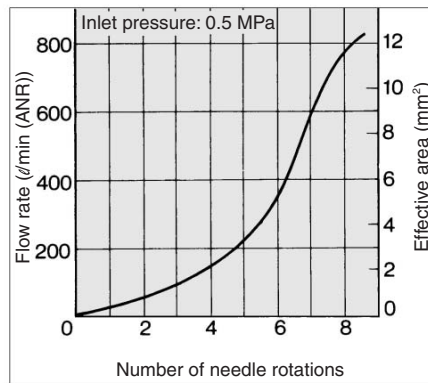


Model/Specifications

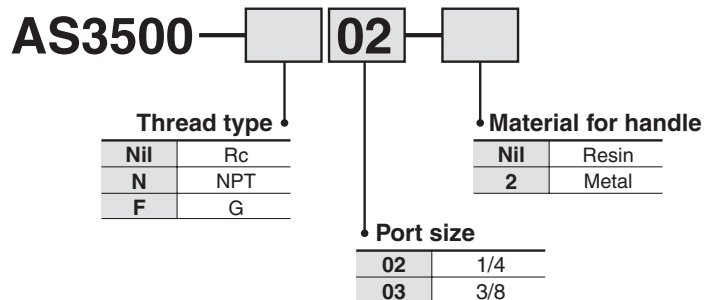
Model		Resin handle	AS3500-02	AS3500-03
		Metal handle	AS3500-02-2	AS3500-03-2
Specifications				
Port size			1/4	3/8
Applicable cylinder bore size (mm)			40, 50, 63	
Proof pressure			1.5 MPa	
Max. operating pressure			1 MPa	
Min. operating pressure			0.05 MPa	
Ambient and fluid temperature			-5 to 60°C (No freezing)	
Number of needle rotation			8 turns	
Weight			130 g (Metallic handle: 140 g)	
Free flow	Flow rate (l/min (ANR))		810	
	Effective area (mm ²)		12.3	
Controlled flow	Flow rate (l/min (ANR))		810	
	Effective area (mm ²)		12.3	

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

Needle Valve/Flow Characteristics AS3500



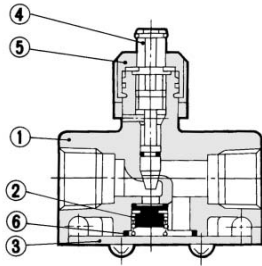
How to Order



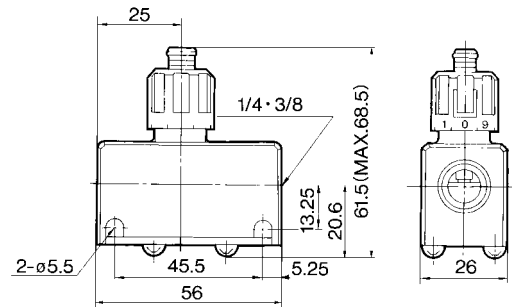
⚠ Caution

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Construction



Dimensions



Component Parts

No.	Description	Material	Note
①	Body	Aluminum alloy	Chromate plated
②	Valve	NBR	
③	Cap	Rolled steel	Electroless nickel plated
④	Needle	Brass	
⑤	Handle	POM	Black
		Zinc alloy	Black

Replacement Parts

No.	Description	Material	Part no.
⑥	O-ring	NBR	14284

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Speed Controller: Standard Type

Series AS

Large Flow In-line Type

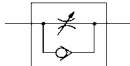
Able to control and set a constant speed easily.

Speed may be accurately controlled even at low speed.

Retainer prevents accidental loss of needle.



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.

Model

Model	Port size	Free flow		Controlled flow		Applicable cylinder bore size (mm)	Weight (g)
		Flow rate (ℓ/min (ANR))	Effective area (mm ²)	Flow rate (ℓ/min (ANR))	Effective area (mm ²)		
AS420-02	1/4	2,500	38	3,600	55	63, 80, 100, 125	0.34
AS420-03	3/8	5,000	77	4,800	74		0.33
AS420-04	1/2	6,600	100	6,700	102		0.32
AS500-06	3/4	10,100	154	8,100	123	140, 160, 180, 200	0.36
AS600-10	1	15,100	230	16,900	258	160, 180, 200, 250	0.7
AS800-12	1 1/4	35,400	540	38,500	586	300	1.4
AS900-14	1 1/2	52,000	792	47,500	724		3.3
AS900-20	2	57,800	880	60,800	926		3.3

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

Specifications

Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure	1 MPa
Min. operating pressure	0.05 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Number of needle rotations	10 turns (12 turns Note)

Note) (): Values for AS800, AS900.

How to Order

AS 42 0 - [] 02 - []

Body size

42	1/2 standard
50	3/4 standard
60	1 standard
80	1 1/4 standard
90	1 1/2 standard

Thread type

Nil	Rc
N	NPT
F	G

Bore size

Bore size	Applicable series
02	1/4
03	3/8
04	1/2
06	3/4
10	1
12	1 1/4
14	1 1/2
20	2

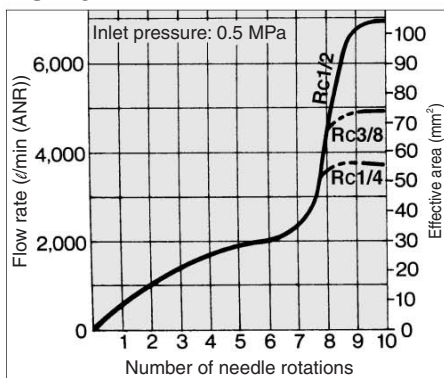
Option

Nil	None
H ⁽¹⁾	High temperature (-5 to 80°C)
L ⁽²⁾	Low temperature (-30 to 60°C)

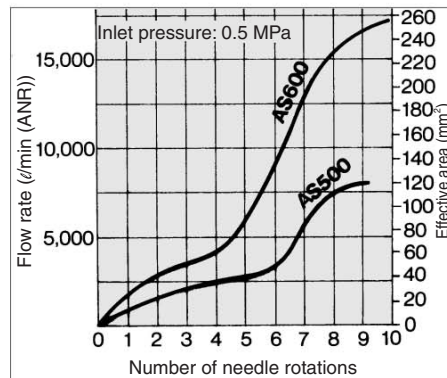
Note 1) AS800 is available as special.
Note 2) AS900 is available as special.

Needle Valve/Flow Characteristics

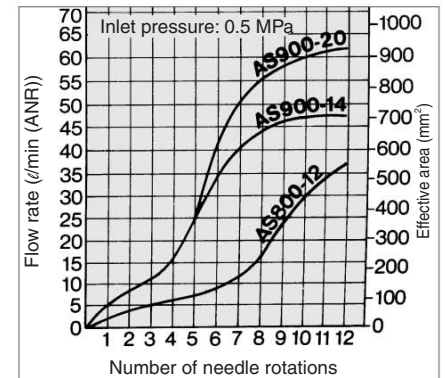
AS420



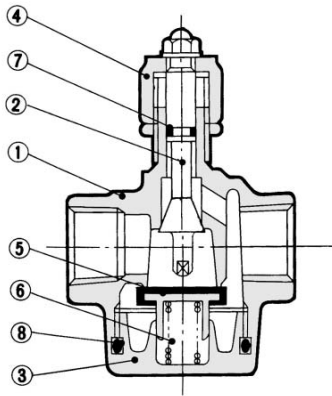
AS500/600



AS800/900



Construction: AS420/500/600



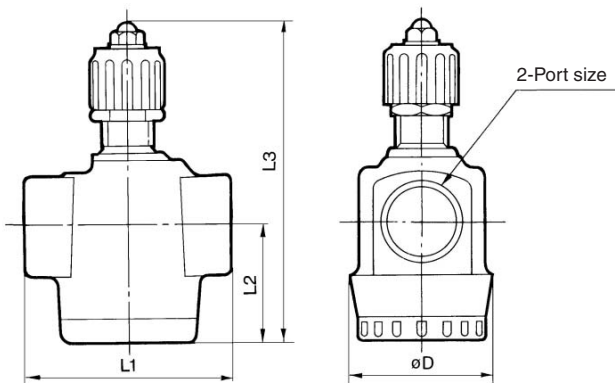
Component Parts

No.	Description	Material	Note
①	Body	Aluminum alloy	Chromated
②	Needle	Brass	—
③	Bottom cover	Aluminum alloy	Chromated
④	Handle	Zinc alloy	Black painted

Replacement Parts

No.	Description	Material	Part no.	
			AS420-500	AS600
⑤	Check Valve	Brass	14254	14273
⑥	Spring	Stainless steel	14255	14275
⑦	O-ring	NBR	JIS B 2401 P-7	JIS B 2401 P-7
⑧	O-ring	NBR	JIS B 2401 P-38	JIS B 2401 P-48

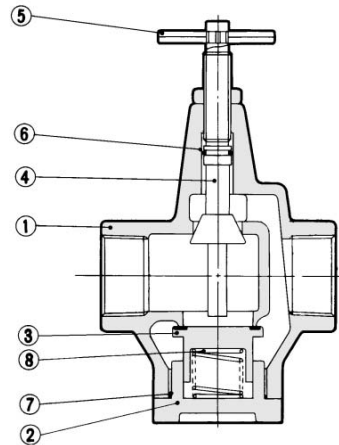
Dimensions: AS420/500/600



Dimensions

Model	Port size	L1	L2	L3		D
				Max.	Min.	
AS420	1/4, 3/8, 1/2	67.5	38	122	112	50
AS500	3/4	74	42	115	105	50
AS600	1	90	55	158	148	62

Construction: AS800/900



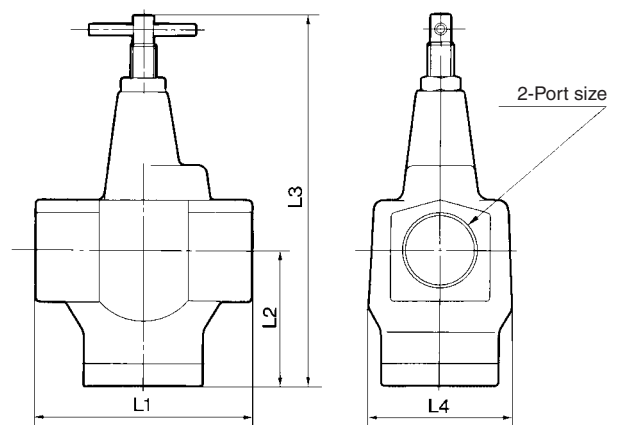
Component Parts

No.	Description	Material	Note
①	Body	Aluminum alloy	Chromated
②	Valve guide	Aluminum alloy	Chromated
③	Check valve	Brass	Rubber lining
④	Needle	Brass	—
⑤	Handle	Carbon steel	Chromated

Replacement Parts

No.	Description	Material	Part no.	
			AS800	AS900
⑥	O-ring	NBR	JIS B 2401 P-12	JIS B 2401 P-16
⑦	O-ring	NBR	JIS B 2401 G-50	JIS B 2401 G-65
⑧	Spring	Stainless steel	14115	14124

Dimensions: AS800/900



Dimensions

Model	Port size	L1	L2	L3		L4
				Max.	Min.	
AS800	1 1/4	120	74	204	192	80
AS900	1 1/2, 2	150	93	262	250	94

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ASF

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 ²)	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".

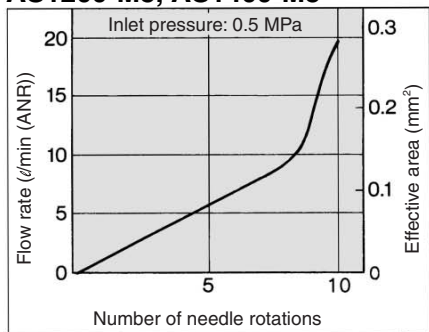
Bore size

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

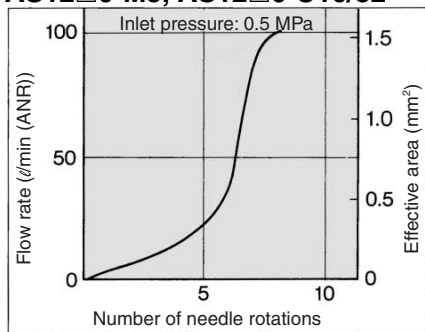
* Male thread comes with R thread.

Needle Valve/Flow Characteristics

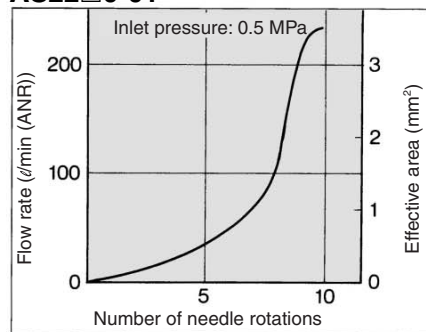
AS1200-M3, AS1400-M3



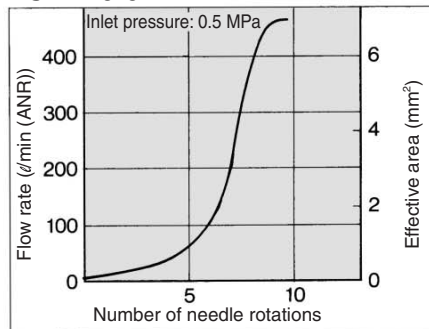
AS12□0-M5, AS12□0-U10/32



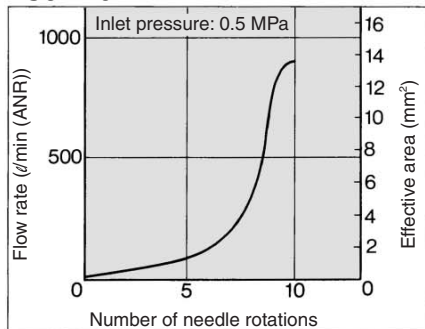
AS22□0-01



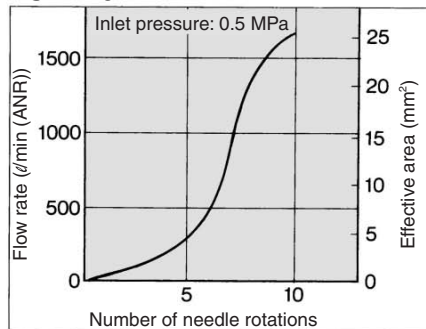
AS22□0-02



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**