

Series AS

Series

Series	Applicable tube O.D.												Applicable cylinder bore size (mm)	
	Metric size						Inch size							
	2	3.2	4	6	8	10	12	1/8"	5/32"	1/4"	5/16"	3/8"		1/2"
AS1002F	●	●	●	●				●	●	●				6, 10, 16, 20 (Note)
AS2002F			●	●				●	●					20, 25, 32
AS2052F			●	●	●				●	●	●			20, 25, 32, 40
AS3002F				●	●	●			●	●	●			40, 50, 63
AS4002F						●	●				●	●		63, 80, 100

Note) The applicable cylinder bore sizes (mm) for AS1002F-02 are 2.5, 4, 6.

Specifications

Fluid	Air
Proof pressure	1.5 MPa (1.05 MPa Note 1))
Max. operating pressure	1 MPa (0.7 MPa Note 1))
Min. operating pressure	0.1 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Applicable tube material	Nylon, Soft nylon, Polyurethane

Note 1) In case of AS1002F-02

Note 2) Use caution at the max. operating pressure when using soft nylon or polyurethane tubing.

(Refer to pages 371 and 372 of Best Pneumatics Vol. 6)

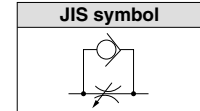
Note 3) Brass parts are all electroless nickel plated.

Flow Rate and Effective Area

Series	AS1002F		AS2002F		AS2052F		AS3002F			AS4002F	
	Metric size	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.	Tube O.D.
AS1002F	ø2	ø3.2, ø4, ø6	ø4	ø6	ø6	ø8	ø6	ø8	ø10, ø12	ø10	ø12
AS2002F	—	ø1/8", ø5/32" ø1/4"	ø5/32"	ø1/4"	—	ø1/4" ø5/16"	ø1/4"	ø5/16"	ø3/8"	ø3/8"	ø1/2"
Controlled flow (Free flow)	Flow rate (l/min (ANR))	20	100	130	230	290	460	390	660	920	1390
	Effective area (mm ²)	0.3	1.5	2	3.5	4.5	7	6	10	14	21

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

Flow Direction Symbol on Body



How to Order

AS 400 2F - 12

Body size

100	M3, M5 standard
200	1/8 standard
205	1/4 standard
300	3/8 standard
400	1/2 standard

Applicable tube O.D.

Metric size	Inch size
02	ø2
23	ø3.2*
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

* Use ø1/8" tube.

With one-touch fittings

RoHS

Made to Order

Lubricant: Vaseline **-X12**

Ex.) AS2002F-04-X12

Grease-free (Sealant: Fluoro coated) + Restrictor (Without Check Valve) **-X21**

Ex.) AS2002F-04-X21

Note) Not particle-free

Restrictor (Without Check Valve) **-X214**

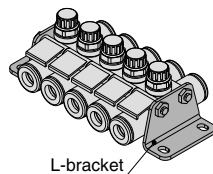
Ex.) AS2002F-04-X214

Made to Order

Options

L-bracket

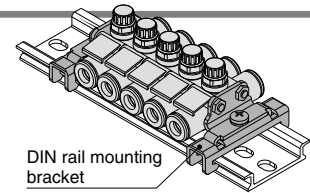
Part no.	Applicable series
AS-12L	AS1002F-02
AS-10L	AS1002F
AS-20L	AS2002F
AS-25L	AS2052F
AS-30L	AS3002F
AS-40L	AS4002F



L-bracket

DIN rail mounting bracket

Part no.	Applicable series
AS-10D	AS1002F
AS-20D	AS2002F
AS-25D	AS2052F
AS-30D	AS3002F
AS-40D	AS4002F



DIN rail mounting bracket

* Bracket for AS1002F-02 is not available.

* Prepare DIN rail by user.

Part no. list of threaded stud kit for manifold

Model		4 stations	6 stations	8 stations	10 stations
Metric size	Inch size				
AS1002F-02	—	AS-31B	AS-32B	AS-33B	AS-34B
AS1002F-23	AS1002F-01	AS-32B	AS-33B	AS-34B	AS-36B
AS1002F-04	AS1002F-03		AS-34B	AS-36B	AS-37B
AS1002F-06	—	AS-32B	AS-34B	AS-35B	AS-38B
—	AS1002F-07			AS-36B	AS-37B
AS2002F-04	AS2002F-03	AS-32B	AS-34B	AS-36B	AS-38B
AS2002F-06	—			AS-37B	AS-38B
—	AS2002F-07	AS-41B	AS-42B	AS-44B	AS-45B
AS2052F-06	—			AS-44B	AS-45B
—	AS2052F-07	AS-42B	AS-44B	AS-45B	AS-47B
AS2052F-08	AS2052F-09			AS-46B	AS-47B
AS3002F-06	—	AS-42B	AS-44B	AS-45B	AS-47B
—	AS3002F-07			AS-46B	AS-47B
AS3002F-08	AS3002F-09	AS-43B	AS-45B	AS-47B	AS-48B
AS3002F-10	—			AS-47B	AS-48B
—	AS3002F-11	AS-43B	AS-45B	AS-47B	AS-48B
AS3002F-12	—			AS-47B	AS-48B
AS4002F-10	—	AS-43B	AS-45B	AS-47B	AS-48B
—	AS4002F-11			AS-47B	AS-48B
AS4002F-12	—	AS-43B	AS-45B	AS-47B	AS-48B
—	AS4002F-13			AS-47B	AS-48B

Details of threaded stud kit for manifold

Part no.	Threaded stud		Accessories					
	Length	pcs.	Hexagon nut	Flat washer	pcs.			
AS-31B	38	2	M3	4	M3			
AS-32B	62	2						
AS-33B	72	2						
AS-34B	90	2						
AS-35B	104	2						
AS-36B	114	2						
AS-37B	135	2						
AS-38B	140	2						
AS-41B	78	2				M4	4	M4
AS-42B	111	2						
AS-43B	119	2						
AS-44B	147	2						
AS-45B	179	2						
AS-46B	191	2						
AS-47B	236	2						
AS-48B	277	2						

* Precautions when options are ordered

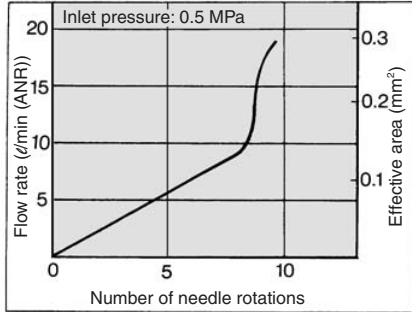
Threaded studs for manifold are not included when L-bracket and DIN rail mounting bracket are ordered. Please order them according to the number of stations.

Ex.) AS2002F-04 When connecting 4 pcs. and mounting L-brackets on both sides

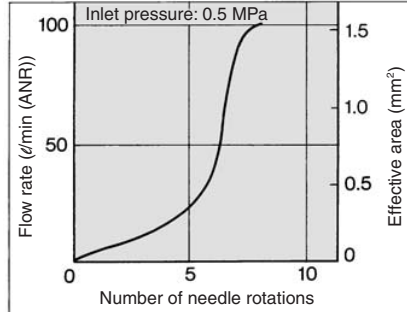
- Speed controller AS2002F-04 4 pcs.
- L-bracket AS-20L 2 pcs.
- Threaded stud kit for manifold AS-32B 1 pc.

Needle Valve/Flow-rate Characteristics

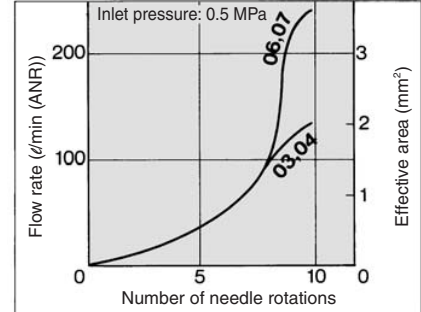
AS1002F-02



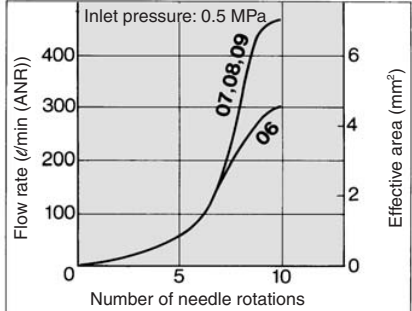
AS1002F



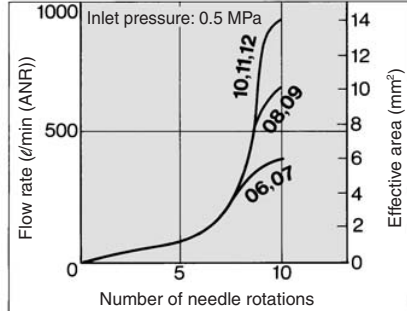
AS2002F



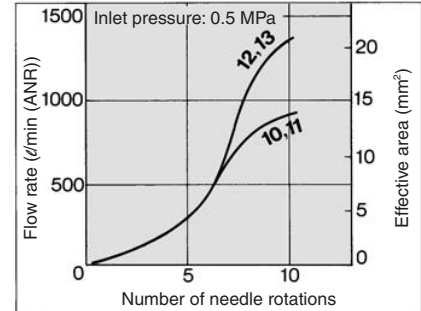
AS2052F



AS3002F

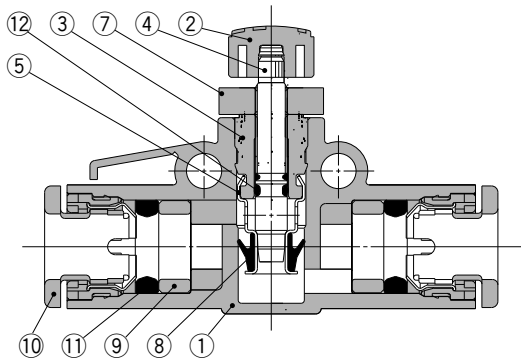


AS4002F

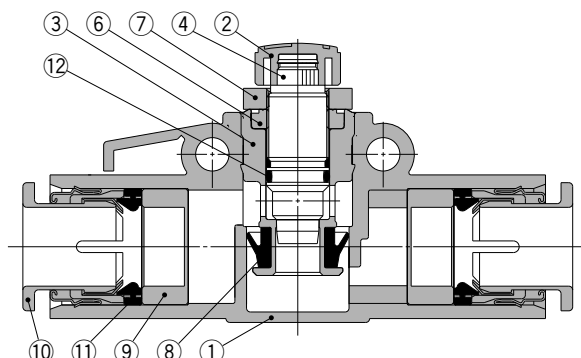


Construction

AS1002F, AS2002F, AS2052F



AS1002F-02, AS3002F, AS4002F



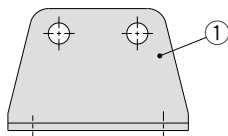
Component Parts

No.	Description	Material	Note
1	Body A	PBT	
2	Handle	PBT	
3	Body B	Brass	Electroless nickel plated
4	Needle	Brass	Electroless nickel plated
5	Seat ring	Brass	Electroless nickel plated
6	Needle guide	Brass	Electroless nickel plated

No.	Description	Material	Note
7	Lock nut	Steel wire	Zinc chromated
8	U-seal	HNBR	
9	Spacer	POM ^{Note)}	
10	Cassette	—	
11	Seal	NBR	
12	O-ring	NBR	

Note) AS2052F, AS3002F, AS4002F are made of PBT. AS3002F-11, AS4002F-11, AS4002F-13 are made of electroless nickel plated brass.

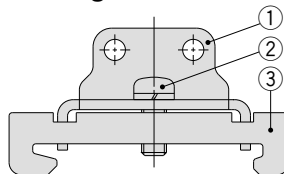
L-bracket



Component Part

No.	Description	Material
1	Bracket	Steel strip

DIN rail mounting bracket



Component Parts

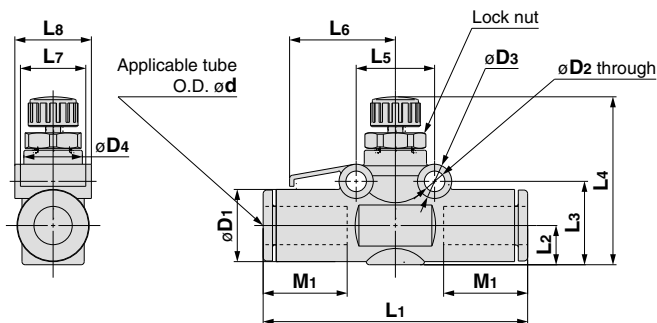
No.	Description	Material
1	Bracket	Steel strip
2	Cross recessed round head screw	Steel wire
3	Clasp	Steel strip

⚠ Caution

Be sure to read before handling.
Refer to back cover for Safety Instructions and Best Pneumatics Vol. 6 for Flow Control Equipment Precautions.

Series AS

Dimensions



Metric Size

Model	Applicable tube O.D. ød	D1	D2	D3	D4	L1	L2	L3	L4 ^{Note)}		L5	L6	L7	L8	M1	Weight (g)
									MAX.	MIN.						
AS1002F-02	2	6	3.2	5	6	25.4	3.4	7.9	20.9	18.4	11	9.8	5	6.7	8.8	3
AS1002F-23	3.2	8.4	3.3	5.5	9.1	36	4.4	11.1	23.8	21	11	15.4	8.8	9.8	12.7	5
AS1002F-04	4	9.3				37	5.1	11.8	24.5	21.7				10.1		5.5
AS1002F-06	6	11.6				39.5	6.1	12.8	25.5	22.7				12.3		6.5
AS2002F-04	4	9.3	3.3	5.5	10	40.7	5.2	12.3	28.9	25.4	12.6	17	10.5	11.5	12.7	8.5
AS2002F-06	6	11.6				42.5	6.3	13.4	30	26.5				12.3	9.5	
AS2052F-06	6	12.8	4.3	7.8	14	53.2	6.7	16.3	33.2	28.2	17	22.8	12	15.7	17	19
AS2052F-08	8	15.2				57.2	8	17.6	34.5	29.5				16.1	18	22
AS3002F-06	6	13.2	4.3	8	19.3	59	7.4	19.3	38.6	33.6	22	25	12	20.5	17	36
AS3002F-08	8	15.2				65	8.2	20.1	39.4	34.4					18	38
AS3002F-10	10	18.5				70.8	9.8	21.7	41	36					21	42
AS3002F-12	12	20.9				76	10.9	22.8	42.1	37.1					22.1	44
AS4002F-10	10	18.5	4.3	8	25	76.9	10.3	22.7	51.6	44.1	28	33	14	21	76	
AS4002F-12	12	21.7				81.3	11.3	23.7	52.6	45.1				22	82	

Note) Reference dimensions

Inch Size

Model	Applicable tube O.D. ød	D1	D2	D3	D4	L1	L2	L3	L4 ^{Note)}		L5	L6	L7	L8	M1	Weight (g)
									MAX.	MIN.						
AS1002F-01	1/8"	8.4	3.3	5.5	9.1	36	4.5	11.2	23.8	21	11	15.4	8.8	9.8	12.7	5
AS1002F-03	5/32"	9.3				37	5.2	11.9	24.5	21.7				10.1		5.5
AS1002F-07	1/4"	12				39.5	6.1	12.8	25.5	22.7				12.8		6.5
AS2002F-03	5/32"	9.3	3.3	5.5	10	40.7	5.2	12.3	28.9	25.4	12.6	17	10.5	11.5	12.7	8.5
AS2002F-07	1/4"	12				42.6	6.5	13.6	30.2	26.7				12.8	9.5	
AS2052F-07	1/4"	13.2	4.3	7.8	14	53.4	6.9	16.5	33.4	28.4	17	22.8	12	15.7	17	19
AS2052F-09	5/16"	15.2				57.2	8	17.6	34.5	29.5				16.1	18	22
AS3002F-07	1/4"	13.2	4.3	8	19.3	59	7.4	19.3	38.6	33.6	22	25	12	20.5	17	35
AS3002F-09	5/16"	15.2				65	8.2	20.1	39.4	34.4					18	38
AS3002F-11	3/8"	18.5				69.8	9.8	21.7	41	36					21	52
AS4002F-11	3/8"	18.5				76.9	10.3	22.7	51.6	44.1					21	86
AS4002F-13	1/2"	21.7	4.3	8	25	81.3	11.3	23.7	52.6	45.1	28	33	14	26.2	22	95

Note) Reference dimensions

Proper tightening torque for a lock nut is shown in the below table.
For standard installation, turn 15 to 30° using tool, after fastening by hand.
Pay attention not to over torque the product.

Series	Proper tightening torque (N·m)
AS1002F-02	0.07
AS1002F	0.2
AS2002F	0.3
AS2052F	1
AS3002F	2
AS4002F	4