

Series 10-AS

Speed controller with One-touch fittings (Inline type)

Series

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

Note) The applicable cylinder bore sizes (mm) for 10-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	Polyurethane (Note 2)
Option	Round lock nut
Grease	Fluorine grease
Particulate generation grade	Grade 3

Note 1) In case of 10-AS1002F-02

Note 2) The maximum operating pressure for polyurethane is 0.8 MPa (at 20°C).
(Refer to page 372 of Best Pneumatics Vol. 6)

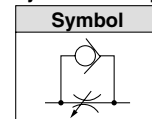
Note 3) Brass parts are all electroless nickel plated.

Flow Rate and Effective Area

Series		10-AS1002F		10-AS2002F		10-AS2052F		10-AS3002F		10-AS4002F	
Tube O.D.	Metric size	ø2	ø3.2, ø4, ø6	ø4	ø6	ø6	ø8	ø6	ø8	ø10, ø12	ø10, ø12
Controlled flow	Flow rate (L/min (ANR))	20	100	130	230	290	460	390	660	920	920
(Free flow)	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

10-AS 400 2F - 12 -

Clean series

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**

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

Lock nut option

Nil	Hexagon lock nut
-J	Round lock nut

With One-touch fittings

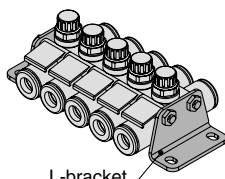
* Use ø1/8" tube.

RoHS

Options

L-bracket

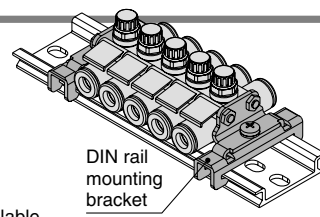
Part no.	Applicable series
AS-12L	10-AS1002F-02
AS-10L	10-AS1002F
AS-20L	10-AS2002F
AS-25L	10-AS2052F
AS-30L	10-AS3002F
AS-40L	10-AS4002F



L-bracket

DIN rail mounting bracket

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



DIN rail
mounting
bracket

* Bracket for 10-AS1002F-02 is not available.

* Prepare DIN rail by user.

Part no. list of threaded stud kit for manifold

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

Details of threaded stud kit for manifold

Part no.	Threaded stud		Accessories			
	Length	pcs.	Hexagon nut	pcs.	Flat washer	pcs.
AS-31B	38	2	M3	4	M3	4
AS-32B	62	2				
AS-33B	72	2				
AS-34B	90	2				
AS-35B	104	2				
AS-36B	114	2				
AS-37B	135	2	M4	4	M4	4
AS-38B	140	2				
AS-41B	78	2				
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

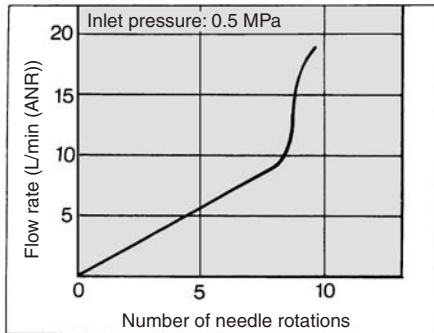
Threaded studs for manifold are not included when L-bracket and DIN rail mounting bracket are ordered. Please order them according to the number of stations.

Ex.) 10-AS2002F-04 When connecting 4 pcs. and mounting L-brackets on both sides

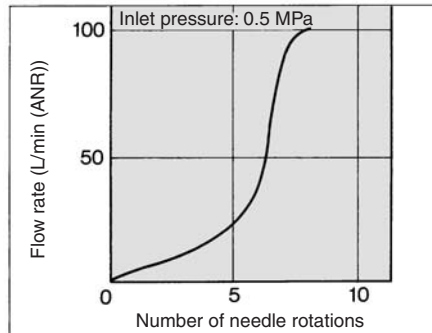
• Speed controller	10-AS2002F-04	4 pcs.
• L-bracket	AS-20L	2 pcs.
• Threaded stud kit for manifold	AS-32B	1 pc.

Needle Valve/Flow Characteristics

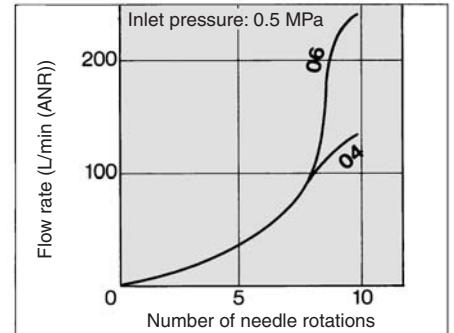
10-AS1002F-02



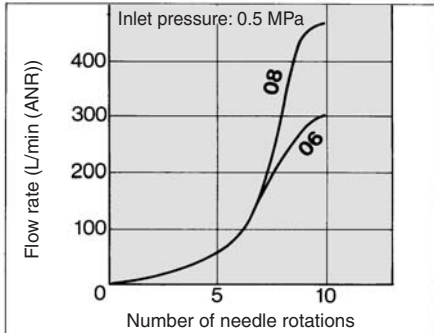
10-AS1002F



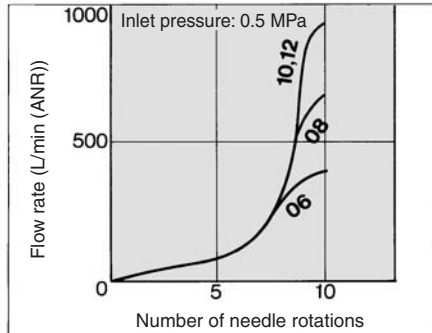
10-AS2002F



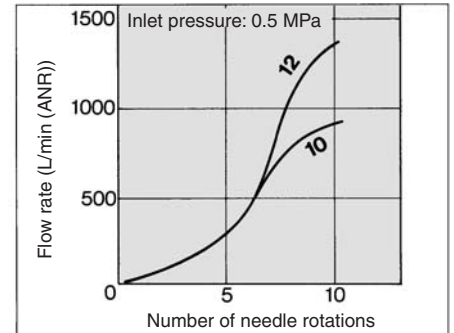
10-AS2052F



10-AS3002F

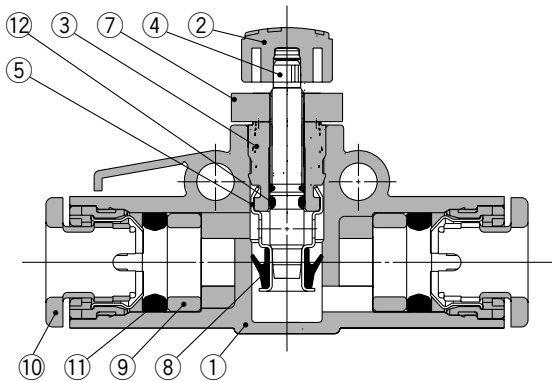


10-AS4002F

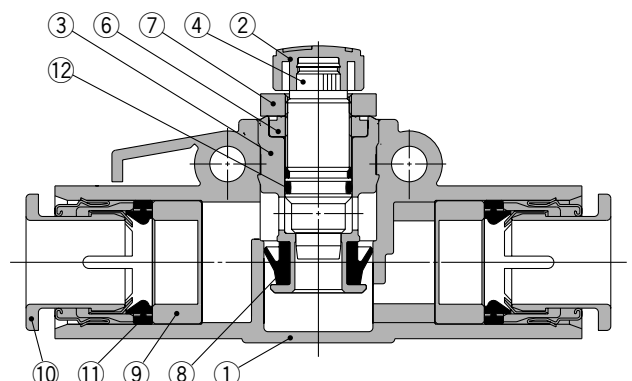


Construction

10-AS1002F, AS2002F, AS2052F



10-AS1002F-02, AS3002F, AS4002F



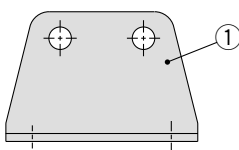
Component Parts

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

Note) AS2052F, AS3002F, AS4002F are made of PBT.

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

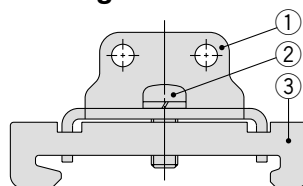
L-bracket



Component Part

No.	Description	Material
1	Bracket	Steel strip

DIN rail mounting bracket



Component Parts

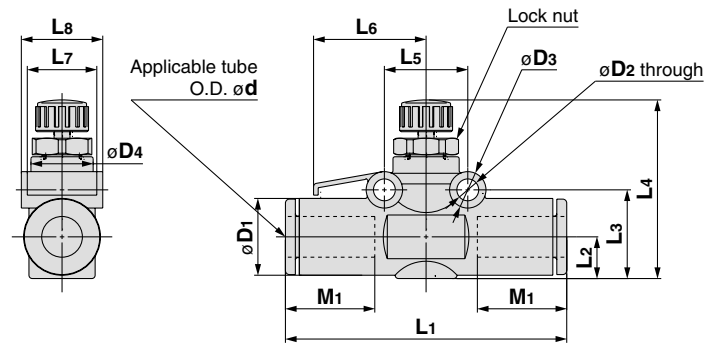
No.	Description	Material
1	Bracket	Steel strip
2	Cross recessed round head screw	Steel wire
3	Clasp	Steel strip

Caution

Be sure to read before handling.
Refer to back cover for Safety
Instructions and Best Pneumat-
ics Vol. 6 for Flow Control Equip-
ment Precautions.



Dimensions



Metric Size

Model	Applicable tube O.D. ϕ d	D1	D2	D3	D4	L1	L2	L3	L4 ^{Note)}		L5	L6	L7	L8	M1	Weight (g)
									MAX.	MIN.						
10-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
10-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
10-AS1002F-04	4	9.3				37	5.1	11.8	24.5	21.7				10.1		5.5
10-AS1002F-06	6	11.6				39.5	6.1	12.8	25.5	22.7				12.3		6.5
10-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
10-AS2002F-06	6	11.6				42.5	6.3	13.4	30	26.5				12.3	13.5	9.5
10-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
10-AS2052F-08	8	15.2				57.2	8	17.6	34.5	29.5				16.1	18	22
10-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
10-AS3002F-08	8	15.2				65	8.2	20.1	39.4	34.4					18	38
10-AS3002F-10	10	18.5				70.8	9.8	21.7	41	36					21	42
10-AS3002F-12	12	20.9				76	10.9	22.8	42.1	37.1					22	44
10-AS4002F-10	10	18.5	4.3	8	25	76.9	10.3	22.7	51.6	44.1	28	33	14	26.2	21	76
10-AS4002F-12	12	21.7				81.3	11.3	23.7	52.6	45.1					22	82

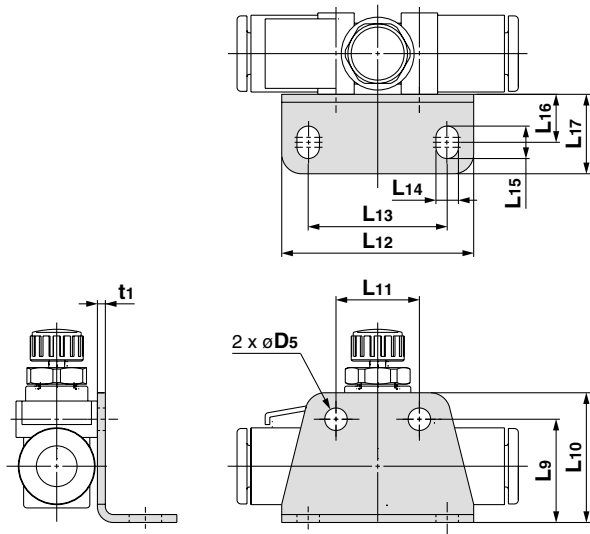
Note) Reference dimensions

The hexagon lock nut can be fastened by hand. When stronger tightening is required, please retighten using a tool. The recommended tightening torques for tools are shown in the table below. For standard installation, turn 15 to 30° using tool, after fastening by hand. Pay attention not to over torque the product.

Series	Recommended tightening torque (N·m)	Lock nut Hexagon width across flats
10-AS1002F-02	0.07	4.5
10-AS1002F	0.2	7
10-AS2002F	0.3	9
10-AS2052F	1	12
10-AS3002F	2	14
10-AS4002F	4	17

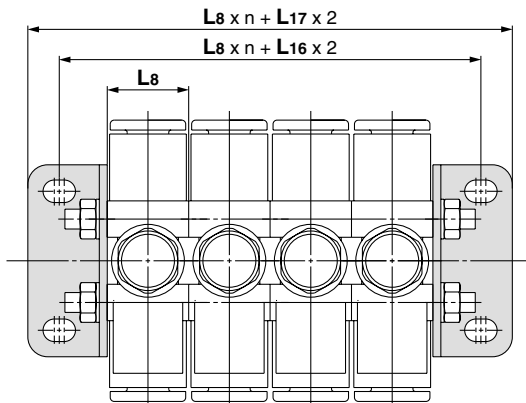
L-bracket

Bracket on a single side



Part no.	Applicable series	D5	L9	L10	L11	L12	L13	L14	L15	L16	L17	t1
AS-12L	10-AS1002F-02		9.9	13.4	11	27.5	19.5					1
AS-10L	10-AS1002F	3.4	14.8	18.3				3.4	4.9	7.3	12	
AS-20L	10-AS2002F		15.6	19.6	12.6	29	21					1.2
AS-25L	10-AS2052F		19.6	24.6	17	38	28					
AS-30L	10-AS3002F	4.5	24.8	29.8	22	43	33	4.5	6.5	9.5	15.5	1.4
AS-40L	10-AS4002F		25.7	30.7	28	49	39					

Brackets on both sides

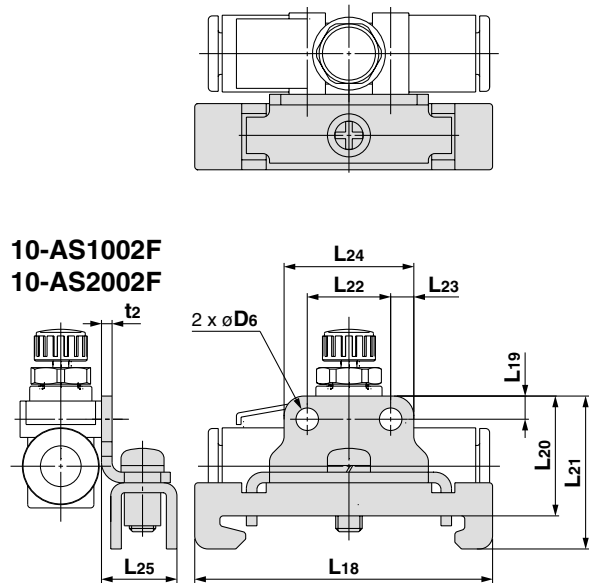


*1 Refer to page 3 for L8.

*2 The above figure shows the manifold with controllers connected using two L-brackets and a threaded stud kit for manifold. Refer to page 1 for threaded stud kits for manifold.

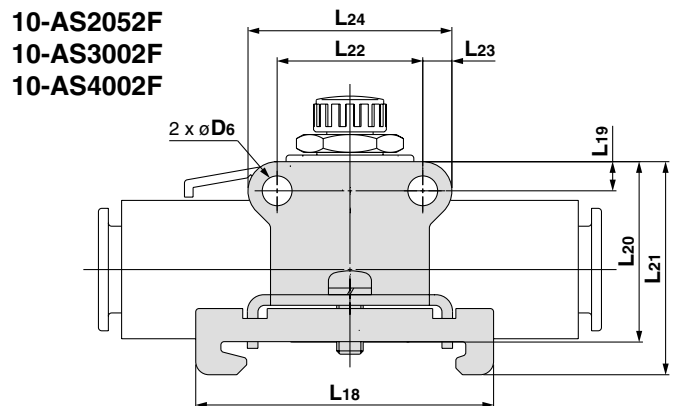
DIN rail mounting bracket

Bracket on a single side



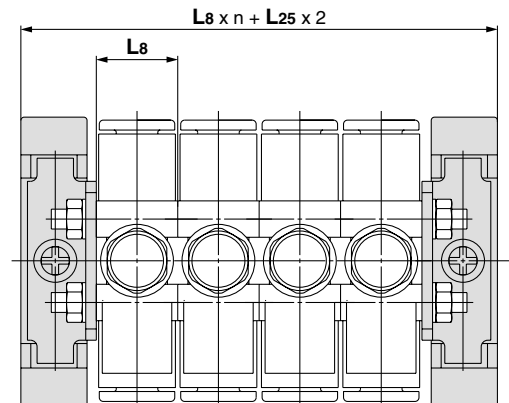
10-AS1002F
10-AS2002F

10-AS2052F
10-AS3002F
10-AS4002F



Part no.	Applicable series	D6	L18	L19	L20	L21	L22	L23	L24	L25	t2
AS-10D	10-AS1002F	3.4		3.5	18.2	23.2	11		18		
AS-20D	10-AS2002F				18.6	23.6	12.6	3.5	19.6		
AS-25D	10-AS2052F		45		22	27	17		25.8	11.2	1.6
AS-30D	10-AS3002F	4.5		4.4	27.2	32.2	22	4.4	30.8		
AS-40D	10-AS4002F				28.1	33.1	28		36.8		

Brackets on both sides



*1 Refer to page 3 for L8.

*2 The above figure shows the manifold with controllers connected using two DIN rail mounting brackets and a threaded stud kit for manifold. Refer to page 1 for threaded stud kits for manifold.