

Speed Controller Adjustable by Flat Head Screwdriver with One-touch Fittings

Series AS□□□1F-D

In-line Type



Model

| Model | Applicable tubing O.D. | | | | | | | | | | | | Applicable cylinder bore size (mm) | |
|---------|------------------------|---|---|---|----|----|-----------|-------|-------|------|-------|------|------------------------------------|----------------|
| | Metric size | | | | | | Inch size | | | | | | | |
| | 3.2 | 4 | 6 | 8 | 10 | 12 | 1/8" | 5/32" | 3/16" | 1/4" | 5/16" | 3/8" | | 1/2" |
| AS1001F | ● | ● | ● | | | | ● | ● | ● | ● | | | | 6, 10, 16, 20 |
| AS2001F | | ● | ● | | | | | ● | ● | ● | | | | 20, 25, 32 |
| AS2051F | | | ● | ● | | | | | ● | ● | ● | | | 20, 25, 32, 40 |
| AS3001F | | | ● | ● | ● | ● | | | | ● | ● | ● | | 40, 50, 63 |
| AS4001F | | | | | ● | ● | | | | | | ● | ● | 63, 80, 100 |

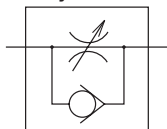
Specifications

| | |
|--------------------------------|---------------------------------|
| Fluid | Air |
| Proof pressure | 1.5 MPa |
| Max. operating pressure | 1 MPa |
| Min. operating pressure | 0.1 MPa |
| Ambient and fluid temperature | -5 to 60°C (No freezing) |
| Number of needle rotations | 10 turns (8 turns (1)) |
| Applicable tubing material (2) | Nylon, Soft nylon, Polyurethane |

Note 1) In the case of AS1001F type

Note 2) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used. (Refer to pages 15-6-3 to 15-6-5 for details.)

JIS Symbol

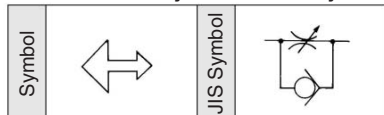


Flow Rate and Effective Area

| Model | AS1001F | AS2001F | AS2051F | AS3001F | AS4001F | | | | | | |
|-----------------------------|-----------------------------------|------------------------------|---------|---------------|---------|---------------|-------|--------|----------|-------|-------|
| Tubing O.D. | Metric size | ø3.2, ø4, ø6 | ø4 | ø6 | ø6 | ø8 | ø6 | ø8 | ø10, ø12 | ø10 | ø12 |
| | Inch size | ø1/8", ø5/32", ø3/16", ø1/4" | ø5/32" | ø3/16", ø1/4" | ø3/16" | ø1/4", ø5/16" | ø1/4" | ø5/16" | ø3/8" | ø3/8" | ø1/2" |
| Controlled flow (Free flow) | Flow rate (l/min (ANR)) | 100 | 130 | 230 | 290 | 460 | 660 | 920 | 1050 | 1390 | |
| | Effective area (mm ²) | 1.5 | 2 | 3.5 | 4.5 | 7 | 6.5 | 10 | 14 | 16 | 21 |

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

Flow Direction Symbols on Body



How to Order

AS 200 1F — 06 D

Body size

| | |
|-----|--------------|
| 100 | M5 standard |
| 200 | 1/8 standard |
| 205 | 1/4 standard |
| 300 | 3/8 standard |
| 400 | 1/2 standard |

With One-touch fittings

Type adjustable by flat head screwdriver

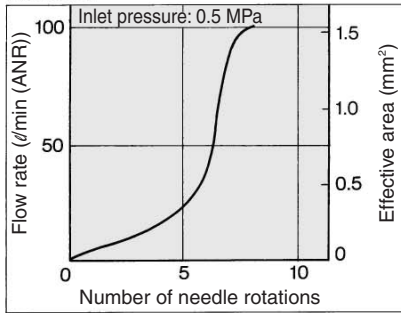
Applicable tubing O.D.

| Metric size | Inch size |
|-------------|-----------|
| 23 | ø3.2" |
| 04 | ø4 |
| 06 | ø6 |
| 08 | ø8 |
| 10 | ø10 |
| 12 | ø12 |
| 01 | ø1/8" |
| 03 | ø5/32" |
| 05 | ø3/16" |
| 07 | ø1/4" |
| 09 | ø5/16" |
| 11 | ø3/8" |
| 13 | ø1/2" |

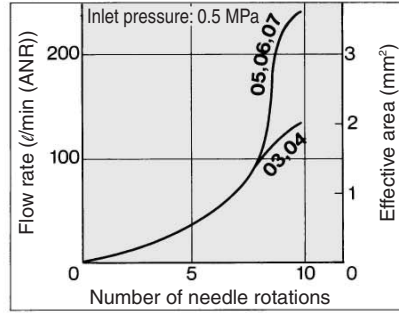
* Use ø1/8" tube.

Needle Valve/Flow Characteristics

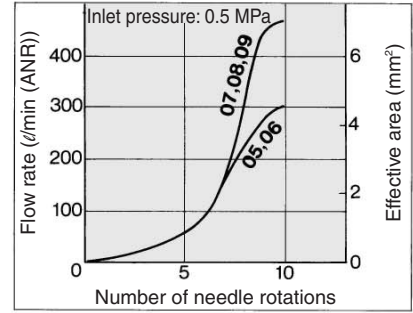
AS1001F



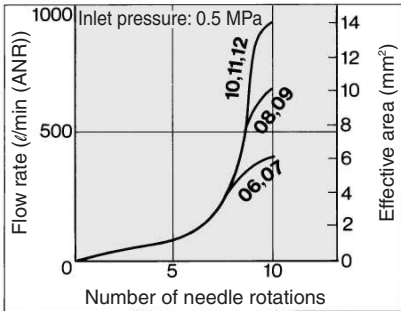
AS2001F



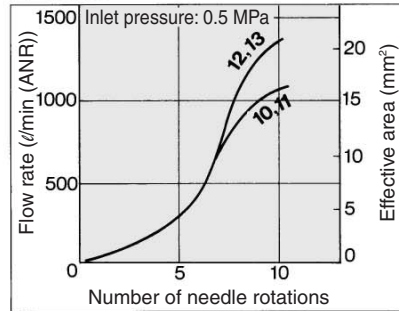
AS2051F



AS3001F

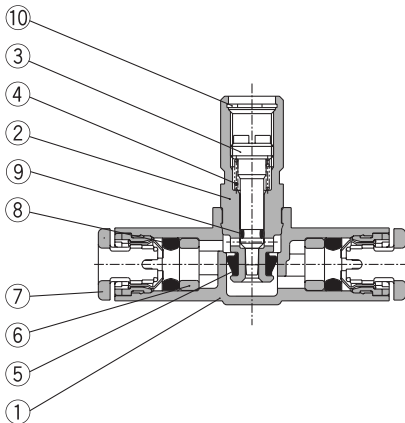


AS4001F

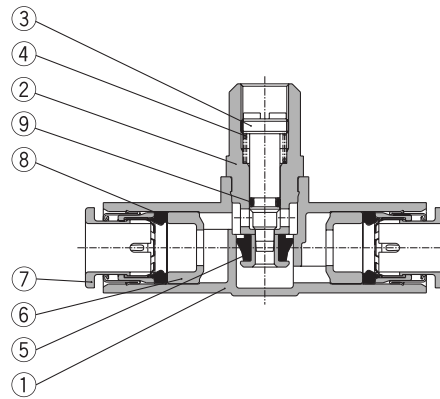


Construction

AS1001F



AS2001F to AS4001F



Component Parts

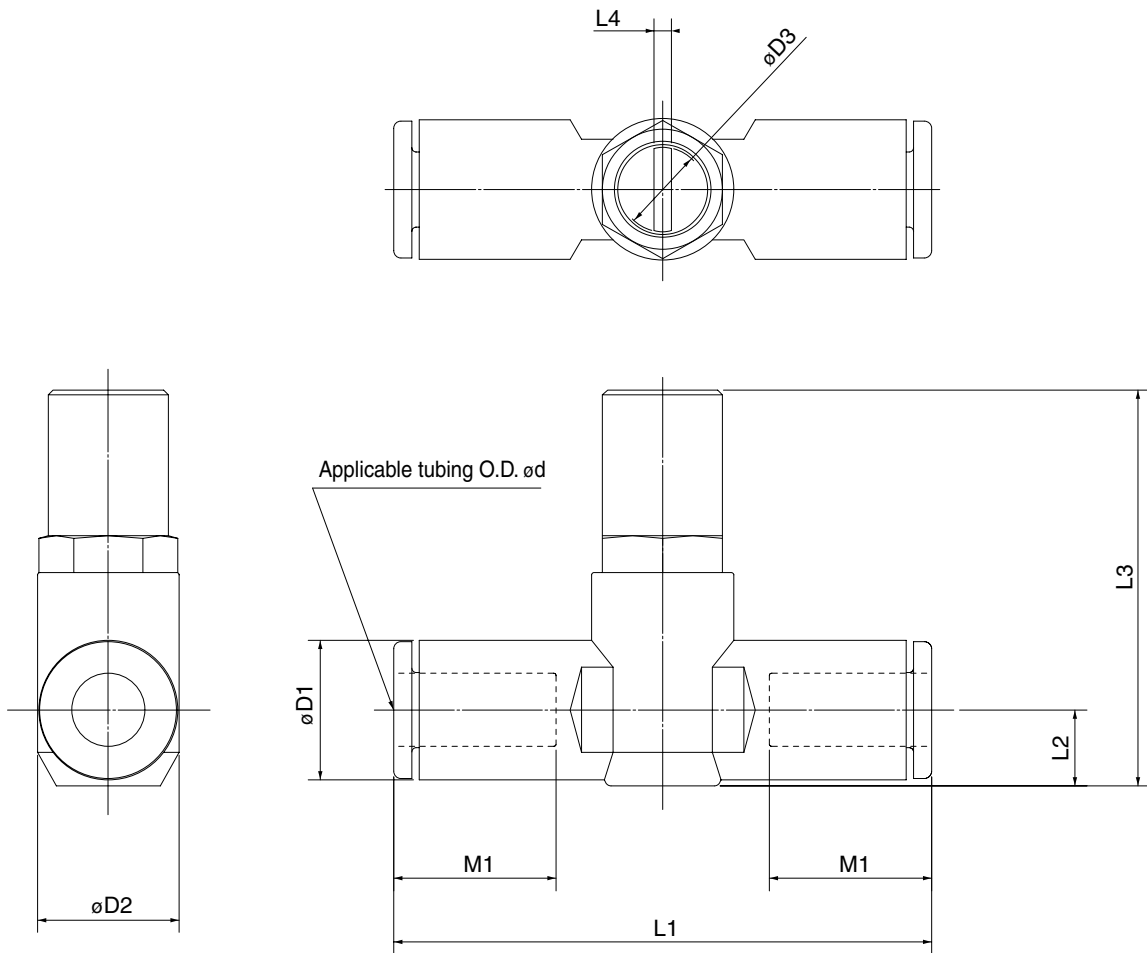
| No. | Description | Material | Note |
|-----|--------------------------------|-------------------------------------|---------------------------|
| ① | Body A | PBT | |
| ② | Body B | Brass | Electroless nickel plated |
| ③ | Needle | Brass | Electroless nickel plated |
| ④ | Spring | Steel wire | |
| ⑤ | U seal | HNBR | |
| ⑥ | Spacer | POM ⁽¹⁾ | |
| ⑦ | Cassette | POM, Stainless steel ⁽²⁾ | |
| ⑧ | Seal | NBR | |
| ⑨ | O-ring | NBR | |
| ⑩ | Retaining ring for hole type C | Tool steel | |

Note 1) $\phi 3/16"$, $\phi 3/8"$, $\phi 1/2"$ are made of brass (Electroless nickel plated).

Note 2) $\phi 3/16"$, $\phi 5/16"$, $\phi 3/8"$, $\phi 1/2"$ are made of POM, stainless steel, and brass (Electroless nickel plated).

Speed Controller Adjustable by Flat Head Screwdriver With One-touch Fittings, In-line Type

Dimensions



- AS
- ASP
- ASN
- AQ
- ASV
- AK
- ASS
- ASR
- ASF

Metric Size

| Model | d | D1 | D2 | D3 | L1 | L2 | L3 | L4 | M1 |
|-------------|-----|------|------|------|------|------|------|-----|------|
| AS1001F-23D | 3.2 | 8.4 | 10 | 4.7 | 38 | 4.5 | 26 | 0.7 | 12.7 |
| AS1001F-04D | 4 | 9.3 | | | 39.2 | 5.2 | 26.6 | | |
| AS1001F-06D | 6 | 11.6 | 11.8 | 7.2 | 40.7 | 6.2 | 27.7 | 1.2 | 13.5 |
| AS2001F-04D | 4 | 9.3 | | | 40.7 | 5.2 | 31.9 | | 12.7 |
| AS2001F-06D | 6 | 11.6 | 14.8 | 7.2 | 44.8 | 6.3 | 33 | 1.2 | 13.5 |
| AS2051F-06D | 6 | 12.8 | | | 53.2 | 6.7 | 35.2 | | 17 |
| AS2051F-08D | 8 | 15.2 | 19.8 | 9.8 | 59.8 | 8.1 | 36.5 | 1.2 | 18 |
| AS3001F-06D | 6 | 12.8 | | | 59 | 7.4 | 45 | | 17 |
| AS3001F-08D | 8 | 15.2 | 19.8 | 9.8 | 64.4 | 8.2 | 45.8 | 1.2 | 18 |
| AS3001F-10D | 10 | 18.5 | | | 71.6 | 9.8 | 47.3 | | 21 |
| AS3001F-12D | 12 | 20.9 | 26.5 | 12.4 | 76 | 11 | 48.5 | 1.2 | 22 |
| AS4001F-10D | 10 | 18.5 | | | 82 | 11.3 | 55.4 | | 21 |
| AS4001F-12D | 12 | 20.9 | 82 | 11.3 | 56.4 | 22 | | | |

Inch Size

| Model | d | D1 | D2 | D3 | L1 | L2 | L3 | L4 | M1 |
|-------------|-------|------|------|------|------|------|------|-----|------|
| AS1001F-01D | 1/8" | 8.4 | 10 | 4.7 | 38 | 4.5 | 26 | 0.7 | 12.7 |
| AS1001F-03D | 5/32" | 9.3 | | | 39.2 | 5.2 | 26.6 | | |
| AS1001F-05D | 3/16" | 11.4 | 11.8 | 7.2 | 40.7 | 6.2 | 27.7 | 1.2 | 16.5 |
| AS1001F-07D | 1/4" | 12 | | | 40.7 | 5.2 | 31.9 | | 12.7 |
| AS2001F-03D | 5/32" | 9.3 | 14.8 | 7.2 | 40.7 | 5.2 | 31.9 | 1.2 | 12.7 |
| AS2001F-05D | 3/16" | 11.4 | | | 50 | 6.2 | 32.8 | | 16.5 |
| AS2001F-07D | 1/4" | 13.2 | 19.8 | 9.8 | 52.2 | 7.1 | 33.7 | 1.2 | 17 |
| AS2051F-05D | 3/16" | 11.4 | | | 52.2 | 6.2 | 34.9 | | 16.5 |
| AS2051F-07D | 1/4" | 13.2 | 19.8 | 9.8 | 54.4 | 7.1 | 35.7 | 1.2 | 17 |
| AS2051F-09D | 5/16" | 15.2 | | | 59.8 | 8.1 | 36.7 | | 18 |
| AS3001F-07D | 1/4" | 13.2 | 26.5 | 12.4 | 59 | 7.4 | 45.2 | 1.2 | 17 |
| AS3001F-09D | 5/16" | 15.2 | | | 64.4 | 8.2 | 46 | | 18 |
| AS3001F-11D | 3/8" | 17.9 | 26.5 | 12.4 | 70.8 | 9.5 | 47.2 | 1.2 | 21 |
| AS4001F-11D | 3/8" | 17.9 | | | 76.9 | 10.3 | 55.5 | | 21 |
| AS4001F-13D | 1/2" | 21.7 | 83.1 | 11.6 | 56.9 | 22 | | | |