

Speed Controller with Residual Pressure Release Valve

Series AS□□□□FE

With One-touch Fittings

RoHS

Residual pressure can be easily released with one push of button.

Eye-catching red colour release button.



Model

Elbow style	Universal style	Port size in cylinder side	Applicable tube O.D (mm)					Cylinder bore size (mm)
			ø 4	ø 6	ø 8	ø 10	ø 12	
AS22□1FE-01	AS23□1FE-01	R(PT)1/8	●	●	●	● ⁽¹⁾		20, 25, 32
AS22□1FE-02	AS23□1FE-02	R(PT)1/4	●	●	●	●		20, 25, 32, 40
AS32□1FE-03	AS33□1FE-03	R(PT)3/8		●	●	●	●	40, 50, 63
AS42□1FE-04	AS43□1FE-04	R(PT)1/2				●	●	63, 80, 100

Note 1) Only elbow type

Notes) Distinction between meter-out/meter-in types by appearance

They are distinguished by the lock nut. The meter-out types is electroless nickel plated, while the meter-in type is black zinc chromate plated.

Specifications

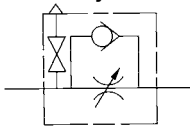
Proof pressure	1.5MPa
Max. operating pressure	1.0MPa
Min. operating pressure	0.1MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Number of needle rotations	10 turns
Effective area of residual pressure release valve	0.8mm ²
Applicable tubing	Nylon, Soft nylon, Polyurethane

Air Flow/Effective Area

Model		AS22□1FE-01 AS23□1FE-01			AS22□1FE-02 AS23□1FE-02			AS32□1FE AS33□1FE			AS42□1FE AS43□1FE	
Tube O.D.	Metric size	ø4	ø6 ø8 ø10	ø4	ø6	ø8 ø10	ø6	ø8	ø10 ø12	ø10	ø12	
Controlled (Free)flow	Air flow (l/min(ANR))	180	230	260	390	460	660	790	920	1580	1710	
	Effective area (mm ²)	2.7	3.5	4	6	7	10	12	14	24	26	

Note) Supply pressure: 0.5MPa, Temperature: 20°C.

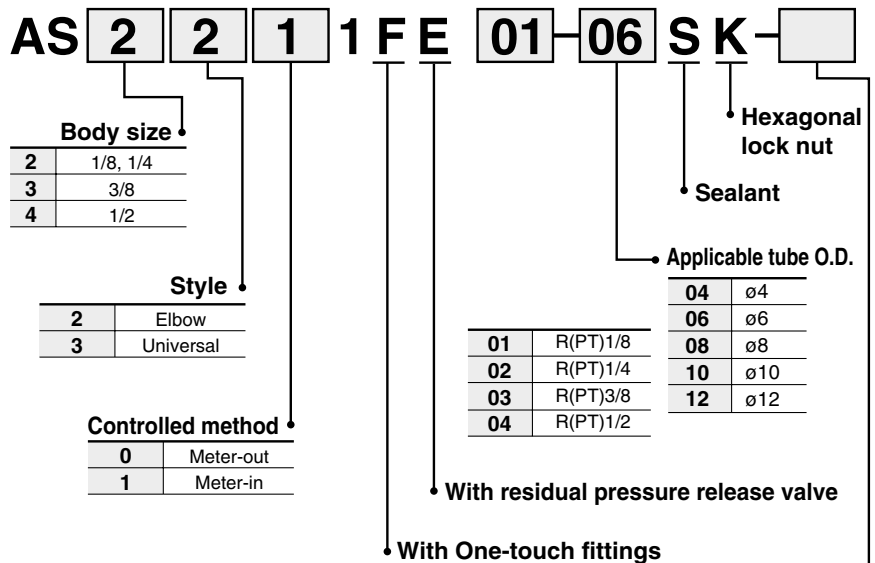
JIS Symbol



Indication of air flow direction on body

	Meter-out	Meter-in
Symbol		
JIS Symbol		

How to Order



Made to Order

Series AS□□□□FE



EMC-AS_2-3_1FE-01A-UK

Series AS□□□□FE

Made to Order

1 Lubricant: Vaseline

X12

Ex.) AS2201FE-01-04SK-X12

2 Grease-free (Seal: Fluorine Coating) + Throttle Valve (Without Check Valve)

X21

Ex.) AS2201FE-01-04SK-X21

Note 1) Not particle-free

Note 2) Throttle valve is only compatible with the part no. of the meter-out type.

3 Throttle Valve (Without Check Valve)

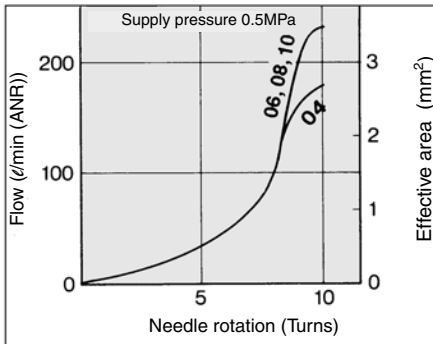
X214

Ex.) AS2201FE-01-04SK-X214

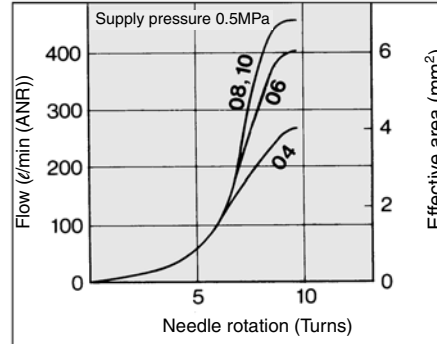
Note) Throttle valve is only compatible with the part no. of the meter-out type.

Needle Valve/Flow Characteristics

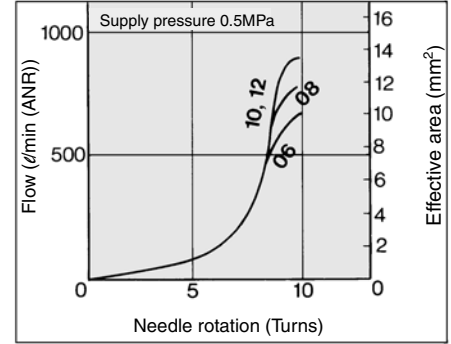
AS2201FE-01, AS2211FE-01
AS2301FE-01, AS2311FE-01



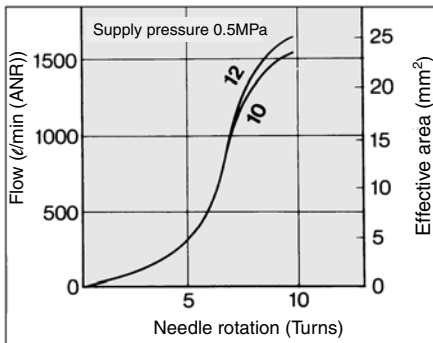
AS2201FE-02, AS2211FE-02
AS2301FE-02, AS2311FE-02



AS3201FE, AS3211FE
AS3301FE, AS3311FE

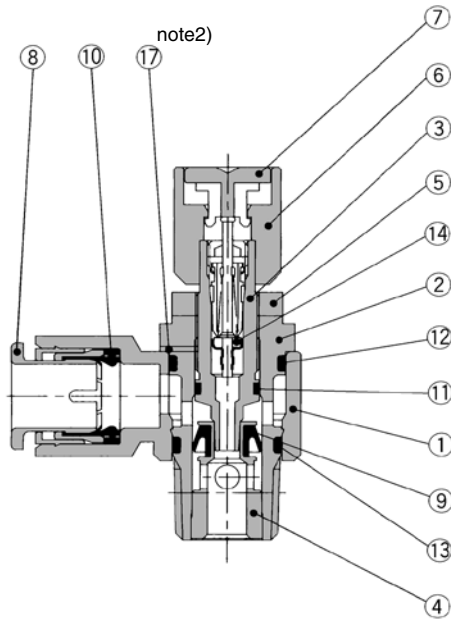


AS4201FE, AS4211FE
AS4301FE, AS4311FE

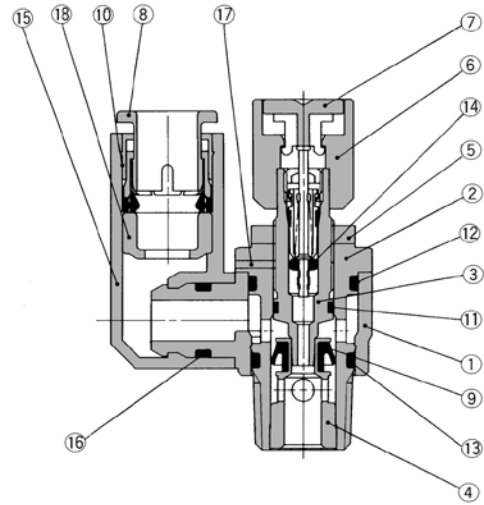


Construction

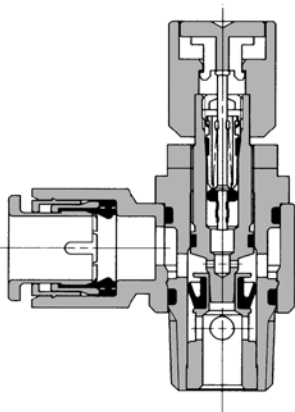
Elbow style Meter-out



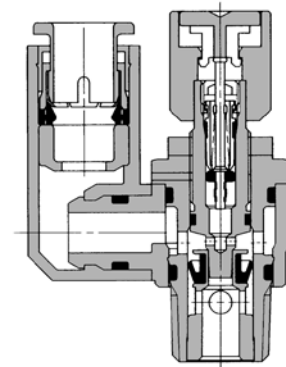
Universal style Meter-out



Meter-in



Meter-in



Component Parts

No.	Description	Material	Note
①	Body A	PBT	White
②	Body B	Brass	Electroless nickel plated
③	Needle	Brass	Electroless nickel plated
④	Seat ring	Brass	(1)
⑤	Lock nut	Steel ⁽²⁾	Zinc chromated ⁽²⁾⁽³⁾
⑥	Handle	Aluminum alloy	Red painted
⑦	Push button	POM	Red
⑧	Cassette	POM, Stainless steel	
⑨	U-packing	NBR	
⑩	Packing	NBR	
⑪	O ring	NBR	
⑫	O ring	NBR	
⑬	O ring	NBR	
⑭	Valve core	NBR, Brass, Stainless steel	
⑮	Elbow body	PBT	
⑯	O ring	NBR	
⑰	Jumping out preventing screw	Stainless steel	
⑱	Spacer	POM	

Note 1) AS2□□1FE type is electroless nickel plated

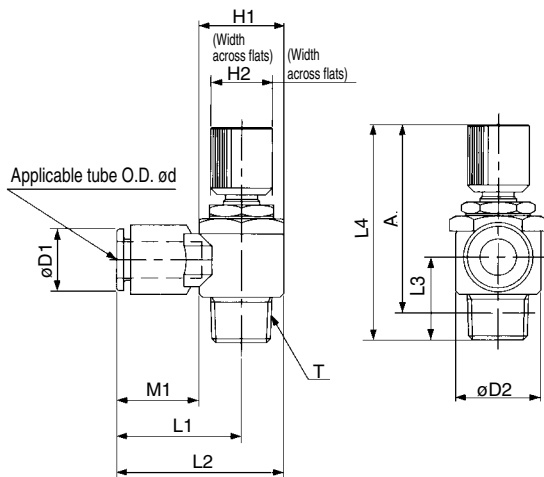
Note 2) Brass parts of AS2201FE-01 are electroless nickel plated.

Note 3) Meter-in type: Black zinc chromated

Series AS□□□□FE

Dimensions

Elbow style

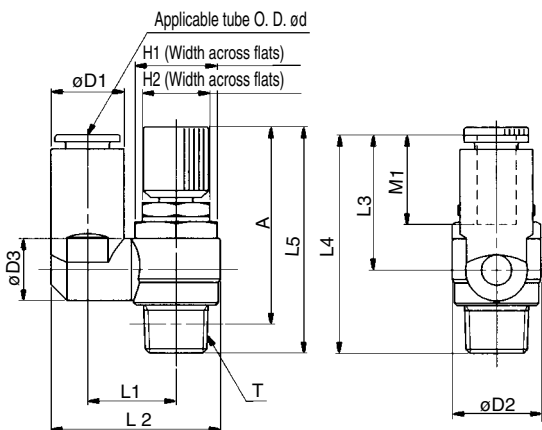


Model	Tube O.D. d	T	H1	H2	D1	D2	L1	L2	L3	L4		A*		M1	Wgt. (g)		
										MAX.	MIN.	MAX.	MIN.				
AS22□1FE-01-04SK	4	1/8	12	12	9.3	14.2	20.4	27.5	13.4	53	48	49.9	44.9	12.7	26		
AS22□1FE-01-06SK	6				11.6									20.4	27.5	13.5	27
AS22□1FE-01-08SK	8				15.2									25.3	32.4	18.5	29
AS22□1FE-01-10SK	10				18.5	33.1	40.2	14.1						21	31		
AS22□1FE-02-04SK	4	1/4	17	14	10.4	18.5	25.2	34.4	17.7	51.7	46.7	46.2	41.2	16	36		
AS22□1FE-02-06SK	6				12.8									25.2	34.4	17	37
AS22□1FE-02-08SK	8				15.2									27.2	36.4	18.5	39
AS22□1FE-02-10SK	10				18.5									33.9	43.2	21	42
AS32□1FE-03-06SK	6	3/8	19	14	12.8	23	27.8	39.3	19.8	56.7	51.7	51.5	46.5	16	57		
AS32□1FE-03-08SK	8				15.2									29.5	41	18.5	60
AS32□1FE-03-10SK	10				18.5									31.9	43.3	21	62
AS32□1FE-03-12SK	12				20.9	32.8	44.3							22	64		
AS42□1FE-04-10SK	10	1/2	24	17	18.5	28.6	33.6	47.9	24.5	63.8	58.8	56.5	51.5	21	103		
AS42□1FE-04-12SK	12				20.9									34.6	48.9	22	105

*Reference dimensions of R(PT) thread after being screwed in.

Dimensions

Universal style



Model	Tube O.D. d	T	H1	H2	D1	D2	D3	L1	L2	L3	L4	L5		A*		M1	Wgt. (g)					
												MAX.	MIN.	MAX.	MIN.							
AS23□1FE-01-04SK	4	1/8	12	12	9.3	14.2	9.3	13.1	24.9	17.5	30.9	53	48	49.9	44.9	12.7	26					
AS23□1FE-01-06SK	6				11.6											10.9	14	26.9	22.9	36.3	13.5	27
AS23□1FE-01-08SK	8				15.2											12.9	16.2	30.9	28.2	40.8	18.5	29
AS23□1FE-02-04SK	4	1/4	14	14	10.4	18.5	10.9	16.2	30.6	21.9	39.6	51.7	46.7	46.2	41.2	16	36					
AS23□1FE-02-06SK	6				12.8											18.4	34	25.2	42.1	17	37	
AS23□1FE-02-08SK	8				15.2											12.9	18.3	35.2	28.2	45.1	18.5	39
AS23□1FE-02-10SK	10				18.5											20.2	38.7	31	47.9	21	42	
AS33□1FE-03-06SK	6	3/8	19	14	12.8	23	12.9	20.6	38.5	25.2	45	56.7	51.7	51.5	46.5	17	57					
AS33□1FE-03-08SK	8				15.2											39.7	28.2	48	18.5	60		
AS33□1FE-03-10SK	10				18.5											43.7	32.6	52.4	21	62		
AS33□1FE-03-12SK	12				20.9	16.2	23	44.9	34.4	54.2				22	64							
AS43□1FE-04-10SK	10	1/2	24	17	18.5	28.6	16.2	25.8	49.4	32.6	57.1	63.8	58.8	56.5	51.5	21	103					
AS43□1FE-04-12SK	12				21.7											19.4	26.8	52	36.3	60.8	22	105

*Reference dimensions of R(PT) thread after being screwed in.

Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of “Caution,” “Warning” or “Danger.” They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC) ¹⁾, and other safety regulations.

Caution:

Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.

Warning:

Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.

Danger:

Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

- 1) ISO 4414: Pneumatic fluid power – General rules relating to systems.
ISO 4413: Hydraulic fluid power – General rules relating to systems.
IEC 60204-1: Safety of machinery – Electrical equipment of machines.
(Part 1: General requirements)
- ISO 10218-1: Manipulating industrial robots - Safety.
etc.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery and equipment.

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

3. Do not service or attempt to remove product and machinery/equipment until safety is confirmed.

1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.

4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.

1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

Caution

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries. If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary. If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following “Limited warranty and Disclaimer” and “Compliance Requirements”. Read and accept them before using the product.

Limited warranty and Disclaimer

1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first. ²⁾ Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.
- 2) Vacuum pads are excluded from this 1 year warranty. A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited warranty.

Compliance Requirements

1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

Caution

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country. Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.

Safety Instructions

Be sure to read “Handling Precautions for SMC Products” (M-E03-3) before using.

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