

Flame Resistant (Equivalent to UL-94 Standard V-0) Speed Controller with One-touch Fittings Elbow Type

AS Series

Minimizes installation time
and cost

Tube swivels 360°

Application to inch size tubing

- Metric size
ø6, ø8, ø10, ø12

Maximum operating pressure
1 MPa max.

Applicable tubing materials
FR double layer, FR soft nylon

Comes standard with seal.

Model

Elbow type	Port size	Applicable tubing O.D. (mm)			
		6	8	10	12
AS12□1F-M5-W2	M5	●			
AS22□1F-01-□W2	R1/8	●	●	●	
AS22□1F-02-□W2	R1/4	●	●	●	
AS32□1F-02-□W2	R1/4	●	●	●	●
AS32□1F-03-□W2	R3/8	●	●	●	●
AS42□1F-04-□W2	R1/2			●	●

Note 1) Meter-out and meter-in types can be visually differentiated by the lock nut.

The lock nut on the meter-out type is zinc chromated, while the meter-in type is black zinc chromate plated.

Note 2) ●: Brass parts are electroless nickel plated, provided as standard. (N specifications)

Specifications

Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure	1 MPa
Mini. operating pressure	0.1 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Applicable tubing material ^(Note)	FR double layer, FR Three-layer, FR soft nylon, Nylon, Soft nylon, Polyurethane

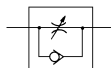
Note) Use caution regarding the max. tubing operating pressure.

(Refer to pages 483 and 484 for details.)

Elbow type



Symbol



Flow Direction Symbols on Body

	Meter-out type	Meter-in type
Indication symbol		
Symbol		

Flow Rate and Sonic Conductance

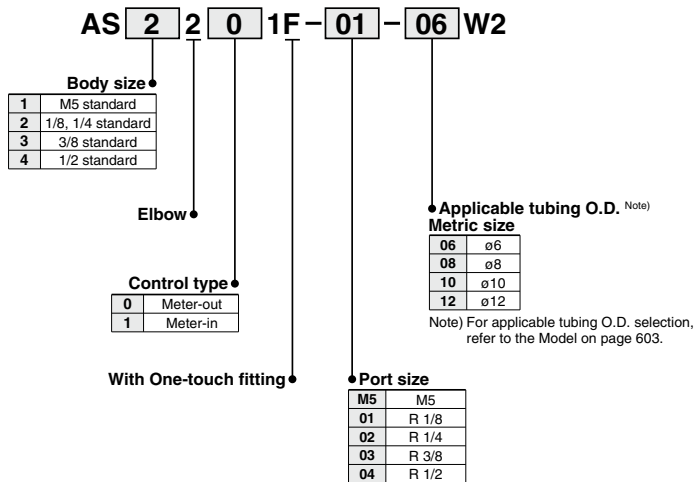
Model	AS12□1F-M5	AS22□1F-01	AS22□1F-02	AS32□1F			AS42□1F			
Tubing O.D. (mm)	ø6	ø6, ø8, ø10	ø6, ø8, ø10	ø6	ø8	ø10, ø12	ø10	ø12		
Controlled flow	Flow rate L/min (ANR)	100	230	390	460	660	790	920	1580	1710
	Sonic conductance dm ³ /(s·bar)	0.28	0.64	1.1	1.3	1.8	2.2	2.6	4.4	4.8
Critical pressure ratio	Controlled flow	0.2	0.25	0.3	0.25			0.25		
	Free flow	0.4	0.2	0.3	0.2			0.3		

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

⚠ Caution

Be sure to read this before handling the products.
Refer to back page 50 for Safety Instructions and pages 543 to 546 for Flow Control Equipment Precautions.

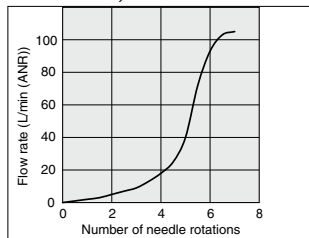
How to Order



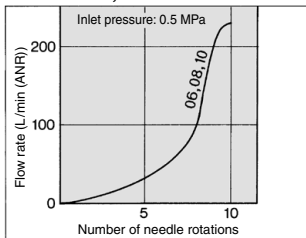
Needle Valve/Flow Rate Characteristics

Note) The flow rate characteristics are representative values.

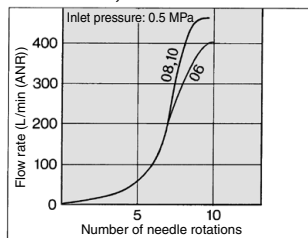
AS1201F-M5, AS1211F-M5



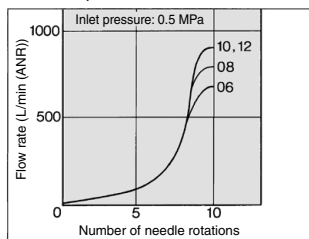
AS2201F-01, AS2211F-01



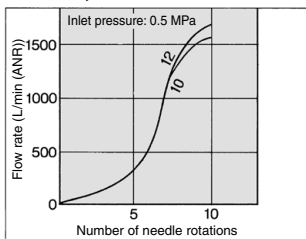
AS2201F-02, AS2211F-02



AS3201F, AS3211F



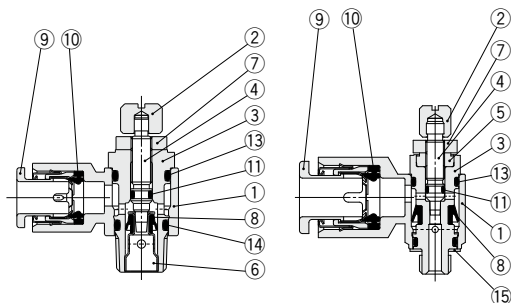
AS4201F, AS4211F



Construction

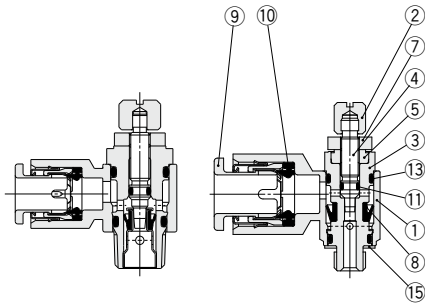
Meter-out type

M5 type



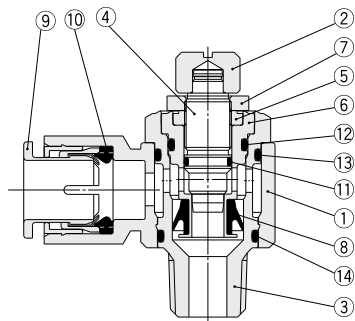
Meter-in type

M5 type

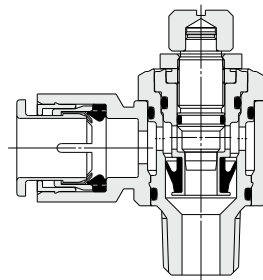


AS32□1F-02

Meter-out type AS3201F-02



Meter-in type AS3211F-02



AS-F
TMH
ASD
AS
AS-FE
KE
AS-FG
AS-FP
AS-FM
AS-D
AS-T
ASP
ASN
AQ
ASV
AK
VCHC
ASR
ASQ

Component Parts

No.	Description	Material	Note
1	Body A	Flame-resistant PBT	
2	Handle	Brass	Electroless nickel plated
3	Body B	Brass	Electroless nickel plated
4	Needle	Brass	Electroless nickel plated
5	Needle guide	Brass	Electroless nickel plated
6	Seat ring	Brass	(1)
7	Lock nut	Steel	Meter-out Zinc chromate plated Meter-in Black zinc chromate plated
8	U-packing	HNBR	
9	Cassette	—	
10	Seal	NBR	
11	O-ring	NBR	
12	O-ring	NBR	
13	O-ring	NBR	
14	O-ring	NBR	
15	Gasket	Stainless steel, NBR	

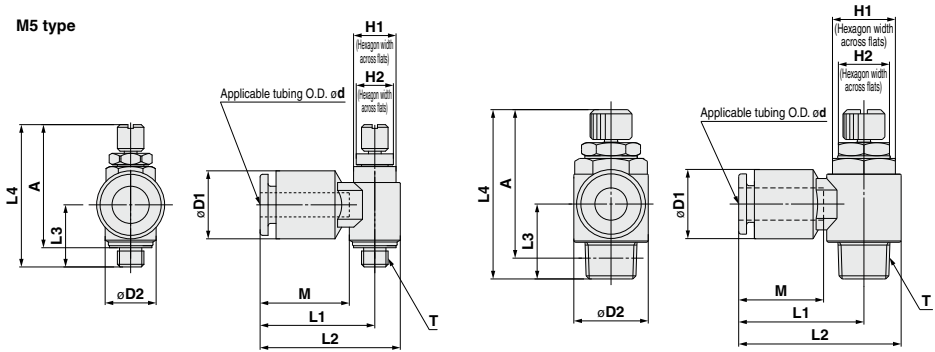
Note 1) AS22□1F, AS32□1F: Electroless nickel plated.

AS Series



Elbow Type

M5 type



Metric Size

Model	Applicable tubing O.D. ød	T	H1	H2	D1	D2	L1	L2	L3	L4 ⁽¹⁾		A ⁽²⁾		M	Weight (g)				
										Max.	Min.	Max.	Min.						
AS12□1F-M5-06W2	6	M5 x 0.8	8	6	11.6	9.6	18.1	22.9	11.7	28.8	26	25.2	22.4	13.5	9				
AS22□1F-01-06W2	6	R 1/8	12	10	13.2	14.2	23.9	31	13.4	36.4	31.4	33.3	28.3	17	19				
AS22□1F-01-08W2	8				15.2		32.4	18.5						32.1	39.2	15.2	18.5	21	23
AS22□1F-01-10W2	10				18.5		32.1	39.2						15.2	18.5	21	23		
AS22□1F-02-06W2	6	R 1/4	17	12	13.2	18.5	25.2	34.4	17.7	41.1	36.1	35.6	30.6	17	34				
AS22□1F-02-08W2	8				15.2		36.4	18.5						35.3	44.5	18.3	18.5	36	
AS22□1F-02-10W2	10				18.5		35.3	44.5						18.3	18.5	21	38		
AS32□1F-02-06W2	6	R 1/4	19	14	13.2	23	27.8	39.3	21.3	49.9	44.9	44.4	39.4	17	63				
AS32□1F-02-08W2	8				15.2		41	18.5						31.5	43.1	18.5	65		
AS32□1F-02-10W2	10				18.5		41	18.5						31.5	43.1	21	67		
AS32□1F-02-12W2	12	R 3/8	19	14	20.9	23	32.8	44.3	19.8	47.4	42.4	42.4	37.4	22	69				
AS32□1F-03-06W2	6				13.2		39.3	18.5						31.5	43.1	17	58		
AS32□1F-03-08W2	8				15.2		41	18.5						31.5	43.1	18.5	60		
AS32□1F-03-10W2	10	R 3/8	19	14	18.5	23	32.8	44.3	19.8	47.4	42.4	42.4	37.4	21	62				
AS32□1F-03-12W2	12				20.9		44.3	22						64					
AS42□1F-04-10W2	10	R 1/2	24	17	18.5	28.6	33.6	47.9	24.5	58.7	51.2	51.4	43.9	21	101				
AS42□1F-04-12W2	12				20.9		49.5	22						107					

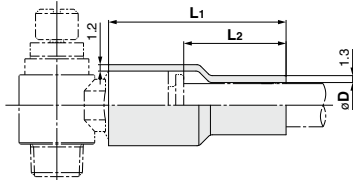
Note 1) Reference dimensions

Note 2) Reference thread dimensions after installation.

Related Equipment

Flame Resistant (Equivalent to UL-94 Standard V-0) Spatter Cover

(Applicable tubing: FR double layer/TRB, TRBU FR three layer/TRTU)

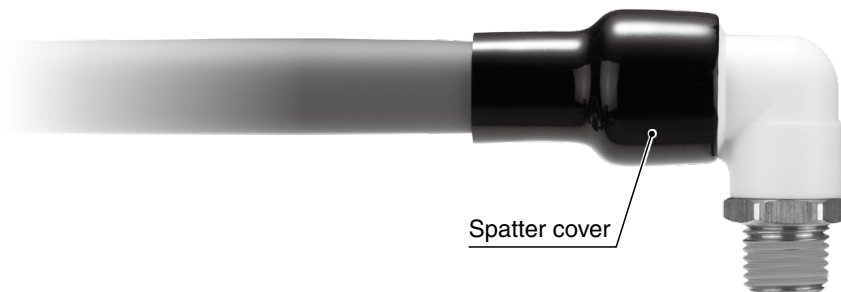
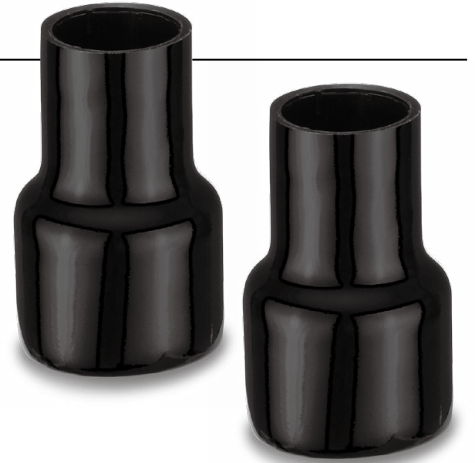


Model	Applicable tubing O.D.	øD	L1	L2	(mm)
KR-06C-X1807	6	8.5	33.3	19.2	
KR-08C-X1807	8	10.5	34.5	19.3	
KR-10C-X1807	10	12.5	37.2	20.2	
KR-12C-X1807	12	14.5	37.9	20.2	




Note) Sales unit: 10 pcs.

Flame Resistant (Equivalent to UL-94 Standard V-0) Spatter Cover

- Prevents the adhesion and entry of welding spatter
- Uses a flame-retardant material (Equivalent to UL-94 Standard V-0 Soft PVC)



■ Applicable model and size

Applicable fitting Applicable speed controller	Applicable tubing	FR One-touch Fitting KR-W2 Series	Flame Resistant Speed Controller with One-touch Fitting AS-W2 Series	Flame Resistant Flat Head Screwdriver Adjustable Speed Controller AS-W2D Series
				
ø6		KR□06-□□W2*1	AS□2□1F-□-06W2	AS□2□1F-□-06W2D
ø8		KR□08-□□W2*1	AS□2□1F-□-08W2	AS□2□1F-□-08W2D
ø10		KR□10-□□W2*1	AS□2□1F-□-10W2	AS□2□1F-□-10W2D
ø12		KR□12-□□W2*1	AS□2□1F-□-12W2	AS□2□1F-□-12W2D
Applicable tubing O.D. (Inner tubing O.D.)		FR double layer/TRB, TRBU FR three layer/TRTU		
Ambient temperature		-5 to 60°C		

*1 This product cannot be used with fittings such as KRU (union "Y") that have tube insertion parts close to each other.
For KRH (male connector) and KRE (bulkhead union) fittings, this product can only protect the release button and resin component parts.

*2 Sales unit: 10 pcs.

KR-□C-X1807



21-E776

KR-□C-X1807

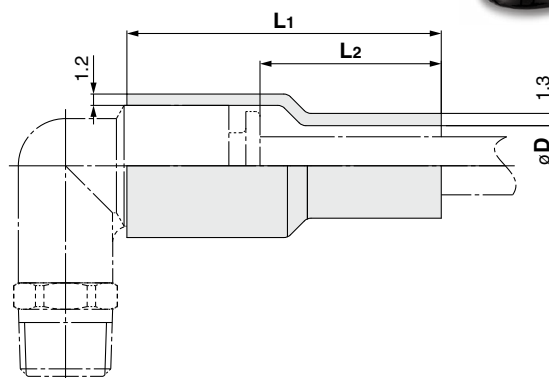
How to Order

KR-**08**C-X1807

• Applicable tubing O.D.

06	ø6
08	ø8
10	ø10
12	ø12

Dimensions



[mm]

Model	Applicable tubing O.D.	øD	L1	L2
KR-06C-X1807	6	8.5	33.3	19.2
KR-08C-X1807	8	10.5	34.5	19.3
KR-10C-X1807	10	12.5	37.2	20.2
KR-12C-X1807	12	14.5	37.9	20.2

⚠ Safety Instructions Be sure to read the "Handling Precautions for SMC Products" (M-E03-3) and "Operation Manual" before use.