

Speed Controller with One-touch Fittings

Series AS

Elbow Style, Universal Style

Minimizes installation time and cost

Reduces the mounting height and enables compact machinery design. Effective area is larger than the former model.

Tube swivels 360°

Universal style permits 360° piping swivel.

Application to inch size tubing

•Metric size (Release bushing: White color)
ø3.2, ø4, ø6, ø8, ø10, ø12

•Inch size (Release bushing: Orange color)
ø1/8", ø5/32", ø3/16", ø1/4", ø5/16", ø3/8", ø1/2"

Operating pressure 1MPa max.

Accepts

Nylon, Soft nylon and Polyurethane tubing.

Retainer prevents accidental loss of needle

Optional: Hexagonal lock nut, Nickel plated option

Number of needle rotations has been increased (8 to 10 turns)

The increased number of needle rotations (8 to 10 turns) permits easier control at lower speed.

Model

Elbow	Universal	Port size	Applicable tube 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"	
AS12□1F-M3	AS13□1F-M3	M3	●	●						●	●						2.5, 4, 6
AS12□1F-M5	AS13□1F-M5	M5	●	●	●					●	●						6, 10, 16, 20
AS12□1F-U10/32	AS13□1F-U10/32	10-32UNF	●	●	●					●	●						6, 10, 16, 20
AS22□1F-01	AS23□1F-01	R(PT)1/8	●	●	●	●	●	*		●	●	●	●	●	●		20, 25, 32
AS22□1F-02	AS23□1F-02	R(PT)1/4		●	●	●	●	●			●	●	●	●	●	●	20, 25, 32, 40
AS32□1F-02	AS33□1F-02	R(PT)1/4			●	●	●	●	●				●	●	●	●	40, 50, 63
AS32□1F-03	AS33□1F-03	R(PT)3/8			●	●	●	●	●				●	●	●	●	40, 50, 63
AS42□1F-04	AS43□1F-04	R(PT)1/2						●	●						●	●	63, 80, 100

Note 1) *Only elbow style.

Note 2) Distinction between meter-out/meter-in types by appearance.

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

Note 3) ●: Nickel plated model is standard.

Specifications

Proof pressure	1.5MPa
Max. operating pressure	1MPa
Min. operating pressure	0.1MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Number of needle rotations	10 turns (8 turns ⁽¹⁾)
Applicable tubes ⁽²⁾	Nylon, Soft nylon, Polyurethane
Option	Sealant ⁽³⁾ , Hexagon lock nut, Electroless nickel plated ⁽⁴⁾

Note 1) AS12□1F-M5, AS12□1F-U10/32
AS13□1F-M5, AS13□1F-U10/32

Note 2) Pay attention to the maximum operating pressure when soft nylon or Polyurethane is used. (Refer to p.2.4-2 and 2.4-3 in "Best Pneumatics No.4" for further information.)

Note 3) Nickel plated AS12□1F and AS13□1F are standard, not equipped with a seal.

Note 4) Brass parts are all electroless nickel plated.

Air Flow/Effective Area

Model		AS12□1F-M3 AS13□1F-M3	AS12□1F-M5 AS13□1F-M5	AS22□1F-01 AS23□1F-01	AS22□1F-02 AS23□1F-02	AS32□1F AS33□1F			AS42□1F AS43□1F		
Tube O.D.	Metric size	ø3.2, ø4	ø3.2, ø4, ø6	ø3.2, ø4 ø6, ø8, ø10	ø4 ø6 ø8, ø10	ø6 ø8 ø10, ø12	ø10 ø12				
	Inch size	ø1/8", ø5/32"	ø1/8", ø5/32"	ø1/8", ø5/32" ø3/16", ø1/4", ø5/16"	ø5/32" ø3/16" ø1/4", ø5/16", ø3/8"	ø1/4" ø5/16"	ø3/8"	ø1/2"			
Controlled (Free) flow	Air (d/min(ANR))	20	100	180	230	260 390	460	660 790	920	1580 1710	
	Eff. area (mm²)	0.3	1.5	2.7	3.5	4 6	7	10 12	14	24 26	

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

U10/32 has the same specification as M5.

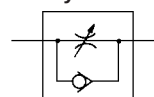
Elbow style



Universal style



JIS Symbol



Indication of air flow direction on body

	Meter-out	Meter-in
Symbol		
JIS Symbol		

Caution

Be sure to read before handling.
Refer to p.0-20 and 0-21 for Safety Instructions and common precautions on the products mentioned in this catalogue, and refer to p.4.0-3 to 4.0-5 for precautions on every series.

With One-touch Fittings: Elbow/Universal Style *Series AS*

How to Order

AS 2 2 1 1F — 01 — 06 S

Body size

1	M3, M5 standard
2	1/8, 1/4 standard
3	3/8 standard
4	1/2 standard

Style

2	Elbow
3	Universal

Control

0	Meter out
1	Meter in

With One-touch fittings

Thread

—	Meter thread (M3, M5)
—	Unified thread (10-32UNF)
—	R(PT)
N	NPT

Option

—	None
S	With sealant
K	Hexagon lock nut
N	Electroless nickel plating

*If more than one option is required, write option parts numbers in the order of "S", "K", "N".

Applicable tube O.D.

Millimeter	Inch
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"

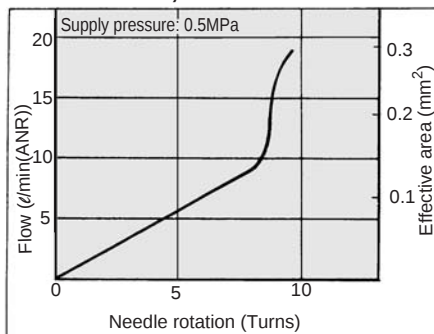
*ø1/8" tube should be used.

Port size

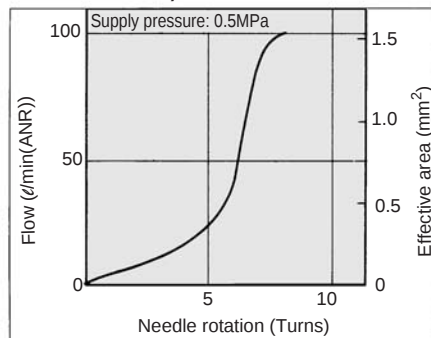
M3	M3
M5	M5
U10/32	10-32UNF
01	1/8
02	1/4
03	3/8
04	1/2

Needle Valve/Flow Characteristics

**AS1201F-M3, AS1211F-M3
AS1301F-M3, AS1311F-M3**

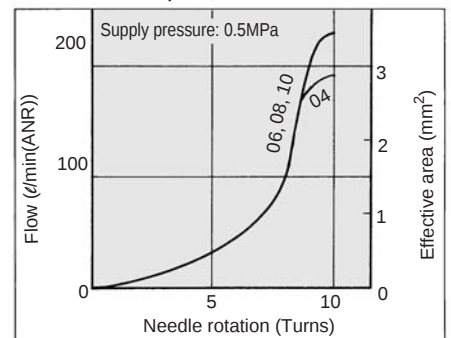


**AS1201F-M5, AS1211F-M5
AS1301F-M5, AS1311F-M5**

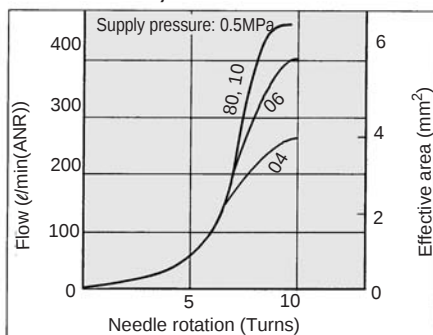


Note) "-U10/32" is the same as "M5".

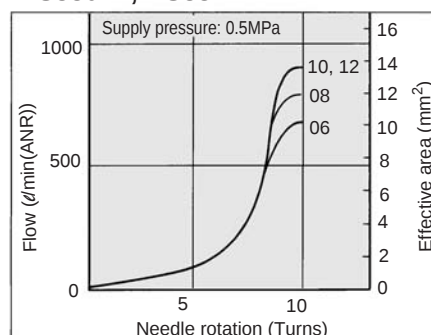
**AS2201F-01, AS2211F-01
AS2301F-01, AS2311F-01**



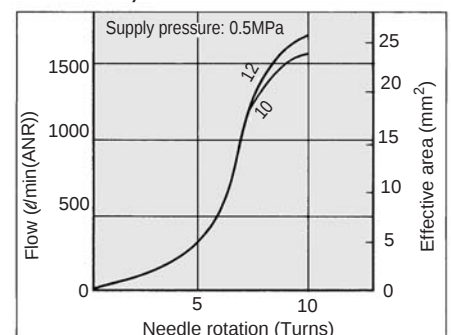
**AS2201F-02, AS2211F-02
AS2301F-02, AS2311F-02**



**AS3201F, AS3211F
AS3301F, AS3311F**



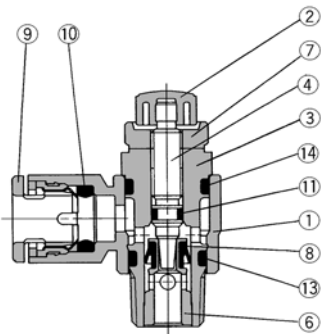
**AS4201F, AS4211F
AS4301F, AS4311F**



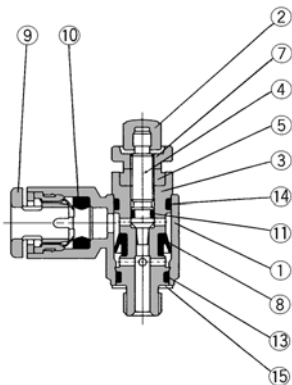
Series AS

Construction

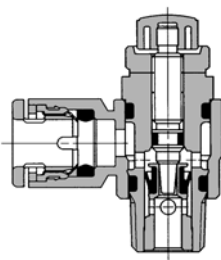
Elbow style
Meter-out



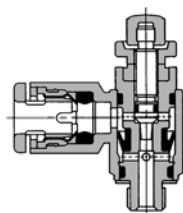
M3 port
M5 port
U10/32 port



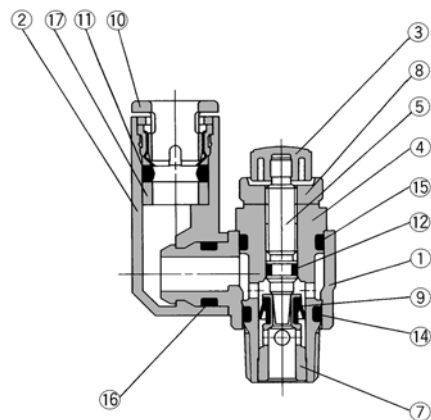
Meter-in



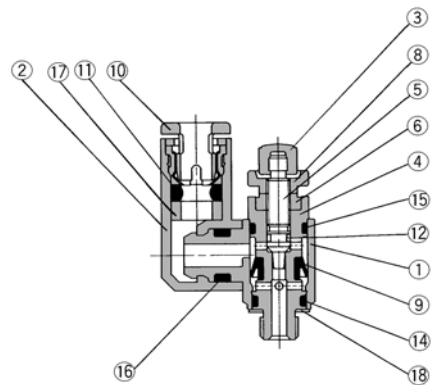
M3 port
M5 port
U10/32 port



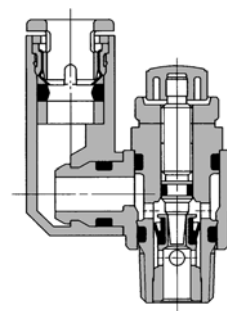
Universal style
Meter-out



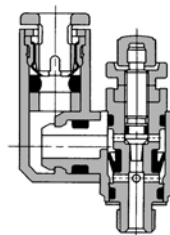
M3 port
M5 port
U10/32 port



Meter-in



M3 port
M5 port
U10/32 port

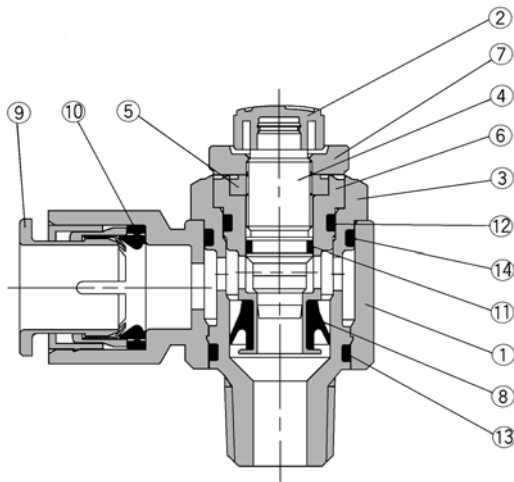


With One-touch Fittings: Elbow/Universal Style *Series AS*

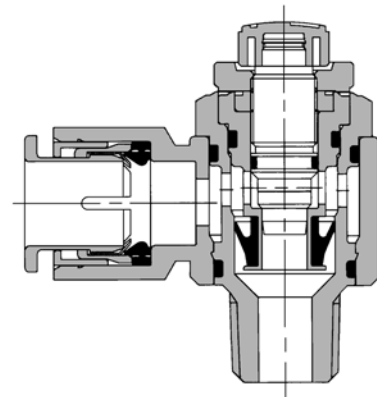
Construction

Elbow style

Meter-out AS3201F-02



Meter-in AS3211F-02



Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Handle	PBT	
③	Body B	Brass ⁽¹⁾	Electroless nickel plated
④	Needle	Brass	Electroless nickel plated
⑤	Needle guide	Brass	Electroless nickel plated
⑥	Seat ring	Brass	See Note 2
⑦	Lock nut	Brass ⁽³⁾	
⑧	U-packing	NBR	Electroless nickel plated ⁽⁴⁾
⑨	Cassette	POM, Stainless steel	
⑩	Packing	NBR	
⑪	O ring	NBR	
⑫	O ring	NBR	
⑬	O ring	NBR	
⑭	O ring	NBR	
⑮	Gasket	NBR, Stainless steel	

Note 1) AS12□1F-M3: Stainless

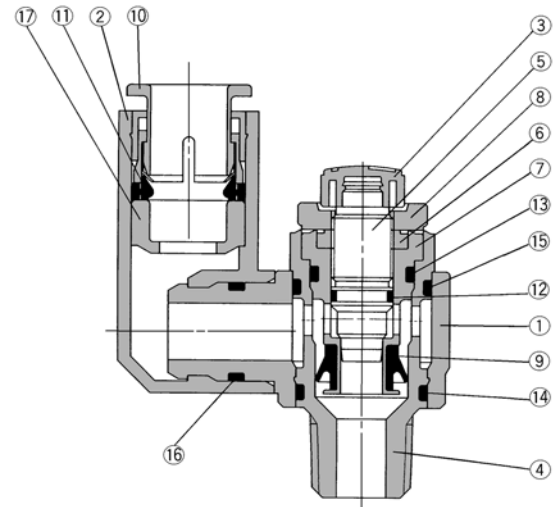
Note 2) AS32□1F-02: Electroless nickel plated

Note 3) AS2□□1F: Steel

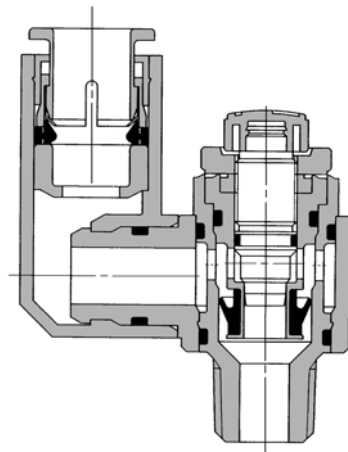
Note 4) Meter-in type: Black zinc chromated

Universal style

Meter-out AS3301F-02



Meter-in AS3311F-02



Component Parts

No.	Description	Material	Note
①	Body A	PBT	
②	Elbow body	PBT	
③	Handle	PBT	
④	Body B	Brass ⁽¹⁾	Electroless nickel plated
⑤	Needle	Brass	Electroless nickel plated
⑥	Needle guide	Brass	Electroless nickel plated
⑦	Seat ring	Brass	See Note 2
⑧	Lock nut	Brass ⁽³⁾	Electroless nickel plated ⁽⁴⁾
⑨	U-packing	NBR	
⑩	Cassette	POM, Stainless steel	
⑪	Packing	NBR	
⑫	O ring	NBR	
⑬	O ring	NBR	
⑭	O ring	NBR	
⑮	O ring	NBR	
⑯	O ring	NBR	
⑰	Spacer	POM ⁽⁵⁾	
⑱	Gasket	NBR, Stainless steel	

Note 1) AS13□1F-M3: Stainless

Note 2) AS33□1F-02: Electroless nickel plated

Note 3) AS2□□1F: Steel

Note 4) Meter-in type: Black zinc chromated

Note 5) ø3/16", ø1/4", ø3/8", ø1/2": Brass

AS

ASN

AQ

ASV

AK

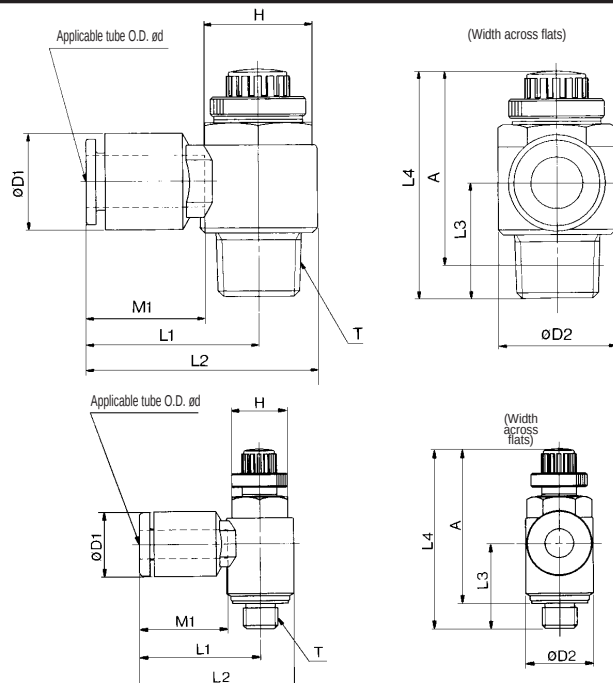
ASS

Series AS



Elbow Style

M3 port
M5 port
U10/32 port



Metric

Model	Tube O.D. d	T	H ⁽¹⁾	D1	D2	L1	L2	L3	L4		A ⁽²⁾		M1	Weight (g)
									MAX.	MIN.	MAX.	MIN.		
AS12□1F-M3-23	3.2	M3	5.5	8.4	7.2	16.1	19.7	10.5	26.6	24.1	24	21.5	12.7	4
AS12□1F-M3-04	4			9.3	7.2	16.1	19.7	10	26.6	24.1	24	21.5	12.7	4
AS12□1F-M5-23	3.2	M5	8	8.4	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-23	4			9.3	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-M5-04	4	10-32UNF	8	9.3	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-04	6			11.6	7.2	18.1	22.9	11.7	28.6	25.8	25	22.2	12.7	7
AS12□1F-M5-06	6	10-32UNF	8	11.6	7.2	18.1	22.9	11.7	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-06	6			11.6	7.2	18.1	22.9	11.7	28.6	25.8	25	22.2	12.7	7
AS22□1F-01-23	3.2	R(PT) 1/8	12 (12.7)	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-04	4			9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-06	6	R(PT) 1/8	12 (12.7)	11.6	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-08	8			15.2	14.2	25.3	32.4	15	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-10	10	R(PT) 1/8	12 (12.7)	18.5	14.2	33.1	40.2	15	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-02-04	4			10.4	14.2	25.2	34.4	18.2	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-02-06	6	R(PT) 1/4	17 (17.5)	12.8	18.5	25.2	34.4	18.2	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-08	8			15.2	18.5	27.2	36.4	20	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-10	10	R(PT) 1/4	17 (17.5)	18.5	18.5	33.9	43.2	20	40.4	35.4	34.4	29.4	18.5	34
AS32□1F-02-06	6			12.8	18.5	27.8	39.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-02-08	8	R(PT) 3/8	19	15.2	23	29.5	41	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-02-10	10			18.5	23	31.8	43.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-02-12	12	R(PT) 3/8	19	20.9	23	32.8	44.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-03-06	6			12.8	23	27.8	39.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-03-08	8	R(PT) 3/8	19	15.2	23	29.5	41	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-03-10	10			18.5	23	31.8	43.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-03-12	12	R(PT) 1/2	24 (23.8)	20.9	28.6	32.8	44.3	25.4	57.6	50.1	49.6	42.1	21	100
AS42□1F-04-10	10			18.5	28.6	33.6	47.9	25.4	57.6	50.1	49.6	42.1	21	100
AS42□1F-04-12	12	R(PT) 1/2	24 (23.8)	20.9	28.6	34.6	48.9	25.4	57.6	50.1	49.6	42.1	21	100
AS42□1F-04-14	14			23.8	28.6	37.6	51.9	25.4	57.6	50.1	49.6	42.1	21	100

Note 1) () are the dimensions of NPT thread.

Note 2) Reference thread dimensions after being screwed in.

Inch

Model	Tube O.D. d	T	H ⁽¹⁾	D1	D2	L1	L2	L3	L4		A ⁽²⁾		M1	Weight (g)
									MAX.	MIN.	MAX.	MIN.		
AS12□1F-M3-01	1/8"	M3	5.5	8.4	7.2	16.1	19.7	10.5	26.6	24.1	24	21.5	12.7	4
AS12□1F-M3-03	5/32"			9.3	7.2	16.1	19.7	10	26.6	24.1	24	21.5	12.7	4
AS12□1F-M5-01	1/8"	M5	8	8.4	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-01	1/8"			9.3	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-M5-03	5/32"	10-32UNF	8	9.3	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1F-U10/32-03	5/32"			9.3	7.2	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS22□1F-01-01	1/8"	1/8	12 (12.7)	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-03	5/32"			9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-05	3/16"	1/8	12 (12.7)	11.4	14.2	23.1	30.2	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-07	1/4"			13.2	14.2	23.9	31	15	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-01-09	5/16"	1/4	17 (17.5)	15.2	14.2	25.3	32.4	15	36.1	31.1	32.1	27.1	12.7	16
AS22□1F-02-03	5/32"			10.4	14.2	25.2	34.4	18.2	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-05	3/16"	1/4	17 (17.5)	11.4	14.2	24.9	34.2	18.2	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-07	1/4"			13.2	14.2	25.2	34.5	20	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-09	5/16"	1/4	17 (17.5)	15.2	14.2	27.2	36.4	20	40.4	35.4	34.4	29.4	18.5	34
AS22□1F-02-11	3/8"			17.9	14.2	33.9	43.2	20	40.4	35.4	34.4	29.4	18.5	34
AS32□1F-02-07	1/4"	1/4	17 (17.5)	13.2	18.5	27.8	39.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-02-09	5/16"			15.2	18.5	29.5	41	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-02-11	3/8"	1/4	17 (17.5)	17.9	18.5	31.8	43.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-03-07	1/4"			13.2	18.5	27.8	39.3	21.8	48.8	43.8	42.8	37.8	18.5	63
AS32□1F-03-09	5/16"	3/8	19	15.2	23	29.5	41	20.9	46.5	41.5	40.2	35.2	18.5	57
AS32□1F-03-11	3/8"			17.9	23	31.8	43.3	20.9	46.5	41.5	40.2	35.2	18.5	57
AS42□1F-04-11	3/8"	1/2	24 (23.8)	17.9	28.6	33.6	47.9	25.4	57.6	50.1	49.6	42.1	21	100
AS42□1F-04-13	1/2"			21.7	28.6	35.2	49.5	25.4	57.6	50.1	49.6	42.1	21	100

Note 1) () are the dimensions of NPT thread.

Note 2) Reference thread dimensions after being screwed in.

Elbow Style

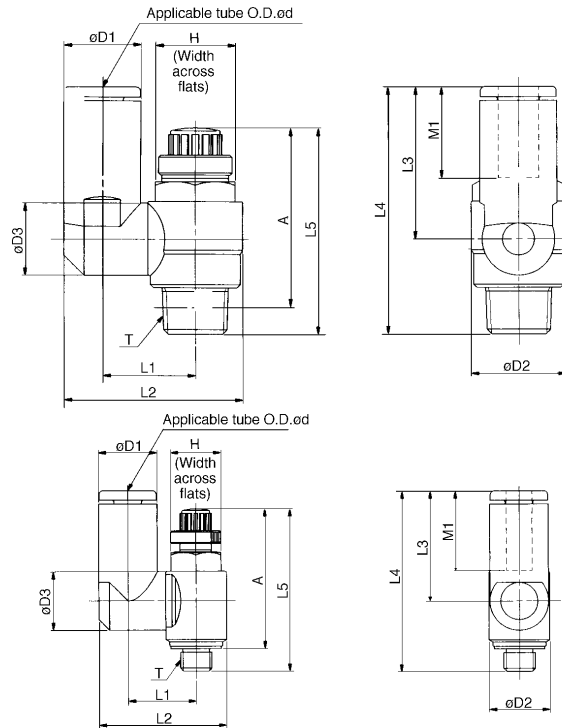
File	Model	Port size	Detail No.				
			Tube O.D.				
SAS21F1N	AS12□1F-M3-□	M3	#1	#2	#3	#4	#5
	AS12□1F-M5-□	M5	#6	#7	#8	#9	#10
	AS22□1F-01-□S	R(PT)1/8	#11	#12	#13	#14	#15
	AS22□1F-02-□S	R(PT)1/4	#16	#17	#18	#19	#20
	AS32□1F-03-□S	R(PT)3/8	#21	#22	#23	#24	#25
	AS42□1F-04-□S	R(PT)1/2	#26	#27	#28	#29	#30

With One-touch Fittings: Elbow/Universal Style *Series AS*



Universal Style

M3 port
M5 port
U10/32 port



Metric

Model	d	T	H ⁽¹⁾	D1	D2	D3	L1	L2	L3	L4	L5		A ⁽²⁾		M1	Weight (g)
											MAX.	MIN.	MAX.	MIN.		
AS13□1F-M3-23	3.2	M3	5.5	8.4	7.2	7.2	10.1	17.9	17.6	28.3	26.6	24.1	24	21.5	12.7	4
AS13□1F-M3-04	4			9.3	7.2	7.2	10.1	18.3	17.9	28.6	26.6	24.1	24	21.5	12.7	5
AS13□1F-M5-23	3.2	M5	8	8.4				19.8							12.7	7
AS13□1F-U10/32-23	3.2			8.4				17.5	28.7						12.7	7
AS13□1F-M5-04	4	M5	8	9.3	9.6	9.3	10.8	20.3			28.6	25.8	25	22.2		
AS13□1F-U10/32-04	4			9.3	9.6	9.3	10.8	20.3			28.6	25.8	25	22.2		
AS13□1F-M5-06	6	M5	10-32UNF	11.6				21.4	20.6	31.8					13.5	
AS13□1F-U10/32-06	6			11.6				21.4	20.6	31.8					13.5	
AS23□1F-01-23	3.2	1/8	12 (12.7)	8.4		9.3	13.1	24.4	17.5	31.8					12.7	17
AS23□1F-01-04	4			9.3	14.2			24.9			36.1	31.1	32.1	27.1	16.5	18
AS23□1F-01-06	6	1/8	12 (12.7)	11.6		10.9	14	26.9	22.9	37.2					13.5	
AS23□1F-01-08	8			15.2		12.9	16.2	30.9	28.2	41.7					18.5	21
AS23□1F-02-04	4	1/4	17 (17.5)	10.4		10.9	16.2	30.6	21.9	40.1					16	32
AS23□1F-02-06	6			12.8	18.5	12.9	18.4	34	25.2	42.6	40.4	35.4	34.4	29.4	17	33
AS23□1F-02-08	8	1/4	17 (17.5)	15.2		12.9	18.3	35.2	28.2	45.6					18.5	36
AS23□1F-02-10	10			18.5		12.9	20.2	38.7	31	48.4					21	40
AS33□1F-02-06	6	1/4	17 (17.5)	12.8		12.9	20.6	38.5	25.2	47					17	60
AS33□1F-02-08	8			15.2	23	12.9	20.6	39.7	28.2	50	48.8	43.8	42.8	37.8	18.5	63
AS33□1F-02-10	10	1/4	17 (17.5)	18.5		12.9	23	43.7	32.6	54.4					21	67
AS33□1F-02-12	12			20.9		16.2	23	44.9	34.4	56.2					22	69
AS33□1F-03-06	6	3/8	19	12.8		12.9	20.6	38.5	25.2	46.1					17	56
AS33□1F-03-08	8			15.2	23	12.9	20.6	39.7	28.2	49.1	46.5	41.5	40	35	18.5	59
AS33□1F-03-10	10	3/8	19	18.5		12.9	23	43.7	32.6	53.5					21	63
AS33□1F-03-12	12			20.9		16.2	23	44.9	34.4	55.3					22	65
AS43□1F-04-10	10	1/2	24 (23.8)	18.5	28.6	16.2	25.8	49.4	32.6	58	57.6	50.1	49.6	42.1	21	104
AS43□1F-04-12	12			21.7		19.4	26.8	52	36.3	61.7					22	106

Note 1) () are the dimensions of NPT thread

Note 2) Reference thread dimensions after being screwed in

Inch

Model	Tube O.D. d	T	H ⁽¹⁾	D1	D2	D3	L1	L2	L3	L4	L5		A ⁽²⁾		M1	Weight (g)								
											MAX.	MIN.	MAX.	MIN.										
AS13□1F-M3-01	1/8"	M3	5.5	8.4	7.2	7.2	10.1	17.9	17.6	28.3	26.6	24.1	24	21.5	12.7	4								
AS13□1F-M3-03	5/32"			9.3				18.3	17.9	28.6						5								
AS13□1F-M5-01	1/8"	M5	8	8.4	9.6	9.3	10.8	19.8	17.5	28.7	28.6	25.8	25	22.2	12.7	7								
AS13□1F-U10/32-01	1/8"			10-32UNF																				
AS13□1F-M5-03	5/32"	M5																						
AS13□1F-U10/32-03	5/32"	10-32UNF																						
AS23□1F-01-01	1/8"	1/8	12 (12.7)	8.4	14.2	10.9	14	24.4	17.5	31.8	36.1	31.1	32.1	27.1	12.7	17								
AS23□1F-01-03	5/32"			9.3				24.9							16.5	18								
AS23□1F-01-05	3/16"			11.6				26.8							23.9	31.8	17	19						
AS23□1F-01-07	1/4"			13.2				29.9							25.6	37.2	18.5	21						
AS23□1F-01-09	5/16"			15.2				30.9							28.2	41.7								
AS23□1F-02-03	5/32"			10.4				30.6							21.9	40.1	16	32						
AS23□1F-02-05	3/16"	1/4	17 (17.5)	11.6	18.5	10.9	16.2	31.1	23.9	42.6	40.4	35.4	34.4	29.4	16.5	33								
AS23□1F-02-07	1/4"			13.2				18.3							34.2	25.6	45.6	17	36					
AS23□1F-02-09	5/16"			15.2				18.3							35.2	28.2	48.4	18.5	39					
AS23□1F-02-11	3/8"			18.5				20.2							38.7	31	47	21	40					
AS33□1F-02-07	1/4"			13.2				12.9							20.6	38.7	25.6	50	17	60				
AS33□1F-02-09	5/16"			15.2				23							12.9	20.6	39.7	28.2	54.4	48.8	43.8	42.8	37.8	18.5
AS33□1F-02-11	3/8"	3/8	19	18.5	12.9	23	43.7	32.6	56.2	21	69													
AS33□1F-03-07	1/4"			13.2				12.9				20.6	38.7	25.6	46.1	17	56							
AS33□1F-03-09	5/16"			15.2				23				12.9	20.6	39.7	28.2	49.1	46.5	41.5	40.2	35.2	18.5	59		
AS33□1F-03-11	3/8"			18.5				12.9				23	43.7	32.6	53.5	21	65							
AS43□1F-04-11	3/8"			1/2				24 (23.8)				18.5	28.6	16.2	25.8	49.4	32.6	55.3	57.6	50.1	49.6	42.1	21	104
AS43□1F-04-13	1/2"											21.7											19.4	26.8

Note 1) () are the dimensions of NPT thread

Note 2) Reference thread dimensions after being screwed in

Universal Style

File	Model	Port size	Detail No.					
			Tube O.D.					
			3.2	4	6	8	10	12
SAS31F1N	AS13 □1F-M3-□	M3	#1	#2	—	—	—	—
	AS13 □1F-M5-□	M5	#3	#4	#5	—	—	—
	AS23 □1F-01-□S	R(PT)1/8	#6	#7	#8	#9	—	—
	AS23 □1F-02-□S	R(PT)1/4	—	#10	#11	#12	#13	—
	AS33 □1F-03-□S	R(PT)3/8	—	—	#14	#15	#16	#17
	AS43 □1F-04-□S	R(PT)1/2	—	—	—	—	#18	#19