

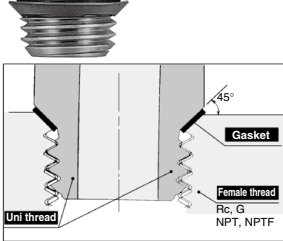
Speed Controller with Uni One-touch Fitting

Push-lock type

AS Series



New-stand male threads for piping that reduces the screw-in time by 1/3.



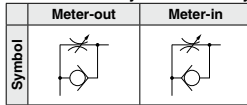
Shape of Uni thread ridge

Use of the chamfered surface of the female thread as the seat surface and adoption of gaskets made by laminating NBR on both surfaces of stainless steel plates achieve secure sealing regardless of the difference of diameters due to the female thread type, deviations due to the tolerance, or the size of the chamfered corner. (Any standard chamfered female thread can be used.)

A ridge shape has been created as a Uni thread for common applications for Rc, G, NPT and NPTF.

The gasket seal method drastically cuts piping work-hours.

Flow Direction Symbols on Body



Caution

Be sure to read this before handling the products. Refer to page 11 for safety instructions, pages 19 to 22 for flow control equipment precautions, and pages 797 to 799 for specific product precautions.

Model

Model		Uni thread size	Applicable tubing O.D.												
			Metric size					Inch size							
Elbow type	Universal type		3.2	4	6	8	10	12	16	1/8"	5/32"	1/4"	5/16"	3/8"	1/2"
AS22□1F-U01	AS23□1F-U01	1/8	●	●	●	●	● (Note)			●	●	●	●		
AS22□1F-U02	AS23□1F-U02	1/4	● (Note)	●	●	●	●			● (Note)	●	●	●	●	
AS32□1F-U02	AS33□1F-U02	1/4		●	●	●	●					●	●	●	
AS32□1F-U03	AS33□1F-U03	3/8			●	●	●	●				●	●	●	
AS42□1F-U04	AS43□1F-U04	1/2					●	●	● (Note)					●	●

Note) Universal type is not available.

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)
Applicable tubing material	Nylon, Soft nylon, Polyurethane (Note)

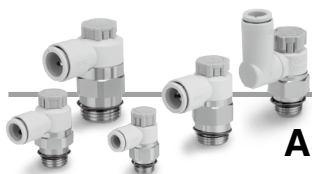
Note) Use caution at the max. operating pressure when using soft nylon or polyurethane tubing. (Refer to pages 678 and 682 for details.)

Flow Rate and Sonic Conductance

Model		AS22□1F-U01 AS23□1F-U01			AS22□1F-U02 AS23□1F-U02			AS32□1F AS33□1F		AS42□1F AS43□1F			
Tubing O.D.	Metric size	ø3.2	ø4	ø6 ø8 ø10	ø3.2	ø4	ø6 ø8 ø10	ø6	ø8 ø10 ø12	ø10	ø12 ø16		
	Inch size	ø1/8"	ø5/32"	ø1/4" ø5/16"	ø1/8"	ø5/32"	—	ø1/4" ø5/16" ø3/8"	ø1/4"	ø5/16"	ø3/8"	ø3/8"	ø1/2"
C values: Sonic conductance dm ³ (s-bar)	Free flow	0.4	0.6	0.6	0.7	1.0	1.3	1.5	1.6	1.7	2.5	4.4	4.8
	Controlled flow	0.4	0.7	0.8	0.6	0.9	1.3	2.1	2.4	3.3	4.4	4.9	
b values: Critical pressure ratio	Free flow	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3				
	Controlled flow	0.2	0.3	0.3	0.3	0.4	0.4	0.3	0.3				

Note) C and b values are for controlled flow with the needle fully open and free flow with the needle fully closed.

AS Series



How to Order



AS 2 2 0 1 F - U01 - 06 A

Body size

2	1/8, 1/4
3	3/8
4	1/2

Type

2	Elbow
3	Universal

Control type

0	Meter-out
1	Meter-in

* Meter-out and meter-in types can be visually identified by color of the knob.
Meter-out: Gray
Meter-in: Light blue

With One-touch fitting

Port size

U01	Uni 1/8
U02	Uni 1/4
U03	Uni 3/8
U04	Uni 1/2

• Push-lock type

• Applicable tubing O.D. ^{Note 1)}

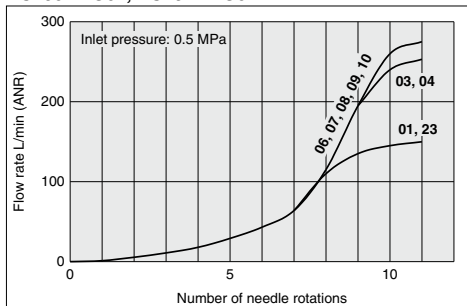
Metric size		Inch size	
Tubing O.D.		Tubing O.D.	
23	ø3.2 ^{Note 2)}	01	ø1/8"
04	ø4	03	ø5/32"
06	ø6	07	ø1/4"
08	ø8	09	ø5/16"
10	ø10	11	ø3/8"
12	ø12	13	ø1/2"
16	ø16		

Note 1) For selecting applicable tubing O.D., refer to the "Model" on page 871. Metric size and inch size types can be visually identified by color of the release button.
Metric size: Light gray
Inch size: Orange

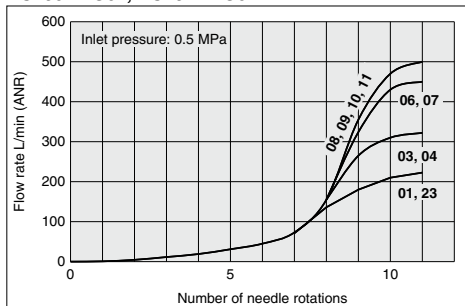
Note 2) Use ø1/8" tube.

Needle Valve/Flow Rate Characteristics

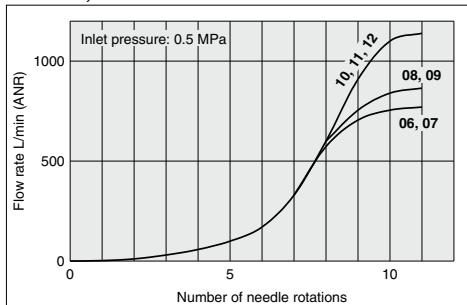
AS2201F-U01, AS2211F-U01
AS2301F-U01, AS2311F-U01



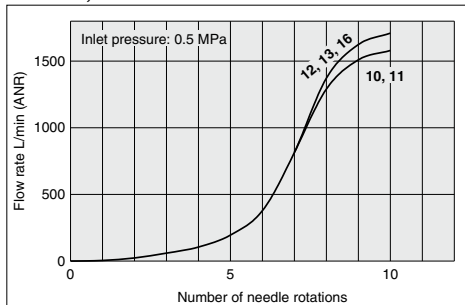
AS2201F-U02, AS2211F-U02
AS2301F-U02, AS2311F-U02



AS3201F, AS3211F
AS3301F, AS3311F



AS4201F, AS4211F
AS4301F, AS4311F

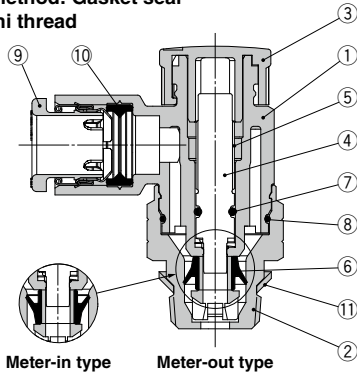


Note) The numbers above the flow rate characteristic curves in the charts show the applicable tubing outside diameter as defined by the product number.

Construction

Elbow type

Seal method: Gasket seal
For Uni thread

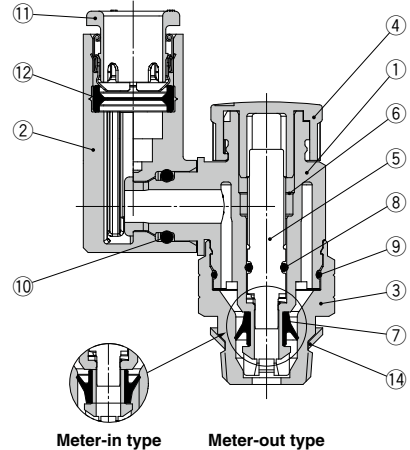
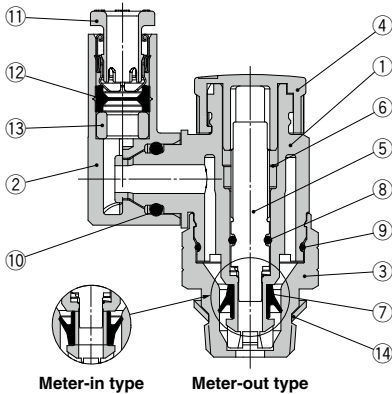


Component Parts

No.	Description	Material	Note
1	Body A	PBT	
2	Body B	Brass	Electroless nickel plating
3	Knob	POM	
4	Needle	PBT	
5	Needle guide	Brass	Electroless nickel plating
6	U-seal	HNBR	
7	O-ring	NBR	
8	O-ring	NBR	
9	Cassette	—	
10	Seal	NBR	
11	Gasket	NBR/Stainless steel	

Universal type

Seal method: Gasket seal
For Uni thread



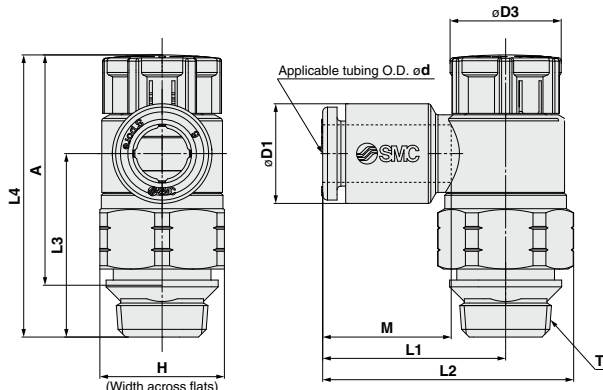
Component Parts

No.	Description	Material	Note
1	Body A	PBT	
2	Elbow body	PBT	
3	Body B	Brass	Electroless nickel plating
4	Knob	POM	
5	Needle	PBT	
6	Needle guide	Brass	Electroless nickel plating
7	U-seal	HNBR	
8	O-ring	NBR	
9	O-ring	NBR	
10	O-ring	NBR	
11	Cassette	—	
12	Seal	NBR	
13	Spacer ^(Note)	—	
14	Gasket	NBR/Stainless steel	

Note) Spacer is included only for the applicable tubing O.D. ø3.2, ø1/8", ø4, ø5/32" and ø6.

AS Series

Dimensions/ Elbow type



Metric Size

Model	d	T Uni thread	H	D1	D3	L1	L2	L3	L4 Note 1)		A Note 2)		M	Weight [g]
									Unlocked	Locked	Unlocked	Locked		
AS22□1F-U01-23A	3.2	1/8	13	7.2	12	19.1	26.2	19.1	30.6	29.2	25.8	24.4	13.3	9
AS22□1F-U01-04A	4			8.2										
AS22□1F-U01-06A	6			10.4										
AS22□1F-U01-08A	8			13.2										
AS22□1F-U01-10A	10	15.9	25.3	32.4										
AS22□1F-U02-23A	3.2	1/4	17	7.2	13	23.4	32.7	22.6	36.6	35	30.2	28.6	13.3	17
AS22□1F-U02-04A	4			8.2										
AS22□1F-U02-06A	6			10.4										
AS22□1F-U02-08A	8			13.2										
AS22□1F-U02-10A	10	15.9	26.9	36.2										
AS32□1F-U02-06A	6	1/4	19	10.4	16.6	21.8	32.1	36.4	50	48.4	43.6	42	13.3	39
AS32□1F-U02-08A	8			13.2										
AS32□1F-U02-10A	10			15.9										
AS32□1F-U02-12A	12			18.5										
AS32□1F-U03-06A	6	3/8	19	10.4	16.6	21.8	32.1	28.7	42.3	40.7	35.9	34.3	13.3	39
AS32□1F-U03-08A	8			13.2										
AS32□1F-U03-10A	10			15.9										
AS32□1F-U03-12A	12			18.5										
AS42□1F-U04-10A	10	1/2	24	15.9	18.8	27.4	40.3	36.2	50.8	49.2	42.2	40.6	15.6	52
AS42□1F-U04-12A	12			18.5										
AS42□1F-U04-14A	14			21.2										
AS42□1F-U04-16A	16			23.8										

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation

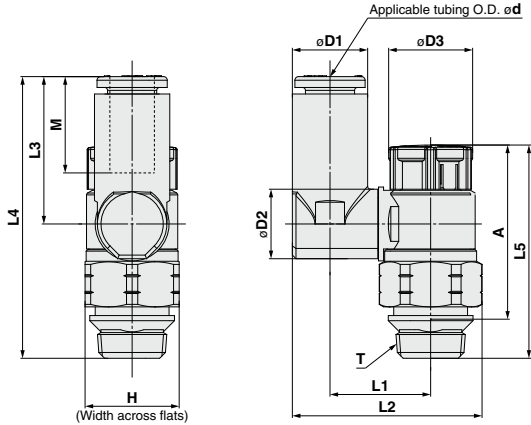
Inch Size

Model	d	T Uni thread	H	D1	D3	L1	L2	L3	L4 Note 1)		A Note 2)		M	Weight [g]
									Unlocked	Locked	Unlocked	Locked		
AS22□1F-U01-01A	1/8"	1/8	13	7.2	12	19.1	26.2	19.1	30.6	29.2	25.8	24.4	13.3	9
AS22□1F-U01-03A	5/32"			8.2										
AS22□1F-U01-07A	1/4"			11.2										
AS22□1F-U01-09A	5/16"			13.2										
AS22□1F-U02-01A	1/8"	1/4	17	7.2	13	23.4	32.7	22.6	36.6	35	30.2	28.6	13.3	17
AS22□1F-U02-03A	5/32"			8.2										
AS22□1F-U02-07A	1/4"			11.2										
AS22□1F-U02-09A	5/16"			13.2										
AS22□1F-U02-11A	3/8"	15.5	26.4	35.7										
AS32□1F-U02-07A	1/4"	1/4	19	11.2	16.6	21.8	32.1	36.4	50	48.4	43.6	42	13.3	39
AS32□1F-U02-09A	5/16"			13.2										
AS32□1F-U02-11A	3/8"			15.5										
AS32□1F-U03-07A	1/4"			11.2										
AS32□1F-U03-09A	5/16"	3/8	19	13.2	16.6	22.7	33	28.7	42.3	40.7	35.9	34.3	14.2	39
AS32□1F-U03-11A	3/8"			15.5										
AS42□1F-U04-11A	3/8"			15.5										
AS42□1F-U04-13A	1/2"			19.3										

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation



Dimensions/ **Universal type**



Metric Size

Model	d	T Uni thread	H	D1	D2	D3	L1	L2	L3	L4	L5 ^{Note 1)}		A ^{Note 2)}		M	Weight [g]		
											Unlocked	Locked	Unlocked	Locked				
AS23□1F-U01-23A	3.2	1/8	13	7.2	9.6	12	13.3	24	17.5	36	30.6	29.2	25.8	24.4	13.3	9		
AS23□1F-U01-04A	4			8.2			13.9	25.1								10		
AS23□1F-U01-06A	6			10.4			26.2	20.4								11		
AS23□1F-U01-08A	8	1/4	17	13.2	12.9	13	16.4	30.1	17.5	40.1	36.6	35	30.2	28.6	14.2	11		
AS23□1F-U02-04A	4			8.2			16.5	29.9								12		
AS23□1F-U02-06A	6			11.2			19	33.8								21.4	13	
AS23□1F-U02-08A	8			13.2			19	34.9								23.5	14	
AS23□1F-U02-10A	10			15.9			20.9	38.1								24.7	15	
AS33□1F-U02-06A	6			11.2			20.2	36								21.4	16	
AS33□1F-U02-08A	8	13.2	16.6	12.9	17.4	23	37.1	23.5	17.5	59.9	50	48.4	43.6	42	14.2	31		
AS33□1F-U02-10A	10	15.9					41.2	26.1								17		
AS33□1F-U02-12A	12	18.5					42.5	28.3								18		
AS33□1F-U03-06A	6	3/8	19	11.2	12.9	16.6	20.2	36	21.4	50.1	42.3	40.7	35.9	34.3	13.3	31		
AS33□1F-U03-08A	8			13.2			23	37.1									23.5	14
AS33□1F-U03-10A	10			15.9			23	41.2									26.1	15
AS33□1F-U03-12A	12			18.5			23	42.5									28.3	16
AS43□1F-U04-10A	10	1/2	24	15.9	17.4	18.8	25.6	46.4	26.1	61.2	50.8	49.2	42.2	40.6	15.6	54		
AS43□1F-U04-12A	12			18.5			21	26.2								48.3	28.3	63.4

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation

Inch Size

Model	d	T Uni thread	H	D1	D2	D3	L1	L2	L3	L4	L5 ^{Note 1)}		A ^{Note 2)}		M	Weight [g]		
											Unlocked	Locked	Unlocked	Locked				
AS23□1F-U01-01A	1/8"	1/8	13	7.2	9.6	12	13.3	24	17.5	36	30.6	29.2	25.8	24.4	13.3	9		
AS23□1F-U01-03A	5/32"			8.2			13.9	25.1								10		
AS23□1F-U01-07A	1/4"			11.2			16.4	29.1								20.2	11	
AS23□1F-U01-09A	5/16"	1/4	17	13.2	12.9	13	16.4	30.1	17.5	40.1	36.6	35	30.2	28.6	14.2	11		
AS23□1F-U02-03A	5/32"			8.2			16.5	29.9								12		
AS23□1F-U02-07A	1/4"			11.2			19	33.8								21.4	13	
AS23□1F-U02-09A	5/16"			13.2			19	34.9								23.5	14	
AS23□1F-U02-11A	3/8"			15.9			20.9	38.1								24.7	15	
AS33□1F-U02-07A	1/4"			11.2			20.2	36								21.4	16	
AS33□1F-U02-09A	5/16"	13.2	16.6	12.9	17.4	23	37.1	23.5	17.5	59.9	50	48.4	43.6	42	14.2	31		
AS33□1F-U02-11A	3/8"	15.9					41.2	26.1								17		
AS33□1F-U03-07A	1/4"	11.2					23	37.1								23.5	14	
AS33□1F-U03-09A	5/16"	3/8	19	13.2	12.9	16.6	20.2	36	21.4	50.1	42.3	40.7	35.9	34.3	13.3	31		
AS33□1F-U03-11A	3/8"			15.9			23	41.2									26.1	15
AS33□1F-U03-13A	7/16"			18.5			23	42.5									28.3	16
AS43□1F-U04-11A	3/8"			15.9			25.6	46.4									26.1	17
AS43□1F-U04-13A	1/2"	18.5	21	26.2	48.3	28.3	63.4	17	56									

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation