

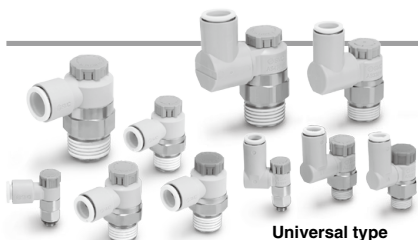
Series 10-AS-F

Push-lock Type

RoHS

Speed Controller with One-touch Fitting
Elbow Type/Universal Type

How to Order



Elbow type

Universal type

Body size

1	M5 x 0.8 10-32UNF
---	----------------------

Width across flats (H)

E	8 mm
Nil	9 mm

Port size

M5	M5 x 0.8
U10/32	10-32UNF

Applicable tubing O.D. ^{Note 1)}

Metric size		Inch size	
02	ø2	01	ø1/8"
23	ø3.2 ^{Note 2)}	03	ø5/32"
04	ø4	07	ø1/4"
06	ø6		

Note 1) For selecting applicable tubing O.D., refer to the "Model" on the table below.

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.

Body size 1

10-AS 1 2 0 1 F - M5 E - 06 A

Body size 2/3/4

10-AS 2 2 0 1 F - 01 - 06 S A

Clean series

Body size

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

Type

2	Elbow
3	Universal

Thread type

Nil	R
N	NPT

Control type ^{Note)}

0	Meter-out
1	Meter-in

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

Push-lock type

Seal method

Nil	Without sealant
S	With sealant

Applicable tubing O.D. ^{Note 1)}

Metric size		Inch size	
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 5.

Note 2) Use ø1/8" tube.

Model

Model		Port size	Seal method	Applicable tubing O.D.															
				Metric size						Inch size									
				2 ^{Note 2)}	3.2	4	6	8	10	12	16	1/8"	5/32"	1/4"	5/16"	3/8"	1/2"		
10-AS12□1F-M5□	10-AS13□1F-M5□	M5 x 0.8	Gasket seal	● ^{Note 3)}	●	●	●						●	●	●				
10-AS12□1F-U10/32□	10-AS13□1F-U10/32□	10-32UNF		● ^{Note 3)}	●	●	●						●	●	●				
10-AS22□1F-□01	10-AS23□1F-□01	R NPT	Note 1) Sealant		●	●	●	●	● ^{Note 3)}				●	●	●	●			
10-AS22□1F-□02	10-AS23□1F-□02			1/8		●	●	●	●	●				●	●	●	●		
10-AS32□1F-□03	10-AS33□1F-□03			1/4		●	●	●	●	●				●	●	●	●		
10-AS32□1F-□04	10-AS33□1F-□04			1/4											●	●	●	●	
10-AS42□1F-□03	10-AS43□1F-□03	3/8												●	●	●			
10-AS42□1F-□04	10-AS43□1F-□04	1/2												●	●	●	●		

Note 1) "Without sealant" type can be selected as a standard option.

Note 2) Only polyurethane tubing is applicable for ø2.

Note 3) Universal type is not available.

Specifications

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	Polyurethane (Note 1)
Option (Note 2)	With seal
Grease	Fluorine grease
Cleanliness class (ISO class)	Class 5

Note 1) Use caution at the max. operating pressure when using polyurethane tubing. (Refer to the **WEB catalog** for details.)
 Note 2) M5 type port is not available with seal.

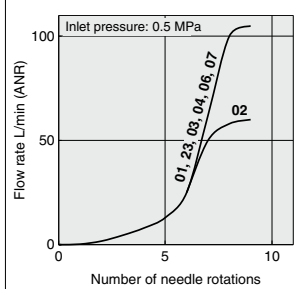
Flow Rate and Sonic Conductance

Model	10-AS12□1F-M5□ 10-AS13□1F-M5□		10-AS22□1F-□01 10-AS23□1F-□01		10-AS22□1F-□02 10-AS23□1F-□02			10-AS32□1F 10-AS33□1F			10-AS42□1F 10-AS43□1F	
	Metric size	ø2 ø3.2 ø4 ø6	ø3.2 ø4	ø6 ø8 ø10	ø3.2 ø4 ø6 ø8 ø10	ø6 ø8 ø10	ø6 ø8 ø10	ø6 ø8 ø10	ø6 ø8 ø10	ø6 ø8 ø10	ø10 ø12	ø10 ø16
Tubing O.D.	Inch size	— ø1/8" ø1/4" ø5/32"	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"	ø3/8"	ø1/2"
	C values: Sonic conductance dm ³ /(s·bar)	Free flow Controlled flow	0.2 0.3 0.4 0.6	0.4 0.6 0.7 0.8	0.6 0.8 0.9 1.3	0.7 1.0 1.3 1.5	1.6 1.7 2.5 4.4	1.6 1.7 2.5 4.4	2.1 2.4 3.3 4.4	2.1 2.4 3.3 4.4	3.3 4.4 4.9	4.4 4.9
b values: Critical pressure ratio	Free flow	0.3 0.4	0.2 0.3	0.3 0.4	0.3 0.4	0.4 0.3	0.4 0.3	0.4 0.3	0.4 0.3	0.3 0.3	0.3 0.3	
	Controlled flow	0.2	0.2 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	0.3 0.3	

Note 1) 10-32UNF has the same specification as M5.
 Note 2) C and b values are for controlled flow with the needle fully open and free flow with the needle fully closed.

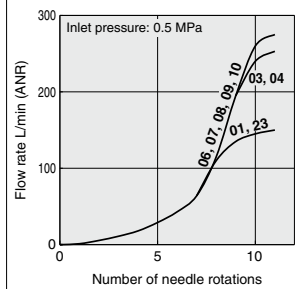
Needle Valve/Flow Rate Characteristics

10-AS1201F-M5□, 10-AS1211F-M5□
 10-AS1301F-M5□, 10-AS1311F-M5□

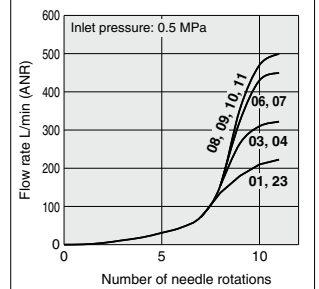


Note) -U10/32 has the same specification as M5.

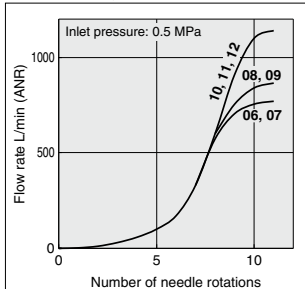
10-AS2201F-01, 10-AS2211F-01
 10-AS2301F-01, 10-AS2311F-01



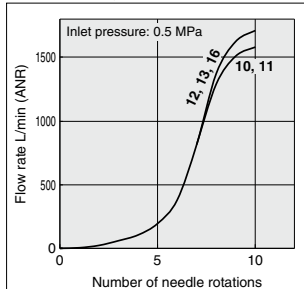
10-AS2201F-02, 10-AS2211F-02
 10-AS2301F-02, 10-AS2311F-02



10-AS3201F, 10-AS3211F
 10-AS3301F, 10-AS3311F



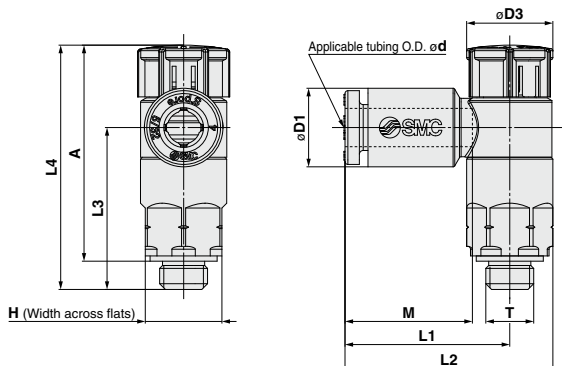
10-AS4201F, 10-AS4211F
 10-AS4301F, 10-AS4311F



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

Dimensions/ Elbow type

Seal method: Gasket seal
For M5, 10-32UNF



Metric Size

Model	d	T	H ^{Note 1)}	D1	D3	L1	L2	L3	L4 ^{Note 2)}		A ^{Note 3)}		M	Weight [g]
									Unlocked	Locked	Unlocked	Locked		
10-AS12□1F-M5E-02A	2	M5 x 0.8 10/32UNF	8 (9)	5.8	9.4	15.8	20.3	16.9	26.5	25.4	23.5	22.4	11.9	5
10-AS12□1F-U10/32E-02A				7.2										
10-AS12□1F-M5E-23A	3.2			8.2		17.2	21.7	16.5					13.3	
10-AS12□1F-U10/32E-23A				9.4										
10-AS12□1F-M5E-04A	4			18.6		23.1	16.5	6						
10-AS12□1F-U10/32E-04A	6			10.4		18.6	23.1	16.5					6	
10-AS12□1F-M5E-06A		10.4	18.6	23.1	16.5	6								
10-AS12□1F-U10/32E-06A	6	10.4	18.6	23.1	16.5	6								

Note 1) The value in () indicates that the dimension for the width across flats is 9 mm.

Note 2) Reference dimensions

Note 3) Reference dimensions of threads after installation

Inch Size

Model	d	T	H ^{Note 1)}	D1	D3	L1	L2	L3	L4 ^{Note 2)}		A ^{Note 3)}		M	Weight [g]
									Unlocked	Locked	Unlocked	Locked		
10-AS12□1F-M5E-01A	1/8"	M5 x 0.8 10/32UNF	8 (9)	7.2	9.4	17.2	21.7	16.9	26.5	25.4	23.5	22.4	13.3	5
10-AS12□1F-U10/32E-01A				8.2										
10-AS12□1F-M5E-03A	5/32"			11.2		18.6	23.1	16.5					6	
10-AS12□1F-U10/32E-03A				11.2										
10-AS12□1F-M5E-07A	1/4"			11.2		18.6	23.1	16.5					6	
10-AS12□1F-U10/32E-07A				11.2										

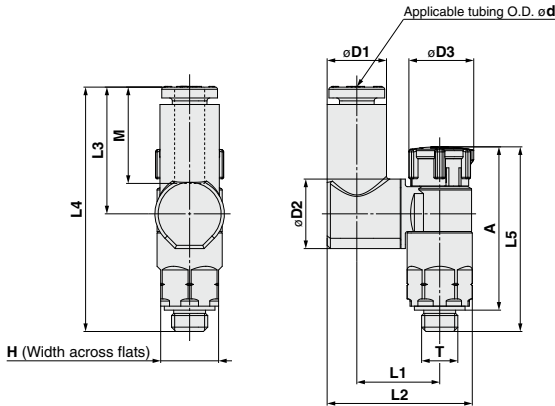
Note 1) The value in () indicates that the dimension for the width across flats is 9 mm.

Note 2) Reference dimensions

Note 3) Reference dimensions of threads after installation

Dimensions/ Universal type

Seal method: Gasket seal
For M5, 10-32UNF



Metric Size

Model	d	T	H ^{Note 1)}	D1	D2	D3	L1	L2	L3	L4	L5 ^{Note 2)}		A ^{Note 3)}		M	Weight [g]
											Unlocked	Locked	Unlocked	Locked		
10-AS13□1F-M5E-23A	3.2	M5 x 0.8 10/32UNF	8 (9)	7.2	9.6	9.4	11.6	19.4	17.5	33.8	26.5	25.4	23.5	22.4	13.3	6
10-AS13□1F-U10/32E-23A				8.2												
10-AS13□1F-M5E-04A	4	M5 x 0.8 10/32UNF	8 (9)	8.2	9.6	9.4	11.5	19.8	20.4	36.6	26.5	25.4	23.5	22.4	13.3	6
10-AS13□1F-U10/32E-04A				10.4												
10-AS13□1F-M5E-06A	6	M5 x 0.8 10/32UNF	8 (9)	10.4	9.6	9.4	11.5	20.9	20.4	36.6	26.5	25.4	23.5	22.4	13.3	6
10-AS13□1F-U10/32E-06A				11.5												

Note 1) The value in () indicates that the dimension for the width across flats is 9 mm.

Note 2) Reference dimensions

Note 3) Reference dimensions of threads after installation

Inch Size

Model	d	T	H ^{Note 1)}	D1	D2	D3	L1	L2	L3	L4	L5 ^{Note 2)}		A ^{Note 3)}		M	Weight [g]
											Unlocked	Locked	Unlocked	Locked		
10-AS13□1F-M5E-01A	1/8"	M5 x 0.8 10/32UNF	8 (9)	7.2	9.6	9.4	11.6	19.4	17.5	33.8	26.5	25.4	23.5	22.4	13.3	6
10-AS13□1F-U10/32E-01A				8.2												
10-AS13□1F-M5E-03A	5/32"	M5 x 0.8 10/32UNF	8 (9)	8.2	9.6	9.4	11.5	19.8	20.2	36.5	26.5	25.4	23.5	22.4	13.3	6
10-AS13□1F-U10/32E-03A				11.2												
10-AS13□1F-M5E-07A	1/4"	M5 x 0.8 10/32UNF	8 (9)	11.2	9.6	9.4	11.5	21.3	20.2	36.5	26.5	25.4	23.5	22.4	13.3	6
10-AS13□1F-U10/32E-07A				11.5												

Note 1) The value in () indicates that the dimension for the width across flats is 9 mm.

Note 2) Reference dimensions

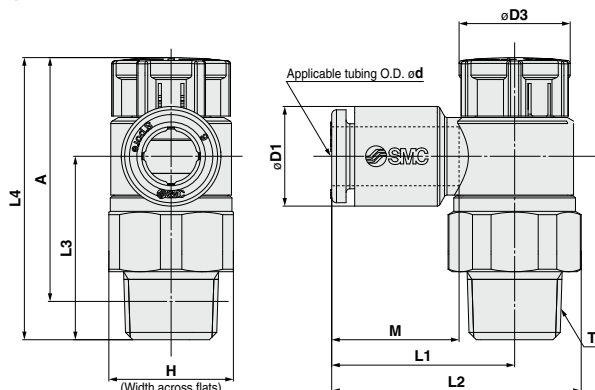
Note 3) Reference dimensions of threads after installation

Directional Control Valves
Air Cylinders
Rotary Actuators
Air Grippers
Air Preparation Equipment
Modular F. R.
Pressure Control Equipment
Fittings & Tubing
Flow Control Equipment
Pressure Switches/ Pressure Sensors

Push-lock Type Speed Controller with One-touch Fitting 10-AS-F

Dimensions/ Elbow type

Seal method: Sealant
For R, NPT thread



Metric Size

Model	d	T	H	D1	D3	L1	L2	L3	L4 ^{Note 1)}		A ^{Note 2)}		M	Weight [g]
									Unlocked	Locked	Unlocked	Locked		
10-AS22□1F-01-23(S)A	3.2	1/8	13 (12.7)	7.2	12	19.1	26.2	19.1	30.6	29.2	27.5	26.1	13.3	9 (9)
10-AS22□1F-01-04(S)A	4			8.2										10 (9)
10-AS22□1F-01-06(S)A	6			10.4										11 (10)
10-AS22□1F-01-08(S)A	8			13.2										12 (11)
10-AS22□1F-01-10(S)A	10	15.9	15.9	32.4	12 (11)									
10-AS22□1F-02-23(S)A	3.2	1/4	17 (17.5)	7.2	13	20.9	30.2 (30.3)	22.6	36.6	35	31.1	29.5	13.3	18 (19)
10-AS22□1F-02-04(S)A	4			8.2										18 (19)
10-AS22□1F-02-06(S)A	6			10.4										19 (20)
10-AS22□1F-02-08(S)A	8			13.2										20 (21)
10-AS22□1F-02-10(S)A	10	15.9	26.9	36.2 (36.3)	21 (21)									
10-AS32□1F-02-06(S)A	6	1/4	19	10.4	16.6	21.8	32.1	36.4	50	48.4	44.5	42.9	13.3	40 (40)
10-AS32□1F-02-08(S)A	8			13.2										41 (41)
10-AS32□1F-02-10(S)A	10			15.9										42 (42)
10-AS32□1F-02-12(S)A	12			18.5										43 (43)
10-AS32□1F-03-06(S)A	6	3/8	19	10.4	16.6	21.8	32.1	28.7	42.3	40.7	37.1	35.5	13.3	31 (32)
10-AS32□1F-03-08(S)A	8			13.2										32 (32)
10-AS32□1F-03-10(S)A	10			15.9										33 (33)
10-AS32□1F-03-12(S)A	12			18.5										34 (35)
10-AS42□1F-04-10(S)A	10	1/2	24 (23.8)	15.9	18.8	27.4	40.3 (40.2)	36.2	50.8	49.2	43.7	42.1	15.6	54 (53)
10-AS42□1F-04-12(S)A	12			18.5										55 (55)
10-AS42□1F-04-14(S)A	14			23.8										60 (59)
10-AS42□1F-04-16(S)A	16			34.8										47.7 (47.6)

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation Note 3) The values in () are for NPT thread.

Inch Size

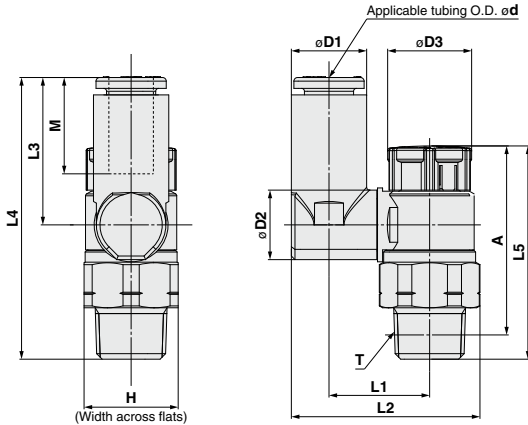
Model	d	T	H	D1	D3	L1	L2	L3	L4 ^{Note 1)}		A ^{Note 2)}		M	Weight [g]
									Unlocked	Locked	Unlocked	Locked		
10-AS22□1F-01-01(S)A	1/8"	1/8	13 (12.7)	7.2	12	19.1	26.2	19.1	30.6	29.2	27.5	26.1	13.3	9 (9)
10-AS22□1F-01-03(S)A	5/32"			8.2										10 (9)
10-AS22□1F-01-07(S)A	1/4"			11.2										11 (10)
10-AS22□1F-01-09(S)A	5/16"			13.2										12 (11)
10-AS22□1F-02-01(S)A	1/8"	1/4	17 (17.5)	7.2	13	20.9	30.2 (30.3)	22.6	36.6	35	31.1	29.5	13.3	18 (19)
10-AS22□1F-02-03(S)A	5/32"			8.2										19 (19)
10-AS22□1F-02-07(S)A	1/4"			11.2										20 (21)
10-AS22□1F-02-09(S)A	5/16"			13.2										21 (21)
10-AS22□1F-02-11(S)A	3/8"	15.5	26.4	35.7 (35.8)	21 (21)									
10-AS32□1F-02-07(S)A	1/4"	1/4	19	11.2	16.6	21.8	32.1	36.4	50	48.4	44.5	42.9	13.3	40 (40)
10-AS32□1F-02-09(S)A	5/16"			13.2										41 (41)
10-AS32□1F-02-11(S)A	3/8"			15.5										42 (42)
10-AS32□1F-03-07(S)A	1/4"			11.2										43 (43)
10-AS32□1F-03-09(S)A	5/16"	3/8	19	13.2	16.6	22.7	33	28.7	42.3	40.7	37.1	35.5	13.3	31 (32)
10-AS32□1F-03-11(S)A	3/8"			15.5										32 (32)
10-AS42□1F-04-11(S)A	3/8"			15.9										33 (33)
10-AS42□1F-04-13(S)A	1/2"			18.5										34 (35)
10-AS42□1F-04-13(S)A	3/8"	1/2	24 (23.8)	15.5	18.8	27.4	40.3 (40.2)	36.2	50.8	49.2	43.7	42.1	15.6	54 (53)
10-AS42□1F-04-14(S)A	1/2"			19.3										60 (59)

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation Note 3) The values in () are for NPT thread.



Dimensions/ Universal type

Seal method: Sealant
For R, NPT thread



Metric Size

Model	d	T	H	D1	D2	D3	L1	L2	L3	L4	L5 Note 1)		A Note 2)		M	[mm]		
											Unlocked	Locked	Unlocked	Locked		Weight [g]		
10-AS23□1F-01-23(S)A	3.2	1/8	13 (12.7)	7.2	9.6	12	13.3	24	17.5	36	30.6	29.2	27.5	26.1	13.3	10 (10)		
10-AS23□1F-01-04(S)A	4			8.2			13.9	25.1								14.2	12 (12)	
10-AS23□1F-01-06(S)A	6			10.4			26.2	20.4								38.8	11 (10)	
10-AS23□1F-01-08(S)A	8			13.2			10.2	16.4								30.1	21.5	40
10-AS23□1F-02-04(S)A	4	1/4	17 (17.5)	8.2	12.9	13	16.5	29.9 (30)	17.5	40.1	36.6	35	31.1	29.5	13.3	19 (20)		
10-AS23□1F-02-06(S)A	6			11.2			33.8 (33.9)	21.4	43.9	13.3					21 (22)			
10-AS23□1F-02-08(S)A	8			13.2			34.9 (35)	23.5	46	14.2					22 (22)			
10-AS23□1F-02-10(S)A	10			15.9			20.9	38.1 (38.2)	24.7	47.3					15.6	23 (24)		
10-AS33□1F-02-06(S)A	6	1/4	19	11.2	12.9	16.6	20.2	36	21.4	57.8	50	48.4	44.5	42.9	13.3	42 (42)		
10-AS33□1F-02-08(S)A	8			13.2			37.1	23.5	59.9	14.2					43 (43)			
10-AS33□1F-02-10(S)A	10			15.9			41.2	26.1	62.5	15.6					46 (46)			
10-AS33□1F-02-12(S)A	12			18.5			23	42.5	64.7	17					48 (48)			
10-AS33□1F-03-06(S)A	6	3/8	19	11.2	12.9	16.6	20.2	36	21.4	50.1	42.3	40.7	37.1	35.5	13.3	34 (35)		
10-AS33□1F-03-08(S)A	8			13.2			37.1	23.5	52.2	14.2					35 (36)			
10-AS33□1F-03-10(S)A	10			15.9			41.2	26.1	54.8	15.6					38 (39)			
10-AS33□1F-03-12(S)A	12			18.5			23	42.5	57	17					40 (41)			
10-AS43□1F-04-10(S)A	10	1/2	24 (23.8)	15.9	17.4	18.8	25.6	46.4 (46.3)	26.1	61.2	50.8	49.2	43.7	42.1	15.6	61 (61)		
10-AS43□1F-04-13(S)A	12			18.5			21	26.2	48.3 (48.2)	28.3					63.4	17	64 (63)	

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation Note 3) The values in () are for NPT thread.

Inch Size

Model	d	T	H	D1	D2	D3	L1	L2	L3	L4	L5 Note 1)		A Note 2)		M	[mm]		
											Unlocked	Locked	Unlocked	Locked		Weight [g]		
10-AS23□1F-01-01(S)A	1/8"	1/8	13 (12.7)	7.2	9.6	12	13.3	24	17.5	36	30.6	29.2	27.5	26.1	13.3	10 (10)		
10-AS23□1F-01-03(S)A	5/32"			8.2			13.9	25.1								14.2	12 (12)	
10-AS23□1F-01-07(S)A	1/4"			11.2			29.1	20.2								38.7	11 (10)	
10-AS23□1F-01-09(S)A	5/16"			13.2			16.4	30.1								21.5	40	14.2
10-AS23□1F-02-03(S)A	5/32"	1/4	17 (17.5)	8.2	12.9	13	16.5	29.9 (30)	17.5	40.1	36.6	35	31.1	29.5	13.3	19 (20)		
10-AS23□1F-02-07(S)A	1/4"			11.2			33.8 (33.9)	21.4	43.9	13.3					21 (22)			
10-AS23□1F-02-09(S)A	5/16"			13.2			34.9 (35)	23.5	46	14.2					22 (22)			
10-AS23□1F-02-11(S)A	5/16"			15.9			20.9	38.1 (38.2)	24.7	47.3					15.6	23 (24)		
10-AS33□1F-02-07(S)A	1/4"	3/8	19	11.2	12.9	16.6	20.2	36	21.4	57.8	50	48.4	44.5	42.9	13.3	42 (42)		
10-AS33□1F-02-09(S)A	5/16"			13.2			37.1	23.5	59.9	14.2					43 (43)			
10-AS33□1F-02-11(S)A	3/8"			15.9			41.2	26.1	62.5	15.6					46 (46)			
10-AS33□1F-03-07(S)A	1/4"			11.2			23	42.5	64.7	17					48 (48)			
10-AS33□1F-03-09(S)A	5/16"	3/8	19	13.2	12.9	16.6	20.2	36	21.4	50.1	42.3	40.7	37.1	35.5	13.3	34 (35)		
10-AS33□1F-03-11(S)A	3/8"			15.9			41.2	26.1	54.8	14.2					35 (36)			
10-AS43□1F-04-11(S)A	3/8"			18.5			23	42.5	57	15.6					38 (39)			
10-AS43□1F-04-13(S)A	1/2"			24 (23.8)			15.9	17.4	18.8	25.6					46.4 (46.3)	26.1	61.2	50.8
10-AS43□1F-04-13(S)A	1/2"		18.5	21	18.8	26.2	48.3 (48.2)	28.3	63.4	50.8	49.2	43.7	42.1	17	64 (63)			

Note 1) Reference dimensions Note 2) Reference dimensions of threads after installation Note 3) The values in () are for NPT thread.

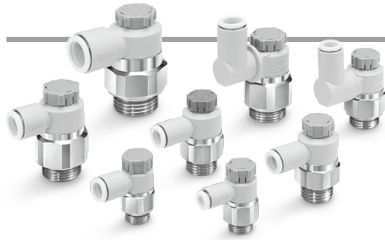
Directional Control Valves
Air Cylinders
Rotary Actuators
Air Grippers
Air Preparation Equipment
Modular F. R.
Pressure Control Equipment
Fittings & Tubing
Flow Control Equipment
Pressure Switches/ Pressure Sensors

Series 10-AS-F

Push-lock Type



Speed Controller with One-touch Fitting
Face seal



How to Order

G thread **10-AS** **2** **2** **0** **1F-G** **01** - **06** **A**

- Clean series** (10)
- 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
- Thread type**

G	G
---	---
- Push-lock type** (A)
- Applicable tubing O.D. Note ^{Note 1)}**

Metric size	
23	ø3.2 ^{Note 2)}
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12
16	ø16

Note 1) For selecting applicable tubing O.D., refer to the "Model" on the table below.
Note 2) Use ø1/8" tube.
- Port size**

01	1/8
02	1/4
03	3/8
04	1/2

Model

Model		Port size	Seal method	Applicable tubing O.D.						
Elbow type	Universal type			Metric size						
				3.2	4	6	8	10	12	16
10-AS22□1F-G01	10-AS23□1F-G01	G	Face seal	●	●	●	●	● (Note)		
10-AS22□1F-G02	10-AS23□1F-G02			● (Note)	●	●	●	●		
10-AS32□1F-G02	10-AS33□1F-G02					●	●	●	●	
10-AS32□1F-G03	10-AS33□1F-G03						●	●	●	●
10-AS42□1F-G04	10-AS43□1F-G04								●	●

Note) Universal type is not available.

Specifications

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	Polyurethane ^{Note 1)}
Option ^{Note 2)}	With seal
Grease	Fluorine grease
Cleanliness class (ISO class)	Class 5

Note 1) Use caution at the max. operating pressure when using polyurethane tubing. (Refer to the **Web Catalog** for details.)

Note 2) M5 type port is not available with seal.

Flow Rate and Sonic Conductance

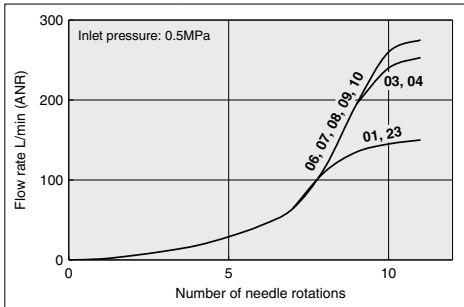
Model		10-AS2□□1F-G01			10-AS2□□1F-G02			10-AS3□□1F-G02/03			10-AS4□□1F-G04		
Tubing O.D.	Metric size	ø3.2	ø4	ø6 ø8 ø10	ø3.2	ø4	ø6	ø8 ø10	ø6	ø8	ø10 ø12	ø10	ø12 ø16
	Note 2) Inch size	ø1/8"	ø5/32"	ø1/4" ø5/16"	ø1/8"	ø5/32"	—	ø1/4" ø5/16" ø3/8"	ø1/4"	ø5/16"	ø3/8"	ø3/8"	ø1/2"
C values: Sonic conductance 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		0.4		0.4		0.3	0.3	
	Controlled flow	0.2		0.3	0.3			0.3			0.3		

Note 1) C and b values are for controlled flow with the needle fully open and free flow with the needle fully closed.

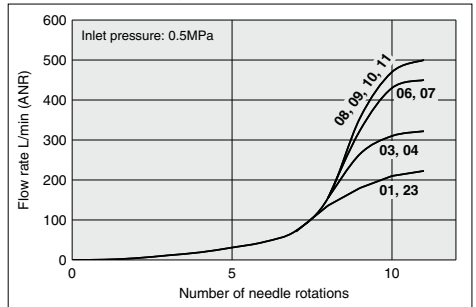
Note 2) G thread is not available.

Needle Valve/Flow Rate Characteristics

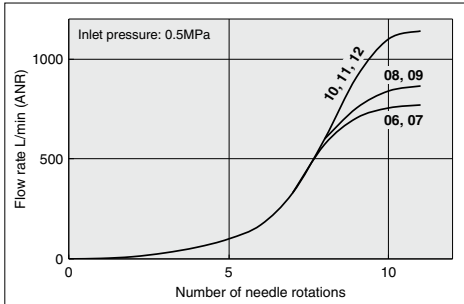
10-AS2201F-G01-□, 10-AS2211F-G01-□
10-AS2301F-G01-□, 10-AS2311F-G01-□



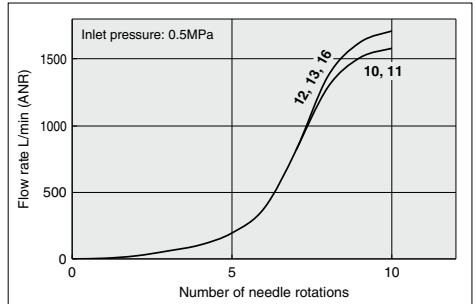
10-AS2201F-G02-□, 10-AS2211F-G02-□
10-AS2301F-G02-□, 10-AS2311F-G02-□



10-AS3201F-G02/03-□, 10-AS3211F-G02/03-□
10-AS3301F-G02/03-□, 10-AS3311F-G02/03-□



10-AS4201F-G04-□, 10-AS4211F-G04-□
10-AS4301F-G04-□, 10-AS4311F-G04-□



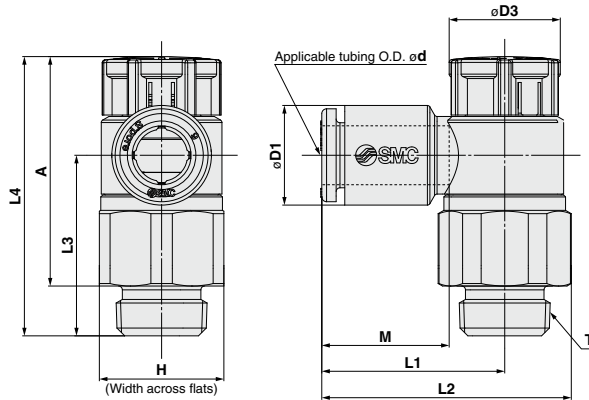
Note) The numbers above the flow rate characteristic curves in the charts show the applicable tubing outside diameter as defined by the product number.

Directional Control Valves
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Push-lock Type Speed Controller with One-touch Fitting **10-AS-F**
 Face seal

Dimensions/ **Elbow type**

Seal method: Face seal
 For G thread



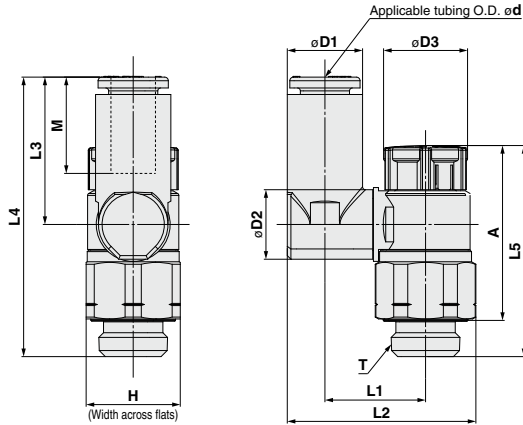
Metric Size

[mm]

Model	d	T	H	D1	D3	L1	L2	L3	L4		A		M	Weight [g]		
									Unlocked	Locked	Unlocked	Locked				
10-AS22□1F-G01-23A	3.2	1/8	13	7.2	12	19.1	26.2	18.8	30.3	28.9	24.8	23.4	13.3	10		
10-AS22□1F-G01-04A	4			8.2												
10-AS22□1F-G01-06A	6			10.4												
10-AS22□1F-G01-08A	8			13.2											22.4	29.5
10-AS22□1F-G01-10A	10	15.9	25.3	32.4									14.2	11		
10-AS22□1F-G02-23A	3.2	1/4	17	7.2	13	23.4	32.7	22.6	36.6	35	30.1	28.5	13.3	21		
10-AS22□1F-G02-04A	4			8.2											20.9	30.2
10-AS22□1F-G02-06A	6			10.4											23.4	32.7
10-AS22□1F-G02-08A	8			13.2											23.9	33.2
10-AS22□1F-G02-10A	10	15.9	26.9	36.2									15.6	23		
10-AS32□1F-G02-06A	6	1/4	21	10.4	16.6	21.8	33	36.4	50	48.4	43.5	41.9	13.3	50		
10-AS32□1F-G02-08A	8			13.2		22.7	33.9									
10-AS32□1F-G02-10A	10			15.9		26.7	37.9								35.7	
10-AS32□1F-G02-12A	12			18.5		29.7	40.9								34.5	
10-AS32□1F-G03-06A	6	3/8	21	10.4	16.6	21.8	33	28.7	42.3	40.7	34.8	33.2	13.3	38		
10-AS32□1F-G03-08A	8			13.2		22.7	33.9									
10-AS32□1F-G03-10A	10			15.9		26.7	37.9								28	
10-AS32□1F-G03-12A	12			18.5		29.7	40.9								26.8	
10-AS42□1F-G04-10A	10	1/2	27	15.9	18.8	27.4	41.8	36.2	50.8	49.2	41.8	40.2	15.6	72		
10-AS42□1F-G04-12A	12			18.5		30.8	45.2	35.1								
10-AS42□1F-G04-14A	14			21.1		33.4	47.8	32.7								
10-AS42□1F-G04-16A	16			23.8		34.8	49.2	32.7								

Dimensions/ **Universal type**

Seal method: Face seal
For G thread



Metric Size

Model	d	T	H	D1	D2	D3	L1	L2	L3	L4	L5		A		M	Weight [g]
											Unlocked	Locked	Unlocked	Locked		
10-AS23□1F-G01-23A	3.2	1/8	13	7.2	9.6	12	13.3	24.0	17.5	35.7	30.3	28.9	24.8	23.4	13.3	10
10-AS23□1F-G01-04A	4			8.2			25.1	11								
10-AS23□1F-G01-06A	6			10.4	26.2		20.4	38.5	11							
10-AS23□1F-G01-08A	8			13.2	10.2		16.4	30.1	21.5	39.7					14.2	12
10-AS23□1F-G02-04A	4	1/4	17	8.2	12.9	13	16.5	29.9	17.5	40.1	36.6	35	30.1	28.5	13.3	22
10-AS23□1F-G02-06A	6			10.4			33.8	21.4	43.9	24						
10-AS23□1F-G02-08A	8			13.2	34.9		23.5	46.0	25							
10-AS23□1F-G02-10A	10			15.9			20.9	38.1	24.7	47.3					15.6	26
10-AS33□1F-G02-06A	6	1/4	21	10.4	12.9	16.6	20.2	36.6	21.4	57.8	50	48.4	43.5	41.9	13.3	51
10-AS33□1F-G02-08A	8			13.2			38.0	23.5	59.9	25						
10-AS33□1F-G02-10A	10			15.9	42.2		26.1	58.0	26							
10-AS33□1F-G02-12A	12			18.5	17.4		23	43.5	28.3	59.9					17	57
10-AS33□1F-G03-06A	6	3/8	21	10.4	12.9	16.6	20.2	36.6	21.4	50.1	42.3	40.7	34.8	33.2	13.3	41
10-AS33□1F-G03-08A	8			13.2			38.0	23.5	52.2	42						
10-AS33□1F-G03-10A	10			15.9	42.2		26.1	50.3	46							
10-AS33□1F-G03-12A	12			18.5	17.4		23	43.5	28.3	52.2					17	47
10-AS43□1F-G04-10A	10	1/2	27	15.9	17.4	18.8	25.6	47.9	26.1	61.2	50.8	49.2	41.8	40.2	15.6	78
10-AS43□1F-G04-12A	12			18.5	21		26.2	49.8	28.3	63.4						17

- Directional Control Valves
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