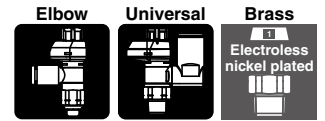


# Speed Controller with Indicator (Elbow Type / Universal Type) **AS-FS Series**



## Model

Model	Port size	Seal method	Applicable tubing O.D.											*3 Max. number of rotations					
			Metric size						Inch size										
			2*2	3.2	4	6	8	10	12	16	1/8"	5/32"	1/4"		5/16"	3/8"	1/2"		
AS1□□1FS□-M5□	M5 x 0.8	Gasket seal	●*4	●	●	●						●	●	●			8		
AS1□□1FS□-U10/32□	10-32UNF		●*4	●	●	●						●	●	●					
AS2□□1FS□-□01	R NPT	Sealant*1		●	●	●	●	●*4				●	●	●	●		10		
AS2□□1FS□-□02			1/8		●*4	●	●	●	●			●*4	●	●	●	●			
AS3□□1FS□-□02			1/4			●	●	●	●	●			●	●	●	●		●	
AS3□□1FS□-□03			3/8				●	●	●	●	●			●	●	●		●	
AS4□□1FS□-□04			1/2							●	●	●*4				●		●	
AS2□□1FS□-G01	G	Face seal		●	●	●	●	●*4									10		
AS2□□1FS□-G02			1/8		●*4	●	●	●	●										
AS3□□1FS□-G02			1/4			●	●	●	●	●									
AS3□□1FS□-G03			3/8				●	●	●	●									
AS4□□1FS□-G04			1/2							●	●	●*4							

\*1 "Without sealant" type can be selected as a standard option.

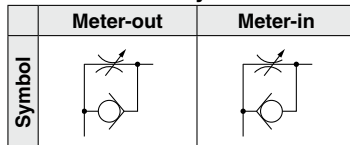
\*2 Only polyurethane tubing is applicable for ø2.

\*3 There are differences in actual rate as by the indicator window over the maximum number of rotations depending on the individual product.

\*4 The universal type is not available.

## Specifications

### Flow Direction Symbols on Body



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*1, FEP, PFA

\*1 Use caution at the max. operating pressure when using soft nylon or polyurethane tubing.  
(For details, refer to the **Web Catalog**.)

## ⚠ Caution

Be sure to read this before handling the products. Refer to the back cover for safety instructions. For flow control equipment precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual" on the SMC website: <http://www.smcworld.com>

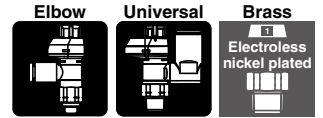
## Flow Rate and Sonic Conductance

Model	AS1□□1FS-M5□	AS2□□1FS-01		AS2□□1FS-02			AS3□□1FS		AS4□□1FS						
Tubing O.D.	Metric size	ø2	ø3.2 ø4 ø6	ø3.2	ø4	ø6 ø8 ø10	ø3.2	ø4	ø6	ø8 ø10	ø6	ø8	ø10 ø12	ø10	ø12 ø16
	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"
C values: Sonic conductance dm³/(s·bar)	Free flow	0.2	0.3	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	0.2	0.3	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	0.3	0.4	0.2	0.3	0.3	0.3	0.4	0.4	0.3	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

\* 10-32UNF has the same specification as M5.

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

# AS-FS Series



## How to Order



**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.\*1**

Metric size		Inch size	
02	ø2	01	ø1/8"
23	ø3.2*2	03	ø5/32"
04	ø4	07	ø1/4"
06	ø6		

\*1 For selecting applicable tubing O.D., refer to the "Model" on page 4. Metric size and inch size types can be visually identified by color of the release button.

Metric size: Light gray  
Inch size: Orange  
\*2 Use ø1/8" tubing.

**Body size 1** AS 1 2 0 1FS [ ] - M5 E - 06 - [ ]

**Body size 2/3/4** AS 2 2 0 1FS [ ] - [ ] 01 - 06 S - [ ]

**Body size**

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

With indicator

**Type**

2	Elbow
3	Universal

**Control type\*1**

0	Meter-out
1	Meter-in

\*1 Meter-out and meter-in types can be visually identified by color of the knob. Meter-out: Gray Meter-in: Light blue

**Made to Order**  
Refer to page 15 for details.

**Seal method**

Nil	Without sealant
S	With sealant

\* Face seal type is used for the G thread type. Select "Nil/Without sealant". Example) AS2201FS-G01-06

**Applicable tubing O.D.\*1**

Metric size		Inch size*3	
23	ø3.2*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		

\*1 For selecting applicable tubing O.D., refer to the "Model" on page 4.

\*2 Use ø1/8" tubing.

\*3 Only the metric size is available for the G thread type.

**Port size**

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

**Thread type**

Nil	R
N	NPT
G	G



**Made to Order**  
(For details, refer to page 15.)

Symbol	Specifications
-X12	Lubricant: Vaseline
-X21	Grease-free (Seal: Fluorine-coated) + Restrictor (Without check valve)
-X214	Restrictor (Without check valve)
10-	Clean series

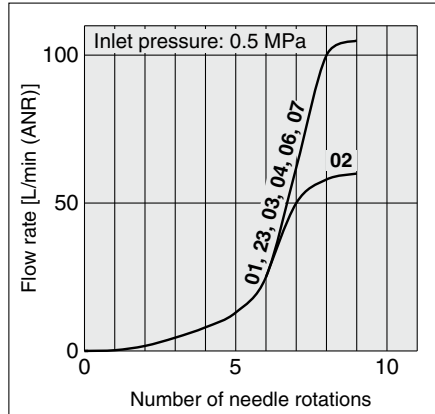
**Indicator window direction**

		Elbow	Universal
Nil	0°	●	—
1	180°	●	●
2	90°	●	—
3	270°	●	—

\* Orientation of indicator direction is fixed when manufacturing, and cannot be changed by the user. In addition, the universal type is only available with 180° setting.

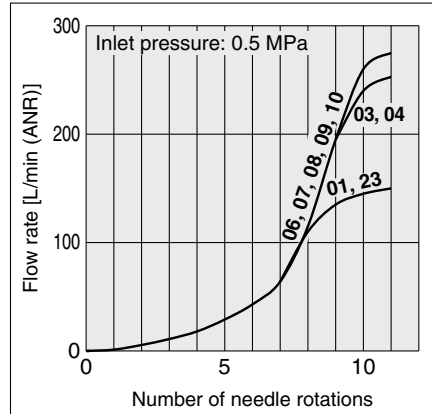
## Needle Valve: Flow Rate Characteristics

**AS1□01FS□-M5□, AS1□11FS□-M5□**

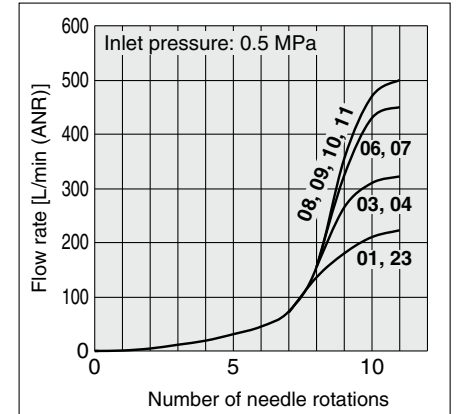


\* -U10/32 has the same specification as M5.

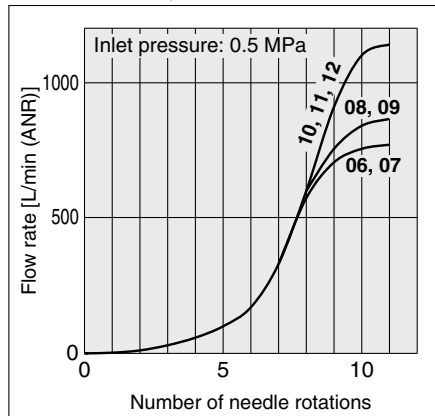
**AS2□01FS□-01, AS2□11FS□-01**



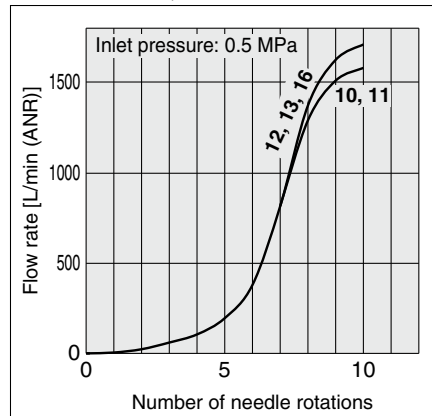
**AS2□01FS□-02, AS2□11FS□-02**



**AS3□01FS□, AS3□11FS□**



**AS4□01FS□, AS4□11FS□**



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

AS-FS

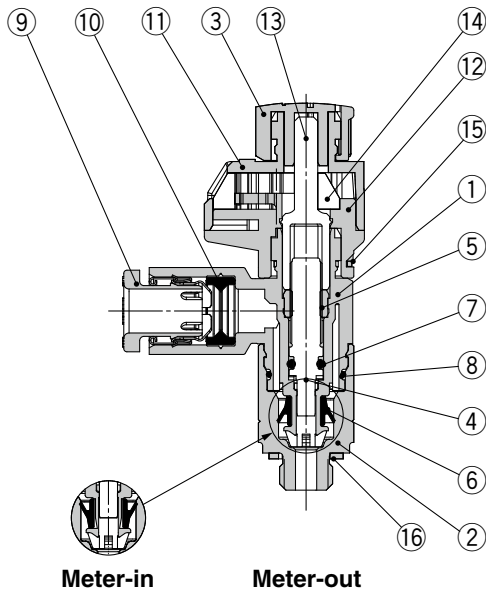
AS-FSG

Uni-AS-FS

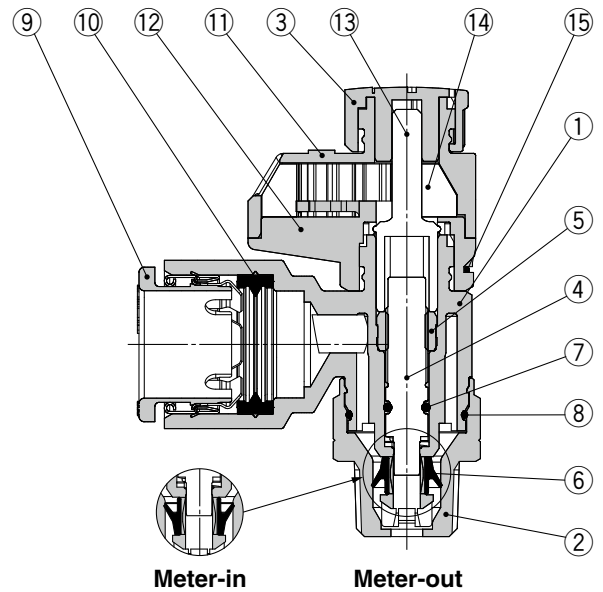
# AS-FS Series

## Construction: Elbow Type

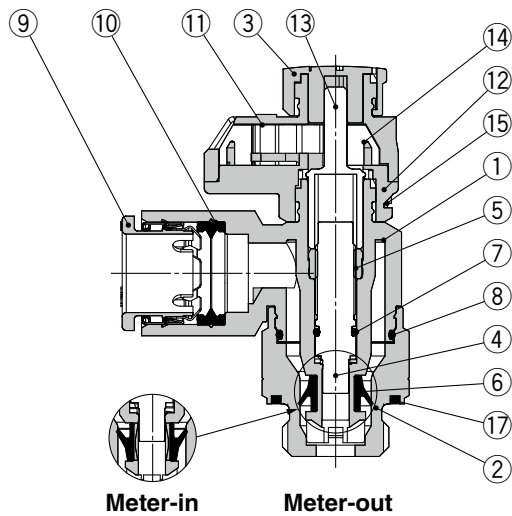
Seal method: Gasket seal  
For M5, 10-32UNF



Seal method: Sealant  
For R, NPT thread



Seal method: Face seal  
For G thread

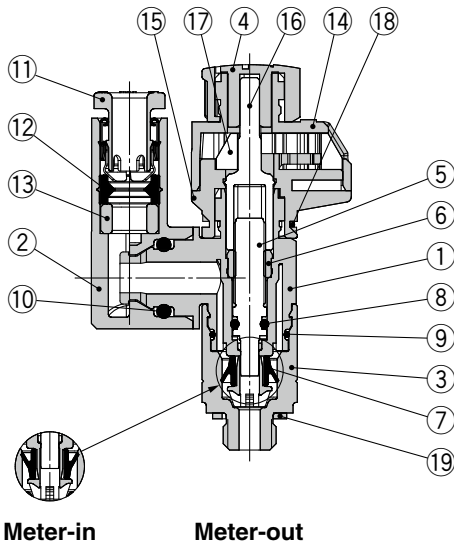


### Component Parts

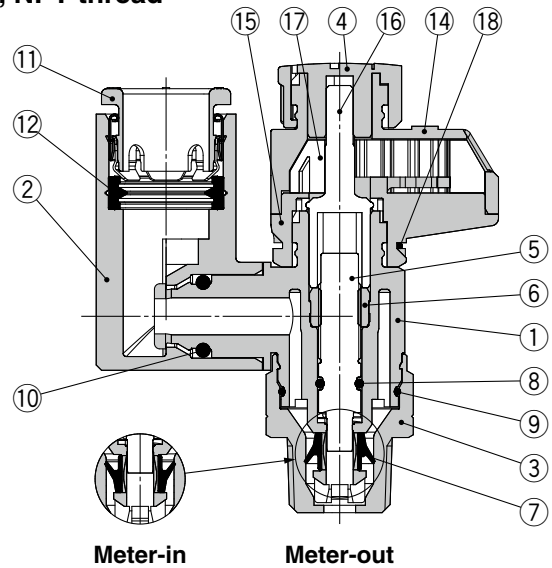
No.	Description	Material	Note
1	Body A	PBT	
2	Body B	Brass	Electroless nickel plating
3	Knob	POM	
4	Needle	PBT	
5	Needle guide	Brass	Electroless nickel plating
6	U-seal	HNBR	
7	O-ring	NBR	
8	O-ring	NBR	
9	Cassette	—	
10	Seal	NBR	
11	Bonnet A	POM	
12	Bonnet B	POM	
13	Gear	POM	
14	Indicator gear	POM	
15	Clip	Stainless steel	
16	Gasket	NBR/Stainless steel	
17	Seal	NBR	

## Construction: **Universal Type**

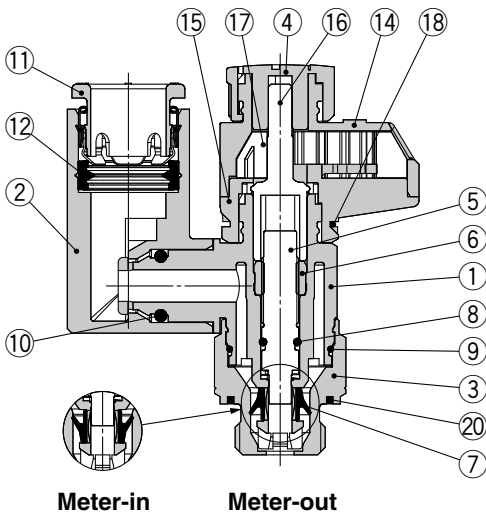
**Seal method: Gasket seal**  
For M5, 10-32UNF



**Seal method: Sealant**  
For R, NPT thread



**Seal method: Face seal**  
For G 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	PBT	ø3.2, ø1/8", ø4, ø5/32" and ø6 only
14	Bonnet A	POM	
15	Bonnet B	POM	
16	Gear	POM	
17	Indicator gear	POM	
18	Clip	Stainless steel	
19	Gasket	NBR/Stainless steel	
20	Seal	NBR	

AS-FS

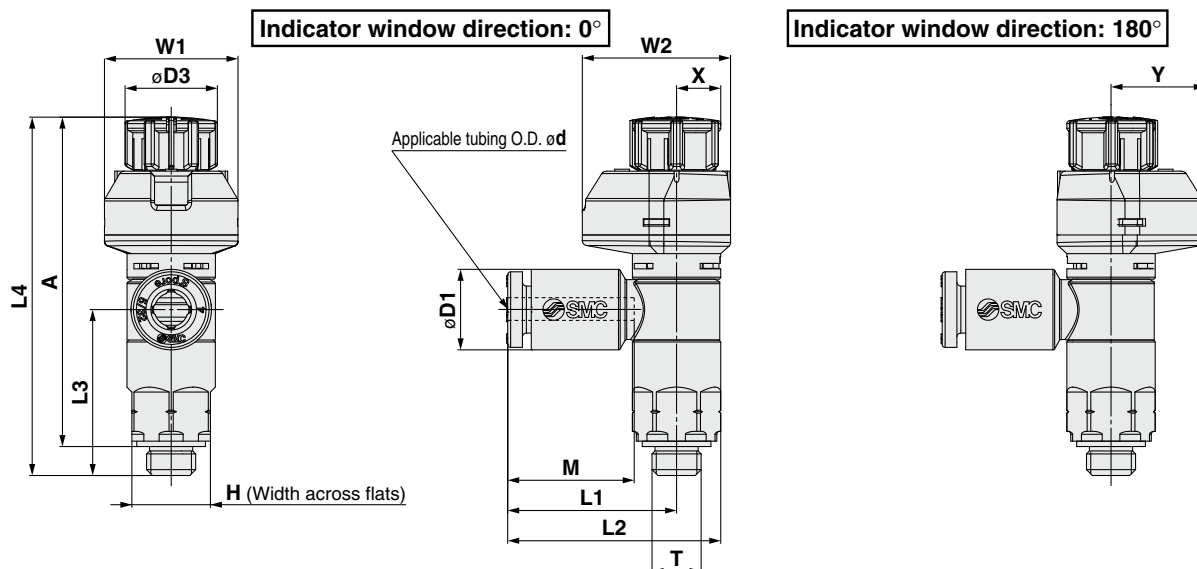
AS-FSG

Uni-AS-FS

# AS-FS Series

## Dimensions: Elbow Type

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



### Metric Size

Model	d	T	H*1	D1	D3	L1	L2	L3	L4*2		A*3		M	W1	W2	X	Y	Weight [g]		
									Unlocked	Locked	Unlocked	Locked								
AS12□1FS□-M5E-02	2	M5 x 0.8 10/32UNF	8 (9)	5.8	9.4	15.8	20.3	16.9	39	36.5	35	33.5	11.9	13.6	15.1	5.5	9.6	7		
AS12□1FS□-U10/32E-02				7.2		17.2	21.7													
AS12□1FS□-M5E-23	3.2			8.2		18.6	23.1												16.5	13.3
AS12□1FS□-U10/32E-23				10.4		18.6	23.1												16.5	
AS12□1FS□-M5E-04	4			10.4		18.6	23.1												16.5	13.3
AS12□1FS□-U10/32E-04	6			10.4		18.6	23.1												16.5	13.3
AS12□1FS□-M5E-06		10.4	18.6	23.1	16.5	13.3														
AS12□1FS□-U10/32E-06	6	10.4	18.6	23.1	16.5	13.3														

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

\*2 Reference dimensions

\*3 Reference dimensions of threads after installation

### Inch Size

Model	d	T	H*1	D1	D3	L1	L2	L3	L4*2		A*3		M	W1	W2	X	Y	Weight [g]		
									Unlocked	Locked	Unlocked	Locked								
AS12□1FS□-M5E-01	1/8"	M5 x 0.8 10/32UNF	8 (9)	7.2	9.4	17.2	21.7	16.9	39	36.5	35	33.5	13.3	13.6	15.1	5.5	9.6	7		
AS12□1FS□-U10/32E-01				8.2		18.6	23.1												16.5	
AS12□1FS□-M5E-03	5/32"			11.2		18.6	23.1												16.5	13.3
AS12□1FS□-U10/32E-03				11.2		18.6	23.1												16.5	
AS12□1FS□-M5E-07	1/4"			11.2		18.6	23.1												16.5	13.3
AS12□1FS□-U10/32E-07				11.2		18.6	23.1												16.5	

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

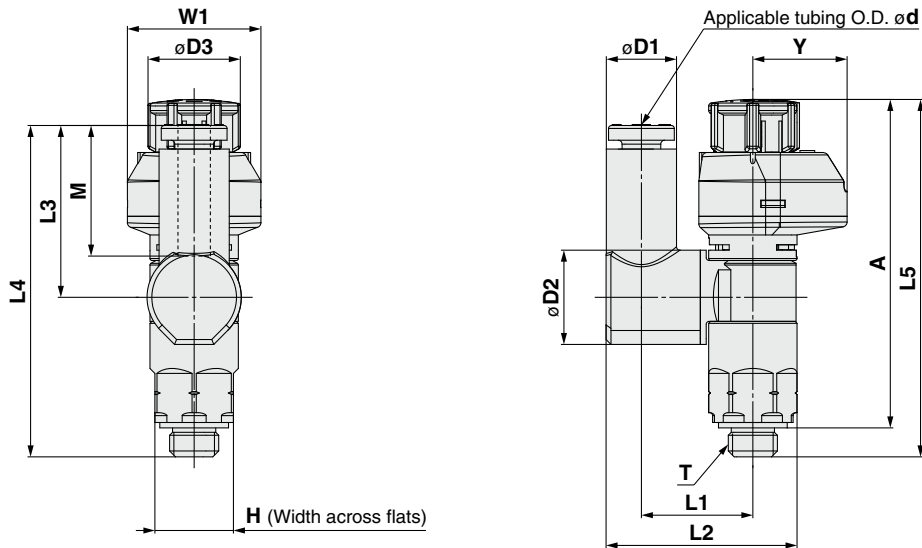
\*2 Reference dimensions

\*3 Reference dimensions of threads after installation



## Dimensions: **Universal Type**

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



### Metric Size

Model	d	T	H*1	D1	D2	D3	L1	L2	L3	L4	L5*2		A*3		M	W1	Y	Weight [g]
											Unlocked	Locked	Unlocked	Locked				
AS13□1FS1-M5E-23	3.2	M5 x 0.8	8	7.2	9.6	9.4	11.6	19.4	17.5	33.8	39	36.5	35	33.5	13.3	13.6	9.6	7
AS13□1FS1-U10/32-23				8.2														
AS13□1FS1-M5E-04	4	10/32UNF	(9)	8.2	9.6	9.4	11.5	19.8	20.4	36.6	39	36.5	35	33.5	13.3	13.6	9.6	8
AS13□1FS1-U10/32-04				10.4														
AS13□1FS1-M5E-06	6	10/32UNF	(9)	10.4	9.6	9.4	11.5	20.9	20.4	36.6	39	36.5	35	33.5	13.3	13.6	9.6	8
AS13□1FS1-U10/32-06				10.4														

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

\*2 Reference dimensions

\*3 Reference dimensions of threads after installation

### Inch Size

Model	d	T	H*1	D1	D2	D3	L1	L2	L3	L4	L5*2		A*3		M	W1	Y	Weight [g]
											Unlocked	Locked	Unlocked	Locked				
AS13□1FS1-M5E-01	1/8	M5 x 0.8	8	7.2	9.6	9.4	11.6	19.4	17.5	33.8	39	36.5	35	33.5	13.3	13.6	9.6	7
AS13□1FS1-U10/32-01				8.2														
AS13□1FS1-M5E-03	5/32	10/32UNF	(9)	8.2	9.6	9.4	11.5	19.8	20.4	36.6	39	36.5	35	33.5	13.3	13.6	9.6	8
AS13□1FS1-U10/32-03				11.2														
AS13□1FS1-M5E-07	1/4	10/32UNF	(9)	11.2	9.6	9.4	11.5	21.3	20.4	36.6	39	36.5	35	33.5	13.3	13.6	9.6	8
AS13□1FS1-U10/32-07				11.2														

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

\*2 Reference dimensions

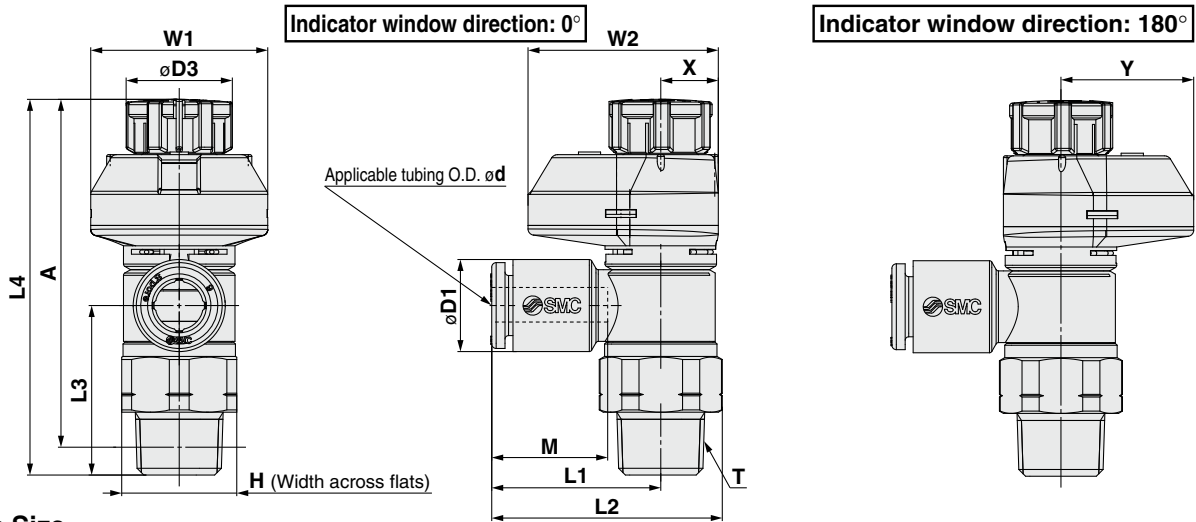
\*3 Reference dimensions of threads after installation

AS-FS  
AS-FSG  
Uni-AS-FS

# AS-FS Series

## Dimensions: Elbow Type

Seal method: Sealant  
For R, NPT thread



### Metric Size

Model	d	T (R, NPT)	H	D1	D3	L1	L2	L3	L4*1		A*2		M	W1	W2	X	Y	Weight [g]				
									Unlocked	Locked	Unlocked	Locked										
AS22□1FS□-01-23 (S)	3.2	1/8 (12.7)	13	7.2	12	19.1	26.2	19.1	43.9	42.4	40.8	39.3	13.3	20	21.5	6.5	15	13 (13)				
AS22□1FS□-01-04 (S)	4			8.2															14 (13)			
AS22□1FS□-01-06 (S)	6			10.4															15 (14)			
AS22□1FS□-01-08 (S)	8			13.2															16 (15)			
AS22□1FS□-01-10 (S)	10			15.9															25.3	32.4	15.6	
AS22□1FS□-02-23 (S)	3.2	1/4 (17.5)	17	7.2	13	20.9	30.2 (30.3)	22.6	49.7	48.3	44.2	42.8	13.3	21.5	24	7.8	16.2	23 (24)				
AS22□1FS□-02-04 (S)	4			8.2															24 (25)			
AS22□1FS□-02-06 (S)	6			10.4															25 (26)			
AS22□1FS□-02-08 (S)	8			13.2															26.9	36.2 (36.3)	15.6	
AS22□1FS□-02-10 (S)	10			15.9															26.7	37	35.7	17
AS32□1FS□-02-06 (S)	6	1/4	19	10.4	16.6	21.8	32.1	36.4	63.1	61.7	57.9	56.5	13.3	24.5	28.5	9.3	19.2	47 (48)				
AS32□1FS□-02-08 (S)	8			13.2															33	14.2		
AS32□1FS□-02-10 (S)	10			15.9															26.7	37	35.7	15.6
AS32□1FS□-02-12 (S)	12			18.5															29.7	40	34.5	17
AS32□1FS□-03-06 (S)	6			3/8															19	10.4	16.6	21.8
AS32□1FS□-03-08 (S)	8	13.2	33		14.2																	
AS32□1FS□-03-10 (S)	10	15.9	26.7		37	28	15.6															
AS32□1FS□-03-12 (S)	12	18.5	29.7		40	26.8	17															
AS42□1FS□-04-10 (S)	10	1/2 (23.8)	24		15.9	18.8	27.4	40.3 (40.2)	36.2	64.1	62.5	57	55.4	15.6	26	29	10	19		62 (61)		
AS42□1FS□-04-12 (S)	12			18.5	30.8														43.7 (43.6)		35.1	17
AS42□1FS□-04-16 (S)	16			23.8	34.8														47.7 (47.6)		32.7	20.6

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

### Inch Size

Model	d	T (R, NPT)	H	D1	D3	L1	L2	L3	L4*1		A*2		M	W1	W2	X	Y	Weight [g]																
									Unlocked	Locked	Unlocked	Locked																						
AS22□1FS□-01-01 (S)	1/8"	1/8 (12.7)	13	7.2	12	19.1	26.2	19.1	43.9	42.4	40.8	39.3	13.3	20	21.5	6.5	15	13 (13)																
AS22□1FS□-01-03 (S)	5/32"			8.2															14 (13)															
AS22□1FS□-01-07 (S)	1/4"			11.2															15 (14)															
AS22□1FS□-01-09 (S)	5/16"			13.2															22.4	29.5	14.2													
AS22□1FS□-02-01 (S)	1/8"			1/4 (17.5)															17	7.2	13	20.9	30.2 (30.3)	22.6	49.7	48.3	44.2	42.8	13.3	21.5	24	7.8	16.2	23 (24)
AS22□1FS□-02-03 (S)	5/32"	8.2	24 (24)																															
AS22□1FS□-02-07 (S)	1/4"	11.2	25 (26)																															
AS22□1FS□-02-09 (S)	5/16"	13.2	26.9		36.2 (36.3)	15.6																												
AS22□1FS□-02-11 (S)	3/8"	15.5	26.4		35.7 (35.8)	17																												
AS32□1FS□-02-07 (S)	1/4"	1/4	19	11.2	16.6	21.8	32.1	36.4	63.1	61.7	57.9	56.5	13.3	24.5	28.5	9.3	19.2	47 (48)																
AS32□1FS□-02-09 (S)	5/16"			13.2															33	14.2														
AS32□1FS□-02-11 (S)	3/8"			15.5															26.7	37	35.9	15.6												
AS32□1FS□-03-07 (S)	1/4"			3/8															19	11.2	16.6	21.8	32.1	28.7	55.4	54	50.2	48.8	13.3	24.5	28.5	9.3	19.2	38 (39)
AS32□1FS□-03-09 (S)	5/16"																			13.2														
AS32□1FS□-03-11 (S)	3/8"	15.5	26.7		37	28.2	15.6																											
AS42□1FS□-04-11 (S)	3/8"	1/2 (23.8)	24		15.5	18.8	27.4	40.3 (40.2)	36.2	64.1	62.5	57	55.4	15.6	26	29	10	19		62 (61)														
AS42□1FS□-04-13 (S)	1/2"				19.3																													

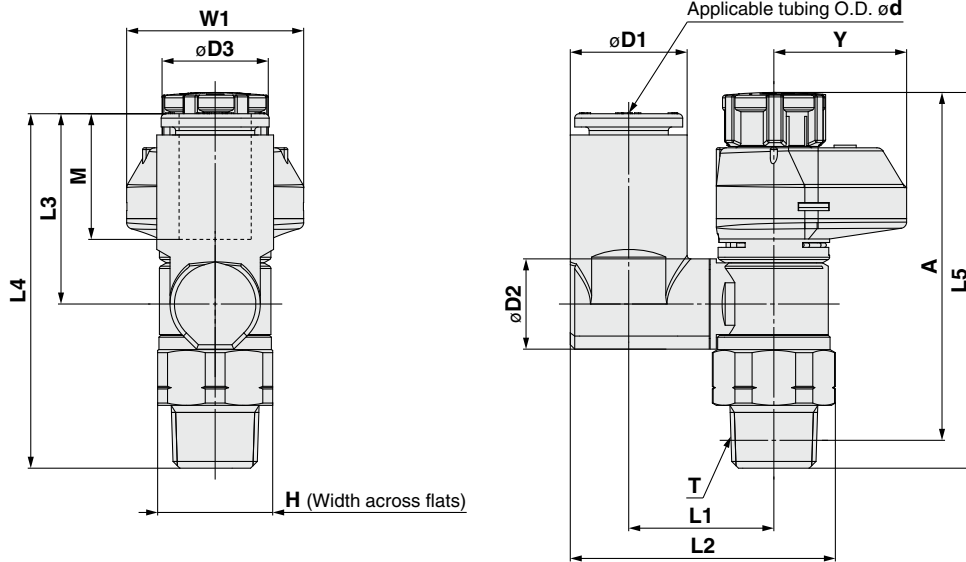
\*1 Reference dimensions \*2 Reference dimensions of threads after installation \* The values in ( ) are for NPT thread.





## Dimensions: **Universal Type**

Seal method: Sealant  
For R, NPT thread



### Metric Size

Model	d	T	H	D1	D2	D3	L1	L2	L3	L4	L5		A		M	W1	Y	Weight [g]	
											Unlocked	Locked	Unlocked	Locked					
AS23□1FS1-01-23 (S)	3.2	1/8	13 (12.7)	7.2	9.6	12	13.3	24	17.5	36	43.9	42.4	40.8	39.3	13.3	20	15	14	
AS23□1FS1-01-04 (S)	4			8.2			13.9	25.1										15	
AS23□1FS1-01-06 (S)	6			10.4			26.2	20.4										16	
AS23□1FS1-01-08 (S)	8	1/4	17 (17.5)	13.2	12.9	13	16.4	30.1	21.5	40	49.7	48.3	44.2	42.8	14.2	21.5	16.2	16	
AS23□1FS1-02-04 (S)	4			8.2			16.5	29.9										24	
AS23□1FS1-02-06 (S)	6			11.2			19	33.8										21.4	26
AS23□1FS1-02-08 (S)	8	10	15.9	13.2	17.4	23	34.9	23.5	46	47.3	63.1	61.7	57.9	56.5	15.6	24.5	19.2	27	
AS23□1FS1-02-10 (S)	10			15.9			20.9	38.1										24.7	28
AS33□1FS1-02-06 (S)	6			11.2			20.2	36										21.4	49
AS33□1FS1-02-08 (S)	8	1/4	19	13.2	12.9	16.6	37.1	23.5	59.9	62.5	63.1	61.7	57.9	56.5	14.2	24.5	19.2	50	
AS33□1FS1-02-10 (S)	10			15.9			41.2	26.1										53	
AS33□1FS1-02-12 (S)	12			18.5			42.5	28.3										55	
AS33□1FS1-03-06 (S)	6	3/8	19	10.4	12.9	16.6	20.2	36	21.4	50.1	55.4	54	50.2	48.8	13.3	24.5	19.2	41	
AS33□1FS1-03-08 (S)	8			13.2			37.1	23.5										42	
AS33□1FS1-03-10 (S)	10			15.9			41.2	26.1										45	
AS33□1FS1-03-12 (S)	12	1/2	24 (23.8)	18.5	17.4	18.8	23	42.5	28.3	57	64.1	62.5	57	55.4	15.6	26	19	47	
AS43□1FS1-04-10 (S)	10			15.9			25.6	46.4										26.1	69
AS43□1FS1-04-12 (S)	12			18.5			26.2	48.3										28.3	72

### Inch Size

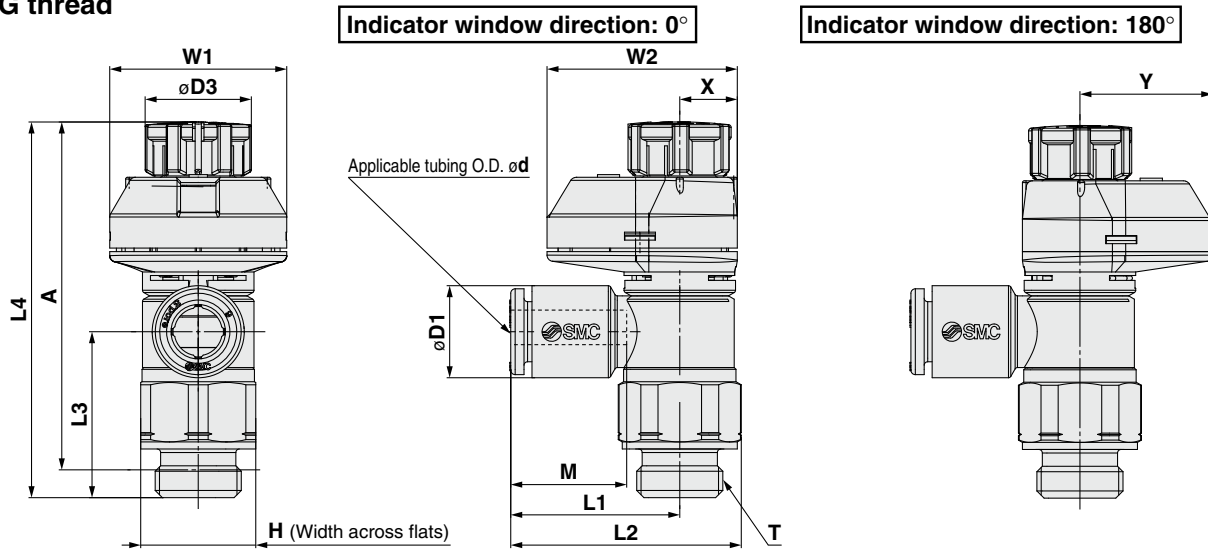
Model	d	T	H	D1	D2	D3	L1	L2	L3	L4	L5		A		M	W1	Y	Weight [g]	
											Unlocked	Locked	Unlocked	Locked					
AS23□1FS1-01-01 (S)	1/8	1/8	13 (12.7)	7.2	9.6	12	13.3	24	17.5	36	43.9	42.4	40.8	39.3	13.3	20	15	14	
AS23□1FS1-01-03 (S)	5/32			8.2			13.9	25.1										15	
AS23□1FS1-01-07 (S)	1/4			11.2			16.4	29.1										20.2	16
AS23□1FS1-01-09 (S)	5/16	1/4	17 (17.5)	13.2	12.9	13	16.5	29.9	17.5	40.1	49.7	48.3	44.2	42.8	14.2	21.5	16.2	16	
AS23□1FS1-02-03 (S)	5/32			8.2			16.5	29.9										24	
AS23□1FS1-02-07 (S)	1/4			11.2			19	33.8										21.4	26
AS23□1FS1-02-09 (S)	5/16	3/8	15.9	13.2	17.4	23	34.9	23.5	46	47.3	63.1	61.7	57.9	56.5	15.6	24.5	19.2	27	
AS23□1FS1-02-11 (S)	3/8			15.9			20.9	38.1										24.7	28
AS33□1FS1-02-07 (S)	1/4			11.2			20.2	36										21.4	49
AS33□1FS1-02-09 (S)	5/16	3/8	19	13.2	12.9	16.6	37.1	23.5	59.9	62.5	63.1	61.7	57.9	56.5	14.2	24.5	19.2	50	
AS33□1FS1-02-11 (S)	3/8			15.9			41.2	26.1										53	
AS33□1FS1-03-07 (S)	1/4			11.2			23	36										21.4	51
AS33□1FS1-03-09 (S)	5/16	3/8	19	13.2	12.9	16.6	20.2	37.1	23.5	52.2	55.4	54	50.2	48.8	13.3	24.5	19.2	41	
AS33□1FS1-03-11 (S)	3/8			15.9			23	41.2										26.1	42
AS43□1FS1-04-11 (S)	3/8			15.9			25.6	46.4										26.1	45
AS43□1FS1-04-13 (S)	1/2	1/2	24 (23.8)	18.5	17.4	18.8	23	42.5	28.3	57	64.1	62.5	57	55.4	15.6	26	19	69	
				18.5			26.2	48.3										28.3	72

AS-FS  
AS-FSG  
Uni-AS-FS

# AS-FS Series

## Dimensions: Elbow Type

Seal method: Face seal  
For G thread



### Metric Size

Model	d	T	H	D1	D3	L1	L2	L3	L4*1		A*2		M	W1	W2	X	Y	Weight [g]				
									Unlocked	Locked	Unlocked	Locked										
AS22□1FS□-G01-23	3.2	1/8	13	7.2	12	19.1	26.2	18.8	43.8	42.4	38.3	36.9	13.3	20	21.5	6.5	15	14				
AS22□1FS□-G01-04	4			8.2																		
AS22□1FS□-G01-06	6			10.4															22.4	29.5	14.2	
AS22□1FS□-G01-10	10			15.9															25.3	32.4	15.6	
AS22□1FS□-G02-23	3.2	1/4	17	7.2	13	20.9	30.2	22.6	49.7	48.3	43.2	41.8	13.3	21.5	24	7.8	16.2	26				
AS22□1FS□-G02-04	4			8.2																		
AS22□1FS□-G02-06	6			10.4															23.4	32.7	14.2	
AS22□1FS□-G02-08	8			13.2															23.9	33.2	15.6	
AS22□1FS□-G02-10	10	15.9	26.9	36.2	15.6																	
AS32□1FS□-G02-06	6	1/4	21	10.4	16.6	21.8	33	36.4	63.1	61.7	54.6	53.2	13.3	24.5	28.5	9.3	19.2	55				
AS32□1FS□-G02-08	8			13.2															22.7	33.9	14.2	
AS32□1FS□-G02-10	10			15.9															26.7	37.9	15.6	
AS32□1FS□-G02-12	12			18.5															29.7	40.9	17	
AS32□1FS□-G03-06	6	3/8	21	10.4	16.6	21.8	33	28.7	55.4	54	47.9	46.5	13.3	24.5	28.5	9.3	19.2	45				
AS32□1FS□-G03-08	8			13.2															22.7	33.9	14.2	
AS32□1FS□-G03-10	10			15.9															26.7	37.9	15.6	
AS32□1FS□-G03-12	12			18.5															29.7	40.9	17	
AS42□1FS□-G04-10	10	1/2	27	15.9	18.8	27.4	41.8	36.2	64.1	62.5	55.1	53.5	15.6	26	29	10	19	80				
AS42□1FS□-G04-12	12			18.5															30.8	45.2	35.1	17
AS42□1FS□-G04-16	16			23.8															34.8	49.2	32.7	20.6

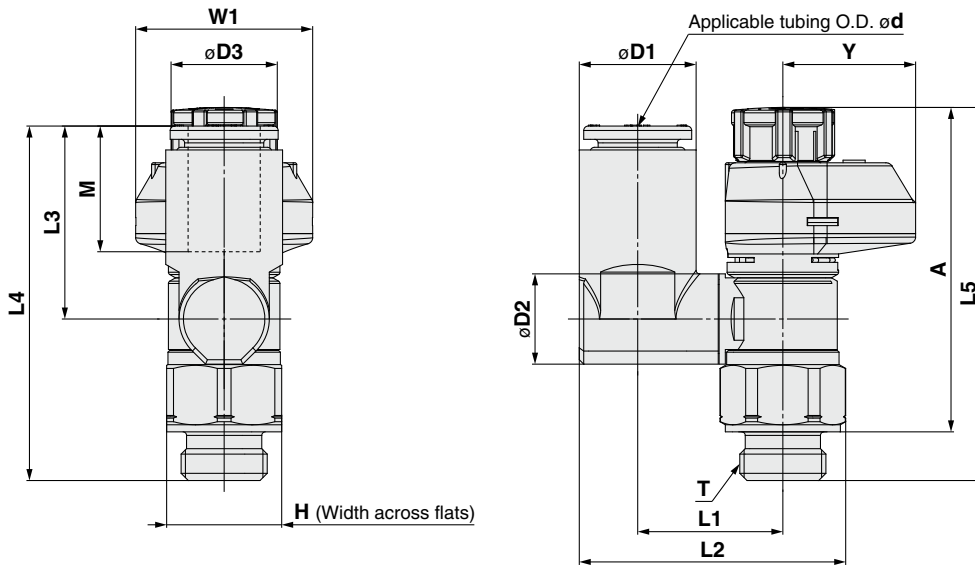
\*1 Reference dimensions

\*2 Reference dimensions of threads after installation



## 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	W1	Y	Weight [g]		
											Unlocked	Locked	Unlocked	Locked						
AS23□1FS1-G01-23	3.2	1/8	13	7.2	9.6	12	13.2	24	17.5	35.7	43.8	42.4	38.3	36.9	13.3	20	15	14		
AS23□1FS1-G01-04	4			8.2			13.9	25.1										15		
AS23□1FS1-G01-06	6			10.4			26.2	20.4										15		
AS23□1FS1-G01-08	8	1/4	17	13.2	10.2	13	16.4	30.1	21.5	39.7	49.7	48.3	43.2	41.8	14.2	21.5	16.2	16		
AS23□1FS1-G02-04	4			8.2			16.5	29.9										17.5	40.1	26
AS23□1FS1-G02-06	6			10.4			19	33.8										21.4	43.9	28
AS23□1FS1-G02-08	8	1/4	17	13.2	12.9	13	19	34.9	23.5	46	49.7	48.3	43.2	41.8	14.2	21.5	16.2	29		
AS23□1FS1-G02-10	10			15.9			20.9	38.1										24.7	47.3	32
AS23□1FS1-G02-06	6			10.4			20.2	36.1										21.4	57.8	55
AS33□1FS1-G02-08	8	1/4	21	13.2	12.9	16.6	20.2	38	23.5	59.9	63.1	61.7	54.6	53.2	14.2	24.5	19.2	56		
AS33□1FS1-G02-10	10			15.9			23	42.2										26.1	58	59
AS33□1FS1-G02-12	12			18.5			23	43.5										28.3	59.9	61
AS33□1FS1-G03-06	6	3/8	21	10.4	12.9	16.6	20.2	36.6	21.4	50.1	55.4	54	47.9	46.5	13.3	24.5	19.2	45		
AS33□1FS1-G03-08	8			13.2			38	23.5										52.2	46	
AS33□1FS1-G03-10	10			15.9			42.2	28.1										50.3	47	
AS33□1FS1-G03-12	12	1/2	27	18.5	17.4	18.8	23	43.5	28.3	52.2	64.1	62.5	55.1	53.5	17	26	19	49		
AS43□1FS1-G04-10	10			15.9			25.6	47.9										26.1	61.2	80
AS43□1FS1-G04-12	12			18.5			26.2	49.8										28.3	63.4	82

AS-FS

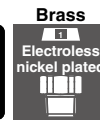
AS-FSG

Uni-AS-FS

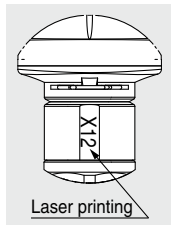
# AS-FS Series

## Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.

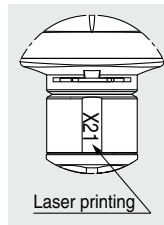


### 1 Lubricant: Vaseline -X12



Example) AS2201FS-01-04S-X12

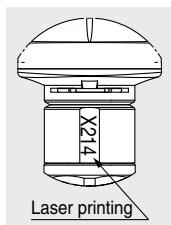
### 2 Grease-free (Seal: Fluorine-coated) + Restrictor (Without check valve) -X21



Example) AS2201FS-01-04S-X21

- Note 1) Not particle-free
- Note 2) This product is a restrictor without a check valve (no control direction). Be aware that all part numbers are for a meter-out type; there is no part number for a meter-in type.
- Note 3) Only the needle and O-ring are fluorine-coated.

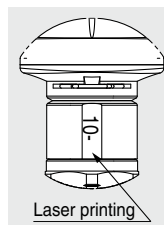
### 3 Restrictor (Without check valve) -X214



Example) AS2201FS-01-04S-X214

Note) This product is a restrictor without a check valve (no control direction). Be aware that all part numbers are for a meter-out type; there is no part number for a meter-in type.

### 4 Clean Series 10-



Example) 10-AS2201FS-01-04S

- Note 1) Fluorine grease is used.
- Note 2) The cleanliness class (ISO class) is 5.