

# Series 10-AS-FG

Stainless Steel Speed Controller with One-touch Fittings (Elbow/Universal type)

## How to Order

RoHS

**10** – **AS** **2** **3** **1** **1** **F** **G** **01** **06**

**Clean series** •

**Body size** •

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

**Type** •

2	Elbow
3	Universal

**Control type** •

0	Meter-out
1	Meter-in

**With One-touch fitting** •

**Stainless steel specifications (Stainless steel 303)** •

**Lock nut option**

Nil	Hexagon lock nut
J	Round lock nut

**Applicable tubing O.D. (Note)**

**Metric size**

23	ø3.2 *
04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Note) Refer to the following Model list for selection of applicable tubing O.D.  
\* ø1/8" tubing should be used.

**Port size**

M5	M5 x 0.8
01	R1/8
02	R1/4
03	R3/8
04	R1/2



## Model

Elbow type	Universal type	Port size	Applicable tubing O.D.					
			Metric size					
			3.2	4	6	8	10	12
10-AS12□1FG-M5	10-AS13□1FG-M5	M5 x 0.8	●	●	●			
10-AS22□1FG-01	10-AS23□1FG-01	R1/8	●	●	●	●	●*	
10-AS22□1FG-02	10-AS23□1FG-02	R1/4		●	●	●	●	
10-AS32□1FG-02	10-AS33□1FG-02	R1/4			●	●	●	●
10-AS32□1FG-03	10-AS33□1FG-03	R3/8			●	●	●	●
10-AS42□1FG-04	10-AS43□1FG-04	R1/2					●	●

Note 1) The meter-out and meter-in types can be visually determined by the flow direction symbol on the resin body.

Note 2) \* Elbow type only.

### Specifications

<b>Proof pressure</b>	1.5 MPa
<b>Max. operating pressure</b>	1 MPa
<b>Min. operating pressure</b>	0.1 MPa
<b>Ambient and fluid temperature</b>	-5 to 60°C (No freezing)
<b>Applicable tubing material</b>	Polyurethane <sup>Note 1)</sup>
<b>Grease</b>	Fluorine grease
<b>Cleanliness class (ISO class)</b>	Class 5

Note 1) The maximum operating pressure for polyurethane (at 20 °C) is 0.8 MPa.  
(Refer to the **WEB catalog** for details.)

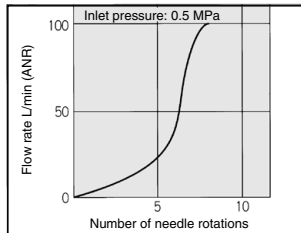
### Flow Rate and Sonic Conductance

Model		10-AS12□1FG 10-AS13□1FG	10-AS22□1FG-□01 10-AS23□1FG-□01	10-AS22□1FG-□02 10-AS23□1FG-□02			10-AS32□1FG 10-AS33□1FG			10-AS42□1FG 10-AS43□1FG		
<b>Tubing O.D.</b>	Metric size	ø3.2 ø4 ø6	ø3.2 ø4 ø6 ø8 ø10	ø4 ø6 ø8 ø10	ø4 ø6 ø8 ø10	ø6 ø8 ø10	ø6 ø8 ø10 ø12	ø6 ø8 ø10 ø12	ø10 ø12	ø10 ø12		
	Flow rate L/min (ANR)	100	180	230	260	390	460	660	790	920	1580	1710
<b>Controlled flow</b>	Free flow											
	Sonic conductance dm <sup>3</sup> /(s·bar)	0.28	0.50	0.64	0.72	1.1	1.3	1.8	2.2	2.6	4.4	4.8
<b>Critical pressure ratio</b>	Controlled flow	0.2	0.25	0.3	0.3	0.3	0.3	0.25	0.25	0.25	0.25	0.25
	Free flow	0.4	0.2	0.3	0.3	0.3	0.3	0.2	0.2	0.2	0.3	0.3

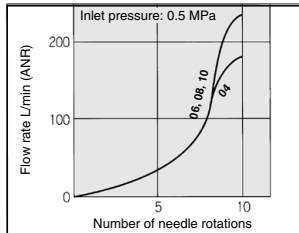
Note) Supply pressure: 0.5 MPa, Temperature: 20°C.

### Needle Valve / Flow Rate Characteristics

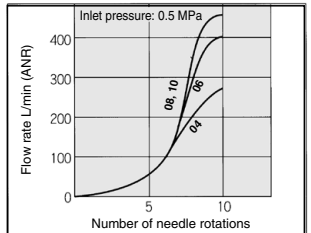
**10-AS12□1FG**  
**10-AS13□1FG**



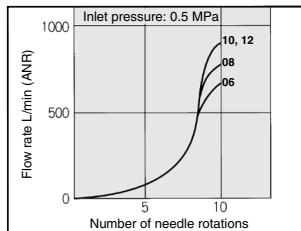
**10-AS22□1FG-01**  
**10-AS23□1FG-01**



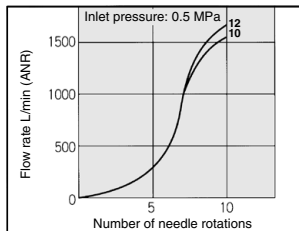
**10-AS22□1FG-02**  
**10-AS23□1FG-02**



**10-AS32□1FG**  
**10-AS33□1FG**

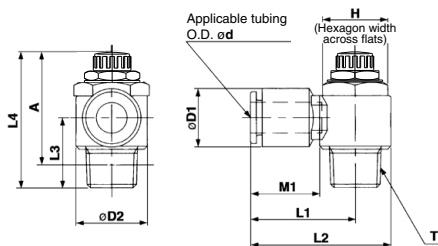


**10-AS42□1FG**  
**10-AS43□1FG**

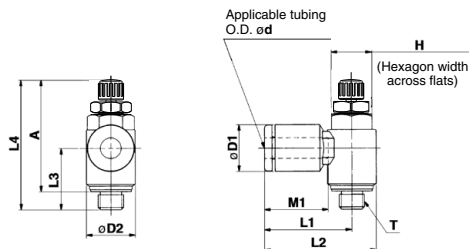


Directional Control Valves  
Air Cylinders  
Rotary Actuators  
Air Grippers  
Air Preparation Equipment  
Modular F. R.  
Pressure Control Equipment  
Fittings & Tubing  
Flow Control Equipment  
Pressure Switches/ Pressure Sensors

**Dimensions / Elbow Type**



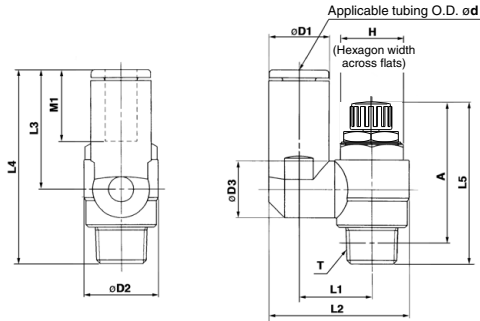
**M5 type**



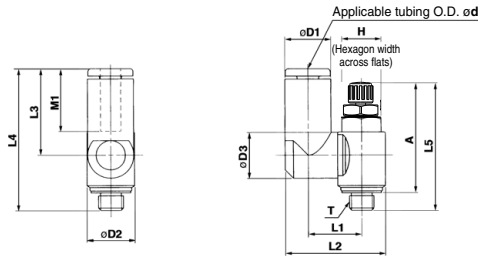
Model	d	T	H	D1	D2	L1	L2	L3	L4		A *		M1	Weight (g)	
									MAX.	MIN.	MAX.	MIN.			
10-AS12□1FG-M5-23	3.2	M5 x 0.8	8	8.4	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7	
10-AS12□1FG-M5-04	4			9.3											
10-AS12□1FG-M5-06	6			11.6											
10-AS22□1FG-01-23	3.2	R1/8	12	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16	
10-AS22□1FG-01-04	4			11.6									13.5	17	
10-AS22□1FG-01-06	6			15.2									18.5	19	
10-AS22□1FG-01-08	8			18.5		25.3	32.4						18.5	19	
10-AS22□1FG-01-10	10			18.5		33.1	40.2	15					21	21	
10-AS22□1FG-02-04	4	R1/4	17	10.4	18.5	25.2	34.4	18.2	40.4	35.4	34.4	29.4	16	32	
10-AS22□1FG-02-06	6			12.8									17		
10-AS22□1FG-02-08	8			15.2									18.5		19
10-AS22□1FG-02-10	10			18.5		35.3	44.5	20					21	36	
10-AS32□1FG-02-06	6	R1/4	17	12.8	18.5	27.8	39.3	21.8	48.8	43.8	42.8	37.8	17	60	
10-AS32□1FG-02-08	8			15.2									18.5		19
10-AS32□1FG-02-10	10			18.5									21.8		21
10-AS32□1FG-02-12	12			20.9		32.8	44.3						22	69	
10-AS32□1FG-03-06	6	R3/8	19	12.8	23	27.8	39.3	20.9	46.5	41.5	40.2	35.2	17	55	
10-AS32□1FG-03-08	8			15.2									18.5		19
10-AS32□1FG-03-10	10			18.5									21.8		21
10-AS32□1FG-03-12	12			20.9		32.8	44.3						22	61	
10-AS42□1FG-04-10	10	R1/2	24	18.5	28.6	33.6	47.9	25.4	57.6	50.1	49.6	42.1	21	100	
10-AS42□1FG-04-12	12			20.9									34.6	48.9	22

\* Reference thread dimensions after being screwed in.

**Dimensions / Universal Type**



**M5 type**



Model	d	T	H	D1	D2	D3	L1	L2	L3	L4	L5		A *		M1	Weight (g)		
											MAX.	MIN.	MAX.	MIN.				
10-AS13□1FG-M5-23	3.2	M5 x 0.8	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		
10-AS13□1FG-M5-04	4			9.3				20.3										
10-AS13□1FG-M5-06	6			11.6				21.4									20.6	
10-AS23□1FG-01-23	3.2	R1/8	12	8.4	14.2	10.9	14	24.4	22.9	37.2	36.1	31.1	32.1	27.1	12.7	17		
10-AS23□1FG-01-04	4			9.3				24.9									17.5	31.8
10-AS23□1FG-01-06	6			11.6				24.4									17.5	31.8
10-AS23□1FG-01-08	8			15.2				24.9									17.5	31.8
10-AS23□1FG-02-04	4			10.4				24.4									17.5	31.8
10-AS23□1FG-02-06	6			12.8				24.4									17.5	31.8
10-AS23□1FG-02-08	8	15.2	24.4	17.5	31.8													
10-AS23□1FG-02-10	10	18.5	24.4	17.5	31.8													
10-AS33□1FG-02-06	6	R1/4	17	12.8	18.5	12.9	16.2	38.5	25.2	47	40.4	35.4	34.4	29.4	17	33		
10-AS33□1FG-02-08	8			15.2				38.5									25.2	47
10-AS33□1FG-02-10	10			18.5				38.5									25.2	47
10-AS33□1FG-02-12	12			20.9				38.5									25.2	47
10-AS33□1FG-03-06	6			12.8				38.5									25.2	47
10-AS33□1FG-03-08	8			15.2				38.5									25.2	47
10-AS33□1FG-03-10	10	18.5	38.5	25.2	47													
10-AS33□1FG-03-12	12	20.9	38.5	25.2	47													
10-AS43□1FG-04-10	10	R3/8	19	18.5	23	16.2	23	43.7	28.2	54.4	48.8	43.8	42.8	37.8	18.5	63		
10-AS43□1FG-04-12	12			20.9				43.7									28.2	54.4
10-AS43□1FG-04-10	10			18.5				43.7									28.2	54.4
10-AS43□1FG-04-12	12	20.9	43.7	28.2	54.4													
10-AS43□1FG-04-10	10	R1/2	24	18.5	28.6	16.2	25.8	49.4	32.6	58	57.6	50.1	49.6	42.1	21	104		
10-AS43□1FG-04-12	12			20.9				49.4									32.6	58

\* Reference thread dimensions after M5 x 0.8, R thread being screwed in.

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