

Speed Controller with One-touch Fitting Stainless Steel Series Elbow Type/Universal Type *Series AS-FG*

Stainless specifications for use in corrosive environments. Stainless steel 303 used for metal parts.

Suitable for use on CRT lines where copper ions can cause damage, for washing food processing equipment where there is exposure to water and salt water, etc., and in clean rooms where dust from discoloration and rusting of copper materials is unacceptable.

Light colors to match equipment

White resin parts are used for bodies and release buttons.

Threads with and without seal are available as standard.

Applicable tubing: Inch sizes standardized

Inch sizes are now available for all models.

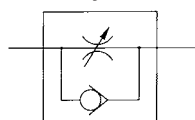


Elbow type



Universal type

JIS Symbol



Flow Direction Symbols on Body

	Meter-out type	Meter-in type
Symbol		
JIS Symbol		

Model

Elbow type	Universal type	Port size	Applicable tubing 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□1FG-M5	AS13□1FG-M5	M5 x 0.8	●	●	●											6, 10, 16, 20
AS22□1FG-01	AS23□1FG-01	R 1/8	●	●	●	●	●*									20, 25, 32
AS22□1FG-02	AS23□1FG-02	R 1/4		●	●	●	●									20, 25, 32, 40
AS32□1FG-02	AS33□1FG-02	R 1/4			●	●	●	●								40, 50, 63
AS32□1FG-03	AS33□1FG-03	R 3/8			●	●	●	●								40, 50, 63
AS42□1FG-04	AS43□1FG-04	R 1/2					●	●								63, 80, 100
AS12□1FG-U10/32	AS13□1FG-U10/32	10-32 UNF							●	●	●	●				6, 10, 16, 20
AS22□1FG-N01	AS23□1FG-N01	NPT 1/8							●	●	●	●	●			20, 25, 32
AS22□1FG-N02	AS23□1FG-N02	NPT 1/4								●	●	●	●	●		20, 25, 32, 40
AS32□1FG-N02	AS33□1FG-N02	NPT 1/4										●	●	●		40, 50, 63
AS32□1FG-N03	AS33□1FG-N03	NPT 3/8										●	●	●		40, 50, 63
AS42□1FG-N04	AS43□1FG-N04	NPT 1/2												●	●	63, 80, 100

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

Note 2) * Elbow type only

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)
Number of needle rotations	10 turns (8 turns ⁽¹⁾)
Applicable tubing material ⁽²⁾	Nylon, Soft nylon, Polyurethane

Note 1) In the case of AS12□1FG and AS13□1FG

Note 2) Use caution regarding the max. operating pressure when soft nylon or polyurethane tubing is used.

(Refer to pages 371 and 372 for details.)

Flow Rate and Effective Area

Model		AS12□1FG AS13□1FG	AS22□1FG-□01 AS23□1FG-□01	AS22□1FG-□02 AS23□1FG-□02			AS32□1FG AS33□1FG			AS42□1FG AS43□1FG		
Tubing O.D.	Metric size	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" ø3/16" ø1/4"	ø1/8" ø5/32" ø1/4" ø5/16"	ø5/32"	ø3/16"	ø1/4" ø5/16" ø3/8"	ø1/4"	ø5/16"	ø3/8"	ø3/8"	ø1/2"	
Controlled flow (Free flow)	Flow rate (ℓ/min (ANR))	100	180	230	260	390	460	660	790	920	1580	1710
	Effective area (mm²)	1.5	2.7	3.5	4	6	7	10	12	14	12	26

Note) Flow rate values are measured at 0.5 MPa and 20°C.



Made to Order
(Refer to page 473 for details.)

How to Order

AS 2 3 0 1 F G - 01 - 06 -

Body size

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

Control type

0	Meter-out
1	Meter-in

Type

2	Elbow
3	Universal

With One-touch fitting

Stainless steel specifications (SUS303)

Thread type

Nil	Metric thread (M5)
	Unified thread (10-32 UNF)
	R
N	NPT

Port size

M5	M5 x 0.8
U10/32	10-32 UNF
01	1/8
02	1/4
03	3/8
04	1/2

Made to Order
(Refer to the below for details.)

Option

Nil	None
S	With seal*

* M5 and U10/32 are not available with seal.

Applicable tubing O.D.

Metric size

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

* Use ø1/8" tube.

Inch size

01	ø1/8"
03	ø5/32"
05	ø3/16"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

Made to Order



1 Lubricant: Vaseline X12

Ex.) AS1201FG-M5-23-X12

3 Throttle Valve (Without Check Valve) X214

Ex.) AS1201FG-M5-23-X214

Note) Throttle valve is only compatible with the part no. of the meter-out type.

2 Grease-free (Seal: Fluorine Coating) + Throttle Valve (Without Check Valve) X21

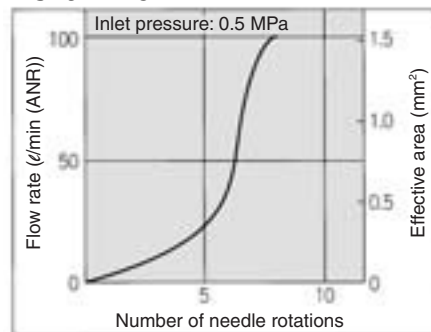
Ex.) AS1201FG-M5-23-X21

Note 1) Not particle-free

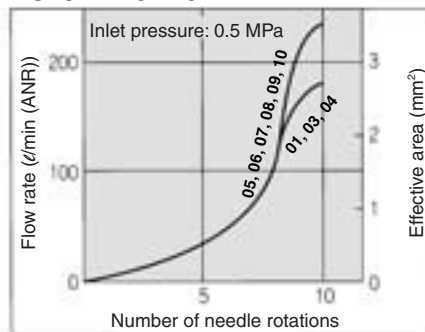
Note 2) Throttle valve is only compatible with the part no. of the meter-out type.

Needle Valve/Flow Characteristics

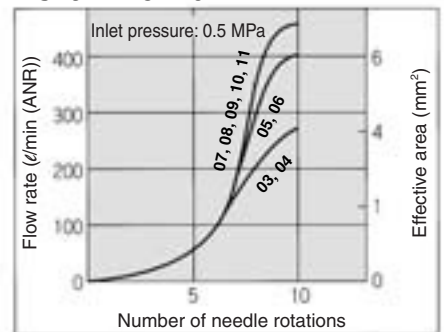
AS12□1FG
AS13□1FG



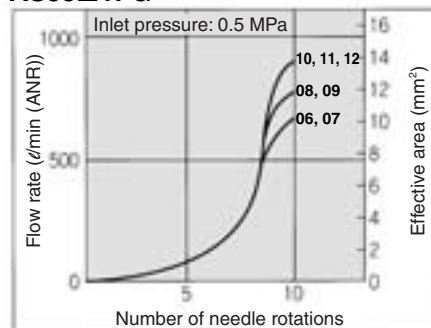
AS22□1FG-□01
AS23□1FG-□01



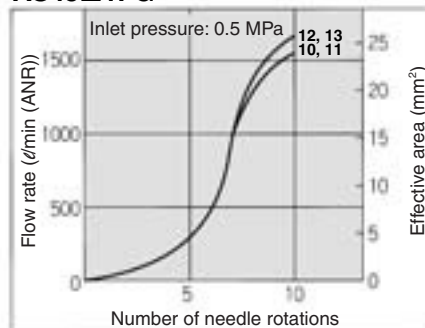
AS22□1FG-□02
AS23□1FG-□02



AS32□1FG
AS33□1FG

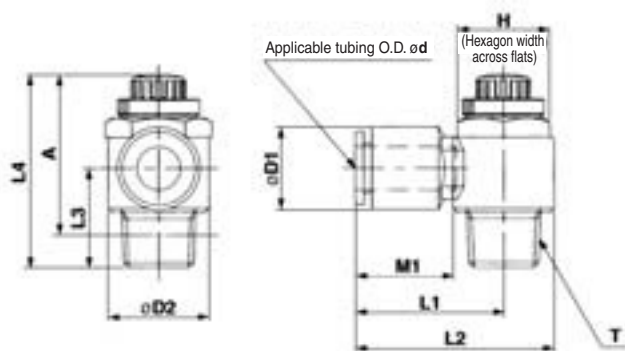


AS42□1FG
AS43□1FG

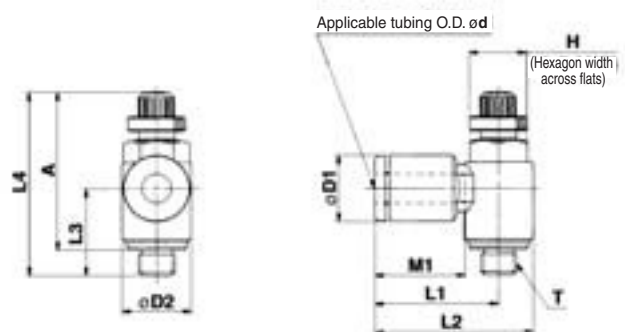


Series AS-FG

Dimensions: Elbow Type



M5 type U10/32 type



Metric Size

Model	d	T	H	D1	D2	L1	L2	L3	L4 ⁽¹⁾		A*		M1	Mass (g)
									Max.	Min.	Max.	Min.		
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
AS12□1FG-M5-04	4	M5 x 0.8	8	9.3	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1FG-M5-06	6	M5 x 0.8	8	11.6	18.1	22.9	11.7		28.6	25.8	25	22.2	13.5	7
AS22□1FG-01-23	3.2	R 1/8	12	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7	16
AS22□1FG-01-04	4	R 1/8	12	9.3	14.2	20.4	27.5	13.4	35.2	30.2	32.1	27.1	12.7	17
AS22□1FG-01-06	6	R 1/8	12	11.6	18.1	22.9	11.7		35.2	30.2	32.1	27.1	13.5	17
AS22□1FG-01-08	8	R 1/8	12	15.2	25.3	32.4			35.2	30.2	32.1	27.1	18.5	19
AS22□1FG-01-10	10	R 1/8	12	18.5	32.1	39.2	14.1		35.2	30.2	32.1	27.1	21	21
AS22□1FG-02-04	4	R 1/4	17	10.4	25.2	34.4			39.9	34.9	34.4	29.4	16	32
AS22□1FG-02-06	6	R 1/4	17	12.8	27.2	36.4			39.9	34.9	34.4	29.4	17	32
AS22□1FG-02-08	8	R 1/4	17	15.2	31.8	43.3			39.9	34.9	34.4	29.4	18.5	34
AS22□1FG-02-10	10	R 1/4	17	18.5	35.3	44.5	19.5		39.9	34.9	34.4	29.4	21	36
AS32□1FG-02-06	6	R 1/4	19	12.8	27.8	39.3			48.3	43.3	42.8	37.8	17	60
AS32□1FG-02-08	8	R 1/4	19	15.2	29.5	41			48.3	43.3	42.8	37.8	18.5	63
AS32□1FG-02-10	10	R 1/4	19	18.5	31.8	43.3			48.3	43.3	42.8	37.8	21	67
AS32□1FG-02-12	12	R 1/4	19	20.9	32.8	44.3			48.3	43.3	42.8	37.8	22	69
AS32□1FG-03-06	6	R 3/8	19	12.8	27.8	39.3			45.4	40.4	40.2	35.2	17	55
AS32□1FG-03-08	8	R 3/8	19	15.2	29.5	41			45.4	40.4	40.2	35.2	18.5	57
AS32□1FG-03-10	10	R 3/8	19	18.5	31.8	43.3			45.4	40.4	40.2	35.2	21	59
AS32□1FG-03-12	12	R 3/8	19	20.9	32.8	44.3			45.4	40.4	40.2	35.2	22	61
AS42□1FG-04-10	10	R 1/2	24	18.5	33.6	47.9			56.7	49.2	49.6	42.1	21	100
AS42□1FG-04-12	12	R 1/2	24	20.9	34.6	48.9			56.7	49.2	49.6	42.1	22	101

Note 1) Reference dimensions

Note 2) Reference dimensions of M5 x 0.8, R threads after installation.

Inch Size

Model	d	T	H	D1	D2	L1	L2	L3	L4 ⁽¹⁾		A*		M1	Mass (g)
									Max.	Min.	Max.	Min.		
AS12□1FG-U10/32-01	1/8"	10-32 UNF	8	8.4	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1FG-U10/32-03	5/32"	10-32 UNF	8	9.3	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7	7
AS12□1FG-U10/32-05	3/16"	10-32 UNF	8	11.4	18.1	22.9	11.7		28.6	25.8	25	22.2	13.5	7
AS12□1FG-U10/32-07	1/4"	10-32 UNF	8	12	18.3	23.1			28.6	25.8	25	22.2	13.5	7
AS22□1FG-N01-01	1/8"	NPT 1/8	12.7	9.3	14.2	20.4	27.5	13.4	35.2	30.2	32.1	27.1	12.7	16
AS22□1FG-N01-03	5/32"	NPT 1/8	12.7	11.4	18.1	22.9	11.7		35.2	30.2	32.1	27.1	13.5	17
AS22□1FG-N01-05	3/16"	NPT 1/8	12.7	13.2	23.9	31			35.2	30.2	32.1	27.1	18.5	19
AS22□1FG-N01-07	1/4"	NPT 1/8	12.7	15.2	25.3	32.4	14.1		35.2	30.2	32.1	27.1	21	21
AS22□1FG-N01-09	5/16"	NPT 1/8	12.7	17.9	27.8	39.3			35.2	30.2	32.1	27.1	21	21
AS22□1FG-N02-03	5/32"	NPT 1/4	17.5	10.4	25.2	34.4			39.9	34.9	34.4	29.4	16	32
AS22□1FG-N02-05	3/16"	NPT 1/4	17.5	11.4	24.9	34.2	17.7		39.9	34.9	34.4	29.4	17	32
AS22□1FG-N02-07	1/4"	NPT 1/4	17.5	13.2	25.2	34.5			39.9	34.9	34.4	29.4	18.5	34
AS22□1FG-N02-09	5/16"	NPT 1/4	17.5	15.2	27.2	36.4			39.9	34.9	34.4	29.4	21	36
AS22□1FG-N02-11	3/8"	NPT 1/4	17.5	17.9	27.8	39.3			39.9	34.9	34.4	29.4	21	36
AS32□1FG-N02-07	1/4"	NPT 1/4	19	13.2	27.8	39.3			48.3	43.3	42.8	37.8	17	60
AS32□1FG-N02-09	5/16"	NPT 1/4	19	15.2	29.5	41			48.3	43.3	42.8	37.8	18.5	63
AS32□1FG-N02-11	3/8"	NPT 1/4	19	17.9	27.8	39.3			48.3	43.3	42.8	37.8	21	67
AS32□1FG-N03-07	1/4"	NPT 3/8	19	13.2	27.8	39.3			45.4	40.4	40.2	35.2	17	55
AS32□1FG-N03-09	5/16"	NPT 3/8	19	15.2	29.5	41			45.4	40.4	40.2	35.2	18.5	57
AS32□1FG-N03-11	3/8"	NPT 3/8	19	17.9	27.8	39.3			45.4	40.4	40.2	35.2	21	59
AS42□1FG-N04-11	3/8"	NPT 1/2	23.8	17.9	33.6	47.9			56.7	49.2	49.6	42.1	21	100
AS42□1FG-N04-13	1/2"	NPT 1/2	23.8	21.7	35.2	49.5			56.7	49.2	49.6	42.1	22	101

Note 1) Reference dimensions

Note 2) Reference dimensions of 10-32 UNF and NPT threads after installation.