

Stainless Steel Speed Controller with One-touch Fitting

ASG Series

RoHS

Model

One-touch fitting type

Model (Standard)	Port size	Seal method	Applicable tubing O.D.									
			Metric size (Applicable thread: R, G)					Inch size (Applicable thread: NPT)				
			4	6	8	10	12	5/32"	1/4"	5/16"	3/8"	1/2"
ASG12□1-M5-□	M5 x 0.8	Gasket seal	●	●								
ASG12□1-U10/32-□	10-32UNF							●	●			
ASG22□1-□01-□	R G NPT	Sealant (R/NPT) Face seal (G)		●	●				●	●		
ASG22□1-□02-□				●	●	●			●	●	●	
ASG32□1-□03-□					●	●				●	●	
ASG42□1-□04-□						●	●				●	●

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

*2 Meter-out and meter-in types can be visually differentiated by the flow direction symbol on the body.

Flow Direction Symbols on Body

	Meter-out	Meter-in
Indication symbol		
Symbol		

Specifications

Fluid	Air
Proof pressure	1.5 MPa
Max. operating pressure	1 MPa*1
Min. operating pressure	0.1 MPa*1
Ambient and fluid temperatures*2	0 to 150°C (No freezing)
Applicable tubing material*1	FEP, PFA, Nylon, Soft nylon, Polyurethane, Polyolefin

*1 Check the max. operating pressure of the tubing. (Please refer to the **Web Catalog** for details.)

*2 It is recommended that you use the inner sleeve in the following conditions.

- When using in an environment where the fluid temperature changes drastically.
- When using at a high temperature.

* Temperature Condition of Mounting the Inner Sleeve

Tubing	Temperature
FEP tubing/TH Series	80°C or more
Super PFA tubing/TL Series	120°C or more

Metric Size Cross Reference Table of the Inner Sleeve

Tubing O.D.	Tubing material			Applicable inner sleeve	
	TUS (Soft polyurethane)	TH/TIH (FEP)	TL/TIL (Super PFA)	Part no.	Length
ø4	—	TH0402	—	TJ-0402	18
	TUS0425	TH0425	—	TJ-0425	18
	—	—	TL0403	TJ-0403	18
ø6	TUS0604	TH0604	TL0604	TJ-0604	19
ø8	TUS0805	—	—	TJ-0805	20.5
	—	TH0806	TL0806	TJ-0806	20.5
ø10	TUS1065	—	—	TJ-1065	23
	—	TH1075	—	TJ-1075	23
	—	TH1008	TL1008	TJ-1008	24
ø12	TUS1208	—	—	TJ-1208	24
	—	TH1209	—	TJ-1209	24
	—	TH1210	TL1210	TJ-1210	24

* C2700 + Electroless nickel plated is used for the TJ series.

Inch Size Cross Reference Table of the Inner Sleeve

Tubing O.D.	Tubing material		Applicable inner sleeve	
	TH/TIH (FEP)	TL/TIL (Super PFA)	Part no.	Length
ø5/32"	TH0402	—	TJ-0402	18
	TH0425	—	TJ-0425	18
	—	TL0403	TJ-0403	18
ø1/4"	TIHB07	TIL07	TJ-0604	19
	TIHA07	—	TJ-0746	19
ø5/16"	TH0806	TL0806	TJ-0806	20.5
ø3/8"	TIHB11	TIL11	TJ-1065	23
	TIHA11	—	TJ-1107	23
ø1/2"	TIH13	TIL13	TJ-1395	24

* C2700 + Electroless nickel plated is used for the TJ series.

Flow Rate and Sonic Conductance

Model		ASG12□1-M5-□	ASG12□1-U10/32-□	ASG22□1-□01-□	ASG22□1-□02-□	ASG32□1-□03-□	ASG42□1-□04-□
Tubing O.D.	Metric size	ø4, ø6	—	ø6, ø8	ø6, ø8, ø10	ø8, ø10	ø10, ø12
	Inch size	—	ø5/32, ø1/4	ø1/4, ø5/16	ø1/4, ø5/16, ø3/8	ø5/16, ø3/8	ø3/8, ø1/2
C values: Sonic conductance dm³/(s·bar)	Free flow	0.3	0.3	0.7	1.4	2.9	5.3
	Controlled flow	0.3	0.3	0.7	1.3	3.2	5
b values: Critical pressure ratio	Free flow	0.4	0.4	0.4	0.4	0.4	0.15
	Controlled flow	0.4	0.4	0.4	0.25	0.25	0.2

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

How to Order



ASG 2 2 0 1 - 01 - 06 S

Body size

1	M5 standard
2	01, 02 standard
3	03 standard
4	04 standard

Elbow

Control type

0	Meter-out
1	Meter-in

Thread type

Nil	R
N	NPT
G	G

Option

Nil	Without sealant
S	With sealant

* Select Nil (Without sealant) for M5 and G thread.

Applicable tubing O.D.

Metric size

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Inch size

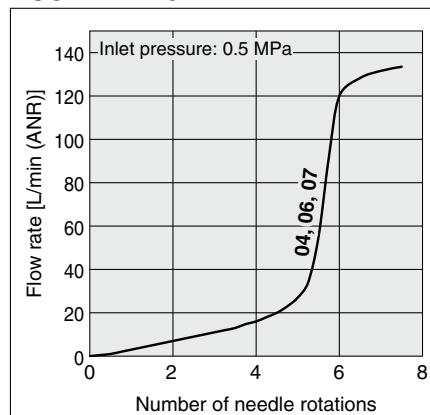
03	ø5/32"
07	ø1/4"
09	ø5/16"
11	ø3/8"
13	ø1/2"

Port size

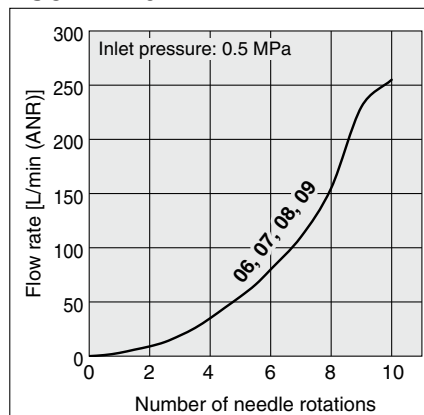
M5	M5 x 0.8
U10/32	10-32UNF
01	1/8
02	1/4
03	3/8
04	1/2

Needle Valve: Flow Rate Characteristics

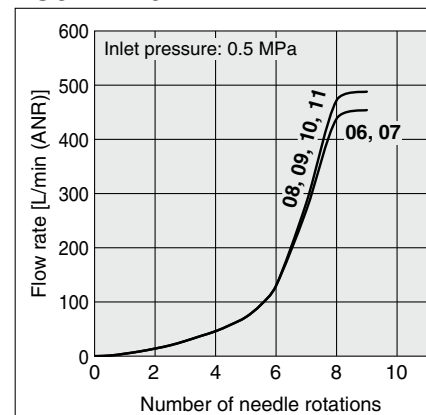
ASG12□1-M5-□



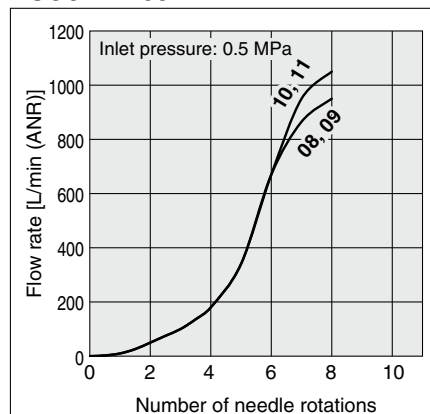
ASG22□1-01-□



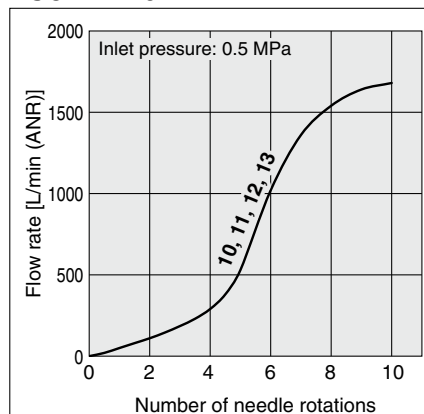
ASG22□1-02-□



ASG32□1-03-□



ASG42□1-04-□



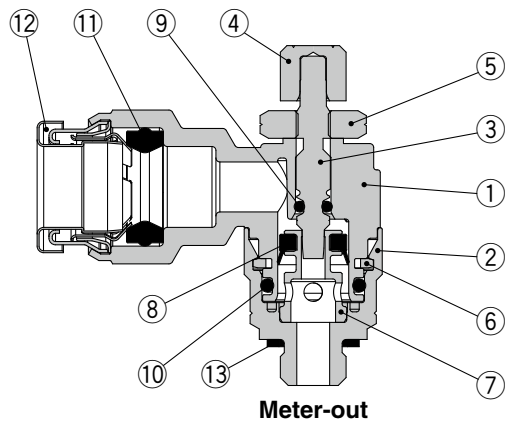
* The flow rate characteristics are representative values.

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

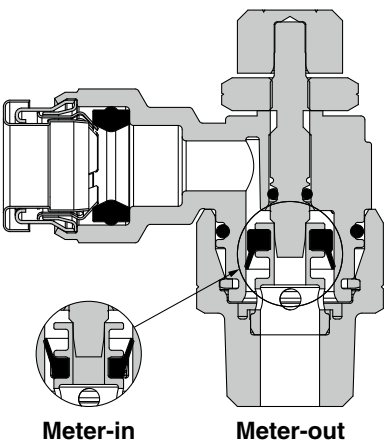
ASG Series

Construction

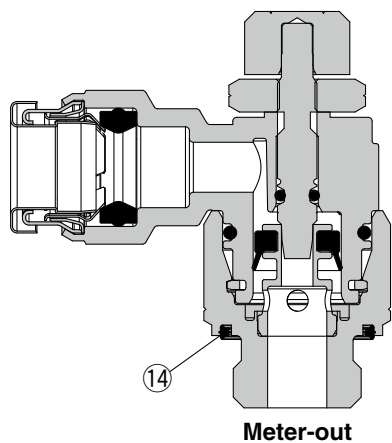
Seal method: Gasket seal
For M5



Seal method: Sealant
For R



Seal method: Face seal
For G thread

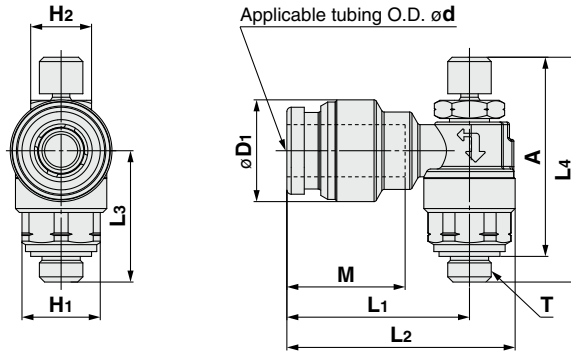


Component Parts

No.	Description	Material	Note
1	Body A	Stainless steel 316	
2	Body B	Stainless steel 304	
3	Needle	Stainless steel 304	
4	Knob	Stainless steel 304	
5	Lock nut	Stainless steel 304	
6	C-ring	Stainless steel 304	
7	Seat ring	Aluminum alloy	
8	U-seal	FKM	
9	O-ring	FKM	
10	O-ring	FKM	
11	Seal	FKM	
12	Cassette	Stainless steel 304	
13	Gasket	Stainless steel/FKM	M5
14	Seal	FKM	G thread type

Dimensions

One-touch fitting type
Seal method: Gasket seal
For M5, 10-32UNF



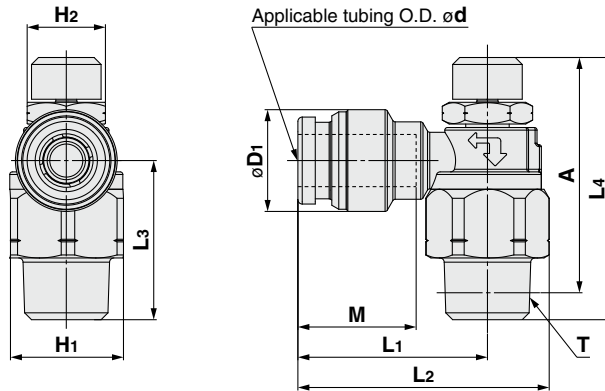
Metric Size

Model	d	T	H1	H2	D1	A Max.	L1	L2	L3	L4 Max.	M	Weight [g]
ASG12□1-M5-04	4	M5 x 0.8	9	7	9.0	26.0	16.3	21.6	15.1	28.9	12.6	9
ASG12□1-M5-06	6				11.7		21.0	26.3			13.6	12

Inch Size

Model	d	T	H1	H2	D1	A Max.	L1	L2	L3	L4 Max.	M	Weight [g]
ASG12□1-U10/32-03	5/32	10/32 UNF	9	7	9.0	26.0	16.3	21.6	15.1	28.9	12.6	9
ASG12□1-U10/32-07	1/4				11.7		21.0	26.2			13.5	12

One-touch fitting type
Seal method: Sealant
For R, NPT



Metric Size

Model	d	T	H1	H2	D1	A Max.	L1	L2	L3	L4 Max.	M	Weight [g]
ASG22□1-01-06	6	R1/8	13	9	11.7	30.9	21.8	28.9	18.3	34	13.6	21
ASG22□1-01-08	8				13.7		24.7	31.8			16.1	23
ASG22□1-02-06	6	R1/4	17	12	11.7	34	24	33.3	23	39.5	13.6	37
ASG22□1-02-08	8				13.7		27.6	36.9			16.1	39
ASG22□1-02-10	10				16.7		30	39.2			17.0	43
ASG32□1-03-08	8	R3/8	22	14	13.7	40.3	29.2	41.1	26.9	45.5	16.1	66
ASG32□1-03-10	10				16.7		31.2	43.1			17.0	69
ASG42□1-04-10	10	R1/2	27	17	16.7	45.8	33.5	47.9	33.3	54.8	17.0	112
ASG42□1-04-12	12				19.6		35.5	49.9			18.6	117

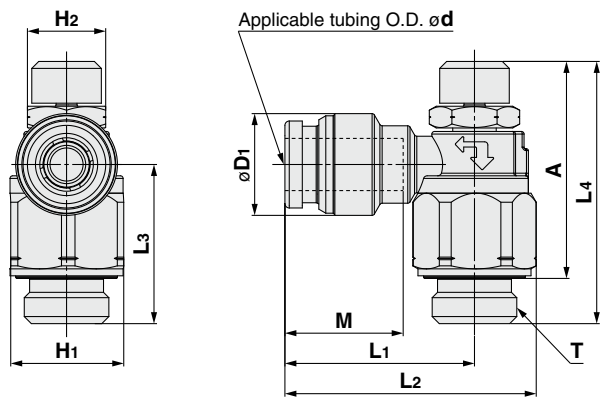
Inch Size

Model	d	T	H1	H2	D1	A Max.	L1	L2	L3	L4 Max.	M	Weight [g]
ASG22□1-N01-07	1/4	N1/8	12.7	9	11.7	30.9	21.7	28.8	18.3	34	13.5	21
ASG22□1-N01-09	5/16				13.7		24.7	31.8			16.1	22
ASG22□1-N02-07	1/4	N1/4	17.46	12	11.7	34	23.9	33	23	39.6	13.5	37
ASG22□1-N02-09	5/16				13.7		27.6	36.9			16.1	39
ASG22□1-N02-11	3/8				16.7		29.5	38.6			16.6	44
ASG32□1-N03-09	5/16	N3/8	22.23	14	13.7	40.3	29.2	41.1	26.9	45.5	16.1	67
ASG32□1-N03-11	3/8				16.7		30.8	42.6			16.6	71
ASG42□1-N04-11	3/8	N1/2	27	17	16.7	45.8	33.1	49.2	33.3	54.8	16.6	113
ASG42□1-N04-13	1/2				19.6		35.3	49.4			18.5	116

ASG Series

Dimensions

One-touch fitting type
Seal method: Face seal
For G thread



Metric Size												[mm]
Model	d	T	H1	H2	D1	A	L1	L2	L3	L4	M	Weight
ASG22□1-G01-06	6	G1/8	13	9	11.7	28.8	21.8	28.9	18.3	34	13.6	22
ASG22□1-G01-08	8				13.7		24.7	31.7			16.1	23
ASG22□1-G02-06	6	G1/4	17	12	11.7	31.6	24	33.2	23	39.6	13.6	38
ASG22□1-G02-08	8				13.7		27.6	36.8			16.1	40
ASG22□1-G02-10	10				16.7		29.9	39.1			17.0	44
ASG32□1-G03-08	8	G3/8	22	14	13.7	38	29.2	41	26.9	45.5	16.1	69
ASG32□1-G03-10	10				16.6		31.2	43			17.0	72
ASG42□1-G04-10	10	G1/2	27	17	16.6	45.8	33.5	47.6	33.3	54.8	17.0	119
ASG42□1-G04-12	12				19.6		35.5	49.6			18.6	124