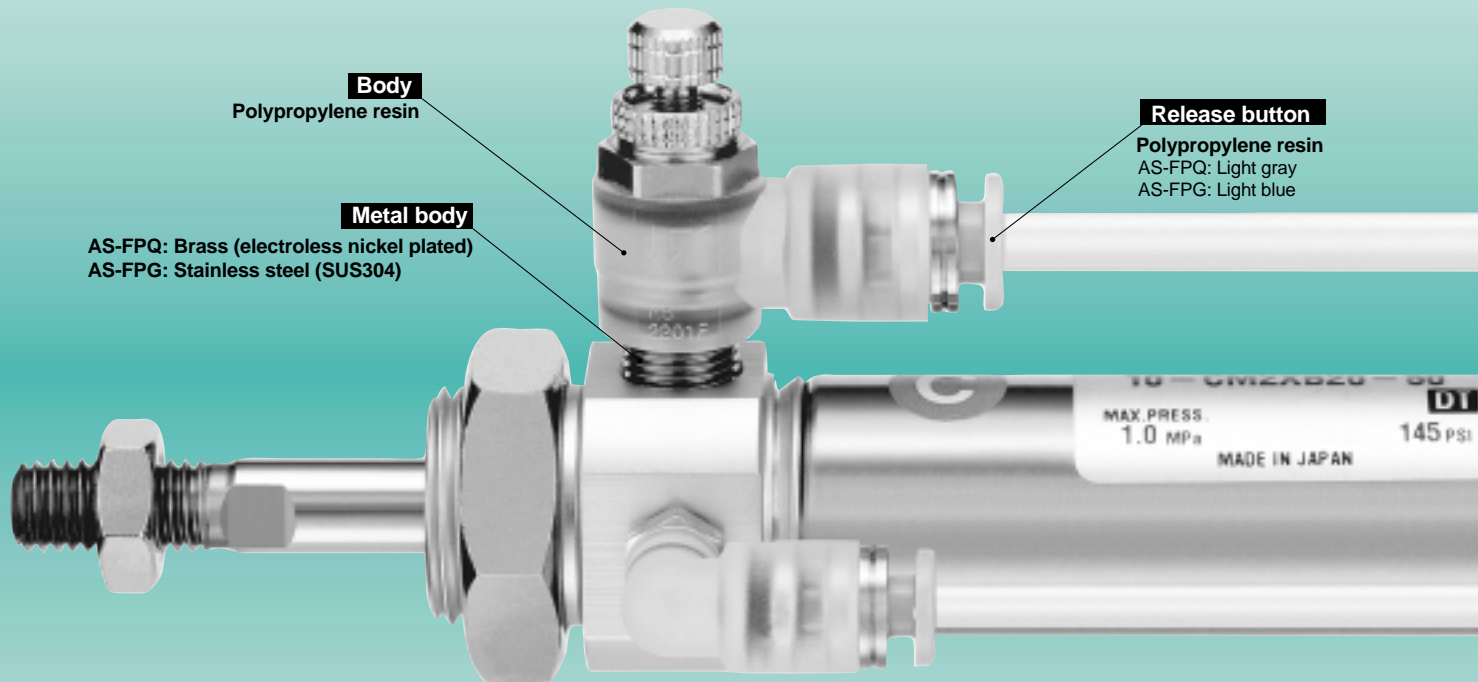


# Speed Controller with One-touch Fitting for Clean Room Series **AS-FPQ/AS-FPG**



**AS-FPQ: Brass (electroless nickel plated) and  
AS-FPG: Stainless steel (SUS304) are now available as a series.**

# Low particulate generating speed controllers designed for use in clean rooms



Speed Controller with One-touch Fitting for Clean Room

## Series AS-FPQ/FPG



**Series AS-FPQ**  
Brass (electroless nickel plated)

**Series AS-FPG**  
Stainless steel (SUS304)

Elbow type	Port size	Applicable tube O.D. (mm)					Applicable cylinder bore size (mm)
		4	6	8	10	12	
AS12□1FP□-M5	M5 x 0.8	●	●	●	●	●	6, 10, 16, 20
AS22□1FP□-01	R 1/8	●	●	●	●	●	20, 25, 32
AS22□1FP□-02	R 1/4	●	●	●	●	●	20, 25, 32, 40
AS32□1FP□-03	R 3/8	●	●	●	●	●	40, 50, 63
AS42□1FP□-04	R 1/2	●	●	●	●	●	63, 80, 100

Low particulate generation

Clean performance

AS-FPQ  
Resin: PP  
Metal: Brass (electroless nickel plated)

AS-FPG  
Resin: PP  
Metal: Stainless steel (SUS304)

10-AS-F  
Resin: PBT, POM  
Metal: Brass (electroless nickel plated)

10-AS-FG  
Resin: PBT, POM  
Metal: Stainless steel (SUS303)

Environmental resistance

Excellent

# Speed Controller with One-touch Fitting for Clean Room

Elbow Type

# Series AS-FPQ/FPG

**AS-FPQ/Brass** (electroless nickel plated)

Release button color: Light gray

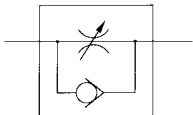


**AS-FPG/Stainless steel (SUS304)**

Release button color: Light blue



JIS symbol



Flow direction symbols on body

	Meter-out type	Meter-in type
Symbol		
JIS symbol		

## Models

Elbow type	Port size	Applicable tubing O.D. (mm)					Applicable cylinder bore size (mm)
		4	6	8	10	12	
AS12□1FP□-M5	M5 x 0.8	●	●				6, 10, 16, 20
AS22□1FP□-01	R 1/8	●	●	●			20, 25, 32
AS22□1FP□-02	R 1/4	●	●	●	●		20, 25, 32, 40
AS32□1FP□-03	R 3/8		●	●	●	●	40, 50, 63
AS42□1FP□-04	R 1/2				●	●	63, 80, 100

## Specifications

Particulate generation grade	Grade 1 Note 1)
Proof pressure	1.5MPa
Maximum operating pressure	1MPa
Minimum operating pressure	0.1MPa
Ambient and fluid temperature	-5 to 60°C (with no freezing)
Number of needle rotations	10 rotations (8 rotations Note 2))

Note 1) Refer to particulate generation grade classifications.

Note 2) For AS12□1FP□

## Flow Rate and Effective Area

Model		AS12□1FP□-M5			AS22□1FP□-01			AS22□1FP□-02			AS32□1FP□-03			AS42□1FP□-04		
Tubing O.D.	Metric sizes	ø4	ø4	ø6	ø4	ø6	ø8	ø6	ø8	ø10	ø10	ø12				
		ø6		ø8			ø10			ø12						
Controlled (free) flow	Flow rate /min (ANR)	100	180	230	260	390	460	660	790	920	1580	1710				
	Effective area mm <sup>2</sup>	1.5	2.7	3.5	4	6	7	10	12	14	24	26				

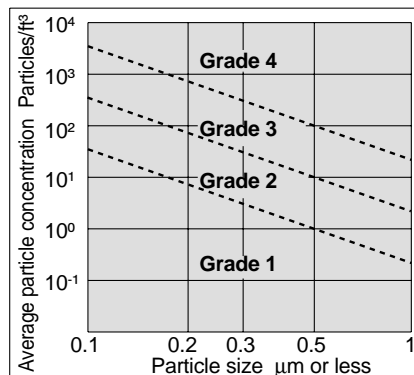
Note) Flow rate values are at a pressure of 0.5MPa, and temperature of 20°C.

## Recommended Applicable Tubing

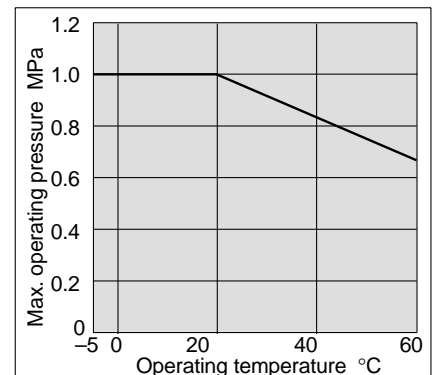
Tubing material	Clean series polyurethane tubing: Series 10
Tubing O.D.	ø4, ø6, ø8, ø10, ø12

Polyurethane tubing: Series TU, Nylon tubing: Series T and Soft nylon tubing: Series TS can also be used. However, the degree of clean performance will decline.

## Particulate Generation Grade Classifications

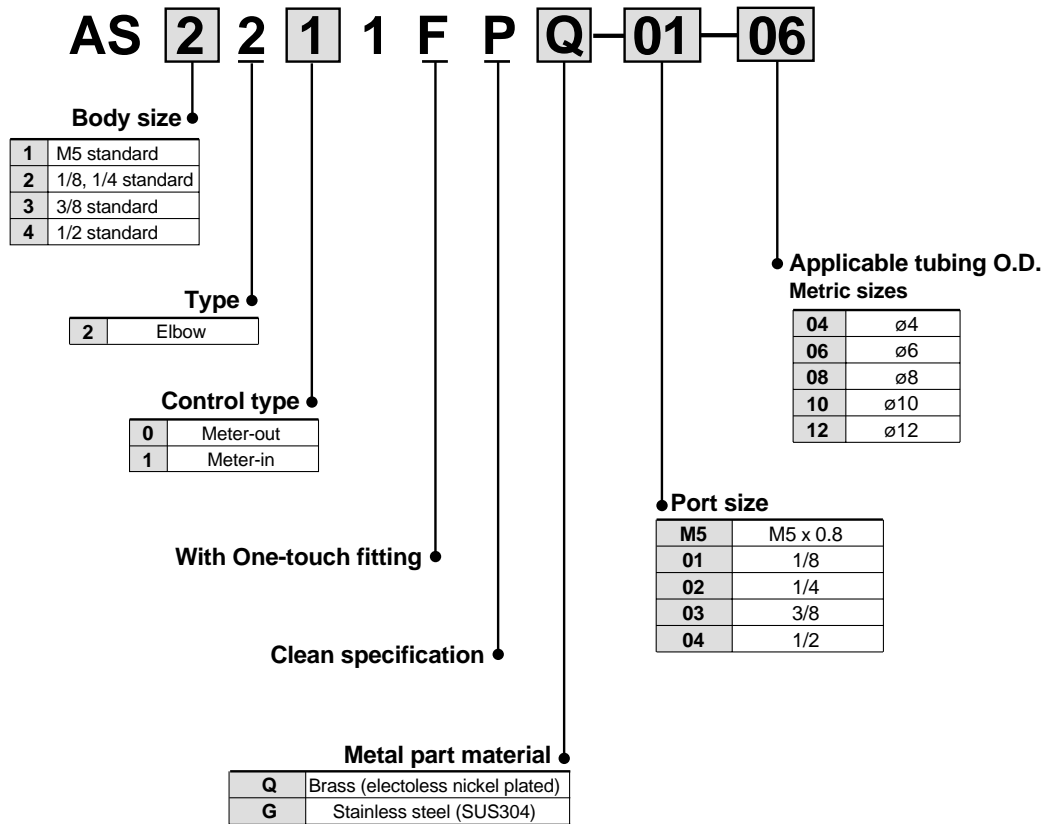


## Relation of Operating Temperature and Maximum Operating Pressure



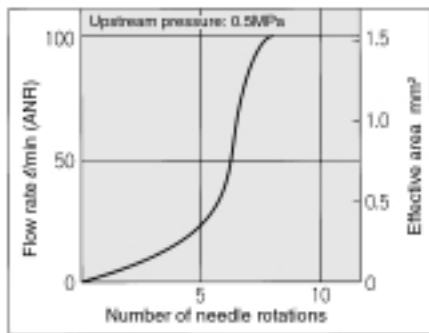
# Series AS-FPQ/FPG

## How to Order

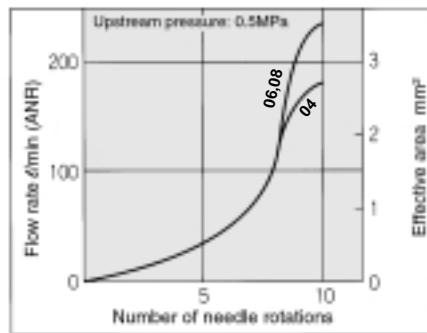


## Needle Valve/Flow Characteristics

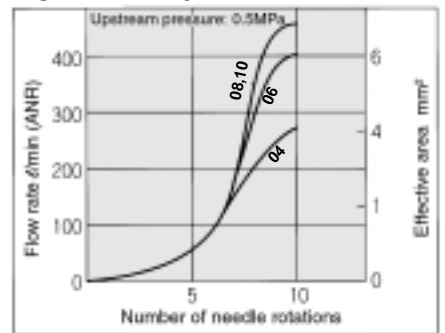
AS12□1FP□-M5



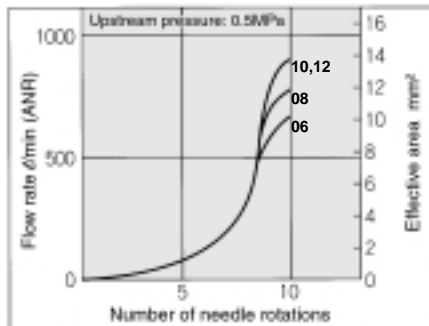
AS22□1FP□-01



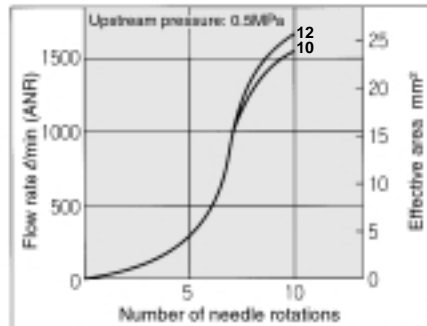
AS22□1FP□-02



AS32□1FP□-03

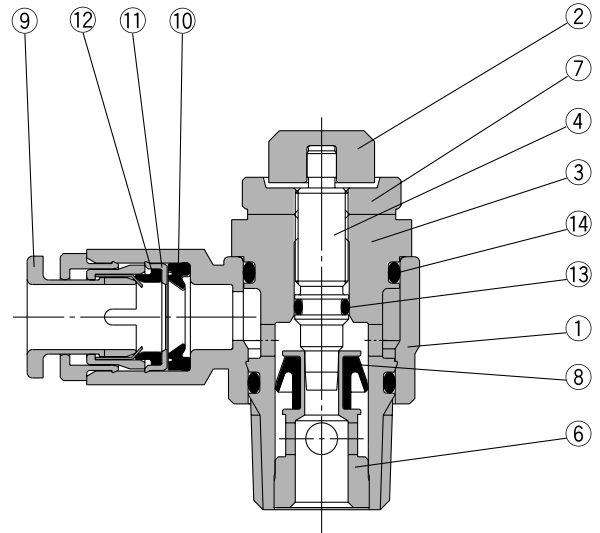
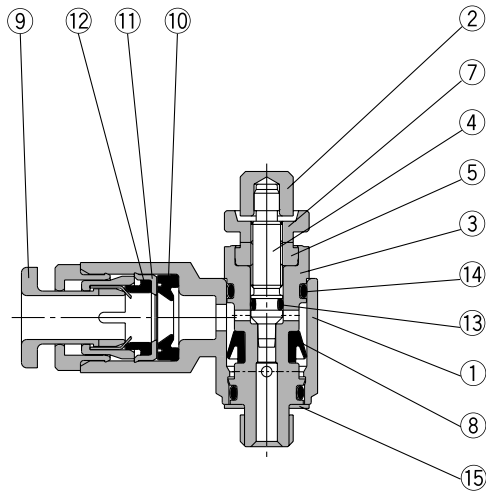


AS42□1FP□-04

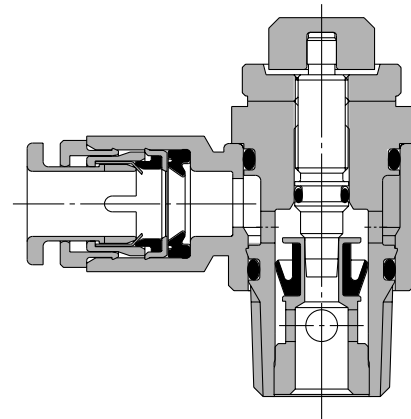
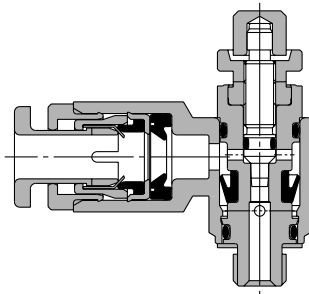


## Construction

### Meter-out type M5 type



### Meter-in type M5 type



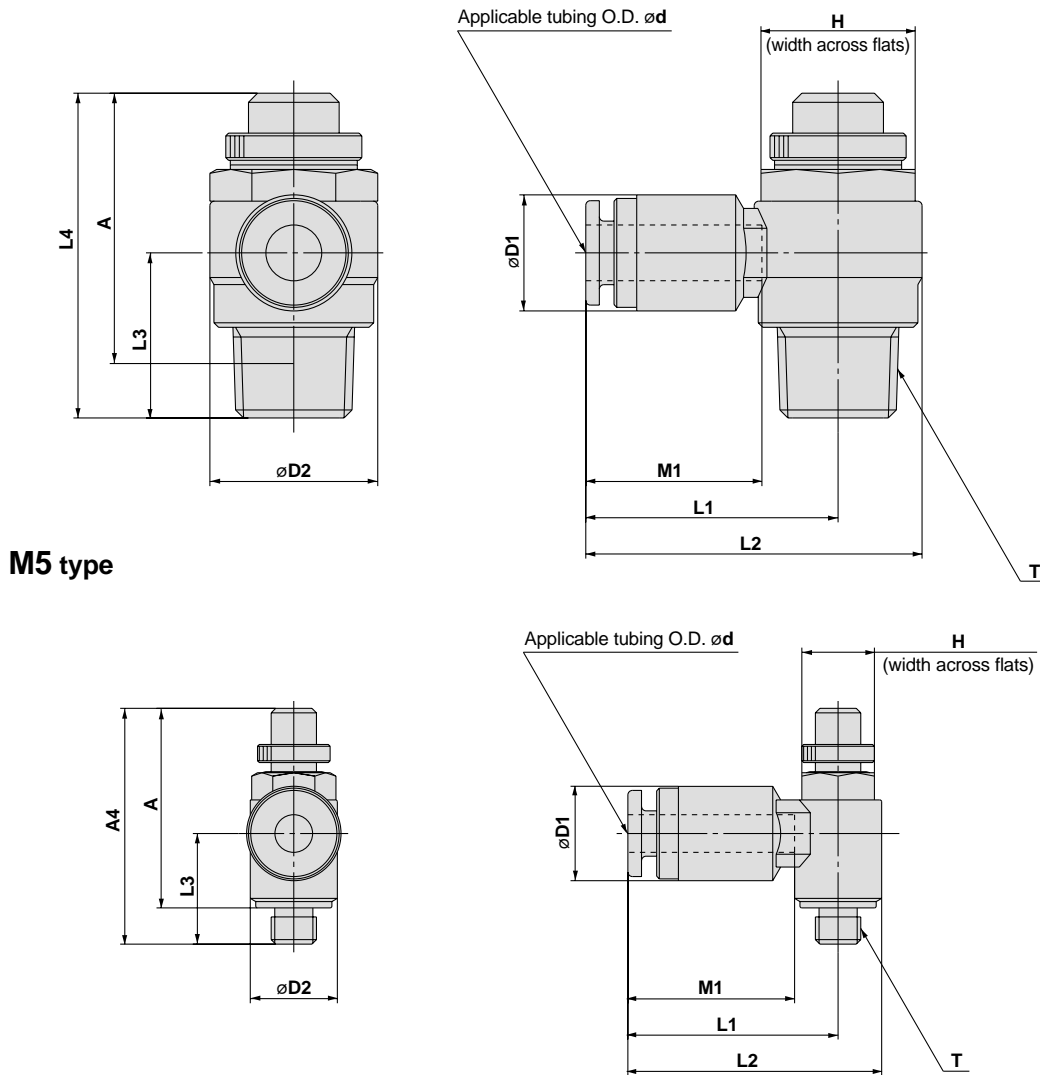
### Parts list

No.	Description	AS□□□1FPQ		AS□□□1FPG	
		Material	Note	Material	Note
1	<b>Body A</b>	Polypropylene resin		Polypropylene resin	
2	<b>Knob</b>	Brass	Electroless nickel plated	SUS304	
3	<b>Body B</b>	Brass	Electroless nickel plated	SUS304	
4	<b>Needle</b>	Brass	Electroless nickel plated	SUS304	
5	<b>Needle guide</b>	Brass	Electroless nickel plated	SUS304	
6	<b>Seat ring</b>	Brass	Electroless nickel plated	SUS304	
7	<b>Lock nut</b>	Brass	Electroless nickel plated	SUS304	
8	<b>U seal</b>	HNBR		HNBR	
9	<b>Cassette</b>	Polypropylene resin SUS304, Brass	Brass parts are electroless nickel plated	Polypropylene resin SUS304	
10	<b>Seal</b>	NBR		NBR	
11	<b>Stopper</b>	SUS304		SUS304	
12	<b>Cushion</b>	NBR		NBR	
13	<b>O-ring</b>	NBR		NBR	
14	<b>O-ring</b>	NBR		NBR	
15	<b>Gasket</b>	NBR, SUS304		NBR, SUS304	

SUS304: SUS304 Stainless steel

# Series AS-FPQ/FPG

## Dimensions



Model	Tubing O.D. d	T	H	D1	D2	L1	L2	L3	L4		A <sup>Note 1)</sup>		M1	Weight (g) <sup>Note 2)</sup>	
									Max.	Min.	Max.	Min.		1*	2*
AS12□1FP□-M5-04	4	M5 x 0.8	8	10.4	9.6	23.2	28	12.2	28.3	25.5	25	22.2	18.4	7	7
AS12□1FP□-M5-06	6			12.8		24.2	29						19.4	8	8
AS22□1FP□-01-04	4	R 1/8	12	10.4	14.2	25.3	32.4	14.3	36.4	31.4	32.4	27.4	18.4	17	17
AS22□1FP□-01-06	6			12.8		26.3	33.4						19.4	18	18
AS22□1FP□-01-08	8			15.2		28.5	35.6						21.9	20	20
AS22□1FP□-02-04	4	R 1/4	17	10.4	18.5	27.8	37	18.2	40.8	35.8	34.8	29.8	18.4	33	33
AS22□1FP□-02-06	6			12.8		27.8	37						19.4	33	33
AS22□1FP□-02-08	8			15.2		30.4	39.6						21.9	35	35
AS22□1FP□-02-10	10			18.5		38.3	47.5						23.8	38	38
AS32□1FP□-03-06	6	R 3/8	19	12.8	23	30.4	41.9	20.9	46.9	41.9	40.6	35.6	19.4	59	55
AS32□1FP□-03-08	8			15.2		32.9	44.4						21.9	61	57
AS32□1FP□-03-10	10			18.5		34.6	46.1						23.8	63	59
AS32□1FP□-03-12	12			20.9		35.8	47.3						25	65	61
AS42□1FP□-04-10	10	R 1/2	24	18.5	28.6	36.6	50.9	25.4	55.6	50.6	47.4	42.4	23.8	107	100
AS42□1FP□-04-12	12			20.9		38.2	52.5						25	109	102

Note 1) Reference dimension for threads after installation

Note 2) 1\* is the weight for type AS□□1FPQ (brass + electroless nickel plated), 2\* is the weight for type AS□□1FPG (SUS304).