

Clean Speed Controller with One-touch Fitting Elbow Type

RoHS

Series AS-FPQ/FPG

AS-FPQ/Brass (electroless nickel plated)

Release button color: Light gray

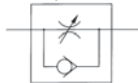


AS-FPG/Stainless steel 304

Release button color: Light blue



Symbol



Flow Direction Symbols on Body

	Meter-out type	Meter-in type
Indication symbol		
Symbol		

Model

Elbow type	Port size	Applicable tubing O.D. (mm)				
		4	6	8	10	12
AS12□1FP□-M5	M5 x 0.8	●	●			
AS22□1FP□-01	R 1/8	●	●	●		
AS22□1FP□-02	R 1/4	●	●	●	●	
AS32□1FP□-03	R 3/8		●	●	●	●
AS42□1FP□-04	R 1/2				●	●

Specifications

Fluid	Air
Particulate generation grade	Grade 1 (1)
Proof pressure (20°C)	1.5 MPa (2)
Maximum operating pressure (20°C)	1 MPa (3)
Minimum operating pressure	0.1 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Oil	Fluorine-based grease

Note 1) Refer to particulate generation grade classifications.

Note 2) Proof pressure is 1.5 times higher than maximum operating pressure.

Note 3) The value of the maximum operating pressure is at a temperature of 20°C. In other cases, refer to "Relationship between Operating Temperature and Max. Operating Pressure" below.

Flow Rate and Sonic Conductance

Model	AS12□1FP□-M5	AS22□1FP□-01	AS22□1FP□-02	AS32□1FP□-03	AS42□1FP□-04
Tubing O.D.	ø4	ø4	ø4	ø6	ø8
Metric sizes	ø4	ø6	ø6	ø8	ø10
Controlled flow	100	180	230	260	390
Free flow	0.28	0.5	0.64	0.72	1.1
Sonic conductance dm ³ /(s·bar)	0.28	0.5	0.64	0.72	1.1
Critical pressure ratio	0.2	0.25	0.3	0.25	0.25
	0.4	0.2	0.3	0.2	0.3

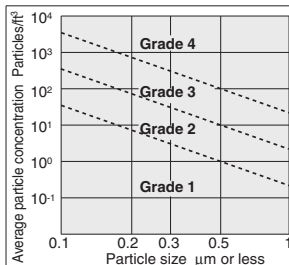
Note) Flow rate values are at a pressure of 0.5 MPa, and temperature of 20°C.

Recommended Applicable Tubing

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

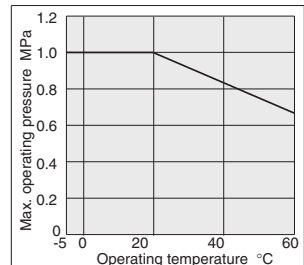
Polyurethane tubing: Series TU, Nylon tubing: Series T and Soft nylon tubing: Series TS can also be used. However, the degree of clean performance will decline.

Particulate Generation Grade Classifications



Note) Refer to back page 10 for details.

Relation between Operating Temp. and Max. Operating Pressure



AS

TMH

ASD

AS

AS-FE

KE

AS-FG

AS-FP

AS-FM

AS-D

AS-T

ASP

ASN

AQ

ASV

AK

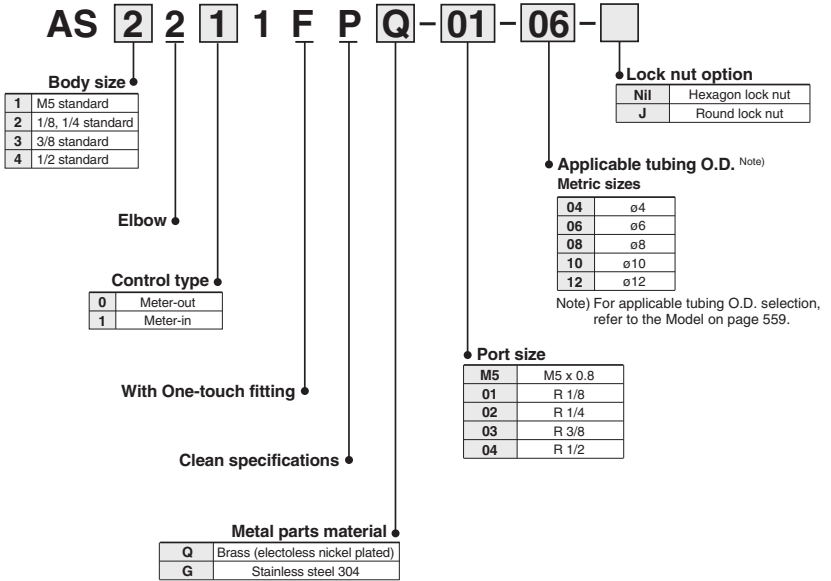
VCHC

ASS

ASR

ASQ

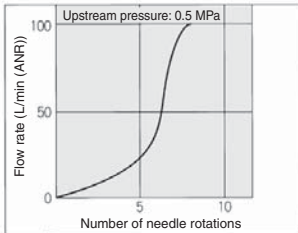
How to Order



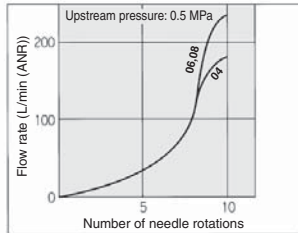
Needle Valve/Flow Characteristics

(Note) The flow characteristics are representative values.

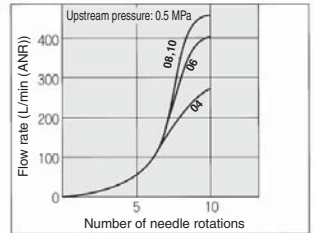
AS12 1FP -M5



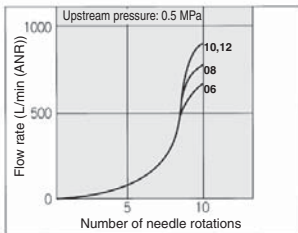
AS22 1FP -01



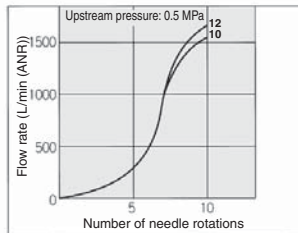
AS22 1FP -02



AS32 1FP -03

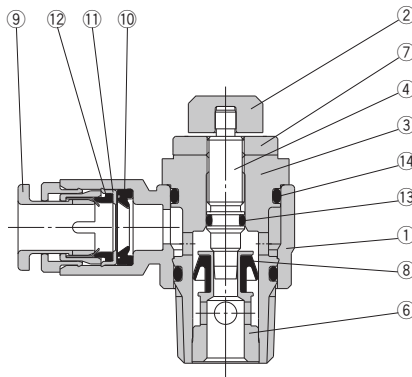
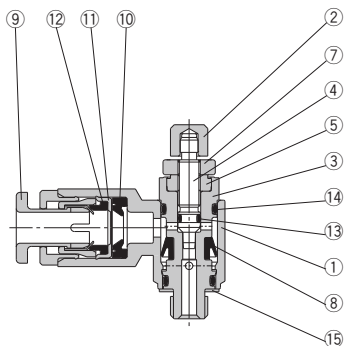


AS42 1FP -04

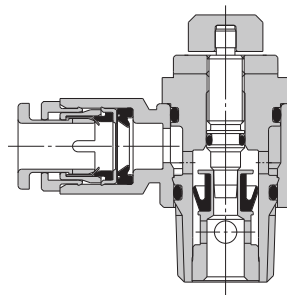
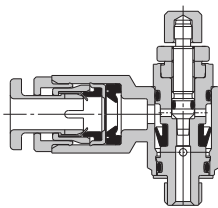


Construction

Meter-out type M5 type



Meter-in type M5 type



AS
TMH
ASD
AS
AS-FE KE
AS-FG
AS-FP
AS-FM
AS-D AS-T
ASP
ASN
AQ
ASV
AK
VCHC
ASS
ASR ASQ

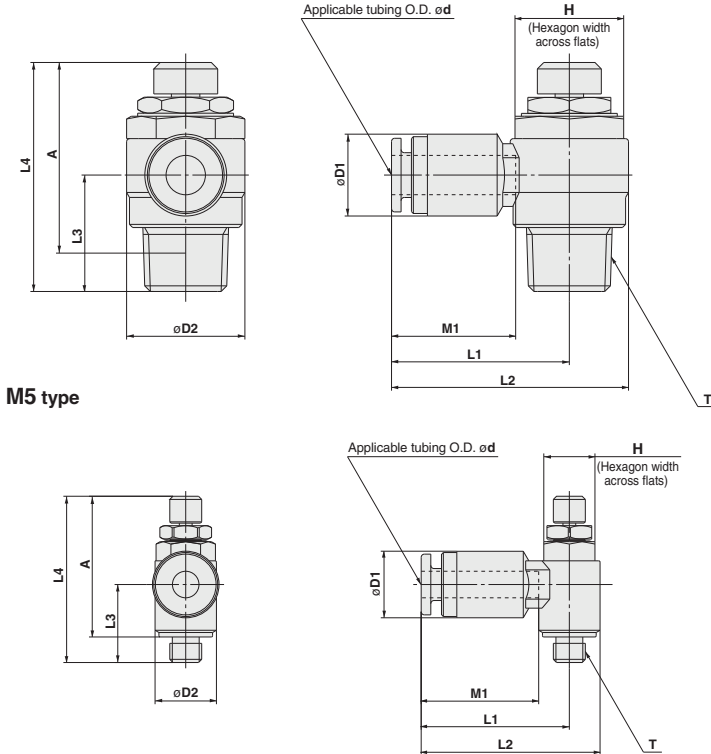
Component Parts

No.	Description	AS□□□1FPQ		AS□□□1FPG	
		Material	Note	Material	Note
1	Body A	Polypropylene resin		Polypropylene resin	
2	Knob	Brass	Electroless nickel plated	Stainless steel 304	
3	Body B	Brass	Electroless nickel plated	Stainless steel 304	
4	Needle	Brass	Electroless nickel plated	Stainless steel 304	
5	Needle guide	Brass	Electroless nickel plated	Stainless steel 304	
6	Seat ring	Brass	Electroless nickel plated	Stainless steel 304	
7	Lock nut	Steel ⁽¹⁾	Electroless nickel plated	Stainless steel 304	
8	U seal	HNBR		HNBR	
9	Cassette	Polypropylene resin Stainless steel 304, Brass	Brass parts are electroless nickel plated	Polypropylene resin Stainless steel 304	
10	Seal	NBR		NBR	
11	Stopper	Stainless steel 304		Stainless steel 304	
12	Cushion	NBR		NBR	
13	O-ring	NBR		NBR	
14	O-ring	NBR		NBR	
15	Gasket	NBR, Stainless steel 304		NBR, Stainless steel 304	

(Note) The material of the lock nut option-J (round type) is brass. However, note that only the AS22□1FPQ uses steel.

Series AS-FPQ/FPG

Dimensions



M5 type

Model	Tubing O.D. d	T	H	D1	D2	L1	L2	L3 (4)	L4 (1) (4)		A (2)		M1	Weight (g) (3)	
									Max.	Min.	Max.	Min.		1*	2*
AS12□1FP□-M5-04	4	M5 x 0.8	8	10.4	9.6	22.2	27	12.2	28.8	26	25.2	22.4	17	7	7
AS12□1FP□-M5-06	6			12.8		23.2	28						(12.2)	(28.8)	(26)
AS22□1FP□-01-04	4	R 1/8	12	10.4	14.2	24.3	31.4	13.4	35.5	30.5	32.4	27.4	17	17	17
AS22□1FP□-01-06	6			12.8		25.3	32.4						(14.3)	(36.4)	(31.4)
AS22□1FP□-01-08	8			15.2		27.5	34.6						20.5	20	20
AS22□1FP□-02-04	4	R 1/4	17	10.4	18.5	26.8	36	17.7	40.3	35.3	34.8	29.4	17	33	33
AS22□1FP□-02-06	6			12.8		26.8	36						(18.2)	(40.8)	(35.8)
AS22□1FP□-02-08	8			15.2		29.4	38.6						20.5	35	35
AS22□1FP□-02-10	10			18.5		37.3	46.5	18.3(18.8)					23	38	38
AS32□1FP□-03-06	6	R 3/8	19	12.8	23	29.4	40.9	19.8	45.8	40.8	40.6	35.6	18.5	59	55
AS32□1FP□-03-08	8			15.2		31.9	43.4						(20.9)	(46.9)	(41.9)
AS32□1FP□-03-10	10			18.5		33.6	45.1						23	63	59
AS32□1FP□-03-12	12			20.9		34.8	46.3						24	65	61
AS42□1FP□-04-10	10	R 1/2	24	18.5	28.6	35.6	49.9	24.5	57.2	49.7	49.9	42.4	23	107	100
AS42□1FP□-04-12	12			21.7		38.2	52.5						(25.4)	(58.1)	(50.6)

Note 1) Reference dimensions

Note 2) Reference dimension for threads after installation

Note 3) 1* is the weight for type AS□□1FPQ (brass + electroless nickel plated), 2* is the weight for type AS□□1FPG (Stainless steel 304).

Note 4) Dimensions of AS□□1FPQ, () : AS□□1FPG