

Series (21-)AS-FPQ/FPG Clean speed controller with One-touch fittings (Elbow type)

How to Order

AS 2 2 1 1 F P G 01 06

21 - AS 2 2 1 1 F P Q 01 06

AS-FPQ / Brass (Electroless nickel plated)
Release button color: Light gray

AS-FPG / Stainless steel (SUS304)
Release button color: Light blue

With One-touch fittings

Clean specification

Body size

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

Type

2	Elbow
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Control type

0	Meter-out
1	Meter-in

Metal part material

Q	Brass (Electroless nickel plated)
G	Stainless steel (SUS304)

Lock nut option

Nil	Hexagon lock nut
J	Round lock nut

Applicable tubing O.D. (mm) Note)

Metric size

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

Note) Refer to the following Model list for selection of applicable tubing O.D.

Connection port size

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

Metal part material

Q	Brass (Electroless nickel plated)
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Model

Elbow type	Connection port size	Applicable tubing O.D. (mm)					Applicable cylinder bore size (mm)
		4	6	8	10	12	
(21-) AS12□1FP□-M5	M5 x 0.8	●	●				6, 10, 16, 20
(21-) AS22□1FP□-01	R1/8	●	●	●			20, 25, 32
(21-) AS22□1FP□-02	R1/4	●	●	●	●		20, 25, 32, 40
(21-) AS32□1FP□-03	R3/8		●	●	●	●	40, 50, 63
(21-) AS42□1FP□-04	R1/2				●	●	63, 80, 100

Specifications

Proof pressure (20°C)	1.5 MPa
Max. operating pressure (20°C)	1 MPa ^{Note 1)}
Min. operating pressure	0.1 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Grease	Fluorine grease 21-: Lithium soap based grease
Particle generation grade (Refer to front matter pages 13 to 22 for details.)	Grade 1

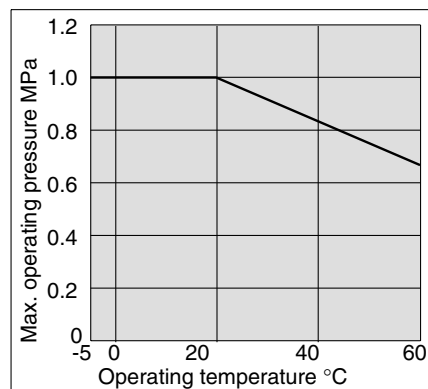
Note 1) The maximum operating pressure is the value at 20°C. Refer to operating pressure curve for values at other temperatures.

Flow rate and effective area

	Model	(21-)AS12□1FP□-M5	(21-)AS22□1FP□-01		(21-)AS22□1FP□-02			(21-)AS32□1FP□-03			(21-)AS42□1FP□-04	
Tubing O.D.	Metric size	ø4 ø6	ø4	ø6 ø8	ø4	ø6	ø8 ø10	ø6	ø8	ø10 ø12	ø10	ø12
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	24	26

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

Relationship between operating temperature and maximum operating pressure



Recommended applicable tubing

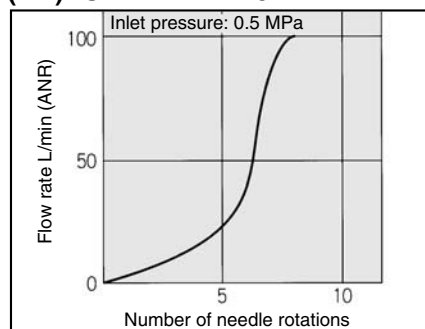
Tubing material	Clean series polyurethane tubing: 10-series
Tubing O.D.	ø4, ø6, ø8, ø10, ø12

Polyurethane tubing: TU series, Nylon tubing: T series

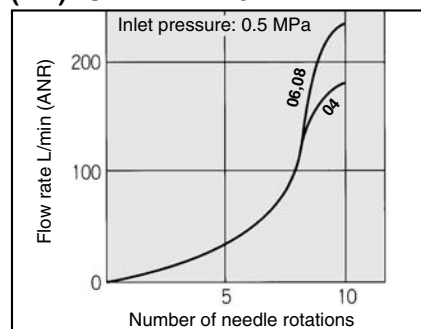
Soft nylon tubing TS series can also be used. However, the degree of cleanliness will decline.

Needle valve / Flow characteristics

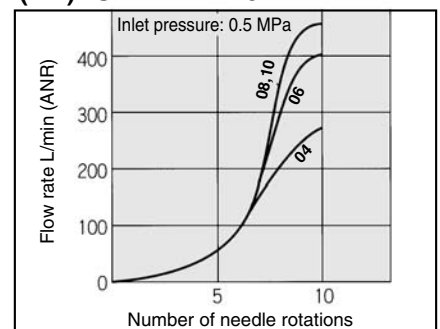
(21-)AS12□1FP□-M5



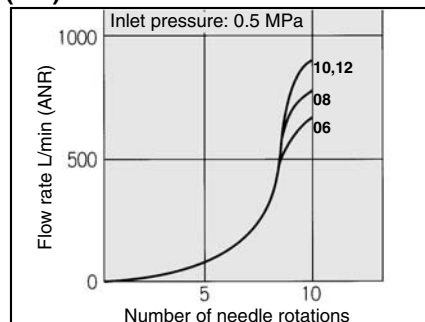
(21-)AS22□1FP□-01



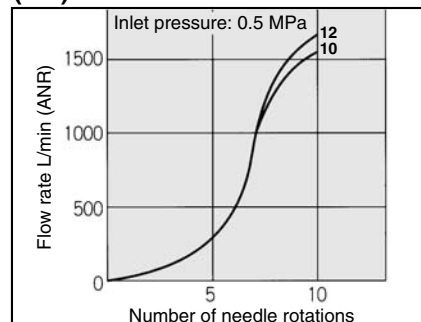
(21-)AS22□1FP□-02



(21-)AS32□1FP□-03

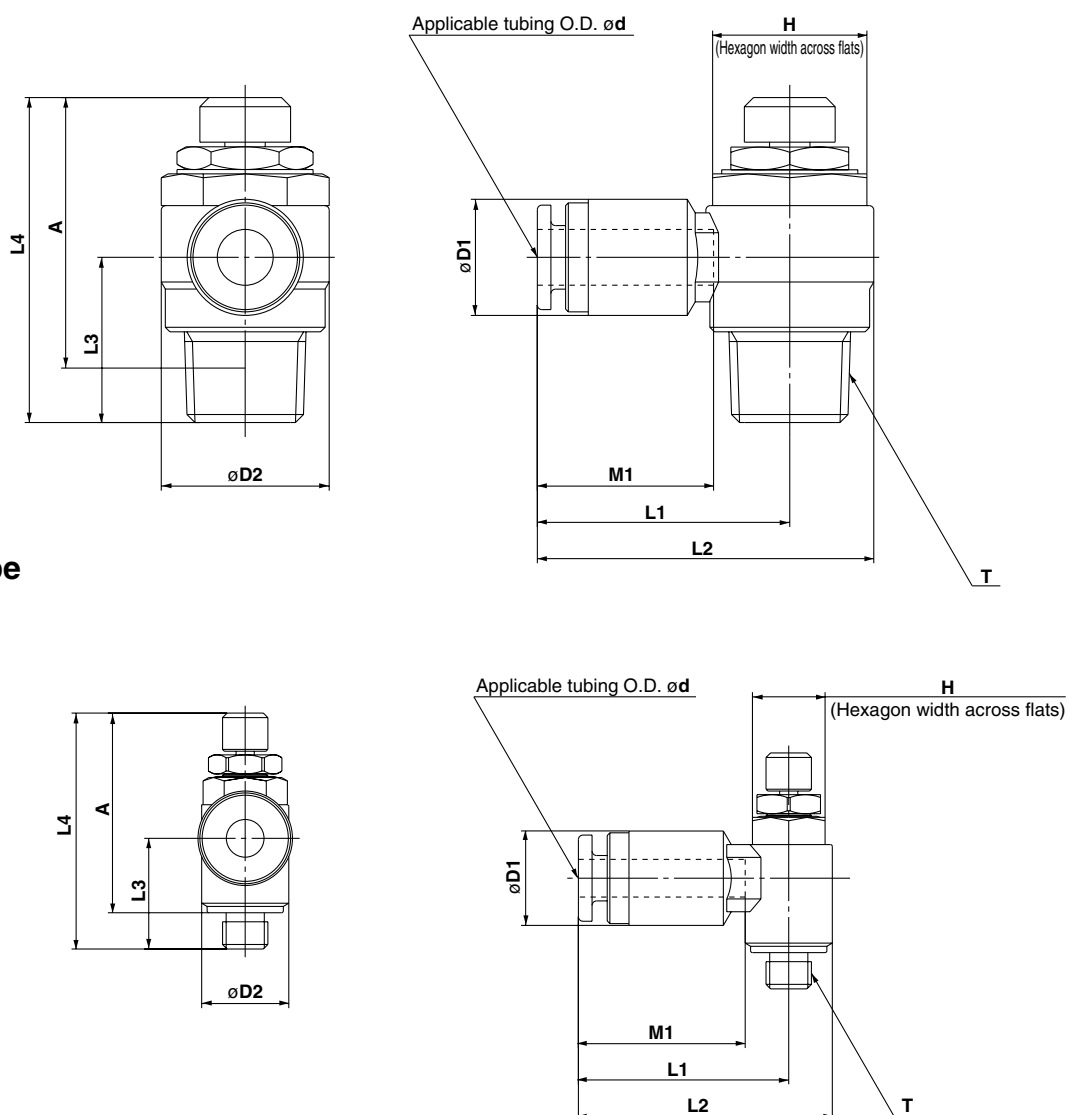


(21-)AS42□1FP□-04



Dimensions

M5 type



Model	Tubing O.D. d	T	H	D1	D2	L1	L2	L3	L4		A ^{Note 1)}		M1	Weight (g) ^{Note 2)}	
									MAX.	MIN.	MAX.	MIN.		* 1	* 2
(21-) 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
(21-) AS12□1FP□-M5-06	6			12.8		24.2	29		28.3	25.5	25	22.2	19.4	8	8
(21-) AS22□1FP□-01-04	4	R1/8	12	10.4	14.2	25.3	32.4	14.3	36.4	31.4	32.4	27.4	18.4	17	17
(21-) AS22□1FP□-01-06	6			12.8		26.3	33.4		36.4	31.4	32.4	27.4	19.4	18	18
(21-) AS22□1FP□-01-08	8	R1/4	17	15.2	18.5	28.5	35.6	18.2	40.8	35.8	34.8	29.8	21.9	20	20
(21-) AS22□1FP□-02-04	4			10.4		27.8	37		40.8	35.8	34.8	29.8	18.4	33	33
(21-) AS22□1FP□-02-06	6			12.8		30.4	39.6		40.8	35.8	34.8	29.8	19.4	35	35
(21-) AS22□1FP□-02-08	8			15.2		38.3	47.5		40.8	35.8	34.8	29.8	21.9	38	38
(21-) AS22□1FP□-02-10	10	R3/8	19	18.5	23	38.3	47.5	20	46.9	41.9	40.6	35.6	23.8	38	38
(21-) AS32□1FP□-03-06	6			12.8		30.4	41.9		46.9	41.9	40.6	35.6	19.4	59	55
(21-) AS32□1FP□-03-08	8			15.2		32.9	44.4		46.9	41.9	40.6	35.6	21.9	61	57
(21-) AS32□1FP□-03-10	10			18.5		34.6	46.1		46.9	41.9	40.6	35.6	23.8	63	59
(21-) AS32□1FP□-03-12	12	R1/2	24	20.9	28.6	35.8	47.3	25.4	55.6	50.6	47.4	42.4	25	65	61
(21-) AS42□1FP□-04-10	10			18.5		36.6	50.9		55.6	50.6	47.4	42.4	23.8	107	100
(21-) AS42□1FP□-04-12	12			21.7		38.2	52.5		55.6	50.6	47.4	42.4	25	109	102

Note 1) Reference dimensions of threads after installation.

Note 2) * 1 is the weight of type (21-)AS□2□1FPQ (Brass + Electroless nickel plated). * 2 is the weight of type AS□2□1FPG (SUS304).