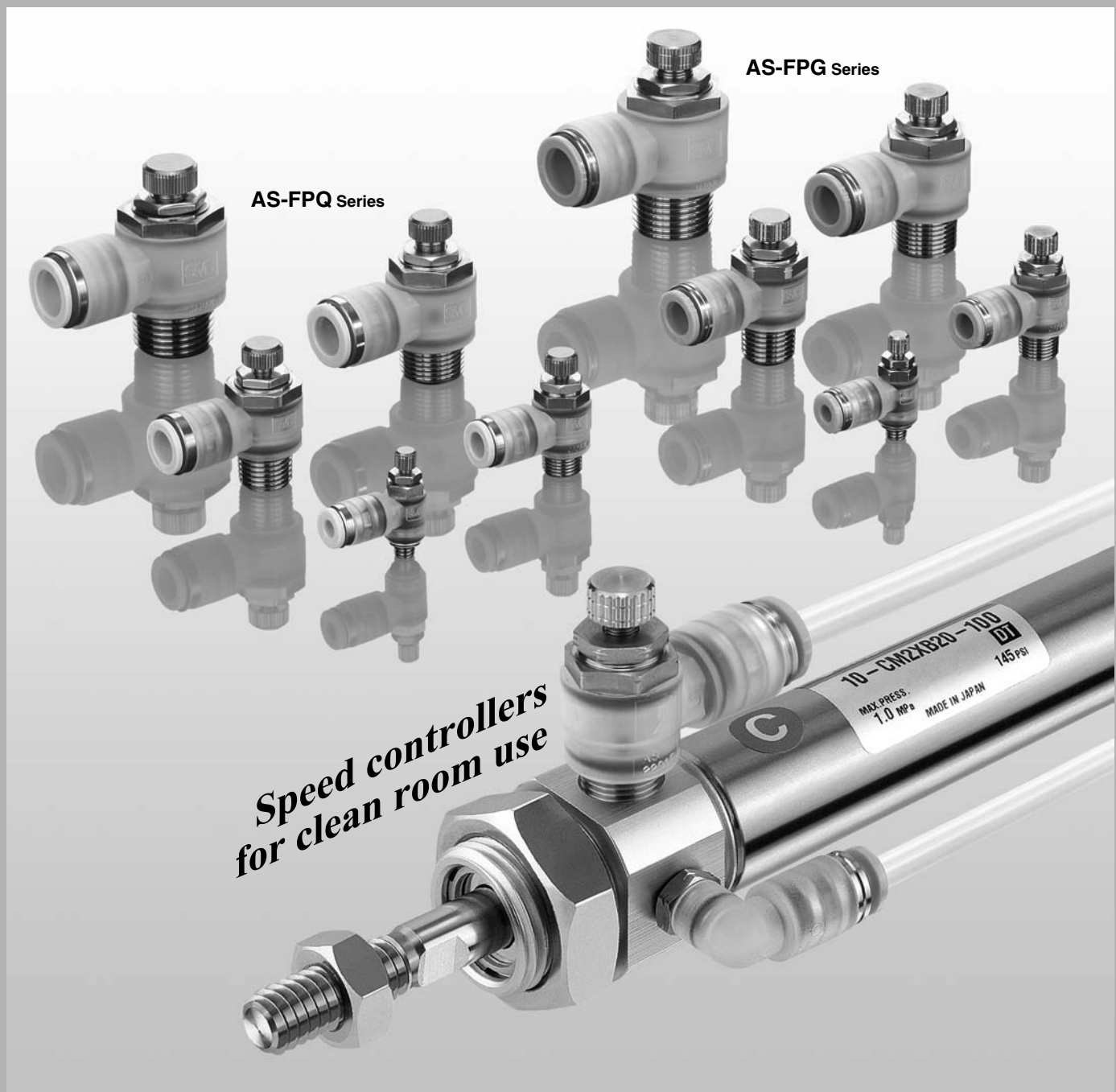


Clean Speed Controller with One-touch Fitting

Series *AS-FPQ/AS-FPG*



**AS-FPQ: Brass (electroless nickel plated) and
AS-FPG: Stainless steel 304 are now available as a series.**

AS
ASP
ASN
AQ
ASV
AK
VCHC
ASS
ASR
ASQ
KE
TMH

Low particulate generating speed controllers designed for use in clean rooms



Clean Speed Controller
with One-touch Fitting

Series AS-FPQ/FPG

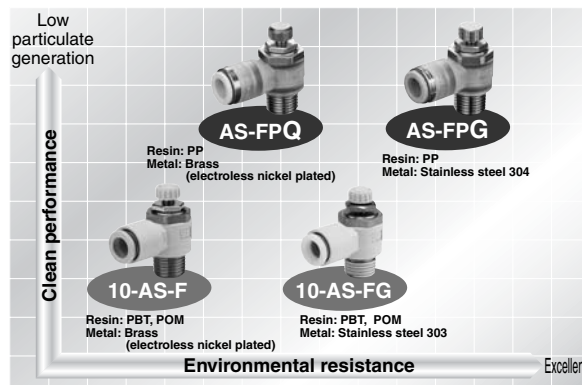


Series AS-FPQ
Brass (electroless nickel plated)



Series AS-FPG
Stainless steel 304

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



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

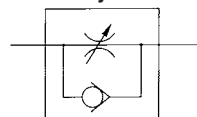


AS-FPG/Stainless steel 304

Release button color: Light blue



JIS 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)					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

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)
Number of needle rotations	10 rotations (8 rotations ⁽⁴⁾)
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.

Note 4) 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 ø6	ø4 ø6 ø8	ø4 ø6 ø8 ø10	ø6 ø8 ø10 ø12	ø10 ø12
	Controlled flow rate d/min (ANR)	100	180 230	260 390 460	660 790 920	1580 1710
(free) flow Effective area mm²		1.5	2.7 3.5	4 6 7	10 12 14	24 26

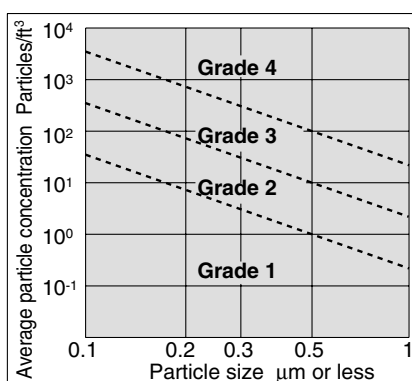
Note) Flow rate values are at a pressure of 0.5MPa, and temperature of 20°C.

Recommended Applicable Tubing

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

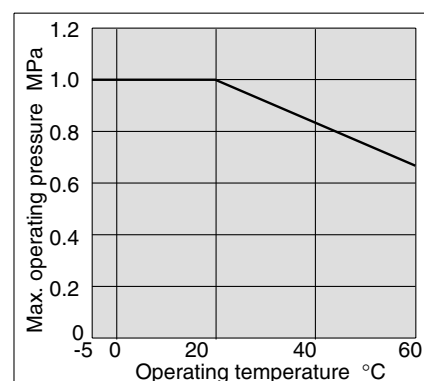
Polyurethane tubing: Series TU, Nylon tubing: Series T and Soft nylon tubing: Series TS can also be used. However, the degree of clean performance will decline.

Particulate Generation Grade Classifications



Note) Refer to back page 10 for details.

Relation between Operating Temp. and Max. Operating Pressure



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Series AS-FPQ/FPG

How to Order

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

Body size

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

Elbow

Control type

0	Meter-out
1	Meter-in

With One-touch fitting

Clean specifications

Metal parts material

Q	Brass (electroless nickel plated)
G	Stainless steel 304

Lock nut option

Nil	Hexagon lock nut
J	Round lock nut

Applicable tubing O.D. Note)

Metric sizes

04	ø4
06	ø6
08	ø8
10	ø10
12	ø12

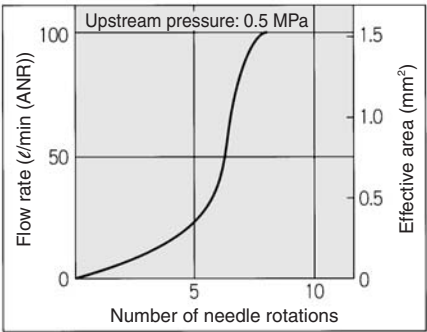
Note) For applicable tubing O.D. selection, refer to the Model on page 489.

Port size

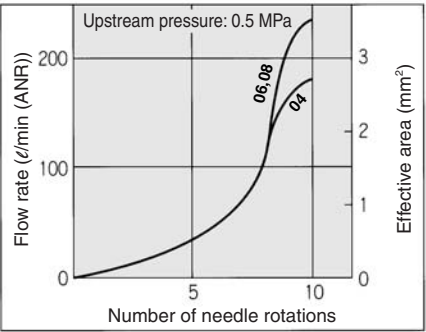
M5	M5 x 0.8
01	R 1/8
02	R 1/4
03	R 3/8
04	R 1/2

Needle Valve/Flow Characteristics

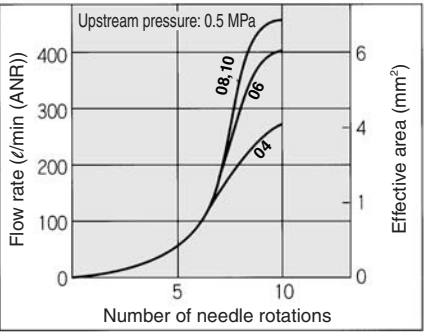
AS12□1FP□-M5



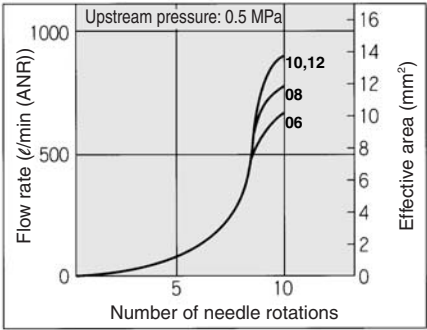
AS22□1FP□-01



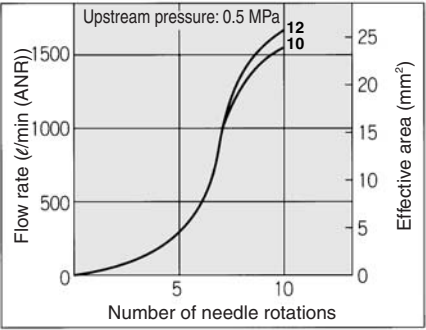
AS22□1FP□-02



AS32□1FP□-03

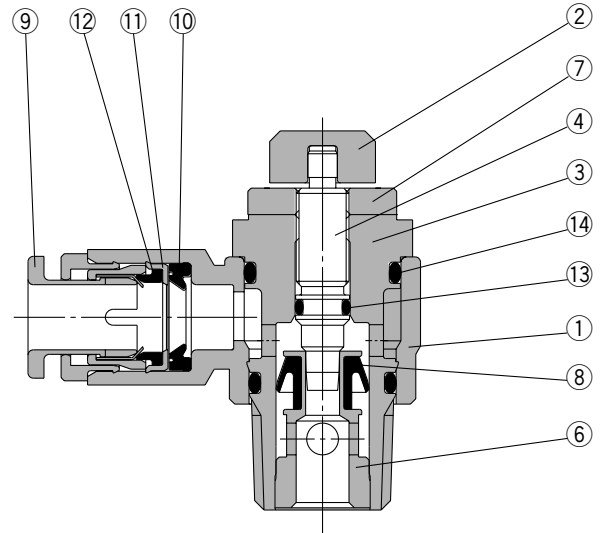
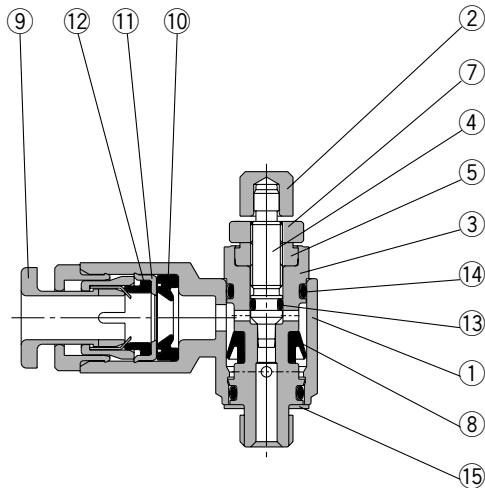


AS42□1FP□-04

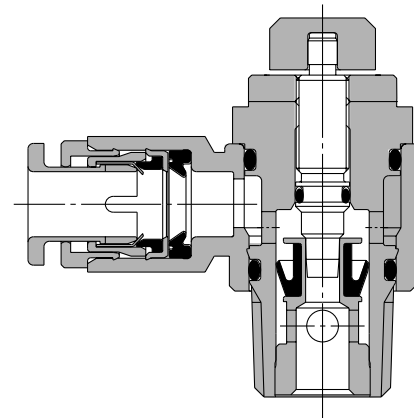
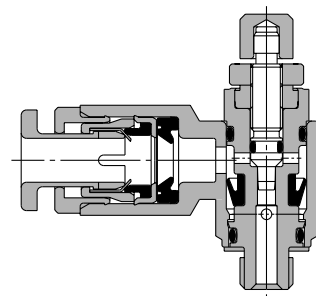


Construction

Meter-out type M5 type



Meter-in type M5 type



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	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	

AS

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VCHC

ASS

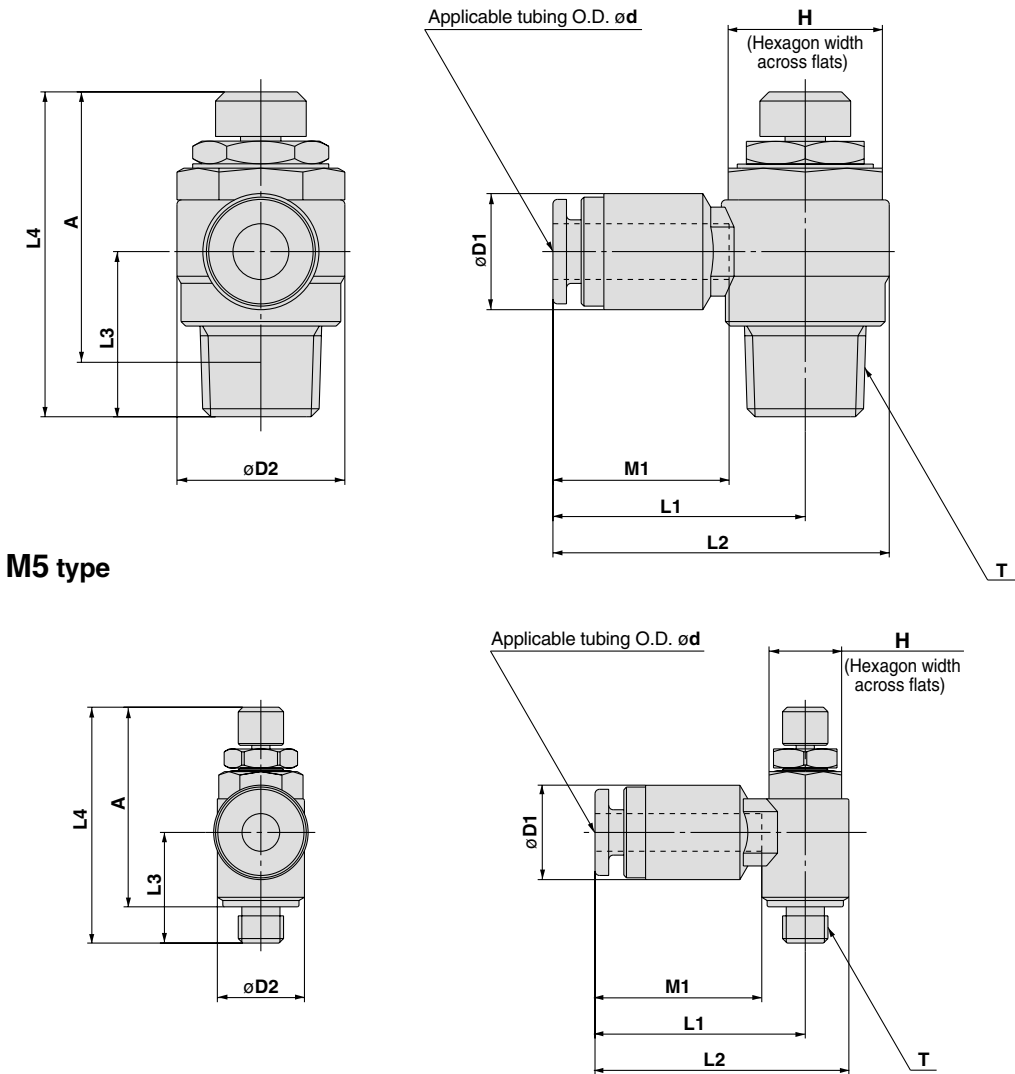
ASR
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Series AS-FPQ/FPG

Dimensions



Model	Tubing O.D. d	T	H	D1	D2	L1	L2	L3 (4)	L4 (1) (4)		A (2)		M1	Mass (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)			18.5	8	8
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		(36.4)	(31.4)			18.5	18	18
AS22□1FP□-01-08	8			15.2		27.5	34.6		(14.3)	(31.4)			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						18.5	33	33
AS22□1FP□-02-08	8			15.2		29.4	38.6		(40.8)	(35.8)			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						20.5	61	57
AS32□1FP□-03-10	10			18.5		33.6	45.1		(46.9)	(41.9)			23	63	59
AS32□1FP□-03-12	12			20.9		34.8	46.3		(20.9)	(41.9)			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		37.2	51.5		(58.1)	(50.6)			24	109	102

Note 1) Reference dimensions
Note 2) Reference dimension for threads after installation
Note 3) 1* is the weight for type AS□2□1FPQ (brass + electroless nickel plated), 2* is the weight for type AS□2□1FPG (Stainless steel 304).
Note 4) Dimensions of AS□2□1FPQ, (): AS□2□1FPG



Series *AS-FPQ/FPG* Specific Product Precautions

Be sure to read before handling. Refer to front matters 58 and 59 for Safety Instructions and pages 412 to 414 for Flow Control Equipment Precautions.

Handling

Caution

1. Store away from direct sunlight at 40°C or less.
2. Open the inner package of the double packaging in a clean room or other clean environment.

Piping

Caution

1. Be sure to use sealant tape or liquid gasket at the taper thread part. Using without sealant tape or liquid gasket can cause air leakage.

AS

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