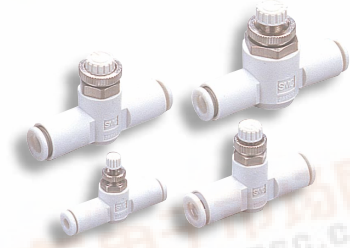


SPEED CONTROLLERS

SPEED CONTROLLER WITH ONE TOUCH FITTINGS: IN-LINE TYPE SERIES AS1001F, 2001F, 2051F, 3001F, 4001F

- ✓ Minimises installation time and cost
- ✓ Accepts nylon and polyurethane tubing
- ✓ Wide variety of sizes
- ✓ Speed may accurately be controlled even at low velocity
- ✓ Constant speed easily set
- ✓ Retainer prevents accidental loss of needle
- ✓ Optional holder gives flexibility of mounting

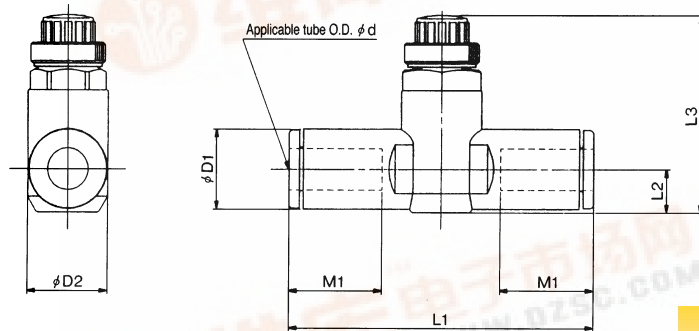


TECHNICAL SPECIFICATIONS

Proof pressure	1.5MPa (15.3kgf/cm ²)
Operating pressure range	0.1~1.0MPa
Ambient and fluid temperature	0~60°C
Number of needle rotations	10 turns (8 turns)*

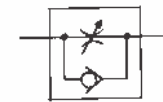
*AS1001F type

DIMENSIONS AS1000-4000



Model	Applicable tube O.D. (d)	D1	D2	L1	L2	L3		M1
						MAX	MIN	
AS1001F	4	9.3	10	39.2	5.2	24.2	21.4	12.8
	6	11.6		40.7	6.2	25.2	22.4	13.7
AS2001F	4	9.3	11.8	40.7	5.2	32.6	27.6	12
	6	11.6		44	6.3	33.7	28.7	13.7
AS2051F	6	12	14.8	53.2	6.7	35.2	30.2	16.8
	8	15.2		59.8	8.1	36.5	31.5	18
AS3001F	6	12	19.8	59	7.4	38.3	33.3	16.8
	8	15.2		64.4	8.2	39.1	34.1	18
	10	18.5		71.6	9.8	40.6	35.6	21
	12	20.9		76	11	41.8	36.8	22
AS4001F	10	18.5	26.5	82.1	11.3	51.1	43.6	21
	12	20.9				52.1	44.6	22

SYMBOLS



How To ORDER AS1000-4000

AS 1F —

BODY SIZE

100 ... M5 (04,06)
200 ... 1/8" (04,06)
205 ... 1/4" (06,08)
300 ... 3/8" (06,08, 10, 12)
400 ... 1/2" (10,12)

WITH ONE-TOUCH FITTINGS

APPLICABLE TUBE O.D.

04 ... Ø4
06 ... Ø6
08 ... Ø8
10 ... Ø10
12 ... Ø12

STOCKED PRODUCTS
FOR A LIST OF STOCKED PRODUCTS, PLEASE SEE THE CURRENT SMC PRICE LIST

ACCESSORIES

MOUNTING BRACKET – NOW ALSO WHITE

Tube Size	Applicable tube					
	ø3.2	ø4	ø6	ø8	ø10	ø12
Body size						
AS1001F	TMH-23J	TMH-04J	TMH-06J			
AS2001F						
AS2051F			TMH-07			
AS3001F				TMH-08		
AS4001F					TMH-10	TMH-12

Air Flow/Effective Area

Model		AS1001F		AS2001F		AS2051F		AS3001F			AS4001F	
Applicable tube O.D.	Metric size	ø4, ø6	ø4	ø6	ø6	ø8	ø6	ø8	ø10, ø12	ø10	ø12	
Controlled (Free) flow	Air flow l/min(ANR)	100	130	230	290	460	420	660	920	1050	1390	
	Effective area (mm ²)	1.5	2	3.5	4.5	7	6.5	10	14	16	21	

(Note) Supply pressure: 0.5MPa (5.1kgf/cm²), Temperature: 20°C

SPECIAL OPTION

Black body with blue bush (same dimensions) order with -X35 suffix.
This also applies for black TMH mounting brackets.



SPEED CONTROLLER WITH ONE TOUCH
FITTINGS TO M5, R(PT) AND UNI TYPE
MALE THREADS
SERIES AS

1	1F
2	1F
3	1F
4	1F

- ✓ Minimises installation time and cost
- ✓ Accepts nylon and polyurethane tubing
- ✓ Wide variety of sizes
- ✓ Body swivels 360°
- ✓ Accurate speed control even at low velocity
- ✓ Constant speed easily set
- ✓ Retainer prevents accidental loss of control needle
- ✓ Available as elbow or universal body types
- ✓ With meter-in or meter-out control as standard options
- ✓ Optional NPT threads and inch tubing versions with meter-in or meter-out control as standard options– Ask SMC Regional Offices for details

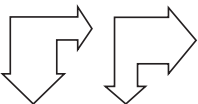
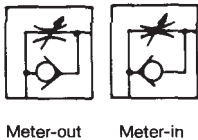


TECHNICAL
SPECIFICATIONS

Fluid	Air
Max. operating pressure	1MPa{10.2kgf/cm²}
Min. operating pressure	0.1MPa{1kgf/cm²}
Proof pressure	1.5MPa{15.3kgf/cm²}
Ambient and fluid temperature	0 ~ 60°C
Number of needle revolutions	10 turns (M5 size: 8 turns)
Applicable tube material	Nylon, soft nylon, polyurethane
Mounting thread	M5, R(PT), Uni thread
Option	Hexagonal lock nut, nickel plated type ^{Note1} , sealant on R(PT) ^{Note2}

Note 1: Brass parts are all electroless nickel plated. M5 size are nickel plated as standard.
Note 2: M5 and Unithread have gasket seal as standard.

SYMBOLS



Indication on product

How To
ORDER
SEE NEXT PAGE

DIMENSIONS
SEE NEXT PAGE

AIR FLOW
EFFECTIVE ORIFICE

Model	AS12■1F AS13■1F	AS22■1F-01 AS23■1F-01	AS22■1F-02 AS23■1F-02	AS32■1F AS33■1F	AS42■1F AS43■1F
Tube OD (mm)	4,6	4 6,8,10	4 6 8,10	6 8 10,12	10 12
Thread type	M5	R(PT) or unithread			
Controlled (Free) Air Flow ℓ/min (ANR)	100	180 230	260 390 460	660 790 920	1580 1710
Flow Effective orifice (mm²)	1.5	2.7 3.5	4 6 7	10 12 14	24 26

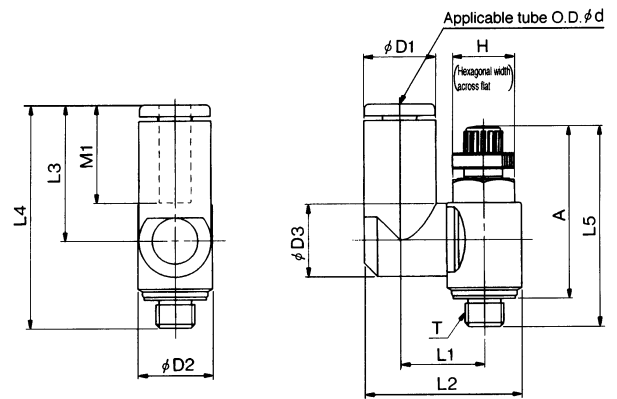
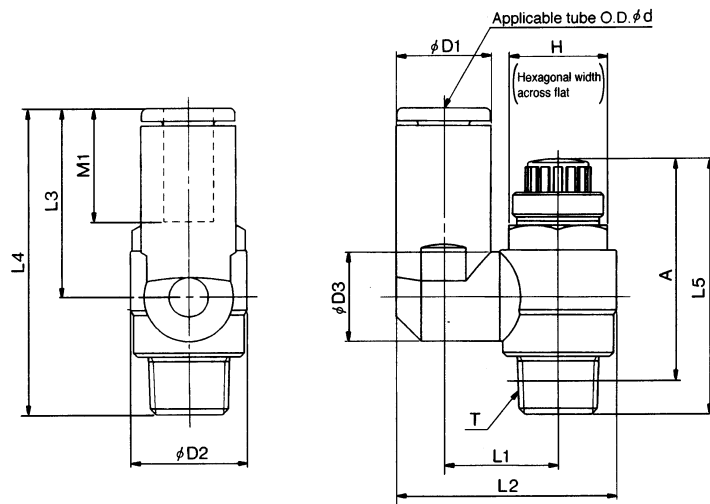
Supply pressure–0.5MPa{5.1kgf/cm2} Temperature 20°C
■: Control Method (0: Meter-out; 1: Meter-in)

MODEL/RANGE

Elbow type	Universal Type	Port Size (Thread)	Applicable tube OD					Applicable cylinder bore size (mm)
			4	6	8	10	12	
AS12 ■ 1F	AS13 ■ 1F	M5 x 0.8	✓	✓				6, 10, 15, 20
AS22 ■ 1F-01	AS23 ■ 1F-01	1/8 R(PT)	✓	✓	✓	✓		20, 25, 32
AS22 ■ 1F-02	AS23 ■ 1F-02	1/4 R(PT)	✓	✓	✓	✓		20, 25, 32, 40
AS32 ■ 1F-02	AS33 ■ 1F-02	1/4 R(PT)		✓	✓	✓	✓	40, 50, 63
AS32 ■ 1F-03	AS33 ■ 1F-03	3/8 R(PT)		✓	✓	✓	✓	40, 50, 63
AS42 ■ 1F-04	AS43 ■ 1F-04	1/2 R(PT)				✓	✓	63, 80, 100
AS22 ■ 1F-U01	AS23 ■ 1F-U01	1/8 Uni-	✓	✓	✓	✓		20, 25, 32
AS22 ■ 1F-U02	AS23 ■ 1F-U02	1/4 Uni-	✓	✓	✓	✓		20, 25, 32, 40
AS32 ■ 1F-U03	AS33 ■ 1F-U03	3/8 Uni-		✓	✓	✓	✓	40, 50, 63
AS42 ■ 1F-U04	AS43 ■ 1F-U04	1/2 Uni-				✓	✓	63, 80, 100

Flow Control Equipment

M5



Model	Applicable Tube OD d	T	H	D1	D2	D3	L1	L2	L3	L4	L5		A ^{nom1}		M1
											Max	Min	Max	Min	
AS13 ■1F-M5-04	4	M5x0.8	8	9.3	9.6	9.3	10.8	20.3	17.5	20.7	28.6	25.8	25	22.2	12.9
AS13 ■1F-M5-06	6	M5x0.8	8	11.6	9.6	9.3	10.8	21.4	20.6	31.8	28.6	25.8	25	22.2	12.9
*AS23 ■1F-01-04	4	R(PT) 1/8	12	9.3	14.2	9.3	13.1	24.9	17.5	31.8	36.1	31.1	32.1 (30.5)	27.1 (25.5)	12.9
AS23 ■1F-01-06	6	R(PT) 1/8	12	11.6	14.2	109	14	26.9	22.9	37.2	36.1	31.1	32.1 (30.5)	27.1 (25.5)	13.7
AS23 ■1F-01-08	8	R(PT) 1/8	12	15.2	14.2	12.9	16.2	30.9	20.2	41.7	36.1	31.1	32.1 (30.5)	27.1 (25.5)	10.7
*AS23 ■1F-02-04	4	R(PT) 1/4	17	10.4	18.5	10.9	16.2	30.6	21.9	40.1	40.4 (39.4)	35.4 (34.4)	34.4 (32)	29.4 (26.6)	15.8
AS23 ■1F-02-06	6	R(PT) 1/4	17	12.8	18.5	12.9	18.4	34	25.2	42.6	40.4 (39.4)	35.4 (34.4)	34.4 (32)	29.4 (26.6)	16
AS23 ■1F-02-08	8	R(PT) 1/4	17	15.2	18.5	12.9	18.3	35.2	28.2	45.6	40.4 (39.4)	35.4 (34.4)	34.4 (32)	29.4 (26.6)	18.7
AS23 ■1F-02-10	10	R(PT) 1/4	17	18.5	18.5	12.9	20.2	38.7	31	48.4	40.4 (39.4)	35.4 (34.4)	34.4 (32)	29.4 (26.6)	20.8
*AS33 ■1F-03-6	6	R(PT) 3/8	19	12.8	23	12.9	20.6	38.5	25.2	47	48.8 (45)	43.8 (40)	42.8 (37.6)	37.8 (32.6)	21.8
AS33 ■1F-03-8	8	R(PT) 3/8	19	15.2	23	12.9	20.6	39.7	28.2	50	48.8 (45)	43.8 (40)	42.8 (37.6)	37.8 (32.6)	18.7
AS33 ■1F-03-10	10	R(PT) 3/8	19	18.5	23	16.2	23	43.7	32.6	54.4	48.8 (45)	43.8 (40)	42.8 (37.6)	37.8 (32.6)	20.8
AS33 ■1F-03-12	12	R(PT) 3/8	19	20.9	23	16.2	23	44.9	34.4	56.2	48.8 (45)	43.8 (40)	42.8 (37.6)	37.8 (32.6)	21.8
*AS43 ■1F-04-10	10	R(PT) 3/8	24	18.5	28.6	16.2	25.8	49.4	32.6	58	57.6 (54.6)	50.1 (47.1)	49.4 (44.5)	41.9 (37)	20
AS43 ■1F-04-12	12	R(PT) 3/8	24	21.7	28.6	19.4	26.8	52	36.3	61.7	57.6 (54.6)	50.1 (47.1)	49.4 (44.5)	41.9 (37)	21

Note 1): Dimensions measured after M5 and (R)PT are screwed in.

* Standard version and unithread version dimensions are the same except () which are unithread dimensions only

SPEED CONTROLLER WITH ONE TOUCH FITTINGS; STAINLESS STEEL TYPE

SERIES AS12 1FG
22 1FG
32 1FG
42 1FG

- ✓ Stainless steel elements (SUS 303). Suitable for copper free specification and water/salt water washdown of food processing machines
- ✓ White resin body/release bush
- ✓ Optional pre-coated thread
- ✓ Maximum operating pressure 1.0MPa
- ✓ Accepts nylon, soft nylon and polyurethane tubing
- ✓ Retainer prevents accidental needle loss
- ✓ Constant easy speed setting with 10 turns of needle rotation



How To ORDER

AS 2 1F G — — —

BODY SIZE

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

TYPE

- 2 Elbow

CONTROL METHOD

- 0 Meter out
- 1 Meter in

WITH ONE TOUCH FITTING

STAINLESS STEEL TYPE (SUS303)

PORT SIZE

- M5 ... M5x0.8
- 01 ... R(PT)1/8
- 02 ... R(PT)1/4
- 03 ... R(PT)3/8
- 04 ... R(PT)1/2

APPLICABLE TUBE O.D

- 04 ... Ø4
- 06 ... Ø6
- 08 ... Ø8
- 10 ... Ø10
- 12 ... Ø12

OPTION

- Nil ... None
- S with Sealant

TECHNICAL SPECIFICATIONS

Proof pressure	1.5MPa{15.3kgf/cm ² }
Max. operating pressure	1MPa{10.2kgf/cm ² }
Min. operating pressure	0.1MPa{1kgf/cm ² }
Ambient and fluid temperature	0 ~ 60°C
Number of needle revolutions	10 turns (8 turns ^{Note1})
Applicable tube material	Nylon, soft nylon, polyurethane
Option	With Sealant ^{Note2}

Note 1: Applicable tube to AS12*FG

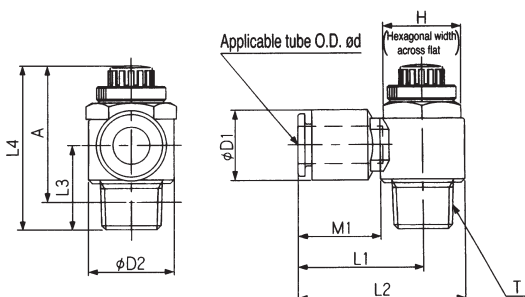
Note 2: Not available for M5 threads

TECHNICAL SPECIFICATIONS

Elbow type	Port Size	Free Control Flow(Nl/min)/Effective Orifice(mm ²) by applicable tube					Applicable Tube
		4	6	8	10	12	
AS12*1FG-M5	M5x0.8	100/1.5	100/1.5				6, 10, 16, 20
AS22*1FG-01	R(PT)1/8	180/2.7	230/3.5	230/3.5	230/3.5		20, 25, 32
AS22*1FG-02	R(PT)1/4	260/4	390/6	460/7	460/7		20, 25, 32, 40
AS32*1FG-04	R(PT)3/8		660/10	790/12	920/14		40, 50, 63
AS42*1FG-04	R(PT)1/2			1580/24	1710/26		63, 80, 100

Note: Supply Pressure 0.5MPa Temperature 20°C

DIMENSIONS



Model	Applicable Tube OD d	T	H	D1	D2	L1	L2	L3	L4		A ^{Note1}		M1
									Max	Min	Max	Min	
AS12 ■ 1FG-M5-04	4	M5x0.8	8	9.3	9.6	17.3	22.1	12.3	28.6	25.8	25	22.2	12.7
AS12 ■ 1FG-M5-06	6	M5x0.8	8	11.6	9.6	18.1	22.9	11.7	28.6	25.8	25	22.2	13.5
AS22 ■ 1FG-01-04	4	R(PT) 1/8	12	9.3	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	12.7
AS22 ■ 1FG-01-06	6	R(PT) 1/8	12	11.6	14.2	20.4	27.5	14.3	36.1	31.1	32.1	27.1	13.5
AS22 ■ 1FG-01-08	8	R(PT) 1/8	12	15.2	14.2	25.3	32.4	14.3	36.1	31.1	32.1	27.1	18.5
AS22 ■ 1FG-02-10	10	R(PT) 1/8	12	18.5	14.2	33.1	40.2	15	36.1	31.1	32.1	27.1	21
AS22 ■ 1FG-02-04	4	R(PT) 1/4	17	10.4	18.5	25.2	34.4	18.2	40.4	35.4	34.4	29.4	15
AS22 ■ 1FG-02-06	6	R(PT) 1/4	17	12.8	18.5	25.2	34.4	18.2	40.4	35.4	34.4	29.4	16.8
AS22 ■ 1FG-02-08	8	R(PT) 1/4	17	15.2	18.5	27.2	36.4	18.2	40.4	35.4	34.4	29.4	18.5
AS22 ■ 1FG-02-10	10	R(PT) 1/4	17	18.5	18.5	33.9	43.2	20	40.4	35.4	34.4	29.4	21
AS32 ■ 1FG-03-6	6	R(PT) 3/8	19	12.8	23	27.8	39.3	20.9	46.5	41.5	40	35	16.8
AS32 ■ 1FG-03-8	8	R(PT) 3/8	19	15.2	23	29.5	41	20.9	46.5	41.5	40	35	18.5
AS32 ■ 1FG-03-10	10	R(PT) 3/8	19	18.5	23	31.8	43.3	20.9	46.5	41.5	40	35	21
AS32 ■ 1FG-03-12	12	R(PT) 3/8	19	20.9	23	32.8	44.3	20.9	46.5	41.5	40	35	22
AS42 ■ 1FG-04-10	10	R(PT) 1/2	24	18.5	28.6	33.6	47.9	25.4	57.6	50.1	49.6	42.1	21
AS42 ■ 1FG-04-12	12	R(PT) 1/2	24	20.9	28.6	34.6	48.9	25.4	57.6	50.1	49.6	42.1	22

Note 1: Dimensions measured when thread has been screwed in.

FLAME RESISTANT SPEED
CONTROLLER WITH ONE TOUCH
FITTINGS AND METAL BODY
SERIES AS12 1-F

2	2	☐	1	-	☐	-	F	☐	☐
3	2	☐	1	-	☐	-	F	☐	☐
4	2	☐	1	-	☐	-	F	☐	☐



- ✔ Metal body and flame resistant resin one-touch fitting cassette (to UL94 standard V-0)
- ✔ Ideal for heavy duty application
- ✔ Can be used in conjunction with other flame resistant fittings and tubing (See section 4 of this catalogue).

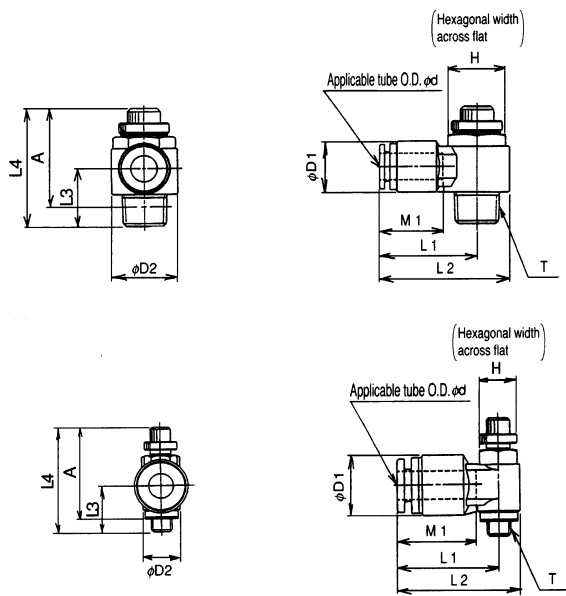
Flow Control Equipment

TECHNICAL SPECIFICATIONS

Proof pressure	1.5MPa{15.3kgf/cm ² }
Max. operating pressure	1MPa{10.2kgf/cm ² }
Min. operating pressure	0.1MPa{1kgf/cm ² }
Ambient and fluid temperature	0 ~ 60°C
Number of needle revolutions	10 turns (8 turns ^{Note1})
Applicable tube material	Nylon, soft nylon, polyurethane
Option	W/seal, Hexagon lock nut, Nickel plating type

Model	AS12 ■ 1-M5-F*	AS22 ■ 1-01-F*	AS22 ■ 1-02-F*	AS32 ■ 1-03-F*	AS42 ■ 1-04-F*
Applicable Tube OD (mm)	Ø4, Ø6	Ø4, Ø6	Ø6 Ø8	Ø8 Ø10	Ø10 Ø12
Controlled (Free) Air Flow ℓ/min (ANR)	100	230	390 460	790 920	1580 1710
Flow Effective orifice (mm ²)	1.5	3.5	6 7	12 14	24 26
ID of applicable cylinders (mm)	6, 10, 16, 20	20, 25, 32	20, 25, 32, 40	40, 50, 63	63, 80, 100

DIMENSIONS



How To Order

AS ○ 2 ○ 1 — ○ — F ○ ○

BODY SIZE _____

1M5 Standard

201, 02 Standard

303 standard

404 Standard

TYPE ———
2 Elbow

```
CONTROL METHOD
0 .....Meter out
1 .....Meter in
```

```

THREAD SIZE
M5 ... M5x0.8
01 ... R(PT)1/8
02 ... R(PT)1/4
03 ... R(PT)3/8
04 ... R(PT)1/2

```

BUILT-IN ONE TOUCH FITTING

TUBE	PORT	SIZE
04	...	Ø4
06	...	Ø6
08	...	Ø8
10	...	Ø10
12	...	Ø12

OPTION _____

S with sealant
K Hexagon lock nut
N Nickel plating type

The option sequence must be SKN

Model	Applicable Tube OD d	T	H	D1	D2	L1	L2	L3	L4		A ^{nom}		M1	Mass
									Max	Min	Max	Min		
AS12 ■ 1-M5-F04	4	M5x0.8	8	13	9	21	25.5	11.2	28.8	25.5	25	22.2	16	12.7
AS12 ■ 1-M5-F06	6	M5x0.8	8	13	9	21.5	26	11.2	28.8	25.5	25	22.2	17	12.5
AS22 ■ 1-01-F06S	6	R(PT) 1/8	12	15.5	14.6	26.6	33.9	14.7	36.4	31.4	32.4	27.4	17	33.7
AS22 ■ 1-01-F08S	8	R(PT) 1/8	12	15.5	14.6	26.6	33.9	14.7	36.4	31.4	32.4	27.4	18.5	30.7
AS22 ■ 1-02-F06S	6	R(PT) 1/4	17	15.5	19.5	28.7	38.5	17.7	40.8	35.8	34.8	29.8	17	56.3
AS22 ■ 1-02-F08S	8	R(PT) 1/4	17	15.5	19.5	28.7	38.5	17.7	40.8	35.8	34.8	29.8	18.5	52.1
AS32 ■ 1-03-F08S	8	R(PT) 3/8	19	18.2	24.3	32.7	44.9	20.1	46.9	41.9	40.6	35.6	18.5	92.9
AS32 ■ 1-03-F10S	10	R(PT) 3/8	19	18.2	24.3	33.3	45.5	20.1	46.9	41.9	40.6	35.6	21	87.6
AS42 ■ 1-04-F10S	10	R(PT) 1/2	24	22.3	28.5	36.1	50.4	25.5	55.6	50.6	47.4	42.4	21	153.8
AS42 ■ 1-04-F12S	12	R(PT) 1/2	24	22.3	28.5	36.1	50.4	25.5	55.6	50.6	47.4	42.4	22	145.5

Note: Dimensions measured when thread has been screwed in.