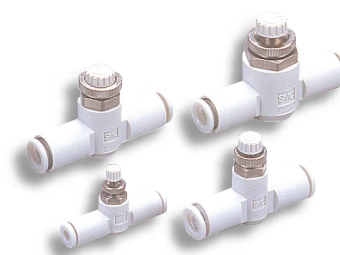


SPEED CONTROLLER WITH ONE TOUCH FITTINGS: IN-LINE TYPE

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

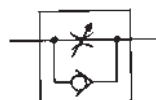


TECHNICAL SPECIFICATIONS

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

SYMBOLS



HOW TO ORDER

AS1000-4000

AS 1F —

BODY SIZE

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

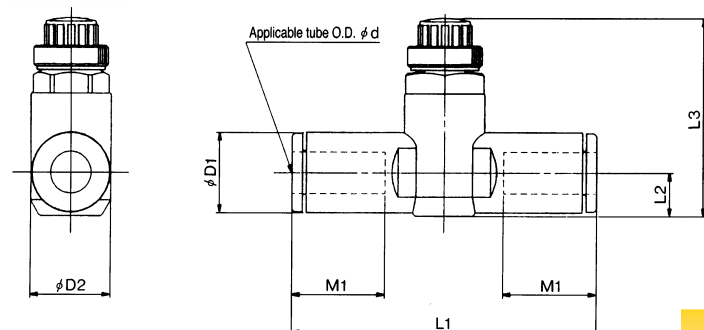
WITH ONE-TOUCH FITTINGS

APPLICABLE TUBE O.D.

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

DIMENSIONS

AS1000-4000

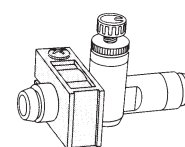


STOCKED PRODUCTS

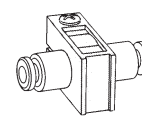
FOR A LIST OF STOCKED PRODUCTS, PLEASE SEE THE CURRENT SMC PRICE LIST

ACCESSORIES

MOUNTING BRACKET – NOW ALSO WHITE



Speed Controller



One-touch fittings

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

SPECIAL OPTION

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

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 (mm²)	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



SEE INSIDE FRONT COVER FOR DETAILS OF YOUR LOCAL SALES OFFICE



FOR FURTHER TECHNICAL DETAILS ON THIS PRODUCT REQUEST CATALOGUE REFERENCE E201-G & E505



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

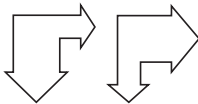
Fluid	Air
Max. operating pressure	1MPa{10.2kgf/cm²}
Min. operating pressure	0.1MPa{1kgf/cm²}
Proof pressure	1.5MPa{15.3kgf/cm²}
Ambient and fluid temperature	0 ~ 60°C
Number of needle revolutions	10 turns (M5 size: 8 turns)
Applicable tube material	Nylon, soft nylon, polyurethane
Mounting thread	M5, 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



Meter-out Meter-in



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



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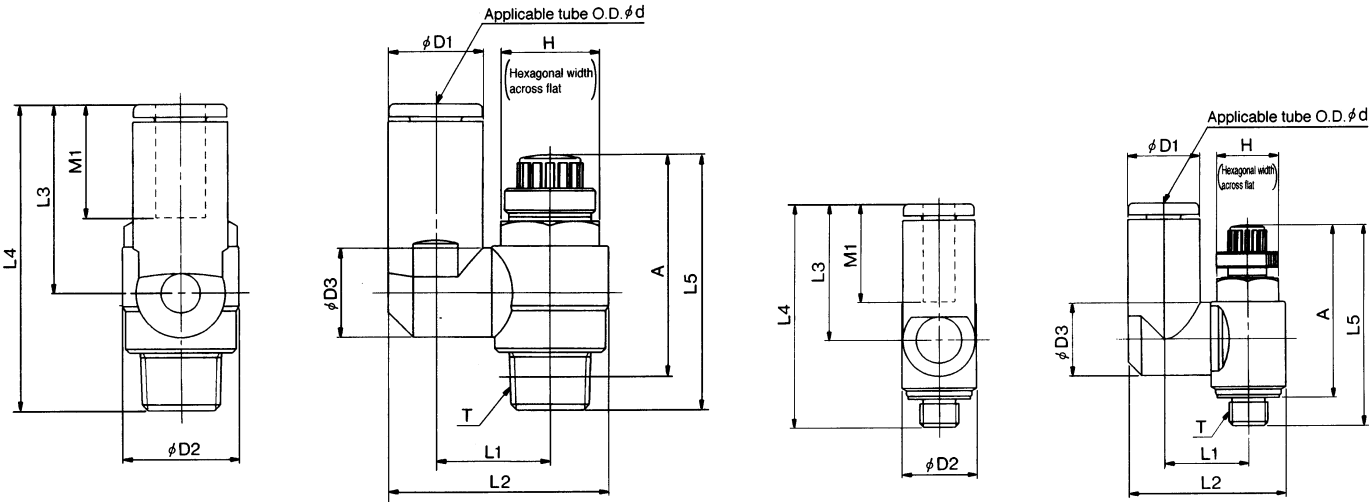
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DIMENSIONS
UNIVERSAL TYPE

R(PT)

M5



Model	Applicable Tube OD ϕd	T	H	D1	D2	D3	L1	L2	L3	L4	L5		A ^{Note1}		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	10.9	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}

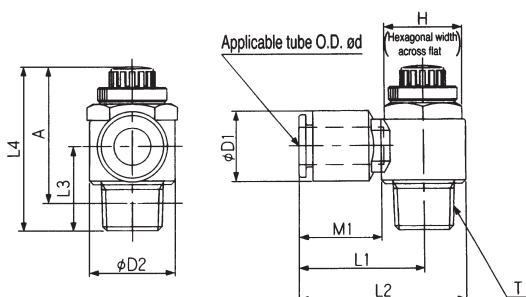
Note 1: Applicable tube to AS12*FG
Note 2: Not available for M5 threads

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.



SEE INSIDE FRONT COVER FOR
DETAILS OF YOUR LOCAL SALES OFFICE



FOR FURTHER TECHNICAL
DETAILS ON THIS
PRODUCT REQUEST
CATALOGUE REFERENCE
E201-G & E505

FLAME RESISTANT SPEED CONTROLLER WITH ONE TOUCH FITTINGS AND METAL BODY

SERIES AS12 1- -F
22 1- -F
32 1- -F
42 1- -F



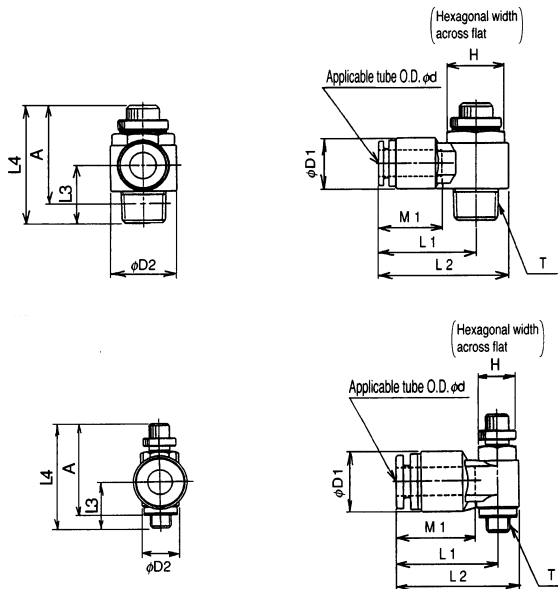
- ✓ Metal body and flame resistant resin one-touch fitting cassette (to UL94 standard V-0)
- ✓ Ideal for heavy duty application
- ✓ Can be used in conjunction with other flame resistant fittings and tubing (See section 4 of this catalogue).

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
2Elbow

CONTROL METHOD
0Meter out
1Meter 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
Swith sealant
KHexagon lock nut
NNickel plating type
The option sequence must be SKN

Model	Applicable Tube OD d	T	H	D1	D2	L1	L2	L3	L4		A ^{note1}		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.



FOR FURTHER TECHNICAL DETAILS ON THIS PRODUCT REQUEST CATALOGUE REFERENCE E201-G & E505