

## SUPER COMPACT BODY PORTED METAL INLINE/ELBOW TYPES AS1000-M3 AS1200-M3 AS1400-M3

- ✓ Super-compact size and light weight
- ✓ Proportional speed control: To 20ℓ/min(ANR)
- ✓ Three types available:
  - In-line type (AS1000)
  - Direct connection elbow type (AS1200)
  - Direct connection flat elbow type (AS1400)



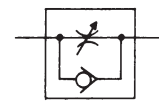
Flow Control Equipment

### TECHNICAL SPECIFICATIONS

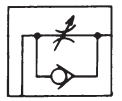
Proof Pressure	1.05MPa{10.7kgf/cm <sup>2</sup> }
Max operating pressure	0.7MPa{7.1kgf/cm <sup>2</sup> }
Min Operating Pressure	0.1MPa{1kgf/cm <sup>2</sup> }
Ambient and fluid temperature	5-60°C
Number of needle rotations	10 turns

Model	Port Size	Free Flow Air Flow (ℓ/min) (ANR)	Controlled Flow Effective Orifice (mm <sup>2</sup> )	Applicable Cylinder Bore Size (mm)	Weight (g)
In-line type AS1000-M3	M3	20	0.3	Ø2.5, Ø4, Ø6	4.7
Elbow type AS1200-M3	M3	20	0.3	Ø2.5, Ø4, Ø6	3
Flat elbow type AS1400-M3	M3	20	0.3	Ø2.5, Ø4, Ø6	6

### SYMBOLS



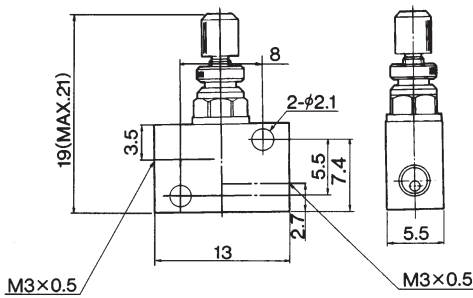
AS1000



AS1200, 1400

### DIMENSIONS

#### IN-LINE TYPE AS1000-M3



### HOW TO ORDER

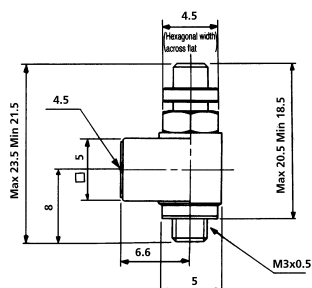
AS1 ● 00 — M3

- TYPE
- 0 .....In-line type
  - 2 .....Direct connection elbow direction
  - 4 .....Direct connection flat elbow type

PORT SIZE  
M3 ...M3x0.5

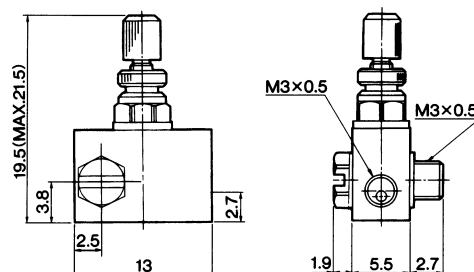
### DIMENSIONS

#### ELBOW TYPE AS1200-M3



### DIMENSIONS

#### FLAT ELBOW TYPE AS1400-M3



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

## SPEED CONTROLLERS WITH LOW SPEED APPLICATION

### SERIES AS12/13 ■ 1FM RESIN BODY WITH ONE TOUCH FITTINGS

### SERIES AS12/22 ■ 0M METAL BODY PORTED

- ✓ Suitable for low speed applications: 10-50mm/sec
- ✓ Accurate control of low speed cylinders with effective orifice for control flow at 1/10 of standard types
- ✓ Possible to operate cylinders at low speed for working strokes and high speed for return strokes
- ✓ Easy control with 10 turns (20 turns for M5 type) of needle rotation

Series AS12/22 □ 0M  
Metal body ported



Series AS12/13 □ 1FM  
AS22/23 □ 1FM  
Resin body with one touch fittings

#### TECHNICAL SPECIFICATIONS

##### WITH ONE TOUCH FITTING

Proof Pressure	1.5MPa {15.3kgf/cm <sup>2</sup> }
Max operating Pressure	1MPa {10.2kgf/cm <sup>2</sup> }
Min Operating Pressure	0.1MPa {1kgf/cm <sup>2</sup> }
Ambient and fluid temperature	0-60°C
Number of needle rotations	10 turns (20 turns - 1 (Note))
Applicable Tube Material <sup>Note 2</sup>	Nylon, Soft Nylon, Polyurethane
Option <sup>Note 3</sup>	With Sealant Std

Elbow type	AS12*1FM	AS22*1FM-01	AS22*1FM-02
Universal type	AS13*1FM	AS23*1FM-01	AS23*1FM-02
Port Size	M5x0.8	R(PT)1/8	R(PT)1/4
Applicable Cylinder bore (mm)	6, 10, 16, 20	20, 25, 32	20, 25, 32, 40
Applicable Tube OD (mm)	Ø3.2, Ø4, Ø6	Ø3.2, Ø4, Ø6, Ø8	Ø4, Ø6, Ø8, Ø10
Control flow rate ℓ/min (ANR) Nℓ/min	8	22	55
Effective Orifice mm <sup>2</sup>	0.13	0.35	0.85
Free flow rate ℓ/min (ANR) Nℓ/min	100	180 230	260 390 460
Effective Orifice mm <sup>2</sup>	15	2.7 3.5	4 6 7

At 0.5MPa (5.1kgf/cm<sup>2</sup>), temperature - 20°C

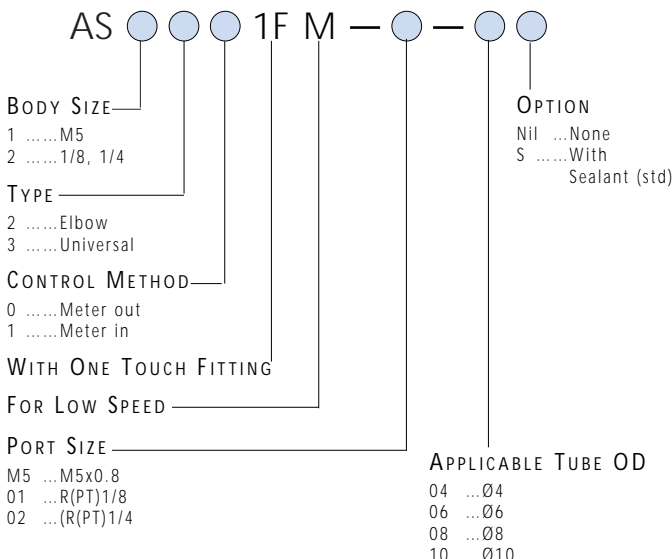
Note 1: For AS12\*1FM type and AS13\*1FM type

Note 2: Be careful of maximum operating pressure when soft nylon or polyurethane tubes are used.

Note 3: Not available for M5 models

#### HOW TO ORDER

##### WITH ONE TOUCH FITTING



#### TECHNICAL SPECIFICATIONS

##### METAL BODY PORTED

Proof Pressure	1.5MPa {15.3kgf/cm <sup>2</sup> }
Max operating Pressure	1MPa {10.2kgf/cm <sup>2</sup> }
Min Operating Pressure	0.1MPa {1kgf/cm <sup>2</sup> }
Ambient and fluid temperature	5-60°

Model	AS12*0M-M5	AS22*0M-01	AS22*0M-02
Port Size (Cylinder Side) (Tube Side)	M5x0.8	R(PT)1/8	R(PT)1/4
Applicable Cylinder Tube ID(mm)	6, 10, 15, 20, 25	20, 25, 32, 40	20, 25, 32, 40
Number of needle rotations	20 turns	10 turns	
Option	-	With Sealant (std)	
Weight (g)	11.5	36	74
Control flow rate ℓ/min (ANR) Nℓ/min	8	22	55
Effective Orifice mm <sup>2</sup>	0.13	0.35	0.85
Free flow rate ℓ/min (ANR) Nℓ/min	105	280	420
Effective Orifice mm <sup>2</sup>	1.6	4.3	6.5

At 0.5MPa (5.1kgf/cm<sup>2</sup>), temperature - 20°C

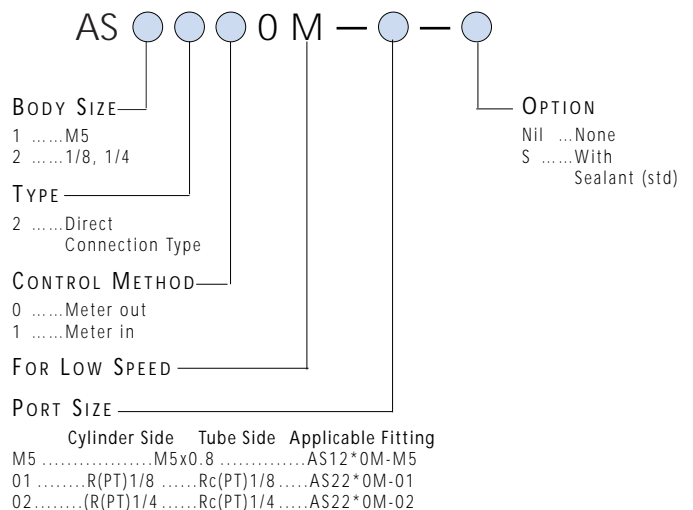
Note 4: Difference of appearance between meter-out models and meter-in models  
Meter-out - with an electroless nickel plated lock nut

The handle and lock nut of meter-in type are black zinc chromated

Note 5: All brass parts are electroless nickel plated.

#### HOW TO ORDER

##### METAL BODY PORTED



DIMENSIONS  
SEE STANDARD  
MODELS



SEE INSIDE FRONT COVER FOR  
DETAILS OF YOUR LOCAL SALES OFFICE