





# Best Pneumatics 4

## Air Filter

|                                               |          |
|-----------------------------------------------|----------|
| Air Filter: AF1000 to 6000 .....              | P.1.4-2  |
| Mist Separator: AFM2000/3000/4000 .....       | P.1.4-6  |
| Micro Mist Separator: AFD2000/3000/4000 ..... | P.1.4-9  |
| Large Flow Air Filter: AF800/900 .....        | P.1.4-12 |



# Modular Style Air Filter Series AF

| Air Filter Series AF                                                                | Model      | Port size     | Filtration $\mu\text{m}$ | Accessories                                                                   |
|-------------------------------------------------------------------------------------|------------|---------------|--------------------------|-------------------------------------------------------------------------------|
|    | AF1000     | M5            | 5                        | Bracket<br><br>Float style auto drain<br><br>Pressure differential auto-drain |
|                                                                                     | AF2000     | 1/8, 1/4      |                          |                                                                               |
|                                                                                     | AF3000     | 1/4, 3/8      |                          |                                                                               |
|                                                                                     | AF4000     | 1/4, 3/8, 1/2 |                          |                                                                               |
|                                                                                     | AF4000-06  | 3/4           |                          |                                                                               |
|                                                                                     | AF5000     | 3/4, 1        |                          |                                                                               |
|                                                                                     | AF6000     | 1             |                          |                                                                               |
|  | AFM2000    | 1/8, 1/4      | 0.3                      | Bracket<br><br>Float style auto drain<br><br>Pressure differential auto-drain |
|                                                                                     | AFM3000    | 1/4, 3/8      |                          |                                                                               |
|                                                                                     | AFM4000    | 1/4, 3/8, 1/2 |                          |                                                                               |
|                                                                                     | AFM4000-06 | 3/4           |                          |                                                                               |
|  | AFD2000    | 1/8, 1/4      | 0.01                     | Bracket<br><br>Float style auto drain<br><br>Pressure differential auto-drain |
|                                                                                     | AFD3000    | 1/4, 3/8      |                          |                                                                               |
|                                                                                     | AFD4000    | 1/4, 3/8, 1/2 |                          |                                                                               |
|                                                                                     | AFD4000-06 | 3/4           |                          |                                                                               |
|  | AF800      | 1 1/4, 1 1/2  | 5                        | Float style auto drain                                                        |
|                                                                                     | AF900      | 2             |                          |                                                                               |

# Air Filter

# AF1000 to 6000



AF4000



AF3000

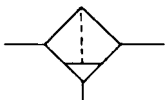


AF2000



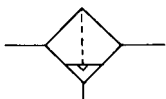
AF1000

JIS symbol



With auto drain

JIS symbol



## Standard Specifications

| Model                            | AF1000                   | AF2000   | AF3000   | AF4000        | AF4000-06 | AF5000 | AF6000 |
|----------------------------------|--------------------------|----------|----------|---------------|-----------|--------|--------|
| Port size                        | M5                       | 1/8, 1/4 | 1/4, 3/8 | 1/4, 3/8, 1/2 | 3/4       | 3/4, 1 | 1      |
| Fluid                            | Air                      |          |          |               |           |        |        |
| Proof pressure                   | 1.5MPa                   |          |          |               |           |        |        |
| Max. operating pressure          | 1.0MPa                   |          |          |               |           |        |        |
| Ambient and fluid temperature    | -5 to 60°C (No freezing) |          |          |               |           |        |        |
| Filtration                       | 5µm                      |          |          |               |           |        |        |
| Bowl material                    | Polycarbonate            |          |          |               |           |        |        |
| Bowl capacity (cm <sup>3</sup> ) | 2.5                      | 8        | 23       | 45            | 45        | 45     | 45     |
| Weight (kg)                      | 0.07                     | 0.19     | 0.29     | 0.55          | 0.58      | 1.08   | 1.18   |
| Accessory (Standard)             | Bowl guard               | —        | —        | ●             | ●         | ●      | ●      |

## Accessory (optional) Part No.

| Description                                     | Model | Part No. |        |        |        |           |        |        |
|-------------------------------------------------|-------|----------|--------|--------|--------|-----------|--------|--------|
|                                                 |       | AF1000   | AF2000 | AF3000 | AF4000 | AF4000-06 | AF5000 | AF6000 |
| Bracket assembly <sup>(1)</sup>                 |       | —        | B240A  | B340A  | B440A  | B540A     | B640A  | B640A  |
| Float style auto drain <sup>(2)</sup>           | N.O.  | —        | —      | AD43   | AD44   | AD44      | AD44   | AD44   |
|                                                 | N.C.  | —        | —      | AD53   | AD54   | AD54      | AD54   | AD54   |
| Pressure differential auto drain <sup>(3)</sup> |       | AD61     | AD62   | —      | —      | —         | —      | —      |



Note 1) Bracket with two mounting threads.

Note 2) Min. operating pressure: 0.1MPa (N.O.), 0.15MPa (N.C.)

Note 3) Min. pressure differential: 0.01MPa

## How to Order

**E AF 30 00 - F 03 B - 2R**

Air filter

Body size

|    |     |
|----|-----|
| 10 | M5  |
| 20 | 1/8 |
| 30 | 3/8 |
| 40 | 1/2 |
| 50 | 3/4 |
| 60 | 1   |

Thread

|   |                   |
|---|-------------------|
| — | Meter thread (M5) |
| — | Rc(PT)            |
| N | NPT               |
| F | G(PF)             |

Port size

|    |     |
|----|-----|
| M5 | M5  |
| 01 | 1/8 |
| 02 | 1/4 |
| 03 | 3/8 |
| 04 | 1/2 |
| 06 | 3/4 |
| 10 | 1   |

Accessory

| Symbol | Description                    | Applicable model |
|--------|--------------------------------|------------------|
| —      | —                              | —                |
| B      | Bracket                        | AF2000 to AF6000 |
| C      | Float auto drain (N.C.)        | AF3000 to AF6000 |
| D      | Float auto drain (N.O.)        | AF3000 to AF6000 |
| D      | Press. differential auto-drain | AF1000/ AF2000   |

Option

|   |                                                                       |
|---|-----------------------------------------------------------------------|
| 2 | Metal bowl                                                            |
| 6 | Nylon bowl                                                            |
| 8 | Metal bowl with level gauge (AF3000 to AF6000)                        |
| C | With bowl guard (AF2000 only)                                         |
| J | Drain guide Rc(PT)1/4 (AF3000 to AF6000)*                             |
| R | Flow: From right to left                                              |
| W | With drain cock and barb fitting (AF3000 to AF6000) (For ø6/ø4 nylon) |

•When specifying more than one symbol, indicate them alphabetically.  
Ex.) 6RW

\*Without valve function

## Combination Table/Accessory and Option

◎ Combinable    ■ Impossible    ○ Depends on the model

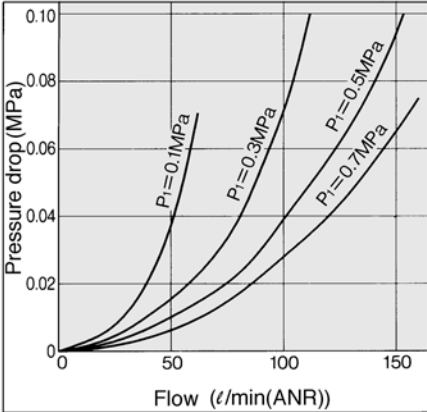
| Accessory/Option                     | Symbol | Auto drain |   |   | Option |   |   |   |   |   |   | Applicable filter model |        |        |                  |
|--------------------------------------|--------|------------|---|---|--------|---|---|---|---|---|---|-------------------------|--------|--------|------------------|
|                                      |        | D          | D | C | 2      | 6 | 8 | C | J | R | W | AF1000                  | AF2000 | AF3000 | AF4000 to AF6000 |
| Pressure differential auto-drain     | D      | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Float style auto drain (N.O.)        | D      | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Float style auto drain (N.C.)        | C      | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Metal bowl                           | -2     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Nylon bowl                           | -6     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Metal bowl with level gauge          | -8     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Bowl guard                           | -C     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Drain guide Rc(PT)1/4                | -J     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Flow direction: From right to left   | -R     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |
| Barb fitting on One-touch drain cock | -W     | ◎          | ◎ | ◎ | ◎      | ◎ | ◎ | ◎ | ◎ | ◎ | ◎ | ◎                       | ◎      | ◎      | ◎                |

\*Refer to p.1.0-1 and 1.0-2 for FRL precautions.

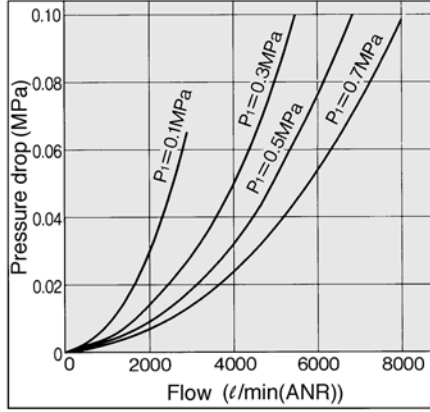
# AF1000 to 6000

## Flow Characteristics

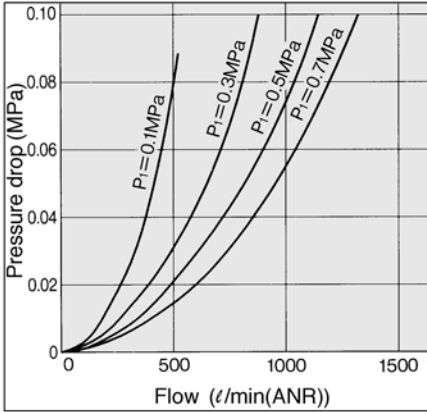
**AF1000** M5



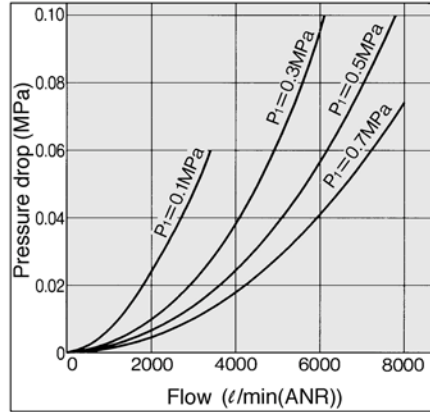
**AF4000-06** Rc(PT) 3/4



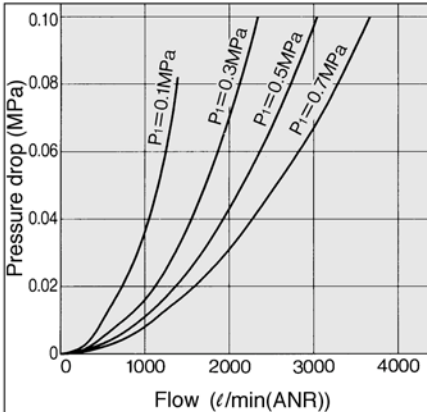
**AF2000** Rc(PT) 1/4



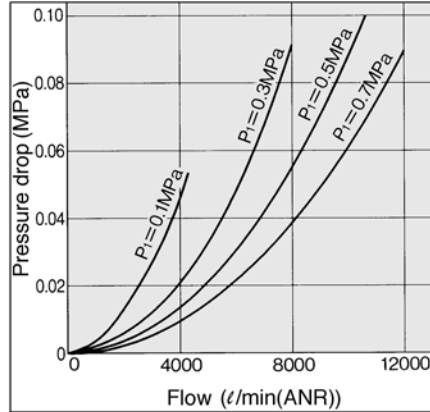
**AF5000** Rc(PT) 3/4



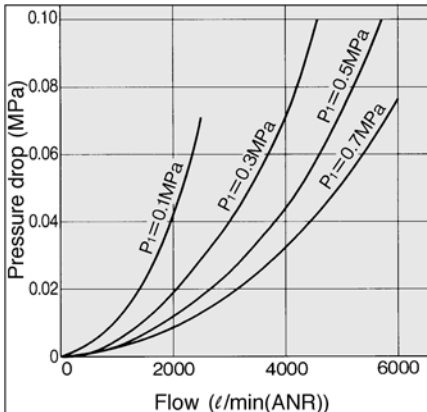
**AF3000** Rc(PT) 3/8



**AF6000** Rc(PT) 1



**AF4000** Rc(PT) 1/2



## ⚠ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalogue and refer to p.1.0-2 and 1.0-3 for precautions on every series.

## Maintenance

### ⚠ Warning

Replace the filter element within 2 years of operation or before the pressure drop reaches 0.1 MPa. Failure to observe this precaution could damage the filter element.

# Air Filter AF1000 to 6000

## Operation Principle: Float Style Auto Drain

**N.O. type: AD43/44**

**● When no pressure is applied internally to the bowl**  
 Float ① descends due to its own weight and valve ② closes chamber hole ③. Piston ④ is pushed down by spring ⑤, and the drainage passes through chamber hole ⑦ to enter housing ⑧.

**● When the pressure is applied internally to the bowl**  
 When the pressure is greater than 1kgf/cm<sup>2</sup>, it overcomes the force of spring ⑤, allowing piston ④ to ascend to the position that causes it to be sealed by seal ⑥. Thus, the inside of the bowl is isolated from the outside.

**● When drainage has accumulated**  
 Float ① ascends through flotation and opens the chamber's hole ③, allowing the pressure to enter the chamber. Piston ④ descends due to the force of the internal pressure and spring ⑤, and the accumulated drainage is discharged through drain outlet ⑨.

**N.C. type: AD53/54**

**● When no drainage has accumulated**  
 Float ① descends due to its own weight and valve ② closes the chamber's hole ③. Spring ⑤ pushes piston ④ up to the position that causes it to be sealed by seal ⑥.

**● When drainage has accumulated**  
 Float ① ascends through flotation and opens the chamber's hole ③, allowing the pressure to enter the chamber. The force of the internal pressure pushes piston ④ down, and the accumulated drainage passes through chamber hole ⑦ and drain housing ⑧, and is discharged through drain outlet ⑨. After the drainage has been discharged and valve ② closes, the chamber's internal pressure passes through the orifice ⑩ portion of piston ④, and is released externally. Therefore, piston ④ receives the case's internal pressure at its bottom, and with the additional force of spring ⑤, piston ④ is pushed upward, thus returning to the sealing position of seal ⑥.

## Differential Pressure Auto Drain

**AD61/62**

**● When no pressure is applied internally to the case**  
 With piston ② having descended, if a pressure > 0.1 MPa is applied to piston ② inside bowl ①, the hole of valve ④ becomes closed by valve seal ③. While the valve remains closed, the pressure of piston upper chamber ⑤ and lower chamber ⑥ are equalized. As soon as the air is expanded, the pressure in upper chamber ⑤ decreases, thus creating a momentary difference in pressure between upper ⑤ and lower chamber ⑥ and causing piston ② to ascend. Then, the hole of valve ④ opens to discharge (the valve opens even if no drainage has accumulated). The pressure at the bottom of piston ② decreases, causing the pressure in upper chamber ⑤ to become greater than the pressure in lower chamber ⑥. So, piston ② descends, causing the hole of valve ④ to be closed by valve seal ③. When the air consumption rate becomes constant, the pressure between piston upper ⑤ and lower chamber ⑥ becomes equalized and the hole of the valve remains closed.

## Construction

**AF1000/2000**

**AF3000/4000**

**AF5000/6000**

### Component Parts

| No. | Description | Material      |                     |                   | Note                  |
|-----|-------------|---------------|---------------------|-------------------|-----------------------|
|     |             | AF1000/2000   | AF3000/4000/4000-06 | AF5000/6000       |                       |
| ①   | Body        | Zinc die cast | Aluminum die cast   |                   | Platinum silver paint |
| ⑨   | Housing     | —             | —                   | Aluminum die cast | Platinum silver paint |

### Replacement Parts

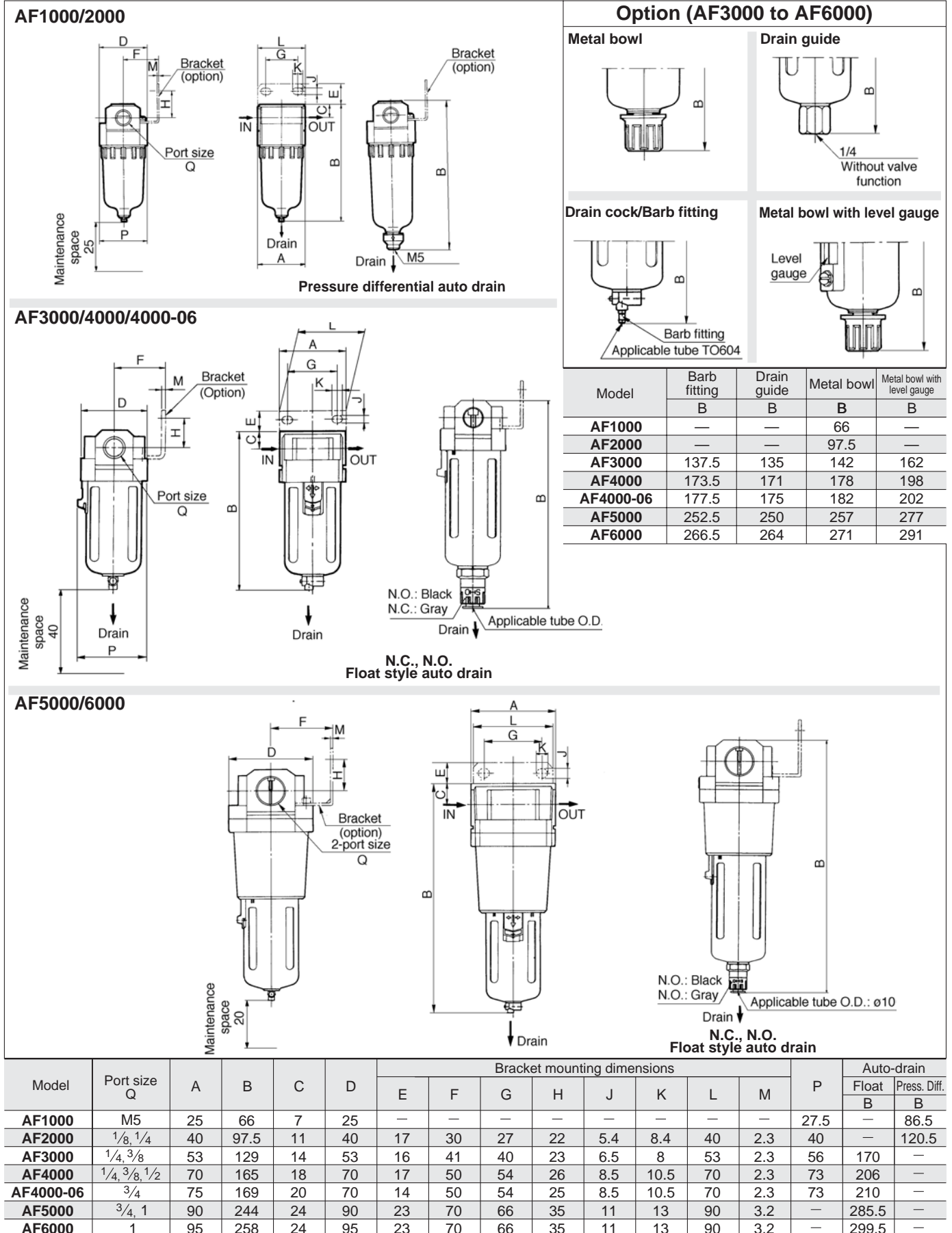
| No. | Description                  | Material         | Part No.         |               |              |              |              |              |              |
|-----|------------------------------|------------------|------------------|---------------|--------------|--------------|--------------|--------------|--------------|
|     |                              |                  | AF1000           | AF2000        | AF3000       | AF4000       | AF4000-06    | AF5000       | AF6000       |
| ②   | Filter element               | Non-woven fabric | 111344           | 1129116       | 111585       | 1116103      | 1116103      | 111724       | 111825       |
| ③   | Baffle                       | indicated in ( ) | 111312 (POM)     | 11295 (PBT)   | 111522 (PBT) | 111622 (PBT) | 111622 (PBT) | 111727 (ABS) | 111824 (ABS) |
| ④   | Bowl O ring                  | NBR              | 111325           | 11297         | 111512       | 111636       | 111636       | 111636       | 111636       |
| ⑤   | Bowl assembly <sup>(1)</sup> | Polycarbonate    | C100F            | C200F         | C300F        | C400F        | C400F        | C400F        | C400F        |
| ⑥   | Deflector                    | indicated in ( ) | 11133A (POM/ABS) | 1129111 (PBT) | 11158 (PBT)  | 11167 (PBT)  | 11167 (PBT)  | 111726 (ABS) | 111823 (ABS) |
| ⑦   | Housing O ring               | NBR              | —                | —             | —            | —            | —            | 111710       | 11189        |
| ⑧   | Packing                      | NBR              | —                | —             | —            | —            | —            | 111711       | 111810       |

Note 1) A bowl guard (material: SPCE) is included in the bowl assembly for AF3000-AF6000.

- AC
- AV
- AU
- AF**
- AR
- IR
- VEX
- SRP
- AW
- AMR
- AWM
- AWD
- ITV
- VBA
- G
- AL

# AF1000 to 6000

## Dimensions



## X-ON Electronics

Largest Supplier of Electrical and Electronic Components

*Click to view similar products for [smc manufacturer](#):*

Other Similar products are found below :

[G46-10-02-LN](#) [AC20A-F01-A](#) [AC20A-F02C-A](#) [AFM20-F02C-A](#) [AKM2000-F02-A](#) [AL40-F06-A](#) [AN20-02](#) [AN800-14](#) [ANA1-02](#) [ANA1-04](#)  
[AR20-F02H-A](#) [AR30-F03H-A](#) [EAV4000-F04-5YO-Q](#) [AW20-F01H-A](#) [AW20-F02H-A](#) [AW30-F03H-A](#) [KQ2E23-00NJ](#) [KQ2L02-M3G](#)  
[KQ2Z06-02AS](#) [KQ2ZT10-02AS](#) [AFD20-F02C-A](#) [SY5220-5DO-01F-Q](#) [SY7220-5DO-02F-Q](#) [SY9320-5YO-C10F-Q](#) [T0425BU-20](#) [T0425Y-](#)  
[20](#) [T1075W-100](#) [T1075W-20](#) [T1075Y-20](#) [T1209R-20](#) [AN110-01](#) [AN30-03](#) [AN500-06](#) [AR20-F01H-A](#) [TIA01W-20](#) [TU0212BU-20](#)  
[TU0212R-20](#) [TU0604B-100](#) [TU0604C-100](#) [TU0604G-20](#) [TU0604Y-20](#) [TU0604YR-100](#) [TU0604YR-20](#) [TU0805G-20](#) [TU0805YR-20](#)  
[TU1065C-100](#) [TU1610C-20](#) [KQ2D06-02AS](#) [KQ2LU06-02AS](#) [KQ2N06-M5A](#)