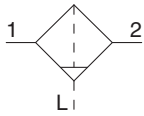


Air Filter

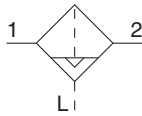
AF20-A to AF40-A

JIS Symbol

Air Filter



Air Filter with Auto Drain



AF20-A



AF40-A

How to Order

AF **30** - **03** **BD** - **03** - **A**

① ② ③ ④ ⑤

- Option/Semi-standard: Select one each for a to f.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AF30-03BD-CR-A

| | Symbol | Description | ① | | | | |
|----------------------|---------------|-------------------------|--|---|-----------------------|-----------------------|----------------------|
| | | | Body size | | | | |
| | | | 20 | 30 | 40 | | |
| ② | Thread type | Nil | Rc | ● | ● | ● | |
| | | N ^{Note 1)} | NPT | ● | ● | ● | |
| | | F ^{Note 2)} | G | ● | ● | ● | |
| + | | | | | | | |
| ③ | Port size | 01 | 1/8 | ● | — | — | |
| | | 02 | 1/4 | ● | ● | ● | |
| | | 03 | 3/8 | — | ● | ● | |
| | | 04 | 1/2 | — | — | ● | |
| | | 06 | 3/4 | — | — | ● | |
| + | | | | | | | |
| ④ | a | Mounting | Nil | Without mounting option | ● | ● | ● |
| | | | B ^{Note 3)} | With bracket | ● | ● | ● |
| | + | | | | | | |
| | b | Float type auto drain | Nil | Without auto drain | ● | ● | ● |
| C ^{Note 4)} | | | N.C. (Normal close) Drain port is closed when pressure is not applied. | ● | ● | ● | |
| D ^{Note 5)} | | | N.O. (Normal open) Drain port is open when pressure is not applied. | — | ● | ● | |
| + | | | | | | | |
| ⑤ | c | Bowl ^{Note 6)} | Nil | Polycarbonate bowl | ● | ● | ● |
| | | | C | With bowl guard | ● | — ^{Note 7)} | — ^{Note 7)} |
| | + | | | | | | |
| | d | Drain port | Nil | With drain cock | ● | ● | ● |
| | | | J ^{Note 8)} | Drain guide1/8 | ● | — | — |
| | | | W | Drain cock with barb fitting (for ø6 x ø4 nylon tube) | — | ● | ● |
| | + | | | | | | |
| | e | Flow direction | Nil | Flow direction: Left to right | ● | ● | ● |
| | | | R | Flow direction: Right to left | ● | ● | ● |
| | + | | | | | | |
| f | Pressure unit | Nil | Name plate and caution plate for bowl in imperial units: MPa | ● | ● | ● | |
| | | Z ^{Note 9)} | Name plate and caution plate for bowl in imperial units: psi, °F | ○ ^{Note 10)} | ○ ^{Note 10)} | ○ ^{Note 10)} | |

Note 1) Drain guide is NPT1/8 (applicable to the AF20-A) and NPT1/4 (applicable to the AF30-A to AF40-A).

The auto drain port comes with ø3/8" One-touch fitting (applicable to the AF30-A to AF40-A).

Note 2) Drain guide is G1/8 (applicable to the AF20-A) and G1/4 (applicable to the AF30-A to AF40-A).

Note 3) A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws.

Note 4) When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.

Note 5) If the compressor is small (0.75 kW, discharge flow is less than 100 L/min[ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.

Note 6) Refer to Chemical data on page 32 for chemical resistance of the bowl.

Note 7) Standard material (polycarbonate)

Note 8) Without a valve function.

Note 9) For thread type: NPT. This product is for overseas use only according to the new Measurement Law.

(The SI unit type is provided for use in Japan.)

Note 10) ○: For thread type: NPT only

Air Filter *Series AF20-A to AF40-A*

Standard Specifications

| Model | AF20-A | AF30-A | AF40-A | AF40-06-A |
|-----------------------------------|-------------------------------|----------|--------------------------|-----------|
| Port size | 1/8, 1/4 | 1/4, 3/8 | 1/4, 3/8, 1/2 | 3/4 |
| Fluid | Air | | | |
| Ambient and fluid temperature | -5 to 60°C (with no freezing) | | | |
| Proof pressure | 1.5 MPa | | | |
| Maximum operating pressure | 1.0 MPa | | | |
| Nominal filtration rating | 5 μm | | | |
| Drain capacity (cm ³) | 8 | 25 | 45 | |
| Bowl material | Polycarbonate | | | |
| Bowl guard | Semi-standard (Steel) | | Standard (Polycarbonate) | |
| Weight (kg) | 0.08 | 0.18 | 0.36 | 0.41 |

Options/Part No.

| Optional specifications | Model | | | |
|--|-------------|-------------|-------------|-------------|
| | AF20-A | AF30-A | AF40-A | AF40-06-A |
| Bracket assembly ^{Note 1)} | AF22P-050AS | AF32P-050AS | AF42P-050AS | AF42P-070AS |
| Float type auto drain ^{Note 2) Note 3)} | N.C. | AD27-A | AD37-A | AD47-A |
| | N.O. | — | AD38-A | AD48-A |

Semi-standard/Bowl Assembly Part No.

| Semi-standard specifications | | | | | Model | | | | |
|------------------------------|--|------|-----------------------------|-------------------|-----------------|-----------|----------|----------|-----------|
| Bowl material | Note 2) Note 3) Float type auto drain | | Note 3) With drain guide | With barb fitting | With bowl guard | AF20-A | AF30-A | AF40-A | AF40-06-A |
| | N.C. | N.O. | | | | | | | |
| Polycarbonate bowl | — | — | — | — | ● | C2SF-C-A | — | — | — |
| | ● | — | — | — | ● | AD27-C-A | — | — | — |
| | — | — | ● | — | — | C2SF-J-A | C3SF-J-A | C4SF-J-A | — |
| | — | — | — | ● | — | — | C3SF-W-A | C4SF-W-A | — |
| | — | — | ● | — | ● | C2SF-CJ-A | — | — | — |

Note 1) Assembly of a bracket and 2 mounting screws.

Note 2) Minimum operating pressure: N.O. type—0.1 MPa; N.C. type—0.1 MPa (AD27-A) and 0.15 MPa (AD37-A/47-A).

Please consult with SMC separately for psi and °F unit display specifications.

Note 3) Please consult with SMC for details on drain piping to fit NPT or G port sizes.

Note) Bowl assembly for the AF20-A to AF40-A models comes with a bowl O-ring.

AC

AF+AR+AL

AW+AL

AF+AR

AF+AFM+AR

AW+AFM

Attachment

AF

AFM / AFD

AR

AL

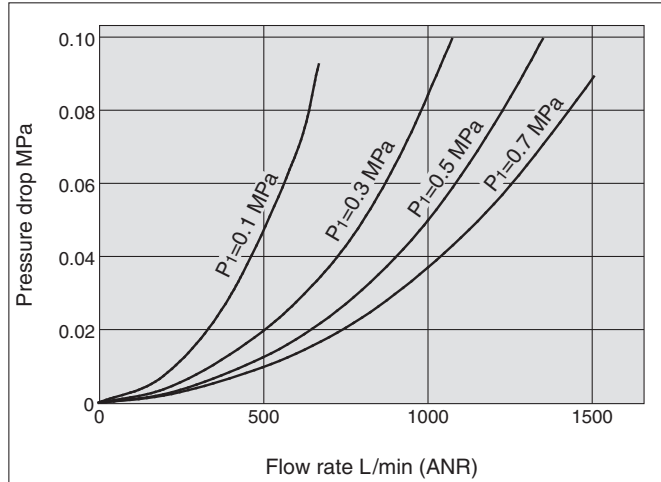
AW

Series AF20-A to AF40-A

Flow Characteristics (Representative values)

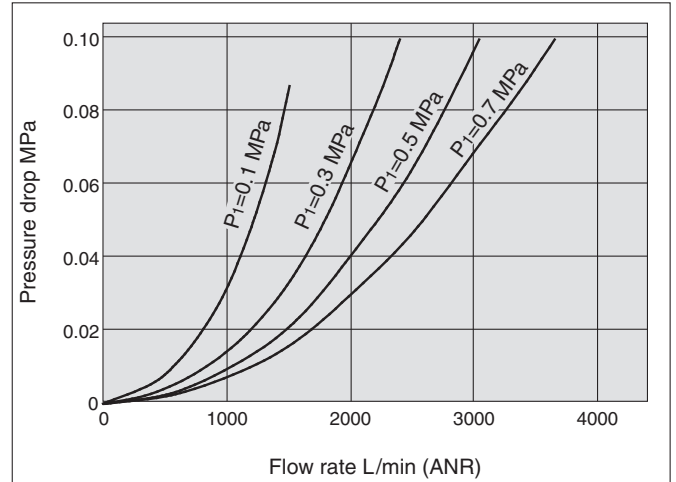
AF20-A

Rc1/4



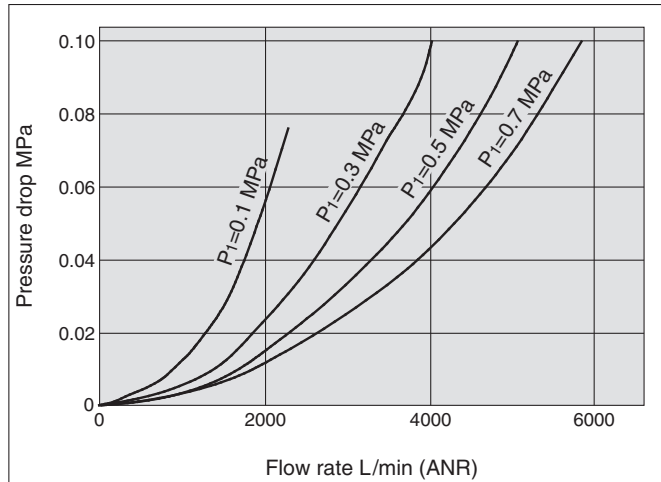
AF30-A

Rc3/8



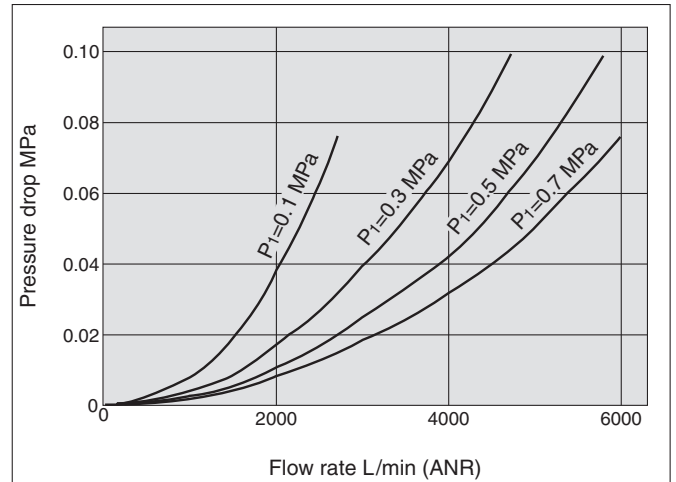
AF40-A

Rc1/2



AF40-06-A

Rc3/4



⚠ Specific Product Precautions

Be sure to read before handling. Refer to back cover for Safety Instructions, "Handling Precautions for SMC Products" (M-E03-3) and the Operation Manual for F.R.L. Precautions.
Please download it via our website, <http://www.smcworld.com>

Design / Selection

⚠ Warning

- The standard bowl for the air filter, filter regulator, and lubricator, as well as the sight dome for the lubricator and bowl guard are made of polycarbonate. Do not use in an environment where they are exposed to or come in contact with organic solvents, chemicals, cutting oil, synthetic oil, alkali, and thread lock solutions.

Effects of atmosphere of organic solvents and chemicals, and where these elements are likely to adhere to the equipment.
Chemical data for substances causing degradation (Reference)

| Type | Chemical name | Application examples | Material |
|-------------------|---|---|---------------|
| | | | Polycarbonate |
| Acid | Hydrochloric acid Sulfuric acid, Phosphoric acid Chromic acid | Acid washing liquid for metals | △ |
| Alkaline | Sodium hydroxide (Caustic soda) Potash Calcium hydroxide (Slack lime) Ammonia water Carbonate of soda | Degreasing of metals Industrial salts Water-soluble cutting oil | × |
| Inorganic salts | Sodium sulfide Sulfate of potash Sulfate of soda | — | × |
| Chlorine solvents | Carbon tetrachloride Chloroform Ethylene chloride Methylene chloride | Cleansing liquid for metals Printing ink Dilution | × |
| Aromatic series | Benzene Toluene Paint thinner | Coatings Dry cleaning | × |
| Ketone | Acetone Methyl ethyl ketone Cyclohexane | Photographic film Dry cleaning Textile industries | × |
| Alcohol | Ethyl alcohol IPA Methyl alcohol | Antifreeze Adhesives | △ |
| Oil | Gasoline Kerosene | — | × |
| Ester | Phthalic acid dimethyl Phthalic acid dimethyl Acetic acid | Synthetic oil Anti-rust additives | × |
| Ether | Methyl ether Ethyl ether | Brake oil additives | × |
| Amino | Methyl amino | Cutting oil Brake oil additives Rubber accelerator | × |
| Other | Thread-lock fluid Seawater Leak tester | — | × |

△ : Some effects may occur × : Effects will occur

Maintenance

⚠ Warning

- Replace the element every 2 years or when the pressure drop becomes 0.1 MPa, whichever comes first, to prevent damage to the element.

Mounting and Adjustment

⚠ Caution

- When the bowl is installed on the air filter, install them so that the lock button lines up to the groove of the front (or the back) of the body to avoid drop or damage of the bowl.



AC

AF+AR+AL

AW+AL

AF+AR

AF+AFM+AR

AW+AFM

Attachment

AF

AFM / AFD

AR

AL

AW