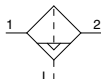
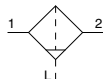


# Air Filter

# AF10-A to AF60-A

Symbol  
Air Filter

Air Filter with Auto Drain



AF10-A



AF20-A



AF40-A

## How to Order

AF 30 -   03 BD -   - A -  

① ② ③ ④ ⑤ Made to Order

(Refer to pages 694 to 697 for details.)

- 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-R-A

		Symbol	Description	① Body size					
				10	20	30	40	50	60
②	Pipe thread type	Nil	Metric thread (M5)	●	—	—	—	—	—
		N <small>Note 1)</small>	Rc	—	●	—	—	—	—
		F <small>Note 2)</small>	NPT	—	●	●	●	●	●
			G	—	●	●	●	●	●
+									
③	Port size	M5	M5 x 0.8	●	—	—	—	—	—
		01	1/8	—	●	—	—	—	—
		02	1/4	—	●	●	—	—	—
		03	3/8	—	—	●	●	—	—
		04	1/2	—	—	—	●	●	—
		06	3/4	—	—	—	—	●	●
+									
④	a Mounting	Nil	Without mounting option	●	●	●	●	●	●
		B <small>Note 3)</small>	With bracket	—	—	●	●	●	●
+									
④	b Float type auto drain	Nil	Without auto drain	●	●	●	●	●	●
		C <small>Note 4)</small>	N.C. (Normally closed) Drain port is closed when pressure is not applied.	—	—	●	●	●	●
		D <small>Note 5)</small>	N.O. (Normally open) Drain port is open when pressure is not applied.	—	—	●	●	●	●
+									
⑤	c Bowl <small>Note 6)</small>	Nil	Polycarbonate bowl	●	●	●	●	●	●
		2	Metal bowl	●	●	—	—	●	●
		6	Nylon bowl	—	—	●	●	●	●
		8	Metal bowl with level gauge	—	—	—	●	●	—
		C	With bowl guard	—	—	—	—	●	●
		6C	With bowl guard (Nylon bowl)	—	—	—	—	●	●
+									
⑤	d Drain port <small>Note 9)</small>	Nil	With drain cock	●	●	—	—	●	●
		J <small>Note 10)</small>	Drain guide 1/8	—	—	—	—	—	—
		W <small>Note 11)</small>	Drain guide 1/4	—	—	●	●	●	●
+									
⑤	e Flow direction	Nil	Flow direction: Left to right	●	●	●	●	●	●
		R	Flow direction: Right to left	●	●	●	●	●	●
+									
⑤	f Pressure unit	Nil	Name plate and caution plate for bowl in imperial units: MPa	●	●	●	●	●	●
		Z <small>Note 12)</small>	Name plate and caution plate for bowl in imperial units: psi, °F	○ <small>Note 13)</small>	○ <small>Note 13)</small>	○ <small>Note 13)</small>	○ <small>Note 13)</small>	○ <small>Note 13)</small>	○ <small>Note 13)</small>

Note 1) Drain guide is NPT1/8 (applicable to the AF20-A) and NPT1/4 (applicable to the AF30-A to AF60-A).

The auto drain port comes with ø3/8" One-touch fitting (applicable to the AF30-A to AF60-A).

Note 2) Drain guide is G1/8 (applicable to the AF20-A) and G1/4 (applicable to the AF30-A to AF60-A).

The auto drain port comes with ø10 One-touch fitting (applicable to the AF30-A to AF60-A).

Note 3) Option B is not assembled and supplied loose at the time of shipment. Assembly of a bracket and 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 689 for chemical resistance of the bowl.

Note 7) A bowl guard is provided as standard equipment (polycarbonate).

Note 8) A bowl guard is provided as standard equipment (nylon).

Note 9) The combination of float type auto drain: C and D is not available.

Note 10) Without a valve function

Note 11) The combination of metal bowl: 2 and 8 is not available.

Note 12) For pipe thread type: M5, 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 13) ○: For pipe thread type: M5, NPT only

## Standard Specifications

Model	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
<b>Port size</b>	M5 x 0.8	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
<b>Fluid</b>	Air						
<b>Ambient and fluid temperature</b>	-5 to 60 °C (with no freezing)						
<b>Proof pressure</b>	1.5 MPa						
<b>Maximum operating pressure</b>	1.0 MPa						
<b>Nominal filtration rating</b>	5 μm						
<b>Drain capacity (cm<sup>3</sup>)</b>	2.5	8	25	45			
<b>Bowl material</b>	Polycarbonate						
<b>Bowl guard</b>	—	Semi-standard (Steel)	Standard (Polycarbonate)				
<b>Weight (kg)</b>	0.06	0.08	0.18	0.36	0.41	0.87	1.00

## Options/Part No.

Optional specifications	Model						
	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
<b>Bracket assembly</b> <small>Note)</small>	—	AF22P-050AS	AF32P-050AS	AF42P-050AS	AF42P-070AS	AF52P-050AS	

Note) Assembly of a bracket and 2 mounting screws

## Bowl Assembly/Part No.

Bowl material	Drain discharge mechanism	Drain port	Other	Model							
				AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A	
Polycarbonate bowl	Manual discharge	With drain cock	—	C1SF-A	C2SF-A	—	—				
		With bowl guard	—	C2SF-C-A	C3SF-A	C4SF-A					
		Drain cock with barb fitting	With bowl guard	—	—	C3SF-W-A	C4SF-W-A				
	Automatic discharge <small>Note)</small> (Auto drain)	With drain guide (without valve function)	With bowl guard	—	—	C2SF□-J-A	—	—			
		Normally closed (N.C.)	With bowl guard	—	AD17-A	AD27-A	—	—			
		Normally open (N.O.)	With bowl guard	—	—	AD37□-A	—	AD47□-A			
Nylon bowl	Manual discharge	With drain cock	—	C1SF-6-A	C2SF-6-A	—	—				
		With bowl guard	—	C2SF-6C-A	C3SF-6-A	C4SF-6-A					
		Drain cock with barb fitting	With bowl guard	—	—	C3SF-6W-A	C4SF-6W-A				
	Automatic discharge <small>Note)</small> (Auto drain)	With drain guide (without valve function)	With bowl guard	—	—	C2SF□-6J-A	—	—			
		Normally closed (N.C.)	With bowl guard	—	AD17-6-A	AD27-6-A	—	—			
		Normally open (N.O.)	With bowl guard	—	—	AD37□-6-A	—	AD47□-6-A			
Metal bowl	Manual discharge	With drain cock	—	C1SF-2-A	C2SF-2-A	C3SF-2-A	C4SF-2-A				
		With level gauge	—	—	—	C3LF-8-A	C4LF-8-A				
		With drain guide (without valve function)	With level gauge	—	—	C2SF□-2J-A	C3SF□-2J-A	C4SF□-2J-A			
	Automatic discharge <small>Note)</small> (Auto drain)	Normally closed (N.C.)	With level gauge	—	AD17-2-A	AD27-2-A	AD37□-2-A	AD47□-2-A			
		Normally open (N.O.)	With level gauge	—	—	AD37□-8-A	—	AD47□-8-A			
		With level gauge	—	—	AD38□-2-A	—	AD48□-2-A				
With level gauge	—	—	AD38□-8-A	—	AD48□-8-A						

Note) Minimum operating pressure: N.O. type-0.1 MPa (AD38-A, AD48-A); N.C. type-0.1 MPa (AD17-A, AD27-A) and 0.15 MPa (AD37-A, AD47-A).

Bowl assembly for the AF20-A to AF60-A models comes with a bowl seal.

□ in bowl assembly part numbers indicates a pipe thread type (applicable tubing for auto drain).

No indication is necessary for Rc thread; however, indicate N for NPT thread, and F for G thread. (For auto drain, Nil: ø10, N: ø3/8")

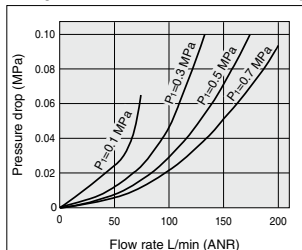
Please consult with SMC separately for psi and °F unit display specifications.

# AF10-A to AF60-A Series

## Flow Rate Characteristics (Representative values)

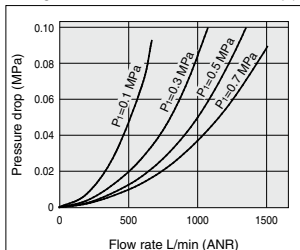
**AF10-A**

M5



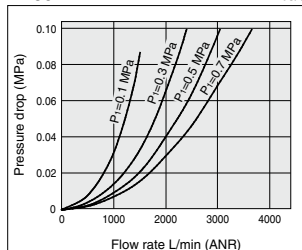
**AF20-A**

Rc1/4



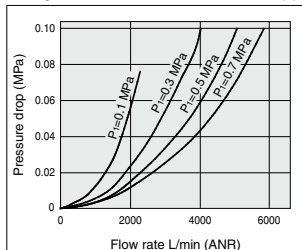
**AF30-A**

Rc3/8



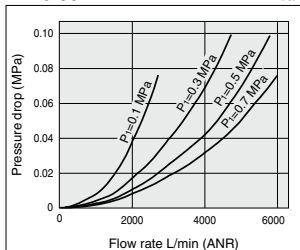
**AF40-A**

Rc1/2



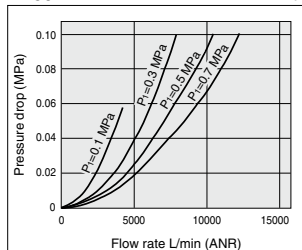
**AF40-06-A**

Rc3/4



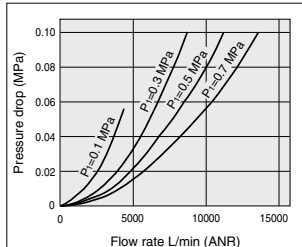
**AF50-A**

Rc1



**AF60-A**

Rc1



## ⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to page 9 for safety instructions and pages 13 to 17 for F.R.L. precautions.

### Design/Selection

#### ⚠ Warning

- The standard bowl for the air filter, filter regulator, and lubricator, as well as the sight dome for the lubricator 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	Nylon
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 diethyl 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	×	×
Others	Thread-lock fluid Seawater Leak tester	—	×	△

○: Essentially safe    △: Some effects may occur.    ×: Effects will occur.

When the above factors are present, or there is some doubt, use a metal bowl for safety.

### 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/Adjustment

#### ⚠ Caution

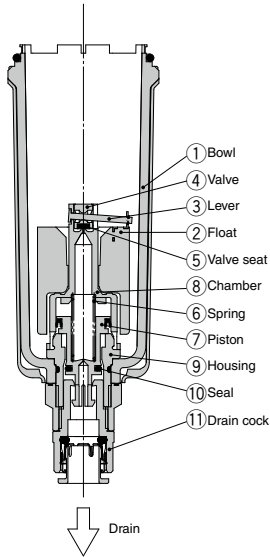
- When the bowl is installed on the air filter (AF30-A to AF60-A), install them so that the lock button lines up to the groove of the front (or the back) of the body to avoid drop or damage of the bowl.



# AF10-A to AF60-A Series

## Working Principle: Float Type Auto Drain

### N.O. type: AD38-A, AD48-A



**• When pressure inside the bowl is released:**

When pressure is released from the bowl ①, the piston ⑦ is lowered by the spring ⑥.

The sealing action of the seal ⑩ is interrupted, and the outside air flows inside the bowl ① through the housing hole ⑨ and the drain cock ⑪.

Therefore, if there is an accumulation of condensate in the bowl ①, it will drain out through the drain cock.

**• When pressure is applied inside the bowl:**

When pressure is 0.1 MPa or more, the force of the piston ⑦ surpasses the force of the spring ⑥, and the piston goes up.

This pushes the seal ⑩ up so that it creates a seal, and the inside of the bowl ①, is shut off from the outside air.

If there is no accumulation of condensate in the bowl ① at this time, the float ② will be pulled down by its own weight, causing the valve ④, which is connected to the lever ③, to seal the valve seat ⑤.

**• When there is an accumulation of condensate in the bowl:**

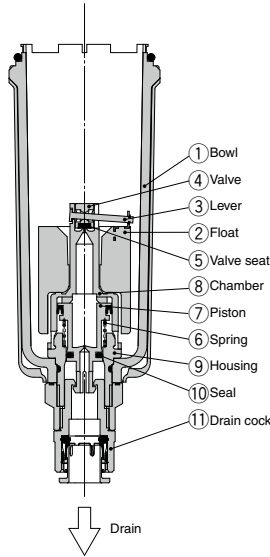
The float ② rises due to its own buoyancy and the seal at the valve seat ⑤ is interrupted.

This allows the pressure inside the bowl ① to enter the chamber ⑧. The result is that the combined pressure inside the chamber ⑧ and the force of the spring ⑥ lowers the piston ⑦.

This causes the sealing action of the seal ⑩ to be interrupted, and the accumulated condensate in the bowl ① drains out through the drain cock ⑪.

Turning the drain cock ⑪ manually counterclockwise lowers the piston ⑦, and causes the seal created by the seal ⑩ to be interrupted, thus allowing the condensate to drain out.

### N.C. type: AD37-A, AD47-A



**• When pressure inside the bowl is released:**

Even when pressure inside the bowl ① is released, spring ⑥ keeps the piston ⑦ in its upward position.

This keeps the seal created by the seal ⑩ in place; thus, the inside of the bowl ① is shut off from the outside air.

Therefore, even if there is an accumulation of condensate in the bowl ①, it will not drain out.

**• When pressure is applied inside the bowl:**

Even when pressure is applied inside the bowl ①, the combined force of the spring ⑥ and the pressure inside the bowl ① keeps the piston ⑦ in its upward position.

This maintains the seal created by the seal ⑩ in place; thus, the inside of the bowl ① is shut off from the outside air.

If there is no accumulation of condensate in the bowl ① at this time, the float ② will be pulled down by its own weight, causing the valve ④, which is connected to the lever ③, to seal the valve seat ⑤.

**• When there is an accumulation of condensate in the bowl:**

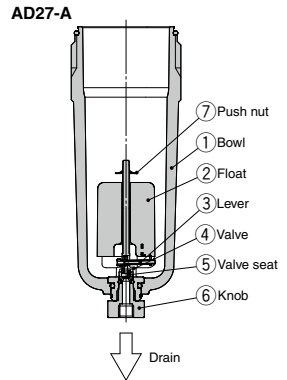
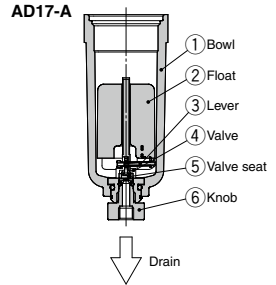
The float ② rises due to its own buoyancy and the seal at the valve seat ⑤ is interrupted. This allows the pressure inside the bowl ① to enter the chamber ⑧.

The result is that the pressure inside the chamber ⑧ surpasses the force of the spring ⑥ and pushes the piston ⑦ downward.

This causes the sealing action of the seal ⑩ to be interrupted and the accumulated condensate in the bowl ① drains out through the drain cock ⑪.

Turning the drain cock ⑪ manually counterclockwise lowers the piston ⑦, and causes the seal created by the seal ⑩ to be interrupted, thus allowing the condensate to drain out.

### Compact auto drain N.C. type: AD17-A, AD27-A



**• When pressure inside the bowl is released:**

Even when pressure inside the bowl ① is released, the weight of the float ② causes the valve ④, which is connected to the lever ③, to seal the valve seat ⑤. As a result, the inside of the bowl ① is shut off from the outside air.

Therefore, even if there is an accumulation of condensate in the bowl ①, it will not drain out.

**• When pressure is applied inside the bowl:**

Even when pressure is applied inside the bowl ①, the weight of the float ② and the differential pressure that is applied to the valve ④ cause the valve ④ to seal the valve seat ⑤, and the outside air is shut off from the inside of the bowl ①.

**• When there is an accumulation of condensate in the bowl:**

The float ② rises due to its own buoyancy and the seal at the valve seat ⑤ is interrupted.

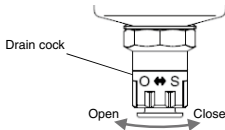
The condensate inside the bowl ① drains out through the knob ⑥.

Turning the knob ⑥ manually counterclockwise lowers it and causes the sealing action of the valve seat ⑤ to be interrupted, which allows the condensate to drain out.

## Operating State and Proper Use of Float Type Auto Drain

Auto drain	When pressure is not applied (After exhausting residual pressure)	When pressure is applied		Minimum operating pressure
		Before drain accumulates	When drain accumulates	
N.O. Normally open	Drain discharged (Open) 	Drain not discharged (Close) 	Drain discharged (Open) 	<b>0.1 MPa or more</b> AF30-A to AF60-A
N.C. Normally closed	Drain not discharged (Close) 	Drain not discharged (Close) 	Drain discharged (Open) 	<b>0.1 MPa or more</b> AF10-A to AF20-A <b>0.15 MPa or more</b> AF30-A to AF60-A

◆ For both N.O. and N.C., the drain can be discharged manually by turning the drain cock to the "O" position.



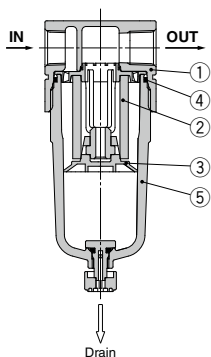
Proper Use			Recommended auto drain
Compressor	When pressure is not applied (After exhausting residual pressure)	Cold climates	
 <b>0.75 kW or more</b>	<b>Drain not accumulated</b> Do not want to accumulate drain generated at the inlet side when pressure is not applied.	<b>Want to prevent troubles caused by freezing.</b>	N.O.*1 Normally open
 <b>Less than 0.75 kW</b>	<b>Drain accumulated</b>	—	N.C. Normally closed

\*1 For N.O. (Normally open) type, the drain discharge passage is open when pressure is not applied. For this reason, the drain exhaust port is not closed completely in a compressor with a small supply amount (less than 0.75 kW) and the air will ceaselessly blow out.

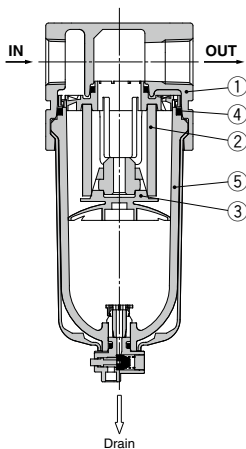
# AF10-A to AF60-A Series

## Construction

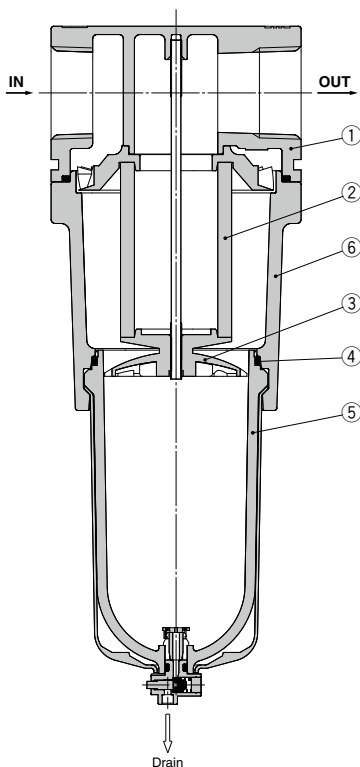
AF10-A/AF20-A



AF30-A to AF40-06-A



AF50-A/AF60-A



### Component Parts

No.	Description	Material	Model	Color
1	Body	Zinc die-cast	AF10-A	White
		Aluminum die-cast	AF20-A to AF60-A	
6	Housing	Aluminum die-cast	AF50-A/AF60-A	White

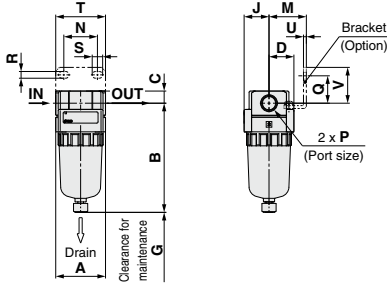
### Replacement Parts

No.	Description	Material	Part no.						
			AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
2	Filter element	Non-woven fabric	AF10P-060S	AF20P-060S	AF30P-060S	AF40P-060S	AF40P-060S	AF50P-060S	AF60P-060S
3	Baffle	PBT	AF10P-040S <sup>Note 2)</sup>	AF22FP-040S	AF32P-040S	AF42P-040S	AF42P-040S	AF50P-040S	AF60P-040S
4	Bowl seal	NBR	C1SFP-260S	C2SFP-260S	C32FP-260S	C42FP-260S			
5	Bowl assembly <sup>Note 1)</sup>	Polycarbonate	C1SF-A	C2SF-A	C3SF-A	C4SF-A			

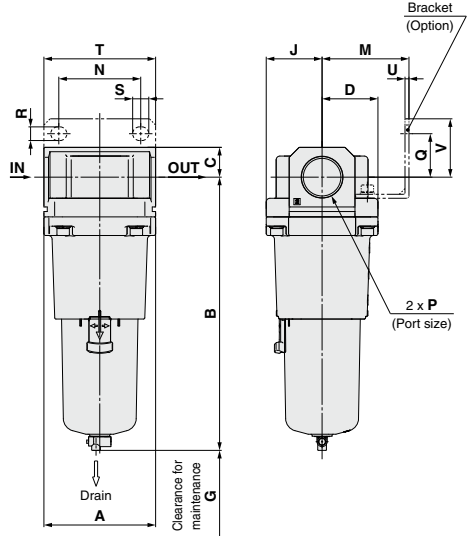
Note 1) Bowl seal is included for the AF20-A to AF60-A. Please contact SMC regarding the supply of bowl assembly with psi and "F" unit display specifications.  
 Note 2) The baffle material for the AF10-A (AF10P-040S) only is polyacetal.

## Dimensions

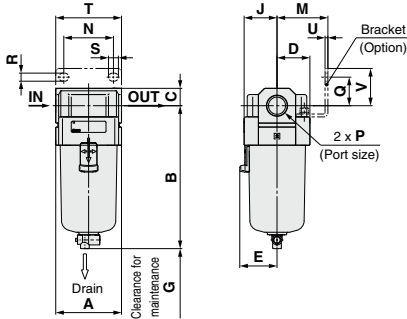
### AF10-A/AF20-A



### AF50-A/AF60-A



### AF30-A to AF40-06-A



Applicable model	AF10-A/AF20-A		AF20-A		AF30-A to AF60-A	
	Optional/Semi-standard specifications	With auto drain (N.C.)	Metal bowl	With drain guide	Metal bowl with drain guide	With auto drain (N.O./N.C.)
Dimensions						

Applicable model	AF30-A to AF60-A						
	Optional/Semi-standard specifications	Metal bowl	Metal bowl with drain guide	Metal bowl with level gauge	Metal bowl with level gauge, with drain guide	With drain guide	Drain cock with barb fitting
Dimensions							

Model	Standard specifications																Optional specifications							Semi-standard specifications						
																	Bracket mount													
	P	A	B	C	D	E	G	J	M	N	Q	R	S	T	U	V	B	B	B	B	B	B	B	B	B	B	B	B		
AF10-A	M5 x 0.8	25	59.9	7	12.5	—	25	12.5	—	—	—	—	—	—	—	77.9	—	—	—	59.3	—	—	—	—	—	—				
AF20-A	1/8, 3/8	40	87.6	9.8	20	—	25	20	30	27	22	5.4	8.4	4.0	2.3	28	104.9	—	—	91.4	87.4	93.9	—	—	—	—				
AF30-A	1/4, 3/8	53	115.1	14	26.7	30	35	26.7	41	35	23	6.5	13	5.3	2.3	30	156.8	123.6	121.9	117.6	122.1	137.6	142.1	—	—	—				
AF40-A	1/4, 3/8, 1/2	70	147.1	18	35.5	38.4	40	35.5	50	52	26	8.5	12.5	7.0	2.3	35	186.9	155.6	153.9	149.6	154.1	169.6	174.1	—	—	—				
AF40-06-A	3/4	75	149.1	20	35.5	38.4	40	35.5	50	52	25	8.5	12.5	7.0	2.3	34	188.9	157.6	155.9	151.6	156.1	171.6	176.1	—	—	—				
AF50-A	3/4, 1	90	220.1	24	45	—	30	45	70	66	35	11	13	9.0	3.2	47	259.9	228.6	226.9	222.6	227.1	242.6	247.1	—	—	—				
AF60-A	1	95	234.1	24	47.5	—	30	47.5	70	66	35	11	13	9.0	3.2	47	273.9	242.6	240.9	236.6	241.1	256.6	261.1	—	—	—				



# Air Filter/AF20-A to AF40-06-A

## Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.



### ① Long Bowl

Drain capacity is greater than that of standard models.

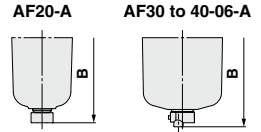
#### Applicable Model/Drain Capacity

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
Drain capacity (cm <sup>3</sup> )	19	43	88	
B dimension (mm) <sup>Note)</sup>	108.6	137.1	167.2	169.2

Note) For polycarbonate bowls. Please contact SMC for other bowl materials.

AF 30 - 03 03 - 03 - A - X64

1  
 2  
 3  
 4  
 5  
 ↓ Long bowl



- Semi-standard: Select one each for a to d.
  - Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
- Example) AF30-03B-2R-A-X64

		Symbol	Description	① Body size			
				20	30	40	
②	Pipe thread type	Nil	Rc	●	●	●	
		N <sup>Note 1)</sup>	NPT	●	●	●	
		F <sup>Note 2)</sup>	G	●	●	●	
+							
③	Port size	01	1/8	●	—	—	
		02	1/4	●	●	●	
		03	3/8	—	●	●	
		04	1/2	—	—	●	
		06	3/4	—	—	●	
+							
④	Option (Mounting)	Nil	Without mounting option	●	●	●	
		B <sup>Note 3)</sup>	With bracket	●	●	●	
+							
⑤	a	Bowl <sup>Note 4)</sup>	Nil	Polycarbonate bowl	●	●	●
			2	Metal bowl	●	●	●
			6	Nylon bowl	●	—	—
			C	With bowl guard	●	— <sup>Note 5)</sup>	— <sup>Note 5)</sup>
			6C	With bowl guard (Nylon bowl)	●	— <sup>Note 6)</sup>	— <sup>Note 6)</sup>
+							
b	Drain port	Nil	With drain cock	●	●	●	
		J <sup>Note 7)</sup>	Drain guide 1/8	●	—	—	
		W <sup>Note 8)</sup>	Drain cock with barb fitting (for ø6 x ø4 nylon tube)	—	●	●	
+							
c	Flow direction	Nil	Flow direction: Left to right	●	●	●	
		R	Flow direction: Right to left	●	●	●	
+							
d	Pressure unit	Nil	Name plate and caution plate for bowl in imperial units: MPa	●	●	●	
		Z <sup>Note 9)</sup>	Name plate and caution plate for bowl in imperial units: psi, °F	○ <sup>Note 10)</sup>	○ <sup>Note 10)</sup>	○ <sup>Note 10)</sup>	

Note 1) Drain guide is NPT1/8 (applicable to the AF20-A) and NPT1/4 (applicable to the AF30-A to AF40-06-A).

Note 2) Drain guide is G1/8 (applicable to the AF20-A) and G1/4 (applicable to the AF30-A to AF40-06-A).

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

Note 4) Refer to Chemical data on page 689 for chemical resistance of the bowl.

Note 5) A bowl guard is provided as standard equipment (polycarbonate).

Note 6) A bowl guard is provided as standard equipment (nylon).

Note 7) Without a valve function

Note 8) The combination of metal bowl: 2 is not available.

Note 9) For pipe 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 pipe thread type: NPT only

# Air Filter/AF20-A to AF40-06-A

# Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.



## ② With Element Service Indicator

Clogging status of elements can be checked visually.

### Applicable Model

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

AF **30** - **03** - **A-X2141**

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-2R-A-X2141

• With element service indicator

A special body type is required to mount the element service indicator. It cannot be mounted on a standard body type.

		Symbol	Description	① Body size		
				20	30	40
②	Pipe thread type	Nil	Rc	●	●	●
		N <sup>Note 1)</sup>	NPT	●	●	●
		F <sup>Note 2)</sup>	G	●	●	●
+						
③	Port size	01	1/8	●	—	—
		02	1/4	●	●	●
		03	3/8	—	●	●
		04	1/2	—	—	●
		06	3/4	—	—	●
+						
④ Option	a Mounting	Nil	Without mounting option	●	●	●
		B <sup>Note 3)</sup>	With bracket	●	●	●
+						
④ Option	b Float type auto drain	Nil	Without auto drain	●	●	●
		C <sup>Note 4)</sup>	N.C. (Normally closed) Drain port is closed when pressure is not applied.	●	●	●
		D <sup>Note 5)</sup>	N.O. (Normally open) Drain port is open when pressure is not applied.	—	●	●
+						
⑤ Semi-standard	c Bowl <sup>Note 6)</sup>	Nil	Polycarbonate bowl	●	●	●
		2	Metal bowl	●	●	●
		6	Nylon bowl	●	●	●
		8	Metal bowl with level gauge	—	●	●
		C	With bowl guard	●	— <sup>Note 7)</sup>	— <sup>Note 7)</sup>
		6C	With bowl guard (Nylon bowl)	●	— <sup>Note 8)</sup>	— <sup>Note 8)</sup>
+						
⑤ Semi-standard	d Drain port <sup>Note 12)</sup>	Nil	With drain cock	●	●	●
		J <sup>Note 9)</sup>	Drain guide 1/8	●	—	—
		W <sup>Note 13)</sup>	Drain guide 1/4	—	●	●
		W <sup>Note 13)</sup>	Drain cock with barb fitting (for ø6 x ø4 nylon tube)	—	●	●
+						
⑤ Semi-standard	e Flow direction	Nil	Flow direction: Left to right	●	●	●
		R	Flow direction: Right to left	●	●	●
+						
⑤ Semi-standard	f Pressure unit	Nil	Name plate and caution plate for bowl in imperial units: MPa	●	●	●
		Z <sup>Note 10)</sup>	Name plate and caution plate for bowl in imperial units: psi, °F	○ <sup>Note 11)</sup>	○ <sup>Note 11)</sup>	○ <sup>Note 11)</sup>

Note 1) Drain guide is NPT1/8 (applicable to the AF20-A) and NPT1/4 (applicable to the AF30-A to AF40-06-A).

The auto drain port comes with ø3/8" One-touch fitting (applicable to the AF30-A to AF40-06-A).

Note 2) Drain guide is G1/8 (applicable to the AF20-A) and G1/4 (applicable to the AF30-A to AF40-06-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 689 for chemical resistance of the bowl.

Note 7) A bowl guard is provided as standard equipment (polycarbonate).

Note 8) A bowl guard is provided as standard equipment (nylon).

Note 9) Without a valve function

Note 10) For pipe 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 11) ○: For pipe thread type: NPT only

Note 12) The combination of float type auto drain: C and D is not available.

Note 13) The combination of metal bowl: 2 and 8 is not available.



# AF20-A to AF60-A Air Filter Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.



## ③ Special Temperature Environment

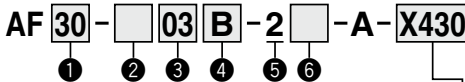
Special materials are used in the manufacturing of seals and resin parts to allow them to withstand various temperature conditions in cold or tropical (hot) climates.

### Specifications

Made-to-order part no.	-X430	-X440
Environment	Low temperature	High temperature
Ambient temperature [°C]	-30 to 60	-5 to 80
Fluid temperature [°C]	-5 to 60 (with no freezing)	
Material	Rubber parts	Special NBR
	Main parts	FKM
	Metal (Aluminum die-cast, etc.)	

### Applicable Model

Model	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
Port size	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1



- Semi-standard: Select one each for a to c.
- Semi-standard symbol: When more than one specification is required, indicate in alphabetic order.  
Example) AF30-03B-2R-A-X430

For high/low temperature

X430	Low temperature
X440	High temperature

	Symbol	Description	① Body size			
			30	40	50	60
② Pipe thread type	Nil	Rc	●	●	●	●
	N*1	NPT	●	●	●	●
	F*2	G	●	●	●	●
③ Port size	+					
	02	1/4	●	●	—	—
	03	3/8	●	●	—	—
	04	1/2	—	—	—	—
	06	3/4	—	●	●	—
10	1	—	—	●	●	
④ Option (Mounting)	Nil	Without mounting option	●	●	●	●
	B*3	With bracket	●	●	●	●
⑤ Bowl*4	+		●	●	●	●
	2	Metal bowl	●	●	●	●
a	Nil	With drain cock	●	●	●	●
	J*5	Drain guide 1/4	●	●	●	●
b	+		●	●	●	●
	Nil	Flow direction: Left to right	●	●	●	●
R	Flow direction: Right to left	●	●	●	●	
c	+		●	●	●	●
	Nil	Name plate and caution plate for bowl in SI units: MPa	○*7	○*7	○*7	○*7
Z*6	Name plate and caution plate for bowl in imperial units: psi, °F	○*7	○*7	○*7	○*7	

- \*1 Drain guide is NPT1/4.
- \*2 Drain guide is G1/4.
- \*3 A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws
- \*4 Only metal bowl 2 is available.
- \*5 Without a valve function
- \*6 For pipe thread type: NPT. This product is for overseas use only according to the new Measurement Act. (The SI unit type is provided for use in Japan.)
- \*7 ○: For pipe thread type: NPT only

## ④ High Pressure

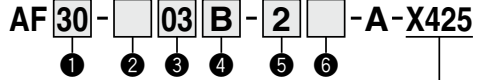
Strong materials are used in the manufacturing of air filters intended for high pressure operation.

### Specifications

Made-to-order part no.	-X425
Proof pressure [MPa]	3.0
Maximum operating pressure [MPa]	2.0
Ambient and fluid temperature [°C]	-5 to 60 (with no freezing)

### Applicable Model

Model	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1



For high pressure

- Semi-standard: Select one each for a to c.
- Semi-standard symbol: When more than one specification is required, indicate in alphabetic order.  
Example) AF30-03B-2R-A-X425

	Symbol	Description	① Body size			
			20	30	40	50
② Pipe thread type	Nil	Rc	●	●	●	●
	N*1	NPT	●	●	●	●
	F*2	G	●	●	●	●
③ Port size	+					
	01	1/8	●	—	—	—
	02	1/4	●	●	—	—
	03	3/8	—	●	—	—
	04	1/2	—	—	●	—
	06	3/4	—	—	—	●
10	1	—	—	—	●	
④ Option (Mounting)	Nil	Without mounting option	●	●	●	●
	B*3	With bracket	●	●	●	●
⑤ Bowl*4	+		●	●	●	●
	2	Metal bowl	●	●	●	●
8	Metal bowl with level gauge	—	—	●	●	
a	Nil	With drain cock	●	●	●	●
	J*5	Drain guide 1/8	●	—	—	—
R	Drain guide 1/4	—	●	●	●	
b	+		●	●	●	●
	Nil	Flow direction: Left to right	●	●	●	●
R	Flow direction: Right to left	●	●	●	●	
c	+		●	●	●	●
	Nil	Name plate and caution plate for bowl in SI units: MPa	○*7	○*7	○*7	○*7
Z*6	Name plate and caution plate for bowl in imperial units: psi, °F	○*7	○*7	○*7	○*7	

- \*1 Drain guide is NPT1/8 (applicable to the AF20-A) and NPT1/4 (applicable to the AF30-A to AF60-A).
- \*2 Drain guide is G1/8 (applicable to the AF20-A) and G1/4 (applicable to the AF30-A to AF60-A).
- \*3 A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws
- \*4 Only metal bowl 2 and 8 are available.
- \*5 Without a valve function
- \*6 For pipe thread type: NPT. This product is for overseas use only according to the new Measurement Act. (The SI unit type is provided for use in Japan.)
- \*7 ○: For pipe thread type: NPT only

# AF20-A to AF60-A Air Filter Made to Order

Please contact SMC for detailed dimensions, specifications and lead times.



## ⑤ Clean Series

For details, refer to the Clean Series/Low Particle Generation section of the **Web Catalog**.



## 10 - Standard model no.

\* Please contact SMC if a product with pressure gauge is desired.

- Clean series

## ⑥ Copper, Fluorine and Silicone-free + Low Particle Generation

For details, refer to the Clean Series/Low Particle Generation section of the **Web Catalog**.

## 21 - Standard model no.

- Copper, fluorine and silicone-free + Low particle generation