




# Modular Type Air Filters Series AF

Air Filter Series AF	Model	Port size	Filtration ( $\mu\text{m}$ )	Options
 <p>Page 478 through to 486</p>	<b>AF10</b>	M5 x 0.8	5	Bracket Float type auto drain
	<b>AF20</b>	1/8, 1/4		
	<b>AF30</b>	1/4, 3/8		
	<b>AF40</b>	1/4, 3/8, 1/2		
	<b>AF40-06</b>	3/4		
	<b>AF50</b>	3/4, 1		
	<b>AF60</b>	1		
 <p>Page 488 through to 494</p>	<b>AFM20</b>	1/8, 1/4	0.3	Bracket Float type auto drain
	<b>AFM30</b>	1/4, 3/8		
	<b>AFM40</b>	1/4, 3/8, 1/2		
	<b>AFM40-06</b>	3/4		
 <p>Page 488 through to 494</p>	<b>AFD20</b>	1/8, 1/4	0.01	Bracket Float type auto drain
	<b>AFD30</b>	1/4, 3/8		
	<b>AFD40</b>	1/4, 3/8, 1/2		
	<b>AFD40-06</b>	3/4		

AC-A

AF-A

AF□-A

AR-A

AL-A

AW-A

AC

AF

AF□

AR

AL

AW□

A□G

E□

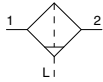
AV

AF

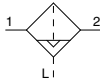
# Air Filter

# AF10 to AF60

Symbol  
Air Filter



Air Filter with Auto Drain



## How to Order

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

① ② ③ ④ ⑤

Made to Order

(Refer to page 484 through to 486 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-2R

		Symbol	Description	① Body size					
				10	20	30	40	50	60
②	Thread type	Nil	Metric thread (M5)	●	—	—	—	—	—
		N <sup>Note 1)</sup>	Rc	—	●	●	●	●	●
		F <sup>Note 2)</sup>	NPT	—	●	●	●	●	●
			G	—	●	●	●	●	●
③	Port size	+							
		M5	M5	●	—	—	—	—	—
		01	1/8	—	●	—	—	—	—
		02	1/4	—	●	●	—	—	—
		03	3/8	—	—	●	●	—	—
		04	1/2	—	—	—	●	—	—
06	3/4	—	—	—	—	●	—		
10	1	—	—	—	—	●	●		
④	a Mounting	Nil	Without mounting option	●	●	●	●	●	●
		B <sup>Note 3)</sup>	With bracket	—	●	●	●	●	●
④	b Float type auto drain	+							
		Nil	Without auto drain	●	●	●	●	●	●
		C	Float type auto drain (N.C.)	●	●	●	●	●	●
D	Float type auto drain (N.O.)	—	—	●	●	●	●		
⑤	c Bowl <sup>Note 4)</sup>	+							
		Nil	Polycarbonate bowl	●	●	●	●	●	●
		2	Metal bowl	●	●	●	●	●	●
		6	Nylon bowl	—	—	●	●	●	●
		8	Metal bowl with level gauge	—	—	●	●	●	●
		C	With bowl guard	—	●	—	—	—	—
6C	Nylon bowl with bowl guard	—	●	—	—	—	—		
⑤	d Drain port <sup>Note 5)</sup>	+							
		Nil	With drain cock	●	●	●	●	●	●
		J <sup>Note 6)</sup>	Drain guide 1/8	—	●	—	—	—	—
W <sup>Note 7)</sup>	Drain guide 1/4	—	—	●	●	●	●		
W <sup>Note 7)</sup>	Drain cock with barb fitting: For ø6 x ø4 nylon tube	—	—	●	●	●	●		
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 <sup>Note 8)</sup>	Name plate and caution plate for bowl in imperial units: psi, °F	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>		

Note 1) Drain guide is NPT1/8 (applicable to the AF20) and NPT1/4 (applicable to the AF30 to AF60). The auto drain port comes with ø3/8" one-touch fitting (applicable to the AF30 to AF60).

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

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 365 when selecting a case material.

Note 5) Float type auto drain: The combination of C and D is not possible.

Note 6) Without a valve function

Note 7) Metal bowl: The combination of 2 and 8 is not possible.

Note 8) For thread type: M5 and 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 9) ○: For thread type: M5 and NPT only

## Standard Specifications

Model	AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
Port size	M5 x 0.8	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
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 <sup>3</sup> )	2.5	8	25	45			
Bowl material	Polycarbonate						
Bowl guard	—	Semi-standard	Standard				
Weight (kg)	0.06	0.10	0.22	0.45	0.49	0.99	1.05

## Options/Part No.

Optional specifications	Model						
	AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
Bracket assembly <sup>Note 1)</sup>	—	AF20P-050AS	AF30P-050AS	AF40P-050AS	AF40P-070AS	AF50P-050AS	AF50P-050AS
Float type auto drain <sup>Note 2) Note 3)</sup>	N.C.	AD17	AD27	AD37	AD47		
	N.O.	—	—	AD38	AD48		

## Semi-standard/Bowl Assembly Part No.

Bowl material	Semi-standard specifications				Model							
	<sup>Note 2) Note 3)</sup> Float type auto drain		<sup>Note 3)</sup> With drain guide	With barb fitting	With bowl guard	AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
	N.C.	N.O.										
Polycarbonate	—	—	—	—	●	—	C2SF-C	—	—	—	—	—
	●	—	—	—	—	—	AD27-C	—	—	—	—	—
	—	—	●	—	—	—	C2SF-J	C3SF-J	—	C4SF-J	—	—
	—	—	—	●	—	—	—	C3SF-W	—	C4SF-W	—	—
	—	—	●	—	●	—	C2SF-CJ	—	—	—	—	—
Nylon	—	—	—	—	—	—	C1SF-6	C2SF-6	C3SF-6	—	C4SF-6	—
	—	—	—	—	●	—	C2SF-6C	—	—	—	—	—
	●	—	—	—	—	—	AD17-6	AD27-6	AD37-6	—	AD47-6	—
	—	●	—	—	—	—	—	AD38-6	—	—	AD48-6	—
	●	—	—	—	●	—	AD27-6C	—	—	—	—	—
	—	—	●	—	—	—	C2SF-6J	C3SF-6J	—	—	C4SF-6J	—
	—	—	—	●	—	—	—	C3SF-6W	—	—	C4SF-6W	—
	—	—	●	—	●	—	C2SF-6CJ	—	—	—	—	—
Metal	—	—	—	—	—	—	C1SF-2	C2SF-2	C3SF-2	—	C4SF-2	—
	●	—	—	—	—	—	AD17-2	AD27-2	AD37-2	—	AD47-2	—
	—	●	—	—	—	—	—	AD38-2	—	—	AD48-2	—
	—	—	●	—	—	—	C2SF-2J	C3SF-2J	—	—	C4SF-2J	—
Metal bowl with level gauge	—	—	—	—	—	—	—	C3LF-8	—	—	C4LF-8	—
	●	—	—	—	—	—	—	AD37-8	—	—	AD47-8	—
	—	●	—	—	—	—	—	AD38-8	—	—	AD48-8	—
	—	—	●	—	—	—	—	C3LF-8J	—	—	C4LF-8J	—

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 (AD17/27) and 0.15 MPa (AD37/47). Please contact SMC for psi and "F unit specifications.

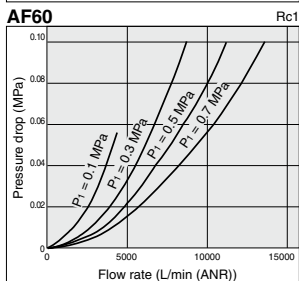
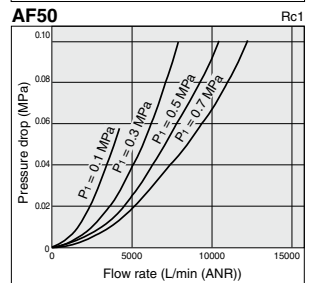
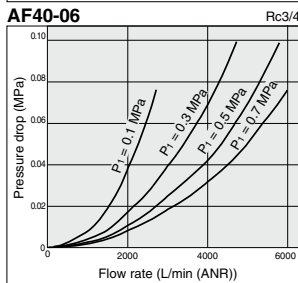
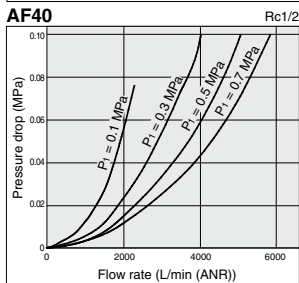
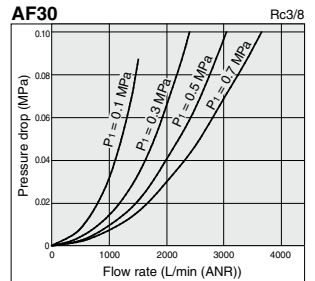
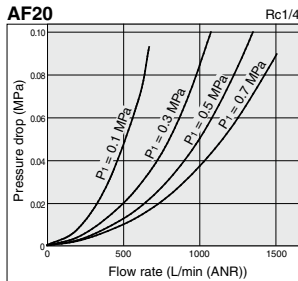
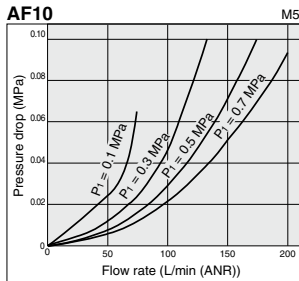
Note 3) Please consult with SMC for details on drain piping to fit NPT or G port sizes.

Note) • Bowl O-ring is included for the AF20 to AF60.

• Bowl assembly for the AF30 to AF60 models comes with a bowl guard (steel band material), (except when the bowl material is metal)

# Series AF10 to AF60

## Flow Characteristics (Representative values)



## ⚠ Specific Product Precautions

Be sure to read before handling.

Refer to front matter 43 for Safety Instructions and pages 365 to 369 for F.R.L. Precautions.

## Mounting and Adjustment

### ⚠ Warning

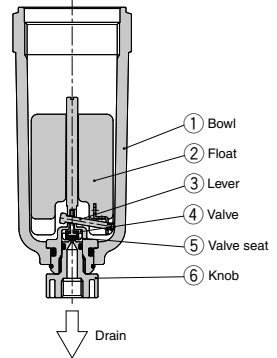
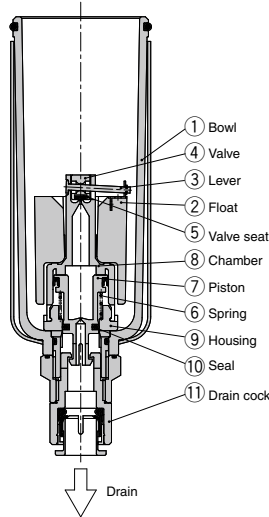
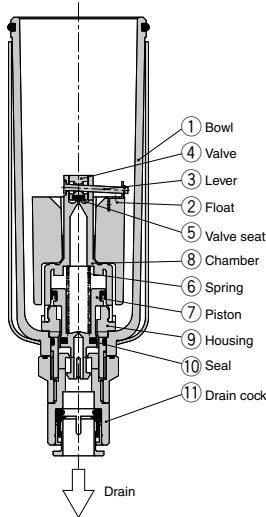
1. Replace the element every 2 years or when the pressure drop becomes 0.1 MPa, whichever comes first, to prevent damage to the element.

## Working Principle: Float Type Auto Drain

N.O. type: AD38, AD48

N.C. type: AD37, AD47

Compact auto drain  
N.C. type: AD17, AD27



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

When pressure is released from the bowl ①, piston ⑦ is lowered by spring ⑥. The sealing action of seal ⑩ is interrupted, and the outside air flows inside the bowl ① through housing hole ⑨ and 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 exceeds 0.1 MPa, the force of piston ⑦ surpasses the force of spring ⑥, and the piston goes up. This pushes 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, float ② will be pulled down by its own weight, causing valve ④, which is connected to lever ③, to seal valve seat ⑤.

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

Float ② rises due to its own buoyancy and pushes open the seal created by the valve seat ⑤.

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

This causes the sealing action of seal ⑩ to be interrupted, and the accumulated condensate in the bowl ① drains out through the drain cock ⑪. Turning drain cock ⑪ manually counterclockwise lowers piston ⑦, which pushes open the seal created by seal ⑩, thus allowing the condensate to drain out.

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

Even when pressure inside the bowl ① is released, spring ⑥ keeps 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 spring ⑥ and the pressure inside the bowl ① keeps 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 float ② will be pulled down by its own weight, causing valve ④, which is connected to lever ③, to seal valve seat ⑤.

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

Float ② rises due to its own buoyancy and pushes open the seal created by the valve seat ⑤. Pressure passes from the bowl ① to chamber ⑧.

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

This causes the sealing action of seal ⑩ to be interrupted and the accumulated condensate in the bowl ① drains out through the drain cock ⑪. Turning drain cock ⑪ manually counterclockwise lowers piston ⑦, which pushes open the seal created by seal ⑩, thus allowing the condensate to drain out.

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

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

• **When the drain is accumulated in the bowl:**

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

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

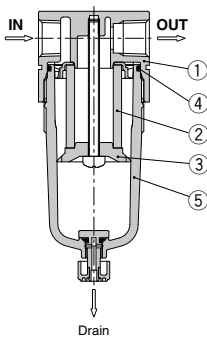
Turning knob ⑥ manually counterclockwise lowers it and causes the sealing action of valve seat ⑤ to be interrupted, which allows the condensate to drain out.

AC-A
AF-A
AF□-A
AR-A
AL-A
AW-A
AC
AF
AF□
AR
AL
AW□
A□G
E□
AV
AF

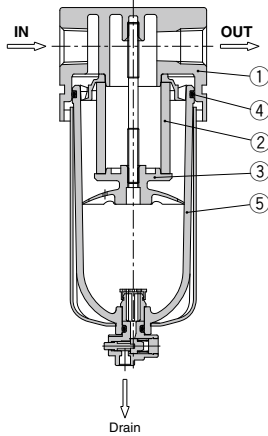
# Series AF10 to AF60

## Construction

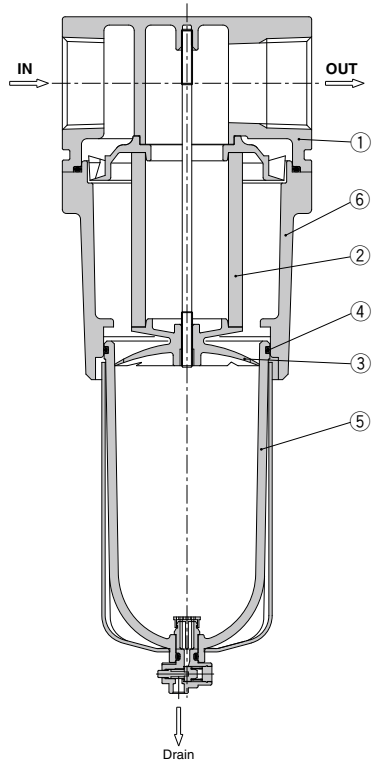
AF10, AF20



AF30 to AF40-06



AF50, AF60



### Component Parts

No.	Description	Material	Model	Color
1	Body	Zinc die-cast	AF10	Platinum silver
		Aluminum die-cast	AF20 to AF60	
6	Housing	Aluminum die-cast	AF50, AF60	Platinum silver

### Replacement Parts

No.	Description	Material	Part no.						
			AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
2	Filter element	Non-woven fabric	AF10P-060S	AF20P-060S	AF30P-060S	AF40P-060S		AF50P-060S	AF60P-060S
3	Baffle	PBT	AF10P-040S <sup>Note 1)</sup>	AF20P-040S	AF30P-040S	AF40P-040S		AF50P-040S	AF60P-040S
4	Bowl O-ring	NBR	C1SFP-260S	C2SFP-260S	C3SFP-260S	C4SFP-260S			
5	Bowl assembly <sup>Note 2)</sup>	Polycarbonate	C1SF	C2SF	C3SF <sup>Note 3)</sup>	C4SF <sup>Note 3)</sup>			

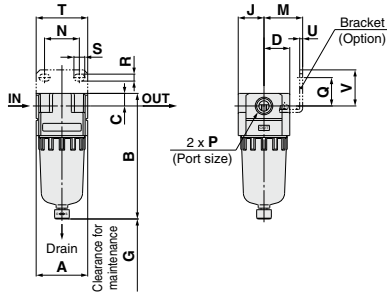
Note 1) The material of the baffle for the AF10 (AF10P-040S) only is polyacetal.

Note 2) Bowl O-ring is included. Please contact SMC regarding the bowl assembly supply for psi and °F unit specifications.

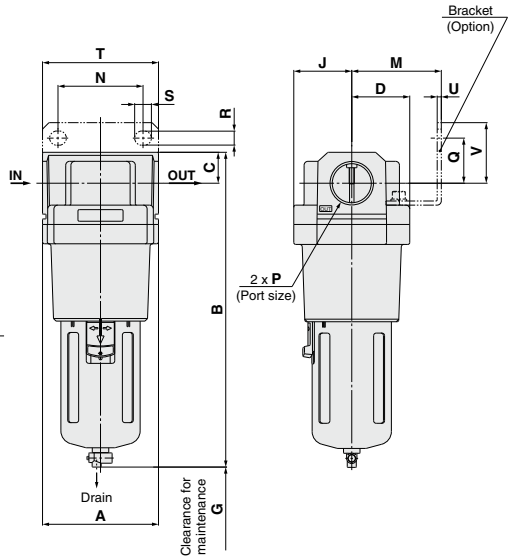
Note 3) Bowl assembly for the AF30 to AF60 models comes with a bowl guard (steel band material).

## Dimensions

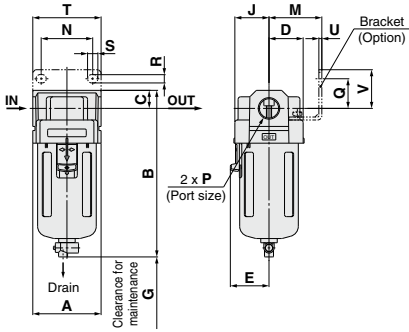
### AF10, AF20



### AF50, AF60



### AF30 to AF40-06



Applicable model Optional/Semi-standard specifications	AF10/20		AF20	AF30 to AF60							
	With auto drain (N.C.)	Metal bowl	With drain guide	With auto drain (N.O./N.C.)	Metal bowl	Metal bowl with level gauge	With drain guide	Drain cock with barb fitting			
Dimensions											
	M5 x 0.8		1/8 Width across flats 14	N.O.: Black N.C.: Gray ø10 one-touch fitting			1/4 Width across flats 17	Barb fitting Applicable tubing: T0604			

Model	Standard specifications																	Optional specifications				
																		Bracket mount				With auto drain
	P	A	B	C	D	E	G	J	M	N	Q	R	S	T	U	V	B					
AF10	M5 x 0.8	25	67	7	12.5	—	25	12.5	—	—	—	—	—	—	—	—	85					
AF20	1/8, 1/4	40	97	10	20	—	40	20	30	27	22	5.4	8.4	40	2.3	28	115					
AF30	1/4, 3/8	53	129	14	26.5	30	50	26.5	41	40	23	6.5	8	53	2.3	30	170					
AF40	1/4, 3/8, 1/2	70	165	18	35	38	75	35	50	54	26	8.5	10.5	70	2.3	35	204					
AF40-06	3/4	75	169	20	35	38	75	35	50	54	25	8.5	10.5	70	2.3	34	208					
AF50	3/4, 1	90	245	24	45	—	20	45	70	66	35	11	13	90	3.2	47	284					
AF60	1	95	258	24	47.5	—	20	47.5	70	66	35	11	13	90	3.2	47	297					

Model	Semi-standard specifications			
	With barb fitting	With drain guide	Metal bowl	Metal bowl with level gauge
	B	B	B	B
AF10	—	—	66	—
AF20	—	101	97	—
AF30	137	136	142	162
AF40	173	172	178	198
AF40-06	177	176	182	202
AF50	253	252	258	278
AF60	266	265	271	291

- AC-A
- AF-A
- AF□-A
- AR-A
- AL-A
- AW-A
- AC
- AF**
- AF□
- AR
- AL
- AW□
- A□G
- E□
- AV
- AF

# Air Filter AF10 to AF60

# Made to Order Specifications:



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

## ① Special Temperature Environment

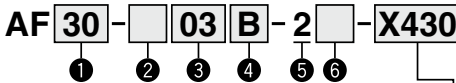
Special materials are used in the manufacturing of seals and resin parts to allow them to withstand various temperature conditions in cold or tropical (hot) climates.

### Specifications

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

### Applicable Model

Model	AF30	AF40	AF40-06	AF50	AF60
<b>Port size</b>	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 alphanumeric order.  
Example) AF30-03B-2R-X430

**For high/low temperature**

<b>X430</b>	Low temperature
<b>X440</b>	High temperature

	Symbol	Description	① Body size			
			30	40	50	60
② Thread type	<b>N</b>	Rc	●	●	●	●
	<b>N</b> (Note 1)	NPT	●	●	●	●
	<b>F</b> (Note 2)	G	●	●	●	●
③ Port size	<b>02</b>	1/4	●	●	—	—
	<b>03</b>	3/8	●	●	—	—
	<b>04</b>	1/2	—	●	—	—
	<b>06</b>	3/4	—	—	●	—
	<b>10</b>	1	—	—	—	●
④ Option (Mounting)	<b>N</b>	Without mounting option	●	●	●	●
	<b>B</b> (Note 3)	With bracket	●	●	●	●
⑤ Bowl (Note 4)	<b>2</b>	Metal bowl	●	●	●	●

⑥ Semi-standard	a	Drain port	<b>N</b>	With drain cock	●	●	●	●
			<b>J</b> (Note 5)	Drain guide 1/4	●	●	●	●
	b	Flow direction	<b>N</b>	Flow direction: Left to right	●	●	●	●
<b>R</b>			Flow direction: Right to left	●	●	●	●	
c	Pressure unit	<b>N</b>	Name plate and caution plate for bowl in imperial units: MPa	●	●	●	●	
		<b>Z</b> (Note 6)	Name plate and caution plate for bowl in imperial units: psi, "F"	○	○	○	○	

- Note 1) Drain guide is NPT1/4.  
 Note 2) Drain guide is G1/4.  
 Note 3) A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws  
 Note 4) Only metal bowl 2 is available.  
 Note 5) Without a valve function  
 Note 6) 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 7) ○: For thread type: NPT only

## ② High Pressure

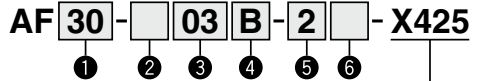
Strong materials are used in the manufacturing of air filters intended for high pressure operation.

### Specifications

Made-to-order no.	-X425
<b>Proof pressure (MPa)</b>	3.0
<b>Maximum operating pressure (MPa)</b>	2.0
<b>Ambient and fluid temperature (°C)</b>	-5 to 60 (with no freezing)

### Applicable Model

Model	AF20	AF30	AF40	AF40-06	AF50	AF60
<b>Port size</b>	1/8, 1/4	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 alphanumeric order.  
Example) AF30-03B-2R-X425

	Symbol	Description	① Body size			
			20	30	40	50
② Thread type	<b>N</b>	Rc	●	●	●	●
	<b>N</b> (Note 1)	NPT	●	●	●	●
	<b>F</b> (Note 2)	G	●	●	●	●
③ Port size	<b>01</b>	1/8	●	—	—	—
	<b>02</b>	1/4	●	●	—	—
	<b>03</b>	3/8	—	●	—	—
	<b>04</b>	1/2	—	—	●	—
	<b>06</b>	3/4	—	—	—	●
	<b>10</b>	1	—	—	—	●
④ Option (Mounting)	<b>N</b>	Without mounting option	●	●	●	●
	<b>B</b> (Note 3)	With bracket	●	●	●	●
⑤ Bowl (Note 4)	<b>2</b>	Metal bowl	●	●	●	●
	<b>8</b>	Metal bowl with level gauge	—	●	●	●

⑥ Semi-standard	a	Drain port	<b>N</b>	With drain cock	●	●	●	●
			<b>J</b> (Note 5)	Drain guide 1/8 Drain guide 1/4	●	—	—	—
	b	Flow direction	<b>N</b>	Flow direction: Left to right	●	●	●	●
<b>R</b>			Flow direction: Right to left	●	●	●	●	
c	Pressure unit	<b>N</b>	Name plate and caution plate for bowl in imperial units: MPa	●	●	●	●	
		<b>Z</b> (Note 6)	Name plate and caution plate for bowl in imperial units: psi, "F"	○	○	○	○	

- Note 1) Drain guide is NPT1/8 (applicable to the AF20) and NPT1/4 (applicable to the AF30 to AF60).  
 Note 2) Drain guide is G1/8 (applicable to the AF20) and G1/4 (applicable to the AF30 to AF60).  
 Note 3) A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws  
 Note 4) Only metal bowl 2 and 8 are available.  
 Note 5) Without a valve function  
 Note 6) 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 7) ○: For thread type: NPT only



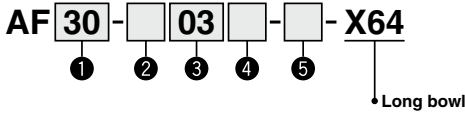
## ③ Long Bowl

Drain capacity is greater than that of standard models.

### Applicable Model/Drain Capacity

Model	AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
<b>Port size</b>	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
<b>Drain capacity (cm<sup>3</sup>)</b>	9	19	43	88			

Note) Please consult with SMC for dimensions.



- 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-X64

		Symbol	Description	①						
				Body size						
				10	20	30	40	50	60	
②	Thread type	Nil	Metric thread (M5)	●	—	—	—	—	—	
		N <small>Note 1)</small>	Rc	—	●	●	●	●	●	
		F <small>Note 2)</small>	NPT	—	●	●	●	●	●	
			G	—	●	●	●	●	●	
+										
③	Port size	M5	M5	●	—	—	—	—	—	
		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 <small>Note 3)</small>	With bracket	—	—	●	●	●	●	
+										
⑤	a	Bowl <small>Note 4)</small>	Nil	Polycarbonate bowl	●	●	●	●	●	●
			2	Metal bowl	●	●	●	●	●	●
			6	Nylon bowl	●	●	●	●	●	●
			C	With bowl guard	—	●	—	—	—	—
			6C	Nylon bowl with bowl guard	—	●	—	—	—	—
			+							
	b	Drain port	Nil	With drain cock	●	●	●	●	●	●
			J <small>Note 5)</small>	Drain guide 1/8	—	●	—	—	—	—
				Drain guide 1/4	—	—	●	●	●	●
			W <small>Note 6)</small>	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 <small>Note 7)</small>	Name plate and caution plate for bowl in imperial units: psi, °F	○ <small>Note 8)</small>	○ <small>Note 8)</small>	○ <small>Note 8)</small>	○ <small>Note 8)</small>	○ <small>Note 8)</small>	○ <small>Note 8)</small>	

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

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

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 365 when selecting a case material.

Note 5) Without a valve function

Note 6) Metal bowl: The combination with 2 is not possible.

Note 7) For 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 8) ○: For thread type: M5, NPT only

- AC-A
- AF-A
- AF□-A
- AR-A
- AL-A
- AW-A
- AC
- AF
- AF□
- AR
- AL
- AW□
- A□G
- E□
- AV
- AF

# Air Filter AF30 to AF60

# Made to Order Specifications:



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

## ④ With Element Service Indicator

Clogging status of elements can be checked visually.

### Applicable Model

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

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

① ② ③ ④ ⑤

With element service indicator

A special body type is required to mount the clogging checker. It cannot be mounted on a standard body.

- 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-X2141

		Symbol	Description	① Body size				
				30	40	50	60	
②	Thread type	Nil	Rc	●	●	●	●	
		N <sup>Note 1)</sup>	NPT	●	●	●	●	
		F <sup>Note 2)</sup>	G	●	●	●	●	
+								
③	Port size	02	1/4	●	●	—	—	
		03	3/8	●	●	—	—	
		04	1/2	—	●	—	—	
		06	3/4	—	●	●	—	
		10	1	—	—	●	●	
+								
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	Float type auto drain (N.C.)	●	●	●	●
			D	Float type auto drain (N.O.)	●	●	●	●
+								
⑤ Semi-standard	c	Bow <sup>Note 4)</sup>	Nil	Polycarbonate bowl	●	●	●	●
			2	Metal bowl	●	●	●	●
			6	Nylon bowl	●	●	●	●
			8	Metal bowl with level gauge	●	●	●	●
	+							
⑤ Semi-standard	d	Drain port <sup>Note 5)</sup>	Nil	With drain cock	●	●	●	●
			J <sup>Note 6)</sup>	Drain guide 1/4	●	●	●	●
			W <sup>Note 7)</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 8)</sup>	Name plate and caution plate for bowl in imperial units: psi, °F	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>	○ <sup>Note 9)</sup>

Note 1) Drain guide is NPT1/4.

The auto drain port comes with ø3/8" One-touch fitting.

Note 2) Drain guide is G1/4.

Note 3) Option B is not assembled and supplied loose at the time of shipment.

Note 4) Refer to Chemical Data on page 365 when selecting a case material.

Note 5) Flow type auto drain: The combination of C and D is not possible.

Note 6) Without a valve function

Note 7) Metal bowl: The combination of 2 and 8 is not possible.

Note 8) 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 9) ○: For thread type: NPT only

How To Order

**AF 30 - N 03 D - 8 Z - X480**

Filter ●

Body Size ●

Symbol	Size
20	1/8
30	3/8
40	1/2

NPT Threads ●

Port Size ●

Symbol	Port Size	Applicable Body Size
02	1/4	20
03	3/8	30
04	1/2	40

● With External Epoxy Coating, Stainless Fasteners

● Name Plate, Caution Plate On Bowl in psi, °F

● Bowl

Symbol	Description	Applicable Body Size
2	Metal Bowl	20
8	Metal Bowl With Sight Glass	30, 40

● Accessories

Symbol	Description	Applicable Body Size
Nil	None	All
B*	Mounting Bracket	All
C	Float Auto Drain (N.C.)	30, 40
D	Float Auto Drain (N.O.)	30, 40

Note: Other sizes, thread forms, options, etc. may be possible, please contact SMC for availability.

\*Note: Bracket is not assembled and is supplied loose at time of shipment.

Specifications



Body size	20	30	40
Operating specifications	Same as standard - see catalog ES40-42D or NC160A		
Port size	1/4" NPT	3/8" NPT	1/2" NPT
Auto drain port	N/A	1/4" NPT	
Bowl type	Metal	Metal with sight gauge	
Body material	Die cast aluminum		
Bowl material	Die cast aluminum		
Body, Bowl surface treatment	Epoxy resin coating		
Manual drain (AF, AW)	POM		
External screws	Stainless steel 410		
Individual mounting brackets	Epoxy coated steel		
Sight glass hardware	Stainless steel 304		

Dimensions - Refer to drawings on page 5

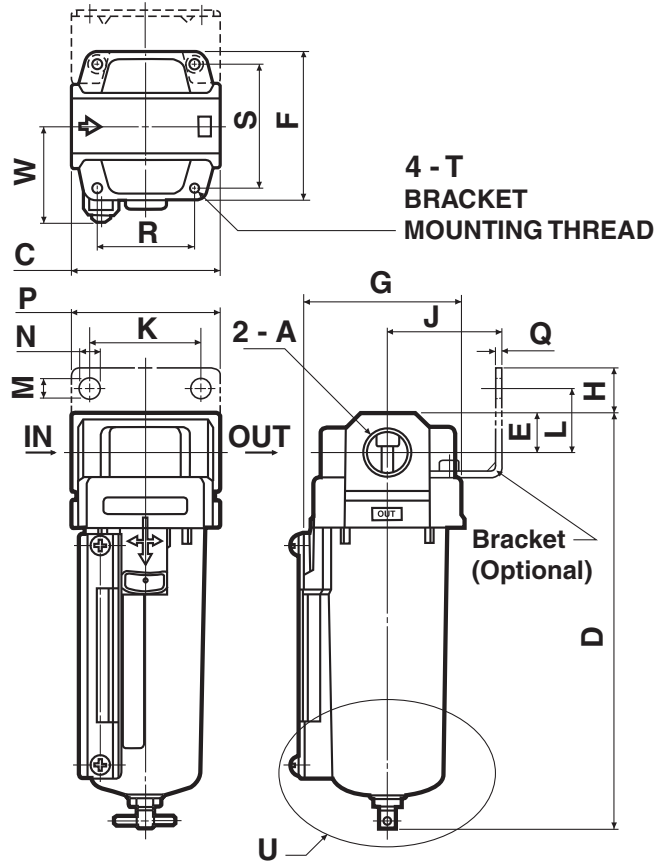
Standard

Model	Port Size	Dimensions																Mounting Bracket Kit (Optional)	
		A	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S		T
AF20	NPT 1/4	40	97	10	40	—	18	30	27	22	5.4	8.4	40	2.3	26	32	M4 X 0.7	—	AF20P-050AS-X480
AF30	NPT 3/8	53	149	14	53	57	16	41	40	23	6.5	8	53	2.3	35	44	M4 X 0.7	34.5	AF30P-050AS-X480
AF40	NPT 1/2	70	185	18	70	73	17	50	54	26	8.5	10.5	70	2.3	47	60	M5 X 0.8	41	AF40P-050AS-X480

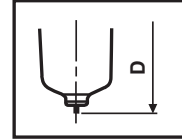
Auto Drain

Model	Port Size	Dimensions																Mounting Bracket Kit (Optional)	
		A	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S		T
AF30	NPT 3/8	53	158	14	53	57	16	41	40	23	6.5	8	53	2.3	35	44	M4 X 0.7	34.5	AF30P-050AS-X480
AF40	NPT 1/2	70	194	18	70	73	17	50	54	26	8.5	10.5	70	2.3	47	60	M5 X 0.8	41	AF40P-050AS-X480

Standard  
(Manual Drain)

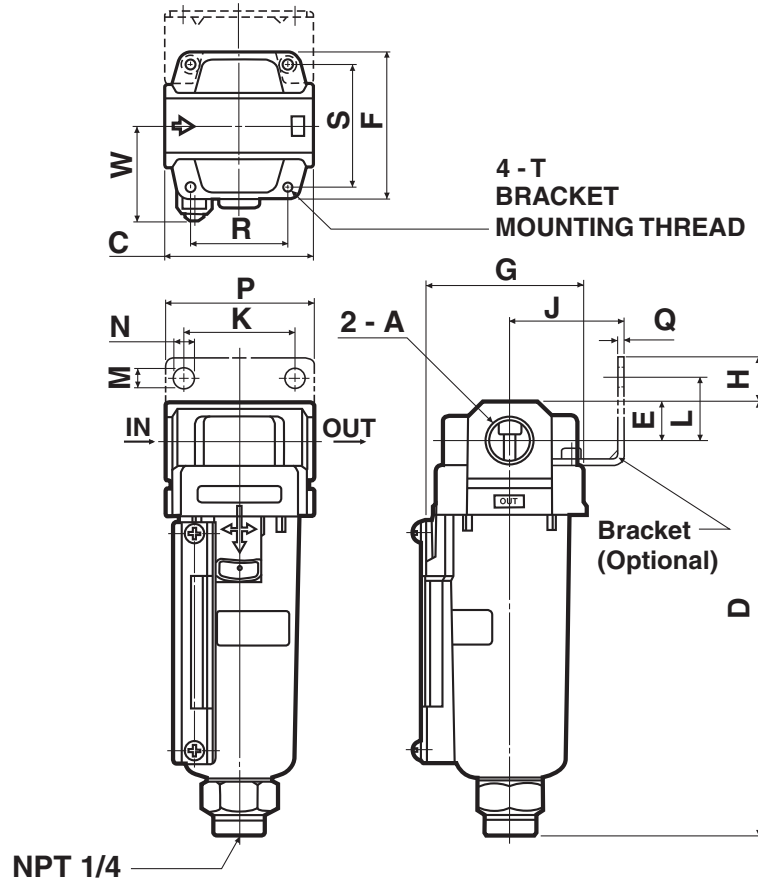


Bowl Detail U  
(AF20)



Note: Sight glass not applicable to AF20.

With Auto Drain



# Large Flow Air Filter

## Series AF800/900



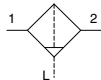
AF800

AF911

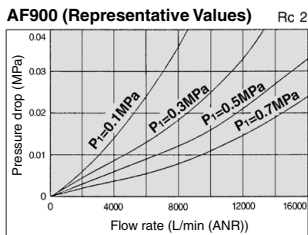
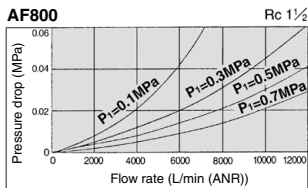
### Symbol

Air filter

Air filter with auto drain



### Flow Characteristics (Representative Values)



### Standard Specifications

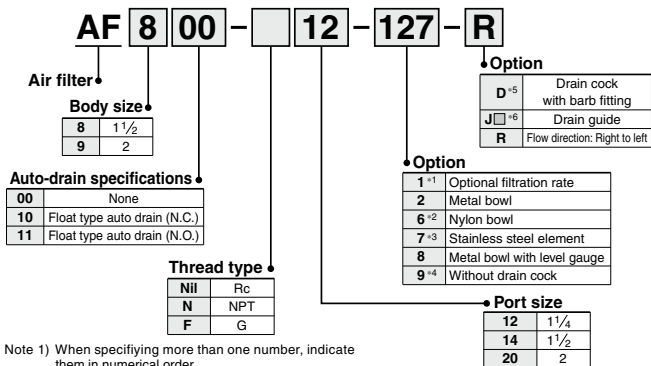
Model	AF800	AF900
Port size	1 1/4 1 1/2	2
Proof pressure	1.5 MPa	
Maximum operating pressure	1.0 MPa	
Ambient and fluid temperature	-5 to 60°C (No freezing)	
Filtration	Standard specifications: 5 μm Option: 2, 10, 20, 40, 70, 100 μm	
Bowl material	Polycarbonate	
Bowl capacity (cm <sup>3</sup> )	45 cm <sup>3</sup>	
Weight (kg)	3.15	7.30
Accessory (Standard)	Bowl guard	

### Accessory (Option)/Part No.

Description	Model	Part no.	
		AF8□□	AF9□□
Float type auto drain * (Bowl assembly)	N.O	AD48-6 (Bowl material: Nylon)	AD48-6 (Bowl material: Nylon)
	N.C	AD47 (Bowl material: Polycarbonate)	AD47 (Bowl material: Polycarbonate)

\* Min. operating pressure: 0.1 MPa (N.O.), 0.15 MPa (N.C.)

### How to Order



Note 1) When specifying more than one number, indicate them in numerical order.  
(Ex.) 127-40

Note 2) When specifying more than one alphabet symbol, indicate them alphabetically and put "-" between them.  
(Ex.) D-R

Note 3) Options for "2", "6", and "8" can not be specified at the same time.  
(Ex.) 68

Note 4) Symbols "9", "D", "J" can not be specified at the same time.  
(Ex.) 9-D-J

Note 5) For products with auto drain, either symbol "D" or "J" cannot be specified at the same time.

\* 1 Indicate the required filtration rate after the symbol "1".  
(Ex.) When 40 μm is required: 1-40

\* 2 For float type auto drain (N.O.), nylon bowl is a standard specification. Selection of "6" is not necessary.

\* 3 If indicating "7" only, the filtration rate is 5 μm. Optional filtration rate is required, indicate like 17-□.  
(Ex.) When requiring "stainless steel and 40 μm"; 17-40

\* 4 The bowl of series AL is used.

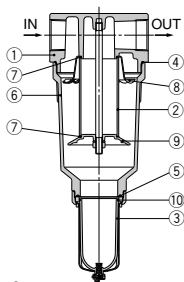
\* 5 Drain cock thread machining (1/4) for products with metal bowl.

\* 6 This symbol "□" indicates the port size.

1	Rc 1 1/4
6	NPT 1 1/4
8	G 1 1/4

# Series AF800/900

## Construction



## Component Parts

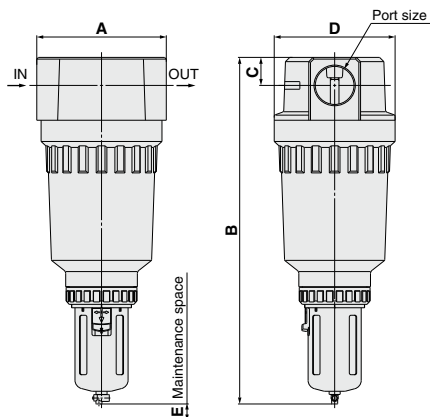
No.	Description	Material		Note
		AF800	AF900	
1	Body	Aluminum die-casted	Aluminum casted	Platinum silver painted.
6	Housing	Aluminum die-casted	Aluminum casted	Platinum silver painted.

## Replacement Parts

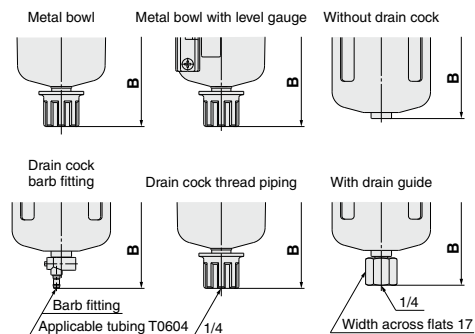
No.	Description	Material	Part no.		Qty.	
			AF800	AF900		
2	Element	Standard	Bronze	11345-5B	11352-5B	1
		-7	Stainless steel	11345-5S	11352-5S	1
3	Bowl assembly	Standard	—	C4SF	—	1
		-2	—	C4SF-2	—	
		-6	—	C4SF-6	—	
		-8	—	C4LF-8	—	
		-9	—	C4SF-X401	—	
4	O-ring	NBR	JIS B2401 G130	630332	1	
5	O-ring	NBR	113136	113136	1	
7	Element seal	NBR	11217	112310	2	
8	Deflector	Aluminum	11346	11355	1	
9	Buffer	AF800	ADC	11344	—	1
		AF900	Aluminum casted	—	11354	
10	O-ring	NBR	—	C4SFP-260S	1	

Note) O-ring ⑩ is attached.

## Dimensions



## Option



## Option/Dimensions

Model	A	B	C	D	B (With auto drain)		E
					N.O	N.C	
AF800	150	408	33	140	448	448	150
AF900	200	488	46	170	528	528	210

Model	B (Without auto drain)					
	Metal bowl	Metal bowl with level gauge	Without drain cock	Drain cock barb fitting	Drain cock thread piping	With drain guide
AF800	421	441	397	417	421	415
AF900	501	521	477	497	501	495

## ⚠ Precautions

- Be sure to read before handling.
- Refer to front matter 43 for Safety Instructions and pages 365 to 369 for F.R.L. Precautions.