


Modular Type Filter Regulator **AW Series**

Filter Regulator AW Series	Model	Port size	Set pressure	Options
		AW10-A	M5 x 0.8	0.05 to 0.7 MPa 0.02 to 0.2 MPa
AW20-B		1/8, 1/4	0.05 to 0.85 MPa 0.02 to 0.2 MPa	Bracket Set nut (for panel mount)*1
AW30-B		1/4, 3/8		Float type auto drain
AW40-B		1/4, 3/8, 1/2		Square embedded type pressure gauge Digital pressure switch
AW40-06-B		3/4		Round type pressure gauge
AW60-B		3/4, 1		Bracket Square embedded type pressure gauge Digital pressure switch Round type pressure gauge

Pages 93 to 111

*1 Interchangeable with the previous AW series and panel mounting dimensions.

AC

AF+AR+AL

AW+AL

AF+AR

AF+AFM+AR

AW+AFM

Attachment

AF

AFM / AFD

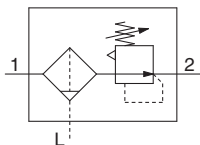
AR

AL

AW

Filter Regulator AW10-A

Symbol
Filter Regulator



- Integrated filter and regulator units save space and require less piping.

How to Order

Refer to page 95 for size 20 to 60.

AW10-M5 - - A -

① ②

- Option/Semi-standard: Select one each for **a** to **h**.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
Example) AW10-M5CG-12NR-A

- **Made to order**
(Refer to page 108 for details.)

		Symbol	Description		
①	Option #1	a	Mounting	—	Without mounting option
			B	With bracket	
			H	With set nut (for panel mount)	
		+			
		b	Float type auto drain	—	Without auto drain
				C *2	N.C. (Normally closed) Drain port is closed when pressure is not applied.
+					
c	Pressure gauge	—	Without pressure gauge		
		G *3	Round type pressure gauge (without limit indicator)		
+					
②	Semi-standard	d	Set pressure *4	—	0.05 to 0.7 MPa setting
			1	0.02 to 0.2 MPa setting	
		+			
		e	Bowl *5	—	Polycarbonate bowl
				2	Metal bowl
				6	Nylon bowl
		+			
		f	Exhaust mechanism	—	Relieving type
				N	Non-relieving type
		+			
		g	Flow direction	—	Flow direction: Left to right
				R	Flow direction: Right to left
+					
h	Pressure unit	—	Name plate, caution plate, and pressure gauge in SI units: MPa		
		Z	Name plate, caution plate, and pressure gauge in imperial units: psi, °F		

*1 Options B, G, H are not assembled and supplied loose at the time of shipment.

*2 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.

*3 A 1.0 MPa pressure gauge will be fitted. It is not assembled and supplied loose at the time of shipment.

*4 Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.

*5 Refer to chemical data on page 98 for chemical resistance of the bowl.



AW10-A

Standard Specifications

Port size	M5 x 0.8
Pressure gauge port size	1/16
Fluid	Air
Ambient and fluid temperature	-5 to 60 °C (with no freezing)
Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Set pressure range	0.05 to 0.7 MPa
Nominal filtration rating	5 μm
Drain capacity [cm ³]	2.5
Bowl material	Polycarbonate
Construction	Relieving type
Weight [kg]	0.09

Options/Part No.

Bracket assembly *1	AR12P-270AS
Set nut	AR12P-260S
Round type pressure gauge *2	G27-10-R1

*1 Assembly of a bracket and set nuts

*2 1.0 MPa pressure gauge

Bowl Assembly/Part No.

Bowl material	Drain discharge mechanism	Drain port	Bowl part no.
Polycarbonate	Manual	With drain cock	C1SF-A
	Automatic (Auto drain) *1	Normally closed (N.C.)	AD17-A
Nylon	Manual	With drain cock	C1SF-6-A
	Automatic (Auto drain) *1	Normally closed (N.C.)	AD27-6-A
Metal	Manual	With drain cock	C1SF-2-A
	Automatic (Auto drain) *1	Normally closed (N.C.)	AD17-2-A

*1 Minimum operating pressure: 0.1 MPa

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

AC

AF+AR+AL

AW+AL

AF+AR

AF+AFM+AR

AW+AFM

Attachment

AF

AFM / AFD

AR

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AW

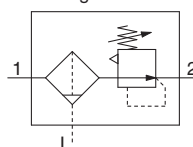
Filter Regulator

AW20-B to AW60-B

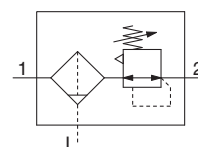
Filter Regulator with Backflow Function

AW20K-B to AW60K-B

Symbol
Filter Regulator



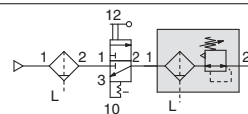
Filter Regulator with
Backflow Function



- Integrated filter and regulator units save space and require less piping.
- With the backflow function, it incorporates a mechanism to exhaust the air pressure in the outlet side reliably and quickly.

Example)

When the air supply is cut off and releasing the inlet pressure to the atmosphere, the residual pressure release of the outlet side can be ensured for a safety purpose.



How to Order

Refer to page 93 for size 10.

AW 30 K - 03 BE - - B -

1
 2
 3
 4
 5
 6

- Option/Semi-standard: Select one each for a to i.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
Example) AW30K-03BE-1N-B

• Made to order

(Refer to pages 106 to 110 for details.)

	Symbol	Description	① Body size					
			20	30	40	60		
②	—	Without backflow function	●	●	●	●		
	K*1	With backflow function	●	●	●	●		
+								
③	—	Rc	●	●	●	●		
	N*2	NPT	●	●	●	●		
	F*3	G	●	●	●	●		
+								
④	Port size	01	1/8	●	—	—	—	
		02	1/4	●	●	●	—	
		03	3/8	—	●	●	—	
		04	1/2	—	—	●	—	
		06	3/4	—	—	●	●	
		10	1	—	—	—	●	
+								
⑤ Option *4	a	Mounting	—	Without mounting option	●	●	●	●
			B*5	With bracket	●	●	●	●
			H	With set nut (for panel mount)	●	●	●	—
	+							
	b	Float type auto drain	—	Without auto drain	●	●	●	●
			C*6	N.C. (Normally closed) Drain port is closed when pressure is not applied.	●	●	●	●
			D*7	N.O. (Normally open) Drain port is open when pressure is not applied.	—	●	●	●
	+							
	c	Pressure gauge *8	—	Without pressure gauge	●	●	●	●
			E	Square embedded type pressure gauge (with limit indicator)	●	●	●	●
			G	Round type pressure gauge (with limit indicator)	●	●	●	●
			M	Round type pressure gauge (with colour zone)	●	●	●	●
		Digital pressure switch *9	E1	Output: NPN output, Electrical entry: Wiring bottom entry	●	●	●	●
			E2	Output: NPN output, Electrical entry: Wiring top entry	●	●	●	●
E3			Output: PNP output, Electrical entry: Wiring bottom entry	●	●	●	●	
E4	Output: PNP output, Electrical entry: Wiring top entry	●	●	●	●			
+								
⑥ Semi-standard	d	Set pressure *10	—	0.05 to 0.85 MPa setting	●	●	●	●
			1	0.02 to 0.2 MPa setting	●	●	●	●
	+							
	e	Bowl *11	—	Polycarbonate bowl	●	●	●	●
			2	Metal bowl	●	●	●	●
			6	Nylon bowl	●	●	●	●
			8	Metal bowl with level gauge	—	●	●	●
			C	With bowl guard	●	—*12	—*12	—*12
			6C	With bowl guard (Nylon bowl)	●	—*13	—*13	—*13
	+							
f	Drain port *14	—	With drain cock	●	●	●	●	
		J*15	Drain guide 1/8	●	—	—	—	
			Drain guide 1/4	—	●	●	●	
		W*16	Drain cock with barb fitting	—	●	●	●	

Filter Regulator **AW20-B to AW60-B Series**

Filter Regulator with Backflow Function **AW20K-B to AW60K-B Series**



AW20-B, AW20K-B AW40-B, AW40K-B

		Symbol	Description	① Body size				
				20	30	40	60	
6	g	Exhaust mechanism	—	Relieving type	●	●	●	●
			N	Non-relieving type	●	●	●	●
				+				
	h	Flow direction	—	Flow direction: Left to right	●	●	●	●
			R	Flow direction: Right to left	●	●	●	●
				+				
i	Pressure unit	—	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	●	●	●	●	
		Z*17	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○*19	○*19	○*19	○*19	
		ZA*18	Digital pressure switch: With unit selection function	△*20	△*20	△*20	△*20	

- *1 Set the inlet pressure to at least 0.05 MPa higher than the set pressure.
- *2 Drain guide is NPT 1/8 (applicable to the AW20(K)-B) and NPT 1/4 (applicable to the AW30(K)-B to AW60(K)-B). The auto drain port comes with Ø 3/8" One-touch fitting (applicable to the AW30(K)-B to AW60(K)-B).
- *3 Drain guide is G 1/8 (applicable to the AW20(K)-B) and G 1/4 (applicable to the AW30(K)-B to AW60(K)-B).
- *4 Options B, G, H, M are not assembled and supplied loose at the time of shipment.
- *5 Assembly of a bracket and set nuts (applicable to the AW20(K)-B to AW40(K)-B). Including 2 mounting screws for the AW60(K)-B
- *6 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.
- *7 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.
- *8 When the pressure gauge is attached, a 1.0 MPa pressure gauge will be fitted for standard (0.85 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.
- *9 When choosing with H (panel mount), the installation space for lead wires will not be secured. In this case, select "wiring top entry" for the electrical entry.
- *10 Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.
- *11 Refer to chemical data on page 98 for chemical resistance of the bowl.
- *12 A bowl guard is provided as standard equipment (polycarbonate).
- *13 A bowl guard is provided as standard equipment (nylon).
- *14 The combination of float type auto drain: C and D is not available.
- *15 Without a valve function
- *16 The combination of metal bowl: 2 and 8 is not available.
- *17 For pipe thread type: NPT. Cannot be used with M: Round type pressure gauge (with colour zone). Available by request for special. The digital pressure switch will be equipped with the unit selection function, setting to psi initially.
- *18 For options: E1, E2, E3, E4.
- *19 ○: For pipe thread type: NPT only
- *20 △: Select with options: E1, E2, E3, E4.

Standard Specifications

Model	AW20-B	AW30-B	AW40-B	AW40-06-B	AW60-B
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1
Pressure gauge port size *1	1/8				
Fluid	Air				
Ambient and fluid temperature *2	-5 to 60 °C (with no freezing)				
Proof pressure	1.5 MPa				
Maximum operating pressure	1.0 MPa				
Set pressure range	0.05 to 0.85 MPa				
Nominal filtration rating	5 µm				
Drain capacity [cm³]	8	25	45		
Bowl material	Polycarbonate				
Bowl guard	Semi-standard (Steel)	Standard (Polycarbonate)			
Construction	Relieving type				
Weight [kg]	0.20	0.36	0.66	0.72	2.05

*1 Pressure gauge connection threads are not available for F.R.L. unit with a square embedded type pressure gauge or with a digital pressure switch.

*2 -5 to 50 °C for the products with the digital pressure switch.

AC
AF+AR+AL
AW+AL
AF+AR
AF+AFM+AR
AW+AFM
Attachment
AF
AFM / AFD
AR
AL
AW

AW20-B to AW60-B Series

AW20K-B to AW60K-B Series

Options/Part No.

Optional specifications		Model				
		AW20(K)-B	AW30(K)-B	AW40(K)-B	AW40(K)-06-B	AW60(K)-B
Bracket assembly *1		AW23P-270AS	AR33P-270AS	AR43P-270AS		AW62P-270AS
Set nut		AR23P-260S	AR33P-260S	AR43P-260S		—*2
Pressure gauge	Round type *3	Standard	G36-10-□01		G46-10-□01	
		0.02 to 0.2 MPa setting	G36-4-□01		G46-4-□01	
	Round type *3 (with colour zone)	Standard	G36-10-□01-L		G46-10-□01-L	
		0.02 to 0.2 MPa setting	G36-4-□01-L		G46-4-□01-L	
Square embedded type *4	Standard	GC3-10AS [GC3P-010AS (Pressure gauge cover only)]				
	0.02 to 0.2 MPa setting	GC3-4AS [GC3P-010AS (Pressure gauge cover only)]				
Digital pressure switch *5		NPN output, Wiring bottom entry	ISE35-N-25-MLA [ISE35-N-25-M (Switch body only)]			
		NPN output, Wiring top entry	ISE35-R-25-MLA [ISE35-R-25-M (Switch body only)]			
		PNP output, Wiring bottom entry	ISE35-N-65-MLA [ISE35-N-65-M (Switch body only)]			
		PNP output, Wiring top entry	ISE35-R-65-MLA [ISE35-R-65-M (Switch body only)]			

*1 Assembly of a bracket and set nuts. Including 2 mounting screws for the AW60(K)-B

*2 Please consult with SMC regarding the set nuts for the AW60(K)-B.

*3 □ in part numbers for a round type pressure gauge indicates a pipe thread type.

No indication is necessary for R; however, indicate N for NPT.

Please contact SMC regarding the pressure gauge supply for psi unit specifications.

*4 Including one O-ring and 2 mounting screws.

[]: Pressure gauge cover only

*5 In addition to the pressure switch body, lead wire with connector (2 m), adapter, lock pin, O-ring (1 pc.), mounting screw (2 pcs.) are attached.

[]: Switch body only. (Regarding how to order the digital pressure switch, refer to the [Web Catalogue](#).)

A pressure switch can be mounted on the AW60(K)-B, with a special mounting adapter (Pressure switch adapter assembly: AW63P-310AS) and mounting screws (M3 x 0.5 x 14) which are delivered with the mounting adapter.

Bowl Assembly/Part No.

Bowl material	Drain discharge mechanism	Drain port	Other	Model					
				AW20-B	AW30-B	AW40-B	AW40-06-B	AW60-B	
Polycarbonate	Manual	With drain cock	—	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 *1 (Auto drain)	With drain guide (without valve function)	With bowl guard	—	C2SF□-J-A	—	—		
		With bowl guard	—	C2SF□-CJ-A	C3SF□-J-A	C4SF□-J-A			
		Normally closed (N.C.)	With bowl guard	—	AD27-A	—	—		
Normally open (N.O.)	With bowl guard	—	AD27-C-A	AD37□-A	AD47□-A				
	With bowl guard	—	AD38□-A	AD48□-A					
Nylon	Manual	With drain cock	—	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 *1 (Auto drain)	With drain guide (without valve function)	With bowl guard	—	C2SF□-6J-A	—	—		
		With bowl guard	—	C2SF□-6CJ-A	C3SF□-6J-A	C4SF□-6J-A			
		Normally closed (N.C.)	With bowl guard	—	AD27-6-A	—	—		
Normally open (N.O.)	With bowl guard	—	AD27-6C-A	AD37□-6-A	AD47□-6-A				
	With bowl guard	—	AD38□-6-A	AD48□-6-A					
Metal	Manual	With drain cock	—	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 *1 (Auto drain)	With level gauge	—	—	C3LF□-8J-A	C4LF□-8J-A			
		Normally closed (N.C.)	With level gauge	—	AD27-2-A	AD37□-2-A	AD47□-2-A		
		With level gauge	—	—	AD37□-8-A	AD47□-8-A			
Normally open (N.O.)	With level gauge	—	—	AD38□-2-A	AD48□-2-A				
	With level gauge	—	—	AD38□-8-A	AD48□-8-A				

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

Bowl assembly 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, —: ∅ 10, N: ∅ 3/8")

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

⚠ Specific Product Precautions

Be sure to read this before handling the products. Refer to the back cover for safety instructions. For F.R.L. units precautions, refer to the “Handling Precautions for SMC Products” and the “Operation Manual”, <http://www.smc.eu>

Design/Selection

⚠ Warning

- Residual pressure disposal (outlet pressure removal) is not possible for the AW20-B to AW60-B even though the inlet pressure is exhausted. When the residual pressure disposal is performed, use the filter regulator with backflow function (AW20K-B to AW60K-B).
- 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 Potassium nitrate 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

⚠ Warning

- Set the regulator while verifying the displayed values of the inlet and outlet pressure gauges. Turning the regulator knob excessively can cause damage to the internal parts.
- Do not use tools on the pressure regulator knob as this may cause damage. It must be operated manually.

⚠ Caution

- Be sure to unlock the knob before adjusting the pressure and lock it after setting the pressure. Failure to follow this procedure can cause damage to the knob and the outlet pressure may fluctuate.
 - Pull the pressure regulator knob to unlock. (You can visually verify this with the “orange mark” that appears in the gap.)
 - Push the pressure regulator knob to lock. When the knob is not easily locked, turn it left and right a little and then push it (when the knob is locked, the “orange mark”, i.e., the gap will disappear).
- A knob cover is available to prevent careless operation of the knob. Refer to page 112 for details.
- When the bowl is installed on the AW30-B to AW60-B, 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

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AW

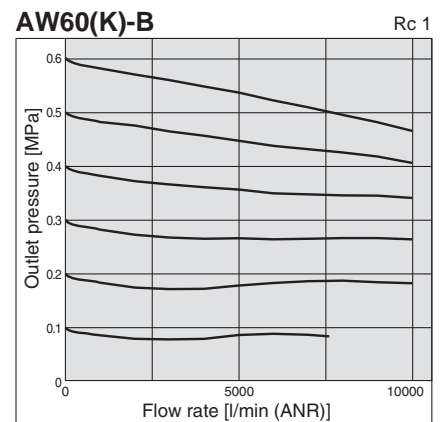
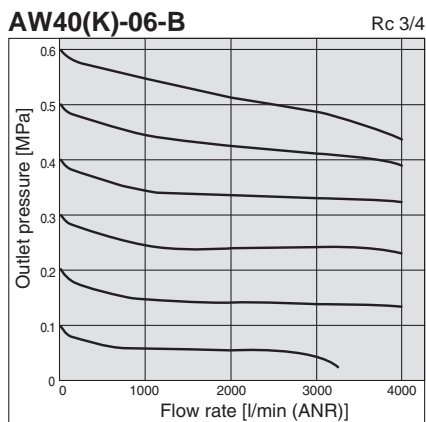
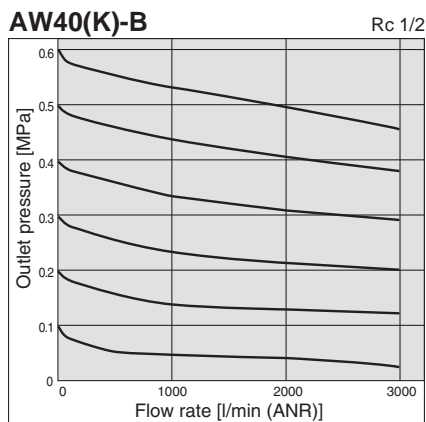
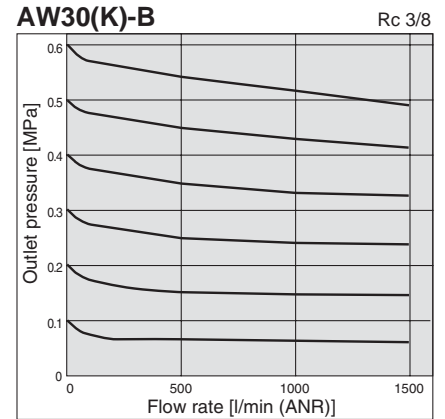
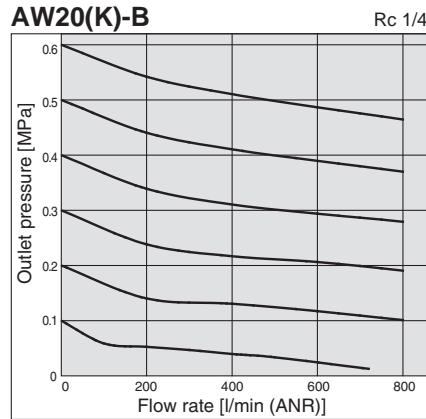
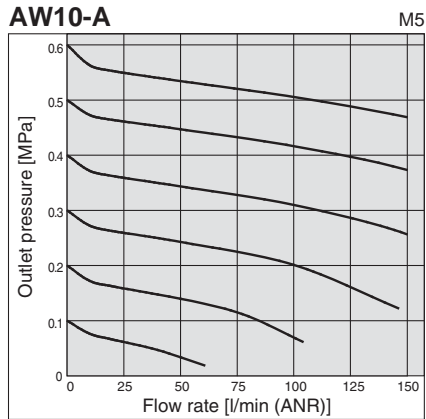
AW10-A Series

AW20-B to AW60-B Series

AW20K-B to AW60K-B Series

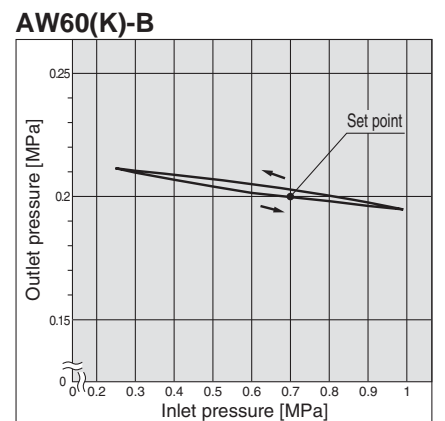
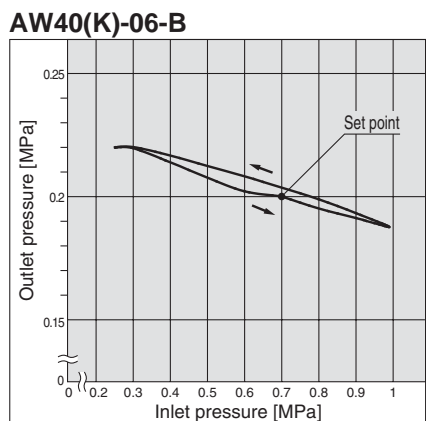
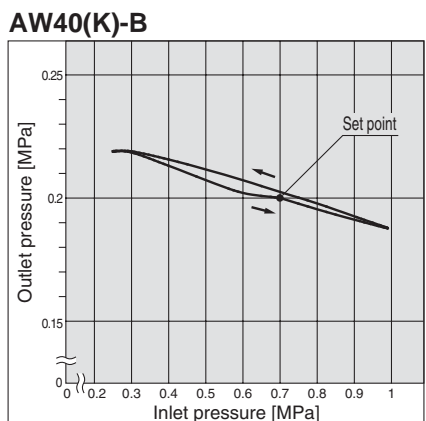
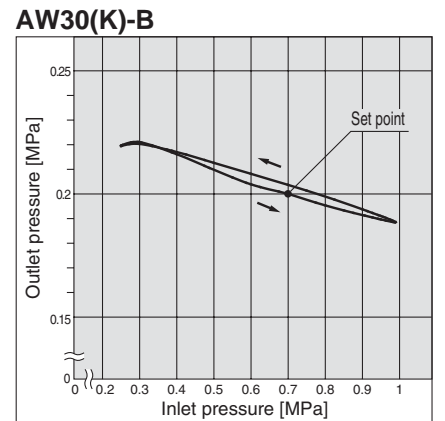
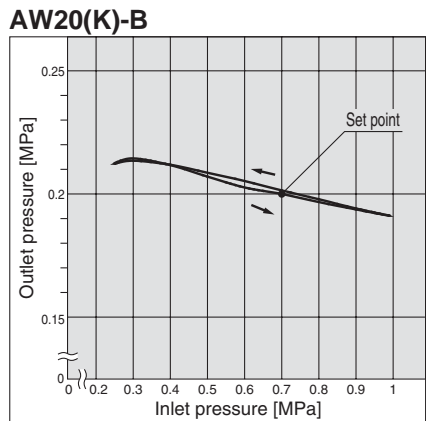
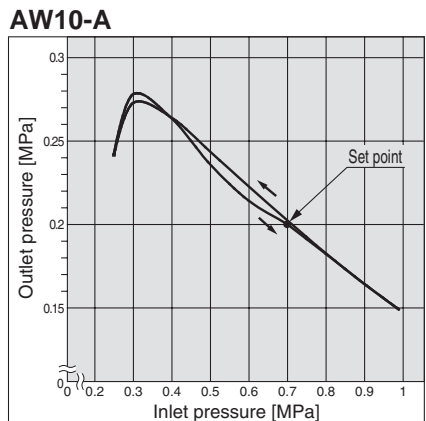
Flow Rate Characteristics (Representative values)

Condition: Inlet pressure of 0.7 MPa

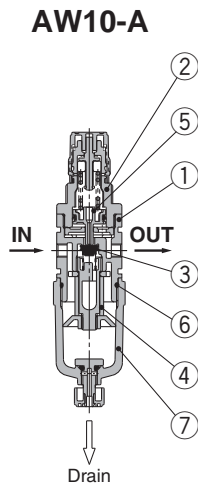


Pressure Characteristics (Representative values)

Conditions: Inlet pressure of 0.7 MPa, Outlet pressure of 0.2 MPa, Flow rate 20 l/min (ANR)



Construction



Component Parts

No.	Description	Material	Colour
1	Body	Zinc die-cast	White
2	Bonnet	Polyacetal	White

Replacement Parts

No.	Description	Material	Part no.
3	Valve	HNBR	AR10P-090S
4	Filter element	Non-woven fabric	AF10P-060S
5	Piston assembly	Polyacetal	AR10P-150AS
6	Bowl O-ring	NBR	C1SFP-260S
7	Bowl assembly	Polycarbonate	C1SF-A

Working Principle (Filter Regulator with Backflow Function)

AW10-A

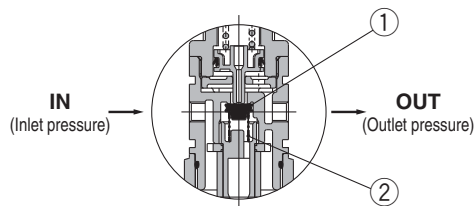


Figure 1

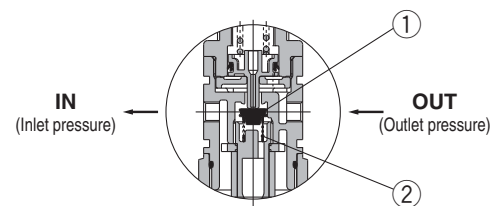


Figure 2

When the inlet pressure is higher than the regulating pressure, the check valve operates as a normal regulator (Figure 1).

When the inlet pressure is shut off and exhausted, any inlet pressure applied to the valve ① will be lost. The force for seating the valve ① is the valve spring force ② only. When the valve ① is opened using the outlet force, the outlet pressure will be exhausted at the inlet side (Figure 2). When the set pressure is 0.15 MPa or less, the valve ① may not open due to the valve spring ② force.

AC
AF+AR+AL
AW+AL
AF+AR
AF+AFM+AR
AW+AFM
Attachment
AF
AFM / AFD
AR
AL
AW

AW20-B to AW60-B Series

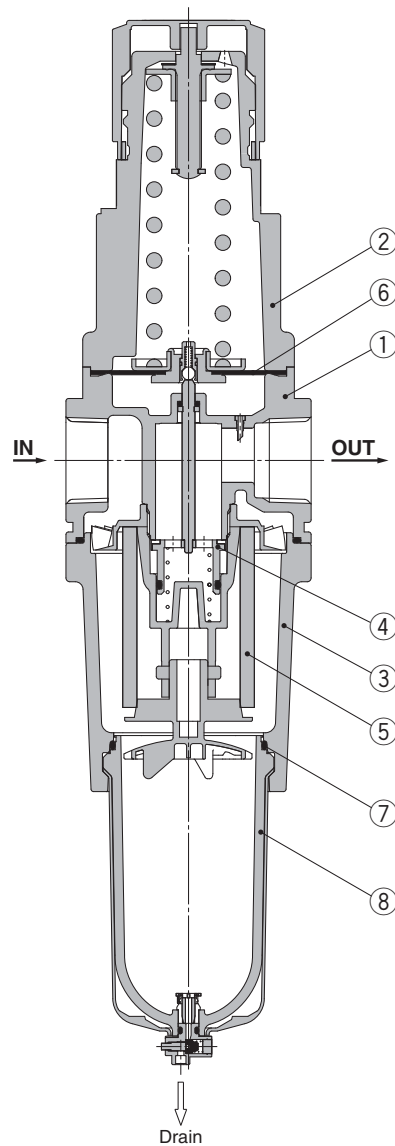
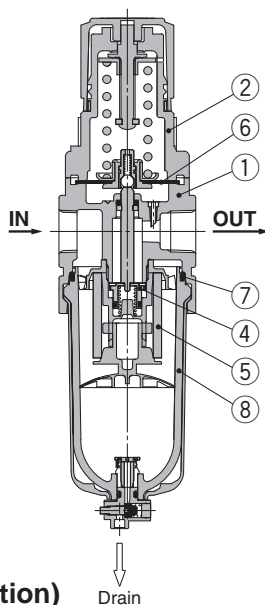
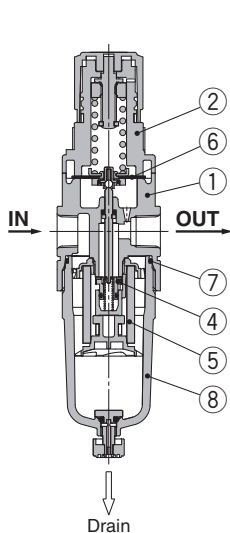
AW20K-B to AW60K-B Series

Construction

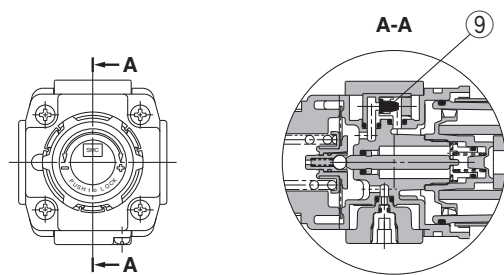
AW20(K)-B

AW30(K)-B/AW40(K)-B

AW60(K)-B



AW20K-B to AW60K-B
(Filter Regulator with Backflow Function)



Component Parts

No.	Description	Material	Model	Colour
1	Body	Aluminium die-cast	AW20-B to AW60-B	White
2	Bonnet	Polyacetal	AW20-B to AW40-B	White
		Aluminium die-cast	AW60-B	White
3	Housing	Aluminium die-cast	AW60-B	White

Replacement Parts

No.	Description	Material	Part no.				
			AW20(K)-B	AW30(K)-B	AW40(K)-B	AW40(K)-06-B	AW60(K)-B
4	Valve assembly	Brass, HNBR	AW20P-340AS	AW30P-340AS	AW40P-340AS	AW40P-340AS	AW60P-090AS
5	Filter element	Non-woven fabric	AF20P-060S	AF30P-060S	AF40P-060S	AF40P-060S	AW60P-060S
6	Diaphragm assembly	Weatherable NBR	AR20P-150AS	AR30P-150AS	AR40P-150AS	AR40P-150AS	AR50P-150AS
7	Bowl seal	NBR	C2SFP-260S	C32FP-260S	C42FP-260S		
8	Bowl assembly *1	Polycarbonate	C2SF-A	C3SF-A*2	C4SF-A*2		
9	Check valve assembly *3	—	AR23KP-020AS				

*1 Bowl assembly includes the bowl O-ring.

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

*2 Bowl assembly for the AW30(K)-B to AW60(K)-B models comes with a bowl guard (Material: Polycarbonate).

*3 Check valve assembly is applicable for a filter regulator with backflow function (AW20(K)-B to AW60(K)-B) only.

Assembly of a check valve cover, check valve body assembly and 2 mounting screws

Working Principle (Filter Regulator with Backflow Function)

AW20K-B to AW60K-B

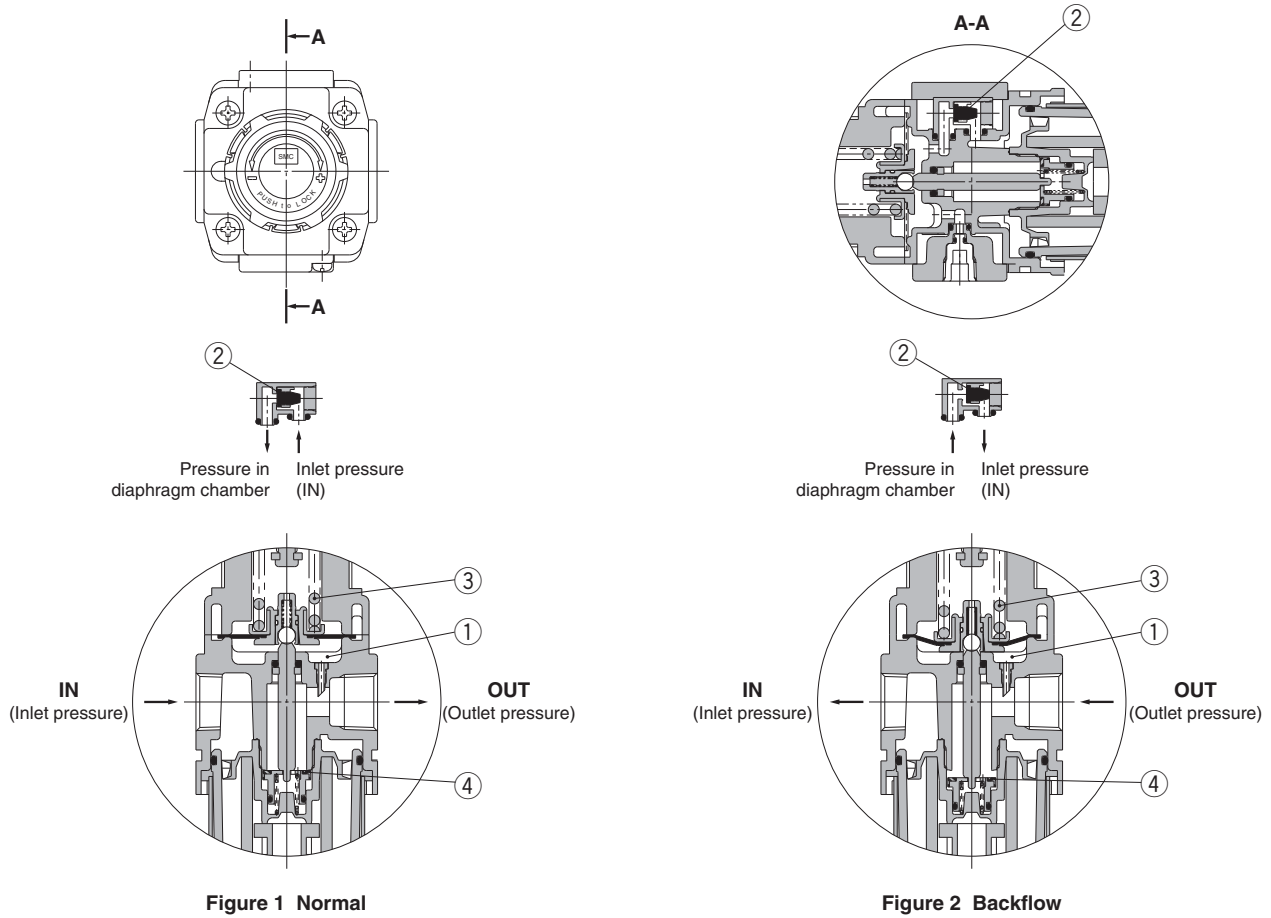


Figure 1 Normal

Figure 2 Backflow

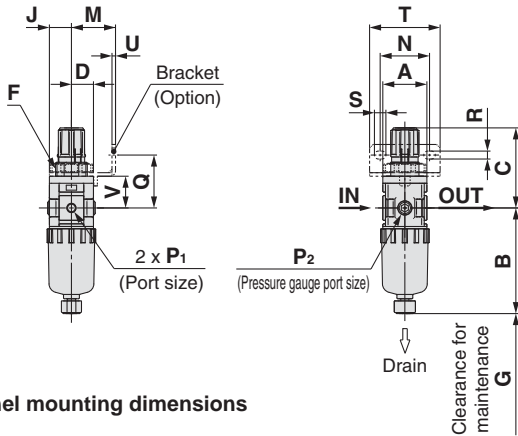
When the inlet pressure is higher than the regulating pressure, the check valve ② closes and operates as a normal regulator (Figure 1). When the inlet pressure is shut off and released, the check valve ② opens and the pressure in the diaphragm chamber ① is released into the inlet side (Figure 2). This lowers the pressure in the diaphragm chamber ① and the force generated by the spring ③ lifts the diaphragm. The valve ④ opens through the stem, and the outlet pressure is released to the inlet side (Figure 2).

AC
AF+AR+AL
AW+AL
AF+AR
AF+AFM+AR
AW+AFM
Attachment
AF
AFM / AFD
AR
AL
AW

AW10-A Series AW20-B to AW60-B Series AW20K-B to AW60K-B Series

Dimensions

AW10-A

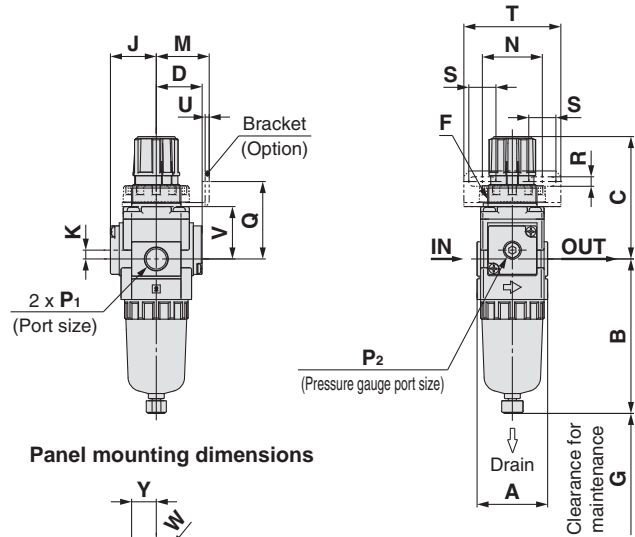


Panel mounting dimensions



Plate thickness
AW10-A: Max. 3.5

AW20(K)-B



Panel mounting dimensions

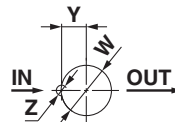
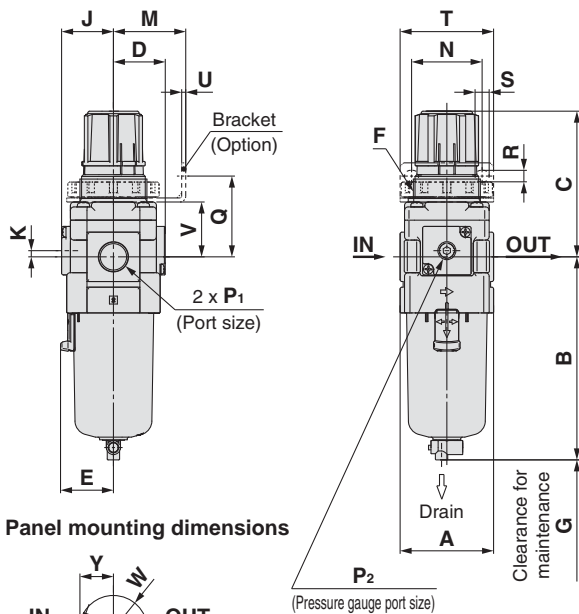


Plate thickness
AW20(K)-B: Max. 3.5

AW30(K)-B to AW40(K)-06-B



Panel mounting dimensions

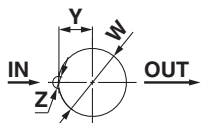
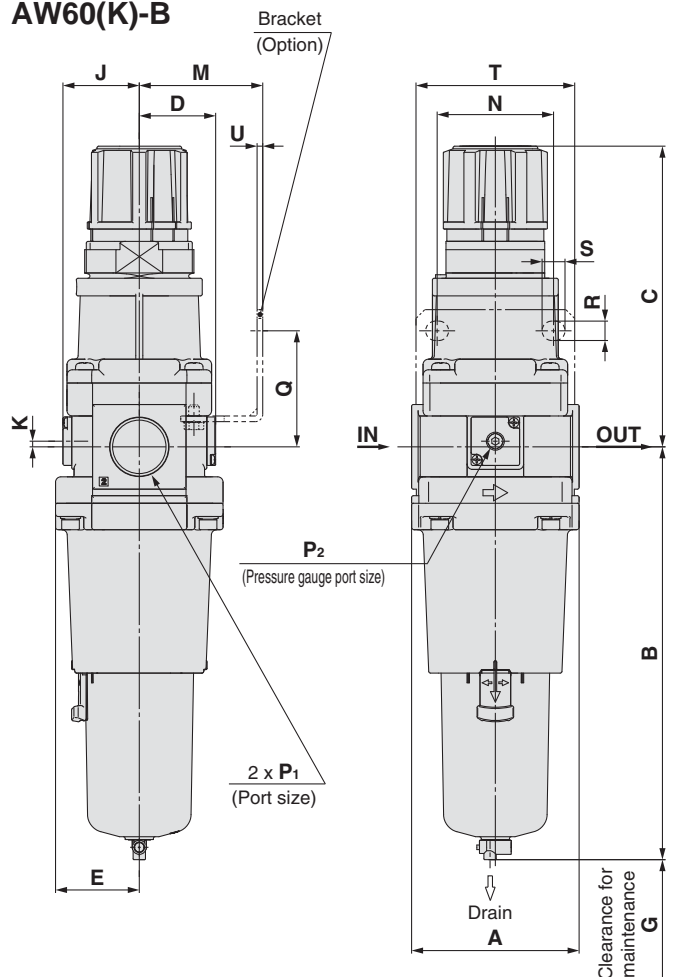


Plate thickness
AW30(K)-B: Max. 3.5
AW40(K)-B: Max. 5

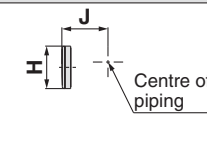
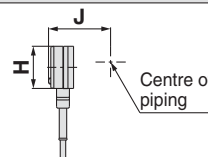
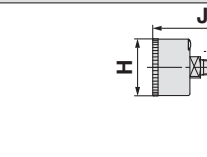
AW60(K)-B

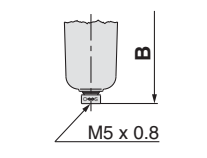
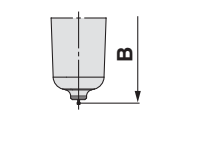
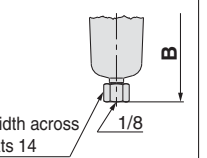
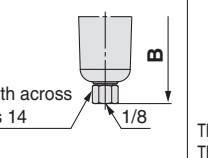
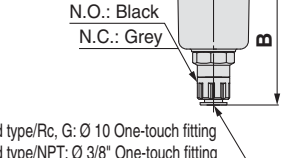


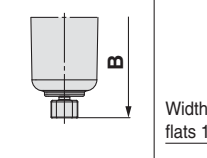
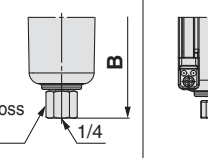


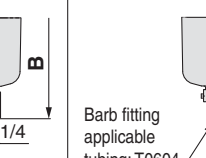

Filter Regulator **AW10-A Series**

Filter Regulator **AW20-B to AW60-B Series**

Filter Regulator with Backflow Function **AW20K-B to AW60K-B Series**

Option	Square embedded type pressure gauge	Digital pressure switch	Round type pressure gauge	Round type pressure gauge (with colour zone)
Dimensions				

Applicable model	AW10-A/AW20(K)-B		AW20(K)-B		AW30(K)-B to AW60(K)-B
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	AW30(K)-B to AW60(K)-B					
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							
												Square embedded type pressure gauge	Digital pressure switch		Round type pressure gauge		Round type pressure gauge (with colour zone)		
	P ₁	P ₂	A	B	C*1	D	E	F	G	J	K	H	J	H	J	H	J	H	J
AW10-A	M5 x 0.8	1/16	25	59.9	47.4	12.5	—	M18 x 1	25	12.5	—	—	—	—	—	∅ 26	26	—	—
AW20(K)-B	1/8, 1/4	1/8	40	87.6	72.4	26	—	M28 x 1	40	26	5	□28	27	□27.8	37.5	∅ 37.5	62.5	∅ 37.5	63.5
AW30(K)-B	1/4, 3/8	1/8	53	115.1	85.6	29.4	30	M38 x 1.5	55	29.4	3.5	□28	30.4	□27.8	40.9	∅ 37.5	65.9	∅ 37.5	66.9
AW40(K)-B	1/4, 3/8, 1/2	1/8	70	147.1	91.7	37.3	38.4	M42 x 1.5	80	37.3	1.5	□28	38.3	□27.8	48.8	∅ 42.5	74.8	∅ 42.5	74.8
AW40(K)-06-B	3/4	1/8	75	149.1	93.2	37.3	38.4	M42 x 1.5	80	37.3	1.2	□28	38.3	□27.8	48.8	∅ 42.5	74.8	∅ 42.5	74.8
AW60(K)-B	3/4, 1	1/8	95	234.1	175.5	43.3	47.5	—	20	43.3	3.2	□28	44.3	□27.8	61.3	∅ 42.5	80.8	∅ 42.5	80.8

Model	Optional specifications											Semi-standard specifications							
	Bracket mount						Panel mount					With auto drain	With barb fitting	With drain guide	Metal bowl	Metal bowl with drain guide	Metal bowl with level gauge	Metal bowl with level gauge, with drain guide	
	M	N	Q	R	S	T	U	V	W	Y	Z	B	B	B	B	B	B	B	
AW10-A	25	28	30	4.5	6.5	40	2	18	18.5	—	—	77.9	—	—	59.3	—	—	—	
AW20(K)-B	30	34	43.9	5.4	15.4	55	2.3	29.7	28.5	14	6	104.9	—	91.4	87.4	93.9	—	—	
AW30(K)-B	41	40	45.8	6.5	8	53	2.3	31.1	38.5	19	7	156.8	123.6	121.9	117.6	122.1	137.6	142.1	
AW40(K)-B	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7	186.9	155.6	153.9	149.6	154.1	169.6	174.1	
AW40(K)-06-B	50	54	55.5	8.5	10.5	70	2.3	37	42.5	21	7	188.9	157.6	155.9	151.6	156.1	171.6	176.1	
AW60(K)-B	70	66	65.8	11	13	90	3.2	—	—	—	—	273.9	240.9	242.6	236.6	241.1	256.6	261.1	

*1 The dimension of C is the length when the filter regulator knob is unlocked.

AC
 AF+AR+AL
 AW+AL
 AF+AR
 AF+AFM+AR
 AW+AFM
 Attachment
 AF
 AFM/AFD
 AR
 AL
 AW