Modular Type
Filter Regulators
Series AW

	Model	Port size	Options
Filter Regulator Series AW **Pages 516 through to 527**	**AW10**	M5 x 0.8	Bracket Float type auto drain Square embedded type pressure gauge (except the AW10) Round type pressure gauge Digital pressure switch (except the AW10) Panel mount (except the AW60 (K))
	AW20	1/8, 1/4	
	AW30	1/4, 3/8	
	AW40	1/4, 3/8, 1/2	
	AW40-06	3/4	
	AW60	3/4, 1	
Filter Regulator with Backflow Function Series AW□K **Pages 516 through to 527**	**AW20K**	1/8, 1/4	
	AW30K	1/4, 3/8	
	AW40K	1/4, 3/8, 1/2	
	AW40K-06	3/4	
	AW60K	3/4, 1	
Mist Separator Regulator Series AWM **Pages 528 through to 537**	**AWM20**	1/8, 1/4	
	AWM30	1/4, 3/8	
	AWM40	1/4, 3/8, 1/2	
Micro Mist Separator Regulator Series AWD **Pages 528 through to 537**	**AWD20**	1/8, 1/4	
	AWD30	1/4, 3/8	
	AWD40	1/4, 3/8, 1/2	

Filter Regulator

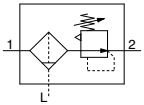
AW10 to AW60

Filter Regulator with Backflow Function

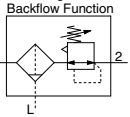
AW20K to AW60K

Symbol

Filter Regulator

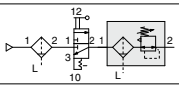


Filter Regulator with Backflow Function



- **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

AW 30 K – □ 03 BE – □ – □

❶ ❷ ❸ ❹ ❺ ❻

- **Made to Order**
  Refer to pages 524 through to 527 for details.

- 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

			Symbol	Description	❶ Body size 10	20	30	40	60
❷	With backflow function		Nil	Without backflow function	●	●	●	●	●
			K Note 1)	With backflow function	—	●	●	●	●
			+						
❸	Thread type		Nil	Metric thread (M5)	●	—	—	—	—
				Rc	—	●	●	●	●
			N Note 2)	NPT	—	●	●	●	●
			F Note 3)	G	—	●	●	●	●
			+						
❹	Port size		M5	M5	●	—	—	—	—
			01	1/8	—	●	—	—	—
			02	1/4	—	●	●	●	—
			03	3/8	—	—	●	●	—
			04	1/2	—	—	—	●	—
			06	3/4	—	—	—	●	●
			10	1	—	—	—	—	●
			+						
❺	Option Note 4)	a Mounting	Nil	Without mounting option	●	●	●	●	●
			B Note 5)	With bracket	●	●	●	●	●
			H	With set nut (for panel fitting)	●	●	●	●	—
			+						
		b Float type auto drain	Nil	Without auto drain	●	●	●	●	●
			C	Float type auto drain (N.C.)	●	●	●	●	●
			D	Float type auto drain (N.O.)	—	—	●	●	●
			+						
		c Pressure gauge	Nil	Without pressure gauge	●	●	●	●	●
			E	Square embedded type pressure gauge (with limit indicator)	—	●	●	●	●
			G	Round type pressure gauge (without limit indicator)	●	—	—	—	—
				Round type pressure gauge (with limit indicator)	—	●	●	●	●
			M	Round type pressure gauge (with color zone)	—	●	●	●	●
		c Digital pressure switch	E1 Note 6)	Output: NPN output / Electrical entry: Wiring bottom entry	—	●	●	●	●
			E2 Note 6)	Output: NPN output / Electrical entry: Wiring top entry	—	●	●	●	●
			E3 Note 6)	Output: PNP output / Electrical entry: Wiring bottom entry	—	●	●	●	●
			E4 Note 6)	Output: PNP output / Electrical entry: Wiring top entry	—	●	●	●	●
			+						
❻	Semi-standard	d Set pressure	Nil Note 7)	0.05 to 0.85 MPa setting	●	●	●	●	●
			1 Note 8)	0.02 to 0.2 MPa setting	●	●	●	●	●
			+						
		e Bowl Note 9)	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	—	●	—	—	—

AW20, AW20K **AW40, AW40K**

		Symbol	Description	❶ Body size 10	20	30	40	60
❻ Semi-standard	f Drain port Note 10)	Nil	With drain cock	●	●	●	●	●
		J Note 11)	Drain guide 1/8	—	●	—	—	—
			Drain guide 1/4	—	—	●	●	●
		W Note 12)	Drain cock with barb fitting: For ø6 x ø4 nylon tube	—	—	●	●	●
	+							
	g Exhaust mechanism	Nil	Relieving type	●	●	●	●	●
		N	Non-relieving type	●	●	●	●	●
	+							
	h Flow direction	Nil	Flow direction: Left to right	●	●	●	●	●
		R	Flow direction: Right to left	●	●	●	●	●
	+							
	i Pressure unit	Nil	Name plate, caution plate for bowl, and pressure gauge in imperial units: MPa	●	●	●	●	●
		Z Note 13)	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	◯ Note 15)	◯ Note 15)	◯ Note 15)	◯ Note 15)	◯ Note 15)
		ZA Note 14)	Digital pressure switch: With unit conversion function	—	△ Note 16)	△ Note 16)	△ Note 16)	△ Note 16)

Note 1) The AW10 type comes with a backflow function as a standard feature. (K is not available.) When using the AW10 type as w/ backflow function, backflow may not occur with the set pressure 0.15 MPa or less. For AW20K to AW60K, Please set the inlet pressure to at least 0.05 MPa higher than the set pressure.
Note 2) Drain guide is NPT 1/8 (applicable to the AW20(K)) and NPT 1/4 (applicable to the AW30(K) to AW60(K)). The auto drain port comes with ø3/8" one-touch fitting (applicable to the AW30(K) to AW60(K)).
Note 3) Drain guide is G 1/8 (applicable to the AW20(K)) and G 1/4 (applicable to the AW30(K) to AW60(K)).
Note 4) Option B, G, H, M are not assembled and supplied loose at the time of shipment.
Note 5) Assembly of a bracket and set nuts (AW10, AW20(K) to AW40(K))
Including 2 mounting screws for the AW60(K)
Note 6) 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.
Note 7) Only the AW10 has a pressure setting of 0.05 to 0.7 MPa.
Note 8) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.2 MPa pressure gauge will be fitted.
Note 9) Refer to Chemical Data on page 365 when selecting a case material.
Note 10) Float type auto drain: The combination of C and D is not possible.
Note 11) Without a valve function
Note 12) Metal bowl: The combination of 2 and 8 is not possible.
Note 13) 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.) The digital pressure switch will be equipped with the unit conversion function, setting to psi initially. The combination of the round type pressure gauge with color zone "M" and a psi display "Z" is not orderable as a standard product. However, this combination is available as a special.
Note 14) For options: E1, E2, E3, E4. This product is for overseas use only according to the new Measurement Law. (The SI unit is provided for use in Japan.)
Note 15) ◯: For thread type: M5 and NPT only
Note 16) △: Select with options: E1, E2, E3, E4.

Standard Specifications

Model	AW10	AW20(K)	AW30(K)	AW40(K)	AW40(K)-06	AW60(K)
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
Pressure gauge port size Note 1)	1/16 Note 2)	1/8		1/4		
Fluid	Air					
Ambient and fluid temperature Note 3)	–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	0.05 to 0.85 MPa				
Relief pressure Note 4)	Set pressure + 0.05 MPa [at relief flow rate of 0.1 L/min (ANR)]					
Nominal filtration rating	5 μm					
Drain capacity (cm³)	2.5	8	25	45	45	45
Bowl material	Polycarbonate					
Bowl guard	—	Semi-standard	Standard			
Construction	Relieving type					
Weight (kg)	0.09	0.20	0.40	0.72	0.75	2.00

Note 1) Pressure gauge connection threads are not available for F.R.L. unit with a square embedded type pressure gauge (AW20(K) to AW60(K)).
Note 2) Use a bushing (part no:131368) when connecting the R1/8 pressure gauge to the Rc 1/16.
Note 3) –5 to 50°C for the products with the digital pressure switch
Note 4) Not applicable to the AW10.

Options/Part No.

Optional specifications			Model					
			AW10	AW20(K)	AW30(K)	AW40(K)	AW40(K)-06	AW60(K)
Bracket assembly Note 1)			AR10P-270AS	AW20P-270AS	AR30P-270AS	AR40P-270AS		AW60P-270AS Note 6)
Set nut			AR10P-260S	AR20P-260S	AR30P-260S	AR40P-260S		— Note 7)
Pressure gauge	Round type Note 2)	Standard	G27-10-R1	G36-10-□01		G46-10-□02		
		0.02 to 0.2 MPa setting	G27-10-R1 Note 3)	G36-2-□01		G46-2-□02		
	Round type Note 2) (with color zone)	Standard	—	G36-10-□01-L		G46-10-□02-L		
		0.02 to 0.2 MPa setting	—	G36-2-□01-L		G46-2-□02-L		
	Square embedded type Note 4)	Standard	—	GC3-10AS [GC3P-010AS (Pressure gauge cover only)]				
		0.02 to 0.2 MPa setting	—	GC3-2AS [GC3P-010AS (Pressure gauge cover only)]				
Digital pressure Note 5) switch		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)]				
Float type auto drain Note 8) Note 9)		N.C.	AD17	AD27	AD37	AD47		
		N.O.	—	—	AD38	AD48		

Semi-standard/Bowl Assembly Part No.

Semi-standard specifications						Model					
Bowl material	Float type auto drain Note 8) Note 9)		With drain guide Note 9)	With barb fitting	With bowl guard	AW10	AW20(K)	AW30(K)	AW40(K)	AW40(K)-06	AW60(K)
	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 set nuts
Note 2) □ in part numbers for a round pressure gauge indicates a type of connection thread. No indication is necessary for R; however, indicate N for NPT. Please contact SMC regarding the connection thread NPT and pressure gauge supply for psi unit specifications.
Note 3) Standard pressure gauge
Note 4) Including one O-ring and 2 mounting screws. [ ]: Pressure gauge cover only
Note 5) Lead wire with connector (2 m), adapter, lock pin, O-ring (1 pc.), mounting screw (2 pcs.) are attached. [ ]: Switch body only. Also, regarding how to order the digital pressure switch, please refer to page 538. A pressure switch adapter assembly (AW60P-310AS) will be additionally required for the AW60(K) only. Use the attached mounting screw (M3 x 0.5 x 14) for mounting. The mounting screw (M3 x 0.5 x 7) attached to the digital pressure switch assembly will not be required.
Note 6) Assembly of a bracket and 2 mounting screws
Note 7) Please consult SMC regarding the set nuts for the AW60(K).
Note 8) Minimum operating pressure: N.O. type–0.1 MPa; N.C. type–0.1 MPa (AD27) and 0.15 MPa (AD37/47). Please contact SMC for psi and °F unit specifications.
Note 9) Please consult SMC for details on drain piping to fit NPT or G port sizes.
Note) • Bowl O-ring is included for the AW20(K) to AW60(K).
• Bowl assembly for the AW30(K) to AW60(K) models comes with a bowl guard (steel band material). (except when the bowl material is metal)

Series AW10 to AW60
Series AW20K to AW60K
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.

Selection

⚠ Warning

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

Maintenance

⚠ 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.

Mounting and Adjustment

⚠ Warning

1. 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.
2. The pressure gauge included with regulators for 0.02 to 0.2 MPa setting is for up to 0.2 MPa use only (except the AW10). Exceeding 0.2 MPa of pressure can damage the gauge.
3. Do not use tools on the pressure regulator knob as this may cause damage. It must be operated manually.

⚠ Caution

1. 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).

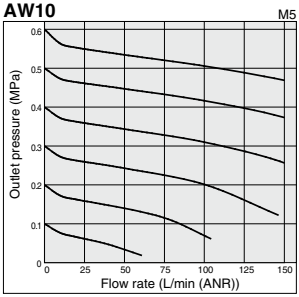
2. A knob cover is available to prevent careless operation of the knob. Refer to page 539 for details.

Flow Characteristics (Representative values)

Condition: Inlet pressure 0.7 MPa

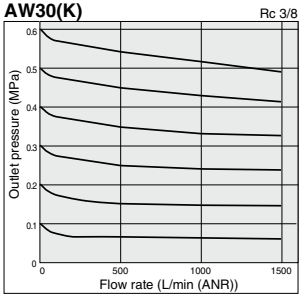
AW10

M5



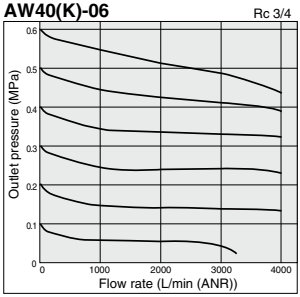
AW30(K)

Rc 3/8



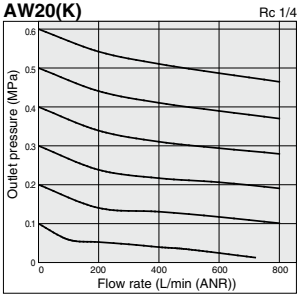
AW40(K)-06

Rc 3/4



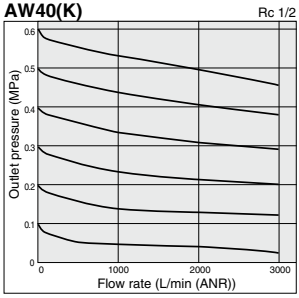
AW20(K)

Rc 1/4



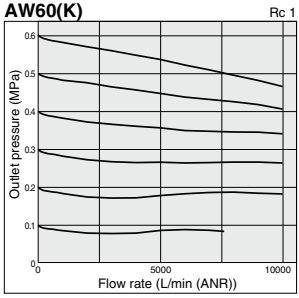
AW40(K)

Rc 1/2



AW60(K)

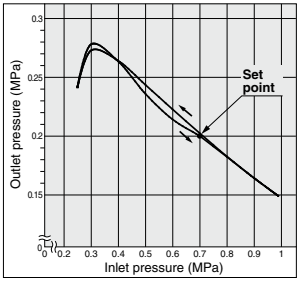
Rc 1



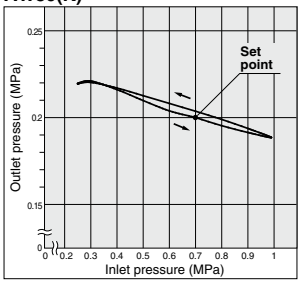
Pressure Characteristics (Representative values)

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

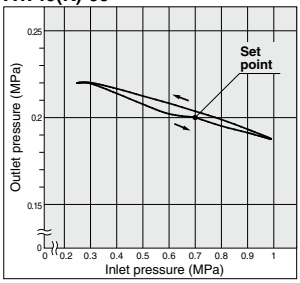
AW10



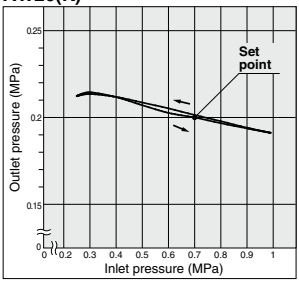
AW30(K)



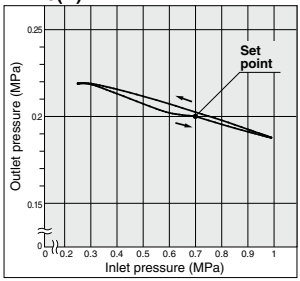
AW40(K)-06



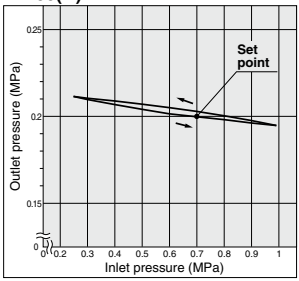
AW20(K)



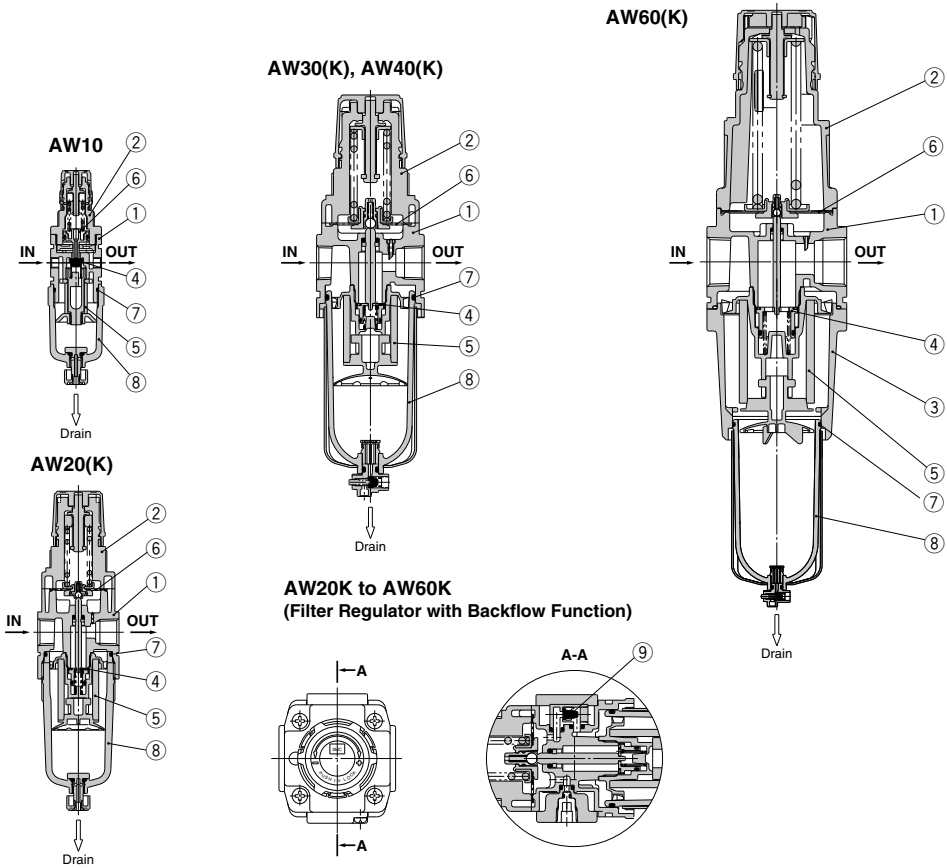
AW40(K)



AW60(K)



Construction



Component Parts

No.	Description	Material	Model	Color
1	**Body**	Zinc die-cast	AW10	Platinum silver
		Aluminum die-cast	AW20(K) to AW60(K)	
2	**Bonnet**	Polyacetal	AW10 to AW40(K)	Black
		Aluminum die-cast	AW60(K)	
3	**Housing**	Aluminum die-cast	AW60(K)	Platinum silver

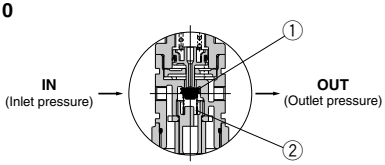
Replacement Parts

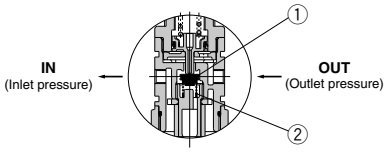
No.	Description	Material	Part no.					
			AW10	**AW20(K)**	**AW30(K)**	**AW40(K)**	**AW40(K)-06**	**AW60(K)**
4	**Valve assembly**	Brass, HNBR	AR10P-090S	AW20P-340AS	AW30P-340AS	AW40P-340AS		AW60P-090AS
5	**Filter element**	Non-woven fabric	AF10P-060S	AF20P-060S	AF30P-060S	AF40P-060S		AW60P-060S
6	**Diaphragm assembly**	Weatherable NBR	AR10P-150AS Note 1)	AR20P-150AS	AR30P-150AS	AR40P-150AS		AR50P-150AS
7	**Bowl O-ring**	NBR	C1SFP-260S	C2SFP-260S	C3SFP-260S	C4SFP-260S		
8	**Bowl assembly** Note 2)	Polycarbonate	C1SF	C2SF	C3SF Note 3)	C4SF Note 3)		
9	**Check valve assembly** Note 4)	—	—	AR20KP-020AS				

Note 1) The AW10 is a piston type. Assembly of a piston and a seal (KSYP-13).
Note 2) Bowl O-ring is included for the AW20(K) to AW60(K). Please contact SMC regarding the bowl assembly supply for psi and °F unit specifications.
Note 3) Bowl assembly for the AW30(K) to AW60(K) models comes with a bowl guard (steel band material).
Note 4) Check valve assembly is applicable for a filter regulator with backflow function (AW20K to AW60K) only.
Assembly of a check valve cover, check valve body assembly and 2 screws

Working Principle (Filter Regulator with Backflow Function)

AW10





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, valve ① may not open due to the valve spring ② force.

AW20K to AW60K

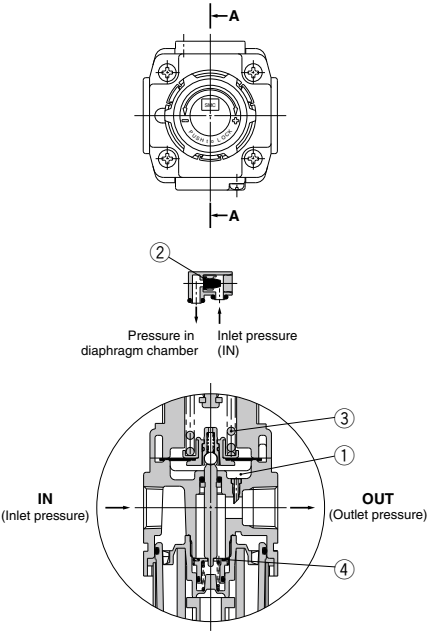


Figure 1 Normal

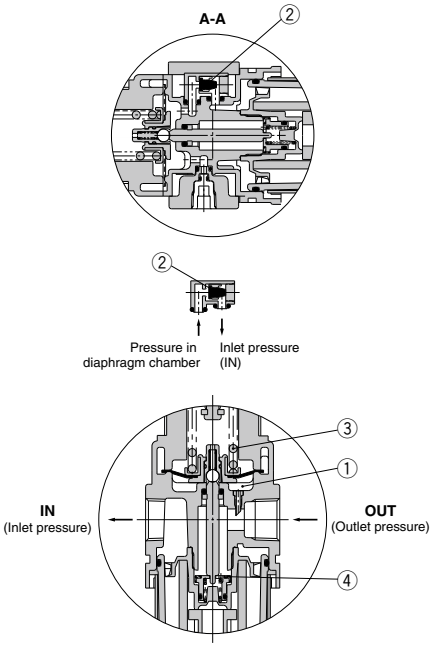
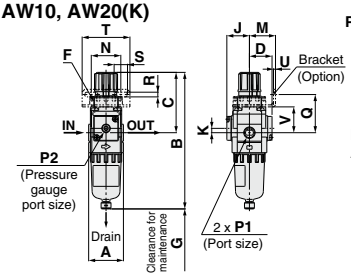


Figure 2 Backflow

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 pressure regulator spring ③ lifts the diaphragm. Valve ④ opens through the stem, and the outlet pressure is released to the inlet side (Figure 2).

Dimensions

AW10, AW20(K)



Panel fitting dimension

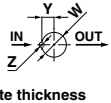
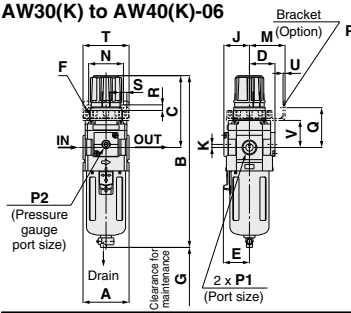


Plate thickness
AW10, AW20(K): Max. 3.5

AW30(K) to AW40(K)-06



Panel fitting dimension

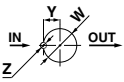
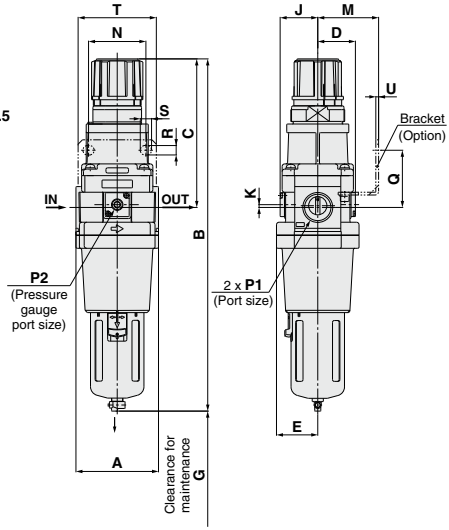
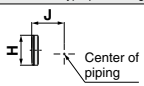
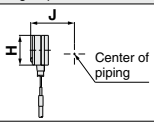
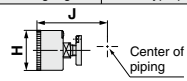
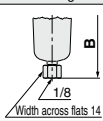
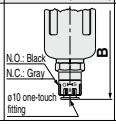
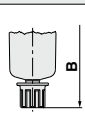
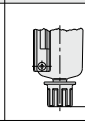
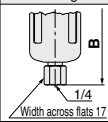
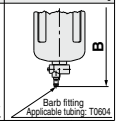


Plate thickness
AW30(K): Max. 3.5
AW40(K): Max. 5

AW60(K)



Applicable model	AW20(K) to AW60(K)		AW10, AW20(K) to AW60(K)	AW20(K) to AW60(K)
Option	Square embedded type pressure gauge	Digital pressure switch	Round type pressure gauge	Round type pressure gauge (with color zone)
Dimensions				

Applicable model	AW10, AW20(K)		AW20(K)	AW30(K) to AW60(K)				
Optional/Semi-standard specifications	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								

Model	Standard specifications											Optional specifications							
												Square type pressure gauge		Digital pressure switch		Round type pressure gauge		Round type pressure gauge (with color zone)	
	P1	P2	A	B Note)	C	D	E	F	G	J	K	H	J	H	J	H	J	H	J
AW10	M5 x 0.8	1/16	25	108	48	12.5	—	M18 x 1	25	12.5	0	—	—	—	—	ø26	26	—	—
AW20(K)	1/8, 1/4	1/8	40	160	73	26	—	M28 x 1	40	26	5	□28	27	□27.8	37.5	ø37.5	62.5	ø37.5	63
AW30(K)	1/4, 3/8	1/8	53	201	86	29.5	30	M38 x 1.5	55	29.5	3.5	□28	30.5	□27.8	41	ø37.5	66	ø37.5	66
AW40(K)	1/4, 3/8, 1/2	1/4	70	239	92	37.5	38	M42 x 1.5	80	37.5	1.5	□28	38.5	□27.8	49	ø42.5	76	ø42.5	76
AW40(K)-06	3/4	1/4	75	242	93	37.5	38	M42 x 1.5	80	37.5	1.2	□28	38.5	□27.8	49	ø42.5	76	ø42.5	76
AW60(K)	3/4, 1	1/4	95	409	175	43.5	47.5	—	20	43.5	3.2	□28	44.5	□27.8	61.5	ø42.5	82	ø42.5	84

Model	Optional specifications												Semi-standard specifications			
	Bracket mount							Panel mount				With auto drain	With barb fitting	With drain guide	Metal bowl	Metal bowl with level gauge
	M	N	Q	R	S	T	U	V	W	Y	Z	B Note)	B Note)	B Note)	B Note)	B Note)
AW10	25	28	30	4.5	6.5	40	2	18	18.5	—	—	125	—	—	107	—
AW20(K)	30	34	44	5.4	15.4	55	2.3	30	28.5	14	6	177	—	164	160	—
AW30(K)	41	40	46	6.5	8	53	2.3	31	38.5	19	7	242	209	208	214	234
AW40(K)	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7	278	247	246	252	272
AW40(K)-06	50	54	56	8.5	10.5	70	2.3	37	42.5	21	7	282	251	249	255	275
AW60(K)	70	66	66	11	13	90	3.2	—	—	—	—	448	417	416	422	442

Note) The total length of B dimension is the length when the filter regulator knob is unlocked.

Filter Regulator
AW20 to AW60
Made to Order Specifications:

Made to Order

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 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	FKM
	Main parts	Metal (Aluminum die-cast), etc.	

AW30-03G-2-X440

Applicable Model

Model	AW30	AW40	AW40-06	AW60
Port size	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1

AW 30 – ☐ 03 BG – 2 ☐ – X430

❶ ❷ ❸ ❹ ❺ ❻

For high/low temperature

X430	Low temperature
X440	High temperature

- Option/Semi-standard: Select one each for **a** to **g**.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.

Example) AW30-03BG-2N-X430

			Symbol	Description	❶ Body size 30	40	60
❷	Thread type		**Nil**	Rc	●	●	●
			N	NPT	●	●	●
			F	G	●	●	●
			+				
❸	Port size		**02**	1/4	●	●	—
			03	3/8	●	●	—
			04	1/2	—	●	—
			06	3/4	—	●	●
			10	1	—	—	●
			+				
❹ Option Note 1)	a	Mounting	**Nil**	Without mounting option	●	●	●
			B Note 2)	With bracket	●	●	●
			H	With set nut (for panel fitting)	●	●	—
			+				
	b	Pressure gauge	**Nil**	Without pressure gauge	●	●	●
			G Note 3)	Round type pressure gauge (without limit indicator)	●	●	●
			+				
❺	Bowl Note 4)		**2**	Metal bowl	●	●	●
			+				
❻ Semi-standard	c	Set pressure	**Nil**	0.05 to 0.85 MPa setting	●	●	●
			1 Note 5)	0.02 to 0.2 MPa setting	●	●	●
			+				
	d	Drain port	**Nil**	With drain cock	●	●	●
			J Note 6)	Drain guide 1/4	●	●	●
			+				
	e	Exhaust mechanism	**Nil**	Relieving type	●	●	●
			N	Non-relieving type	●	●	●
			+				
	f	Flow direction	**Nil**	Flow direction: Left to right	●	●	●
			R	Flow direction: Right to left	●	●	●
			+				
	g	Pressure unit	**Nil**	Name plate, caution plate for bowl, and pressure gauge in imperial units: MPa	●	●	●
			Z Note 7)	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○ Note 8)	○ Note 8)	○ Note 8)

Note 1) Option B, G, H are not assembled and supplied loose at the time of shipment.
Note 2) Assembly of a bracket and set nuts (AW30 to AW40)
Including 2 mounting screws for the AW60
Note 3) Mounting thread for pressure gauge: 1/8 for the AW30, 1/4 for the AW40 and AW60. Pressure gauge type: G43
Note 4) Only metal bowl 2 is available.
Note 5) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.2 MPa pressure gauge will be fitted.
Note 6) Without a valve function
Note 7) 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 8) ○: For thread type: NPT only

② High Pressure

Strong materials are used in the manufacturing of air filters intended for high pressure operation. Also, construction modification allows a wider regulating pressure range.

Specifications

Made-to-order part no.	-X425
Proof pressure (MPa)	3.0
Maximum operating pressure (MPa)	2.0
Set pressure range (MPa)	0.1 to 1.7
Ambient and fluid temperature (°C)	–5 to 60°C (with no freezing)

Applicable Model

Model	AW20	AW30	AW40	AW40-06	AW60
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1

AW30-03-2-X425

AW 30 – □ 03 BG – 2 □ – X425

❶ ❷ ❸ ❹ ❺ ❻

For high pressure

- 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) AW30-03BG-2N-X425

		Symbol	Description	❶ Body size 20	30	40	60
❷	Thread type	**Nil**	Rc	●	●	●	●
		N	NPT	●	●	●	●
		F	G	●	●	●	●
		+					
❸	Port size	**01**	1/8	●	—	—	—
		02	1/4	●	●	●	—
		03	3/8	—	●	●	—
		04	1/2	—	—	●	—
		06	3/4	—	—	●	●
		10	1	—	—	—	●
		+					
❹ Option Note 1)	a Mounting	**Nil**	Without mounting option	●	●	●	●
		B Note 2)	With bracket	●	●	●	●
		H	With set nut (for panel fitting)	●	●	●	—
		+					
	b Pressure gauge	**Nil**	Without pressure gauge	●	●	●	●
		G Note 3)	Round type pressure gauge (with limit indicator)	●	●	●	●
		+					
❺	Bowl Note 4)	**2**	Metal bowl	●	●	●	●
		8	Metal bowl with level gauge	—	●	●	●
		+					
❻ Semi-standard	c Exhaust mechanism	**Nil**	Relieving type	●	●	●	●
		N	Non-relieving type	●	●	●	●
		+					
	d Drain port	**Nil**	With drain cock	●	●	●	●
		J Note 5)	Drain guide 1/8	●	—	—	—
			Drain guide 1/4	—	●	●	●
		+					
	e Flow direction	**Nil**	Flow direction: Left to right	●	●	●	●
		R	Flow direction: Right to left	●	●	●	●
		+					
	f Pressure unit	**Nil**	Name plate, caution plate for bowl, and pressure gauge in imperial units: MPa	●	●	●	●
		Z Note 6)	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○ Note 7)	○ Note 7)	○ Note 7)	○ Note 7)

Note 1) Option B, G, H are not assembled and supplied loose at the time of shipment.
Note 2) Assembly of a bracket and set nuts (AW20 to AW40)
Including 2 mounting screws for the AW60
Note 3) Mounting thread for pressure gauge: 1/8 for the AW20 and AW30, 1/4 for the AW40 and AW60. Pressure gauge type: G46-20-□
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

Filter Regulator *AW10 to AW60*
Filter Regulator with Backflow Function *AW20K to AW60K*
Made to Order Specifications:

Made to Order

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

③ 0.4 MPa Setting

The maximum set pressure is 0.4 MPa. When a pressure gauge is included, the display will show a range from 0 to 0.4 MPa.

Specifications

Proof pressure	1.5 MPa
Maximum operating pressure	1.0 MPa
Set pressure range	0.05 to 0.4 MPa

Applicable Model

Model	AW10	AW20(K)	AW30(K)	AW40(K)	AW40(K)-06	AW60(K)
Port size	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1

④ Long Bowl

Drain capacity is greater than that of standard models.

Applicable Model/Drain Capacity

Model	AW10	AW20(K)	AW30(K)	AW40(K)	AW40(K)-06	AW60(K)
Port size	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1
Drain capacity (cm³)	9	19	43	88		

Note) Please consult SMC for dimensions.

How to Order

AW 30 ❶ ❷ – ❸ 03 ❹ ❺ – ❻ – X406

X406	0.4 MPa setting
X64	Long bowl

- 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) AW30K-03BE-2N-X406

		Symbol	Description	0.4 MPa Setting ❶ Body size 10	20	30	40	60	Long Bowl ❶ Body size 10	20	30	40	60
❷	With backflow function	**Nil**	Without backflow function	●	●	●	●	●	●	●	●	●	●
		K Note 1)	With backflow function	–	●	●	●	●	–	●	●	●	●
		+											
❸	Thread type	**Nil**	Metric thread (M5)	●	–	–	–	–	●	–	–	–	–
			Rc	–	●	●	●	●	–	●	●	●	●
		N Note 2)	NPT	–	●	●	●	●	–	●	●	●	●
		F Note 3)	G	–	●	●	●	●	–	●	●	●	●
		+											
❹	Port size	**M5**	M5	●	–	–	–	–	●	–	–	–	–
		01	1/8	–	●	–	–	–	–	●	–	–	–
		02	1/4	–	●	●	●	–	–	●	●	●	–
		03	3/8	–	–	●	●	–	–	–	●	●	–
		04	1/2	–	–	–	●	–	–	–	–	●	–
		06	3/4	–	–	–	●	●	–	–	–	●	●
		10	1	–	–	–	–	●	–	–	–	–	●
		+											
❺ Note 4) Option	a Mounting	**Nil**	Without mounting option	●	●	●	●	●	●	●	●	●	●
		B Note 5)	With bracket	●	●	●	●	●	●	●	●	●	●
		H	With set nut (for panel fitting)	●	●	●	●	–	●	●	●	●	–
		+											
	b Float type auto drain	**Nil**	Without auto drain	●	●	●	●	●	–	–	–	–	–
		C	Float type auto drain (N.C.)	●	●	●	●	●	–	–	–	–	–
		D	Float type auto drain (N.O.)	–	–	●	●	●	–	–	–	–	–
		+											
	c Pressure gauge	**Nil**	Without pressure gauge	●	●	●	●	●	●	●	●	●	●
		E	Square embedded type pressure gauge (with limit indicator)	–	●	●	●	●	–	●	●	●	●
		G	Round type pressure gauge (without limit indicator)	●	–	–	–	–	●	–	–	–	–
			Round type pressure gauge (with limit indicator)	–	●	●	●	●	–	●	●	●	●
		M	Round type pressure gauge (with color zone)	–	●	●	●	●	–	●	●	●	●
	c Digital pressure switch	**E1** Note 6)	Output: NPN output / Electrical entry: Wiring bottom entry	–	●	●	●	●	–	●	●	●	●
		E2 Note 6)	Output: NPN output / Electrical entry: Wiring top entry	–	●	●	●	●	–	●	●	●	●
		E3 Note 6)	Output: PNP output / Electrical entry: Wiring bottom entry	–	●	●	●	●	–	●	●	●	●
		E4 Note 6)	Output: PNP output / Electrical entry: Wiring top entry	–	●	●	●	●	–	●	●	●	●

Note 1) The AW10 type comes with a backflow function as a standard feature. (K is not available.) When using the AW10 type as w/ backflow function, backflow may not occur with the set pressure 0.15 MPa or less. Please set the inlet pressure to at least 0.05 MPa higher than the set pressure.

Note 2) Drain guide is NPT 1/8 (applicable to the AW20(K)) and NPT 1/4 (applicable to the AW30(K) to AW60(K)). The auto drain port comes with ø3/8" One-touch fitting (applicable to the AW30(K) to AW60(K)).

Note 3) Drain guide is G 1/8 (applicable to the AW20(K)) and G 1/4 (applicable to the AW30(K) to AW60(K)).

Note 4) Option B, G, H, M are not assembled and supplied loose at the time of shipment.

Note 5) Assembly of a bracket and set nuts. (AW10, AW20(K) to AW40(K)). Including 2 mounting screws for the AW60(K)

Note 6) When choosing with H (panel mount), the installation space for lead wires will not be secured. In this case, select "wiring down entry" for the electrial entry.

			Symbol	Description	0.4 MPa Setting					Long Bowl				
					❶ Body size					❶ Body size				
					10	20	30	40	60	10	20	30	40	60
❻	Semi-standard	d	Set pressure	Nil Note 7)	0.05 to 0.85 MPa setting	–	–	–	–	–	●	●	●	●	●
				1 Note 8)	0.02 to 0.2 MPa setting	–	–	–	–	–	●	●	●	●	●
			+												
		e	Bowl Note 9)	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	–	●	–	–	–	–	●	–	–	–
			+												
		f	Drain port Note 10)	Nil	With drain cock	●	●	●	●	●	●	●	●	●	●
				J Note 11)	Drain guide 1/8	–	●	–	–	–	–	●	–	–	–
					Drain guide 1/4	–	–	●	●	●	–	–	●	●	●
				W Note 12)	Drain cock with barb fitting: For ø6 x ø4 nylon tube	–	–	●	●	●	–	–	●	●	●
			+												
		g	Exhaust mechanism	Nil	Relieving type	●	●	●	●	●	●	●	●	●	●
				N	Non-relieving type	●	●	●	●	●	●	●	●	●	●
			+												
		h	Flow direction	Nil	Flow direction: Left to right	●	●	●	●	●	●	●	●	●	●
				R	Flow direction: Right to left	●	●	●	●	●	●	●	●	●	●
			+												
		i	Pressure unit	Nil	Name plate, caution plate for bowl, and pressure gauge in imperial units: MPa	●	●	●	●	●	●	●	●	●	●
				Z Note 13)	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)	○ Note 15)
				ZA Note 14)	Digital pressure switch: With unit conversion function	–	△ Note 16)	△ Note 16)	△ Note 16)	△ Note 16)	–	△ Note 16)	△ Note 16)	△ Note 16)	△ Note 16)

Note 7) Only the AW10 has a pressure setting of 0.05 to 0.7 MPa.
Note 8) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.2 MPa pressure gauge will be fitted.
Note 9) Refer to Chemical Data on page 365 when selecting a case material.
Note 10) Float type auto drain: The combination of C and D is not possible.
Note 11) Without a valve function
Note 12) Metal bowl: The combination of 2 and 8 is not possible.
Note 13) 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.) The digital pressure switch will be equipped with the unit conversion function, setting to psi initially.
Note 14) For options: E1, E2, E3, E4. This product is for overseas use only according to the new Measurement Law. (The SI unit is provided for use in Japan.)
Note 15) ○: For thread type: M5 and NPT only
Note 16) △: Select with options: E1, E2, E3, E4.

Lubricator — How To Order — *Series* AL20 to 40

AL 20 — N 02 B — 2 Z - X480

- AL: Lubricator
- 20: Body Size
- N: NPT Threads
- 02: Port Size
- B: Accessories
- 2: Bowl
- Z: Name Plate, Caution Plate On Bowl in psi, °F
- X480: With External Epoxy Coating, Stainless Fasteners

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

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

Symbol	Description	Applicable Body Size
Nil	None	All
B*	Mounting Bracket	All

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

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

Filter – Regulator — How To Order — *Series* AW20 to 40

AW 30 — N 03 D 8 Z - X48

- AW: Filter - Regulator
- 30: Body Size
- N: NPT Threads
- 03: Port Size
- D: Accessories
- 8: Bowl
- Z: Name Plate in imperial Units (psi, °F)
- X48: With External Epoxy Coating Stainless Fasteners

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

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

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
H*	Panel Mount Nut	All

*Note: Bracket and/or panel mount nut are not assembled and are supplied loose at time of shipment.

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

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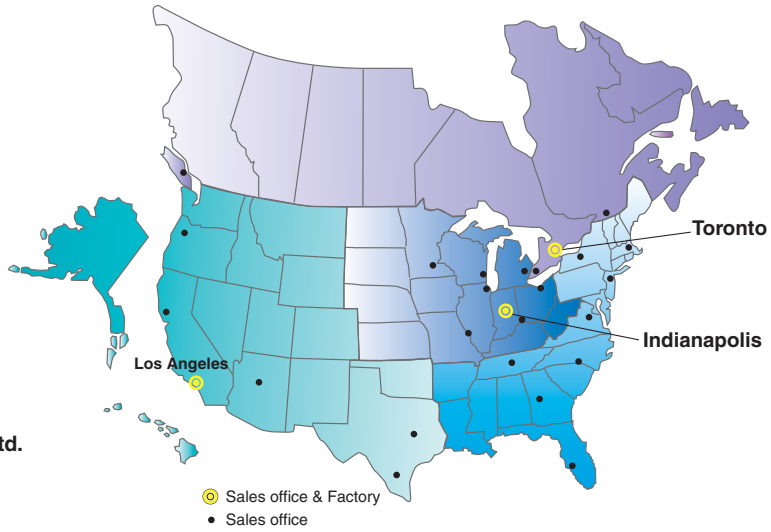

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