Modular F.R.L. Units



► Better visibility & environmental resistance

The bowl is covered with Double layer a transparent bowl guard! design

- The inside is visible from 360°.
- The bowl is completely protected from the environment. Safety improved



* Body size: 30 or more

Selection of pressure gauges



Square embedded type

pressure gauge



Round type

pressure gauge





switch

Interchangeability

Interchangeable with the previous AR series by panel mounting

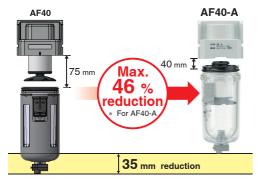
Easy replacement of the element

The element and the bowl are in one piece. Replacement can be done in hand.





Reduced required maintenance space





AR□K regulator with backflow function added.

New Made to order added.

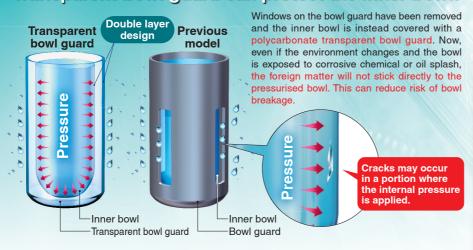
- Long bowl (-X64)
- 0.4 MPa setting (-X406)
- With element service indicator (-X2141)
- High pressure (-X425)
- Low temperature (-X430)
- High temperature (-X440)
- Clean series (10-)
- Copper, fluorine and silicone-free + Low particle generation (21-)



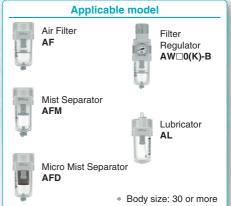


Transparent bowl guard

Better environmental resistance: Transparent bowl guard can protect the inner bowl!

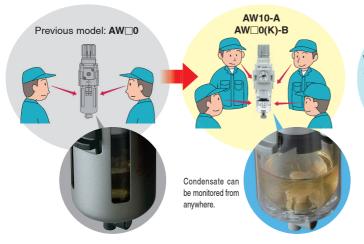






Better visibility: 360°

Use of transparent bowl guard makes it possible to check the condensate inside the filter bowl and the remaining oil amount in the lubricator from the entire periphery.



Light weight: Max. 90 g reduction * Except AW

AF40-A
Weight 360 g
Weight 450 g

Metal related corrosion does not occur.



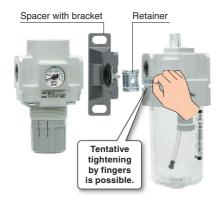
Resin body does not rust.

New Spacer

Modular connection

Step 1

- Mount the product by lining up the mating surface of the new spacer with bracket.
- Insert the retainer into the spacer bolt and tighten the nut. (temporary assembling)



Step ②

• Tighten the nut with the hexagon wrench.

Interchangeable with previous model

- Previous spacer can be connected to the new AF□-A, AR□(K)-B, AL□-A, AW□(K)-B series.



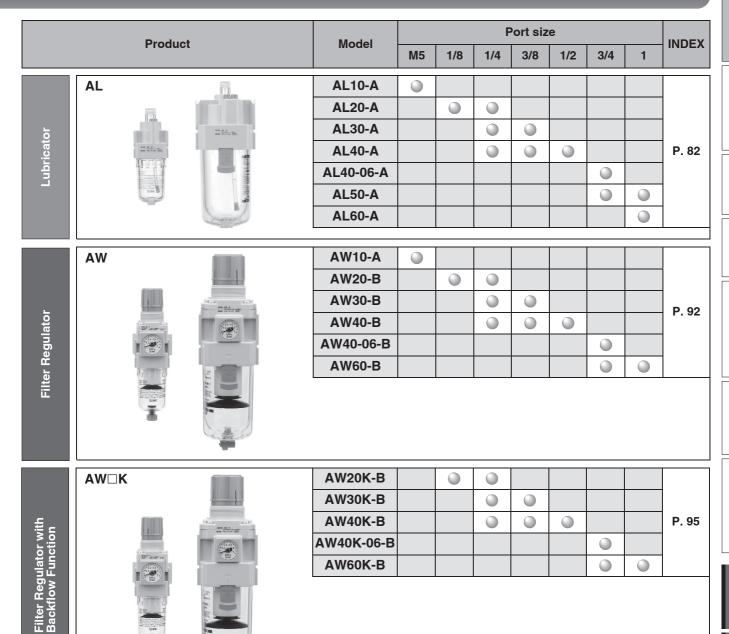


AC Series

Serie	s Configuration									
					P	ort siz	ze			
	Product	Model	M5	1/8	1/4	3/8	1/2	3/4	1	INDEX
	Air Filter + Regulator + Lubricator	AC10-A	0							
	AF AR AL	AC20-B		0	0					
		AC25-B				0				
		AC30-B								
		AC40-B								P. 7
		AC40-06-B								
		AC50-B						0		
		AC55-B								
		AC60-B							0	
	Filter Regulator + Lubricator	AC10A-A								
	AW AL	AC20A-B		0						
		AC30A-B				0				
		AC40A-B			0	0	0			P. 15
	This is	AC40A-06-B						0		
		AC50A-B						0	0	
		AC60A-B							0	
	Air Filter	AC10B-A	0							
ion	AF AR	AC20B-B		•						
nati		AC25B-B			0	0				
mbi		AC30B-B			0	0				
Air Combination		AC40B-B			0	0	0			P. 21
Air		AC40B-06-B AC50B-B						0		
		AC50B-B						0	0	
	-	AC60B-B							0	
				l _	_					
	Air Filter Mist Separator Regulator	AC20C-B		0	0					
	AF AFM AR	AC25C-B			0	0				D 07
		AC30C-B			0	0	0			P. 27
		AC40C-B			0	0	0	0		
		A0400-00-D								
	Last Last									
	Filter Regulator + Mist Separator	AC20D-B		0		_				
	AW AFM	AC30D-B								P. 31
		AC40D-B			0	0	0			
		AC40D-06-B								

Series Configuration

							F	ort siz	е			
		Produ	ct	Model	M5	1/8	1/4	3/8	1/2	3/4	1	INDEX
	AF		·	AF10-A	0							
				AF20-A		0	0					
		M20-02-8 	## 0-16-4 0-90 mer nor EMD	AF30-A			0	0				
ilter			***	AF40-A			0	0	0			P. 43
Air Filter		A SECTION OF THE PROPERTY OF T		AF40-06-A						0		1
				AF50-A						0	0	
				AF60-A							0	•
						•		•			•	•
	AFM			AFM20-A		0	0					
_		00000	###00-04-# (m) ONE care to the BEI	AFM30-A			0	0				P. 55
rato		MARCH TO A		AFM40-A			0	0	0			P. 55
eba				AFM40-06-A								
Mist Separator		Owc	Section 1									
Ē												
			-									
	AED			AFD20-A								
_	AFD			AFD20-A		0	0	0				
ıratc		APON - ST - A Section - Se	MOSI - 64 - A (975 - 985 -	AFD30-A			0	0				P. 55
Sepa				AFD40-A			0	0	0	0		
ist 6		Secretarian and American Ameri		AI D40-00-A						0		
Micro Mist Separator												
Mic												
	AR			AR10-A	0							
				AR20-B		0	0					-
				AR25-B			0	0				
Regulator		MP2 15 MP	23 C C C C C C C C C C C C C C C C C C C	AR30-B			0	0				
lnga		Cas Elec	ON THE PARTY OF TH	AR40-B			0	0	0			P.64
~ ~				AR40-06-B						0		-
				AR50-B						0	0	
				AR60-B							0	
	AR□K			AR20K-B		0	0					
				AR25K-B			0	0				-
ith				AR30K-B			0	0				-
r wi				AR40K-B			0	0	0			P.67
ulate			1 1 -	AR40K-06-B						0		-
Regulator with Backflow Function				AR50K-B							0	1
				AR60K-B							0	-
3				 								<u>I</u>



Simple Specials System

A system designed to respond quickly and easily to your special ordering needs



Short lead times

This system enables us to respond to your special needs, such as additional machining, accessory assembly, or modular unit, and deliver such special products as quickly as standard products.

Repeat orders

Once we receive a Simple Special part number from your previous order, we will process the order, manufacture the product, and deliver it to you.

Please contact your local sales representative for more details.

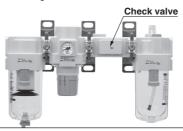


Attachment List

Check valve

Page 34

■A check valve with intermediate branch port can be easily installed to prevent a backflow of lubricant when branching the air flow and releasing the air on the outlet side of the regulator.

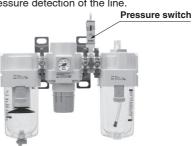


- · Air Filter + Regulator + Lubricator (AC20-B to AC40-B)
- · Filter Regulator + Lubricator (AC20A-B to AC40A-B)
- * Port size: Except 06

Pressure switch

Page 35

A compact integrated pressure switch can be easily installed and facilitates the pressure detection of the line.



- · Air Filter + Regulator + Lubricator (AC20-B to AC60-B)
- · Filter Regulator + Lubricator (AC20A-B to AC60A-B)
- · Air Filter + Regulator (AC20B-B to AC60B-B)
- · Air Filter + Mist Separator + Regulator (AC20C-B to AC60C-B)
 - · Filter Regulator + Mist Separator (AC20D-B to AC60D-B)

T-spacer

Page 35

■ Using a T-shaped spacer facilitates the branching of air flow.



- · Air Filter + Regulator + Lubricator (AC10-A to AC60-B)
- · Air Filter + Regulator (AC10B-A to AC60B-B)
- · Air Filter + Mist Separator + Regulator (AC20C-B to AC40C-B)

Pressure relief 3 port valve

Page 36

With the use of a pressure relief 3 port valve, pressure left in the line can be easily exhausted.





- Air Filter + Regulator + Lubricator (AC20-B to AC50-B)
- · Filter Regulator + Lubricator (AC20A-B to AC50A-B)
- · Air Filter + Regulator (AC20B-B to AC50B-B)
- Air Filter + Mist Separator + Regulator (AC20C-B to AC40C-B)
- Filter Regulator + Mist Separator (AC20D-B to AC40D-B)

Cross spacer

Page 36

■ Pipings are possible in all 4 directions.



* Needs to be ordered separately.

5

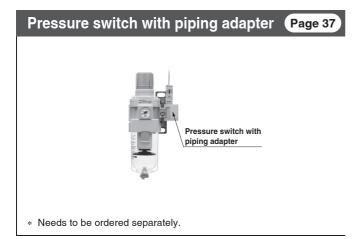
Piping adapter

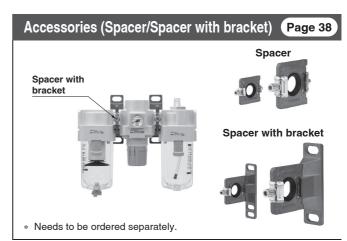
Page 37

A piping adapter allows installation/removal of the component without removing the piping and thus makes maintenance easier.

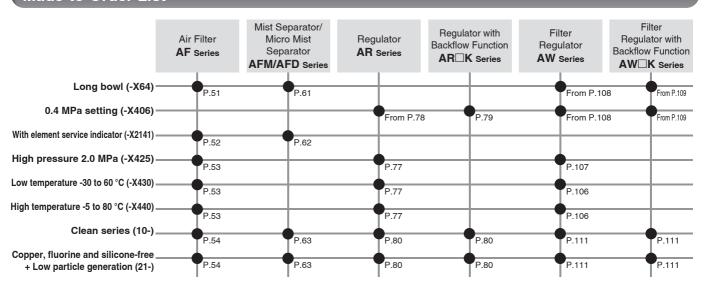


* Needs to be ordered separately.

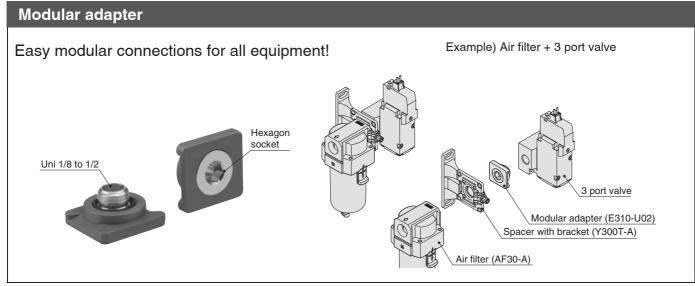




Made-to-Order List

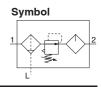


Related Product



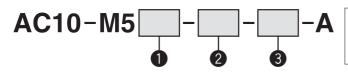


Air Filter + Regulator + Lubricator AC10-A



How to Order

Refer to page 9 for size 20 to 60.



- 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) AC10-M5CG-T-12NR-A

				Symbol	Description
		а	Float type auto drain	_	Without auto drain
	ے	a	r loat type auto drain	C*1	N.C. (Normally closed) Drain port is closed when pressure is not applied.
0	Option			+	
		b	Pressure gauge		Without pressure gauge
				G *2	Round type pressure gauge (without limit indicator)
				+	
2		Δt	tachment (T-spacer) *3	_	Without attachment
9		710	taorimoni (1 opacor)	Т	Mounting position: AF+ T +AR+AL
				+	
		С	Set pressure *4		0.05 to 0.7 MPa setting
		c Set pressure **		1	0.02 to 0.2 MPa setting
				+	
					Polycarbonate bowl
		d	Bowl *5	2	Metal bowl
				6	Nylon bowl
				+	
	lard	е	Lubricator lubricant	_	Without drain cock
8	Semi-standard		exhaust port	3	Lubricator with drain cock
•	mi-s			+	
	Sel	f	Exhaust mechanism		Relieving type
			Extraget moortamem	N	Non-relieving type
			+		
		g Flow direction	_	Flow direction: Left to right	
		9	g Flow direction	R	Flow direction: Right to left
			+		
		h Pressure unit		Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	
		"	i iossuio unii	Z	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F

^{*1} 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.

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

*3 The bracket position varies depending on the T-spacer mounting.

^{*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 46 for chemical resistance of the bowl.



Standard Specifications

	Air Filter [AF]	AF10-A				
Component	Regulator [AR]	AR10-A				
	Lubricator [AL]	AL10-A				
Port size		M5 x 0.8				
Pressure gauge	port size [AR]	1/16				
Fluid		Air				
Ambient and flui	d temperature	-5 to 60 °C (with no freezing)				
Proof pressure		1.5 MPa				
Maximum operat	ing pressure	1.0 MPa				
Set pressure ran	ge [AR]	0.05 to 0.7 MPa				
Nominal filtration	n rating [AF]	5 μm				
Recommended I	ubricant [AL]	Class 1 turbine oil (ISO VG32)				
Bowl material [A	F/AL]	Polycarbonate				
Construction [A	R]	Relieving type				
Weight [kg]		0.27				
		•				

⚠ Specific Product Precautions

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

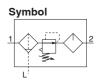
Selection

- 1. When releasing air at the intermediate position using a T-spacer on the inlet side of the lubricator, lubricant may back flow. Therefore, releasing air that does not contain traces of lubricant is not possible.
- 2. An F.R.L. unit shipped from the plant has its model number labelled. However, components that are combined together during the distribution process do not have a label on them.



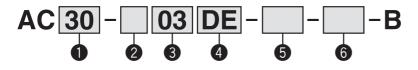
Air Filter + Regulator + Lubricator

AC20-B to AC60-B



How to Order

Refer to page 7 for size 10.



- Option/Semi-standard: Select one each for a to m.
- Option/Attachment/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AC30-F03DE1-KSTV-136NR-B

	_	_							0			
				Symbol	Description			В	ody siz	ze		
						20	25	30	40	50	55	60
				_	Rc		•	•	•	•	•	
2		Pipe	thread type	N*1	NPT	•	•	•	•	•	•	•
				F *2	G	•	•	•	•	•	•	•
				+					'			
				01	1/8	•	_	_	_	_	_	_
				02	1/4			•	•	_	_	_
3			Port size	03	3/8	_		•		_	_	_
9			1 011 3126	04	1/2	_	_	_	•	_	_	_
				06	3/4		_	_	•	•	_	_
				10	1		_	_		•	•	
				+								
		Float type		_	Without auto drain	•	•	•	•	•	•	•
		а	auto drain	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.	•	•	•	•	•	•	•
		auto drain		D *5	N.O. (Normally open) Drain port is open when pressure is not applied.		•	•	•	•	•	
				+								
	ლ *				Without pressure gauge		•	•	•	•	•	•
4	loi		Pressure	E	Square embedded type pressure gauge (with limit indicator)		•	•	•	•	•	•
	Option		gauge *6	G	Round type pressure gauge (with limit indicator)		•	•	•	•	•	•
		b		M	Round type pressure gauge (with colour zone)		•	•	•	•	•	•
	~		Digital	E1	Output: NPN output, Electrical entry: Wiring bottom entry		•	•	•	•	•	
			pressure	E2	Output: NPN output, Electrical entry: Wiring top entry	•	•	•	•	•	•	•
			switch	E3	Output: PNP output, Electrical entry: Wiring bottom entry		•	•	•	•	•	•
				E4	Output: PNP output, Electrical entry: Wiring top entry			•	•	•		
				+	Without attachment							
		С	Check valve	K	Mounting position: AF+AR+ K +AL				*7			
				+	Mounting position: AF+AR+R+AL				**			
			Pressure	T	Without attachment							
	aut	d	switch	S*8	Mounting position: AF+AR+S+AL							
6	Attachment		Ownon	+	Modifiling position. At TAILTOTAL							
9	tac				Without attachment			•			•	
	¥	е	T-spacer	T *8	Mounting position: AF+T+AR+AL							
				+	mounting position. 7 to 17 to							
			Pressure relief		Without attachment							
		f	3 port valve	V	Mounting position: AF+AR+AL+ V			•	•	•	_	_
			'	+	mounting position. 7th 17th 17th 17th							
			Set	_	0.05 to 0.85 MPa setting		•	•	•	•	•	
		g	pressure *9	1	0.02 to 0.2 MPa setting		•	•	•	•	•	•
	व		•	+	<u> </u>				_		_	
	Semi-standard u		_	Polycarbonate bowl			•	•		•		
6			2	Metal bowl		•	•	•	•	•	•	
	⊢i⊢		D 1×10	6	Nylon bowl	•	•	•	•	•	•	•
	Sei	h	Bowl *10	8	Metal bowl with level gauge		•	•	•	•	•	•
	S S			С	With bowl guard	•	*11	*11	*11	*11	*11	*11
			6C	With bowl guard (Nylon bowl)	•	*12	*12	*12	*12	*12	*12	
				*								

AF

Air Combination AC20-B to AC60-B Series



	\	_							0			
				Symbol	Description			В	ody siz	e		
						20	25	30	40	50	55	60
				_	With drain cock	•	•	•	•	•	•	
			Air filter	*14	Drain guide 1/8	•	_	_	_	_	_	
			drain port *13	3	Drain guide 1/4	_	•	•		•	•	
				W *15	Drain cock with barb fitting (for Ø 6 x Ø 4 nylon tube)	_	•		•	•	•	
				+								
		,	Lubricator lubricant	_	Without drain cock	•	•	•	•	•	•	•
	ard	J	exhaust port	3 *16	Lubricator with drain cock		•	•	•	•	•	
	Semi-standard			+								
6	sta	k	Exhaust		Relieving type	•	•	•	•	•	•	•
	Ä.		mechanism	N	Non-relieving type	•	•	•	•	•	•	•
	Se			+								
			Flow direction	_	Flow direction: Left to right	•	•	•	•	•	•	
			- low direction	R	Flow direction: Right to left	•	•	•	•	•	•	•
				+								
				_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	•	•	•	•	•
		m	Pressure unit	Z *17	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	O*19	O*19	O*19	O*19	O*19	O*19	○*19
				ZA *18	Digital pressure switch: With unit selection function	△*20	△*20	△*20	△*20	△*20	△*20	△*20
*1 D	rain o	uido	is NPT 1/8 (applicabl	lo to the A	C20-B) and pressure gauge will be fitted for standard (0.85 MPa)	-15 T	he com	hination	of mot	ما المصملات	0 and	O io not

- *1 Drain guide is NPT 1/8 (applicable to the AC20-B) and NPT 1/4 (applicable to the AC25-B to AC60-B). The auto drain port comes with O 3/8" One-touch fitting (applicable to the AC25-B to AC60-B).
- *2 Drain guide is G 1/8 (applicable to the AC20-B) and G 1/4 (applicable to the AC25-B to AC60-B).
- *3 Options G, M are not assembled and supplied loose at the time of shipment.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min[ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- *6 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.
- *7 Not available with piping port size: 06
- *8 The bracket position varies depending on the T-spacer or pressure switch mounting.
- Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.
- *10 Refer to chemical data on page 46 for chemical resistance of the bowl.
- 11 A bowl guard is provided as standard equipment (polycarbonate).
- *12 Å bowl guard is provided as standard equipment (nylon).
- *13 The combination of float type auto drain: C and D is not available.
- *14 Without a valve function

- *15 The combination of metal bowl: 2 and 8 is not available.
- *16 When choosing with W: Filter drain port, the drain cock of a lubricator will be with barb fittings.
- *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 O: For pipe thread type: NPT only
- *20 \triangle : Select with options: E1, E2, E3, E4.

ı	Model	AC20-B	AC25-B	AC30-B	AC40-B	AC40-06-B	AC50-B	AC55-B	AC60-B					
	Air Filter [AF]	AF20-A	AF30-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A	AF60-A					
Component	Regulator [AR]	AR20-B	AR25-B	AR30-B	AR40-B	AR40-06-B	AR50-B	AR50-B	AR60-B					
	Lubricator [AL]	AL20-A	AL30-A	AL30-A	AL40-A	AL40-06-A	AL50-A	AL60-A	AL60-A					
Port size	Port size		1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1	1					
Pressure gaug	ge port size [AR] *1	1/8												
Fluid					A	Air								
Ambient and	fluid temperature *2	-5 to 60 °C (with no freezing)												
Proof pressu	re	1.5 MPa												
Maximum op	erating pressure	1.0 MPa												
Set pressure	range [AR]	0.05 to 0.85 MPa												
Nominal filtra	ation rating [AF]				5	μm								
Recommende	ed lubricant [AL]			C	Class 1 turbine	oil (ISO VG32	2)							
Bowl materia	I [AF/AL]	Polycarbonate												
Bowl guard [AF/AL]	Semi-standard (Steel)			Stand	lard (Polycarbo	nate)							
Construction	[AR]				Relievi	ng type	•							
Weight [kg]		0.39	0.70	0.78	1.39	1.53	3.43	3.71	3.76					

^{*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.

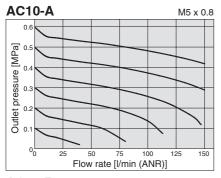


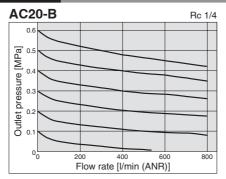
^{*2 -5} to 50 °C for the products with the digital pressure switch.

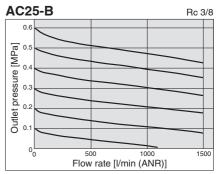
AC10-A Series AC20-B to AC60-B Series

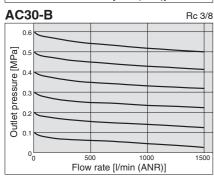
Flow Rate Characteristics (Representative values)

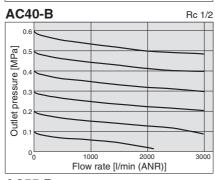
Condition: Inlet pressure of 0.7 MPa

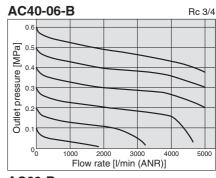


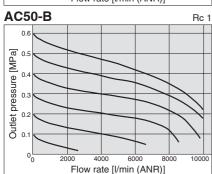


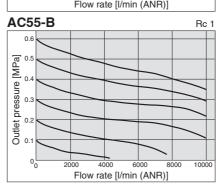


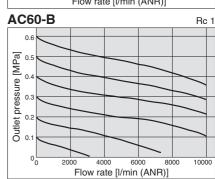






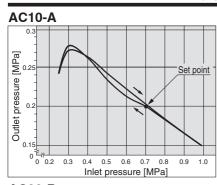


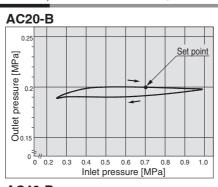


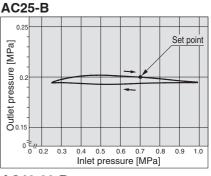


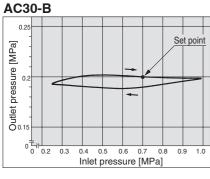
Pressure Characteristics (Representative values)

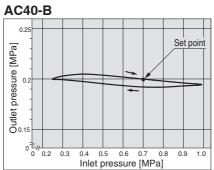
Conditions: Inlet pressure of 0.7 MPa, Outlet pressure of 0.2 MPa, Flow rate 20 l/min (ANR) $\,$

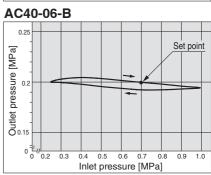








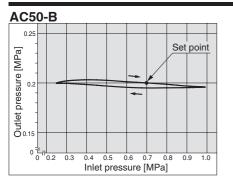


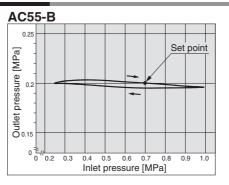


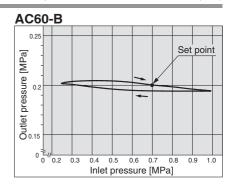
Air Combination AC10-A Series Air Combination AC20-B to AC60-B Series

Pressure Characteristics (Representative values)

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







⚠ 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

Piping

Marning

1. When mounting a check valve, make sure the arrow (IN side) points in the correct direction of air flow.

Air Supply

⚠ Caution

1. Use an air filter with 5 μm or less filtration rating on the inlet side of the valve to avoid any damage to the seat caused by dust when mounting a pressure relief 3 port valve on the inlet side.

Mounting/Adjustment

⚠ Caution

- A knob cover is available to prevent careless operation of the knob. Refer to page 112 for details.
- 2. When the bowl is installed on the air filter, filter regulator, lubricator, mist separator, or micro mist separator (AC25-B to AC60-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.



Selection

Marning

Float type auto drain
 Operate under the following conditions to a

Operate under the following conditions to avoid malfunction. <N.O. type>

Operating compressor: 0.75 kW (100 L/min (ANR)) or more.
 When using 2 or more auto drains, multiply the value above by the number of auto drains to find the capacity of the compressors you will need.

For example, when using 2 auto drains, 1.5 kW (200 L/min (ANR)) of the compressor capacity is required.

- · Operating pressure: 0.1 MPa or more
- <N.C. type>
- Operating pressure for AD27-A: 0.1 MPa or more
 Operating pressure for AD37-A/AD47-A: 0.15 MPa or more
- 2. Use a regulator or filter regulator with backflow function when mounting a pressure release 3 port valve on the inlet side to ensure the release of the residual pressure. Otherwise, residual pressure will not be fully released.

↑ Caution

 When releasing air at the intermediate position using a T-spacer on the inlet side of the lubricator, lubricant may back flow. Therefore, releasing air that does not contain traces of lubricant is not possible.

To release air that does not contain traces of lubricant, use a check valve (AKM series) on the inlet side of the lubricator to prevent a backflow of the lubricant.

- 2. If a pressure relief 3 port valve is mounted on the inlet side of the lubricator, causing a backflow of air, it can result in a backflow of oil or damage to internal parts. Do not use it in this fashion
- 3. An F.R.L. unit shipped from the plant has its model number labeled. However, components that are combined together during the distribution process do not have a label on them.
- 4. For AC10 series products with a pressure gauge, when connected to the modular unit, there will be interference preventing the use of tools; therefore, the pressure gauge cannot be mounted or removed in such a state.

Mount or remove the pressure gauge from the AR/AW10-A single unit product before connecting it to the modular unit. To screw in the pressure gauge, make sure to insert a wrench

into the wrench flats before turning the gauge. If the pressure gauge is screwed in by holding some other part of it, air leakage or damage may result.

It is possible to have the product shipped with the pressure gauge already mounted. Please contact your local sales representative for more details.

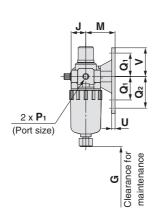


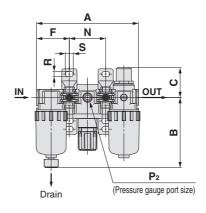
AC10-A Series

AC20-B to AC60-B Series

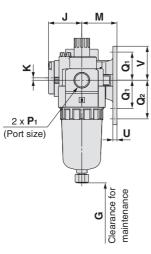
Dimensions

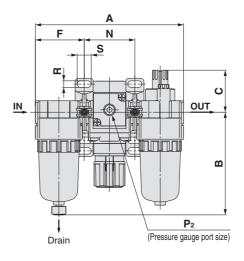
AC10-A



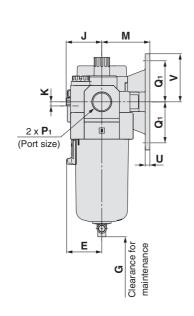


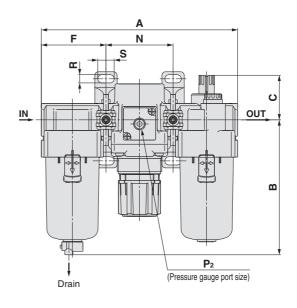
AC20-B



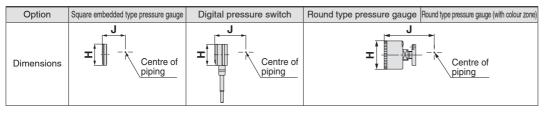


AC25-B to AC60-B





Air Combination AC10-A Series Air Combination AC20-B to AC60-B Series



Applicable model					AC25-B to AC60-B		
Optional/Semi-standard specifications	With auto drain	Metal bowl	With auto drain	Metal bowl	Metal bowl with drain guide	With auto drain (N.O./N.C.)	
Dimensions	B	a	M5 x 0.8	a	Width across flats 14 1/8	Width across flats 14	N.O.: Black N.C.: Grey Thread type/Rc, G: Ø 10 One-touch fitting Thread type/NPT: Ø 3/8" One-touch fitting

Applicable model			AC	25-B to AC60-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	a	Width across flats 17	a a	Width across flats 17	Width across flats 17	Barb fitting applicable tubing: T0604

		Standard specifications																
Model	P ₁	P ₂	А	В	С	Е	F	G		К				Bracke	t mount			
	P1	F2	A	В		_	Г	G	J		M	N	Q ₁	Q ₂	R	S	U	V
AC10-A	M5 x 0.8	1/16	87	59.9	25.5	_	28	35	12.5	_	25	31	20	27	4.5	6.8	3	24.5
AC20-B	1/8, 1/4	1/8	126.4	87.6	35.9	_	41.6	60	28.5	2 *1	30	43.2	24	33	5.5	12	3.5	29
AC25-B	1/4, 3/8	1/8	167.4	115.1	38.1	30	55.1	80	27.5	0	41	57.2	35	_	7	14	4	41
AC30-B	1/4, 3/8	1/8	167.4	115.1	38.1	30	55.1	80	29.4	3.5	41	57.2	35	_	7	14	4	41
AC40-B	1/4, 3/8, 1/2	1/8	220.4	147.1	39.8	38.4	72.6	110	33.8	3.5	50	75.2	40	_	9	18	5	48
AC40-06-B	3/4	1/8	235.4	149.1	37.8	38.4	77.6	110	33.8	3	50	80.2	40	_	9	18	5	48
AC50-B	3/4, 1	1/8	282.4	220.1	41.2	_	93.1	110	43.3	3.2	70	96.2	50	_	11	20	6	60
AC55-B	1	1/8	292.4	234.1	44.7	_	98.1	110	43.3	3.2	70	96.2	50	_	11	20	6	60
AC60-B	1	1/8	297.4	234.1	44.7	_	98.1	110	43.3	3.2	70	101.2	50	_	11	20	6	60

				Option	al specific	cations				Semi-standard specifications							
Model	embedo	uare ded type e gauge	Digital pressure switch		Round type pressure gauge		Round pressure (with cold	,,	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		
	Н	J	Н	J	Н	J	Н	J	В	В	В	В	В	В	В		
AC10-A	_	_	_	_	Ø 26	26	_	_	77.9	_	_	59.3	_	_	_		
AC20-B	□28	29.5	□27.8	40	Ø 37.5	65	Ø 37.5	66	104.9	_	91.4	87.4	93.9	_	_		
AC25-B	□28	28.5	□27.8	39	Ø 37.5	64	Ø 37.5	65	156.8	123.6	121.9	117.6	122.1	137.6	142.1		
AC30-B	□28	30.4	□27.8	40.9	Ø 37.5	65.9	Ø 37.5	66.9	156.8	123.6	121.9	117.6	122.1	137.6	142.1		
AC40-B	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3	186.9	155.6	153.9	149.6	154.1	169.6	174.1		
AC40-06-B	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3	188.9	157.6	155.9	151.6	156.1	171.6	176.1		
AC50-B	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8	259.9	228.6	226.9	222.6	227.1	242.6	247.1		
AC55-B	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8	273.9	242.6	240.9	236.6	241.1	256.6	261.1		
AC60-B	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8	273.9	242.6	240.9	236.6	241.1	256.6	261.1		

^{*1} For the AC20-B only, the position of the pressure gauge is above the centre of the piping.



Filter Regulator + Lubricator

AC10A-A



How to Order

Refer to page 17 for size 20 to 60.



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) AC10-M5CG-12NR-A

				Symbol	Description
		а	Float type auto drain	_	Without auto drain
	ت	а	i loat type auto uralii	C*1	N.C. (Normally closed) Drain port is closed when pressure is not applied.
0	Option			+	
		b	Pressure gauge		Without pressure gauge
			Troodaro gaago	G *2	Round type pressure gauge (without limit indicator)
				+	
		С	Set pressure *3	_	0.05 to 0.7 MPa setting
			oot procedure	1	0.02 to 0.2 MPa setting
				+	
				_	Polycarbonate bowl
		d	Bowl *4	2	Metal bowl
				6	Nylon bowl
				+	
	lard	е	Lubricator lubricant	_	Without drain cock
2	tanc		exhaust port	3	Lubricator with drain cock
9	Semi-standard			+	
	Sel	f	Exhaust mechanism	_	Relieving type
		•	Exhaust moonamom	N	Non-relieving type
				+	
		a	g Flow direction -	_	Flow direction: Left to right
		9		R	Flow direction: Right to left
				+	
		h Pressure unit	_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	
	h Pressure unit	Z	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F		

^{*1} 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.



^{*2} A 1.0 MPa pressure gauge will be fitted. It is not assembled and supplied loose at the time of shipment.

^{*3} Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.

^{*4} Refer to chemical data on page 46 for chemical resistance of the bowl.

Air Combination AC10A-A Series

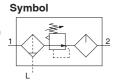


AC10A-A

Commonant	Filter Regulator [AW]	AW10-A
Component	Lubricator [AL]	AL10-A
Port size		M5 x 0.8
Pressure gauge por	t size [AW]	1/16
Fluid		Air
Ambient and fluid te	emperature	-5 to 60 °C (with no freezing)
Proof pressure		1.5 MPa
Maximum operating	pressure	1.0 MPa
Set pressure range	[AW]	0.05 to 0.7 MPa
Nominal filtration ra	ting [AW]	5 μm
Recommended lubri	icant [AL]	Class 1 turbine oil (ISO VG32)
Bowl material [AW/A	AL]	Polycarbonate
Construction [AW]		Relieving type
Weight [kg]		0.2

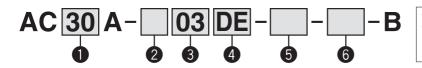
Filter Regulator + Lubricator

AC20A-B to AC60A-B



How to Order

Refer to page 15 for size 10.



- Option/Semi-standard: Select one each for a to I.
- Option/Attachment/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
 Example) AC30A-F03DE1-KSV-136NR-B

	_	_				0							
				Symbol	Description			Body size					
						20	30	40	50	60			
				_	Rc	•	•	•	•	•			
2		Pipe	thread type	N*1	NPT		•	•					
9		pc	anoda typo	F*2	G			•	•				
				+									
				01	1/8	•	_	_					
				02	1/4	•	•	•					
				03	3/8		•	•					
3		- 1	Port size	04	1/2			•					
				06	3/4			•	•				
				10	1				•	_			
				+	ı								
					Without auto drain	•	•	•					
		а	Float type		N.C. (Normally closed) Drain port is closed when pressure is not applied.	•		•	•	•			
		а	auto drain	D*5	N.O. (Normally closed) Drain port is closed when pressure is not applied. N.O. (Normally open) Drain port is open when pressure is not applied.			•	•				
				+	11.0. (1101111ally open) Drain port is open when pressure is not applied.		•	•	-	_			
				T	Without pressure gauge								
	*3		Desc	E	Square embedded type pressure gauge (with limit indicator)	•	•	•	•	•			
4	Option		Pressure gauge *6	G			_						
	do		gauge	M	Round type pressure gauge (with limit indicator)	•	•	•	•	•			
		b			Round type pressure gauge (with colour zone)	•	•	•	•	•			
			Digital	E1	Output: NPN output, Electrical entry: Wiring bottom entry	•	•	•	•	•			
			pressure	E2	Output: NPN output, Electrical entry: Wiring top entry	•	•	•	•	•			
			switch	E3	Output: PNP output, Electrical entry: Wiring bottom entry	•	•	•	•	•			
				E4	Output: PNP output, Electrical entry: Wiring top entry	•		•	•				
				+	Med to the first terms of the fi								
		С	Check valve	_	Without attachment	•	•	0.07	•	•			
	_			K	Mounting position: AW+K+AL	•	•	●*7		_			
	lent		_	+	Med			_					
6	Attachment	d	Pressure	-	Without attachment	•	•	•	•	•			
	ttac		switch	S*8	Mounting position: AW+S+AL			•	•				
	⋖			+	Med								
		е	Pressure relief	_	Without attachment	•	•	•	•	•			
			3 port valve	V	Mounting position: AW+AL+ V	•		•	•				
				+	O OF L O OF MP. III'								
		f	Set pressure *9	_	0.05 to 0.85 MPa setting	•	•	•	•	•			
			pressure **	1	0.02 to 0.2 MPa setting	•	•	•	•	•			
				+									
				_	Polycarbonate bowl	•	•	•	•	•			
	5			2	Metal bowl	•	•	•	•	•			
	nda	g	Bowl *10	6	Nylon bowl	•	•	•	•	•			
6	Semi-standard			8	Metal bowl with level gauge		•	•	•	•			
	٦ <u>-</u>			С	With bowl guard	•	*11	*11	*11	<u>*11</u>			
	Ser			6C	With bowl guard (Nylon bowl)	•	*12	*12	*12	<u></u> *12			
				+			-	-					
				_	With drain cock	•	•	•	•	•			
		h	Filter regulator	J*14	Drain guide 1/8	•	_	_	_				
			drain port *13	365.45	Drain guide 1/4		•	•	•	•			
				W *15	Drain cock with barb fitting: For Ø 6 x Ø 4 nylon tube		•	•	•				

Air Combination AC20A-B to AC60A-B Series



	_	_		0 1 1	D			0					
				Symbol	Description	Body size							
						20	30	40	50	60			
			Lubricator lubricant	_	Without drain cock	•	•	•	•	•			
		'	exhaust port	3 *16	Lubricator with drain cock	•	•	•	•	•			
				+									
	_		Exhaust	_	Relieving type	•	•	•	•	•			
	-standard	J	mechanism	N	Non-relieving type	•	•	•	•	•			
6	tanc			+									
	<u>i-</u> S1	k	Flow direction		Flow direction: Left to right	•	•	•	•	•			
	Semi-	,	1 low difection	R	Flow direction: Right to left	•	•	•	•	•			
	()			+									
				_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	•	•	•			
		1	Pressure unit	Z *17	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○*19	○*19	○*19	○*19	○*19			
				ZA *18	Digital pressure switch: With unit selection function	△*20	△*20	△*20	△*20	△*20			
*1 D	rain	auide	is NPT 1/8 (applica	ble to the	AC20A-B) pressure gauge will be fitted for standard (0.85 MPa)	*15 The	combinatio	n of metal	bowl: 2 an	d 8 is no			

- and NPT 1/4 (applicable to the AC30A-B to AC60A-B). The auto drain port comes with O 3/8" One-touch fitting (applicable to the AC30A-B to AC60A-B). *2 Drain guide is G 1/8 (applicable to the AC20A-B) and G 1/4
- (applicable to the AC30A-B to AC60A-B). *3 Options G, M are not assembled and supplied loose at
- the time of shipment.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min[ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- *6 When the pressure gauge is attached, a 1.0 MPa

- type. 0.4 MPa pressure gauge for 0.2 MPa type.
- *7 Not available with piping port size: 06
 *8 The bracket position varies depending on the pressure switch mounting.
- *9 Pressure can be set higher than the specification pressure in some cases, but use pressure within the . specification range.
- *10 Refer to chemical data on page 46 for chemical resistance of the bowl.
- *11 A bowl guard is provided as standard equipment (polycarbonate).
- *12 A bowl guard is provided as standard equipment (nylon).
- The combination of float type auto drain: C and D is
- not available *14 Without a valve function

- available
- *16 When choosing with W: Filter drain port, the drain cock of a lubricator will be with barb fittings.
- *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 O: For pipe thread type: NPT only *20 \(\triangle:\) Select with options: E1, E2, E3, E4.

ı	Model	AC20A-B	AC30A-B	AC40A-B	AC40A-06-B	AC50A-B	AC60A-B				
Component	Filter Regulator [AW]	AW20-B	AW30-B	AW40-B	AW40-06-B	AW60-B	AW60-B				
Component	Lubricator [AL]	AL20-A	AL30-A	AL40-A	AL40-06-A	AL50-A	AL60-A				
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1				
Pressure gaug	ge port size [AW] *1			1.	/8						
Fluid				А	ir						
Ambient and	fluid temperature *2	-5 to 60 °C (with no freezing)									
Proof pressu	re	1.5 MPa									
Maximum op	erating pressure	1.0 MPa									
Set pressure	range [AW]	0.05 to 0.85 MPa									
Nominal filtra	ation rating [AW]	5 μm									
Recommende	ed lubricant [AL]			Class 1 turbine	oil (ISO VG32)						
Bowl materia	I [AW/AL]			Polyca	rbonate						
Bowl guard [AW/AL]	Semi-standard (Steel) Standard (Polycarbonate)									
Construction	[AW]			Relievi	ng type						
Weight [kg]		0.33	0.63	1.15	1.25	3.21	3.36				

^{*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.

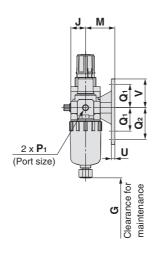


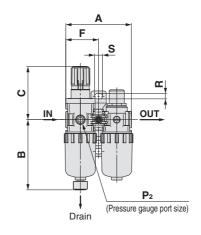
^{*2 -5} to 50 °C for the products with the digital pressure switch.

AC10A-A Series AC20A-B to AC60A-B Series

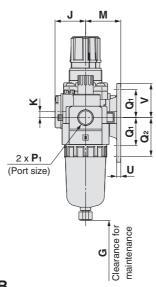
Dimensions

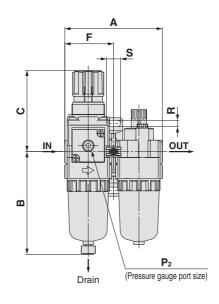
AC10A-A



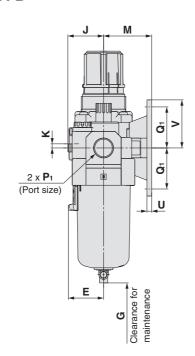


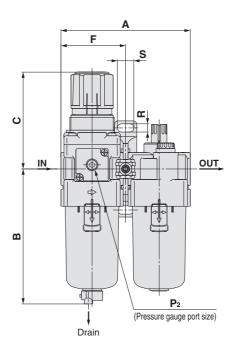
AC20A-B



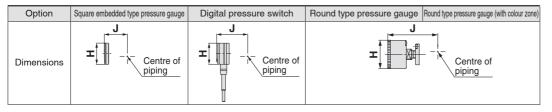


AC30A-B to AC60A-B





Air Combination AC10A-A Series Air Combination AC20A-B to AC60A-B Series



Applicable model				AC20A-B						
Optional/Semi-standard specifications	With auto drain	With auto drain	Metal bowl	With drain guide	Metal bowl with drain guide	With auto drain (N.O./N.C.)				
Dimensions	B B		M5 × 0.8	B	Width across flats 14 1/8	Width across	N.O.: Black N.C.: Grey Thread type/Rc, G: Ø 10 One-touch fitting Thread type/NPT: Ø 3/8" One-touch fitting			

Applicable model			AC3	0A-B to AC60A-B		
Optional/Semi-standard specifications	Metal bowl	Metal bowl with drain guide	With drain guide	Drain cock with barb fitting		
Dimensions	0	Width across flats 17	a	Width across flats 17	Width across flats 17	Barb fitting applicable tubing: T0604

		Standard specifications															
Model	P ₁	P ₂	Δ.	В	C*1	Е	F	G		V			Bra	acket mo	unt		
	P1	F2	Α	В		_	•	G	J	N.	M	Q ₁	Q ₂	R	S	U	V
AC10A-A	M5 x 0.8	1/16	56	59.9	47.4	_	28	25	12.5	_	25	20	27	4.5	6.8	3	24.5
AC20A-B	1/8, 1/4	1/8	83.2	87.6	72.4	_	41.6	60	28.5	5	30	24	33	5.5	12	3.5	29
AC30A-B	1/4, 3/8	1/8	110.2	115.1	85.6	30	55.1	80	29.4	3.5	41	35	_	7	14	4	41
AC40A-B	1/4, 3/8, 1/2	1/8	145.2	147.1	91.7	38.4	72.6	110	33.8	1.5	50	40	_	9	18	5	48
AC40A-06-B	3/4	1/8	155.2	149.1	93.2	38.4	77.6	110	33.8	1.2	50	40	_	9	18	5	48
AC50A-B	3/4, 1	1/8	191.2	234.1	175.5	_	98.1	110	43.3	3.2	70	50	_	11	20	6	60
AC60A-B	1	1/8	196.2	234.1	175.5	_	98.1	110	43.3	3.2	70	50	_	11	20	6	60

				Option	al specific	cations				Semi-standard specifications							
Model	Square embedded type pressure gauge		Digital pressure switch		Round type pressure gauge		Round type pressure gauge (with colour zone)		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		
	Н	J	Н	J	Н	J	Н	J	В	В	В	В	В	В	В		
AC10A-A	_	_	_	_	Ø 26	26	_	_	77.9	_	_	59.3	_	_	_		
AC20A-B	□28	27	□27.8	37.5	Ø 37.5	62.5	Ø 37.5	63.5	104.9	_	91.4	87.4	93.9	_	_		
AC30A-B	□28	30	□27.8	40.9	Ø 37.5	66.9	Ø 37.5	67.9	156.8	123.6	121.9	117.6	122.1	137.6	142.1		
AC40A-B	□28	38.4	□27.8	48.8	Ø 42.5	75.7	Ø 42.5	75.7	186.9	155.6	153.9	149.6	154.1	169.6	174.1		
AC40A-06-B	□28	38.4	□27.8	48.8	Ø 42.5	75.7	Ø 42.5	75.7	188.9	157.6	155.9	151.6	156.1	171.6	176.1		
AC50A-B	□28	44.3	□27.8	61.3	Ø 42.5	80.8	Ø 42.5	80.8	273.9	242.6	240.9	236.6	241.1	256.6	261.1		
AC60A-B	□28	44.3	□27.8	61.3	Ø 42.5	80.8	Ø 42.5	80.8	273.9	242.6	240.9	236.6	241.1	256.6	261.1		

 $[\]ast 1$ The dimension of C is the length when the filter regulator knob is unlocked.

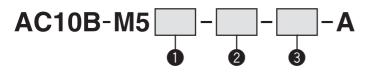
Air Filter + Regulator

AC10B-A



How to Order

Refer to page 23 for size 20 to 60.



- \bullet Option/Semi-standard: Select one each for ${\bf a}$ to ${\bf g}.$
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.

Example) AC10B-M5CG-T-12NR-A

		_		Symbol	Description
			Fl444- d	-	Without auto drain
	_	а	Float type auto drain	C *1	N.C. (Normally closed) Drain port is closed when pressure is not applied.
0	Option			+	
	0	b	Pressure gauge		Without pressure gauge
		D	r ressure gauge	G *2	Round type pressure gauge (without limit indicator)
				+	
2		Δ-	ttachment (T-spacer) *3		Without attachment
			itacriment (1-spacer)	Т	Mounting position: AF+ T +AR
				+	
		С	Set pressure *4		0.05 to 0.7 MPa setting
			Oct product	1	0.02 to 0.2 MPa setting
				+	
					Polycarbonate bowl
		d	Bowl *5	2	Metal bowl
	9			6	Nylon bowl
	Semi-standard			+	
3	-sta	е	Exhaust mechanism		Relieving type
	emi		Exhaust modification	N	Non-relieving type
	0)			+	
		f	Flow direction		Flow direction: Left to right
		•	Tiow direction	R	Flow direction: Right to left
				+	
		g	Pressure unit		Name plate, caution plate for bowl, and pressure gauge in SI units: MPa
		9	i iessuie uiiit	Z	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F

^{*1} 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.

^{*2} A 1.0 MPa pressure gauge will be fitted. It is not assembled and supplied loose at the time of shipment.

^{*3} The bracket position varies depending on the T-spacer mounting.

^{*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 46 for chemical resistance of the bowl.

Air Combination AC10B-A Series



AC10B-A

Commonant	Air Filter [AF]	AF10-A			
Component	Regulator [AR]	AR10-A			
Port size		M5 x 0.8			
Pressure gauge por	t size [AR]	1/16			
Fluid		Air			
Ambient and fluid to	emperature	-5 to 60 °C (with no freezing)			
Proof pressure		1.5 MPa			
Maximum operating	pressure	1.0 MPa			
Set pressure range	[AR]	0.05 to 0.7 MPa			
Nominal filtration ra	ting [AF]	5 μm			
Bowl material [AF]		Polycarbonate			
Construction [AR]		Relieving type			
Weight [kg]		0.16			

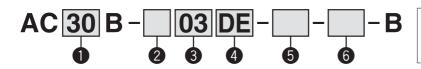
Air Filter + Regulator

AC20B-B to AC60B-B



How to Order

Refer to page 21 for size 10.

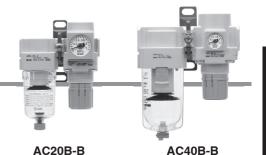


- Option/Semi-standard: Select one each for a to j.
- Option/Attachment/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
 Example) AC30B-F03DE1-SV-16NR-B

		_					0							
				Symbol	Description			В	ody siz	ze				
						20	25	30	40	50	55	60		
				_	Rc		•	•	•	•	•			
2		Pipe	thread type	N*1	NPT		•	•	•	•	•	•		
			,,	F *2	G		•	•	•	•	•	•		
				+										
				01	1/8		_	_	_	_	_	_		
				02	1/4	•	•	•	•	_	_			
			Port size	03	3/8	_	•	•	•	_	_	_		
8			Fort size	04	1/2	_	_	_	•	_	_			
				06	3/4	_	_	_	•	•	_			
				10	1	_	_	_	_	•	•	•		
				+										
			Float type	_	Without auto drain	•	•	•	•	•	•			
		а	auto drain	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.		•	•	•	•	•			
			Care Grain	D *5	N.O. (Normally open) Drain port is open when pressure is not applied.			•			•			
				+						ı				
	ლ *			_	Without pressure gauge	•	•	•	•	•	•	•		
4	on		Pressure	E	Square embedded type pressure gauge (with limit indicator)		•	•	•	•	•			
М	Option		gauge *6	G	Round type pressure gauge (with limit indicator)		•	•	•	•	•			
		b		M	Round type pressure gauge (with colour zone)	•	•	•	•	•	•	•		
		-	Digital	E1	Output: NPN output, Electrical entry: Wiring bottom entry		•	•	•	•	•	•		
			pressure	E2	Output: NPN output, Electrical entry: Wiring top entry		•	•	•	•	•	•		
			switch	E3	Output: PNP output, Electrical entry: Wiring bottom entry		•	•	•	•	•	•		
				E4	Output: PNP output, Electrical entry: Wiring top entry									
				+										
			Pressure		Without attachment		•	•	•	•	•			
	Ħ	С	switch	S*7	Mounting position: AF+S+AR		•	•		•	•			
	Attachment		T-spacer	T *7	Mounting position: AF+T+AR									
6	ach			+	Wall to the first of the first									
	Att		Pressure relief	_	Without attachment		•	•	•	•	•	•		
		d	3 port valve	V	Mounting position: AF+AR+V		•	•	•	•				
				V1*8	Mounting position: V +AF+AR□K			•		•				
			Cot	+	0.05 to 0.85 MPa setting									
		е	Set pressure *9	1	0.02 to 0.2 MPa setting									
			procedio	+	O.OZ TO O.Z IVII & SELLING		_	_	_					
				T	Polycarbonate bowl									
				2	Metal bowl		•	•		•	•			
	ard			6	Nylon bowl		•	•		•				
	ndg	f	Bowl *10	8	Metal bowl with level gauge		•			•				
6	-sta			C	With bowl guard		*11	*11	*11	*11	*11	*11		
	Semi-standard			6C	With bowl guard (Nylon bowl)		*12	*12	*12	*12	*12	*12		
	Se			+	That som gadra (region som)					<u> </u>				
					With drain cock			•			•			
			Air filter		Drain guide 1/8		_	_	_	_	_			
		g	drain port *13	J*14	Drain guide 1/4		•	•		•	•	•		
			•	W*15	Drain cock with barb fitting: For Ø 6 x Ø 4 nylon tube	_	•			•				
				••										

A

Air Combination AC20B-B to AC60B-B Series



				0										
		Symbol	Description	Body size										
				20	25	30	40	50	55	60				
b	Exhaust	—	Relieving type	•	•	•	•	•	•	•				
"	mechanism	N	Non-relieving type	•	•	•	•	•	•	•				
		+												
	Flow direction	_	Flow direction: Left to right	•	•	•	•	•	•	•				
•	r low direction	R	Flow direction: Right to left	•	•	•	•	•	•	•				
		+												
		_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	•	•	•	•	•				
j	Pressure unit	Z *16	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	O*18	O*18	O*18	O*18	O*18	O*18	O*18				
		ZA *17	Digital pressure switch: With unit selection function	△*19	△*19	△*19	△*19	△*19	△*19	△*19				
	h	i Flow direction	h Exhaust — N + + Flow direction R + T - Z*16	Mame plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	Exhaust mechanism	Exhaust mechanism Relieving type	Exhaust mechanism	h Exhaust mechanism N Non-relieving type I Flow direction R Flow direction: Right to left H Name plate, caution plate for bowl, and pressure gauge in SI units: MPa Z*16 Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F Z*18 ○*18 ○*18 ○*18 ○*18 ○*18 ○*18 ○*18 ○	h Exhaust mechanism N Non-relieving type I Flow direction R Flow direction: Left to right R Flow direction: Right to left H Pressure unit Z*16 Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F 20 25 30 40 50	h Exhaust mechanism N Non-relieving type i Flow direction R Flow direction: Right to left - Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F 20 25 30 40 50 55				

- and NPT 1/4 (applicable to the AC25B-B to AC60B-B). The auto drain port comes with Ø 3/8" One-touch fitting (applicable to the AC25B-B to AC60B-B).
- *2 Drain guide is G 1/8 (applicable to the AC20B-B) and G 1/4 (applicable to the AC25B-B to AC60B-B).
- *3 Options G, M are not assembled and supplied loose at the time of shipment.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min[ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- pressure gauge will be fitted for standard (0.85 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.

 The bracket position varies depending on the T-spacer
- or pressure switch mounting.
- *8 Make sure that the outlet pressure is released to
- atmospheric pressure using a pressure gauge.

 *9 Pressure can be set higher than the specification pressure in some cases, but use pressure within the . specification range.
- *10 Refer to chemical data on page 46 for chemical resistance of the bowl
- A bowl guard is provided as standard equipment (polycarbonate).
- *12 A bowl guard is provided as standard equipment (nylon).

- not available.
- *14 Without a valve function
- *15 The combination of metal bowl: 2 and 8 is not available.
- *16 For pipe thread type: NPT. Cannot be used with M: Round 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.
- *17 For options: E1, E2, E3, E4.
- *18 O: For pipe thread type: NPT only *19 \(\triangle: Select with options: E1, E2, E3, E4.

1	Model	AC20B-B	AC25B-B	AC30B-B	AC40B-B	AC40B-06-B	AC50B-B	AC55B-B	AC60B-B
Commonant	Air Filter [AF]	AF20-A	AF30-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A	AF60-A
Component	Regulator [AR]	AR20-B	AR25-B	AR30-B	AR40-B	AR40-06-B	AR50-B	AR50-B	AR60-B
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1	1
Pressure gaug	ge port size [AR] *1				1.	/8			
Fluid					Д	ir			
Ambient and	fluid temperature *2			-	5 to 60 °C (w	th no freezing)		
Proof pressu	re				1.5	MPa			
Maximum op	erating pressure				1.0	MPa			
Set pressure	range [AR]				0.05 to 0).85 MPa			
Nominal filtra	ation rating [AF]				5 إ	ım			
Bowl materia	I [AF]				Polyca	rbonate			
Bowl guard [AF]	Semi-standard (Steel)			Stand	ard (Polycarbo	onate)		
Construction [AR]					Relievi	ng type			
Weight [kg]		0.27	0.45	0.53	0.91	0.99	2.27	2.40	2.45

^{*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.



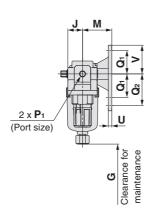
^{*2 -5} to 50 °C for the products with the digital pressure switch.

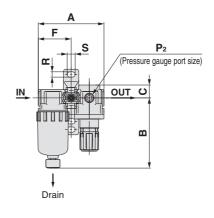
AC10B-A Series

AC20B-B to AC60B-B Series

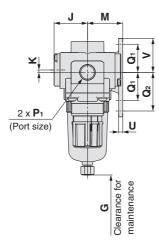
Dimensions

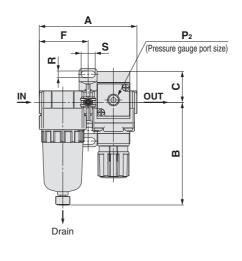
AC10B-A



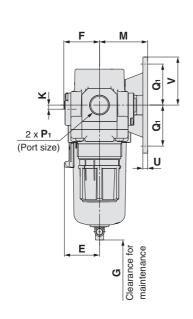


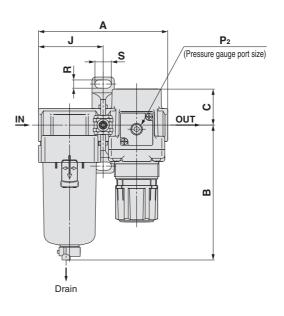
AC20B-B



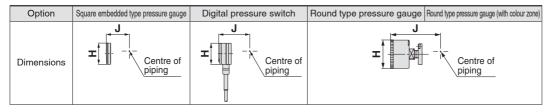


AC25B-B to AC60B-B





Air Combination AC10B-A Series Air Combination AC20B-B to AC60B-B Series



Applicable mode					AC20B-B		AC25B-B to AC60B-B
Optional/Semi-standard specifications	With auto drain	Metal bowl	With auto drain	Metal bowl	With drain guide	Metal bowl with drain guide	With auto drain (N.O./N.C.)
Dimensions	B		M5 x 0.8	B	Width across flats 14 1/8	Width across of 1/8	N.O.: Black N.C.: Grey Thread type/Rc, G: Ø 10 One-touch fitting Thread type/NPT: Ø 3/8" One-touch fitting

Applicable model			AC2	5B-B to AC60B-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	a	Width across flats 17	B	Width across flats 17 1/4	Width across flats 17	Barb fitting applicable tubing: T0604

							S	tandard	specifica	tions							
Model	P ₁	P ₂	Λ	В	С	Е	F	G		К			Bra	acket mo	unt		
	P1	F2	Α	В	C	_	Г	G	J	I.	M	Q ₁	Q ₂	R	S	U	V
AC10B-A	M5 x 0.8	1/16	56	59.9	11	_	28	25	12.5	_	25	20	27	4.5	6.8	3	24.5
AC20B-B	1/8, 1/4	1/8	83.2	87.6	26.5	_	41.6	25	28.5	2 *1	30	24	33	5.5	12	3.5	29
AC25B-B	1/4, 3/8	1/8	110.2	115.1	28	30	55.1	35	27.5	0	41	35	_	7	14	4	41
AC30B-B	1/4, 3/8	1/8	110.2	115.1	30.7	30	55.1	35	29.4	3.5	41	35	_	7	14	4	41
AC40B-B	1/4, 3/8, 1/2	1/8	145.2	147.1	35.8	38.4	72.6	40	33.8	3.5	50	40	_	9	18	5	48
AC40B-06-B	3/4	1/8	155.2	149.1	35.8	38.4	77.6	40	33.8	3	50	40	_	9	18	5	48
AC50B-B	3/4, 1	1/8	186.2	220.1	43	_	93.1	30	43.3	3.2	70	50	_	11	20	6	60
AC55B-B	1	1/8	191.2	234.1	43	_	98.1	30	43.3	3.2	70	50	_	11	20	6	60
AC60B-B	1	1/8	196.2	234.1	46	_	98.1	30	43.3	3.2	70	50	_	11	20	6	60

				Option	al specific	cations						Semi-star	ndard specific	ations	
Model	embedo	iare led type e gauge	Digital p		Round	d type e gauge	Round pressure (with cold	e gauge	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
	Н	J	Н	J	Н	J	Н	J	В	В	В	В	В	В	В
AC10B-A	_	_	_	_	Ø 26	26	_	_	77.9	_	_	59.3	_	_	_
AC20B-B	□28	29.5	□27.8	40	Ø 37.5	65	Ø 37.5	66	104.9	_	91.4	87.4	93.9	_	_
AC25B-B	□28	28.5	□27.8	39	Ø 37.5	64	Ø 37.5	65	156.8	123.6	121.9	117.6	122.1	137.6	142.1
AC30B-B	□28	30.4	□27.8	40.9	Ø 37.5	65.9	Ø 37.5	66.9	156.8	123.6	121.9	117.6	122.1	137.6	142.1
AC40B-B	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3	186.9	155.6	153.9	149.6	154.1	169.6	174.1
AC40B-06-B	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3	188.9	157.6	155.9	151.6	156.1	171.6	176.1
AC50B-B	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8	259.9	228.6	226.9	222.6	227.1	242.6	247.1
AC55B-B	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8	273.9	242.6	240.9	236.6	241.1	256.6	261.1
AC60B-B	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8	273.9	242.6	240.9	236.6	241.1	256.6	261.1

^{*1} For the AC20B-B only, the position of the pressure gauge is above the centre of the piping.

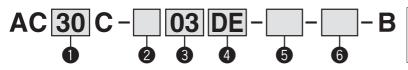


Air Filter + Mist Separator + Regulator

AC20C-B to AC40C-B



How to Order



- Option/Semi-standard: Select one each for a to j.
- Option/Attachment/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AC30C-F03DE1-SV-16NR-B

		_					0		
				Symbol	Description		Body	size	
						20	25	30	40
				_	Rc	•	•	•	•
2		Pipe	thread type	N*1	NPT	•	•	•	•
				F *2	G	•	•	•	
				+					
				01	1/8	•	_	_	_
				02	1/4	•	•		•
3			Port size	03	3/8	_	•	•	•
				04	1/2	_	_	_	
				06	3/4	_		_	
		_		+					
			Float type	_	Without auto drain	•	•	•	•
		а	auto drain	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.	•	•	•	
				D *5	N.O. (Normally open) Drain port is open when pressure is not applied.	_	•	•	
				+					
	e *			_	Without pressure gauge	•	•	•	•
4	on		Pressure	Е	Square embedded type pressure gauge (with limit indicator)	•	•	•	•
	Option *		gauge *6	G	Round type pressure gauge (with limit indicator)	•	•	•	•
		b		M	Round type pressure gauge (with colour zone)	•	•	•	•
			Digital	E1	Output: NPN output, Electrical entry: Wiring bottom entry	•	•	•	•
			pressure	E2	Output: NPN output, Electrical entry: Wiring top entry	•	•	•	•
			switch	E3	Output: PNP output, Electrical entry: Wiring bottom entry	•	•	•	•
				E4	Output: PNP output, Electrical entry: Wiring top entry		•	•	•
				+					
			Pressure	_	Without attachment	•	•	•	•
	t	С	switch	S*7	Mounting position: AF+AFM+S+AR	•	•	•	•
	mel		T-spacer	T *7	Mounting position: AF+AFM+ T +AR		•	•	•
6	Attachment			+				_	_
	Att		Pressure relief		Without attachment	•	•	•	•
		d	3 port valve	V	Mounting position: AF+AFM+AR+V	•	•	•	•
				V1*8	Mounting position: V +AF+AFM+AR□K		•	•	
			-	+	0.05 + 0.05 MD 111				
		е	Set	_	0.05 to 0.85 MPa setting	•	•	•	•
			pressure *9	1	0.02 to 0.2 MPa setting			•	•
				+	Polysorhonata hayd				
				2	Polycarbonate bowl Metal bowl				
				6					
		f	Bowl *10	8	Nylon bowl Metal bowl with level gauge				
	darc			C	With bowl guard	•	*11	*11	*11
6	and			6C	With bowl guard (Nylon bowl)		*12	*12	*12
U	i-st				Willi bowi guaru (Nyion bowi)				
	Semi-standard			+	With drain cock	•	•	•	•
	(0)		Air filter		Drain guide 1/8			_	
		g	Mist separator	J *14	Drain guide 1/4		•	•	•
			drain port *13	W *15	Drain cock with barb fitting: For Ø 6 x Ø 4 nylon tube	_		•	
				+	Drain cook with barb fitting. For D 0 X D 4 hylon tube		-	•	
			Exhaust	_	Relieving type				
		h	mechanism	N	Non-relieving type			•	•
			7.1.5 G AI II OI I 7	14	Tion Tonoving typo			•	_

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△*19

Air Combination AC20C-B to AC40C-B Series



	\	_		Symbol	Description
				_	Flow direction: Left to right
	Semi-standard	i	Flow direction	R	Flow direction: Right to left
6	anc			+	
U	i-st			_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa
	em	j	Pressure unit	Z *16	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F
	[0] Z				Digital pressure switch: With unit selection function
э1 Г	roin c		ic NPT 1/8 (applica	blo to the	ACQCCR) is recommended

- NPT 1/8 (applicable to the AC20C-B) and NPT 1 / 4 (applicable to the AC 2 5 C-B to AC40C-B).
- The auto drain port comes with O 3 / 8 " One-touch fitting (applicable to the AC25C-B to AC40C-B).
- *2 Drain guide is G 1/8 (applicable to the AC20C-B) and G 1/4 (applicable to the AC25C-B to AC40C-B).
- *3 Options G, M are not assembled and supplied loose at the time of shipment.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min [ANR]), air leakage from the drain cock may occur during start of operations. N.C. type

- *6 When the pressure gauge is attached, a 1 . 0 MPa pressure gauge will be fitted for standard (0 . 8 5 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.
- *7 The bracket position varies depending on the T-spacer or pressure switch mounting.
- *8 Make sure that the outlet pressure is released to atmospheric pressure using a pressure gauge.
- *9 Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.
- *10 Refer to chemical data on page 4 6 for chemical resistance of the bowl
- A bowl guard is provided as standard equipment (polycarbonate).
- *12 A bowl guard is provided as standard equipment

△^{∗19} (nylon).

O*18

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The combination of float type auto drain: C and D is not available

0 Body size

30

O*18

△*19

25

O*18

△*19

- *14 Without a valve function
- *15 The combination of metal bowl: 2 and 8 is not available.
- *16 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.
- *17 For options: E1, E2, E3, E4.
- *18 O: For pipe thread type: NPT only
- *19 \(\triangle:\) Select with options: E1, E2, E3, E4.

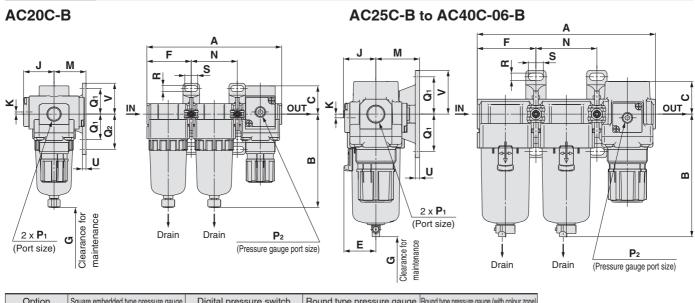
Junuara (specifications											
	Model	AC20C-B	AC25C-B	AC30C-B	AC40C-B	AC40C-06-B						
	Air Filter [AF]	AF20-A	AF30-A	AF30-A	AF40-A	AF40-06-A						
Component	Mist Separator [AFM]	AFM20-A	AFM30-A	AFM30-A	AFM40-A	AFM40-06-A						
	Regulator [AR]	AR20-B	AR25-B	AR30-B	AR40-B	AR40-06-B						
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4						
Pressure gau	uge port size [AR] *1	·	1/8									
Fluid				Air								
Ambient and	fluid temperature *2		-5 to	60 °C (with no freez	ing)							
Proof pressu	ire			1.5 MPa								
Maximum op	erating pressure			1.0 MPa								
Set pressure	range [AR]			0.05 to 0.85 MPa								
Nominal filtra	ation rating [AF/AFM]		AF: 5 μm, AFM:	0.3 μm (99.9 % filter	ed particle size)							
Rated flow [l/	min(ANR)] [AFM] *3	200	450	450	1100	1100						
Outlet side oil m	ist concentration [AFM] *4 *5		Max.1	.0 mg/m³ (ANR) (≈0.8	ppm)							
Bowl materia	il [AF/AFM]	Polycarbonate										
Bowl guard [AF/AFM]	Semi-standard (Steel) Standard (Polycarbonate)										
Construction	[AR]	Relieving type										
Weight [kg]		0.38	0.69	0.77	1.39	1.53						

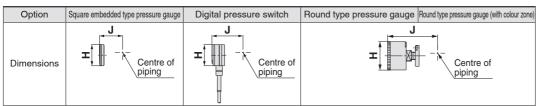
- *1 Pressure gauge connection threads are not available for F.R.L. unit with a square embedded type pressure gauge or with a digital pressure switch.
- *2 -5 to 50 °C for the products with the digital pressure switch.
- Conditions: Mist separator inlet pressure: 0.7 MPa; The rated flow varies depending on the inlet pressure. Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.
- *4 When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).
- *5 Bowl seal and other O-rings are slightly lubricated.



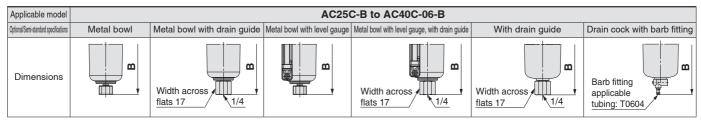
AC20C-B to AC40C-B Series

Dimensions





Applicable model		AC20	OC-B		AC25C-B to AC40C-06-B
Optional Semi-standard specifications	With auto drain (N.C.)	With drain guide	Metal bowl	Metal bowl with drain guide	With auto drain (N.O./N.C.)
Dimensions	M5 x 0.8	Width across flats 14 1/8	8	Width across flats 14	N.O.: Black N.C.: Grey Thread type/Rc, G: Ø 10 One-touch fitting Thread type/NPT: Ø 3/8" One-touch fitting



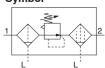
								Stand	ard spec	ification	S							
Model	P ₁	P ₂	Α	В	_	Е	_	G		K				Bracket	t mount			
	FI	Γ2	A			_	F	G	"	N.	M	N	Q ₁	Q ₂	R	S	U	V
AC20C-B	1/8, 1/4	1/8	126.4	87.6	26.5	_	41.6	40	28.5	2 *1	30	43.2	24	33	5.5	12	3.5	29
AC25C-B	1/4, 3/8	1/8	167.4	115.1	28	30	55.1	50	27.5	0	41	57.2	35	_	7	14	4	41
AC30C-B	1/4, 3/8	1/8	167.4	115.1	30.7	30	55.1	50	29.4	3.5	41	57.2	35	_	7	14	4	41
AC40C-B	1/4, 3/8, 1/2	1/8	220.4	147.1	35.8	38.4	72.6	75	33.8	3.5	50	75.2	40	_	9	18	5	48
AC40C-06-B	3/4	1/8	235.4	149.1	35.8	38.4	77.6	75	33.8	3	50	80.2	40	_	9	18	5	48

	Square Digital pressu		Option	al specific	cations						Semi-star	ndard specific	ations		
Model	embedo	led type			Round type pressure gauge		Round type pressure gauge (with colour zone		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
	H J		Н	J	Н	J	Н	J	В	В	В	В	В	В	В
AC20C-B	□28	29.5	□27.8	40	Ø 37.5	65	Ø 37.5	66	104.9	_	91.4	87.4	93.9	_	_
AC25C-B	□28	28.5	□27.8	39	Ø 37.5	64	Ø 37.5	65	156.8	123.6	121.9	117.6	122.1	137.6	142.1
AC30C-B	□28	30.4	□27.8	40.9	Ø 37.5	65.9	Ø 37.5	66.9	156.8	123.6	121.9	117.6	122.1	137.6	142.1
AC40C-B	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3	186.9	155.6	153.9	149.6	154.1	169.6	174.1
AC40C-06-B	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3	188.9	157.6	155.9	151.6	156.1	171.6	176.1

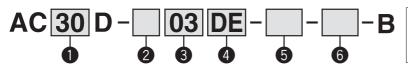
^{*1} For the AC20C-B only, the position of the pressure gauge is above the centre of the piping.

Filter Regulator + Mist Separator

AC20D-B to AC40D-B



How to Order



- Option/Semi-standard: Select one each for a to j.
- Option/Attachment/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AC30D-F03DE1-SV-16NR-B

							0	
				Symbol	Description		Body size	
					·	20	30	40
				_	Rc		•	•
2		Pipe	thread type	N*1	NPT	•	•	•
_			71	F *2	G	•	•	•
				+				
				01	1/8	•	_	_
				02	1/4	•	•	•
3		- 1	Port size	03	3/8	_	•	•
				04	1/2	_	_	•
				06	3/4	_	_	•
				+				
			Float type		Without auto drain	•	•	•
		а	auto drain	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.	•	•	•
			auto diam	D *5	N.O. (Normally open) Drain port is open when pressure is not applied.	_	•	•
				+				
	eo *			_	Without pressure gauge	•	•	•
4	Option *3		Pressure	E	Square embedded type pressure gauge (with limit indicator)	•	•	•
	Spti		gauge *6	G	Round type pressure gauge (with limit indicator)	•	•	•
		b		M	Round type pressure gauge (with colour zone)	•	•	•
			Digital	E1	Output: NPN output, Electrical entry: Wiring bottom entry	•	•	•
			pressure	E2	Output: NPN output, Electrical entry: Wiring top entry	•	•	•
			switch	E3	Output: PNP output, Electrical entry: Wiring bottom entry		•	•
				E4	Output: PNP output, Electrical entry: Wiring top entry	•	•	•
			_	+	\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\\			
	_	С	Pressure switch		Without attachment			•
	ner		SWILCIT	+	Mounting position: AW+S+AFM			
6	Attachment				Without attachment			
	∖tta	d	Pressure relief	V	Mounting position: AW+AFM+V			
	1	ď	3 port valve	V1*8	Mounting position: V+AW□K+AFM			•
				+	Thousanding positions 1 17 (47 E) (17 till 18			
			Set	_	0.05 to 0.85 MPa setting	•	•	•
		е	pressure *9	1	0.02 to 0.2 MPa setting	•	•	•
				+	•			
				_	Polycarbonate bowl	•	•	•
				2	Metal bowl	•	•	•
		£	Bowl *10	6	Nylon bowl	•	•	•
		f	DOMI	8	Metal bowl with level gauge	_	•	•
	-			С	With bowl guard	•	*11	<u></u> *11
	dar			6C	With bowl guard (Nylon bowl)	•	<u></u> *12	<u></u> *12
6	Semi-standard			+				
•	Ji-S		Filter regulator	_	With drain cock	•	•	•
	Sen	g	Mist separator	J *14	Drain guide 1/8	•	_	_
	0,	9	drain port *13		Drain guide 1/4		•	•
			·	W *15	Drain cock with barb fitting: For Ø 6 x Ø 4 nylon tube		•	•
				+		1		
		h	Exhaust		Relieving type	•	•	•
			mechanism	N	Non-relieving type	•	•	•
				+	EL E & LOUIS			
		i	Flow direction		Flow direction: Left to right		•	•
				R	Flow direction: Right to left		•	•

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Air Combination AC20D-B to AC40D-B Series



AC20D-B

AC40D-B

				Symbol	Description		Body size	
						20	30	
	dard			_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	
6 Pressure unit				Z *16	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○*18	○*18	
	Semi			ZA *17	Digital pressure switch: With unit selection function	△*19	△*19	
		uide	is NPT 1/8 (applicable	to the AC	20D-B) and *6 When the pressure gauge is attached, a 1.0 MPa	*13 The combina	tion of float type aut	to drai

- NPT 1/4 (applicable to the AC30D-B/AC40D-B). The auto drain port comes with O 3/8" One-touch fitting (applicable to the AC30D-B/AC40D-B).
- *2 Drain guide is G 1/8 (applicable to the AC20D-B) and G 1/4 (applicable to the AC30D-B/AC40D-B).
- *3 Options G, M are not assembled and supplied loose at the time of shipment.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min [ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- pressure gauge will be fitted for standard (0.85 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.
- The bracket position varies depending on the pressure switch mounting.
- *8 Make sure that the outlet pressure is released to atmospheric pressure using a pressure gauge.
- *9 Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.
- *10 Refer to chemical data on page 46 for chemical resistance of the bowl
- A bowl guard is provided as standard equipment (polycarbonate).
- A bowl guard is provided as standard equipment

- ain: C and D is not available
- *14 Without a valve function
- *15 The combination of metal bowl: 2 and 8 is not available.
- 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.
- *17 For options: E1, E2, E3, E4.
- *18 O: For pipe thread type: NPT only
- *19 \(\triangle:\) Select with options: E1. E2. E3. E4.

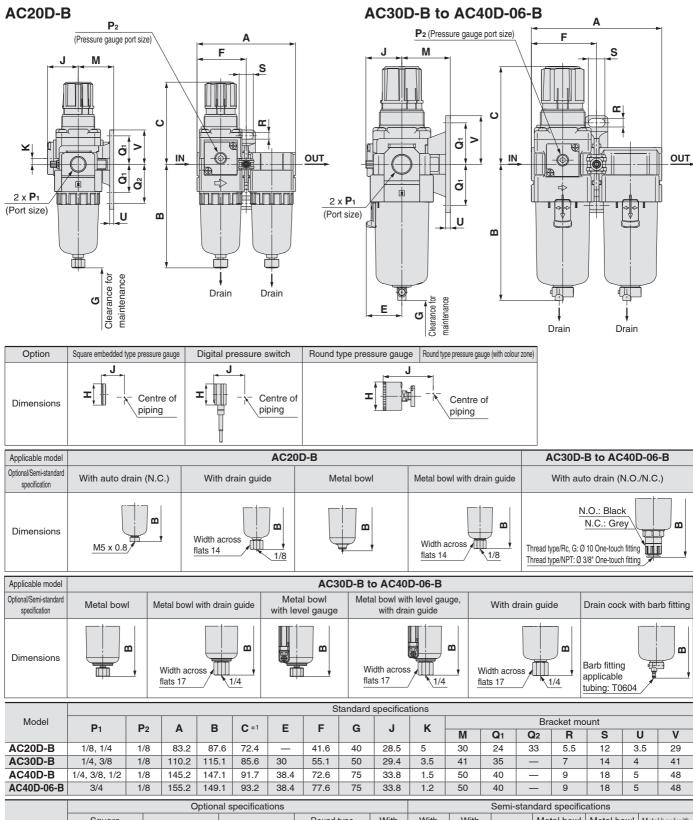
	- poormounomo									
	Model	AC20D-B	AC30D-B	AC40D-B	AC40D-06-B					
Component	Filter Regulator [AW]	AW20-B	AW30-B	AW40-B	AW40-06-B					
Component	Mist Separator [AFM]	AFM20-A	AFM30-A	AFM40-A	AFM40-06-A					
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4					
Pressure gau	uge port size [AW] *1	1/8								
Fluid				Air						
Ambient and	fluid temperature *2	-5 to 60 °C (with no freezing)								
Proof pressu	ire	1.5 MPa								
Maximum op	erating pressure	1.0 MPa								
Set pressure	range [AW]	0.05 to 0.85 MPa								
Nominal filtra	ation rating [AW/AFM]	AW: 5 μm, AFM: 0.3 μm (99.9 % filtered particle size)								
Rated flow [l.	/min(ANR)] [AFM] *3	150 330 800 8								
Outlet side oil m	ist concentration [AFM] *4 *5	Max.1.0 mg/m³ (ANR) (≈0.8 ppm)								
Bowl materia	al [AW/AFM]	Polycarbonate								
Bowl guard [AW/AFM]	Semi-standard (Steel) Standard (Polycarbonate)								
Construction	n [AW]	Relieving type								
Weight [kg]		0.32	0.62	1.15	1.25					

- *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.
- *3 Conditions: Mist separator inlet pressure: 0.5 MPa; The rated flow varies depending on the inlet pressure.
- Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.
- *4 When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).
- *5 Bowl seal and other O-rings are slightly lubricated.



AC20D-B to AC40D-B Series

Dimensions



		Optional specifications										Semi-standard specifications						
Model	Square embedded type pressure gauge		Digital pressure switch		pressure dalide '		pressur	Round type pressure gauge (with colour zone)		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			
	Н	J	Н	J	Н	J	Н	J	В	В	В	В	В	В	В			
AC20D-B	□28	27	□27.8	37.5	Ø 37.5	62.5	Ø 37.5	63.5	104.9	_	91.4	87.4	93.9	_	_			
AC30D-B	□28	30	□27.8	40.9	Ø 37.5	66.9	Ø 37.5	67.9	156.8	123.6	121.9	117.6	122.1	137.6	142.1			
AC40D-B	□28	38.4	□27.8	48.8	Ø 42.5	75.7	Ø 42.5	75.7	186.9	155.6	153.9	149.6	154.1	169.6	174.1			
AC40D-06-B	□28	38.4	□27.8	48.8	Ø 42.5	75.7	Ø 42.5	75.7	188.9	157.6	155.9	151.6	156.1	171.6	176.1			

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

Air Combination AC Series **Options/Attachments**

Options/Attachments/Part No.

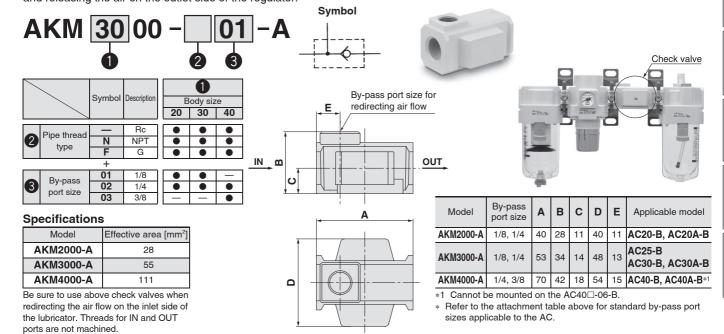
	·							Part no.						
				For AC10-A	For AC20-B	For AC25-B	For AC30-B		For AC40-06-B	For AC50-B	For AC55-B	For AC60-B		
Section	:		Model	For AC10A-A				For AC40A-B				For AC60A-B		
ecti						For AC25B-B					For AC55B-B			
Š		Descript	ion					For AC40C-B						
				_	For AC20D-B	_		For AC40D-B		_	_	_		
F	-	Round	Standard	G27-10-R1		G36-10-□01				G46-10-□01				
	ge	type	0.02 to 0.2 MPa setting	G27-10-R1		G36-4-□01				G46-4-□01				
	Pressure gauge *1	Round type (with colour	Standard	_		G36-10-□01-L		G46-10-□01-L						
	<u>e</u>	(with colour o.02 to 0.2 MPa setting		_		G36-4-□01-L				G46-4-□01-L				
1_	SSI	Square embedded	Standard	_			GC3-10AS	GC3P-010AS (I	Pressure gauge	cover only)]				
Option	Pre	type *2	0.02 to 0.2 MPa setting	_			GC3-4AS [GC3P-010AS (F	ressure gauge	cover only)]				
Į			NPN output, Wiring bottom entry				ISE35-N-25	-MLA [ISE35-N-	25-M (Switch bo	ody only)] *3				
١	1-	igital	NPN output, Wiring top entry				ISE35-R-25	-MLA [ISE35-R-	25-M (Switch bo	ody only)] *3				
		vitch	ressure DND output Wiring bottom entry				ISE35-N-65	-MLA [ISE35-N-	65-M (Switch bo	ody only)] *3				
	Ľ	WILOIT	PNP output, Wiring top entry			ISE35-R-65-MLA [ISE35-R-65-M (Switch body only)] *3								
		oat type	N.O.	_	_	AD3		AD48-A						
L		ıto drain *4	N.C.	AD17-A	AD27-A	AD3				AD47-A				
		pacer		Y100-A	Y200-A Y300-A			Y400-A	Y500-A	Y600-A				
	S	pacer with	n bracket	Y100T-A	Y200T-A		DT-A	Y400T-A	Y500T-A		Y600T-A			
	С	heck valve *5 *6		_	AKM2000-□01-A	AKM3000-(□01)-A		AKM4000-(□02)-A	_	_	_	_		
					(□02)-A □02-A IS10M-20-A			□03-A		10101100				
	P	ressure s	witch *6		IS10M-20-A			IS10M-40-A	IS10M-50-A		IS10M-60-A			
	T-	spacer *5	*6	Y110-M5-A	Y210-□01-A	Y310-(l		Y410-(□02)-A	Y510-(□02)-A	Y610-□03-A	Y610-([
	<u> </u>				(□02)-A	l l	□02-A	□03-A	□03-A	(□04)-A	L	□04-A		
1	P	ressure re	elief		VHS20-□01A	VHS30)-□02A	□02A	\#\IO 40 □004	VHS50-□06A				
ler Ler	3	port valve	*6	_		□02A □03A		VHS40-□03A	VHS40-□06A	□10A	_	_		
Attachment	<u> </u>	·						□04A				1		
tac					□01-A	ı	□02-A	□02-A			E000 -00 A			
¥	Pi	iping ada	oter *6	E100-M5-A	E200-□02-A	E300-l	□03-A	E400-□03-A	E500-□06-A		E600-□06-A □10-A			
					□03-A	[□04-A	□04-A □06-A			⊔10-A			
	-							□06-A						
	D		witala with		□01-A		□02-A	□02-A IS10E-40□03-A						
	1	ressure si iping adar	switch with		— IS10E-20□02-A		0□03-A	□04-A	_	_	_ _ _			
	Pi	ping adap	itel		□03-A		□04-A							
	-				Y24-□01-A	Y34-	□01-Λ	□06-A Y44-□02-A	Y54-□03-A			+		
	С	ross spac	er *6	Y14-M5-A	124-⊔01-A □02-A		⊒01-A ⊒02-A	144-⊔02-A □03-A	154-⊔03-A □04-A	_	_	1 – 1		
\perp				⊔∪2ºA	L	_0∠.V	∪05*A	⊔∪+⁴A						

- *1 ☐ 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 connection thread NPT and pressure gauge supply for psi unit specifications.
- *2 Including one O-ring and 2 mounting screws
 *3 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**.

 *4 Minimum operating pressure: N.O. type–0.1 MPa; N.C. type–0.1 MPa (AD27-A) and 0.15 MPa (AD37-A/AD47-A). Please consult with SMC separately for psi and F unit display specifications.
- *5 For F.R.L. units, port sizes without () are standard specifications.
- *6 Separate spacers are required for modular unit

Check Valve: (K) 1/8, 1/4, 3/8

A check valve with intermediate air release port can be easily installed to prevent a backflow of lubricant when redirecting the air flow and releasing the air on the outlet side of the regulator.



SMC

AC Series

Pressure Switch: (S)

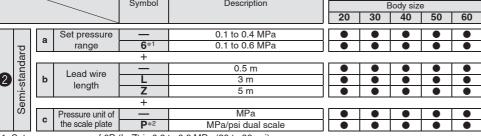
A compact integrated pressure switch can be easily installed and facilitates the pressure detection of the line.



- Semi-standard: Select one each for a to c.
- Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) IS10M-30-6LP

		\		Symbol	Description	Body size						
						20	30	40	50	60		
			Set pressure	_	0.1 to 0.4 MPa	•	•	•	•			
	0	а	range	6*1	0.1 to 0.6 MPa	•	•	•	•	•		
	standard			+								
	2		Lead wire	_	0.5 m	•	•	•	•	•		
2	sta	b	length	L	3 m	•			•			
	1		lerigiri	Z	5 m	•	•		•			
	Semi			+								
	တ	С	Pressure unit of	_	MPa	•			•			
		C	the scale plate	P*2	MPa/psi dual scale	•			•			

*1 Set pressure range of 6P (L, Z) is 0.2 to 0.6 MPa (30 to 90 psi).



Specifications

Fluid	Air
Ambient and fluid temperature	-5 to 60 °C (with no freezing)
Proof pressure	1.0 MPa
Maximum operating pressure	0.7 MPa
Set pressure range (when OFF)	0.1 to 0.4 MPa
Hysteresis	0.08 MPa or less

Switch Characteristics

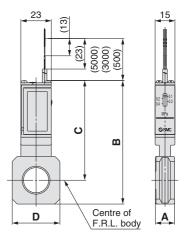
Contact point configuration	1a					
Maximum contact point capacity	2 VA (AC), 2 W (DC)					
Operating voltage: AC, DC	100 V or less					
Maximum operating current	12 V to 24 V AC, DC: 50 mA 48 V AC, DC: 40 mA 100 V AC, DC: 20 mA					

^{*} For detailed specifications on the IS10 series, refer to the IS10 series section of the SMC website: http://www.smc.eu

Symbol





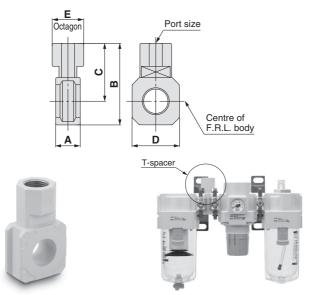


Model	Α	В	С	D	Applicable model
IS10M-20-A	10.6	74.2	64.4	28	AC20□-B
IS10M-30-A	12.6	84.5	70.5	30	AC25□-B, AC30□-B
IS10M-40-A	14.6	93.3	75.3	36	AC40□-B
IS10M-50-A	16.6	97.3 77.3 44		44	AC40□-06-B
IS10M-60-A	22	92.5	66.8	53	AC50□-B, AC55□-B, AC60□-B
_					

^{*} Separate spacers are required for modular unit.

T-Spacer: (T) M5 x 0.8, 1/8, 1/4, 3/8, 1/2

Using a T-spacer facilitates the branching of air flow.



Model *1	Port size	Α	В	С	D	Е	Applicable model
Y110-M5-A	M5 x 0.8	11.2	19	12	14	8	AC10-A, AC10B-A
Y210-□01-A	1/8	14.6	41.8	32	28	19	AC20-B, AC20B-B
Y210-□02-A	1/4	14.0	41.0	52	2	1	AC20C-B
Y310-□01-A	1/8	14.6	52.7	38.7	30	19	AC25-B, AC25B-B
Y310-□02-A	1/4	14.0		56.7	5	13	AC25C-B, AC30C-B
Y410-□02-A	1/4	18.6	62	44	36	24	AC40-B, AC40B-B
Y410-□03-A	3/8	10.0	02		30	24	AC40C-B
Y510-□02-A	1/4	18.6	66	46	44	24	AC40-06-B, AC40B-06-B
Y510-□03-A	3/8	10.0	0	ř	Ť	1	AC40C-06-B
Y610-□03-A	3/8	22	81	57	53	30	AC50-B, AC55-B, AC60-B,
Y610-□04-A	1/2	22	01	5	53	30	AC50B-B, AC55B-B, AC60B-B

- *1 ☐ in model numbers indicates a pipe thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.
- Separate spacers are required for modular unit.
- * Refer to the attachment table on page 34 for standard port sizes when using with the AC.

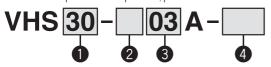
Caution on Mounting

If a T-spacer is used on the inlet side of the lubricator, lubricant may be mixed. Use the AKM series check valve to avoid such possibility.



Pressure Relief 3 Port Valve: (V)

With the use of a pressure relief 3 port valve, pressure left in the line can be easily exhausted.



- Semi-standard: Select one each for a to b.
- Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
 Example) VHS30-03A-RZ

	\	\		Symbol	Description	Body size 20 30 40 50				
				_	Rc	•	•	•		
2	Pi	e th	read type	N*1	NPT	•	•	•	•	
				F*1	G	•	•	•		
				01	1/8	•	l		_	
				02	1/4		•	•	—	
3		Por	t size	03	3/8	_	•	•	_	
9		1 01	1 3126	04	1/2	_	l	•	_	
				06	3/4			•	•	
				10	1	_	I	ı	•	
				+						
	ard	а	Flow	_	Flow direction: Left to right		•	•		
	nde	u	direction	R	Flow direction: Right to left	•	•	•		
4	sta			+						
	Semi-standard	b	Pressure	_	Name plate in SI units: MPa	•	•	•		
	Š		unit	Z *1	Name plate in imperial units: psi		•	•		

^{*1} For pipe thread type: NPT only.

Flow Rate Characteristics

	Port s	size		Flow	rate ch	aracteristics	3		
Model	IN. OUT	EXH	IN-	→OUT		OUT→EXH			
	IIN, OUT	EVU	C(dm ³ /s·bar)	b	Cv	C(dm ³ /s·bar)	b	Cv	
VHS20	1/8	1/8	2.4	0.43	0.65	2.5	0.39	0.69	
V11320	1/4	1/0	3.3	0.40	0.88	3.1	0.51	0.84	
VHS30	1/4	1/4	6.4	0.45	1.7	6.2	0.38	1.7	
V11330	3/8	1/4	8.3	0.41	2.3	7.0	0.41	1.9	
	1/4		7.3	0.49	2.0	8.5	0.35	2.3	
VHS40	3/8	3/8	10.9	0.45	3.0	11.6	0.40	3.1	
	1/2		14.2	0.39	3.8	13.3	0.43	3.6	
VHS40-06	3/4	1/2	18.3	0.31	5.0	17.7	0.37	4.8	
VHS50	3/4	1/2	23.8	0.41	6.4	21.8	0.41	5.9	
V11330	1	1/2	31.9	0.33	8.6	23.5	0.44	6.4	

	STD STD
Pressure relief 3 port valve	
	Symbol 2 3 1
IN (Port size) P2 (Port size)	OUT
Key can be mounted when residual pressure is released.	E D C

Model			S	tandar	d spe	cificat	ions				
Model	P1	P ₂	Α	В	С	D	Е	F	G	Н	ı
VHS20	1/8, 1/4	1/8	66.4	22.3	40	37.5	14	46.6	33.6	28	43
VHS30	1/4, 3/8	1/4	80.3	29.4	53	49	19	52	38	30	49
VHS40	1/4, 3/8, 1/2	3/8	104.9	38.5	70	63	22	58	44	36	63
VHS40-06	3/4	1/2	110.4	42	75	63	22	58	44	44	63
VHS50	3/4, 1	1/2	134.3	53	90	76	26	76	61	53	81

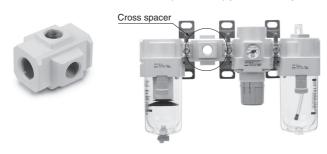
^{*} Use an air filter on the inlet side for operating protection.

Cross Spacer: M5 x 0.8, 1/8, 1/4, 3/8, 1/2

Pipings are possible in all 4 directions.

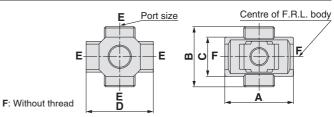
IN/OUT ports are not machined for threads.

Please contact SMC if threaded (machined) ports are required.



Caution on Mounting

- When mounting a cross spacer directly on the IN side of the lubricator, be sure to use the AKM series check valve between the lubricator and cross spacer.
- Factory mounting of a cross spacer on the AC model is available as a special order.



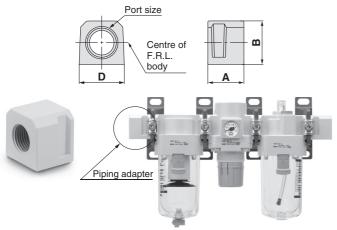
Model *1	E (Port size)	Α	В	С	D	Applicable model	
Y14-M5-A	M5	23	16	14	25	AC10□-A	
Y24-□01-A	1/8	40	40	22	40	AC20□-B	
Y24-□02-A	1/4	40	40	~~	40	ACZUL-D	
Y34-□01-A	1/8	49	43	28	48	AC25□-B. AC30□-B	
Y34-□02-A	1/4	ř	ř	20	ř	A0230-B, A0300-B	
Y44-□02-A	1/4	60	48	36	54	AC40□-B	
Y44-□03-A	3/8	00	40	30	54	AC40L-B	
Y54-□03-A	3/8	72	62	40	62	AC40□-06-B	
Y54-□04-A	1/2	12	02	40	02	AC40	

- *1 ☐ in model numbers indicates a pipe thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.
- * If threaded IN/OUT ports are required, they are available as a special order. Please contact SMC.
- * Two hexagon socket head plugs are included in the package.



Piping Adapter: M5 x 0.8, 1/8, 1/4, 3/8, 1/2, 3/4, 1

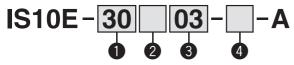
A piping adapter allows installation/removal of the component without removing the piping and thus makes maintenance easier.



Model *1	Port size	Α	В	D	Applicable model
E100-M5-A	M5 x 0.8	10	14	14	AC10□-A
E200-□01-A	1/8				
E200-□02-A	1/4	29.8	23.5	28	AC20□-B
E200-□03-A	3/8				
E300-□02-A	1/4				
E300-□03-A	3/8	31.8	30	30	AC25□-B, AC30□-B
E300-□04-A	1/2				
E400-□02-A	1/4				
E400-□03-A	3/8	31.8	36	36	AC40□-B
E400-□04-A	1/2	31.0	30	30	AC40□-B
E400-□06-A	3/4				
E500-□06-A	3/4	31.8	40	44	AC40□-06-B
E600-□06-A	3/4	35	48	53	AC50-B, AC55-B, AC60-B, AC50A-B, AC60A-B, AC50B-B.
E600-□10-A	1	00	70	33	AC55B-B, AC60B-B

- *1 ☐ in model numbers indicates a pipe thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.
- * Separate spacers are required for modular unit.
- Factory mounting of a piping adapter on the AC models is available as a special order.

Pressure Switch with Piping Adapter



- Semi-standard: Select one each for a to d.
- Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order.
 Example) IS10E-30N03-6PRZ

	_	\		Symbol	Description	80 20	ody siz	ze 40
				— N* ²	Rc NPT	•	•	•
2		Pipe	thread type	•	•			
				F *2	G			
				+				
				01	1/8		_	_
				02	1/4		•	
3		F	Port size	03	3/8	•	•	
				_	•	•		
				06	3/4		_	•
				+				
		а	Set pressure	_	0.1 to 0.4 MPa		•	•
		а	range	6*1	0.1 to 0.6 MPa	•	•	•
				+				
	σ		Lead wire	_	0.5 m		•	•
	dar	b	length	L	3 m	•	•	•
	an		icrigar	Z	5 m		•	•
4	-st			+				
	Semi-standard		Pressure unit of	_	MPa	•	•	•
	Ñ	С	the scale plate	P*2	MPa/psi dual scale	•	•	•
				+				
			Mounting	_	Right			
		d	position	R	Left	•	•	•

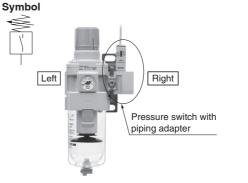
- *1 Set pressure range of 6P (L, R, Z) is 0.2 to 0.6 MPa (30 to 90 psi).
- *2 For pipe thread type: NPT only.

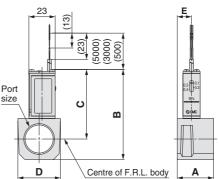
Specifications

opoomoanomo	
Fluid	Air
Ambient and fluid temperature	-5 to 60 °C (with no freezing)
Proof pressure	1.0 MPa
Maximum operating pressure	0.7 MPa
Set pressure range (when OFF)	0.1 to 0.4 MPa
Hysteresis	0.08 MPa or less

Switch Characteristics

Contact point configuration	1a				
Maximum contact point capacity	2 VA (AC), 2 W (DC)				
Operating voltage: AC, DC	100 V or less				
	12 V to 24 V AC, DC: 50 mA				
Maximum operating current	48 V AC, DC: 40 mA				
	100 V AC, DC: 20 mA				





Model *1	Port size	Α	В	С	D	ш	Applicable model	
IS10E-20□01-A	1/8							
IS10E-20□02-A	1/4	29.8	66.3	55.3	28	16	AC20□-B	
IS10E-20□03-A	3/8							
IS10E-30□02-A	1/4						4.005 D	
IS10E-30□03-A	3/8	31.8	72.8	58.8	30	13	AC25□-B, AC30□-B	
IS10E-30□04-A	1/2						ACCO-D	
IS10E-40□02-A	1/4							
IS10E-40□03-A	3/8	31.8	78.8	60.8	37	12.5	*2	
IS10E-40□04-A	1/2	31.8	70.0	00.6	37	12.5	AC40□-B	
IS10E-40□06-A	3/4							

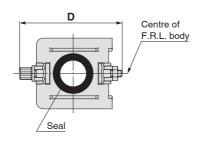
- *1 ☐ in the model numbers indicates a pipe thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.
- *2 Cannot be mounted on the AC40□-06-B.
- * Separate spacers are required for modular unit.
- * The pressure switch on the AC40□-06-B can be mounted by screwing IS10-01S into the piping adapter E500-□06-A-X501 (with top-face thread Rc 1/8). Products with a premounted switch are available as a special order. Please contact SMC regarding their availability.

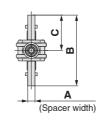


AC Series

Accessories (Spacers/Brackets)

Spacer





Model	Α	В	С	D	Applicable model		
Y100-A	6	17.9	9	35.4	AC10□-A		
Y200-A	3.2	31.2	15.6	44.9	AC20□-B		
Y300-A	4.2	43.4	21.7	57.9	AC25□-B, AC30□-B		
Y400-A	5.2	53	26.5	68.5	AC40□-B		
Y500-A	5.2	57	28.5	75.6	AC40□-06-B		
Y600-A	6.2	67.6	33.8	92.5	AC50□-B, AC55□-B, AC60□-B		



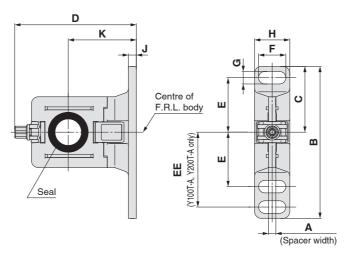
Y400-A

Y200-A

Replacement Parts

Description	Material	Part no.							
Description	ivialeriai	Y100-A	Y200-A	Y300-A	Y400-A	Y500-A	Y600-A		
Seal	HNBR (NBR) *1	Y120P-050AS *2	Y220P-050S	Y320P-050S	Y420P-050S	Y520P-050S	Y620P-050S		

Spacer with Bracket



Model	Α	В	С	D	Ε	EE	F	G	Н	J	K	Applicable model
Y100T-A	6	56	24.5	43.6	20	27	6.8	4.5	13	3	25	AC10□-A
Y200T-A	3.2	67	29	53.4	24	33	12	5.5	15.5	3.5	30	AC20□-B
Y300T-A	4.2	82	41	71.5	35	_	14	7	19	4	41	AC25□-B, AC30□-B
Y400T-A	5.2	96	48	86.1	40	_	18	9	26	5	50	AC40□-B
Y500T-A	5.2	96	48	89.6	40	_	18	9	26	5	50	AC40□-06-B
Y600T-A	6.2	120	60	118	50	_	20	11	31.2	6	70	AC50□-B, AC55□-B, AC60□-B



Y200T-A

Y400T-A

Replacement Parts

Description	Material			Part	no.		
Description	ivialeriai	Y100T-A	Y200T-A	Y300T-A	Y400T-A	Y500T-A	Y600T-A
Seal	HNBR (NBR) *1	Y120P-050AS *2	Y220P-050S	Y320P-050S	Y420P-050S	Y520P-050S	Y620P-050S

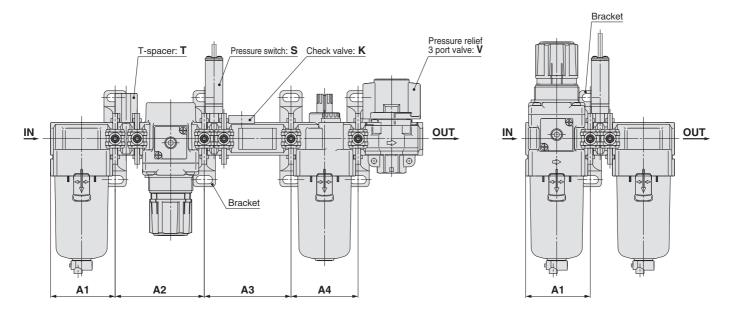


^{*1 ():} Size 10 *2 Assembly of 2 O-rings

^{*1 ():} Size 10 *2 Assembly of 2 O-rings

AC Series

Mounting Position for Spacer with Bracket



Attachment		K			S	-	Г		V			KS			KT			K	V			KST	
Model	A1	A2	А3	A1	A2	A1	A2	A1	A2	A3	A1	A2	А3	A1	A2	A3	A1	A2	A3	A4	A1	A2	АЗ
AC10-A	_	_	_	_	_	28	48.2	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AC20-B	41.6	43.2	43.2	41.6	43.2	41.6	61	41.6	43.2	43.2	41.6	43.2	57	41.6	61	43.2	41.6	43.2	43.2	43.2	41.6	61	57
AC25-B	55.1	57.2	57.2	55.1	57.2	55.1	76	55.1	57.2	57.2	55.1	57.2	74	55.1	76	57.2	55.1	57.2	57.2	57.2	55.1	76	74
AC30-B	55.1	57.2	57.2	55.1	57.2	55.1	76	55.1	57.2	57.2	55.1	57.2	74	55.1	76	57.2	55.1	57.2	57.2	57.2	55.1	76	74
AC40-B	72.6	75.2	75.2	72.6	75.2	72.6	99	72.6	75.2	75.2	72.6	75.2	95	72.6	99	75.2	72.6	75.2	75.2	75.2	72.6	99	95
AC40-06-B	_	_	_	77.6	80.2	77.6	104	77.6	80.2	80.2	_	_	_	_	_	_	_	_	_	_	_	_	_
AC50-B	_	_	_	93.1	96.2	93.1	124	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AC55-B	_		_	98.1	96.2	98.1	124	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_
AC60-B	_	_	_	98.1	101.2	98.1	129	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	

Attachment		KS	SV			K'	ΓV			KS	TV		S	Т		sv			STV			TV	
Model	A1	A2	A3	A4	A1	A2	A3	A4	A1	A2	A3	A4	A1	A2	A1	A2	АЗ	A1	A2	A3	A1	A2	A3
AC10-A	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_	_		_	_
AC20-B	41.6	43.2	57	43.2	41.6	61	43.2	43.2	41.6	61	57	43.2	41.6	61	41.6	43.2	57	41.6	61	57	41.6	61	43.2
AC25-B	55.1	57.2	74	57.2	55.1	76	57.2	57.2	55.1	76	74	57.2	55.1	76	55.1	57.2	74	55.1	76	74	55.1	76	57.2
AC30-B	55.1	57.2	74	57.2	55.1	76	57.2	57.2	55.1	76	74	57.2	55.1	76	55.1	57.2	74	55.1	76	74	55.1	76	57.2
AC40-B	72.6	75.2	95	75.2	72.6	99	75.2	75.2	72.6	99	95	75.2	72.6	99	72.6	75.2	95	72.6	99	95	72.6	99	75.2
AC40-06-B	_	_	_	_	_	_	_	_	_	_	_	_	77.6	104	77.6	80.2	102	77.6	104	102	77.6	104	80.2
AC50-B	_	_	_	_	_	_	_	_	_	_	_	_	93.1	124	93.1	189.3	124	93.1	124	124	93.1	124	96.2
AC55-B	_	_	_	_		_	_	_	_	_	_	_	98.1	124	_	_	_	_	_	_		_	_
AC60-B	_	_	_	_	_	_	_	_	_	_	_	_	98.1	129	_	_	_			_	_	_	_

Attachment	ŀ	<u> </u>	S	1	/	K	S		ΚV			KSV		S	٧
Model	A1	A2	A1	A1	A2	A1	A2	A1	A2	АЗ	A1	A2	A3	A1	A2
AC20A-B	41.6	43.2	41.6	41.6	43.2	41.6	57	41.6	43.2	43.2	41.6	57	43.2	41.6	57
AC30A-B	55.1	57.2	55.1	55.1	57.2	55.1	74	55.1	57.2	57.2	55.1	74	57.2	55.1	74
AC40A-B	72.6	75.2	72.6	72.6	75.2	72.6	95	72.6	75.2	75.2	72.6	95	75.2	72.6	95
AC40A-06-B	_	_	77.6	77.6	80.2	_	_	_	_	_	_	_	_	77.6	102
AC50A-B	_	_	93.1	93.1	96.2	_	_	_	_	_	_	_	_	93.1	124
AC60A-B	_	_	98.1	_	_	_	_	_	_	_	_	_	_	_	_

Attachment	S	Т	1	/	V	1	S	٧	S	V1	Т	٧	T۱	/1
Model	A1	A1	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2	A1	A2
AC10B-A	_	28	_	_	_	_	_	_	_	_	_	_	_	
AC20B-B	41.6	41.6	41.6	43.2	41.6	43.2	41.6	57	41.6	43.2	41.6	61	41.6	43.2
AC25B-B	55.1	55.1	55.1	57.2	55.1	57.2	55.1	74	55.1	57.2	55.1	76	55.1	57.2
AC30B-B	55.1	55.1	55.1	57.2	55.1	57.2	55.1	74	55.1	57.2	55.1	76	55.1	57.2
AC40B-B	72.6	72.6	72.6	75.2	72.6	75.2	72.6	95	72.6	75.2	72.6	99	72.6	75.2
AC40B-06-B	77.6	77.6	77.6	80.2	77.6	80.2	77.6	102	77.6	80.2	77.6	104	77.6	80.2
AC50B-B	93.1	93.1	93.1	189.3	93.1	96.2	93.1	124	93.1	96.2	93.1	124	93.1	96.2
AC55B-B	98.1	98.1	_	_	_	_	_	_	_	_	_	_	_	_
AC60B-B	98.1	98.1	_	_	_	_	_	_	_	_	_	_	_	

Attachment	5	6	7	Γ		٧			V1			SV			SV1			TV			TV1	
Model	A1	A2	A1	A2	A1	A2	АЗ	A1	A2	АЗ	A1	A2	АЗ	A1	A2	АЗ	A1	A2	АЗ	A1	A2	A3
AC20C-B	41.6	43.2	41.6	43.2	41.6	43.2	43.2	41.6	43.2	43.2	41.6	43.2	57	41.6	43.2	43.2	41.6	43.2	61	41.6	43.2	43.2
AC25C-B	55.1	57.2	55.1	57.2	55.1	57.2	57.2	55.1	57.2	57.2	55.1	57.2	74	55.1	57.2	57.2	55.1	57.2	76	55.1	57.2	57.2
AC30C-B	55.1	57.2	55.1	57.2	55.1	57.2	57.2	55.1	57.2	57.2	55.1	57.2	74	55.1	57.2	57.2	55.1	57.2	76	55.1	57.2	57.2
AC40C-B	72.6	75.2	72.6	75.2	72.6	75.2	75.2	72.6	75.2	75.2	72.6	75.2	95	72.6	75.2	75.2	72.6	75.2	99	72.6	75.2	75.2
AC40C-06-B	77.6	80.2	77.6	80.2	77.6	80.2	80.2	77.6	80.2	80.2	77.6	80.2	102	77.6	80.2	80.2	77.6	80.2	104	77.6	80.2	80.2

Attachment	S	\	/	V	1	S	٧	SI	V1
Model	A1	A1	A2	A1	A2	A1	A2	A1	A2
AC20D-B	41.6	41.6	43.2	41.6	43.2	41.6	57	41.6	43.2
AC30D-B	55.1	55.1	57.2	55.1	57.2	55.1	74	55.1	57.2
AC40D-B	72.6	72.6	75.2	72.6	75.2	72.6	95	72.6	75.2
AC40D-06-B	77.6	77.6	80.2	77.6	80.2	77.6	102	77.6	80.2

- A1: Dimension from the end of the IN side to the centre of the mounting hole for the first bracket.
- A2: Mounting hole pitch between the first and the second brackets.
- A3: Mounting hole pitch between the second and the third brackets.
- A4: Mounting hole pitch between the third and the fourth brackets.

Modular Type Air Filters AF/AFM/AFD Series

Air Filter AF Series	Model	Port size	Filtration μm	Options
	AF10-A	M5 x 0.8		
	AF20-A	1/8, 1/4		
20 24. mg	AF30-A	1/4, 3/8		Bracket (Except AF10-A)
	AF40-A	1/4, 3/8, 1/2	5	
	AF40-06-A	3/4		Float type auto drain
_	AF50-A	3/4, 1		
Pages 43 to 54	AF60-A	1		
Mist Separator AFM Series	AFM20-A	1/8, 1/4		
	AFM30-A	1/4, 3/8	0.3	Bracket
	AFM40-A	1/4, 3/8, 1/2	0.5	Float type auto drain
Pages 55 to 63	AFM40-06-A	3/4		
Micro Mist Separator AFD Series	AFD20-A	1/8, 1/4		
	AFD30-A	1/4, 3/8	0.01	Bracket
ou.	AFD40-A	1/4, 3/8, 1/2	0.01	Float type auto drain
Pages 55 to 63	AFD40-06-A	3/4		

Air Filter

AF10-A to AF60-A

Symbol

Air Filter

Air Filter with Auto Drain









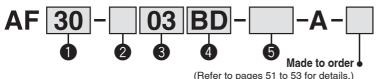


How to Order

· Option/Semi-standard: Select one each for a to f.

AF20-A

AF40-A



Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AF30-03BD-R-A

					(Refer to pages 51 to 53 for details.)						
	_	_			5			(
				Symbol	Description			Body			
						10	20	30	40	50	60
					Metric thread (M5)	•	_	_	_	_	_
2		Pine	thread type		Rc	_				•	
9	1	i ipc	till cad type	N*1	NPT	_				•	
				F *2	G	_					
				+							
				M5	M5 x 0.8	•			_		
				01	1/8		•	_	_		
				02	1/4		•	•	•		
3			Port size	03	3/8	_	_	•	•		_
				04	1/2				•	_	
				06	3/4	_	_	_	•	•	
				10	1		_		_	•	
_				+						1	
		а	Mounting		Without mounting option	•	•	•	•	•	
	ا د			B *3	With bracket				•		
4	Option			+							
	ြဝိ		Float type		Without auto drain	•	•	•	•	•	•
		b	auto drain	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.	•	•	•	•	•	•
				D *5	N.O. (Normally open) Drain port is open when pressure is not applied.		_		•	•	
				+							
					Polycarbonate bowl	•	•	•	•	•	
				2	Metal bowl	•	•	•	•	•	•
		С	Bowl *6	6	Nylon bowl	•	•	•	•	•	•
				8	Metal bowl with level gauge		_	•	•	•	•
				С	With bowl guard		•	*7	*7	<u></u> *7	<u>*</u> *7
	احا			6C	With bowl guard (Nylon bowl)	_		*8	*8	*8	*8
	Semi-standard			+	West 1		_	_		_	
	anc				With drain cock	•	•	•	•	•	•
6	-ste	d	Drain port *9	J *10	Drain guide 1/8		•		_	_	
	E		·	VA / 0.11	Drain guide 1/4			•	•	•	•
	Se			W*11	Drain cock with barb fitting	_	_			•	
				+							_
		е	Flow direction		Flow direction: Left to right		•	•	•	•	•
				R	Flow direction: Right to left						
				+	Name and a section and a secti						
		f	Pressure unit	7+12	Name plate and caution plate for bowl in SI units: MPa	0.10	0.40	0.10	0.10	0.10	0.110
				Z *12	Name plate and caution plate for bowl in imperial units: psi, °F	○*13	○*13	○*13	○*13	○*13	○*13

- *1 Drain guide is NPT 1/8 (applicable to the AF20-A) and NPT 1/4 (applicable to the AF30-A to AF60-A). The auto drain port comes with Ø 3/8" One-touch fitting (applicable to the AF30-A to AF60-A)
- *2 Drain guide is G 1/8 (applicable to the AF20-A) and G 1/4 (applicable to the AF30-A to AF60-A). The auto drain port comes with O 10 One-touch fitting (applicable to the AF30-A to AF60-A).
- *3 Option B is not assembled and supplied loose at the time of shipment. Assembly of a bracket and 2 mounting screws.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min [ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- *6 Refer to chemical data on page 46 for chemical resistance of the bowl.
- *7 A bowl guard is provided as standard equipment (polycarbonate).
- *8 A bowl guard is provided as standard equipment (nylon).
- *9 The combination of float type auto drain: C and D is not available.
- *10 Without a valve function
- *11 The combination of metal bowl: 2 and 8 is not available.
- *12 For pipe thread type: M5, NPT
- *13 O: For pipe thread type: M5, NPT only



Standard Specifications

Model	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A						
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 6	60 °C (with no fre	ezing)								
Proof pressure	1.5 MPa												
Maximum operating pressure	1.0 MPa												
Nominal filtration rating				5 μm									
Drain capacity [cm³]	2.5	8	25		4	5							
Bowl material				Polycarbonate									
Bowl guard	_	Semi-standard (Steel)		Stan	dard (Polycarbor	nate)							
Weight [kg]	0.06	0.08	0.18	0.36	0.41	0.87	1.00						

Air Filter AF10-A to AF60-A Series

Option/Part No.

Optional specifications				Model			
Optional specifications	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
Bracket assembly *1	_	AF22P-050AS	AF32P-050AS	AF42P-050AS	AF42P-070AS	AF52P	-050AS

^{*1} Assembly of a bracket and 2 mounting screws

Bowl Assembly/Part No.

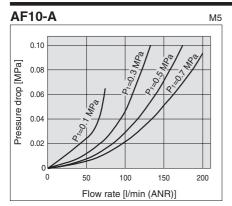
Bowl	Drain					Mode	el			
material	discharge mechanism	Drain port	Other	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
		With drain cock	_	C1SF-A	C2SF-A	_				
		Willi dialii cock	With bowl guard	_	C2SF-C-A	C3SF-A				
	Manual	Drain cock with barb fitting	With bowl guard	_	_	C3SF-W-A	C4SF-W-A			
Polycarbonate		With drain guide	_	_	C2SF□-J-A	_				
Folycarbonate		(without valve function)	With bowl guard	_	C2SF□-CJ-A	C3SF□-J-A	C4SF□-J-A			
	Automatic *	Normally closed (N.C.)	_	AD17-A	AD27-A	_		-	_	
	(Auto drain)	Normally closed (N.C.)	With bowl guard	_	AD27-C-A	AD37□-A		AD47	7□-A	
	(rtato diairi)	Normally open (N.O.)	With bowl guard	_	_	AD38□-A		AD48	3□-A	
		With drain cock	_	C1SF-6-A	C2SF-6-A	_	_			
	Manual	Willi dialii cock	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	
Nylon		With drain guide	_	_	C2SF□-6J-A	_	_			
Nylon		(without valve function)	With bowl guard	_	C2SF□-6CJ-A	C3SF□-6J-A	A C4SF□-6J-A			
	Automostic *1	Normally closed (N.C.)	_	AD17-6-A	AD27-6-A	_		-	_	
	(Auto drain)	Normally closed (N.C.)	With bowl guard	_	AD27-6C-A	AD37□-6-A		AD47	□-6-A	
	(riate aram)	Normally open (N.O.)	With bowl guard	_	_	AD38□-6-A		AD48	□-6-A	
		With drain cock	_	C1SF-2-A	C2SF-2-A	C3SF-2-A		C4SI	=-2-A	
	Manual	With diam cock	With level gauge	_	_	C3LF-8-A		C4LF	-8-A	
	Ivialiual	With drain guide	_	_	C2SF□-2J-A	C3SF□-2J-A		C4SF	⊒-2J-A	
Metal		(without valve function)	With level gauge	_	_	C3LF□-8J-A		C4LF	⊒-8J-A	
ivicial		Normally closed (N.C.)		AD17-2-A	AD27-2-A	AD37□-2-A		AD47	□-2-A	
	Automatic *1	Indimally closed (N.C.)	With level gauge	_	_	AD37□-8-A		AD47	□-8-A	
	(Auto drain)			_	_	AD38□-2-A		AD48	□-2-A	
		intormally open (N.O.)	With level gauge	_	_	AD38□-8-A		AD48	□-8-A	

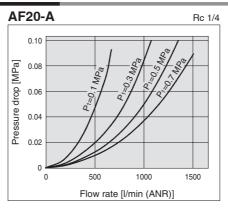
^{*1} Minimum operating pressure: N.O. type–0.1 MPa (AD38-A, AD48-A); N.C. type–0.1 MPa (AD17-A, AD27-A) and 0.15 MPa (AD37-A, AD47-A). Bowl assembly for the AF20-A to AF60-A models comes with a bowl seal.

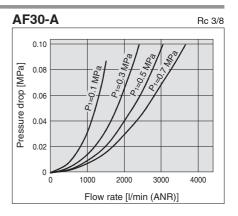
No indication is necessary for Rc thread; however, indicate N for NPT thread, and F for G thread. (For auto drain, —: O 10, N: O 3/8") Please consult with SMC separately for psi and °F unit display specifications.

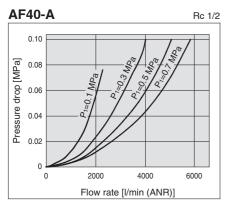
AF10-A to AF60-A Series

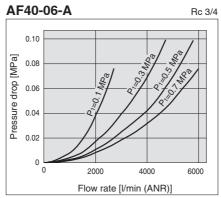
Flow Rate Characteristics (Representative values)

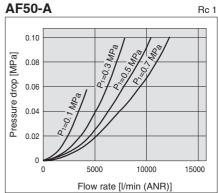


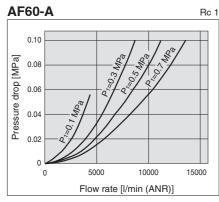












Specific Product Precautions

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

Design/Selection

⚠ Warning

1. 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)

			Mat	erial
Type	Chemical name	Application examples	Polycar- bonate	Nylon
Acid	Hydrochloric acid Sulfuric acid, Phosphoric acid Chromic acid	Acid washing liquid for metals	Δ	Х
Alkaline	Sodium hydroxide (Caustic soda) Potash Calcium hydroxide (Slack lime) Ammonia water Carbonate of soda	Degreasing of metals Industrial salts Water-soluble cutting oil	Х	0
Inorganic salts	Sodium sulfide Potassium nitrate Sulfate of soda	_	Х	Δ
Chlorine solvents	Carbon tetrachloride Chloroform Ethylene chloride Methylene chloride	Cleansing liquid for metals Printing ink Dilution	х	Δ
Aromatic series	Benzene Toluene Paint thinner	Coatings Dry cleaning	Х	Δ
Ketone	Acetone Methyl ethyl ketone Cyclohexane	Photographic film Dry cleaning Textile industries	Х	Х
Alcohol	Ethyl alcohol IPA Methyl alcohol	Antifreeze Adhesives	Δ	Х
Oil	Gasoline Kerosene	_	Х	0
Ester	Phthalic acid dimethyl Phthalic acid diethyl Acetic acid	Synthetic oil Anti-rust additives	Х	0
Ether	Methyl ether Ethyl ether	Brake oil additives	Х	0
Amino	Methyl amino	Cutting oil Brake oil additives Rubber accelerator	Х	Х
Others	Thread-lock fluid Seawater Leak tester lly safe \(\triangle \tri	_	X ects will o	Δ

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

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/Adjustment

♠ Caution

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



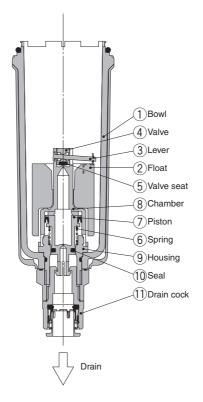
AF10-A to AF60-A Series

Working Principle: Float Type Auto Drain

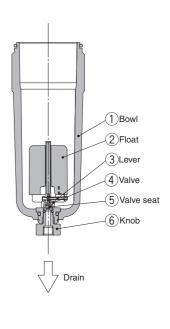
N.O. type: AD38-A, AD48-A

1 Bowl 4 Valve 3 Lever 2 Float 5 Valve seat 8 Chamber 6 Spring 7 Piston 9 Housing 10 Seal 11 Drain cock

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



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



When pressure inside the bowl is released:

When pressure is released from the bowl \bigcirc , the piston \bigcirc is lowered by the spring \bigcirc .

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

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

When pressure is applied inside the bowl:

When pressure is 0.1 MPa or more, the force of the piston ② surpasses the force of the spring ⑥, and the piston goes up.

This pushes seal @ 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 $\widehat{\ \ }$ at this time, the float $\widehat{\ \ }$ will be pulled down by its own weight, causing the valve $\widehat{\ \ }$, which is connected to the lever $\widehat{\ \ }$, to seal the valve seat $\widehat{\ \ }$).

When there is an accumulation of condensate in the bowl:

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

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

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

Turning the drain cock ① manually counterclockwise lowers the piston ②, and causes the seal created by the seal ⑩ to be interrupted, 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 the piston 7 in its upward position.

This keeps the seal created by the seal 1 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 \bigcirc , the combined force of the spring \bigcirc and the pressure inside the bowl \bigcirc keeps the piston \bigcirc in its upward position.

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

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

When there is an accumulation of condensate in the bowl:

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

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

This causes the sealing action of the seal 0 to be interrupted and the accumulated condensate in the bowl 1 drains out through the drain cock 1.

Turning the drain cock ① manually counterclockwise lowers the piston ⑦, and causes the seal created by the seal ⑩ to be interrupted, thus allowing the condensate to drain out.

When pressure inside the bowl is released:

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

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

When pressure is applied inside the howl:

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

When there is an accumulation of condensate in the bowl:

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

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

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

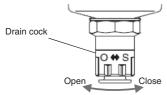


Air Filter AF10-A to AF60-A Series

Operating State and Proper Use of Float Type Auto Drain

Auto drain	When pressure is not applied (After exhausting residual pressure)	When pressu	ure is applied When drain accumulates	Minimum operating pressure (Outlet pressure)
	Drain discharged (Open)	Drain not discharged (Close)	Drain discharged (Open)	
N.O. Normally open	Piston Orifice			0.1 MPa or more AF30-A to AF60-A
N.C. Normally closed	Drain not discharged (Close) Float Piston Orifice			0.1 MPa or more AF10-A to AF20-A 0.15 MPa or more AF30-A to AF60-A

◆ For both N.O. and N.C., the drain can be discharged manually by turning the drain cock to the "O" position. (Except for medium air pressure, AFF75B, AM□850, and free standing type)



Compressor	Proper Use When pressure is not applied (After exhausting residual pressure)	Cold climates		Recommended auto drain
0.75 kW or more	Drain not accumulated Do not want to accumulate drain generated at the inlet side when pressure is not applied.	Want to prevent troubles caused by freezing.	\Rightarrow	N.O. ^{Note)} Normally open
Less than 0.75 kW	Drain accumulated			N.C. Normally closed

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



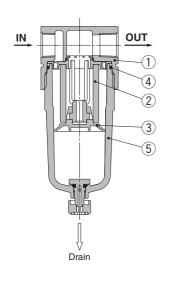
AF10-A to AF60-A Series

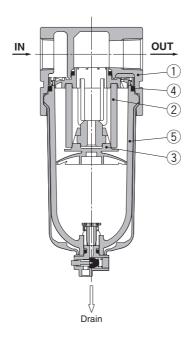
Construction

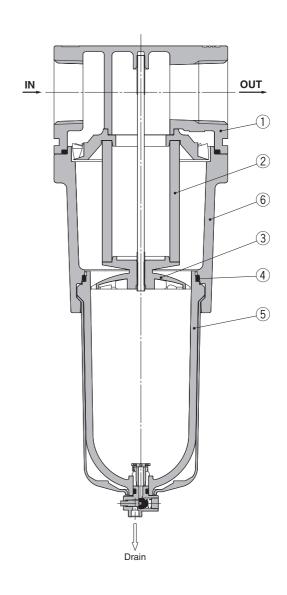
AF10-A/AF20-A

AF30-A to AF40-06-A

AF50-A/AF60-A







Component Parts

No.	Description	Material	Model	Colour
-1	Body	Zinc die-cast	AF10-A	White
'	Body	Aluminium die-cast	AF20-A to AF60-A	VVIIILE
6	Housing	Aluminium die-cast	AF50-A/AF60-A	White

Replacement Parts

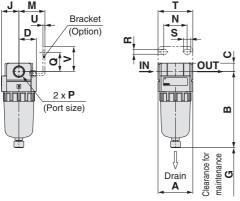
ПСР	idocinicint i di to										
No.	Description	Material		Part no.							
NO.	Description	iviateriai	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A		
2	Filter element	Non-woven fabric	AF10P-060S	AF20P-060S	AF30P-060S	AF40P-060S		AF50P-060S	AF60P-060S		
3	Baffle	PBT	AF10P-040S *2	AF22P-040S	AF32P-040S	AF42P-040S		AF50P-040S	AF60P-040S		
4	Bowl seal	NBR	C1SFP-260S	C2SFP-260S	C32FP-260S						
5	Bowl assembly *1	Polycarbonate	C1SF-A	C2SF-A	C3SF-A	C4SF-A					

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

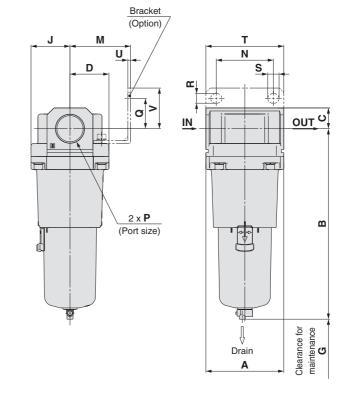


ΑF

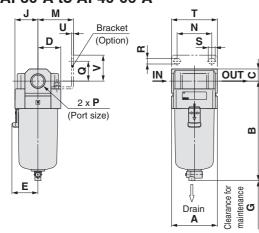
AF10-A/AF20-A



AF50-A/AF60-A



AF30-A to AF40-06-A

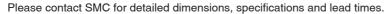


Applicable model	AF10-A	/AF20-A	AF2	20-A	AF30-A to AF60-A
Optional/Semi-standard specifications	With auto drain (N.C.)	Metal bowl	With drain guide	Metal bowl with drain guide	With auto drain (N.O./N.C.)
Dimensions	M5 x 0.8	B	Width across flats 14 1/8	Width across flats 14	N.O.: Black N.C.: Grey Thread type/Rc, G: Ø 10 One-touch fitting Thread type/NPT: Ø 3/8" One-touch fitting

Applicable model			AF	F30-A to AF60-A		
Optional/Semi-standard specifications	Metal bowl	Metal bowl with drain guide	Metal bowl with level gauge	Metal bowl with level gauge, with drain guide	With drain guide	Drain cock with barb fitting
Dimensions	B	Width across flats 17	a	Width across flats 17	Width across flats 17	Barb fitting applicable tubing: T0604

											(Option	al spe	cifica	itions				Semi-	standar	d specific	cations	
Model		\$	Standard	d speci	ificatio	ns			Bracket 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			
	Р	Α	В	С	D	Е	G	J	M	N	Q	R	S	Т	U	٧	В	В	В	В	В	В	В
AF10-A	M5 x 0.8	25	59.9	7	12.5	_	25	12.5	_	_	_	_	_	_	_	_	77.9	_	_	59.3	_	_	_
AF20-A	1/8, 1/4	40	87.6	9.8	20	_	25	20	30	27	22	5.4	8.4	40	2.3	28	104.9	_	91.4	87.4	93.9	_	_
AF30-A	1/4, 3/8	53	115.1	14	26.7	30	35	26.7	41	35	23	6.5	13	53	2.3	30	156.8	123.6	121.9	117.6	122.1	137.6	142.1
AF40-A	1/4, 3/8, 1/2	70	147.1	18	35.5	38.4	40	35.5	50	52	26	8.5	12.5	70	2.3	35	186.9	155.6	153.9	149.6	154.1	169.6	174.1
AF40-06-A	3/4	75	149.1	20	35.5	38.4	40	35.5	50	52	25	8.5	12.5	70	2.3	34	188.9	157.6	155.9	151.6	156.1	171.6	176.1
AF50-A	3/4, 1	90	220.1	24	45	_	30	45	70	66	35	11	13	90	3.2	47	259.9	228.6	226.9	222.6	227.1	242.6	247.1
AF60-A	1	95	234.1	24	47.5	_	30	47.5	70	66	35	11	13	90	3.2	47	273.9	242.6	240.9	236.6	241.1	256.6	261.1

AF10-A to AF60-A Air Filter Made to Order





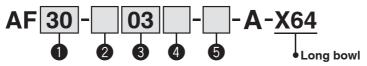
1 Long Bowl

Drain capacity is greater than that of standard models.

Applicable Model/Drain Capacity

Model	AF10-A	AF20-A	AF30-A	AF40-A	AF40-06-A	AF50-A	AF60-A
Port size	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
Drain capacity [cm³]	9	19	43		8	8	
B dimension [mm] *1	81.6	108.6	137.1	167.2	169.2	240.2	254.2

*1 For polycarbonate bowls. Please contact SMC for other bowl materials.



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







AF20-A



	_							(
				Symbol	Description			Body	size		
						10	20	30	40	50	60
					Metric thread (M5)	•	_	_	_	_	_
		Dina	thread type		Rc	_	•	•	•	•	•
2		ripe	tilleau type	N*1	NPT	_	•	•	•	•	•
				F *2	G	_	•	•	•	•	•
				+							<u>.</u>
				M5	M5	•	_	_	_	_ [_
			01	1/8	_	•	_	_	_ [_	
				02	1/4	_	•	•	•		_
3			Port size	03	3/8	_	_	•	•		_
				04	1/2	_	_	_	•	_ [_
				06	3/4	_	_	_	•	•	_
				10	1	_	_	_	_	•	•
				+					•	•	
4		Ontic	on (Mounting)	_	Without mounting option	•	•	•	•	•	•
4	l '	Optic	on (Mounting)	B *3	With bracket	_	•	•	•	•	•
				+							
				_	Polycarbonate bowl	•	•	•	•	•	•
				2	Metal bowl	•	•	•	•	•	•
		а	Bowl *4	6	Nylon bowl	•	•	•	•	•	•
				С	With bowl guard	_	•	<u>_</u> *5	*5	*5	*5
				6C	With bowl guard (Nylon bowl)	_	•	—* ⁶	<u></u> *6	*6	*6
	-			+							
	dar			_	With drain cock	•	•	•	•	•	•
	Semi-standard	b	Drain part	J * ⁷	Drain guide 1/8	_	•			_ [
6	ii-st	D	Drain port	J	Drain guide 1/4			•	•	•	•
	sem			W *8	Drain cock with barb fitting (for Ø 6 x Ø 4 nylon tube)			•	•	•	•
	(O)			+							
		С	Flow direction	_	Flow direction: Left to right	•	•	•	•	•	•
			1 low direction	R	Flow direction: Right to left	•	•	•	•	•	•
				+							
		d	Pressure unit	_	Name plate and caution plate for bowl in SI units: MPa	•	•	•	•	•	•
		u	1 1033u10 utilit	Z *9	Name plate and caution plate for bowl in imperial units: psi, °F	○*10	○*10	○*10	○*10	○*10	○*10

- *1 Drain guide is NPT 1/8 (applicable to the AF20-A) and NPT 1/4 (applicable to the AF30-A to AF60-A).
- *2 Drain guide is G 1/8 (applicable to the AF20-A) and G 1/4 (applicable to the AF30-A to AF60-A).
- *3 Option B is not assembled and supplied loose at the time of shipment. Assembly of a bracket and 2 mounting screws.
- *4 Refer to chemical data on page 46 for chemical resistance of the bowl.
- *5 A bowl guard is provided as standard equipment (polycarbonate).
- *6 A bowl guard is provided as standard equipment (nylon).
- *7 Without a valve function
- *8 The combination of metal bowl: 2 is not available.
- *9 For pipe thread type: NPT.
- *10 \bigcirc : For pipe thread type: NPT only



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

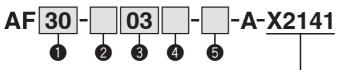
Please contact SMC for detailed dimensions, specifications and lead times.

2 With Element Service Indicator

Clogging status of elements can be checked visually.

Applicable Model

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



- Option/Semi-standard: Select one each for a to f.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AF30-03BD-2R-A-X2141

With element service indicator

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

	_	_						0		
				Symbol	Description		ı	Body size		
						20	30	40	50	60
				_	Rc	•	•		•	•
2		Pipe	thread type	N*1	NPT	•	•	•	•	•
				F*2	G	•	•	•	•	•
				+			•	•		
				01	1/8	•	_	_	_	_
				02	1/4				_	_
3		Port size 03			3/8	_			_	_
9	04				1/2	_	_		_	_
					3/4	_	_			_
				10	1	_	_	_		
				+						
		а	Mounting	_	Without mounting option	•	•	•		•
	_		Wiedmang	B *3	With bracket					
4	Option			+						
	o		Float type	_	Without auto drain	•	•	•	•	•
		b	auto drain	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.	•	•	•	•	•
				D *5	N.O. (Normally open) Drain port is open when pressure is not applied.	_				
				+						
				_	Polycarbonate bowl	•	•	•	•	•
		С	Bowl *6	2	Metal bowl	•	•	•	•	•
			20	6	Nylon bowl	•	•	•	•	•
				8	Metal bowl with level gauge		•			
	_			+	10					
	lard				With drain cock	_	•	•	•	•
	ano	d	Drain port *7	J *8	Drain guide 1/8	•	_	_		
6	-ste		·	14/::0	Drain guide 1/4		•	•	•	•
	Semi-standard			W *9	Drain cock with barb fitting (for Ø 6 x Ø 4 nylon tube)					
	ű			+	E. C. C. L. C. C. L.		_	_	_	
		е	Flow direction		Flow direction: Left to right	•	•	•	•	•
				R	Flow direction: Right to left		•	•		
				+	Name plate and caution plate for bowl in SI units: MPa					
		f	Pressure unit	7 *10	Name plate and caution plate for bowl in Si units: MPa Name plate and caution plate for bowl in imperial units: psi, °F	● ○* ¹¹	● ○* ¹¹	O*11	O*11	O*11
					Name plate and caution plate for bown in imperial units: psi, 'F	0	0	0	0	0

- *1 Drain guide is NPT 1/8 (applicable to the AF20-A) and NPT 1/4 (applicable to the AF30-A to AF60-A). The auto drain port comes with O 3/8" One-touch fitting (applicable to the AF30-A to AF60-A).

 *2 Drain guide is G 1/8 (applicable to the AF20-A) and G 1/4 (applicable to the AF30-A to AF60-A).
- *3 Option B is not assembled and supplied loose at the time of shipment. Assembly of a bracket and 2 mounting screws.
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min [ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- *6 Refer to chemical data on page 46 for chemical resistance of the bowl.
- The combination of float type auto drain: C and D is not available.
- *8 Without a valve function
- *9 The combination of metal bowl: 2 and 8 is not available.
- *10 For pipe thread type: NPT.
- *11 O: For pipe thread type: NPT only



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

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



3 Special Temperature Environment

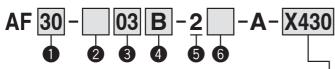
Special materials are used in the manufacturing of seals and resin parts to allow them to withstand various temperature conditions in cold or tropical (hot) climates.

Specifications

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

Applicable Model

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



- Semi-standard: Select one each for a to c.
- Semi-standard symbol: When more than one specification is required, indicate in alphabetic

Example) AF30-03B-2R-A-X430

For high/low temperature

X430	Low temperature
X440	High temperature

	\	_		Symbol	Description		Body	size	
					·	30	40	50	60
	_	Pipe thread		_	Rc	•	•	•	•
2	P			N*1	NPT	•	•	•	•
		ιy	ре	F *2	G	•	•	•	•
				+					
				02	1/4	•	•	_	_
				03	3/8	•	•	—	_
3		Port	size	04	1/2	_	•	_	_
				06	3/4	_	•	•	_
				10	1	_	_	•	•
				+					
4		Ор	tion	_	Without mounting option	•	•	•	•
U	(1	Mou	ınting)	B *3	With bracket		•	•	
				+					
5		Bo	wl* ⁴	2	Metal bowl		•	•	
	_			+					
		а	Drain		With drain cock	•	•	•	•
			port	J *5	Drain guide 1/4		•	•	
	ام			+					
	dar	b	Flow	_	Flow direction: Left to right	•	•	•	•
6	tan		direction	R	Flow direction: Right to left				
•	ni-s			+					
	Semi-standard	С	Pressure	_	Name plate and caution plate for bowl in SI units: MPa	•	•	•	•
		G	unit	Z *6	Name plate and caution plate for bowl in imperial units: psi, °F	O*7	O* ⁷	0*7	O* ⁷

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

4 High Pressure

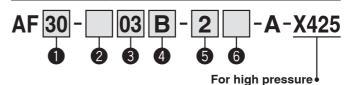
Strong materials are used in the manufacturing of air filters intended for high pressure operation.

Specifications

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

Applicable Model

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



- Semi-standard: Select one each for a to c.
- Semi-standard symbol: When more than one specification is required, indicate in alphabetic order.

Example) AF30-03B-2R-A-X425

	Example) AF30-036-2h-A-423											
	_							0				
		\		Symbol	Description Body s				ze			
						20	30	40	50	60		
				_	Rc	•	•	•	•	•		
2	P		thread	N*1	NPT		•	•	•	•		
		ιy	/pe	F*2	G		•	•	•	•		
				+								
					1/8		_	_	_	-		
				02	1/4		•	•	_	_		
3		Dor	t size	03	3/8	_	•	•	_			
9		FOI	l SIZE	04	1/2	_	_	•	_			
				06	3/4	_	_	•	•			
					1	_	_	_	•	•		
				+								
			tion	_	Without mounting option		•	•	•			
•	(Μοι	ınting)	B *3	With bracket		•					
				+								
6		Bo	wl*4	2	Metal bowl		•	•	•			
9		БО	vv1	8	Metal bowl with level gauge	_	•	•	•	•		
		_		+								
			Drain	_	With drain cock		•	•	•	•		
		а	port	J *5	Drain guide 1/8		_	_	_			
			·		Drain guide 1/4	_	•	•				
	ard	_		+								
	ıngı	b	Flow		Flow direction: Left to right		•	•	•	•		
6	Semi-standard		direction	R	Flow direction: Right to left		•	•				
	m.			+								
	S	С	Pressure	_	Name plate and caution plate for bowl in SI units: MPa	•	•	•	•	•		
			unit	Z *6	Name plate and caution plate for bowl in imperial units: psi, °F	0*7	O* ⁷	O* ⁷	O* ⁷	O*7		

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



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

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



5 Clean Series

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



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

Clean series

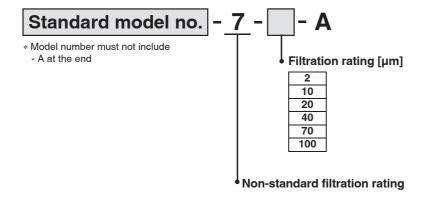
6 Copper, Fluorine and Silicone-free + Low Particle Generation

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

Standard model no.

Copper, fluorine and silicone-free + Low particle generation

Non-standard filtration rating





Mist Separator

• AFM Series Nominal filtration rating: 0.3 μm • AFD Series Nominal filtration rating: 0.01 μm

AFM20-A to AFM40-A **Micro Mist Separator** AFD20-A to AFD40-A

Micro Mist Separator



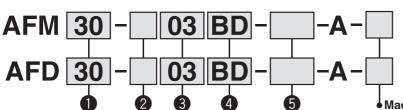
Symbol Mist Separator





How to Order

AFD40-A AFM20-A



 \bullet Option/Semi-standard: Select one each for \boldsymbol{a} to $\boldsymbol{f}.$ • Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order. Example) AFM30-03BD-R-A

Made to order

(Refer to pages 61 and 62 for details.)

					(Heter to pages 6)	i and 02 for details	5.)	
	_	_					0	
				Symbol	Description		Body size	
						20	30	40
				— N*1	Rc	•	•	•
2		Pipe thread type			NPT	•	•	•
				F *2	G	•	•	•
				+ 01	1/8		1	
						•	_	_
			5	02	1/4	•	•	•
3			Port size	03	3/8	_	•	•
				04	1/2	_	_	•
				06	3/4			•
				+	Mithaut manufing antique			
		а	Mounting	— B∗³	Without mounting option	•		
	Ē				With bracket	•	•	•
4	Option			+	Without auto drain	•		•
	O	b	Float type		N.C. (Normally closed) Drain port is closed when pressure is not applied.	•		
		D	auto drain	D*5	N.O. (Normally closed) Drain port is closed when pressure is not applied. N.O. (Normally open) Drain port is open when pressure is not applied.	_		
				+	N.O. (Normally open) Drain port is open when pressure is not applied.		•	•
				<u> </u>	Polycarbonate bowl	•	•	•
				2	Metal bowl	•	•	•
				6	Nylon bowl	•	•	•
		С	Bowl *6	8	Metal bowl with level gauge		•	•
				С	With bowl guard	•	*7	*7
				6C	With bowl guard (Nylon bowl)	•	*8	*8
	rd			+	3 () /			
	Semi-standard			_	With drain cock	•	•	•
6	staı		D : 1*12	J *9	Drain guide 1/8	•	_	_
	Ä.	d	Drain port *12	J*°	Drain guide 1/4	_	•	•
	Se			W *13	Drain cock with barb fitting (for Ø 6 x Ø 4 nylon tube)	_	•	•
				+		J.		
		е	Flow direction	_	Flow direction: Left to right	•	•	•
		-	I low direction	R	Flow direction: Right to left	•	•	•
				+				
		f	Pressure unit	_	Name plate and caution plate for bowl in SI units: MPa	•	•	•
			1 1033u10 uIIII	Z *10	Name plate and caution plate for bowl in imperial units: psi, °F	○*11	○*11	○*11
					AFMOO A AFDOO A) LNIDT 4/4/ I' LL L II AFMOO A/40 A			

- *1 Drain guide is NPT 1/8 (applicable to the AFM20-A, AFD20-A) and NPT 1/4 (applicable to the AFM30-A/40-A, AFD30-A/40-A). The auto drain port comes with Ø 3/8" One-touch fitting (applicable to the AFM30-A/40-A, AFD30-A/40-A)
- *2 Drain guide is G 1/8 (applicable to the AFM20-A, AFD20-A) and G 1/4 (applicable to the AFM30-A/40-A, AFD30-A/40-A).
- *3 A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- *5 If the compressor is small (0.75 kW, discharge flow is less than 100 l/min [ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- *6 Refer to chemical data on page 58 for chemical resistance of the bowl.
- *7 A bowl guard is provided as standard equipment (polycarbonate).
- *8 A bowl guard is provided as standard equipment (nylon).
- *9 Without a valve function
- *10 For pipe thread type: NPT.
- *11 O: For pipe thread type: NPT only
- *12 The combination of float type auto drain: C and D is not available.
- *13 The combination of metal bowl: 2 and 8 is not available.

Mist Separator AFM20-A to AFM40-A Series Micro Mist Separator AFD20-A to AFD40-A Series

Standard Specifications

•							
Model		AFM20-A	AFM30-A	AFM40-A	AFM40-06-A		
Wodel		AFD20-A	AFD30-A	AFD40-A	AFD40-06-A		
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4		
Fluid			А	ir			
Ambient and fluid temperature	е		-5 to 60 °C (wi	th no freezing)			
Proof pressure			1.5	MPa			
Maximum operating pressure			1.0 l	MPa			
Minimum operating pressure		0.05 MPa					
Nominal filtration rating	AFM20-A to AFM40-06-A	0.3 μm (99.9 % filtered particle size)					
Nominal intration rating	AFD20-A to AFD40-06-A		0.01 μm (99.9 % fil	filtered particle size)			
Outlet side oil mist	AFM20-A to AFM40-06-A						
concentration	AFD20-A to AFD40-06-A	Max. 0.1 mg/m³ (ANR)	(Before saturated with o	oil 0.01 mg/m³ (ANR) or	less ≈ 0.008 ppm) *2 *3		
Rated flow [I/min (ANR)] *1	AFM20-A to AFM40-06-A	200	450	11	00		
nated flow [i/ifilit (ANN)]	AFD20-A to AFD40-06-A	120	240	6	000		
Drain capacity [cm³]		8	25	4	.5		
Bowl material			Polycai	bonate			
Bowl guard		Semi-standard (Steel)	St	andard (Polycarbonate)			
Weight [kg]		0.09	0.19	0.38	0.43		

^{*1} Conditions: Inlet pressure: 0.7 MPa; The rated flow varies depending on the inlet pressure. Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.

Options/Part No.

		Model				
Optional specifications	AFM20-A AFD20-A	AFM30-A AFD30-A	AFM40-A AFD40-A	AFM40-06-A AFD40-06-A		
Bracket assembly *1		AF22P-050AS	AF32P-050AS	AF42P-050AS	AF42P-070AS	
Float type auto drain *2 *3	N.C.	AD27-A	AD37-A	AD4	17-A	
rioat type auto drain	N.O.	_	AD38-A	AD ²	18-A	

^{*1} Assembly of a bracket and 2 mounting screws

Bowl Assembly/Part No.

Bowl	Drain				Mod	del	
material	discharge mechanism	Drain port	Other	AFM20-A AFD20-A	AFM30-A AFD30-A	AFM40-A AFD40-A	AFM40-06-A AFD40-06-A
		With drain cock	_	C2SF-A	_	<u> </u>	
		With drain cock	With bowl guard	C2SF-C-A	C3SF-A	C48	SF-A
	Manual	Drain cock with barb fitting	With bowl guard	_	C3SF-W-A	C4SI	=-W-A
Polycarbonate		With drain guide	_	C2SF□-J-A	_	-	_
l diyearbonate		(without valve function)	With bowl guard	C2SF□-CJ-A	C3SF□-J-A	C4SF	·□-J-A
	Automatic *1	Normally closed (N.C.)	_	AD27-A	_	-	_
	(Auto drain)	, , ,	With bowl guard	AD27-C-A	AD37□-A	AD4	7□-A
		Normally open (N.O.)	With bowl guard	_	AD38□-A	AD4	8□-A
		With drain cock	_	C2SF-6-A	_	-	_
			With bowl guard	C2SF-6C-A	C3SF-6-A	C4SF-6-A	
	Manual	Drain cock with barb fitting	With bowl guard	_	C3SF-6W-A	C4SF-6W-A	
Nylon		With drain guide	_	C2SF□-6J-A	_	_	
INVIOL		(without valve function)	With bowl guard	C2SF□-6CJ-A	C3SF□-6J-A	C4SF	□-6J-A
	Automatic *1	Normally closed (N.C.)	_	AD27-6-A	_		
	(Auto drain)	, , ,	With bowl guard	AD27-6C-A	AD37□-6-A	AD47	′□-6-A
	(Auto diairi)	Normally open (N.O.)	With bowl guard	_	AD38□-6-A	AD48	□-6-A
		With drain cock	_	C2SF-2-A	C3SF-2-A	C4S	F-2-A
	Manual		With level gauge	_	C3LF-8-A	C4LF-8-A	
	Iviaridai	With drain guide	_	C2SF□-2J-A	C3SF□-2J-A		□-2J-A
Metal		(without valve function)	With level gauge	_	C3LF□-8J-A	C4LF	⊒-8J-A
Ivicial		Normally closed (N.C.)	_	AD27-2-A	AD37□-2-A	AD47	′□-2-A
	Automatic *1	Tromainy Glosed (N.O.)	With level gauge	_	AD37□-8-A		′□-8-A
	(Auto drain)	Normally open (N.O.)	_	_	AD38□-2-A		□-2-A
		rtormany opon (rt.o.)	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 (AD17-A, AD27-A) and 0.15 MPa (AD37-A, AD47-A). Bowl assembly for the AFM20-A to AFM40-06-A, AFD20-A to AFD40-06-A models comes with a bowl seal.



^{*2} When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).

^{*3} Bowl seal and other O-rings are slightly lubricated.

^{*2} Minimum operating pressure: N.O. type-0.1 MPa; N.C. type-0.1 MPa (AD27-A) and 0.15 MPa (AD37-A/AD47-A). Please consult with SMC separately for psi and °F unit display specifications.

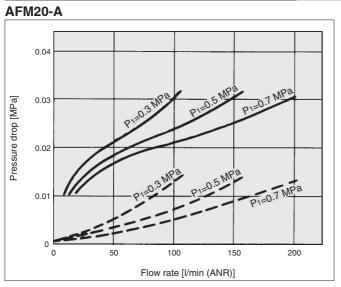
^{*3} Please consult with SMC for details on drain piping to fit NPT or G port sizes.

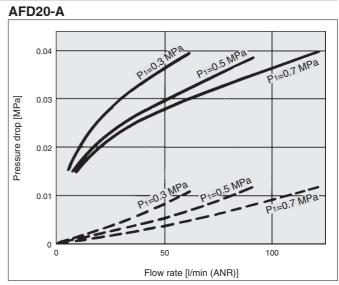
[🗆] in bowl assembly part numbers indicates a pipe thread type (applicable tubing for auto drain). No indication is necessary for Rc thread; however, indicate N for NPT thread, and F for G thread. (For auto drain, —: O 10, N: O 3/8")
Please consult with SMC separately for psi and °F unit display specifications.

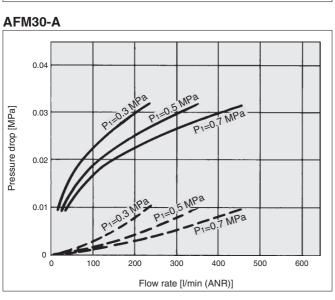
AFM20-A to AFM40-A Series AFD20-A to AFD40-A Series

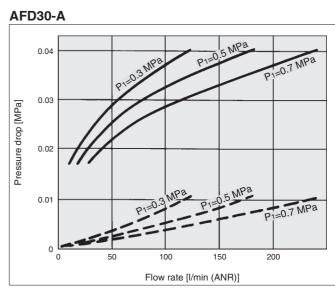
Flow Rate Characteristics (Representative values)

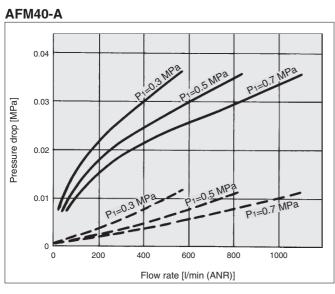
When saturated with oil

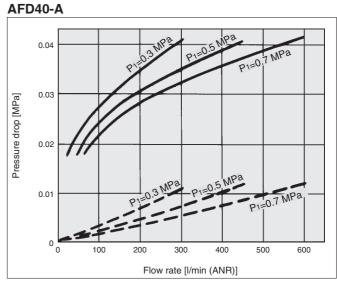












Mist Separator AFM20-A to AFM40-A Series Micro Mist Separator AFD20-A to AFD40-A Series

Specific Product Precautions

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

Design/Selection

Marning

1. 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 Acid Alkaline	Chemical name Hydrochloric acid Sulfuric acid, Phosphoric acid Chromic acid Sodium hydroxide (Caustic soda) Potash Calaium hydroxide (Clack line)	Application examples Acid washing liquid for metals	Polycar- bonate	Nylon
	Sulfuric acid, Phosphoric acid Chromic acid Sodium hydroxide (Caustic soda) Potash	for metals	Δ	, .
Alkaline	Potash	· · · · · · · · · · · · · · · · · · ·		Х
	Calcium hydroxide (Slack lime) Ammonia water Carbonate of soda	Degreasing of metals Industrial salts Water-soluble cutting oil	Х	0
Inorganic salts	Sodium sulfide Potassium nitrate Sulfate of soda	Т	Х	Δ
Chlorine solvents	Carbon tetrachloride Chloroform Ethylene chloride Methylene chloride	Cleansing liquid for metals Printing ink Dilution	Х	Δ
Aromatic series	Benzene Toluene Paint thinner	Coatings Dry cleaning	Х	Δ
Ketone	Acetone Methyl ethyl ketone Cyclohexane	Photographic film Dry cleaning Textile industries	Х	Х
Alcohol	Ethyl alcohol IPA Methyl alcohol	Antifreeze Adhesives	Δ	Х
Oil	Gasoline Kerosene	_	Х	0
Ester	Phthalic acid dimethyl Phthalic acid diethyl Acetic acid	Synthetic oil Anti-rust additives	Х	0
Ether	Methyl ether Ethyl ether	Brake oil additives	Х	0
Amino	Methyl amino	Cutting oil Brake oil additives Rubber accelerator	Х	Х
Others	Thread-lock fluid Seawater Leak tester	— cts may occur. X: Effe	Х	Δ

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

Air Supply

∕!∖ Caution

- 1. Install an air filter (AF series) as a pre-filter on the inlet side of the mist separator to prevent premature clogging.
- 2. Install a mist separator (AFM series) as a pre-filter on the inlet side of the micro mist separator to prevent premature clogging.
- 3. Do not install on the inlet side of the dryer as this can cause premature clogging of the element.

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/Adjustment

∖ Caution

1. When the bowl is installed on the mist separator (AFM30-A/AFM40-A), or micro mist separator (AFD30-A/AFD40-A), install them so that the lock button lines up to the groove of the front (or the back) of the body to avoid drop or damage of the bowl.



Design

∕∖\ Caution

1. Design the system so that the mist separator is installed in a pulsation-free location. The difference between internal and external pressure inside the element should be kept within 0.1 MPa, as exceeding this value could cause damage.

Selection

♠ Caution

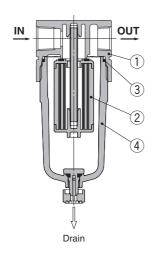
- 1. Do not allow air flow that exceeds the rated flow. If the air flow is allowed outside the range of the rated flow even momentarily, drainage and lubricant may splash at the outlet side or cause damage to the component.
- 2. Do not use in a low pressure application (such as a blower). An F.R.L. unit has its own minimum operating pressure depending on the equipment and is designed specifically to function with compressed air. If used below the minimum operating pressure, a loss of performance and malfunction can occur. Please contact SMC if an application under such conditions cannot be avoided

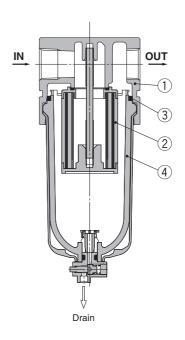
AFM20-A to AFM40-A Series AFD20-A to AFD40-A Series

Construction

AFM20-A AFD20-A

AFM30-A to AFM40-06-A AFD30-A to AFD40-06-A





Component Parts

No.	Description	Material	Model	Colour
1	Body	Aluminium die-cast	AFM20-A to AFM40-06-A AFD20-A to AFD40-06-A	White

Replacement Parts

1106	nacomont i arto									
				Part no.						
No.	Description	on	Material	AFM20-A AFD20-A	AFM30-A AFD30-A	AFM40-A AFD40-A	AFM40-06-A AFD40-06-A			
2	Element secombly	AFM20 to 40	_	AFM20P-060AS	AFM30P-060AS	AFM40P-060AS				
	Element assembly AFD20 to 40		_	AFD20P-060AS	AFD30P-060AS	AFD40F	P-060AS			
3	3 Bowl seal		NBR	C2SFP-260S	C32FP-260S	C42FF	P-260S			
4	Bowl assembly *1		Polycarbonate	C2SF-A	C3SF-A	C48	SF-A			

^{*1} Bowl seal is included. Please contact SMC regarding the supply of bowl assembly with psi and °F unit display specifications.

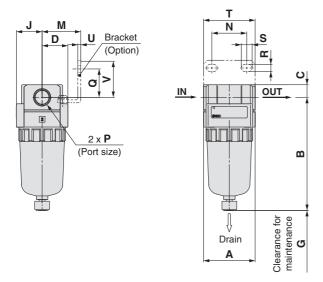
A

AB

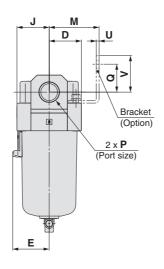
Mist Separator AFM20-A to AFM40-A Series Micro Mist Separator AFD20-A to AFD40-A Series

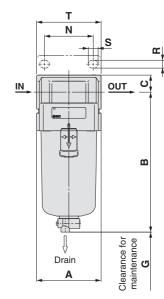
Dimensions

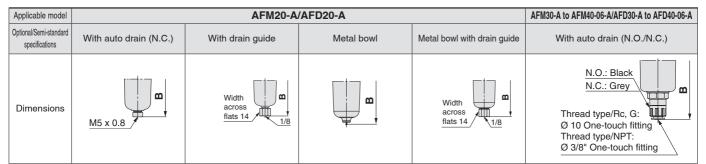
AFM20-A AFD20-A



AFM30-A to AFM40-06-A AFD30-A to AFD40-06-A







Applicable model		AFM30-A to AFM40-06-A/AFD30-A to AFD40-06-A				
Optional/Semi-standard specifications	Metal bowl	Metal bowl with drain guide	Metal bowl with level gauge	Metal bowl with level gauge, with drain guide	With drain guide	Drain cock with barb fitting
Dimensions	8	Width across flats 17	a	Width across flats 17	Width across flats 17	Barb fitting applicable tubing:

Model		Standard specifications							Optional specifications Bracket mount With auto d						With auto drain		
	Р	Α	В	С	D	Е	G	J	М	N	Q	R	S	Т	U	V	В
AFM20-A/AFD20-A	1/8, 1/4	40	87.6	9.8	20	_	40	20	30	27	22	5.4	8.4	40	2.3	28	104.9
AFM30-A/AFD30-A	1/4, 3/8	53	115.1	14	26.7	30	50	26.7	41	35	23	6.5	13	53	2.3	30	156.8
AFM40-A/AFD40-A	1/4, 3/8, 1/2	70	147.1	18	35.5	38.4	75	35.5	50	52	26	8.5	12.5	70	2.3	35	186.9
AFM40-06-A/AFD40-06-A	3/4	75	149.1	20	35.5	38.4	75	35.5	50	52	25	8.5	12.5	70	2.3	34	188.9

				Semi-standard specific	ations	
Model	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
	В	В	В	В	В	В
AFM20-A/AFD20-A	_	91.4	87.4	93.9	_	_
AFM30-A/AFD30-A	123.6	121.9	117.6	122.1	137.6	142.1
AFM40-A/AFD40-A	155.6	153.9	149.6	154.1	169.6	174.1
AFM40-06-A/AFD40-06-A	157.6	155.9	151.6	156.1	171.6	176.1

AFM20-A to AFM40-06-A Mist Separator AFD20-A to AFD40-06-A Micro Mist Separator

Made to Order

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

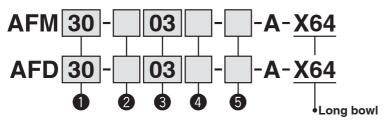
1 Long Bowl

Drain capacity is greater than that of standard models.

Applicable Model/Drain Capacity

Model	AFM20-A, AFD20-A	AFM30-A, AFD30-A	AFM40-A, AFD40-A	AFM40-06-A, AFD40-06-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4
Drain capacity [cm³]	19	43		88
B dimension [mm]*1	108.6	137.1	167.2	169.2

*1 For polycarbonate bowls. Please contact SMC for other bowl materials.



- AFM20-A AFD20-A
- AFM30 to 40-06-A AFD30 to 40-06-A





- 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) AFM30-03B-2R-A-X64

	_	_					0	
				Symbol	Description		Body size	
						20	30	40
				_	Rc	•	•	•
2		Pipe	e thread type	N*1	NPT	•	•	•
				F *2	G	•	•	•
				+				
				01	1/8	•	_	_
			02	1/4	•	•	•	
3			Port size	03	3/8	_	•	•
				04	1/2	_	_	•
			06	3/4	_	_	•	
				+				
	Option (Mounting) — B*3		_	Without mounting option	•	•	•	
•			B *3	With bracket	•	•	•	
				+				
				_	Polycarbonate bowl	•	•	•
				2	Metal bowl	•	•	•
		а	Bowl *4	6	Nylon bowl	•	•	•
				С	With bowl guard	•	<u></u> *5	*5
				6C	With bowl guard (Nylon bowl)	•	*6	*6
	_ l			+				
	dar			_	With drain cock	•	•	•
6	tan	b	Drain port	J*7	Drain guide 1/8	•	_	_
9	-i-S		Brain port		Drain guide 1/4	_	•	•
	Semi-standard			W *8	Drain cock with barb fitting (for Ø 6 x Ø 4 nylon tube)	_	•	•
	0)			+				
		С	Flow direction		Flow direction: Left to right	•	•	•
			1 low direction	R	Flow direction: Right to left	•	•	•
				+				
		d	Pressure unit	_	Name plate and caution plate for bowl in SI units: MPa	•	•	•
		u	1 1033u10 unit	Z *9	Name plate and caution plate for bowl in imperial units: psi, °F	○*10	○*10	○*10

- *1 Drain guide is NPT 1/8 (applicable to the AFM20-A, AFD20-A) and NPT 1/4 (applicable to the AFM30-A to AFM40-06-A, AFD30-A to AFD40-06-A).
- *2 Drain guide is G 1/8 (applicable to the AFM20-A, AFD20-A) and G 1/4 (applicable to the AFM30-A to AFM40-06-A, AFD30-A to AFD40-06-A).
- *3 A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws.
- *4 Refer to chemical data on page 58 for chemical resistance of the bowl.
- *5 A bowl guard is provided as standard equipment (polycarbonate).
- *6 A bowl guard is provided as standard equipment (nylon).
- *7 Without a valve function
- *8 The combination of metal bowl: 2 is not available.
- *9 For pipe thread type: NPT.
- *10 O: For pipe thread type: NPT only



AFM20-A to AFM40-06-A Mist Separator AFD20-A to AFD40-06-A Micro Mist Separator

Made to Order

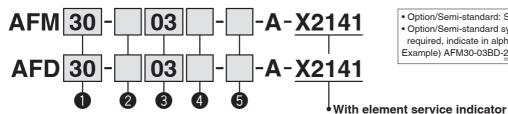
Please contact SMC for detailed dimensions, specifications and lead times.

With Element Service Indicator

Clogging status of elements can be checked visually.

Applicable Model

Model	AFM20-A, AFD20-A	AFM30-A, AFD30-A	AFM40-A, AFD40-A	AFM40-06-A, AFD40-06-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4



- 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) AFM30-03BD-2R-A-X2141

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

	_					0	
			Symbol	Description		Body size	
					20	30	40
				Rc	•	•	•
	Pipe	thread type	N*1	NPT	•	•	•
			F *2	G	•	•	•
			+				
			01	1/8	•	_	_
			02	1/4	•	•	•
	- 1	Port size	03	3/8	_	•	•
1			04	1/2	_	_	•
			06	3/4	_	_	•
			+				
				Without mounting option	•	•	•
	а	Mounting	B *3	With bracket	•	•	•
Option			+			_	
ğ			<u>-</u>	Without auto drain	•		•
0	b	Float type	C*4	N.C. (Normally closed) Drain port is closed when pressure is not applied.	•	•	•
		auto drain	D *5	N.O. (Normally open) Drain port is open when pressure is not applied.		•	•
_			+				
			_	Polycarbonate bowl	•	•	•
			2	Metal bowl	•	•	•
		Bowl *6	6	Nylon bowl	•	•	•
	С	Bowl ***	8	Metal bowl with level gauge	_	•	•
			С	With bowl guard	•	<u>*</u> *7	*7
٦			6C	With bowl guard (Nylon bowl)	•	*8	*8
gar			+				
Semi-standard			-	With drain cock	•	•	•
-sta	d	Drain port *12	J *9	Drain guide 1/4	•	•	•
J.E			W*13	Drain cock with barb fitting (for Ø 6 x Ø 4 nylon tube)	_	•	•
Š			+				
		Flow direction	-	Flow direction: Left to right	•	•	•
	е	I low direction	R	Flow direction: Right to left	•	•	•
			+				
	f	Pressure unit	-	Name plate and caution plate for bowl in SI units: MPa	•	•	•
	Fressure unit		Z *10	Name plate and caution plate for bowl in imperial units: psi, °F	•	O*11	O*11

- (applicable to the AFM30-A/40-A, AFD30-A/40-A). The auto drain port comes with Ø 3/8" One-touch fitting (applicable to the AFM30-A/40-A, AFD30-A/40-A).
- *2 Drain guide is G 1/8 (applicable to the AFM20-A, AFD20-A) and G 1/4 (applicable to the AFM30-A/40-A, AFD30-A/40-A).
- *3 A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws
- *4 When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.
- [ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.
- *6 Refer to chemical data on page 58 for chemical resistance of the bowl.
- *7 A bowl guard is provided as standard equipment (polycarbonate).
- *8 A bowl guard is provided as standard equipment (nylon).
- *9 Without a valve function
- *10 For pipe thread type: NPT.
- *11 O: For pipe thread type: NPT only
- *12 The combination of float type auto drain: C and D is not available.
- *13 The combination of metal bowl: 2 and 8 is not available.



AFM20-A to AFM40-06-A Mist Separator AFD20-A to AFD40-06-A Micro Mist Separator Made to Order

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



3 Clean Series

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

Standard model no.

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

Clean series

4 Copper, Fluorine and Silicone-free + Low Particle Generation

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

Standard model no.

Copper, fluorine and silicone-free + Low particle generation

Modular Type Regulator AR Series

Regulator AR Series	Model	Port size	Set pressure	Options
	AR10-A	M5 x 0.8	0.05 to 0.7 MPa 0.02 to 0.2 MPa	Bracket Round type pressure gauge Set nut (for panel mount) *1
The state of the s	AR20(K)-B	1/8, 1/4		Bracket
	AR25(K)-B	1/4, 3/8		Set nut (for panel mount) *1
AMERICAN SECTION AND ASSESSMENT OF THE PROPERTY OF THE PROPERT	AR30(K)-B	177, 575		Square embedded type pressure gauge
	AR40(K)-B	ARAII/K 1-R 1// 3/8 1/9	0.05 to 0.85 MPa 0.02 to 0.2 MPa	Digital pressure switch
	AR40(K)-06-B	3/4		Round type pressure gauge
	AR50(K)-B	3/4, 1		Bracket Square embedded type pressure gauge
Pages 65 to 80	AR60(K)-B	1		Digital pressure switch Round type pressure gauge

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

Regulator AR10-A

Symbol Regulator





How to Order

Refer to page 67 for size 20 to 60.



- 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) AR10-M5BG-1NR-A

	_			Symbol	Description
				_	Without mounting option
	-	а	Mounting	B *2	With bracket
	Option *1			Н	With set nut (for panel mount)
	Opti			+	
		b	Pressure gauge	_	Without pressure gauge
			1 recours gaage	G *3	Round type pressure gauge (without limit indicator)
				+	
		С	Set pressure *4	_	0.05 to 0.7 MPa setting
			Oct prossure	1	0.02 to 0.2 MPa setting
				+	
		d	Exhaust mechanism	_	Relieving type
		u	Exhaust mechanism	N	Non-relieving type
	lard			+	
2	Semi-standard	е	Flow direction	_	Flow direction: Left to right
4	ni-s		1 low direction	R	Flow direction: Right to left
	Ser			+	
		f	Knob	_	Downward
		•	Kilob	Υ	Upward
				+	
		a	Pressure unit	_	Name plate and pressure gauge in SI units: MPa
		g	r ressure unit	Z	Name plate and pressure gauge in imperial units: psi

- *1 Options are not assembled and supplied loose at the time of shipment.
- *2 Assembly of a bracket and set nuts
- *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.



Standard Specifications

Port size	M5 x 0.8
Pressure gauge port size *1	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
Construction	Relieving type
Weight [kg]	0.06

^{*1} Use a bushing (part no.: 131368) when connecting the R 1/8 pressure gauge to the Rc 1/16.

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

⚠ Specific Product Precautions

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

Selection

Warning

1. Although exhaust of the residual pressure to the inlet side is possible when eliminating the inlet pressure, exhaust is not possible when the set pressure is 0.15 MPa or less.

Maintenance

∕!\ Warnind

1. When using the regulator between a solenoid valve and an actuator, check the pressure gauge periodically. Sudden pressure fluctuations may shorten the durability of the pressure gauge. A digital pressure gauge is recommended for such situation or as deemed necessary.

Mounting/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. 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 disap-
- 2. Pulsation will be generated when the difference between the inlet and the outlet pressure is large. In this case, reduce the pressure difference between the inlet and the outlet. Please consult with SMC if the pulsation problem is not resolved.



Regulator

AR20-B to AR60-B

Regulator with Backflow Function

AR20K-B to AR60K-B

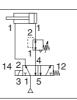


Regulator with Backflow Function



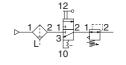
• Models with the backflow function include a mechanism which allows for the air pressure in the outlet side to be released to the inlet side.

Example 1) When the pressure in the rear and the front of the cylinder differs:



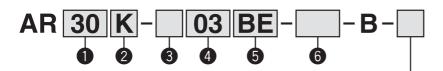
Example 2)

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 65 for size 10.



- 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) AR30K-03BE-1NR-B

Made to order

(Refer to pages 77 to 79 for details.)

Symbol				Symbol	Description	Body size						
				Symbol	Description	20	25	30	y size 40 50 60			
						20	23	30	40	30	00	
With backflow function					Without backflow function	•	•	•	•	•	•	
			tunction	K *1	With backflow function		•	•	•		•	
				+			_	-		-		
					Rc	•	•	•	•	•	•	
3		Pipe	thread type	N	NPT	•	•	•	•	•	•	
				F	G		•		•		•	
				+			1					
				01	1/8	•	_					
		Port size		02	1/4		•	•	•	_		
4				03	3/8		•	•	•	_		
				04	1/2		_		•			
				06	3/4		_		•	•		
				10	1		_	_		•		
				+								
				_	Without mounting option	•	•	•	•	•	•	
		а	Mounting	B *3	With bracket		•	•	•	•	•	
				Н	With set nut (for panel mount)				•	_		
				+								
	۲ *			_	Without pressure gauge		•	•	•	•	•	
6	on		Pressure	E	Square embedded type pressure gauge (with limit indicator)		•	•	•	•	•	
	Option		gauge *4	G	Round type pressure gauge (with limit indicator)		•	•	•	•	•	
		b		M	Round type pressure gauge (with colour zone)		•	•	•	•	•	
			Digital	E1	Output: NPN output, Electrical entry: Wiring bottom entry	•	•	•	•	•	•	
			pressure	E2	Output: NPN output, Electrical entry: Wiring top entry	•	•	•	•	•	•	
			switch *5	E3	Output: PNP output, Electrical entry: Wiring bottom entry	•	•	•	•	•	•	
				E4	Output: PNP output, Electrical entry: Wiring top entry			•	•	•	•	

Regulator AR20-B to AR60-B Series Regulator with Backflow Function AR20K-B to AR60K-B Series





AR20-B, AR20K-B

AR40-B, AR40K-B

	_	_						1					
	Symbo			Symbol	Description	Body size							
						20	25	30	40	50	60		
			Set	_	0.05 to 0.85 MPa setting	•	•	•	•	•	•		
		С	pressure *6	1	0.02 to 0.2 MPa setting	•	•	•	•	•	•		
				+									
		d	Exhaust	_	Relieving type	•	•	•	•	•	•		
		a	mechanism	N	Non-relieving type	•	•	•	•	•	•		
	ard			+									
	nde	е	Flow direction	_	Flow direction: Left to right		•	•	•	•	•		
6	Semi-standard			R	Flow direction: Right to left			•		•	•		
	Ë			+									
	Se	f	Knob		Downward			•		•	•		
			TATIOD	Υ	Upward			•	•	•	•		
				+									
				_	Name plate and pressure gauge in SI units: MPa	•	•	•	•	•	•		
		g	Pressure unit	Z *7	Name plate and pressure gauge in imperial units: psi	○*9	○*9	○*9	○*9	○*9	○*9		
						ZA *8	Digital pressure switch: With unit selection function	△*10	△*10	△*10	△*10	△*10	△*10

- *1 Set the inlet pressure to at least 0.05 MPa higher than the set pressure.
- *2 Options B, G, H, M are not assembled and supplied loose at the time of shipment.
- *3 Assembly of a bracket and set nuts (applicable to the AR20(K)-B to AR40(K)-B). Including 2 mounting screws for the AR50(K)-B and AR60(K)-B
- *4 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.
- *5 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. (Select "wiring bottom entry" when the semi-standard Y is chosen simultaneously.)
- *6 Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.
- *7 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.
- *8 For options: E1, E2, E3, E4.
- *9 O: For pipe thread type: NPT only
- *10 \(\triangle:\) Select with options: E1, E2, E3, E4.

Standard Specifications

Model	AR20-B	AR25-B	AR30-B	AR40-B	AR40-06-B	AR50-B	AR60-B	
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1	
Pressure gauge port size *1	gauge port size *1 1/8							
Fluid				Air				
Ambient and fluid temperature *2	Ambient and fluid temperature *2 -5 to 60 °C (with no freezing)							
Proof pressure	Proof pressure 1.5 MPa							
Maximum operating pressure	Maximum operating pressure 1.0 MPa							
Set pressure range 0.05 to 0.85 MPa								
Construction	onstruction Relieving type							
Weight [kg]	0.16	0.21	0.29	0.44	0.47	1.17	1.22	

^{*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.



AR20-B to AR60-B Series AR20K-B to AR60K-B Series

Options/Part No.

Option		Model	AR20(K)-B	AR25(K)-B	AR30(K)-B	AR40(K)-B	AR40(K)-06-B	AR50(K)-B	AR60(K)-B				
Brack	et assem	ıbly *1	AR23P-270AS	AR28P-270AS	AR33P-270AS	AR43P	-270AS	AR52P-270AS					
Set nu	ıt		AR23P-260S	AR28P-260S	AR33P-260S	AR43P-260S		*2				-260S —*2	
	Round	Standard		G36-10-□01		G46-10-□01							
	type *3	0.02 to 0.2 MPa setting		G36-4-□01		G46-4-□01							
Pressure	Round type *3	Standard		G36-10-□01-L		G46-10-□01-L							
gauge	(with colour zone)	0.02 to 0.2 MPa setting		G36-4-□01-L		G46-4-□01-L							
	Square *4	Standard		GC3-10AS [GC3P-010AS (Pressure gauge cover only)]									
	embedded type	0.02 to 0.2 MPa setting		GC3-4AS [GC3P-010AS (Pressure gauge cover only)]									
Digita	_	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)]									
press		PNP output, Wiring bottom entry		IS	E35-N-65-MLA [ISE35-N-65-M (Switch body onl	y)]					
SWILCI	•	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 AR50(K)-B and AR60(K)-B
- *2 Please consult with SMC regarding the set nuts for the AR50(K)-B and AR60(K)-B.
- *3 in part numbers for a round 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**.)

⚠ 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 I precautions, refer to the "Handling Precautions for SMC Products" and the "Operation Manual", http://www.smc.eu

Selection

Marning

 Residual pressure disposal (outlet pressure removal) is not possible for the AR20-B to AR60-B even though the inlet pressure is exhausted. When the residual pressure disposal is performed, use the regulator with a backflow function (AR20K-B to AR60K-B).

Maintenance

1. When using the regulator with backflow function between a solenoid valve and an actuator, check the pressure gauge periodically. Sudden pressure fluctuations may shorten the durability of the pressure gauge. A digital pressure gauge is recommended for such situation or as deemed necessary.

Mounting/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.** 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).



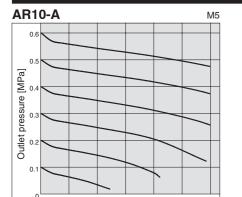
2. A knob cover is available to prevent careless operation of the knob. Refer to page 112 for details.



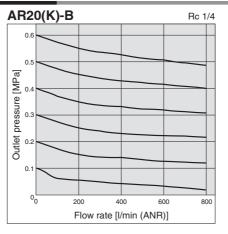
AB

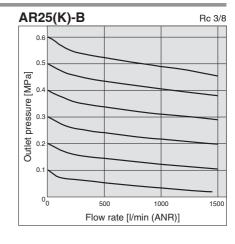
Regulator AR10-A Series Regulator AR20-B to AR60-B Series Regulator with Backflow Function AR20K-B to AR60K-B Series



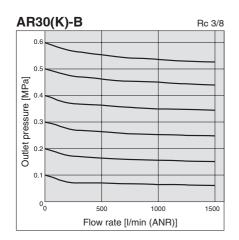


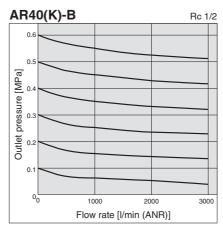
Flow rate [I/min (ANR)]

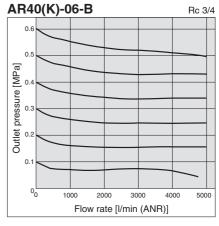


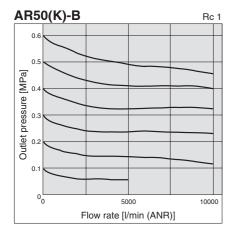


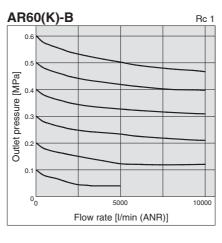
Condition: Inlet pressure of 0.7 MPa







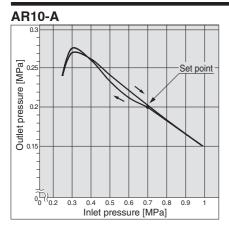


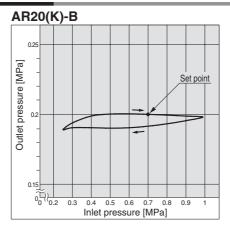


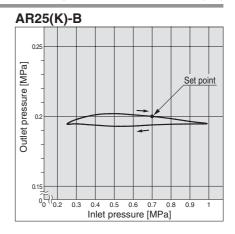
AR10-A Series AR20-B to AR60-B Series AR20K-B to AR60K-B Series

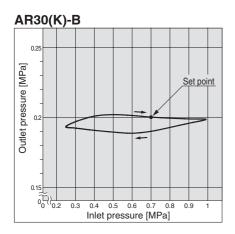
Pressure Characteristics (Representative values)

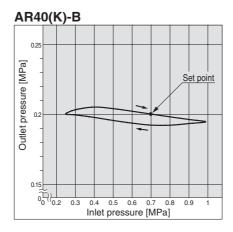
Conditions: Inlet pressure of 0.7 MPa, Outlet pressure of 0.2 MPa, Flow rate 20 l/min (ANR)

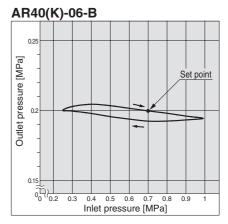


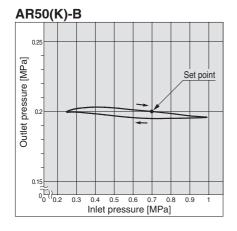


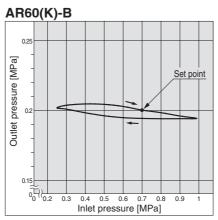








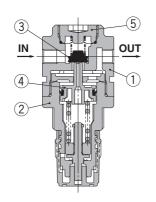


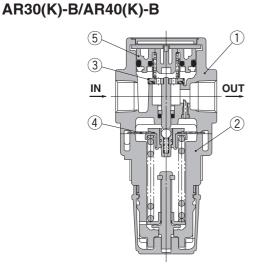


Regulator AR10-A Series Regulator AR20-B to AR60-B Series Regulator with Backflow Function AR20K-B to AR60K-B Series

Construction

AR10-A





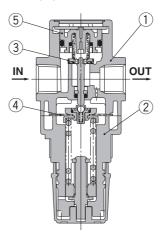
Component Parts

No.	Description	Material	Model	Colour		
		Zinc die-cast	AR10-A			
1	Body	Aluminium die-cast	AR20(K)-B to AR60(K)-B	White		
			AR10-A			
2	Bonnet	Polyacetal	AR20(K)-B to AR40(K)-B	White		
		Aluminium die-cast	AR50(K)-B/ AR60(K)-B			

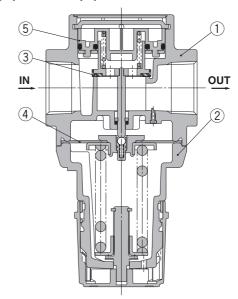
Replacement Parts [AR10-A]

No.	Description	Material	Part no.			
3	Valve	HNBR	AR10P-090S			
4	Piston assembly	Polyacetal	AR10P-150AS			
5	Valve guide assembly	Polyacetal	131329			

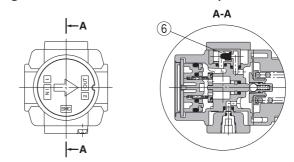
AR20(K)-B/AR25(K)-B



AR50(K)-B/AR60(K)-B



AR20K-B to AR60K-B (Regulator with Backflow Function)



[AR20(K)-B to AR60(K)-B]

-	_ ` '										
No.	Description	Material	Part no.								
INO.	Description		AR20(K)-B	AR25(K)-B	AR30(K)-B	AR40(K)-B	AR40(K)-06-B	AR50(K)-B	AR60(K)-B		
3	Valve	Brass, HNBR	AR20P-410S	AR25P-410S	AR30P-410S	AR40F	P-410S	AR50P-410S	AR60P-410S		
4	Diaphragm assembly	Weatherable NBR	AR20P-150AS	AR25P-150AS	AR30P-150AS	AR40P-150AS		AR50P-150AS			
5	Valve guide assembly	Polyacetal	AR20P-050AS	AR25P-050AS	AR30P-050AS	AR40P-050AS		AR50P-050AS	AR60P-050AS		
6	Check valve assembly *1	_	AR23KP-020AS								

^{*1} Check valve assembly is applicable for a regulator with backflow function (AR20K-B to AR60K-B) only. Assembly of a check valve cover, check valve body assembly and 2 mounting screws



AR10-A Series AR20K-B to AR60K-B Series

Working Principle (Regulator with Backflow Function)

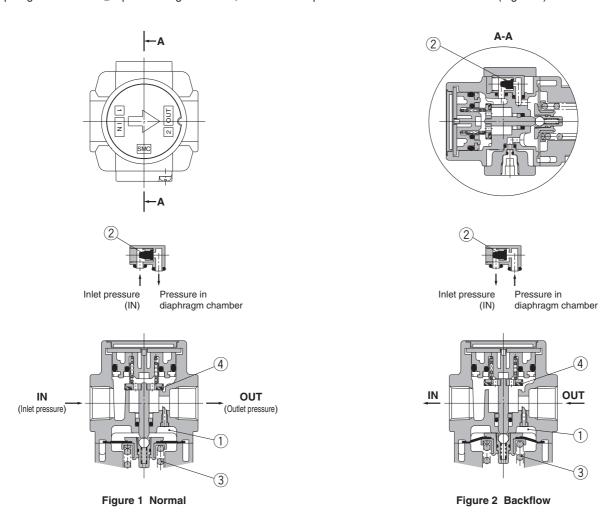
AR10-A

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.



AR20K-B to AR60K-B

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).



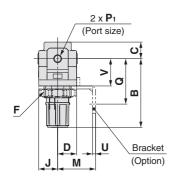


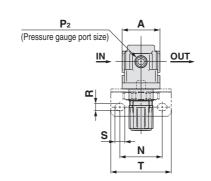
AL

AR10-A Series AR20-B to AR60-B Series AR20K-B to AR60K-B Series

Dimensions

AR10-A



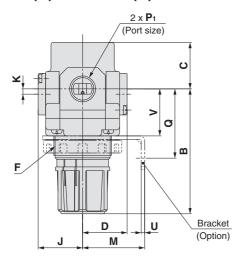


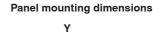
Panel mounting dimensions

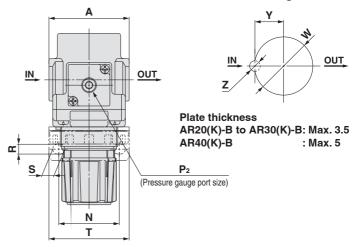


Plate thickness AR10-A: Max. 3.5

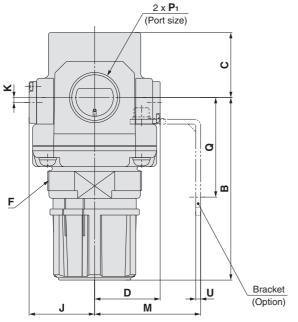
AR20(K)-B to AR40(K)-06-B

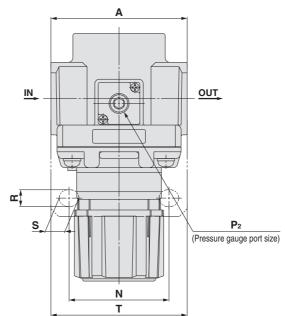






AR50(K)-B/AR60(K)-B





AB

Regulator AR10-A Series Regulator AR20-B to AR60-B Series Regulator with Backflow Function AR20K-B to AR60K-B Series

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

												Ор	tional s	oecificatio	ons		
Model				Standar	d specif	ications				Square embedded type pressure gauge		Digital pressure switch		Round type pressure gauge		Round type pressure gauge (with colour zone)	
	P ₁	P ₂	Α	B*1	С	D	F	J	K	Н	J	Н	J	Н	J	Н	J
AR10-A	M5 x 0.8	1/16	25	47.4	11	12.5	M18 x 1	12.5	_	_	_	_	_	Ø 26	26	_	_
AR20(K)-B	1/8, 1/4	1/8	40	67.4	26.5	28.5	M28 x 1	28.5	2*2	□28	29.5	□27.8	40	Ø 37.5	65	Ø 37.5	66
AR25(K)-B	1/4, 3/8	1/8	53	71.9	28	27.5	M32 x 1.5	27.5	0	□28	28.5	□27.8	39	Ø 37.5	64	Ø 37.5	65
AR30(K)-B	1/4, 3/8	1/8	53	85.6	30.7	29.4	M38 x 1.5	29.4	3.5	□28	30.4	□27.8	40.9	Ø 37.5	65.9	Ø 37.5	66.9
AR40(K)-B	1/4, 3/8, 1/2	1/8	70	91.7	35.8	33.8	M42 x 1.5	33.8	3.5	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3
AR40(K)-06-B	3/4	1/8	75	93.2	35.8	33.8	M42 x 1.5	33.8	3	□28	34.8	□27.8	45.3	Ø 42.5	71.3	Ø 42.5	71.3
AR50(K)-B	3/4, 1	1/8	90	125.2	43	43.3	M62 x 1.5	43.3	3.2	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8
AR60(K)-B	1	1/8	95	129.6	46	43.3	M62 x 1.5	43.3	3.2	□28	44.3	□27.8	54.8	Ø 42.5	80.8	Ø 42.5	80.8

	Optional specifications											
Model			Br	acket mo	unt			Panel mount				
	M	N	Q	R	S	Т	U	V	W	Υ	Z	
AR10-A	25	28	30	4.5	6.5	40	2	18	18.5	_	_	
AR20(K)-B	30	34	43.9	5.4	15.4	55	2.3	24.7	28.5	14	6	
AR25(K)-B	30	34	43.9	5.4	15.4	55	2.3	25.7	32.5	16	6	
AR30(K)-B	41	40	45.8	6.5	8	53	2.3	31.1	38.5	19	7	
AR40(K)-B	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7	
AR40(K)-06-B	50	54	55.5	8.5	10.5	70	2.3	37	42.5	21	7	
AR50(K)-B	70	66	65.8	11	13	90	3.2	_	_	_	_	
AR60(K)-B	70	66	65.8	11	13	90	3.2	_	_	_	_	

^{*1} The dimension of B is the length when the filter regulator knob is unlocked.
*2 For the AR20(K)-B only, the position of the pressure gauge is above the centre of the piping.

AR20-B to AR60-B Regulator

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

Made to Order



AR30-03-B-X430/440/425

1 Special Temperature Environment

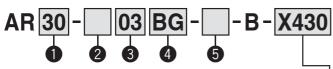
Special materials are used in the manufacturing of seals and resin parts to allow them to withstand various temperature conditions in cold or tropical (hot) climates.

Specifications

Made-to	-order part no.	-X430	-X440		
Environn	nent	Low temperature	High temperature		
Ambient t	emperature [°C]	-30 to 60	-5 to 80		
Fluid ten	perature [°C]	-5 to 60 (with no freezing)			
Material	Rubber parts	Special NBR	FKM		
Material	Main parts	Metal (Aluminiu	ım die-cast, etc.)		

Applicable Model

Model	AR25-B	AR30-B	AR40-B	AR40-06-B	AR50-B	AR60-B
Port size	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1



- 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) AR30-03BG-1NR-B-X430

For high/low temperature

	Low temperature
X440	High temperature

	\	\		Symbol	Description	25	30	ody si	ze 50	60
				-	Rc			•	•	
2	Pip	e thi	read type	N	NPT	•	•	•	•	
				F	G	•	•	•	•	•
				+						
				02	1/4		•	•	_	_
				03	3/8		•			
3		Por	t size	04	1/2		_			
•		. 0.	1 0120	06	3/4	\vdash	_		•	\vdash
				10	1	H_	\vdash			
				+	ı					
					Mithaut maunting setien					
				— B*2	Without mounting option		•	•	•	
	-	а	Mounting	B*z	With bracket	•	•	•	•	•
4	Option *1			Н	With set nut (for panel mount)	•	•	•	_	-
	현			+						
		b	Pressure	G *3	Round type pressure gauge (without limit indicator)	•	•	•	•	•
			gauge		(without limit indicator)					
	_	_		+						
		c Set			0.05 to 0.85 MPa setting	•	•	•	•	•
		_	pressure	1*4	0.02 to 0.2 MPa setting		•		•	
				+						
		d	Exhaust	_	Relieving type			•	•	
		u	mechanism	N	Non-relieving type	•	•	•	•	•
	0			+						
	Jar	_	Flow	_	Flow direction: Left to right		•	•	•	•
•	and	е	direction	R	Flow direction: Right to left	•	•	•	•	•
6	-st			+	V					
	Semi-standard			_	Downward		•		•	
	Se	f	Knob	Υ	Upward		•		•	•
		_		+	- F					
				'			Ι			
			Pressure	_	Name plate and pressure gauge in SI units: MPa	•	•	•	•	•
		g	unit	Z *5	Name plate and pressure gauge in imperial units: psi	O*6	O*6	O*6	O*6	O*6
_	_	_								

- Options B. G. H are not assembled and supplied loose at the time of shipment.
- *2 Assembly of a bracket and set nuts (AR25-B to AR40-B)
- Including 2 mounting screws for the AR50-B and AR60-B

 *3 Mounting thread for pressure gauge: 1/8, Pressure gauge type: G43

 *4 The only difference from the standard specifications is the spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.4 MPa pressure gauge will be fitted.
- *5 For pipe thread type: NPT.
- *6 O: For pipe thread type: NPT only

2 High Pressure

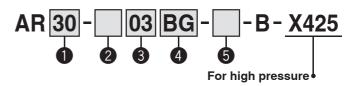
Strong materials are used in the manufacturing of regulators intended for high pressure operation. Also, construction modification allows a wider set pressure range.

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 (with no freezing)

Applicable Model

ĺ	Model	AR20-B	AR25-B	AR30-B	AR40-B	AR40-06-B	AR50-B	AR60-B
ſ	Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1



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

Ex	amp	ole)	AR30-03	BG-NR	-B-X425						
	_	_		0 1 1	D			(
				Symbol	Description	20	25	Body 30	/ size	50	60
						20	25	30	40	อบ	60
					Rc	•	•	•	•	•	
2	Pip	e th	read type	N	NPT	•	•	•	•	•	
				F	G		•	•			
+											
				01 02	1/8		_	_	_	_	\vdash
	_			02	1/4 3/8		-	•	-	\vdash	\vdash
3		Por	t size	03	3/8 1/2	\vdash	•	•	•	_	
				06	3/4	\vdash	\vdash	\vdash		_	H
					3/4	\vdash	-	_	•	•	
				10	ļ ļ	드	1-		_		
					Without mounting option						
	Option *1			B *2	With bracket						
		а	Mounting		With set nut	_	-	-	-	_	-
4				Н	(for panel mount)	•	•	•	•	_	-
	Opti			+	,						
		b	Pressure gauge	G *3	Round type pressure switch (with limit indicator)	•	•	•	•	•	•
			3 3	+	(_	1				
			Exhaust	_	Relieving type		•	•	•	•	
		С	mechanism	N	Non-relieving type	•	•	•	•	•	•
				+				•	•		
		d	Flow	_	Flow direction: Left to right		•	•	•	•	•
	ard	a	direction	R	Flow direction: Right to left	•	•	•	•	•	•
	nd			+							
5	Semi-standard	е	Knob	_	Downward	•	•	•	•	•	•
	Ë	9	KIIOD	Υ	Upward		•	•	•	•	•
	Se	_		+							
	3)		Pressure	_	Name plate and pressure gauge in SI units: MPa	•	•	•	•	•	•

*1 Options B, G, H are not assembled and supplied loose at the time of shipment.
*2 Assembly of a bracket and set nuts (AR20-B to AR40-B)

Name plate and pagage in imperial units: psi

- Including 2 mounting screws for the AR50-B and AR60-B
- *3 Mounting thread for pressure gauge: 1/8, Pressure gauge type: G46-20-□
 *4 For pipe thread type: NPT.
 *5 ○: For pipe thread type: NPT only



AR10 Regulator **Made to Order**

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



3 0.4 MPa Setting

The setting specification is 0.4 MPa. When a pressure gauge is included, the display will show a range from 0 to 1.0 MPa.

Specifications

Made-to-order part no.	-X406
Proof pressure [MPa]	1.5
Maximum operating pressure [MPa]	1.0
Set pressure range [MPa] *1	0.05 to 0.4

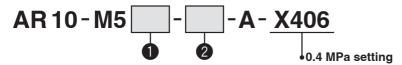
*1 Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range.

∆ Caution

• The AR10 comes with a backflow function as a standard feature. When using the AR10 as with backflow function, backflow may not occur with the set pressure of 0.15 MPa or less.

Applicable Model

Model	AR10				
Port size	M5				



- Option/Semi-standard: Select one each for a to f.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphabetic order. Example) AR10-M5BG-NR-A-X406

		_		Symbol	Description	Body size 10
				_	Without mounting option	•
	N *	а	Mounting	B *3	With bracket	•
•				Н	With set nut (for panel mount)	•
v	Option			+		
	0	b	Pressure gauge *4	_	Without pressure gauge	•
		Б	Tressure gauge	G	Round type pressure gauge (without limit indicator)	•
		С	Exhaust mechanism	_	Relieving type	•
		C	Lanaust mechanism	N	Non-relieving type	•
				+		
	ard	d	Flow direction		Flow direction: Left to right	•
	Semi-standard	u	1 low direction	R	Flow direction: Right to left	•
2	sta			+		
	호	е	Knob		Downward	•
	8	C	TATOD	Υ	Upward	•
				+		
		f	Pressure unit		Name plate and pressure gauge in SI units: MPa	•
			1 1033dre driit	Z	Name plate and pressure gauge in imperial units: psi	

- *2 Options B, G, H are not assembled and supplied loose at the time of shipment.
- *3 Assembly of a bracket and set nuts.
- *4 A 1.0 MPa pressure gauge will be fitted.

AR20-B to AR60-B Regulator AR20K-B to AR60K-B Regulator with Backflow Function

Made to Order

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



3 0.4 MPa Setting

The setting specification is 0.4 MPa, When a pressure gauge is included, the display will show a range from 0 to 0.7 MPa.

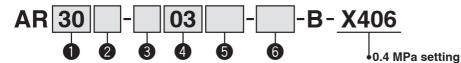
Specifications

Made-to-order part no.	-X406
Proof pressure [MPa]	1.5
Maximum operating pressure [MPa]	1.0
Set pressure range [MPa] *1	0.05 to 0.4

^{*1} Pressure can be set higher than the specification pressure in some cases, but use pressure within the specification range

Applicable Model

Model	AR20(K)-B	AR25(K)-B	AR30(K)-B	AR40(K)-B	AR40(K)-06-B	AR50(K)-B	AR60(K)-B
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1



- Option/Semi-standard: Select one each for a to f.
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphabetic order. Example) AR30K-03BE-NR-B-X406

	Sv							0)		
				Symbol	Description			Body :	size		
						20	25	30	40	50	60
2	١,	∧/;+h h	packflow function	_	Without backflow function	•	•	•	•	•	•
4	l '	vviiii i.	acknow function	K *2	With backflow function	•	•	•	•	•	•
				+							
					Rc	•	•	•	•	•	•
3		Pip	e thread type	N	NPT	•	•	•	•	•	•
			F	G	•	•	•	•	•	•	
				+							
				01	1/8	•	_	_	_	_	_
				02	1/4		•	•	•	_	_
		Port size		03	3/8	_	•	•	•	_	_
			I UIT SIZE	04	1/2	_	_	_	•	_	_
				06	3/4	_	_ [•	•	_
				10	1	_	_	_	_	•	•
				+					·	·	
					Without mounting option	•	•	•	•	•	•
		а	Mounting	B*4	With bracket	•	•	•	•	•	•
				Н	With set nut (for panel mount)	•	•	•	•	_	_
				+					·	•	
	e *				Without pressure gauge	•	•	•	•	•	•
6	ا <u>۾</u> ا		Pressure gauge*5	E	Square embedded type pressure gauge (with limit indicator)		•	•	•	•	•
J	Option		Fressure gauge	G	Round type pressure gauge (with limit indicator)	•	•	•	•	•	•
	0	ь		M	Round type pressure gauge (with colour zone)	•	•	•	•	•	•
		b		E1*6	Output: NPN output, Electrical entry: Wiring bottom entry	•	•	•	•	•	•
			Digital pressure	E2*6	Output: NPN output, Electrical entry: Wiring top entry	•	•	•	•	•	•
			switch	E3*6	Output: PNP output, Electrical entry: Wiring bottom entry	•	•	•	•	•	•
				E4 *6	Output: PNP output, Electrical entry: Wiring top entry	•	•	•	•	•	•
				+							
		С	Exhaust		Relieving type		•	•	•	•	•
			mechanism	N	Non-relieving type		•	•	•	•	•
				+							
	٩	d	Flow direction		Flow direction: Left to right		•	•	•	•	
	dar	u	I low direction	R	Flow direction: Right to left		•	•	•	•	•
6	Semi-standard			+							
U	<u></u>	е	Knob		Downward		•	•	•	•	
	em	-	KIIOD	Υ	Upward		•	•	•	•	•
	S			+							
				_	Name plate and pressure gauge in SI units: MPa			•	•	•	•
		f	Pressure unit	Z *7	Name plate and pressure gauge in imperial units: psi	○*9	○*9	○*9	○*9	○*9	○*9
				ZA*8	Digital pressure switch: With unit selection function	△*10	△*10	△*10	△*10	△*10	△*10

- *2 Please set the inlet pressure to at least 0.05 MPa higher than the set pressure.
- *3 Options B, G, H are not assembled and supplied loose at the time of shipment.
 *4 Assembly of a bracket and set nuts. (AR20(K)-B to AR40(K)-B). Including 2 mounting screws for the AR50(K)-B and AR60(K)-B
- *5 A 0.7 MPa pressure gauge will be fitted.

 *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. (Select "wiring bottom entry" when the semi-standard Y is chosen simultaneously.)
- *7 For pipe thread type: NPT. The digital pressure switch will be equipped with the unit selection function, setting to psi initially. *8 For options: E1, E2, E3, E4.
- *9 O: For pipe thread type: NPT only
- *10 \(\triangle:\) Select with options: E1, E2, E3, E4.



AR20-B to AR60-B Regulator AR20K-B to AR60K-B Regulator with Backflow Function

Made to Order

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



4 Clean Series

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



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

Clean series



5 Copper, Fluorine and Silicone-free + Low Particle Generation

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

Standard model no.

Copper, fluorine and silicone-free + Low particle generation

AF+AR

AF+AR+AL

AW+AL

Attachment | AW+AFM | AF+AFM+AR

¥



Modular Type Lubricator AL Series

Lubricator AL Series	Model	Port size	Option
	AL10-A	M5 x 0.8	
	AL20-A	1/8, 1/4	
	AL30-A	1/4, 3/8	
All of the same of	AL40-A	1/4, 3/8, 1/2	Bracket (Except AL10-A)
Osc B	AL40-06-A	3/4	
	AL50-A	3/4, 1	
Pages 83 to 90	AL60-A	1	

Lubricator

AL10-A to AL60-A

Symbol





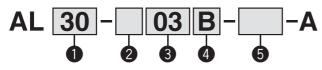




How to Order

AL20-A

AL40-A



- Option/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) AL30-03B-3RW-A

	_				0							
			Symbol	Description			Body	size				
					10	20	30	40	50	60		
				Metric thread (M5)	•	_	_	_	_	_		
2	Dir	e thread type		Rc	_	•	•	•	•	•		
9	Lik	e ililead type	N	NPT	_	•	•	•	•	•		
			F	G	_	•	•	•	•	•		
			+									
			M5	M5 x 0.8			_	_	_	_		
			01	1/8	_	•	_	_	_	_		
			02	1/4	_	•	•	•	_	_		
3		Port size	03	3/8		_	•	•	_	_		
			04	1/2	_	_	_	•	_	_		
			06	3/4	_	_	_	•	•	_		
			10	1	_	_	_	_	•	•		
			+									
	4 Option (Mounting)		_	Without mounting option	•	•	•	•	•	•		
4	Орі	ion (wounting)	B *1	With bracket	_	•	•	•	•	•		
			+									
			_	Polycarbonate bowl	•	•	•	•	•	•		
			2	Metal bowl	•	•	•	•	•	•		
		Bowl *2 *3	6	Nylon bowl	•	•	•	•	•	•		
	a	BOWL	8	Metal bowl with level gauge	_	_	•	•	•	•		
			С	With bowl guard	_	•	*4	*4	*4	*4		
_	.		6C	With bowl guard (Nylon bowl)	_	•	*5	*5	*5	*5		
2 10		•	+				'		'			
a no			—	Without drain cock	•	•	•	•	•	•		
6	b	Lubricant	3	With drain cock	•	•	•	•	•	•		
Semi-standard	5	exhaust port	3W*6	Drain cock with barb fitting		_	•	•	•	•		
S) <u></u>		+									
		E	_	Flow direction: Left to right		•	•	•	•	•		
	С	Flow direction	R	Flow direction: Right to left	•	•	•	•	•	•		
		•	+	-								
			_	Name plate and caution plate: MPa		•	•	•	•	•		
	d	Pressure unit	Z *7	Name plate and caution plate: psi, °F	O*8	O*8	O*8	O*8	O*8	O*8		

- *1 Option is not assembled and supplied loose at the time of shipment.
- *2 Refer to chemical data on page 86 for chemical resistance of the bowl.
- *3 Refer to page 89 for 1000 cm³ tanks.
- *4 A bowl guard is provided as standard equipment (polycarbonate).
- *5 A bowl guard is provided as standard equipment (nylon). *6 The combination of metal bowl: 2 and 8 is not available.
- *7 For pipe thread type: M5, NPT.
- *8 O: For pipe thread type: M5, NPT only



A

Lubricator AL10-A to AL60-A Series

Standard Specifications

Model	AL10-A	AL20-A	AL30-A	AL40-A	AL40-06-A	AL50-A	AL60-A
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 6	60 °C (with no fre	ezing)		
Proof pressure				1.5 MPa			
Maximum operating pressure				1.0 MPa			
Minimum dripping flow rate [I/min (ANR)] *1	4	15	1/4: 30 3/8: 40	1/4: 30 3/8: 40 1/2: 50	50	190	220
Oil capacity [cm³]	7	25	55		13	35	
Recommended lubricant			Class	turbine oil (ISO	VG32)		
Bowl material				Polycarbonate			
Bowl guard	_	Semi-standard (Steel)		Stan	dard (Polycarbor	nate)	
Weight [kg]	0.07	0.10	0.20	0.38	0.43	0.94	1.09

^{*1 ·} The flow rate is 5 drops or greater/min under the following conditions: Inlet pressure of 0.5 MPa; Class 1 turbine oil (ISO VG32); Temperature at 20 °C; Oil adjustment valve fully open.

Option/Part No.

Optional specifications	Model										
Optional specifications	AL10-A	AL20-A	AL30-A	AL40-A	AL40-06-A	AL50-A	AL60-A				
Bracket assembly *1	_	AF22P-050AS	AF32P-050AS	AF42P-050AS	AF42P-070AS	AF52P	050AS				

^{*1} Assembly of a bracket and 2 mounting screws

Bowl Assembly/Part No.

Bowl	Lubricant	Other				Model					
material	exhaust port		AL10-A	AL20-A	AL30-A	AL40-A	AL40-06-A	AL50-A	AL60-A		
	Without drain cock	_	C1SL-A	C2SL-A	_	_					
Polycarbonate	Without drain cock	With bowl guard	_	C2SL-C-A	C3SL-A	C4SL-A					
	With drain cock	_	C1SL-3-A	C2SL-3-A	_		_	_			
	Willi dialii cock	With bowl guard	_	C2SL-3C-A	C3SL-3-A	C4SL-3-A					
	Drain cock with barb fitting	With bowl guard		_	C3SL-3W-A						
	Without drain cock	_	C1SL-6-A	C2SL-6-A	_	_					
	vvitnout drain cock	With bowl guard	_	C2SL-6C-A	C3SL-6-A	C4SL-6-A					
Nylon	With drain cock	_	C1SL-36-A	C2SL-36-A	_	_					
	With drain cock	With bowl guard	_	C2SL-36C-A	C3SL-36-A		C4SL	-36-A			
	Drain cock with barb fitting	With bowl guard		_	C3SL-36W-A		C4SL-	36W-A			
	Without drain cock	_	C1SL-2-A	C2SL-2-A	C3SL-2-A		C4SI	2-A			
Metal	Without drain cock	With level gauge	_	_	C3LL-8-A	C4LL-8-A					
ivietai	With drain cock	_	C1SL-23-A	C2SL-23-A	C3SL-23-A	A C4SL-23-A					
	Willi Gialli COCK	With level gauge	_	_	C3LL-38-A		C4LL	-38-A			

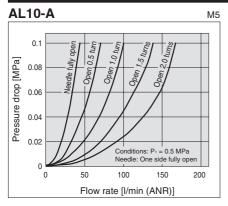
 $[\]cdot$ Bowl seal is included for the AL20-A to AL60-A.

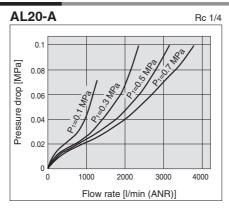
For a circuit that repeatedly turns ON and OFF on the outlet side, make the adjustment so that the average air consumption per minute becomes the minimum dripping flow rate or more.

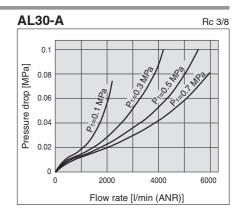
[·] Please consult with SMC separately for psi and °F unit display specifications.

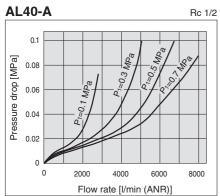
AL10-A to AL60-A Series

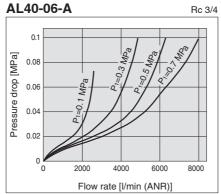
Flow Rate Characteristics (Representative values)

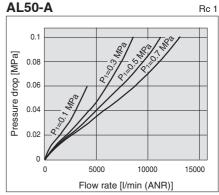


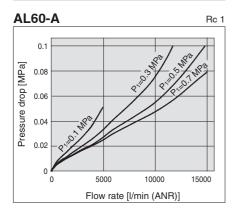




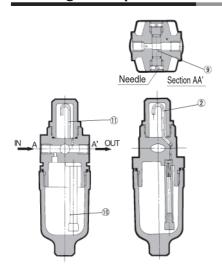








Working Principle: AL10



A portion of the air introduced from the IN side pressurises the lubricant inside the bowl. The remainder of the air passes through the needle ③, and flows to the OUT side. The differential pressure between the inside of the bowl and the inside of the sight dome ②, causes the lubricant inside the bowl into the oil passage ⑩. The lubricant drips from the dripping tube ⑪, and lubricates the OUT side. The amount of lubricant is adjusted by the needle ⑨ on the front face. Turning the needle clockwise increases the amount of the lubricant, and turning it counterclockwise until fully open shuts off the lubricant. The needle on the side that is not used should be left fully open.



Selection

.Marning

- 1. Do not introduce air from the outlet side as this can damage the bumper.
- 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)

	I			· · ·
Type	Chemical name	Application examples		erial
, , , , , , , , , , , , , , , , , , ,		''	Polycarbonate	Nylon
Acid	Hydrochloric acid Sulfuric acid, Phosphoric acid Chromic acid	Acid washing liquid for metals	Δ	Х
Alkaline	Sodium hydroxide (Caustic soda) Potash Calcium hydroxide (Slack lime) Ammonia water Carbonate of soda	Degreasing of metals Industrial salts Water-soluble cutting oil	Х	0
Inorganic salts	Sodium sulfide Potassium nitrate Sulfate of soda	_	Х	Δ
Chlorine solvents	Carbon tetrachloride Chloroform Ethylene chloride Methylene chloride	Cleansing liquid for metals Printing ink Dilution	Х	Δ
Aromatic series	Benzene Toluene Paint thinner	Coatings Dry cleaning	Х	Δ
Ketone	Acetone Methyl ethyl ketone Cyclohexane	Photographic film Dry cleaning Textile industries	Х	Х
Alcohol	Ethyl alcohol IPA Methyl alcohol	Antifreeze Adhesives	Δ	Х
Oil	Gasoline Kerosene	_	Х	0
Ester	Phthalic acid dimethyl Phthalic acid diethyl Acetic acid	Synthetic oil Anti-rust additives	Х	0
Ether	Methyl ether Ethyl ether	Brake oil additives	Х	0
Amino	Methyl amino	Cutting oil Brake oil additives Rubber accelerator	Х	Х
Others	Thread-lock fluid Seawater Leak tester	_	Х	Δ
O: Essentia	lly safe	cts may occur. X: Effe	cts will oc	cur.

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

Selection

_Caution

1. Use a check valve (AKM series) to prevent back flow of the lubricant when redirecting the air flow before the lubricator.

Maintenance

△Warning

- For the AL10-A/AL20-A, replenish the lubricant after releasing the inlet pressure. Lubrication cannot take place under a pressurised condition.
- 2. Adjustment of the oil regulating valve for models from the AL20-A to AL60-A should be carried out manually. Turning it counterclockwise increases the dripping amount, and turning it clockwise reduces the dripping amount. The use of tools etc. can result in damage to the unit. From the fully closed position, three rotations will bring it to the fully open position. Do not rotate it any further than this. Note that the numbered scale markings are guidelines for adjusting the position, and not indicators of the dripping amount.

∧Caution

1. Check the dripping amount once a day. Drip failure can cause damage to the components that need lubrication.

Mounting/Adjustment

⚠Caution

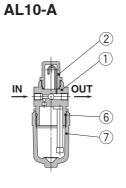
 When the bowl is installed on the AL30-A to AL60-A, install them so that the lock button lines up to the groove of the front (or the back) of the body to avoid drop or damage of the bowl.

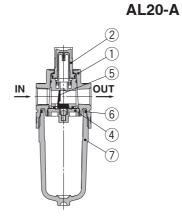


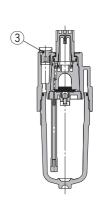


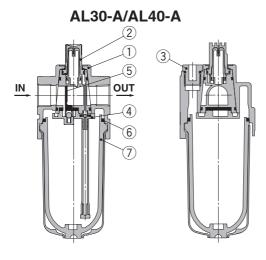
AL10-A to AL60-A Series

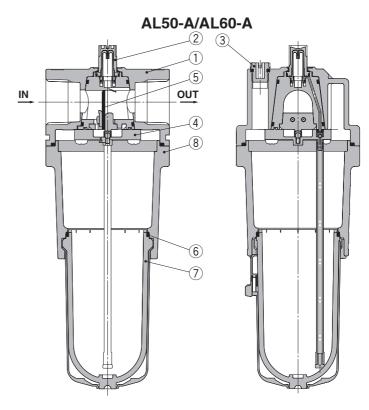
Construction











Component Parts

No.	Description	Material	Model	Colour	
-1	Body	Zinc die-cast		White	
і Бойу	Body	Aluminium die-cast	AL20-A to AL60-A	vviille	
8	Housing	Aluminium die-cast	AL50-A/AL60-A	White	

Replacement Parts

No.	Description	Description Material		Part no.									
INO.	Description	Material	AL10-A	AL20-A	AL30-A	AL40-A	AL40-06-A	AL50-A	AL60-A				
2	Sight dome assembly	Polycarbonate	AL10P-080AS			AL20P	-080AS						
3	Lubrication plug assembly	_	_	AL22P-060AS	AL32P-060AS	AL42P-060AS							
4	Bumper retainer assembly	_	_	AL20P-030AS	AL30P-030AS	AL40P	-030AS	AL50P-030AS	AL60P-030AS				
5	Bumper (assembly)	Synthetic resin	_	AL20P-040S	AL30P-040S	AL40F	P-040S	AL50P-040AS	AL60P-040AS				
6	Bowl seal	NBR	C1SFP-260S	C2SFP-260S	C32FP-260S		C42FF	P-260S					
7	Bowl assembly *1	Polycarbonate	C1SL-A	C2SL-A	C3SL-A		C45	SL-A					

^{*1 ·} Bowl seal is included for the AL20-A to AL60-A. Please consult with SMC separately for psi and °F unit display specifications. · Bowl assembly for the AL30-A to AL60-A models comes with a bowl guard (Material: Polycarbonate).



Applicable model

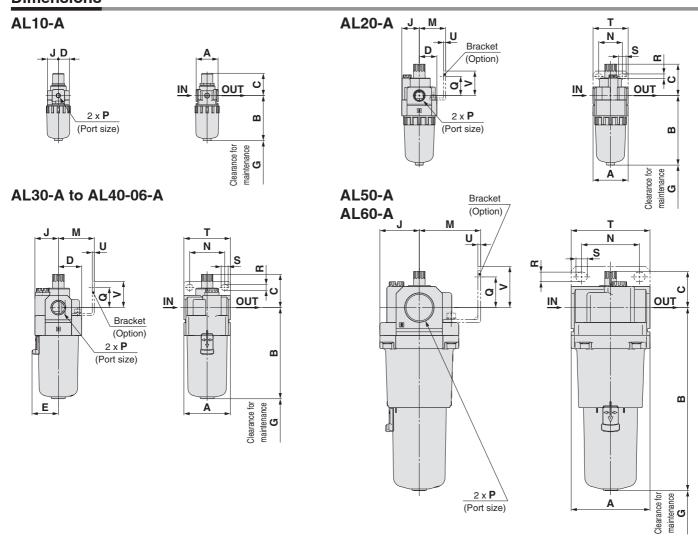
Optional/Semi-standard specifications

With drain cock

AL30-A to AL60-A

Metal bowl

AB



Dimensions		<u>m</u>	m	a	a a
Applicable model			AL30-A to	AL60-A	
Optional/Semi-standard specifications	With drain cock	Metal bowl with level gauge	Metal bowl with drain	n cock Metal bowl with level gauge	e, with drain cock Drain cock with barb fitting
Dimensions	B	a	a		Barb fitting applicable tubing: T0604

AL10-A/AL20-A

Metal bowl

Metal bowl with drain cock

											Optio	onal sp	ecifica	ation	s			Semi	i-standar	d specific	ations	
Model		Standard specifications						Bracket mount					With drain cock	With barb fitting	Metal bowl	Metal bowl with drain cock	Metal bowl with level gauge	Metal bowl with level gauge, with drain cock				
	Р	Α	В	С	D	Е	G	J	M	N	Q	R	S	Т	U	V	В	В	В	В	В	В
AL10-A	M5 x 0.8	25	51.5	25.5	12.5	_	35	12.5	_	_	_	_	_	_	_	_	59.9	_	56.3	59.3	_	
AL20-A	1/8, 1/4	40	79.3	35.9	20	_	60	20	30	27	22	5.4	8.4	40	2.3	28	87.7	_	84.5	87.5	_	_
AL30-A	1/4, 3/8	53	104.1	38.1	26.7	30	80	26.7	41	35	23	6.5	13	53	2.3	30	115.1	123.6	104.1	117.6	124.1	137.6
AL40-A	1/4, 3/8, 1/2	70	136.1	39.8	35.5	38.4	110	35.5	50	52	26	8.5	12.5	70	2.3	35	147.1	155.6	136.1	149.6	156.1	169.6
AL40-06-A	3/4	75	138.1	37.8	35.5	38.4	110	35.5	50	52	25	8.5	12.5	70	2.3	34	149.1	157.6	138.1	151.6	158.1	171.6
AL50-A	3/4, 1	90	209.1	41.2	45	_	110	45	70	66	35	11	13	90	3.2	47	220.1	228.6	209.1	222.6	229.1	246.2
AL60-A	1	95	223.1	44.7	47.5	_	110	47.5	70	66	35	11	13	90	3.2	47	234.1	242.6	223.1	236.6	243.1	256.6

Semi-standard Specifications: 1000 cm³ Tank

Lubricator

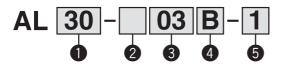
AL30 to AL60

Available for previous models (AL30 to 60).

Symbol



How to Order



- \bullet Option/Semi-standard: Select one each for ${\bf a}$ to ${\bf c}.$
- Option/Semi-standard symbol: When more than one specification is required, indicate in alphanumeric order

Example) AL30-03B-1R

						1				
			Symbol	Description	Body size					
					30	40	50	60		
-			_	Rc	•	•	•	•		
2	Pipe thread type		N	NPT	•	•	•	•		
			F	G	•	•	•	•		
			+							
			02	1/4	•	•	_	_		
			03	3/8	•	•	_	_		
8	3 Port size		04	1/2		•	_	_		
			06	3/4		•		_		
			10	1		_				
			+							
4	Ontid	on (Mounting)		Without mounting option		•		•		
	Optio	on (Mounting)	B *1	With bracket		•				
			+							
	а	Bowl *2	1	1000 cm ³ tank		•	•			
			+		_					
	- h Flow direction -			Flow direction: Left to right		•	•	•		
6			R	Flow direction: Right to left		•				
			+							
	C	Pressure unit		Name plate in SI units: MPa		•	•	•		
	C Flessure		Z *3	Name plate in imperial units: psi	O*4	○*4	○*4	O*4		

^{*1} Option B is not assembled and supplied loose at the time of shipment.

Semi-standard/Bowl Assembly Part No.

	,								
Semi-standard	specifications		Model						
	With switch								
Bowl material	Lowest limit ON	Lowest limit OFF	AL30	AL40	AL40-06	AL50	AL60		
1000 cm³ tank (Metal bowl with level gauge)	_	_			121538-1A				

[·] It is not possible to switch from a polycarbonate, nylon or metal bowl, or from a metal bowl with a level gauge to a 1000 cm³ tank. Please order the product separately.



^{*2} The standard bowl is a metal bowl with level gauge and lubricant discharge function. The material of the sight dome is polycarbonate resin. For chemical resistance, refer to the chemical data on page 463.

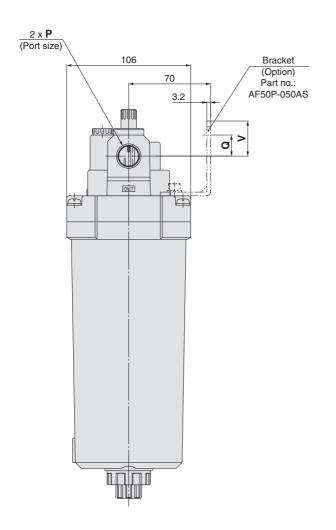
^{*3} For pipe thread type: M5, NPT. This product is for overseas use only according to the new Measurement Act. (The SI unit type is provided for use in Japan.)

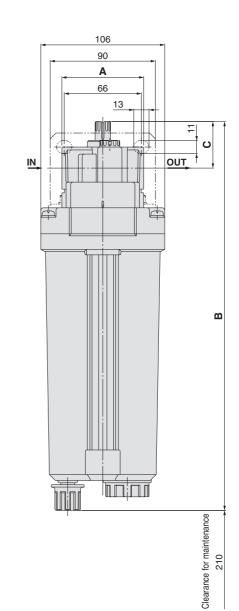
^{*4} O: For pipe thread type: M5, NPT only

[·] When adding a float switch to the 1000 cm3 tank, select IS400-1 or IS400-2.

For other replacement parts, refer to the Operation Manual

Semi-standard specifications: 1000 cm³ tank





Model	P	Α	В	С	Bracke	t mount	Float switch	
Wodel	F	A			Q	V	В	
AL30	1/4, 3/8	53	324	38	25	_	374	
AL40	1/4, 3/8, 1/2	70	333	40	18	_	383	
AL40-06	3/4	75	333	38	16	_	383	
AL50	3/4, 1	90	332	41	35	47	382	
AL60	1	95	335	45	35	47	385	

AB

Modular Type Filter Regulator AW Series

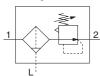
Filter Regulator AW Series		Model	Port size	Set pressure	Options
		AW10-A	M5 x 0.8	0.05 to 0.7 MPa 0.02 to 0.2 MPa	Bracket Round type pressure gauge Set nut (for panel mount)*1
		AW20-B	1/8, 1/4		Bracket Set nut (for panel mount)*1
		AW30-B	1/4, 3/8		Float type auto drain
	20 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1	AW40-B	1/4, 3/8, 1/2	0.05 to 0.85 MPa 0.02 to 0.2 MPa	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
Pages 93 to 111					Round type pressure gauge

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

Filter Regulator AV10-A

Symbol

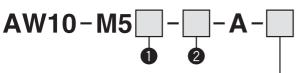
Filter Regulator



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

How to Order

Refer to page 95 for size 20 to 60.



- 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
	-	а	Mounting	— В Н	Without mounting option With bracket With set nut (for panel mount)
0	Option *1	b	Float type auto drain	+ - C*2	Without auto drain N.C. (Normally closed) Drain port is closed when pressure is not applied.
	c Pressure gauge	+ — G*3	Without pressure gauge Round type pressure gauge (without limit indicator)		
		d	Set pressure *4	+ - 1	0.05 to 0.7 MPa setting 0.02 to 0.2 MPa setting
	rd	е	Bowl *5	+ 2 6	Polycarbonate bowl Metal bowl Nylon bowl
2	Semi-standard	f	Exhaust mechanism	+ — N	Relieving type Non-relieving type
	Se	g	Flow direction	+ — R	Flow direction: Left to right Flow direction: Right to left
		h	Pressure unit	+ 	Name plate, caution plate, and pressure gauge in SI units: MPa 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
Fluid Air Ambient and fluid temperature -5 to 60 °C (with no freezing) Proof pressure 1.5 MPa
Ambient and fluid temperature -5 to 60 °C (with no freezing) Proof pressure 1.5 MPa
Proof pressure 1.5 MPa
1000 p. 100 m. 1
Maximum an austin a passage 10 MD-
Maximum operating pressure 1.0 MPa
Set pressure range 0.05 to 0.7 MPa
Nominal filtration rating 5 μm
Drain capacity [cm³] 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

Bowl Assembly/Part No.

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

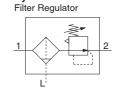
^{*2 1.0} MPa pressure gauge

^{*1} Minimum operating pressure: 0.1 MPa
* Please consult with SMC separately for psi and °F unit display specifications.

Filter Regulator

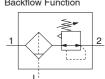
AW20-B to AW60-B

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



Symbol

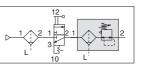
Filter Regulator with Backflow Function



- Integrated filter and regulator units save space and require less piping.
- Models with the backflow function include a mechanism which allows for the air pressure in the outlet side to be released to the inlet side.

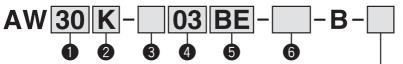
Example)

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.



- 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.)

					(Refer to pages 1	106 to 110 for	details.)		
	\						1		
				Symbol	Description		Body	size	
						20	30	40	60
		Wi	th backflow	_	Without backflow function			•	•
2	function K*1				With backflow function		•	•	•
				+					
				_	Rc	•	•	•	•
3		Pipe	e thread type	N *2	NPT	•	•	•	•
				F *3	G	•	•	•	•
				+					
				01	1/8	•	_	_	
				02	1/4	•	•	•	
4			Port size	03	3/8		•	•	
				04	1/2	_	_	•	
				06	3/4			•	•
				10	1			_	
				+	Without mounting entian				
			Marinting	 B∗⁵	Without mounting option With bracket		•	•	•
		а	Mounting	H	With set nut (for panel mount)				
		+			with set flut (ioi panel flioditt)				
				-	Without auto drain		•	•	_
		b	Float type	C*6	N.C. (Normally closed) Drain port is closed when pressure is not applied.				
	_		auto drain	D *7	N.O. (Normally open) Drain port is open when pressure is not applied.		•		
	n *4			+	The (normany open) Dram portio open men process is not approach				
5	Option			_	Without pressure gauge		•	•	•
	ō		Pressure	Е	Square embedded type pressure gauge (with limit indicator)	•	•	•	•
			gauge *8	G	Round type pressure gauge (with limit indicator)	•	•	•	•
				M	Round type pressure gauge (with colour zone)	•	•	•	•
		С	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		•		•
			_	+		_			
		d	Set *10		0.05 to 0.85 MPa setting	•	•	•	
			pressure *10	1	0.02 to 0.2 MPa setting				
				+	Debased and bound				
				2	Polycarbonate bowl Metal bowl				
	ndard		Bowl *11	6	Nylon bowl				
	nd	е		8	Metal bowl with level gauge				
6	sta			C	With bowl guard		*12	*12	*12
	Semi-star			6C	With bowl guard (Nylon bowl)		*13	*13	*13
	Se			+	Jaara (rijion som)				
					With drain cock			•	•
				Ind5	Drain guide 1/8		_	_	
		f	Drain port *14	J*15	Drain guide 1/4		•	•	•
				W *16	Drain cock with barb fitting		•	•	•
OF.					•		-		-

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**

	\	_					0)	
	Symbol Description		Description	Body size					
						20	30	40	60
			Exhaust	_	Relieving type	•	•	•	•
			mechanism	N	Non-relieving type	•	•	•	•
7	ard .		+				·		
	nda	h	Flow direction	_	Flow direction: Left to right	•	•	•	•
6	standard	11	riow direction	R	Flow direction: Right to left	•	•	•	•
	1			+		-			
d	Semi			_	Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	•	•
		i	Pressure unit	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

- 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" Onetouch 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.
- 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.
- 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 (nvlon).

- 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 O: For pipe thread type: NPT only
- *20 A: 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 free:	zing)	
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]					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.



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

Options/Part No.

	Optional spe	cifications			Model		
	Optional spe	cilications	AW20(K)-B	AW30(K)-B	AW40(K)-B	AW40(K)-06-B	AW60(K)-B
Bracket	t assembly *1		AW23P-270AS	AR33P-270AS	AR43P	-270AS	AW62P-270AS
Set nut		AR23P-260S	AR33P-260S	AR43F	P-260S	*2	
	Round type *3	Standard	G36-1	0-□01		G46-10-□01	
	nound type	0.02 to 0.2 MPa setting	G36-4-□01		G46-4-□01		
Pressure	Round type *3	Standard	G36-10-□01-L		G46-10-□01-L		
gauge	(with colour zone)	0.02 to 0.2 MPa setting	G36-4-□01-L G46-4-□01-L				
	Square embedded	Standard	GC3-10AS [GC3P-010AS (Pressure gauge cover only)]				
	type *4	0.02 to 0.2 MPa setting	GC3-4AS [GC3P-010AS (Pressure gauge cover only)]				
		NPN output, Wiring bottom entry		ISE35-N-25-MLA	(SE35-N-25-M	Switch body only)]	
Digital	pressure	NPN output, Wiring top entry		ISE35-R-25-MLA	(SE35-R-25-M	Switch body only)]	
switch	*5	PNP output, Wiring bottom entry		ISE35-N-65-MLA	(SE35-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 \square 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	Drain					Model		
material	discharge mechanism	Drain port	Other	AW20-B	AW30-B	AW40-B	AW40-06-B	AW60-B
		With drain cock	_	C2SF-A	_	_		
		With drain cock	With bowl guard	C2SF-C-A	C3SF-A		C4SF-A	
	Manual	Drain cock with barb fitting	With bowl guard	_	C3SF-W-A		C4SF-W-A	
Polycarbonate		With drain guide		C2SF□-J-A	_		_	
rolycarbonale		(without valve function)	With bowl guard	C2SF□-CJ-A	C3SF□-J-A		C4SF□-J-A	
	A	Normally closed (N.C.)	_	AD27-A	_		_	
	Automatic *1 (Auto drain)	Normally closed (N.C.)	With bowl guard	AD27-C-A	AD37□-A	AD47□-A		
		Normally open (N.O.)	With bowl guard	_	AD38□-A		AD48□-A	
	Manual	With drain cock	_	C2SF-6-A	_	_		
		With drain cock	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		
Nylon		With drain guide	_	C2SF□-6J-A	_		_	
inyion		(without valve function)	With bowl guard	C2SF□-6CJ-A	C3SF□-6J-A	C4SF□-6J-A		
	A	Name ally alaced (N.C.)	_	AD27-6-A	_		_	
	Automatic *1 (Auto drain)	Normally closed (N.C.)	With bowl guard	AD27-6C-A	AD37□-6-A	AD47□-6-A		
	(Auto drain)	Normally open (N.O.)	With bowl guard	_	AD38□-6-A		AD48□-6-A	
		With drain cock	_	C2SF-2-A	C3SF-2-A		C4SF-2-A	
	Manual	With drain cock	With level gauge	_	C3LF-8-A		C4LF-8-A	
	Manual	With drain guide	_	C2SF□-2J-A	C3SF□-2J-A		C4SF□-2J-A	
Metal		(without valve function)	With level gauge	_	C3LF□-8J-A		C4LF□-8J-A	
ivietai		Name ally alone d (N. O.)	_	AD27-2-A	AD37□-2-A		AD47□-2-A	
	Automatic *1	Normally closed (N.C.)	With level gauge	_	AD37□-8-A		AD47□-8-A	
	(Auto drain)	Normally open (N.O.)	_	_	AD38□-2-A		AD48□-2-A	
		Normally open (N.O.)	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.

No indication is necessary for Rc thread; however, indicate N for NPT thread, and F for G thread. (For auto drain, —: O 10, N: O 3/8")

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



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

Filter Regulator AW20-B to AW60-B Series

Specific Product Precautions

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

Design/Selection

∕∿ Warning

- 1. 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).
- 2. 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)

			Mate	erial
Type	Chemical name	Application examples	Polycarbonate	Nylon
Acid	Hydrochloric acid Sulfuric acid, Phosphoric acid Chromic acid	Acid washing liquid for metals	Δ	Х
Alkaline Calcium hydroxide (Slack lime) Industrial salts		Degreasing of metals Industrial salts Water-soluble cutting oil	Х	0
Inorganic salts	Sodium sulfide Potassium nitrate Sulfate of soda	_	х	Δ
Chlorine solvents	Carbon tetrachloride Chloroform Ethylene chloride Methylene chloride	Cleansing liquid for metals Printing ink Dilution	х	Δ
Aromatic series	Benzene Toluene Paint thinner	Coatings Dry cleaning	х	Δ
Ketone	Acetone Methyl ethyl ketone Cyclohexane	Photographic film Dry cleaning Textile industries	х	Х
Alcohol	Ethyl alcohol IPA Methyl alcohol	Antifreeze Adhesives	Δ	Х
Oil	Gasoline Kerosene	_	х	0
Ester	Phthalic acid dimethyl Phthalic acid diethyl Acetic acid	Synthetic oil Anti-rust additives	х	0
Ether	Methyl ether Ethyl ether	Brake oil additives	х	0
Amino	Methyl amino	Cutting oil Brake oil additives Rubber accelerator	х	Х
Others	Thread-lock fluid Seawater Leak tester	_	х	Δ

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

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/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. 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 112 for details.
- 3. 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.



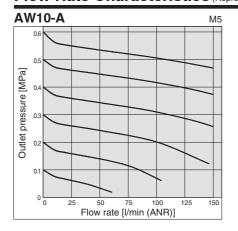


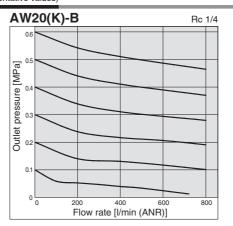


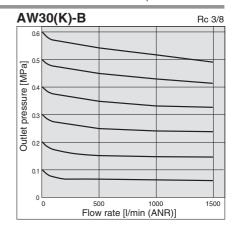
AW10-A Series AW20-B to AW60-B Series AW20K-B to AW60K-B Series

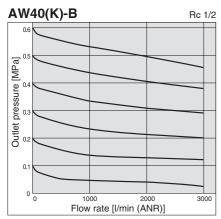
Flow Rate Characteristics (Representative values)

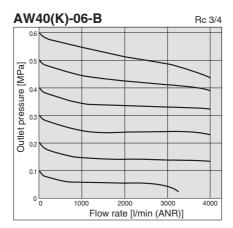
Condition: Inlet pressure of 0.7 MPa

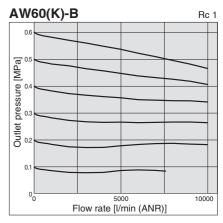






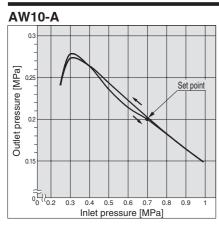


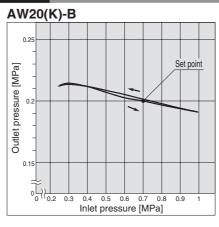


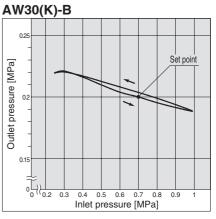


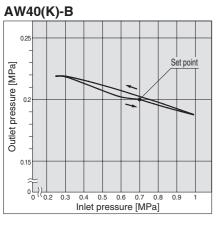
Pressure Characteristics (Representative values)

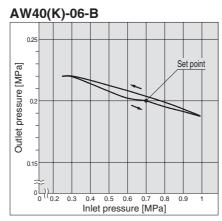
Conditions: Inlet pressure of 0.7 MPa, Outlet pressure of 0.2 MPa, Flow rate 20 l/min (ANR)

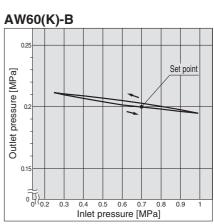






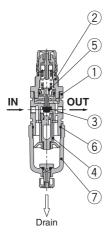






Construction

AW10-A



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



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.

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

Drain

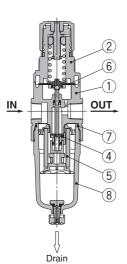
IN.

2

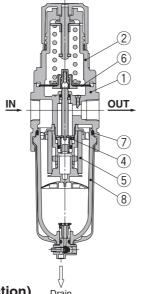
OUT

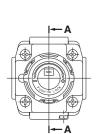
(4) (3)

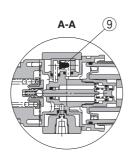
(8)











Component Parts

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

Replacement Parts

No.	Description	Material	Part no.					
NO.	Besonption	iviateriai	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 AW60P		AW60P-090AS	
5	Filter element	Non-woven fabric	AF20P-060S	AF30P-060S	AF40P-060S AW60F		AW60P-060S	
6	Diaphragm assembly	Weatherable NBR	AR20P-150AS	AR30P-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					

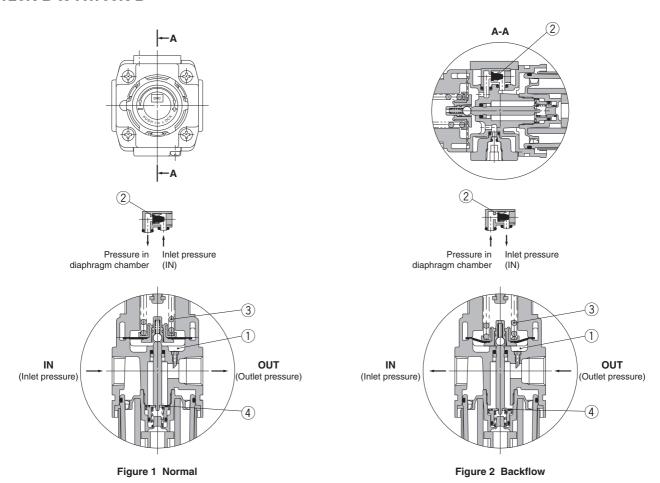
^{*1} Bowl assembly includes the bowl O-ring.

 ^{*1} Bowl assembly includes the powr 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



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).



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

Dimensions

AW10-A

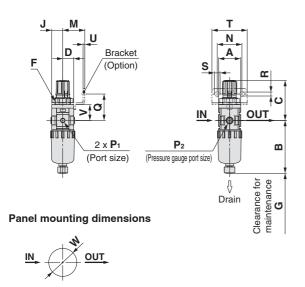
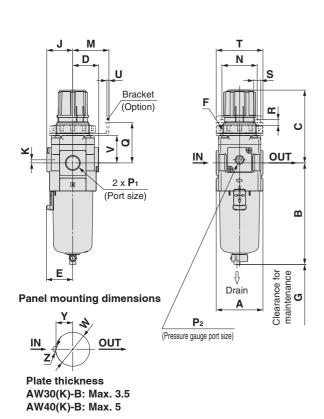


Plate thickness AW10-A: Max. 3.5

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



AW20(K)-B

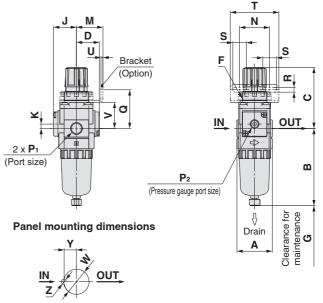
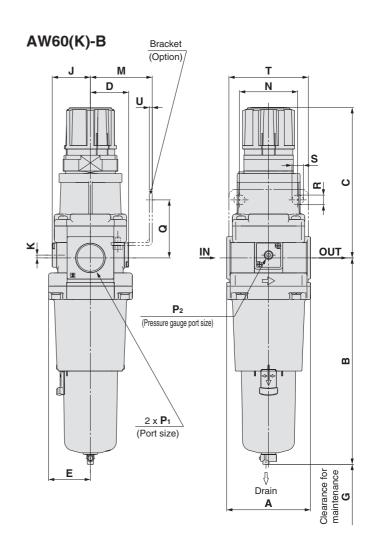
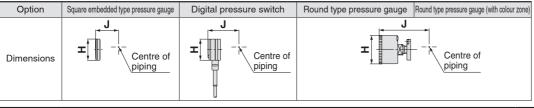


Plate thickness AW20(K)-B: Max. 3.5



A

Filter Regulator AW10-A Series Filter Regulator AW20-B to AW60-B Series Filter Regulator with Backflow Function AW20K-B to AW60K-B Series



Applicable model	, , ,		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	M5 x 0.8	a	Width across 1/8 flats 14	Width across flats 14	N.O.: Black N.C.: Grey Thread type/Rc, G: Ø 10 One-touch fitting Thread type/NPT: Ø 3/8" One-touch fitting

Applicable model												
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	<u> </u>	Width across flats 17	a a	Width across flats 17	Width across flats 17	Barb fitting applicable tubing: T0604						

														Ор	otional sp	ecificatio	ns		
Model				Sta	ndard s _l	pecific	ations					Square embedded type pressure gauge		Digital pressure switch		Round type pressure gauge		Round type pressure gauge (with color zone)	
	P ₁	P ₂	Α	В	C*1	D	Е	F	G	J	K	Н	J	Н	J	Н	J	Н	J
AW10-A	M5 x 0.8	1/16	25	59.9	47.4	12.5	_	M18 x 1	25	12.5	_	_	_	_	_	Ø 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	Ø 37.5	62.5	Ø 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	Ø 37.5	65.9	Ø 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	Ø 42.5	74.8	Ø 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	Ø 42.5	74.8	Ø 42.5	74.8
AW60(K)-B	3/4, 1	1/8	95	234.1	175.5	43.3	47.5	_	30	43.3	3.2	□28	44.3	□27.8	61.3	Ø 42.5	80.8	Ø 42.5	80.8

					Opt	ional s	pecific	ations					Semi-standard specifications					
Model			Brad	cket m	ount				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	Т	U	٧	W	Υ	Z	В	В	В	В	В	В	В
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.

AW+AL

AW30-B to AW60-B Filter Regulator **Made to Order**



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

1 Special Temperature Environment

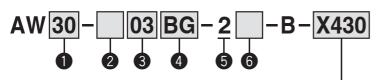
Special materials are used in the manufacturing of seals and resin parts to allow them to withstand various temperature conditions in cold or tropical (hot) climates.

Specifications

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

Applicable Model

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



For high/low temperature

	Low temperature					
X440	High temperature					

	l.
	ı.
	ı



AW30-03-2-B-X440

- 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-B-X430

\	_					0	
			Symbol	Description		Body size	
					30	40	60
			_	Rc	•	•	•
	Pipe	thread type	N	NPT	•	•	•
ı		• •	F	G	•	•	•
			+	·			
			02	1/4	•	•	_
			03	3/8	•	•	_
		Port size	04	1/2	_	•	_
			06	3/4	_	•	•
			10	1	_	_	•
			+	<u> </u>		•	
			_	Without mounting option	•	•	•
-	а	Mounting	B *2	With bracket	•	•	•
Option*1			Н	With set nut (for panel mount)	•	•	_
	I —		+				
	b	Pressure gauge	_	Without pressure gauge	•	•	•
		Fressure gauge	G *3	Round type pressure gauge (without limit indicator)	•	•	•
			+				
		Bowl *4	2	Metal bowl	•	•	•
			+				
	C	Set pressure		0.05 to 0.85 MPa setting	•	•	•
		Set pressure	1 *5	0.02 to 0.2 MPa setting	•	•	•
			+				
	d	Drain port	_	With drain cock	•	•	•
Ó	الـــّـــــــــــــــــــــــــــــــــ	Diam port	J*6	Drain guide 1/4	•	•	•
Semi-standard	l		+				
tan	ll e	Exhaust mechanism	_	Relieving type	•	•	•
-5	L	Exhaust moonamon	N	Non-relieving type	•	•	•
er	I —		+				
(1)	ll f	Flow direction	_	Flow direction: Left to right	•	•	•
	النا	c allocation	R	Flow direction: Right to left	•	•	•
	I —		+	<u> </u>			
	g	Pressure unit		Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	•
	9		Z * ⁷	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○*8	○*8	○*8

- *2 Assembly of a bracket and set nuts (AW30-B to AW40-B)
- Including 2 mounting screws for the AW60-B *3 Mounting thread for pressure gauge: 1/8, Pressure gauge type: G43
- *4 Only metal bowl 2 is available.
- *5 The only difference from the standard specifications is the spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.4 MPa pressure gauge will be fitted.
- Without a valve function
- *7 For pipe thread type: NPT
- *8 O: For pipe thread type: NPT only



AW20-B to AW60-B Filter Regulator **Made to Order**





2 High Pressure

Strong materials are used in the manufacturing of filter regulators intended for high pressure operation. Also, construction modification allows a wider set pressure range.

Specifications

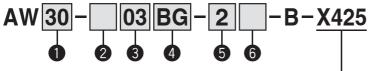
Made-to-order part no.	-X425
Proof pressure [MPa]	3.0
Maximum operating pressure [MPa]	2.0
Set pressure range [MPa]	0.1 to 1.7
Ambient and fluid temperature [°C]	-5 to 60 °C (with no freezing)

Applicable Model

Model	AW20-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



AW30-03-2-B-X425



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) AW30-03RG-2N-R-X425

		_					1		
			_	Symbol	Description		Body	size	
						20	30	40	60
				_	Rc	•	•	•	•
2		Pipe	thread type	N	NPT	•	•	•	•
_			,,	F	G	•	•	•	•
				+					
				01	1/8	•	_	_	_
				02	1/4	•	•	•	_
0			Port size	03	3/8	_	•	•	_
3		1	Port size	04	1/2	_	_	•	_
				06	3/4	_	_	•	•
				10	1	_	_	_	•
				+			•		
				_	Without mounting option	•	•	•	•
	-	а	Mounting	B *2	With bracket	•	•	•	•
4	ž			Н	With set nut (for panel mount)	•	•	•	_
4	Option *1	+							
	0	b Pressu	Pressure gauge	_	Without pressure gauge	•	•	•	•
		D	i lessule gauge	G *3	Round type pressure gauge (with limit indicator)	•	•	•	•
				+					
6			Bowl *4	2	Metal bowl	•	•	•	•
V			DOWI	8	Metal bowl with level gauge	_	•	•	•
				+					
		С	Exhaust mechanism	I	Relieving type	•	•	•	•
		C	Extraust medianism	N	Non-relieving type	•	•	•	•
				+					
	p			-	With drain cock	•	•	•	•
	dar	d	Drain port	J *5	Drain guide 1/8	•	_	_	_
6	tan			,	Drain guide 1/4	_	•	•	•
U	Semi-standard			+					
	en	е	Flow direction	_	Flow direction: Left to right	•	•	•	•
	(C)	T low direction		R	Flow direction: Right to left	•	•	•	•
		_			<u> </u>				
		f	Pressure unit		Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•	•	•
		. I Toodaro ariit		Z *6	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○*7	○*7	○*7	○*7

- *1 Options B, G, H are not assembled and supplied loose at the time of shipment. *2 Assembly of a bracket and set nuts (AW20-B to AW40-B)
- Including 2 mounting screws for the AW60-B
- *3 Mounting thread for pressure gauge: 1/8, Pressure gauge type: G46-20-□ *4 Only metal bowl 2 and 8 are available.
- *5 Without a valve function
- *6 For pipe thread type: NPT. *7 O: For pipe thread type: NPT only



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AW10 Filter Regulator **Made to Order**

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

Refer to page 109 and after for size 20 or more.

3 0.4 MPa Setting

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

Specifications

Made-to-order part no.	-X406
Proof pressure [MPa]	1.5
Maximum operating pressure [MPa]	1.0
Set pressure range [MPa] *1	0.05 to 0.4

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

4 Long Bowl

Drain capacity is greater than that of standard models.

Applicable Model/Drain Capacity

Model	AW10
Port size	M5
Drain capacity [cm³]	9
B dimension [mm] *1	81.6

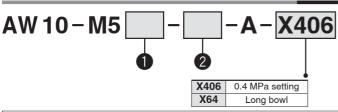
*1 For polycarbonate bowls. Please contact SMC for other bowl materials.



Applicable Model

Model	AW10
Port size	M5

How to Order



- 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

. Caution

• The AW10 comes with a backflow function as a standard feature. When using the AW10 as with backflow function, backflow may not occur with the set pressure of 0.15 MPa or less. Please set the inlet pressure to at least 0.05 MPa higher than the set pressure.

		W10- <u>M5BG</u> -NF	R-A-X406		0.4 MPa Setting	Long Bowi
	Symbol		Symbol	Description	Body size 10	Body size
			—	Without mounting option	•	•
	а	Mounting	B *3	With bracket	•	•
			Н	With set nut (for panel mount)	•	•
*2			+			
اقِ: (1	ь	Float type	_	Without auto drain	•	_
Option	b	auto drain	С	Float type auto drain (N.C.)	•	_
			+			
	С	Pressure gauge *4	_	Without pressure gauge	•	•
		i ressure gauge	G	Round type pressure gauge (without limit indicator)	•	•
			+			
				Polycarbonate bowl	•	•
	d	Bowl *5	2	Metal bowl	•	•
			6	Nylon bowl	•	•
2			+			
dal	е	Exhaust mechanism		Relieving type	•	•
Semi-standard			N	Non-relieving type	•	•
ع ا نِد	_		+			
Sen	f	Flow direction		Flow direction: Left to right	•	•
0)			K	Flow direction: Right to left	•	•
	_		+			_
	g	Pressure unit		Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	•	•
	9	- TITING WINC	Z	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	•	•
Option	ns B,	G, H are not as	sembled a	and supplied loose at the time of shipment.		

- *3 Assembly of a bracket and set nuts
- *4 A 1.0 MPa pressure gauge will be fitted.
- *5 Refer to chemical data on page 98 when selecting a bowl material.



AW20-B to AW60-B Filter Regulator AW20K-B to AW60K-B Filter Regulator with Backflow Function

Made to Order

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



3 0.4 MPa Setting

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

Specifications

Made-to-order part no.	-X406
Proof pressure [MPa]	1.5
Maximum operating pressure [MPa]	1.0
Set pressure range [MPa] *1	0.05 to 0.4

*1 Pressure can be set higher than the specification pressure in some cases, but use

Applicable Model

Model	AW20(K)-B	AW30(K)-B	AW40(K)-B	AW40(K)-06-B	AW60(K)-B
Port size	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	AW20(K)-B	AW30(K)-B	AW40(K)-B	AW40(K)-06-B	AW60(K)-B					
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1					
Drain capacity [cm³]	19	43								
B dimension [mm]*1	108.6	137.1	167.2	169.2	254.2					

*1 For polycarbonate bowls. Please contact SMC for other bowl materials.

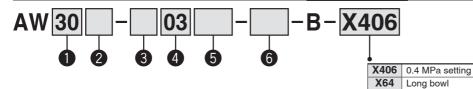
AW20-B

AW30 to 60-B





How to Order



- 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-B-X406

0.4 MPa Setting

Long Bowl

				=									
	Symbol Description) / size			Body) v sizo				
				·	20	30	40	60	20	30	40	60	
		With	n backflow	_	Without backflow function	•		•			•		
2			unction	K	With backflow function	•	•				•		
	+												
_				_	Rc		•	•	•	•	•	•	•
3		Pipe 1	thread type	N*2	NPT	•	•	•	•	•	•	•	•
			• •	F *3	G	•	•	•	•	•	•	•	•
				+									
				01	1/8		_	_			_	_	_
				02	1/4		•	•	_		•		_
		Р	ort size	03	3/8	_	•	•	_	_	•	•	_
U		T OIT SIZE		04	1/2	_	_	•	_	_	_		
				06	3/4	_	_	•	•	_	_	•	
			10	1		_	_	•	_	_		•	
		_		+									
					Without mounting option		•	•	•		•	•	•
		a	Mounting	B *5	With bracket	•	•	•	•		•	•	•
				Н	With set nut (for panel mount)		•	•		•	•	•	_
				+									
			Float type		Without auto drain		•	•	•	_			_
		b	auto drain	С	Float type auto drain (N.C.)	•	•	•	•	_	_		
	*			D	Float type auto drain (N.O.)	_	•	•	•	_			
6	Option	5		+	Mal 4								
	bt		D	 E	Without pressure gauge Square embedded type pressure gauge (with limit indicator)	•	•	•	•	•	•	•	
			Pressure *5	G	Round type pressure gauge (with limit indicator)	•	•	•		•	•	•	
			gauge	M	Round type pressure gauge (with ilmit indicator) Round type pressure gauge (with colour zone)	•					•		
		c		E1* ⁷	Output: NPN output, Electrical entry: Wiring bottom entry						•		
			Digital	E2*7	Output: NPN output, Electrical entry: Wiring bottom entry Output: NPN output, Electrical entry: Wiring top entry								
			pressure	E3*7	Output: NPN output, Electrical entry: Wiring top entry Output: PNP output, Electrical entry: Wiring bottom entry								
			switch	E4* ⁷	Output: PNP output, Electrical entry: Wiring bottom entry Output: PNP output, Electrical entry: Wiring top entry			•					
				E4***	Output. Fire output, Electrical entry. Wiring top entry				•				

- *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 O $3/8^{\circ}$ 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. (AW20(K)-B to AW40(K)-B). Including 2 mounting screws for the AW60(K)-B
- *6 A 0.7 MPa pressure gauge will be fitted for a 0.4 MPa setting (-X406).
 *7 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 electrical entry.



Filter Regulator AW20-B to AW60-B Series Filter Regulator with Backflow Function AW20K-B to AW60K-B Series

					0.4	н мРа	Settir	ıg		Long	Bowi	
			Symbol Description		Body size				Body size			
					20	30	40	60	20	30	40	60
	d	Set pressure	_	0.05 to 0.85 MPa setting		_	_	_	•	•	•	•
	l a	Set pressure	1*8	0.02 to 0.2 MPa setting	_	_	_	_	•	•	•	•
			+									
			_	Polycarbonate bowl		•	•		•	•	•	
			2	Metal bowl			•		•	•		
	l e	Bowl *9	6	Nylon bowl		•	•		•	•	•	•
	"	DOWI	8	Metal bowl with level gauge	_	•	•	•		_		_
			С	With bowl guard		_	-	_	•	_	-	_
			6C	With bowl guard (Nylon bowl)		_	_	_		_	_	_
3	t Drain port J* The property of the property		+									
4	<u> </u>	*10	_	With drain cock	•	•	•		•	•	•	•
6	g f	Drain port	J*11	Drain guide 1/8					•	_	_	
	2 -			Drain guide 1/4		•	•	•		•	•	•
			W*12	Drain cock with barb fitting: For Ø 6 x Ø 4 nylon tube		•	•			•	•	•
	"│											
	g	Exhaust		Relieving type		•	•	•	•	•	•	•
		mechanism	N	Non-relieving type		•	•	•	•	•	•	•
			+			_				_	_	
	h	Flow direction		Flow direction: Left to right		•	•	•	•	•	•	•
			R	Flow direction: Right to left	•	•	•		•	•	•	•
			+			_	_			_	_	
				Name plate, caution plate for bowl, and pressure gauge in SI units: MPa	0 #15	O #15	0 *15	O#15	O #15	O #15	O #15	● ○ #15
	ı	Pressure unit	Z*13	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	O*15	O*15	O*15	O*15	O*15	O*15	O*15	O*15
			ZA *14	Digital pressure switch: With unit selection function	△*16	△*16	△*16	△*16	△*16	△*16	△*16	△*16

- *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 0.4 MPa pressure gauge will be fitted.
- *9 Refer to chemical Data on page 98 when selecting a bowl material.
- *10 Float type auto drain: The combination of C and D is not possible. *11 Without a valve function
- *12 Metal bowl: The combination of 2 and 8 is not possible.
- *13 For pipe thread type: NPT. The digital pressure switch will be equipped with the unit selection function, setting to psi initially.
- *14 For options: E1, E2, E3, E4.
- *15 O: For pipe thread type: NPT only *16 △: Select with options: E1, E2, E3, E4.

AW20-B to AW60-B Filter Regulator AW20K-B to AW60K-B Filter Regulator with Backflow Function

Made to Order

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

5 Clean Series

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

10 - Standard model no.

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

Clean Series



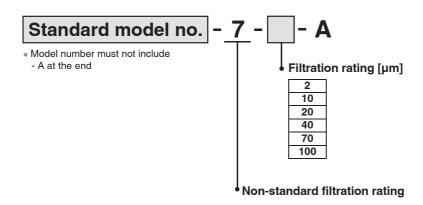
6 Copper, Fluorine and Silicone-free + Low Particle Generation

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

21 - Standard model no.

Copper, fluorine and silicone-free + Low particle generation

Non-standard filtration rating



AB

Option **Knob Cover**

Prevents careless knob operation.





Part no.	Applicable model
AR20P-580AS	AC20□-B, AR20(K)-B, AW20(K)-B
AR25P-580AS	AC25□-B, AR25(K)-B
AR30P-580AS	AC30□-B, AR30(K)-B, AW30(K)-B
AR40P-580AS	AC40□(-06)-B, AR40(K)(-06)-B, AW40(K)(-06)-B

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of "Caution," "Warning" or "Danger." They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC) 1), and other safety regulations.

Caution indicates a hazard with a low level of risk **∧** Caution: which, if not avoided, could result in minor or moderate injury.

Warning indicates a hazard with a medium level of risk Marning: which, if not avoided, could result in death or serious

Danger indicates a hazard with a high level of risk ♠ Danger: which, if not avoided, will result in death or serious

1) ISO 4414: Pneumatic fluid power – General rules relating to systems. ISO 4413: Hydraulic fluid power - General rules relating to systems. IEC 60204-1: Safety of machinery – Electrical equipment of machines. (Part 1: General requirements)

ISO 10218-1: Manipulating industrial robots - Safety.

Warning

1. The compatibility of the product is the responsibility of the person who designs the equipment or decides its specifications.

Since the product specified here is used under various operating conditions, its compatibility with specific equipment must be decided by the person who designs the equipment or decides its specifications based on necessary analysis and test results. The expected performance and safety assurance of the equipment will be the responsibility of the person who has determined its compatibility with the product. This person should also continuously review all specifications of the product referring to its latest catalogue information, with a view to giving due consideration to any possibility of equipment failure when configuring the equipment.

2. Only personnel with appropriate training should operate machinery

The product specified here may become unsafe if handled incorrectly. The assembly, operation and maintenance of machines or equipment including our products must be performed by an operator who is appropriately trained and experienced.

- 3. Do not service or attempt to remove product and machinery/ equipment until safety is confirmed.
 - 1. The inspection and maintenance of machinery/equipment should only be performed after measures to prevent falling or runaway of the driven objects have been confirmed.
 - 2. When the product is to be removed, confirm that the safety measures as mentioned above are implemented and the power from any appropriate source is cut, and read and understand the specific product precautions of all relevant products carefully.
 - 3. Before machinery/equipment is restarted, take measures to prevent unexpected operation and malfunction.
- 4. Contact SMC beforehand and take special consideration of safety measures if the product is to be used in any of the following conditions.
 - 1. Conditions and environments outside of the given specifications, or use outdoors or in a place exposed to direct sunlight.
 - 2. Installation on equipment in conjunction with atomic energy, railways, air navigation, space, shipping, vehicles, military, medical treatment, combustion and recreation, or equipment in contact with food and beverages, emergency stop circuits, clutch and brake circuits in press applications, safety equipment or other applications unsuitable for the standard specifications described in the product catalogue.
 - 3. An application which could have negative effects on people, property, or animals requiring special safety analysis.
 - 4. Use in an interlock circuit, which requires the provision of double interlock for possible failure by using a mechanical protective function, and periodical checks to confirm proper operation.

1. The product is provided for use in manufacturing industries.

The product herein described is basically provided for peaceful use in manufacturing industries.

If considering using the product in other industries, consult SMC beforehand and exchange specifications or a contract if necessary. If anything is unclear, contact your nearest sales branch.

Limited warranty and Disclaimer/Compliance Requirements

The product used is subject to the following "Limited warranty and Disclaimer" and "Compliance Requirements". Read and accept them before using the product.

Limited warranty and Disclaimer

- 1. The warranty period of the product is 1 year in service or 1.5 years after the product is delivered, whichever is first. 2) Also, the product may have specified durability, running distance or replacement parts. Please consult your nearest sales branch.
- 2. For any failure or damage reported within the warranty period which is clearly our responsibility, a replacement product or necessary parts will be provided. This limited warranty applies only to our product independently, and not to any other damage incurred due to the failure of the product.
- 3. Prior to using SMC products, please read and understand the warranty terms and disclaimers noted in the specified catalogue for the particular products.
- 2) Vacuum pads are excluded from this 1 year warranty. A vacuum pad is a consumable part, so it is warranted for a year after it is delivered. Also, even within the warranty period, the wear of a product due to the use of the vacuum pad or failure due to the deterioration of rubber material are not covered by the limited

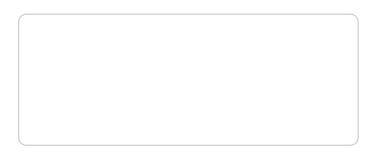
Compliance Requirements

- 1. The use of SMC products with production equipment for the manufacture of weapons of mass destruction (WMD) or any other weapon is strictly prohibited.
- 2. The exports of SMC products or technology from one country to another are governed by the relevant security laws and regulations of the countries involved in the transaction. Prior to the shipment of a SMC product to another country, assure that all local rules governing that export are known and followed.

SMC products are not intended for use as instruments for legal metrology.

Measurement instruments that SMC manufactures or sells have not been qualified by type approval tests relevant to the metrology (measurement) laws of each country.

Therefore, SMC products cannot be used for business or certification ordained by the metrology (measurement) laws of each country.



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