

Modular F.R.L. Unit Series AC

SMC's FRL units will be progressively renewed. Please check if the model you require is already available in the renewed models (pages 1006 to 1011)



Features

- Ready assembled air preparation sets.
- Choice of filter, regulator and lubricator options.
- Sizes from M5 to 1" ports.
- Autodrain and gauges can be specified.
- Saves procurement and assembly times.

How to Order

AC 30 [] F 03 DE

F.R.L. unit

Body size

10	20	25	30	40	50	55	60
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Model combination

Symbol	Combination				
	Air filter	Regulator	Lubricator	Filter regulator	Mist separator
—	(1)	(2)	(3)	—	—
A	—	—	(2)	(1)	—
B	(1)	(2)	—	—	—
C	(1)	(3)	—	—	(2)
D	—	—	—	(1)	(2)

Note 1) The number inside () indicates the combination order counted from the inlet side.

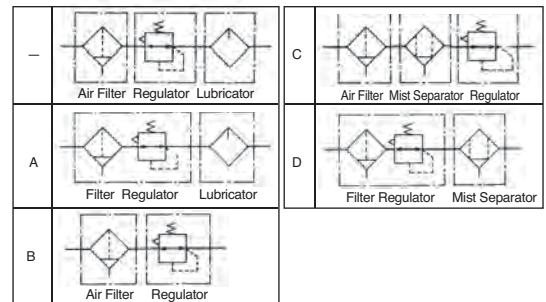
Thread type

—	Metric system thread (M5) (AC10 only)
F	G

Port size

Symbol	Port size	Body size							
		10	20	25	30	40	50	55	60
M5	M5	●	—	—	—	—	—	—	—
01	1/8	—	●	—	—	—	—	—	—
02	1/4	—	●	●	●	●	—	—	—
03	3/8	—	—	●	●	●	—	—	—
04	1/2	—	—	—	—	●	—	—	—
06	3/4	—	—	—	—	●	●	—	—
10	1	—	—	—	—	—	●	●	●

Symbols



Options

Options	Body size							
	10	20	25	30	40	50	55	60
—	Without auto drain / Without pressure gauge	●	●	●	●	●	●	●
C	Float type auto drain (N.C.)	●	●	●	●	●	●	●
D	Float type auto drain (N.O.)	—	—	●	●	●	●	●
E	Square embedded type pressure gauge (with limit indicator)	—	●	●	●	●	●	●
G	Round type pressure gauge (without limit indicator)	●	—	—	—	—	—	—
	Round type pressure gauge (with limit indicator)	—	●	●	●	●	●	●
M	Round type pressure gauge (with colour zone)	—	●	●	●	●	●	●
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	—	●	●	●	●	●	●

* When more than one specification is required, indicate in ascending alphanumeric order

Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 1072

Series IS10 - Pressure Switches - page 1093

Series E210/310/410 - Modular Adapter - page 1074

Series AKM - Check Valve - page 1091

(Related Products)

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

Product Recommendation



Stocked items for fast delivery

Model	Options (*)	Model	Options (*)	Model	Options (*)	Model	Options (*)
AC10-M5 *	—, G	AC10A-M5 *	—, C, G	AC10B-M5 *	—	AC30C-F03 *	DE
AC20-F01 *	—, C, CE, E, G	AC20A-F01 *	—, C, CE, E, G	AC20B-F01 *	—, CE	AC40C-F03 *	—
AC20-F02 *	—, C, CE, E, G	AC20A-F02 *	—, C, CE, CG, E, G	AC25B-F02 *	—, C, D, E, G	AC40C-F04 *	—, D
AC30-F02 *	—, D, DE, E	AC30A-F02 *	—, C, CE, D, DE, E	AC30B-F03 *	—, D, DG, G	AC20D-F01 *	E
AC30-F03 *	—, CE, D, DE, DG, E, E3, G	AC30A-F03 *	—, C, CE, D, DE, DG, E, G	AC40B-F04 *	—, D, DG, E, G	AC20D-F02 *	—
AC40-F03 *	—, DE	AC40A-F02 *	—, D, E, G	AC40B-F06 *	DE, DG, G	AC30D-F03 *	—
AC40-F04 *	—, D, DE, DG, E, G	AC40A-F03 *	—, D, DE, E	AC50B-F06 *	—, D	AC40D-F03 *	D
AC40-F06 *	—, D, DE, DG, E, G	AC40A-F04 *	—, C, CG, D, DE, DG, E, G	AC50B-F10 *	—, D	AC40D-F04 *	—, D, DE
AC50-F06 *	—, C, D, DE, DG, E	AC40A-F06 *	—, D, DE, DG, E, G	AC60B-F10 *	—, DG, E, G	AC40D-F06 *	—
AC50-F10 *	—, D, DE, DG, E	AC50A-F06 *	—	AC25C-F02	CE		
AC60-F10 *	—, D, DE, DG, E, G	AC60A-F10 *	—, E	AC30C-F02	—		



For more product options and details see our specific catalogues or on-line information.

F.R.L. Unit (Air Filter + Regulator + Lubricator) Series AC10 to 60

Standard Specifications

Model	AC10	AC20	AC25	AC30	AC40	AC40-06	AC50	AC55	AC60	
Component	Air filter	AF10	AF20	AF30	AF30	AF40	AF40-06	AF50	AF60	AF60
	Regulator	AR10	AR20	AR25	AR30	AR40	AR40-06	AR50	AR50	AR60
	Lubricator	AL10	AL20	AL30	AL30	AL40	AL40-06	AL50	AL60	AL60
Port size	M5	1/8 1/4	1/4 3/8	1/4 3/8	1/4 3/8	1/4 3/8 1/2	3/4	3/4 1	1	1
Pressure gauge port size ^(Note 1)	1/16	1/8	1/8	1/8	1/8	1/4	1/4	1/4	1/4	1/4
Fluid	Air									
Proof pressure	1.5 MPa									
Max. operating pressure	1.0 MPa									
Set pressure range	0.05 to 0.7 MPa		0.05 to 0.85 MPa							
Rated Flow (Port size) ^(Note 2)	100 (M5)	800 (1/4)	1000 (3/8)	2500 (3/8)	5000 (1/2)	6000 (3/4)	10000 (1)	10000 (1)	10000 (1)	10000 (1)
Relief pressure	Set pressure + 0.05 MPa (at relief flow rate of 0.1 l/min (ANR)) ^(Note 3)									
Ambient and fluid temperature ^(Note 4)	-5 to 60°C (With no freezing)									
Nominal filtration rating	5 μm									
Recommended lubricant	Class 1 turbine oil (ISO VG32)									
Bowl material	Polycarbonate									
Bowl guard	—	Option	Standard							
Regulator construction	Relieving type									
Weight [kg]	0.27	0.73	0.91	1.00	1.74	1.95	4.17	4.25	4.34	

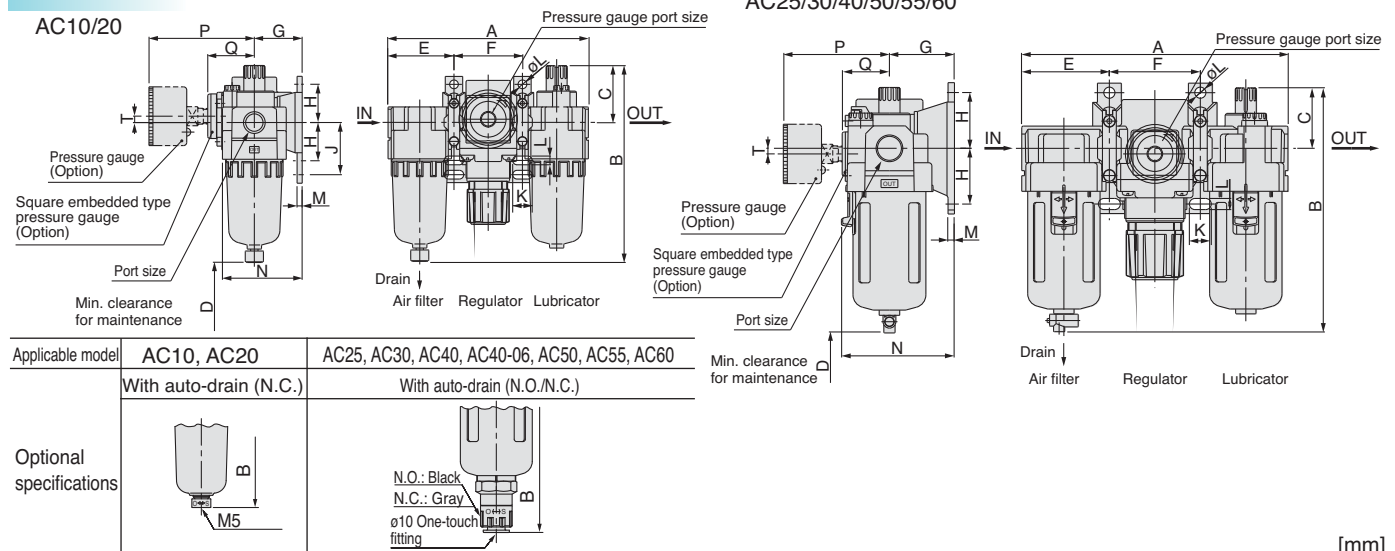
Note 1) Pressure gauge connection threads are not available for F.R.L. unit with a square embedded type pressure gauge or with a digital pressure switch (AC20 to AC60).

Note 2) Conditions; inlet pressure 0.7MPa, set pressure 0.5MPa, 0.1MPa outlet pressure drop.

Note 3) Not applicable to AC10.

Note 4) -5 to 50°C for the products with the digital pressure switch.

Dimensions



Model	Port size	Standard specifications															Accessory specifications			
		A	B	C	D	Bracket mounting size										With pressure gauge		With auto-drain		
						E	F	G	H	J	K	L	øL	M	N	P	Q		T	B
AC10	M5	87	85	26	35	28	31	25	20	27	7	4.5	4.5	2.8	40	26	—	0	104	
AC20	1/8, 1/4	126	123	36	60	41.5	43	30	24	33	12	5.5	5.5	3.2	50	65	29.5	2 ^(Note 1)	141	
AC25	1/4, 3/8	167	153	38	80	55	57	41	35	—	14	7	7	4	71	64	28.5	0	194	
AC30	1/4, 3/8	167	153	38	80	55	57	41	35	—	14	7	7	4	71	66	30.5	3.5	194	
AC40	1/4, 3/8, 1/2	220	187	40	110	72.5	75	50	40	—	18	9	9	4	88	74	35	3.5	226	
AC40-06	3/4	235	187	38	110	77.5	80	50	40	—	18	9	9	4.6	88	74	35	3	226	
AC50	3/4, 1	282	264	43	110	93	96	70	50	—	20	11	11	6.4	115	84	44.5	3.3	303	
AC55	1	292	279	45	110	98	96	70	50	—	20	11	11	6.4	117.5	84	44.5	3.3	318	
AC60	1	297	280	46	110	98	101	70	50	—	20	11	11	6.4	117.5	84	44.5	3.3	318	

Note 1) For the AC20 only, the position of the pressure gauge is above the centre of the piping.

Preparation Air

F.R.L. Unit (Filter Regulator + Lubricator) Series AC10A to 60A

Standard Specifications

Model		AC10A	AC20A	AC30A	AC40A	AC40A-06	AC50A	AC60A
Component	Filter regulator	AW10	AW20	AW30	AW40	AW40-06	AW60	AW60
	Lubricator	AL10	AL20	AL30	AL40	AL40-06	AL50	AL60
Port size		M5	1/8 1/4	1/4 3/8	1/4 3/8 1/2	3/4	3/4, 1	1
Pressure gauge port size ^{Note 1)}		1/16	1/8	1/8	1/4	1/4	1/4	1/4
Fluid		Air						
Proof pressure		1.5 MPa						
Maximum operating pressure		1.0 MPa						
Set pressure range		0.05 to 0.7 MPa		0.05 to 0.85 MPa				
Rated Flow (Port Size) ^{Note 2)}		100(M5)	500(1/4)	1500(3/8)	2000(1/2)	3000(3/4)	10000(1)	10000(1)
Relief pressure		Set pressure + 0.05 MPa (at relief flow rate of 0.1 l/min (ANR) ^{Note 3)}						
Ambient and fluid temperature ^{Note 4)}		-5 to 60°C (With no freezing)						
Nominal filtration rating		5 μm						
Recommended lubricant		Class 1 turbine oil (ISO VG32)						
Bowl material		Polycarbonate						
Bowl guard		—	Option	Standard				
Filter regulator construction		Relieving type						
Weight [kg]		0.20	0.59	0.75	1.41	1.46	3.33	3.40

Note 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 (AC20A to AC60A).

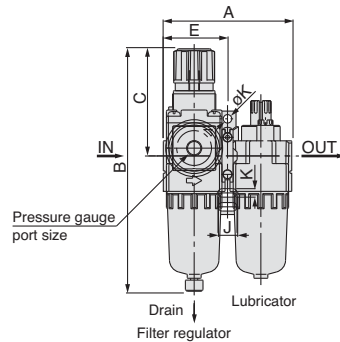
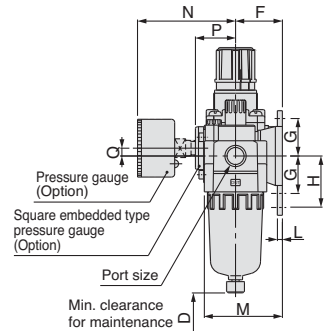
Note 2) Conditions; inlet pressure 0.7Mpa, set pressure 0.5Mpa, 0.1Mpa outlet pressure drop.

Note 3) Not applicable to AC10A.

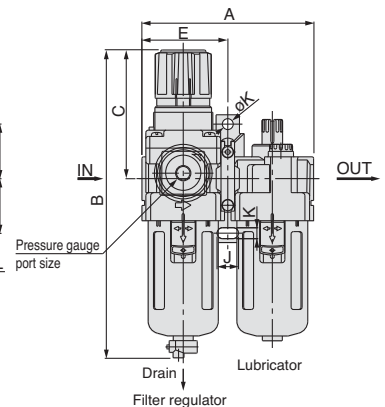
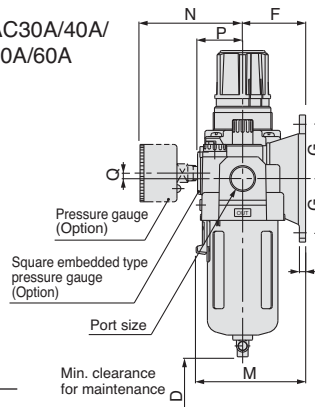
Note 4) -5 to 50°C for the products with the digital pressure switch.

Dimensions

AC10A/20A



AC30A/40A/ 50A/60A



Applicable model	AC10A, AC20A	AC30A, AC40A, AC40A-06, AC50A, AC60A
	With auto-drain (N.C.)	With auto-drain (N.O./N.C.)
Optional specifications		

[mm]

Model	Port size	Standard specifications												Accessory specifications				
		A	B	C	D	Bracket mounting size								With pressure gauge		With auto-drain		
						E	F	G	H	J	K	øK	L	M	N		P	Q
AC10A	M5	56	108	48	35	28	25	20	27	7	4.5	4.5	2.8	40	26	—	0	125
AC20A	1/8, 1/4	83	160	73	60	41.5	30	24	33	12	5.5	5.5	3.2	50	63	27	5	177
AC30A	1/4, 3/8	110	201	86	80	55	41	35	—	14	7	7	4	71	66	30.5	3.5	242
AC40A	1/4, 3/8, 1/2	145	239	92	110	72.5	50	40	—	18	9	9	4	88	76	38.5	1.5	278
AC40A-06	3/4	155	242	93	110	77.5	50	40	—	18	9	9	4.6	88	76	38.5	1.2	282
AC50A	3/4, 1	191	409	175	110	98	70	50	—	20	11	11	6.4	117.5	84	44.5	3.2	448
AC60A	1	196	409	175	110	98	70	50	—	20	11	11	6.4	117.5	84	44.5	3.2	448



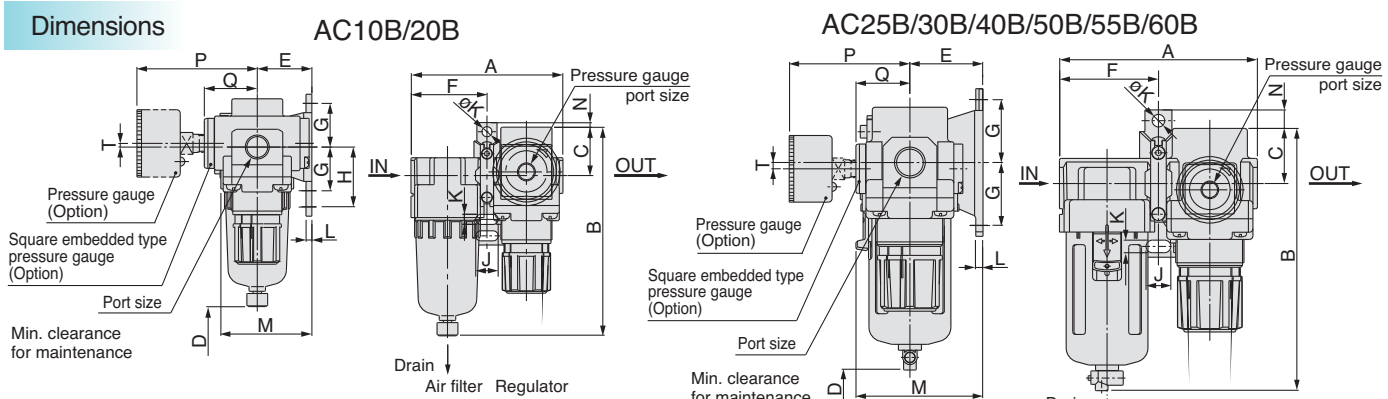
For more product options and details see our specific catalogues or on-line information.

F.R.L. Unit (Air Filter + Regulator) Series AC10B to 60B

Standard Specifications

Model	AC10B	AC20B	AC25B	AC30B	AC40B	AC40B-06	AC50B	AC55B	AC60B	
Component	Air filter	AF10	AF20	AF30	AF30	AF40	AF40-06	AF50	AF60	AF60
	Regulator	AR10	AR20	AR25	AR30	AR40	AR40-06	AR50	AR50	AR60
Port size	M5	1/8 1/4	1/4 3/8	1/4 3/8	1/4 3/8	1/4 3/8 1/2	3/4	3/4 1	1	1
Pressure gauge port size ^{Note 1)}	1/16	1/8	1/8	1/8	1/8	1/4	1/4	1/4	1/4	1/4
Fluid	Air									
Proof pressure	1.5 MPa									
Max. operating pressure	1.0 MPa									
Set pressure range	0.05 to 0.7 MPa		0.05 to 0.85 MPa							
Rated Flow (Port size) ^{Note 2)}	100 (M5)	800 (1/4)	1000 (3/8)	2500 (3/8)	5000 (1/2)	6000 (3/4)	10000 (1)	10000 (1)	10000 (1)	
Relief pressure	Set pressure + 0.05 MPa (at relief flow rate of 0.1 l/min (ANR)) ^{Note 3)}									
Ambient and fluid temperature ^{Note 4)}	-5 to 60°C (With no freezing)									
Nominal filtration rating	5 μm									
Bowl material	Polycarbonate									
Bowl guard	—	Option	Standard							
Regulator construction	Relieving type									
Weight [kg]	0.16	0.51	0.55	0.63	1.12	1.16	2.44	2.45	2.54	

Note 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 (AC20B to AC60B).
 Note 2) Conditions; inlet pressure 0.7MPa, set pressure 0.5MPa, 0.1MPa outlet pressure drop.
 Note 3) Not applicable to AC10B.
 Note 4) -5 to 50°C for the products with the digital pressure switch.



Applicable model	AC10B, AC20B	AC25B, AC30B, AC40B, AC40B-06, AC50B, AC55B, AC60B
	With auto-drain (N.C.)	With auto-drain (N.O./N.C.)
Optional specifications		

Model	Port size	Standard specifications														Accessory specifications			
		A	B	C	D	Bracket mounting size										With pressure gauge		With auto-drain	
						E	F	G	H	J	K	ØK	L	M	N	P	Q	T	B
AC10B	M5	56	71	11	25	25	28	20	27	7	4.5	4.5	2.8	40	13.5	26	—	0	89
AC20B	1/8, 1/4	83	114	26.5	40	30	41.5	24	33	12	5.5	5.5	3.2	50	2.5	65	29.5	2 ^{Note)}	132
AC25B	1/4, 3/8	110	143	28	50	41	55	35	—	14	7	7	4	71	13	64	28.5	0	184
AC30B	1/4, 3/8	110	146	31	50	41	55	35	—	14	7	7	4	71	10	66	30.5	3.5	187
AC40B	1/4, 3/8, 1/2	145	183	36	75	50	72.5	40	—	18	9	9	4	88	12	74	35	3.5	222
AC40B-06	3/4	155	185	36	75	50	77.5	40	—	18	9	9	4.6	88	12	74	35	3	224
AC50B	3/4, 1	186	264	43	20	70	93	50	—	20	11	11	6.4	115	16	84	44.5	3.3	303
AC55B	1	191	277	43	20	70	98	50	—	20	11	11	6.4	117.5	16	84	44.5	3.3	316
AC60B	1	196	280	46	20	70	98	50	—	20	11	11	6.4	117.5	13	84	44.5	3.3	319

Note) For the AC20B only, the position of the pressure gauge is above the centre of the piping.

Preparation Air

F.R.L. Unit (Air Filter + Mist Separator + Regulator) Series AC20C to 40C

Standard Specifications

Model		AC20C	AC25C	AC30C	AC40C	AC40C-06
Component	Air filter	AF20	AF30	AF30	AF40	AF40-06
	Mist separator	AFM20	AFM30	AFM30	AFM40	AFM40-06
	Regulator	AR20	AR25	AR30	AR40	AR40-06
Port size		1/8 1/4	1/4 3/8	1/4 3/8	1/4 3/8 1/2	3/4
Pressure gauge port size <small>Note 1)</small>		1/8	1/8	1/8	1/4	1/4
Fluid		Air				
Proof pressure		1.5 MPa				
Maximum operating pressure		1.0 MPa				
Minimum operating pressure		0.05 MPa				
Set pressure range		0.05 to 0.85 MPa				
Rated flow [l/min (ANR)] <small>Note 2)</small>		200	450	450	1100	1100
Relief pressure		Set pressure + 0.05 MPa (at relief flow rate of 0.1 l/min (ANR))				
Ambient and fluid temperature <small>Note 3)</small>		-5 to 60°C (With no freezing)				
Nominal filtration rating		AF: 5 μm ; AFM: 0.3 μm (99.9% filtered particle size)				
Outlet side oil mist concentration		Maximum 1.0 mg/m^3 (ANR) (approx. 0.8 ppm) <small>Note 4) Note 5)</small>				
Bowl material		Polycarbonate				
Bowl guard		Option	Standard			
Filter regulator construction		Relieving type				
Weight [kg]		0.74	0.88	0.95	1.76	1.83

Note 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 (AC20C to AC60C).

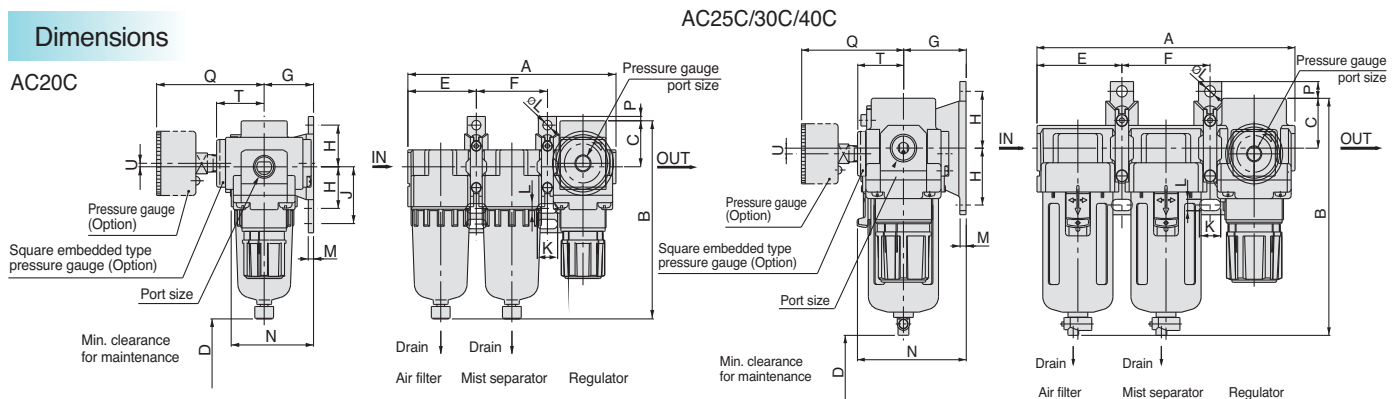
Note 2) Conditions: Mist separator inlet pressure: 0.7 MPa; The rated flow varies depending on the inlet pressure. Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.

Note 3) -5 to 50°C for the products with the digital pressure switch.

Note 4) When the compressor oil mist discharge concentration is 30 mg/m^3 (ANR).

Note 5) Bowl O-ring and other O-rings are slightly lubricated.

Dimensions



Applicable model	AC20C	AC25C, AC30C, AC40C, AC40C-06
	With auto-drain (N.C.)	With auto-drain (N.O./N.C.)
Optional specifications		

[mm]

Model	Port size	Standard specifications														Accessory specifications				
		A	B	C	D	Bracket mounting size										With pressure gauge				
																Q	T	U	B	
AC20C	1/8, 1/4	126	114	26.5	45	41.5	43	30	24	33	12	5.5	ϕL	M	N	P	65	29.5	2 <small>Note)</small>	132
AC25C	1/4, 3/8	167	143	28	50	55	57	41	35	—	14	7	7	4	71	13	64	28.5	0	184
AC30C	1/4, 3/8	167	146	31	50	55	57	41	35	—	14	7	7	4	71	10	66	30.5	3.5	187
AC40C	1/4, 3/8, 1/2	220	183	36	75	72.5	75	50	40	—	18	9	9	4	88	12	74	35	3.5	222
AC40C-06	3/4	235	185	36	75	77.5	80	50	40	—	18	9	9	4.6	88	12	74	35	3	224

Note) For the AC20C only, the position of the pressure gauge is above the centre of the piping.



For more product options and details see our specific catalogues or on-line information.

F.R.L. Unit (Filter Regulator + Mist Separator) Series AC20D to 40D

Standard Specifications

Model		AC20D	AC30D	AC40D	AC40D-06
Component	Filter regulator	AW20	AW30	AW40	AW40-06
	Mist separator	AFM20	AFM30	AFM40	AFM40-06
Port size		1/8 1/4	1/4 3/8	1/4 3/8 1/2	3/4
Pressure gauge port size <small>Note 1)</small>		1/8	1/8	1/4	1/4
Fluid		Air			
Proof pressure		1.5 MPa			
Maximum operating pressure		1.0 MPa			
Minimum operating pressure		0.05 MPa			
Set pressure range		0.05 to 0.85 MPa			
Rated flow [l/min (ANR)] <small>Note 2)</small>		150	330	800	800
Relief pressure		Set pressure + 0.05 MPa (at relief flow rate of 0.1 l/min (ANR))			
Ambient and fluid temperature <small>Note 3)</small>		-5 to 60°C (With no freezing)			
Nominal filtration rating		AW: 5 μm; AFM: 0.3 μm (99.9% filtered particle size)			
Outlet side oil mist concentration		Maximum 1.0 mg/m ³ (ANR) (approx. 0.8 ppm) <small>Note 4) Note 5)</small>			
Bowl material		Polycarbonate			
Bowl guard		Option	Standard		
Filter regulator construction		Relieving type			
Weight [kg]		0.57	0.74	1.38	1.43

Note 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 (AC20D to AC60D).

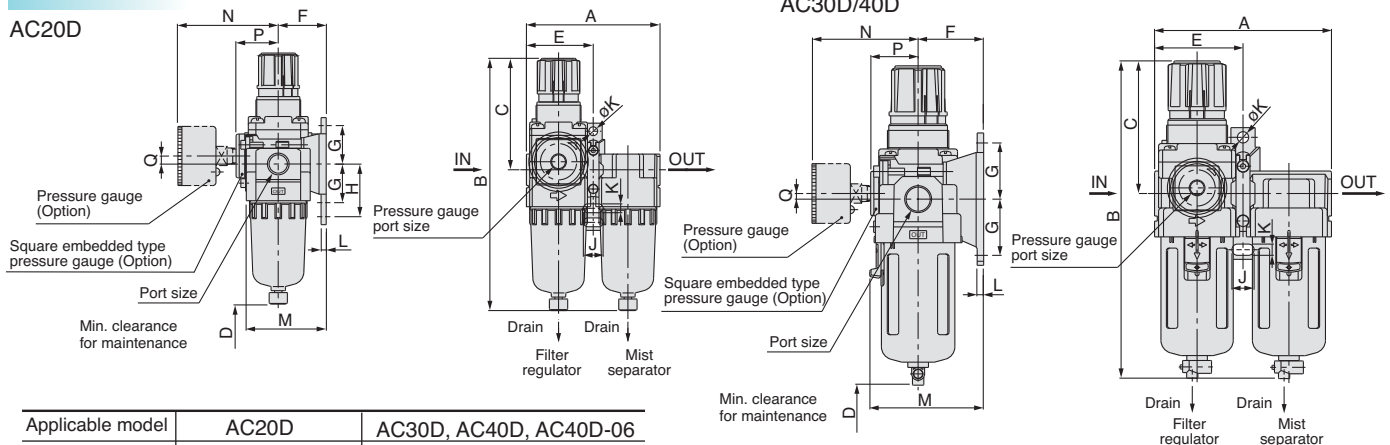
Note 2) Conditions: Mist separator inlet pressure: 0.7MPa; The rated flow varies depending on the inlet pressure. Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.

Note 3) -5 to 50°C for the products with the digital pressure switch.

Note 4) When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).

Note 5) Bowl O-ring and other O-rings are slightly lubricated.

Dimensions



Applicable model	AC20D	AC30D, AC40D, AC40D-06
	With auto-drain (N.C.)	With auto-drain (N.O./N.C.)
Optional specifications		

[mm]

Model	Port size	Standard specifications												Accessory specifications				
		A	B	C	D	Bracket mounting size								With pressure gauge				
						E	F	G	H	J	K	øK	L	M	N	P	Q	B
AC20D	1/8, 1/4	83	160	73	45	41.5	30	24	33	12	5.5	5.5	3.2	50	63	27	5	177
AC30D	1/4, 3/8	110	201	86	55	55	41	35	—	14	7	7	4	71	66	30.5	3.5	242
AC40D	1/4, 3/8, 1/2	145	239	92	80	72.5	50	40	—	18	9	9	4	88	76	38.5	1.5	278
AC40D-06	3/4	155	242	93	80	77.5	50	40	—	18	9	9	4.6	88	76	38.5	1.2	278

Air Filter Series AF10 to 60

SMC's FRL units will be progressively renewed.
Please check if the model you require is already
available in the renewed models (pages 1012 to 1013)



Features

- Replacement elements available.
- Integral water separator.
- Mounting bracket available.
- Port size M5 - 1".
- Autodrain available.
- Super efficient 5µm poly-element.

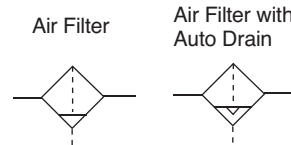
How to Order

AF 30 - F 03 BD

Air filter Body size Thread type Port size Accessories

Thread type		Body size					
Metric thread (M5)		10	20	30	40	50	60
F	G						
* Only body size 10							
Symbol	Port size	Body size					
M5	M5	●	—	—	—	—	—
01	1/8	—	●	—	—	—	—
02	1/4	—	●	●	●	—	—
03	3/8	—	—	●	●	—	—
04	1/2	—	—	—	●	—	—
06	3/4	—	—	—	●	●	—
10	1	—	—	—	—	●	●

Symbol



Accessories

		Body size					
		10	20	30	40	50	60
—	Without mounting option / Without auto drain	●	●	●	●	●	●
B (Note 1)	With bracket	—	●	●	●	●	●
C	Float type auto drain (N.C.)	●	●	●	●	●	●
D	Float type auto drain (N.O.)	—	—	●	●	●	●

Note 1) A bracket is not assembled and supplied loose at the time of shipment. Including 2 mounting screws

* When more than one specification is required, indicate in ascending alphanumeric order.

Product Recommendation



Stocked items for fast delivery

Model	Options (*)	Model	Options (*)
AF10-M5 *	-, C	AF40-F03 *	-, D
AF20-F01 *	-, B, C	AF40-F04 *	-, B, BD, C, D
AF20-F02 *	-, B, BC, C	AF40-F06 *	-, B, C, D
AF30-F02 *	-, B, C, D	AF50-F06 *	-, C, D
AF30-F03 *	-, B, BC, BD, C, D	AF50-F10 *	-, C, D
AF40-F02 *	-, B, D	AF60-F10 **	-, C, D

Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552

Series IS10 - Pressure Switches - page 1093

Series E210/310/410 - Modular Adapter - page 1074

Series AKM - Check Valve - page 1091

(Related Products)

Series AC - Air Preparation Modular Units - page 1076

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

Standard specifications

Model	AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
Fluid	Air						
Maximum operating pressure	1.0MPa						
Rated Flow (Note 1)	200	1500	3700	5800	7000	12000	13000
Ambient and fluid temperature	-5 to 60°C (with no freezing)						
Nominal filtration rating	5µm						
Bowl material	Polycarbonate						
Bowl guard	Standard						

Note 1) Conditions; inlet pressure 0.7Mpa, 0.1Mpa outlet pressure drop, (Representative Values).

Accessory/Optional specification combinations

⊙: Combination available

○: Varies depending on the model

■: Combination not available

Accessory/Optional specifications	Combination	Symbol	Accessory			Applicable filter		
			B	C	D	AF10	AF20	AF30 to 60
With bracket	B	■	⊙	○	■	○	○	
Float type auto drain (N.C.)	C	○	■	■	○	○	○	
Float type auto drain (N.O.)	D	⊙	■	■	■	■	○	

Note) Contact SMC for other possible options, like metal bowls.



For more product options and details see our specific catalogues or on-line information.

Accessory part no.

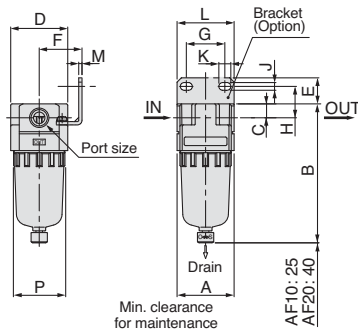
Applicable model		AF10	AF20	AF30	AF40	AF40-06	AF50	AF60
Accessory								
Bracket assembly ^{Note 1)}		—	AF20P-050AS	AF30P-050AS	AF40P-050AS	AF40P-070AS	AF50P-050AS	AF50P-050AS
Float type ^{Note 2)}	N.O.	—	—	AD38	AD48	AD48	AD48	AD48
auto drain Bowl Ass'y	N.C.	AD17	AD27	AD37	AD47	AD47	AD47	AD47

Note 1) Assembly includes a bracket and 2 mounting screws.

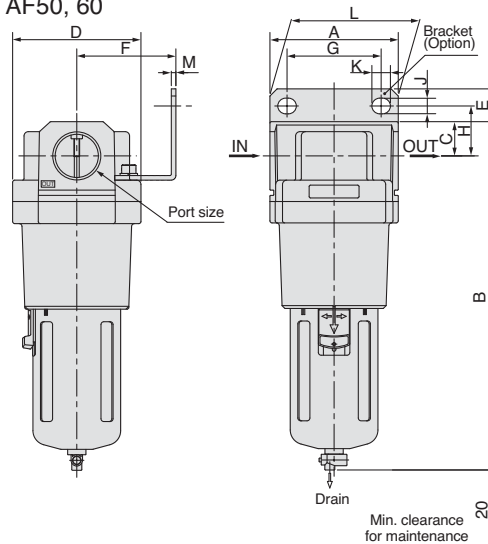
Note 2) Minimum operating pressure: N.O. type=0.1MPa; N.C. type=0.1MPa (AD17/27) and 0.15MPa (AD37/47).

Dimensions

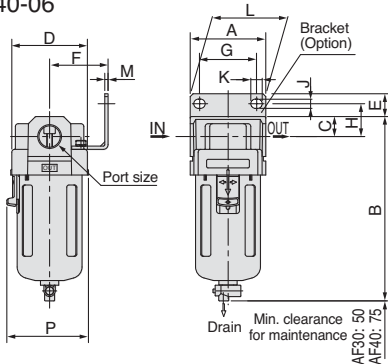
AF10, 20



AF50, 60



AF30, 40, 40-06



Applicable model	AF10, AF20	AF30, AF40, AF40-06, AF50, AF60
Optional specifications	With auto drain (N.C.) 	With auto drain (N.O./N.C.) N.O.: Black N.C.: Grey ø10 One-touch fitting

Model	Port size	Standard specification					Accessory specification									
		A	B	C	D	P	Bracket mounting size									With auto drain
							E	F	G	H	J	K	L	M	B	
AF10	M5	25	67	7	25	28	—	—	—	—	—	—	—	—	—	85
AF20	1/8, 1/4	40	97	10	40	—	18	30	27	22	5.4	8.4	40	2.3	115	
AF30	1/4, 3/8	53	129	14	53	57	16	41	40	23	6.5	8	53	2.3	170	
AF40	1/4, 3/8, 1/2	70	165	18	70	73	17	50	54	26	8.5	10.5	70	2.3	204	
AF40-06	3/4	75	169	20	70	73	14	50	54	25	8.5	10.5	70	2.3	208	
AF50	3/4, 1	90	245	24	90	—	23	70	66	35	11	13	90	3.2	284	
AF60	1	95	258	24	95	—	23	70	66	35	11	13	90	3.2	297	

Air filter replacement parts

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

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

Note 2) Bowl assembly for AF30 to 60 models comes with a bowl guard (steel band material).

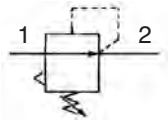
Regulator Series AR10 to 60

SMC's FRL units will be progressively renewed.
Please check if the model you require is already
available in the renewed models (pages 1014 to 1015)

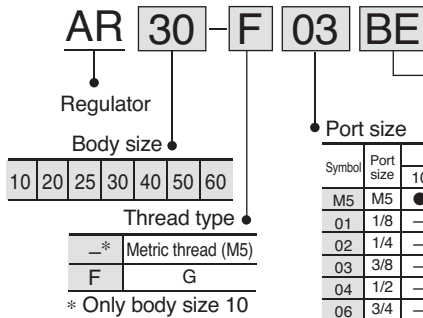
Features

- Port size M5 - 1".
- "Q" and "P" compensation.
- Built in gauge available.
- Locking handle as standard.
- Tamper proof cap as option.

Symbol



How to Order



Accessories ^{Note 1)}

		Body size						
		10	20	25	30	40	50	60
—	Without mounting option / Without Pressure gauge	●	●	●	●	●	●	●
B ^{Note 2)}	With bracket	●	●	●	●	●	●	●
H	With set nut (for panel fitting)	●	●	●	●	—	—	—
E	Square embedded type pressure gauge (with limit indicator)	●	●	●	●	●	●	●
G	Round type pressure gauge (without limit indicator)	●	—	—	—	—	—	—
	Round type pressure gauge (with limit indicator)	—	●	●	●	●	●	●
M	Round type pressure gauge (with colour zone)	—	●	●	●	●	●	●
E1 ^{Note 3)}	Output: NPN output / Electrical entry: Wiring bottom entry	—	●	●	●	●	●	●
E2 ^{Note 3)}	Output: NPN output / Electrical entry: Wiring top entry	—	●	●	●	●	●	●
E3 ^{Note 3)}	Output: PNP output / Electrical entry: Wiring bottom entry	—	●	●	●	●	●	●
E4 ^{Note 3)}	Output: PNP output / Electrical entry: Wiring top entry	—	●	●	●	●	●	●

Note 1) Optional parts are not assembled and are supplied loose at the time of shipment (except for option E).

Note 2) Assembly of a bracket and set nuts (AR10, AR20 to AR40) including 2 mounting screws for the AR50 and AR60

Note 3) When choosing with H (panel mount), the installation space for lead wires will be limited. In this case, select "wiring top entry" for the electrical entry. (Select "wiring bottom entry" when the semi-standard Y is chosen simultaneously.)

* When more than one specification is required, indicate in ascending alphanumeric order.

Product Recommendation



Stocked items for fast delivery

Model	Options (*)	Model	Options (*)
AR10-M5 *	—, B, BG, G, GH, H	AR40-F02 *	—, BE, E, G, H
AR20-F01 *	—, B, BE, BG, E, EH, G, H	AR40-F03 *	—, B, BE, E, EH, H
AR20-F02 *	—, B, BE, BG, E, E3, E4, EH, G, H	AR40-F04 *	—, BE, BG, E, EH, G, H
AR25-F02 *	—, B, BE, BG, E, EH, G, H	AR40-F06 *	—, BE, E, EH, G, H
AR25-F03 *	—, BG, E, G, H	AR50-F06 *	—, E, G
AR30-F02 *	—, B, BE, BG, E, EH, G, GH, H	AR50-F10 *	—, B, E, G
AR30-F03 *	—, B, BE, BG, E, E3, EH, G, H	AR60-F10 *	—, B, BG, E, G



Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552
Series IS10 - Pressure Switches - page 1093
Series E210/310/410 - Modular Adapter - page 1074
Series AKM - Check Valve - page 1091

(Related Products)

Series AC - Air Preparation Modular Units - page 1076
Series IDG - Membrane Air Dryer - page 1142
Series AV - Soft Start-up Valves - www.smc.eu
Series KK - S Couplers - page 1204
Series KQ2 - Fittings - page 1184
Series TU - Tubing - page 1223

Standard specifications

Model	AR10	AR20	AR25	AR30	AR40	AR40-06	AR50	AR60
Port sizes	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
Fluid	Air							
Proof pressure	1.5MPa							
Maximum operating pressure	1.0MPa							
Set pressure range	0.05 to 0.7MPa		0.05 to 0.85MPa					
Rated flow (port size) ^{Note 4)}	100(M5)	800(1/4)	1000(3/8)	2500(3/8)	5000(3/8)	6000(3/4)	10000(1)	10000(1)
Pressure gauge port size ^{Note 1)}	Rc 1/16 ^{Note 2)}	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4
Relief pressure	Set pressure + 0.05MPa ^{Note 3)} [at relief flow rate of 0.1L/min (ANR)]							
Ambient and fluid temperature	-5 to 60°C (with no freezing)							
Construction	Relieving type							
Weight [kg]	0.06	0.26	0.21	0.29	0.44	0.47	1.17	1.22

Note 1) Pressure gauge connection threads are not required for regulator with a square embedded type pressure gauge (AR20 to AR60).

Note 2) Use a bushing (part no: 131368) when connecting the R 1/8 pressure gauge to the R 1/16 gauge port.

Note 3) Except for AR10.

Note 4) Conditions; Inlet pressure 0.7Mpa, set pressure 0.5Mpa, 0.1Mpa outlet pressure drop (Representative values).



For more product options and details see our specific catalogues or on-line information.

Accessory/Optional specification combinations

Accessory/Optional specifications	Combination Symbol	Accessory			Applicable regulator		
		B	E	G	AR10	AR20 to 40	AR50 to 60
With bracket (with neck nut)	B		○	◎	◎	◎	◎
Square embedded or digital pressure gauge	E	◎				◎	◎
Round pressure gauge	G	◎			◎	◎	◎

◎ : Combination available
 ○ : Varies depending on the model
 : Combination not available

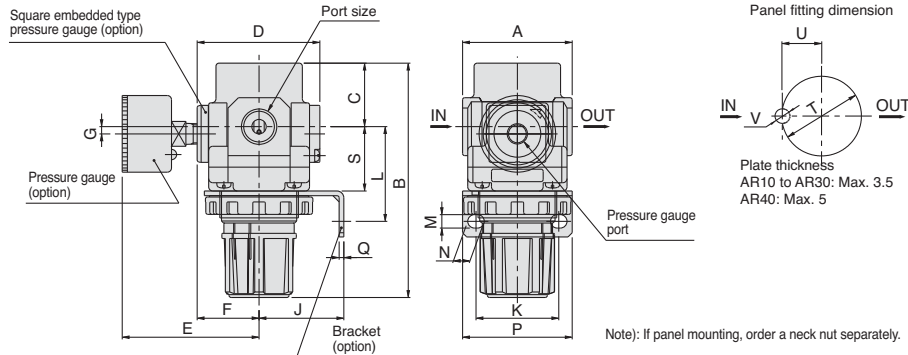
Accessory part no.

Applicable model		AR10	AR20	AR25	AR30	AR40	AR40-06	AR50	AR60
Bracket assembly ^{Note 1)}		AR10P-270AS	AR20P-270AS	AR25P-270AS	AR30P-270AS	AR40P-270AS	AR40P-270AS	AR50P-270AS ^{Note 3)}	AR60P-270AS ^{Note 3)}
Set nut		AR10P-260S	AR20P-260S	AR25P-260S	AR30P-260S	AR40P-260S	AR40P-260S	—	—
Pressure gauge	1MPa	Round	G27-10-R1	G36-10-01	G36-10-01	G36-10-01	G46-10-02	G46-10-02	G46-10-02
		Square embedded type ^{Note 2)}	—	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS

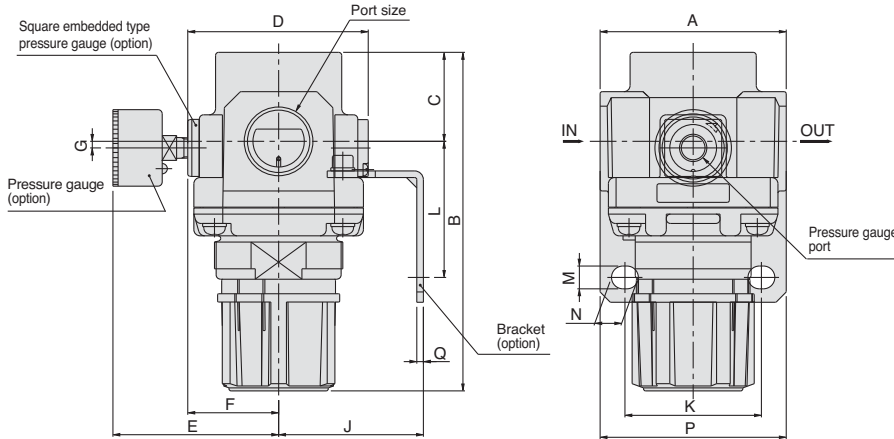
Note 1) Assembly includes a bracket and neck nuts.
 Note 2) Includes one O-ring and 2 mounting screws.
 Note 3) Assembly includes a bracket and 2 mounting screws.

Dimensions

AR10 to 40



AR50, 60



Model	Port sizes	Standard specification				Accessory specification													
		A	C	B	D	With pressure gauge			Bracket mounting size							Panel mount			
						E	F	G	J	K	L	M	N	P	Q	S	T	U	V
AR10	M5	25	11	58	25	26	—	0	25	28	30	4.5	6.5	40	2	18	18.5	—	—
AR20	1/8, 1/4	40	26.5	94	57	65	29.5	2 ^{Note)}	30	34	44	5.4	15.4	55	2.3	25	28.5	14	6
AR25	1/4, 3/8	53	28	101	55	64	28.5	0	30	34	44	5.4	15.4	55	2.3	26	32.5	16	6
AR30	1/4, 3/8	53	31	116	59	66	30.5	3.5	41	40	46	6.5	8	53	2.3	31	38.5	19	7
AR40	1/4, 3/8, 1/2	70	36	128	68	74	35	3.5	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7
AR40-06	3/4	75	36	129	68	74	35	3	50	54	56	8.5	10.5	70	2.3	37	42.5	21	7
AR50	3/4, 1	90	43	169	87	84	44.5	3.3	70	66	65.8	11	13	90	3.2	—	—	—	—
AR60	1	95	46	176	87	84	44.5	3.3	70	66	65.8	11	13	90	3.2	—	—	—	—

Note) For AR20 only, the position of the pressure gauge is above the centre of the piping.

Replacement parts

Applicable Model	AR10	AR20	AR25	AR30	AR40-04	AR40-06	AR50	AR60
Spares Kit	KT-AR10	KT-AR20-02	KT-AR25-02	KT-AR30-03	KT-AR40-04	KT-AR40-06	KT-AR50-06	KT-AR60

Spare kit includes valve assembly, valve guide assembly and diaphragm assembly.

Regulator: Modular type with Back Flow Mechanism Series AR20K to 60K

Regulator with a built-in mechanism that ensures a quick release of the outlet air pressure (built-in check valve with back flow mechanism).

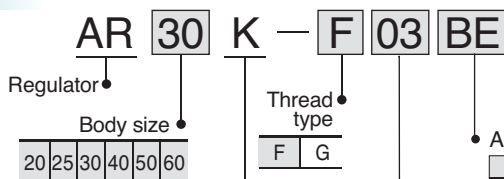
SMC's FRL units will be progressively renewed. Please check if the model you require is already available in the renewed models (pages 1014 to 1015)



Features

- Port size M5 - 1"
- "Q" and "P" compensation.
- Built in gauge available.
- Locking handle as standard.
- Tamper proof cap as option.

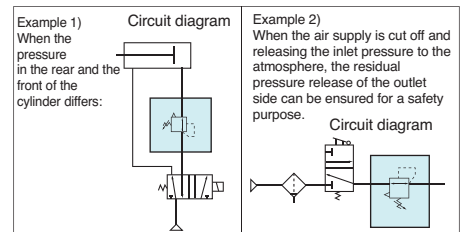
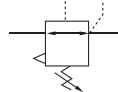
How to Order



Note) AR10 comes with a back flow mechanism as a standard feature. If the set pressure is below 0.15MPa, back flow may not occur. When a backflow mechanism is required with a set pressure of less than 0.15MPa, contact SMC.

Symbol	Port size	Body size					
		20	25	30	40	50	60
01	1/8	●	—	—	—	—	—
02	1/4	●	●	●	●	—	—
03	3/8	—	●	●	●	—	—
04	1/2	—	—	—	●	—	—
06	3/4	—	—	—	●	●	—
10	1	—	—	—	—	●	●

Symbol



Accessories Note 1)

		Body size					
		20	25	30	40	50	60
—	Without mounting option / Without pressure gauge	●	●	●	●	●	●
B	With bracket	●	●	●	●	●	●
H	With set nut (for panel fitting)	●	●	●	●	—	—
E	Square embedded type pressure gauge (with limit indicator)	●	●	●	●	●	●
G	Round type pressure gauge (without limit indicator)	—	—	—	—	—	—
	Round type pressure gauge (with limit indicator)	●	●	●	●	●	●
M	Round type pressure gauge (with colour zone)	●	●	●	●	●	●
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	●	●	●	●	●	●

Note 1) Optional parts are not assembled and are supplied loose at the time of shipment (except for option E).

Note 2) Assembly of a bracket and set nuts (AR10, AR20 to AR40) Including 2 mounting screws for the AR50 and AR60

Note 3) When choosing with H (panel mount), the installation space for lead wires will be limited. In this case, select "wiring top entry" for the electrical entry. (Select "wiring bottom entry" when the semi-standard Y is chosen simultaneously.)

* When more than one specification is required, indicate in ascending alphanumeric order.

Product Recommendation



Stocked items for fast delivery

Model	Options (*)	Model	Options (*)
AR20K-F01 *	—, B, BE, BG, E, EH, GH, H	AR40K-F04 *	—, BE, E, H
AR20K-F02 *	—, B, BE, BG, E, EH, H	AR40K-F06 *	—, E, H
AR25K-F02 *	—, BE, BG, E, H	AR50K-F06 *	—
AR30K-F02 *	—, BE, BG, E, G, H	AR50K-F10 *	—
AR30K-F03 *	—, B, BE, BG, E, H	AR60K-F10 *	—, BE, E
AR40K-F03 *	—, BE, E, H		



Accessories and Related Products

(Accessories)

- Series VHS** - Residual Relief 3 Port Valve - page 552
- Series IS10** - Pressure Switches - page 1093
- Series E210/310/410** - Modular Adapter - page 1074
- Series AKM** - Check Valve - page 1091

(Related Products)

- Series AC** - Air Preparation Modular Units - page 1076
- Series IDG** - Membrane Air Dryer - page 1142
- Series AV** - Soft Start-up Valves - www.smc.eu
- Series KK** - S Couplers - page 1204
- Series KQ2** - Fittings - page 1184
- Series TU** - Tubing - page 1223

Standard specifications

Model	AR20K	AR25K	AR30K	AR40K	AR40K-06	AR50K	AR60K
Fluid	Air						
Proof pressure	1.5MPa						
Maximum operating pressure	1.0MPa						
Set pressure range Note 1)	0.05 to 0.85MPa						
Pressure gauge port size Note 2)	G 1/8	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4	G 1/4
Rated Flow (Port size) Note 3)	800(1/4)	1000(3/8)	2500(3/8)	5000(1/2)	6000(3/4)	10000(1)	10000(1)
Relief pressure	Set pressure + 0.05MPa [at relief flow rate of 0.1ℓ/min (ANR)]						
Ambient and fluid temperature	-5 to 60°C (with no freezing)						
Construction	Relieving type						
Weight [kg]	0.16	0.21	0.30	0.45	0.48	1.17	1.22

* AR10 comes with a back flow mechanism as a standard feature.

Note 1) Set the inlet pressure 0.05MPa or higher than the set pressure.

Note 2) Pressure gauge connection threads are not required for regulators with a square embedded type pressure gauge (AR20K to AR60K).

Note 3) Conditions; inlet pressure 0.7Mpa, set pressure 0.5Mpa, 0.1Mpa outlet pressure drop (Representative values).



For more product options and details see our specific catalogues or on-line information.

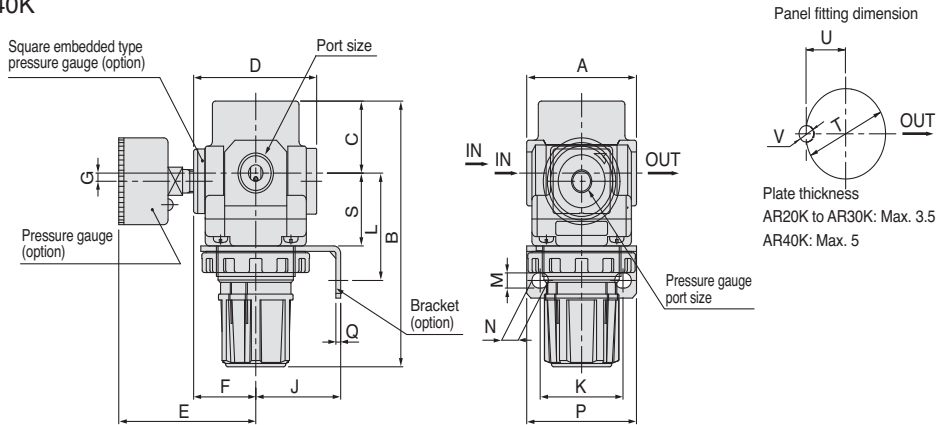
Accessory part no.

Accessory		Applicable model	AR20K	AR25K	AR30K	AR40K	AR40K-06	AR50K	AR60K
Bracket assembly ^{Note 1)}			AR20P-270AS	AR25P-270AS	AR30P-270AS	AR40P-270AS	AR40P-270AS	AR50P-270AS ^{Note 3)}	AR50P-270AS ^{Note 2)}
Set nut			AR20P-260S	AR25P-260S	AR30P-260S	AR40P-260S	AR40P-260S	–	–
Pressure gauge	1.0MPa	Round	G36-10-01	G36-10-01	G36-10-01	G46-10-02	G46-10-02	G46-10-02	G46-10-02
		Square embedded type ^{Note 3)}	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS
	0.2MPa	Round	G36-2-01	G36-2-01	G36-2-01	G46-2-02	G46-2-02	G46-2-02	G46-2-02
		Square embedded type ^{Note 3)}	GC3-2AS	GC3-2AS	GC3-2AS	GC3-2AS	GC3-2AS	GC3-2AS	GC3-2AS

Note 1) Assembly includes a bracket and neck nuts.
 Note 2) Assembly includes a bracket and 2 mounting screws.
 Note 3) Includes one O-ring and 2 mounting screws.

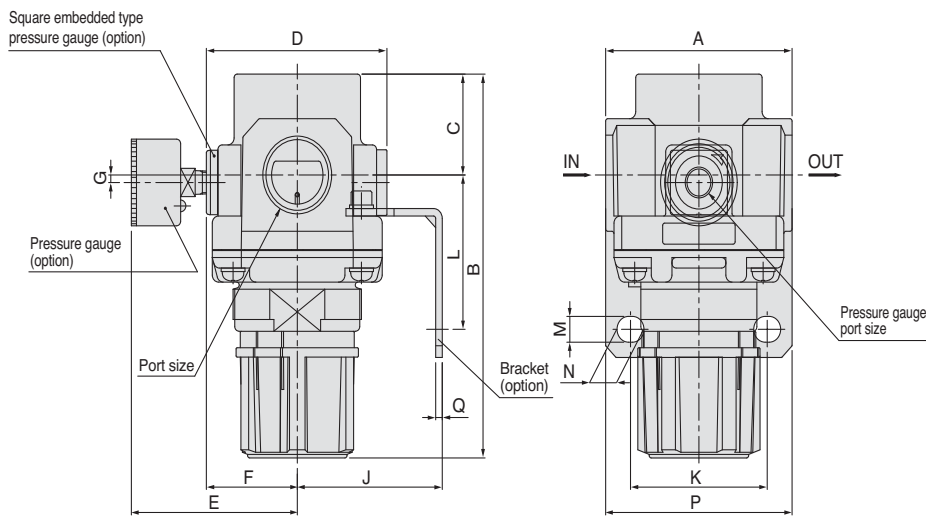
Dimensions

AR20K to 40K



AR50K, 60K

NOTE: If panel mounting, order a neck nut separately.



Model	Port size	Standard specification				Accessory specification													
						With pressure gauge			Bracket mounting size							Panel mount			
		A	B	C	D	E	F	G	J	K	L	M	N	P	Q	S	T	U	V
AR20K	1/8, 1/4	40	94	26.5	57	65	29.5	2 ^{Note)}	30	34	44	5.4	15.4	55	2.3	25	28.5	14	6
AR25K	1/4, 3/8	53	101	28	55	64	28.5	0	30	34	44	5.4	15.4	55	2.3	26	32.5	16	6
AR30K	1/4, 3/8	53	116	31	59	66	30.5	3.5	41	40	46	6.5	8	53	2.3	31	38.5	19	7
AR40K	1/4, 3/8, 1/2	70	128	36	68	74	35	3.5	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7
AR40K-06	3/4	75	129	36	68	74	35	3	50	54	56	8.5	10.5	70	2.3	37	42.5	21	7
AR50K	3/4, 1	90	169	43	87	84	44.5	3.3	70	66	65.8	11	13	90	3.2	–	–	–	–
AR60K	1	95	176	46	87	84	44.5	3.3	70	66	65.8	11	13	90	3.2	–	–	–	–

Note) For AR20K only, the position of the pressure gauge is above the centre of the piping.

Replacement parts

Applicable Model	AR20K	AR25K	AR30K	AR40K-04	AR40K-06	AR50K	AR60K
Spares Kit	KT-AR20K-02	KT-AR25K-02	KT-AR30K-03	KT-AR40K-04	KT-AR40K-06	KT-AR50K-06	KT-AR60K

Spare kit includes valve assembly, valve guide assembly, diaphragm assembly and check valve assembly

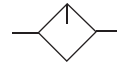
Preparation Air

Lubricator Series AL10 to 60

SMC's FRL units will be progressively renewed. Please check if the model you require is already available in the renewed models (pages 1016 to 1017)



Symbol



Product Recommendation



Stocked items for fast delivery

AL10-M5	AL30-F03	AL40-F03
AL20-F01	AL40-F02	AL50-F02
AL20-F02	AL40-F03	AL50-F03
AL30-F02	AL40-F04	AL60-F04



Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552

Series IS10 - Pressure Switches - page 1093

Series E210/310/410 - Modular Adapter - page 1074

Series AKM - Check Valve - page 1091

(Related Products)

Series AC - Air Preparation Modular Units - page 1076

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

Features

- Port size M5 - 1".
- Precise adjustment.
- Uniform lubrication even at extremely low flow rates.
- Over 97% of atomised oil particles <10 microns.
- Sight dome for visual setting.
- Built in check valve prevents oil falling back into bowl during no air consumption which could cause 'dry period' running.
- Mounting bracket available.

How to Order

AL 30 - F 03

Note: Contact SMC for other options like metal bowl or 1 litre tank.

Lubricator

Body size

10	20	30	40	50	60
----	----	----	----	----	----

Thread type

-	Metric thread (M5)
F	G

Port size

Symbol	Port size	Body size					
		10	20	30	40	50	60
M5	M5	●	—	—	—	—	—
01	1/8	—	●	—	—	—	—
02	1/4	—	●	●	●	—	—
03	3/8	—	—	●	●	—	—
04	1/2	—	—	—	●	—	—
06	3/4	—	—	—	●	●	—
10	1	—	—	—	—	●	●

Standard specifications

Model	AL10	AL20	AL30	AL40	AL40-06	AL50	AL60
Fluid	Air						
Proof pressure	1.5MPa						
Maximum operating pressure	1.0MPa						
Minimum dripping flow rate [L/min (ANR)] ^{Note 1)}	4	15	1/4: 30 3/8: 40	1/4: 30 3/8: 40 1/2: 50	50	190	220
Oil capacity [cm ³]	7	25	55	135	135	135	135
Rated Flow (Port size) ^{Note 2)}	100 (ms)	4000 (1/4)	7000 (3/8)	8000 (1/2)	8000 (3/4)	14000 (1)	15000 (1)
Recommended lubricant	Class 1 turbine oil (ISO VG32)						
Ambient and fluid temperature	-5 to 60°C (with no freezing)						
Bowl material	Polycarbonate						
Bowl guard	—	Option	Standard				
Weight [kg]	0.07	0.20	0.24	0.47	0.52	1.06	1.13

Note 1) • The flow rate is 5 drips/min under the following conditions: Inlet pressure of 0.5MPa; Class 1 turbine oil (ISO VG32); Temperature at 20°C; Oil adjustment valve fully open.

• Use air consumption flow rate for minimum dripping flow rate.

Note 2) Inlet pressure 0.7MPa, 0.1 MPa outlet pressure drop (Representative values).

◎ : Combination available

○ : Varies depending on the model

■ : Combination not available

Accessory/Optional specification combinations

Accessory/Optional specifications	Combination	Symbol	Accessory			Applicable lubricator		
			B			AL10	AL20	AL30 to 60
Accessory With bracket	B	■	○		■	◎	◎	

Accessory part no.

Accessory	Applicable model	AL10	AL20	AL30	AL40	AL40-06	AL50	AL60
Bracket assembly ^{Note)}		—	AF20P-050AS	AF30P-050AS	AF40P-050AS	AF40P-070AS	AF50P-050AS	AF50P-050AS

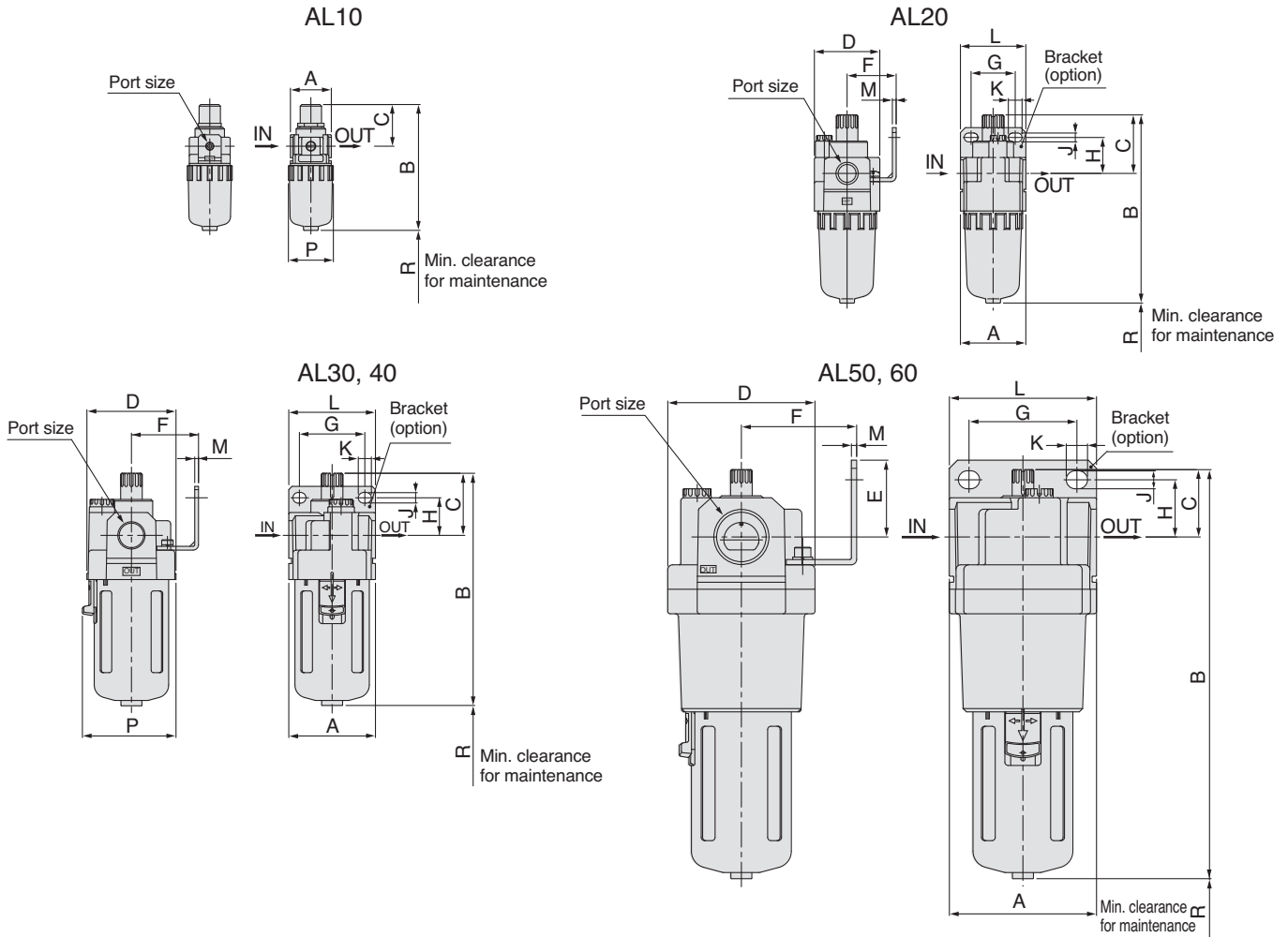
* The part number for Bracket assembly for 1000cm³ is AF50P-050AS (applicable to AL30 to AL60).

Note) Assembly includes a bracket and 2 mounting screws.



For more product options and details see our specific catalogues or on-line information.

Dimensions



Preparation Air

Model	Port size	Standard specification							Accessory specification							
		A	B	C	D	P	R	E	F	G	H	J	K	L	M	
AL10	M5	25	77	26	25	28	35	—	—	—	—	—	—	—	—	
AL20	1/8, 1/4	40	115	36	40	—	60	—	30	27	22	5.4	8.4	40	2.3	
AL30	1/4, 3/8	53	142	38	53	57	80	—	41	40	23	6.5	8	53	2.3	
AL40	1/4, 3/8, 1/2	70	176	40	70	73	110	—	50	54	26	8.5	10.5	70	2.3	
AL40-06	3/4	75	176	38	70	73	110	—	50	54	25	8.5	10.5	70	2.3	
AL50	3/4, 1	90	250	41	90	—	110	47	70	66	35	11	13	90	3.2	
AL60	1	95	268	45	95	—	110	47	70	66	35	11	13	90	3.2	

Replacement parts

Applicable Model	AL10	AL20	AL30	AL40	AL50	AL60
Spares Kit	KT-AL10	KT-AL20-02	KT-AL30-03	KT-AL40-04	KT-AL50-06	KT-AL60

AL10 spares kit includes sight dome assembly

AL20 to AL60 spares kit includes sight dome assembly, lubricator plug assembly, damper retainer assembly and damper.

Filter Regulator Series AW10 to 60

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

Features

- Port size M5 - 1".
- Quick release bowl guard on some sizes.
- Choice of manual or automatic condensate drain.
- 5µm filter element.
- Built in gauge available.
- Locking handle as standard.
- Tamper proof cap as option.

How to Order

Filter regulator: **AW**
 Body size: **30**
 Thread type: **F**
 Port size: **03**
 Bowl type: **BE**

Note) Contact SMC for other options like metal bowl or 1 litre tank.

Symbol	Port size	Body size				
		10	20	30	40	60
M5	M5	●	—	—	—	—
01	1/8	—	●	—	—	—
02	1/4	—	●	●	—	—
03	3/8	—	—	●	●	—
04	1/2	—	—	—	●	●
06	3/4	—	—	—	●	●
10	1	—	—	—	—	●

* Only body size 10

Product Recommendation



Stocked items for fast delivery

AW10-M5 *	-, A, C, CH, H
AW20-F01 *	-, A, BC, BCE, BE, C, CE, CEH, CG, CGH, CH, E, EH, G, GH, H
AW20-F02 *	-, A, B, BC, BCE, BCE3, BCG, BE, BE3, BG, C, CE, CE3, CEH, CH, E, E3, EH, G, H
AW30-F02 *	-, A, B, BC, BCG, BD, BDE, BE, C, CE, D, DE, DEH, DH, E, EH, G, GH, H
AW30-F03 *	-, A, B, BCE, BDE, BDE3, BE, BE4, BG, C, CE, CE3, CH, D, DE, DE3, DEH, DG, DGH, DH, E, E3, EH, G, H
AW40-F02 *	-, A, D, DE, DH, E, EH, G
AW40-F03 *	-, A, BDE, BE, D, DE, DEH, DG, DH, E, H
AW40-F04 *	-, A, B, BC, BDE, BDG, BE, BG, C, CE, CEH, CG, CH, D, DE, DE3, DE4, DEH, DG, DGH, DH, E, E3, E4, EH, G, GH, H
AW40-F06 *	-, A, B, BE, C, CE, D, DE, DEH, DG, DH, E, EH, G, H
AW60-F06 *	-, A, D, E, G
AW60-F10 *	-, A, C, D, DE, E, G

Standard Specifications

Model	AW10	AW20	AW30	AW40	AW40-06	AW60
Port sizes	M5	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1
Fluid	Air					
Proof pressure	1.5MPa					
Maximum operating pressure	1.0MPa					
Set pressure range	0.05 to 0.7MPa		0.05 to 0.85MPa			
Pressure gauge port size ^{Note 1)}	1 / 16 ^{Note 2)}	G 1/8	G 1/8	G 1/4	G 1/4	G 1/4
Relief pressure	Set pressure + 0.05MPa ^{Note 3)} [at relief flow rate of 0.1L/min (ANR)]					
Rated Flow (Port size) ^{Note 4)}	100(M5)	500(1/4)	1500(3/8)	2000(1/2)	3800(3/4)	14000(1)
Ambient and fluid temperature	-5 to 60°C (with no freezing)					
Nominal filtration rating	5 µm					
Drain capacity [cm ³]	2.5	8	25	45	45	45
Bowl material	Polycarbonate					
Bowl guard	—	Option	Standard			
Construction	Relieving type					
Weight [kg]	0.09	0.32	0.40	0.72	0.75	2.0

Note 1) Pressure gauge connection threads are not required for regulators with a square embedded type pressure gauge (AW20 to AW40).

Note 2) Use a bushing (part no: 131368) when connecting R 1/8 pressure gauge to R 1/16 gauge port.

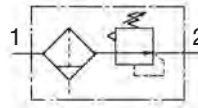
Note 3) Not applicable to AW10.

Note 4) Conditions; inlet pressure 0.7Mpa, set pressure 0.54 Mpa, 0.1Mpa outlet pressure drop.

SMC's FRL units will be progressively renewed. Please check if the model you require is already available in the renewed models (pages 1018 to 1019)

Symbol

Direct operated, relieving type



Accessories ^{Note 1)}

		Body size				
		10	20	30	40	60
—	Without mounting option / auto drain / pressure gauge	●	●	●	●	●
B ^{Note 2)}	With bracket	●	●	●	●	●
H	With set nut (for panel fitting)	●	●	●	●	—
C	Float type auto drain (N.C.)	●	●	●	●	●
D	Float type auto drain (N.O.)	—	—	●	●	●
E	Square embedded type pressure gauge (with limit indicator)	—	●	●	●	●
G	Round type pressure gauge (without limit indicator)	●	—	—	—	—
	Round type pressure gauge (with limit indicator)	—	—	—	●	●
M	Round type pressure gauge (with colour zone)	—	●	●	●	●
E1 ^{Note 3)}	Output: NPN output / Electrical entry: Wiring bottom entry	—	●	●	●	●
E2 ^{Note 3)}	Output: NPN output / Electrical entry: Wiring top entry	—	●	●	●	●
E3 ^{Note 3)}	Output: PNP output / Electrical entry: Wiring bottom entry	—	●	●	●	●
E4 ^{Note 3)}	Output: PNP output / Electrical entry: Wiring top entry	—	●	●	●	●

Note 1) Optional parts are not assembled and are supplied loose at the time of shipment (except for option C, D and E).

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

Note 3) When choosing with H (panel mount), the installation space for lead wires will be limited. In this case, select "wiring top entry" for the electrical entry.

* When more than one specification is required, indicate in ascending alphanumeric order.



Accessories and Related Products

(Accessories)

- Series VHS** - Residual Relief 3 Port Valve - page 552
- Series IS10** - Pressure Switches - page 1093
- Series E210/310/410** - Modular Adapter - page 1074
- Series AKM** - Check Valve - page 1091

(Related Products)

- Series AC** - Air Preparation Modular Units - page 1076
- Series IDG** - Membrane Air Dryer - page 1142
- Series AV** - Soft Start-up Valves - www.smc.eu
- Series KK** - S Couplers - page 1204
- Series KQ2** - Fittings - page 1184
- Series TU** - Tubing - page 1223



For more product options and details see our specific catalogues or on-line information.

Accessory/Optional specification combinations

Accessory/Optional specifications	Combination	Symbol	Accessory					Applicable filter regulator		
			B	C	D	E	G	AW10	AW20	AW30 to 60
With bracket (with neck nut)	B	⊙	⊙	○	○	○	⊙	⊙	⊙	
Float type auto drain (N.C.)	C	⊙	⊙	⊙	○	○	⊙	⊙	⊙	
Float type auto drain (N.O.)	D	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
Square embedded type pressure gauge/digital gauge	E	⊙	⊙	⊙	⊙	⊙	⊙	⊙	⊙	
Round pressure gauge	G	⊙	⊙	○	⊙	⊙	⊙	⊙	⊙	

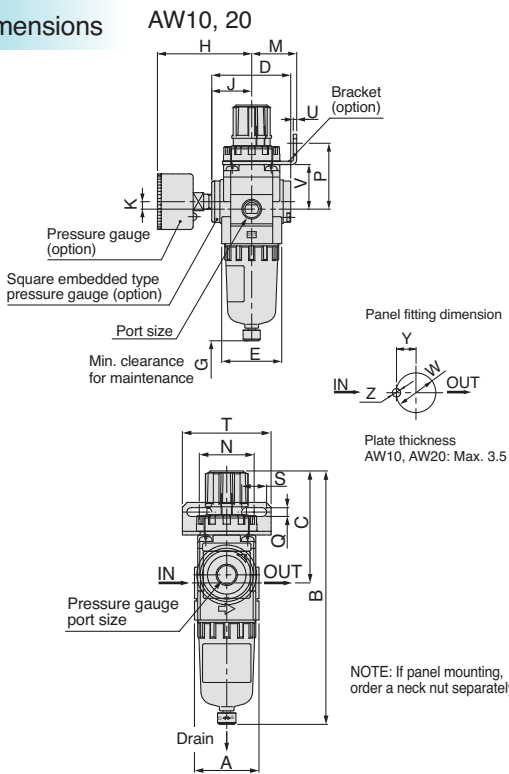
⊙: Combination available
 ○: Varies depending on the model
 ⊙: Combination not available

Accessory part no.

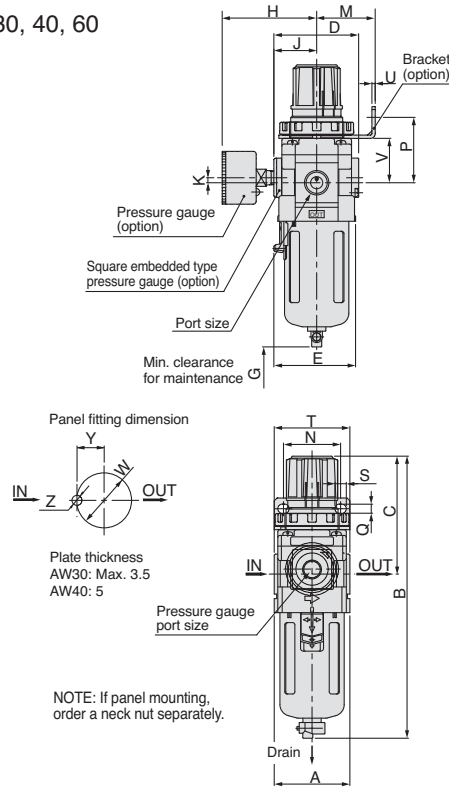
Applicable model		AW10	AW20	AW30	AW40	AW40-06	AW60	
Accessory								
Bracket assembly ^{Note 1)}		AR10P-270AS	AR20P-270AS	AR30P-270AS	AR40P-270AS	AR40P-270AS	AW60P-270AS	
Set nut		AR10P-260S	AR20P-260S	AR30P-260S	AR40P-260S	AR40P-260S	-	
Pressure gauge	1.0MPa	Round	G27-10-R1	G36-10-01	G36-10-01	G46-10-02	G46-10-02	G46-10-02
		Square embedded type ^{Note 3)}	-	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS	GC3-10AS
	0.2MPa	Round	G27-10-R1 ^{Note 2)}	G36-2-01	G36-2-01	G46-2-02	G46-2-02	G46-2-02
		Square embedded type ^{Note 3)}	-	GC3-2AS	GC3-2AS	GC3-2AS	GC3-2AS	GC3-2AS
Float type auto drain ^{Note 4)}	Bowl assembly	N.O.	-	AD38	AD48	AD48	AD48	
	N.C.	AD17	AD27	AD37	AD47	AD47	AD47	

Note 1) Assembly includes a bracket and set nuts.
 Note 2) For 1MPa.
 Note 3) Includes one O-ring and 2 mounting screws.
 Note 4) Minimum operating pressure: N.O. type-0.1MPa; N.C. type-0.1MPa (AD17/27) and 0.15MPa (AD37/47). Contact SMC regarding the specifications for PSI unit and F.

Dimensions



AW30, 40, 60



Model	Port size	Standard specification																			Accessory specification									
		Standard specification						With pressure gauge			Bracket mounting size						Panel mount				With auto drain									
		A	B	C	D	E	G	H	J	K	M	N	P	Q	S	T	U	V	W	Y	Z	B								
AW10	M5	25	108	48	25	28	25	26	-	0	25	28	30	4.5	6.5	40	2	18	18.5	-	-	125								
AW20	1/8, 1/4	40	160	73	52	40	40	63	27	5	30	34	44	5.4	15.4	55	2.3	30	28.5	14	6	177								
AW30	1/4, 3/8	53	201	86	59	57	55	66	30.5	3.5	41	40	46	6.5	8	53	2.3	31	38.5	19	7	242								
AW40	1/4, 3/8, 1/2	70	239	92	75	73	80	76	38.5	1.5	50	54	54	8.5	10.5	70	2.3	35.5	42.5	21	7	278								
AW40-06	3/4	75	242	93	75	73	80	76	38.5	1.2	50	54	56	8.5	10.5	70	2.3	37	42.5	21	7	282								
AW60	3/4, 1	95	405	175	95	95	80	84	43.5	3.3	70	66	66	11	13	90	3.2	-	-	-	-	448								

Replacement parts

Applicable Model	AW10	AW20	AW30
Spares Kit	KT-AW10	KT-AW20-02	KT-AW30-03
Applicable Model	AW40-04	AL40-06	AW60
Spares Kit	KT-AW40-04	KT-AW40-06	KT-AW60-10

Spares kit includes valve assembly, diaphragm assembly and filter element

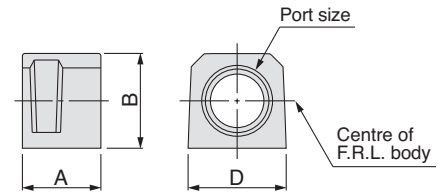
Applicable model	AW10, AW20	AW30, AW40, AW40-06, AW60
Optional specifications	With auto drain (N.C.)	With auto drain (N.O./N.C.)
Dimensions		

FRL Unit Modular Accesories

Piping Adapter

M5, 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.



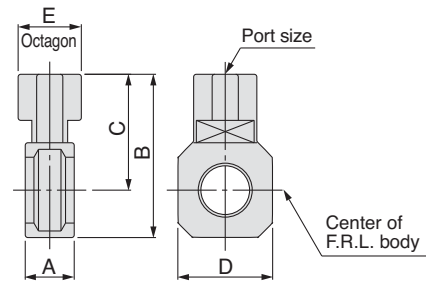
Model ^(Note)	Port size	A	B	D	Applicable body size
E100-M5	M5	10	14	14	10
E200-F01	1/8	30	23.5	28	20
E200-F02	1/4				
E200-F03	3/8				
E300-F02	1/4	32	30	30	25, 30
E300-F03	3/8				
E300-F04	1/2	32	36	36	40
E400-F02	1/4				
E400-F03	3/8				
E400-F04	1/2				
E400-F06	3/4	32	40	44	40-06
E500-F06	3/4				
E600-F06	3/4	35	48	53	50, 55, 60
E600-F10	1				

Note) Separate interfaces are required for modular unit.

T-interface (T)

M5, 1/8, 1/4, 3/8, 1/2

Using a T-interface facilitates the redirection of air flow.



Model	Port size	A	B	C	D	E	Applicable body size
Y110-M5	M5	11	19	12	14	8	10
Y210-F01	1/8	15	42	32	28	19	20
Y210-F02	1/4						
Y310-F01	1/8	15	53	39	30	19	25,30
Y310-F02	1/4						
Y410-F02	1/4	19	62	44	36	24	40
Y410-F03	3/8						
Y510-F02	1/4						
Y510-F03	3/8	19	66	46	44	24	40-06
Y610-F03	3/8						
Y610-F04	1/2	22	81	57	53	30	50, 55, 60

• Separate interfaces are required for modular unit.

Caution in Mounting

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



Pressure Switch Series IS10

Features

- Space savings.
- Easy handling and mounting.

How to Order

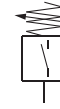


Symbol	Description
—	None
S	With seal

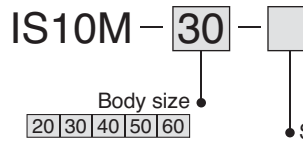
Semi-standard			
a	Set pressure range	—	0.1 to 0.4 MPa
		6 <small>Note 1)</small>	0.1 to 0.6 MPa
b	Lead wire length	—	0.5 m
		L	3 m

Note 1) Set pressure range of 6 (L) is 0.2 to 0.6 MPa.
 Note 2) Semi-standard: Select one option each in a through b. Place them in alphanumerical order.

Symbol



Pressure Switch with Spacer

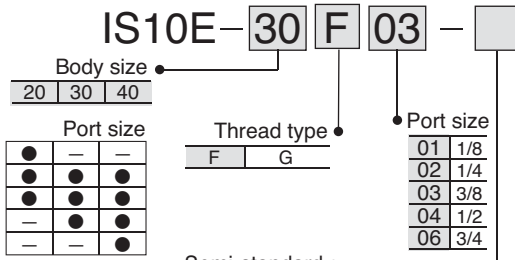


Body size	
20	30
40	50
60	

Semi-standard			
a	Set pressure range	—	0.1 to 0.4 MPa
		6 <small>Note 1)</small>	0.1 to 0.6 MPa
b	Lead wire length	—	0.5 m
		L	3 m

Note 1) Set pressure range of 6 (L) is 0.2 to 0.6 MPa.
 Note 2) Semi-standard: Select one option each in a through b. Place them in alphanumerical order.

Pressure Switch with Piping Adapter



Body size		
20	30	40

Port size		
●	—	—
●	●	●
●	●	●
—	●	●
—	—	●

Thread type		Port size	
F	G	01	1/8
		02	1/4
		03	3/8
		04	1/2
		06	3/4

Semi-standard			
a	Set pressure range	—	0.1 to 0.4 MPa
		6 <small>Note 1)</small>	0.1 to 0.6 MPa
b	Lead wire length	—	0.5 m
		L	3 m
c	Mounting position	—	Right
		R	Left

Note 1) Set pressure range of 6 (L) is 0.2 to 0.6 MPa.
 Note 2) Semi-standard: Select one option each in a through c. Place them in alphanumerical order.

Product Recommendation



Pressure switch

Stocked items for fast delivery

IS10-01	IS10-01-6L	IS10-01S-6L
IS10-01-L	IS10-01S-L	



Pressure switch with spacer

Stocked items for fast delivery

IS10M-20-L	IS10M-30-L	IS10M-40-6	IS10M-40-6L
IS10M-20-6L	IS10M-30-6L	IS10M-40-L	IS10M-60-6L



Pressure switch with piping adapter

Stocked items for fast delivery

IS10E-20F01-6L	IS10E-20F02-6L	IS10E-30F03-6	IS10E-40F04
IS10E-20F02	IS10E-20F02-6LR	IS10E-30F03-L	IS10E-40F04-L
IS10E-20F02-L	IS10E-30F02-6L	IS10E-30F03-6L	IS10E-40F04-6L



Related Products

- Series AC - Air Preparation - page 1076
- Series PF2A - Digital Flow Switch for Air- page 1309
- Series VHS- Hand Valve - page 552
- Series E210/310/410 - Modular Adapter - page 1074

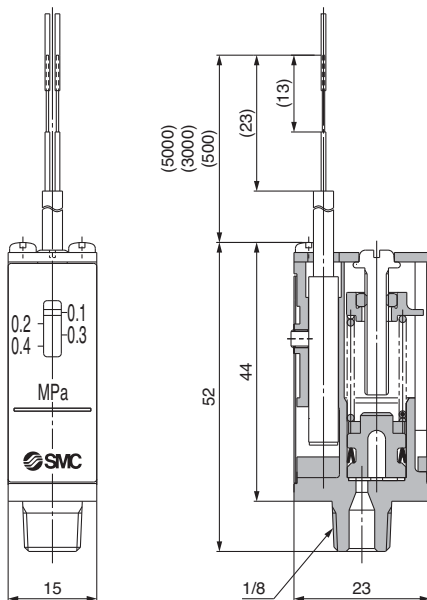
Specifications

Model	IS10-01
Fluid	Air/Inert gas
Proof pressure	1.0 MPa
Max. operating pressure	0.7 MPa
Set pressure range	0.1 to 0.4 MPa Option: 0.1 to 0.6 MPa
Ambient and fluid temperature	-5 to 60°C (No freezing)
Contacts	1a
Error of scale	0.05 MPa or less
Hysteresis	Fixed 0.08 MPa or less
Repeatability	0.05 MPa or less
Wiring specifications	Grommet, Lead wire length: 0.5 m Option: 3 m, 5 m
Enclosure	Equivalent to IP40
Port size	1/8
Weight	62 g

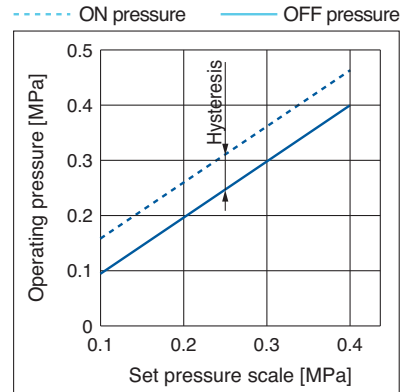
Switch Characteristics

Max. contact capacity	AC 2 VA, DC 2 W		
Voltage AC/DC	24 V or less	48 V	100 V
Max. operating current and range	50 mA	40 mA	20 mA

Dimensions/Construction

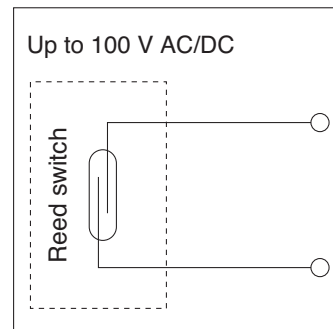


Set Pressure Range



Wiring

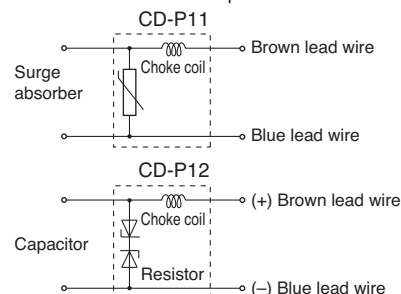
Electrical Circuit



Note) When the load which is operated by the pressure switch is an inductive load, or the lead wire is 5 m or longer, use the contact protection box shown in the table below. Otherwise, damage to the switch can result.

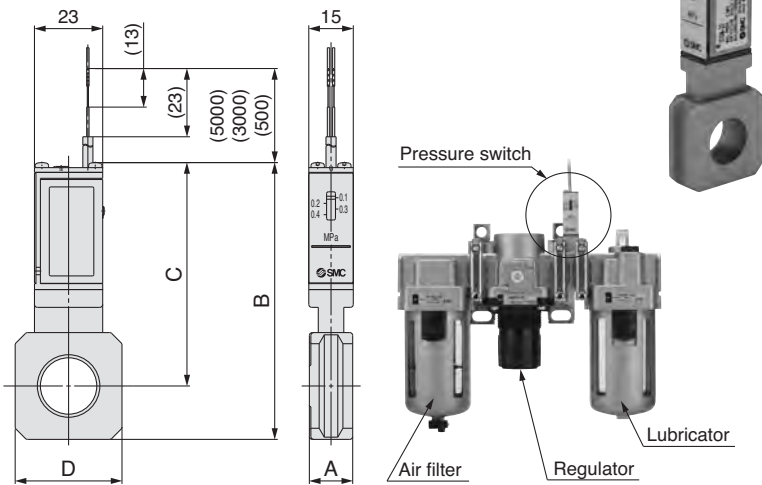
Part no.	Voltage	Lead wire length
CD-P11	100 V AC	Switch side: 0.5 m
CD-P12	24 V DC	Load side: 0.5 m

Internal circuit of contact protection box



Accessories

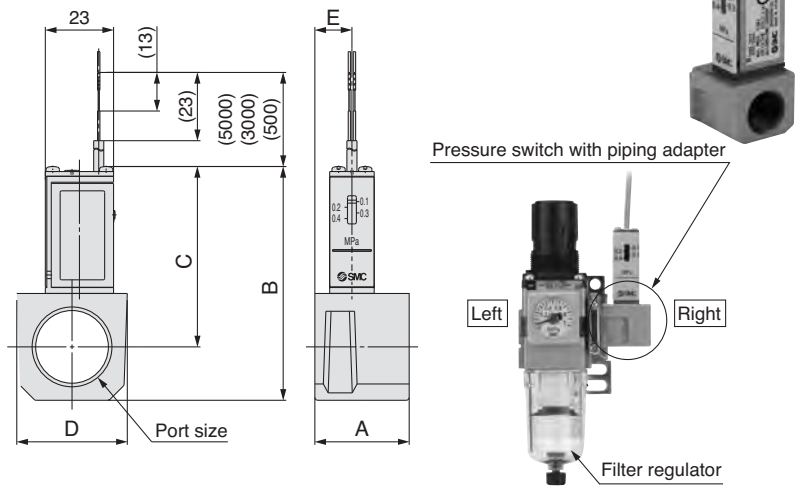
Pressure Switch with Spacer



Model	A	B	C	D	Applicable model
IS10M-20	11	74	64	28	AC20□
IS10M-30	13	85	71	30	AC25□, AC30□
IS10M-40	15	93	75	36	AC40□
IS10M-50	17	97	77	44	AC40□-06
IS10M-60	22	91	67	53	AC50□, AC55□, AC60□

Note) Prepare a spacer separately for modular connection.

Pressure Switch with Piping Adapter



Model	Port size	A	B	C	D	E	Applicable model
IS10E-20F01	G1/8	30	66	55	28	16	AC20□
IS10E-20F02	G1/4						AR20□, AW20□
IS10E-20F03	G3/8						AWM20, AWD20
IS10E-30F02	G1/4	32	73	59	30	13	AC25□, AC30□
IS10E-30F03	G3/8						AR25□, AR30□, AW30□
IS10E-30F04	G1/2						AWM30, AWD30
IS10E-40F02	G1/4	32	79	61	37	13	Note 2)
IS10E-40F03	G3/8						AC40□
IS10E-40F04	G1/2						AR40□, AW40□
IS10E-40F06	G3/4						AWM40, AWD40

Note 1) □ in the model numbers indicates a thread type. No indication is necessary for Rc; however, indicate N for NPT, and F for G.

Note 2) Cannot be mounted to the AC40□-06 and AW40□-06.

Note 3) Prepare a spacer separately for modular connection.

* The pressure switch can be mounted on the AC40□-06 and above and the AW40□-06 by screwing the IS10-01 into the piping adapter E500-□06-X501 or E600-□06-X501 to E600-□10-X501 (Rc1/8 threaded on top surface). Products with a premounted switch are available as a special order. Please contact SMC beforehand.

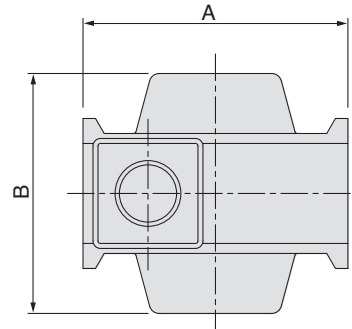
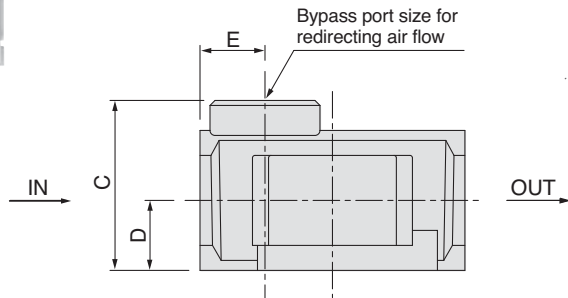
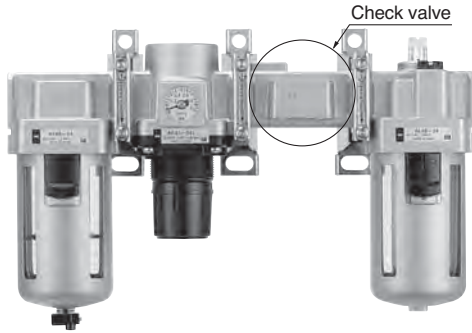
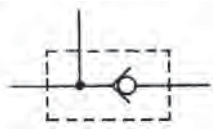
Check Valve (K)

1/8, 1/4, 3/8

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



Symbol



Specifications

Model	Effective area [mm ²]
AKM2000	28
AKM3000	55
AKM4000	111

Be sure to use above check valves when redirecting the air flow on the inlet side of the lubricator. There are no machined threads in the inlet or outlet ports.

How to Order

AKM 30 00 – F 01

Check valve

Body size

20	30	40
----	----	----

• Bypass port size for redirecting air flow

Symbol	Port size	Body size		
		20	30	40
01	1/8	●	●	—
02	1/4	●	●	●
03	3/8	—	—	●

• Thread type

F	G
---	---

Model	Bypass port sizes	A	B	C	D	E	Applicable body size
AKM2000	1/8, 1/4	40	40	28	11	11	20
AKM3000	1/8, 1/4	53	48	34	14	13	25, 30
AKM4000	1/4, 3/8	70	54	42	18	15	40

Note) Not applicable to parts 40 □-06.



Shut Off Valve Series VHS

3-Port Valve for Residual Pressure Release (V)

Features

- Relieves the downstream pressure for system servicing.
- Can be locked in off state with padlock.
- Visual position indication.
- Red handle for easy location on machine.

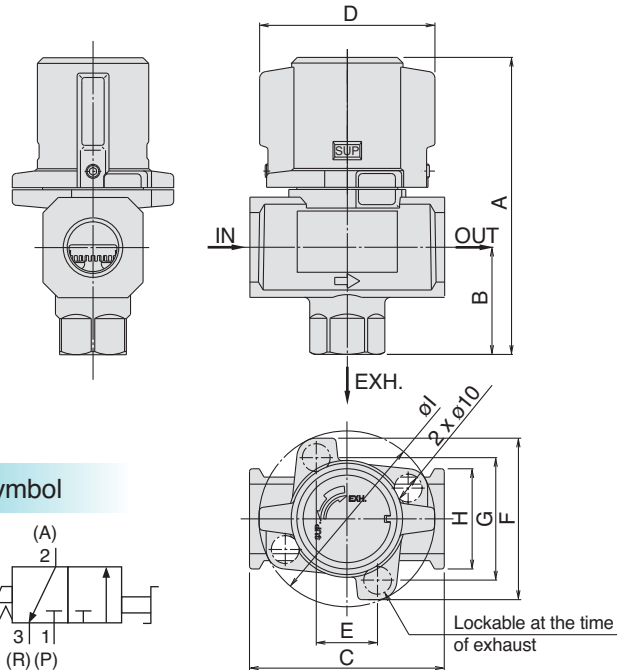
Specifications

Model	Port size		Effective area [mm ²] () Effective Area mm ² [Cv]	
	IN,OUT	EXH.	IN to OUT	OUT to EXH.
VHS20	1/8	1/8	10 (0.54)	11 (0.60)
	1/4		14 (0.76)	16 (0.87)
VHS30	1/4	1/4	16 (0.87)	14 (0.76)
	3/8		31 (1.68)	29 (1.57)
VHS40	1/4	3/8	27 (1.46)	36 (1.75)
	3/8		38 (2.06)	40 (2.08)
	1/2		55 (2.98)	42 (2.12)
VHS40-06	3/4	1/2	77 (4.17)	49 (2.12)
VHS50	3/4	1/2	82 (4.44)	50 (2.85)
	1		125 (6.78)	53 (2.93)

Note) Use an air filter on the IN side for operating protection.



With the use of a 3-port valve for residual pressure release, pressure left in the line can be easily exhausted.



How to order

Air Preparation

VHS 30 F 03

3-port valve for residual pressure release

Body size

Symbol	Applicable model
20	AC20
30	AC25,30
40	AC40
50	AC50, AC60 ^{Note)}

Note) When the valve is mounted on 60 size, the flow rate may decrease depending upon the mounting position.

Thread type

F	G
---	---

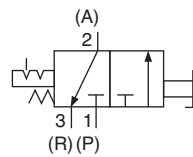
Port size

Symbol	Port size	Body size			
		20	30	40	50
01	1/8	●	—	—	—
02	1/4	●	●	●	—
03	3/8	—	●	●	—
04	1/2	—	—	●	—
06	3/4	—	—	●	●
10	1	—	—	—	●

Optional specifications

Code	Description
—	Flow direction: Left to right
R	Flow direction: Right to left

Symbol



Model	A	B	C	D	E	F	G	H	I
VHS20	59	20	40	34	—	45	33	28	45
VHS30	78	29	53	46	—	55	42	30	55
VHS40	107	39	70	63	22	58	44	36	63
VHS40-06	110	42	75	67	21	65	50	44	69
VHS50	134	53	90	78	26	76	61	54	81

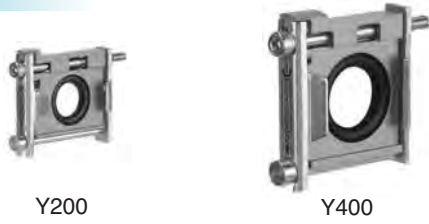
Caution

1. If a stop valve or a silencer is connected to the exhaust port of VHS20/30, the effective sectional area should be larger than the figure indicated in the following table, to prevent malfunction caused by back pressure. (This is not applicable to VHS40 and VHS50)

Model	Effective area [mm ²]
VHS20	5
VHS30	5

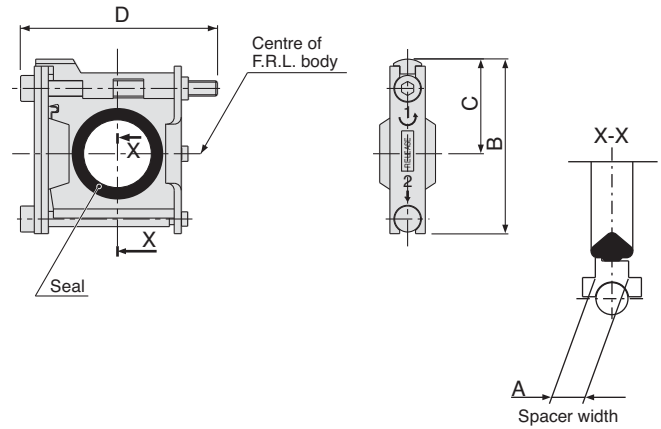
FRL Spacers and Brackets Accessories

Spacer



Y200

Y400



Model	A	B	C	D	Applicable body size
Y100	6	27	15	33	10
Y200	3	35.5	18.5	48	20
Y300	4	47	26	59	25, 30
Y400	5	57	31	65	40
Y500	5	61	33	70	40-06
Y600	6	75.5	41	86	50, 55, 60

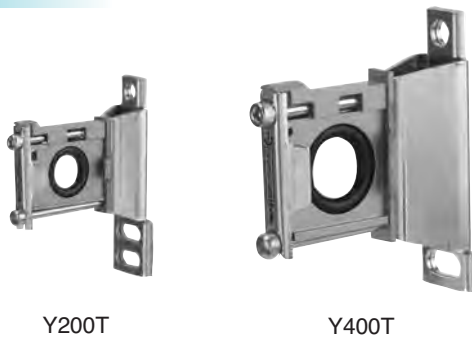
Replacement parts

Description	Material	Part no.					
		Y100	Y200	Y300	Y400	Y500	Y600
Seal	HNBR ^{Note 2)}	Y100P-060AS ^{Note 1)}	Y200P-061S	Y300P-060S	Y400P-060S	Y500P-060S	Y600P-060S

Note 1) Y100 comes with 2 O-rings.

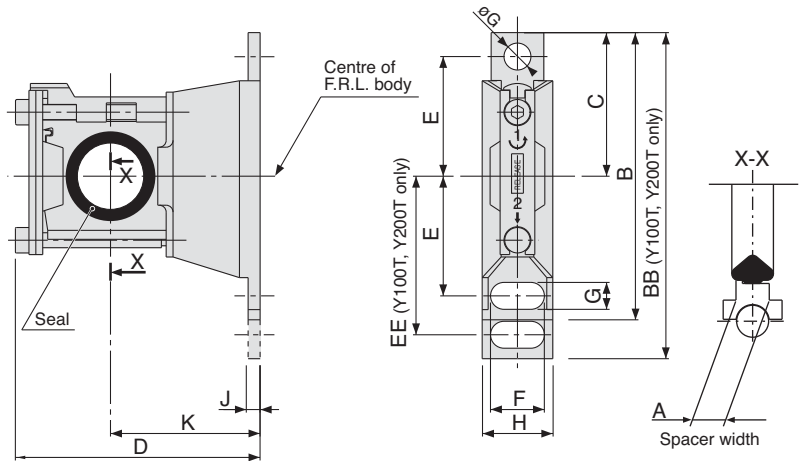
Note 2) NBR seal is used for Y100 spacer because of no direct contact with fluid.

Spacer with Bracket



Y200T

Y400T



Model	A	B	BB	C	D	E	EE	F	G	øG	H	J	K	Applicable body size
Y100T	6	—	56	24.5	40.5	20	27	6.8	4.5	4.5	14	2.8	25	10
Y200T	3	—	67	29	53	24	33	12	5.5	5.5	19	3.2	30	20
Y300T	4	82	—	41	68	35	—	14	7	7	21	4	41	25, 30
Y400T	5	96	—	48	81.5	40	—	18	9	9	26	4	50	40
Y500T	5	96	—	48	86	40	—	18	9	9	27	4.6	50	40-06
Y600T	6	120	—	60	112	50	—	20	11	11	31	6.4	70	50, 55, 60

Replacement parts

Description	Material	Part no.					
		Y100T	Y200T	Y300T	Y400T	Y500T	Y600T
Seal	HNBR ^{Note 2)}	Y100P-060AS ^{Note 1)}	Y200P-061S	Y300P-060S	Y400P-060S	Y500P-060S	Y600P-060S

Note 1) Y100T comes with 2 O-rings.

Note 2) NBR seal is used for Y100T spacer because of no direct contact with fluid.



Modular Adapter Series E210/310/410

Features

- Flexible mounting.
- Reduced space / piping maintenance cost.



How to Order

E310 – **U** **03**

Size

210
310
410

Thread

U	Uni thread
---	------------

Piping port size

Symbol	Port size Uni thread	Size		
		210	310	410
01	1/8	●	—	—
02	1/4	●	●	●
03	3/8	—	●	●
04	1/2	—	—	●



Related Products

- Series AC - Air Preparation - page 1076
- Series AC-A - Air Preparation - page 1078
- Series AFF - Main Line Filter - page 1167
- Series AM□ - Mist Separator - page 1171
- Series VP - 3 Por Solenoid Valve for Air - page 406
- Series VX2 - Direct Operated 2 port Solenoid Valves - page 1457
- Series VXD - Pilot Operated 2 Port Solenoid Valve - page 1448
- Series VXZ - Pilot Operated 2 Port Solenoid Valves - page 1451

Specifications

Model	E210		E310		E410		
Port size	1/8	1/4	1/4	3/8	1/4	3/8	1/2
Piping I.D.	ø6	ø8	ø8	ø10	ø8	ø10	ø12
Fluid	Air						
Ambient and fluid temperature	–5 to 60°C (No freezing)						
Proof pressure	1.5 MPa						
Maximum operating pressure	1.0 MPa						
Mass [g]	26	25	38	38	60	62	68

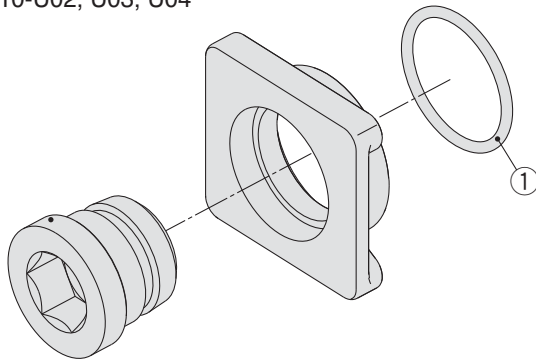
Applicable Attachment Part Number

Applicable models	E210	E310	E410
Spacer	Y200	Y300	Y400
Spacer with bracket	Y200T	Y300T	Y400T

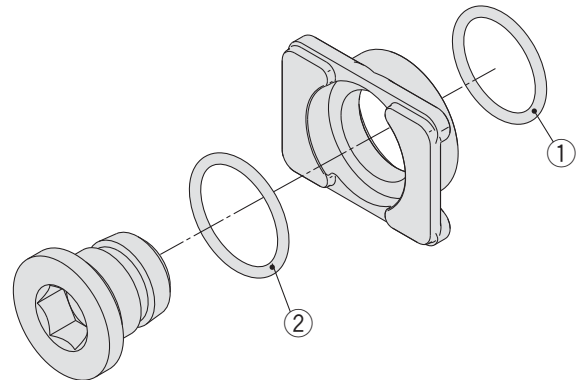


Construction

E210-U01
E310-U02, U03
E410-U02, U03, U04



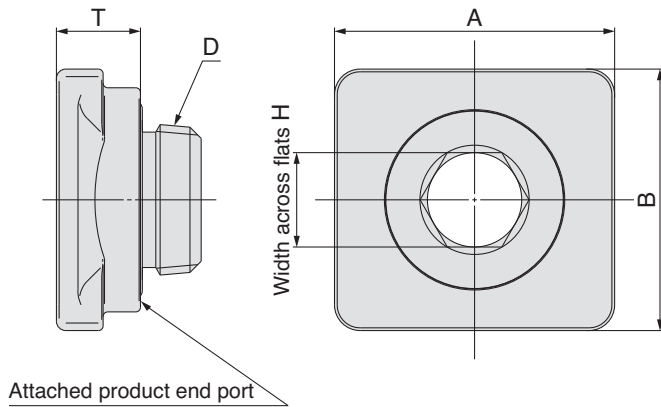
E210-U02



Replacement parts

No.	Description	Material	Part no.				
			E210-U01	E210-U02	E310-U02 E410-U02	E310-U03 E410-U03	E410-U04
1	O-ring	NBR	E210P-040S	E210P-030S	E210P-030S	E310P-030S	E410P-030S
2	O-ring	NBR	—	E210P-050S	—	—	—

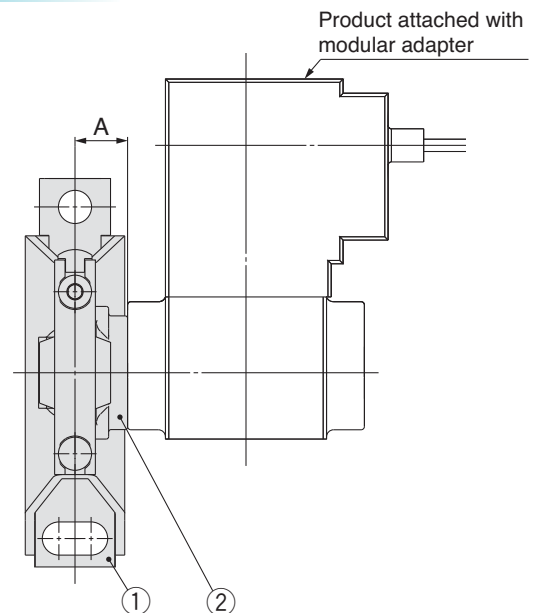
Dimensions



Unit: [mm]

Part no.	D Uni thread	A	B	T	Width across flats H
E210-U01	1/8	28	21	9	6
E210-U02	1/4				8
E310-U02	1/4	30	28		8
E310-U03	3/8				10
E410-U02	1/4	36	36		8
E410-U03	3/8				10
E410-U04	1/2			12	

Mounting Dimensions



Unit: [mm]

① Spacer with bracket	② Modular adapter	A
Y200T	E210-U01 to U02	10.6
Y300T	E310-U02 to U03	11.1
Y400T	E410-U02 to U04	11.6

Note) Y200 to Y400 spacers share the same dimensions.



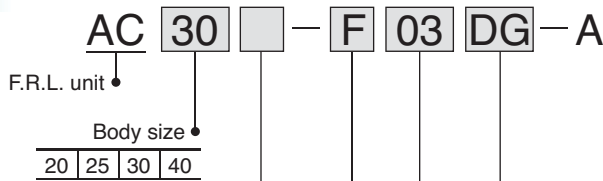
Modular F.R.L. Unit Series AC-A

Features

- Redesigned and renovated.
- Energy saving regulator.
- In-bowl assembled element construction.
- Double layer transparent bowl.
- Port sizes: 1/8 to 3/4.
- Wide range of attachments and accessories.



How to Order



Model combination

Symbol	Combination				
	AF	AR	AL	AW	AFW
—	(1)	(2)	(3)	—	—
A	—	—	(2)	(1)	—
B	(1)	(2)	—	—	—
C	(1)	(3)	—	—	(2)
D	—	—	—	(1)	(2)

Note 1) The number inside () indicates the combination order counted from the inlet side.

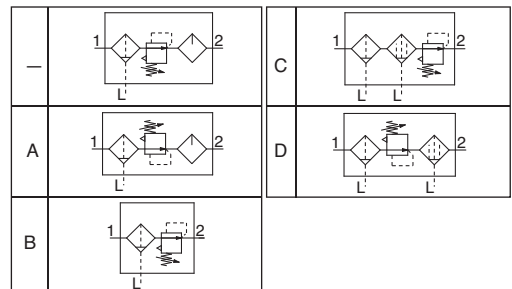
Thread type

F	G
---	---

Port size

Symbol	Port size	Body size			
		20	25	30	40
01	1/8	●	—	—	—
02	1/4	●	●	●	●
03	3/8	—	●	●	●
04	1/2	—	—	—	●
06	3/4	—	—	—	●

Symbols



Options ^{Note 1)}

	Options	Body size			
		20	25	30	40
—	Without auto drain / Without pressure gauge	●	●	●	●
C ^{Note 2)}	N.C. (Normal close) Drain port is closed when pressure is not applied	●	●	●	●
D ^{Note 3)}	N.O. (Normal open) Drain port is open when pressure is not applied	●	●	●	●
G ^{Note 4)}	Round type pressure gauge (with limit indicator)	●	●	●	●
M ^{Note 4)}	Round type pressure gauge (with colour zone)	●	●	●	●

Note 1) Option G, M are not assembled and supplied loose at the time of shipment.

Note 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.

Note 3) If the compressor is small (0.75 kW, discharge flow is less than 100 L/min[ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.

Note 4) When the pressure gauge is attached, a 1.0 MPa pressure gauge will be fitted for standard (0.7 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.

* When more than one specification is required, indicate in ascending alphanumeric order.

Product Recommendation



Stocked items for fast delivery

AC20-F02-A	AC20A-F01-A	AC40A-F04DG-A
AC20-F02C-A	AC20A-F02-A	AC40A-F04G-A
AC20-F02G-A	AC20A-F02C-A	AC40A-F06-A
AC30-F03-A	AC20A-F02CG-A	AC40A-F06D-A
AC30-F03D-A	AC20A-F02G-A	AC40A-F06G-A
AC30-F03G-A	AC30A-F02-A	AC30B-F03-A
AC40-F03-A	AC30A-F02D-A	AC40B-F04D-A
AC40-F04-A	AC30A-F03-A	AC40B-F04DG-A
AC40-F04G-A	AC30A-F03D-A	AC40B-F04G-A
AC40-F06-A	AC30A-F03G-A	AC40D-F04D-A
AC40-F06G-A	AC40A-F04D-A	



Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552

Series IS10 - Pressure Switches - page 1093

Series AKM - Check Valve - page 1091

(Related Products)

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

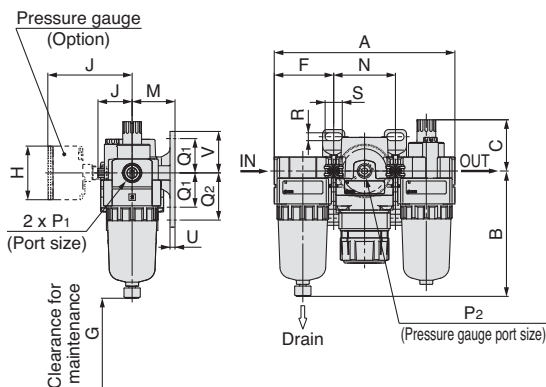
F.R.L. Unit (Air Filter + Regulator + Lubricator) Series AC20-A to AC40-A

Standard Specifications

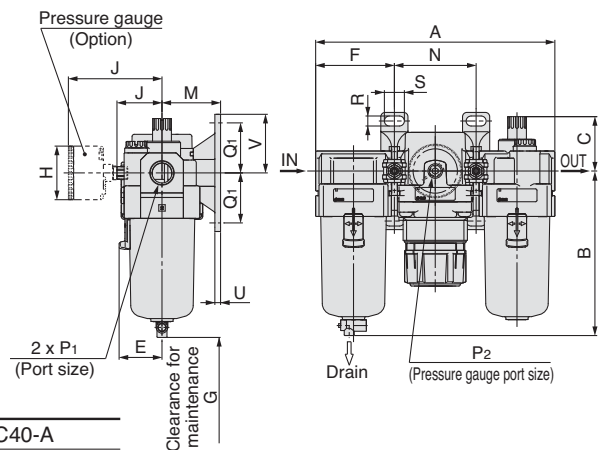
Model	AC20-A	AC25-A	AC30-A	AC40-A	AC40-06-A
Component	Air filter	AF20-A	AF30-A	AF30-A	AF40-A
	Regulator	AR20-A	AR25-A	AR30-A	AR40-A
	Lubricator	AL20-A	AL30-A	AL30-A	AL40-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4
Pressure gauge port size	1/8				
Fluid	Air				
Ambient and fluid temperature	– 5 to 60°C(with no freezing)				
Proof pressure	1.5 MPa				
Max. operating pressure	1.0 MPa				
Set pressure range	0.05 to 0.7 MPa				
Nominal filtration rating	5 µm				
Recommended lubricant	Class 1 turbine oil (ISO VG32)				
Bowl material	Polycarbonate				
Bowl guard	Semi-standard (Steel)	Standard (Polycarbonate)			
Regulator construction	Relieving type				
Weight [kg]	0.39	0.67	0.82	1.26	1.43

Dimensions

AC20-A



AC25-A to AC40-A



Applicable model	AC20-A	AC25-A to AC40-A
Optional specifications	With auto drain (N.C.)	With auto drain (N.O./N.C.)
Dimensions		<p>N.O.: Black N.C.: Grey</p> <p>Thread type/Rc, G: ø10 One-touch fitting Thread type/NPT: ø3/8" One-touch fitting</p>

Model	Standard specifications																
	P ₁	P ₂	A	B	C	E	F	G	J	Bracket mount							
										M	N	Q ₁	Q ₂	R	S	U	V
AC20-A	1/8, 1/4	1/8	126.4	87.6	35.9	—	41.6	60	23.4	30	43.2	24	33	5.5	12	3.5	29
AC25-A	1/4, 3/8	1/8	167.4	115.1	38.1	30	55.1	80	30.5	41	57.2	35	—	7	14	4	41
AC30-A	1/4, 3/8	1/8	167.4	115.1	38.1	30	55.1	80	30.5	41	57.2	35	—	7	14	4	41
AC40-A	1/4, 3/8, 1/2	1/8	220.4	147.1	39.8	38.4	72.6	110	36.1	50	75.2	40	—	9	18	5	48
AC40-06-A	3/4	1/8	235.4	149.1	37.8	38.4	77.6	110	39.6	50	80.2	40	—	9	18	5	48

Model	Optional specifications				
	Round type pressure gauge		Round type pressure gauge (with colour zone)		With auto drain
	H	J	H	J	B
AC20-A	ø37.5	58.5	ø37.5	59.5	104.9
AC25-A	ø37.5	58.5	ø37.5	59.5	156.8
AC30-A	ø37.5	65	ø37.5	66	156.8
AC40-A	ø42.5	72	ø42.5	72	186.9
AC40-06-A	ø42.5	72	ø42.5	72	188.9



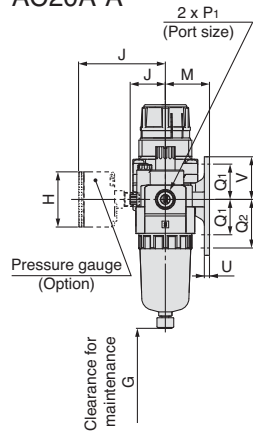
F.R.L. Unit (Filter Regulator + Lubricator) Series AC20A-A to AC40A-A

Standard Specifications

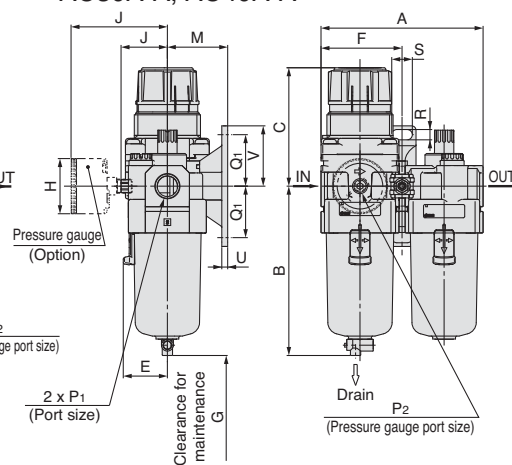
	Model	AC20A-A	AC30A-A	AC40A-A	AC40A-06-A
Component	Filter regulator	AW20-A	AW30-A	AW40-A	AW40-06-A
	Lubricator	AL20-A	AL30-A	AL40-A	AL40-06-A
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4
Pressure gauge port size		1/8			
Fluid		Air			
Ambient and fluid temperature		- 5 to 60°C (with no freezing)			
Proof pressure		1.5 MPa			
Maximum operating pressure		1.0 MPa			
Set pressure range		0.05 to 0.7 MPa			
Nominal filtration rating		5 µm			
Recommended lubricant		Class 1 turbine oil (ISO VG32)			
Bowl material		Polycarbonate			
Bowl guard		Semi-standard (Steel)	Standard (Polycarbonate)		
Regulator construction		Relieving type			
Weight [kg]		0.33	0.66	1.22	1.34

Dimensions

AC20A-A



AC30A-A, AC40A-A



Applicable model	AC20A-A
Optional specifications	With auto drain (N.C.)
Dimensions	
Applicable model	AC30A-A, AC40A-A
Optional specifications	With auto drain (N.O./N.C.)
Dimensions	

Model	Standard specifications															
	P ₁	P ₂	A	B	C (Note)	E	F	G	J	Bracket mount						
										M	Q ₁	Q ₂	R	S	U	V
AC20A-A	1/8, 1/4	1/8	83.2	87.6	67.4	—	41.6	60	23.4	30	24	33	5.5	12	3.5	29
AC30A-A	1/4, 3/8	1/8	110.2	115.1	83.5	30	55.1	80	30.5	41	35	—	7	14	4	41
AC40A-A	1/4, 3/8, 1/2	1/8	145.2	147.1	100	38.4	72.6	110	36.1	50	40	—	9	18	5	48
AC40A-06-A	3/4	1/8	155.2	149.1	101.5	38.4	77.6	110	39.6	50	40	—	9	18	5	48

Model	Optional specifications				
	Round type pressure gauge		Round type pressure gauge (with colour zone)		With auto drain
	H	J	H	J	B
AC20A-A	ø37.5	58.5	ø37.5	59.5	104.9
AC30A-A	ø37.5	65	ø37.5	66	156.8
AC40A-A	ø42.5	72	ø42.5	72	186.9
AC40A-06-A	ø42.5	72	ø42.5	72	188.9

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

Preparation Air

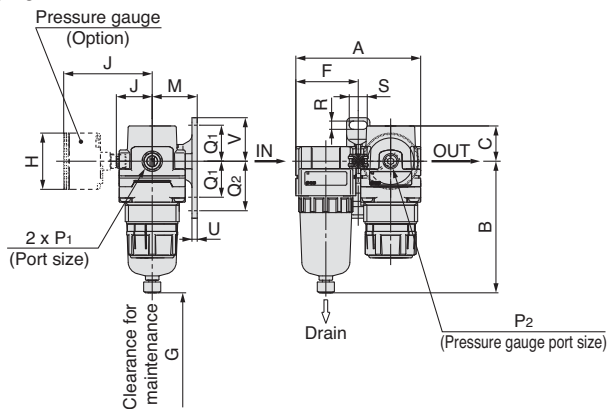
F.R.L. Unit (Air Filter + Regulator) Series AC20B-A to AC40B-A

Standard Specifications

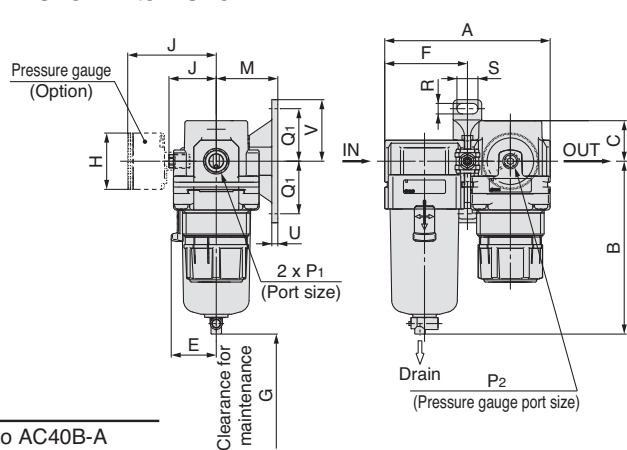
Model		AC20B-A	AC25B-A	AC30B-A	AC40B-A	AC40B-06-A
Component	Air filter	AF20-A	AF30-A	AF30-A	AF40-A	AF40-06-A
	Regulator	AR20-A	AR25-A	AR30-A	AR40-A	AR40-06-A
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4
Pressure gauge port size		1/8				
Fluid		Air				
Ambient and fluid temperature		- 5 to 60°C (with no freezing)				
Proof pressure		1.5 MPa				
Maximum operating pressure		1.0 MPa				
Set pressure range		0.05 to 0.7 MPa				
Nominal filtration rating		5 µm				
Bowl material		Polycarbonate				
Bowl guard		Semi-standard (Steel)	Standard (Polycarbonate)			
Regulator construction		Relieving type				
Weight [kg]		0.27	0.42	0.57	0.79	0.90

Dimensions

AC20B-A



AC25B-A to AC40B-A



Applicable model	AC20B-A	AC25B-A to AC40B-A
Optional specifications	With auto drain (N.C.)	With auto drain (N.O./N.C.)
Dimensions		<p>N.O.: Black N.C.: Grey</p> <p>Thread type/Rc, G: ø10 One-touch fitting Thread type/NPT: ø3/8" One-touch fitting</p>

Model	Standard specifications															
	P ₁	P ₂	A	B	C	E	F	G	J	Bracket mount						
										M	Q ₁	Q ₂	R	S	U	V
AC20B-A	1/8, 1/4	1/8	83.2	87.6	23.5	—	41.6	25	23.4	30	24	33	5.5	12	3.5	29
AC25B-A	1/4, 3/8	1/8	110.2	115.1	23.5	30	55.1	35	30.5	41	35	—	7	14	4	41
AC30B-A	1/4, 3/8	1/8	110.2	115.1	27	30	55.1	35	30.5	41	35	—	7	14	4	41
AC40B-A	1/4, 3/8, 1/2	1/8	145.2	147.1	33.5	38.4	72.6	40	36.1	50	40	—	9	18	5	48
AC40B-06-A	3/4	1/8	155.2	149.1	33.5	38.4	77.6	40	39.6	50	40	—	9	18	5	48

Model	Optional specifications				
	Round type pressure gauge		Round type pressure gauge (with colour zone)		With auto drain
	H	J	H	J	B
AC20B-A	ø37.5	58.5	ø37.5	59.5	104.9
AC25B-A	ø37.5	58.5	ø37.5	59.5	156.8
AC30B-A	ø37.5	65	ø37.5	66	156.8
AC40B-A	ø42.5	72	ø42.5	72	186.9
AC40B-06-A	ø42.5	72	ø42.5	72	188.9



F.R.L. Unit (Air Filter + Mist Separator + Regulator) Series AC20C-A to AC40C-A

Standard Specifications

Model		AC20C-A	AC25C-A	AC30C-A	AC40C-A	AC40C-06-A
Component	Air filter	AF20-A	AF30-A	AF30-A	AF40-A	AF40-06-A
	Mist separator	AFM20-A	AFM30-A	AFM30-A	AFM40-A	AFM40-06-A
	Regulator	AR20-A	AR25-A	AR30-A	AR40-A	AR40-06-A
Port size		1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4
Pressure gauge port size		1/8				
Fluid		Air				
Ambient and fluid temperature		- 5 to 60°C (with no freezing)				
Proof pressure		1.5 MPa				
Maximum operating pressure		1.0 MPa				
Minimum operating pressure		0.05 MPa				
Set pressure range		0.05 to 0.7 MPa				
Nominal filtration rating		AF: 5 µm, AFM: 0.3 µm (99.9% filtered particle size)				
Outlet side oil mist concentration		MAX 1.0 mg/m ³ (ANR) (≈0.8 ppm) ^{Note 2) Note 3)}				
Rated flow [l/min (ANR)] ^{Note 1)}		200	450	450	1100	1100
Bowl material		Polycarbonate				
Bowl guard		Semi-standard (Steel)	Standard (Polycarbonate)			
Regulator construction		Relieving type				
Weight [kg]		0.38	0.67	0.82	1.26	1.42

Note 1) 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.

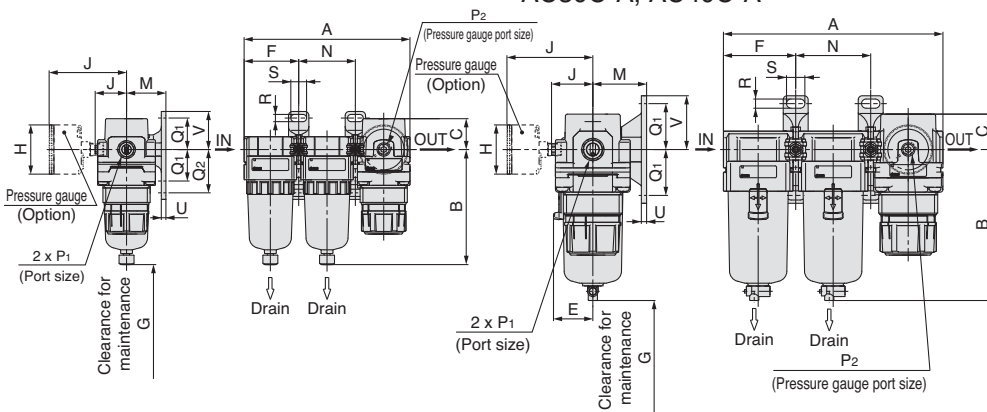
Note 2) When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).

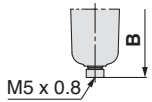
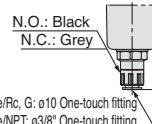
Note 3) Bowl O-ring and other O-rings are slightly lubricated.

Dimensions

AC20C-A

AC30C-A, AC40C-A



Applicable model	AC20C-A
Optional specifications	With auto drain (N.C.)
Dimensions	 M5 x 0.8
Applicable model	AC30C-A, AC40C-A
Optional specifications	With auto drain (N.O./N.C.)
Dimensions	 N.O.: Black N.C.: Grey Thread type/Rc: G: ø10 One-touch fitting Thread type/NPT: ø3/8" One-touch fitting

Model	Standard specifications																
	P ₁	P ₂	A	B	C	E	F	G	J	Bracket mount							
										M	N	Q ₁	Q ₂	R	S	U	V
AC20C-A	1/8, 1/4	1/8	126.4	87.6	23.5	—	41.6	40	23.4	30	43.2	24	33	5.5	12	3.5	29
AC25C-A	1/4, 3/8	1/8	167.4	115.1	23.5	30	55.1	50	30.5	41	57.2	35	—	7	14	4	41
AC30C-A	1/4, 3/8	1/8	167.4	115.1	27	30	55.1	50	30.5	41	57.2	35	—	7	14	4	41
AC40C-A	1/4, 3/8, 1/2	1/8	220.4	147.1	33.5	38.4	72.6	75	36.1	50	75.2	40	—	9	18	5	48
AC40C-06-A	3/4	1/8	235.4	149.1	33.5	38.4	77.6	75	39.6	50	80.2	40	—	9	18	5	48

Model	Optional specifications				
	Round type pressure gauge		Round type pressure gauge (with colour zone)		With auto drain
	H	J	H	J	B
AC20C-A	ø37.5	58.5	ø37.5	59.5	104.9
AC25C-A	ø37.5	58.5	ø37.5	59.5	156.8
AC30C-A	ø37.5	65	ø37.5	66	156.8
AC40C-A	ø42.5	72	ø42.5	72	186.9
AC40C-06-A	ø42.5	72	ø42.5	72	188.9

F.R.L. Unit (Filter Regulator + Mist Separator) Series AC20D-A to AC40D-A

Standard Specifications

Model		AC20D-A	AC30D-A	AC40D-A	AC40D-06-A
Component	Filter regulator	AW20-A	AW30-A	AW40-A	AW40-06-A
	Mist separator	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 gauge port size		1/8			
Fluid		Air			
Ambient and fluid temperature		- 5 to 60°C (with no freezing)			
Proof pressure		1.5 [MPa]			
Maximum operating pressure		1.0 [MPa]			
Minimum operating pressure		0.05 [MPa]			
Set pressure range		0.05 to 0.7 [MPa]			
Nominal filtration rating		AW: 5 µm, AFM: 0.3 µm (99.9% filtered particle size)			
Rated flow [l/min (ANR)] ^{Note 1)}		150	330	800	800
Outlet side oil mist concentration		MAX 1.0 mg/m ³ (ANR) (≈0.8 ppm) ^{Note 2) Note 3)}			
Bowl material		Polycarbonate			
Bowl guard		Semi-standard (Steel)	Standard (Polycarbonate)		
Regulator construction		Relieving type			
Weight [kg]		0.32	0.65	1.22	1.34

Note 1) Conditions: Mist separator inlet pressure: 0.5 [MPa]; The rated flow varies depending on the inlet pressure.

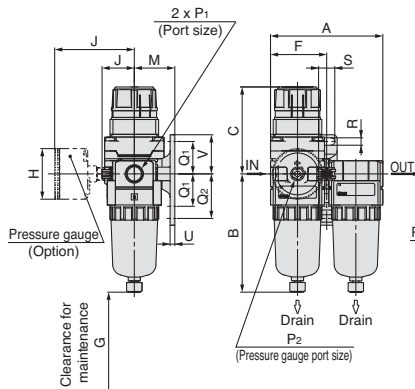
Keep the air flow within the rated flow to prevent an outflow of lubricant to the outlet side.

Note 2) When the compressor oil mist discharge concentration is 30 mg/m³ (ANR).

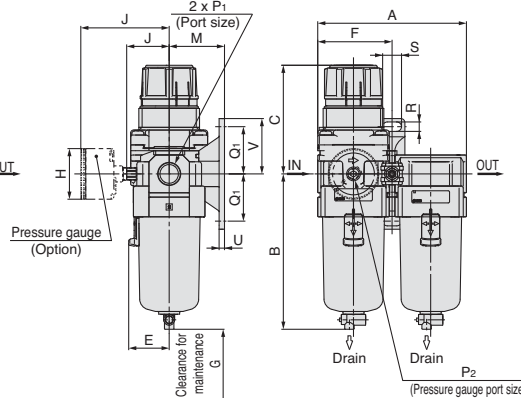
Note 3) Bowl O-ring and other O-rings are slightly lubricated.

Dimensions

AC20D-A



AC30D-A, AC40D-A



Applicable model	AC20D-A
Optional specifications	With auto drain (N.C.)
Dimensions	
Applicable model	AC30D-A, AC40D-A
Optional specifications	With auto drain (N.O./N.C.)
Dimensions	

Model	Standard specifications															
	P ₁	P ₂	A	B	C ^{Note)}	E	F	G	J	Bracket mount						
										M	Q ₁	Q ₂	R	S	U	V
AC20D-A	1/8, 1/4	1/8	83.2	87.6	67.4	—	41.6	40	23.4	30	24	33	5.5	12	3.5	29
AC30D-A	1/4, 3/8	1/8	110.2	115.1	83.5	30	55.1	50	30.5	41	35	—	7	14	4	41
AC40D-A	1/4, 3/8, 1/2	1/8	145.2	147.1	100	38.4	72.6	75	36.1	50	40	—	9	18	5	48
AC40D-06-A	3/4	1/8	155.2	149.1	101.5	38.4	77.6	75	39.6	50	40	—	9	18	5	48

Model	Optional specifications				
	Round type pressure gauge		Round type pressure gauge (with color zone)		With auto drain
	H	J	H	J	B
AC20D-A	ø37.5	58.5	ø37.5	59.5	104.9
AC30D-A	ø37.5	65	ø37.5	66	156.8
AC40D-A	ø42.5	72	ø42.5	72	186.9
AC40D-06-A	ø42.5	72	ø42.5	72	188.9

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



For more product options and details see our specific catalogues or on-line information.

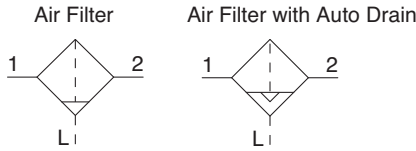
Air Filter

Series AF20-A to AF40-A

Features

- 5 μm filtration degree
- Double layer transparent bowl
- Good visibility of the condensate
- Complete safe bowl guard
- Easy and quick in-hand maintenance
- Safe and quick bowl locking system
- Port sizes: 1/8 to 3/4

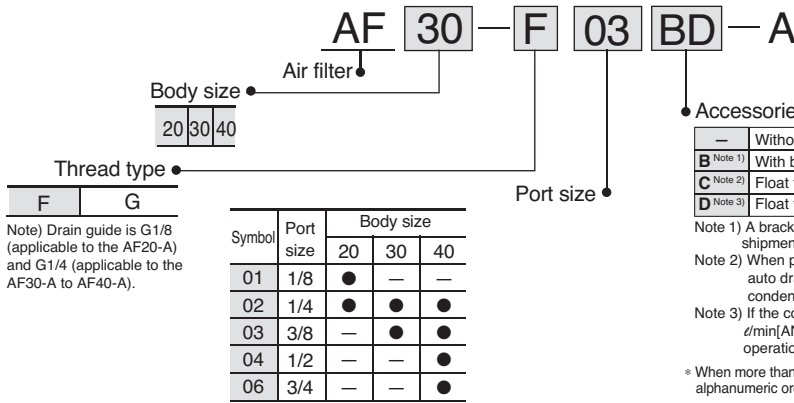
Symbol



AF20-A

AF40-A

How to Order



Product Recommendation



Stocked items for fast delivery

AF20-F01-A	AF40-F02-A
AF20-F01C-A	AF40-F03-A
AF20-F02-A	AF40-F03D-A
AF20-F02B-A	AF40-F04B-A
AF20-F02C-A	AF40-F04BD-A
AF30-F02-A	AF40-F04C-A
AF30-F02C-A	AF40-F06-A
AF30-F02D-A	AF40-F06B-A
AF30-F03-A	AF40-F06C-A
AF30-F03C-A	AF40-F06D-A
AF30-F03D-A	



Accessories and Related Products

- (Accessories)
- Series VHS** - Residual Relief 3 Port Valve - page 552
 - Series IS10** - Pressure Switches - page 1093
 - Series AKM** - Check Valve - page 1091
- (Related Products)
- Series AC** - Air Preparation Modular Units - page 1076
 - Series IDG** - Membrane Air Dryer - page 1142
 - Series AV** - Soft Start-up Valves - www.smc.eu
 - Series KK** - S Couplers - page 1204
 - Series KQ2** - Fittings - page 1184
 - Series TU** - Tubing - page 1223

Standard specifications

Model	AF20-A	AF30-A	AF40-A	AF40-06-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4
Fluid	Air			
Ambient and fluid temperature	-5 to 60°C (with no freezing)			
Proof pressure	1.5 MPa			
Maximum operating pressure	1.0 MPa			
Nominal filtration rating	5 µm			
Drain capacity [cm ³]	8	25	45	
Bowl material	Polycarbonate			
Bowl guard	Semi-standard (Steel)	Standard (Polycarbonate)		
Weight [kg]	0.08	0.18	0.36	0.41

Options/Part No.

Optional specifications	Model			
	AF20-A	AF30-A	AF40-A	AF40-06-A
Bracket assembly ^{Note 1)}	AF22P-050AS	AF32P-050AS	AF42P-050AS	AF42P-070AS
Float type auto drain ^{Note 2) Note 3)}	N.C.	AD27-A	AD37-A	AD47-A
	N.O.	—	AD38-A	AD48-A

Note 1) Assembly of a bracket and 2 mounting screws.

Note 2) Minimum operating pressure: N.O. type-0.1 MPa; N.C. type-0.1 MPa (AD27-A) and 0.15 MPa (AD37-A/47-A).

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

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

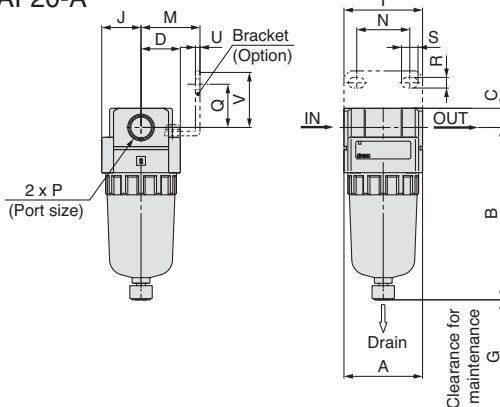
Replacement Parts

Description	Material	Part no.			
		AF20-A	AF30-A	AF40-A	AF40-06-A
Filter element	Non-woven fabric	AF20P-060S	AF30P-060S	AF40P-060S	
Baffle	PBT	AF22P-040S	AF32P-040S	AF42P-040S	
Bowl O-ring	NBR	C2SFP-260S	C32FP-260S	C42FP-260S	
Bowl assembly ^{Note)}	Polycarbonate	C2SF-A	C3SF-A	C4SF-A	

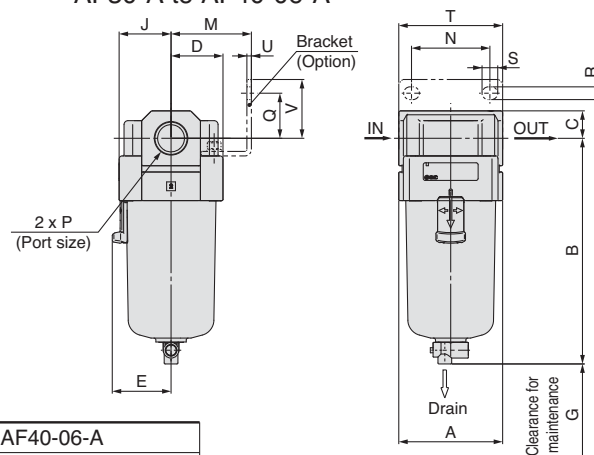
Note) Bowl O-ring is included. Please contact SMC regarding the bowl assembly supply for psi and °F unit specifications.

Dimensions

AF20-A



AF30-A to AF40-06-A



Applicable model	AF20-A	AF30-A to AF40-06-A
Optional specifications	With auto drain (N.C.)	With auto drain (N.O./N.C.)
Dimensions		<p>N.O.: Black N.C.: Grey</p> <p>Thread type/Rc, G: ø10 One-touch fitting Thread type/NPT: ø3/8" One-touch fitting</p>

Model	Standard specifications								Optional specifications								
	Bracket mount								With auto drain								
	P	A	B	C	D	E	G	J	M	N	Q	R	S	T	U	V	B
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
AF30-A	1/4, 3/8	53	115.1	14	26.7	30	35	26.7	41	40	23	6.5	8	53	2.3	30	156.8
AF40-A	1/4, 3/8, 1/2	70	147.1	18	35.5	38.4	40	35.5	50	54	26	8.5	10.5	70	2.3	35	186.9
AF40-06-A	3/4	75	149.1	20	35.5	38.4	40	35.5	50	54	25	8.5	10.5	70	2.3	34	188.9



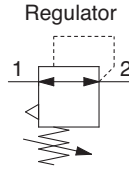
For more product options and details see our specific catalogues or on-line information.

Regulator Series AR20-A to AR40-A

Features

- Energy saving regulator
- Improved pressure drop
- Set pressure range 0.05 to 0.7 MPa
- Pressure gauge option
- Port sizes: 1/8 to 3/4

Symbol

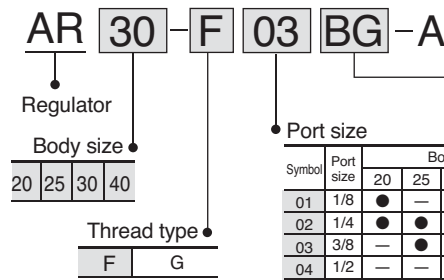


AR20-A



AR40-A

How to Order



Accessories Note 1)

		Body size			
		20	25	30	40
—	Without mounting option / Without Pressure gauge	●	●	●	●
B <small>Note 2)</small>	With bracket	●	●	●	●
H	With set nut (for panel fitting)	●	●	●	●
G	Round type pressure gauge (with limit indicator)	●	●	●	●
M <small>Note 3)</small>	Round type pressure gauge (with colour zone)	●	●	●	●

Note 1) Option B, G, H, M are not assembled and supplied loose at the time of shipment.

Note 2) Assembly of a bracket and set nuts.

Note 3) When the pressure gauge is attached, a 1.0 MPa pressure gauge will be fitted for standard (0.7 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.

* When more than one specification is required, indicate in ascending alphanumeric order.

Product Recommendation



Stocked items for fast delivery

AR20-F01-A	AR25-F03-A	AR40-F02-A
AR20-F01B-A	AR25-F03H-A	AR40-F03-A
AR20-F01BG-A	AR30-F02-A	AR40-F03H-A
AR20-F01H-A	AR30-F02B-A	AR40-F04BG-A
AR20-F02B-A	AR30-F02H-A	AR40-F04G-A
AR20-F02BG-A	AR30-F03B-A	AR40-F04H-A
AR20-F02G-A	AR30-F03BG-A	AR40-F06-A
AR25-F02-A	AR30-F03G-A	AR40-F06H-A
AR25-F02H-A	AR30-F03H-A	



Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552

Series IS10 - Pressure Switches - page 1093

Series AKM - Check Valve - page 1091

(Related Products)

Series AC-A - Air Preparation Modular Units - page 1076

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

Standard specifications

Model	AR20-A	AR25-A	AR30-A	AR40-A	AR40-06-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4
Pressure gauge port size	1/8				
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]	0.17	0.19	0.34	0.58	0.60

Options/Part No.

Optional specifications		Model					
		AR20-A	AR25-A	AR30-A	AR40-A	AR40-06-A	
Bracket assembly ^{Note 1)}		AR22P-270AS	AR27P-270AS	AR32P-270AS	AR42P-270AS	AR42P-270AS	
Set nut		AR22P-260S	AR22P-260S	AR32P-260S	AR42P-260S	AR42P-260S	
Pressure gauge	Round type ^{Note 2)}	Standard		G36-10-□01		G46-10-□01	
		0.02 to 0.2 MPa setting		G36-4-□01		G46-4-□01	
	Round type ^{Note 2)} (with colour zone)	Standard		G36-10-□01-L		G46-10-□01-L	
		0.02 to 0.2 MPa setting		G36-4-□01-L		G46-4-□01-L	

Note 1) Assembly of a bracket and set nuts

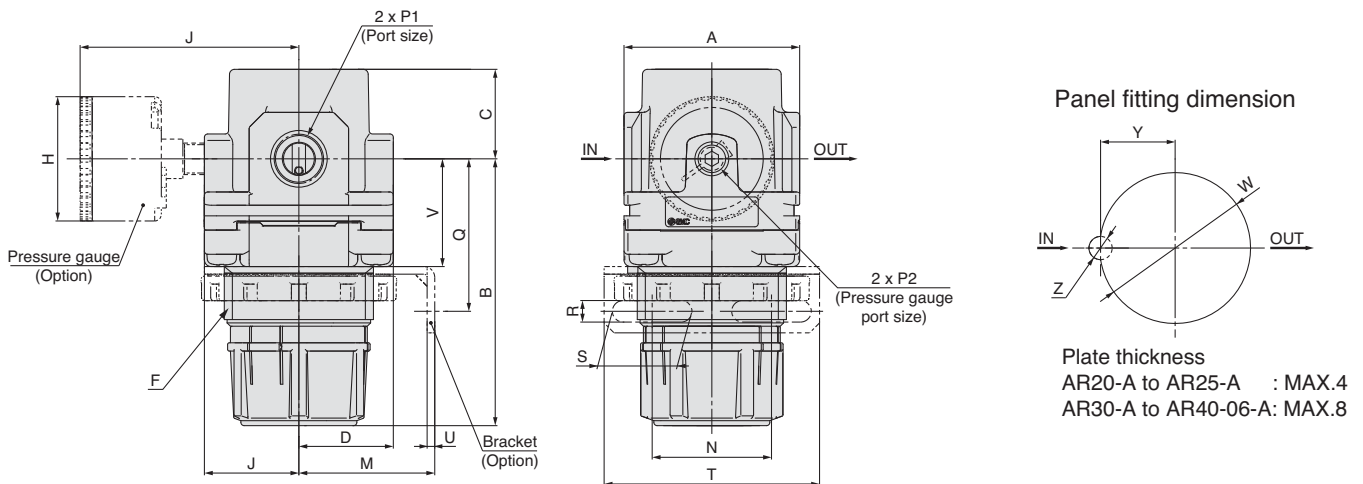
Note 2) □ in part numbers for a round pressure gauge indicates a type of connection thread. No indication is necessary for R.
Please contact SMC regarding the connection thread NPT and pressure gauge supply for psi unit specifications.

Replacement Parts

Description	Material	Part no.				
		AR20-A	AR25-A	AR30-A	AR40-A	AR40-06-A
Valve assembly	Stainless steel, HNBR	AR22P-060AS		AR32P-060AS	AR42P-060AS	
Diaphragm assembly	Weatherable NBR	AR22P-150AS		AR32P-150AS	AR42P-150AS	
Valve guide assembly	Polyacetal	AR22P-050AS		AR32P-050AS	AR42P-050AS	

Dimensions

AR20-A to AR40-06-A



Model	Standard specifications										Optional specifications												
											Round type pressure gauge		Round type pressure gauge (with colour zone)		Bracket mount					Panel mount			
	P ₁	P ₂	A	B ^{Note)}	C	D	F	J	H	J	H	J	M	N	Q	R	S	T	U	V	W	Y	Z
AR20-A	1/8, 1/4	1/8	40	67.4	23.5	22	M36 x 1.5	22	ø37.5	58.5	ø37.5	59.5	30	34	43.9	5.4	15.4	55	2.3	27.3	36.5	17.5	6
AR25-A	1/4, 3/8	1/8	53	70.4	23.5	22	M36 x 1.5	22	ø37.5	58.5	ø37.5	59.5	30	34	44.3	5.4	15.4	55	2.3	30.3	36.5	17.5	6
AR30-A	1/4, 3/8	1/8	53	83.5	27	28.5	M45 x 1.5	28.5	ø37.5	65	ø37.5	66	41	36	46	6.5	24	65	2.3	32.5	45.5	22.5	7
AR40-A	1/4, 3/8, 1/2	1/8	70	100	33.5	34.5	M52 x 1.5	34.5	ø42.5	72	ø42.5	72	50	38	54	8.5	26.5	70	2.3	38.4	52.5	26	7
AR40-06-A	3/4	1/8	75	101.5	33.5	34.5	M52 x 1.5	34.5	ø42.5	72	ø42.5	72	50	38	55.5	8.5	26.5	70	2.3	39.9	52.5	26	7

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



For more product options and details see our specific catalogues or on-line information.

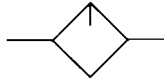
Lubricator Series AL20-A to AL40-A

Features

- For ISO VG32 Oil
- Double layer transparent bowl
- Complete safe bowl guard
- Safe and quick bowl locking system
- Port sizes: 1/8 to 3/4

Symbol

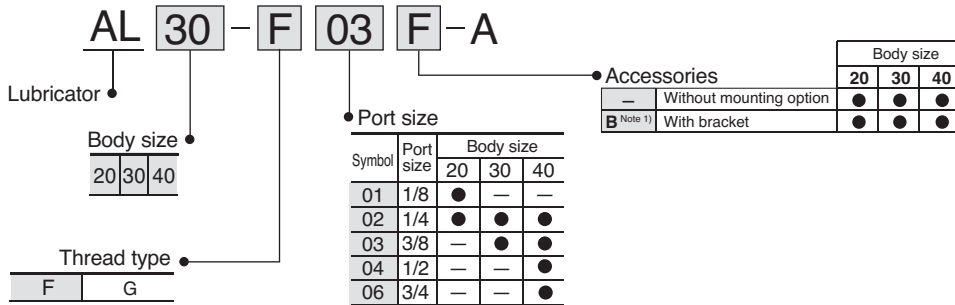
Lubricator



AL20-A

AL40-A

How to Order



Note 1) Option B is not assembled and supplied loose at the time of shipment.

Product Recommendation



Stocked items for fast delivery

AL20-F01-A	AL40-F03-A
AL20-F02-A	AL40-F04B-A
AL30-F02-A	AL40-F06-A
AL40-F02-A	



Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552

Series IS10 - Pressure Switches - page 1093

Series AKM - Check Valve - page 1091

(Related Products)

Series AC-A - Air Preparation Modular Units - page 1076

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

Standard specifications

Model	AL20-A	AL30-A	AL40-A	AL40-06-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4
Fluid	Air			
Proof pressure	1.5 MPa			
Maximum operating pressure	1.0 MPa			
Ambient and fluid temperature	- 5 to 60°C (with no freezing)			
Minimum dripping flow rate [L/min (ANR)] ^(Note)	15	1/4: 30 3/8: 40	1/4: 30 3/8: 40 1/2: 50	50
Oil capacity [cm ³]	25	55	135	
Recommended lubricant	Class 1 turbine oil (ISO VG32)			
Bowl material	Polycarbonate			
Bowl guard	Semi-standard (Steel)	Standard (Polycarbonate)		
Weight [kg]	0.10	0.20	0.38	0.43

Note) • 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 opened.

• Use air consumption flow rate for minimum dripping flow rate.

Option/Part No.

Optional specifications	Model			
	AL20-A	AL30-A	AL40-A	AL40-06-A
Bracket assembly ^(Note)	AF22P-050AS	AF32P-050AS	AF42P-050AS	AF42P-070AS

Note) Assembly of a bracket and 2 mounting screws.

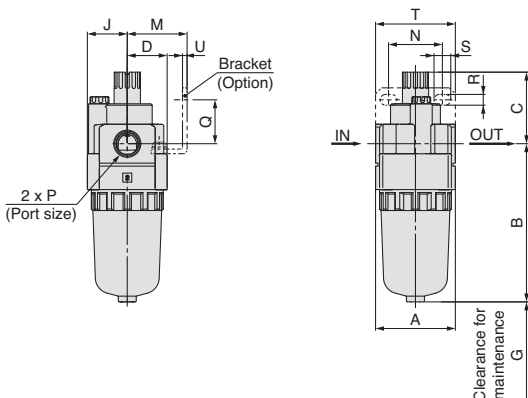
Replacement Parts

Description	Material	Part no.			
		AL20-A	AL30-A	AL40-A	AL40-06-A
Sight dome assembly	Polycarbonate	AL20P-080AS			
Lubrication plug assembly	—	AL22P-060AS	AL32P-060AS	AL42P-060AS	
Damper retainer assembly	—	AL20P-030AS	AL30P-030AS	AL40P-030AS	
Damper (assembly)	Synthetic resin	AL20P-040S	AL30P-040S	AL40P-040S	
Bowl seal	NBR	C2SFP-260S	C32FP-260S	C42FP-260S	
Bowl assembly ^{Note)}	Polycarbonate	C2SL-A	C3SL-A	C4SL-A	

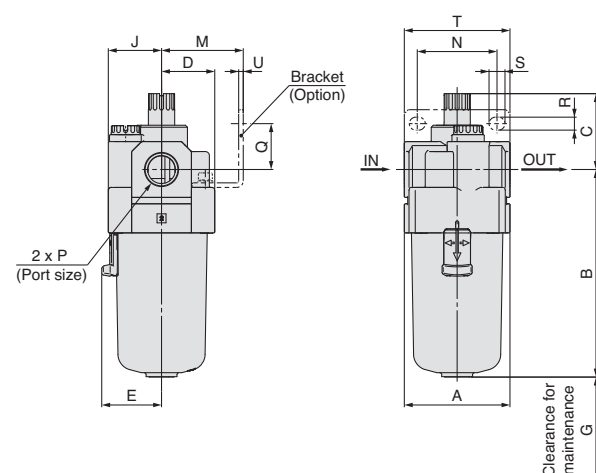
Note) Bowl seal is included. Please contact SMC regarding the bowl assembly supply for psi and °F unit specifications.

Dimensions

AL20-A



AL30-A, AL40-A



Model	Standard specifications							Optional specifications							
	P	A	B	C	D	E	G	J	M	N	Q	R	S	T	U
AL20-A	1/8, 1/4	40	79.3	35.9	20	—	60	20	30	27	22	5.4	8.4	40	2.3
AL30-A	1/4, 3/8	53	104.1	38.1	26.7	30	80	26.7	41	40	23	6.5	8	53	2.3
AL40-A	1/4, 3/8, 1/2	70	136.1	39.8	35.5	38.4	110	35.5	50	54	26	8.5	10.5	70	2.3
AL40-06-A	3/4	75	138.1	37.8	35.5	38.4	110	35.5	50	54	25	8.5	10.5	70	2.3



For more product options and details see our specific catalogues or on-line information.

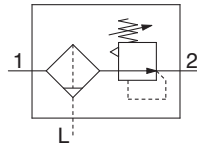
Filter Regulator Series AW20-A to AW40-A

Features

- 2 in 1 element for confine spaces
- 5 μm filtration degree
- Set pressure range 0.05 to 0.7 MPa
- Port sizes: 1/8 to 3/4

Symbol

Filter Regulator

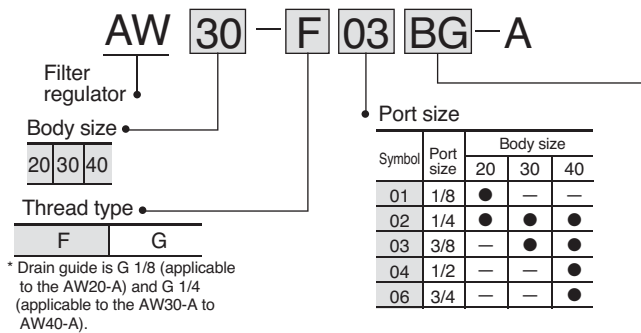


AW20-A



AW40-A

How to Order



* Drain guide is G 1/8 (applicable to the AW20-A) and G 1/4 (applicable to the AW30-A to AW40-A).

Accessories Note 1)

		Body size		
		20	30	40
—	Without mounting option / auto drain / pressure gauge	●	●	●
B <small>Note 2)</small>	With bracket	●	●	●
H	With set nut (for panel fitting)	●	●	●
C <small>Note 3)</small>	Float type auto drain (N.C.)	●	●	●
D <small>Note 4)</small>	Float type auto drain (N.O.)	—	●	●
G <small>Note 5)</small>	Round type pressure gauge (with limit indicator)	●	●	●
M <small>Note 5)</small>	Round type pressure gauge (with colour zone)	●	●	●

Note 1) Option B, G, H, M are not assembled and supplied loose at the time of shipment.

Note 2) Assembly of a bracket and set nuts.

Note 3) When pressure is not applied, condensate which does not start the auto drain mechanism will be left in the bowl. Releasing the residual condensate before ending operations for the day is recommended.

Note 4) If the compressor is small (0.75 kW, discharge flow is less than 100 c/min[ANR]), air leakage from the drain cock may occur during start of operations. N.C. type is recommended.

Note 5) When the pressure gauge is attached, a 1.0 MPa pressure gauge will be fitted for standard (0.7 MPa) type. 0.4 MPa pressure gauge for 0.2 MPa type.

* When more than one specification is required, indicate in ascending alphanumeric order.

Symbol	Port size	Body size		
		20	30	40
01	1/8	●	—	—
02	1/4	●	●	●
03	3/8	—	●	●
04	1/2	—	—	●
06	3/4	—	—	●

Product Recommendation



Stocked items for fast delivery

AW20-F01-A	AW20-F02-R-A	AW30-F03DH-A	AW40-F04C-A
AW20-F01C-A	AW30-F02-A	AW30-F03G-A	AW40-F04DH-A
AW20-F01CH-A	AW30-F02D-A	AW30-F03-R-A	AW40-F04G-A
AW20-F01H-A	AW30-F02DH-A	AW40-F03-A	AW40-F06-A
AW20-F02BG-A	AW30-F02H-A	AW40-F03D-A	AW40-F06D-A
AW20-F02C-A	AW30-F03B-A	AW40-F03H-A	AW40-F06H-A
AW20-F02CH-A	AW30-F03BG-A	AW40-F04B-A	
AW20-F02G-A	AW30-F03C-A	AW40-F04BDG-A	
AW20-F02H-A	AW30-F03DG-A	AW40-F04BG-A	



Accessories and Related Products

(Accessories)

Series VHS - Residual Relief 3 Port Valve - page 552

Series IS10 - Pressure Switches - page 1093

Series AKM - Check Valve - page 1091

(Related Products)

Series AC-A - Air Preparation Modular Units - page 1076

Series IDG - Membrane Air Dryer - page 1142

Series AV - Soft Start-up Valves - www.smc.eu

Series KK - S Couplers - page 1204

Series KQ2 - Fittings - page 1184

Series TU - Tubing - page 1223

Standard specifications

Model	AW20-A	AW30-A	AW40-A	AW40-06-A
Port size	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4
Pressure gauge port size	1/8			
Fluid	Air			
Ambient and fluid temperature	-5 to 60 °C (with no freezing)			
Proof pressure	1.5 MPa			
Maximum operating pressure	1.0 MPa			
Set pressure range	0.05 to 0.7 MPa			
Nominal filtration rating	5 µm			
Drain capacity [cm ³]	8	25	45	
Bowl material	Polycarbonate			
Bowl guard	Semi-standard (Steel)	Standard (Polycarbonate)		
Construction	Relieving type			
Weight [kg]	0.21	0.41	0.75	0.81

Options/Part No.

Optional specifications		Model			
		AW20-A	AW30-A	AW40-A	AW40-06-A
Bracket assembly ^{Note 1)}		AR22P-270AS	AR32P-270AS	AR42P-270AS	
Set nut		AR22P-260S	AR32P-260S	AR42P-260S	
Pressure gauge	Round type ^{Note 2)}	Standard	G36-10-□01		G46-10-□01
		0.02 to 0.2 MPa setting	G36-4-□01		G46-4-□01
	Round type ^{Note 2)} (with colour zone)	Standard	G36-10-□01-L		G46-10-□01-L
		0.02 to 0.2 MPa setting	G36-4-□01-L		G46-4-□01-L
Float type auto drain ^{Note 3) Note 4)}		N.C.	AD27-A	AD37-A	AD47-A
		N.O.	—	AD38-A	AD48-A

Note 1) Assembly of a bracket and set nuts

Note 2) □ in part numbers for a round pressure gauge indicates a type of connection thread. No indication is necessary for R. Please contact SMC regarding the connection thread NPT and pressure gauge supply for psi unit specifications.

Note 3) Minimum operating pressure: N.O. type-0.1 MPa; N.C. type-0.1 MPa (AD27-A) and 0.15 MPa (AD37-A/47-A). Please consult with SMC separately for psi and °F unit display specifications.

Note 4) Please consult SMC for details on drain piping to fit NPT or G port sizes. The bowl assembly includes the bowl O-ring.

Replacement Parts

Description	Material	Part no.			
		AW20-A	AW30-A	AW40-A	AW40-06-A
Valve assembly	Stainless steel, HNBR	AW22P-060AS	AW32P-060AS	AW42P-060AS	
Filter element	Non-woven fabric	AF20P-060S	AF30P-060S	AF40P-060S	
Diaphragm assembly	Weatherable NBR	AR22P-150AS	AR32P-150AS	AR42P-150AS	
Bowl seal	NBR	C2SFP-260S	C32FP-260S	C42FP-260S	
Bowl assembly ^{Note)}	Polycarbonate	C2SF-A	C3SF-A	C4SF-A	

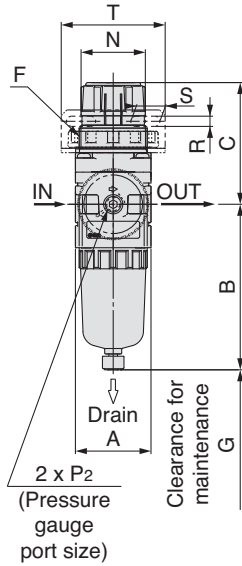
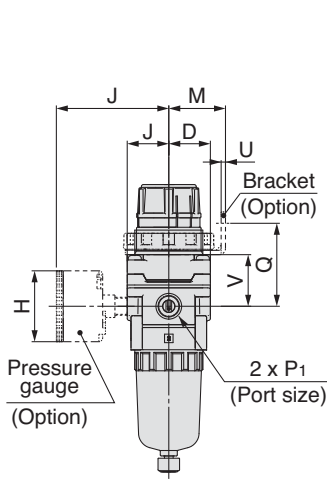
Note) Bowl seal is included. Please contact SMC regarding the bowl assembly supply for psi and °F unit specifications.



Dimensions

AW20-A

AW30-A to AW40-06-A



Panel fitting dimension

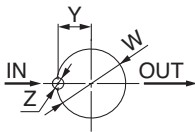
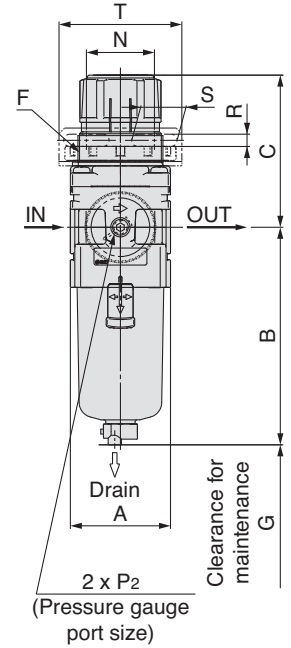
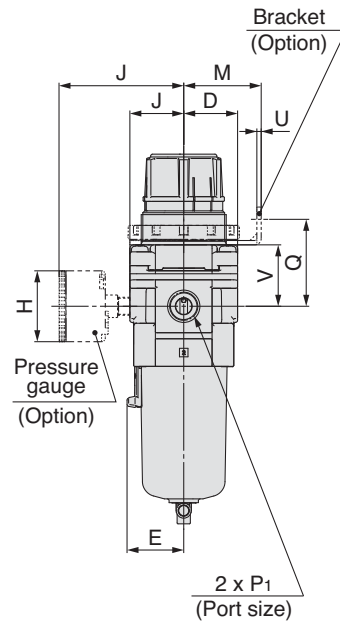


Plate thickness
AW20-A : Max.4



Panel fitting dimension

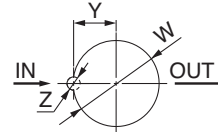


Plate thickness
AW30-A to AW40-06-A : MAX.8

Applicable model	AW20-A	AW30-A to AW40-A
Optional specifications	With auto drain (N.C.)	With auto drain (N.O./N.C.)
Dimensions		<p>N.O.: Black N.C.: Gray</p> <p>Thread type/Rc,G: ø10 One-touch fitting Thread type/NPT: ø3/8" One-touch fitting</p>

Model	Standard specifications											Optional specifications			
	P1	P2	A	B	C(Notes)	D	E	F	G	J	H	J	H	J	
AW20-A	1/8, 1/4	1/8	40	87.6	67.4	22	—	M36 x 1.5	25	22	ø37.5	58.5	ø37.5	59.5	
AW30-A	1/4, 3/8	1/8	53	115.1	83.5	28.5	30	M45 x 1.5	35	28.5	ø37.5	65	ø37.5	66	
AW40-A	1/4, 3/8, 1/2	1/8	70	147.1	100	34.5	38.4	M52 x 1.5	40	34.5	ø42.5	72	ø42.5	72	
AW40-06-A	3/4	1/8	75	149.1	101.5	34.5	38.4	M52 x 1.5	40	34.5	ø42.5	72	ø42.5	72	

Model	Optional specifications											
	Bracket mount						Panel mount					With auto drain
	M	N	Q	R	S	T	U	V	W	Y	Z	B
AW20-A	30	34	43.9	5.4	15.4	55	2.3	27.3	36.5	17.5	6	104.9
AW30-A	41	36	46	6.5	24	65	2.3	32.5	45.5	22.5	7	156.8
AW40-A	50	38	54	8.5	26.5	70	2.3	38.4	52.5	26	7	186.9
AW40-06-A	50	38	55.5	8.5	26.5	70	2.3	39.9	52.5	26	7	188.9

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

Air Combination Modular Accesories

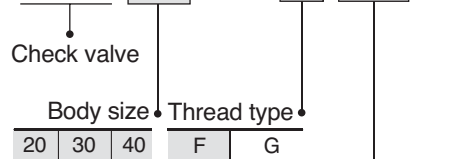
Check Valve: (K)

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.

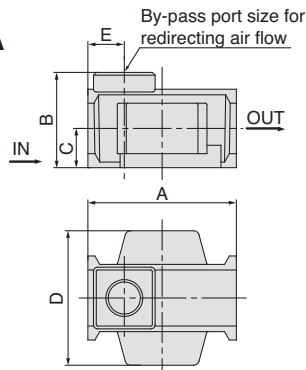
How to Order

AKM 30 00 - F 01 - A



Bypass port size for redirecting air flow

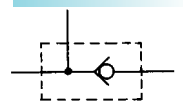
Symbol	Port size	Body size		
		20	30	40
01	1/8	●	●	—
02	1/4	●	●	●
03	3/8	—	—	●



Specifications

Model	Effective area [mm ²]
AKM2000-A	28
AKM3000-A	55
AKM4000-A	111

Symbol



Be sure to use above check valves when redirecting the air flow on the inlet side of the lubricator. Threads for IN and OUT ports are not machined.

Model	By-pass port size	A	B	C	D	E	Applicable model
AKM2000-A	1/8, 1/4	40	28	11	40	11	AC20-A, AC20A-A
AKM3000-A	1/8, 1/4	53	34	14	48	13	AC25-A, AC30-A, AC30A-A
AKM4000-A	1/4, 3/8	70	42	18	54	15	AC40-A, AC40A-A ^(Note)

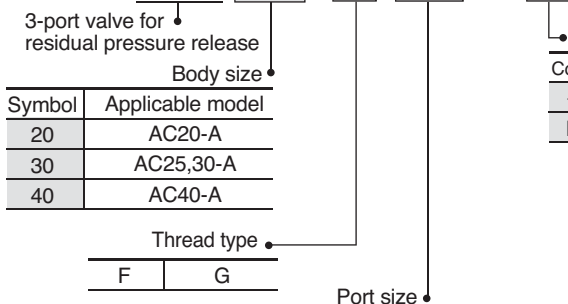
Note) A pressure switch cannot be mounted on the AC40□-06-A.
* Refer to the attachment table above for standard by-pass port sizes applicable to the AC.

Shut Off Valve

With the use of a 3-port valve for residual pressure release, pressure left in the line can be easily exhausted.

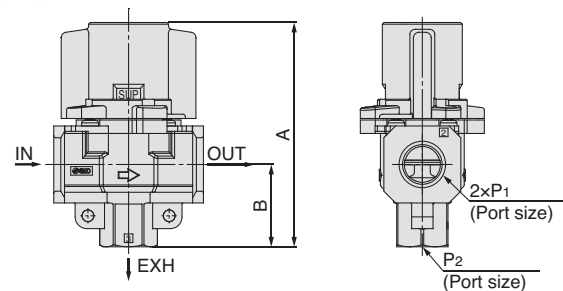
How to order

VHS 30 - F 03 A -

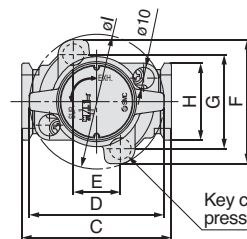
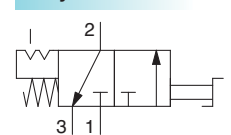


Symbol	Port size	Body size		
		20	30	40
01	1/8	●	—	—
02	1/4	●	●	●
03	3/8	—	●	●
04	1/2	—	—	●
06	3/4	—	—	●

Code	Description
—	Flow direction: Left to right
R	Flow direction: Right to left



Symbol



Key can be mounted when residual pressure is released.

Specifications

Model	Port size	EXH	Specifications					
			IN → OUT			OUT → EXH		
			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
	1/4		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
	3/8		8.3	0.41	2.3	7.0	0.41	1.9
VHS40	1/4	3/8	7.3	0.49	2.0	8.5	0.35	2.3
	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

Note) Use an air filter on the IN side for operating protection.

Model	Standard specifications										
	P ₁	P ₂	A	B	C	D	E	F	G	H	I
VHS20	1/8, 1/4	1/8	66.4	22.25	40	37.5	14	46.6	33.6	28	37.5
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

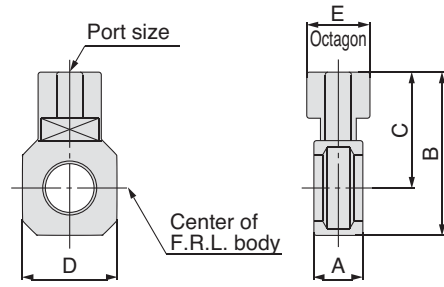
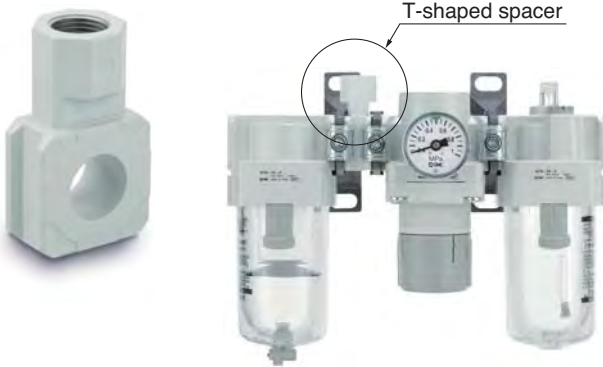


For more product options and details see our specific catalogues or on-line information.

T-shaped Spacer: (T)

1/8, 1/4, 3/8

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



Model (Note)	Port size	A	B	C	D	E	Applicable model
Y210- F 01-A	1/8	14.6	41.8	32	28	19	AC20-A, AC20B-A
Y210- F 02-A	1/4						AC20C-A
Y310- F 01-A	1/8	14.6	52.7	38.7	30	19	AC25-A, AC25B-A
Y310- F 02-A	1/4						AC25C-A, AC30-A
Y410- F 02-A	1/4	18.6	62	44	36	24	AC40-A, AC40B-A
Y410- F 03-A	3/8						AC40C-A
Y510- F 02-A	1/4	18.6	66	46	44	24	AC40-06-A, AC40B-06-A
Y510- F 03-A	3/8						AC40C-06-A

* Separate interfaces are required for modular unit.

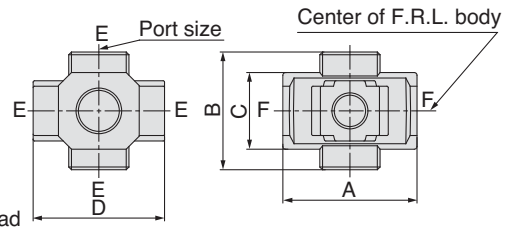
Caution in Mounting

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

Cross Spacer

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.



E: 4 × Rc
F: Without thread

Model (Note)	Port size	A	B	C	D	Applicable model
Y24- F 01-A	1/8	40	40	22	40	AC20□-A
Y24- F 02-A	1/4					AC25□-A, AC30□-A
Y34- F 01-A	1/8	49	43	28	48	AC25□-A, AC30□-A
Y34- F 02-A	1/4					AC40□-A
Y44- F 02-A	1/4	60	48	36	54	AC40□-A
Y44- F 03-A	3/8					AC40□-06-A
Y54- F 03-A	3/8	72	62	40	62	AC40□-06-A
Y54- F 04-A	1/2					

* 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.

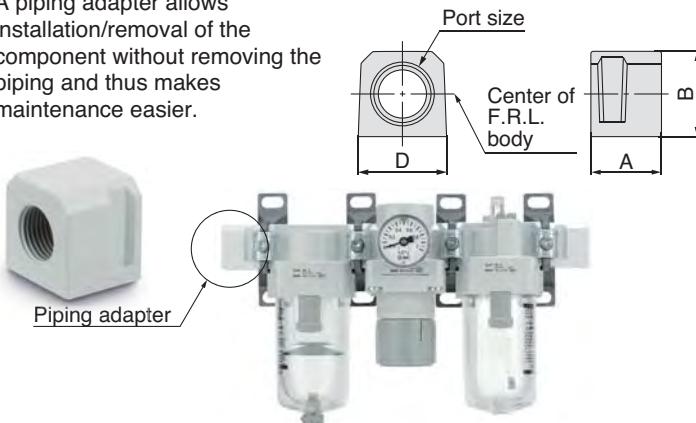
Caution in Mounting

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

Piping Adapter

1/8, 1/4, 3/8, 1/2, 3/4

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



Model (Note)	Portsize	A	B	D	Applicable model
E200- F 01-A	1/8	29.8	23.5	28	AC20□-A
E200- F 02-A	1/4				
E200- F 03-A	3/8				
E300- F 02-A	1/4	31.8	30	30	AC25□-A, AC30□-A
E300- F 03-A	3/8				
E300- F 04-A	1/2				
E400- F 02-A	1/4				
E400- F 03-A	3/8	31.8	36	36	AC40□-A
E400- F 04-A	1/2				
E400- F 06-A	3/4				
E500- F 06-A	3/4	31.8	40	44	AC40□-06-A

* Separate interfaces are required for modular unit.

* Factory mounting of a piping adapter on the AC models is available as a special order.

Pressure Switch Series IS10

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

How to Order

Pressure Switch with Spacer

IS10M – **30** – **□** – A

Body size
20 | 30 | 40

Semi-standard

a	Set pressure range	—	0.1 to 0.4 MPa
		6 Note 1)	0.1 to 0.6 MPa
b	Lead wire length	—	0.5 m
		L	3 m
		Z	5 m

Note 1) Set pressure range of 6 (L, Z) is 0.2 to 0.6 MPa.

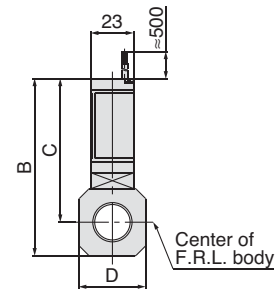
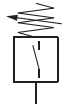
Note 2) Semi-standard: Select one option each in a through b. Place them in alphanumerical order.



IS10M

Pressure switch

Symbol



Pressure Switch with Piping Adapter

IS10E – **30** **F** **03** – **□** – A

Body size
20 | 30 | 40

Port size

●	—	—
●	●	●
●	●	●
—	●	●
—	—	●

Thread type

F | G

01 1/8
02 1/4
03 3/8
04 1/2
06 3/4

Semi-standard

a	Set pressure range	—	0.1 to 0.4 MPa
		6 Note 1)	0.1 to 0.6 MPa
b	Lead wire length	—	0.5 m
		L	3 m
		Z	5 m
c	Mounting position	—	Right
		R	Left

Note 1) Set pressure range of 6 (L, Z) is 0.2 to 0.6 MPa.

Note 2) Semi-standard: Select one option each in a through c. Place them in alphanumerical order.

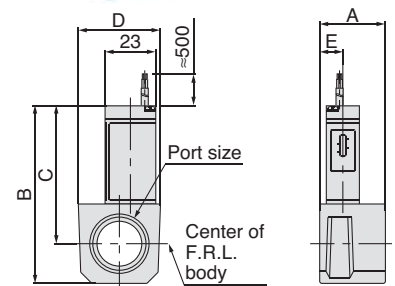


IS10E

Left

Right

Pressure switch with piping adapter



Model	A	B	C	D	Applicable model
IS10M-20-A	10.6	74.2	64.4	28	AC20□-A
IS10M-30-A	12.6	84.5	70.5	30	AC25□-A, AC30□-A
IS10M-40-A	14.6	93.3	75.3	36	AC40□-A
IS10M-50-A	16.6	97.3	77.3	44	AC40□-06-A

* Separate spacers are required for modular unit.

Model ^{Note 1)}	Port size	A	B	C	D	E	Applicable model
IS10E-20□01-A	1/8						
IS10E-20□02-A	1/4	29.8	66.3	55.3	28	16	AC20□-A
IS10E-20□03-A	3/8						
IS10E-30□02-A	1/4						
IS10E-30□03-A	3/8	31.8	72.8	58.8	30	13	AC25□-A, AC30□-A
IS10E-30□04-A	1/2						
IS10E-40□02-A	1/4						
IS10E-40□03-A	3/8	31.8	78.8	60.8	37	12.5	^{Note 2)} AC40□-A
IS10E-40□04-A	1/2						
IS10E-40□06-A	3/4						

Note 1) □ in the model numbers indicates a thread type. No indication is necessary for Rc; however, indicate F for G.

Note 2) Cannot be mounted on the AC40□-06-A.

* Separate interfaces are required for modular unit.

* The pressure switch on the AC40□-06-A can be mounted by screwing IS10-01 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.

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 VAC, DC: 50 mA
	48 VAC, DC: 40 mA
	100 VAC, DC: 20 mA

Note) For detailed specifications on the IS10 series, please refer to the section of our website IS10 series, www.smc.eu



For more product options and details see our specific catalogues or on-line information.

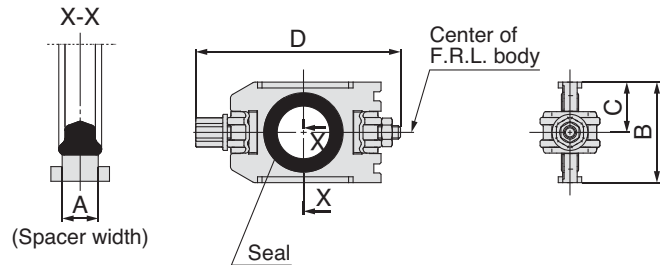
FRL Spacers and Brackets Accessories

Spacer



Y200-A Y400-A

Model	A	B	C	D	Applicable model
Y200-A	3.2	22.4	11.2	44.9	AC20□-A
Y300-A	4.2	34.2	17.1	57.9	AC25□-A, AC30□-A
Y400-A	5.2	42.2	21.1	68.5	AC40□-A
Y500-A	5.2	46.2	23.1	75.6	AC40□-06-A



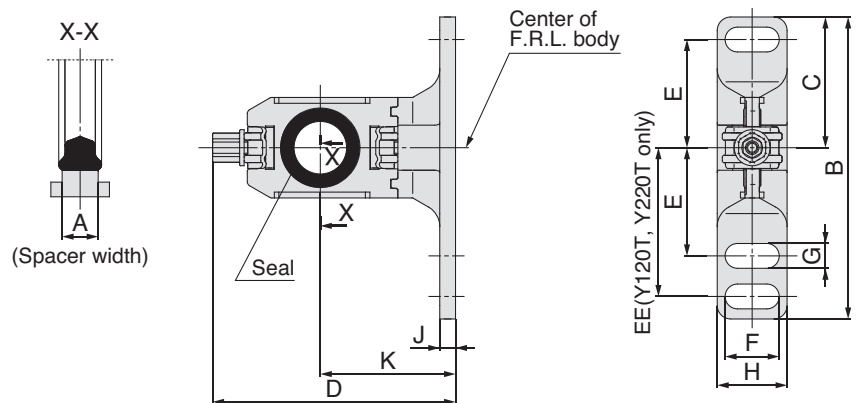
Replacement Parts

Description	Material	Part no.			
		Y200-A	Y300-A	Y400-A	Y500-A
Seal	HNBR	Y220P-050S	Y320P-050S	Y420P-050S	Y520P-050S

Spacer with Bracket



Y200T-A Y400T-A



Model	A	B	C	D	E	EE	F	G	H	J	K	Applicable model
Y200T-A	3.2	67	29	53.4	24	33	12	5.5	15.5	3.5	30	AC20□-A
Y300T-A	4.2	82	41	71.5	35	—	14	7	19	4	41	AC25□-A, AC30□-A
Y400T-A	5.2	96	48	86.1	40	—	18	9	26	5	50	AC40□-A
Y500T-A	5.2	96	48	89.6	40	—	18	9	26	5	50	AC40□-06-A

Replacement Parts

Description	Material	Part no.			
		Y200T-A	Y300T-A	Y400T-A	Y500T-A
Seal	HNBR	Y220P-050S	Y320P-050S	Y420P-050S	Y520P-050S

Preparation Air

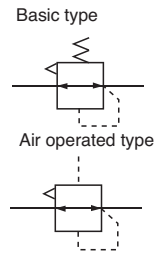
Precision Regulator Series IR1000/2000/3000

Features

- Precise air pressure regulator for instrument applications.
- Three body sizes available.
- Pressure unaffected by supply pressure or demand changes.
- Bracket and pressure gauge can be mounted from 2 directions.
- Compact and lightweight.
- Superior relief flow characteristics.



Symbol



How to Order

IR 2 0 0 0 - F 02

Precision regulator

Body size

1	IR1000
2	IR2000
3	IR3000

Adjustment type

0	Handle type
1	Air pilot (Note)

Note) The IR*1*0 type (Air operated) is only available for body sizes 2 and 3.

Thread type

F	G
---	---

Regulating pressure range

For series IR1000/2000		For series IR3000	
0	0.005 to 0.2 MPa	0	0.01 to 0.2 MPa
1	0.01 to 0.4 MPa	1	0.01 to 0.4 MPa
2	0.01 to 0.8 MPa	2	0.01 to 0.8 MPa

Note) Air operated type is model IR2120 only. Note) Air operated type is model IR3120 only.

Port size

Symbol	size	Application		
		IR1000	IR2000	IR3000
01	1/8	●		
02	1/4		●	●
03	3/8			●
04	1/2			●

Note) The IR*1*0 type (Air operated) is only available for body sizes 2 and 3.

Product Recommendation



Stocked items for fast delivery

IR1000-F01	IR2000-F02	IR2120-F02	IR3000-F04	IR3010-F04	IR3020-F04
IR1010-F01	IR2010-F02	IR3000-F02	IR3010-F02	IR3020-F02	IR3120-F03
IR1020-F01	IR2020-F02	IR3000-F03	IR3010-F03	IR3020-F03	IR3120-F04



Accessories and Related Products

- (Accessories)
- Series G** - Pressure Gauges - www.smc.eu
- (Related Products)
- Series AR** - Air Regulators - page 1084
 - Series ITV** - Electro-pneumatic Regulators - page 1104
 - Series ISE** - Digital Pressure Switches - page 1273
 - Series AC** - Air Preparation Modular Units - page 1076
 - Series AC-A** - Air Preparation Modular Units - page 1076

Specifications

Model	Basic type			Air operated type	
	IR10□0	IR20□0	IR30□0	IR2120	IR3120
Max. supply pressure	1.0 MPa				
Min. supply pressure ⁽¹⁾	Set pressure + 0.05 MPa		Set pressure + 0.1 MPa	Set pressure + 0.05 MPa	Set pressure + 0.1 MPa
Regulating pressure range	IR1000: 0.005 to 0.2 MPa IR1010: 0.01 to 0.4 MPa IR1020: 0.01 to 0.8 MPa	IR2000: 0.005 to 0.2 MPa IR2010: 0.01 to 0.4 MPa IR2020: 0.01 to 0.8 MPa	IR3000: 0.01 to 0.2 MPa IR3010: 0.01 to 0.4 MPa IR3020: 0.01 to 0.8 MPa	0.01 to 0.8 MPa	0.01 to 0.8 MPa
Input signal ⁽²⁾ pressure	—			0.01 to 0.8 MPa	0.01 to 0.8 MPa
Sensitivity	Within 0.2% of full span				
Repeatability	Within ±0.5% of full span				
Linearity ⁽³⁾	—			Within ±1% of full span	
Air consumption ⁽⁴⁾ (At supply pressure of 1.0 MPa)	4.4 ℓ/min (ANR) or less	4.4 ℓ/min (ANR) or less	11.5 ℓ/min (ANR) or less	4.4 ℓ/min (ANR) or less	11.5 ℓ/min (ANR) or less
Port size	1/8	1/4	1/4, 3/8, 1/2	1/4	1/4, 3/8, 1/2
Pressure gauge port	1/8 (2 locations)				
Ambient and fluid temperature	-5 to 60°C (No freezing)				
Weight [kg]	0.14	0.30	0.64	0.35	0.71

Note 1) With the condition of no flow on the output side. Together with the set pressure, be sure to maintain a minimum differential pressure of 0.05 MPa for models IR1000 and IR2000, and 0.1 MPa for model IR3000.

Note 2) Applicable only to air operated types IR2120 and IR3120.

Note 3) Indicates the linearity of the output pressure with respect to the input signal pressure.

Note 4) Air is normally being discharged to the atmosphere from a bleed hole or an exhaust port.



For more product options and details see our specific catalogues or on-line information.