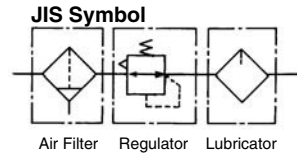


Air Combination Air Filter + Regulator + Lubricator AC10 to AC60



How to Order

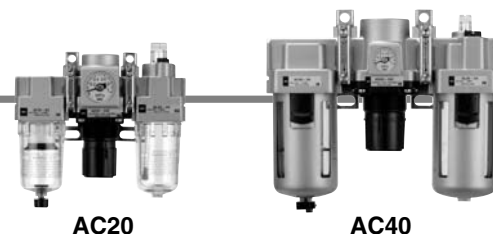
AC **30** - **03** **DE** - -

① ② ③ ④ ⑤ ⑥

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

	Symbol	Description	①								
			Body size								
			10	20	25	30	40	50	55	60	
②	Thread type	Nil	Metric thread (M5)								
		Rc	●	—	—	—	—	—	—	—	—
		N ^{Note 1)}	—	●	●	●	●	●	●	●	●
		F ^{Note 2)}	—	●	●	●	●	●	●	●	●
+											
③	Port size	M5	●	—	—	—	—	—	—	—	
		01	—	●	—	—	—	—	—	—	
		02	—	●	●	●	●	—	—	—	
		03	—	—	●	●	●	—	—	—	
		04	—	—	—	—	●	—	—	—	
		06	—	—	—	—	●	●	—	—	
+											
④	a	Float type auto drain	Nil	●	●	●	●	●	●	●	
		C	●	●	●	●	●	●	●	●	
		D	—	—	●	●	●	●	●	●	
	+										
	b	Pressure gauge	Nil	●	●	●	●	●	●	●	●
			E	—	●	●	●	●	●	●	●
			G	●	—	—	—	—	—	—	—
		Digital pressure switch	M	—	●	●	●	●	●	●	●
			E1	—	●	●	●	●	●	●	●
			E2	—	●	●	●	●	●	●	●
+											
⑤	c	Check valve	Nil	●	●	●	●	●	●	●	
		K	—	●	●	●	● ^{Note 4)}	—	—	—	
	+										
	d	Pressure switch	Nil	●	●	●	●	●	●	●	
		S ^{Note 5)}	—	●	●	●	●	●	●	●	
	+										
	e	T-interface	Nil	●	●	●	●	●	●	●	
		T ^{Note 5)}	●	●	●	●	●	●	●	●	
+											
f	3-port valve for residual pressure release	Nil	●	●	●	●	●	●	●		
	V	—	●	●	●	●	●	—	—		
+											
⑥	g	Set pressure	Nil	●	●	●	●	●	●	●	
		1 ^{Note 6)}	●	●	●	●	●	●	●	●	
+											
h	Bowl ^{Note 7)}	Nil	●	●	●	●	●	●	●	●	
		2	●	●	●	●	●	●	●	●	
		6	●	●	●	●	●	●	●	●	
		8	—	—	●	●	●	●	●	●	
		C	—	●	—	—	—	—	—	—	
		6C	—	●	—	—	—	—	—	—	

Air Combination *Series AC10 to AC60*



	Symbol	Description	①								
			Body size								
			10	20	25	30	40	50	55	60	
⑥ Semi-standard	i	Filter drain port ^{Note 8)}	Nil	With drain cock	●	●	●	●	●	●	●
		J ^{Note 9)}	Drain guide 1/8	—	●	—	—	—	—	—	—
			Drain guide 1/4	—	—	●	●	●	●	●	●
		W ^{Note 10)}	Drain cock with barb fitting: For ø6 x ø4 nylon tube	—	—	●	●	●	●	●	●
	+										
	j	Lubricator lubricant exhaust port	Nil	Without drain cock	●	●	●	●	●	●	●
			3 ^{Note 11)}	Lubricator with drain cock	●	●	●	●	●	●	●
	+										
	k	Exhaust mechanism	Nil	Relieving type	●	●	●	●	●	●	●
			N	Non-relieving type	●	●	●	●	●	●	●
	+										
	l	Flow direction	Nil	Flow direction: Left to right	●	●	●	●	●	●	●
R			Flow direction: Right to left	●	●	●	●	●	●	●	
+											
m	Pressure unit	Nil	Name plate and pressure gauge in imperial units: MPa	●	●	●	●	●	●	●	
		Z ^{Note 12)}	Name plate, caution plate for bowl, and pressure gauge in imperial units: psi, °F	○ ^{Note 14)}	○ ^{Note 14)}	○ ^{Note 14)}	○ ^{Note 14)}	○ ^{Note 14)}	○ ^{Note 14)}	○ ^{Note 14)}	
		ZA ^{Note 13)}	Digital pressure switch: With unit conversion function	—	△ ^{Note 15)}	△ ^{Note 15)}	△ ^{Note 15)}	△ ^{Note 15)}	△ ^{Note 15)}	△ ^{Note 15)}	

Note 1) Drain guide is NPT1/8 (applicable to the AC20) and NPT1/4 (applicable to the AC25 to AC60). The auto drain port comes with ø3/8" one-touch fitting (applicable to the AC25 to AC60).

Note 2) Drain guide is G1/8 (applicable to the AC20) and G1/4 (applicable to the AC25 to AC60).

Note 3) Option G, M are not assembled and supplied loose at the time of shipment.

Note 4) Not available with piping port size: 06.

Note 5) The bracket position varies depending on the T-interface or pressure switch mounting.

Note 6) The only difference from the standard specifications is the adjusting spring for the regulator. It does not restrict the setting of 0.2 MPa or more. When the pressure gauge is attached, a 0.2 MPa pressure gauge will be fitted.

Note 7) Refer to Chemical Data on page 287 when selecting a case material.

Note 8) Float type auto drain: The combination of C and D is not possible.

Note 9) Without a valve function

Note 10) Metal bowl: The combination of 2 and 8 is not possible.

Note 11) Filter drain port: When choosing with W, the drain cock of a lubricator will be with barb fittings.

Note 12) For thread type: M5 and NPT. This product is for overseas use only according to the new Measurement Law. (The SI unit type is provided for use in Japan.) The digital pressure switch will be equipped with the unit conversion function, setting to psi initially. MPa and psi are shown together on the pressure unit.

Note 13) For options: E1, E2, E3, E4. This product is for overseas use only according to the new Measurement Law. (The SI unit is provided for use in Japan.)

Note 14) ○: For thread type: M5 and NPT only
Note 15) △: Select with options: E1, E2, E3, E4.

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 x 0.8	1/8, 1/4	1/4, 3/8	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1	1	
Pressure gauge port size ^{Note 1)}	1/16	1/8		1/4		1/4				
Fluid	Air									
Ambient and fluid temperature ^{Note 2)}	-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	0.05 to 0.85 MPa								
Relief pressure	Set pressure + 0.05 MPa ^{Note 3)} [at relief flow rate of 0.1 l/min (ANR)]									
Nominal filtration rating	5 µm									
Recommended lubricant	Class 1 turbine oil (ISO VG32)									
Bowl material	Polycarbonate									
Bowl guard	—	Semi-standard	Standard				Standard			
Regulator construction	Relieving type									
Mass (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) -5 to 50°C for the products with the digital pressure switch

Note 3) Not applicable to the AC10.

AC

AF□

AR

AL

AW□

A□G

AV

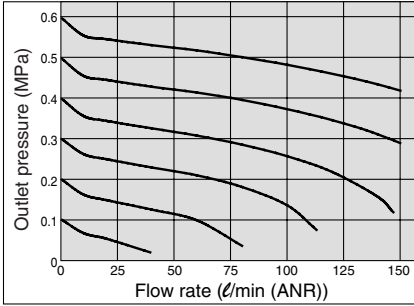
AF800
AF900

Series AC10 to AC60

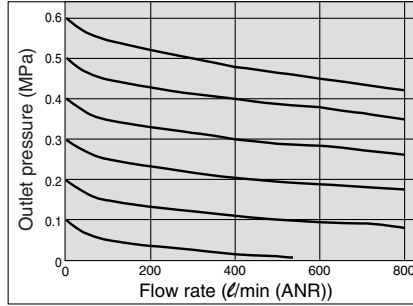
Flow Characteristics (Representative values)

Condition: Inlet pressure 0.7 MPa

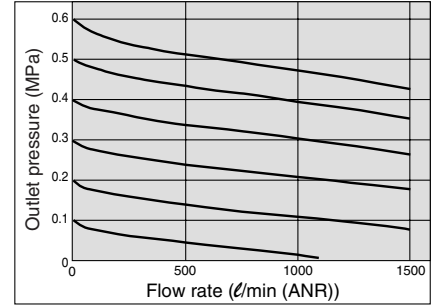
AC10 M5 x 0.8



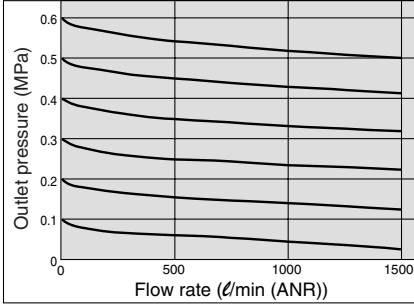
AC20 Rc1/4



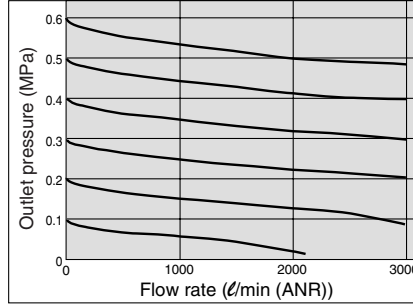
AC25 Rc3/8



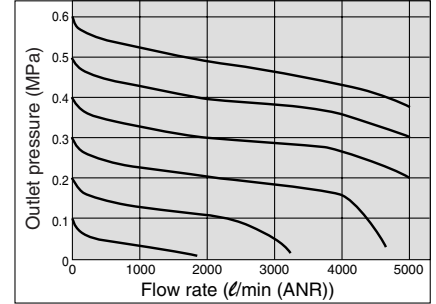
AC30 Rc3/8



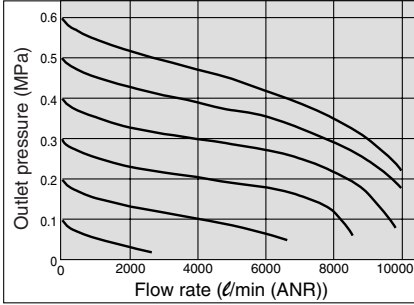
AC40 Rc1/2



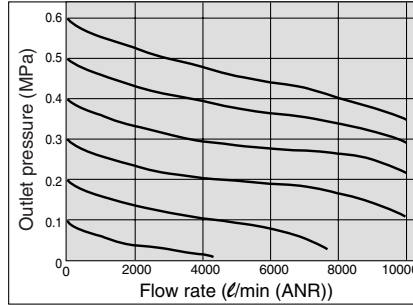
AC40-06 Rc3/4



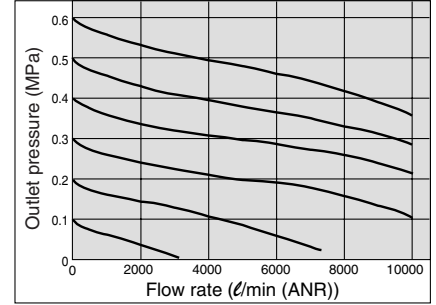
AC50 Rc1



AC55 Rc1



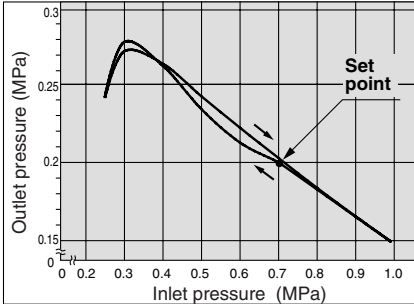
AC60 Rc1



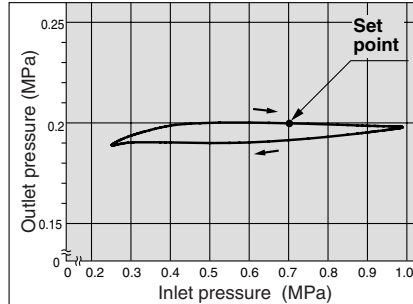
Pressure Characteristics (Representative values)

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

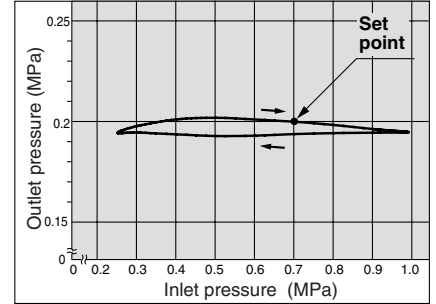
AC10



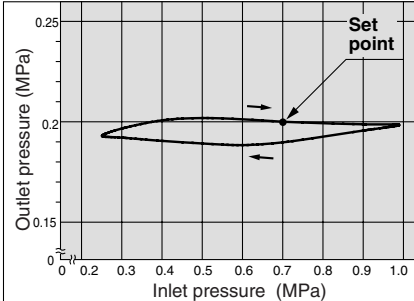
AC20



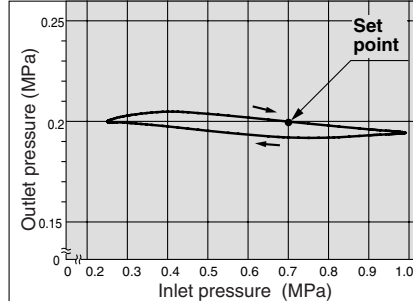
AC25



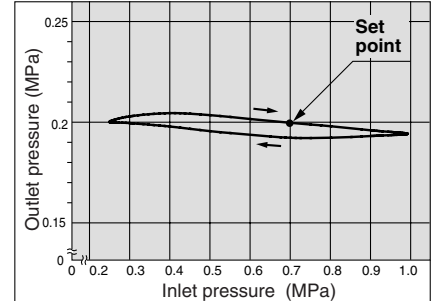
AC30



AC40



AC40-06

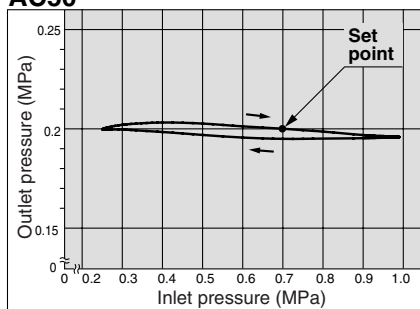


Air Combination *Series AC10 to AC60*

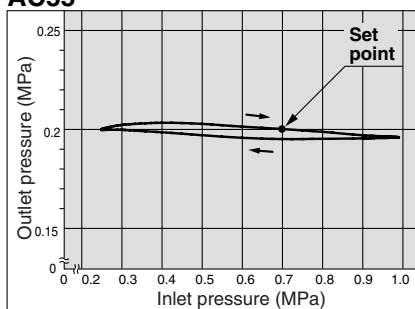
Pressure Characteristics (Representative values)

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

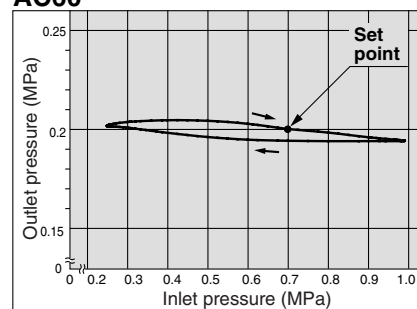
AC50



AC55



AC60



⚠ Specific Product Precautions

! Be sure to read before handling.

! Refer to front matters 42 and 43 for Safety Instructions and pages 287 to 291 for F.R.L. Precautions.

Mounting and Adjustment

⚠ Caution

1. A knob cover is available to prevent careless operation of the knob. Refer to page 389 for details.

Piping

⚠ Warning

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

Air Supply

⚠ Caution

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

Selection

⚠ Warning

1. Float type auto drain

Operate under the following conditions to avoid malfunction.

<N.O. type>

- Operating compressor: 0.75 kW (100 ℓ/min (ANR)) or more.

When using 2 or more auto drains, multiply the value above by the number of auto drains to find the capacity of the compressors you will need.

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

- Operating pressure: 0.1 MPa or more.

<N.C. type>

- Operating pressure for AD17/27: 0.1 MPa or more.
- Operating pressure for AD37/47: 0.15 MPa or more.

2. Use a regulator or filter regulator with backflow function when mounting a 3-port valve for residual pressure release on the IN side to ensure the release of the residual pressure. Otherwise, residual pressure will not be fully released.

⚠ Caution

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

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

2. If a residual pressure-release 3-port valve is mounted on the inlet side of the lubricator, causing a backflow of air, it can result in a backflow of oil or damage to internal parts. Please do not use it in this fashion.

3. An F.R.L. unit shipped from the plant has its model number labeled. However, components that are combined together during the distribution process do not have a label on them.

AC

AF□

AR

AL

AW□

A□G

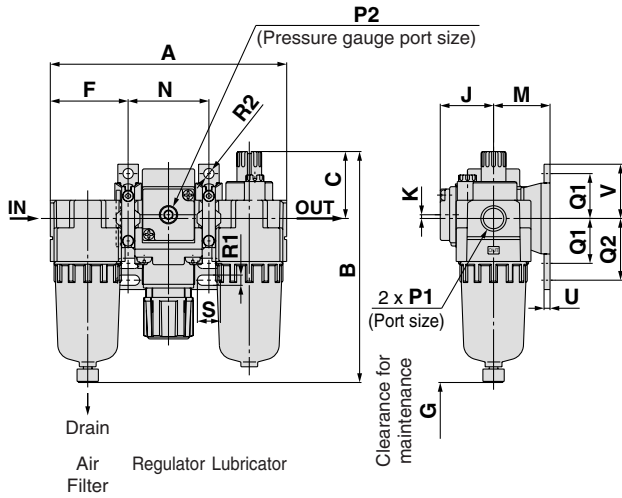
AV

AF800
AF900

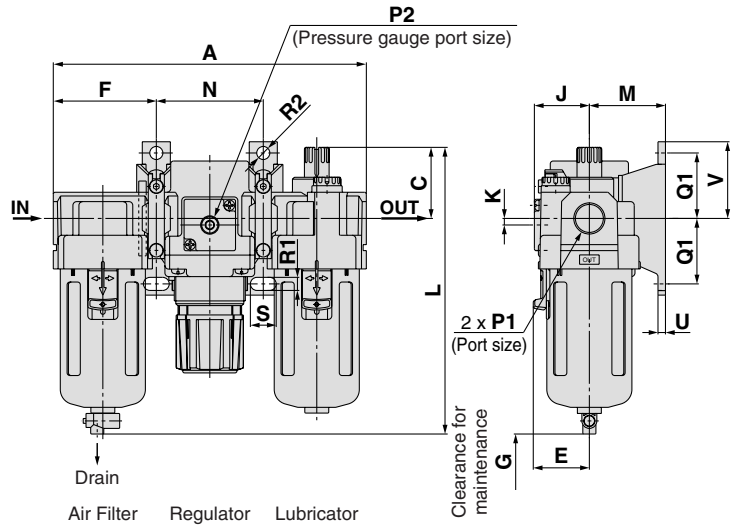
Series AC10 to AC60

Dimensions

AC10, AC20



AC25 to AC60



Applicable model	AC20 to AC60		AC10 to AC60	AC20 to AC60
Option	Square embedded type pressure gauge	Digital pressure switch	Round type pressure gauge	Round type pressure gauge (with color zone)
Dimensions				

Applicable model	AC10, AC20		AC20	AC25 to AC60				
Optional/Semi-standard specifications	With auto drain (N.C.)	Metal bowl	With drain guide	With auto drain (N.O./N.C.)	Metal bowl	Metal bowl with level gauge	With drain guide	Drain cock with barb fitting
Dimensions								

Model	Standard specifications										Optional specifications							
	P1	P2	A	B	C	E	F	G	J	K	Square type pressure gauge		Digital pressure switch		Round type pressure gauge		Round type pressure gauge (with color zone)	
											H	J	H	J	H	J	H	J
AC10	M5 x 0.8	1/16	87	85	26	—	28	35	13	0	—	—	—	—	ø26	26	—	—
AC20	1/8, 1/4	1/8	126	123	36	—	41.5	60	28.5	2 ^{Note)}	□28	29.5	□27.8	40	ø37.5	65	ø37.5	65
AC25	1/4, 3/8	1/8	167	153	38	30	55	80	27.5	0	□28	28.5	□27.8	39	ø37.5	64	ø37.5	64
AC30	1/4, 3/8	1/8	167	153	38	30	55	80	29.5	3.5	□28	30.5	□27.8	41	ø37.5	66	ø37.5	66
AC40	1/4, 3/8, 1/2	1/4	220	187	40	38	72.5	110	34	3.5	□28	35	□27.8	45	ø42.5	74	ø42.5	74
AC40-06	3/4	1/4	235	187	38	38	77.5	110	34	3	□28	35	□27.8	45	ø42.5	74	ø42.5	74
AC50	3/4, 1	1/4	282	264	43	45	93	110	43.5	3.3	□28	44.5	□27.8	55	ø42.5	84	ø42.5	84
AC55	1	1/4	292	279	45	47.5	98	110	43.5	3.3	□28	44.5	□27.8	55	ø42.5	84	ø42.5	84
AC60	1	1/4	297	280	46	47.5	98	110	43.5	3.3	□28	44.5	□27.8	55	ø42.5	84	ø42.5	84

Model	Optional specifications										Semi-standard specifications				
	Bracket mount										With auto drain	With barb fitting	With drain guide	Metal bowl	Metal bowl with level gauge
	M	N	Q1	Q2	R1	R2	S	U	V		B	B	B	B	B
AC10	25	31	20	27	4.5	ø4.5	7	2.8	24.5	104	—	—	—	85	—
AC20	30	43	24	33	5.5	ø5.5	12	3.2	29	141	—	—	127	123	—
AC25	41	57	35	—	7	ø7	14	4	41	194	161	160	166	186	—
AC30	41	57	35	—	7	ø7	14	4	41	194	161	160	166	186	—
AC40	50	75	40	—	9	ø9	18	4	48	226	195	194	200	220	—
AC40-06	50	80	40	—	9	ø9	18	4.6	48	226	195	194	200	220	—
AC50	70	96	50	—	11	ø11	20	6.4	60	303	272	271	276	296	—
AC55	70	96	50	—	11	ø11	20	6.4	60	318	287	286	292	312	—
AC60	70	101	50	—	11	ø11	20	6.4	60	319	288	287	293	313	—

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

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