

AL1000 to 6000

Standard Specifications

Model	AL1000	AL2000	AL3000	AL4000	AL4000-06	AL5000	AL6000
Port Size	M5 X 0.8	1/8, 1/4	1/4, 3/8	1/4, 3/8, 1/2	3/4	3/4, 1	1
Fluid	Air						
Proof pressure	1.5MPa						
Max. operating pressure	1.0MPa						
Min. operating flow (ℓ/min (ANR)) ⁽¹⁾	4	15	1/4: 30 3/8: 40	1/4: 30 3/8: 40 1/2: 50	50	190	220
Bowl capacity (cm ³)	7	25	50	130	130	130	130
Recommended oil	Turbine oil class 1 (ISO VG32)						
Ambient and fluid temperature	-5 to 60°C (No freezing)						
Bowl material	Polycarbonate						
Weight (kg)	0.07	0.22	0.28	0.52	0.58	1.08	1.19
Accessory (Standard)	Bowl guard	—	—	●	●	●	●

Note 1) Conditions: Primary pressure = 0.5MPa, Number of drops = 5/min, Turbine oil class 1 (ISO VG32), Needle stud fully open.
 •Refer to air consumption for min. operating flow.

Accessory (Options) Part No.

Description	Model	Part No.						
		AL1000	AL2000	AL3000	AL4000	AL4000-06	AL5000	AL6000
Bracket assembly ⁽¹⁾		—	B240A	B340A	B440A	B540A	B640A	B640A

Note 1) With bracket mounting screw (2 pcs.) *B640A for 1000cm³ tank (AL3000 to AL6000)

How to Order



AL 30 00 — 03 — 23

Lubricator
Body size
 10 M5
 20 1/8
 30 3/8
 40 1/2
 50 3/4
 60 1

Thread
 — Rc(PT)
 N NPT
 F G(PF)

Accessory
 Symbol Description Model
 — — —
 B With bracket AL2000 to AL6000

Port size
 M5 M5 X 0.8
 01 1/8
 02 1/4
 03 3/8
 04 1/2
 06 3/4
 10 1

Options
 1 1000cm³ tank (AL3000 to AL6000)
 10 1000cm³ tank with switch (Bottom limit ON)
 11 1000cm³ tank with switch (Bottom limit OFF)
 2 Metal bowl
 3 With drain cock
 6 Nylon bowl (Including sight glass)
 8 Metal bowl with level gauge (AL3000 to AL6000)
 C With bowl guard (Only AL2000)
 R Flow direction: Right to left
 3W With drain cock and barb fitting (ø6, ø4 for nylon) (AL3000 to AL6000)

When specifying more than one option, please list alphabetically.
(Example) 23R

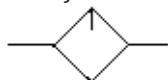
Option Combinations

◎ Available ■ Not available ○ Depends on model

Accessories, options	Symbol	Options										Applicable lubricator model			
		1	10	11	2	3	6	8	C	R	3W	AL1000	AL2000	AL3000	AL4000 to AL6000
1000cm ³ tank	-1	■	■	■	■	■	■	■	■	◎	■	■	■	◎	◎
1000cm ³ tank (With SW) Bottom limit ON	-10	■	■	■	■	■	■	■	■	◎	■	■	■	◎	◎
1000cm ³ tank (With SW) Bottom limit OFF	-11	■	■	■	■	■	■	■	■	◎	■	■	■	◎	◎
Metal bowl	-2	■	■	■	◎	■	■	■	■	◎	■	◎	◎	◎	◎
Lubricator with drain cock	-3	■	■	■	◎	■	◎	◎	◎	◎	■	◎	◎	◎	◎
Nylon bowl	-6	■	■	■	◎	■	■	■	○	◎	◎	◎	◎	◎	◎
Metal bowl with level gauge	-8	■	■	■	◎	■	■	■	◎	◎	■	■	■	◎	◎
With bowl guard	-C	■	■	■	◎	■	■	■	◎	◎	■	■	■	◎	◎
Flow direction: Right to left	-R	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎	◎
One-touch drain cock with barb fitting	-3W	■	■	■	◎	■	◎	◎	◎	◎	■	■	■	◎	◎

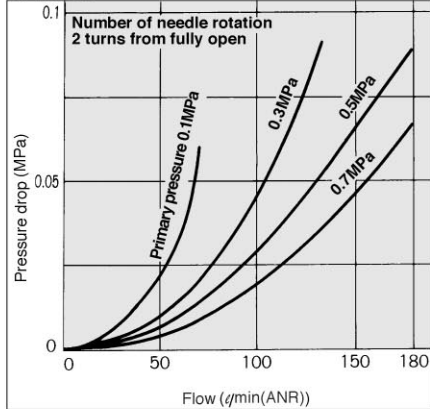
Note) -1, -10 and -11 are with metal bowl with level gauge and with drain cock.

JIS symbol

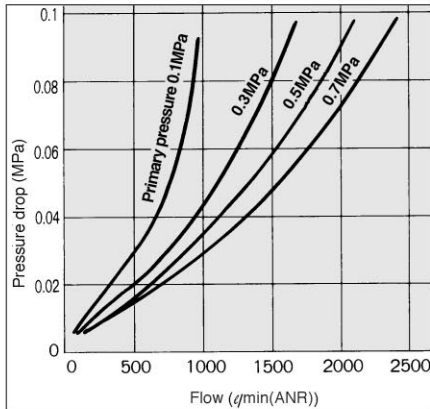


Flow Characteristics

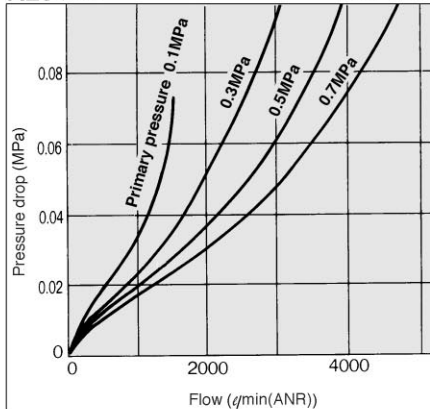
AL1000 M5



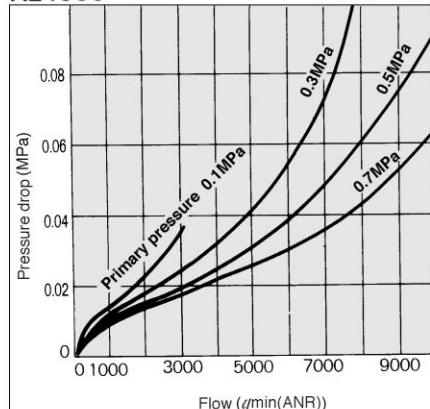
AL2000 Rc(PT) 1/4



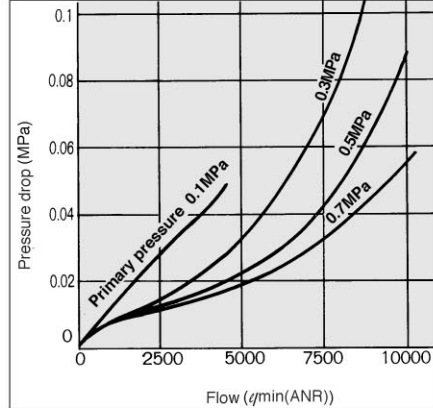
AL3000 Rc(PT) 3/8



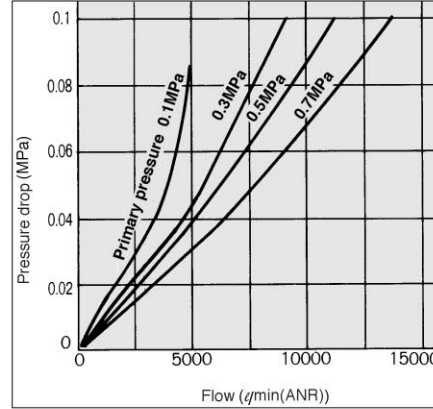
AL4000 Rc(PT) 1/2



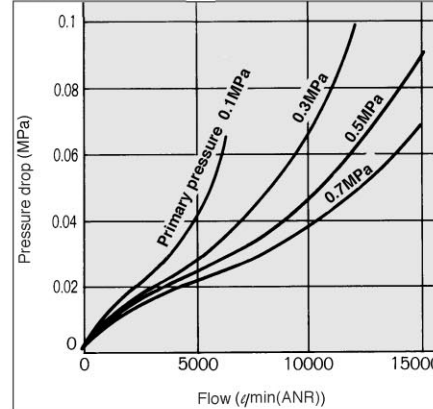
AL4000-06 Rc(PT) 3/4



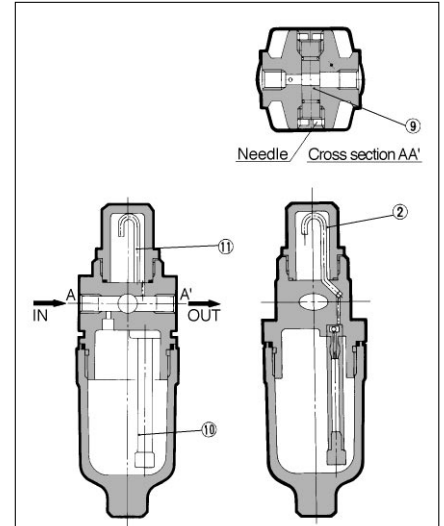
AL5000 Rc(PT) 3/4



AL6000 Rc(PT) 1



Operation principles of AL1000



A portion of the air that is introduced from the IN side pressurizes the oil surface in the bowl. The remainder of the air passes through needle ⑨ and flows to the OUT side. The pressure difference that occurs at this time between the pressure in the bowl and the pressure in the sight dome ② causes the oil to pass through the oil passage pipe ⑩, to drip through siphon tube ⑪, and to the OUT side. The oil volume is adjusted by opening the needle ⑨ in front. Turning the needle clockwise increases the oil volume and turning it counterclockwise to fully open the needle stops the dripping. The needle for the side that will not be used should be kept fully open.

*Operation principle of AL2000 to 6000 is different from AL1000.

⚠ Precautions

Be sure to read before handling. Refer to p.0-26 and 0-27 for Safety Instructions and common precautions on the products mentioned in this catalog, and refer to p.1.0-1 and 1.0-2 for precautions of every series.

Selection

⚠ Warning

① Air should not flow from secondary side. It damages the damper.

⚠ Caution

① Use check valve (AKM series) to prevent back flow of oil at branch before lubricator.

Maintenance

⚠ Warning

① Lubrication of AL1000 and 2000 cannot be done under pressure. Lubricate after primary pressure is removed.

⚠ Caution

① Check minimum operating flow once a day. If a malfunction in minimum operating flow occurs, it causes trouble with the lubrication.

AC

AV

AU

AF

AR

IR

VEX

AW

AMR

AWM

AWD

ITV

VBA

VE

VY

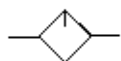
G

AL

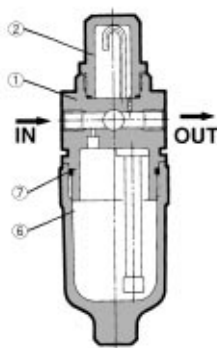
AL1000 to 6000

Construction

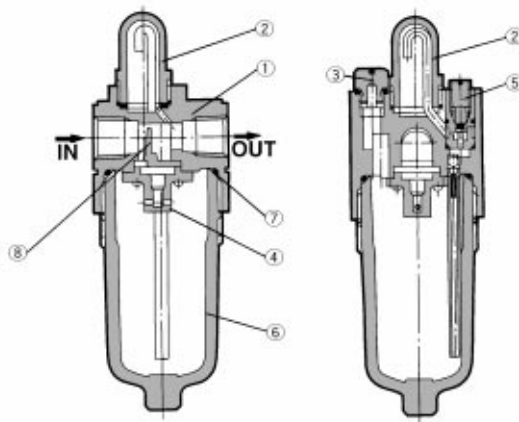
JIS Symbol



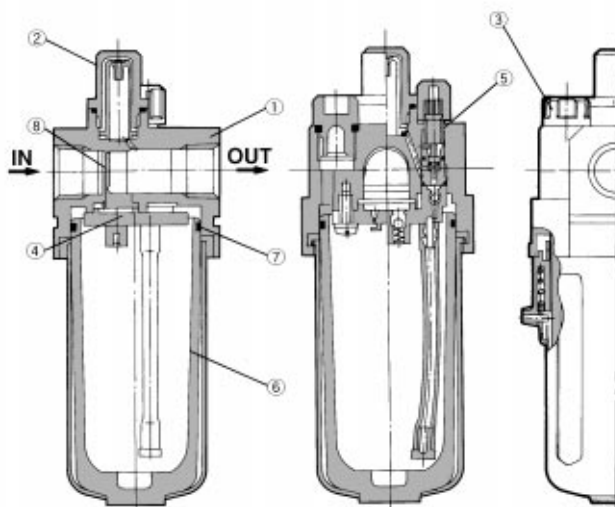
AL1000



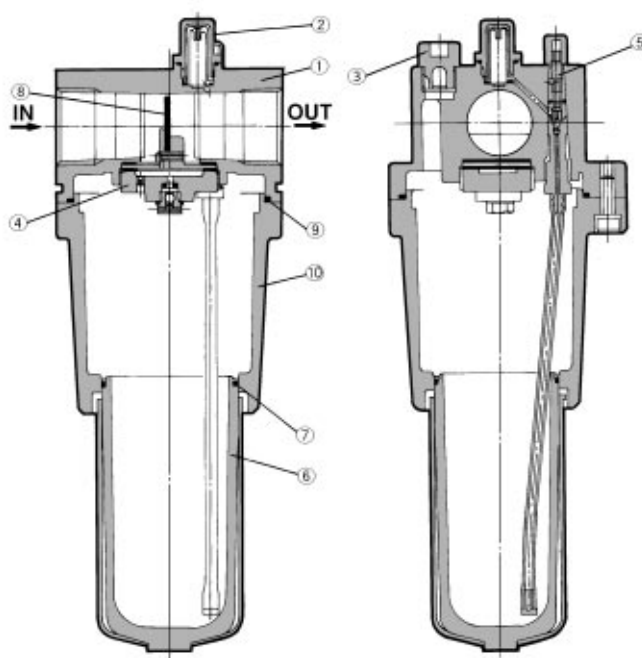
AL2000



AL3000/4000



AL5000/6000



Component parts

No.	Description	Material			Note
		AL1000/2000	AL3000/4000/4000-06	AL5000/6000	
①	Body	Zinc die cast	Aluminum die cast	Aluminum die cast	Painted silver
⑩	Housing	—	—	Aluminum die cast	Painted silver

Replacement parts

No.	Description	Material	Part No.						
			AL1000	AL2000	AL3000	AL4000	AL4000-06	AL5000	AL6000
②	Sight dome assembly	Polycarbonate	12132	12316	12155A	12155A	12155A	12155A	12155A
③	Lubrication plug assembly	—	—	122962A	12159A	12164A	12164A	12164A	12164A
④	Damper retainer assembly	—	—	122953	121521A	121611A	121611A	12325A	12335A
⑤	Needle stud assembly	—	—	12297PA	121522A	121522A	121616A	121616A	121616A
⑥	Bowl assembly ⁽¹⁾	—	C100L	C200L	C300L	C400L	C400L	C400L	C400L
⑦	Bowl O ring	NBR	111325	11297	111512	111636	111636	111636	111636
⑧	Damper assembly	Synthetic resin	—	122933 -2 ^(1/4) -1 ^(1/8)	12158-2 ^(3/8) -1 ^(1/4)	12165 -2 ^(1/2) -1 ^(5/8) 121623 ^(1/4)	12165-2	123210A	123310A
⑨	Housing O ring	NBR	—	—	—	—	—	111710	11189

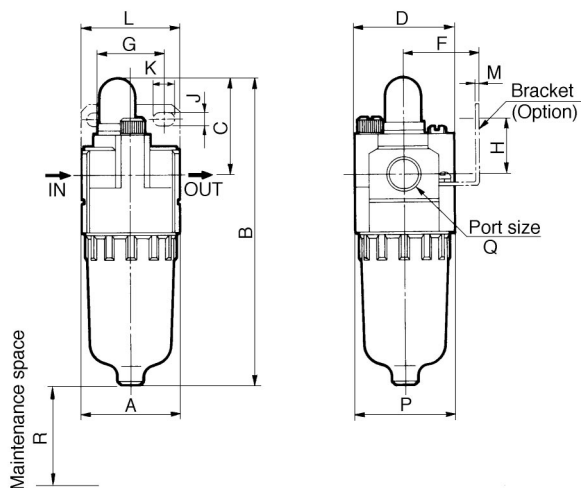


Note 1) Bowl assembly of AL3000 to AL6000 includes bowl guard (material: SPCE).

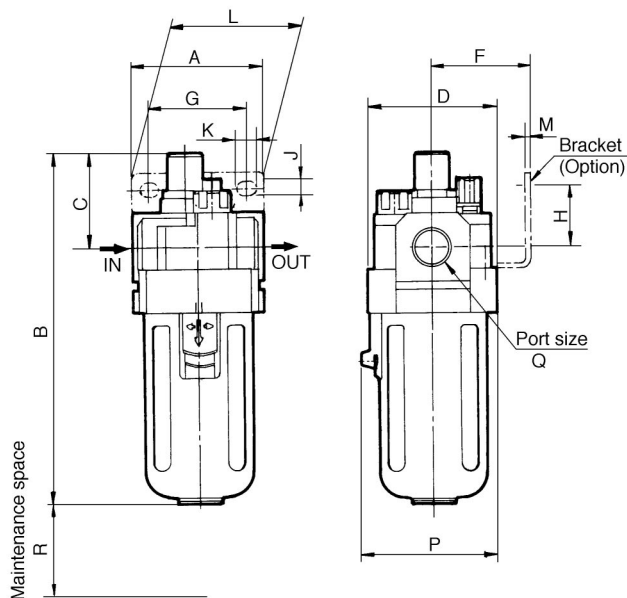
Dimensions



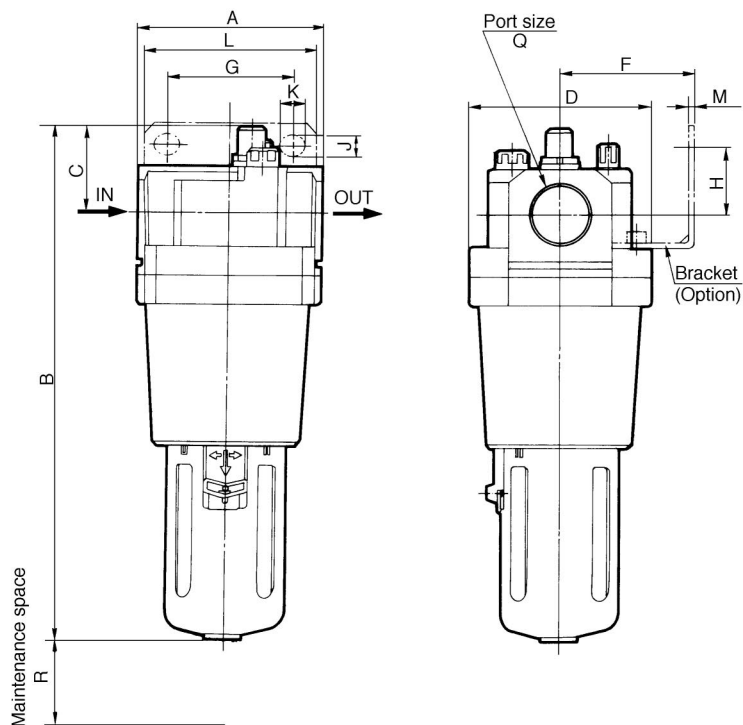
AL1000/2000



AL3000/4000



AL5000/6000



AC

AV

AU

AF

AR

IR

VEX

AW

AMR

AWM

AWD

ITV

VBA

VE

VY

G

AL

Model	Port size Q	A	B	C	D	Bracket mounting dimensions							P	R
						F	G	H	J	K	L	M		
AL1000	M5 X 0.8	25	81.5	25.5	25	—	—	—	—	—	—	—	27	50
AL2000	1/8, 1/4	40	122	38	40	30	27	22	5.4	8.4	40	2.3	40	80
AL3000	1/4, 3/8	53	142	38	53	41	40	23	6.5	8	53	2.3	56	95
AL4000	1/4, 3/8, 1/2	70	177	41	70	50	54	26	8.5	10.5	70	2.3	73	120
AL4000-06	3/4	75	177	39	70	50	54	25	8.5	10.5	70	2.3	73	120
AL5000	3/4, 1	90	254	45	90	70	66	35	11	13	90	3.2	—	120
AL6000	1	95	268	45	95	70	66	35	11	13	90	3.2	—	120



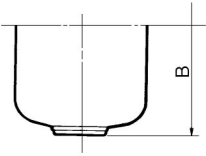
AL1000	SAC1000, #3	AL4000-06	SAC4006, #3
AL2000	SAC2000, #3	AL5000	SAC5000, #3
AL3000	SAC2503, #3	AL6000	SAC6000, #3
AL4000	SAC4000, #3		

AL1000 to 6000

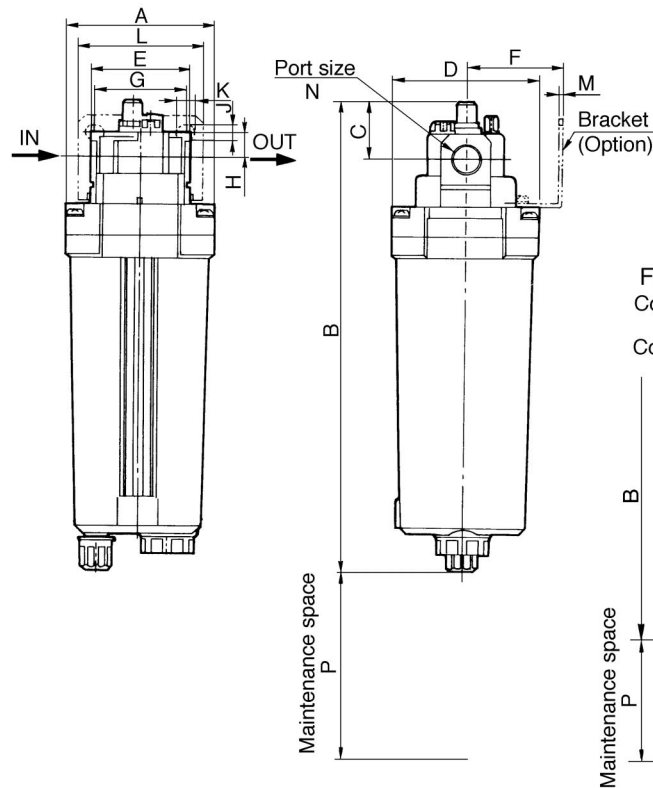
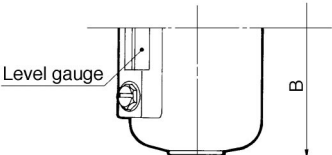
Dimensions

Option specifications/1000cm³ tank

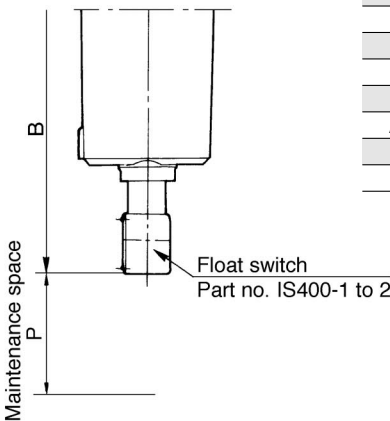
Metal bowl



Metal bowl with level gauge



Float switch
Contact point capacity: AC: 15VA
DC: 15W
Contact point construction: 1a,1b



Model	Metal bowl	Metal bowl with level gauge
	B	B
AL1000	81.5	—
AL2000	122	—
AL3000	142	162
AL4000	177	197
AL4000-06	177	197
AL5000	254	274
AL6000	268	288

Model	Port size N	A	B*	C	D	E	Bracket mounting dimensions							P
							F	G	H	J	K	LL	M	
AL3000-□02 to 03-1	1/4, 3/8	106	324(374)	38	106	53	70	66	25	11	13	90	3.2	210
AL4000-□02 to 04-1	1/4, 3/8, 1/2	106	334(384)	41	106	70	70	66	18	11	13	90	3.2	210
AL4000-□06-1	3/4	106	334(384)	39	106	75	70	66	16	11	13	90	3.2	210
AL5000-□06 to 10-1	3/4, 1	106	336(386)	45	106	90	70	66	35	11	13	90	3.2	210
AL6000-□10-1	1	106	336(386)	45	106	95	70	66	35	11	13	90	3.2	210

*() : With float switch