

Booster Lube Series ALB900

- Centralized control of multi-point lubrication
- Stable oil feeding with a micromist
- Through the use of a booster, a pressure that is higher than that of the main air passage can be supplied. This difference is used as the mist generating pressure differential. Thus, the pressure drop in the main air passage is minimized.
- Micromist can be constantly supplied by merely adjusting the mist generating pressure differential.
- Oil can be replenished by merely opening and closing the oil filler plug without stopping the air line.
- The condition of the generation of micromist can be checked from the oil filler port.

Standard Specifications

Model	ALB900-10	ALB900-20	ALB900-30
Port (Bypass lubrication adapter)	Rc 1	Rc 2	3 inch flange
Port size (Body)	IN: R ¼ OUT: Rc ½		
Fluid	Air		
Proof pressure	1.5 MPa		
Operating pressure range	0.4 to 1.0 MPa		
Operating pressure differential range	0.05 to 0.2 MPa		
Bowl capacity between levels (cm ³)	5000		
Recommended lubricant	Turbine oil Class 1 (With no additives), ISO VG32		
Ambient and fluid temperature	5 to 50°C		
Bowl material	Epoxy resin with glass fiber, Polycarbonate		
Mass (kg)	28		

Accessory (Option) Part No.

Type	Description	Part no.		
		ALB900-10	ALB900-20	ALB900-30
Standard accessory	Bypass lubrication adapter	ALBA90-10	ALBA90-20	ALBA90-30
	Ball valve	Rc ¼		
	Ball valve	Rc ½		
Option	Float switch ^{Note)}	IS440-1 (Without oil ON) IS440-2 (Without oil OFF)		

Note) Float switch specifications
 Voltage ————— 200 VAC, 200 VDC Contact ————— 1a, 1b
 Max. contact capacity — 50 VA AC, 50 W DC Level indication ——— Bottom limit indication
 Max. contact current — 0.5 A AC, 0.5 A DC

How to Order

ALB 900 - 10 - 00 - []

Booster lube

Body size

900	2 inch standard
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Port size (Bypass lubrication adapter)

00	None
10	Rc 1
20	Rc 2
30	3 inch flange

Operation control signal

0	Air pilot
1	100 VAC
2	200 VAC
4	220 VAC
5	24 VDC
9	Other

Operation control

0	Air pilot
1	Solenoid

Float switch (Option)

Nil	None
S1	1b (Without oil ON)
S2	1a (Without oil OFF)

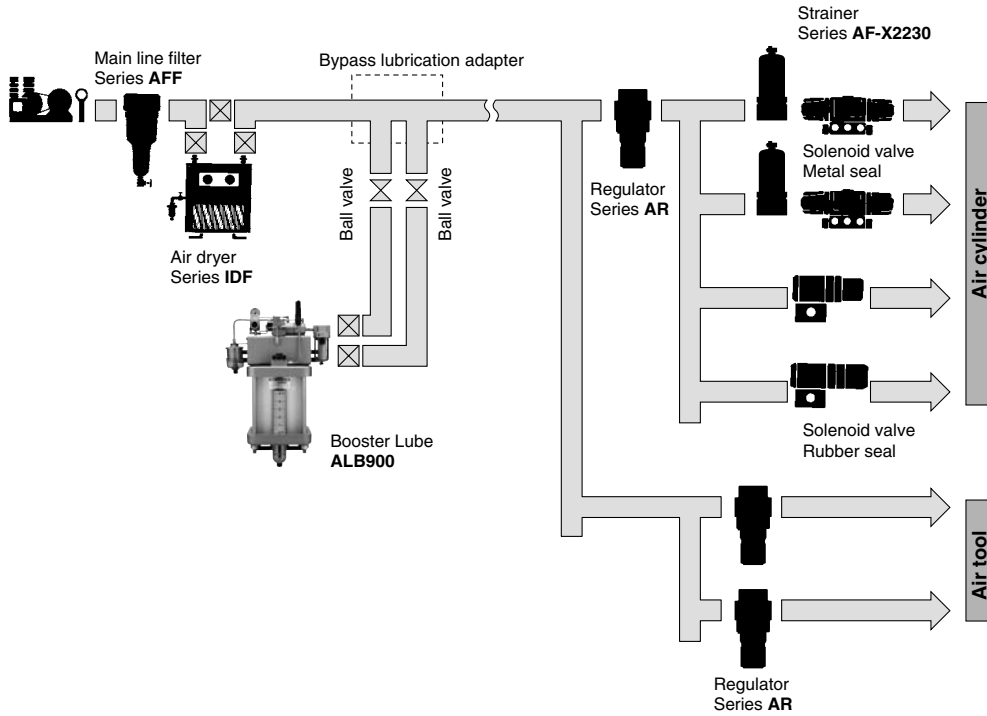


ALB900-00-11

AL800
AL900
ALF
ALT
ALD
ALB
LMU
ALIP

Series ALB900

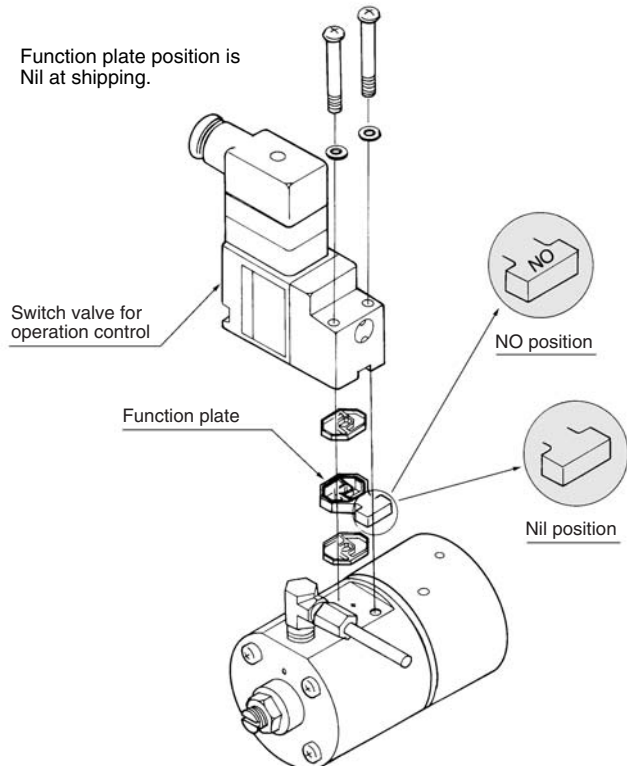
Piping Example



Operation Control Method

As shown in the diagram below, reverse the position of the function plate of the switching valve for operation control, and place it in the NO position or in the unmarked position. When the control signal is input, select the state of the operation or the stopping of the Booster Lube.

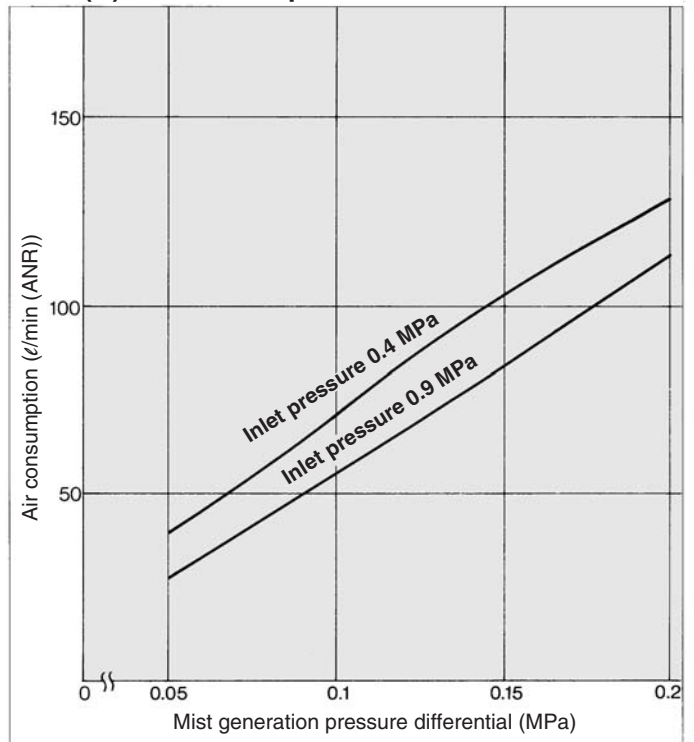
NO position Operation at control signal input
 Nil position Stop at control signal input
 The 100 VAC, 200 VAC, 220 VAC, 24 VDC, or air pilot type specification can be applied to the control signal.



Air Consumption

This unit uses a booster to generate a mist generating pressure differential. Therefore, the booster consumes and discharges the air. Data(A) indicates the relationship between this air consumption rate, the set pressure differential, and the pressure of the main air passage (inlet pressure).

Data (A) Air Consumption

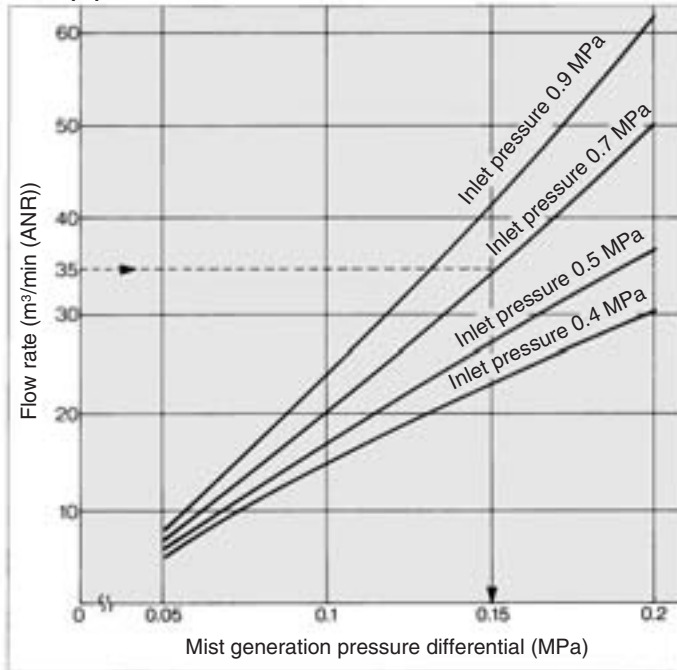


Setting of Mist Generation Pressure Differential

Procedure

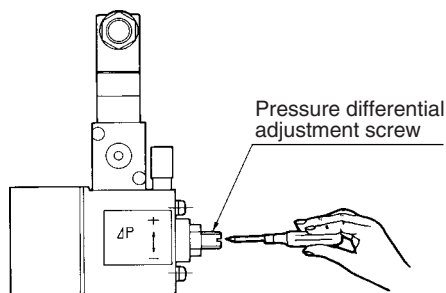
1. Obtain the air consumption flow rate in the downstream of the Booster Lube.
2. Obtain the necessary mist generation pressure differential from data(B).

Data(B) Flow — Mist Generation Pressure Differential

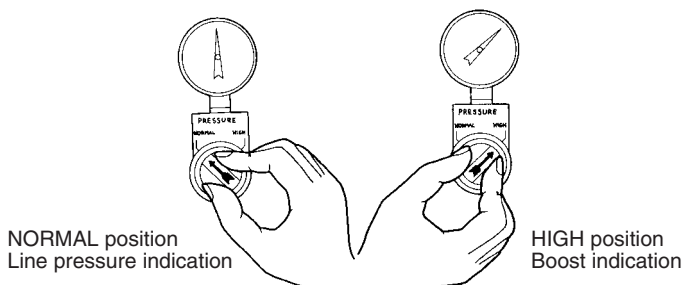


EX: How to obtain the mist generating pressure differential if the flow rate obtained in 1. above is 35 m³/min (ANR) and the line pressure (inlet pressure P_1) is 0.7 MPa:
 → Extend horizontally from the point at which the flow rate is 35 m³/min to obtain the point that intersects with $P_1 = 0.7$ MPa.
 Furthermore, extend vertically downward from that point to the point that intersects with the graduation line of the mist generating pressure differential.
 The value of that intersecting point, which is 0.15 MPa, is the mist generating pressure differential that is sought.

3. The mist generating pressure differential setting is performed by adjusting the adjustment screw. The pressure differential (the difference between the boost pressure and the line pressure) is increased by turning the adjustment screw clockwise, and decreased by turning counterclockwise. To check the pressure differential, switch and operate the manual switching valve to read the difference between the boost pressure (HIGH position) and the line pressure (NORMAL position) as shown below (the pressure gauge that is connected to the manual switching valve). After completing the setting, set the manual switching valve to the position of the line pressure indication. Do not set the mist generating pressure differential to exceed 0.2 MPa.



Mist generation pressure differential setting



⚠ Precautions

Be sure to read before handling.
Refer to front matters 42 and 43 for Safety Precautions and pages 287 to 291 for Precautions on Every series.

Caution on Design

⚠ Warning

1. Epoxy resin containing glass fiber and polycarbonate is used in some parts of the Booster Lube. The Booster Lube cannot be used in an environment or in a location that is exposed to synthetic oil, thinner, acetone, alcohol, organic solvents such as ethylene chloride, chemicals such as sulfuric acid or nitric acid, cutting oil, kerosene, gasoline, or a threadlock agent, etc., because they will be damaged.

Piping

⚠ Warning

If installing an air tank, install it upstream of the bypass oil feed adapter. If it is installed downstream, the micromist could be arrested by the air tank, which could lead to insufficient feeding of oil.

Mounting/Adjustment

⚠ Caution

1. When setting the pressure differential, if there is a fluctuation in the operating flow rate, set the pressure differential at the higher flow rate range. If it is set in the lower flow rate range, the mist density could become thinner, leading to poor lubrication.
2. To prevent mist from being generated unnecessarily, if there is no air consumption in the main air passage, operate the switching valve for operation control to stop the operation of the booster.

Maintenance

⚠ Warning

1. Before removing the oil filler plug, loosen it two and half turns to completely release the pressure in the bowl. This will prevent the oil filler plug from flying out.

AL800
AL900

ALF
ALT

ALD

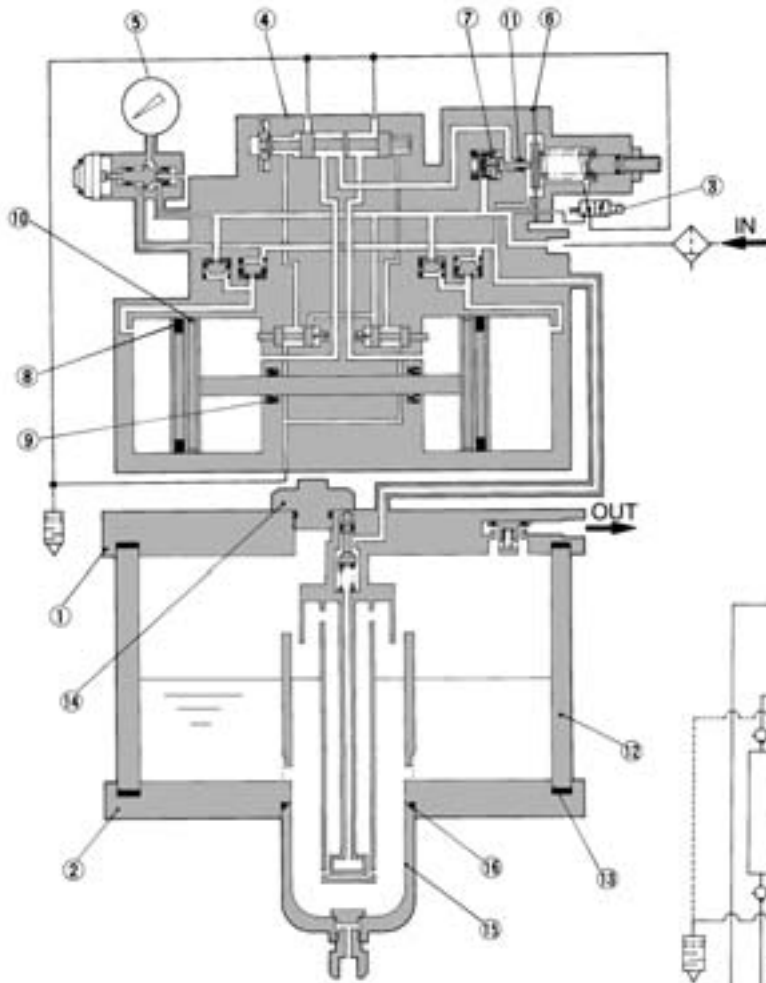
ALB

LMU

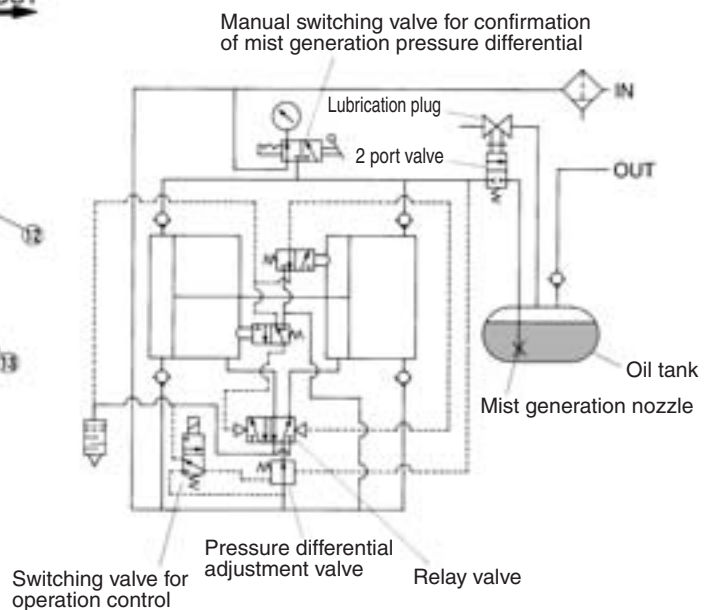
ALIP

Series ALB900

Construction



Circuit



Component Parts

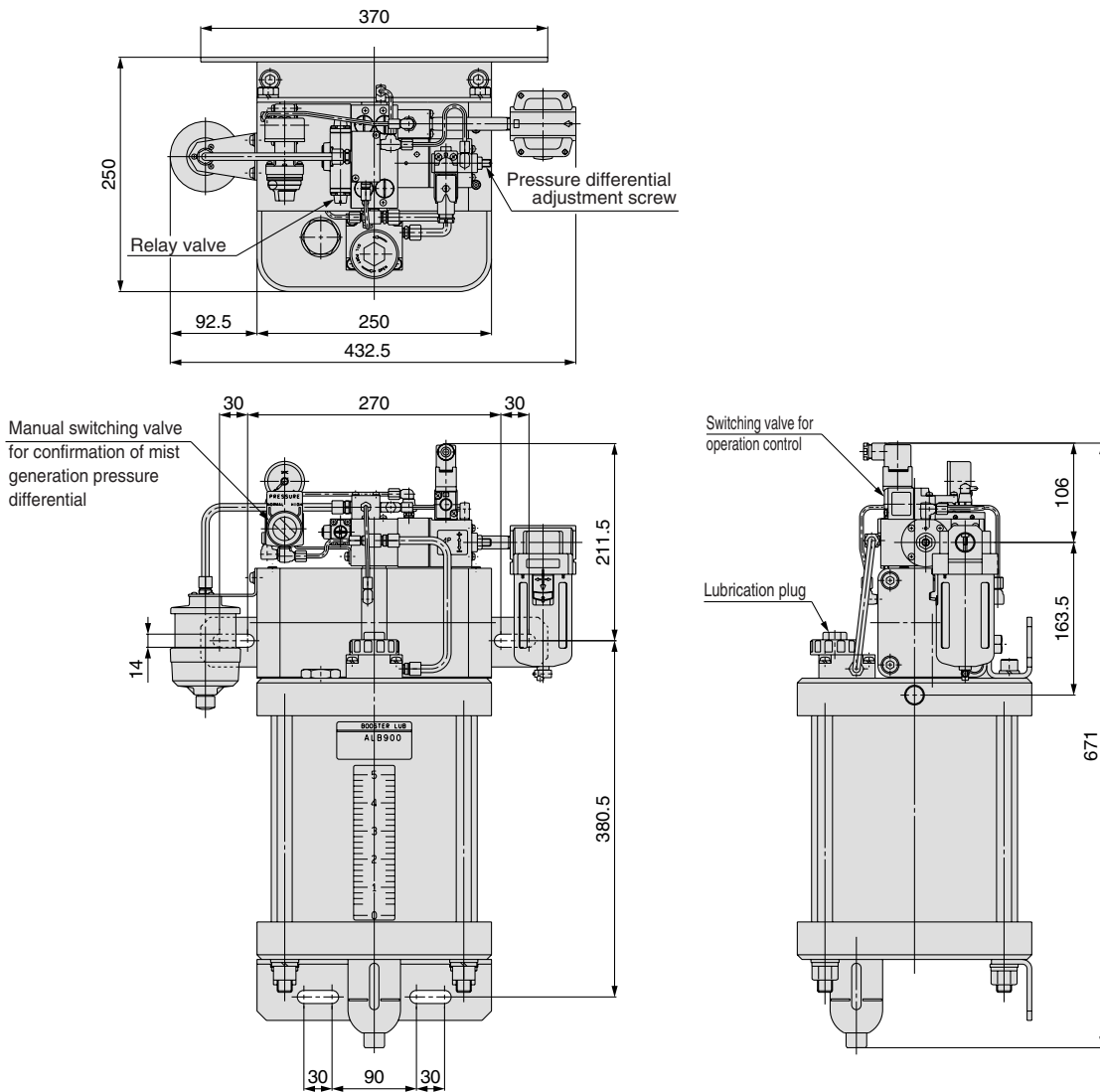
No.	Description	Material
1	Top cover	Aluminum casted
2	Bottom cover	Aluminum casted

Replacement Parts

No.	Description	Material	Part no.	Q'ty
3	3 port switching valve (for operation control)	—	VOA301-M V0307E-*D-X56	1
4	Relay valve	—	VR4152-00-0	1
5	Pressure gauge	—	GA46-10-01	1
6	Diaphragm assembly	—	12702A	1
7	Valve assembly	—	12705A	1
8	NLP seal	NBR	NLP-100A	2
9	PNY seal	NBR	PNY-25	2
10	Wear ring	Cloth-inserted phenol aldehyde resin	SW-100 x 6 x 2	2
11	O-ring	NBR	JIS B2401P3	1
12	Bowl assembly	Glass fiber-inserted epoxy resin	126059-4A	1
13	Seal	NBR	126060	2
14	Lubrication plug assembly	Zinc die-casted NBR	126115AP	1
15	Bowl assembly	—	AF11-3	1
16	O-ring	NBR	11307	1

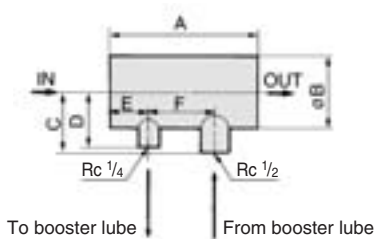
* 1: 100 VAC, 2: 200 VAC, 4: 220 VAC, 5: 24 VDC, 9: Others

Dimensions

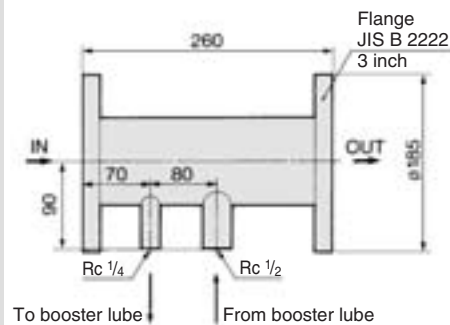


Bypass Lubrication Adapter

ALBA90-10/-20



ALBA90-30



Part no.	Port size Rc	A	B	C	D	E	F
ALBA90-10	1	150	42.7	45	40	35	80
ALBA90-20	2	165	76.3	65	60	40	80

AL800
AL900

ALF
ALT

ALD

ALB

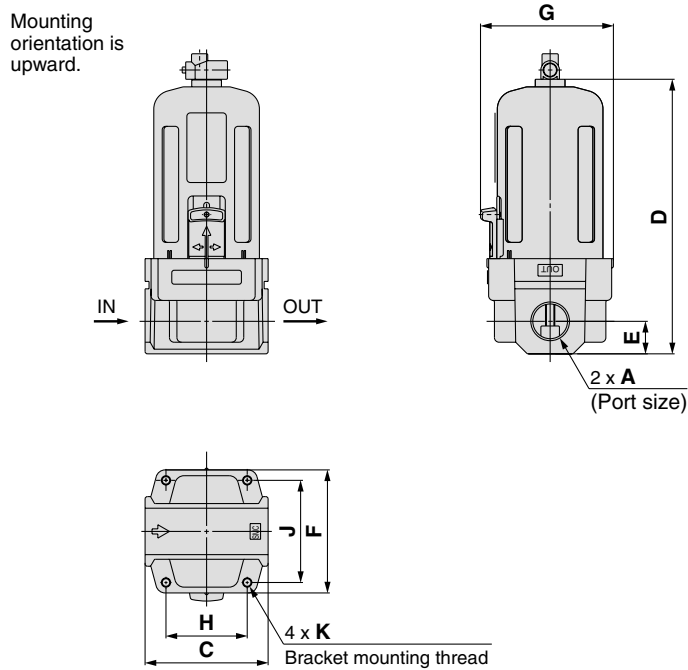
LMU

ALIP

Series ALB900

Related Product: Strainer

At the terminal of an air pressure line in which a Booster Lube is used, install a strainer (filtration rate of 5 μm) upstream from a metal seal solenoid valve, which is susceptible to dust.



Model	A	C	D	E	F	G	H	J	K
AF30-02 to 03-X2230	Rc 1/4, 3/8	53	118	14	53	57	35	44	M4 x 0.7 x 0.5
AF40-02 to 04-X2230	Rc 1/4, 3/8, 1/2	70	165	18	70	73	47	60	M5 x 0.8
AF40-06-X2230	Rc 3/4	75	169	20	70	73	47	60	M5 x 0.8
AF50-06 to 10-X2230	Rc 3/4, 1	90	245	24	90	—	59	73	M6 x 1
AF60-10-X2230	Rc 1	95	258	24	95	—	63	78	M6 x 1