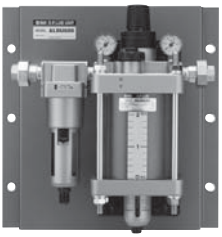
D. P. Lube
Series ALD600/900

- **Centralized control of multi-point lubrication**
- **Low oil consumption volume**
- **Simplified oil feeding volume setting in which only the pressure differential is adjusted.**
- **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.**

ALD600



ALDU600 (with panel)

Standard Specifications

Model name	D.P. Lube		D.P. Lube Unit Note 1)	
Model	**ALD600**	**ALD900**	**ALDU600**	**ALDU900**
Port size Note 2)	3/4 1	1 1/4 1 1/2 2	3/4 1	1 1/4 1 1/2 2
Fluid	Air			
Proof pressure	1.5 MPa			
Operating pressure range	0.1 to 1.0 MPa		0.15 to 1.0 MPa	
Operating pressure differential range	0.03 to 0.1 MPa			
Recommended press. differential	0.05 MPa			
Press. differential setting min. flow Note 3)	102 L/min (ANR)			
Bowl capacity between levels (cm³)	2000	5000	2000	5000
Recommended lubricant	Turbine oil Class 1(With no additives), ISO VG32			
Ambient and fluid temperature	5 to 60°C			
Bowl material	Epoxy resin with glass fiber, Polycarbonate			
Weight (kg)	8.9	21.3	11.1 (18.6) Note 4)	31.6 (48.1) Note 4)

Note 1) D.P. Lube unit has an attached filter at primary side of D.P. Lube.
Note 2) Port of D.P. Lube unit is union.
Note 3) Condition: Inlet pressure = 0.5 MPa, Pressure differential = 0.05 MPa
Note 4) ( ) is weight with panel.

Accessory (Option) Part No.

Description \ Model		Part no. ALD600	ALD900	ALDU600	ALDU900
Bracket		126130P	126044P	126130P	126044P 113449 Note 1) 113543 Note 2)
Panel		—	—	12661P	12651-1P
Float switch	S1	IS430-1	IS420-1	IS430-1	IS420-1
	S2	IS430-2	IS420-2	IS430-2	IS420-2

Note 1) Bracket for filter mounting: For Rc 1 1/4 , 1 1/2
Note 2) Bracket for filter mounting: For Rc 2
} Thread machining on filter body is needed.

How to Order

ALD 9 00 – □ 20 □ – □

Style

ALD	D.P. Lube (Single unit)
ALDU	D.P. Lube unit

Body size (Standard)

6	1B
9	2B

Thread type

Nil	Rc
N	NPT

Port size

06	3/4
10	1
12	1 1/4
14	1 1/2
20	2

Accessory

Symbol	Description
Nil	—
B	Bracket
P	Panel

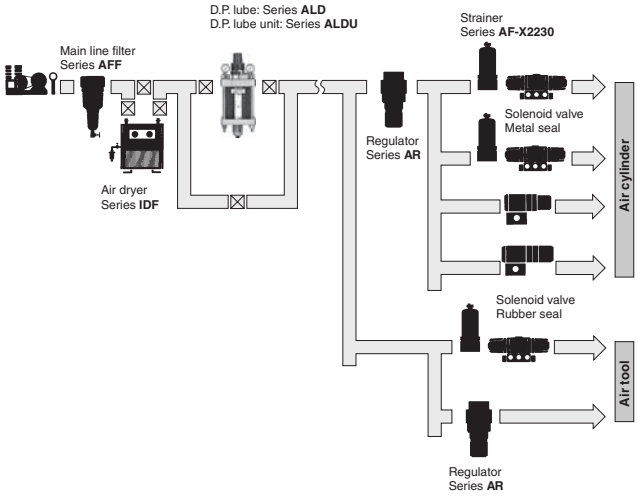
Float switch

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

Float Switch Specifications

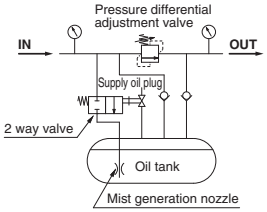
Voltage	200 VAC, 200 VDC
Max. contact capacity	50 VA AC, 50 W DC
Max. operating current	0.5 A AC, 0.5 A DC
Contact point construction	1a, 1b
Level indication	Bottom limit indication

Piping Example

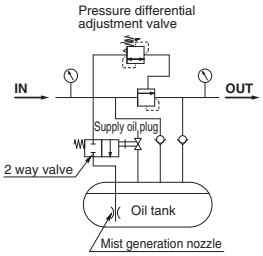


Circuit

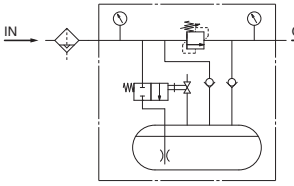
ALD600



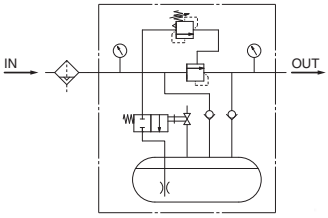
ALD900



ALDU600



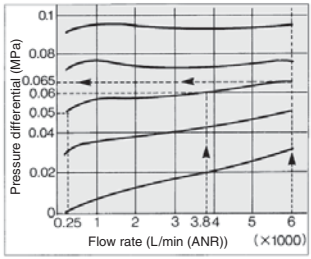
ALDU900



Flow Characteristics (Representative value)

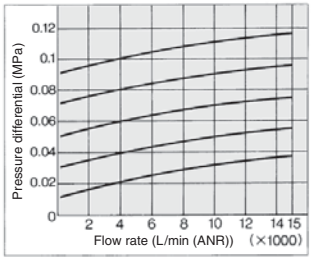
ALD600-10

Condition: Inlet pressure 0.5 MPa,
Pressure differential setting flow 250 L/min (ANR)

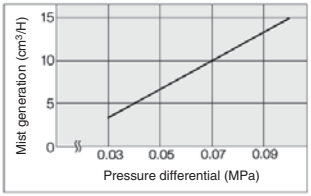


How to read the graph (Example)
With the flow rate set to 250 L/min (ANR) and the pressure differential set to 0.05 MPa, by changing the flow rate to 3800 L/min (ANR) and 6000 L/min (ANR), the pressure differential will change from the initial 0.05 MPa to 0.06 MPa, and to 0.065 MPa.

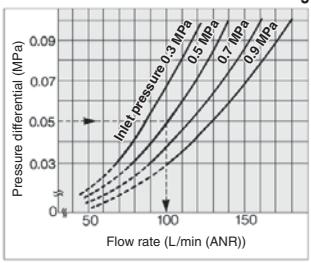
ALD900-20



Pressure Differential and Mist Generation (Representative value)



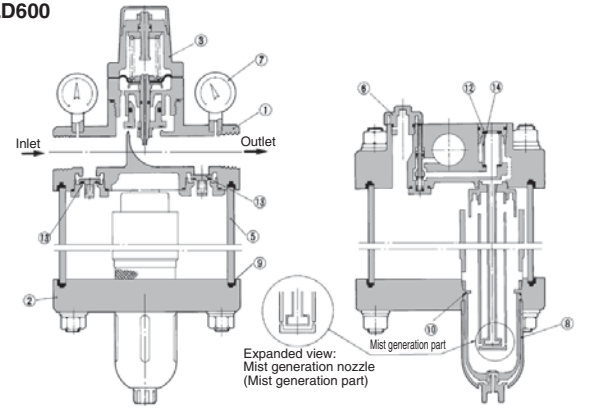
Min. Flow for Pressure Differential Setting



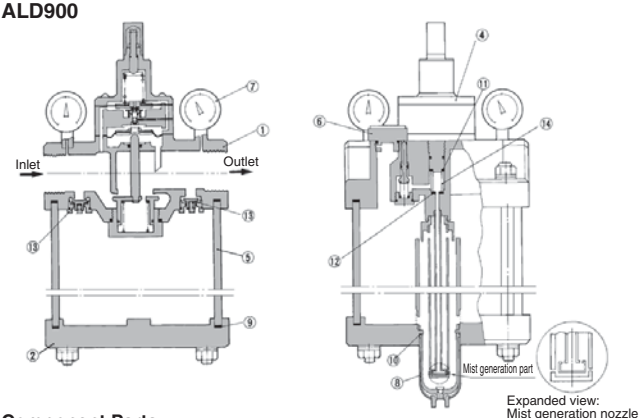
How to read the graph (Example)
When the inlet pressure is 0.5 MPa, a flow rate that is greater than 102 L/min(ANR) will be necessary to set the pressure differential to 0.05 MPa.
Below this flow rate, the pressure differential cannot be set to 0.05 MPa.

Construction

ALD600



ALD900



Component Parts

No.	Description	Material	
		ALD600	ALD900
1	Body	Aluminum die-casted	Aluminum casted
2	Bottom cover	Aluminum die-casted	Aluminum casted

Replacement Parts

No.	Description	Material	Part no.	
			ALD600	ALD900
3	Check valve assembly	—	12612AP	—
4	Pilot body assembly	—	—	12609AP
5	Bowl assembly	Glass fiber-inserted epoxy resin	126139-1A	126059-1A
6	Lubrication plug assembly	Zinc die-casted, NBR	126115AP	126115AP
7	Pressure gauge (2 pcs.)	—	GA46-10-01	GA46-10-02
8	Bowl assembly	—	AF11-3	AF11-3
9	Seal (2 pcs.)	NBR	126140	126060
10	O-ring	NBR	11307	11307
11	Seal	NBR	—	126046
12	Seal	NBR	126047(2)	126047
13	Check valve assembly (2 pcs.)	—	126127A	126022A
14	Filter element	Bronze	11294-70B	11294-70B

⚠ Precautions

Be sure to read before handling. Refer to front matter 43 for Safety Instructions and pages 365 to 369 for Precautions on every series.

Caution on Design

⚠ Warning

1. Epoxy resin containing glass fiber and polycarbonate is used in some parts of the D.P. Lube and the D.P. Lube Unit. These units 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.

Mounting/Adjustment

⚠ Caution

1. Provide about 30 cm of space above and below the D.P. Lube or the D.P. Lube Unit to facilitate their maintenance and inspection.
2. When the line is stopped, do not adjust or set the differenital pressure, as it could cause the differential adjustment valve to break.
3. When setting the pressure differential, if there is a fluctuation in the operating flow rate, set the pressure differential at the lower flow rate range.

Piping

⚠ Warning

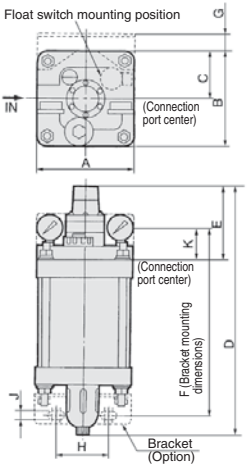
1. The drain pipe for the air filter in the D. P. Lube Unit must have a minimum pipe bore of ø6.5, and a maximum length of 5 m. Avoid using a riser pipe because it could cause the auto-drain to malfunction.
2. If installing an air tank, install it on the IN side of the D.P. Lube Unit. If it is installed on the OUT side, the micromist could be arrested by the air tank, which could lead to insufficient feeding of oil.

Maintenance

⚠ Warning

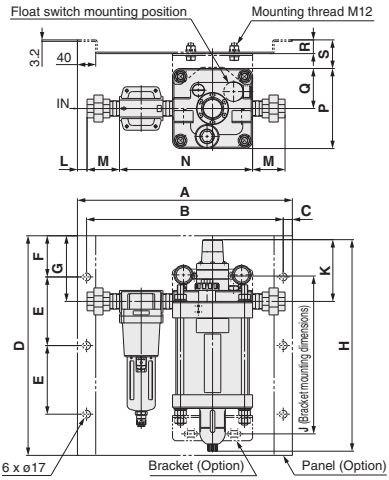
1. Before removing the oil filler plug, loosen it two and a half turns to completely release the pressure inside the case. This will prevent the oil filler plug from flying out.

D.P. Lube / ALD600-□06 to 10, ALD900-□12 to 20



Model	Port size	A	B	C	D	E	Bracket dimensions				
							F	G	H	J	K
ALD600-□06 to 10	3/4, 1	175	175	87.5	487	135	344	32.5	95	14	55.5
ALD900-□12 to 20	1 1/4, 1 1/2, 2	250	250	125	639	210	416.5	0	120	14	48

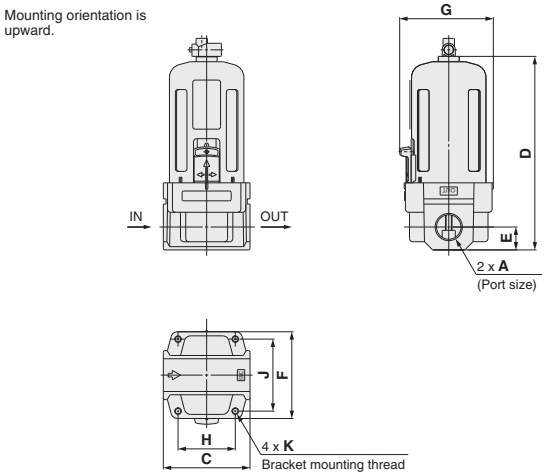
D.P. Lube Unit / ALDU600-□06 to 10, ALDU900-□12 to 20



Model	Port size	A	B	C	D	E	F	G	H	J	K	L	M	N	P	Q	R	S
ALDU600-□06	3/4	470	430	20	500	150	90	145	487	344	55.5	24.5	69.5	289	175	87.5	30	62.5
ALDU600-□10	1											13.6	78.2	291.2				
ALDU900-□12	1 1/4	250	250	125	639	230	120	227	639	416.5	48	51	89	453	250	125	33.2	33.2
ALDU900-□14	1 1/2								639			45.5	94.5	453				
ALDU900-□20	2								639			14.5	102.5	476				

Related Products: Strainer

At the terminal of an air pressure line in which a D.P. Lube is used, install a strainer (filtration rate of 5 μm) upstream with 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