

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 ⁽¹⁾		
	Model	ALD600	ALD900	ALDU600	ALDU900
Port size Rc(PT) ⁽²⁾	$\frac{3}{4}$ 1	$\frac{1}{4}$ $\frac{1}{2}$	$\frac{3}{4}$ 1	$\frac{1}{4}$ $\frac{1}{2}$	$\frac{1}{4}$ $\frac{1}{2}$
Fluid	Air				
Proof pressure	1.5MPa				
Operating pressure range	0.1 to 1.0MPa		0.15 to 1.0MPa		
Operating press. differential range	0.03 to 0.1MPa				
Recommended press. differential	0.05MPa				
Press. differential setting min. flow ⁽³⁾	102 ϵ /min (ANR)				
Bowl capacity between levels	2000	5000	2000	5000	
Recommended oil	Turbine oil class 1 (ISO VG32)				
Ambient and fluid temperature	5 to 60C				
Bowl material	Epoxy resin with glass fiber, Polycarbonate				
Weight (kg)	8.9	21.3	11.1(18.6) ⁽⁴⁾	31.6(48.1) ⁽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: Primary pressure = 0.5MPa, Pressure differential = 0.05MPa

Note 4) () is weight with panel.

Accessory (Options) Part No.

Description	Model	Part No.			
		ALD600	ALD900	ALDU600	ALDU900
Bracket		126130P	126044P	126130P	126044P
					113449 ⁽¹⁾
Panel		—	—	12661P	113543 ⁽²⁾
					12651-1P



Note 1) Bracket for filter mounting: For Rc(PT) $\frac{1}{4}$, $\frac{1}{2}$ } Thread machining on filter body is needed.

Note 2) Bracket for filter mounting: For Rc(PT) $\frac{1}{2}$

How to Order

EALD 9 00 — 20

Style

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

Body size

6	1B
9	2B

Thread

—	Rc(PT)
N	NPT

Option

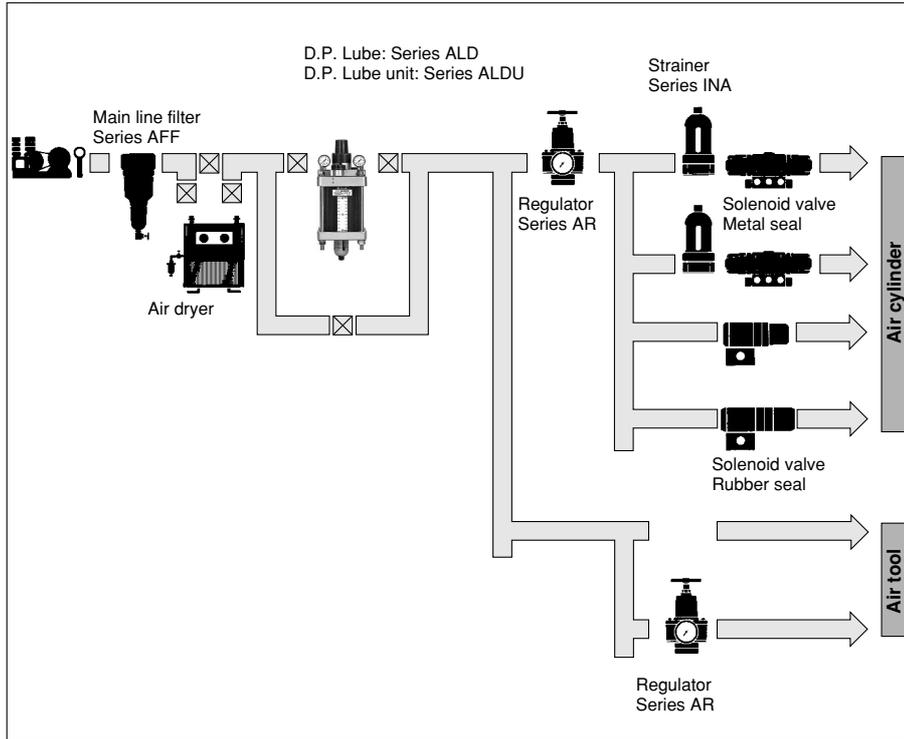
—	—
B	Bracket
P	Panel

Port size

06	$\frac{3}{4}$
10	1
12	$\frac{1}{4}$
14	$\frac{1}{2}$
20	2

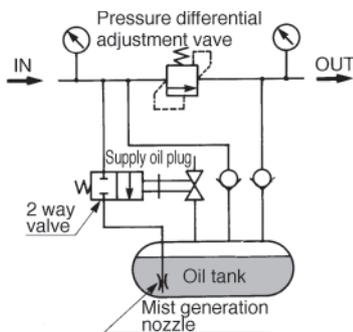
ALD600/900

Piping example

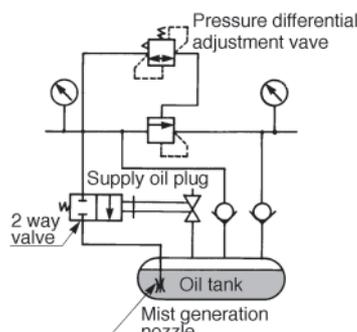


Circuit

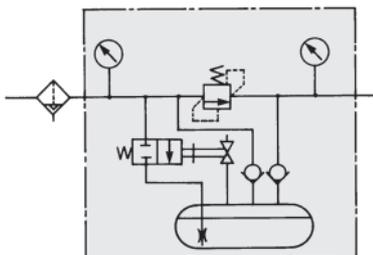
ALD600



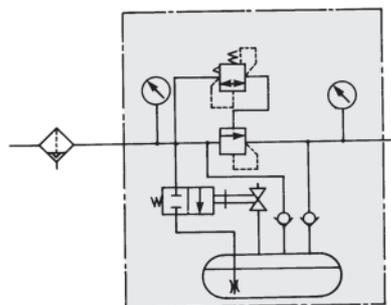
ALD900



ALDU600



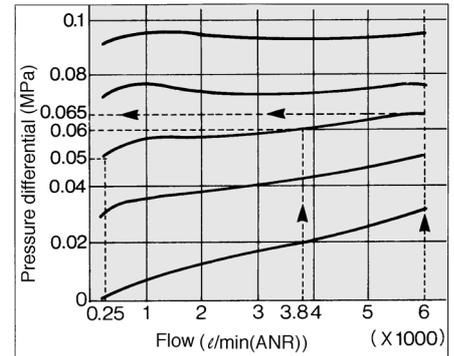
ALDU900



Flow Characteristics

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

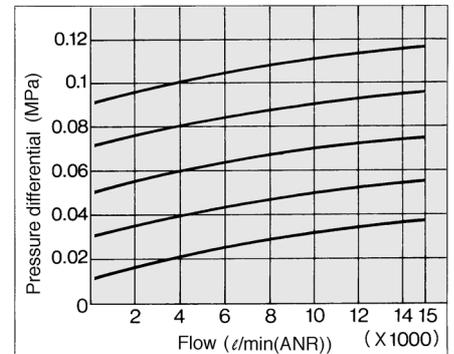
ALD600-10



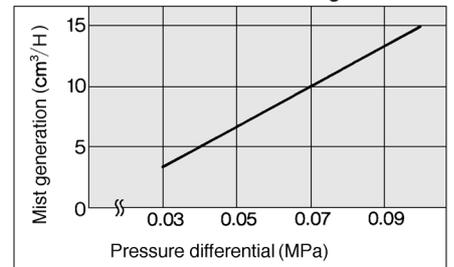
How to read graph

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

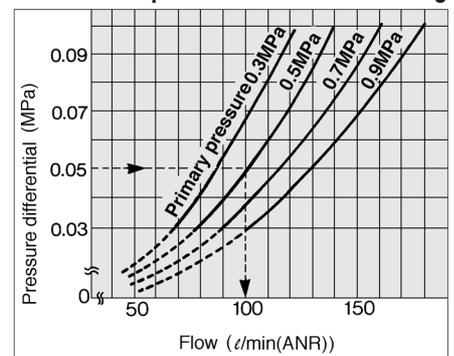
ALD900-20



Pressure differential and mist generation



Min. flow for pressure differential setting

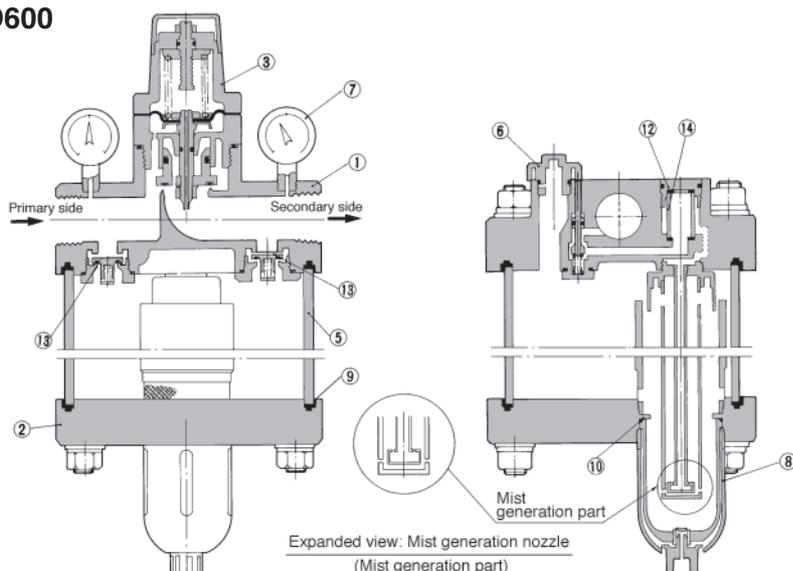


How to read graph

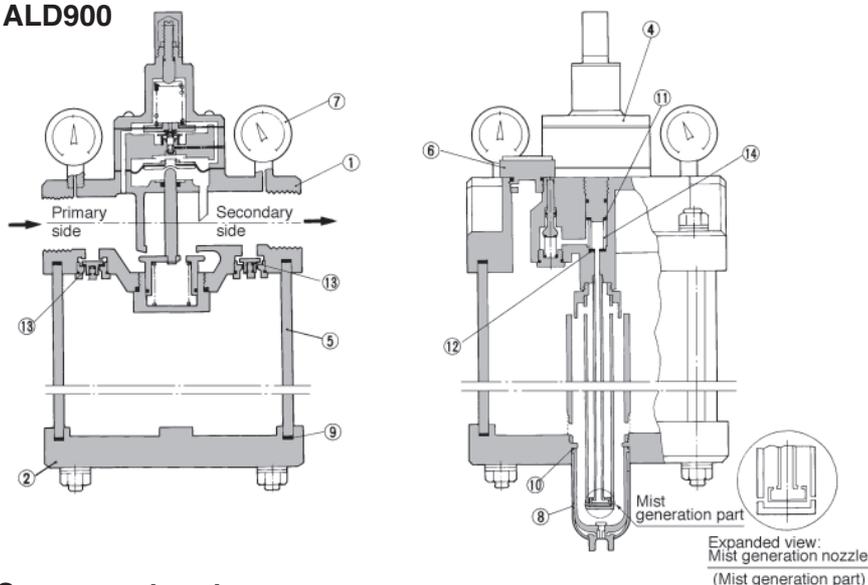
When the primary pressure is 0.5MPa, a flow rate that is greater than 102 ℓ /min(ANR) will be necessary to set the pressure differential to 0.05MPa. Below this flow rate, the pressure differential cannot be set to 0.05MPa.

Construction

ALD600



ALD900



Component parts

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

Replacement parts

No.	Description	Material	Part No.	
			ALD600	ALD900
③	Valve guide assembly	—	12612AP	—
④	Pilot body assembly	—	—	12609AP
⑤	Bowl assembly	Epoxy resin with glass fibre	126139-1A	126059-1A
⑥	Lubrication plug assembly	Zinc die cast, NBR	126115AP	126115AP
⑦	Pressure gauge (2 pcs.)	—	GA46-10-01	GA46-10-02
⑧	Bowl assembly	—	AF11-3	AF11-3
⑨	Sealing (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 p.0-26 and 0-27 for Safety Instructions and common precautions on the products in this catalogue, and refer to p.1.0-2 and 1.0-3 for precautions on every series.

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 sulphuric acid or nitric acid, cutting oil, kerosene, gasoline, or a threadlock agent, etc., because they will be damaged.

Mounting/Adjustment

⚠ Caution

- ① Provide about 30cm of space above and below the D.P. Lube or the D.P. Lube Unit to facilitate their maintenance inspection.
- ② When the line is stopped, do not adjust or set the differential 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 $\phi 10$, and a maximum length of 5m. 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

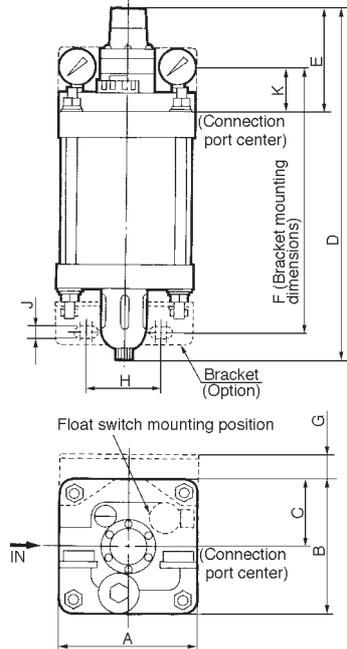
⚠ Warning

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

ALD600/900

Dimensions

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

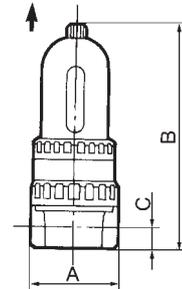


Model	Port size	A	B	C	D	E	Bracket dimensions				
							F	G	H	J	K
ALD600-□06 to 10	3/4, 1	175	175	87.5	460	135	345	32.5	95	14	57
ALD900-□12 to 20	1 1/4, 1 1/2, 2	250	250	125	613	209	419.2	0	120	14	49.6

Related equipment/Strainer

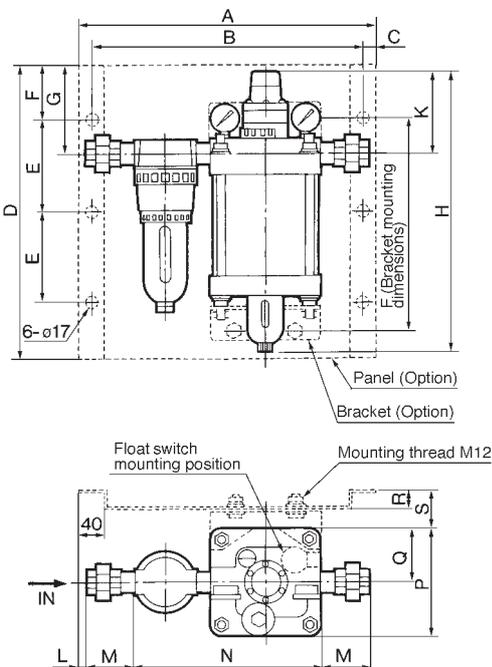
At the terminal of an air pressure line in which a D.P. Lube is used, install a strainer (filtration rate of 5µm) upstream with a metal seal solenoid valve, which is susceptible to dust.

Mounting orientation is Upper direction



Model	Port size Rc(PT)	A	B	C
INA-11-402	1/4	63	141	15
INA-11-403	3/8	63	164.5	15
INA-11-404	1/4, 3/8, 1/2	80	170	15
INA-11-405	3/4	85	180	20
INA-11-406	3/4, 1	90	230	22
INA-11-407	1	100	251	22

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	480	150	90	145	460	345	135	43	67	283	175	87.5	30	62.5
ALDU600-□10	1											10	77	296				
ALDU900-□12	1 1/4	710	670	20	700	230	120	222	615	419.2	209	57	85	424	250	125	33.2	33.2
ALDU900-□14	1 1/2											51	90	424				
ALDU900-□20	1											16	100	476				