



ORIGINAL INSTRUCTIONS

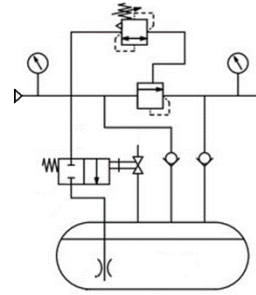


Refer to Declaration of Conformity for relevant Directives

Instruction Manual

Differential Pressure Lubricator

Series ALD 900



The intended use of the ALD series is to supply lubricating oil to the pneumatic circuit. Lubricant flow is controlled by adjusting the differential pressure in the airline.

1 Safety Instructions

These safety instructions are intended to prevent hazardous situations and/or equipment damage. These instructions indicate the level of potential hazard with the labels of "Caution," "Warning" or "Danger." They are all important notes for safety and must be followed in addition to International Standards (ISO/IEC)¹⁾, and other safety regulations.

- ¹⁾ ISO 4414: Pneumatic fluid power - General rules relating to systems.
ISO 4413: Hydraulic fluid power - General rules relating to systems.
IEC 60204-1: Safety of machinery - Electrical equipment of machines. (Part 1: General requirements)
ISO 10218-1: Manipulating industrial robots - Safety, etc.
- Refer to product catalogue, Operation Manual and Handling Precautions for SMC Products for additional information.
 - Keep this manual in a safe place for future reference.

Caution	Caution indicates a hazard with a low level of risk which, if not avoided, could result in minor or moderate injury.
Warning	Warning indicates a hazard with a medium level of risk which, if not avoided, could result in death or serious injury.
Danger	Danger indicates a hazard with a high level of risk which, if not avoided, will result in death or serious injury.

Warning

- Always ensure compliance with relevant safety laws and standards.
- All work must be carried out in a safe manner by a qualified person in compliance with applicable national regulations.

2 Specifications

Model	ALD900
Port Size	1 ¼ , 1 ½ , 2
Fluid	Air
Proof Pressure	1.5 MPa
Operating Pressure Range	0.1 to 1.0 MPa
Operating Differential Pressure Range	0.03 to 0.1 MPa
Recommended Differential Pressure	0.05 MPa
Pressure Differential setting min. flow ^{Note 1)}	102 L/min (ANR)
Bowl Capacity between levels	5000 cm ³
Recommended Lubricant	Turbine oil Class 1 (no additives), ISO VG32
Ambient and fluid temperature	5 to 60°C
Bowl Material	Epoxy Resin with glass fibre, Polycarbonate
Weight	21.3 kg

Note 1) Condition: Inlet pressure = 0.5 MPa, Pressure Differential = 0.05 MPa

2 Specifications - Continued

Float Switch Specification	
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

Warning

Special Products might have specifications different from those shown in this section. Contact SMC for specific drawings.

3 Installation

3.1 Installation

Warning

- Do not install the product unless the safety instructions have been read and understood.
- Product must be installed upright.
- Provide about 30cm of space above and below to facilitate maintenance and inspection.

3.2 Environment

Warning

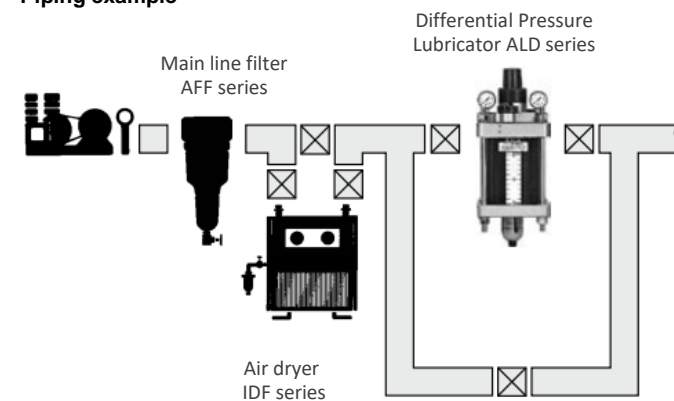
- Do not use in an environment where corrosive gases, chemicals, salt water or steam are present.
- Do not use in an explosive atmosphere.
- Do not expose to direct sunlight. Use a suitable protective cover.
- Do not install in a location subject to vibration or impact in excess of the product's specifications.
- Do not mount in a location exposed to radiant heat that would result in temperatures in excess of the product's specifications.
- Do not install in an environment or location where it will be exposed to synthetic oil, thinner, acetone, alcohol, organic solvents such as sulfuric acid or nitric acid, cutting oil, kerosene, gasoline, threadlock agent, etc. as this will cause damage to the epoxy resin and polycarbonate parts.

3.3 Piping

Caution

- Before connecting piping make sure to clean up chips, cutting oil, dust etc.
- When installing piping or fittings, ensure sealant material does not enter inside the port. When using seal tape, leave 1 thread exposed on the end of the pipe/fitting.
- Tighten fittings to the specified tightening torque.
- Thoroughly flush piping with air before connecting.
- Provide bypass piping as shown in the piping example below to facilitate servicing.

Piping example



3 Installation - Continued

3.4 Lubrication

Caution

- SMC products have been lubricated for life at manufacture, and do not require lubrication in service.

4 Settings

After removing the cap on the top of the product, turning the handle clockwise will increase the differential pressure, anti clockwise will decrease it.

Caution

- When the line is stopped, do not adjust or set the differential pressure, as it could cause the differential adjustment valve to break.
- When setting the pressure differential, if there is a fluctuation in the operating flow rate, set the pressure differential at a lower flow rate.

5 How to Order

Refer to drawings or catalogue for 'How to Order'.

6 Outline Dimensions (mm)

Refer to drawings or catalogue for outline dimensions.

7 Maintenance

7.1 General Maintenance

Caution

- Not following proper maintenance procedures could cause the product to malfunction and lead to equipment damage.
- If handled improperly, compressed air can be dangerous.
- Maintenance of pneumatic systems should be performed only by qualified personnel.
- Before performing maintenance, turn off the power supply and be sure

to cut off the supply pressure. Confirm that the air is released to atmosphere.

- After installation and maintenance, apply operating pressure and power to the equipment and perform appropriate functional and leakage tests to make sure the equipment is installed correctly.
- If any electrical connections are disturbed during maintenance, ensure they are reconnected correctly and safety checks are carried out as required to ensure continued compliance with applicable national regulations.
- Do not make any modification to the product.
- Do not disassemble the product, unless required by installation or maintenance instructions.
- 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 being forced out.

8 Limitations of Use

8.1 Limited warranty and Disclaimer/Compliance Requirements

Refer to Handling Precautions for SMC Products.

9 Product disposal

This product should not be disposed of as municipal waste. Check your local regulations and guidelines to dispose this product correctly, in order to reduce the impact on human health and the environment.

10 Contacts

Refer to www.smcworld.com or www.smc.eu for contacts.

SMC Corporation

URL : <http://www.smcworld.com> (Global) <http://www.smc.eu> (Europe)
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Specifications are subject to change without prior notice from the manufacturer.
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