



ORIGINAL INSTRUCTIONS



Refer to Declaration of Conformity for relevant Directives

Instruction Manual
Mist Spray Unit
LMU Series



The intended use of the mist spray unit is lubrication and/or supply of cutting fluid with compressed air to bearings, tools and press machinery.

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^{*)}, 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

2.1 Specifications		LMU100	LMU200
Proof pressure		1.5 MPa	
Air inlet pressure range		0.1 to 1.0 MPa	
Oil / Air tank set pressure range		0.05 MPa to 0.2 MPa	
Tank capacity		3000 cm ³ (effective capacity 2500 cm ³)	
Ambient and fluid temperature		5°C to 50°C	
Fluid		Air	
Oil (note 1)		ISO VG2-200	
Port size	IN	Rc 1/4	
	OUT	3 x Rc 1/4 Air: H06 Oil: H04 Air blow: H08	2 x Rc 1/4 Air: H06 Oil: H04
Weight (kg)		8.4	7.9

note 1) Fluids not deteriorating the oil path material (Al, Cu, SUS, NBR,FKM)

2 Specifications - continued

2.2 Electrical specifications

Solenoid valve voltage	100V AC 50/60Hz 200V AC 50/60Hz 24V DC
Float switch voltage and current	200 V (AC, DC) AC: 50VA DC: 50W

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.
- Install a 5µm air filter before the product.

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.

3.3 Piping

Caution

- Before connecting piping make sure to clean up chips, cutting oil, dust etc.
- Ensure tubing is securely installed to the outlet.

- 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.

Thread	Appropriate Tightening Torque (N·m)
Rc 1/4	8~12

3.4 Lubrication

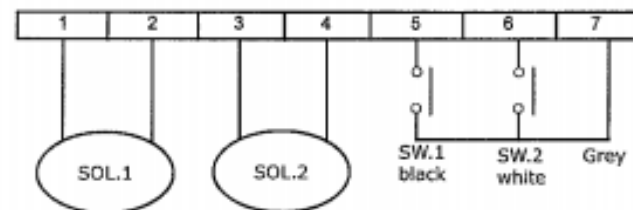
Caution

- SMC products have been lubricated for life at manufacture, and do not require lubrication in service.
- If a lubricant is used in the system, refer to catalogue for details.

3.5 Electrical Connection

Warning

- The layout of the terminal is as shown below. Each wire must be correctly connected to power supply side (LMU100-□□).



Solenoid 1	Turn ON/OFF oil mist valve
Solenoid 2	Turn ON/OFF air blow valve
Switch 1	Top of oil tank
Switch 2	Bottom of oil tank

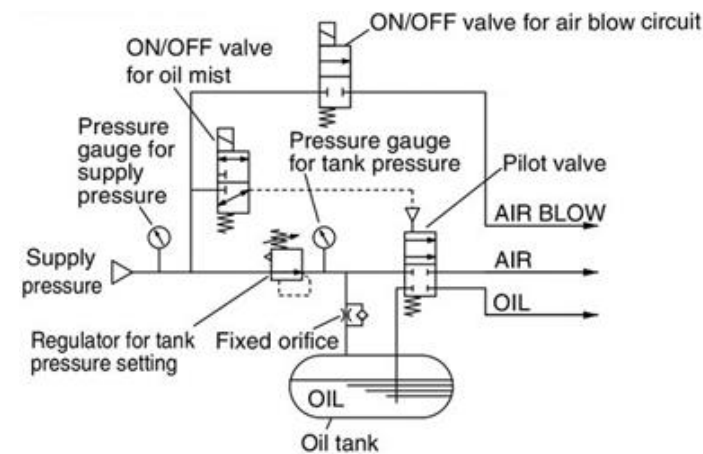
3 Installation - continued

Caution

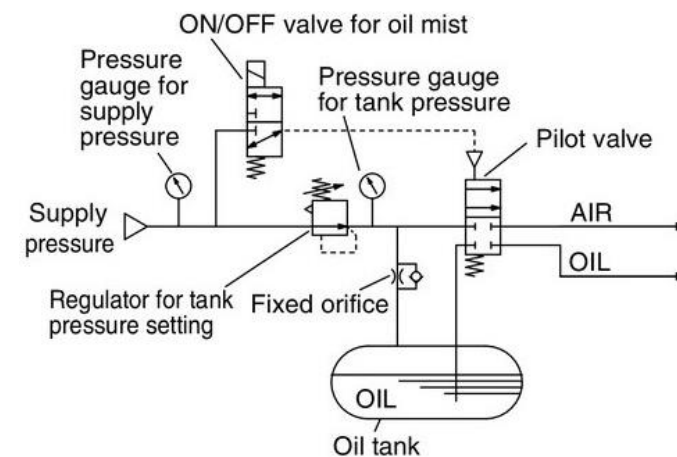
- When DC power is connected to solenoid valve with light and/or surge voltage suppressor, check for polarity indications.
- For polarity indications, no diode for polarity protection may result in diode in valve or switching device at control equipment or power supply may be damaged.
- If there is diode for polarity protection, if polarity connection is wrong, valve will not switch.

3.6 Circuit

LMU100-□□



LMU200-□□



4 Settings

4.1 Adjustment

- Pressure can be adjusted by rotating the pressure setting knob. Turning clockwise will increase the pressure. Anticlockwise will reduce the pressure. Set pressure between 0.05 to 0.2 MPa.
- Release the lock before adjustment of pressure, and lock after adjustment is finished.
- The adjustment needles for oil and air can be turned anticlockwise on the mixing valve to be opened, and clockwise to be closed. Please see separate documentation for LMV series mixing valve for more information.

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.
- Ensure there is no air trapped in the oil pipe. Even small amounts of air will cause oil to dribble and/or leak.
- To remove residual air that may be trapped within oil pipeline, press and hold the manual button on ON/OFF valve for oil mist generation until all residual air is released and a consistent oil/air mixture is achieved.

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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