



SMSP Series
Electric lubrication pump

User manual

N a n j i n g B i j u r M a c h i n e r y C o . , L t d

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Please read carefully the Instruction Manual of the product before use. Improper operation might damage product and cause injury to people.



Please disconnect the power supply before service and maintenance of product.



Please guarantee correct earthing of the casing of product, otherwise the product might be seriously damaged.

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I. Summary

The MSP series electric lubrication pump is driven by a DC or AC power source. It uses an AC (direct current) motor and mechanical transmission to make the plunger move back and forth, continuously outputting lubricant. This pump is equipped with an electromagnetic unloading valve, which can form a volumetric centralized lubrication system with the SJM type quantitative oil injector. Through the control of a programmable controller, the lubricant can be transported to various lubrication points in a timed and quantitative manner. The pump is equipped with an overflow valve, which can effectively protect the lubrication system.

The MSP series electric lubrication pump is widely used in intermittent centralized lubrication systems for mechanical equipment such as lathes, milling machines, stamping equipment, grinders, forging machinery, automotive chassis, plastic machinery, printing machinery, transportation machinery, etc.

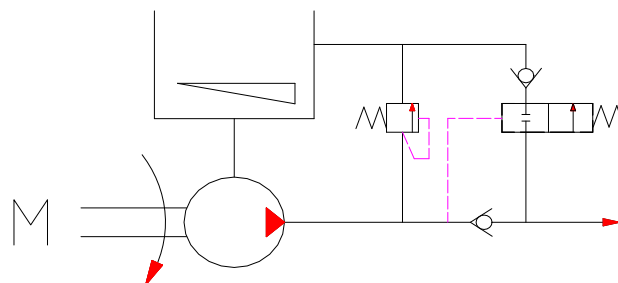
MSP series electric lubrication pump has the following characteristics:

1. Using electromagnetic valves for unloading, which is fast and reliable;
2. Compact overall structure and convenient installation;
3. multiple oil storage capacities to choose.

II. Working principle

The electric motor (DC or AC) decelerates through a reduction gearbox, which drives the eccentric wheel and connecting rod mechanism and drives the plunger to perform reciprocating linear motion, thereby continuously removing lubricant from the oil tank and entering the lubrication system; The lubricant discharged by the pump enters the distribution element through the oil outlet/pipeline; When the distribution components are filled with lubricant, the signal switch in the system acts, and the programmable controller controls the motor to stop running. At the same time, the electromagnetic unloading valve acts to remove the pressure from the lubrication system, completing one oil injection process for the entire system.

Note: When powered on, the electromagnetic unloading valve is in the closed state, and when powered off, the unloading valve is in the open state.



III. Application scope

MSP series electric lubrication pump can be used to lubricate ball bearings, sliding bearings, smooth moving tracks, circular sliding tracks, linear sliding tracks, cams, gears, chains, etc. It is

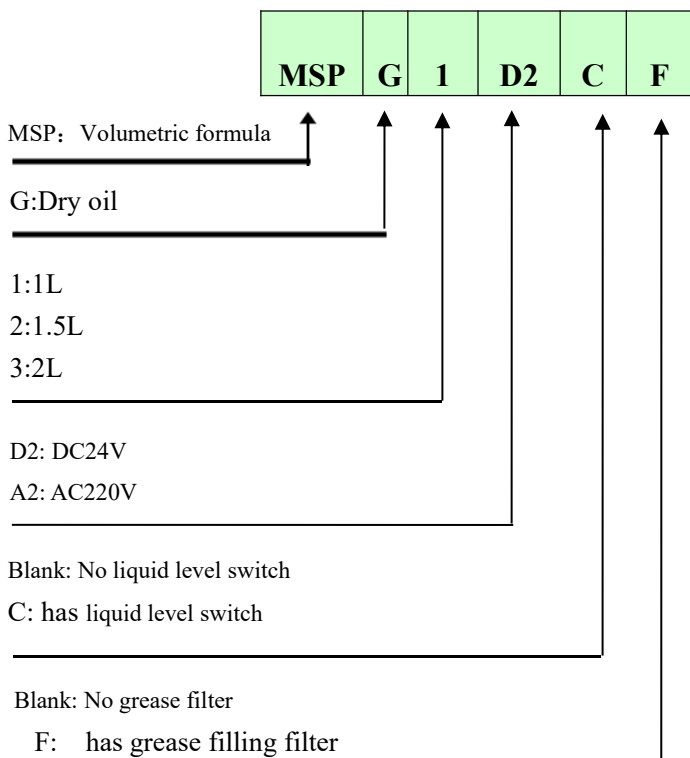
suitable for lubrication of various machinery, such as lathes, milling machines, stamping equipment, grinders, forging machinery, automotive chassis, plastic machinery, printing machinery, transportation machinery, etc. It can simultaneously lubricate various lubrication points of different machines.

IV. Technical parameters and external dimensions

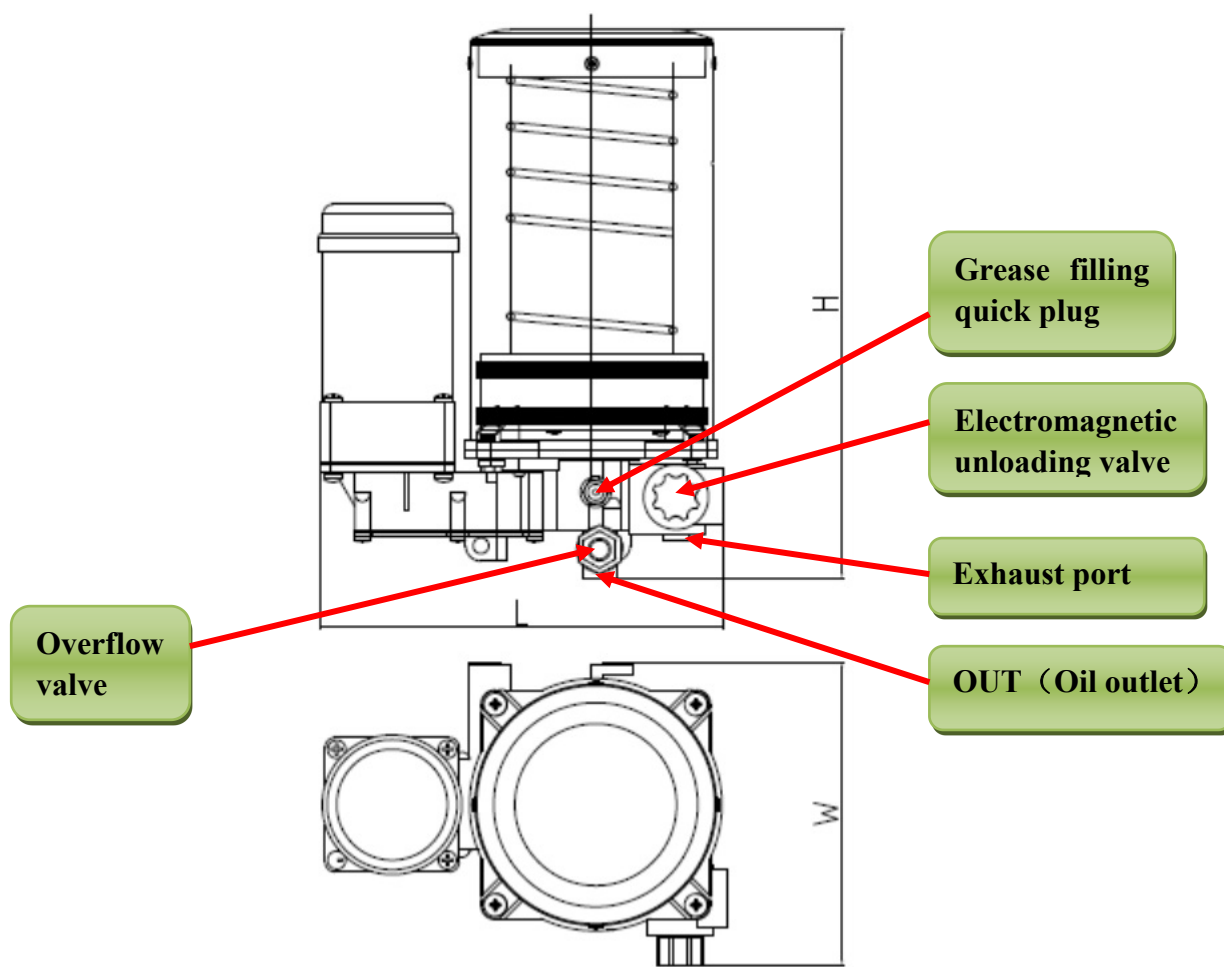
1. Technical parameters:

Rated pressure:	10MPa
Motor voltage:	DC24V AC220V
Motor power:	30W
Oil outlet thread:	M12×1.5
Operating temperature range:	-20°C~60°C
Rated flow rate:	20ml/min
Scope of lubricant use:	Dry oil: NLGI000-1# (If used at low temperatures, choose low-temperature lubricating grease appropriately based on the low-temperature performance of the grease)
Refueling type oil tank capacity:	1L,1.5L,2L

2. Order code



3. External dimensions:

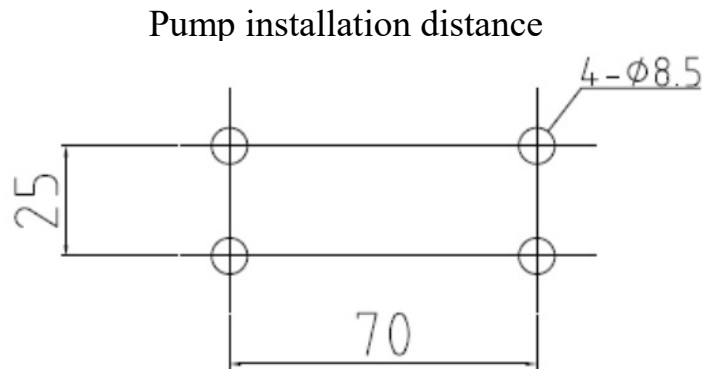


Capacity	DC24V		
	L	W	H(mm)
1L	210	158	242
1.5L			287
2L			332

V. Installation and usage instructions

1. Installing grease pump

Before installing the grease pump, please refer to the fixed hole size as shown in the following figure:



2. Grease filling

Add grease from the grease filling quick plug into the oil tank (see Figure 1) until the pressure plate is at the highest oil level in the oil tank. The first refueling must ensure that the grease is tightly attached to the lower end of the pressure plate, in order to achieve a bubble free vacuum oil suction effect.

Attention!!

- ※ Lubricating grease suitable for NLGI000-1 # extreme pressure lithium grease
- ※ Only new grease can be used, and avoid using grease that has been used or contains impurities for lubrication
- ※ Do not add chemicals or water.
- ※ Do not add oil from above the oil tank
- ※ Please use a grease filter to add grease to the oil tank

Grease
filling
quick
plug

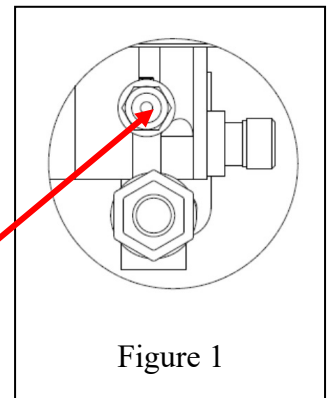


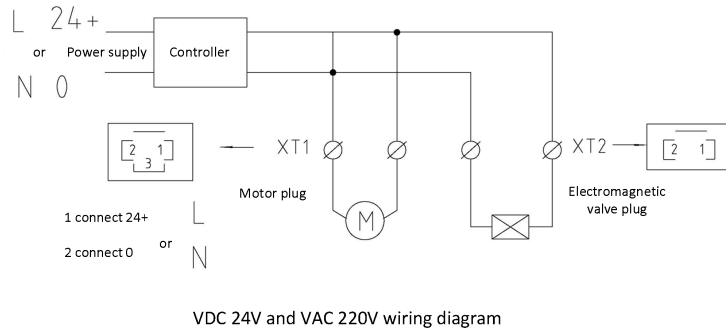
Figure 1

3. Installing power supply

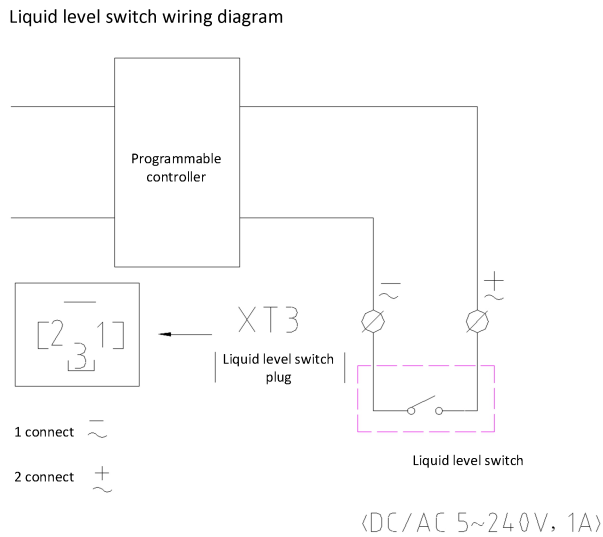
Before installation, please connect the motor according to the voltage specifications. Once the power is connected, it can work normally!

Attention: The positive and negative poles of the 24V power supply cannot be connected incorrectly (the brown wire is the positive pole).

Motor wiring diagram:



Liquid level switch wiring diagram:



4. Air exhaust

The grease may contain air to a greater or lesser extent. When the grease pump starts working but there is no oil discharged from the oil outlet, please loosen (or remove) the exhaust plug (see Figure 2) until the air and grease are discharged from the exhaust hole (evacuation judgment: the grease comes out from the exhaust hole and the oil volume is even), then re-install and tighten the exhaust plug.

5. Instructions for use

Attention! Be sure to turn off the power before each dis-assembly and assembly.

5.1 Supplementing grease

When the grease is below the LOW mark on the oil tank (or when the low level switch alarms), please add new clean grease in a timely manner.

Add grease from the grease filling quick plug into the oil tank until the pressure plate is

at the highest oil level in the tank.

5.2 First use instructions

1. When using the system for the first time after completing pipeline connections, the grease pump is first powered on, and a signal output from the pressure switch at the front or end is turned off.
2. To save debugging time, you can loosen the connection between the grease pump, distributor, and main pipeline. Use a pneumatic pump with a large flow rate to connect the main pipeline for oil pumping. Stop when there is oil flowing out at the end of the pipeline, reconnect the grease pump and pipeline, and repeat the action of step 1 above.
3. Determination of lubrication time (i.e. power on time): The grease pump is powered on, and the system pressure gradually increases. When the system pressure rises to about the set pressure or there is a signal output from the pressure switch, it lasts for 8-12 seconds, which is the time for the grease pump to inject oil.
4. Determination of unloading time: The unloading time is usually set according to the requirements of the pipeline configuration, or can be set according to the actual pipeline configuration. The method is to cut off the power of the grease pump, reduce the system pressure, and when the pressure gauge at the farthest end of the pipeline drops to about 0.5MPa, this period is the shortest unloading time of the grease pump.
5. If the lubrication time is too long and the system pressure exceeds the set pressure, excess grease will return to the oil through the pressure overflow valve. The lubrication time is too short, the system pressure cannot be fully established, and the oil output of the distributor is uneven and too small.
6. The unloading time is too short, and the system pressure has not dropped below the required pressure, resulting in uneven and small oil storage in the distributor, ultimately leading to uneven and small oil output from the distributor.

VI. Maintenance

The maintenance of the centralized lubrication device is very easy. Using clean and impurity free grease is the best maintenance.

VII. Troubleshooting

! Before conducting any checks, please turn off the power first.

! Malfunctions not listed below should not be repaired or disassembled by oneself. Please consult our company or dealers for advice

Malfunctions	Reasons	Solutions
Lubrication in progress, but no oil flows out	Abnormal motor	Send the pump back to the dealer or our company for repair.
	Oil shortage	Add grease (refer to item 2 of Five-grease filling)
	Air mixed in grease	Discharge the air (refer to item 4 of five, air exhaust)
	Pipeline abnormality	Disassemble the outlet oil pipe of the grease pump, check if there is oil flowing out during lubrication. If there is, it indicates that the grease pump is normal. Identify which section of the piping is blocked or broken, and handle it accordingly.
	Improper selection of oil products	Select NLGI 000-1 # extreme pressure lithium grease.
Unable to establish pressure	Pipeline connection is loosen Failure of one-way valve	Please tighten the pipeline connector Replace the one-way valve
Pressure too high, too low, or fluctuates greatly	Adjustment of the overflow valve	Adjust the overflow valve. If there are no changes, replace the overflow valve

Product Quality Information Feedback Sheet

User's name			
Contract No.			
Contacting person		Tel	
Mailing address			
Product name			
Models and Specifications		Sets	
Date of manufacture		Installation date	
Product satisfaction	1. Satisfied	2. Ordinary	3. Dissatisfied
Quality issues			
Impact of these problems on the user's quality	1.Installation 6.Reliability	2.Debugging 7.Life	3.Accuracy 8.Maintain
User's requirements	1.Correspondence description 4.Return for repair	2.Send personnel for service 5.Exchange	3.Installation assistance 6.Return 7.Claimant 8.Others
User's recommendations or other requirements			

Preparer:

Date:

Remarks:

- (1) The feedback sheet is filled by the user and is as one of the basis for the company to improve product quality or process quality issues
- (2) The user can select "Impact of these problems on the user's quality" and "User's requirements".
- (3) Please send this sheet to: Nanjing BIJUR Machinery Co., Ltd Quality department

Address: No.9 Hengtong Road, Economic & Technological Development Zone (Xingang), Nanjing

Zip code: 210038

Free service hotline: 800 828 6000

Fax: 025-85802299

Website: www.bijurdelimon.cn