

Instruction Manual for LUBRICO - E oiler



This manual and other manuals as well, especially documents relating to safety, must be kept in such place where the staff in charge of operating and maintenance can consult them.

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Introduction

Spindle oiler LUBRICO - E is an oil-filling device for the maintenance of all types of Novibra spindles. The LUBRICO - E can be used for the first oil filling and for the oil change.

During lubrication, fresh oil is supplied into the spindle bolster and at the same time used oil is drained away. The oiling head is designed to automatically maintain the correct oil level in the bolster. The LUBRICO - E is powered by an electric pump.

Safety regulations

Before using the LUBRICO - E for the first time, read the instruction manual carefully. It contains important information on start-up, use and maintenance. Pay particular attention to the safety instructions in the text.

In case of fire, extinguish with fire extinguisher: sand, powder, or carbon dioxide! Do not use foam or water!



When operating the LUBRICO - E, ensure that the oil containers are neither overfilled nor underfilled. To prevent this, there are oil level marks on the oil containers. Due to uneven weight distribution caused by full and empty oil containers handle the LUBRICO-E with care. Spilled oil must be treated with special oil binding agents such as sand gravel.

Safety glasses and gloves are recommended to reduce the risk of skin or eye irritation from oil. Two of the castors can be secured with brakes to prevent unintentional movement of LUBRICO - E.



Proper use

The LUBRICO - E must only be used to fill spindles with an oil or to change the oil in spindles in accordance with this manual. The permitted kinematic viscosity of the oil is ISO VG 10 to 46. Novibra is not responsible for any damage caused by incorrect use.

Electrical Installation

The spindle oiler LUBRICO - E is CE certified, indicating its compliance with the essential health, safety, and environmental protection standards set by the European Union. The CE marking affirms that the device conforms to all applicable directives and regulations within the European Economic Area (EEA). The device is also equipped with IP65 protection, which ensures its resistance to dust and water. The IP65 rating signifies that the device is completely dust-tight and protected against low-pressure water jets from any direction.

The LUBRICO - E must only be connected to a power supply that is protected against short-circuits with automatic disconnection from the mains and that supplies the voltage indicated on the unit. Non-compliance may result in damage to the control unit and the pump of the device.

The LUBRICO - E must only be connected to the power supply when it is completely assembled. In case of repair and maintenance work requiring (partial) disassembly, the unit must be disconnected from the power supply.

Transport

Transport the LUBRICO - E only in the original packaging. Dispose of the packaging material in accordance with national regulations. During transport, both oil containers must be empty.

Disposal

At the end of its life, the LUBRICO - E must be disposed of in accordance with the laws and regulations in force in the country where it is used. Any oil, grease, plastic parts, etc. must be disposed of in accordance with the regulations in force. Store new oil and dispose of used oil in accordance with local regulations and the manufacturer's recommendations. Improper storage or disposal of oil creates a risk of fire or damage to the environment.



Design

Apparatus:

- (1) control unit
- (2) main frame
- (3) locking ring
- (4) oiling head
- (5) lubrication adaptor (2 types available)
- (6) oil pump
- (7) oiling head holder
- (8) clean oil container cap
- (9) waste oil container cap
- (10) waste oil container
- (11) clean oil container
- (12) swivel castor with brake
- (13) swivel castor

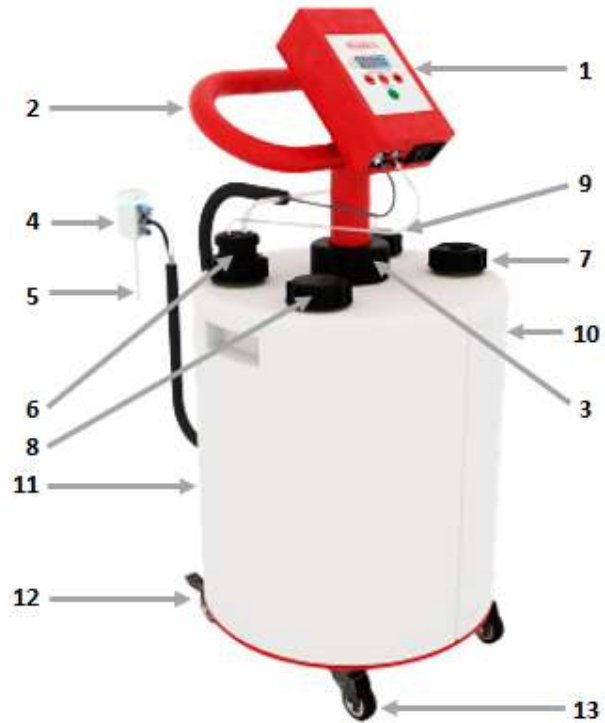


Fig 1. Oiling device

Oiling head:

- (14) waste oil hose
- (15) clean oil hose
- (16) el. connection to the apparatus
- (17) check valve
- (18) LED indicator
- (19) head cap
- (20) compression spring
- (21) start button
- (22) head sealing
- (23) hook spacer
- (24) hook spacer sealing
- (25) spindle bottom part

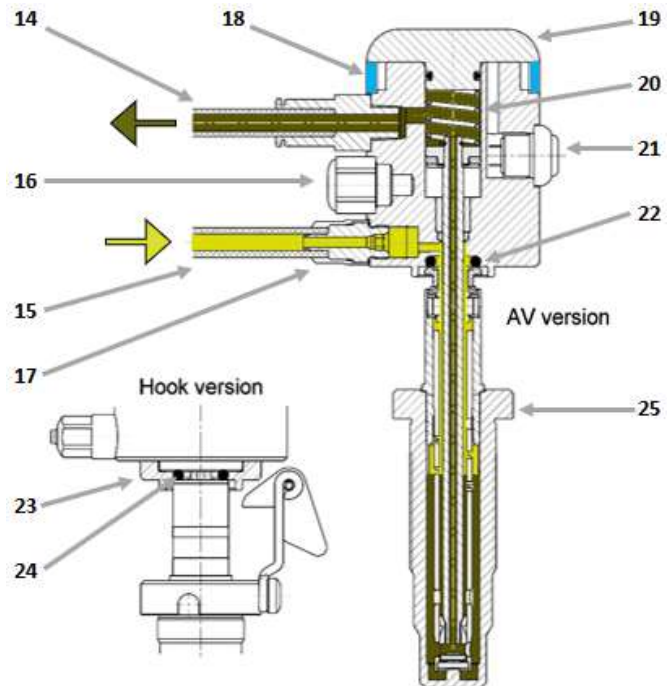


Fig 2. Oiling head

Functional Principle

The LUBRICO - E oiler supplies clean oil to the spindle bolster and drains the waste oil at the same time. The incoming clean oil wets both spindle bearings. The clean oil forces the waste oil through the windings of the spindle damper sleeve, the foot bearing and then out of the spindle through the waste oil hose. The oil volume is completely replaced and at the same time the bearings are carefully rinsed. The oiling head is designed to automatically maintain the correct oil level in the bolster.

Instruction before first start-up

No special qualification is required for the operation and maintenance of the LUBRICO - E, provided operators are familiar with the information in this Instruction Manual. Before each use, always check the power cable for external damage.



Connection to the Power Supply

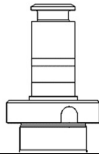

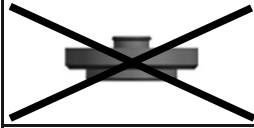

LUBRICO - E is provided with 2 different electrical power connectors:

- 1 x 230 V IEC C13 connector I=10A, EU plug
- 1 x 110 V IEC C13 connector I=10A, US plug

The connector on the LUBRICO - E is supplied for these power supply versions, but the company using the oiler must select the correct power supply cable and connector and ensure that its wiring complies with local safety regulations and directives.

Selection and Replacement of the lubrication adaptor

Select the suitable lubrication adaptor. To replace the lubrication adaptor, loosen the two screws on the underside of the oiling head (4). Remove the head cap (19). Inside the oiling head there is a compression spring (20) which is held in the seat bore. Be sure not to damage it or lose it. Apply slight pressure to slide out the adaptor (5). Reassemble in reverse order. Ensure that all the components are seated properly and use the hook spacer (23) accordingly. After assembly it must be possible to push the adaptor a few millimetres towards the oiling head against minimal force of the spring. When released it must return smoothly to its original position. For the first use after replacing the adaptor, it is recommended to repeat the lubrication procedure twice at first spindle position.

Use of hook spacer (part no. 11278235)	
Spindles with AV lock 	Spindles with hook 
No spacer 	With spacer 

Selection of lubrication adaptors	
LENA Part No. 11278221 	HPS Part No. 11278210 

Adjusting the lubrication time

After connecting the LUBRICO - E to the power supply (35) and switching on the power switch (33), you can set lubrication time between 0.5 and 25.0 seconds by pressing the "PLUS" (27) or "MINUS" (29) keys on the control unit (1). The change in lubrication time must be confirmed by pressing the "ENTER" key (30), otherwise the pump will not start.

The lubrication time is adjusted in 0.1 second intervals and is shown on the control unit display (26). When lubrication is started, the timer counts backwards and shows the remaining lubrication time. The set lubrication time is retained even if the unit is disconnected from the power supply.

Use light to almost no pressure when applying the control keys.

The lubrication time is set correctly when clean oil comes out of the waste oil hose (14) at the end of the process instead of dirty waste oil.

Recommended Lubrication Time	1.5 s
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Control unit:

- (26) control unit display
- (27) PLUS key
- (28) START key
- (29) MINUS key
- (30) ENTER key
- (31) oiling head connector
- (32) oil pump connector
- (33) power switch
- (34) fuse (2A)
- (35) power supply connector

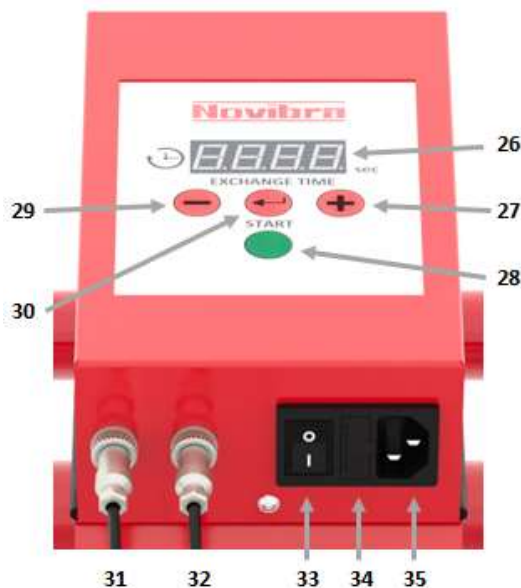


Fig 3. Control unit

Maintenance

Prior to any maintenance or repair work, disconnect the oiler from the power supply. Secure both castors with brakes to prevent unintentional movement of the oiler.

Inside the clean oil container, a suction strainer (Fig 4) is mounted at the end of the intake hose. We recommend cleaning this strainer once a year. To do this, unscrew the plastic cover that holds the oil pump. Then extract the oil pump and the suction hose together with the suction strainer from the clean oil container. Clean the strainer with suitable cleaning agent.



Fig 4. Suction strainer

Oil change

To fill up the clean oil container remove the cap (8) and use a funnel to avoid spillage. Ensure that the oil level is between the MIN and MAX marks.

To dispose of the waste oil, remove the waste oil container. To do so, disconnect the waste oil hose from the container and safely put away the oiling head. Then lift and twist the locking ring (3) to unlock the containers. The waste oil from the waste oil container must be disposed of in accordance with local regulations.

Lubrication

The LUBRICO - E is ready for operation when the unit is connected to the required power supply, fitted with the lubrication adaptor, the lubrication time is set, the clean oil container is at least half full and the used oil container is emptied.

First, make sure sealing (22/24) is in place. Then insert the lubrication adaptor into the spindle bolster (25). Gently press down the head cap (19) and force the oiling head (4) in axial direction against the spindle bolster. Press the Start button (21) located at the oiling head to start the lubrication. "Start" key (28) on the control panel can be used alternatively. The LED strip (18) on the oiling head indicates the lubrication process. When the selected lubrication time is up, the lubrication pump automatically shuts off and the LED indicator stops glowing. Lubrication process is complete.

Make sure to remove the oiling head from the spindle bolster after the LED indicator stops glowing to avoid oil dripping.

During lubrication, observe the transparent clean oil hose (15) to ensure that the clean oil enters the spindle without bubbles. Bubbles in the clean oil hose can occur if either the clean oil suction hose has run dry after a long period of inactivity or if the clean oil container is empty. If bubbles have appeared, repeat the lubrication after refilling the clean oil container until no more bubbles appear in the clean oil hose.

Technical Data

Dimensions	
Length	400 mm
Width	400 mm
Height	840 mm
Net Weight	16 kg
Oil container volume	25 l each

Electrics	
Supply voltage	80 – 240 V AC
Power	65 W
Output current	2,71 A
Control voltage	24 DC
Fuse	2 A

Lubrication hydraulics:

The oil pump (D) is connected to the clean oil container (A) by the intake hose. At the end of the intake hose there is a suction strainer (B) and a check valve (C) to prevent the intake hose from running dry. The (thin) clean oil hose (14) leads from the oil pump to the oiling head (E). The oiling head is equipped with a check valve (17) to prevent air intake. From the oiling head a (thick) waste oil hose (14) leads to the waste oil container (F).

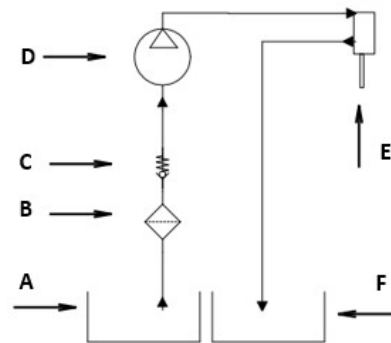


Fig 5. Functional schema of the hydraulics

Electric wiring:

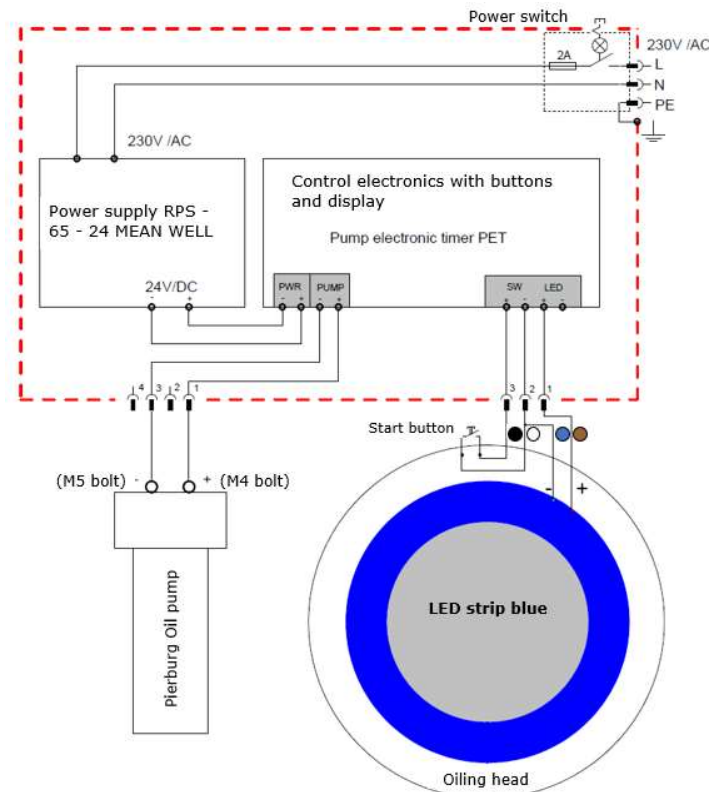





Fig 6. Electric wiring




Troubleshooting	
Failure	Correction
Motor is not running	Check the electrical wiring (Fig 6.) Spare fuse is fitted in the fuse compartment. (34)
No oil is pumped despite of a running motor	Check the oiling head assembly.
	Check for any blockage in the oil circuit including suction strainer (Fig 4.) condition in the clean oil container. Check the check valve (17), clean if necessary.
	In case of air inside the oil pump it must be withdrawn by either repeating the lubrication process a few times or filling the pump with oil, by dismantling hose of fresh oil container. Carefully reassemble hydraulic hose and upper housing.
Oil level differs	Ensure tight fit of lubrication adaptor on the spindle and repeat the lubrication process. Use only the original Novibra measuring rods. Replace any damaged seal.
Oil is leaking	Check the hydraulics for correct assembly (Fig 5.) Check all fittings are properly tightened. Check all sealings are properly fitted.
Display or other electrical failure	Do not try to repair any power related parts or wiring. Always consult an el. specialist.

Spare parts delivered with Lubrico - E		
Ref. No.	Description	Part Pic.
11278210	Lubrication adaptor HPS	(5)
Or / and 11278221	Lubrication adaptor LENA	(5)
11278235	Hook spacer	(23)
11297996	Hook spacer sealing 8x4	(24)
11278777	Head sealing 10x3	(22)
11147869	Head cap sealing 12x2	-
11278809	Compression spring	(20)
11278878	Check valve	(17)
11297973	Fuse 2A	(34)
11297972	Set of two power cables (230 V and 110 V)	-

Spare parts for Lubrico - E		
Ref. No.	Description	Part Pic.
11278208	Oiling head	(4)
11297265	Control unit	(1)
11297235	Oil pump	(6)
11297251	Oil container	(10, 11)
11297319	Locking ring	(3)
11297248	Swivel castor with brake	(12)
11297246	Swivel castor	(13)
11299115	Suction strainer	(Fig 4)

Safety signs

		
1. Caution hazardous area.	2. Caution electrical equipment.	3. Study the instruction manual.

		
4. Repair/clean/adjust only a secured device.	5. The equipment may only be operated by a person authorised to do so.	6. Do not extinguish with water or foam.

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