

Assembly instruction/lubricating instruction for LUBING drip oiler

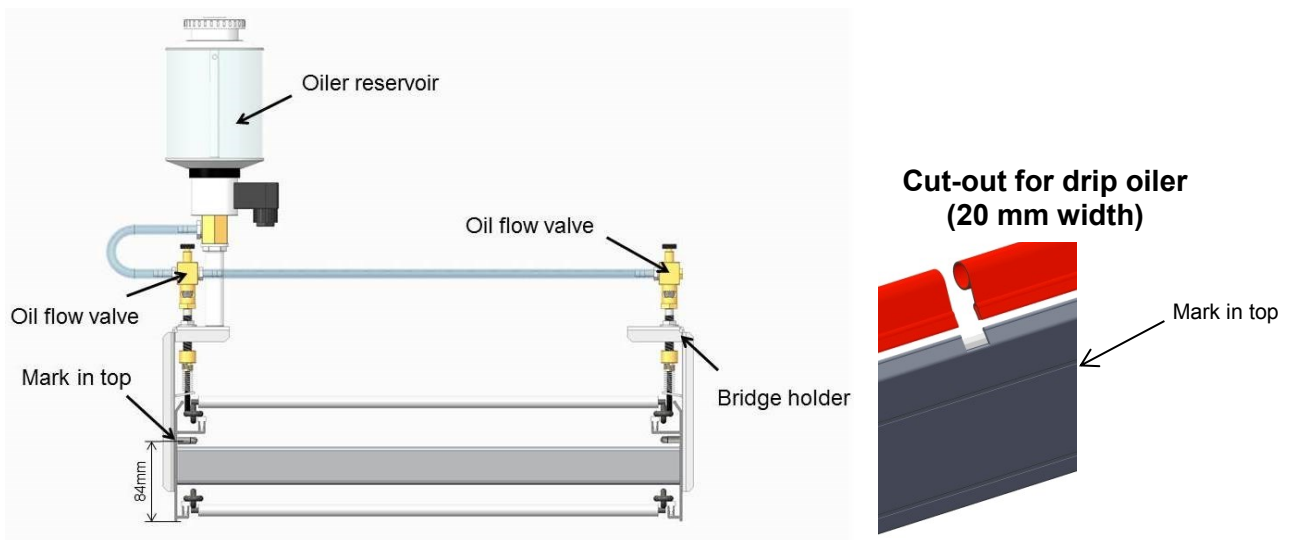
Proper operation of the LUBING curve-, loader- and steep conveyors requires the conveyor chain to be lubricated. A drip-oiler is available from LUBING to facilitate economic and appropriately dosed oiling. This drip oiler must be mounted and operated in accordance with the operating instructions.

NOTE

LUBING drip oilers are always designed for a specific power supply (voltage & frequency). Before installing please check if the equipment is suitable for the locally power supply. Using the drip oiler with a wrong power supply can cause irreparable damage.

The following drawing shows a cross section of a LUBING drip oiler installed on a LUBING curve-, loader- and steep conveyor. It is recommended to install the drip oiler at an easy accessible area where it is visible for the service staff. We advise against an installation of the drip oiler inside the houses due to the dusty surrounding area.

The LUBING drip oiler is able to cover a conveyor line with a maximum length of 300 m. Use additional drip oilers for longer conveyor lines.



The oil tank should be refilled in time by the service staff. Do not use the drip oiler without oil.

NOTE

The oil tank may not be operated without oil as oil acts as a cooling agent for the solenoid. Operating without suitable amount of oil will cause damages on the solenoid.

⚠ CAUTION

Burn hazard due to hot surfaces! Faulty application/usage implies the risk of burns through contact with hot surfaces.

Installation of drip oiler

For an easy assembling of the drip oiler please follow the instruction below:

1. Cut side sheets on both sides till the edge up at a width of 20 mm by using a saw (see drawing page 1).
2. Assemble bridge holder for drip oiler and fix it with screws on the top mark of the side frame.
3. Cut out the red capping (max. 20mm) (see drawing page 1).
4. Electrical connection (consult the wiring diagram on page 5).

DANGER

Warning of electrical hazard!

Only qualified and authorized electrical specialists are allowed to work on electrical equipment. Comply with the regulations of the VDE (Verband der Elektrotechnik Elektronik Informationstechnik e. V.) or IEC (International Electrotechnical Commission).

- Before starting such work always shut off the power to the entire system and prevent unexpected restoration of power to the system for the duration of the work.
- Before connecting the loads, check the ratings for the power supply network against ratings for the loads. Connection is only allowed if the ratings match.
- Make sure there are adequate cable cross-sectional areas, shielding and insulation for the loads and add-on parts.
- For moving parts, in particular, make sure the cabling is laid and fastened adequately.
- Check that the electrical connections are correct before switching on the machine.

NOTE

Depending on the used type of drip oiler it can be possible that the drip oiler operates with 24V DC power supply. In this case a transformer is part of the delivery. The transformer is designed for the installation at the switch board.

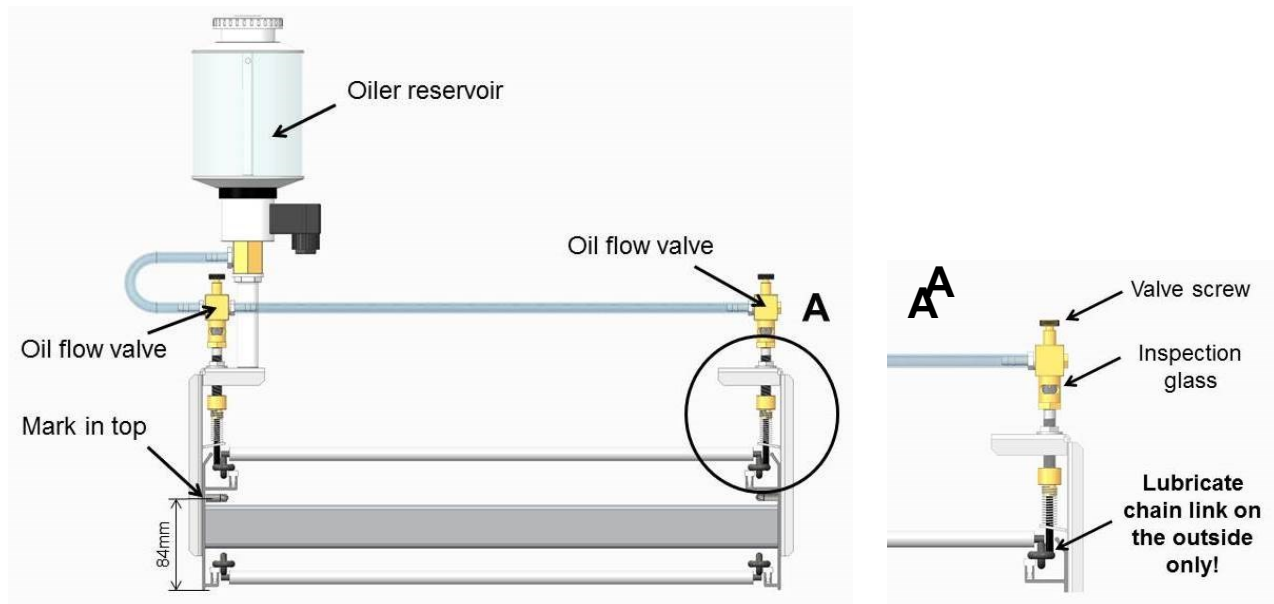


It is recommended to link the power supply of the drip oiler with the power supply of the used motor. In this way it is guaranteed that the drip oiler is only operating while the conveyor system is running. Furthermore a manual switch (on/off) or a timer relay should be integrated in the supply line. Thus the drip oiler can be switched on if required.

5. Fill the oiler reservoir with oil and adjust the oil flow (see instruction below).
6. Do not run the oiler empty. Refill early.
7. If the chain properly lubricated, switch off the drip oiler by using the switch or the timer relay.

Correct adjustment of drip oiler

In the following the correct adjustment and operating of a LUBING drip oiler is described:



- The position of the oil brush is particularly important. The oil brush may only oil the flat chain link on the outside.
- The curve conveyor must be sufficiently lubricated when commissioned. At each point of the conveyor chain a slight film of oil must be available.

i It is recommended to lubricate the conveyor chain before the installation. Sliding profiles, guiding rails and idler units should be slightly oiled (by using a brush or a piece of cloth). A lubrication film reduces friction in the joints at the chain as well as between the chain and deflection wheels.

- Only use suitable lubricating oils and observe the safety requirements applicable in the respective country.
- We recommend using liquid paraffin for lubricating (med. white oil DAB 10). It is classified as safe for food and is available world-wide. If however you do have difficulties obtaining it, this oil can be procured through LUBING.

Recommended oil:

Total Finavestan A 80 B (type is foodsafe!)

NOTE

Plant based oils or chainsaw oils are not suitable. If using other types of oil please observe the stipulations regarding transport systems in the foodstuffs sector as well as the suitability for the conveyor system.

Other oils and undesignated lubrication can lead to problems and restrict the warranty on the plastic-coated conveyor chain.

- Lubricating intervals depend on the operating duration of and loads borne by the conveyor.

Lubrication intervals:	The conveyor must be re-lubricated after 100 operating hours.
Lubrication duration:	Lubrication duration should be 2 full conveyor cycles.

- **How to calculate the lubricating duration:**

$$\frac{\text{Conveyor length} \times 4}{7.0 \text{ m/min [conveyor speed]}}$$

Example:

$$\frac{250 \text{ m} \times 4}{7.0 \text{ m/min}} = 143 \text{ min} \approx 2 \frac{1}{2} \text{ h lubricating duration}$$

- The oil flow valves should be set in such a way that a drop of oil falls every 5 sec. The adjustment is made by turning the valve screw. The time span between two drops of oil can be observed in the inspection glass.
- The oil tank may not be operated without oil as the oil acts as cooling agent for the solenoid. Operating without enough oil will cause a damaged solenoid. Do not run the oiler empty. Refill early. Using a drip oiler bottom with float switch (see section “Optional accessories for drip oiler”) prevents a dry running of the drip oiler.
- The conveyor system must not be over-lubricated. Too much oil binds dust and dirt and can have a negative impact on the quality of the eggs. Economic application of oil ensures that the eggs being transported do not come into contact with the oil.
- Too little oil leads to increased friction in the conveyor system and makes the conveyor difficult to move as well as it leads to premature wear.

Optional accessories for drip oiler

LUBING offers optional accessories for drip oiler to ensure an optimum lubrication of the conveyor chain and to reduce further maintenance work. It is easily possible to upgrade each drip oiler with this additional equipment.



Item No. 4829-40

Uni Control
 electronic drip oiler
 timer

The electronic drip oiler timer allows an exact adjustment of time intervals for lubricating the LUBING conveyor system. During operation of the conveyor system the drip oiler is switched automatically. This proceeding guarantees an even and reliable lubrication. It is possible to define the start and stop time within a range of 0.1 seconds to 99 hours freely. We recommend using shorter intervals than those used for manual lubrication.

Example from above:

2 ½ hours lubricating duration per 100 hours

Therefore: 9 seconds lubricating duration per 6 minutes



Item No. 4829-41

Drip oiler bottom with float switch

The float switch that is integrated in the drip oiler bottom checks the oil level within the oil container. If the oil level falls below a certain level, then the drip oiler will switch off automatically.

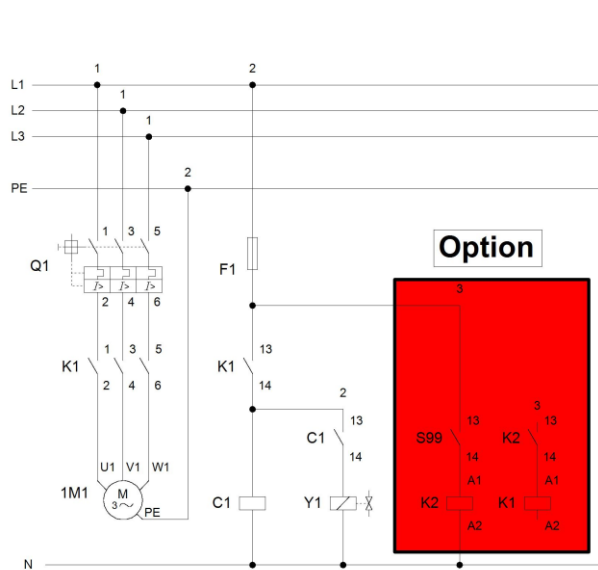
An operation of the system without oil and irreparable damages resulting from this can be avoided by using a drip oiler bottom with float switch.

We suggest redirecting the signal of the float switch to the central control unit. Proceeding like this either a light can indicate a low oil level or the conveyor system can be stopped in case of insufficient lubricating.

The drip oiler bottom with float switch can be used for all drip oilers that are distributed by LUBING.

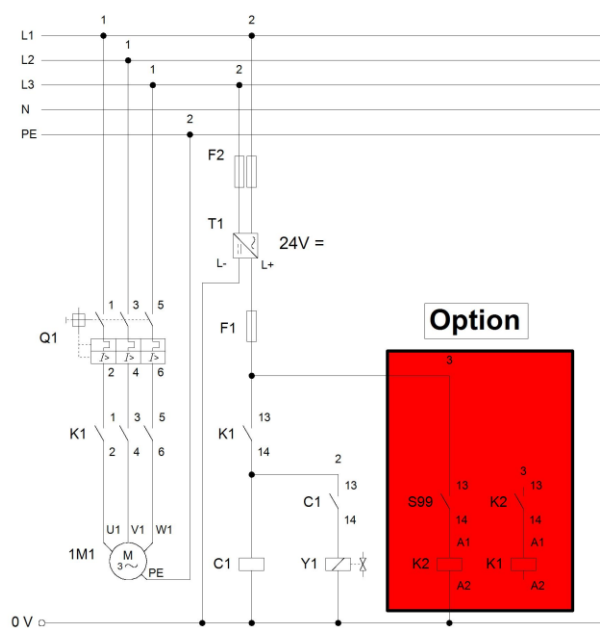
Drip oiler wiring diagram

Wiring diagram without transformer



- Q1 Motor protection switch
- K1 Motor contactor
- 1M1 Driving motor
- F1 Control fuse
- C1 Time control drip oiler
- Y1 Solenoid valve oiler
- S99 Float switch drip oiler
- K2 Relay float switch

Wiring diagram with transformer



- Q1 Motor protection switch
- K1 Motor contactor
- 1M1 Driving motor
- F1 Control fuse 24V DC
- F2 Control fuse 2-pin
- C1 Time control drip oiler
- Y1 Solenoid valve oiler
- S99 Float switch drip oiler
- K2 Relay float switch