

LEHNER

OilTiger®



OPERATING INSTRUCTIONS

Your OilTiger®

Congratulation on your choice of a new-type of spreading appliance, the **OilTiger®**. Do not use this machine until you have read the operation instructions.

There you will find all the necessary information.

You will learn all about the technical details.

You will learn how to control your machine and optimise its performance.

Adequate care and maintainance of your machine ensure its safe working and preserve the value of your **OilTiger®**.

PLEASE OBSERVE THE SAFETY INSTRUCTIONS.

Description:

Before using the machine, it is imperative that you read the operating instructions and safety directions. Please keep these at hand. You may wish to refer to them again at a later date.

The **OilTiger®** consists of a solid Steel Frame®, a container for the spreading material, and the electrical components. Part of the steel frame is the spreader disc and the slide/metering device. The container is easily detachable for cleaning and maintaining the metering device. The electrical components consist of the drive motor for the spreader disc, a sensor, and several magnets to gauge the speed/rpm of the latter, a manifold cabinet, and the operating panel. A battery cable, a cable for the electricity supply to the operating panel, as well as a trailing cable from the operating panel to the **OilTiger®** are supplied as standard equipment. The **OilTiger®** is equipped with a speed control mechanism for the spreader disc, which is controlled via the operating panel. The speed control mechanism enables the user to spread:

1. Oil binding agent
2. Granules

of different kinds and specific weights over varying working widths. A maximum number of revolutions of 660 rpm enables a working width of up to 2 m depending on the grain structure of the binder. If smaller working widths are required, they may be obtained with the aid of the speed control mechanism. The minimum number of revolutions of approximately 70 rpm produces a working width of about 50 cm.

Technical Data:

Measurements L/W/H	577/626/975 mm
Weight	38 kg
Container Volume	170 ltr.
Operating Voltage	10 – 15 V
Fuse	25 Amp.
Engine Capacity	150 W
Speed Range	70 – 660 rpm
Current Consumption	15 amp. at start 10 amp. during normal operation
Operating Temperature	- 10 °C – + 70 °C
Storage Temperature	- 30 °C – + 70 °C

Guarantee:

We give a guarantee of 6 Months on the **OilTiger®**.

Assembly:

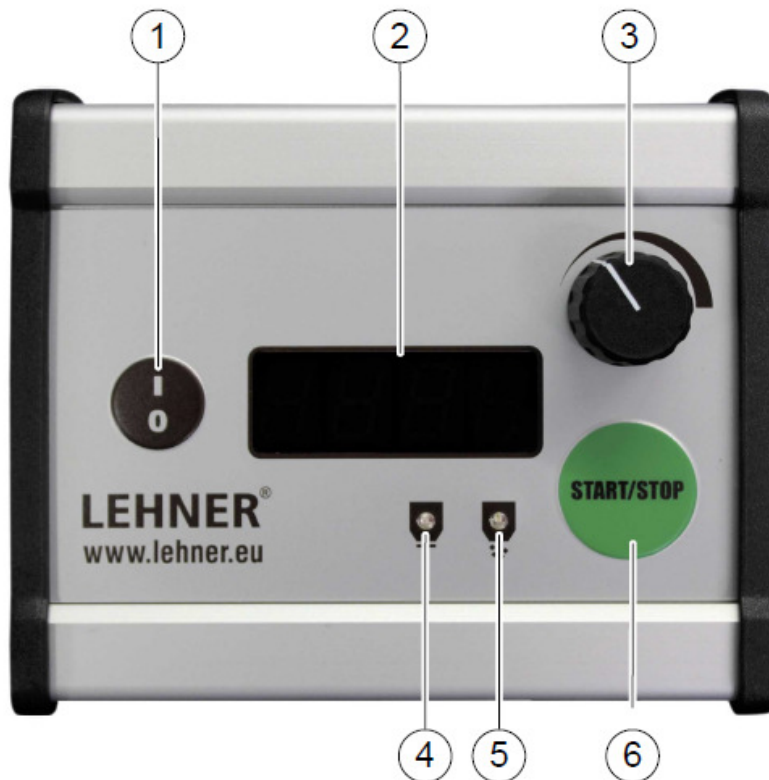
The **OilTiger®** has been designed such that it can be fitted either to the back of the vehicle or to the front. Please note that the weight of the container increases considerably when it is filled with the binder compound. Always ensure that the fixture is sufficiently stable to take the additional weight.

The working width and the wind effect also depend on the fixture height. As a general rule, we recommend a spreader height of 50 – 65 cm above floor level. In the back of the operating frame there are several drillholes of diameter 12.7 mm. For the attachment screws of 10 mm diameter should be used.

The **OilTiger®** is supplied with several cables. The first cable connects the operating panel with the three-pin plug in the driver's cabin. In this way the current supply to the spreader is established. The second cable connects the operating panel to the manifold cabinet at the **OilTiger®**. Also part of the basic equipment is the battery cable with holding device and fuse as well as the cable joints. The cable joints serve to connect the battery cable to the battery. The holding device is to be fixed in the vehicle. It is intended to connect the operating panel. As an alternative you can also connect this to a vehicle-owned 12 V socket with a cable of cross-section of at least 2.5 mm². Different plugs and cables should only be used after consultation with the suppliers. They often do not establish satisfactory contact, and their cross-sections are too thin (cigarette-lighters, socket-appendage, etc.)

Before using your own cable extensions, the manufacturers should be consulted. Extensions may cause a drop-in output.

Control panel:



- 1 On/off button
- 2 Display
- 3 Rotary control for spreading disc speed
- 4 Slider closed indicator
- 5 Slider open indicator
- 6 Start/Stop button

Starting up the spreader:

There is a ON/OFF-Button on the left-hand side of the operating panel. When this is switched on, the motor and thus the spreading disc begin to turn at once.

Actuation of the slide/metering device

The slide is opened and closed with the start/stop Button at the front of the operating panel.

Slider closed



Slider open



This symbol indicates whether the slider is open or closed.

If the spreader is switched off without first closing the slider, the controller automatically closes the slider.

The different parts of the slide have sufficient play between them to ensure that spreading material is not jammed. To prevent the slide from migrating into the passage opening – through vibrations and shakes – an impulse regulates it in the "ON" or "OFF" position every 60 seconds provided the main switch is switched on.

Choice/regulation of the rotary speed

The number of revolutions (rpm) of the spreading disc can be adjusted infinitely variable with the rotary switch at the operating panel. The figure shown on the display

is the nominal value that the spreading disc is adjusted to. If this value cannot be obtained because the motor is overloaded or the current supply is inadequate, the value actually obtained by the motor will be shown.

N.B. These data are not revolutions but index values!

Starting-up Aids

If the motor is overloaded and does not start (foreign bodies), the governor will start it briefly up to eight times. In this way it is possible for the motor to free itself. If this does not succeed, the motor switches off. In the display appears the message E3 – **The spreader must then be switched off** and cleared and emptied by hand. **Be mindful of injuries!**

Error Indication:

Error	Cause	Solution
E1 - Supply voltage < 9 V.		Please ensure adequate power supply.
E2 = Agitator blocked	Occurs if the agitator has not freed itself after 10 reversals of starting direction.	Switch off the control panel Empty hopper and check for foreign bodies.
E3 = Disc motor blocked	Occurs if the spreader disc does not start or is blocked.	<ol style="list-style-type: none"> 1. Check the cabling to the motor. 2. Check that spreader disc is free to rotate. 3. If necessary, apply 12 Volt supply direct to spreader disc motor. 4. Check the number of magnets. <p>✓ Eight magnets must be adhesively attached.</p>
E4 = Slider error		Contact the manufacturer
E5 = Agitator fault	Occurs if the agitator is not plugged in or if the cable is broken.	Check cabling to motor and, if necessary, apply 12 V supply direct to motor.

Operation:

The working width (spreading width) depends on the condition of the granulate, and on the speed of the spreading disc. The coarser the grain, the wider the width attainable. A spreading width of up to 2 m can be achieved with coarse material, but this will not be possible with light or very fine-grained binders.

The spreading disc consists of two parts, the lower Flange with supporting plate, and the smaller plate with rocker shovels. These two plates can be separated with the "Allen" key, which is supplied as standard. They may then be replaced by other supporting parts (still in the development stage).

Please check the metering device and the slide from time to time. If the spreading material contains a lot of dust, the slide may get blocked. To remedy this, loosen the four screws on the plastic ring that connects the slide and the container using a 17 mm spanner. The upper plate can now be removed, and the slide unit may be cleaned with a brush or with compressed air.

Setting the machine for the required spreading width:

Approximate data for the range of certain granular goods can be found in the included spreading tables. To find the required setting, attach the spreader to the carrier vehicle and proceed using the table shown below. When determining the lateral distribution, we would advise you not to do this with the vehicle stationary but to drive about 5 m forward. **Appearances of the spray-pattern are deceiving when the vehicle is stationary. It is in fact quite different in practice when the vehicle is moving forward.** Please remember that the lateral distribution can depend on the position of the feed contact point. (Slide in direction of frame results in earlier shift from the spreader disc).

The output of the spreader is determined using the following formula.

Formulas

$$\frac{\text{Gram/min}}{\text{Speed in m/min} \times \text{Spreading width in m}} = \text{Output in gram/m}^2$$

$$\frac{\text{Gram/min}}{\text{Output in gram/m}^2 \times \text{Spreading width in m}} = \text{Speed in m/min}$$

$$\text{Desired output in gram/m}^2 \times \text{Speed in m/min} \times \text{Spreading width in m} = \text{Gram/min}$$

In zero position the feeder slide is closed; in position 10 it is open. Now the required quantity can be found through renewed adjustment with an altered

scale setting. However, before work can start, the actual output and the lateral distribution must be checked.

Spreading tables for oil binding agents, LEHNER OilTiger®

The standard working height of the spreading disc is: 50 to 65 cm.

Please note that with greater or lesser heights the working/spreading width varies accordingly.

If the metering slide is only partly opened, it may happen that there is only sufficient material for part of the width.

Binding agent	Feed contact point	Slide position	Width	Speed km/h	quantity per area ml/m ²	Rpm
Terraperl S Fine	2,25	4,5	50 cm 1.2 m	5	260	15-45
Terraperl S Coarse	2,5	6	50 cm 1.2 m	5	320	15-45
Avilub	2,5	4,5	50 cm 1.0 m	5	250	15-40
Oilex hard	2,2	4	50 cm 1.0 m	5	280	15-50
Oil-Ex All-weather	2,0	6	50 cm 1.2 m	5	240	15-45

These settings serve only as a guide. They may need adjusting to the condition of the product and to outside influences.

Room for private notes:

Safety Precautions:

1. As the spreader runs at very high speed, and as the different parts of the spreader are very sharp, repairs must not be carried out while the machine is running.
2. The spreading material is sharply accelerated by the rocker shovels. When the machine is running, the spreading area should be strictly out of bounds to all personnel.
3. As the container is open at the bottom end, and as the spreading disc is immediately below this opening, every precaution must be taken that nobody puts his/her hand into the container during operation.
4. The safety precautions of the manufacturers of the binding agents must be observed during production.
5. The safety regulations of the insurers are to be observed.
6. Negative effects due to the binding agents on the materials used by the manufacturers of the **OilTiger®** have not been observed.

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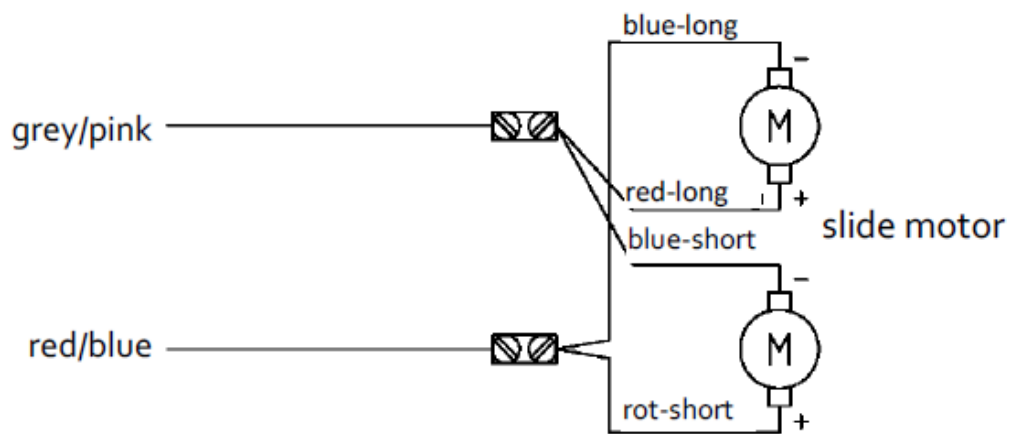
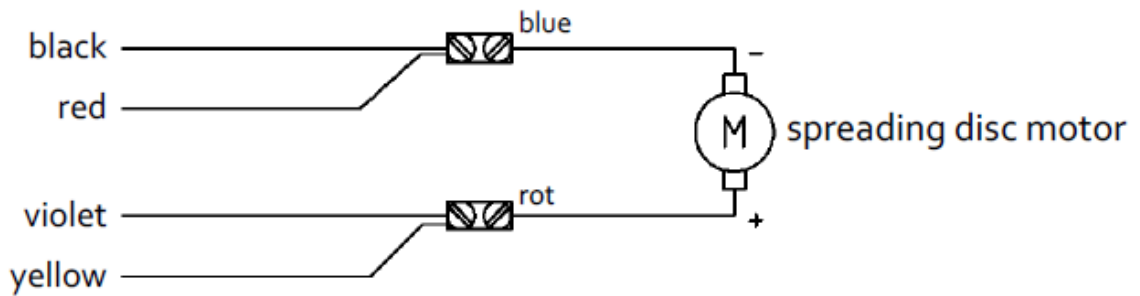
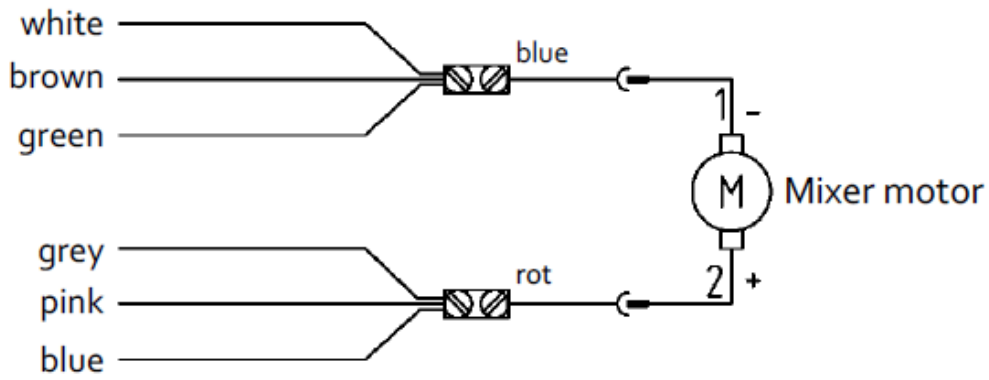
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Control cable Junction box



CE
Declaration of EU Conformity
According to EU Directives 89/392 EU and 336/EU

We

LEHNER Maschinenbau GmbH
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89198 Westerstetten/Germany

declare in sole and personal responsibility that the product

OilTiger[®]

to which this declaration refers, meets the pertinent, basic health and safety requirements of the EU Directives 89/392/EU and 89/336/EU, and conforms to the respective EU standards.

Westerstetten, 16th August 1999



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Helmut Lehner
Managing Director