

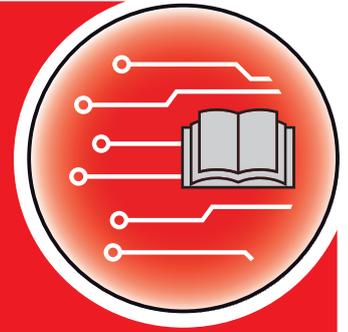
INSTRUCTION MANUAL



**Please read carefully
before using the ma-
chine.**

Keep for future reference.

This instruction manual/assembly instruction is to be considered as part of the machine. Suppliers of new and second-hand machines are required to document in writing that the instruction manual/assembly instruction was delivered with the machine and handed over to the customer.



**AXIS-M
MDS**

E-CLICK

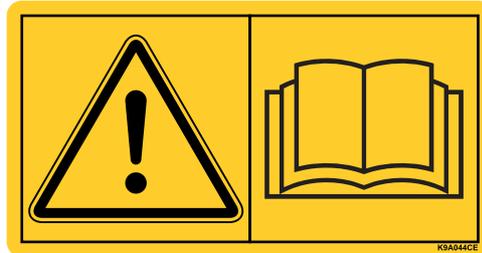
Original instructions

5901360-C-en-0519

Foreword

Dear customer,

By purchasing the control unit E-CLICK for the mineral fertiliser spreaders AXIS and MDS, you have shown confidence in our product. Thank you! We want to justify your trust. You have purchased a powerful and reliable control unit. Our customer service is always at your disposal, should any problems arise.



Please read this operating manual and the operating manual of the mineral fertiliser spreader carefully before commissioning the mineral fertiliser spreader and follow the advice given.

This manual could also describe equipment and options that are not included in your control unit. You should be aware that damage caused by incorrect operation or improper use may not be covered by warranty claims.

Technical improvements

We are continuously improving our products. Therefore, we reserve the right to make any improvements and changes to our machine that we consider necessary without notice. This constitutes no obligation to make such improvements or changes on machines that have already been sold.

We will be pleased to answer any other questions that you might have.

Yours sincerely

RAUCH

Landmaschinenfabrik GmbH

Foreword

Technical improvements

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Terms/conditions of warranty

1 User instructions

1.1 About this operating manual

This operating manual is an **integral part** of the control unit **E-CLICK**.

The manual contains important instructions for a **safe, appropriate** and **economic use** as well as **maintenance** of the control unit. Compliance with its stipulations helps **to** avoid **risks**, reduce maintenance costs and downtime and to increase the machine's reliability and service life.

The operating manual is part of the machine. The complete documentation must be kept in an easily accessible location close to where the control unit is used (e. g. on the tractor).

The operating manual does not replace your **own responsibility** as the operator and operating personnel of the control unit E-CLICK.

1.2 Notes on the depiction of information in this manual

1.2.1 Significance of warnings

The warning instructions in this manual have been structured according to the degree of danger and the probability of their occurrence.

Danger signs and symbols inform the user about other construction-related and unavoidable residual risks that may be encountered when operating the machine. The warning notes used are structured as follows:

Signal word	
Symbol	Explanation
Example	
▲ DANGER	
	<p>Risk to life if warning is not observed</p> <p>Description of the danger and possible consequences.</p> <p>Ignoring these warnings will result in very serious or even fatal injury.</p> <p>▶ Measures to prevent the danger.</p>

Warning severity level

The degree of danger is indicated by the signal word. The levels are classified as follows:

⚠ DANGER



Type and source of danger

This warning warns of a danger posing an immediate threat to the health and life of persons.

Ignoring these warnings will result in very serious or even fatal injury.

- ▶ Always observe the measures described to prevent this danger.

⚠ WARNING



Type and source of danger

This warning warns of a possible dangerous situation for the health of persons.

Ignoring these warnings will result in very serious injury.

- ▶ Always observe the measures described to prevent this danger.

⚠ CAUTION



Type and source of danger

This warning warns of a potentially dangerous situation for personal health or of material and environmental damage.

Ignoring this warning can result in injuries and damage to the product or the general area.

- ▶ Always observe the measures described to prevent this danger.

NOTICE

General information containing application tips and particularly useful information, but which constitutes neither warnings nor hazards.

1.2.2 Instructions and procedures

Steps that the operator must carry out are shown as a numbered list.

1. Instruction for action step 1
2. Instruction for action step 2

Instructions involving only one step are not numbered. The same applies for action steps that do not have a specific sequence.

A bullet is placed in front of these instructions:

- Handling instruction

1.2.3 Listings

Listings without a specific sequence are shown with bullet points (level 1) and dashes (level 2):

- Property A
 - Point A
 - Point B
- Property B

1.2.4 References

References to other text passages in the document are indicated with section number, headline text and page number:

- **Example:** See also Chapter [3: Attachment and installation, page 11](#).

References to other documents are indicated as note or instruction without exact chapter or page number:

- **Example:** Please also observe the instructions contained in the manual for the universal drive shaft.

2 Layout and function

2.1 Overview of supported mineral fertiliser spreader versions

AXIS C	MDS
● AXIS 20.1/20.2 C	● MDS 10.1 C
● AXIS 30.1/30.2 C	● MDS 11.1 C
● AXIS 40.1/40.2 C	● MDS 12.1 C
● AXIS 50.1/50.2 C	● MDS 17.1 C
	● MDS 19.1 C

2.2 Layout of control unit - overview

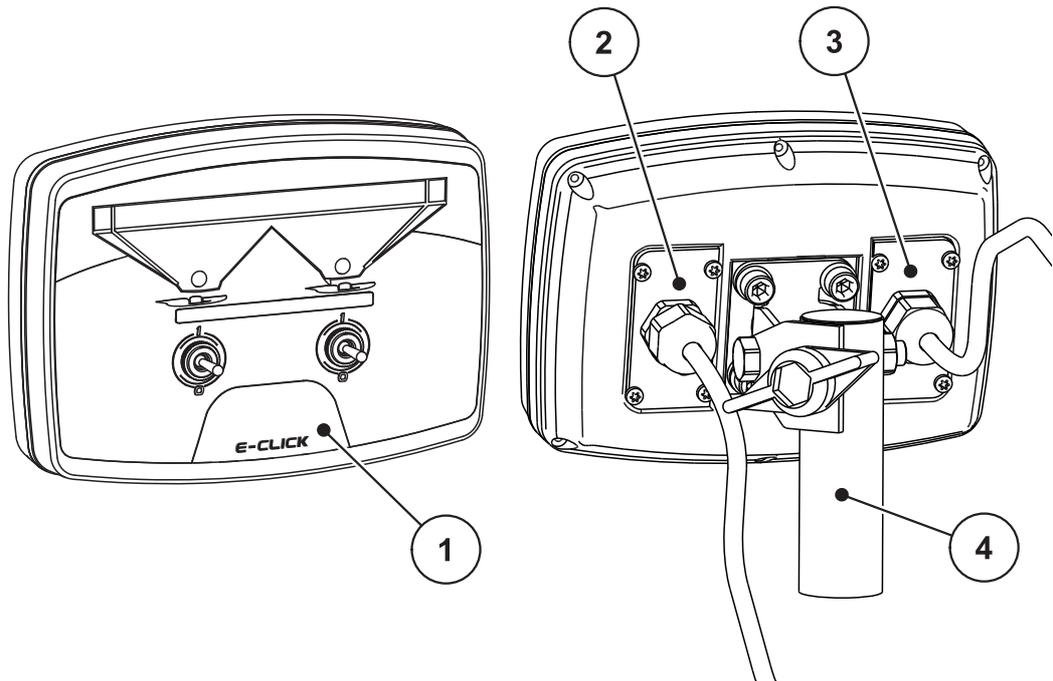


Figure 2.1: E-CLICK control unit

No.	Description	Function
1	Control panel	Consists of toggle switches for controlling the unit and multicolour LEDs for displaying machine conditions.
2	Machine cable plug connector	4-pin plug connector for connecting the machine cable to the actuators.
3	Power supply	3-pin plug connector for connecting the power supply according to DIN 9680 / ISO 12369.
4	Unit mounting bracket	Fastens the control unit to the tractor.

2.3 Operating elements

Use the two toggle switches on the E-CLICK control unit to open and close the metering slides while spreading.

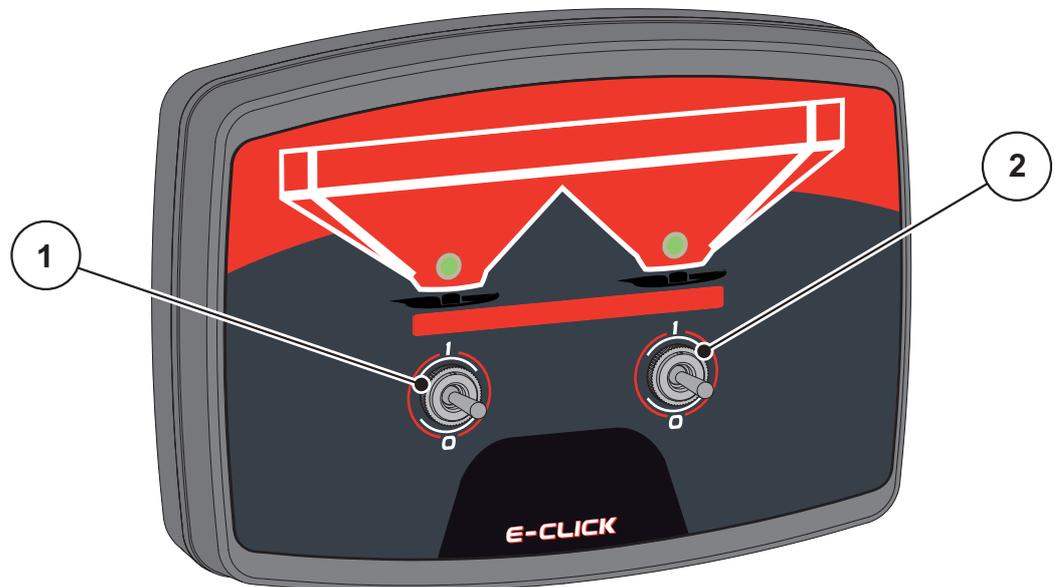


Figure 2.2: Arrangement of toggle switches

- [1] Toggle switch left: Controls the left metering slide
- [2] Toggle switch right: Controls the right metering slide

2.4 Display

Multicolour LEDs on the display area of the E-CLICK show the condition of the metering slides. Changes in colour show whether the metering slides are open, closed or in motion.

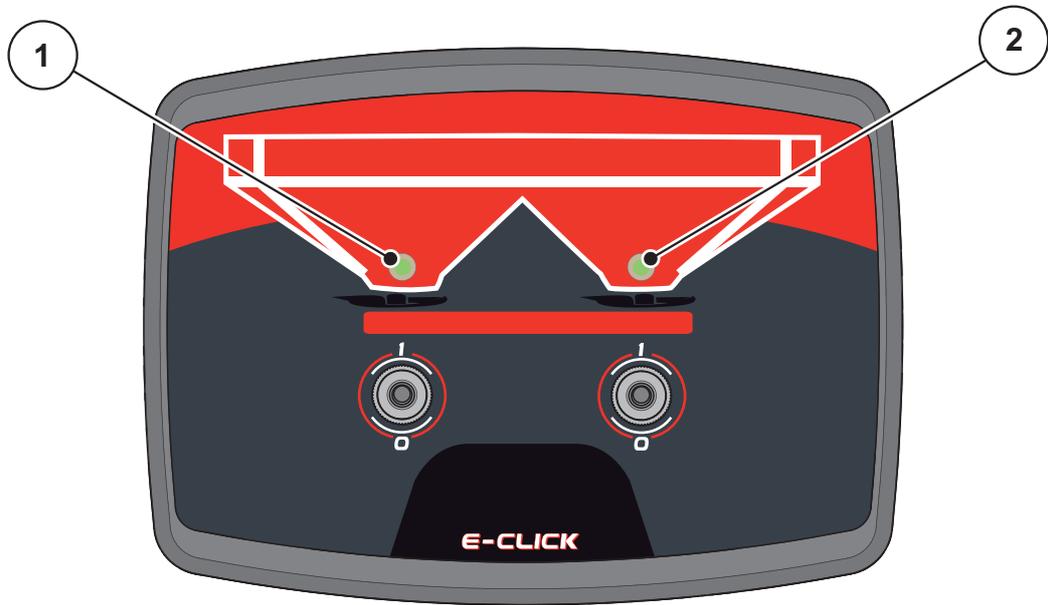


Figure 2.3: E-CLICK multicolour LEDs

- [1] LED condition actuator left
- [2] LED condition actuator right

LED	Condition
LED green	The metering slides are fully open
LED orange	The metering slides are in motion
LED red	The metering slides are fully closed
LED red flashing	Error message, no metering slide movement
LED off	The condition of the metering slides for the E-CLICK are currently unknown

2.5 Nameplate

A nameplate is attached to the back of the E-CLICK control unit where you can find important information about your unit.

NOTICE

Always have this information ready when contacting your RAUCH point of contact!

E-CLICK technical data	
Nominal voltage	12 V / DC
Voltage range	11.0 V to 16.5 V / DC
Nominal current	8.0 A
Operating temperature range	-20 °C to +60 °C
Protection class according to ISO 20653	IP54

3 Attachment and installation

3.1 Tractor requirements

Before attaching the control unit, check that your tractor meets the following requirements:

- A minimum voltage **11 V** must be guaranteed **at all times**, even when several consumers are connected at the same time (e. g. air conditioning, lights).

3.2 Connections, sockets

Power supply

The control unit is supplied with power from the tractor using the 3-pin power supply socket (DIN 9680/ISO 12369).

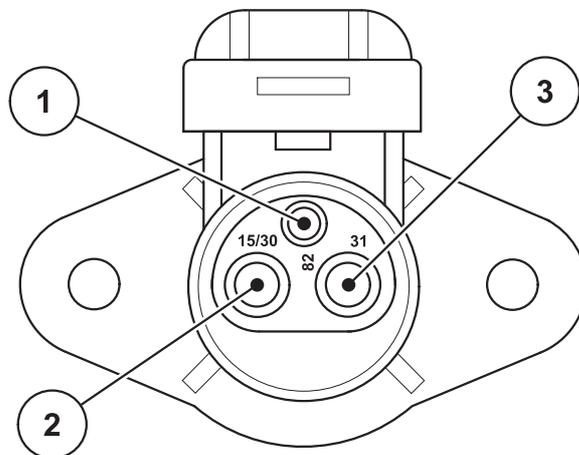


Figure 3.1: Power socket pin layout

- [1] PIN 1: not required
- [2] PIN 2: (15/30): +12 V
- [3] PIN 3: (31): Ground

3.3 Attaching the control unit

Perform the task steps in the following order.

1. Install the holder as shown in Step 1.
2. Tightly screw the installed holder onto the E-CLICK control unit with the four fixing screws and washers (Step 2).

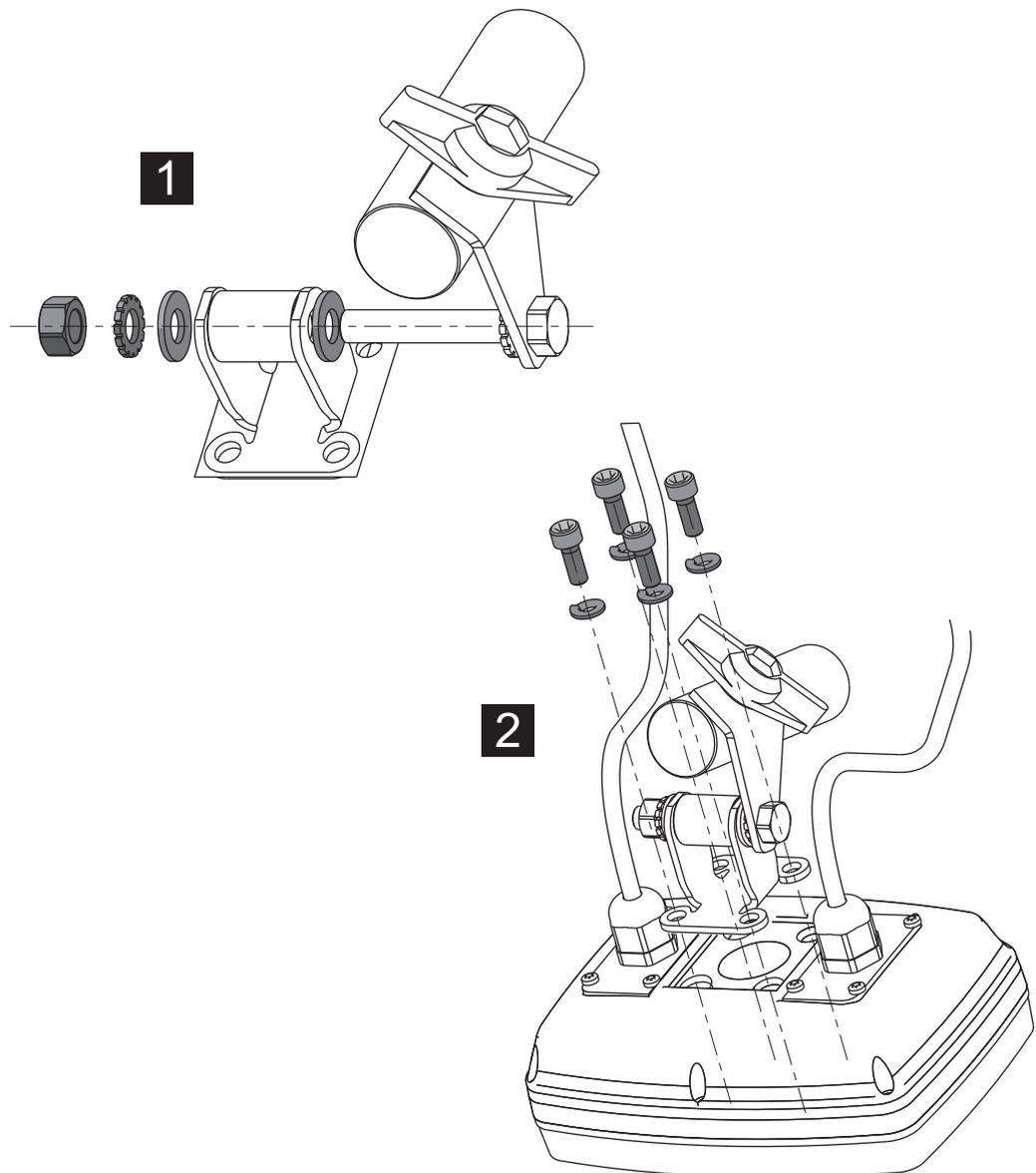


Figure 3.2: Installing the unit holder

3. Select a suitable location in the tractor cab (in the **driver's field of vision**) where you wish to attach the E-CLICK control unit.
4. Attach the control unit with the holder at the selected location.

3.4 Connecting the control unit

Perform the task steps in the following order.

1. Connect the 4-pin machine cable with its counterpart on the E-CLICK control unit.
 2. Connect the E-CLICK control unit power supply with the power socket.
- ▷ **The E-CLICK control unit is ready to operate.**

Schematic connection overview:

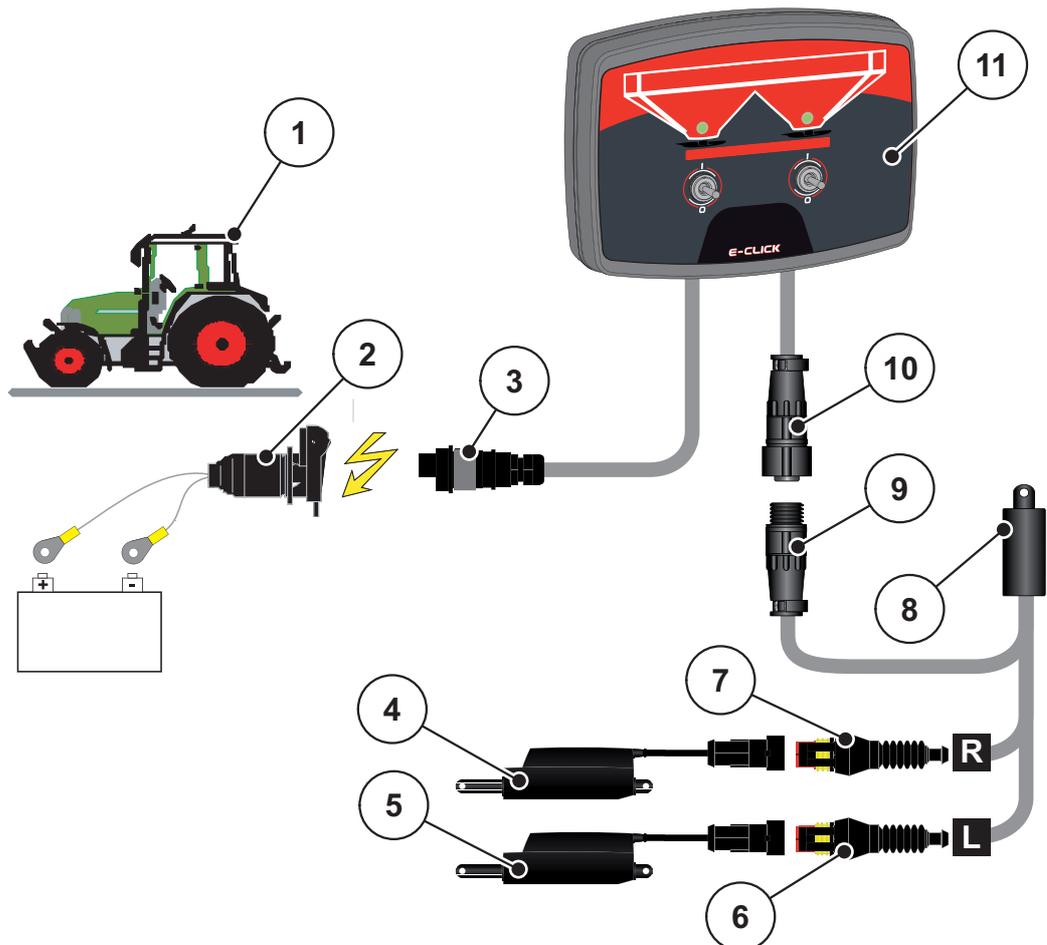


Figure 3.3: E-CLICK schematic connection overview

- [1] Tractor
- [2] Power socket
- [3] 3-pin plug connector according to DIN 9680 / ISO 12369
- [4] Actuator metering slide right
- [5] Actuator metering slide left
- [6] Plug connector machine cable for actuator left
- [7] Plug connector machine cable for actuator right
- [8] Machine cable
- [9] 4-pin machine connector
- [10] 4-pin machine connector
- [11] E-CLICK control unit

4 Operation E-CLICK

4.1 Prepare the control unit

Requirements:

- The control unit is connected properly to the mineral fertiliser spreader and the tractor (see chapter [3.3: Connecting the control unit, page 14](#)).
- A minimum voltage of **11 V** is guaranteed.

NOTICE

The control unit E-CLICK is ready to operate once it is connected to the on-board power supply of your tractor. Separate activation is not required!

⚠ CAUTION



Risk of injury caused by ejected fertiliser

In the event of faults, the metering slide could open unexpectedly en route to the spreading location. There is a danger of people slipping on the discharged fertiliser and injuring themselves.

- ▶ **Before driving to the spreading location**, the control unit E-CLICK must be disconnected from the on-board power supply!

4.2 Switching positions of the toggle switches

Opening and closing the metering slides while spreading is controlled by means of 2 toggle switches on the control E-CLICK unit.

In order that the actuator motors are not overloaded, the **actuators are switched off automatically** when moving against a blockade.

NOTICE

Requirements for spreading with the control unit E-CLICK: The slider openings on the mineral fertiliser spreader are set properly!

NOTICE

The toggle switches have **3 locking switching positions**. The required switching state is set by operating the toggle switches.

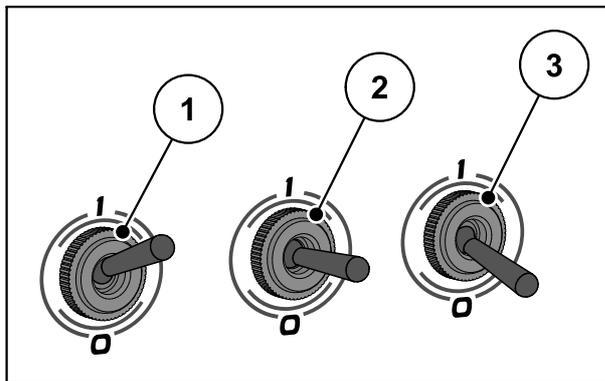


Figure 4.1: Toggle switch position and switching state

- [1] OPEN (I)
- [2] Neutral
- [3] CLOSE (0)

NOTICE

Switching the toggle switch to the **Neutral** position stops the respective metering slide being opened or closed at any time!

- Switching state **OPEN**, the metering slide opens.
- Switching state **Neutral**, actuator control is switched off.
- Switching state **CLOSE**, the metering slide closes.

4.3 Adjusting the application rate

In order to set the required application rate, you must fix the mechanics of the slide operation to your mineral fertiliser spreader.

NOTICE

Instructions on setting the slide opening can be found in the operating manual of your mineral fertiliser spreader!

▲ CAUTION



Risk of injury caused by moving machine parts

In the event of a fault, the metering slides may open unexpectedly. There is the risk of personal injuries due to moving machine parts.

- ▶ **Before driving to the spreading location**, the control unit E-CLICK must be disconnected from the on-board power supply!

1. Set the required scale point on the slide operation of your mineral fertiliser spreader.
 - ▷ The open stop for the metering slide is now defined.

4.4 Reference run

NOTICE

After having restarted the control unit E-CLICK and independently of the switching state of the toggle switches:

- the LEDs are off,
- the state of the actuators is unknown.

A reference run is required, therefore.

Conduct a reference run

You must decide which state the metering slides are to be in.

1. Switch both toggle switches to the **Neutral** position.
2. Switch both toggle switches from **Neutral** to the required position of the metering slides.
 - ▷ The actuators are moved in the required direction.
 - ▷ **Switch off is performed once the stop is reached.**
 - ▷ **The LEDs light up in the respective colour.**

The state of the actuators is stored now, even if the user switches the toggle switches to the **Neutral** position.

NOTICE

The LEDs go out if you switch to the **Neutral** position while moving and interrupt the movement of the actuators this way. The control unit E-CLICK is not able to identify the state of the actuators.

- Perform new reference run.
-

4.5 Spreading using E-CLICK

Spreading procedure

1. Start moving with the tractor.

NOTICE

Please observe the operating manual of your mineral fertiliser spreader!

2. Start spreader discs.

NOTICE

While moving, the LEDs light in **orange**, irrespective of the direction of the movement!

3. Open the required metering slide by switching the toggle switches to the **OPEN** position.
 - ▷ The metering slides open.
 - ▷ The fertiliser is applied.
4. Close the required metering slide by switching the toggle switches to the **CLOSE** position.
 - ▷ Close the metering slide.
 - ▷ No fertiliser will be applied.
5. Stop spreader discs.
6. Stop the tractor.
 - ▷ **Spreading is finished.**

4.6 Error indication

NOTICE

In the event of an error, the LED of the affected actuator side will **flash red!**

⚠ CAUTION



Material damage caused by short-circuit

If the control unit E-CLICK has a short-circuit or interruption, there is the risk that the metering slides cannot be closed.

Escaping fertiliser may fall on the road and cause accidents and pollution.

- ▶ Immediately close the metering slide manually.
-

4.6.1 Short circuit

While controlling an actuator, the control unit E-CLICK permanently monitors the output to the actuators for the **short-circuit** state. If a short-circuit occurs after operating a switch, the LED of the affected actuator side starts flashing **red**. There is no actuator movement.

Remedy the short-circuit for troubleshooting.

- Possible causes:
 - a faulty cable
 - a faulty actuator

4.6.2 Not connected

When starting to control an actuator, the control unit E-CLICK permanently monitors the output to the actuators for the **not connected** state. If no actuator is connected, the LED of the affected actuator side starts flashing **red** after operating a switch. However, monitoring is only performed when the actuator starts. Once the actuator is moving and, for example the plug is removed, **not connected** can no longer be detected.

Restore the connection between the actuator and the E-CLICK to remedy the error.

- Possible causes:
 - a faulty cable (cable break)
 - a faulty or not connected actuator
 - a not connected machine cable

4.6.3 Close the metering slides

NOTICE

In the event of an error, the LED of the affected actuator side will flash **red!**

When closing the metering slides, the actuators move against an integrated limit switch; the actuators will be switched off automatically and the LEDs switch from orange to red.

Switching the toggle switch back to **CLOSE** causes the LED of the affected metering slide side to start flashing red. This behaviour is normal when closing again.

- In this case, this is not an error.

Terms/conditions of warranty

RAUCH units are manufactured with modern production methods and with the greatest care and are subject to numerous inspections.

Therefore RAUCH offers a 12-month warranty subject to the following conditions:

- The warranty begins on the date of purchase.
- The warranty covers material and manufacturing faults. Our liability for third-party products (hydraulic system, electronics) is limited to the warranty of the manufacturer of the equipment. During the warranty period, manufacturing and material faults are corrected free of charge by replacement or repair of the affected parts. Other rights extending beyond the above, such as claims for conversion, reduction or replacement for damages that did not occur in the object of supply are explicitly excluded. Warranty services are provided by authorised workshops, by RAUCH factory representatives or the factory.
- The following are excluded from coverage by the warranty: natural wear, dirt, corrosion and all faults caused by improper handling and external causes. The warranty is rendered void if the owner carries out repairs or modifications to the original state of the supplied product. Warranty claims are rendered void if RAUCH original spare parts were not used. Therefore, the directions in the operating manual must be observed. In all cases of doubt contact our sales representatives or the factory directly. Warranty claims must be submitted to the factory by 30 days at the latest after occurrence of the problem. The date of purchase and the serial number must be indicated. If repairs under the warranty are required, they must be carried out by the authorised workshop only after consultation with RAUCH or the company's appointed representatives. The warranty period is not extended by work carried out under warranty. Shipping faults are not factory faults and therefore are not part of the warranty obligation of the manufacturer.
- No claims for compensation for damages that are not part of RAUCH machines themselves will be accepted. This also means that no liability will be accepted for damage resulting from spreading errors. Unauthorised modifications of RAUCH machines may result in consequential damage, for which the manufacturer will not accept any liability. The manufacturer's liability exclusion will not apply in case of wilful intent or gross negligence by the owner or a senior employee, and in cases where – according to the product liability law – there is liability for personal injury or material damage to privately used objects in the event of defects in the supplied product. It will also not apply in the event that assured properties are absent, if the purpose of the assured properties was to protect the purchaser against damage that does not involve the supplied product itself.

RAUCH Streutabellen
RAUCH Fertilizer Chart
Tableaux d'épandage RAUCH
Tabele wysiewu RAUCH
RAUCH Strooitabellen
RAUCH Tabella di spargimento
RAUCH Spredetabellen
RAUCH Levitystaulukot
RAUCH Spridningstabellen
RAUCH Tablas de abonado



<http://www.rauch-community.de/streutabelle/>



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