

SET-UP INSTRUCTION: HYDRAULIC LIFTING OF HOE SECTION-CONTROL



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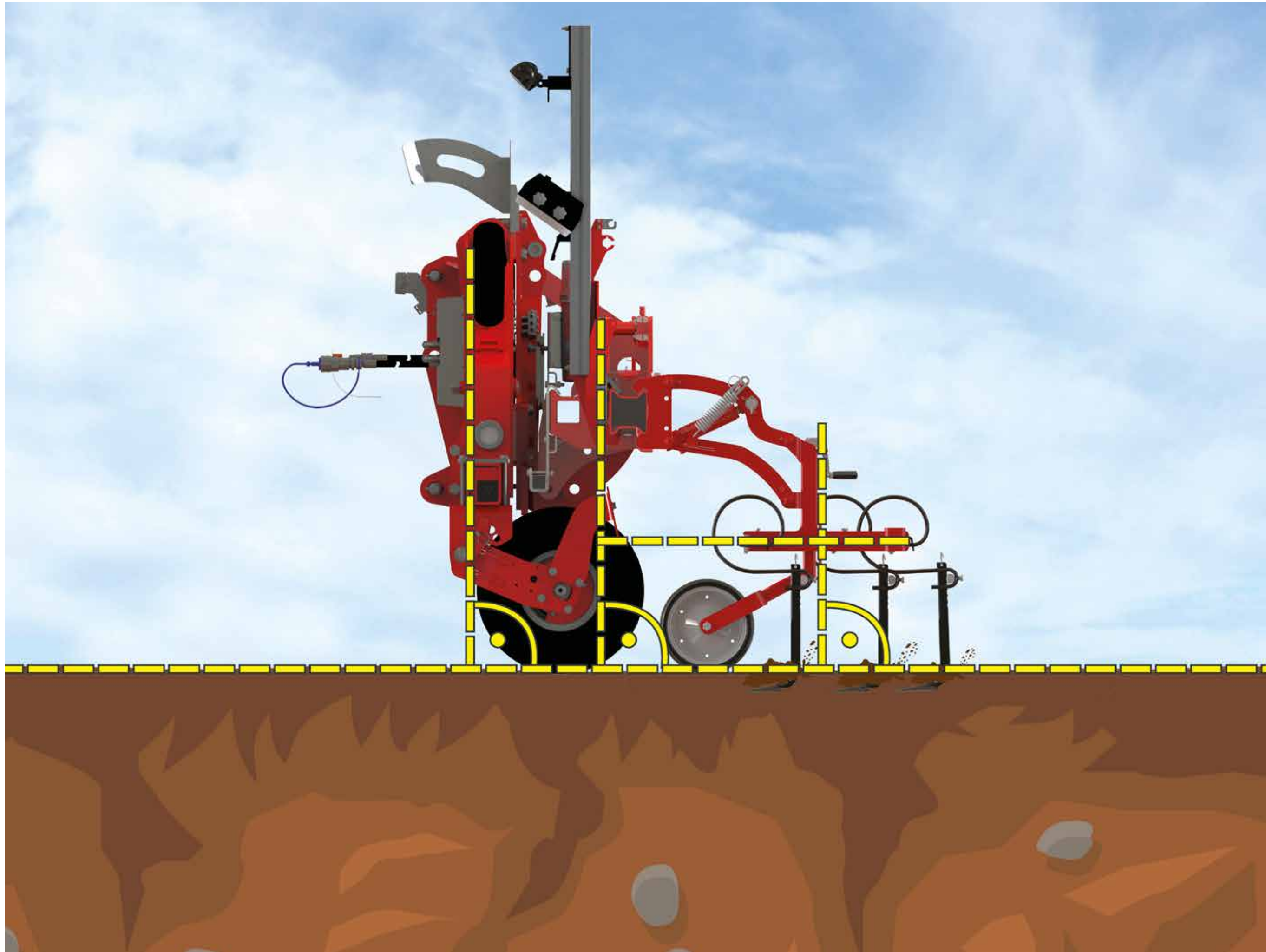
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1. SYSTEM PREPARATION & START

1.1 Mount on the machine



» Correct mounting of the machine - see operating manual **ROW-GUARD** or **CHOPSTAR**

1. SYSTEM PREPARATION & START

1.2 Connect hydraulic supply



» **Power-Beyond:**
If the machine is equipped with Power Beyond, turn off the tractor before connecting the hoses.

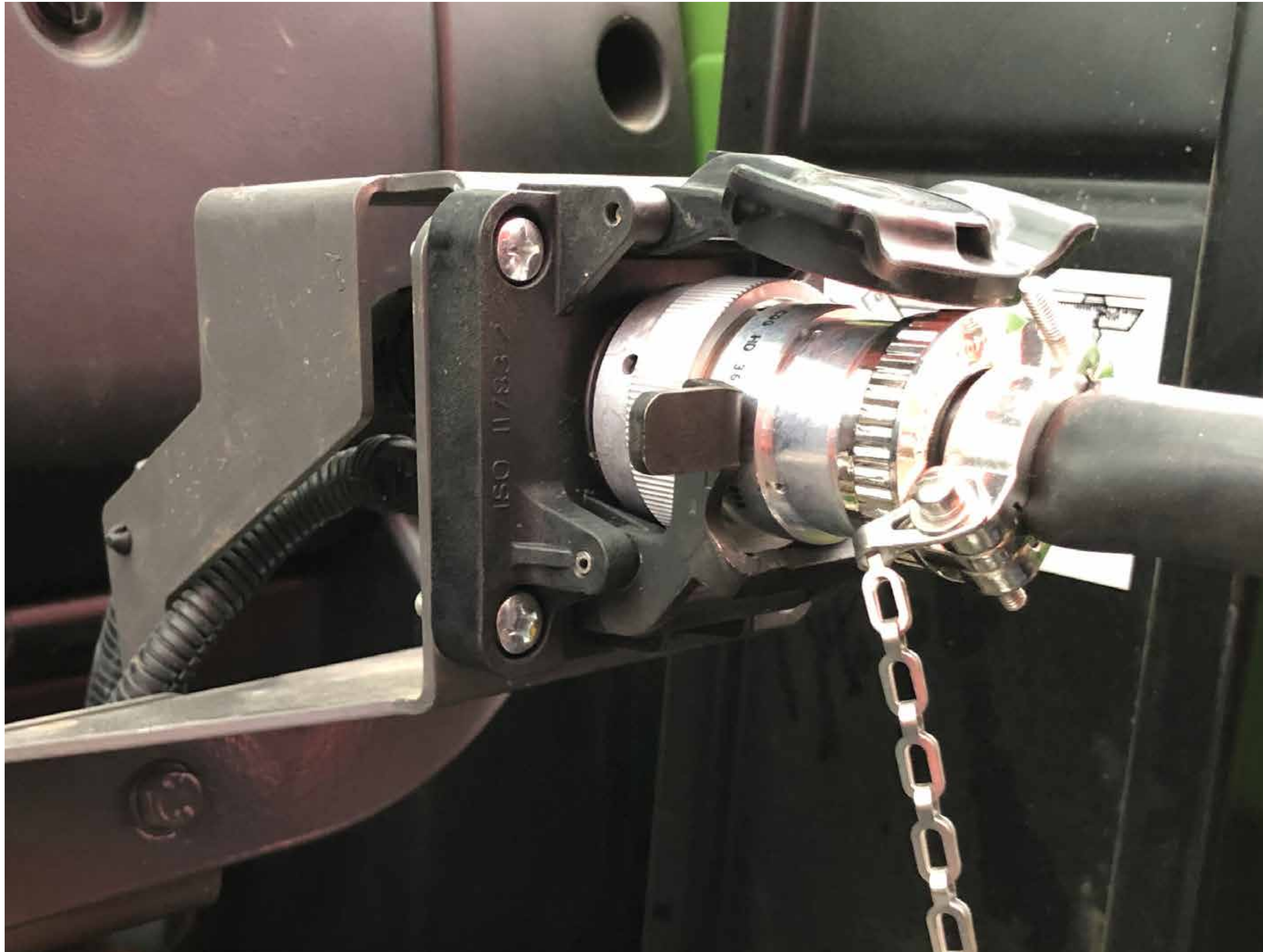


1. SYSTEM PREPARATION & START

1.2 Connect hydraulic supply



- » **Without Power Beyond:**
If the machine is without Power Beyond connection, one single-acting control valve and a pressure-less return valve are required. A constant oil flow of approx. 25l/min is required. The parallelograms should take approx. 2 seconds for lifting.



» Connect the ISOBUS cable of the row-crop cultivator with the ISOBUS socket of the tractor.



- » During road transport all parallelograms must be lowered, independently of the system (Load Sensing / no Load Sensing)
- » Exceptions are machines with **double fold frames** or **CHOPSTAR-PRIME**. Here the following points (a,b,c) do NOT apply. On these machines, the elements for road transport must be **locked at lifted position**. To do this, close all existing locking valves on the hydraulic hoses so that the elements cannot move.



- a. **Power Beyond with external tractor monitor**
Before folding / unfolding and road transport all parallelograms have to be lowered to avoid collisions. Switch off the external control monitor. This is a protection against operating errors while driving on the road. The system must not be activated during road transport (parallelograms lowered), otherwise dangerous situations can arise!



- b. **Power Beyond with internal tractor monitor**
Before folding / unfolding and road transport all parallelograms have to be lowered to avoid collisions. The application “Chopstar” of the internal monitor must be disabled. This is a protection against operating errors while driving on the road. Please ask your tractor dealer to disable your ISOBUS application. The system must not be activated during road transport (parallelograms lowered), otherwise dangerous situations can arise!



c. **Without Power Beyond with external monitor / Without Power Beyond with internal tractor monitor**

Before folding / unfolding and road transport all parallelograms have to be lowered to avoid collisions. Therefore, the respective hydraulic control unit which is used for the oil supply of the parallelograms must be switched to floating position. This is a protection against operating errors while driving on the road. In addition, the external operator monitor can be switched off or the ISOBUS application in the tractor's internal operator monitor can be disabled. The system must not be activated during road transport (parallelograms lowered), otherwise dangerous situations may arise!



Due to the complexity and the numerous adjustment and variation possibilities that a hoeing machine offers, the following points must be observed:

When adjusting row spacing, number of rows, hoeing belt width, finger hoe position or finger hoe adjustment increased caution must be exercised during the first folding operation!

The above-mentioned adjustments change the movement geometry of various components and there is a possibility of device-internal collisions during the folding process! In addition, the permissible transport width may be exceeded! In such cases the position of certain components must be changed before folding or before driving on public roads!

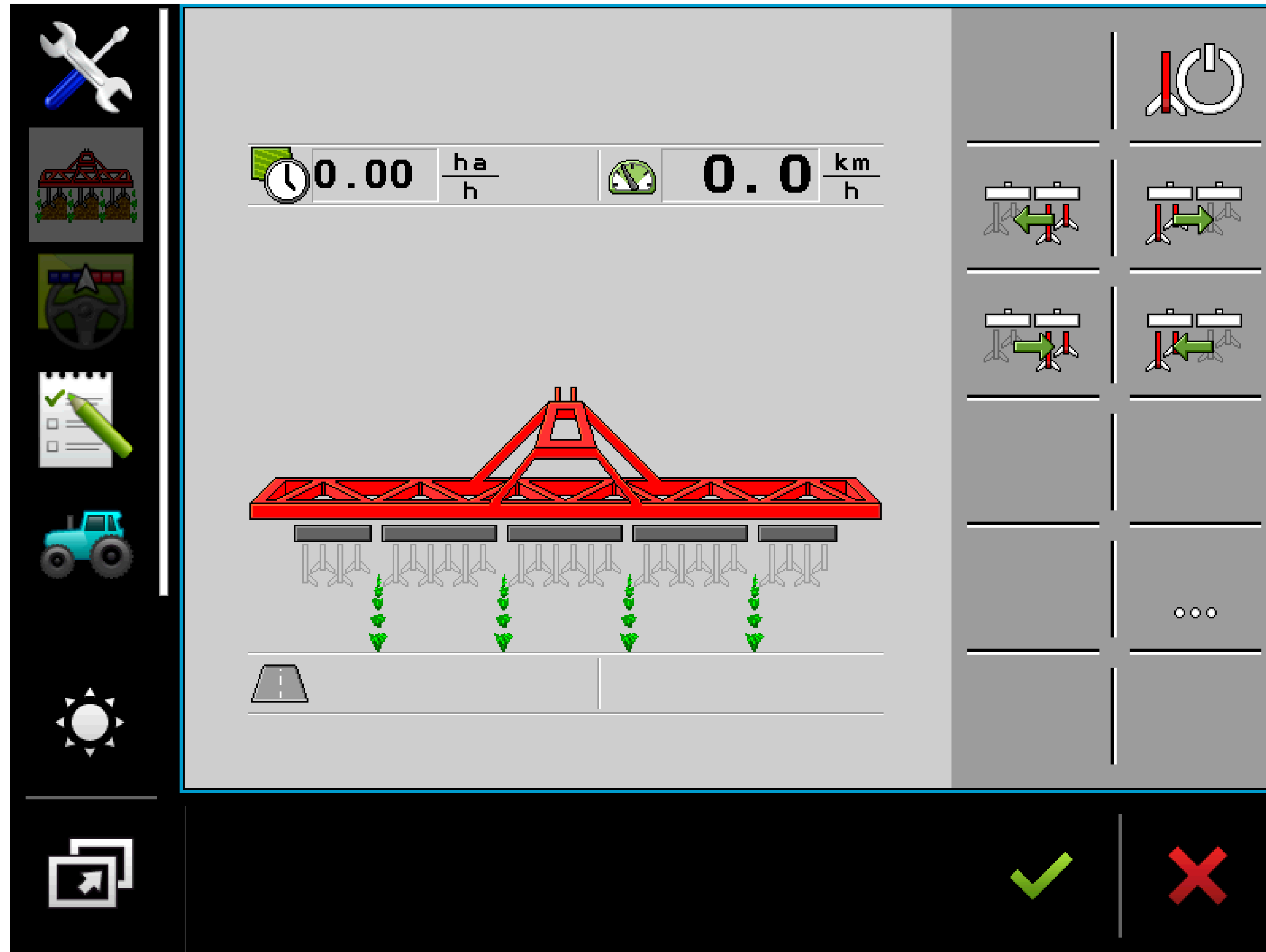


At delivery, the stabilising wheels are usually mounted at highest position.

To achieve the maximum lifting height of the hydraulic parallelograms, mount the wheels with the bolt at the lowest position (see markings)

1. SYSTEM PREPARATION & START

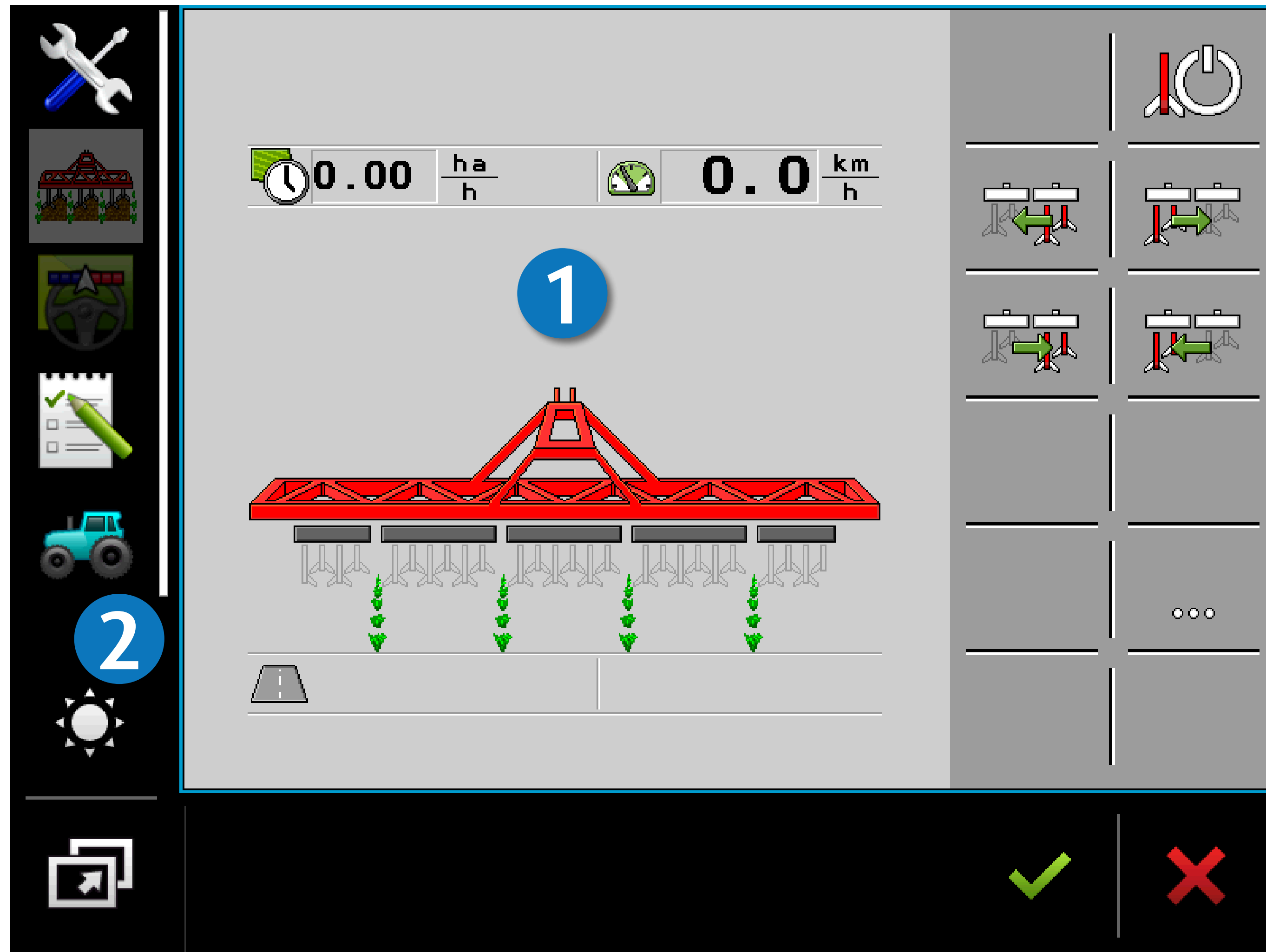
1.6 Turn on monitor



» During the first start, it may take a few minutes to load the data into the monitor.

2. USER INTERFACE

2.1 Layout of the work mask



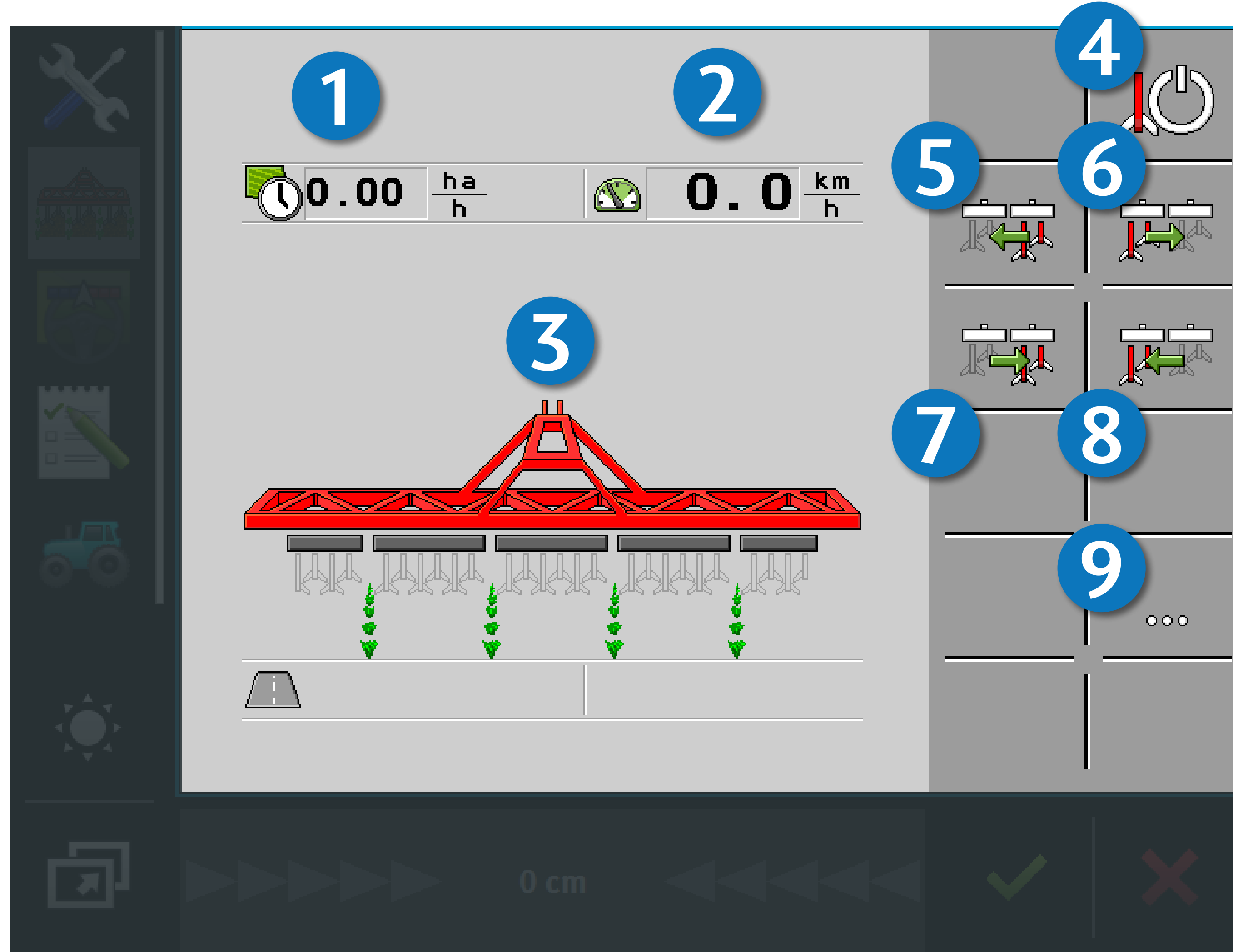
1. Row-crop cultivator interface
2. Monitor setting options

2. USER INTERFACE

2.2 Work mask

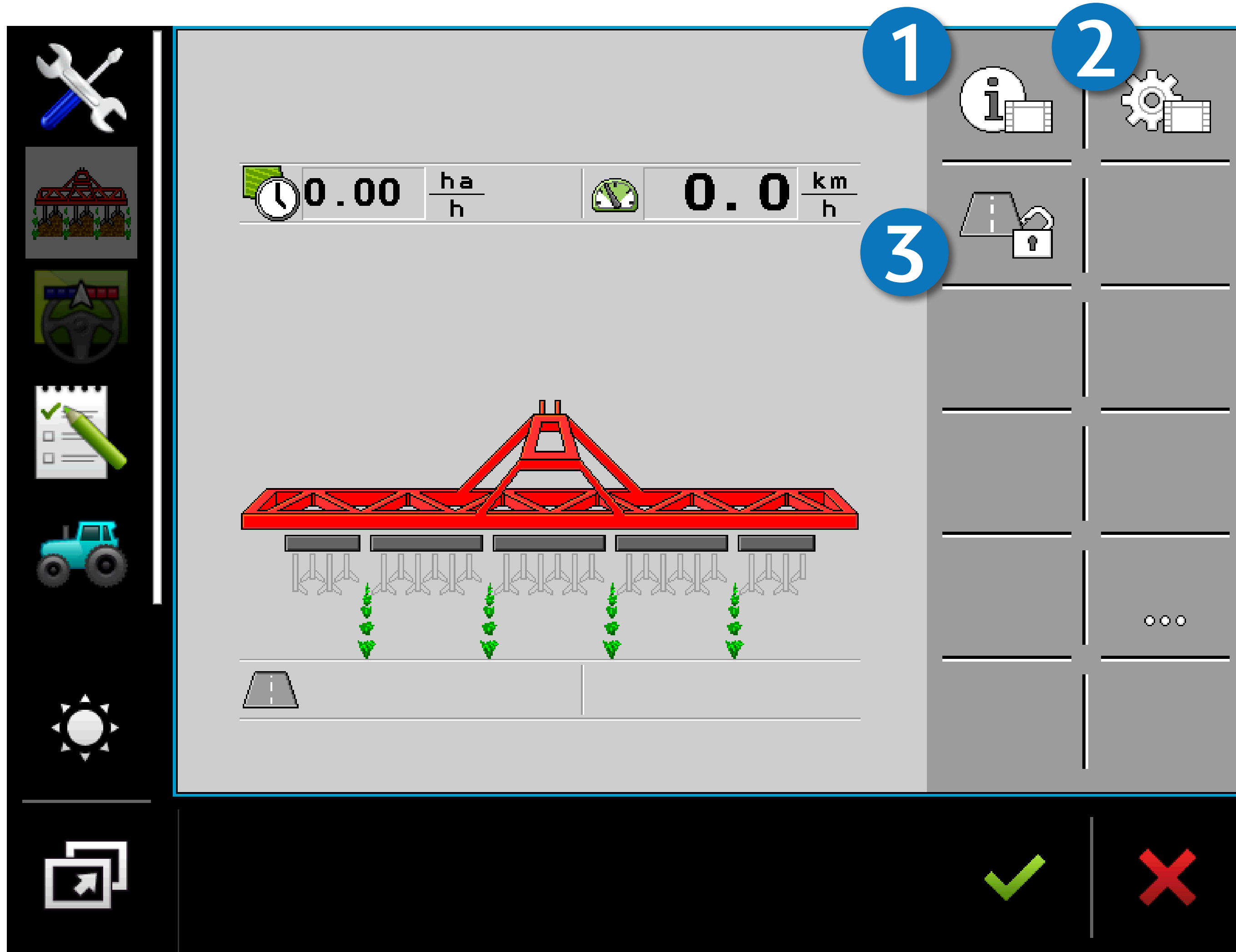
SET-UP INSTRUCTION SECTION-CONTROL

by **Einböck**



1. Display of the area output per hour
2. Display of the speed
3. Display of the row-crop cultivator
4. Starts and stops hoeing operation.
5. Lowers the sections with hoeing elements from right to left.
6. Lowers the sections with hoeing elements from left to right.
7. Raises the sections with hoeing elements from left to right.
8. Raises the sections with hoeing elements from right to left.
9. Continue/Back

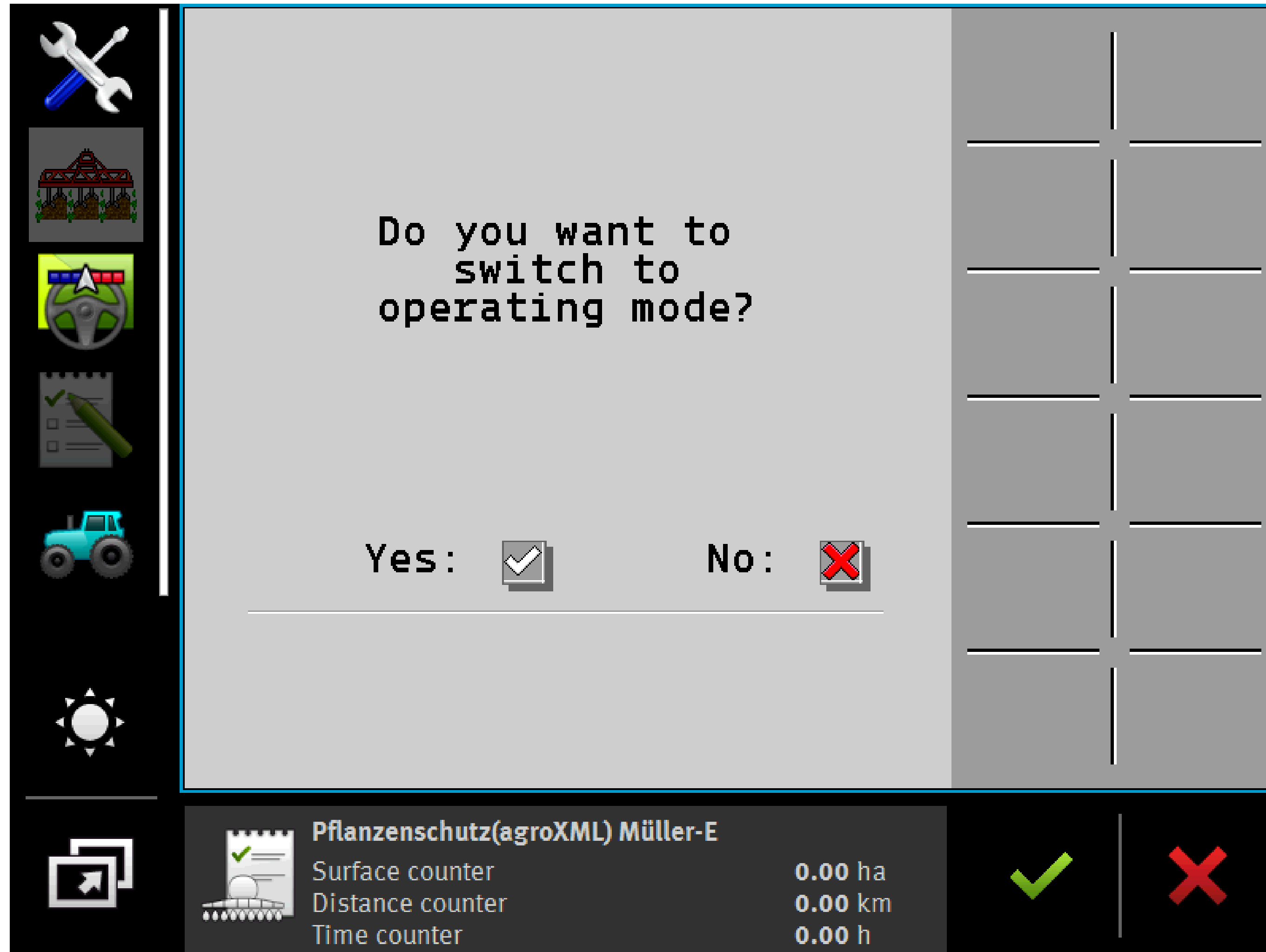




1. Opens the “Results” screen.
2. Opens the “Parameters” screen.
3. Switches between road and working mode.

2. USER INTERFACE

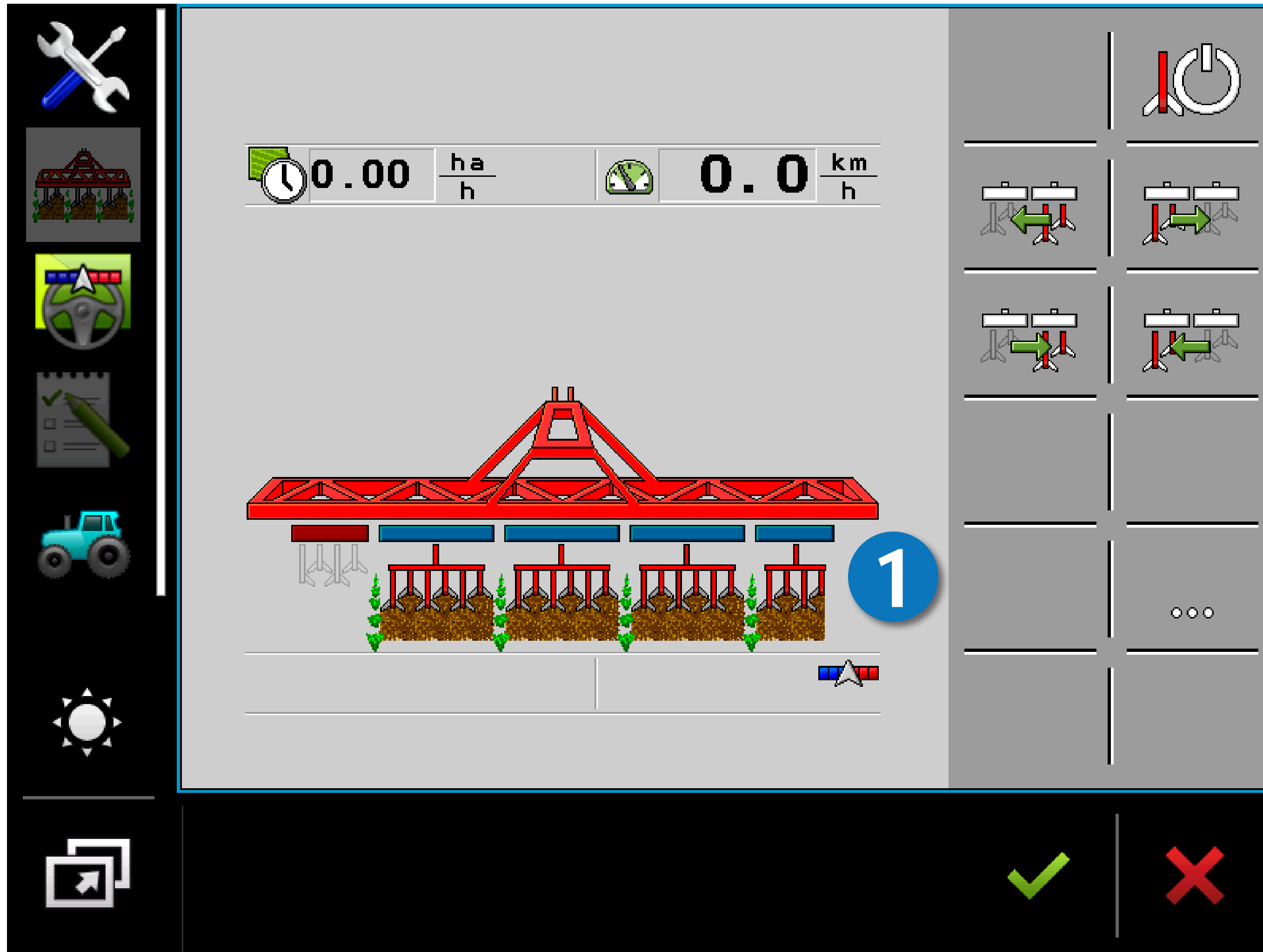
2.3 Display of the hoeing frame



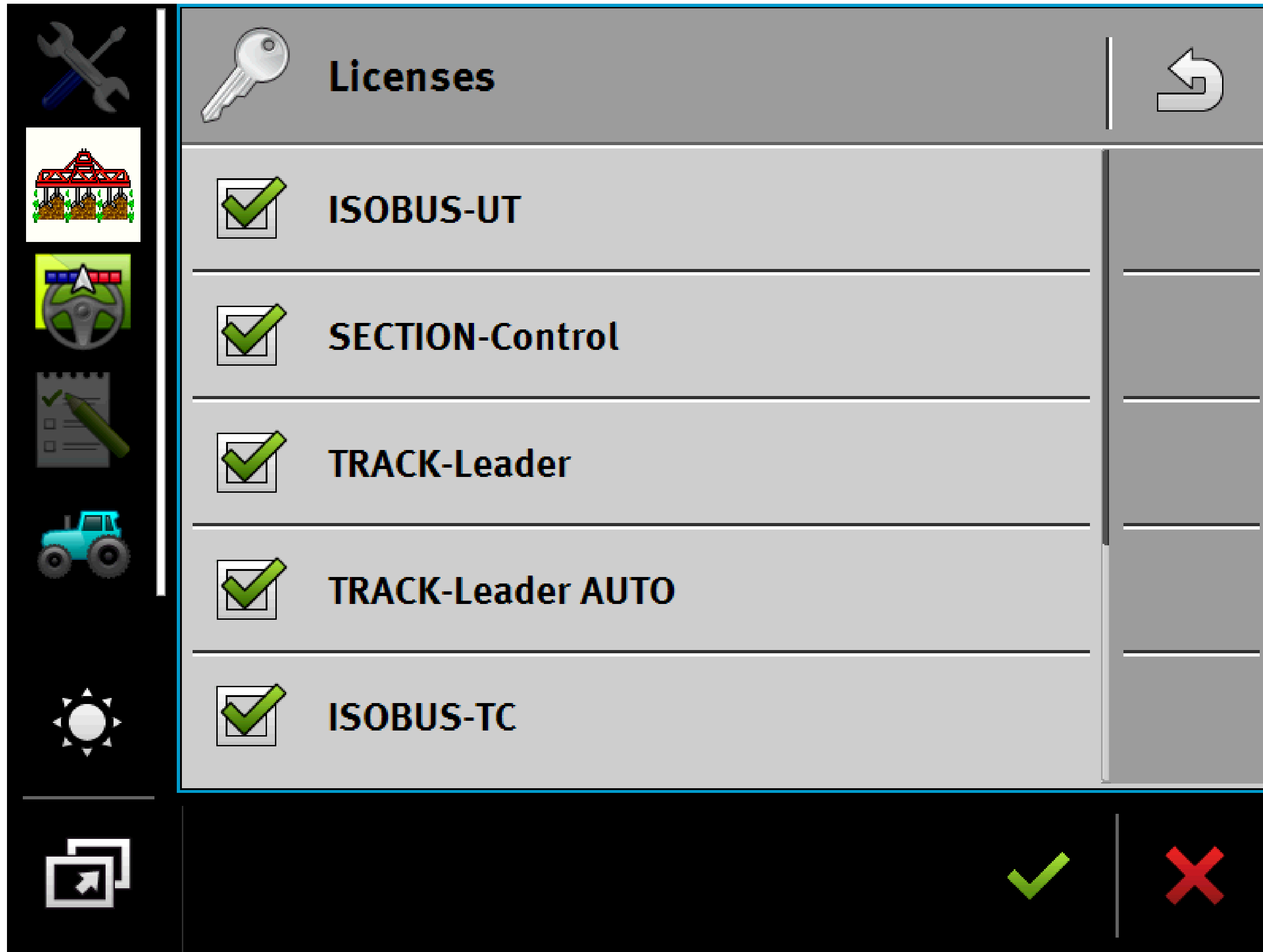
- » After every start of the monitor, the road mode is activated.
- » Switch to operation mode to activate the operation.
- » **ATTENTION:**
During activating operation mode, all Parallelograms are lifting up automatically. NOBODY is allowed to be at the danger zone!

2. USER INTERFACE

2.3 Display of the hoeing frame



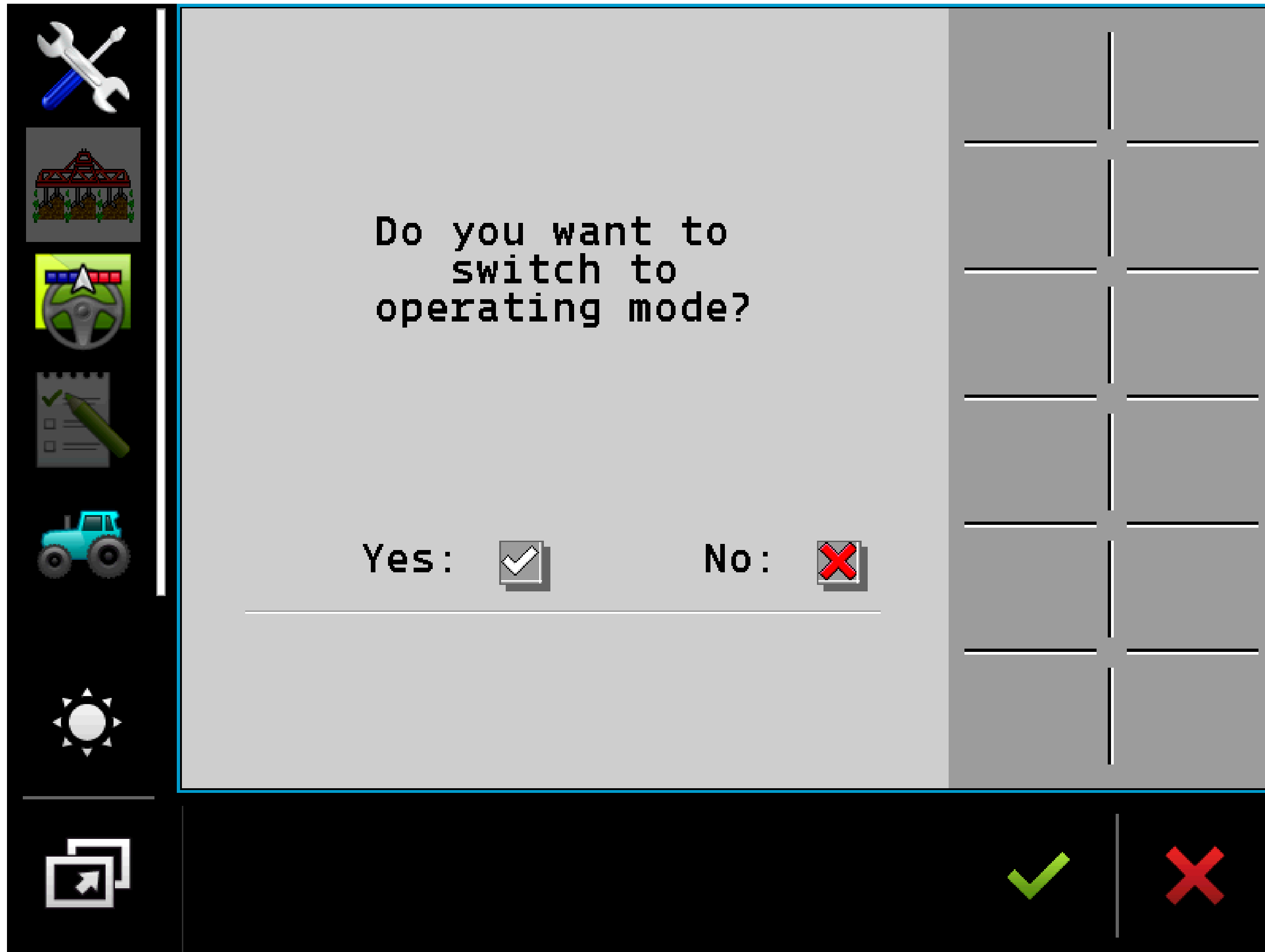
1. The current state of the hoeing elements can be identified by the color of the sections.
 - » Light gray = Hoeing element is deactivated and raised by manual switching off of the sections.
 - » Dark gray = Hoeing element is deactivated and raised by the main switch.
 - » Blue = Hoeing element is activated and lowered.
 - » Red = Hoeing element is activated and raised by SECTION CONTROL.
 - » White = hoeing element is permanently deactivated.



- » Requirements:
The ISOBUS functions (including SECTION-CONTROL) must be unlocked and activated on the monitor.
- » All settings in the monitor must be configured correctly.
- » The row-crop cultivator must be registered as a new device in the monitor.

3. WORKING IN THE FIELD

3.2 Deactivate road mode



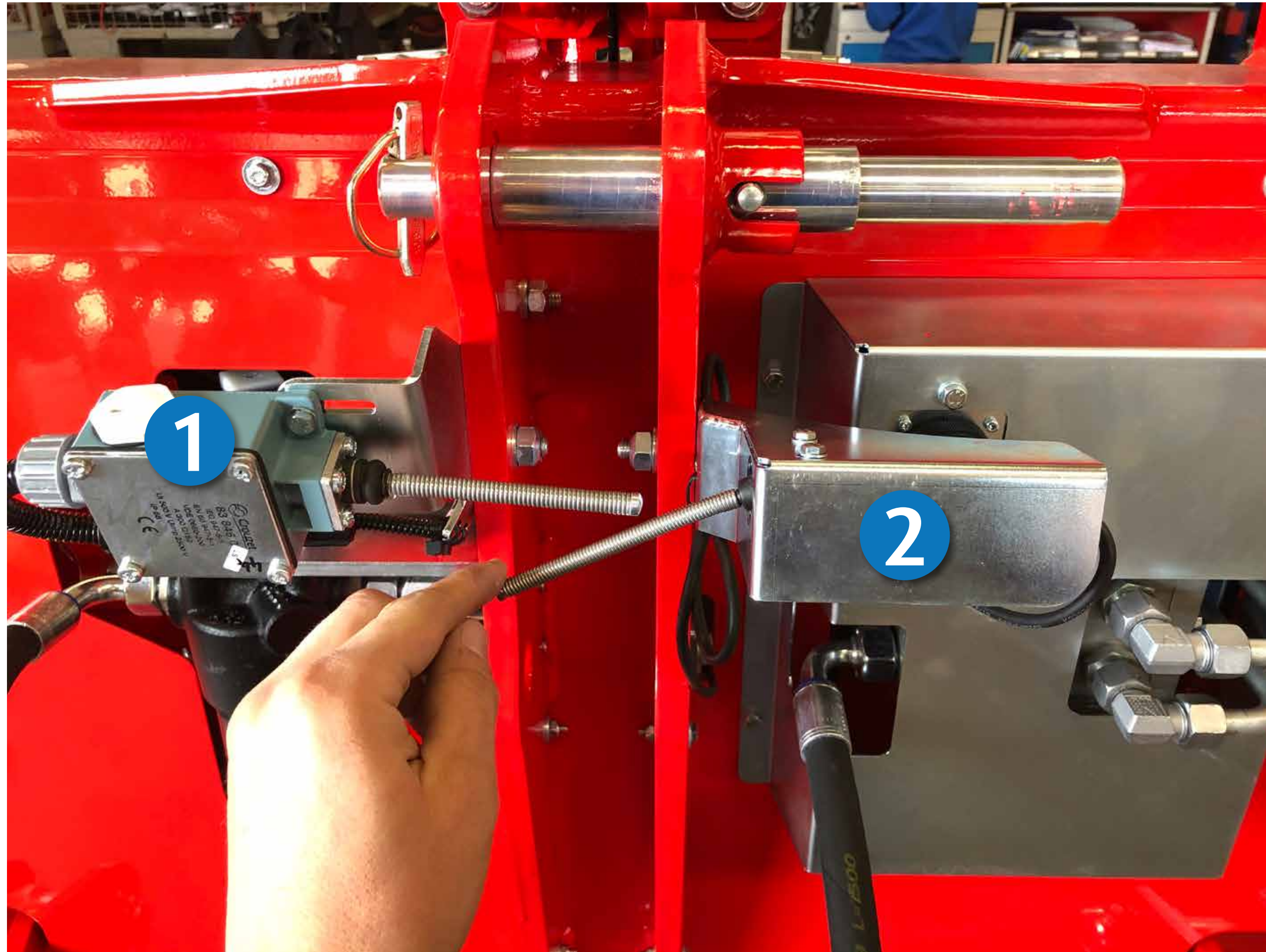
» At first you have to change from the road mode to the operating mode. Only then will the device be operational.

3. WORKING IN THE FIELD

3.3 Top link sensor

SET-UP INSTRUCTION SECTION-CONTROL

by **Einböck**



1. Top link sensor ROW-GUARD

2. Top link sensor SECTION-CONTROL

» The top link sensor serves as the main switch. If it is activated, all elements will be raised (e.g., necessary for driving on the headland).

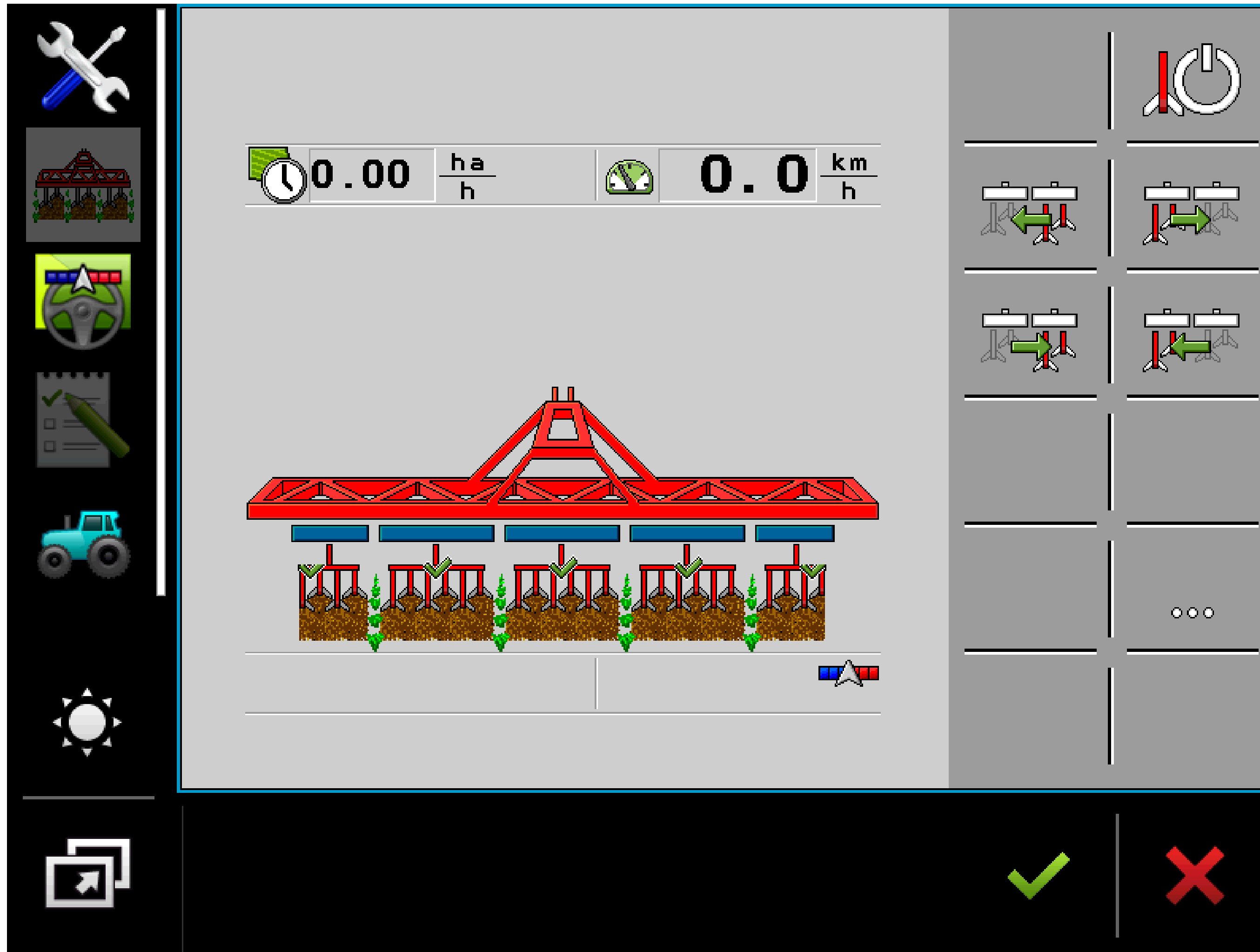


3. WORKING IN THE FIELD

3.4 Start in the field

SET-UP INSTRUCTION SECTION-CONTROL

by **Einböck**

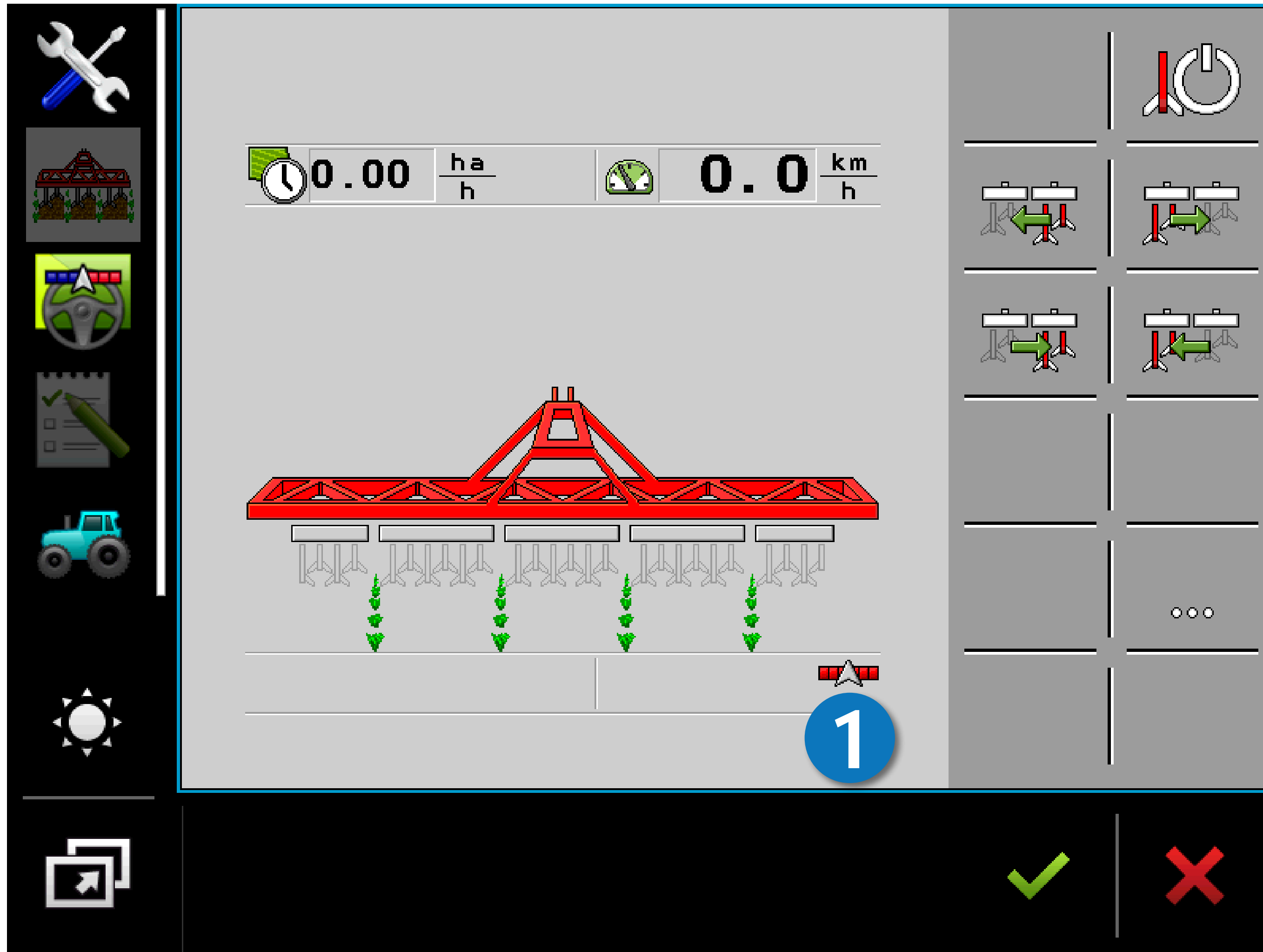


- » Hold the start button for 2 seconds to activate the system.
- » All elements are lowered to their working position or are activated.



3. WORKING IN THE FIELD

3.5 Section-Control active / inactive



1. If SECTION-CONTROL is activated in the monitor, the display shows the following symbol.
 - » Symbol red/blue:
Sections are controlled via SECTION-CONTROL.
 - » Symbol red:
The SECTION-CONTROL application has lifted all sections (e.g., hoe outside the field boundary or in the area already cultivated).
 - » If this symbol is not displayed at all, SECTION-CONTROL is not available and must be activated in the monitor settings.

3. WORKING IN THE FIELD

3.6 Delay time

The screenshot shows a configuration screen for a device named "Gestänge@MEHoeing_1" with the ISO ID "ISO-0xA00C84000C4070F2-00". The screen is divided into several sections. On the left, there is a vertical toolbar with icons for tools, a field, a steering wheel, a checklist, a tractor, a gear, and a monitor. The main area contains the following settings:

Setting	Value	Indicator
Device delay on start	400 ms	1
Delay correction on start	0 ms	2
Device delay on stop	400 ms	1
Delay correction on stop	0 ms	2
Machine model	Mounted	

At the bottom right, there are two large buttons: a green checkmark and a red X.

1. The delay correction (ex-factory set) is taken over by the monitor.
2. In most cases it will be necessary to adjust these delay corrections so that the elements are lowered or lifted out earlier or later.
 - » This input may vary depending on the monitor.

3. WORKING IN THE FIELD

3.7 Degree of overlap

Gestänge@MEHoeing_1
ISO-0xA00C84000C4070F2-00

Name
Gestänge@MEHoeing_1

Degree of overlap **0 %**

Tolerance of overlap
30 cm

Field boundary overlap tolerance
0 cm

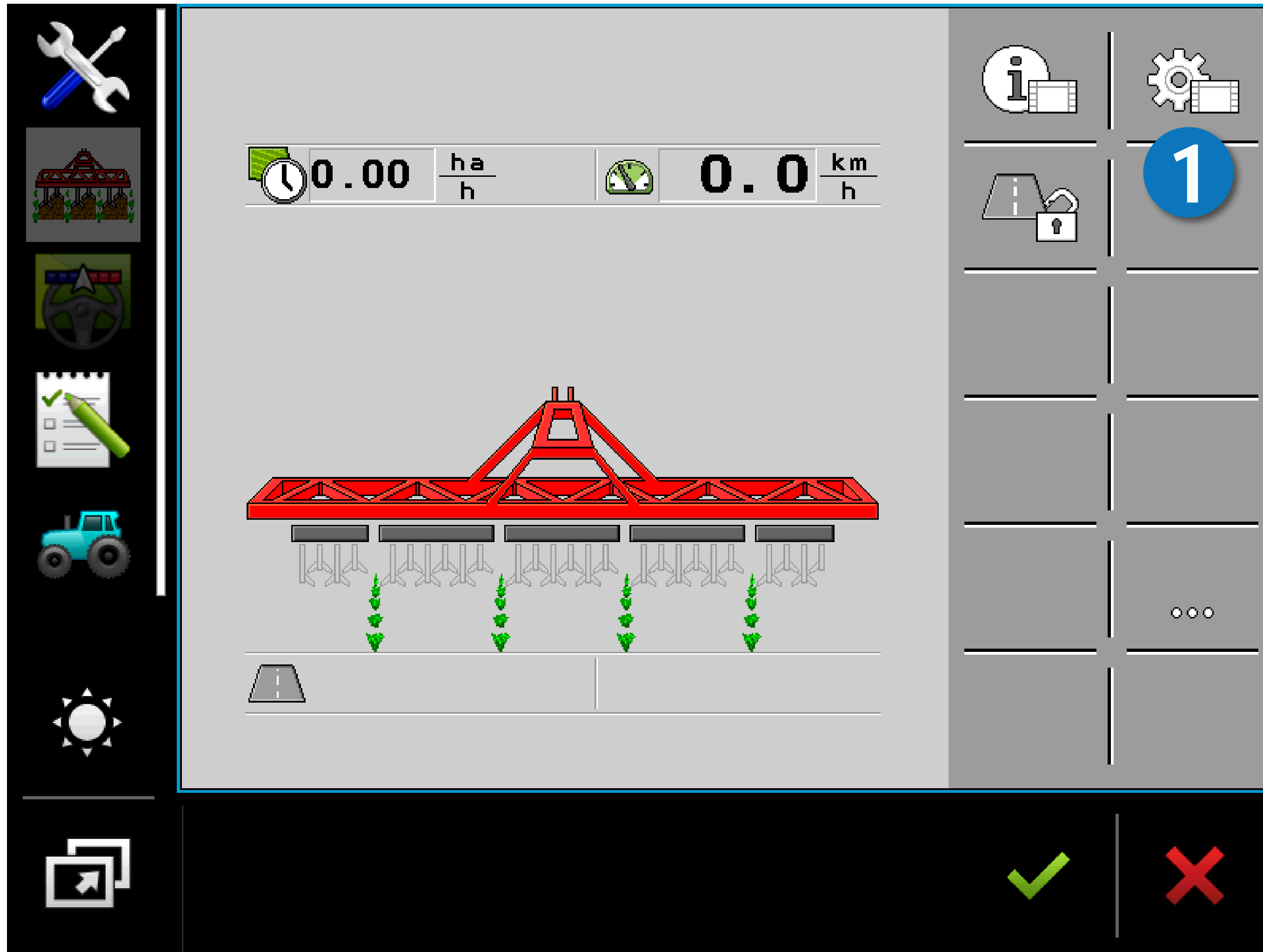
Device delay on start
400 ms

1. The degree of overlap should be set to 0%. This ensures that the elements are lifted at the correct time.

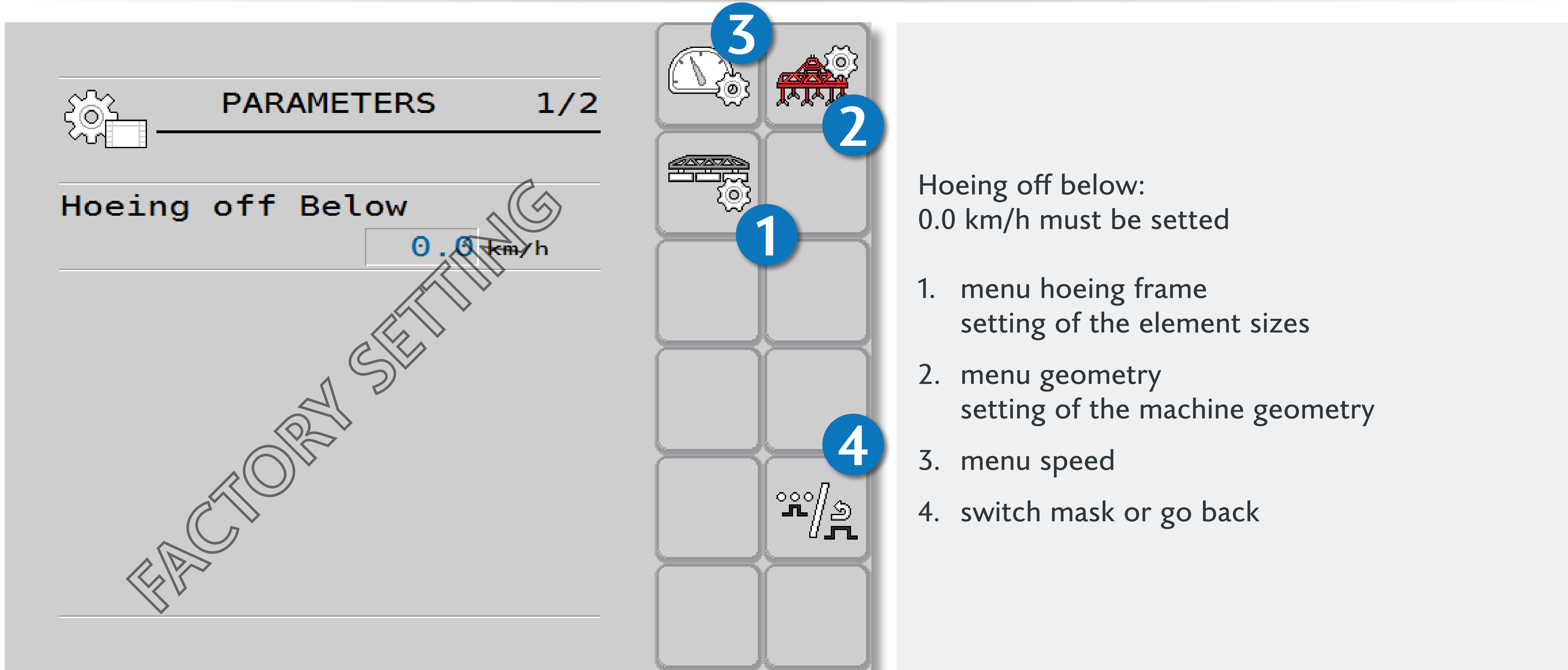
» This input may vary depending on the monitor.

4. CONFIGURING THE JOB COMPUTER

4.1 Configuring the job computer



- » In the settings (1) you can configure the job computer. This is usually configured at the factory. If changes are necessary, you find the most important points at the following pages.
- » For more settings, see also:
Operating instruction ISOBUS-HOEING-CONTROLLER MIDI 3.0



PARAMETERS 1/2

Hoeing off Below

0.0 km/h

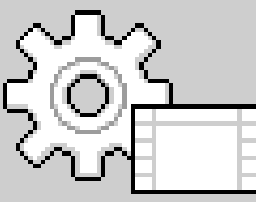
FACTORY SETTING

1. menu hoeing frame
setting of the element sizes

2. menu geometry
setting of the machine geometry

3. menu speed

4. switch mask or go back


PARAMETERS
2/2

Service password:

540913 000000

SW: V01.02.00.30 (20/09/21) *H002PDE

1

2

3

1

2

3

1. menu ISO

2. menu joysticks

3. software-version

Hoeing frame

Tool 1 = standard-Tool, setted in factory.
10 different tools would be able to configure and save.

sections: 18/18

The machine is able to switch 18 sections / 18 sections are activated

hoeing elements: 18/18

The machine is able to switch 18 sections / 18 hoeing elements are activated

1. configure menu hoeing frame - setted in factory

IMPLEMENT DATA

TOOL 1

Name:

TOOL 1

Section number: 18/18

Hoeing elem. no.: 18/18

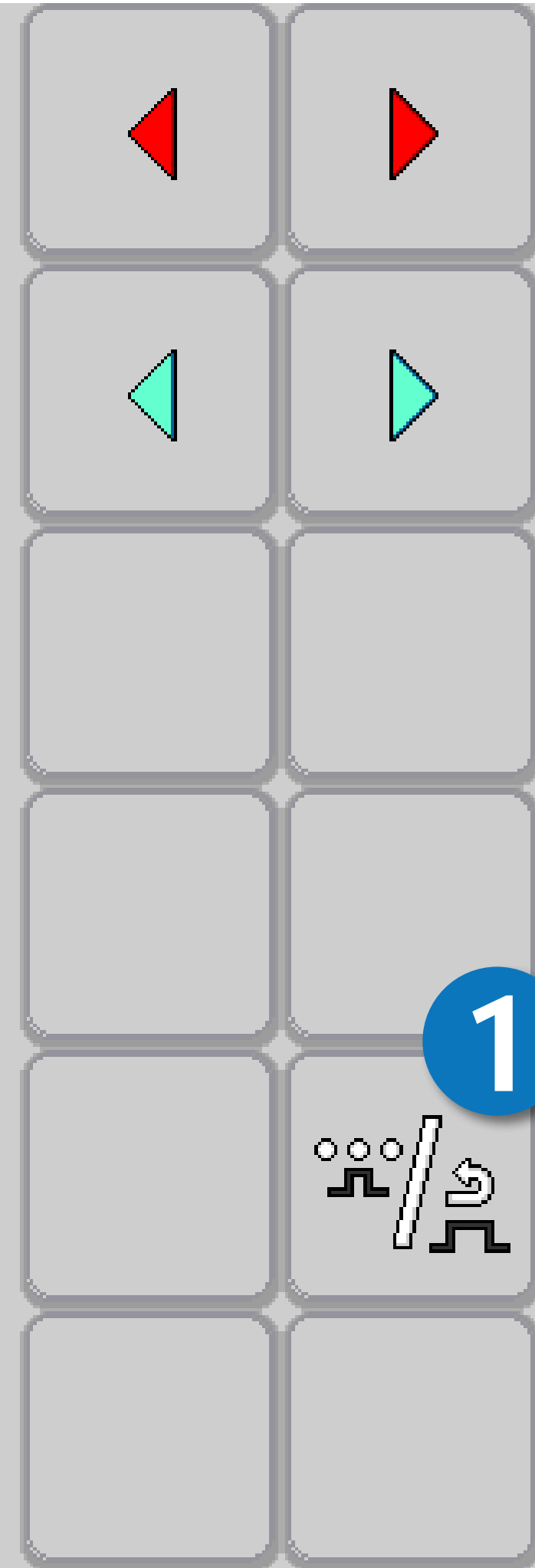
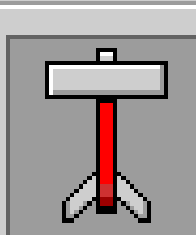
18

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Section:

☐ All

1

**Red arrows:**

reduce or add sections

Turquoise arrows:

reduce or add hoeing elements

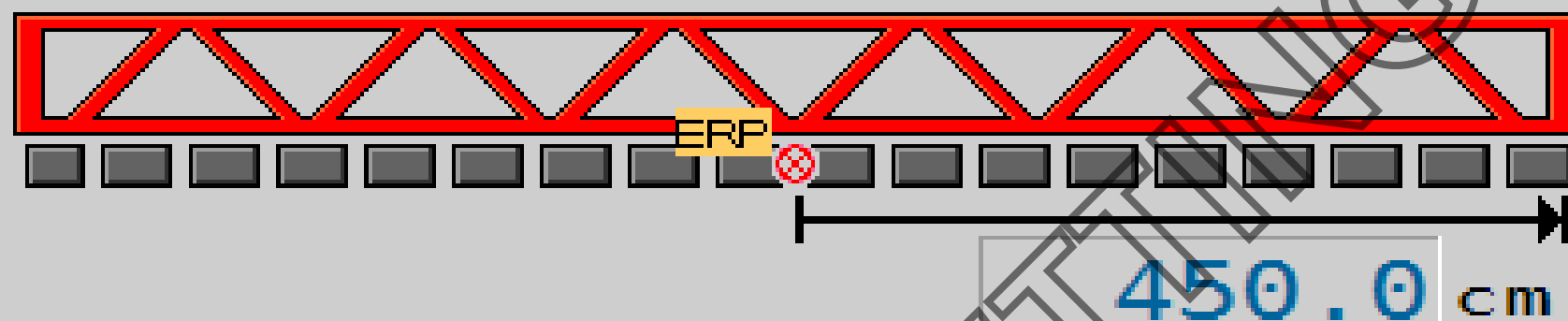
sections = possible to lift manually in the main menu

hoeing elements = automatically switched via SECTION-CONTROL

- » normally amount of sections and hoeing elements are the same
- » if the machine is very big, it can be useful to have less sections with more hoeing elements.

1. switch to 2nd page implement data

IMPLEMENT DATA



Working width:

9.00 m

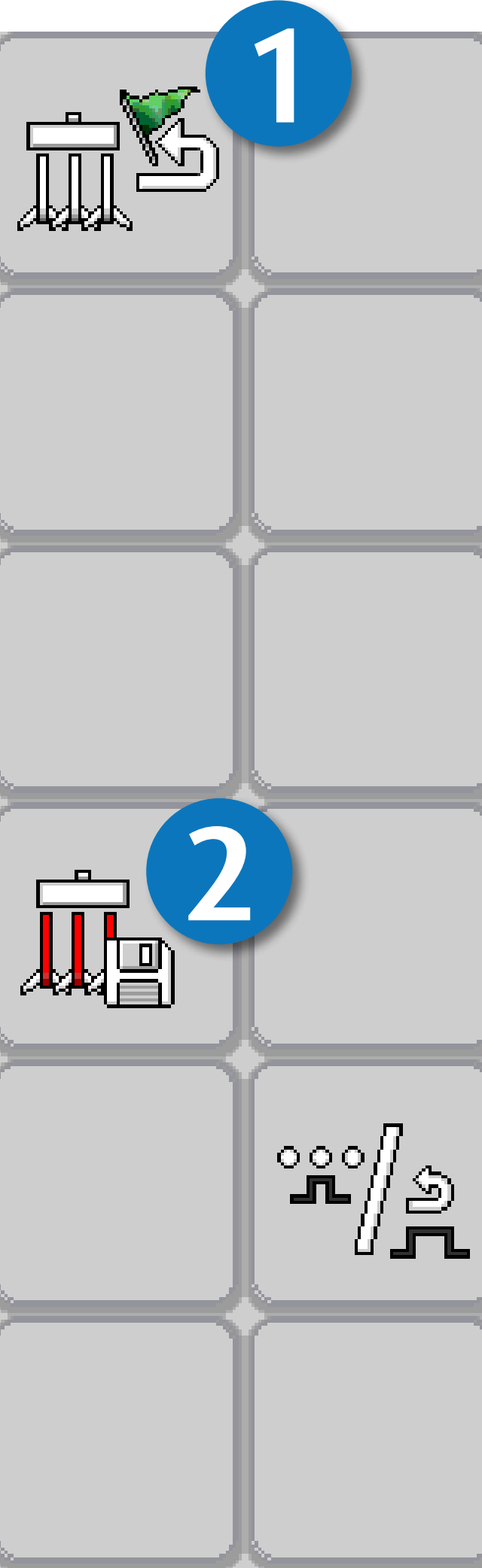
Element:

☐ All ☒ 2

Size:

0.0 cm

50.0 cm

**half working width:**

if it is an asymmetric machine, the length of the right half of the machine must be entered.

working width:

9m - automatically calculated of the amount and the size of the hoeing elements

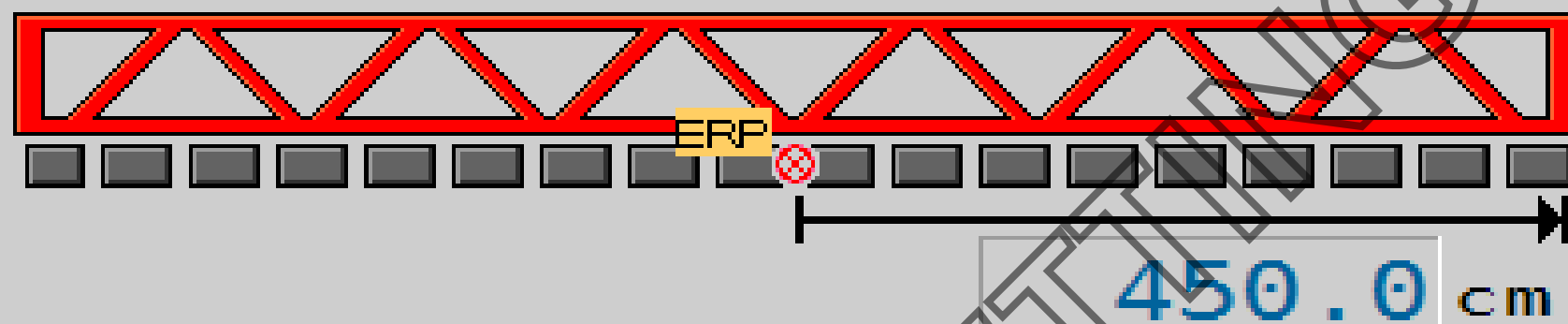
1. reset settings

The machine is reset to basic setting.
(NOT recommended)

2. save settings

after adjusting, the settings has to be saved.

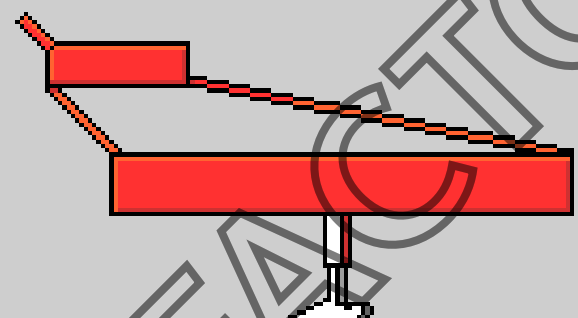
IMPLEMENT DATA



Working width:

9.00 m

Element:

☐ All ☒ 2


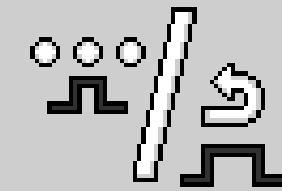
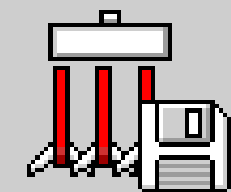
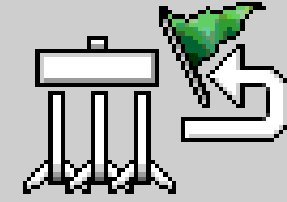
Size:

0.0 cm

50.0 cm

1

2

1. **offset element:**

every hoeing element can be adjusted in it's position further back or in front. (standard: 0)

2. **element size:**

every element can be setted individually.
f.e. machine with 50cm Row-distance.

Element 1 = 25cm (half element)

Element 2 = 50cm (whole element),

The sum of the elements is the working width

IMPLEMENT DATA

TOOL 1

Name :
TOOL 1

Section number: 18/18

Hoeing elem. no.: 18/18

18

1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1 1

Section: ☐ All ☒ 1

←

→

◀

▶

◀

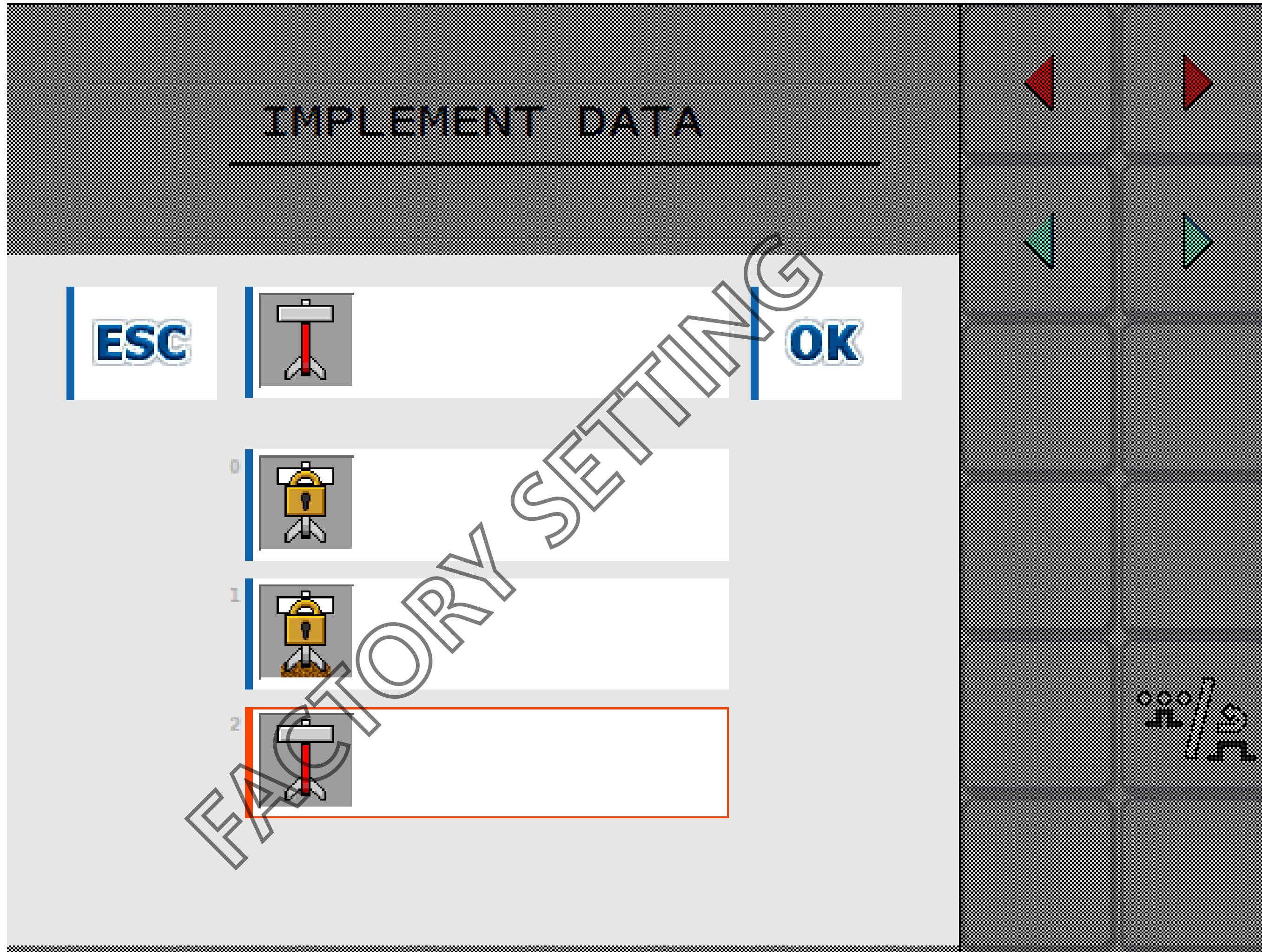
▶

1. Activate/deactivate single hoeing elements (f.e. necessary if changing the row amount of the machine)

Through press the button - entering page opens

4. CONFIGURING THE JOB COMPUTER

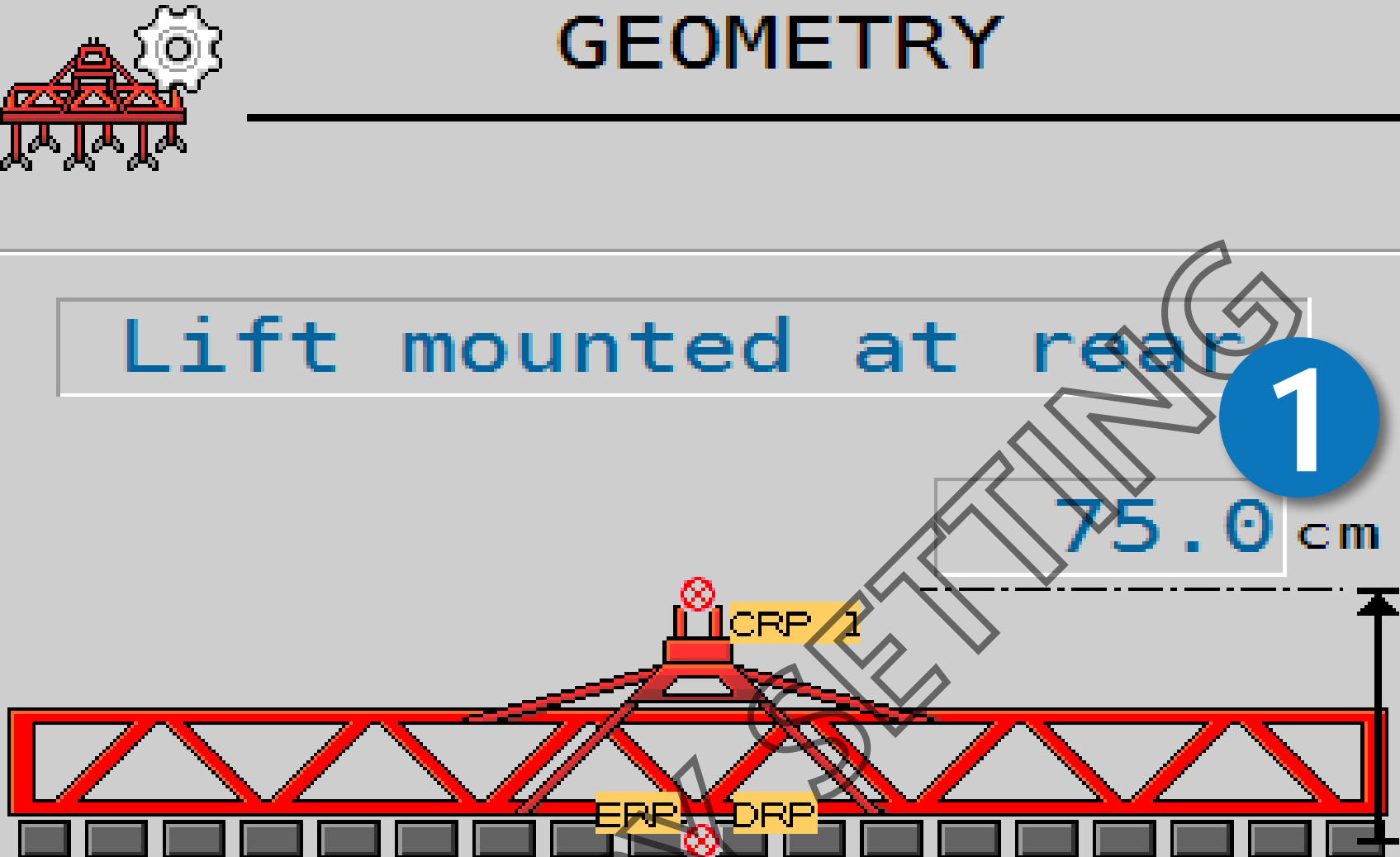
4.4 Activate/deactivate hoeing elements



3 different functions are possible;

- » element locked in position up
- » element locked in position down
- » element activated (standard)

After changing the setting, it must be saved with the „Save-Button“.



GEOMETRY

Lift mounted at rear

75.0 cm

CRP 1

ERP

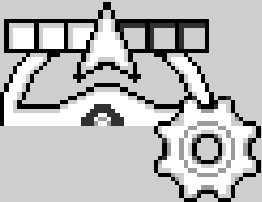
DRP

1

2

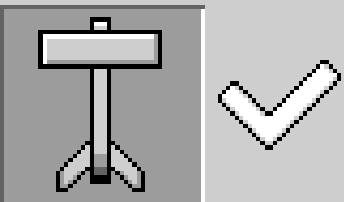
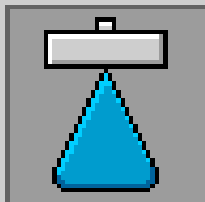
↩

1. offset to the back
offset between lower linkage and first hoeing sweep
2. menu section-control

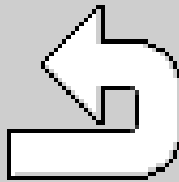
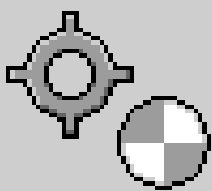
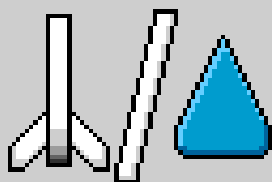
 **SECTION-Control**

Delay on start: ms

Delay on stop: ms

Current working depth cm



Delay on start:

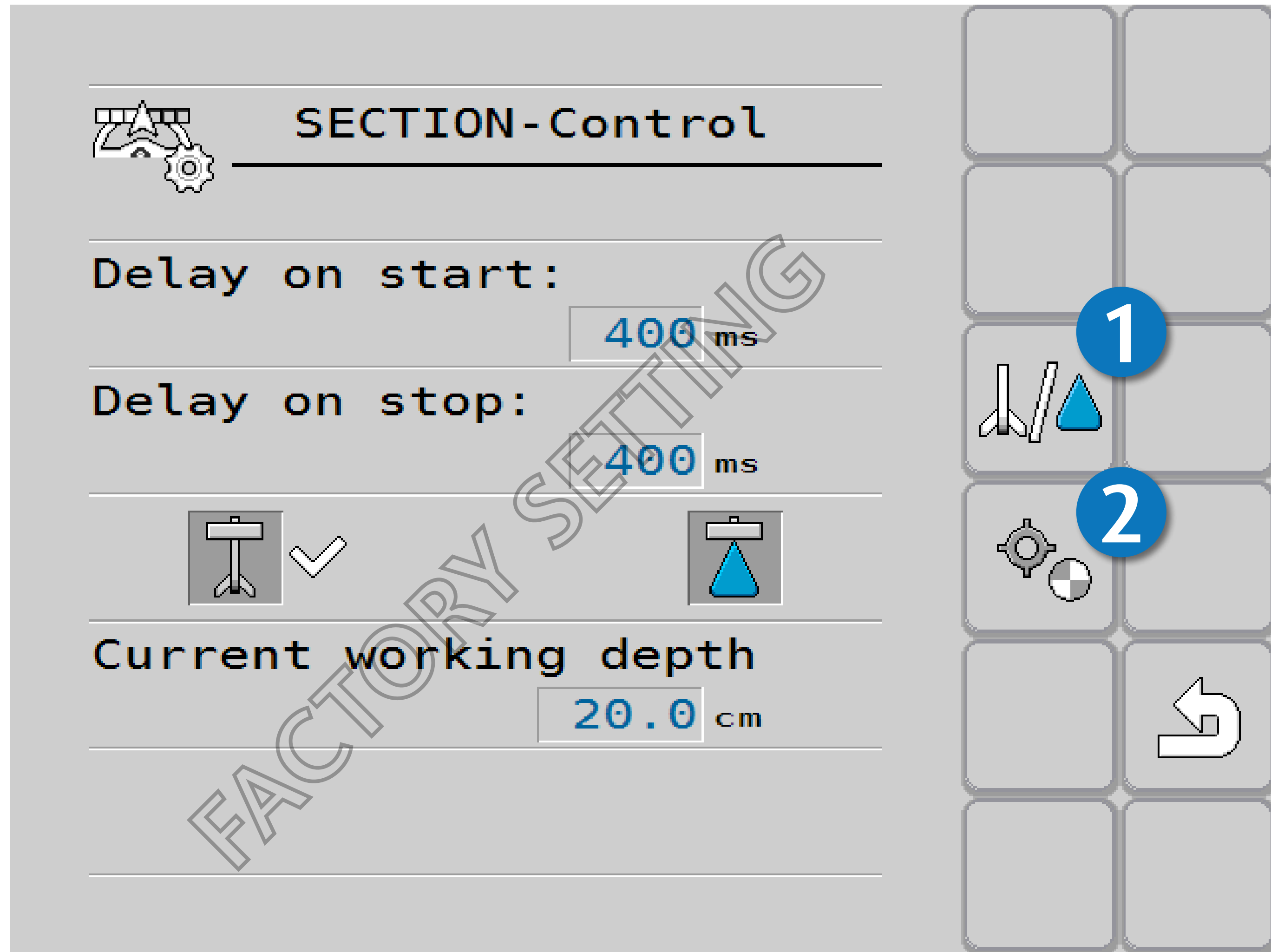
is the delay of the elements, when they are lowering. - setting: when the elements lower too early, reduce the value.

Delay on stop:

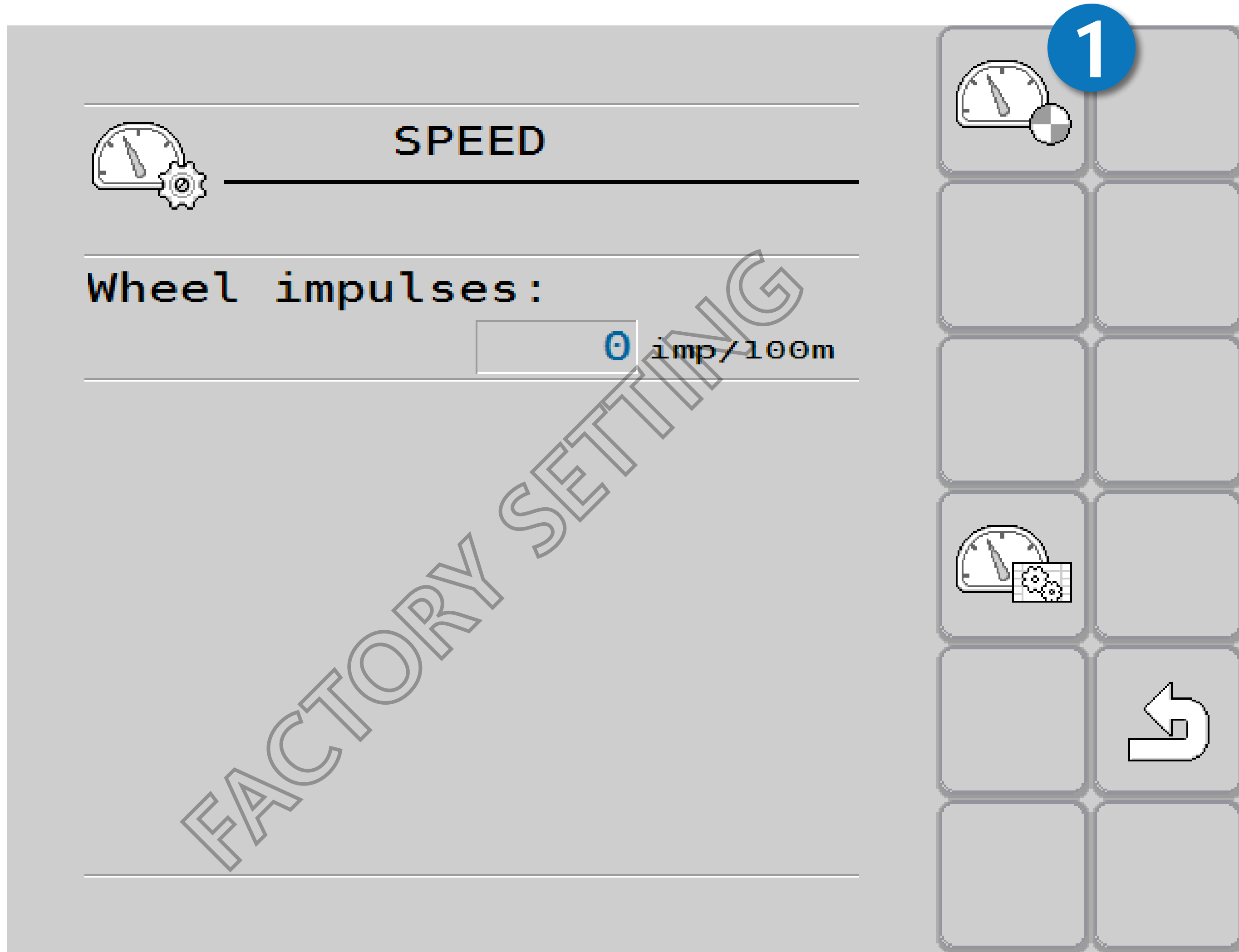
is the delay of the elements, when they lift up.
- setting: when the elements lift up too early, reduce the value.

ATTENTION:

When fine-tuning the setting, the driving speed during leaving and entering the headland has to be always the same.



1. **hoeing machine / spraying machine**
some older types of Monitors can not steer a soil cultivator. In this case change to spraying machine.
2. **show „current working width“**
Press the button to show or hide the value. Some monitors need this value in the Task-Controller (standard: value is shown)



impulses wheel sensor: 0 impulses
(=standard setting) - the speed will be taken by
ISOBUS.

1. simulated speed - press the button to activate
the simulated speed (NOT necessary -
standard: value not shown)

