

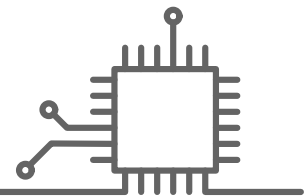


# Original operating manual

ISOBUS software

ZG-TX

This operating manual is valid as of software version NW371-C



SmartLearning





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# About this operating manual

# 1

CMS-T-00000539-I.1

## 1.1 Copyright

CMS-T-00012308-A.1

Reprinting, translation and reproduction in any form, including excerpts, require the written approval of AMAZONEN-WERKE.

## 1.2 Meaning of the operating manual

CMS-T-006245-A.1

The operating manual is an important document and a part of the implement. It is intended for the user and contains safety-related information. Only the instructions provided in the operating manual are reliable. If the operating manual is not observed, it can result in serious injury or death.

1. The safety section must be completely read and observed before initial operation of the implement.
2. Before starting work, also read and observe each section of the operating manual.
3. Keep the operating manual available.
4. Hand over the operating manual to the subsequent user.

## 1.3 Diagrams

CMS-T-005676-F.1

### 1.3.1 Warnings and signal words

CMS-T-00002415-A.1

Warnings are marked with a vertical bar with a triangular safety symbol and the signal word. The signal words *"DANGER"*, *"WARNING"* or *"CAUTION"* describe the severity of the potential danger and have the following meanings:



## **DANGER**

- Indicates a direct threat with high risk for severe physical injury, such as loss of limbs or death.



## **WARNING**

- Indicates a possible threat with moderate risk for severe physical injury or death.



## **CAUTION**

- Indicates a threat with low risk for light or moderately severe physical injuries.

### **1.3.2 Further instructions**

CMS-T-00002416-A.1



## **IMPORTANT**

- Indicates a risk for damage to the implement.



## **ENVIRONMENTAL INFORMATION**

- Indicates a risk for environmental damage.



## **NOTE**

Indicates application tips and instructions for optimal use.

### **1.3.3 Instructions**

CMS-T-00000473-D.1

#### **1.3.3.1 Numbered instructions**

CMS-T-005217-B.1

Actions that have to be performed in a specific sequence are represented as numbered instructions. The specified sequence of the actions must be observed.

Example:

1. Instruction 1
2. Instruction 2

### 1.3.3.2 Instructions and responses

CMS-T-005678-B.1

Reactions to instructions are marked with an arrow.

Example:

1. Instruction 1
- ➔ Reaction to instruction 1
2. Instruction 2

### 1.3.3.3 Alternative instructions

CMS-T-00000110-B.1

Alternative instructions are introduced with the word "or".

Example:

1. Instruction 1
- or
- Alternative instruction
2. Instruction 2

### 1.3.3.4 Instructions with only one action

CMS-T-005211-C.1

Instructions with only one action are not numbered, but rather shown with a arrow.

Example:

- ▶ Instruction

### 1.3.3.5 Instructions without sequence

CMS-T-005214-C.1

Instructions that do not require a specific sequence are shown as a list with arrows.

Example:

- ▶ Instruction
- ▶ Instruction
- ▶ Instruction

#### 1.3.3.6 Workshop work

CMS-T-00013932-B.1



##### WORKSHOP WORK

- ▶ Identifies maintenance work that must be performed at a workshop that is adequately equipped in terms of agricultural technology, safety and environmental technology by specialist personnel with appropriate training.

#### 1.3.4 Lists

CMS-T-000024-A.1

Lists without an essential order are shown as a list with bullets.

Example:

- Point 1
- Point 2

#### 1.3.5 Item numbers in figures

CMS-T-000023-B.1

A framed number in the text, e.g. a 1, indicates an item number in an adjacent figure.

#### 1.3.6 Direction information

CMS-T-00012309-A.1

Unless otherwise specified, all directions are always seen in the direction of travel.

### 1.4 Other applicable documents

CMS-T-00000616-B.1

A list of other applicable documents can be found in the Appendix.



## 1.5 Your opinion is important

CMS-T-000059-D.1

Dear reader, our documents are updated on a regular basis. Your suggestions for improvement help us to create ever more user-friendly documents. Please send us your suggestions by post, fax or email.

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CMS-I-00000638

# ISOBUS requirements

2

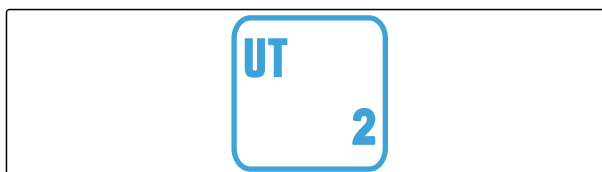
CMS-T-00010917-A.1

## 2.1 Minimum ISOBUS requirements

CMS-T-00010916-A.1

### Universal Terminal:

- Generation 2
- Screen resolution: 240
- Colour depth: 8 bit / 256 colours
- Buttons: 8

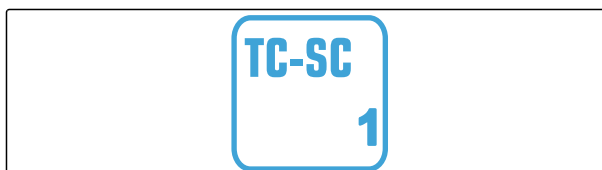


CMS-I-00007472

Other functions are required, depending on the application:

### Task Controller Section Control:

- Generation 1
- Booms: 1
- Number of part-width sections: 1



CMS-I-00007474

### Task Controller geo-based:

- Generation 1
- Number of control channels: 1



CMS-I-00007475

### Task Controller basic:

- Generation 1



CMS-I-00007476

### Auxiliary Control new:

- Generation 1



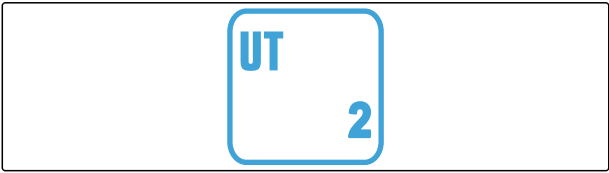
CMS-I-00007473

## 2.2 Recommended ISOBUS requirements

CMS-T-00010918-A.1

**Universal Terminal:**

- Generation 2
- Screen resolution: 480
- Colour depth: 8 bit / 256 colours
- Buttons: 12



CMS-I-00007472

**Task Controller Section Control:**

- Generation 1
- Booms: according to the implement equipment
- Number of part-widths sections: according to the implement equipment. 2 part-width sections for one-sided switching. Up to 126 sections with segment distributor head with return flow and single-row control



CMS-I-00007474

**Task Controller geo-based:**

- Generation 1
- Number of control channels: number of products according to the implement equipment



CMS-I-00007475

**Task Controller basic:**

- Generation 1



CMS-I-00007476

**Auxiliary Control new:**

- Generation 1



CMS-I-00007473

# Overview of the functions

# 3

CMS-T-00009980-A.1

The ZG-TS trailed spreader is operated with the ISOBUS software. The ISOBUS software can be displayed and operated with an ISOBUS control terminal.

### **The ISOBUS software includes the following functions:**

- Starting and stopping fertiliser spreading
- Determining the calibration factor for rate-precise fertiliser spreading
- Switching other fertiliser spreading functions
- Filling the spreading material hopper
- Emptying the spreading material hopper
- Managing products
- Managing profiles
- Documenting work

# User interface at a glance

# 4

CMS-T-00009907-A.1

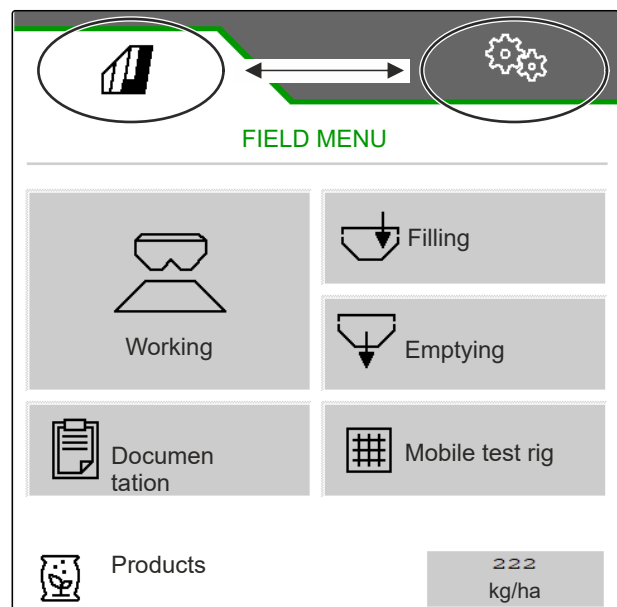
## 4.1 Field menu

CMS-T-00009908-A.1

The user interface is divided into the *"Field menu"* and the *"Settings"* menu.

The *"Field menu"* consists of the following submenus:

- *"Work"* menu for displaying and operation during operation
- *"Documentation"* menu for displaying the recorded work data
- *"Filling"* menu for correct fill level information for the spreading material hopper
- *"Emptying"* menu shows the procedure for emptying the spreading material hopper
- *"Mobile test rig"* menu for checking the lateral distribution
- Input field for the target spread rate



CMS-I-00006786

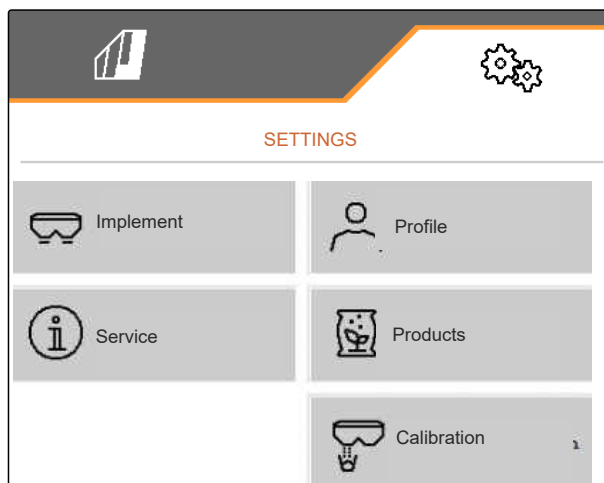
## 4.2 Settings menu

CMS-T-00009909-A.1

The user interface is divided into the *"Field menu"* and the *"Settings"* menu.

The **"Settings"** menu consists of the following submenus:

- The **"Implement"** menu is used for the implement settings.
- The **"Service"** menu provides information on the software version, counter readings, diagnosis data and calibration of the motors on the spreader.
- The **"Profiles"** menu is used to create individual user profiles.
- The **"Products"** menu is used to enter product-specific data.
- The **"Calibration"** menu is used to determine the calibration factor for a correct spread rate.

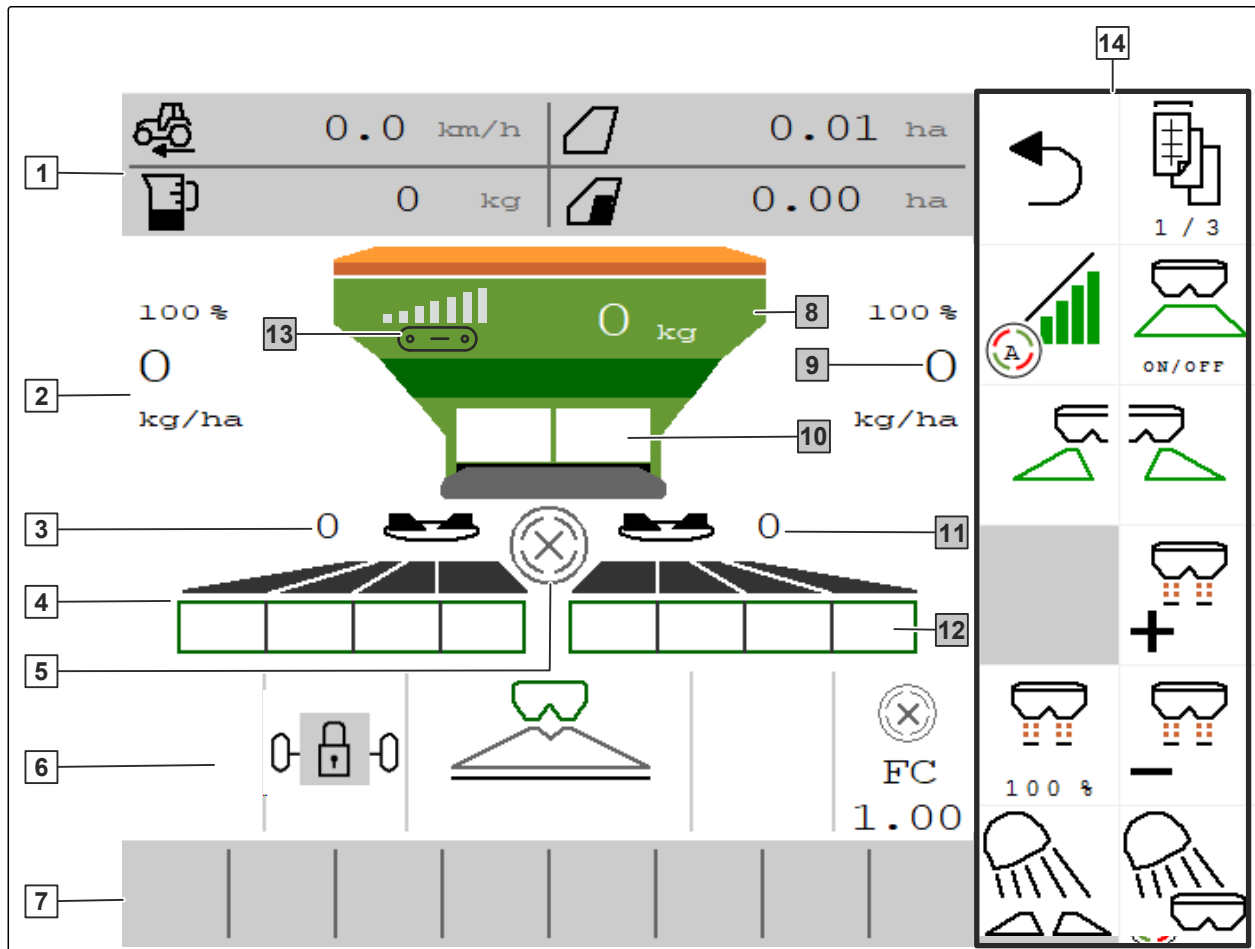


CMS-I-00006788

## Overview of the Work menu

5

CMS-T-00009884-B.1



CMS-I-00006795

- |   |  |
|---|--|
| <b>1</b> Multi-function display             | <b>2</b> Application rate on the left                            |
| <b>3</b> Spreading disc speed on the left   | <b>4</b> Status of the left part-width sections                  |
| <b>5</b> Section Control status             | <b>6</b> Display of additional functions                         |
| <b>7</b> Status bar                         | <b>8</b> Hopper content  |
| <b>9</b> Application rate on the right      | <b>10</b> Double shutter for fertiliser or mono shutter for lime |
| <b>11</b> Spreading disc speed on the right | <b>12</b> Status of the right part-width sections                |
| <b>13</b> Belt speed display                | <b>14</b> Button bar   |

# Basic operation

# 6

CMS-T-00009894-A.1

## 6.1 Switching between the Field menu and the Settings

CMS-T-00009895-A.1

- To switch to the "Field menu":

select .

or

- To switch to the "Settings":

select .



CMS-I-00006796

## 6.2 Switch to the previous menu

CMS-T-00000805-C.1

- Select  on the button bar.

## 6.3 Scrolling through the menus and button bar

CMS-T-00000806-B.1

- To scroll through the menus in the settings,

select .

- To scroll through the button bar,

select .



# Adjusting the implement

7

CMS-T-00009902-B.1

## 7.1 Configuring the source for the speed signal

CMS-T-00009903-A.1

### 7.1.1 Configuring the simulated speed

CMS-T-00000762-F.1

To control the implement, a speed signal is required. If no speed signal is available, the simulated speed can be used.



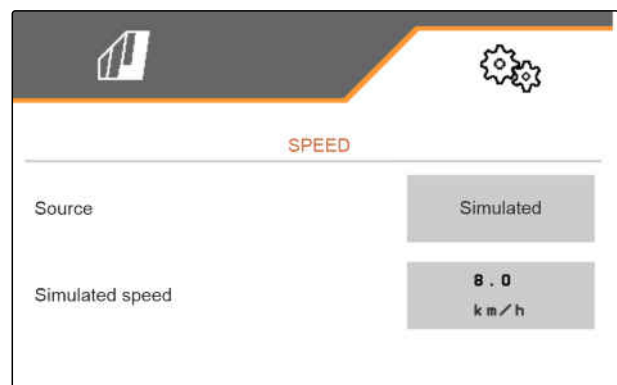
#### NOTE

The simulated speed must be maintained during operation.

When a speed signal is detected, the simulated speed will be deactivated.

After restarting the implement, the simulated speed is set to 0 km/h.

1. In the "Settings" menu, select "Implement" > "Speed".
2. Under "Source", select "Simulated".
3. Under "Simulated speed", enter the desired speed.



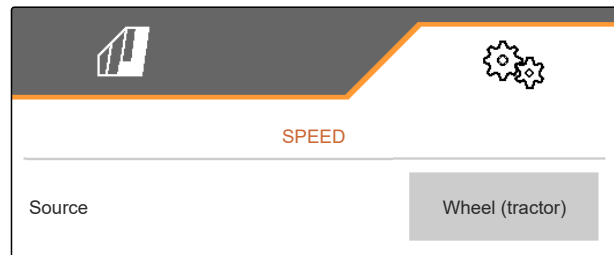
CMS-I-00000623

### 7.1.2 Configuring the speed signal from the tractor

CMS-T-00009910-A.1

To control electric metering drives, a speed signal is required. The speed sensor on the tractor can be used for this.

1. In the "Settings" menu, select "Implement" > "Speed".
2. Under "Source", select "Wheel(tractor)".



CMS-I-00007150

### 7.1.3 Setting up the speed sensor on the implement

CMS-T-00009911-A.1

#### 7.1.3.1 Setting up the speed sensor on the implement

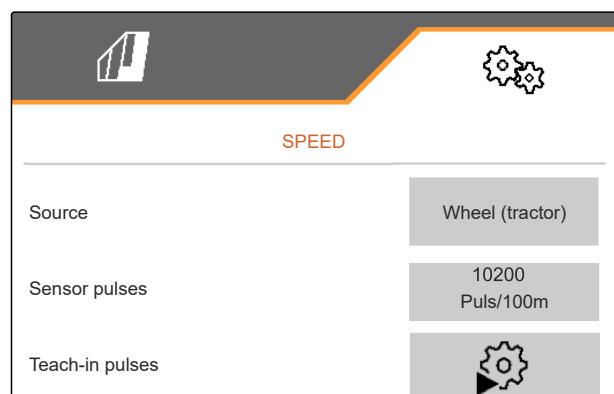
CMS-T-00009904-A.1

To control electric metering drives, a speed signal is required. A speed signal from the tractor can be used for this.

1. In the "Settings" menu, select "Implement" > "Speed".
2. Under "Source", select "Implement".
3. Under "Sensor pulses", enter the pulses per 100 metres.

or

Select "Teach-in pulses".



CMS-I-00000622

#### 7.1.3.2 Teaching-in the pulses per 100 m

CMS-T-00009912-A.1

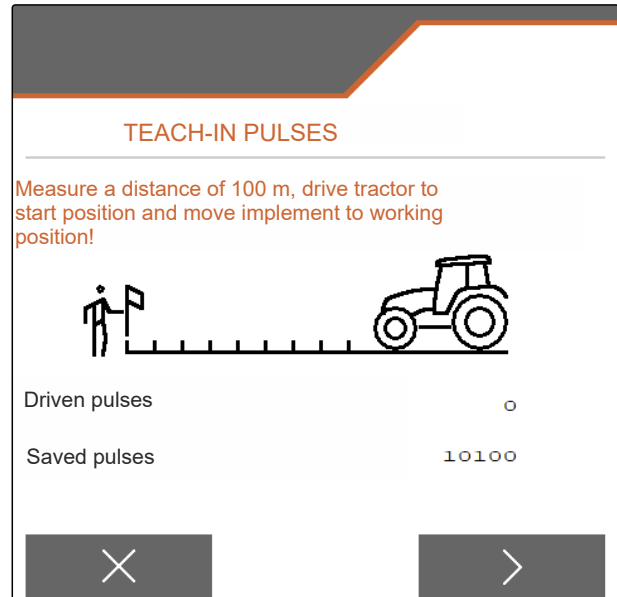


## NOTE

Determine the "Pulses per 100 m" calibration factor under operating conditions.

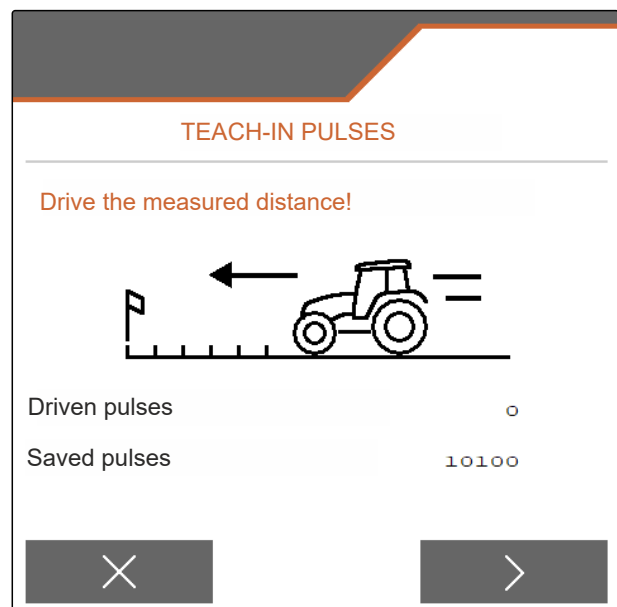
If 4-wheel drive is being used during operation, the 4-wheel drive must also be switched on when determining the pulses per 100 m.

1. Measure a distance of 100 m.
2. Mark the start point and end point.
3. Drive up to the start point.
4. > Continue.



CMS-I-00006797

5. Move the implement into working position.
6. Drive to the end point.
- ➔ The "Driven pulses" will be counted.
7. > Continue.



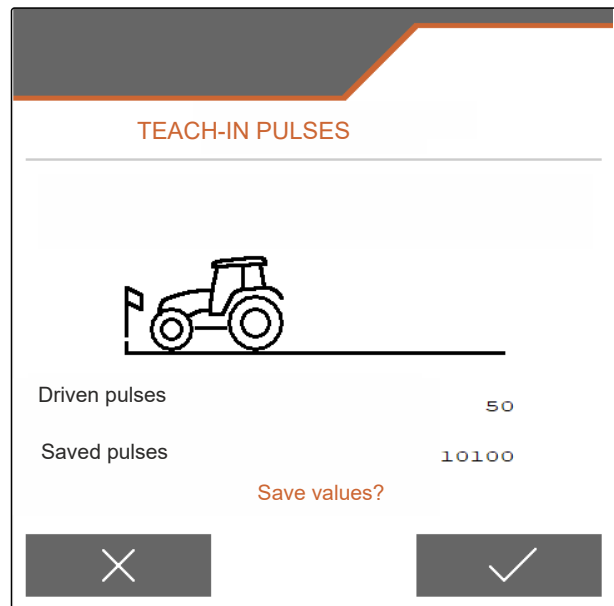
CMS-I-00006799

8. Move the implement into working position.
9. Drive to the end point.
- ➔ The "Driven pulses" will be counted.

10. ✓ Save the value

or

✗ Discard the value.



CMS-I-00006798

## 7.2 Converting the spreader

CMS-T-00009915-B.1

### 7.2.1 Converting the spreader unit for spreading lime

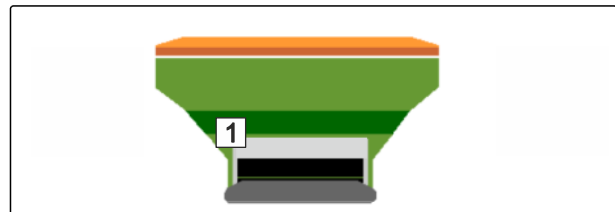
CMS-T-00009916-B.1





#### NOTE

Observe the ZG-TX operating manual.

- 1 Display of the mono shutter in the Work menu



CMS-I-00007290

1. In the "Settings" menu, select "Implement" > "Convert spreader".
2. Select "Conversion to lime".
3. Convert the sluice position.
4.  Move the delivery system into parking position.
5.  Move AutoTS into parking position.
6. Remove the delivery system.

7. Change the spreading discs.
8. ✓ Confirm that conversion is complete.

### 7.2.2 Converting the spreader unit for spreading fertiliser

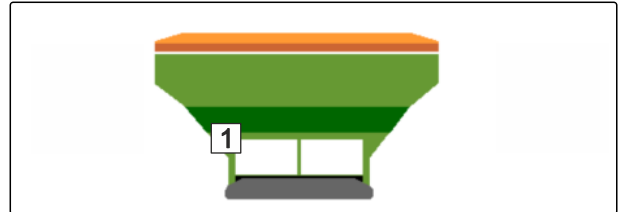
CMS-T-00009917-B.1



#### NOTE

Observe the ZG-TX operating manual.

- 1 Display of the double shutter in the Work menu



CMS-I-00007289

1. In the "Settings" menu, select "Implement" > "Convert spreader".
2. Select "Conversion from lime to fertiliser".
3. Convert the sluice position.
4. Install the delivery system.
5. Change the spreading discs.
6. ✓ Confirm that conversion is complete.

## 7.3 Adjusting the steering system

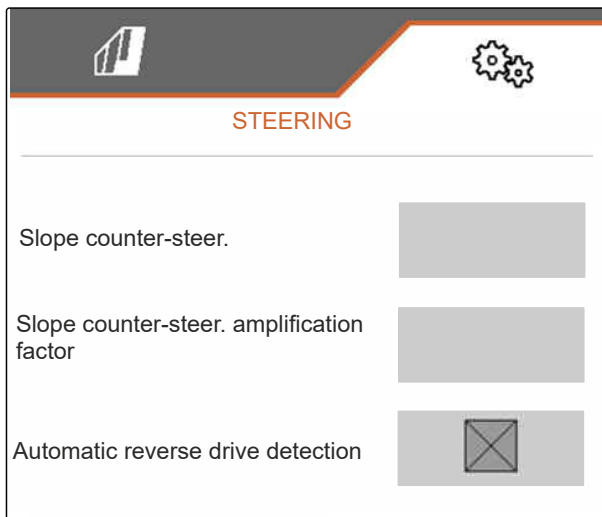
CMS-T-00015171-A.1

1. In the "Setting" menu, call up "Implement" > "Select steering system".
2. Select "Select steering system".

## 7 | Adjusting the implement

### Calibrating AutoTrail steering

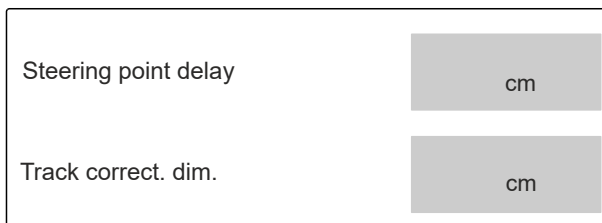
- To adjust the slope counter-steering:  
Select "Manual" for manual steering against the slope  
  
or  
  
Select "Automatic" for automatic steering against the slope.
- Enter the slope counter-steering amplification factor for automatic steering against the slope.  
Default value: 5
- Activate or deactivate the automatic reverse drive detection.



CMS-I-00009824

The steering point delay defines the distance after which the implement starts steering.

High value	The implement steers later
Low value	The implement steers earlier



CMS-I-00009823

- Set the steering point delay in cm.

The track correction dimension enables lateral correction if the track is not followed correctly.

Positive value	Track further out
Negative value	Track further in

- Set the track correction dimension in cm.

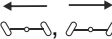


## 7.4 Calibrating AutoTrail steering

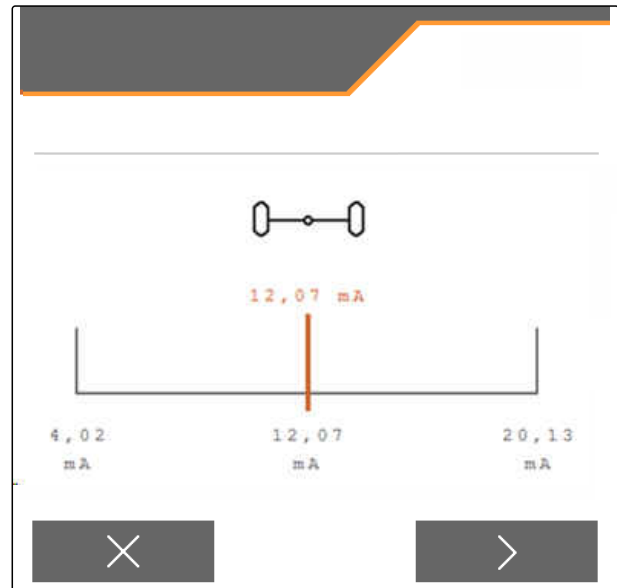
CMS-T-00015172-A.1

- In the "Settings" menu, call up "Implement" > "Steering system".
- Select "Calibrate AutoTrail".



CMS-I-00009825

3.  Align the axle straight and simultaneously drive a short distance straight ahead until tractor and implement are on one track.
  4. *To check the centre position:*  
Secure the tractor and implement against unintentional rolling away.
  5. Measure the steering cylinder.
- ➔ Hydraulic cylinders must have the same length.
6. If necessary, readjust the centre position and check again.
  7. > Continue.
  8.  Steer the implement and tractor all the way to the right simultaneously.
  9. > Continue.
  10.  Steer the implement and tractor all the way to the left simultaneously.
  11. > Continue.
  12. ✓ Save values
- or
- ✗ Discard values.



CMS-I-00009820

## 7.5 Calibrating the yaw rate sensor

CMS-T-00015173-A.1

1. In the "Settings" menu, call up "Implement" > "Steering system".
2. Select "Yaw rate sensor".

Calibrate yaw rate sensor



CMS-I-00009887

## 7 | Adjusting the implement

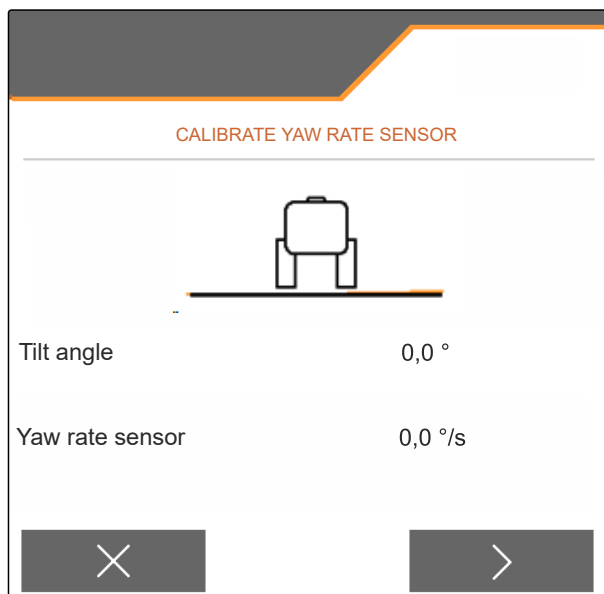
### Entering the geometry data

3. Move the implement into a horizontal position.
4. > Continue.
5. Bring implement to a standstill and wait for calibration.
6. > Continue.
7. ✓ Save values  
or  
✕ Discard values.



#### NOTE

If the values are shown in red, the position of the yaw rate sensor to the rear must be corrected.

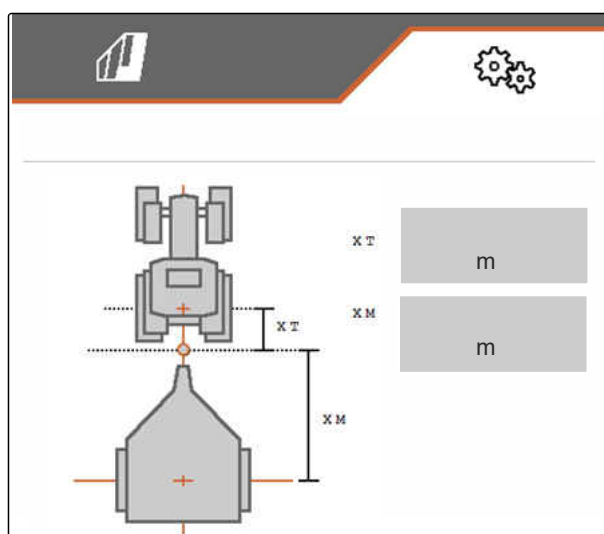


CMS-I-00009821

## 7.6 Entering the geometry data

CMS-T-00015174-A.1

1. In the "Settings" menu, call up "Implement".
2. Select "Geometry".
3. Enter the dimension "XT" from the tractor rear axle up to the connection device in m.
4. Enter the dimension "XM" from the connection device up to the axle of the implement in m.
5. ✓ Save values  
or  
✕ Discard values.



CMS-I-00009822

## 7.7 Taring fill level indicator

CMS-T-00015175-A.1

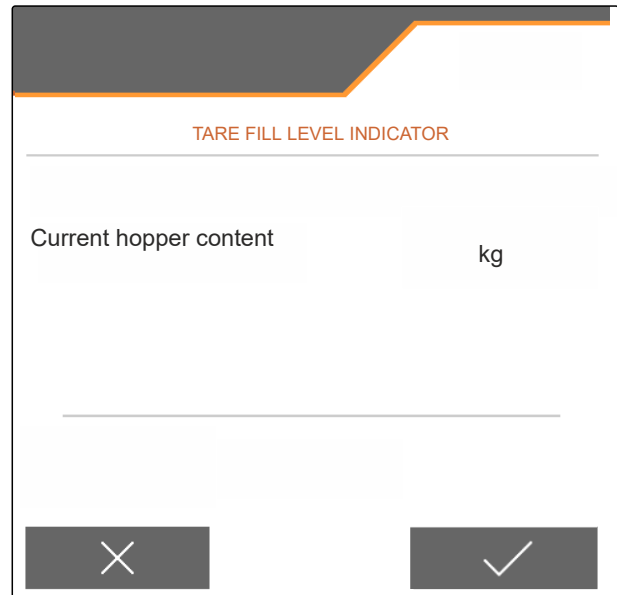
When taring, a weighed value is saved for the empty hopper.

When special equipment is installed, the fill level indicator must be tared.



1. Empty the hopper completely.
  2. Align the implement horizontally.
  3. In the "Settings" menu, call up "Implement".
  4. Select "Fill level indicator".
- ➔ The theoretical hopper fill level is displayed.

5. ✓ Save values
- or
- ✗ Discard values.



CMS-I-00009819

## 7.8 Selecting the calibration method for the spreading material

CMS-T-00015176-A.1

The calibration factor can be checked and adjusted manually or automatically.

- Select the calibration method for the spreading material, "manual" calibration at a standstill
- or
- "automatic" calibration while spreading with FlowControl.

Check and adjust the  
calibration factor



CMS-I-00009818

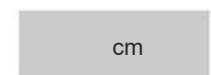
## 7.9 Adjusting the belt overrun distance

CMS-T-00013440-B.1

The belt overrun distance indicates the distance for which the conveyor belt is driven for pre-metering.

1. In the "Settings" menu, call up "Implement".
2. Under "Belt overrun distance", enter the desired distance in cm.

Belt trail




CMS-I-00008414

## 7.10 Switching between day mode and night mode

CMS-T-00008044-A.1

- To switch the display from day mode to night mode and vice versa,

select .

# Using profiles


8

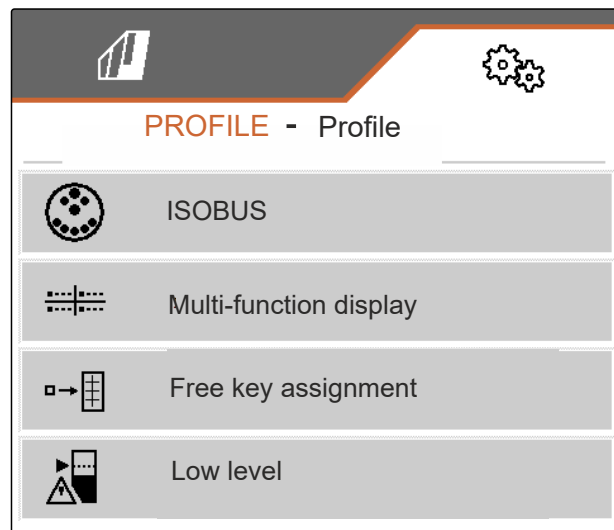
CMS-T-00009913-B.1

## 8.1 Managing profiles

CMS-T-00009877-A.1

1. In the "Settings" menu, select "Profile".

2.  Show the list of profiles.

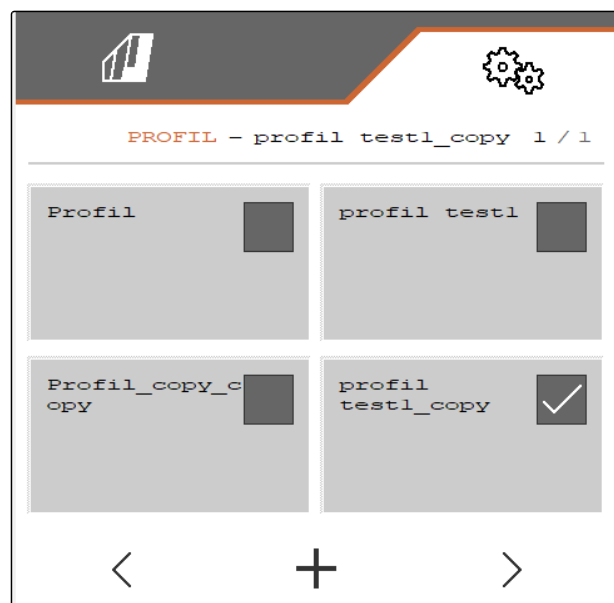


CMS-I-00007151

3. To activate, rename, reset to default values or delete a profile, select the desired profile from the list.

or

 New profile is created.



CMS-I-00007369

4. ✓ Activate profile.

or

To rename a profile:  
Select "Profile".

or

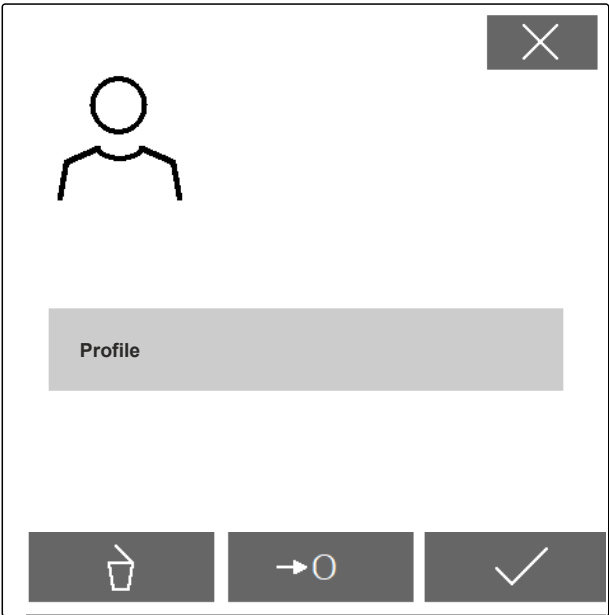
→○ Reset profile to default values.

or

✕ Go back to the list.

or

🗑 Delete profile. The profile must not be activated.



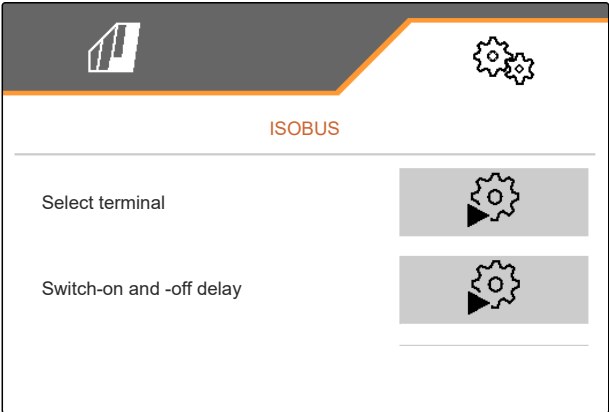
CMS-I-00007152

## 8.2 Setting profiles

CMS-T-00009873-B.1

### 8.2.1 Configuring ISOBUS

1. In the "Settings" menu, select "Profile" > "ISOBUS".



CMS-I-00007156

2. Select "Select terminal".



#### NOTE

If multiple control terminals are connected to the ISOBUS, one terminal can be selected for displaying.

3. Enter the number of the terminal for displaying the implement operation.
4. Enter the number of the terminal for displaying the documentation and Section Control.



#### NOTE

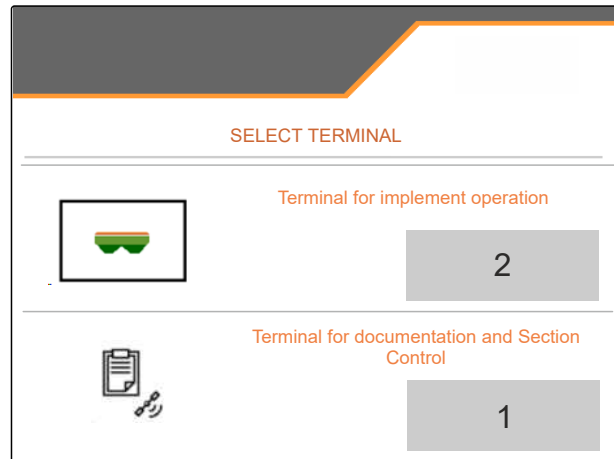
Logging onto the VT terminal can take up to 40 seconds.

If the terminal was not found after this time, the ISOBUS logs onto another terminal.

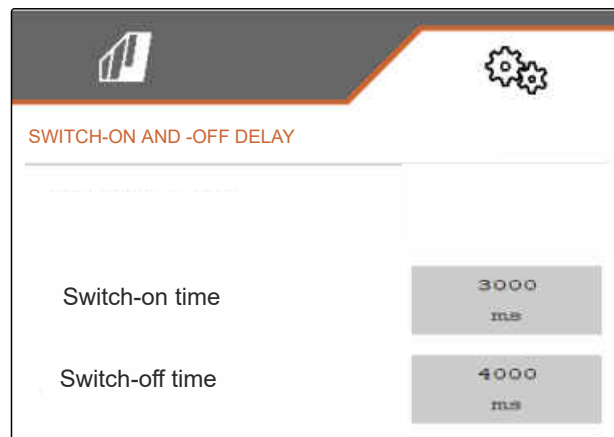
5. Select "Switch-on and -off delay".
6. *If overlaps are produced when moving off a worked area:*  
Increase the "Switch-on time".  
  
or  
  
*If unworked areas are produced when moving off a worked area:*  
Reduce the "Switch-on time".
7. *If overlaps are produced when entering a worked area:*  
Increase the "Switch-off time"

or

*If unworked areas are produced when entering a worked area:*  
Reduce the "Switch-off time".



CMS-I-00007155



CMS-I-00007371

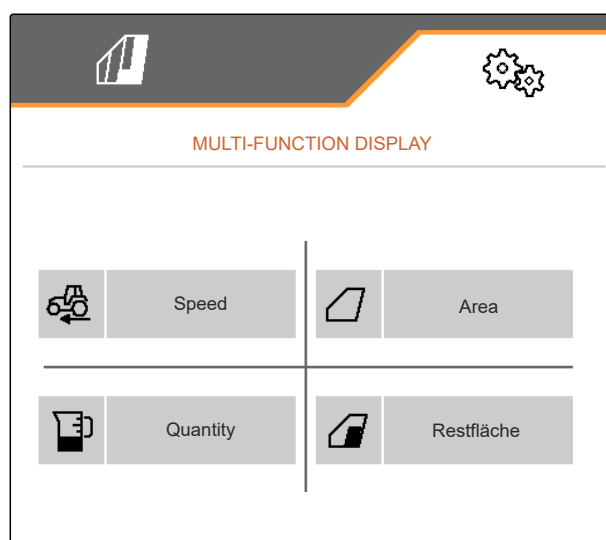
### 8.2.2 Changing the multi-function display

CMS-T-00009876-A.1

4 different values can be displayed in the Work menu on the multi-function display. The following table contains all of the available values.

Value	Explanation
Speed	Current speed in km/h
Fertiliser target rate	Set target spread rate for the fertiliser
Area	Worked area in ha
Remaining distance	Distance in m that can still be worked with the remaining fertiliser
Hopper fill level	Hopper fill level in kg
Spreading disc nominal speed	Spreading disc nominal speed entered for the product
FlowControl rate	Daily spread rate, determined by FlowControl

1. In the "Settings" menu, select "Profile" > "Multi-function display".
  2. To change a display:  
Select the desired display.
- ➔ A list with the available values will be displayed.
3. Select the desired value from the list.
  4. Confirm the selection.



CMS-I-00007236


### 8.2.3 Changing the free button assignment

CMS-T-00009874-A.1

With the free button assignment, the assignment of the buttons in the Work menu can be changed.

1. In the "Settings" menu, select "Profile" > "Free button assignment".

2. If the desired function cannot be found on the first page:

Call up the next page with .

3. Tap the desired function from the list.

➔ The selected function will be framed.


4. Select the desired button in the button bar.

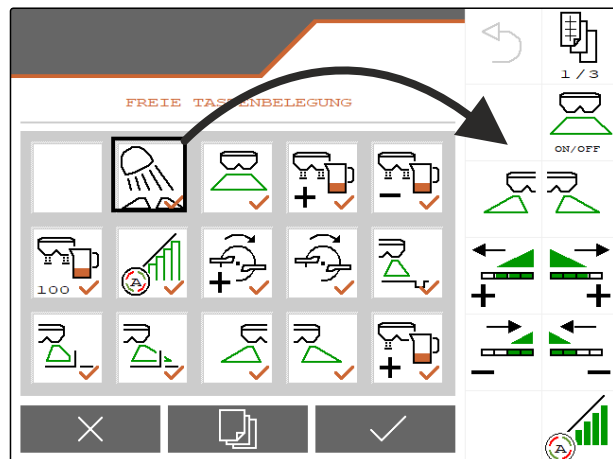
➔ The selected button is assigned to the selected function.

5. Assign other buttons.

6.  Confirm changes

or

 Discard changes.



CMS-I-00007237

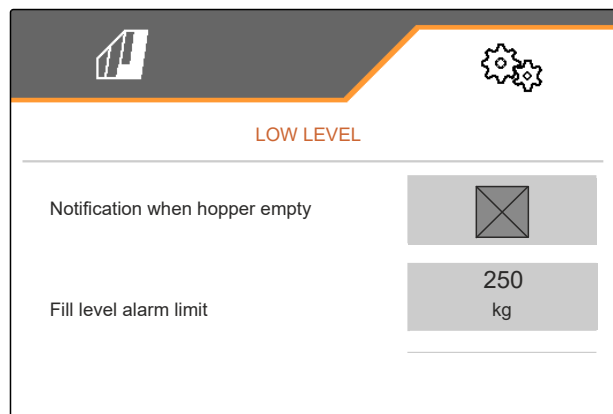
#### 8.2.4 Entering the alarm limit for the hopper fill level

CMS-T-00010594-A.1

1. In the "Settings" menu, select "Profile" > "Low level".

2. To receive a notification when the hopper is empty:  
Mark the box for "Notification when hopper empty".

3. Enter the "Fill level alarm limit".

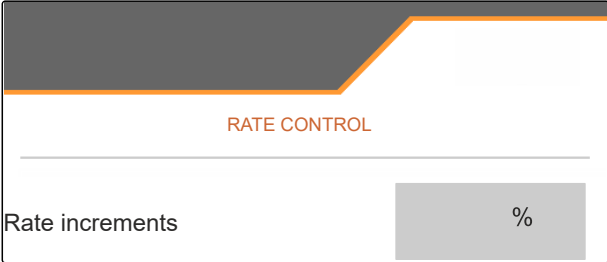


CMS-I-00007238

### 8.2.5 Entering the increment for changing the target rate

1. In the "Settings" menu, select "Profile" > "Rate control".
2. Enter the rate increment in %.

CMS-T-00015205-A.1



RATE CONTROL

Rate increments

%

CMS-I-00009839

# Using product data


9

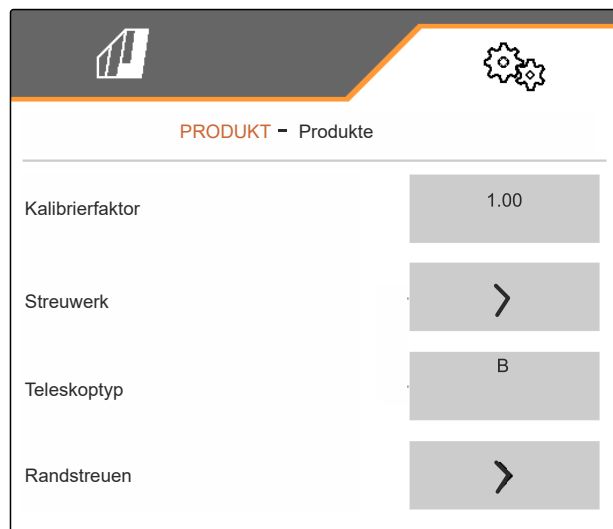
CMS-T-00009914-A.1

## 9.1 Managing products

CMS-T-00009898-A.1

1. In the "Settings" menu, select "Product".

2.  Select the product list.




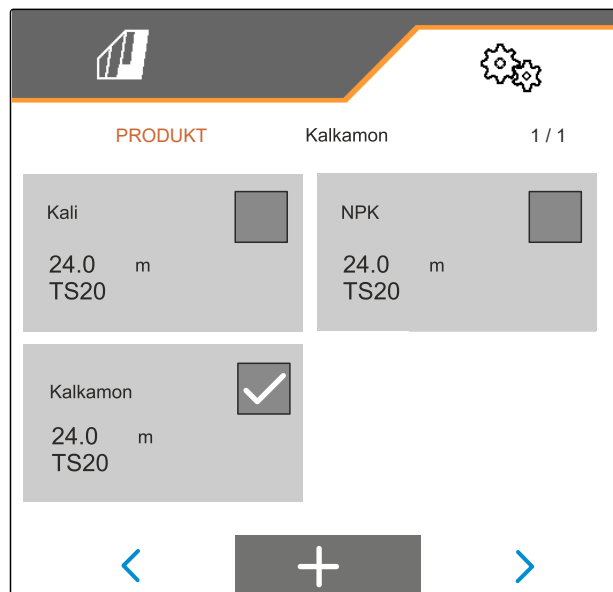
CMS-I-00007240

3. To select, rename, reset to default values or delete a product:

Select the desired product from the list

or

 Create a new product.



CMS-I-00007239



4. *To manage a product:*

✕ Go back to the list

or

✓ Confirm the product.

or

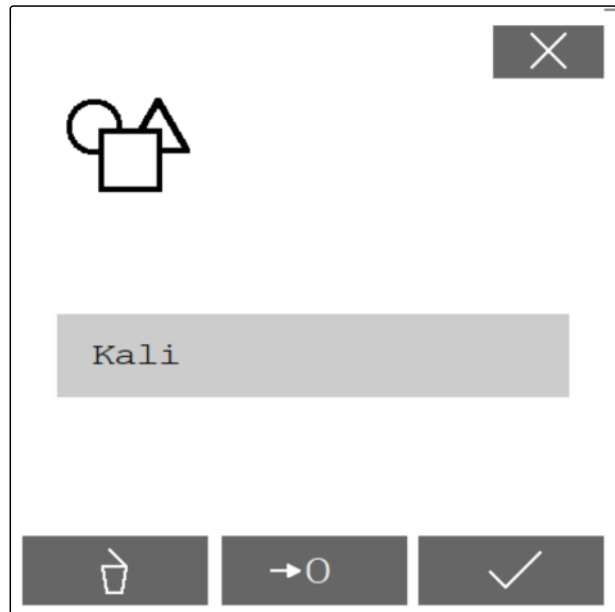
→○ Reset the product to the default values.

or

🗑 Delete the product. The product must not be activated.

or

*To rename a product:*  
Select Product.

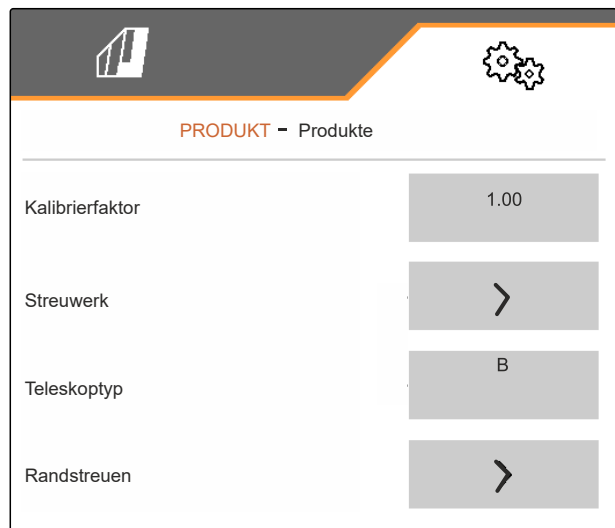


CMS-I-00007241

## 9.2 Entering the product data

CMS-T-00009899-A.1

1. In the "Settings" menu, select "Product".
2. Under "Calibration factor", enter the calibration factor from the setting chart.
3. Under "Spreader unit", enter the spreading disc speed, the position of the delivery system and the spreading disc.
4. Under "Telescope", select the telescope of the spreading vanes for boundary spreading.
5. Under "Border spreading", enter the telescope setting, the boundary-side target spread rate and the boundary-side rate reduction.

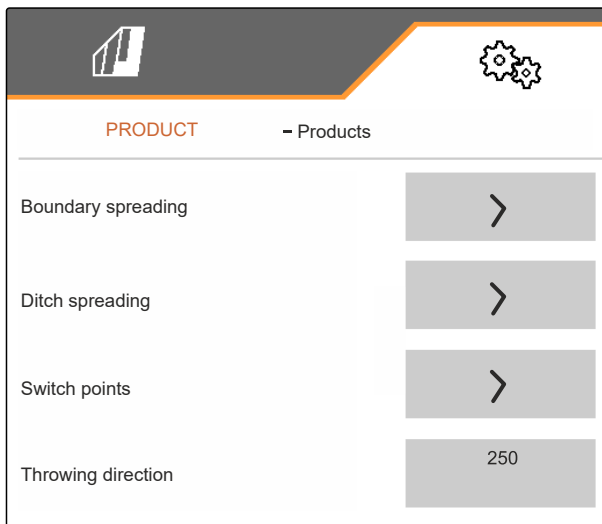


CMS-I-00007240

## 9 | Using product data

### Entering the product data

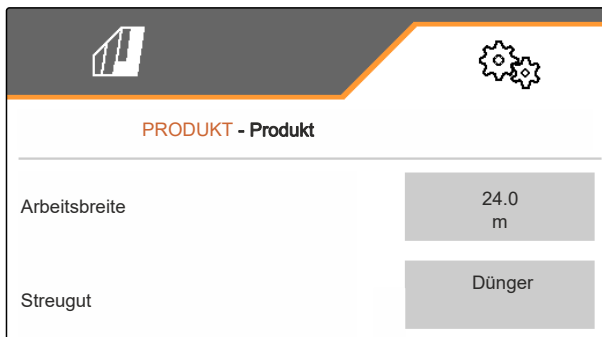
6. Under "*Boundary spreading*", enter the telescope setting, the boundary-side target spread rate and the boundary-side rate reduction.
7. Under "*Ditch spreading*", enter the telescope setting, the boundary-side target spread rate and the boundary-side rate reduction.
8. Under "*Switch points*", enter the switch-on points and switch-off points.
9. Under "*Throwing direction*", enter the value for the throwing direction from the setting chart.



PRODUCT - Products	
Boundary spreading	>
Ditch spreading	>
Switch points	>
Throwing direction	250

CMS-I-00007287

10. Under "*Working width*", enter the desired working width.
11. Under "*Spreading material*", select Fertiliser or Special spreading material.



PRODUKT - Produkt	
Arbeitsbreite	24.0 m
Streugut	Dünger

CMS-I-00007288



# Filling the spreading material hopper

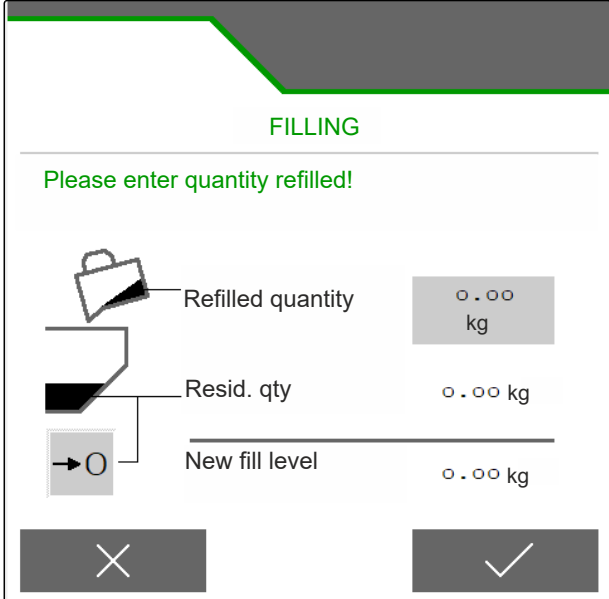
10

CMS-T-00015152-A.1

## 10.1 Filling the spreading material hopper without weighing technology

CMS-T-00009918-B.1

1.  Close the double shutters.
2. In the "Field menu", call up "Filling".
3.  When the hopper is empty, set the residual quantity to 0.
4. Fill the spreading material hopper.
5. Enter the refilled quantity.
- ➔ The new fill level will be shown.
6. ✓ Confirm the new fill level.



**FILLING**

Please enter quantity refilled!

Refilled quantity 0.00 kg

Resid. qty 0.00 kg


New fill level 0.00 kg

X ✓


CMS-I-00007293

## 10.2 Filling the spreading material hopper with weighing technology

CMS-T-00015153-A.1

1.  Close the double shutters.

2. In the "Field menu", call up "Filling".

3.  When the hopper is empty, set the residual quantity to 0.

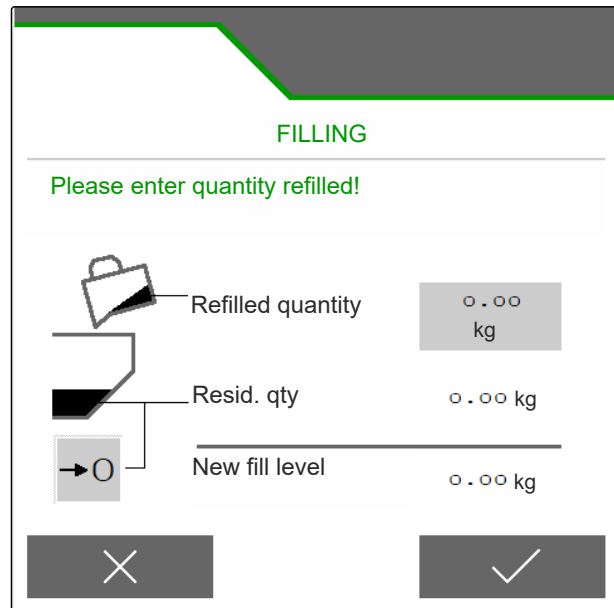
4. Watch the flashing spread fan illumination during the filling procedure.

- 500 kg below the target fill level: the spread fan illumination flashes slowly.
- 100 kg below the target fill level: the spread fan illumination flashes rapidly.

5. *When the spread fan illumination is constantly lit:*  
Stop filling.

➔ The new fill level will be shown.

6. ✓ Confirm the new fill level.



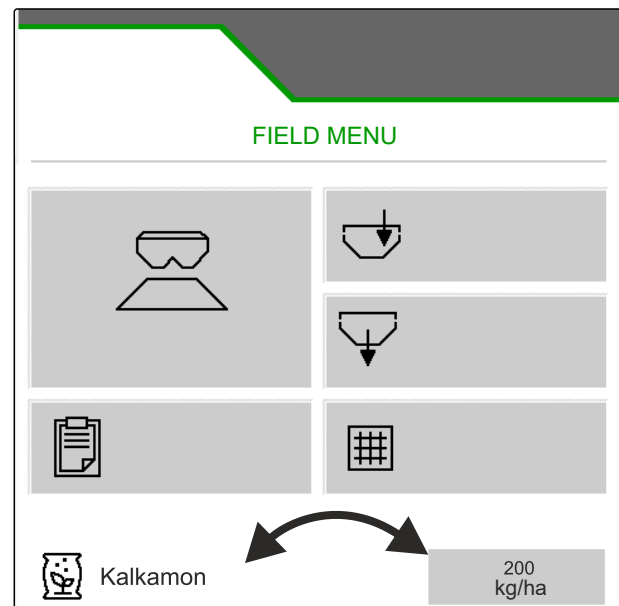
CMS-I-00007293

## Entering the spread rate

11

CMS-T-00009919-A.1

- In the "*Field menu*", enter the spread rate for the selected product.



CMS-I-00007295

# Determining the calibration factor for the spreading material

12

CMS-T-00009921-B.1

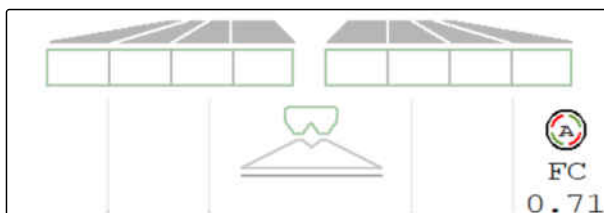
## 12.1 Selecting the calibration method

CMS-T-00009920-B.1



### NOTE

The calibration factor automatically determined with FlowControl is shown in the Work menu for fertiliser and does not require any action from the user.



CMS-I-00007297



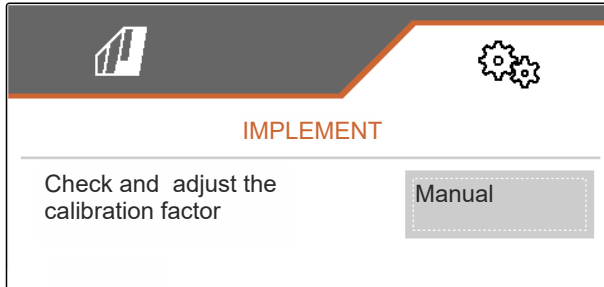
### NOTE

Not for spreading lime

1. In the "Settings" menu, call up "Implement".
2. Under "Check and adjust the calibration factor", select "Manual".

or

Select "Automatic FlowControl".



CMS-I-00007296

## 12.2 Determining the calibration factor for fertiliser manually

CMS-T-00009922-B.1

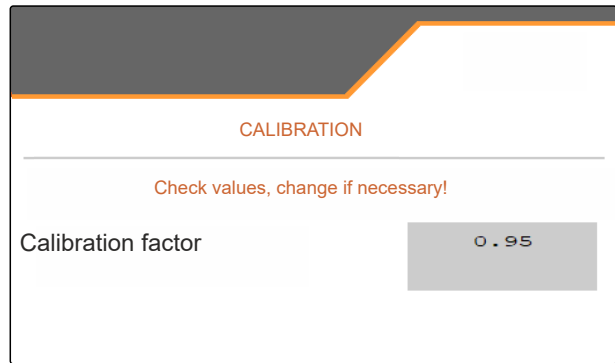


### REQUIREMENTS


- ✓ PTO shaft is switched off
- ✓ The fertiliser spreader unit is installed and set in ISOBUS


1. Observe the implement operating manual.
2. In the "Settings" menu, select "Calibration".


3. Enter the Calibration factor from the setting chart.
4. > Continue.
5. Check the setting values, change if necessary.
6. > Continue.
7. Check the other points.




CMS-I-00007301

8.  Move the delivery system into parking position and remove it.
9. Install the calibration chute.
10. Place a collection bucket underneath.

11.  Open the double shutter.

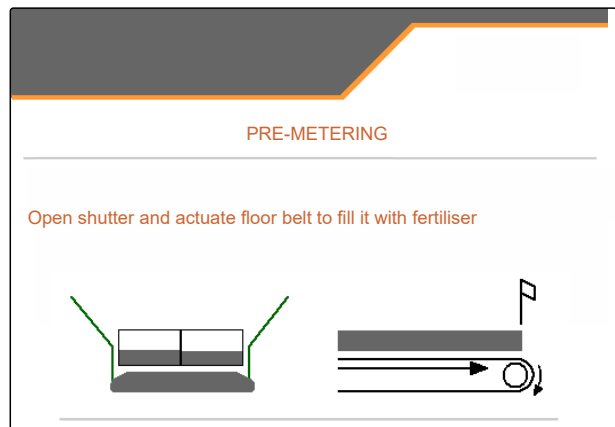
12.  Start the pre-metering for uniform fertiliser flow during calibration.

13. *When the pre-metering is sufficient:*

 Stop the floor belt.

14. Empty the collection bucket and place it back underneath.

15. > Continue.



CMS-I-00007300

## 12 | Determining the calibration factor for the spreading material

### Determining the calibration factor for lime manually



16. Start the calibration.

➔ The spread quantity and the calibration time are shown.

17. When the collection bucket is full:



Terminate the calibration.

18. Weigh the collected quantity.

19. Enter the weight of the collected quantity.

20. > Continue.

➔ The new calibration factor will be displayed.

21. ✓ Save the calibration factor.

or

*To optimise the calibration factor:*



Save the calibration factor. repeat the calibration.

or

✗ Discard the calibration.

22. Prepare the implement for operation.

23. Pour the spread quantity back into the hopper.

CALIBRATION

Enter collected quantity

23.65 kg  
17 s

Collected quantity

25.00 kg

X >

CMS-I-00007299

CALIBRATION

Calibration factor

1.00

CMS-I-00007298

## 12.3 Determining the calibration factor for lime manually

CMS-T-00015207-A.1



### REQUIREMENTS

- ✓ PTO shaft is switched off
- ✓ The lime spreader unit is installed and set in ISOBUS

1. Observe the implement operating manual.

2. In the "Settings" menu, select "Calibration".




3. Enter the bulk density in kg/l or an empirical value.
4. > Continue.
5. Check the setting values, change if necessary.
6. > Continue.
7. Check the other points.
8. Remove the lime chute.



CALIBRATION

Check values, change if necessary!

Calibration factor 0.95

CMS-I-00007301

9.  Start the pre-metering for uniform fertiliser flow during calibration.
10. *When the pre-metering is sufficient:*

 STOP  
 Stop the floor belt.


11. Clear away the quantity that flowed out.
12. > Continue.

VORDOSIEREN

Bandboden betätigen, um diesen mit Kalk zu füllen.




CMS-I-00009848

13.  Start the calibration.

➔ The spread quantity and the calibration time are shown.

14. *When about 500 kg have been spread:*

 Terminate the calibration.



15. Weight the spread quantity.
16. Enter the weight of the spread quantity.
17. > Continue.

CALIBRATION

Enter collected quantity.

590 kg  
12 s

Collected quantity 610 kg

CMS-I-00009849

➔ The new calibration factor will be displayed.

## 12 | Determining the calibration factor for the spreading material

### Determining the calibration factor for lime manually

18. ✓ Save the calibration factor.

or

*To optimise the calibration factor:*



Save the calibration factor. repeat the calibration.

or

✗ Discard the calibration.

19. Prepare the implement for operation.

20. Pour the spread quantity back into the hopper.

The screenshot shows a digital display interface for calibration. At the top, the word "CALIBRATION" is displayed in orange. Below this, there is a horizontal line. Under the line, the text "Calibration factor" is on the left, and the value "1.00" is on the right, separated by a vertical line. The background of the display is light gray with a dark gray header area.

CMS-I-00007298

# Optimising the lateral distribution

# 13

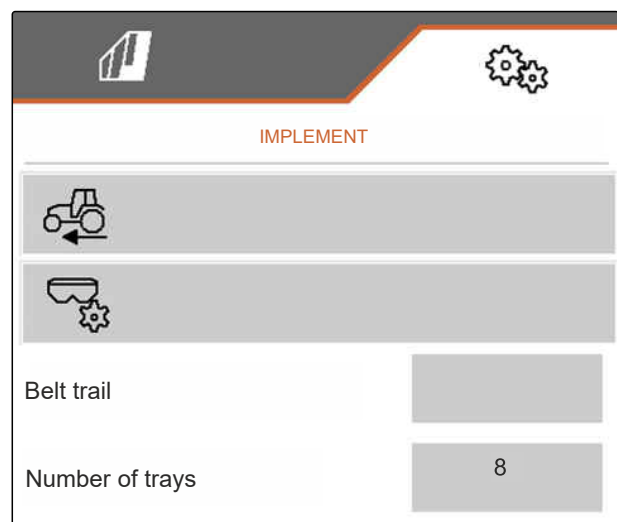
CMS-T-00009923-B.1

## 13.1 Using the mobile test rig with 8 trays

CMS-T-00009924-B.1

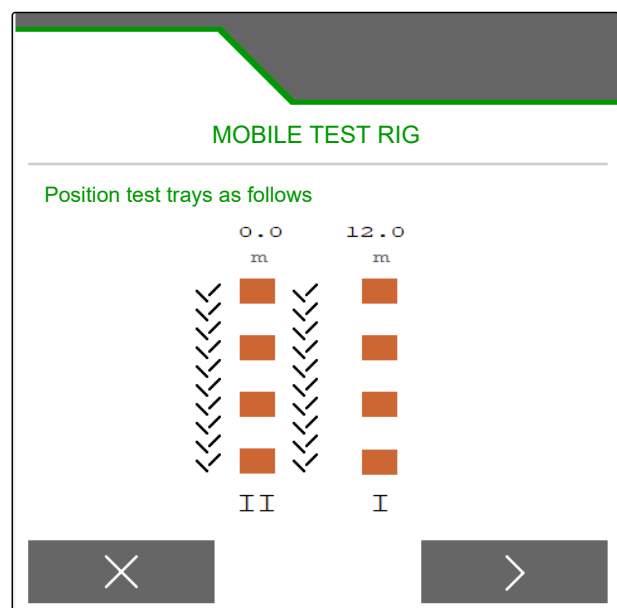
1. In the "Settings" menu, call up "Implement".
2. Under "Number of trays", select the number of trays of the mobile test rig.

➔ Use 8 trays for 2 rows.



CMS-I-00007312

3. In the Field menu, select "Mobile test rig".
4. Collect the fertiliser as described in the "Mobile test rig" operating manual and fill it into the measuring cup.
5. > Continue.



CMS-I-00007311

### 13 | Optimising the lateral distribution Using the mobile test rig with 8 trays

6. Enter measured values I and II.

7. > Continue.

The screenshot shows the 'MOBILER PRÜFSTAND' (Mobile Test Stand) interface. At the top, it says 'Werte aus dem Messbecher eingeben' (Enter values from the measuring cup). Below this, there are two input fields for measured values. The first field is labeled '0.0 m' and the second is labeled '12.0 m'. Below these fields, there are two boxes: the left one contains '2.1 II' and the right one contains '2.3 I'. At the bottom, there are two large buttons: a left arrow (X) and a right arrow (>).

CMS-I-00007314

8. ✓ Accept the adjusted settings

or

✗ Discard.

The screenshot shows the 'MOBILE TEST RIG' interface. At the top, it says 'Adjust the following settings'. Below this, there are two settings: 'RPM' and 'Delivery system position'. The 'RPM' setting has two values: '720' and '720' (with '1/min' next to it). The 'Delivery system position' setting has two values: '30' and '55'. At the bottom, there are two large buttons: a left arrow (X) and a right arrow (>).

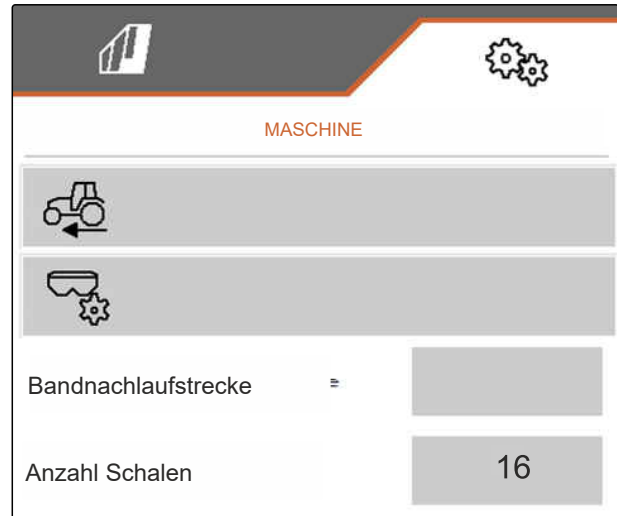
CMS-I-00007313

## 13.2 Using the mobile test rig with 16 trays

CMS-T-00009925-B.1

1. In the "Settings" menu, call up "Implement".
2. Under "Number of trays", select the number of trays of the mobile test rig.

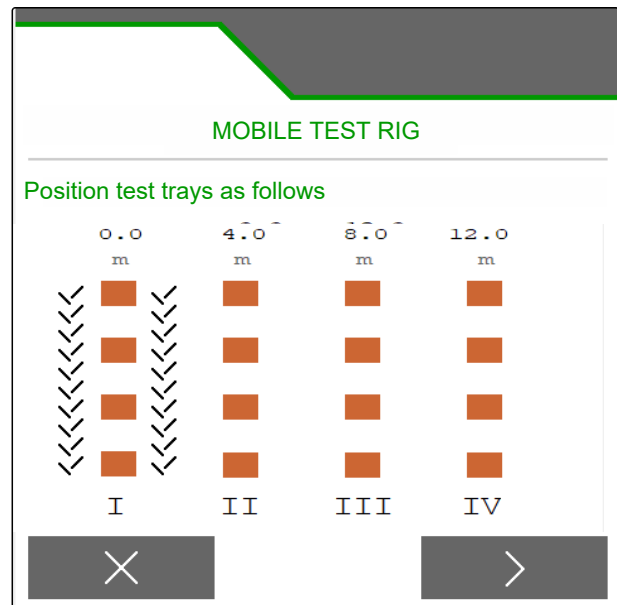
➔ Use 16 trays for 4 rows.



CMS-I-00007317

3. In the Field menu, select "Mobile test rig".
4. Collect the fertiliser as described in the "Mobile test rig" operating manual and fill it into the measuring cup.

5. > Continue.



CMS-I-00007316

### 13 | Optimising the lateral distribution Using the mobile test rig with 16 trays

6. Enter measured values I to IV.

7. > Continue.

The screenshot shows the 'MOBILER PRÜFSTAND' interface. At the top, it says 'Werte aus dem Messbecher eingeben'. Below this, there are four measurement points labeled I, II, III, and IV. Each point has a corresponding value entered in a box: 3.0 for I, 3.0 for II, 3.6 for III, and 3.1 for IV. Above the boxes, there are distance markers: 0.0 m, 4.0 m, 8.0 m, and 12.0 m. To the left of the boxes, there are icons representing the measurement points: a vertical line of arrows for I, and two funnel-like shapes for II, III, and IV. At the bottom, there are two large buttons: a grey 'X' button on the left and a grey '>' button on the right.

CMS-I-00007315

8. ✓ Accept the adjusted settings

or

✗ Discard.

The screenshot shows the 'MOBILE TEST RIG' interface. At the top, it says 'Adjust the following settings'. Below this, there are two settings: 'RPM' and 'Delivery system position'. For 'RPM', the current value is 720 and the target value is 720 1/min. For 'Delivery system position', the current value is 30 and the target value is 55. At the bottom, there are two large buttons: a grey 'X' button on the left and a grey '>' button on the right.

CMS-I-00007313

# Working

# 14

CMS-T-00009889-B.1

## 14.1 Starting work

CMS-T-00009926-A.1




### REQUIREMENTS

- ✓ The implement is configured
- ✓ The product data is entered
- ✓ The product is selected
- ✓ The calibration factor is determined
- ✓ The implement is in working position

► In the "*Field menu*", select "*Work*".

## 14.2 Using the work lights

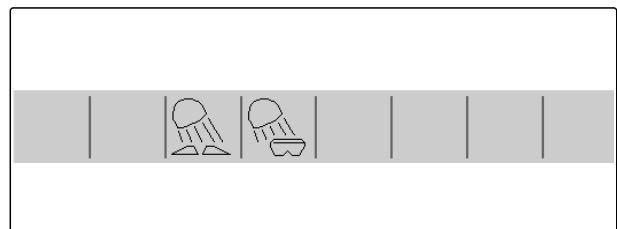
CMS-T-00009890-A.1

1. Switch the spread fan illumination on with .



### NOTE

If the spreading disc drive is interrupted, the spread fan illumination is automatically switched off.



CMS-I-00007377

2. Switch the hopper interior lighting on and off with

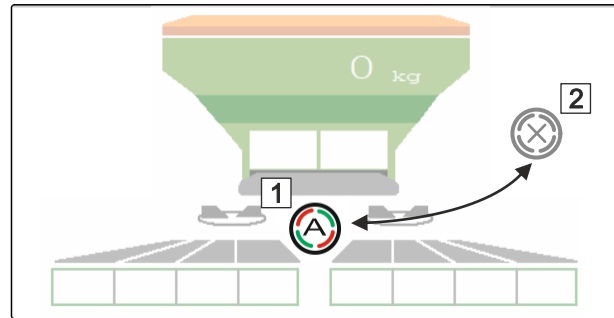


➔ The symbol in the status bar is turned off when the lighting is switched off.

## 14.3 Using Section Control

CMS-T-00009891-A.1

- 1 Working with Section Control
- 2 Working without Section Control





CMS-I-00007322

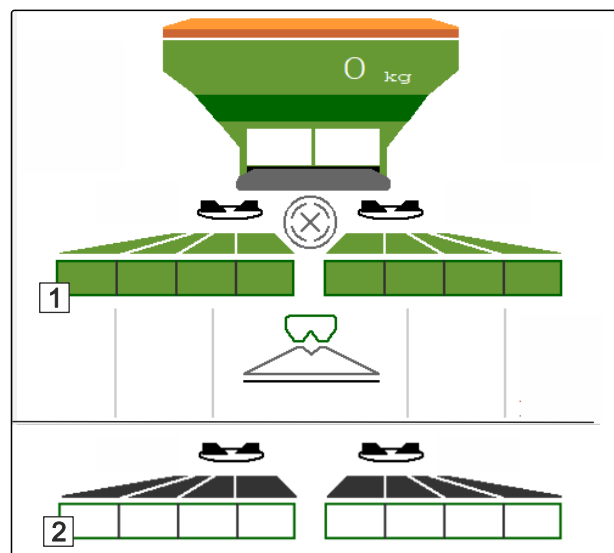
1. *To use Section Control:*  
Activate Section Control on the control terminal.

2. Switch on Section Control with .

## 14.4 Starting spreading

CMS-T-00009927-A.1

1. Drive onto the field.
2. Run the spreading discs at the nominal speed.
3.  *When the switch-on point according to the setting chart has been reached:*  
**1** Start spreading.
4.  *When the switch-off point according to the setting chart has been reached:*  
**2** Stop spreading.
5. *When work is finished:*  
Stop the spreading disc drive.



CMS-I-00007336

## 14.5 Spreading on one side

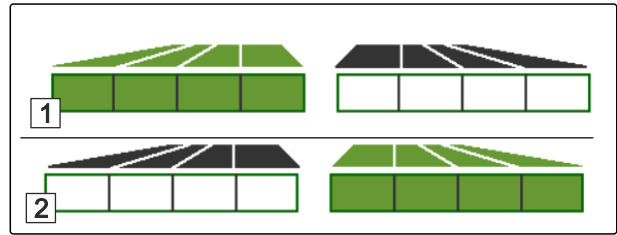
CMS-T-00009928-A.1

### NOTE



Not for spreading lime



- 1 Left shutter open
- 2 Right shutter open



CMS-I-00007335

- ▶  Open or close the left shutter.
- ▶  Open or close the right shutter.




## 14.6 Adjusting the spread rate

CMS-T-00009929-A.1

The setpoint for the spread rate can be increased or reduced before or during operation.

Each time the button is pressed, the spread rate is changed by the quantity increment.

Adjust the spread rate on both sides:


- ▶  Increase the spread rate by the rate increment.
- ▶  Increase the spread rate by the rate increment.
- ▶  Set the spread rate back to 100 %.



CMS-I-00007332




Adjust the spread rate on one side:

**NOTE**  
Not for spreading lime

- ▶  Increase the spread rate on the left by the rate increment.



CMS-I-00007328

- ▶  Reduce the spread rate on the left by the rate increment.
- ▶  Increase the spread rate on the right by the rate increment.
- ▶  Reduce the spread rate on the right by the rate increment.

## 14.7 Switching part-width sections

CMS-T-00009930-A.1

### NOTE

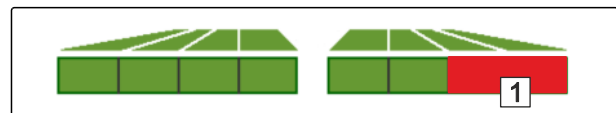
Not for spreading lime

The working width is divided into 8 part-width sections.





The part-width sections can be switched off beginning from the outside.

Switched-off part-width sections are shown in red 1.

Part-width sections can be pre-selected before operation or switched during operation.



CMS-I-00007339

- ▶  Switch on switched off part-width section from the left.
- ▶  Switch off part-width section from the left.
- ▶  Switch on switched off part-width section from the right.
- ▶  Switch off part-width section from the right.

## 14.8 Performing boundary spreading

CMS-T-00009931-A.1



### NOTE

Not for spreading lime

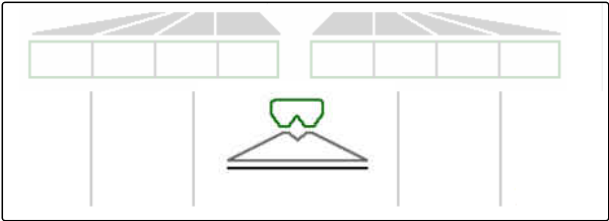
The boundary spreading method can be pre-selected before beginning operation or can be switched on and off during operation.

1. Select the boundary spreading method.

➔ The LED on the button is lit.

	Border spreading	
	Boundary spreading	
	Ditch spreading	

2. Carry out the boundary spreading method.
3. Deselect the boundary spreading method and go back to normal spreading.



CMS-I-00007345

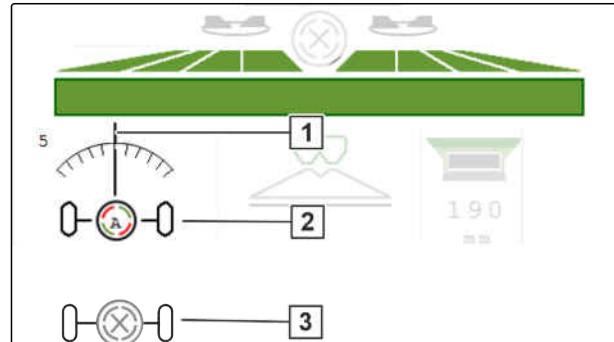
## 14.9 Using the steering axle

CMS-T-00015155-A.1

### 14.9.1 Using the automatic self-steering function

CMS-T-00015156-A.1

- 1 Steering angle display
- 2 Automatic self-steering function
- 3 No self-steering function



CMS-I-00009853



#### REQUIREMENTS

- ✓ Spreading disc drive switched on

1. Switch on the automatic self-steering function.
2. Switch off the automatic self-steering function.

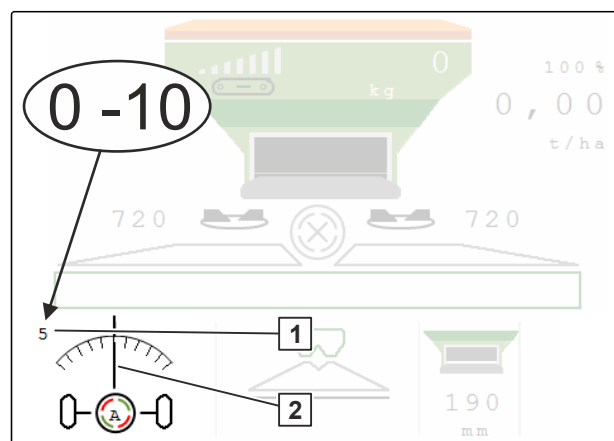
### 14.9.2 Using the automatic slope counter-steering

CMS-T-00015157-A.1

The implement automatically steers against the slope.

With the amplification factor **1**, the slope counter-steering **2** can be adjusted.

- Value 5 = default value
- Value greater than 5 = stronger slope counter-steering
- Value lower than 5 = weaker slope counter-steering







CMS-I-00009852



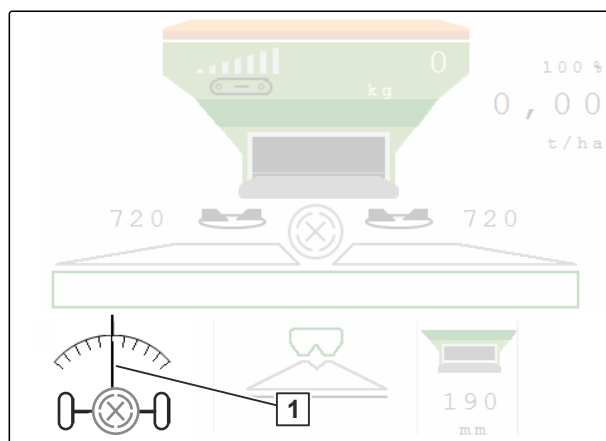
## REQUIREMENTS

- ⊙ Automatic slope counter-steering activated in the "Implement" > "Steering" menu

1.  Switch on the automatic self-steering function.
2.  Set stronger slope counter-steering.
3.  Set weaker slope counter-steering.
4.  Set the slope counter-steering to the default position.




### 14.9.3 Using the manual slope counter-steering

The implement steers manually against the slope.



## REQUIREMENTS


- ⊙ Activate manual slope counter-steering in the "Implement" > "Steering" menu

1.  Steer to the right against the slope.
2.  Steer to the left against the slope.
3.  Deactivate slope counter-steering on the headland or on level ground.

#### **14.9.4 Locking the steering system for road travel**

CMS-T-00015159-A.1

1. Switch off the spreading disc drive.

2.  Lock the steering system.


➔ The axle aligns itself straight ahead while driving.  
The steering system is locked.


# Emptying the spreading material hopper

# 15

CMS-T-00009893-B.1

1. In the Field menu, select "Emptying".

2.  Move the delivery system into parking position.



3.  Open the double shutter.

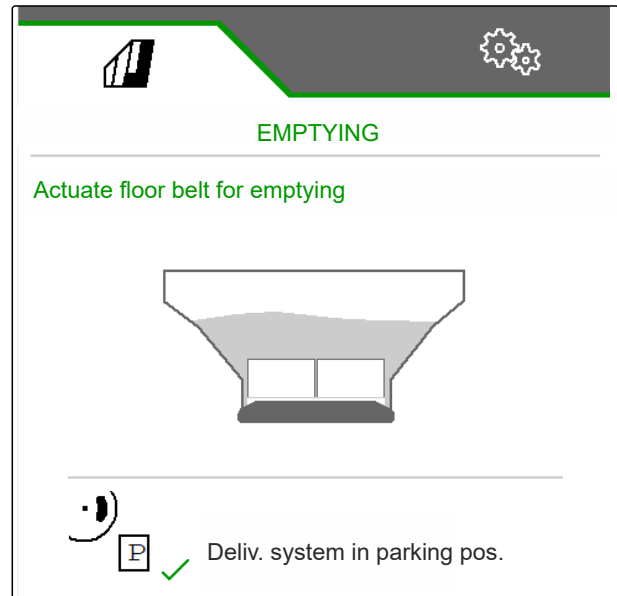
4.  Start the floor belt.

5.  Confirm.

➔ The implement will be emptied.

6. *When the spreading material hopper is empty:*

-  STOP
-  Stop the floor belt.



CMS-I-00007353

# Documenting work

16





CMS-T-00009878-A.1

## 16.1 Calling up the documentation

CMS-T-00009879-A.1

The following work data will be documented and can be displayed:

- 1 Worked area
- 2 Working time
- 3 Spread quantity
- 4 FC Spread quantity determined via FlowControl

DOCUMENTATION		Documen tation
		→O
1 	0.03 ha	0.04 ha
2 	0.0 h	0.0 h
3 	7.9 kg	10.4 kg
4 	13 kg	13 kg

CMS-I-00007357

► In the "Field menu", select "Documentation".


➔ A table with the values for the activated documentation is shown in the menu. The left column shows the total values, and the right column shows the daily values.

►  Delete the daily data.



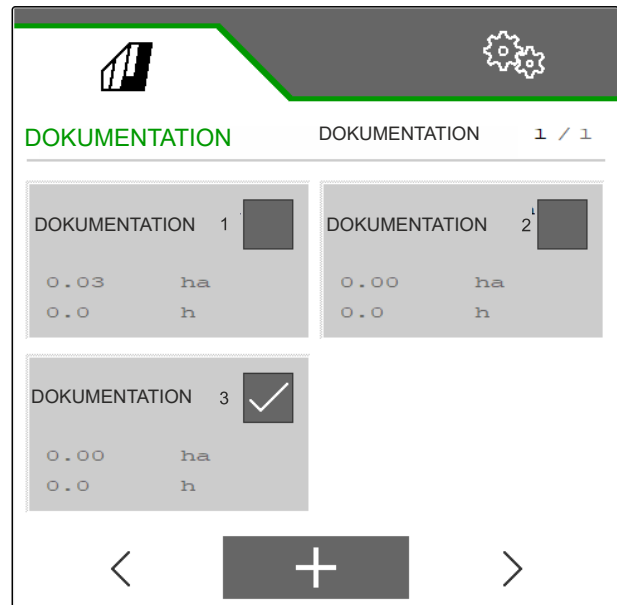
## 16.2 Managing the documentation

CMS-T-00009932-A.1



1. In the "Field menu", select "Documentation".
2.  Show the documentation list.
3. To activate, rename or delete a documentation, select the desired documentation from the list

or


create a new  documentation.



CMS-I-00007359

4. To rename a documentation:  
Activate "Documentation".
- or
-  Cancel and go back to the documentation list.
- or
-  Confirm the documentation.

or

 Delete the documentation. The documentation must not be activated.



CMS-I-00007360



# Eliminating faults


# 17


CMS-T-00013445-B.1

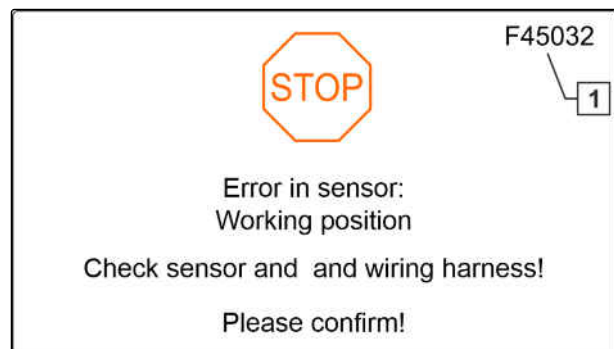
## 17.1 Handling error messages

CMS-T-00007372-D.1

After a notification  or a warning , the work results of the implement can deviate from expectations. A notification is signalled with a slow beeping acoustic warning signal. A warning is signalled with a rapid beeping acoustic warning signal.

After an alarm , there is a risk of implement damage. An alarm is signalled with a continuous acoustic warning signal.

1. *If an error message appears on the display, stop working immediately.*
2. *To find the proposed solutions for the error code , see "Troubleshooting".*



CMS-I-00005170

## 17.2 Troubleshooting

CMS-T-00009933-A.1

Error code	Errors	Cause	Solution
F35001	Automatic part-width section control cannot be activated	Automatic part-width section control can only be activated when the spreading discs are switched on. The current value for the spreading disc speed is < 100 rpm.	<ul style="list-style-type: none"> <li>▶ Switch on the spreading disc drive.</li> <li>▶ Check the spreading disc drive.</li> <li>▶ Eliminate any damage or interruptions on the cable connector to the speed sensor.</li> <li>▶ Replace the speed sensor if defective.</li> </ul>
F35103	Fill level alarm limit undercut	The weighed fill quantity is less than the configured alarm limit	▶ Refill fertiliser.
F35006	Shutter open	The implement is spreading	▶ close the shutter.
F35007	Spreading disc speed cannot be maintained	The spreading disc speed deviates from the configured nominal speed by at least 10 %	▶ Adjust the nominal speed.
F35009/ F36803	Left hopper is empty	Left fill level sensor is not actuated	<ul style="list-style-type: none"> <li>▶ Refill fertiliser.</li> <li>▶ Eliminate the fertiliser bridge in the hopper using the appropriate tools.</li> <li>▶ Eliminate damage or breaks on the cable.</li> <li>▶ Replace the fill level sensor if defective.</li> </ul>
F35013	Caution: rotating spreading discs	Exit the Work menu while the spreading discs are still switched on.	▶ Switch off the spreading discs.
F35021	Fine special spreading material selected	" <i>Slug pellets</i> " special spreading material selected	▶ Read and acknowledge the message.
F35026	Automatic part-width section control not possible	Switching on Section Control not possible	<ul style="list-style-type: none"> <li>▶ Switch on the spreading discs.</li> <li>▶ Switch on Section Control.</li> </ul>
F35035	Setpoint value cannot be maintained	The desired spread rate cannot be spread with the working width and speed	▶ Reduce speed.
F35040	The selected speed source is not available	The speed source selected in the " <i>Configure speed source</i> " menu is not available	▶ Select an existing source for the speed signal in the " <i>Settings</i> " " <i>Configure speed source</i> " menu.

Error code	Errors	Cause	Solution
F35041	Functions that are not controlled via ISOBUS must be switched off separately	The ISOBUS shortcut button of the terminal, e.g. on/off button on the control terminal, is pressed	► Release the shortcut button.
F35046	Simulated speed deactivated	A speed signal > 0 km/h displayed while a simulated speed is set	► Select the correct source for the speed signal in the "Settings" "Configure speed source" menu.
F35051	Left limiter sensor failed	The signal from the path measurement system of the linear drive for the left limiter is less than 0.5 V	► Eliminate damage or interruptions on the cable to the linear drive.
F35052	Right limiter sensor failed	The signal from the path measurement system of the linear drive for the right limiter is less than 0.5 V	► Eliminate damage or interruptions on the cable to the linear drive.
F35053	Left limiter is not responding	Although the linear drive on the left limiter is switched on, the voltage value of the path measurement system in this drive does not change	► Remove blockage in the limiter.
F35054	Right limiter is not responding	Although the linear drive on the right limiter is switched on, the voltage value of the path measurement system in this drive does not change	► Remove blockage in the limiter.
F35057	Left delivery system adjustment is not responding	Although the linear drive on the left delivery system is switched on, the voltage value of the path measurement system in this drive does not change	► Eliminate the blockage of the delivery system adjustment.
F35058	Right delivery system adjustment is not responding	Although the linear drive on the right delivery system is switched on, the voltage value of the path measurement system in this drive does not change	► Eliminate the blockage of the delivery system adjustment.

Error code	Errors	Cause	Solution
F35064	Section Control deactivated	The Section Control State changes from 1 to 0. Automatic part width section control deactivated by the spreader or terminal	<ul style="list-style-type: none"> <li>▶ Switch on the spreading discs.</li> <li>▶ Switch off boundary spreading or ditch spreading.</li> <li>▶ Do not operate the spreader manually when in automatic mode.</li> <li>▶ Eliminate other faults, e.g. "Shutter failed".</li> <li>▶ Exit the "Settings" "Calibration" or "Field" menu.</li> </ul>
F35066/ F36807	Right hopper is empty	Right fill level sensor is not actuated	<ul style="list-style-type: none"> <li>▶ Refill fertiliser.</li> <li>▶ Eliminate the fertiliser bridge in the hopper using the appropriate tools.</li> <li>▶ Eliminate damage or breaks on the cable.</li> <li>▶ Replace the fill level sensor if defective.</li> </ul>
F35074	Tilt sensor failed	A signal from the tilt sensor is less than 2 mA or more than 22 mA	▶ Eliminate damage or interruptions on the cable to the tilt sensor (BEL035).
		The tilt is precisely 0° for longer than 30 seconds	▶ Eliminate damage or interruptions on the cable to the weighing computer (AEL030).
		The tilt is not being transmitted by the weighing computer.	▶ Eliminate damage or interruptions on the cable to the weighing computer (AEL030).
F35077	Left weigh cell failed	The signal of the rear-left weigh cell is less than 4 mA	<ul style="list-style-type: none"> <li>▶ Eliminate damage or breaks on the cable to the weigh cell.</li> <li>▶ Replace defective weigh cell.</li> </ul>
F35078	Right weigh cell failed	The signal of the rear-right weigh cell is less than 4 mA	<ul style="list-style-type: none"> <li>▶ Eliminate damage or breaks on the cable to the weigh cell.</li> <li>▶ Replace defective weigh cell.</li> </ul>

Error code	Errors	Cause	Solution
F35080	Switch off spreading discs for road transport	The speed is greater than 25 km/h and the spreading discs are rotating at more than 100 rpm	► Switch off the spreading discs.
F35241	Left delivery system motor: position failed (MEL021)	The signal from the path measurement system of linear drive MEL021 for the left delivery system is less than 2 mA or more than 22 mA	► Eliminate damage or interruptions on the cable to the linear drive. ► Replace defective linear drive (EA355).
F35242	Delivery system motor: position failed (MEL022)	The signal from the path measurement system of linear drive MEL021 for the right delivery system is less than 2 mA or more than 22 mA	► Eliminate damage or interruptions on the cable to the linear drive. ► Replace defective linear drive (EA355).
F35247	Left shutter is not responding	The measured value of the sensor on the left shutter does not change. The setting motor of the shutter is switched on.	► <i>To eliminate the blockage:</i> Open the shutter via the "Emptying" menu. ► Eliminate any damage or interruptions on the cable connection to the setting motor. ► Hook the shutter back into the setting motor after the calibration. ► Replace the defective setting motor (EA461).
F35249	Right shutter is not responding	The measured value of the sensor on the right shutter does not change. The setting motor of the shutter is switched on.	► <i>To eliminate the blockage:</i> Open the shutter via the "Emptying" menu. ► Eliminate any damage or interruptions on the cable connection to the setting motor. ► Hook the shutter back into the setting motor after the calibration. ► Replace the defective setting motor (EA461).
F35250	Delivery system motor: power consumption on the left is too high (MEL021)	The power consumption of the setting motor on the right delivery system is above 7.5 A	► Remove blockage in the delivery system. ► Replace the defective setting motor (EA355).

Error code	Errors	Cause	Solution
F35252	Shutter path measurement system on the left has failed (MEL001)	The signal from the path measurement system of the right shutter is less than 0.5 V	<ul style="list-style-type: none"> <li>▶ Eliminate damage or breaks on the cable to the shutter motor.</li> </ul>
F35253	Shutter path measurement system on the right has failed (MEL002)	The signal from the path measurement system of the right shutter is less than 0.5 V	<ul style="list-style-type: none"> <li>▶ Eliminate damage or breaks on the cable to the shutter motor.</li> </ul>
F35259	Delivery system motor: power consumption on the right is too high (MEL022)	The power consumption of the setting motor on the right delivery system is above 7.5 A.	<ul style="list-style-type: none"> <li>▶ Remove blockage in the delivery system.</li> <li>▶ Replace the defective setting motor (EA355).</li> </ul>
F35265	Overcurrent at output EEL 092/EEL 093 spread fan illumination	The power consumption of the spread fan illumination is too high	<ul style="list-style-type: none"> <li>▶ Check light and wiring harness.</li> <li>▶ Replace defective light (NA297).</li> <li>▶ Replace defective wiring harness.</li> </ul>
F35264	Angle sensor for shutter unit working mode has failed (BEL105)	The signal for the angle sensor for shutter unit working mode (BEL105) is outside the permitted signal range of 2... 22 mA	<ul style="list-style-type: none"> <li>▶ Check sensor BEL105.</li> <li>▶ Check the sensor connection cable.</li> </ul>
F35265	Floor belt is at a standstill	The floor belt was switched on, but the belt speed is not being detected.	<ul style="list-style-type: none"> <li>▶ Check the hydraulic supply.</li> <li>▶ Check the floor belt hydraulic valve (KHY060).</li> <li>▶ Check the speed sensor on the floor belt (BEL060).</li> </ul>
F35265	Overcurrent at output EEL 090 hopper lighting	The power consumption of the hopper lighting is too high	<ul style="list-style-type: none"> <li>▶ Check light and wiring harness.</li> <li>▶ Replace defective light.</li> <li>▶ Replace defective wiring harness.</li> </ul>
F35267	Left AutoTS motor has failed (MEL054)	The signal from the path measurement system of the linear drive on the right AutoTS gearbox is less than 0.5 V	<ul style="list-style-type: none"> <li>▶ Eliminate damage or interruptions on the cable to the linear drive.</li> <li>▶ Replace defective linear drive (EA460).</li> </ul>
F35268	Left AutoTS motor has failed (MEL053)	The signal from the path measurement system of the linear drive on the left AutoTS gearbox is less than 0.5 V	<ul style="list-style-type: none"> <li>▶ Eliminate damage or interruptions on the cable to the linear drive.</li> <li>▶ Replace defective linear drive (EA460).</li> </ul>

Error code	Errors	Cause	Solution
F35269	Right AutoTS motor not in target position (MEL054)	The sensor value of the linear drive for the right AutoTS spreading vane is not reaching the required value	<ul style="list-style-type: none"> <li>▶ Switch AutoTS again.</li> <li>▶ Remove soiling from the spreading disc.</li> <li>▶ Recalibrate AutoTS.</li> <li>▶ Eliminate damage or interruptions on the cable to the linear drive.</li> <li>▶ Replace defective linear drive (EA477).</li> </ul>
F35270	Left AutoTS motor not in target position (MEL053)	The sensor value of the linear drive for the left AutoTS spreading vane is not reaching the required value	<ul style="list-style-type: none"> <li>▶ Switch AutoTS again.</li> <li>▶ Remove soiling from the spreading disc.</li> <li>▶ Recalibrate AutoTS.</li> <li>▶ Eliminate damage or interruptions on the cable to the linear drive.</li> <li>▶ Replace defective linear drive (EA477).</li> </ul>
F35283	Hopper is overloaded	The permissible payload for this spreader model has been exceeded.	<ul style="list-style-type: none"> <li>▶ <i>To reduce the payload of the implement:</i> Remove spreading material from the hopper.</li> </ul>
F35317	Base computer switches to safe mode: restart	The base computer detected an internal error, e.g. overcurrent. All outputs on the base computer will be switched off.	<ul style="list-style-type: none"> <li>▶ <i>To interrupt the power supply to the implement:</i> Disconnect the ISOBUS plug.</li> <li>▶ Restart the implement.</li> <li>▶ Eliminate any damage or interruptions on the cable connector to the speed sensor.</li> <li>▶ <i>If the error occurs again:</i> Contact Customer Service.</li> </ul>
F35319	Product data cannot be deleted	The desired product data cannot be deleted from the implement's database, because the affected product is currently actively selected.	<ul style="list-style-type: none"> <li>▶ Activate a different product from the implement's product database.</li> <li>▶ Delete again.</li> </ul>



Error code	Errors	Cause	Solution
F35320	Product data transfer failed	Transferring of the product data failed, because e.g. the connection between the smartphone and the Bluetooth adapter is interrupted.	<ul style="list-style-type: none"> <li>▶ Check the connection between the smartphone and implement.</li> <li>▶ Check whether there is space in the implement's product database.</li> <li>▶ Restart the transfer.</li> <li>▶ Restart mySpreader.</li> <li>▶ Update the mySpreader app if necessary.</li> </ul>

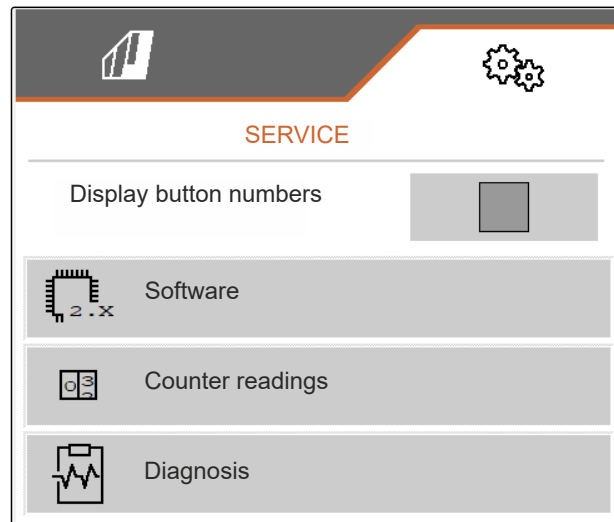
# Calling up Service Information

18

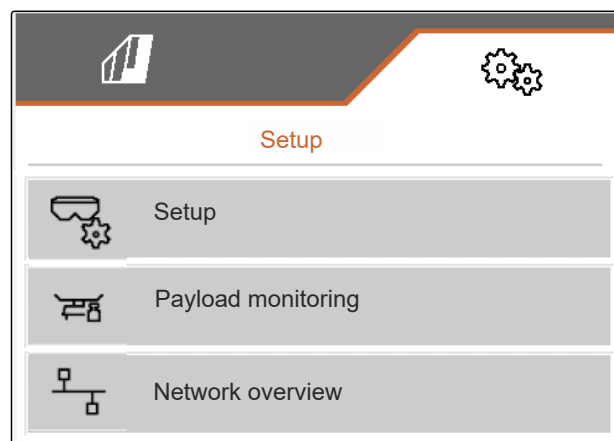
CMS-T-00010692-B.1

The following information can be called up:

- Software versions
  - Counter readings
  - Diagnosis
1. In the "Settings" menu, select "Service".
  2. To number the buttons on the button bar: Select "Display button numbers".
  3. To call up the software information or the implement identification number: select "Software".
  4. To call up the counter readings: select "Counter readings".
  5. To call up the diagnosis for the hopper, the spreader unit or the ECU: select "Diagnosis".
  6. To enter the default settings: Select "Setup".
  - Calibrate the fill level indicator, see page 63.
  - Only for Customer Service: Enter the correction factor for FlowControl.
  - Calibrate the motors, see page 63.
  7. To display the payload monitoring: Select "Payload monitoring".
  8. To display the ISOBUS participants: Select "Network overview".



CMS-I-00007361



CMS-I-00009862

# Repairing the machine

# 19

CMS-T-00009886-B.1

## 19.1 Configuring the fill level indicator

CMS-T-00015160-A.1

If the fill level indicator does not work correctly, it must be tared and calibrated.

1. Empty the hopper completely.
2. Align the implement horizontally.
3. In the "Settings" menu, select "Service" > "Setup" > "Configure fill level indicator".

4. Select "Tare fill level indicator".

➔ The theoretical hopper fill level is displayed.

5. ✓ Save values

or

✗ Discard values.

6. Select "Calibrate fill level indicator".

7. > Continue.

8. Fill the hopper. The fill quantity must be known.



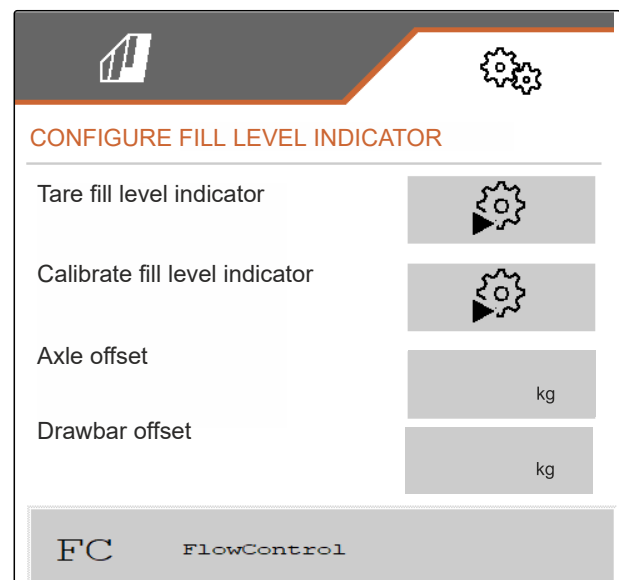
### NOTE

Minimum fill quantity: 1,000 kg

9. Enter the filled quantity as the actual hopper content.

10. > Continue.

➔ The new calibration factor will be displayed.



CMS-I-00009871

11. ✓ Save values

or

✗ Discard values.

## 19.2 Configuring FlowControl

CMS-T-00015161-A.1

- ▶ Enter the left manual correction factor.
- ▶ Enter the right manual correction factor.
- ➔ Default value: value range

CMS-I-00009870

## 19.3 Calibrating AutoTS

CMS-T-00015162-A.1

### NOTE

Not for spreading lime

1. In the "Settings" menu, select "Service" > "Setup" > "Calibrate motors".
  2. Call up "Calibrate AutoTS".
  3. Move to the boundary spreading position.
  4. Move the delivery vane to the boundary spreading position.
  5. > Continue
  6. Move to the normal spreading position.
  7. > Continue
  8. ✓ Save taught-in position
- or
- ✗ Discard.

	Left	Right
Actual voltage	0.00 V	0.87 V
	3.90 V	3.89 V
	1.50 V	0.87 V

Save taught-in positions?

✗ ✓

CMS-I-00007365

## 19.4 Calibrating the shutters

CMS-T-00015163-A.1



### NOTE

Only for double shutter

1. In the "Settings" menu, select "Service" > "Setup" > "Calibrate motors".
2. Call up "Calibrate shutters".
3. Close the double shutters on the left.
4. When the end value is reached:  
Select "Accept value for left shutter".
5. > Continue.
6. Close the double shutters on the right.
7. When the end value is reached:  
Select "Accept value for left shutter".
8. ✓ Save the calibration values  
  
or  
  
✗ Discard.

LEFT SHUTTER

Put the left shutter in calibration position and accept the current value

	Left	Right
Current values	4.46 v	4.50 v
Calibration position left	4.47 v	

Accept value for left shutter

✕

>

CMS-I-00009872

## 19.5 Calibrating the delivery system

CMS-T-00015164-A.1



### NOTE

Only for double shutter

## 19 | Repairing the machine



### Calibrating the delivery system parking position

1. In the "Settings" menu, select "Service" > "Setup" > "Calibrate motors".



2. Call up "Calibrate delivery system".

3. Select "Move to calibration values".

4. > Continue.

5.   Close the delivery system on the left.

➔ The holes in the delivery system and the supply must be aligned.

6.   Close the delivery system on the right.

➔ The holes in the delivery system and the supply must be aligned.

7. ✓ Save the calibration values

or

✗ Discard.

### CALIBRATE DELIVERY SYSTEM

Enter calibration values

	Left	Right
Current values	11.98 mA	12.00 mA
Cal. values	12.00 mA	12.00 mA

Move to calibration values

✗

CMS-I-00009869

## 19.6 Calibrating the delivery system parking position

CMS-T-00015165-A.1

1. In the "Settings" menu, select "Service" > "Setup" > "Calibrate motors".

2. Call up "Calibrate the delivery system parking position".

3. Select "Move to calibration values".

4. ✓ Save the calibration values

or

✗ Discard.

### CAL. DELIVERY SYSTEM PARKING POSITION

	Left	Right
Current values	mm	mm
Current values	mm	mm

Move to calibration values

CMS-I-00009873

# Appendix

# 20

CMS-T-00009900-A.1

## 20.1 Other applicable documents

CMS-T-00010724-A.1

ZG-TX operating manual

Control terminal operating manual

# Directories

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