

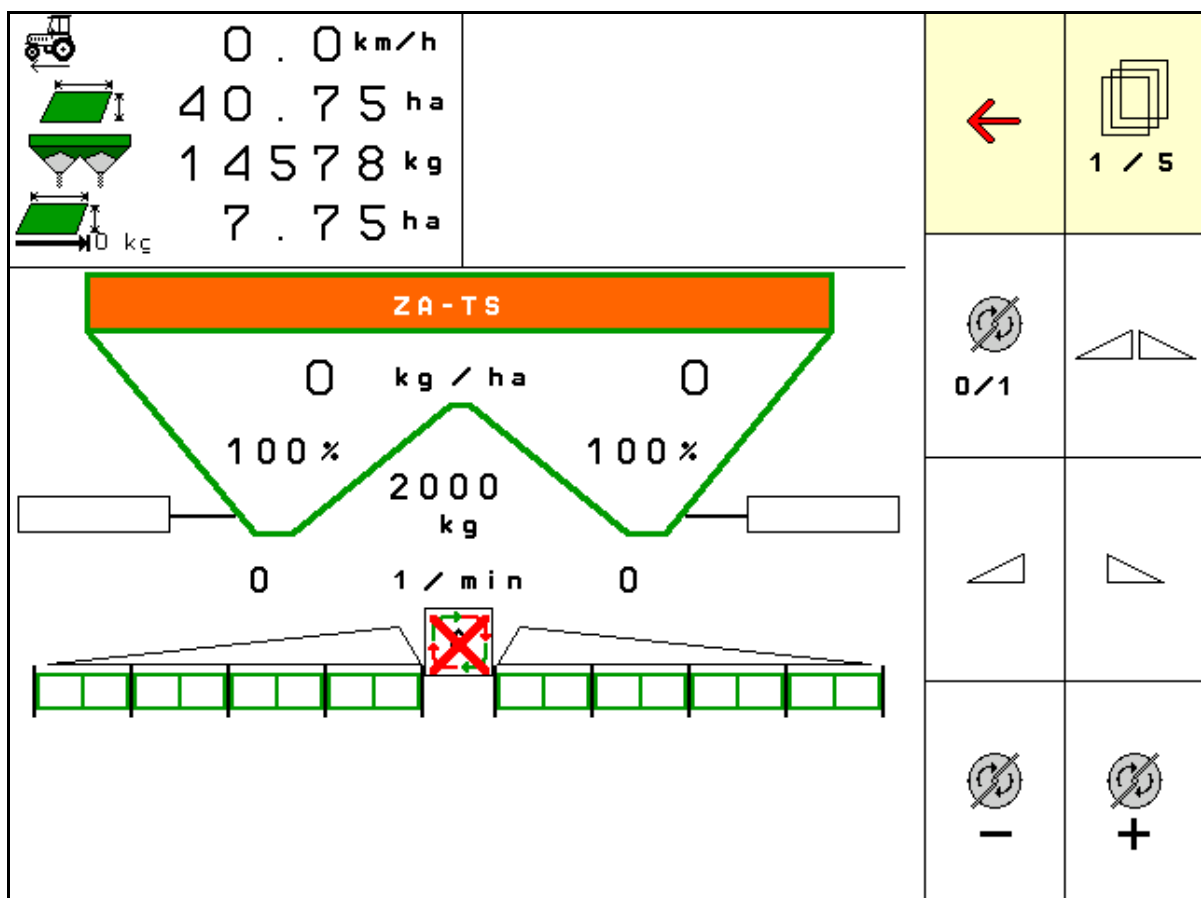
# Operating Manual

## AMAZONE

### Software ISOBUS

for

## ZA-TS      ZG-TS



MG6319  
BAG0204.8 01.24  
Printed in Germany

SmartLearning



Please read and follow  
this operating manual before  
putting the machine into  
operation.  
Keep it in a safe place  
for future use!

en



# *Reading the instruction*

*manual and to adhere to it should not appear to be inconvenient and superfluous as it is not enough to hear from others and to realise that a machine is good, to buy it and to believe that now everything would work by itself. The person concerned would not only harm himself but also make the mistake of blaming the machine for the reason of a possible failure instead of himself. In order to ensure a good success one should go into the mind of a thing or make himself familiar with every part of the machine and to get acquainted with its handling. Only this way, you would be satisfied both with the machine as also with yourself. To achieve this is the purpose of this instruction manual.*

---

*Leipzig-Plagwitz 1872. Rud. Sack.*

---

**Identification data**

---

Enter the machine identification data here. You will find the identification data on the rating plate.

Machine identification number:  
(ten-digit)

Type:

ISOBUS

Year of manufacture:

Basic weight (kg):

Approved total weight (kg):

Maximum load (kg):

---

**Manufacturer's address**

---

AMAZONEN-WERKE

H. DREYER SE & Co. KG

Postfach 51

D-49202 Hasbergen

Phone: + 49 (0) 5405 50 1-0

E-mail: amazone@amazone.de

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**Spare part orders**

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Spare parts lists are freely accessible in the spare parts portal at [www.amazone.de](http://www.amazone.de).

Please send orders to your AMAZONE dealer.

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**Formalities of the operating manual**

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Compilation date: 01.24

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AMAZONEN-WERKE H. DREYER SE & Co. KG.

## Foreword

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## Preface

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Dear Customer,

You decided to purchase one of our high quality machines from the comprehensive range of farm machinery produced by AMAZONEN-WERKE, H. DREYER SE & Co. KG. We thank you for your confidence in our products.

On receiving the machine, check to see if it was damaged during transport or if parts are missing. Using the delivery note, check that the machine was delivered in full including the ordered special equipment. Replacement will be made only if a claim is filed immediately!

Please read and follow this operating manual - in particular, the safety instructions - before putting the machine into operation. Only after careful reading will you be able to benefit from the full scope of your newly purchased machine.

Please ensure that all the machine operators have read this operating manual before they put the machine into operation.

Should you have any questions or problems, please consult this operating manual or contact your local service partner.

Regular maintenance and timely replacement of worn or damaged parts increases the lifespan of your machine.

## User evaluation

---

Dear Reader,

We update our operating manuals regularly. Your suggestions for improvement help us to create ever more user-friendly manuals.

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# 1 User information

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The "User information" section supplies information on using the operating manual.

## 1.1 Purpose of the document

---

This operating manual

- describes the operation and maintenance of the machine.
- provides important information on safe and efficient handling of the machine.
- is a component part of the machine and should always be kept with the machine or the traction vehicle.
- keep it in a safe place for future use.

## 1.2 Locations in the operating manual

---

All the directions specified in the operating manual are always viewed in the direction of travel.

## 1.3 Diagrams used

---

### Instructions for action and reactions

---

Tasks to be carried out by the user are presented as numbered instructions. Always keep to the order of the instructions. The reaction to instructions is given by an arrow.

Example:

1. Instruction for action 1  
→ Reaction of the machine to instruction for action 1
2. Instruction for action 2

### Lists

---

Lists without a mandatory sequence are presented as a list with bullet points.

Example:

- Point 1
- Point 2

### Item numbers in diagrams

---

Numbers in round brackets refer to the item numbers in the diagrams. The first digit refers to the diagram; the second digit, to the item number in the illustration.

## 2 General safety instructions

Knowledge of the basic safety information and safety regulations is a basic requirement for safe handling and fault-free machine operation.



The operation manual

- must always be kept at the place at which the machine is operated!
- must always be easily accessible for the user and maintenance personnel!

### 2.1 Representation of safety symbols

Safety instructions are indicated by the triangular safety symbol and the highlighted signal word. The signal word (DANGER, WARNING, CAUTION) describes the gravity of the risk and has the following significance:



#### **DANGER**

Indicates an immediate high risk, which will result in death or serious physical injury (loss of body parts or long term damage) if not avoided.

If the instructions are not followed, then this will result in immediate death or serious physical injury.



#### **WARNING**

Indicates a medium risk, which could result in death or (serious) physical injury if not avoided.

If the instructions are not followed, then this may result in death or serious physical injury.



#### **CAUTION**

Indicates a low risk, which could incur minor or medium level physical injury or damage to property if not avoided.



#### **IMPORTANT**

Indicates an obligation to special behaviour or an activity required for proper machine handling.

Non-compliance with these instructions can cause faults on the machine or in the environment.



#### **NOTE**

Indicates handling tips and particularly useful information.

These instructions will help you to use all the functions of your machine to the optimum.



### 3 Product description

The ISOBUS software and ISOBUS terminal make it easy to control, operate and monitor the AMAZONE fertiliser spreaders.

The ISOBUS software works with the following AMAZONE fertiliser spreaders:

- ZA-TS with delivery point adjustment, Auto TS boundary spreading system, power take-off or optional hydraulic spreading disc drive
- ZG-TS with delivery point adjustment, Auto TS boundary spreading system, power take-off or optional hydraulic spreading disc drive

The Main menu is shown after switching on the ISOBUS terminal when the machine computer is connected.

#### Adjustments

The settings can be adjusted through the sub-menus in the Main menu.

#### Operation

The ISOBUS software controls the spread rate according to travel speed.




The Work menu shows all of the spreading data during operation and, depending on the equipment, the machine can be operated through the Work menu.

#### 3.1 Software version

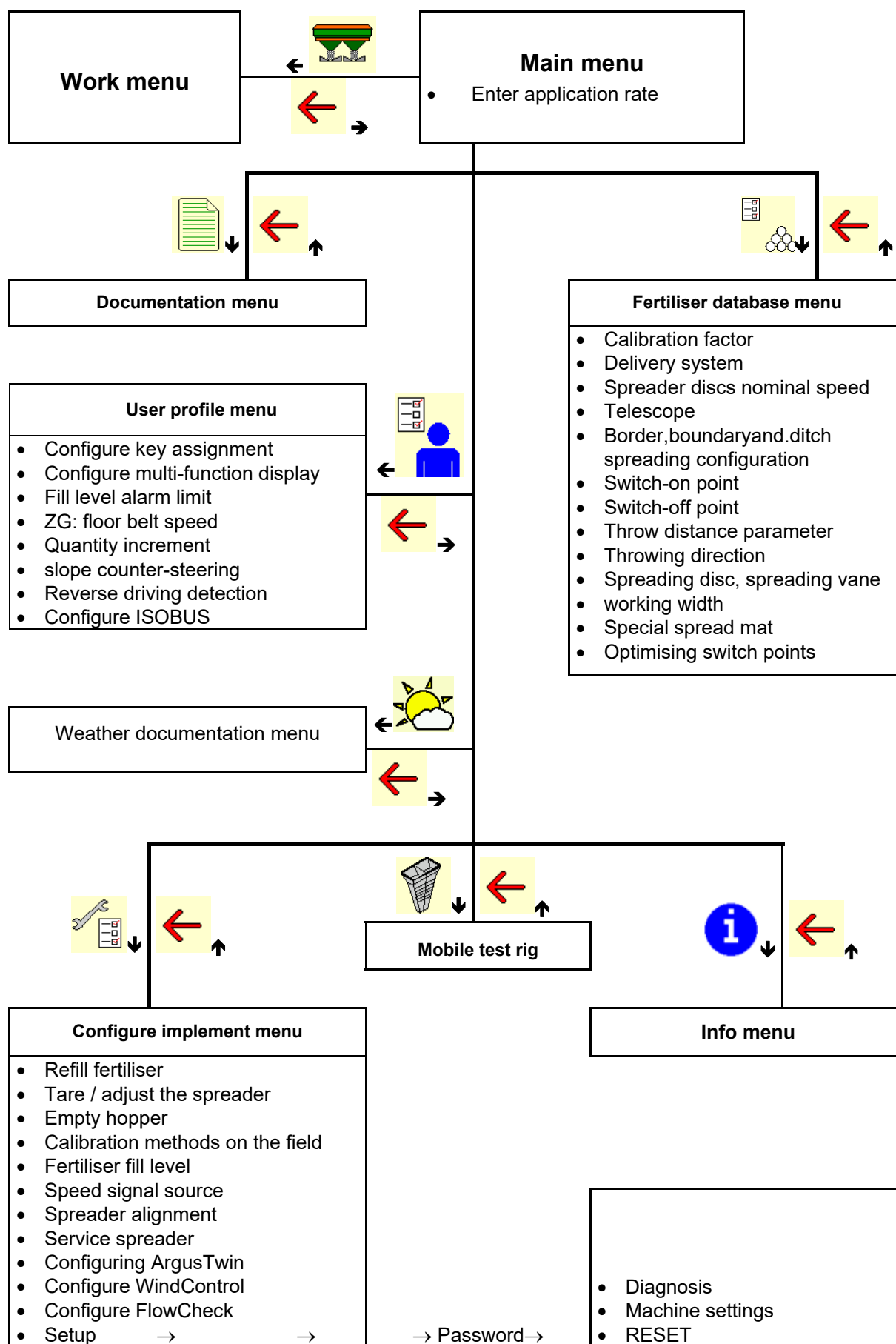
This operating manual is valid from software version:

Base computer: 1.20.01 NW188D

#### 3.2 Menu navigation layout

	<ul style="list-style-type: none"><li>•  Back to previous menu</li><li>•  Scrolling in the menu</li></ul>
---	---

### 3.3 Hierarchy of the ISOBUS software



## 4 Main menu

### 4.1 Display of the Main menu

- Adjusted implement















- Only internal documentation

- Enter the spread rate, or




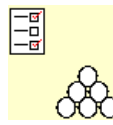
-  spread rate via the Task Controller

- Selected fertiliser

- Set working width

			
	Activated documentation 1		
	Spread rate  248	kg ha	
	Fertiliser xxx		
	Working width 20.0 m		

### 4.2 Sub-menus of the Main menu

-  Work menu
  - Display and operation during work.
-  Documentation menu (as a simple alternative to the Task Controller)
  - Saving of areas, times, amounts.
  - The calculated data can be stored for up to 20 documented jobs.
-  Weather documentation menu
  - Save weather data
-  Fertiliser menu
  - Entry of the data that are dependent on the fertiliser used.
  - Before each use, determine the calibration factor for the fertiliser to be spread.



On the wighing spreader, you can

- o calculate the calibration factor during calibration travel (page 25).
- o use online calibration to continuously calculate the calibration value while spreading (page 24).

Continuous calibration via torque recording with FlowControl during spreading.



- User profile menu

- o Each user can save a personal profile with settings for the terminal and the implement.



- Configure implement menu

- o Entry of machine-specific or individual data.



- Mobile fertiliser test rig menu

- o For checking lateral distribution with the mobile test rig. (Refer to the operating manual for the mobile test rig).



- Info menu

- o Software version and total ground coverage.


## 5 Weather documentation









The Task Controller must be activated.

Every time you save, the entered weather data are saved with the active job in the Task Controller.

- Enter wind strength
- Enter wind direction
- Enter temperature

→  Save weather data.

 Weather data		
Active job		
	Wind speed	<input type="text"/> m/s
	Wind direction	<input type="text"/>
	Temperature	<input type="text"/> °C
 Cancel		 Save

## 6 Manage documentation



Select **Documentation** in the main menu!



The **Documentation** menu is an internal, non-readable job memory.

When the documentation menu is opened, the documentation which has been started is shown.



Overall data display



Daily data display

To end a documentation process, another must be started.

Up to a maximum 20 documented jobs can be stored.

Before further documented jobs can be created, existing ones must be deleted.



Create new documentation.

→ Enter the name.



Start documentation.



Delete day data.



Start previously created documentation.



Start later created documentation.





Delete documentation.



Documentation

Name

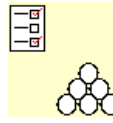


			
Worked area	0.00	0.00	ha
Required time	0.00	0.00	h
Theoretical amount	0.00	0.00	kg



- One documentation is always started.
- Documentation which has already been stored can be selected and restarted.

## 7 Enter / determine / manage fertiliser-specific data





Select **Fertiliser** in the main menu!

### 7.1 Fertiliser database

In the fertiliser database, up to 20 fertiliser types with software settings and settings at the fertiliser spreader can be saved, edited and displayed.

-  Call up the fertiliser database.
- o  Add new fertiliser.
- o  Delete marked fertiliser.









Fertiliser		
12D02Fertiliser 2		
Working width	24.0m	
Disc	TS2	
DFertiliser 3		
Working width	24.0m	
Disc	TS20	
Do11dFertiliser 1		
Working width	24.0m	
Disc	TS20	

### 7.2 Enter fertiliser data













All fertiliser-specific details can be obtained from the setting chart.

- Enter the name of the fertiliser
- Calibration factor, see page 17.
- Calibration factor, see page 15.
- ZA-TS, ZG-TS: Delivery system position value from the setting chart
- Nominal spreading disc speed value from the setting chart
- Telescope (required for FlowCheck)
- Configure the boundary spread deflector, see page 24.
- Configure the border spreading, see page 24.

	Name	<input type="text"/>
	Calibration factor	<input type="text"/>
	Determine the calibration factor	<input type="text"/>
	Drop-point pos.	<input type="text"/>
	Disc nominal speed	<input type="text"/> 1 min
	Telescope	<input type="text"/>
	Boundary spreading deflector	<input type="text"/>
	Config. border spreading	<input type="text"/>

## Table of Contents

- Configure the boundary spreading, see page 24.
- Configure ditch spreading, see page 24.
- Enter the switching on point.  
value from the setting chart
- Enter the switching off point.
  - Typical value for tramline-optimised driving  
ZA-TS: 7 m  
ZG-TS: 10 m
  - Setting chart value for distribution-optimised driving
- Enter the throw distance parameter.  
Value from setting chart
- Enter the throwing direction.  
Value from setting chart
- ! Confirm the throwing direction with the mobile test rig.
- Enter the spreading disc (required for FlowCheck)
- Check / enter working width
- Select special spreading materials
  - Fertiliser
  - Fine special spreading material (slug pellets, fine seed)
- ! The speed-proportional quantity regulation is not active!
  - Coarse special spreading material (rice, cereals, peas)
- Optimising switch points, see page 26.

	Config. boundary spreading	
	Configure ditch spreading	
	Switching on point	<input type="text"/> m
	Switching off point	<input type="text"/> m
	Throw distance parameter	
	throwing direction	<input type="text"/>
	Spread disc	<input type="text"/>
	Working width	<input type="text"/> m
	Special spread mat.	<input type="text"/>
	Optimising switch points	



The entry of several fertiliser data (e.g., spreading disc) serves only for data storage and does not replace the setting chart for the respective fertiliser.



## 7.3 The fertiliser calibration factor



Before determining the fertiliser calibration factor:

- Select fertiliser / add new fertiliser.
- Carry out / check settings for the fertiliser.



- The fertiliser calibration factor can be found in the setting chart for each fertiliser.
- Use the fertiliser calibration factor from the setting chart as a reference value before calibration and enter in the fertiliser data.
- The value of the setting chart is optimised by calibrating the fertiliser.
- The determined fertiliser calibration factor overwrites the value from the setting chart.

Before determining the fertiliser calibration factor:

- Select fertiliser / add new fertiliser.
- Carry out / check settings for the fertiliser.

The fertiliser calibration factor determines the regulating behaviour of the machine computer and is dependent on the flow characteristics of the fertiliser to be spread.

The fertiliser flow characteristics depend on:

- fertiliser storage, storage time and climatic factors.
- working conditions.

The calibration value is determined differently for each spreader.

The table below indicates the pages where the calibration method is described for each spreader.

	ZA-TS		ZG-TS
		Profis	Profis
Calibrate the fertiliser with the implement at standstill:	See page		
• Calibration via the lateral calibration device	20	20	
• Calibration with mounted implement (special spreading material)	21	21	21
Calibrate the fertiliser while driving:	See page		
• Automatically during calibration travel		25	25
• Online calibration while driving with scale	52	52	52
• Online calibration while driving with FlowControl	53	53	53



- The fertiliser flow characteristics may change even after a brief fertiliser storage period.  
Therefore, before each use, re-determine the fertiliser calibration factor of the fertiliser to be spread.
- Always determine the fertiliser calibration factor again if deviations occur between the theoretical and actual spread rates.
- The spread rate entered in the terminal must not exceed a maximum value (dependent on working width, proposed speed and entered calibration factor).
- The maximum spread rate/ha has been reached when the slider is fully open.



Realistic calibration factors for fertiliser (0.7 to 1.4):

- 0.7 for urea
- 1.0 for calcium ammonium nitrate (CAN)
- 1.4 for fine, heavy PK fertilisers



## Application of special spreading material

Coarse special spreading material (rice, rye, barley, wheat, oats):

- The realistic range for the calibration factor is increased from 0 to 2 because of the very different flow characteristics of rice.





Fine special spreading material (slug pellets, rapeseed, mustard, radish and other fine seeds):

- As a result of a very low application rate, the calibration is carried out directly on the shutter.
- The speed-proportional quantity regulation is not active!
- Argus

Twin and WindControl will be automatically deactivated.

## 7.4 Determining the fertiliser calibration factor when the implement is at a standstill


Determine the calibration factor→

	Name	<input type="text"/>
	Calibration factor	<input type="text"/>
	Determine the calibration factor	
	Disc nominal speed	<input type="text"/> 1 min

Determine the calibration factor via:

Lateral opening (calibration device)

Left slide with calibration chute (Special spreading material)

	Determine the calibration factor
<input type="text"/>	
Lateral opening	
<input type="text"/>	
Shutter	
<input type="text"/>	







The scale used to determine the fertiliser calibration factor at standstill must weigh accurately. Inaccuracies may cause deviations in the actual dispensed quantity.

## 7.4.1 Determining the calibration factor using the lateral calibration device






Before the actual determination of the calibration factor, carry out a test run (without calibration menu) in order to guarantee a continuous flow of fertiliser.






1. Add a sufficient quantity of fertiliser to the hopper.
  2. Hang a collection bucket onto the calibration device.
  3. Open the discharge of the calibration device via the hand lever.
- During calibration, the terminal indicates the calibration time in seconds.
4. Close the discharge as soon as the collection bucket is full.

	Determine the calibration factor	1/3
	Open shutter	
	Wait until calibration bucket is full	
	Time	0 s
	Cancel	

5. Weigh the collected fertiliser (allow for the weight of the collection bucket).
6. Enter amount of weighed fertiliser, pay attention to the units.

	Calibrate spreader	2/3
	 Enter in weight collected	5.00 kg

- The new calibration factor will be displayed.
7. Save the new calibration factor, abort calibration, repeat the calibration with the new calibration factor.

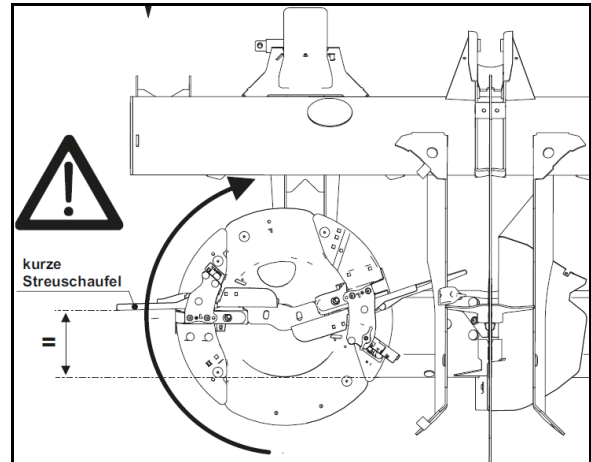
	Calibrate spreader	3/3
	New calibration factor	1.00
	 Repeat	
	Cancel	
	 Save	

## 7.4.2 Determining the calibration factor using the shutter (for fine special spreading material)

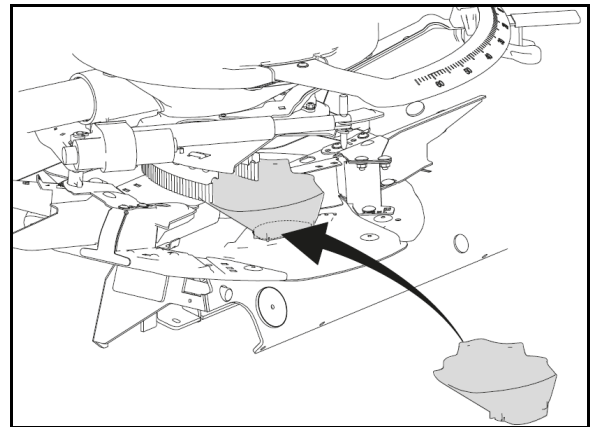
### Preparing the calibration

1. Turn the left spreading disc to the correct position.

Position of the short spreading vane, outside →



2. Install the calibration chute above the left spreading disc.
3. Add a sufficient quantity of fertiliser to the hopper.
4. Position the collection bucket under the left outlet opening.



Select the fertiliser menu.

5. Select fine special spreading material.  
→ ArgusTwin wird automatisch deaktiviert.



Name

**Slug pellets\_1\_\_**



Special spreading materials



### Determining the calibration factor for fine special spreading material



Perform the calibration several times consecutively to obtain an optimised calibration factor.

1. Determine the calibration factor.



Determine the calibration factor

## Table of Contents

2. Select the calibration shutter.









3. Check the value entered for the special spreading material:

Select calibration factor 1.


→ **Enter the specified speed and maintain later during spreading!**




Carry out calibration:


→ > continue

	Determine the calibration factor	
Shutter		
	Determine the calibration factor	1/6
	Working width	<input type="text"/> m
	Application rate	<input type="text"/> kg/ha
	Intended forward speed	<input type="text"/> km/h
	Calibration factor	<input type="text"/>
	Cancel	 Continue


With electrical delivery system:






4.  Set the delivery system to Position 10 on the left side.


	Determine the calibration factor	2/6
	Set the delivery system to Position 10 Install the calibration chute on the left spreading disc and correctly position the spreading disc	
	Cancel	

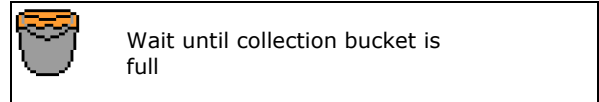
5.  Open the left slide gate

→ During calibration, the terminal indicates the calibration time in seconds.

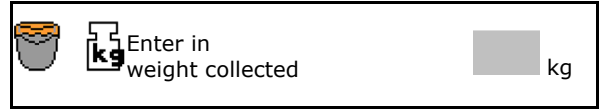
 If the spreading material does not flow continuously out of the shutter opening, set the calibration factor to 0.5 and repeat the calibration.

	Determine the calibration factor	
	open left hand shutter	
	When calibrating, ensure no person is in the danger zone.	
	Time	0 s 

6.  As soon as the collection bucket is full, close the shutter to the left.
7. Weigh the collected amount (take account of the weight of the collection bucket).

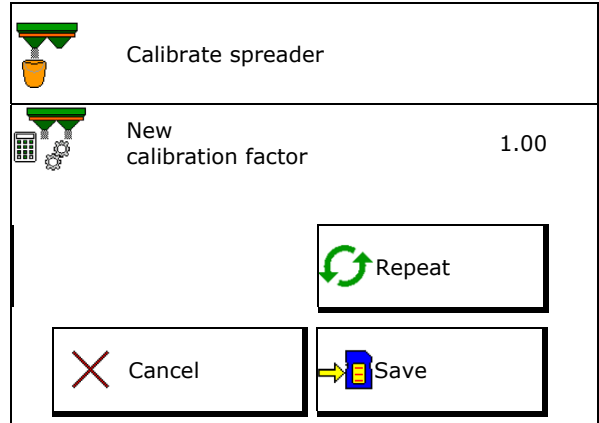


8. Enter amount of weighed fertiliser, pay attention to the units.



→ The new calibration factor will be displayed.

9. Save the new calibration factor, abort calibration, repeat the calibration with the new calibration factor.



10. Remove the calibration chute.

## 7.5 Configuring the BorderTS



To calculate the rate reduction and change the position of the delivery system, the value for the throw direction must be entered in the fertiliser data.

- Enter the field-side nominal disc speed.



The spreading disc on the boundary side is not driven

- Position of the swivelling adjustment plate on the spread deflector
- Enter the quantity reduction in %.  
Default value 50%

→ The value will be calculated and automatically set.

→ The value can be manually overwritten.





- Changing the delivery system position

→ The value will be calculated and automatically set.

→ The value can be manually overwritten.



A smaller value results in a higher rate at the boundary.

BorderTS	
	Nominal disc speed field side <input type="text"/> 1 min
	BorderTS Spread deflector position <input type="text"/>
	Rate reduction <input type="text"/> %
	Changing the delivery system position <input type="text"/>










## 7.6 Border, boundary and ditch spreading configuration

When carrying out a type of boundary spreading, the values are entered automatically.

Values according to details in the setting chart.

- Enter the nominal disc speed.
- Enter the quantity reduction in %.
- Switch Auto TS
  - ☒ Boundary spreading with Auto TS boundary spreading vanes
  - ☐ Border spreading without Auto TS (X in the setting chart)
- Hydro: the nominal disc speed on the field side will be automatically reduced like on the boundary side.  
However, the field side nominal disc speed can be changed.




	Config. border spreading		
	Config. boundary spreading		
	Configure ditch spreading		
	Disc nominal speed	<input type="text"/>	$\frac{1}{\text{min}}$
	Volume reduction	<input type="text"/>	%
	Switch Auto TS	<input type="checkbox"/>	
	Nominal disc speed field side	<input type="text"/>	$\frac{1}{\text{min}}$





If the speed is adjusted in the work menu during border or trench spreading, then the adjusted speed is incorporated here and is used as standard.







## 7.7 Optimising switch points

- Set-up assistance
  - Select the set-up assistance for the switch-on point or the switch-off point.
  - Select too early or too late switching.
- Show the implement geometry

	Optimising switch points
	Set-up assistance
	Implement geometry

### 7.7.1 Set-up assistance

1. Enter the route which should be switched off too early/too late.
  2. Enter the driving speed (only for time-based adjustment).
- When switching the implement, the entered speed should be maintained.
- New implement geometry and on/off point delays will be calculated.
- Show new implement geometry
3.  Save the settings or  Cancel.

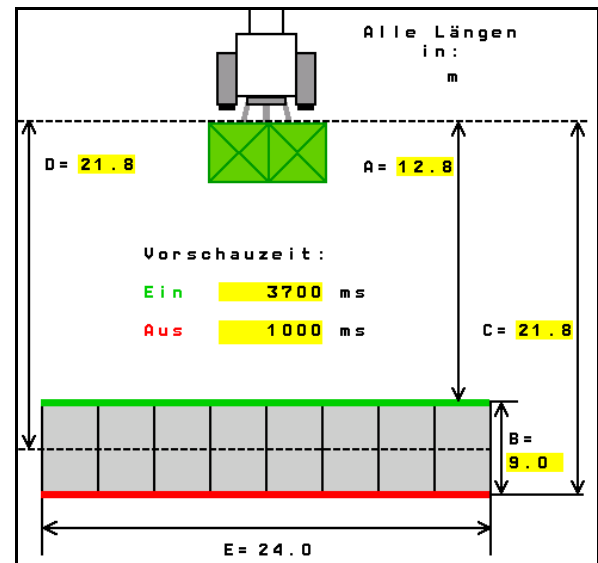
	Optimising the switch-on point
	Machine is switched on too early, by: <input type="text"/> m
	Driving speed <input type="text"/> km/h
	Implement geometry
	Cancel
	Save

### 7.7.1.1 Device geometry

Displaying the implement geometry is important in case the control terminal does not automatically adopt the changed values.

In this case, after optimising the switch points, the changed values must be manually entered in the GPS menu.

The changed values are marked in yellow.




## 8 User profile




Select **User profile** in the main menu!


- Enter the name of the user
- Configure key assignment (see page 30)
- Configure the multi-functional display in the Work menu (see page 32).
- Enter alarm limit for residual quantity in kg (fertiliser spreader with low level alarm).
  - There is an acoustic warning when the residual fertiliser quantity is reached.
- Enter the quantity increment for increasing or reducing the spreading quantity.
- Show the floor belt speed in the work menu (ZG-TS).
  - o ☒ Show message
  - o ☐ Do not show message
- Slope counter-steering in automatic mode.
  - o Automatic steering against the slope
  - o Manual steering against the slope using the function keys.
- Reverse driving detection
  - o ☒ yes
  - o ☐ no
- Configure ISOBUS, see page 33.

User profile






Configure key assignment




Configure multi-functional display




Fill level alarm limit

kg




Quantity increment

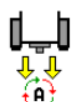
%




Show floor belt speed



slope counter-steering







Automatic reverse drive detection








**ISO** Configure ISOBUS



## User: change, new, delete

-  Change user:
- Create new user:
  - 1.  Create new user.
  - 2. Mark user.
  - 3. Confirm marking.
  - 4. Enter name.
-  Copy the current user with all their settings.
-  Delete user:

 Profile list	
Pit	 
Tom	
	



When using an AUX-N multi-function stick, the freely selected key assignment of the multi-function stick are saved with the respective user.

Each user profile needs a key assignment.

Perform the key assignment on the VT1.

## 8.1 Configure key assignment

Here the function fields of the work menu can be freely assigned.

- Free key assignment
  - ☒ Freely assignable key assignment
  - ☐ Standard assignment of the keys

Perform key assignment:

1. Call up list of the functions.

→ Functions which have already been selected are greyed out.


2. Select function.



3. Select the screen where the function should be saved in the work menu.

4. Press the key / function field in order to place the function to the key / function field.

5. In this manner, all functions can be assigned any way you like.

6.  Save the settings or




cancel.

- Multiple use is possible.
- All of the functions do not need to be assigned.



- Function field without function.

Call up the list of functions→





Configure key assignment

Free key assignment

Select the desired function from the list and press the desired button.


Empty / delete function


Cancel


Save

empty / delete function

Spreading discs on / off  
 Shutter both sides  
 Shutter right / left  
 Switch right boom part width sections on / off  
 Switch left off boom part width section on / off  
 Amount both sides + / -  
 Amount both sides 100%  
 Amount right + / -  
 Amount left + / -



Work menu:

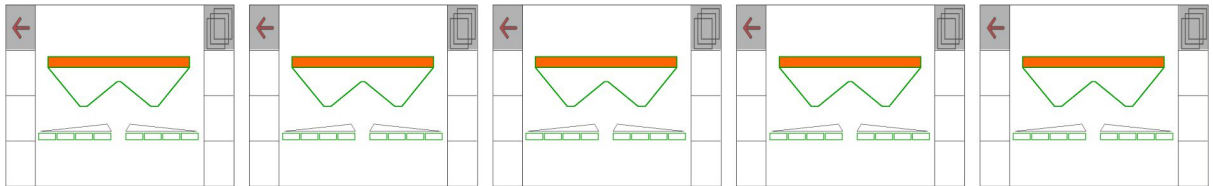


· Calling up the freely assignable function groups.

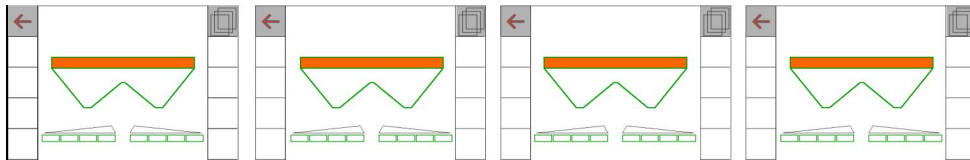
**Example: for freely assignable functions 1 to 30, 32 in the Work menu**

Page 1	Page 2	Page 3	Page 4	Page 5
--------	--------	--------	--------	--------

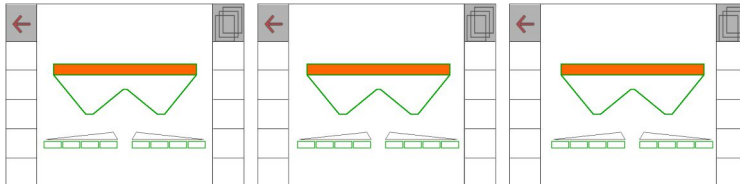
8 key terminal:



10 key terminal:



12 key terminal:



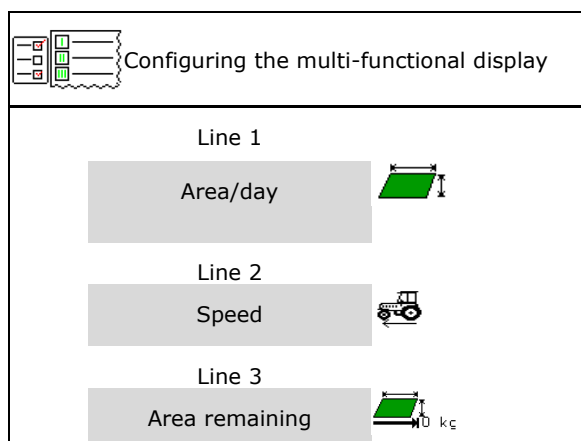
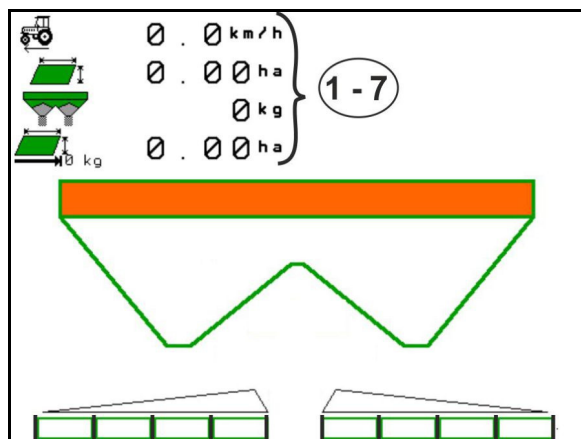
## 8.2 Configuring the multi-functional display

Different data can be shown in the data lines of the Work menu.

- (1) Current speed
- (2) Worked area per day
- (3) Spread quantity per day
- (4) Remaining distance until hopper is empty
- (5) Remaining area until hopper is empty
- (6) Distance counter for the headlands to locate the next tramline.

The distance counter is set to zero when closing the shutter at the headlands and starts measuring the distance until the shutter is opened.

- (7) Spreading disc nominal speed
- (8) Tilting of the implement





## 8.3 Configure the ISOBUS

- Select the terminal, see page 34.
- Switching the Section Control to Manual/Automatic
  - In the GPS menu  
Section Control is switched in the GPS menu.
  - In the work menu (recommended setting)  
Section Control is switched in the ISOBUS Work menu.



Section Control  
Manual/Automatic

- Adjusting the switch points
  - Distance-based (terminal supports working length)
  - Time-based (terminal does not support working length)
- Document weather (only if job management is activated in the TaskController)
  - ☒ Yes
  - ☐ No
- Enter any number of part width sections. (maximum number of part width sections depends on the control terminal)  
The maximum number of part width sections depends on the equipment.  
Hydro: infinitely variable part width section control with Section Control.
- The part-width sections are arranged as a parabola in Section Control. The parabola reflects the actual spreading area more accurately.



The function is not supported by all control terminals, the connection to the Task Controller can be disrupted.

- ☒ Yes
- ☐ No



Configure  
ISOBUS



Select terminal



Adjusting the  
switch points



Adjusting the  
switch points



Document weather



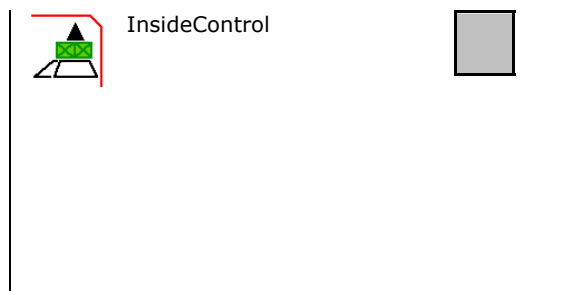
Number of part width  
sections



Arrange part-width  
sections as a parabola

## Table of Contents

- InsideControl on the headlands.  
Inside Control enlarges the working width on the field side and prevents under-fertilising on the field side on the headlands.
  - o ☒ Active
  - o ☐ Not active



## Selecting the terminal

If 2 control terminals are connected to the ISOBUS, one terminal can be selected for displaying.

- Select the terminal for implement operation
  - o 01 Amazone
  - o 02 other terminal
- Select terminal for documentation and Section Control
  - o 01 Amazone
  - o 02 other terminal

1. Select new terminal.

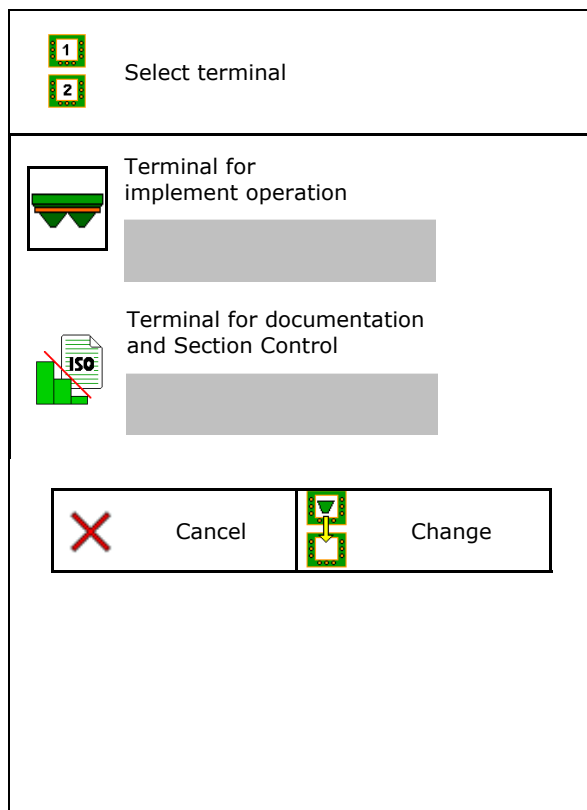


2. Change the terminal for displaying.



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

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





## 9 Configure implement

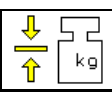



Select **Configure implement** in the main menu!


- Add fertiliser (see page 37).
- Weighing spreader: Tare the spreader, e.g. after the mounting of special equipment (see page 39).
- Weighing spreader: adjust the spreader, e.g. after filling (see page 39).
- Empty the hopper after use and before cleaning (see page 38).
- Weighing spreader: select calibration method on the field.
  - Offline
    - Determination of the fertiliser calibration factor when beginning to spread.
  - Online scale
    - Continuous determination of the fertiliser calibration factor while spreading via weighing technology.
  - Online FlowControl and scale
    - Continuous determination of the fertiliser calibration factor while spreading via torque recording and weighing technology.
- Fertiliser filling level kg (not for fertiliser spreader with weighing technology).
- Configure the signal source for speed (see page 40).
- Alignment of spreader with tilt sensor, see page 41.
- Service spreader, see page 41.
- Pairing the Bluetooth device, see page 41


 Refill fertiliser


 Tare spreader


 Adjusting the spreader


 Empty hopper


 Calibration methods on the field

 Fertiliser filling level

 Configure speed source





 Spreader alignment

 Service spreader

 Pair Bluetooth device

## Table of Contents

- Configuring ArgusTwin, see page 41.
- WindControl configuration, see page 42.
- FlowCheck configuration, see page 42.
- Call up the setup menu, only for customer service, see page 46

	Configure ArgusTwin
	WindControl
	FlowCheck
	Setup

## 9.1 Refill fertiliser

### Without calculator function

Refill fertiliser.


#### Fertiliser spreader without weighing technology:

- Enter amount of added fertiliser in kg and store.


#### Fertiliser spreader with weighing technology:

- Added quantity of fertiliser is displayed in kg.

**Store added quantity of fertiliser.**


 Refill fertiliser

---

 amount of added fertiliser  kg

### With calculator function

#### (1) Theoretical values for calculation


- Area that can be worked with the target fill quantity
- Application rate for calculation
-  Target fill level

#### (2) Actual values

-  Refilled quantity
- Total fill level

#### (3) Values calculated from the actual values



- Drawbar load
- Axle load
- Total weight

 Filling menu

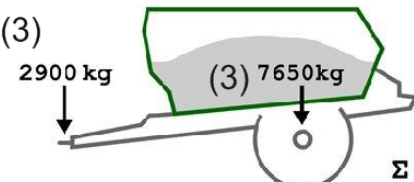
---

Target fill quantity is  (1) ha

At the current application rate  (1) kg/ha

 0 kg (2)   (1) kg

(2) **6250 kg**

(3) 

2900 kg
  (3) 7650 kg
  (3)

$\Sigma$  10550 kg



The flashing spread fan illumination indicates that filling has almost reached the target fill level.

- 500 kg below target fill level: slow flashing
- 100 kg below target fill level: rapid flashing
- Target fill level reached: constantly lit

## 9.2 Emptying the fertiliser hopper

The remaining fertiliser in the hopper can be emptied via the hopper tips.



ZA-TS with a mechanical spreading disc drive:  
Empty residue on left and right separately.

1. Turn the spreading disc by hand so that the hole in the spreader disc is pointing inwards, directly under the opening on the hopper.

2.ZG-TS: switch off floor belt.

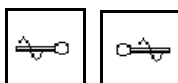
- ☒ Yes, empty only the pre-chamber.
- ☐ No, empty the entire hopper.



3. Set the delivery system to Position 10.



4. Open shutter.



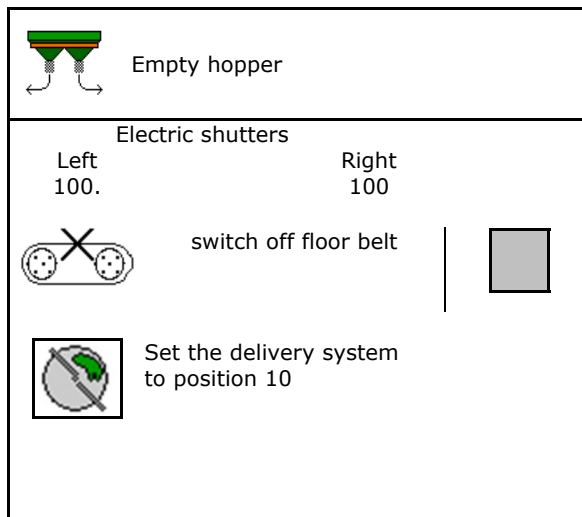
5. Drive the agitator shaft if necessary. Keep the function field pressed.

→ Residual fertiliser runs out.



6. Close shutter.

- Display 0 – Shutter closed
- Display 100 – Shutter open



**ZG:** Drive the floor belt if necessary.  
Keep the function field pressed.



### WARNING

**Risk of injury near the rotating agitators and spreading disc drive.**

- Keep spreading disc drive switched off!
- ZA-TS: Make sure the agitators and disc drive are switched off when emptying the residue.

### 9.3 Weighing spreader: Taring the fertiliser spreader

Taring the fertiliser spreader serves to determine the weight of the spreader with 0 kg hopper contents.

The fill quantity of the empty tank displayed must be 0 kg.

It is necessary to tare it:

- before initial use
- after installing special accessories

1. Completely empty the fertiliser spreader.

2. Wait until the  symbol turns off.

3. Tare spreader.

→ Fertiliser fill level is displayed at 0 kg.

4.  save.

### 9.4 Weighing spreader: adjusting the fertiliser spreader

Adjusting the fertiliser spreader serves to correct the scale with a full hopper (Parameter 2).

Adjustment is necessary if the wrong hopper content is displayed after filling.



The fertiliser spreader must be tared.

1. Fill the fertiliser spreader.



The filling quantity must be known.


2. Wait until the  symbol turns off.

3. Adjust the spreader.

4. Enter the correct hopper content.

→ New Parameter 2 will be displayed.

5.  **Save.**



Adjust the scale

Measured hopper content	xxx kg
Correct hopper content	<input style="width: 100px;" type="text"/> kg

Scale parameter 2:

Old:
New:

✕ Cancel

 Save

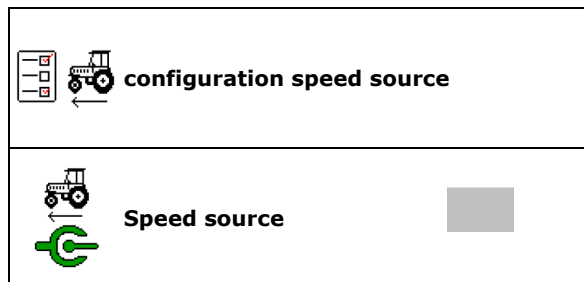
## 9.5 Speed signal source

There are different sources for the forward speed signal input.

- Radar (ISOBUS)
- Wheel (ISOBUS), e.g., tractor wheel
- Wheel (implement), e.g., implement towed with wheel
- Satellite (NMEA2000)
- Satellite (J1939)
- Simulated

→ After selecting the speed, enter the value for the simulated speed.

Entering a simulated speed allows you to continue spreading even if the speed signal from the tractor fails.

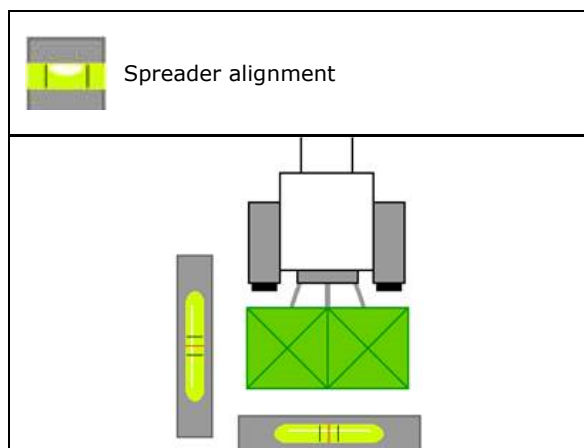


## 9.6 Spreader alignment

1. Position the mounted fertiliser spreader on a level surface.
2. Align the fertiliser spreader horizontally using the top link for the longitudinal direction and the lifting struts of the lower link for the transverse direction.






→ The fertiliser spreader is aligned when the red lines are in the middle.

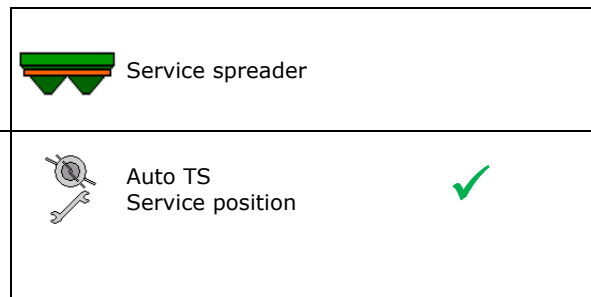




## 9.7 Service spreader

Necessary to make it easier to exchange the spreader disc units TS10, TS 20, TS30

1.  Put Auto TS in a voltage-free middle position.  
→  - Auto TS display is in the centre position
2.  Auto TS returns to its original position

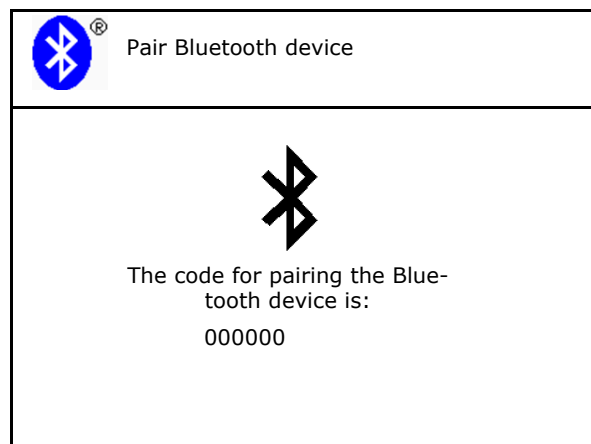


## 9.8 Pairing the Bluetooth device

The implement can be connected to a mobile end device via Bluetooth.

The fertiliser spreader can exchange data with the mySpreader app via Bluetooth.

1. Prepare for pairing
2. Enter the 6-digit code shown on the mobile device.
3. To pair another mobile device, disconnect the connection and restart.

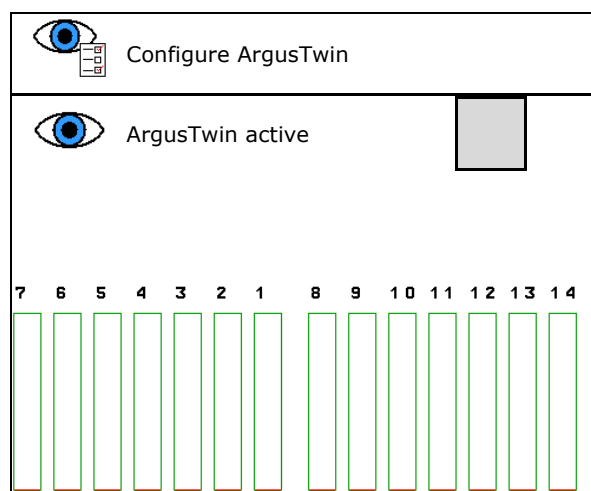


## 9.9 Configuring ArgusTwin

- ArgusTwin active
  - ☒ ArgusTwin active (the position of the drop-point position is controlled via ArgusTwin)
  - ☐ ArgusTwin not active (the drop-point position remains in the set position)






Sensor display:

During spreading, the measured values for the sensors are displayed.







## 9.10 WindControl configuration

- WindControl active
  - ☒ WindControl active  
WindControl regulates the position of the delivery system through ArgusTwin
  - ☐ WindControl not active  
When ArgusTwin is deactivated, WindControl must also be deactivated
- Wind sensor automatic folding active
  - ☒ Automatic folding active  
Wind sensor automatically folds into transport position and operating position  
Wind data is displayed
  - ☐ Automatic folding not active
- Detect gusts
  - ☒ Detect gusts  
Gusts of wind are detected, a warning is issued
  - ☐ Do not detect gusts
- Select wind strength unit
  - m/s (metres per second)
  - bft (Beaufort scale - wind strength 0-12)

	WindControl	
	WindControl active	<input type="checkbox"/>
	Automatic folding active	<input type="checkbox"/>
	Detect gusts	<input type="checkbox"/>
	Wind strength unit	<input type="text"/>

## 9.11 FlowCheck configuration

- Automatically eliminate blockages
  - ☒ FlowCheck detects blockages and eliminates them by moving the shutter back and forth
  - ☐ FlowCheck not active
- Enter alarm limit for residual fertiliser
  - Above the alarm limit, a detected blockage will be eliminated
  - Below the alarm limit, the hopper is considered to be empty. Hopper empty message is issued
- Tolerance for detecting blockages. (Tolerated deviation from the measure hydraulic pressure to the target pressure). This value indicates the sensitivity of FlowCheck. (default value 40%)
  - FlowCheck reacts too frequently: Increase the value in 5% increments.
  - FlowCheck reacts too slowly: Reduce the value in 5% increments.

	FlowCheck	
	Eliminate blockages automatically	<input type="checkbox"/>
	Fill level	<input type="text"/> kg
	Tolerance	<input type="text"/> %

## 9.12 Setup menu



Only for customer service!

To access the Setup menu, you have to enter the password.

In the setup, you can change the implement's basic settings. Incorrect settings can lead to implement failure.

## 10 Mobile fertiliser test rig

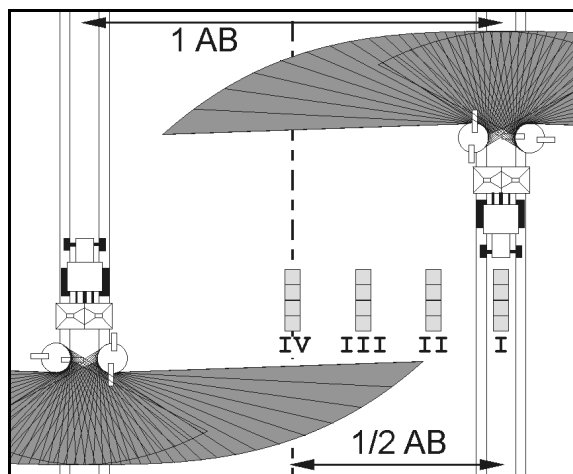


Select **Mobile test rig** in the Main menu.

Start mobile fertiliser test rig as explained in the mobile test rig operating manual and estimate the lateral distribution.



For each test series, successively fill the quantities of fertiliser into the measuring cup from each of the four collection trays in their four setup positions (I, II, III, IV) and enter the number of scale lines at the terminal.



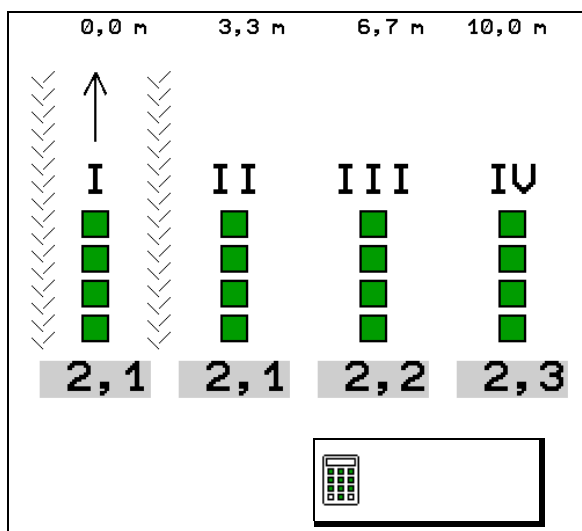
The distances between the fertiliser collection trays are displayed depending on the working width.



1. Enter the number of scale lines for fertiliser level **I to IV**.



2. Calculate the new adjustment value.
3. Perform the adjustment after calculating the setting value.



- Correct the throwing direction by the calculated difference, see Fertiliser menu.



ArgusTwin: The changed throwing direction is calculated and automatically adopted.

- Correct the spreading disc speed by the difference calculated, see fertiliser menu.



4. Save the value calculated and return to the main menu.

Throwing direction correction 0

Correction of the spreading disc speed 0 rpm





The corrected values

- will be stored in the Fertiliser menu,
- will be automatically adjusted (with hydraulic spreading disc drive, electrical adjustment of the delivery system),
- must be adjusted (with mechanical spreading disc drive, manual adjustment of the delivery system).

## 11 Info menu




Select **Info** in the main menu!

- MIN - Implement identity number
- Display the softkey number in the menus.  
In addition, the error memory function field appears
- Display the work data
- Show the software version

Info	
MIN: ZA 00000000	
Display Soft key numbers <input type="checkbox"/>	
Total area spread	0 ha
Total quantity spread	0 1
Total work time	0 h
Driven distance in:	
Transportation position	km
Working position	km
Hydraulic system	xxxxxxx
Basis	xxxxxxx

## Error memory

-  Display of the last 50 error messages (to do so, display the numbers of the softkeys, see above).

Error memory ECU operating hours: 00:00				
	No.	Error code	Operation. hours	
	00	F10000	00:00	
	00	F10000	00:00	
	00	F10000	00:00	

## 12 Application on the field



Select **Work menu** in the main menu!



If the work menu is left while working, then after 10 seconds, it automatically changes back to the work menu.



Weighing spreader:

- Carry out an automatic fertiliser calibration or switch on the online calibration when you start spreading.
- Tare the spreader before initial use and after fitting special equipment (see page 39).
































Before the spreader can be used, the following information must be entered:

- Enter the fertiliser data from the setting chart in the fertiliser menu (see page 35).
- Load and start job (see page 13).
- Calibrate fertiliser at standstill or enter calibration value manually (see page 13).













Scrolling in the Work menu

## 12.1 Functions in the Work menu

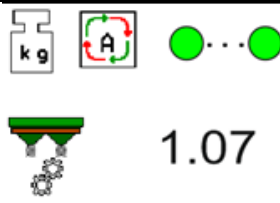
	Refill fertiliser
	Both shutters open / shut
 	Shutter open / shut left right
 	Reduce the spread rate on one side by application rate increment left right
 	Increase the spread rate on one side by application rate increment left right
 	Increase the spread rate on both sides by application rate increment reduce increase
	Adjust the spread rate on both sides to the target quantity
	Calibration travel
	Turn to the next page
	Back to the top menu structure
	Spreading discs on / off (keep pressed for 3 seconds)
 	Border spreading speed increase reduce
 	Trench spreading on / off left right
 	Boundary spreading on / off left right
 	Border spreading on / off left right
 	Switch on boom part width sections left right
 	Switch off boom part width sections left right
	Section Control on / off
	InsideControl on the headlands

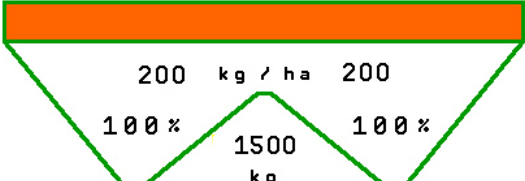
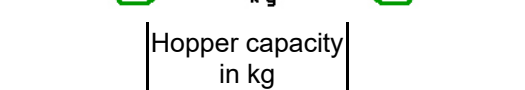






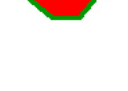
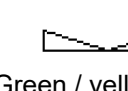



## Table of Contents

   	<p>AutoTrail steering axle Automatic/manual, slope counter-steering, centre position</p>
 	<p>Lift / lower WindControl sensor</p>
   	<p>Work lights</p>





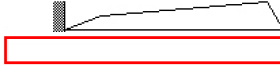
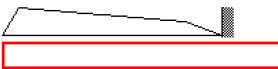






## 12.2 Display Work menu









Multi-function display	Alternative:	
	Selection window	Scale / FlowControl (standard)
	Display: <ul style="list-style-type: none"> <li>• Scale</li> <li>• Steering</li> <li>• WindControl</li> </ul>	

Spread amount, left side			Spread rate, right side
Spread amount left in %			Spread amount right in %
position of the drop-point position on the left			position of the drop-point position on the right
ArgusTwin			ArgusTwin
Shutter opening display			
ZA-TS: Empty hopper			ZG-TS: Metering chamber empty
<ul style="list-style-type: none"> <li>• Left spreading disc switched on</li> <li>• FlowCheck status / FlowControl</li> </ul>			<ul style="list-style-type: none"> <li>• Right spreading disc switched on</li> <li>• FlowCheck status / FlowControl</li> </ul>
Spreading disc speed left	900 1/min	900 1/min	Spreading disc speed right
Shutter gate open			
Shutter gate closed			

## Table of Contents

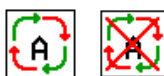
### Boundary spreading

	left		right		
Pre-select, left side					Pre-select, right side
Trench spreading					Preselect trench spreading
boundary spreading					Preselect boundary spreading
Side spreading					Preselect side spreading

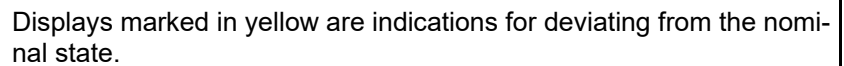
One boom part width section off			Preselect one boom part width section off
Two boom part width sections off			Preselect two boom part width sections off
Three boom part width sections off			Preselect three boom part width sections off
Part width sections switched off, shutter closed			

### Section Control:

Automatic manual



ZG-B: Floor belt speed in %



## 12.4 Mini-view in Section Control

Notes are also shown in the miniviews.



## 12.5 Calibration on the field



For the desired target rate to be spread, the entries from calibration on the field must be made in the Fertiliser menu.

### 12.5.1 Online calibration with weighing technology (scale)

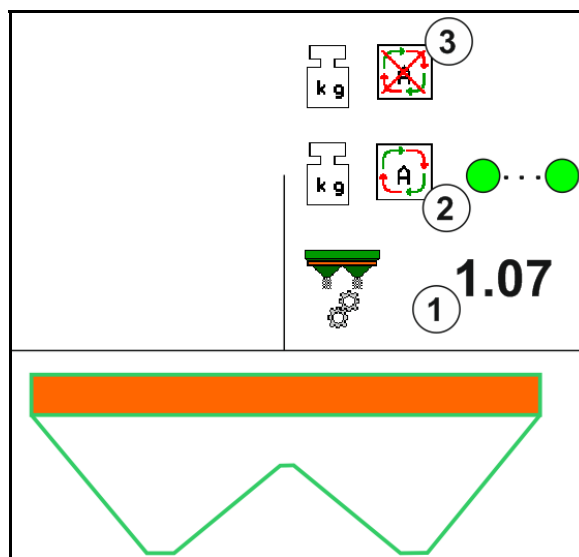
The calibration value is continuously recalculated via online weighing and the theoretically applied quantity. The required shutter position is adjusted online.



Select the desired calibration method in the Configure implement menu.

Display in the Work menu:

- (1) Current calibration factor
- (2) Online calibration active
- (3) Online calibration switched off



Online calibration can only be started when the scale is at rest and with hopper content greater than 200 kg.

If the symbol  appears in the display, the spreader is not at rest.

When working on hilly terrain or if the ground conditions are not level, system-induced fluctuations in determination of weight can occur:

In this case switch off online calibration during the run.



Switch online calibration off / back on (possible while driving).



- Interruption of the online calibration is indicated.
- Spreading will continue with the displayed calibration factor.



During the spreading work, online calibration will be switched off automatically when the hopper content drops below 200 kg!

After filling (hopper volume greater than 200 kg), online calibration will be restarted automatically!

## 12.5.2 Online calibration with torque recording (FlowControl and scale)

The calibration value is continuously recalculated via FlowControl torque recording. The required shutter position is adjusted online. The measured values are referenced over a longer period of measurement with the weighing technology.



Select the desired calibration method in the Configure implement menu.

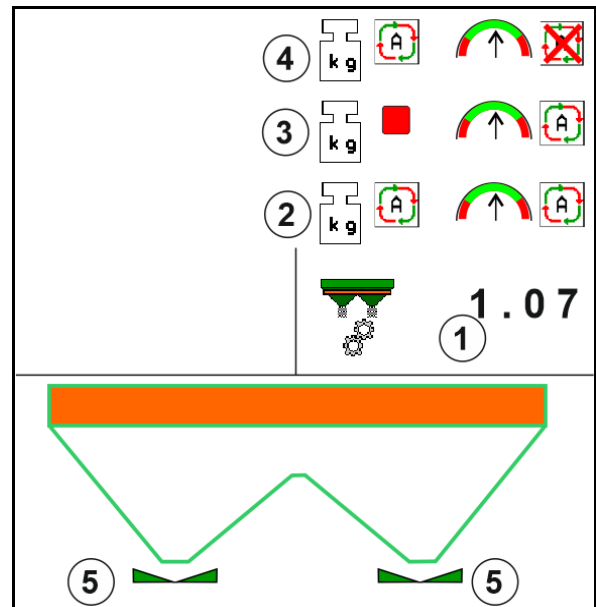
Before starting operation (opening the shutters), FlowControl must determine the torque on the spreading disc without fertiliser load.

To do so, run the spreading discs at the spreading disc target speed for 5 seconds.

As soon as FlowControl switches to automatic mode, spreading can begin.

Display in the Work menu:

- (1) Current calibration factor.
- (2) Online FlowControl calibration active with referencing by the scale.
- (3) Online FlowControl calibration active without referencing by the scale.
- (4) Online FlowControl calibration not active, online calibration with the scale, see page 52.
- (5) Colour display of the spreading discs as the FlowControl status.
  - o White – FlowControl not active.
  - o Green – FlowControl active.
  - o Yellow – FlowControl is working with the correct spread rate, but the shutter positions differ significantly from each other. This can be a sign of a blocked shutter opening.
  - o Red – FlowControl is active, spread rate **cannot** be maintained. Hopper empty or blocked shutter opening..



### 12.5.3 Offline calibration during a calibration run




Automatic **fertiliser calibration** for weighing spreader.

Offline calibration is carried out when beginning operation during spreading, whereby a minimum quantity of fertiliser needs to be spread.

- ZA-TS: Minimum fertiliser quantity = 200 kg
- ZG-TS: Minimum fertiliser quantity = 1000 kg

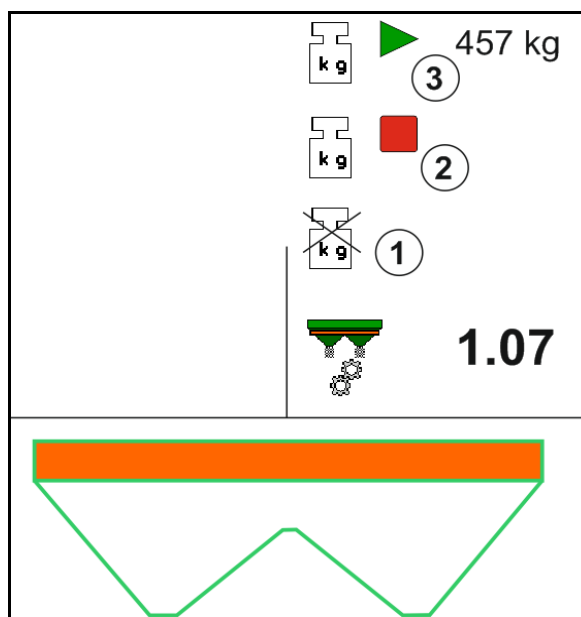


- Tractor with spreader must stand in a horizontal position at the start and end of calibration.
  - The calibration factor can only be started and ended when the scale is at rest.
- If the symbol  appears in the display, the spreader is not in resting position.



Select the desired calibration method in the Configure implement menu.

- (1) Fertiliser spreader not in resting position, weighing not possible
- (2) Offline calibration complete
- (3) Offline calibration started with display of the fertiliser quantity spread until then.



1. Select Work menu.

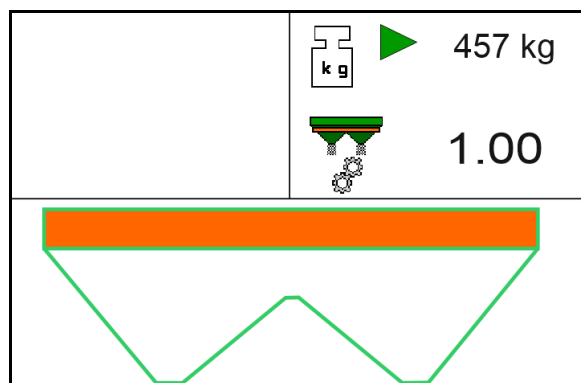


2. Start automatic calibration.

3. Start spreading as usual and spread the minimum quantity of fertiliser.

→ Calibration is indicated with a green triangle.

→ The quantity of fertiliser spread during calibration will be displayed.



→ A green checkmark signals that the minimum amount has been reached.

4. When the minimum amount of fertiliser has been spread, close the shutter and stop.



5. End automatic calibration.

→ Calibration end is indicated with a red square.

→ The new calibration factor will be displayed.




→ The new calibration factor will be displayed.




6. Store the calibration factor or abort calibration.

7. Resume spreading.



A calibration run can be performed at any time during operation to optimise the calibration factor.

		457 kg
		1.07

		457 kg
		1.07



After the first fertiliser calibration, additional calibrations should be performed with higher application rates (e.g. ZA-TS: 1000 kg, ZG-TS: 2500 kg) to further optimise the calibration factor.

## 12.6 Description of the functions in the Work menu

### 12.6.1 Shutter



Both shutters open/shut



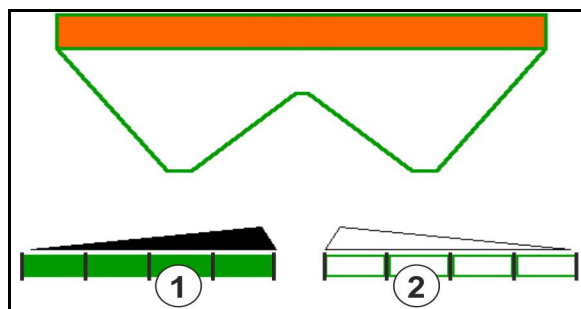
Shutter left/right, open/shut

Open shutter before use,

- and drive off
- once the spreading discs have reached the correct speed.

(1) Display shutter left side open.

(2) Display shutter right side closed.



### 12.6.2 Changing the spread rate while spreading



Increase / reduce the spread rate on both sides by application rate increment



Reduce the spread rate on one side by application rate increment



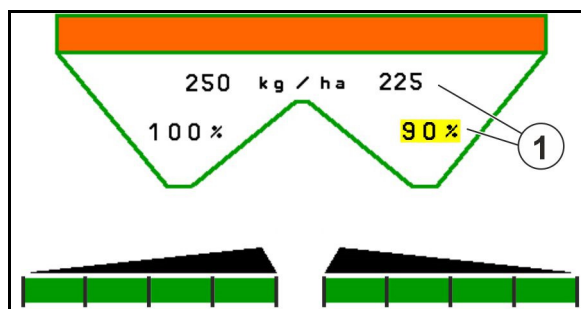
Increase the spread rate on one side by application rate increment



Adjust the spread rate on both sides to the target quantity

- Each press of the key changes the spread amount by the rate increment (e.g. 10%).
- Enter the rate increment in the Machine Data menu.

(1) Display changed spread rate in kg/ha and percent.





### 12.6.3 Refill fertiliser



Filling with fertiliser see page 37.

### 12.6.4 Hydro: Switching spreading disc drive on and off



Spreading discs on/off



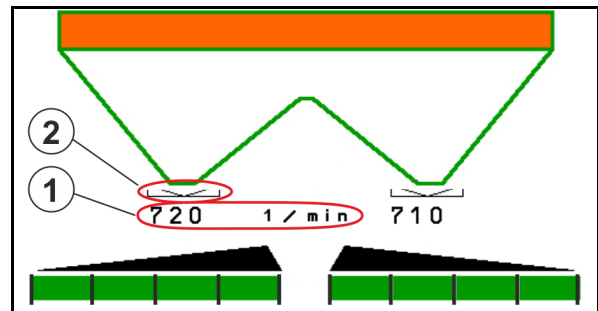
Reduce / increase spreader disc speed.



To switch on, press the key for at least three seconds until the tone stops.

The spreader discs operate at the speed entered in the Machine data menu

- (1) Display spreading disc speed
- (2) Display spreading discs, switched on



#### WARNING

**Risk of injury from the rotating discs.**

Keep people away from the discs.

## 12.6.5 Boom part width sections



Switch on boom part width sections left, right (4 steps)

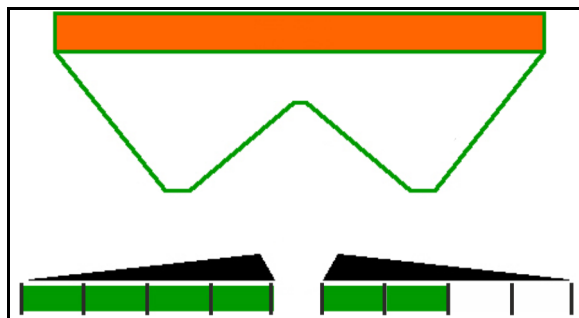


Switch off boom part width sections left, right (4 steps)

Display two right-hand boom part width sections switched off.



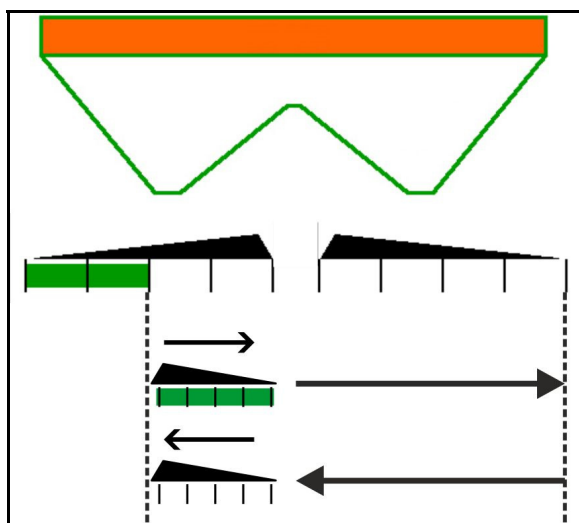
The boom width can be reduced when the shutters are closed.









Display 6 right-hand boom part width sections switched off.



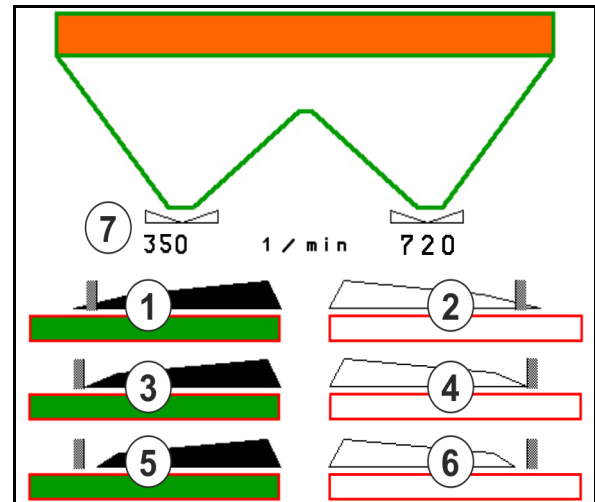
For wedge shaped field spreading, all of the part width sections can be switched on or off from one side to the other.



## 12.6.6 Boundary spreading with Auto-TS

		Switch on/off trench spreading left/right.
		Switch on/off boundary spreading left/right.
		Switch on/off side spreading left/right.

- (1) Display border spreading, switched on
- (2) Display border spreading, preselected
- (3) Display boundary spreading, switched on.
- (4) Display boundary spreading, preselected.
- (5) Display trench spreading, switched on
- (6) Display trench spreading, preselected
- (7) Display reduced spreading disc speed



When using the boundary spreading procedure, the switching of individual boom part width sections using the Section Control is overridden.



- For border and trench spreading, enter the data according to the setting chart in the Machine Data menu:
  - Border side volume reduction.
  - Border side speed reduction
- Boundary spreading can be selected when the shutters are closed.
- If the shutters are opened with boundary spreading switched on, a warning tone is issued.



Move each ClickTS manually to the boundary spreading position/normal spreading position.

## Hydraulic spreader disc drive



Reduce/increase spreader disc speed for selected type of spreading.



- The boundary spreading speed is increased or reduced by 10 rpm each time the key is pressed.
- The changed border spreading speed is saved in the selected border spreading types for later border spreading, see fertiliser menu.

### 12.6.7 Boundary spreading with BorderTS / bed spreading



Selection BorderTS on the right / bed spreading on the right



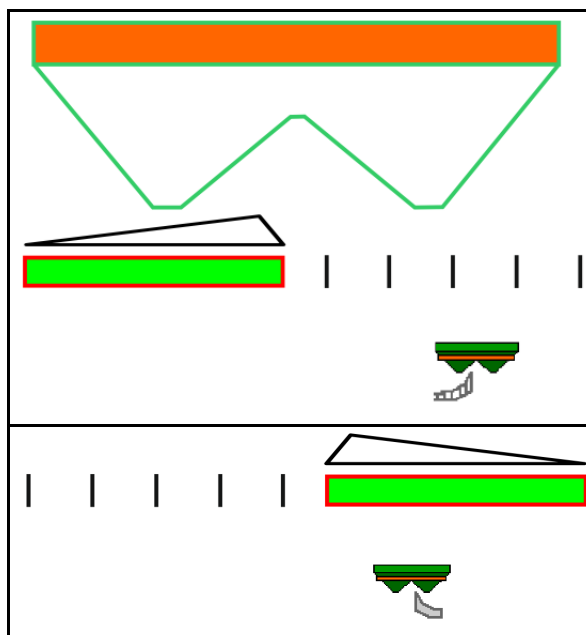
The selection is only important for implements that have the combination of boundary spread deflector BorderTS and bed spread deflector installed on the right side.

The setting controls the spread rate for boundary spreading, see implement operating manual.

After the spread deflectors have been moved into working position, select boundary spreading or bed spreading.

Display for boundary spreading on the right:

Display for bed spreading on the right:



## 12.6.8 Switching Section Control (GPS control)



Switching Section Control on and off



The terminal must be equipped with Section Control.



### WARNING

**Risk of personal injury and environmental damage in the ejection area of the fertiliser spreader by fertiliser particles being unintentionally ejected.**

Use of Section Control on fertiliser spreaders is only permitted inside the defined field boundaries.



### CAUTION

**Unintentional fertiliser spreading with Section Control.**

Always work with boundary spreading equipment at the boundary. The boundary spreading equipment overrides the Section Control.



Information for Section Control:

- For safety reasons, define the field boundary after the first field perimeter drive.
- Section Control can always be overridden by:
  - manual part width section control.
  - boundary spreading
  - closing the shutter
- Switch the Section Control on at the terminal first.



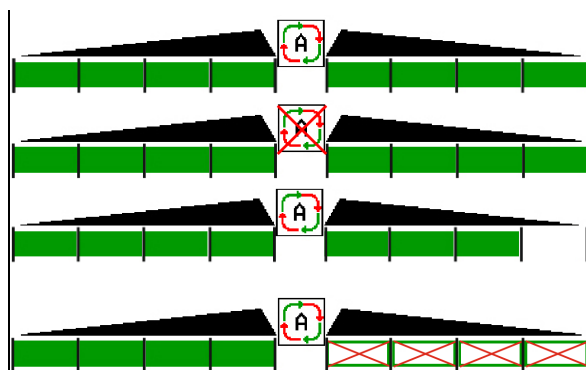
→ Then switch the Section Control on at the fertiliser spreader!

- The spreading disc must be rotating for the Automatic mode. The spreader discs operate at the speed entered in the Machine data menu.

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### Display:

- Section Control switched on (Automatic mode)
- Section Control switched off (Manual mode)
- Section Control switched on one part width section switched off by Section Control
- Section Control overridden by closing the shutter manually.



- Section Control overridden by right boundary spreading equipment
- Section Control overridden by manual switching of the part width section.




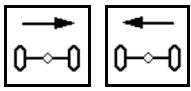

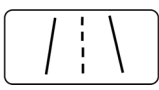
Mechanical spreading disc drive:

→ Section Control actuates a maximum of 8/16 part width sections.

Hydraulic spreading disc drive:

→ Section Control actuates the part width sections infinitely.

## 12.6.9 AutoTrail steering axle

	Automatic / Manual operation
	Manual steering (manual mode) / Steering against the slope (automatic)
	Switch to field mode or move to the centre position (only possible in Field mode)
	Lock the axle in transport position (switch to road travel mode)



### DANGER

#### Risk of accident!

Automatic mode and manual mode are forbidden when driving on roads.

→ The axle must be locked when driving on roads.

Automatic mode is forbidden when manoeuvring.

→ Manoeuvre in manual mode.



### DANGER

#### Risk of the implement tipping over when the steering axle is pushed in; particularly on very uneven or sloping terrain!

Adapt your driving technique accordingly and reduce speed when performing a turning manoeuvre on a headland, so that you are in complete control of the tractor and implement.

## 12.6.9.1 Field operation



To work on the field after road travel, put AutoTrail into field operation.



### Automatic mode



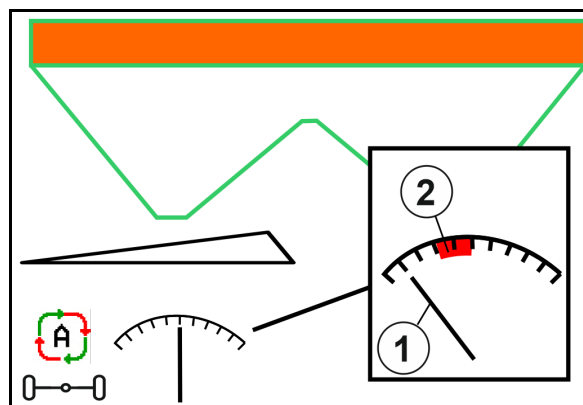
Put AutoTrail into automatic mode.

→ The implement computer ensures the precise tracking of the implement on the field up to 25 km/h.

#### (1) Deflection of the axle as a result of

- driving in curves on the field
- driving on slopes

#### (2) Portion of the deflection resulting from steering against the slope



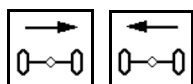
#### (3) Automatic mode with automatic slope counter-steering

(can be set in Profile / Steering)

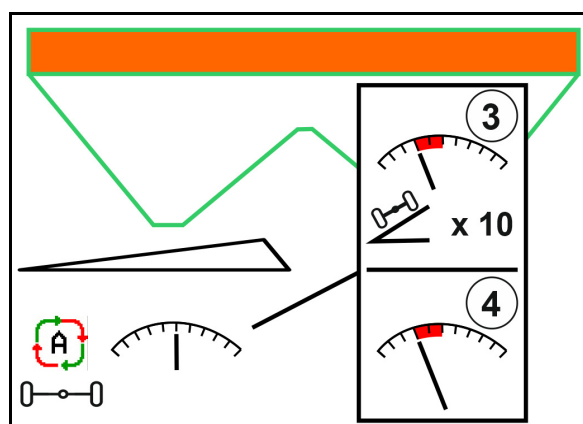
Steering against the slope takes place automatically. The counter-steering intensity is displayed.

Default value: 10

Possible values: 0-20



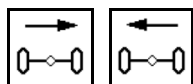
Increase or reduce the counter-steering intensity.



#### (4) Automatic mode with manual slope counter-steering

(can be set in Profile/Steering)




Steering against the slope manually.



Steer the axle against the slope manually.



If the following functions are being executed, the manual slope correction is reset.

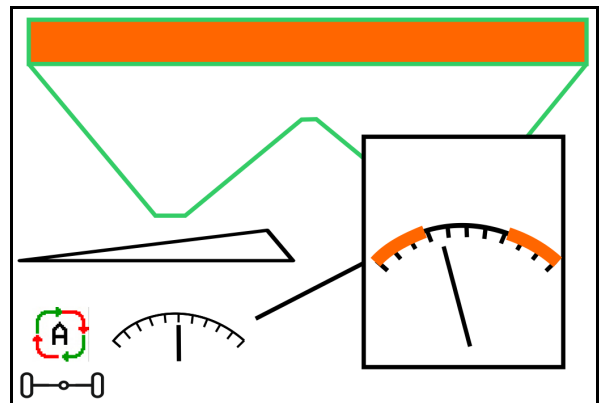
-  Steering in centre position,
-  Close shutter,
-  Change to manual mode.
- Driving in reverse with reverse driving detection.



When reverse driving detection is active (can be set in the Profile menu):

When driving in reverse in automatic mode, the implement is moved once to the centre position. After that, the implement can be steered manually.

AutoTrail with reduced steering angle due to high forward speed






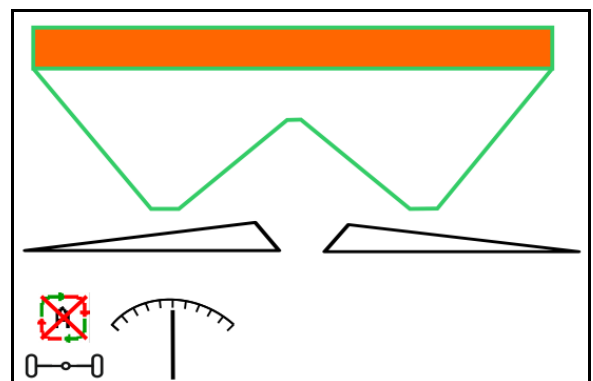
### Manual operation mode



Put AutoTrail in manual operation mode.

→ Automatic precise tracking of the implement is switched off.

-   Manual steering is possible for manoeuvring.
-  Centre position is approached as soon as the speed is greater than 0.



## Safety-relevant error

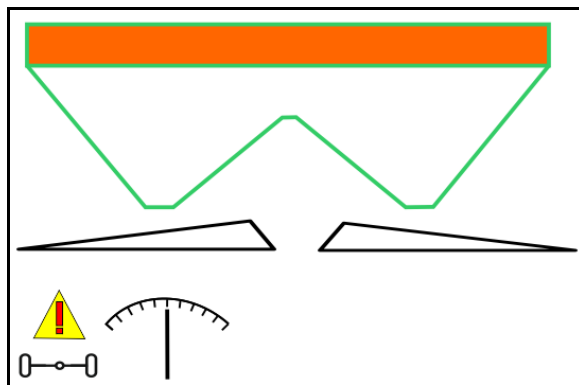


### WARNING

**Risk of accident due to safety-relevant AutoTrail error.**

Driving on public roads is forbidden.

- Manual steering possible up to 7 km/h (helpful for troubleshooting).
- Contact the dealer.



### 12.6.9.2 Driving on the road



### DANGER

**Risk of accident due to implement tipping over when the axle is steered!**

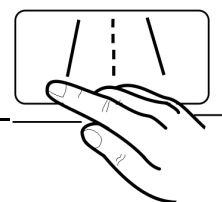


Activate road mode for driving on roads and tracks.

→ When moving off, the axle is moved to the centre position and is automatically locked.

### Note

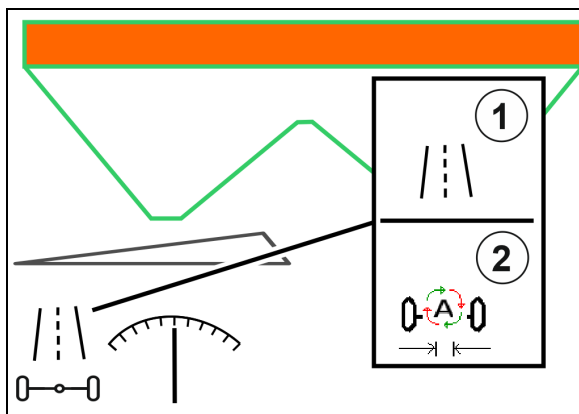
Activate road mode before exiting the field!



- (1) Axle in road mode
- (2) Axle has not yet reached the centre position.

The axle moves to the centre position as soon as the forward speed is greater than 1 km/h.

The implement can still be operated normally.



## 12.6.10 ArgusTwin (optional)

ArgusTwin constantly measures and regulates the throwing direction of the fertiliser spreader to optimise the lateral distribution.

The actual throwing direction is compared to the target values. If there are deviations, the position of the delivery system will be adjusted.

The target throwing direction is taken from the setting chart or determined using the mobile test rig.

If the measured values from the sensors are not sufficient to correctly determine the spreading direction, ArgusTwin will be deactivated.

May be caused by soiled sensors or a spread rate that is too slow.

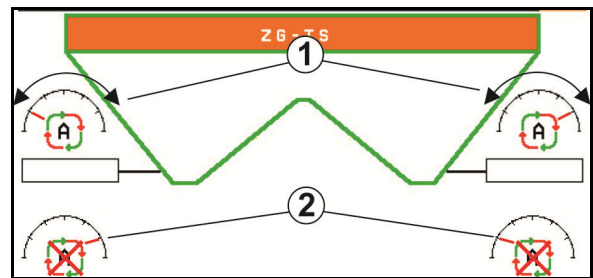
→ Clean sensors or refill hopper.

- (1) ArgusTwin is activated in the fertiliser menu.

The constantly changing position of the delivery system is displayed.

- (2) ArgusTwin is not activated in the fertiliser menu.

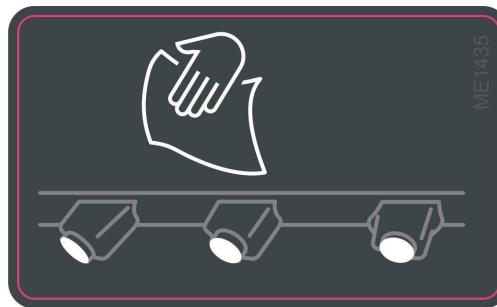
The set position of the delivery system is displayed.





Faulty fertilising due to soiled radar sensors of the ArgusTwin system!




Strong or uneven dirt accumulations can prevent ArgusTwin from properly regulating the delivery system, and the crops are then over- or under-fertilised in strips.


- Depending on the operating conditions, check the radar sensors regularly for strong or uneven dirt accumulations.
- Clean the radar sensors if necessary.



## 12.6.11 WindControl

		<b>Lifting / lowering the wind sensor</b>
---	---	---

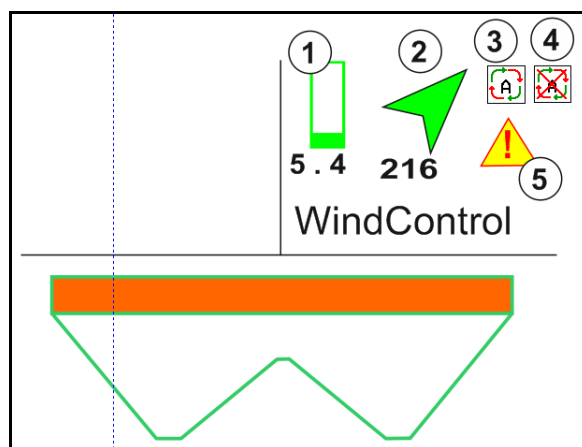
	<ul style="list-style-type: none"> <li>Spreading discs TS 20 or TS 30 must be installed.</li> <li>The wind sensor is automatically lifted into operating position as soon as the spreading discs start rotating.</li> </ul> <p>The wind sensor is automatically lowered into transport position as soon as the spreading discs stop rotating.</p> <p>→ Prerequisite for folding the wind sensor: Forward speed greater than 3 km/h.</p> <ul style="list-style-type: none"> <li>   To avoid obstacles, press the touchpad up to the end position. </li> </ul>
---	--

	Before using WindControl, check that the throw distance parameter is correctly entered.
---	---

- (1) Wind speed display
- (2) Wind direction display
- (3) Automatic mode – WindControl regulation active
- (4) WindControl is not active, wind data are displayed.
- (5) Strong wind, interrupt work

Wind data shown in colours:

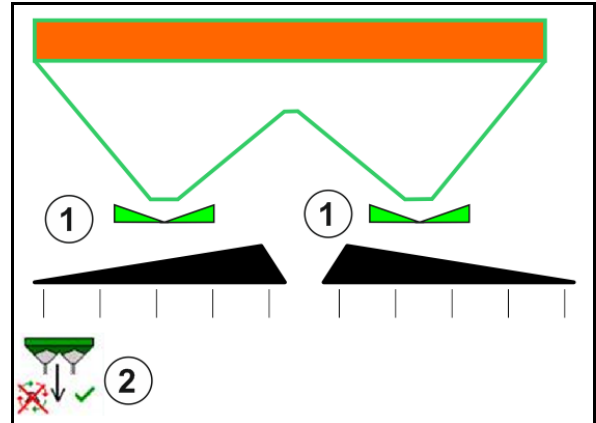
- Green – WindControl can compensate for wind effects
- Yellow – WindControl can compensate for wind effects within the limits
- Red – WindControl has reached the set limits. It is better to stop working.
- grey - WindControl is interrupted because the spreading disc speed is less than 500 min-1



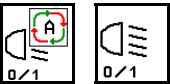


## 12.6.12 FlowCheck

FlowCheck detects insufficient fertiliser outflow and blockages in the hopper.

- (1) During operation, FlowCheck is represented by the coloured spreading disc symbols.
- Green – No deficiencies detected in the flow behaviour of the fertiliser.
  - Yellow – Insufficient flow behaviour was detected and an attempt is being made to correct this.
  - Red – Fertiliser flow behaviour is insufficient.  
→ Stop working.  
→ Eliminate the blockage.
- (2) FlowCheck display is switched off




## 12.6.13 ZG-TS work lights

	<b>Automatic / manual switching of the spread fan lighting</b>
	<b>Maintenance lighting on / off</b>
	<b>Hopper interior lighting on / off</b>



- The automatic spread fan lighting will be switched on as soon as the spreading discs rotate.
- The maintenance lighting consists of the fertiliser pre-chamber and the spreading disc lighting.
- The work lights are automatically switched off for road transport.

## 12.6.14 InsideControl

	<b>InsideControl on the headlands</b>
---	---------------------------------------

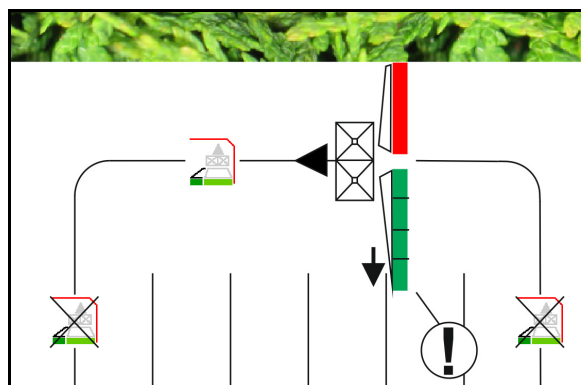
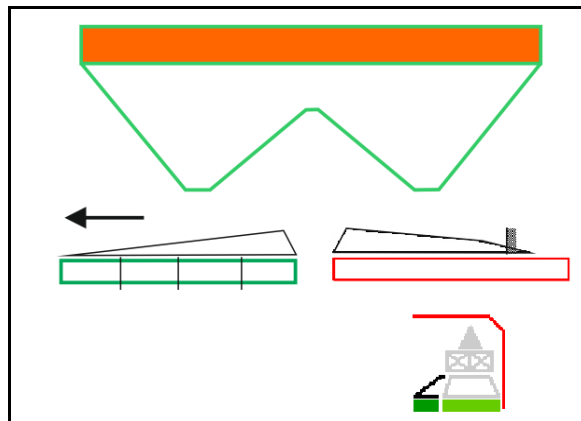
**i** For InsideControl, a boundary spreading method must be selected for the boundary side.



Switch InsideControl on/off

Inside Control must be


- switched on on the headlands.
- switched off on the tramlines.



## 12.7 Procedure for use

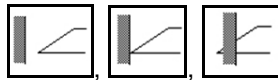
### 12.7.1 Use of fertiliser spreader with mechanical spreading disc drive

1. Select fertiliser menu on the ISOBUS terminal:
  - o Enter the data according to the setting chart.
  - o No weighing spreader: carry out fertiliser calibration.
2. Select Work menu in the ISOBUS terminal.
3. Set the power take-off speed (see setting chart).

4. Move off and open both shutters .

5. Weighing spreader :


- o Start with a calibration travel
  - or
  - o Perform online calibration (switch on in Machine Data menu).
6. If starting with boundary, trench or border spreading:



Select type of boundary spreading and field edge (left / right), and switch on.

- During spreading, the terminal shows the Work menu. All the settings required for spreading should be entered here.
- The calculated data is stored for the current job.

#### After use:

1.  Close both shutters.
2. Switch off power take-off.

## 12.7.2 Use of fertiliser spreader with hydraulic spreading disc drive

1. Select fertiliser menu on the ISOBUS terminal:
  - o Enter the data according to the setting chart.
  - o No weighing spreader: carry out fertiliser calibration.
2. Select Work menu in the ISOBUS terminal.
3. Actuate tractor control unit *red* to supply the control block with hydraulic fluid.



4. Switch on spreading discs.



5. Move off and open the shutters



6. Weighing spreader:
  - o Start with a calibration travel
  - or
  - o Perform online calibration (switch on in Machine Data menu).

7. If starting with boundary, trench or border spreading:



Select type of boundary spreading and edge of the field (left / right), and switch on.

→ During spreading, the terminal shows the Work menu. All the settings required for spreading should be entered here.

→ The calculated data is stored for the current job.

### After use:



1. Close both shutters.



2. Switch off spreading discs.

3. Actuate tractor control unit *red* to stop the hydraulic fluid supply to the control block.



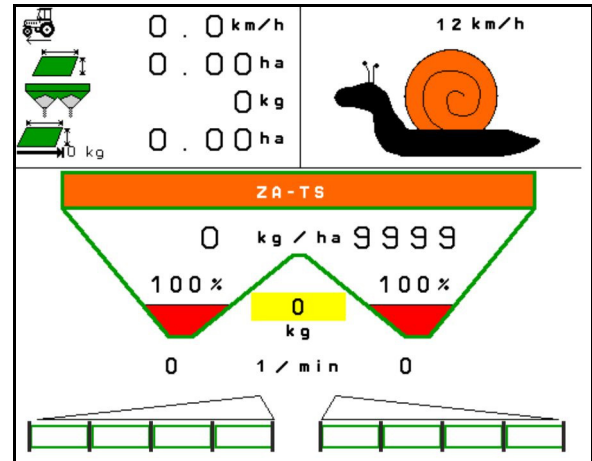
### 12.7.2.1 Procedure when spreading fine special spreading material




The fine special spreading material mode and the intended forward speed are displayed in the work menu.



For this purpose, in the fertiliser menu:

- select fine special spreading material.
- calibrate special spreading material



1. Select Work menu in the ISOBUS terminal.
2. Set the spreading disc speed (as specified in the setting chart).
3. Move off and open both shutters .
4. Reach the intended speed quickly (  ) and maintain this speed during the spreading.
5. ZG-TS:  Actuate the floor belt if necessary. Continue pressing the button until there is sufficient spreading material in the pre-chamber.



#### WARNING

##### Over-metering and under-metering with slug pellets.

The desired application rate will only be achieved when maintaining the speed entered. A proportional speed spread rate is currently not possible.

## 13 AUX-N multi-function sticks

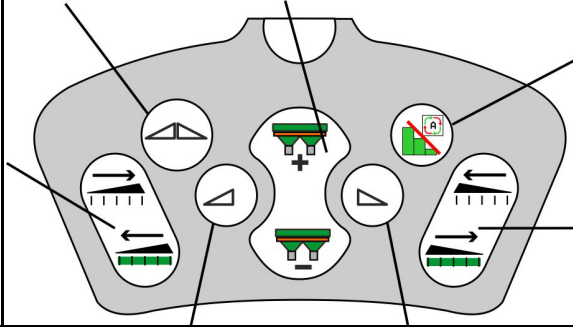


### AUX-N - Auxiliary Control

The implement computer supports the AUX-N standard. Therefore, the functions of the implement can be assigned to an AUX-N-compliant multi-function stick.

The AmaPilot+ and Fendt multi-function sticks are pre-assigned as a standard.

### Assignment of the Fendt multi-function stick

Open/close both shutters		Reduce/increase spread rate	
Switch on/off boom part width sections, left side			Switching the Section Control to manual/automatic
			Switch on/off boom part width sections, right side
Shutter left		Shutter right	

## 14 AmaPilot+ multi-function stick

The implement functions can be executed using the AmaPilot+.

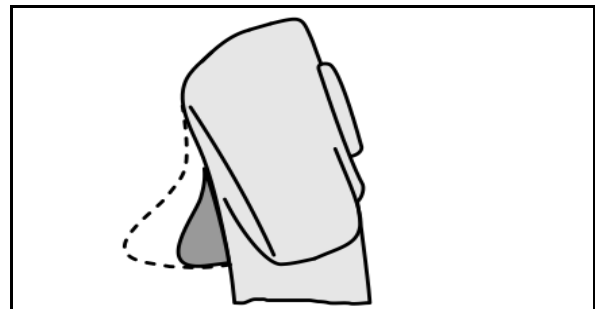
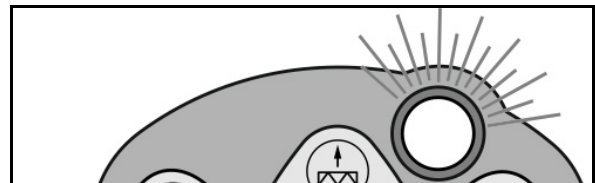
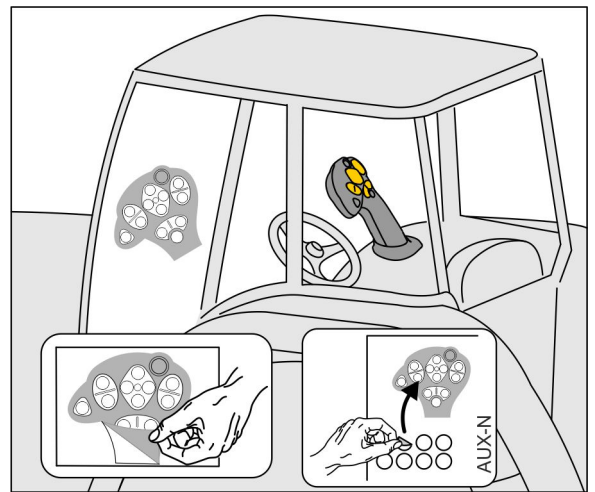
AmaPilot+ is an AUX-N control element with freely selectable button assignment.

A default button assignment is pre-configured for every Amazone ISOBUS implement.

The functions are spread over 3 levels and can be selected by pressing with your thumb.

In addition to the standard level, two other control levels can be switched.


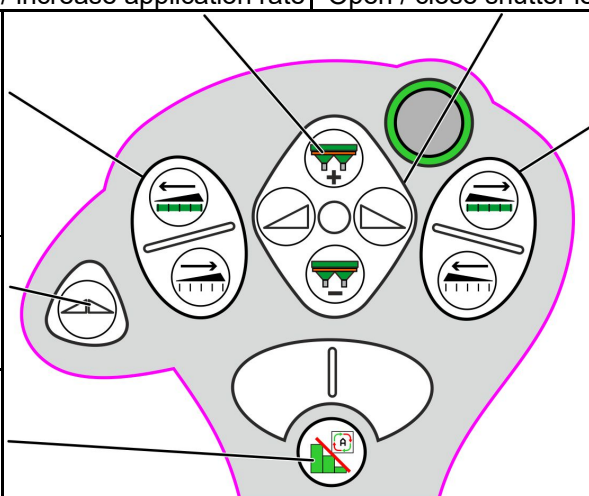

A sticker with the default assignment can be stuck in the cab. For a freely assigned key assignment, a new sticker can be applied over the default assignment.



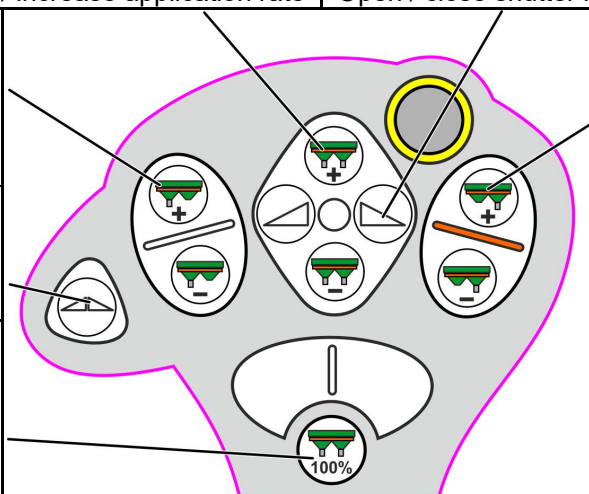
- Standard level,  
Illuminated button is green.
- Level 2 when trigger on the back is held,  
Illuminated button is yellow.
- Level 3 after pressing the illuminated button,  
Illuminated button is red.

# AmaPilot+ with fixed assignment / default assignment

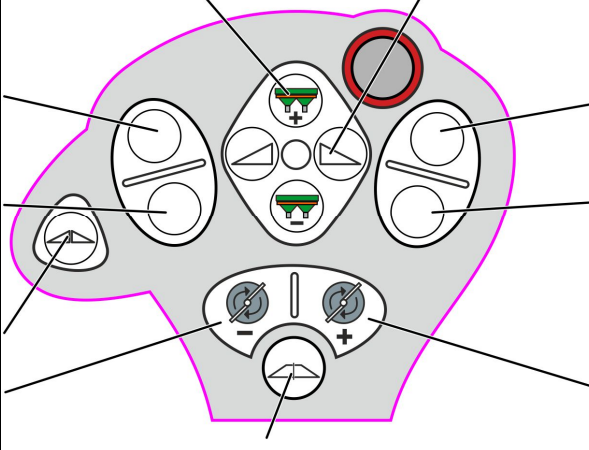
## Standard level, green

Reduce / increase application rate		Open / close shutter left, right	
 Switch on / off boom part width sections, left side		 Switch on / off boom part width sections, right side	
Open / close both shutters			
Switching the Section Control to manual/automatic			

## Level 2, yellow

Reduce / increase application rate		Open / close shutter left, right	
Reduce / increase application rate, left side		Reduce / increase application rate, right side	
Open / close both shutters			
Application rate to 100%			

## Level 3, red

Reduce / increase application rate		Open / close shutter left, right	
Gradually switch off boundary spreading function, left side		Gradually switch off boundary spreading function, right side	
Gradually switch on boundary spreading function, left side		Gradually switch on boundary spreading function, right side	
Application rate to 100%			
Reduce spreading width for boundary spreading		Increase spreading width for boundary spreading	
		Normal spreading on both sides	

## 15 Maintenance and cleaning



### WARNING

Perform maintenance and cleaning only with the spreading discs and agitator shaft drive switched off.

### 15.1 Cleaning



### DANGER

Do not reach into the outlet opening while operating the shutters! Risk of crushing!

To clean the fertiliser spreader, you must have the shutters open so the water and residual fertiliser can drain.

See Empty fertiliser hopper, page 38.

### 15.2 Notes on an update of the software

The settings and calibration values can be noted in the charts.



After resetting or an update of the software of the machine computer, the settings and calibration values must be re-entered.

#### Fertiliser menu

Name of the fertiliser				
Calibration factor				
Intended forward speed				
Set disc speed				
Spread disc				
Telescope vane				
Switch-off point				
Switch-on point				
Working width				
Special spreading materials				

#### Configure border spreading

Set disc speed				
Volume reduction				
Switch Auto TS				

#### Configure boundary spreading

Set disc speed				
Volume reduction				
Switch Auto TS				

#### Configure ditch spreading

Set disc speed				
Volume reduction				
Switch Auto TS				

## Table of Contents

### User profile

User name				
Fill level alarm limit				
Quantity increment				

### Configure key assignment

Page 1		Page 2	
Page 3		Page 4	

### Configure multi-function display

Line 1				
Line 2				
Line 3				
Line 4				

### Configure ISOBUS

UT Number				
Documentation				
TC number				
Switch SectionControl				
Set the switch points				

### Implement menu

Calibration method				
Fertiliser fill level				
Speed source				

### Configure the speed source

Speed source				
Wheel imp.				
Simulated speed				



### Setup/Implement settings

Spreader model				
----------------	--	--	--	--

#### Configure spreading disc speed

Hydraulic drive				
Control factor				

#### Calibrate shutter

Calibrate position left				
Calibration position right				

#### Configure scale

Weigh cell				
Parameter 1				
Parameter 2				

#### Configure Limiter/AutoTS

Limiter/AutoTS				
Normal spreading, left side				
Normal spreading, right side				
Bound. spread.left				
Bound. spread.right				

#### Configure delivery system adjustment

Electrical adjustment				
Calibrate position left				
Calibration position right				

#### Switch-on delay, switch-off delay

Switch-on delay				
Switch-off delay				

## 16 Problem

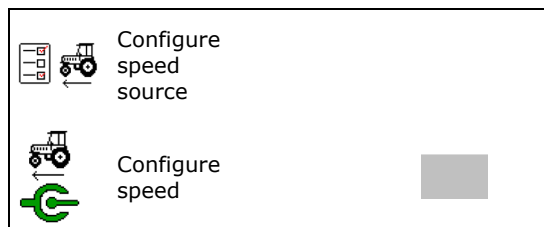
### 16.1 Failure of the speed signal from the ISO-bus

A simulated speed can be entered in the Machine Data menu as a source for the speed signal.

This allows continuing with spreading without a speed signal.

Proceed as follows to do so:

1. Enter simulated speed.
2. Maintain the simulated speed as you continue spreading.



### 16.2 Display on the control terminal

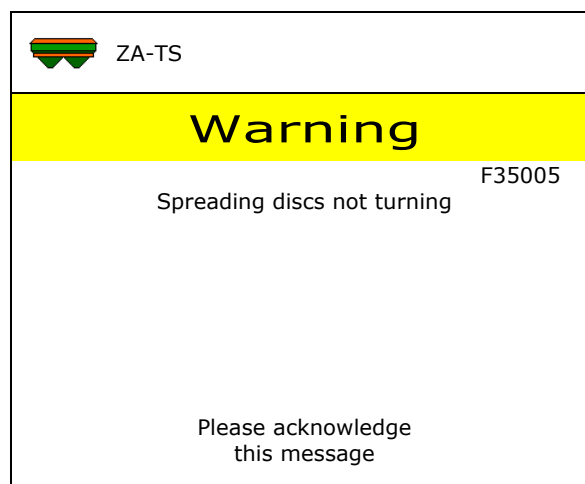
A message appears as:

- note
- warning
- alarm

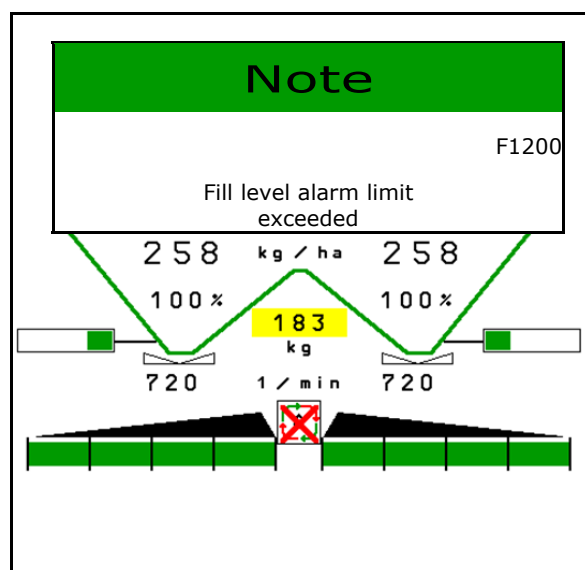
The following are displayed:

- the number of the fault
- a text message
- if applicable, the symbol of the respective menu

Warning/alarm:



Note:





## 16.3 Fault table

Number	Type	Cause	Remedial action
	Note	The spreader has not found the expected terminal on the ISOBUS and instead of that, has logged onto another terminal.	
F35002 F36800	Note	The fill quantity that has been weighed by the weigh cell is less than the alarm limit set.	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> <li>• Adapt the fill level alarm limit in the implement settings</li> </ul>
F35003	Alarm	The measuring value of the sensor on the left shutter does not change although the setting motor of the shutter has been switched on.	<ul style="list-style-type: none"> <li>• Eliminate any damage or interruptions on the cable connector to the setting motor.</li> <li>• Hang the shutter back into the setting motor after the calibration</li> <li>• Replace the defective setting motor (EA380 or EA379)</li> </ul>
F35004	Alarm	The measuring value of the sensor on the right shutter does not change although the setting motor of the shutter has been switched on.	<ul style="list-style-type: none"> <li>• Eliminate any damage or interruptions on the cable connector to the setting motor.</li> <li>• Hang the shutter back into the setting motor after the calibration</li> <li>• Replace the defective setting motor (EA380 or EA379)</li> </ul>
F35005	Warning	Hydro only: although the button for switching on has been pressed in the work menu, no speed can be measured on the spreading disc	<ul style="list-style-type: none"> <li>• Switch on the spreader hydraulic supply</li> <li>• Connect the hydraulic hoses correctly to the tractor</li> <li>• Replace defective wiring harness (no voltage at hydraulic valve)</li> <li>• Eliminate any damage or interruptions on the cable connector to the speed sensor.</li> <li>• Replace defective speed sensor</li> </ul>
F35006	Note		Close shutter
F35007 F36801	Note	The speed of the spreading disc deviates from the nominal speed set by at least 10%.	<ul style="list-style-type: none"> <li>• Adapt the nominal speed</li> <li>• For PTO drives: correct the speed of the PTO shaft</li> <li>• With hydro: increase the oil supply quantity of the tractor</li> </ul>
F35008 F36802	Note	ZG-TS only: when the shutter is open, the voltage of the angle sensor on the fill level flap in the metering chamber is greater than 2V for at least 15 seconds.	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> <li>• Ensure for the correct floor belt drive</li> </ul>

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F35009 F36803	Note	Left filling level sensor is not actuated	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> <li>• Eliminate the "fertiliser bridge" in the hopper using appropriate tools</li> <li>• Eliminate any damage or interruptions of the wiring</li> <li>• Replace defective filling level sensor</li> </ul>
F35010 F36804	Note	The weigh cell computer NI113 has marked the last weight evaluated as invalid. OR the weight deviates by more than 10 kg/s	<ul style="list-style-type: none"> <li>• Wait at least 10 seconds until the weight has settled.</li> <li>• Disconnect the spreader from the ISOBUS socket and reconnect again after 10 seconds.</li> <li>• Correct the weigh cell calibration</li> <li>• Replace defective weigh cell</li> <li>• Replace defective weigh cell computer NI113</li> </ul>
F35012 F36805	Note	As the online or offline calibration should have started, according to the weigh cell there is less than 500 kg in the hopper.	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> </ul>
F35013	Note	The work menu has been exit when the spreading discs were still switched on.	<ul style="list-style-type: none"> <li>• Switch off the spreading discs</li> </ul>
F35015	Note	When accessing the calibration menu, the left shutter was opened.	<ul style="list-style-type: none"> <li>• Close the left shutter in the work menu</li> </ul>
F35016	Note	The automatic mode in Section Control was switched on for the first time.	<ul style="list-style-type: none"> <li>• Note to read and acknowledge</li> </ul>
F35017	Warning	The signal of the hydraulic pressure sensor of the left spreading disc drive is lower than 0.5 V.	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the pressure sensor</li> <li>• Replace the defective pressure sensor (NH085)</li> </ul>
F35018	Warning	No messages was received from the weigh cell computer (NI113) for 2 seconds.	<ul style="list-style-type: none"> <li>• Rectify fault in the wiring between job computer (NI164(NI181) and weigh cell computer (NI113).</li> <li>• Replace defective weigh cell computer (NI113).</li> </ul>
F35019	Note	When accessing the calibration menu, one speed is available.	<ul style="list-style-type: none"> <li>• Stop the tractor</li> <li>• Set simulated speed = 0</li> </ul>
F35020	Note	The amount set in the calibration menu cannot be spread by the spreader.	<ul style="list-style-type: none"> <li>• Reduce the application rate</li> <li>• Reduce the speed</li> <li>-reduce the working width</li> </ul>
F35021	Note	"Slug pellets" was selected as a special spreading material in the fertiliser settings.	<ul style="list-style-type: none"> <li>• Note to read and acknowledge</li> </ul>
F35022	Note	The minimum fill level was not reached during the offline calibration	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> </ul>

F35024	Note	The TaskController has changed the value for the Section Control state from 1 to 0. Maybe the job was terminated, or the GPS reception has failed	<ul style="list-style-type: none"> <li>• Start job</li> <li>• Switch on Section Control from the terminal</li> <li>• Ensure that there is GPS reception</li> </ul>
F35025 F36806	Note	During the online calibration, the new calibration factor calculated was above 1.4 and below 0.6 five times	<ul style="list-style-type: none"> <li>• Remove the blockage on the shutter</li> <li>• Calibrate the fertiliser</li> <li>• Calibrate offline</li> <li>• Re-calibrate the weigh cell</li> <li>• Set the special spreading material, rice</li> </ul>
F35026	Note	User is trying to switch on Section-Control, but the die requirements have not been fulfilled.	<ul style="list-style-type: none"> <li>• Switch on spreading discs</li> <li>• Switch on the the terminal's Section Control</li> </ul>
F35027	Note	Calibration value is outside the limit	<ul style="list-style-type: none"> <li>• Check the value</li> </ul>
F35028	Warning	The weather station is not providing valid wind data.	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the weather station.</li> <li>• Replace defective weather station NH174</li> </ul>
F35029	Alarm	The voltage of the angle sensor on the cleaning hood is greater than 4.5 V or less than 0.5 V	<ul style="list-style-type: none"> <li>• Eliminate any damage of the wiring</li> <li>• Replace defective angle sensor</li> </ul>
F35030	Alarm	The voltage of the angle sensor on the cleaning hood is greater than 1.6 V	<ul style="list-style-type: none"> <li>• Close cleaning hood</li> <li>• Align the booms on the sensor correctly</li> <li>• Position the sensor correctly</li> </ul>
F35031	Warning	No messages are received by the drop-point system adjustment machine computer (NI125).	<ul style="list-style-type: none"> <li>• rectify the fault in the wiring between the job computer (NI164/NI181) and drop-point system adjustment machine computer (NI125).</li> <li>• Replace the defective drop-point system adjustment machine computer (NI125)</li> </ul>
F35032	Warning	The signal of the hydraulic pressure sensor of the right spreading disc drive is lower than 0.5 V.	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the pressure sensor.</li> <li>• Replace the defective pressure sensor (NH085)</li> </ul>
F35033	Note	During the calibration, the voltage at the angle sensor of the fill level flap in the metering chamber of the ZG-TS was greater than 2.0 V for 20 seconds	<ul style="list-style-type: none"> <li>• Before calibrating, refill with fertiliser</li> <li>• Make sure the oil is flowing</li> <li>• Ensure for the correct floor belt drive</li> </ul>
F35034	Note	During the offline calibration, the new calibration factor calculated was above 1.4 and below 0.6	<ul style="list-style-type: none"> <li>• Check the shutter for blockages</li> <li>• Repeat the calibration travel</li> <li>• Do not refill during the calibration travel</li> <li>• Calibrate the fertiliser</li> <li>• Re-calibrate the weigh cell</li> <li>• Set the special spreading material, rice</li> </ul>

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F35035	Warning	The desired application rate cannot be spread with the working width and speed	<ul style="list-style-type: none"> <li>• Reduce the speed</li> <li>• Reduce the application rate</li> <li>• Reduce the working width</li> </ul>
F35037	Note	The diagnosis menu has been called up	<input type="checkbox"/>
F35038	Note	The menu for emptying the hopper has been called up.	<input type="checkbox"/>
F35039	Note	The menu "Determine calibration factor" has been called up..	<input type="checkbox"/>
F35040	Note	The ISOBUS speed signal that has been selected in the menu "Configure source speed" is not available.	<ul style="list-style-type: none"> <li>• In the menu "Configure source speed", select a speed that is available or the simulated speed.</li> <li>• Correct the settings of the tractor ECU.</li> </ul>
F35041	Alarm	The ISOBUS Shortcut Button of the terminal has been pressed (e.g., On / Off button on the AMATRON or the mushroom-head button on the CCI terminal)	<ul style="list-style-type: none"> <li>• Let go of the Shortcut Button</li> </ul>
F35042	Alarm	The ISOBUS Shortcut Button of the terminal has been released (e.g., On / Off button on the AMATRON or the mushroom-head button on the CCI terminal)	<ul style="list-style-type: none"> <li>• Confirm the message</li> </ul>
F35044	Alarm	The hopper contains more than 300 kg and the oil pressure on the left hydraulic motor was too low for longer than 10 s during spreading operation.	<ul style="list-style-type: none"> <li>• Eliminate the cause for blockage on the left shutter.</li> </ul>
F35044	Warning	FlowCheck has measured a pressure that is too low in the flow of the left hydraulic motor over a longer period of time.	<ul style="list-style-type: none"> <li>• Check the left hopper for clogs.</li> <li>• Check fertiliser settings (spreading disc and telescopic setting)</li> </ul>
F35046	Note	One tractor ECU sends a speed signal > 0km/h to the ISOBUS whereas a simulated speed was set.	<ul style="list-style-type: none"> <li>• Select the correct speed in the menu "Configure source speed"</li> <li>• Deactivate the tractor ECU (e.g., 0 lmp/100 m)</li> </ul>
F35047	Warning	No impulses are received by the speed sensor on the left agitator when the electric agitator is switched on.	<ul style="list-style-type: none"> <li>• Remove the blockage in the agitator</li> <li>• Eliminate damage or interruptions on the cable to the agitator motor</li> <li>• Replace defective agitator motor (EA358)</li> </ul>
F35048	Warning	No impulses are received by the speed sensor on the right agitator when the electric agitator is switched on.	<ul style="list-style-type: none"> <li>• Remove the blockage in the agitator</li> <li>• Eliminate damage or interruptions on the cable to the agitator motor</li> <li>• Replace defective agitator motor (EA358)</li> </ul>
F35049	Warning	The signal of the angle sensor of the left shutter is less than 0.5 V.	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the angle sensor</li> <li>• Replace the defective angle sensor (NH115)</li> </ul>

F35050	Warning	The signal of the angle sensor of the right shutter is less than 0.5 V.	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the angle sensor</li> <li>• Replace the defective angle sensor (NH115)</li> </ul>
F35051	Warning	The signal from the path measurement system of the linear drive for the left limiter is smaller 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 (EA353)</li> </ul>
F35052	Warning	The signal from the path measurement system of the linear drive for the right limiter is smaller 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 (EA353)</li> </ul>
F35053	Warning	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	<ul style="list-style-type: none"> <li>• Remove blockage in the limiter</li> <li>• Eliminate damage or interruptions on the cable to the linear drive</li> <li>• Replace defective linear drive (EA353)</li> </ul>
F35054	Warning	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	<ul style="list-style-type: none"> <li>• Remove blockage in the limiter</li> <li>• Eliminate damage or interruptions on the cable to the linear drive</li> <li>• Replace defective linear drive (EA353)</li> </ul>
F35055	Warning	The signal from the path measurement system of the linear drive for the left inlet system position 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 (EA355)</li> </ul>
F35056	Warning	The signal from the path measurement system of the linear drive for the right inlet system 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 (EA355)</li> </ul>
F35057	Warning	Although the linear drive on the left inlet system is switched off, the voltage value of the path measurement system in this drive does not change	<ul style="list-style-type: none"> <li>• Eliminate the blockage of the inlet system adjustment</li> <li>• Eliminate damage or interruptions on the cable to the linear drive</li> <li>• Replace defective linear drive (EA355)</li> </ul>
F35058	Warning	Although the linear drive on the right inlet system is switched off, the voltage value of the path measurement system in this drive does not change	<ul style="list-style-type: none"> <li>• Eliminate the blockage of the inlet system adjustment</li> <li>• Eliminate damage or interruptions on the cable to the linear drive</li> <li>• Replace defective linear drive (EA355)</li> <li>• Replace defective F45 (EA355)</li> </ul>
F35059	Warning	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 (EA387)</li> </ul>
F35060	Warning	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 (EA387)</li> </ul>

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F35061	Warning	The sensor value of the linear drive for the left Auto TS vane does not change and does not have the required value	<ul style="list-style-type: none"> <li>• Switch the Auto TS again</li> <li>• Remove soiling from the spreading disc</li> <li>• Re-calibrate Auto TS</li> <li>• Eliminate damage or interruptions on the cable to the linear drive</li> <li>• Remove defective linear drive (EA375)</li> </ul>
F35062	Warning	The sensor value of the linear drive for the right Auto TS vane does not change and does not have the required value	<ul style="list-style-type: none"> <li>• Switch Auto TS again</li> <li>• Remove soiling from the spreading disc</li> <li>• Re-calibrate Auto TS</li> <li>• Eliminate damage or interruptions on the cable to the linear drive</li> <li>• Remove defective linear drive (EA375)</li> </ul>
F35063	Note	When using the mobile test rig, the position for the inlet system was calculated that was smaller than 0 or greater than 60.	<ul style="list-style-type: none"> <li>• check settings according to setting chart.</li> <li>• spreading again</li> <li>• contact your local service partner</li> </ul>
F35064	Note	The Section Control State changes from 1 to 0. Automatic part width section control has been deactivated by the spreader or terminal.	<ul style="list-style-type: none"> <li>• Switch on the spreading discs</li> <li>• Switch off the boundary and ditch spreading</li> <li>• Do not operate the spreader by hand when in automatic mode</li> <li>• Eliminate other faults (e.g., shutter sensor failed)</li> <li>• Exit the calibration or implement menu</li> </ul>
F35065	Warning	The signal from the angle sensor to the fill level flap in the metering chamber of the ZG-TS is less than 0.5 V.	<ul style="list-style-type: none"> <li>• Eliminate any damage or interruptions of the wiring</li> <li>• Replace defective angle sensor</li> </ul>
F35066 F36807	Note	Right filling level sensor is not actuated	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> <li>• Eliminate the "fertiliser bridge" in the hopper using appropriate tools</li> <li>• Eliminate any damage or interruptions of the wiring</li> <li>• Replace defective filling level sensor</li> </ul>
F35068	Note	Too much noise in the sensor signal or no CAN messages are received by the sensor.	<ul style="list-style-type: none"> <li>• Disconnect the implement plug for the spreader and reconnect</li> <li>• Replace the sensor</li> </ul>
F35069	Warning	Communication with the ArgusTwin sensors has been interrupted.	<ul style="list-style-type: none"> <li>• Eliminate any damage to the wiring</li> <li>• Replace defective ArgusTwin sensor</li> </ul>
F35070	Warning	Communication with the ArgusTwin sensors has been interrupted.	<ul style="list-style-type: none"> <li>• Eliminate any damage to the wiring</li> <li>• Replace defective ArgusTwin sensor</li> </ul>
F35071	Warning	FlowCheck has measured a pressure that is too low in the flow of the right hydraulic motor over a longer period of time.	<ul style="list-style-type: none"> <li>• Check the left hopper for clogs.</li> <li>• Check fertiliser settings (spreading disc and telescopic setting)</li> </ul>

F35072	Note	Changes have been made in the implement settings that require restarting the job computer.	
F35073	Warning	With automatic mode switched on, all of the part-width sections were located outside of the field boundary for longer than 10 seconds	
F35074	Warning	<ul style="list-style-type: none"> <li>The tilt was not transmitted by the scale computer.</li> <li>The tilt is precisely 0° for longer than 30 seconds</li> </ul>	<ul style="list-style-type: none"> <li>Eliminate damage or interruptions on the cable to the tilt sensor</li> <li>Eliminate damage or interruptions on the cable to the scale computer</li> <li>Replace defective tilt sensor (NH163)</li> <li>Replace defective weigh cell computer (NI205)</li> </ul>
F35077	Warning	The signal of the rear-left weigh cell is smaller than 4 mA.	<ul style="list-style-type: none"> <li>Remedy damage or breaks on the cable to the weigh cell</li> <li>Replace defective weigh cell</li> </ul>
F35078	Warning	The signal of the rear-right weigh cell is smaller than 4 mA.	<ul style="list-style-type: none"> <li>Remedy damage or breaks on the cable to the weigh cell</li> <li>Replace defective weigh cell</li> </ul>
F35079	Warning	The signal of the front-right weigh cell is smaller than 4 mA.	<ul style="list-style-type: none"> <li>Remedy damage or breaks on the cable to the weigh cell</li> <li>Replace defective weigh cell</li> </ul>
F35080	Warning	The speed is greater than 25 km/h and the spreading discs are rotating at more than 100 rpm	<ul style="list-style-type: none"> <li>Switch off the spreading discs</li> </ul>
F35081	Warning	'The spreading disc speed required for wind compensation exceeds the permissible maximum spreading disc speed..	<ul style="list-style-type: none"> <li>We recommend fertiliser spreading is stopped if the wind is too strong.</li> </ul>
F35082	Warning	Strong gusty wind detected..	<ul style="list-style-type: none"> <li>Check the strength of the gusts of wind. We recommend fertiliser spreading is stopped if the wind is too gusty.</li> <li>Check the weather station if there is no gusty wind</li> </ul>
F35083	Warning	'The fertiliser spreader's configuration limits have been reached. The wind effects can no longer be fully compensated.	<ul style="list-style-type: none"> <li>We recommend fertiliser spreading is stopped if the wind is too strong.</li> </ul>
F35084	Warning	Spreading disc TS10 is not supported by WindControl.	<ul style="list-style-type: none"> <li>Upgrade spreading disc to TS20 or TS30. Otherwise, operate the machine without WindControl.</li> </ul>

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F35085	Warning	The tractor ECU received a signal that the ignition has been switched off while the spreading discs were switched off and the speed was < 0.5 km/h.	
F35087	Warning	During the online calibration, the new calculated calibration factor was above 1.4 or below 0.6 several times	<ul style="list-style-type: none"> <li>• Check the shutter opening for blockage</li> <li>• Take the calibration factor from the setting chart</li> <li>• Perform offline calibration</li> </ul>
F35089	Note	The steering axle has not yet been calibrated.	<ul style="list-style-type: none"> <li>• Calibrate steering axle.</li> </ul>
F35090	Alarm	The sensor required to determine the wheel angle sends invalid values.	<ul style="list-style-type: none"> <li>• Eliminate damage or breaks on the cable to the wheel angle sensor.</li> <li>• Replace defective wheel angle sensor</li> </ul>
F35091	Alarm	The rotation speed sensor required for automatic steering has failed.	<ul style="list-style-type: none"> <li>• Eliminate damage or breaks on the cable to the turning speed sensor</li> <li>• Replace defective rotation speed sensor</li> </ul>
F35092	Alarm	The ZG job computer does not respond	<ul style="list-style-type: none"> <li>• Eliminate damage or breaks on the cable to the ZG job computer</li> <li>• Replace defective ZG job computer NI254</li> </ul>
F35093	Alarm	The centre position of the steering axis was not reached.	<ul style="list-style-type: none"> <li>• Check the controller for the stop and proportional valve</li> <li>• Ensure adequate oil supply</li> <li>• Check the running gear</li> <li>• Eliminate damage or breaks on the cable to the wheel angle sensor.</li> <li>• Replace defective wheel angle sensor</li> </ul>
F35094	Warning	The hopper contains less than 300 kg and FlowCheck reports that the pressure is too low on the left spreading disc drive	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> </ul>
F35095	Warning	The hopper contains less than 300 kg and FlowCheck reports that the pressure is too low on the right spreading disc drive	<ul style="list-style-type: none"> <li>• Refill with fertiliser</li> </ul>
F35096	Note	The weather station is not fully unfolded. The WindControl controller is temporarily interrupted	
F35098	Warning	The weather station's folding mounting plate is blocked.	<ul style="list-style-type: none"> <li>• Check for blockage or stiffness and remedy it</li> </ul>
F35099	Alarm	The position of the steering axle has changed without the controller.	<ul style="list-style-type: none"> <li>• Check the running gear and wheel angle sensor.</li> </ul>
F35100	Note	The scale adjustment function can only be performed if at least 500 kg are in the hopper.	



F35102	Warning	No messages were received from the left torque sensor for more than 5 seconds	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the torque sensor.</li> <li>• Replace gearbox with defective sensor</li> </ul>
F35103	Warning	No messages were received from the right torque sensor for more than 5 seconds	<ul style="list-style-type: none"> <li>• Eliminate damage or interruptions on the cable to the torque sensor.</li> <li>• Replace gearbox with defective sensor.</li> </ul>
F35104	Warning	The signal of the front-left weigh cell is smaller 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>
F35105	Warning	The signal of the front-left weigh cell is smaller 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>
F35106	Warning	The sensor for recording the position of the folding mounting plate is smaller than 0.5 V.	<ul style="list-style-type: none"> <li>• Eliminate damage or breaks on the cable to WindControl actuator.</li> <li>• Replace defective EA439 actuator</li> </ul>
F35107	Alarm	The recorded position of the steering axle does not change in spite of a controller	<ul style="list-style-type: none"> <li>• Check the controller for the stop and proportional valve</li> <li>• Ensure adequate oil supply.</li> <li>• Check the running gear</li> <li>• Eliminate damage or breaks on the cable to the wheel angle sensor.</li> <li>• Replace defective wheel angle sensor</li> </ul>
F35107	Note	The steering axle may only be calibrated at a standstill	
F35115	Note	The hopper can only be drained at a standstill when the spreading discs are powered off.	
F35116	Warning	The inlet system position required for wind compensation exceeds the adjustable maximum	<ul style="list-style-type: none"> <li>• We recommend fertiliser spreading is stopped if the wind is too strong.</li> </ul>
F35117	Warning	The calculated wind data is implausible.	<ul style="list-style-type: none"> <li>• Eliminate the stiffness in the fall protection</li> <li>• Check displayed wind data</li> <li>• Check the speed source of the fertiliser spreader</li> <li>• Replace defective weather station NH174</li> </ul>
F35118	Warning	The permissible travel speed was exceeded when adjusting the position of the folding mounting plate.	<ul style="list-style-type: none"> <li>• Reduce the speed below the specified numerical value when adjusting the folding mounting plate.</li> </ul>
F35119	Warning	The permissible travel speed was exceeded when adjusting the position of the folding mounting plate.	<ul style="list-style-type: none"> <li>• Reduce the speed below the specified numerical value when adjusting the folding mounting plate.</li> </ul>

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F35138	Warning	FlowControl has a much smaller calibration factor set on the left than on the right.	<ul style="list-style-type: none"> <li>• Check the fertiliser settings (spreading disc, telescope type, telescope position)</li> <li>• Check the condition of the spreading discs. Replace worn parts.</li> <li>• Calibrate the shutter</li> </ul>
F35139	Warning	FlowControl has a much smaller calibration factor set on the right than on the left.	<ul style="list-style-type: none"> <li>• Check the fertiliser settings (spreading disc, telescope type, telescope position)</li> <li>• Check the condition of the spreading discs. Replace worn parts.</li> <li>• Calibrate the shutter</li> </ul>
F35201	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 1 (NH177)</li> </ul>
F35202 – F35214	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 2 (NH177)</li> <li>• Replace ArgusTwin sensor at position 1 (NH177)</li> </ul>
F35203	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 3 (NH177)</li> <li>• Replace ArgusTwin sensor at position 2 (NH177)</li> </ul>
F35204	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 4 (NH177)</li> <li>• Replace ArgusTwin sensor at position 3 (NH177)</li> </ul>
F35205	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 5 (NH177)</li> <li>• Replace ArgusTwin sensor at position 4 (NH177)</li> </ul>
F35206	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 6 (NH177)</li> <li>• Replace ArgusTwin sensor at position 5 (NH177)</li> </ul>
F35207	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 7 (NH177)</li> <li>• Replace ArgusTwin sensor at position 6 (NH177)</li> </ul>

F35208	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 8 (NH177)</li> <li>• Replace ArgusTwin sensor at position 7 (NH177)</li> </ul>
F35209	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 9 (NH177)</li> <li>• Replace Argus sensor at position 8 (NH177)</li> </ul>
F35210	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 10 (NH177)</li> <li>• Replace ArgusTwin sensor at position 9 (NH177)</li> </ul>
F35211	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 11 (NH177)</li> <li>• Replace ArgusTwin sensor at position 10 (NH177)</li> </ul>
F35212	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 12 (NH177)</li> <li>• Replace ArgusTwin sensor at position 11 (NH177)</li> </ul>
F35213	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 13 (NH177)</li> <li>• Replace ArgusTwin sensor at position 12 (NH177)</li> </ul>
F35214	Warning	The ArgusTwin sensor has reported an error or no more messages are being received from this sensor.	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Replace ArgusTwin sensor at position 14 (NH177)</li> <li>• Replace ArgusTwin sensor at position 13 (NH177)</li> </ul>
F35214 – F32228	Warning	During the no-load measurement of the Argus sensor, there is constant noise	<ul style="list-style-type: none"> <li>• Disconnect the power supply of the spreader and reconnect</li> <li>• Install the ArgusTwin sensor at a different position.</li> </ul>
F36809	Note	A boundary spreading mode has been activated for which ClickTS must be switched on on the left.	

## Table of Contents

F36810	Note	A boundary spreading mode has been activated for which ClickTS must be switched on on the right.	
F36811	Note	Boundary spreading has been switched off or a boundary spreading mode has been activated for which ClickTS must be switched off on the left.	
F36812	Note	Boundary spreading has been switched off or a boundary spreading mode has been activated for which ClickTS must be switched off on the right.	
F36815	Note	'A boundary spreading function is activated and a shutter was opened.	





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