

Junkkari



JUNKKARI W600/700

ISOBUS
MANUAL

1 JUNKKARI ISOBUS ECU TECHNICAL SPECIFICATIONS

The Junkkari ISOBUS ECU is programmed for the 3724 control unit manufactured by Epec Oy. The ISOBUS functionality level is TC-GEO.

1.1 FUNCTIONS, JUNKKARI W600 AND W700

1. Driving speed (km/h)
2. Surface area counter
 - The controller includes two resettable surface area counters that are shown on the main screen. In addition, a total surface area counter, which cannot be reset, is located behind the PIN code.
3. Tramline marker
 - Both symmetrical and asymmetrical tramlines can be produced.
4. Bout marker
 - Can be used as an automated function so that the marker always changes side when the coulters are lifted/lowered.
 - In manual operation, the selected bout marker side is always lowered when the coulters are lowered.
5. Pause
 - When this button is activated, the function disables the lifting/lowering sensor.
 - This function can be used if the coulters need to be lifted additionally for some reason and the rhythm of the tramline counter does not want to be changed.
 - Activate the pause function before lifting the coulters additionally and reactivate the counter by pressing the same button after the coulters have been lowered normally.
6. Fertiliser rate remote adjustment
 - The fertiliser rate (kg/ha) can be adjusted from the controller; the desired adjustment can be selected between 1 and 99%. By default, the adjustment is 10%.
7. Seed rate remote adjustment
 - The seed rate (kg/ha) can be adjusted from the controller; the desired adjustment can be selected between 1 and 99%. By default, the adjustment is 10%.
8. Wing hopper level sensors ON/OFF
 - If small seeds are seeded from the wing hoppers alone, the wing hopper level sensors can be turned off.
9. Pole lift
 - If the bout marker needs to be lifted while the coulters remain in the seeding position, you can activate the pole lift function.
10. Half-width seeding
 - With the coulters up, the machine's left or right coulters can be locked to stop them from lowering to the seeding position. In this case, the working width is 3.5 m.
 - With the coulters down, the machine's left or right coulters can be locked to stop them from raising. In this case, the working width is 3.5 m.

11. Wing locks

- With the wings in the transport position, the left or right side can be locked to stop it from lowering.
- With the wings down, the left or right side can be locked to stop it from raising.

12. Precision seeding

- The controller is equipped with an ISOBUS TC-GEO function.
- The machine's seed and fertiliser rate can be adjusted on a location-specific basis by using a pre-defined task. This requires that the position data is sent from the tractor to the CAN bus.

1.2 ALARMS, WARNINGS, INDICATOR LIGHTS AND BUTTONS

1. Wing hopper level sensor indicator lights

- The controller's display includes an indicator light for all four wing hoppers. If the material in the hopper does not cover the level guard, the indicator light will be red. The level sensors are located at the outer ends of the hoppers to ensure that all metering devices receive seeds or fertiliser.
- All four indicator lights should light up red when the wings are lowered. Rotate the wing screws with the hydraulics until all four red lights turn off (usually 10–20 s). You can now start normal seeding.

2. Hopper screw indicator light

- The hopper screw indicator light is red if the hopper screw is not turning.

3. Feed shaft speed difference warning light

- If the speeds of the left and right seed/fertiliser shaft differ by more than 10 per cent, the warning light turns on. The fertiliser and seeds have separate indicator lights.

4. Wing hopper level sensors ON/OFF

- If the wing hopper level sensors are turned off, the yellow "Alarms OFF" icon is displayed.

5. Pole lift activation button

- The indicator light's lock turns red when pole lifting is activated.

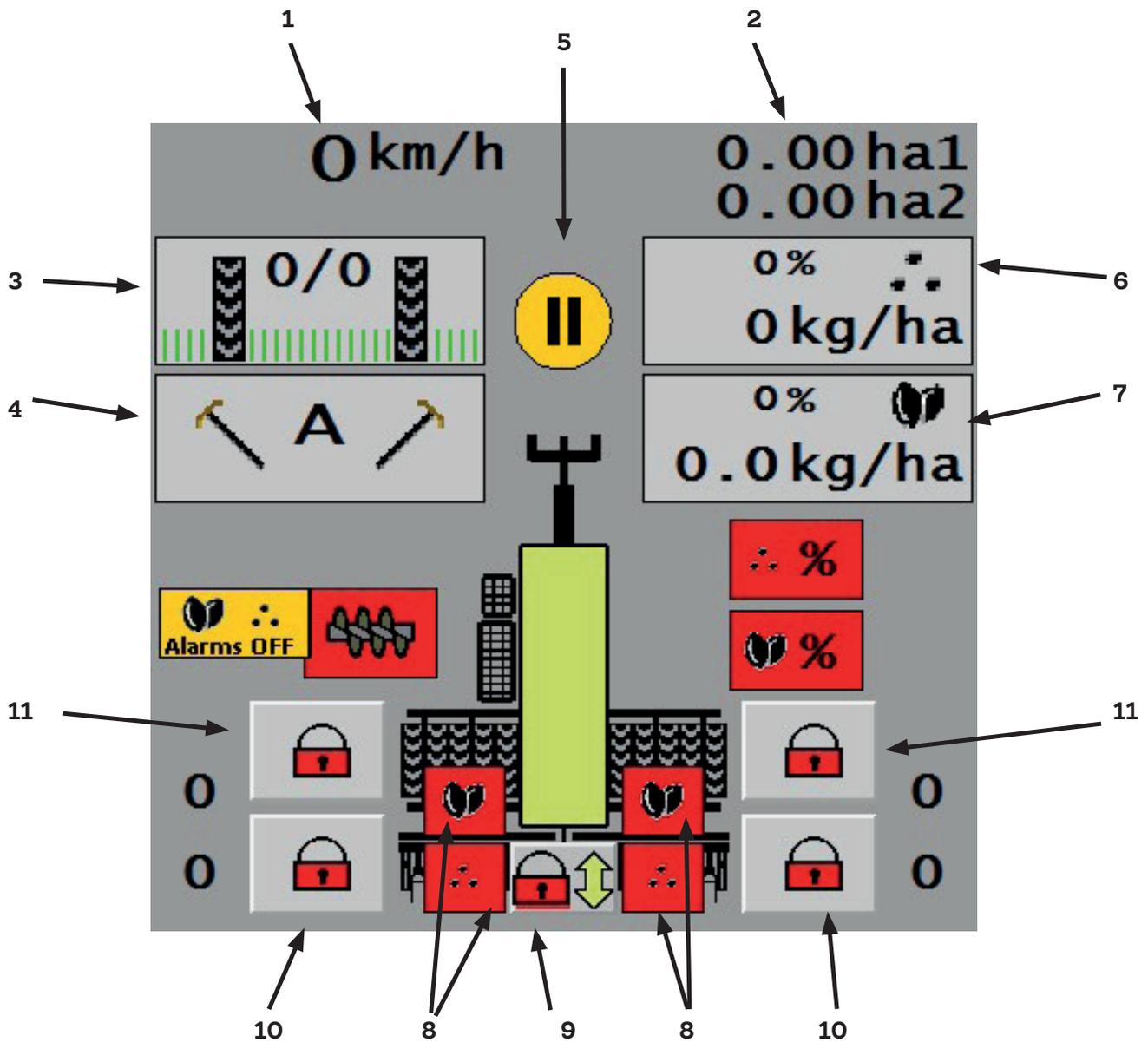
6. Half-width seeding activation

- The indicator light's lock turns red when half-width seeding is activated. The left and right side have separate activation buttons and indicator lights.

7. Wing lockout buttons

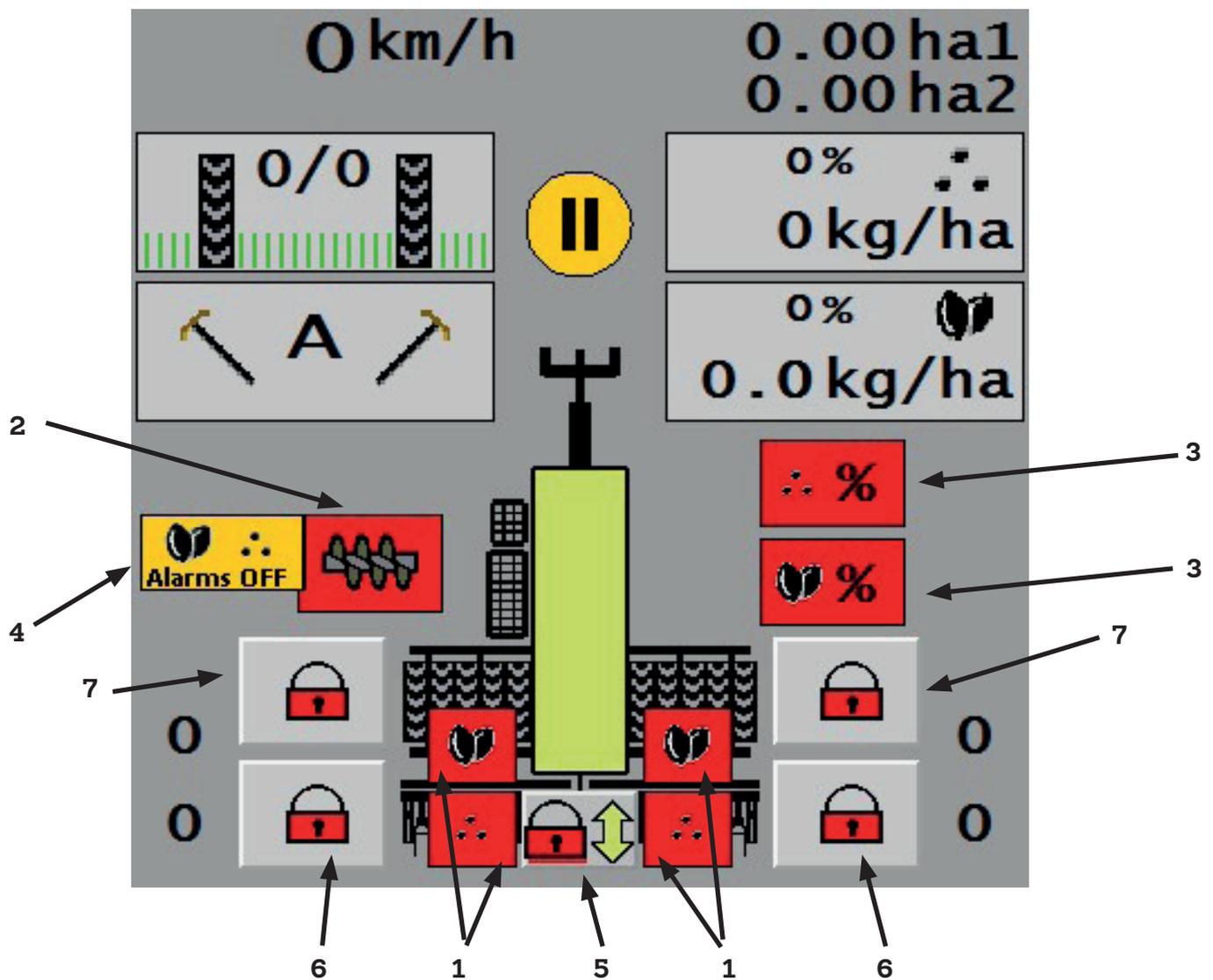
Note! If the seed drill has its own joystick-operated hydraulic valve block, functions 5, 6 and 7 are available on the joystick buttons.

1.3 DISPLAYED FUNCTIONS



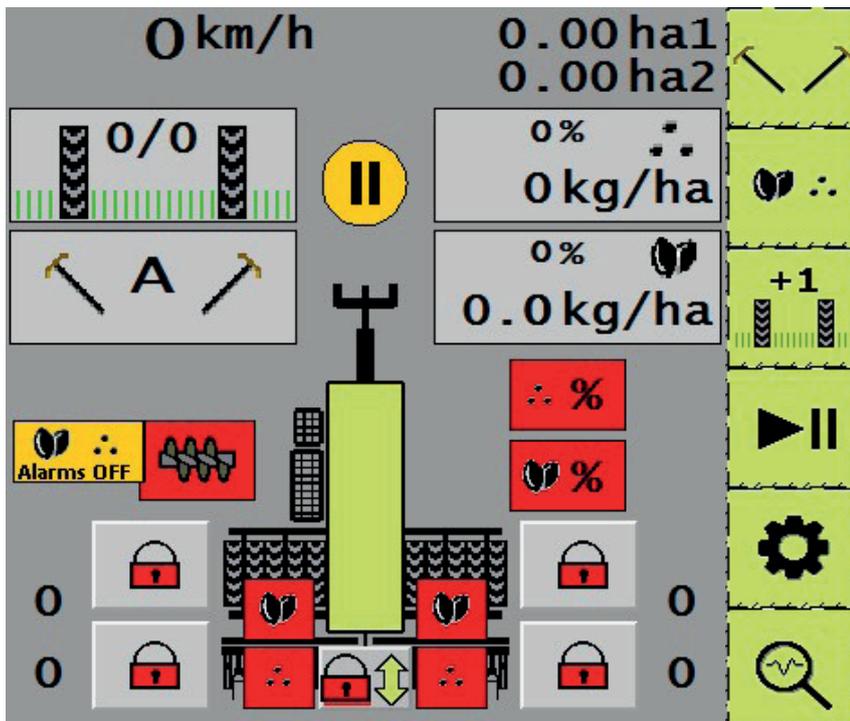
1. Driving speed
2. Surface area counters
3. Tramlines
4. Bout marker
5. Pause
6. Fertiliser remote adjustment
7. Seed remote adjustment
8. Wing hopper level sensors
9. Pole lift
10. Half-width seeding
11. Wing locks

1.4 DISPLAY ALARMS, WARNINGS, INDICATOR LIGHTS AND BUTTONS



1. Wing hopper level sensors
2. Hopper screw
3. Fertiliser and seed shaft speed difference
4. Wing hopper level sensors OFF
5. Pole lift
6. Half-width seeding
7. Wing lockout

1.5 FRONT PAGE BUTTONS



Bout marker menu 2.5.1

Fertiliser/seed hopper menu 2.5.2.

Tramline rhythm change 2.5.3

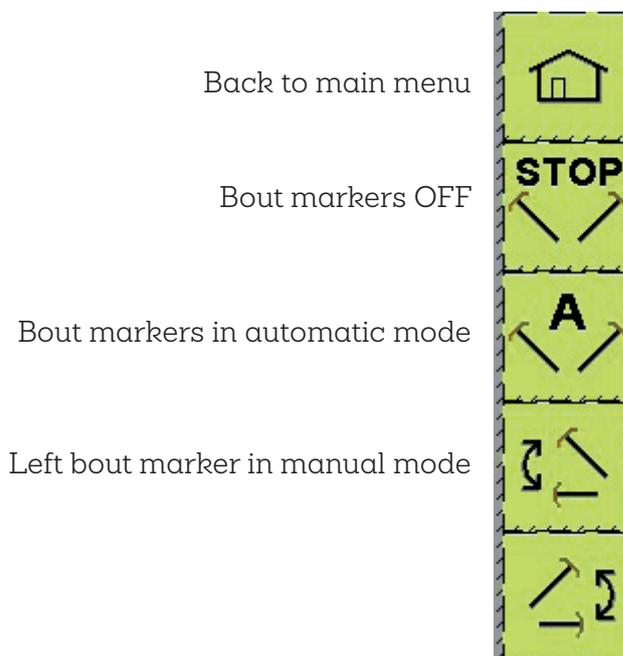
Pause ON/OFF 2.5.4

Settings 2.5.5.

Diagnostics screen 2.5.6

1.5.1 BOUT MARKER MENU

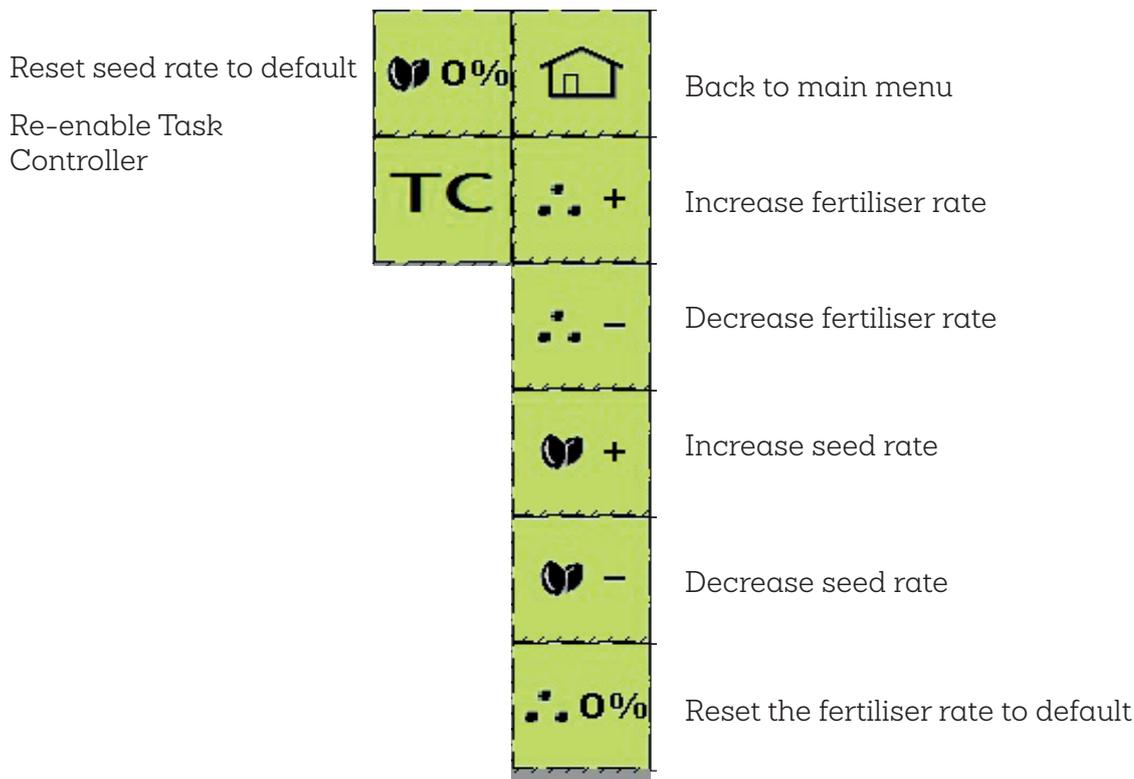
Please note that 2.5.1 is only displayed if the machine is equipped with bout markers.



When automatic function is selected, the bout marker icon shows the letter “A”. Then use the manual operation buttons to select the side where the bout marker should be lowered first. To disable automatic function, press the automation button again. If you wish to use the bout markers manually, select left or right. The selected bout marker will then activate when the coulters are raised or lowered.

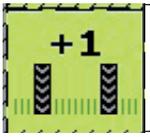
1.5.2 FERTILISER/SEED ADJUSTMENT MENU

Note that icon 2.5.2 is only displayed if the machine is equipped with electrical remote control for seeds and/or fertiliser.



1.5.3 TRAMLIN RHYTHM CHANGE

Note that icon 2.5.3 is only displayed if the machine is equipped with tramline switches.

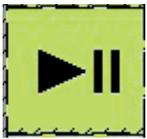


Tramline rhythm change

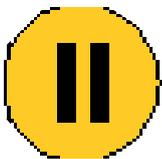
The +1 button increases the counter figure by one. Note that when the display shows two of the same number, e.g. "3/3", this indicates symmetrical tramlines.



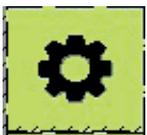
1.5.4 PAUSE ON/OFF



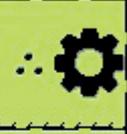
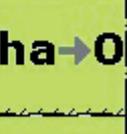
When the pause button is pressed, i.e., the coulter lifting/lowering sensor is disabled, the yellow pause icon is shown on the main screen.



1.5.5 SETTINGS



The Settings button opens the settings menu with the following functions:

	Back to main menu
	Fertiliser calibration and step adjustment % 2.5.5.2
	Seed calibration and step adjustment % 2.5.5.3
	Tramline settings 2.5.5.4
	Area counter reset 2.5.5.5
	Factory reset, PIN required

1.5.6 WING HOPPER LEVEL SENSORS ON/OFF



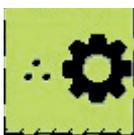
Press the Alarms button to disable the wing hopper alarms (the main screen shows the yellow “Alarms OFF” icon).

This function is used when small seeds are seeded from the wing hoppers alone. The wing hoppers’ capacity is 21 litres/metre (feed and return side).



1.5.7 FERTILISER CALIBRATION AND STEP ADJUSTMENT %

Note that icons 2.5.5.2 and 2.5.5.3 are only displayed the machine is equipped with electrical remote control for seeds and/or fertiliser.

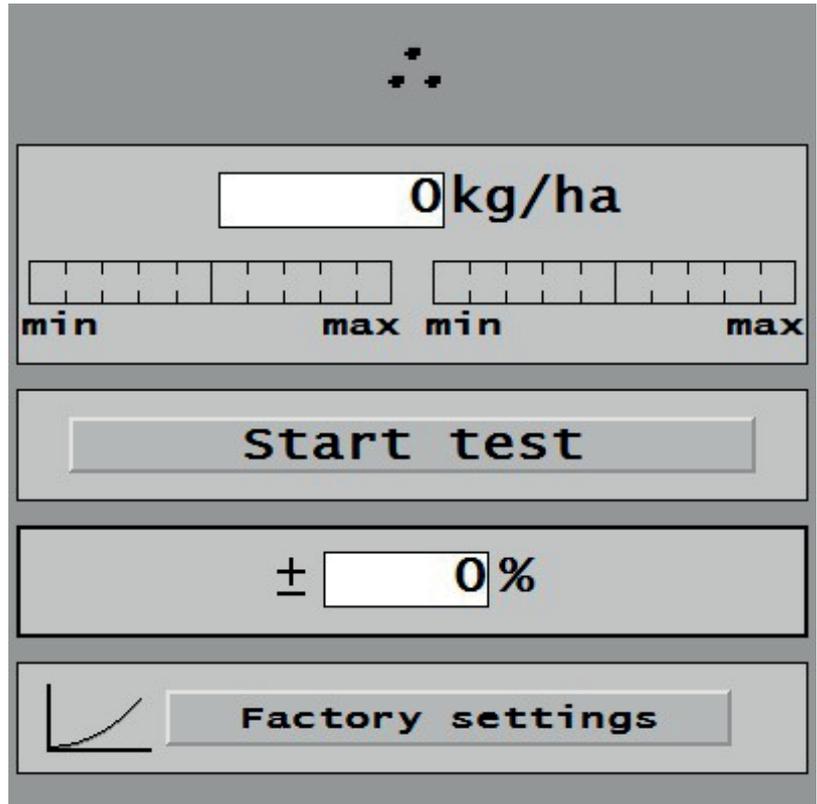


Fertiliser calibration:

1. Set the target kg/ha.

3. Press Start Test to set the cylinders to the default position for the calibration.

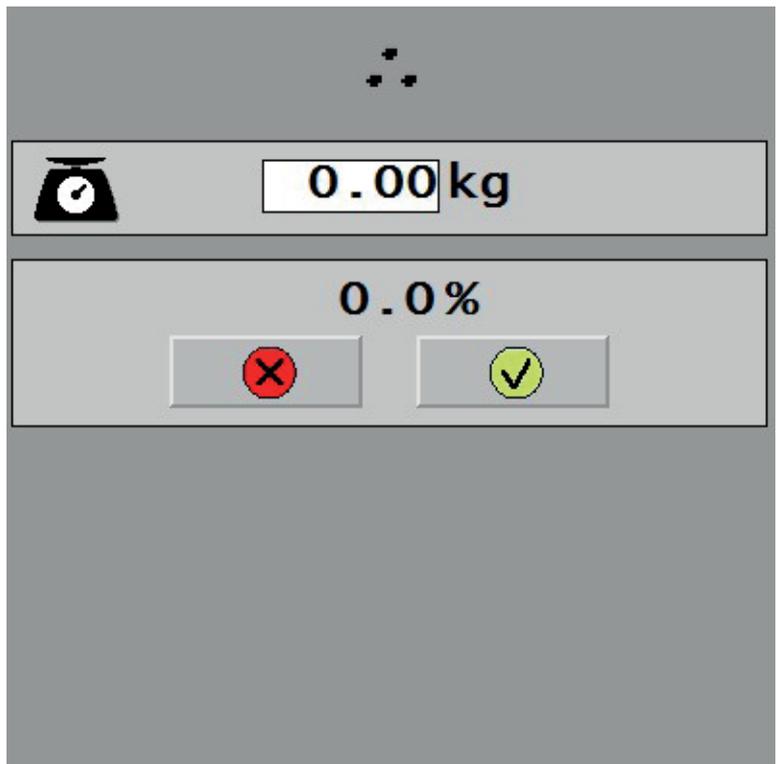
2. Set the target stepping, 1–99%.



Press the Start button to open the menu for entering the calibration result. Calibration requires the fertiliser gearboxes located on the left and right side of the machine to be rotated for 10 revolutions (equal to one are). Add the left and right wing calibration results together and enter the value in the “kg” field. Press the green “V” button to save the result.

4. Input the calibration result.

5. Save the results by pressing the green V button



Once you have saved the rotation test results, the adjustment cylinder will make any corrections. The correction needed is shown as a percentage. After this, carry out one or two rotation tests to ensure that the results correspond to the desired kg/ha volume. When the adjacent menu reads 0–4%, the cylinder is located accurately and you can start seeding.

1.5.8 SEED CALIBRATION AND STEP ADJUSTMENT %

The seed calibration is carried out by rotating the seed side’s gearboxes. Steps 1–5 of the calibration are otherwise completely identical to the fertiliser side calibration.



1.5.9 TRAMLINE SETTINGS

Note that icon 2.5.5.4 is only displayed if the machine is equipped with tramline switches.

Press the tramline settings button to select between marking modes: symmetrical, asymmetrical left or asymmetrical right. This menu also includes the tramline rhythm settings.

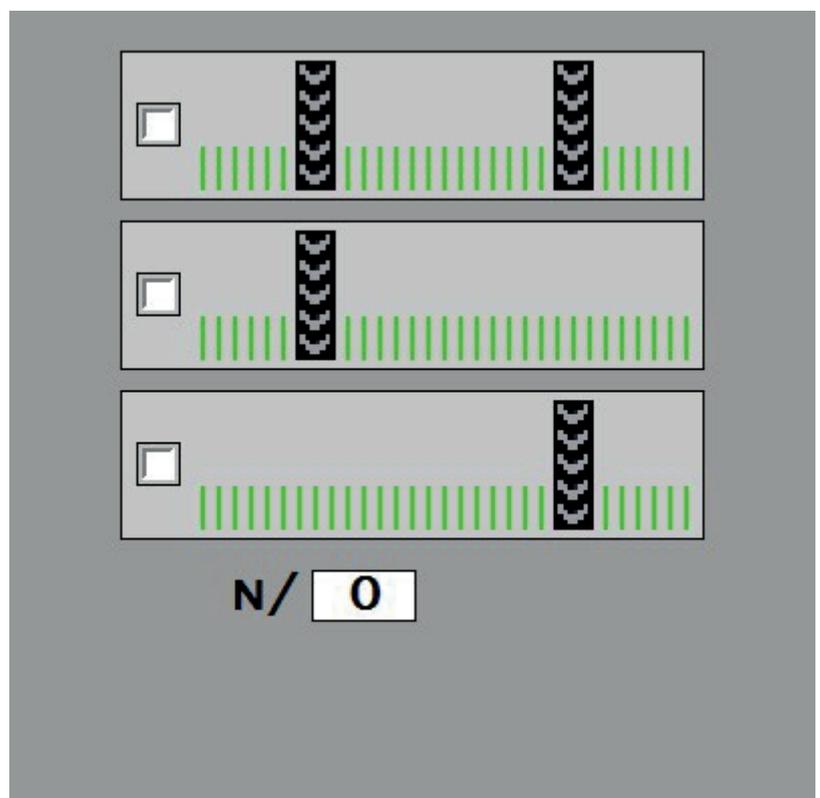


Symmetrical tramline marking

Asymmetrical tramline marking, left

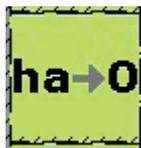
Asymmetrical tramline marking, right

Tramline rhythm selection



1.5.10 AREA COUNTER RESET

Press the area counter reset button to enter a menu where you can reset the ha1 and ha2 counters.



Back to main menu

ha1 surface area counter reset

ha2 surface area counter reset



1.5.11 DIAGNOSTICS SCREEN

The diagnostics screen button opens a dashboard for inspecting the status of different functions and sensors.



	Left	Right
Coulter	1	1
Tramline	1	1
Bout marker	1	1
Fert pulses	0	0
Seed pulses	0	0
Area calc	active	

Hopper screw speed pulses
 Driving speed pulses, left
 Seed speed pulses, left
 Fertiliser speed pulses, left

Seed feed shaft speed difference
 Fertiliser feed shaft speed difference
 Driving speed pulses, right
 Seed speed pulses, right
 Fertiliser speed pulses, right

COULTER: "1" means coulters up

TRAMLINER: "1" means tramlines are being made

BOUT MARKER: "1" means the bout marker is down

FERT PULSE: "1" means the fertiliser feed shaft is working

SEED PULSE: "1" means the seed feed shaft is working

AREA CALC: area calculation is active when the coulters are down and speed pulses are received

