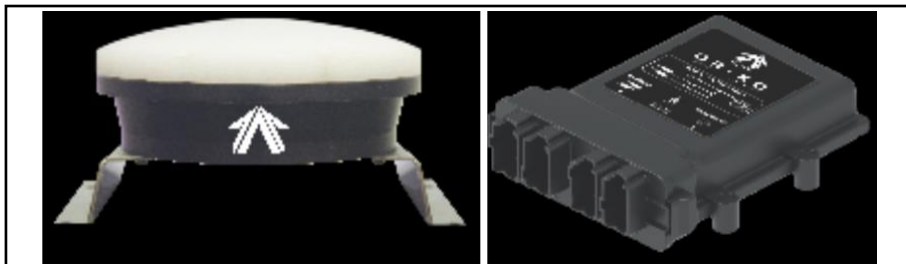




OrKo – RATE CONTROL SYSTEM

USER MANUAL

V.1.01-EN



Model No. ROTA | ORKO-001
Serial No. TKG SXX125G02100S10XXX

Entering Rate Control (OrKo) Menu

Press the “Rate Control” button (**Figure-1/A-1**) on the left menu of the ROTA application to enter the OrKo section.

If no OrKo device is detected, a message will display: “Searching for Devices to Pair” (**Figure-1/A-2**).

Device Selection: If an OrKo device is nearby, the screen will show the logo, name, model, and serial number (**Figure-1/B**). If there are multiple OrKo devices, select the desired one via buttons (**Figure-1/B-1**), then press (**Figure-1/B-2**) to connect.

After entry, the “Rate Control Application” screen (**Figure-1/C**) appears.

Required Inputs:

(**Figure-1/C-1**) Crop pattern.

(**Figure-1/C-2**) Type of job (operation).

(**Figure-1/C-3**) Calibrated content (fertilizer, etc.).

(**Figure-1/C-4**) Target application rate (kg/da or kg/ha)

(**Figure-1/C-5**) Total material loaded into the tank.

(**Figure-1/C-6**) “Start Work” button to begin operation.

(**Figure-1/C-7**): Selection field for the electronic prescription assigned to the relevant field via rotaportal.com.tr when using OrKo.

An active internet connection on the tablet is required to use this feature.

If only a standard speed-based operation will be performed, no selection should be made in this field.



Figure-1A

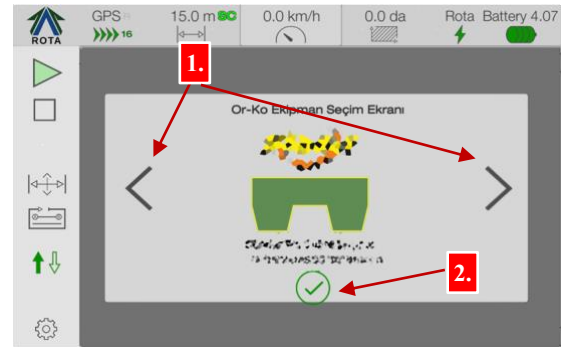


Figure-1/B

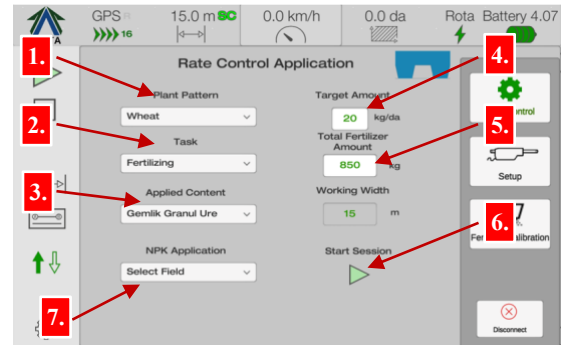


Figure-1/C

OrKo Application Menu

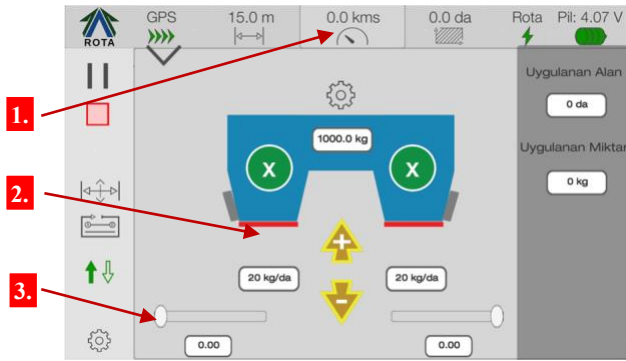


Figure-2/A

Idle Mode:

If the tractor is stationary, speed shows as 0.0 km/h (Figure-2/A-1). No operation is done and no fertilizer is applied.

Active Mode:

Once the tractor exceeds the preset “OrKo minimum speed”, Orko is automatically activated:

Fertilizer begins dispensing (Figure-2/B-3)

Displays: current fertilizer output, scale openings, remaining tank quantity (Figure-2/B-2), total amount and area applied (Figure-2/B-6)

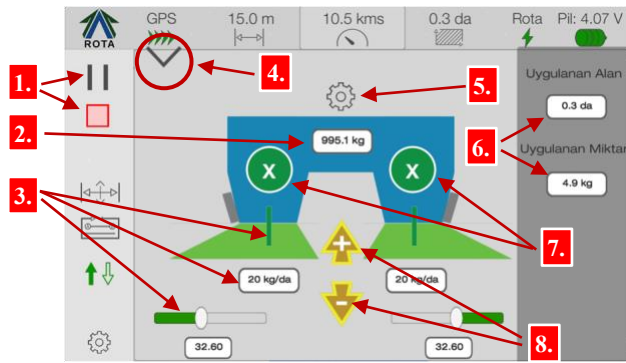


Figure-2/B

Section Control:

Manually disable/enable right/left sections using “X” buttons (Figure-2/B-7 & Figure-2/C-2).

When applying by the border of the field and almost driving on the border, one of the sections can be turned off with this feature avoiding excessive fertilizer application.

Adjustments (turning on/off a section) update cumulative calculations and on-screen coloring if a ROTA MDS license is active.

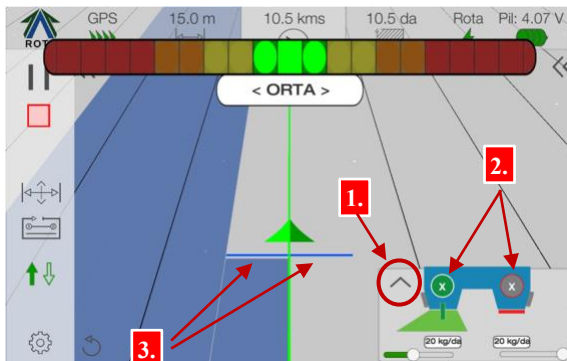


Figure-2/C

Screen Selections:

With an active ROTA MDS license:

Press the “down arrow” (Figure-2/B-4) to switch views (Figure-2/C)

View areas of applied fertilizer zones as colored (Figure-2/C-3) and still turn on/off sections. (Figure-2/C-2)

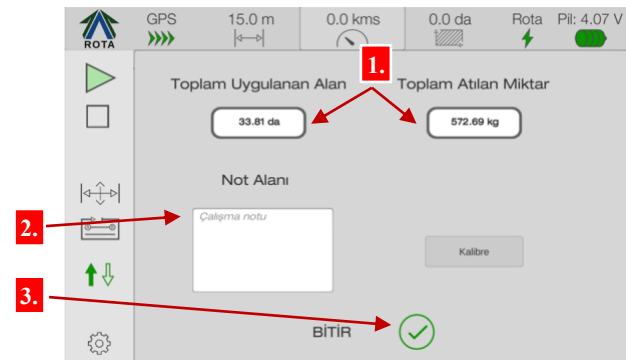


Figure-2/D

Press the “down arrow” (Figure-2/C-1) to return back to the OrKo Application screen.

Adjusting Target Rate:

Adjust target rate during application using the yellow up/down arrows (Figure-2/B-8)

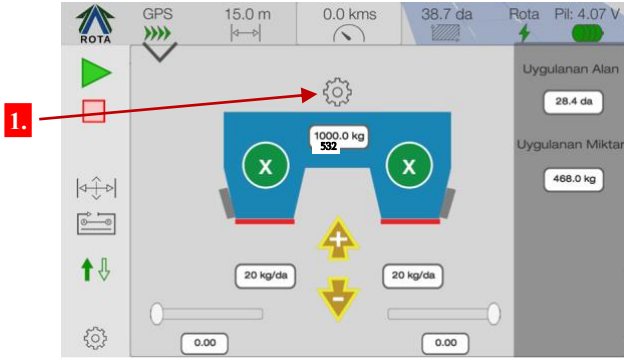


Figure-3/A



Figure-3/B

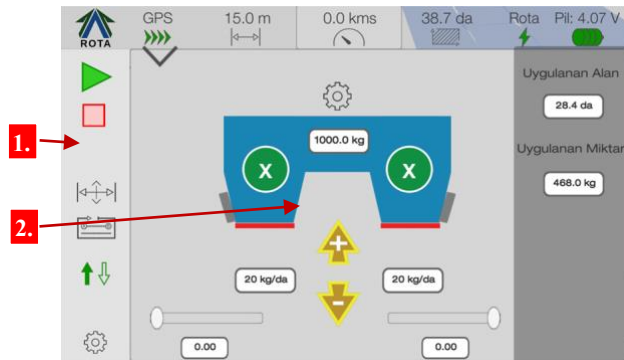


Figure-3/C

Finishing Application:

You must complete the application once the entire field has been treated. Stop the tractor and press the stop button “□” (Figure-2/B-1)

After stopping the application the summary screen (Figure-2/D) is displayed with the following information:

Total area applied and fertilizer used (Figure-2/D-1).

Field notes (any significant information that needs recording) input area (Figure-2/D-2).

Press “Finish” (Figure-2/D-3) to save the session.

Refilling:

Incase refilling is required, stop the tractor, press pause “II” (Figure-2/B-1)

Drive to refill location and refill.

Press (Figure-3/A-1) refill icon and enter the added amount manually (Figure-3/B-1), tank level updates accordingly (Figure-3/C-2)

Once returned (arrived) at the left off location by following the painted areas, Resume work by pressing “Start” (Figure-3/C-1).

Automatic Section Control:

The “SC” indicator (Figure-3/C-3) shown in the upper left corner of the screen indicates the status of automatic section control. If the indicator is **green**, automatic section control is **enabled**.

If the indicator is **light gray**, automatic section control is **disabled**. To enable or disable automatic section control, go to **General Settings** and toggle the “Automatic Section Control” option.

If automatic section control is enabled and a **ROTA MDS license** is active, the system will automatically switch sections on and off during application in overlapping areas.

The overlap detection distance can be adjusted in General Settings under “OrKo overlap distance.” The value entered here represents a distance in meters.

Additionally, automatic section control determines whether a section should be turned off based on a certain overlap percentage threshold. This value is set to **80% by default**, but it can be adjusted in General Settings under “OrKo overlap percentage.”

 IMPORTANT:

As this value decreases, the risk of leaving untreated areas increases.

Installation:

Selecting Motor:

Choose the right or left actuator via icons (**Figure-4/A-1**). Press the “X” button and when the motor is active it will turn green and the icon becomes “✓”.

Activating Setup Mode:

Press “Start” (**Figure-4/A-2**). When setup mode is on the icon turns green and the button changes to “Stop” (**Figure-4/C-2**)

Key Setup Steps:

- Set scale range (**Figure-4/A-4**)
- Set working width (**Figure-4/A-5**)

Motor Setup:

Motors control the gate openings. You must reset “Fully Open” and “Fully Closed” values (**Figure-4/B-7**)

- Ensure fully closed shows 0 and fully open 4096
- Use reset icons (**Figure-4/A-3**)

Operate motors via “Open”, “Close”, “Stop” buttons (**Figure-4/B-8**)

- Visually confirm max opening and closing via scale
- Press “Save Fully Open” when fully open
- Press “Save Fully Closed” when fully closed

After setup:

- Press “Save” (**Figure-4/A-6**)
- Then press “Stop” (**Figure-4/C-2**)

Final Confirmation:

- Enter a scale value in (**Figure-4/C-10**), press “GO”

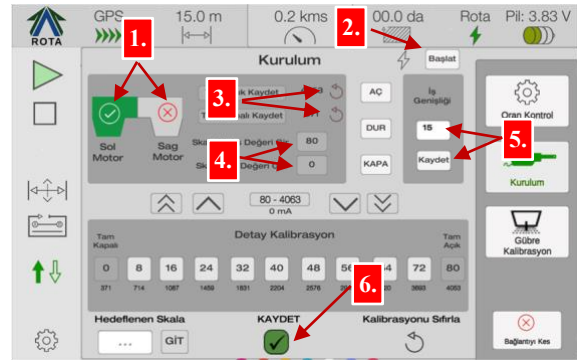


Figure-4/A

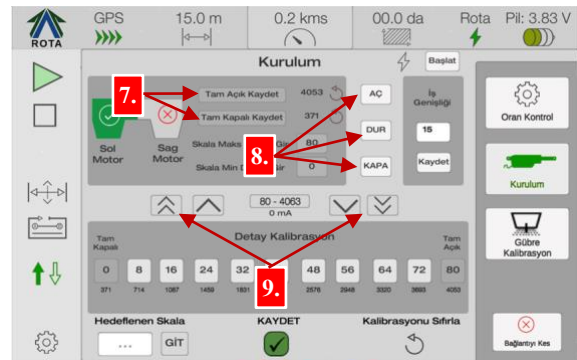


Figure-4/B

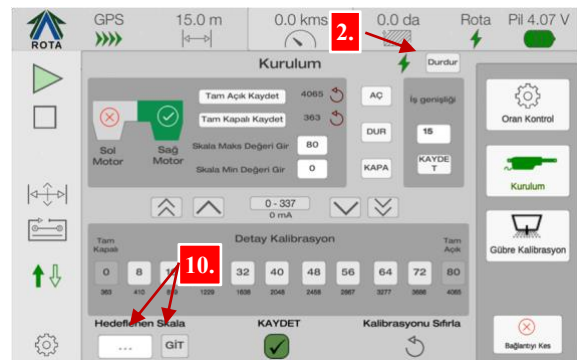


Figure-4/C

- If the physical scale moves accordingly, setup is confirmed

You can test these values individually for the right or left motor. To do this, use the visual selector in (**Figure-4/A-1**) to toggle between right and left sides before performing the test.

IMPORTANT: 2 additional points require careful attention:

1. In the setup menu (**Figure-4/A-4**), be sure to enter the scale range values and verify they are correct. For example, if your fertilizer spreader's scale ranges from 0 to 80, make sure the same

range is reflected in the setup screen. If not, revise the values accordingly, press the “Save” button (**Figure-4/A-6**), and then press the “Stop” button (**Figure-4/C-2**).

2. The working width (equipment width) entered in the setup screen (**Figure-4/A-5**) must match the actual mechanical working width defined by the manufacturer. This width refers to the area covered by the spreader and can only be changed mechanically by adjusting components like spinning discs and changing some physical settings. Modifying this value in the software **DOES NOT** change the physical spreading width. Make sure to manually enter the correct, mechanically adjusted working width into the working width field (**Figure-4/A-5**) during setup.

Fertilizer Calibration

IMPORTANT NOTES:

1. Remove **distribution discs** before calibration. Never start operation without removing the discs.
2. Fertilizer spreader must be mounted to the tractor, leveled, and set at correct height (e.g., 80 cm) with correct shaft speed (e.g., 540 rpm)
Fertilizer calib. NOT PERFORMED in this way, will result INACCURATE field applications.
3. One of the key points to consider before starting calibration is ensuring that the fertilizer tank on the side to be calibrated is at least half full. (ie. On a 1,000 kg capacity fertilizer spreader, if the left side is to be calibrated, load at least 5 bags (~250 kg) of fertilizer on the left compartment; if it's the right side, load them on the right.)
This ensures that the calculated flow factor reflects real operational conditions as closely as possible.
4. Use a digital scale (10g sensitivity, ≥ 1000 kg capacity)

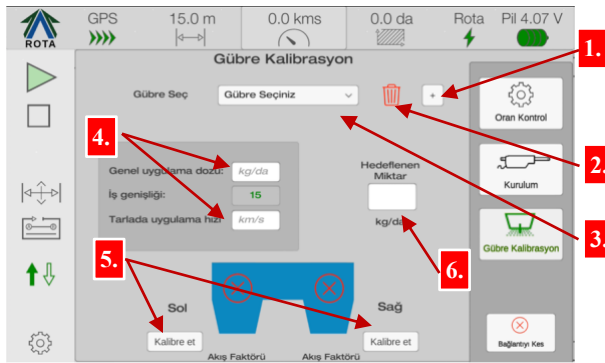


Figure-5/A

Steps:

- Add (Figure-5/A-1) or Select (Figure-5/A-3) fertilizer
- Enter:
 - Fertilizer name (e.g., "IGSAS URE") (Figure-5/B-7)
 - Contents (Figure-5/B-8)
 - Save (Figure-5/B-9)



Figure-5/B

Calibration:

- Select the fertilizer (Figure-5/C-10)
- Enter the dose and working speed during your general operations and planned operations for this fertilizer (Figure-5/A-4) This important for the calibration to be more precise.
- Enter the target discharge weight (kg) for the system to dispense (Figure-5/A-6)
- Start calibration by pressing "Calibrate" (right/left side separately) (Figure-5/A-5)
- System opens scale to the necessary level and starts pouring fertilizer (Figure-5/D-11)
- During operation The system displays the accumulated amount and displays the dispensed amount (Figure-5/D-12)



Figure-5/C

- When target dose is reached, system closes the scale and the final cumulative amount is shown (**Figure-5/E-14**)

- Weigh the real (physically) discharged amount and enter this value (**Figure-5/E-13**)

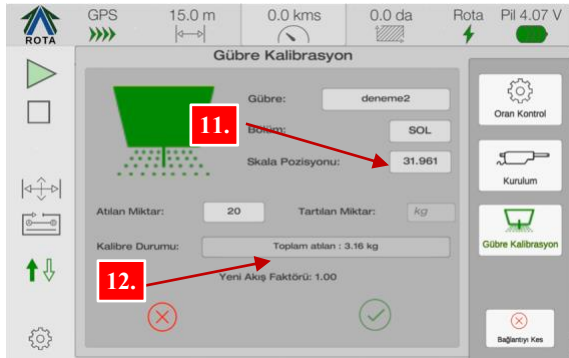


Figure-5/D

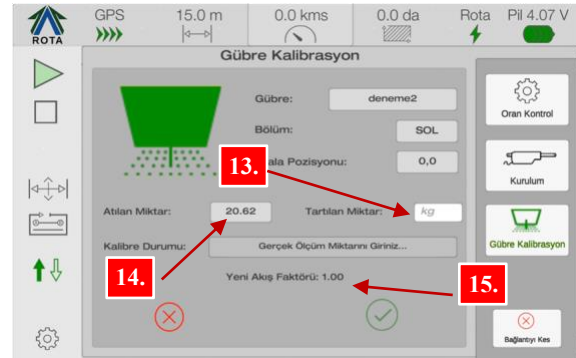


Figure-5/E

- Press update to recalculate flow factor (**Figure-5/E-15**)
- After 3–4 iterations, deviation between the real discharged amount and the systems cumulative discharged amount should fall within $\pm 300g$ → calibration is complete

Delete Fertilizer:

- Select the fertilizer you want to delete (**Figure-5/C-10**)
- Press the “delete” icon (**Figure-5/C-16**) and confirm this step.