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> Mammotion LUBA 3 AWD 5000 Robot Lawn Mower Instruction Manual

## Mammotion LUBA 3 AWD 5000

# Mammotion LUBA 3 AWD 5000 Robot Lawn Mower Instruction Manual

Model: LUBA 3 AWD 5000S

## 1. INTRODUCTION

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The Mammotion LUBA 3 AWD 5000 is an advanced robotic lawn mower designed for efficient and precise lawn care. It integrates cutting-edge Tri-Fusion Navigation technology, combining 360° LiDAR, NetRTK, and Dual-Camera AI Vision for superior positioning and obstacle avoidance. With its All-Wheel-Drive system, the LUBA 3 AWD 5000 can handle challenging terrains and slopes, providing a consistently manicured lawn.



Figure 1: Mammotion LUBA 3 AWD 5000 Robot Lawn Mower.

## 2. SAFETY INFORMATION

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Always read and understand all safety instructions before operating the Mammotion LUBA 3 AWD 5000. Keep hands and feet away from the cutting blades. Ensure children and pets are clear of the mowing area during operation. Do not operate the mower if any parts are damaged or missing. Disconnect power before performing any maintenance or cleaning.

## 3. WHAT'S IN THE BOX

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Your Mammotion LUBA 3 AWD 5000 package includes the following items:

- 1 x LUBA 3 AWD 5000 Robot Lawn Mower
- 1 x Extra Set of Blades
- 1 x Charging Station
- Other Accessories (power supply, pegs, hex key, screwdriver)
- 1 x Product Guide

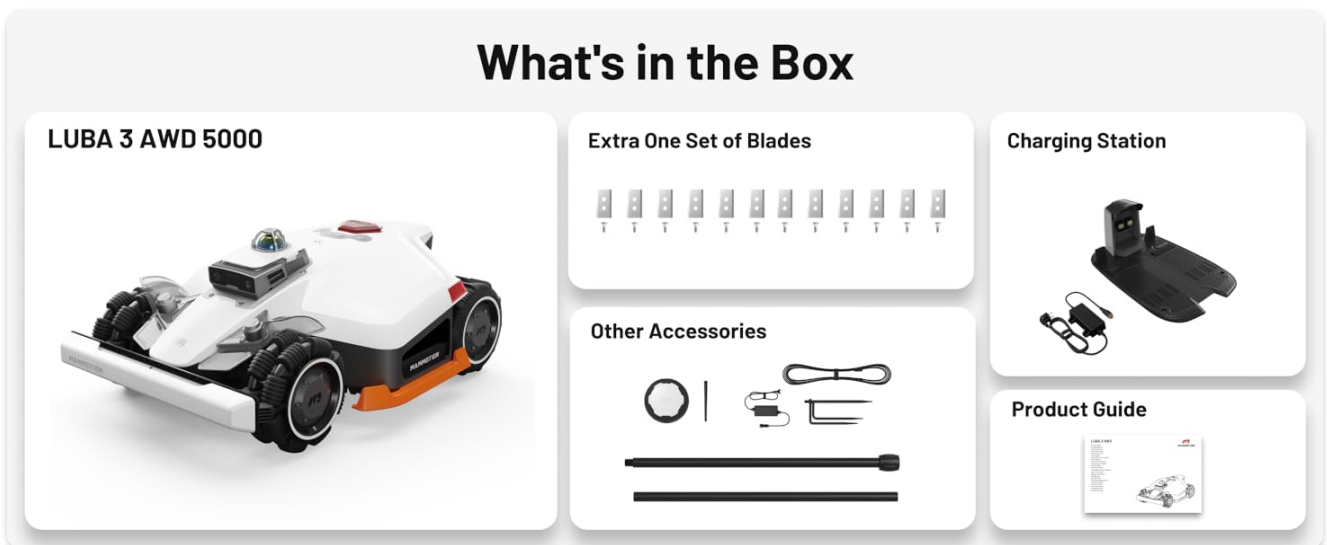


Figure 2: All components included in the Mammotion LUBA 3 AWD 5000 package.

## 4. SETUP

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Setting up your LUBA 3 AWD 5000 is designed to be straightforward. The mower utilizes NetRTK technology, eliminating the need for a physical RTK station in regions like the UK and Europe, as corrections are delivered via 4G or Wi-Fi. For other regions, an RTK station with a pole may be included.

### 4.1 Charging Station Installation

Place the charging station in a suitable location, ideally away from the main lawn area to prevent grass overgrowth around it. Connect the power supply to the charging station. The RTK reference station lead, if present, will be capped off if not required for your region.

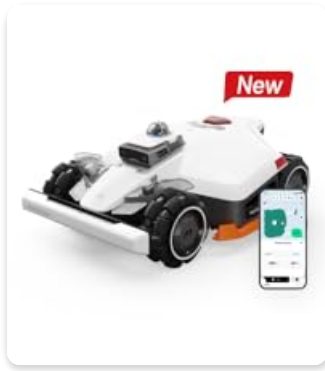


Figure 3: The charging station for the LUBA 3 AWD 5000.

## 4.2 Initial Mapping

The quick start guide provides detailed instructions for initial setup and mapping your lawn. The mower's camera and LiDAR module are pre-installed, simplifying the assembly process compared to previous models. Use the provided hex key and screwdriver for attaching the front bumper and side guards.

Video 1: Official Mammotion LUBA 3 AWD LiDAR Robotic Lawn Mower overview, demonstrating key features and setup components.

## 5. OPERATING INSTRUCTIONS

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The LUBA 3 AWD 5000 offers advanced features for autonomous and precise lawn mowing.

### 5.1 Tri-Fusion Navigation Technology

The mower utilizes a combination of 360° LiDAR, NetRTK, and Dual-Camera AI Vision for unparalleled navigation and obstacle detection.

- **360° LiDAR:** Provides a sweeping 360° horizontal and 59° vertical view with a range of up to 230 ft (70m), creating a real-time point cloud for precise yard mapping.
- **NetRTK:** Delivers enhanced accuracy for seamless navigation across your lawn.
- **Dual-Camera AI Vision:** The upgraded AI processor enables rapid object recognition and intelligent response, identifying over 300 obstacle types and calculating safe paths.



Figure 4: The 360° LiDAR system provides comprehensive terrain mapping.



Figure 5: The AI Vision system detects and avoids over 300 types of obstacles.

### 5.2 All-Wheel-Drive Performance

Equipped with four independent motors, the LUBA 3 AWD can climb slopes up to 80% (38.6°) and navigate uneven terrain with ease. Its adaptive suspension system allows it to overcome curbs, roots, and thresholds up to 50mm high without getting stuck.



Figure 6: The All-Wheel-Drive system allows the mower to handle slopes up to 80%.

### 5.3 Intelligent Path Planning & Multi-Zone Management

Optimize mowing passes with intelligent coverage to minimize missed spots. Choose from various patterns like perimeter-only, zigzag, checkerboard, or adaptive zigzag. The mower supports up to 50 mowing zones and allows you to define no-go areas for protection.

## Intelligent Path Planning

Intelligent coverage optimizes mowing passes to minimize missed spots and overlaps



Figure 7: Intelligent path planning ensures efficient and complete lawn coverage.

### 5.4 Cutting System

Two high-torque 165W motors with 6-blade discs automatically adjust speed and power based on grass density. The rechargeable 15Ah lithium battery provides up to 215 minutes of runtime, covering up to 500m<sup>2</sup>/h. Cutting height is adjustable from 1.0" to 2.7".

## 165W Powerful Cutting Motor

Three Blade Speed



Figure 8: The powerful 165W cutting motors ensure efficient grass cutting.



Cutting height  
**1-2.7 in**



Cynodon dactylon

Zoysia Grass

Fine Fescue

Figure 9: The cutting height can be adjusted between 1.0 and 2.7 inches.

## 5.5 App Control & Additional Features

Manage your LUBA 3 AWD 5000 via the dedicated mobile app. Features include:

- **Rain Detection:** Automatically stops mowing tasks when rain is detected.
- **Anti-Theft Protection:** Enhanced security features to protect your mower.
- **IPX6 Waterproof:** Ensures durability and resistance to water exposure.
- **DropMow Feature:** Allows for temporary mowing tasks on unmapped lawns or spot mowing outside existing map borders.
- **Smart Battery Management:** Enables off-peak charging and custom charging limits to prolong battery life.



Figure 10: Control and monitor your mower using the intuitive mobile application.

## 6. MAINTENANCE

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Regular maintenance ensures optimal performance and longevity of your LUBA 3 AWD 5000.

### 6.1 Cleaning

Use the provided stiff cleaning brush to remove grass clippings and debris from under the mower deck. Ensure the mower is powered off and the safety key is removed before cleaning.

### 6.2 Blade Replacement

The package includes an extra set of blades and screws. Refer to the product guide for detailed instructions on how to safely replace the cutting blades.

### 6.3 Battery Care

Utilize the smart battery management features in the app to optimize charging cycles and extend battery life. Consider enabling off-peak charging to reduce energy costs and improve battery health.

## 7. TROUBLESHOOTING

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If you encounter any issues with your LUBA 3 AWD 5000, refer to the following common troubleshooting tips:

- **Mower Stuck:** If the mower gets stuck, check the app's mowing report for the last known location and any error messages. Manually clear any obstructions.
- **Incomplete Mowing Task:** If a task is interrupted, you may need to restart it from 0% completion in the app, as resuming from a specific percentage is not currently available.

- **Navigation Issues:** Ensure your Wi-Fi or 4G signal is strong for optimal NetRTK performance. Verify that no-go zones are correctly mapped for areas with obstacles or ditches.
- **Firmware Updates:** Regularly check the app for firmware updates to ensure your mower has the latest features and bug fixes.

## 8. SPECIFICATIONS

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Feature	Specification
Brand	Mammotion
Model Number	LUBA 3 5000S
Power Source	Battery Powered
Material	Plastic
Color	White
Item Weight	19.35 Kilograms
Product Dimensions	27.2"D x 21"W x 11"H
Cutting Width	400 Millimeters
Operation Mode	Automatic
Minimum Adjustable Cutting Height	1 Inches
Maximum Adjustable Cutting Height	2.7 Inches
Assembly Required	No

## 9. WARRANTY AND SUPPORT

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Mammotion offers a **3-year warranty** for the LUBA 3 AWD 5000. Additionally, **24/7 Lifetime Customer Support** is available to assist you with any queries or issues.

### 9.1 Contact Support

You can reach Mammotion customer support via:

- Email
- Live Chat
- Phone Call

## 3 Year Warranty



Email



Live Chat



Call

\*24/7 Lifetime Customer Support

Figure 11: Mammotion offers a 3-year warranty and comprehensive customer support.