

LUBA 3 AWD

1500 / 3000 / 5000 / 10000

INSTRUCTIONS

Original version 1.0 12/2025



MAMOTION



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Unless expressly stated otherwise, this manual is intended solely as a user guide, and all statements and information contained herein do not constitute any form of warranty.

Intended use

The Mammotion mower is designed for domestic lawn care and is not intended for commercial use.

Hahn & Sohn

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1 Safety instructions

IMPORTANT

BEFORE USING THE ROBOT, PLEASE READ THIS MANUAL CAREFULLY IN ITS ENTIRETY, KEEP IT FOR FUTURE REFERENCE AND DO NOT DISCARD IT

1.1 General safety instructions

1. Before using the robot, carefully read and understand all instructions.
2. Before using the mower for the first time, cut the grass to a maximum height of 10 cm.
3. Only use genuine parts and accessories recommended by Mammotion with the robot.
4. Never allow children, persons with reduced physical, sensory or mental capabilities, or a lack of experience and knowledge, or persons who are not familiar with these instructions, to use the robot. The age of the operator may be restricted by local regulations.
5. DO NOT allow children to move around near the robot or play with it whilst it is in operation.
6. DO NOT use the robot in areas where people are unaware of its presence.
7. When manually controlling the robot using the Mammotion app, always walk – never run. Take care on slopes and maintain good posture and balance. When manually controlling the robot, you assume full responsibility for it.
8. Do not sit or stand on the robot, the adapter, the cables or the charging base. This may cause damage and void the warranty.
9. DO NOT touch moving parts, such as the mowing disc, blades and wheels, until all movement has completely stopped.
10. If you are using the robot in public areas, place warning signs around the working area with the following text: “Warning! Automatic lawn mower! Keep away from the robot! Supervise children!”
11. NEVER leave the robot running unattended if there are pets, children or people nearby.
12. Wear sturdy footwear and long trousers when the robot is in operation.
13. To prevent damage to the robot and accidents involving vehicles and people, do not set up working areas or connecting paths across public roads or public thoroughfares.
14. DO NOT connect to or touch a damaged cable until it has been disconnected from the mains socket. If the cable becomes damaged during operation, unplug the plug from the socket. A worn or damaged cable increases the risk of electric shock and should be replaced immediately. Contact an authorised service centre without delay.
15. Keep extension cables well clear of the robot’s moving parts, such as the cutting blades, to prevent damage to the cables and the robot.

16. DO NOT MODIFY the robot yourself. Modifications could impair its operation, lead to serious injury or damage, or result in the warranty being voided. Use only genuine parts and accessories approved by Mammotion.

17. If the robot makes an unusual noise or triggers an alarm, press the STOP button immediately.

18. Check regularly (once a week) that all parts of the robot are functioning normally.

19. Before carrying out maintenance, cleaning or inspecting the robot, switch it off first and remove the key from the . If the robot vibrates abnormally, check for damage before restarting it. Do not use the robot if any of its parts are damaged or faulty.

20. Do not touch the cutting blades or wheels whilst the robot is in operation. When handling the cutting blades or wheels, always switch off the robot first, remove the key and always wear protective gloves.

21. The images used in this manual are for illustrative purposes only. Please refer to the actual robot.

22. If you have a swimming pool in your garden, ensure that the robot mows the grass at a sufficient distance from the edge of the pool (at least 50 cm). The product has an IPX6 water resistance rating when in operation, but it is not completely waterproof.

23. IPX6 water resistance applies when the robot is in the working position.

24. The user is responsible for any accidents or hazards that may occur to other persons on their property.

25. The robot and accessories may only be repaired and modified by an authorised service centre or a qualified person who has been trained at an authorised service centre.

26. Operating and storage temperature: 0°C – 40°C. Operating temperature for charging: 5°C – 40°C.

1.2 Safety instructions for the charging base

1. DO NOT place the charging base in areas where people might trip over it.
2. DO NOT place the charging base in areas where there is a risk of standing water.
3. Only use the original charging base to charge the robot. Incorrect use may result in electric shock, overheating or leakage of corrosive liquid from the battery. If electrolyte enters the eyes, rinse the eyes with water or a neutralising agent and seek medical attention if the corrosive liquid comes into contact with the eyes.
4. Keep the charging base and accessories at least 60 cm away from flammable materials. Malfunctions or overheating may pose a fire risk.
5. Always use a residual current device (RCD) with a maximum tripping current of 30 mA when connecting the power supply to a socket.

1.3 Safety instructions for mowing

- 1.** Do not reach with your hands or feet near the cutting blades. Do not reach under the robot or touch it whilst it is switched on.
- 2.** Do not lift or move the robot whilst it is switched on.
- 3.** Before starting, remove stones, branches, tools, toys and other objects from the lawn to prevent damage to the blades.
- 4.** DO NOT PLACE any objects on the robot or the charging base.
- 5.** DO NOT use the robot if the STOP button is not working.
- 6.** Prevent collisions with people or animals. If someone or something gets in its way, stop the robot immediately.
- 7.** Always switch the robot off when it is not in use.
- 8.** DO NOT use the robot at the same time as pop-up sprinklers, and avoid placing the navigation paths where sprinklers are installed.
- 9.** DO NOT use the robot in standing water or during heavy rain.

1.4 Battery safety instructions

Lithium-ion batteries may explode or catch fire if mishandled. Do not disassemble, short-circuit, expose to water, fire or high temperatures. Handle with care and avoid any mechanical or electrical damage. Store batteries away from direct sunlight.

- 1.** Use only the original charging base and power adapter. Incompatible chargers may cause electric shock or overheating.
- 2.** DO NOT attempt to repair or modify the batteries. Attempts to repair them may result in serious injury due to explosion or electric shock. In the event of a leak, the released electrolytes are corrosive and toxic.

2 Introduction

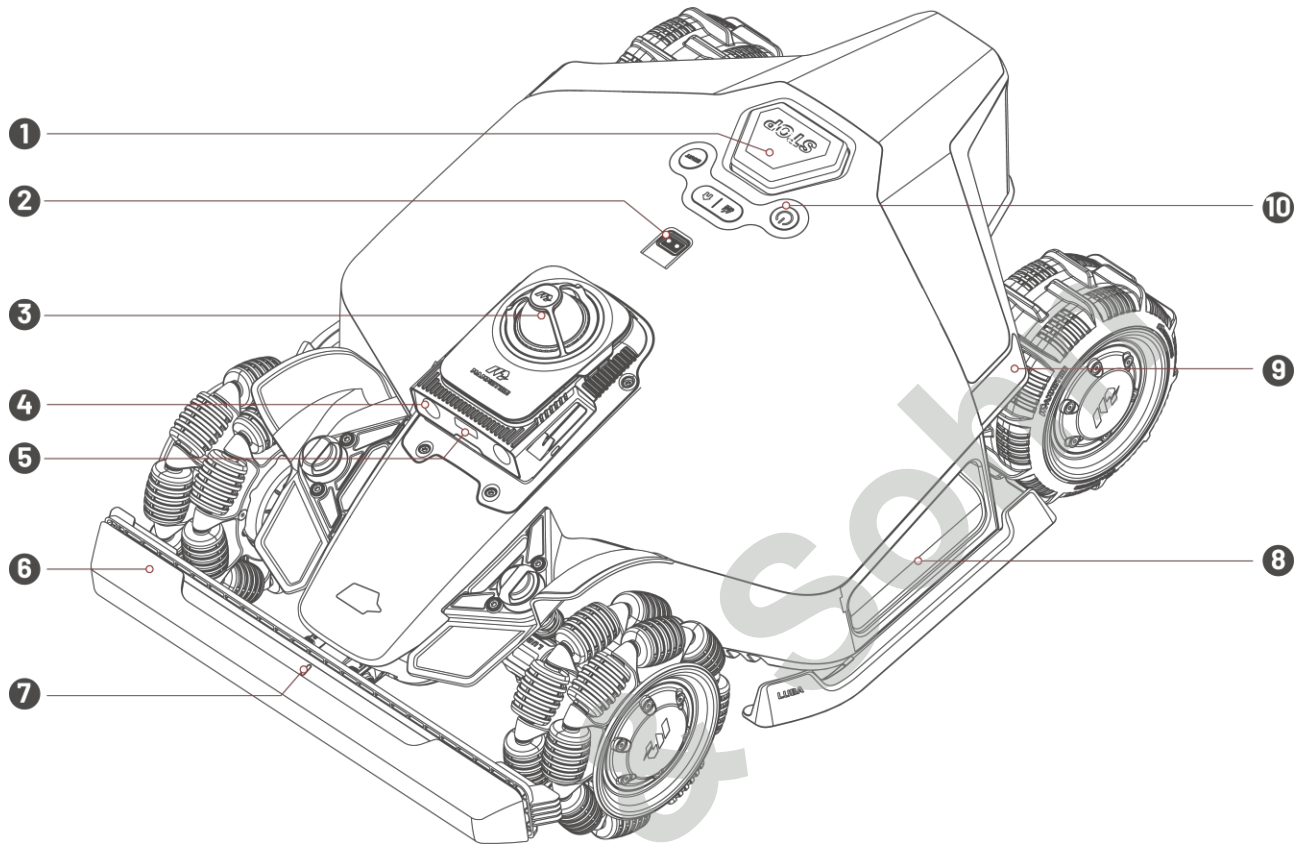
2.1 LUBA 3 AWD configurations

LUBA 3 AWD model variants for the EU:

Model	Configuration
LUBA 3 AWD 1500	<ul style="list-style-type: none">● Robot● Charging base
LUBA 3 AWD 3000	<ul style="list-style-type: none">● Robot● Charging base
LUBA 3 AWD 5000	

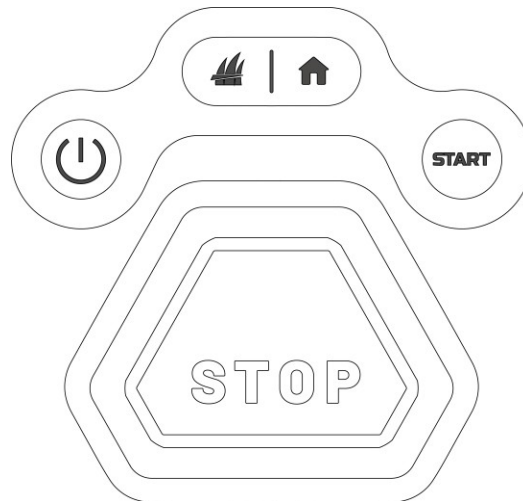
2.2 About the mower











Top view



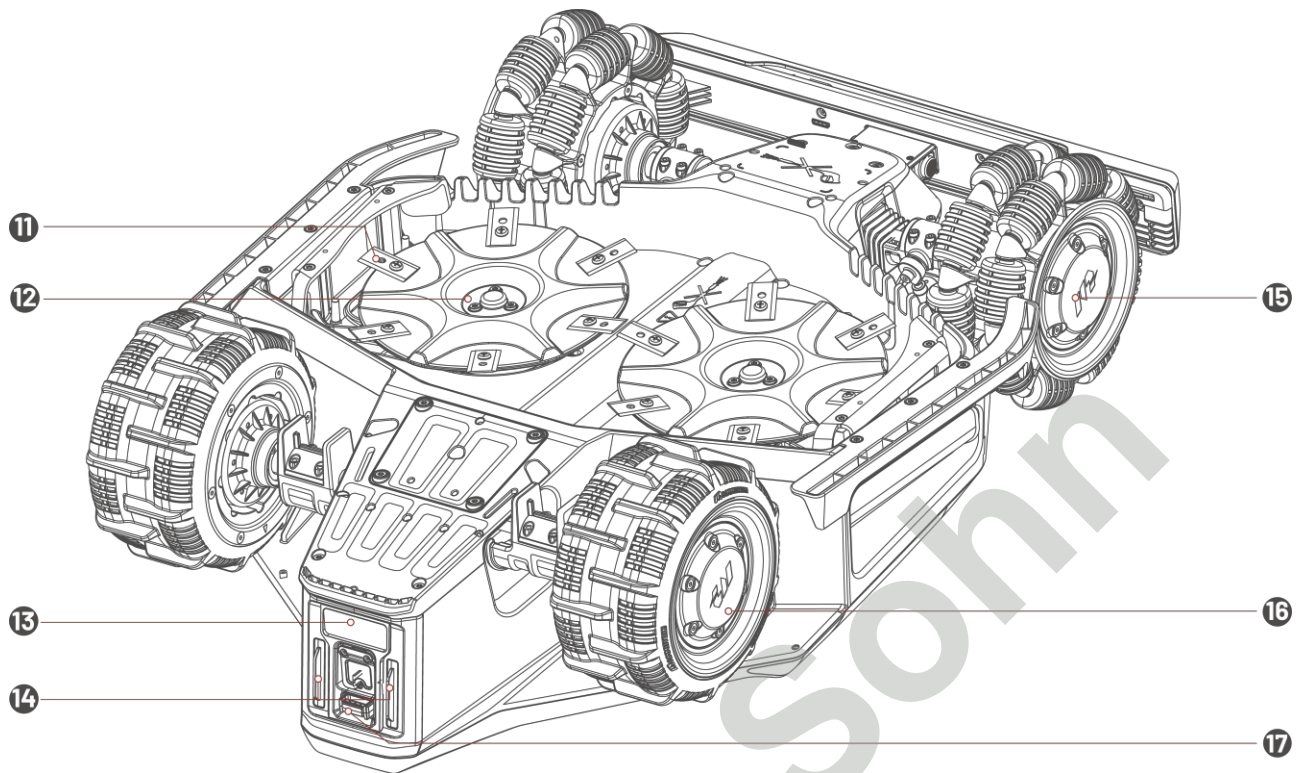
- | | | | |
|----|-------------|-----|---------------|
| 1. | STOP button | 2. | Rain sensor |
| 3. | 360° LiDAR | 4. | Vision module |
| 5. | Light | 6. | Bumper |
| 7. | Bumper LED | 8. | Handrail |
| 9. | Side LED | 10. | Buttons |

Buttons



Button	Description
	Press and hold to switch the mower on/off.
	Press twice to lower the mowing discs to their lowest position for cleaning.
	Press twice to unlock the robot only after an emergency stop.
	In an emergency, press the STOP button.
 > 	<ul style="list-style-type: none"> ● Press the button once to resume mowing. ● Press and hold  for 5 seconds, then press  to activate DropMow. DropMow is used for one-off mowing of unmapped lawns or for trimming the lawn outside mapped areas.
 > 	Press repeatedly to initiate the return to the charging base.

View from below



11. Mowing blade

12. Cutting disc

13. IR receiver

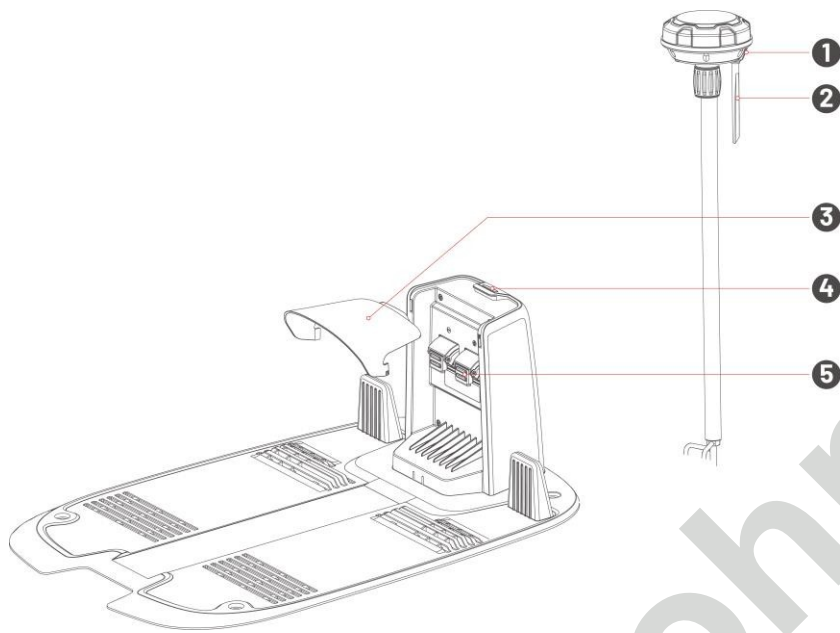
14. Charging contact

15. Omni wheel

16. Wheel

17. Security key

Charging base and RTK reference station



1. RTK reference station LED

2. Radio antenna

3. Canopy

4. LED charging base

5. Charging contact

LED indicator lights

Lawnmower

LED	Status	Description
Side LED	Red light on	The robot is working correctly.
	Red flashing	<ul style="list-style-type: none"> ● OTA update. ● The robot is charging.
	The red light is flashing slowly	<ul style="list-style-type: none"> ● The STOP button has been pressed. ● Battery flat. ● The robot is stuck. ● The key is not inserted correctly in the mower. ● The robot has been lifted, tilted or overturned.
	Red light flashing rapidly	<ul style="list-style-type: none"> ● The robot is showing an error (see the app for more details). ● The robot update has failed.
	Not lit	<ul style="list-style-type: none"> ● The robot is switched off. ● The robot is in standby mode. ● The side LEDs are turned off in the app. ● The robot is in manual mode but is currently inactive.

Charging base

LED	Status	Description
LED	Green flashing	The robot is parked in the charging base.
	Green steady	The robot is not parked in the charging base.
	Red is lit	Charging base error.
	Not lit	Not connected to the mains.












RTK reference station

LED	Status	Description
LED	Blue flashing	RTK is updating.
	Green flashing	RTK is initialising.
	Green is lit	RTK is working correctly via Datalink.
	Blue light	RTK is working correctly via the Internet.
	Not lit	<ul style="list-style-type: none"> ● Local time is between 18:00 and 08:00. ● Not connected to the mains.
	Red is lit	RTK reference station error.

2.3 Symbols used

You will find these symbols on the product. Please study them carefully:

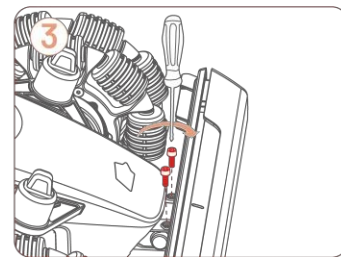
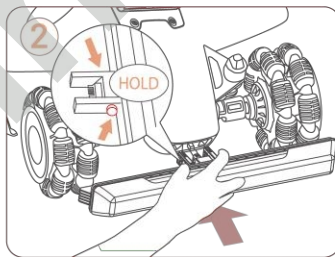
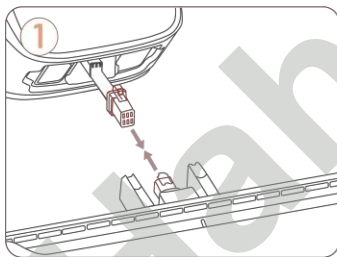
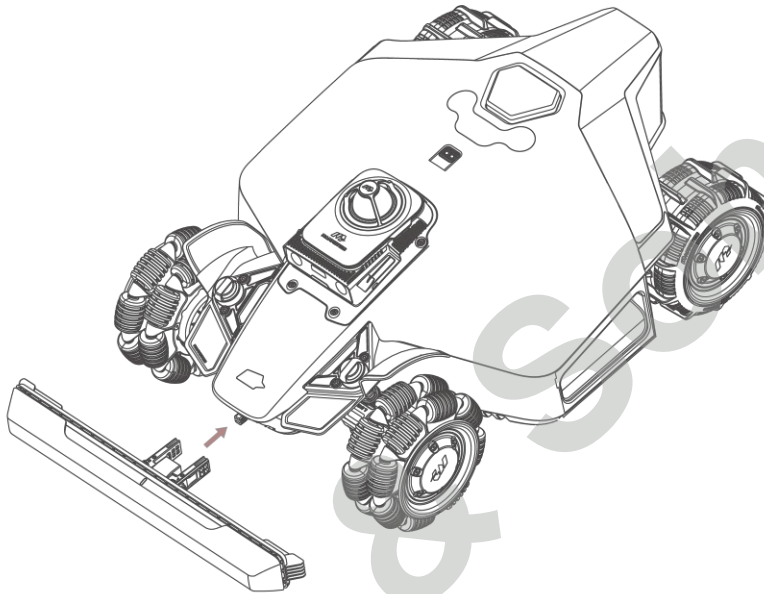
 TS-A210-2807501 E210-1C280750M6	Use the detachable power adapter TS-A012-1201002.
 TS-A012-1201002	Use the detachable power adapter TS-A081-2703002/ADS-81EJ-27-5.
	This product complies with the applicable CE directives. BLAKAR trading s.r.o. declares that the specified product is in conformity with and complies with Directive 2014/53/EU. The full version of the declaration of is available at www.blakar.cz/prohlaseni-o-shode
Made in China	This product is manufactured in China.
	This product must not be disposed of as ordinary household waste. Ensure the product is disposed of in an environmentally friendly manner in accordance with local regulations. For more information, visit www.asekol.cz
	This product can be recycled. For more information, visit www.ekokom.cz

	<p>The packaging of this product should not be exposed to moisture or water.</p>
	<p>The packaging of this product should not be covered.</p>
	<p>It must not be turned upside down.</p>
	<p>This product is fragile.</p>
	<p>Do not stand, sit or climb on the packaging of this product, the product itself or its accessories.</p>
	<p>Class III appliance.</p>
 <p>Do not touch rotating blade. Ne touchez pas la lame rotative.</p>	<p>Warning – do not touch the moving parts of the product or the cutting blades with your hands or feet whilst they are in motion.</p>
	<p>WARNING: Read the entire manual carefully before using the product.</p>
	<p>WARNING: Risk of objects being thrown against the body. Maintain a safe distance from the product during operation.</p>
	<p>WARNING: Do not place your hands or feet under the product when it is switched on or running. When handling or lifting the product, switch it off first and remove the key.</p>
	<p>WARNING: Never ride on the product. Never place your hands or feet near the rotating blades or under the product when it is switched on.</p>

3 Getting started

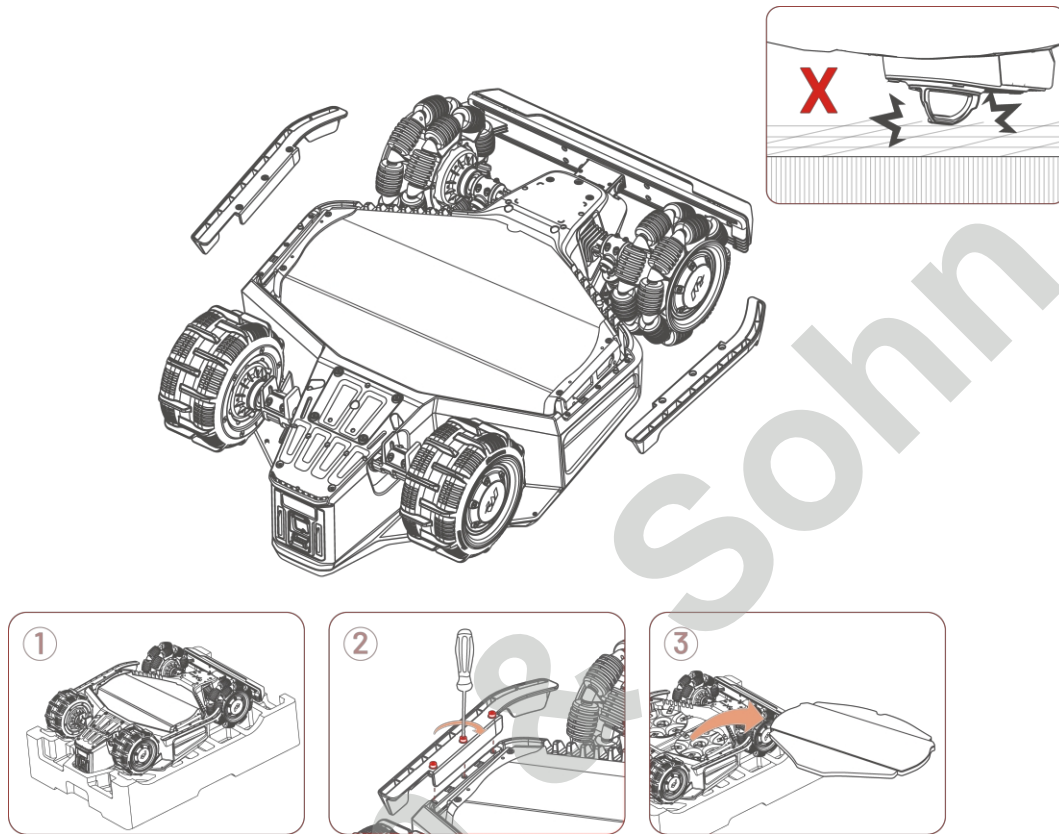
3.1 Assembling the robot

1. Carefully pull the connector on the cable out of the mower and plug it into the bumper.
2. Press and hold the two release buttons on the bumper and slide the bumper into the mower.
The LED indicator on the bumper must face upwards.
3. Insert and tighten the two screws from the top of the bumper to secure it.

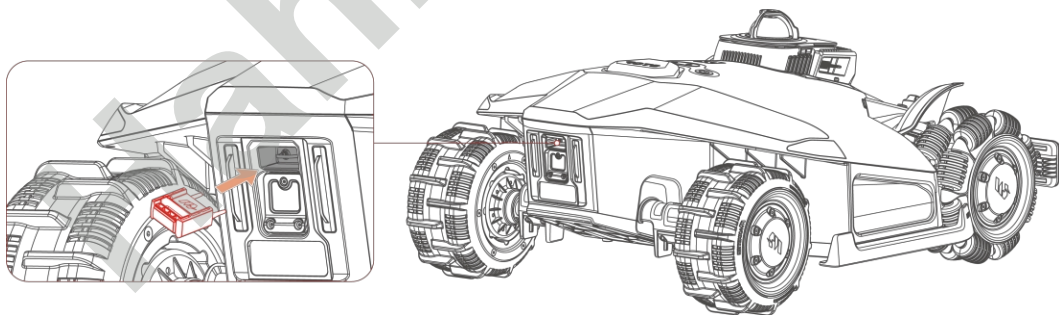


4. Place the robot with its wheels facing upwards on a soft, clean surface, taking care not to damage the LiDAR module, and install the side bumpers. Tighten the screws using the supplied hex screwdriver.

5. Remove the transport safety cover from the underside of the robot.



6. Insert the safety key into the rear key slot on the mower.

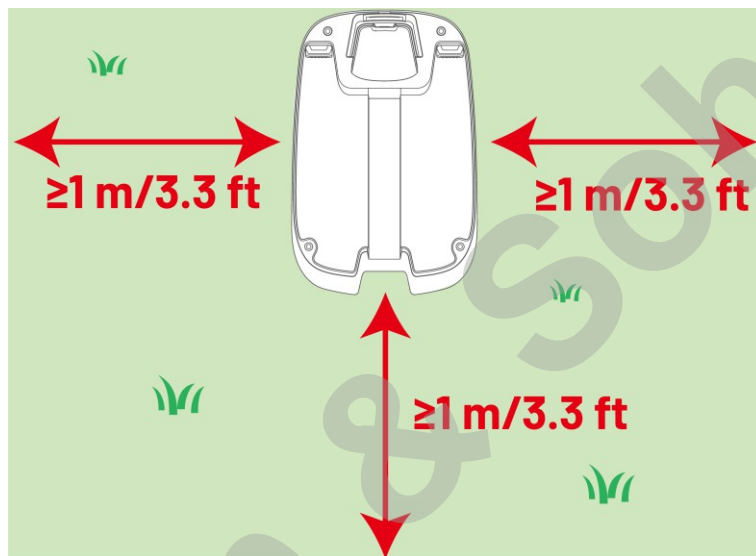


3.2 Installing the charging base

Select a suitable location for the charging base

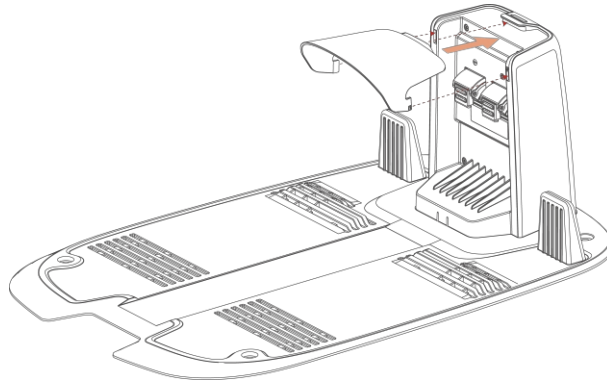
The charging base is where your robot parks and recharges. To ensure trouble-free operation, please ensure that the installation site meets the following conditions:

- **Flat surface:** The area must be free of bumps, slopes or stones.
- **Nearby power source:** An accessible electrical socket is required to power the charging base.
- **Clear surroundings:** There must be no obstacles (such as trees, houses or other objects) within 1 metre to the left, right and in front of the charging base.
- Place the charging base in a location with an unobstructed view of the sky.



Assembling the charging base

1. Attach the canopy to the top of the charging base.

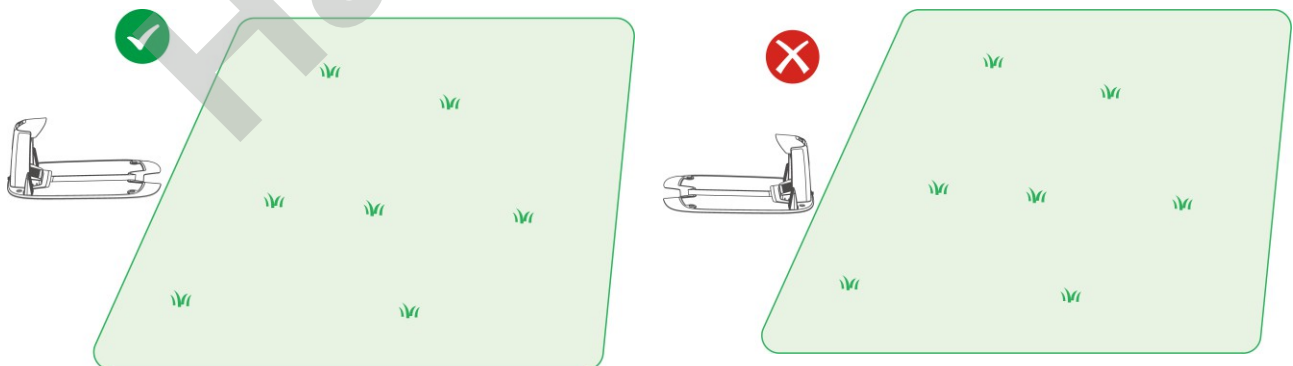
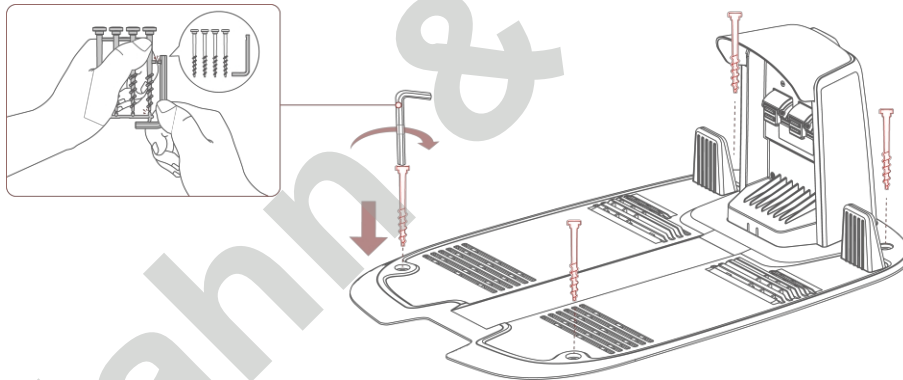


2. Use the four pins provided to secure the charging base in the chosen position. Ensure that the charging base is facing the lawn with its ramp

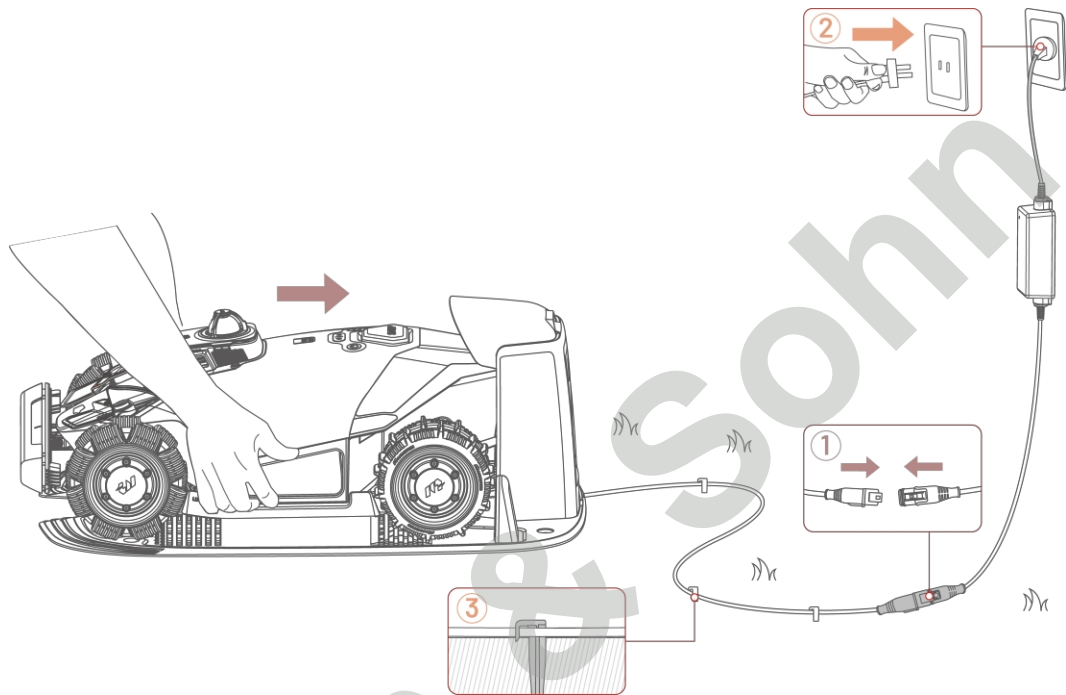
NOTE



If the charging base is installed on a concrete surface, secure it with expansion bolts (not included).



3. Connect the power cable (longer cable) to the power adapter. Place the adapter in a dry, well-ventilated location.
4. Plug the power adapter into a mains socket. Secure the cable to the ground using the cable pegs provided.
5. BEFORE FIRST USE, MANUALLY PLACE THE MOWER INTO THE CONNECTED CHARGING STATION. DO NOT SWITCH IT ON. AS SOON AS THE MOWER CONNECTS TO THE CHARGING STATION'S CONTACTS, IT WILL AUTOMATICALLY THE SIDE LED LIGHTS WILL ACTIVATE AND LIGHT UP. Allow the mower to charge fully.



NOTE

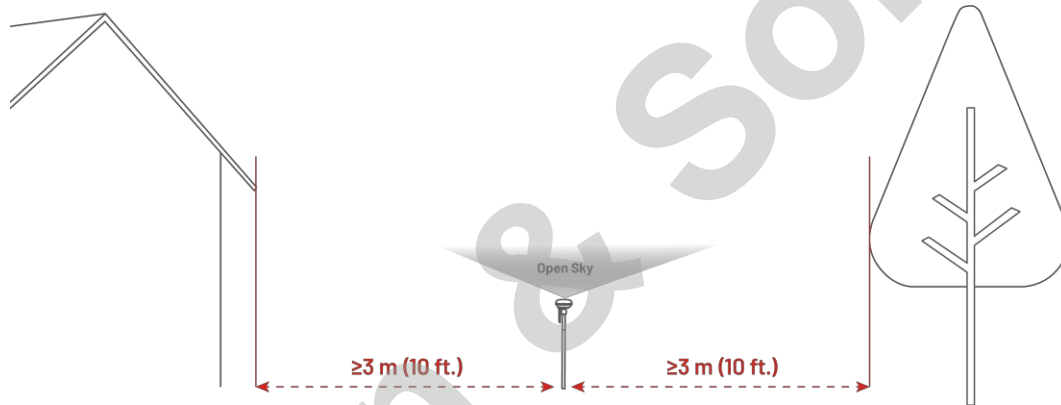
Before first use, allow the mower to fully charge and update it.

3.3 Installation of the RTK reference station (not included, available for purchase separately, not required for operation of the LUBA 3 AWD mower)

Suitable location for the RTK reference station

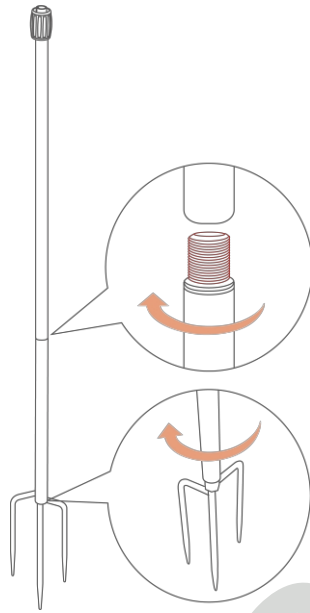
To optimise the performance of the RTK system, the RTK reference station must be placed in an open area with an unobstructed view of the sky to ensure good reception of satellite signals and correct correction for the robotic mower. Follow the instructions below:

- Open space: There should be an unobstructed view of the sky from the area.
- Nearby power source: An accessible electrical socket with a residual current device (RCD) with a maximum trip current of 30 mA is required.
- Strong Wi-Fi signal: The 2.4 GHz network is supported.
- Unobstructed surroundings: Maintain a distance of at least 3 m between the RTK reference station and any wall or tree.

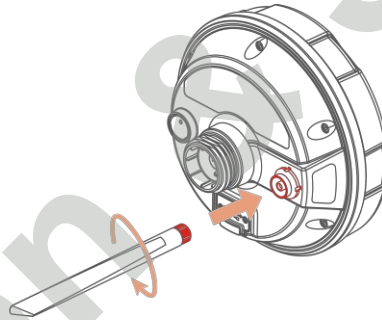


Assembling the RTK reference station

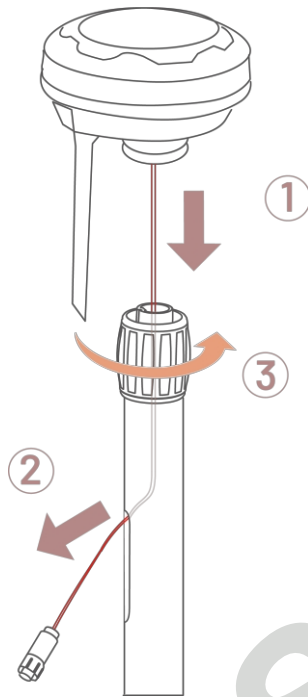
1. Connect the two parts of the mounting rod and screw the tripod onto them as shown in the illustration.



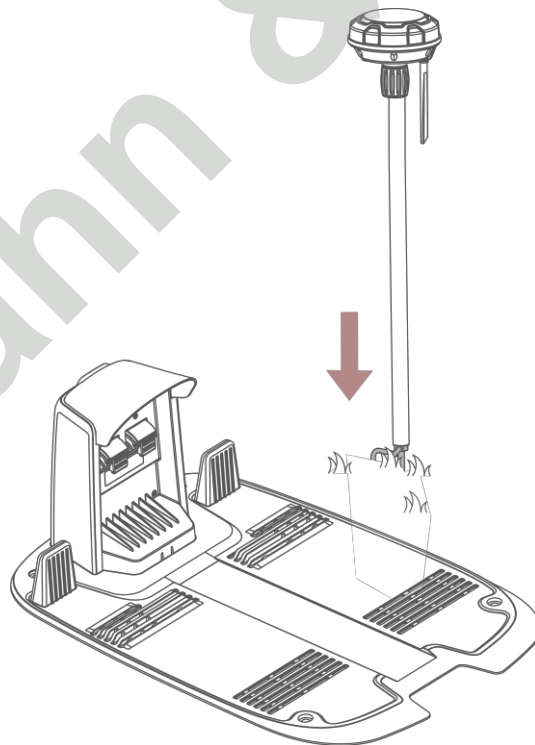
2. Screw the radio antenna into the RTK reference station.



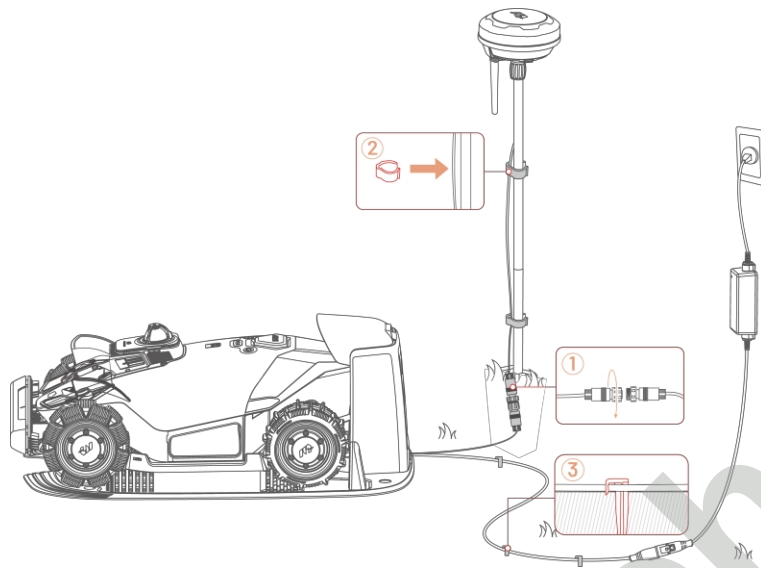
3. Feed the cable from the RTK reference station through the mounting pole as shown in the illustration.
4. Attach the RTK reference station to the mounting pole as shown in the illustration.



5. Securely install the RTK reference station near the charging base.



6. Connect the cable from the RTK reference station to the cable from the charging base (the shorter cable).
7. Secure the cable to the mounting pole using the clamps.





3.4 Download the Mammotion app

Scan the QR code and download the Mammotion app for free from the Android or Apple Store, or search for it in these stores.





Once the app is installed, please register and log in. While using the app, you may be asked to grant access to Bluetooth, location and the local network where necessary. For optimal performance, we recommend enabling the above permissions. For further information, please refer to our Privacy Policy (in the app, go to **Profile > About Mammotion > Privacy Policy**).

If you wish to log in using a third-party account, click on  or  on the login page and continue.

Trademark notice:



The “” icon is a trademark of Google LLC. The “” icon is a trademark of Apple Inc. All trademarks mentioned in this guide are the property of their respective owners.

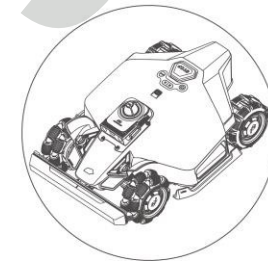
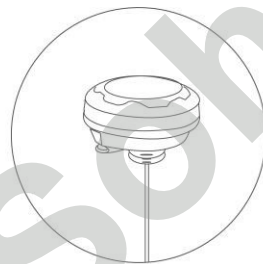
3.5 Mower settings

NOTE



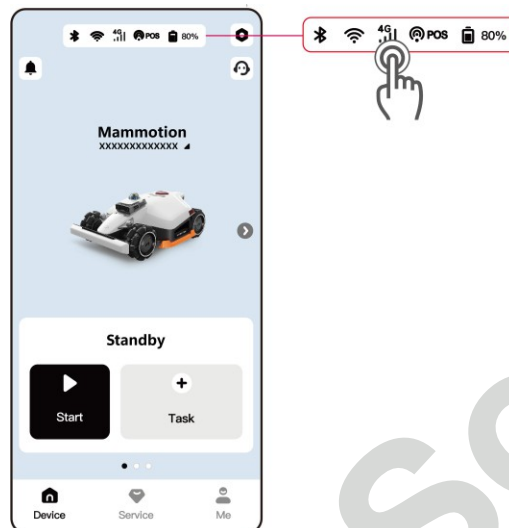
- Keep the distance between your phone and the robot at 3 m or less.
- If you're using 4G mobile data, you can skip the Wi-Fi setup.

1. Tap + to add the robot.
2. Follow the on-screen instructions to connect the robot to Wi-Fi.
3. Follow the on-screen instructions to activate the built-in SIM card.
4. Update the mower to the latest version before you start using it.



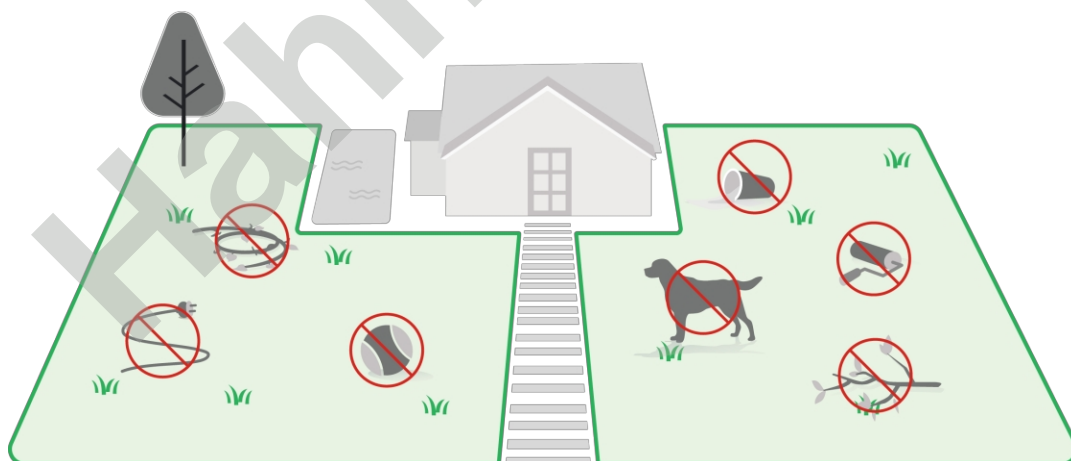
If you did not activate the SIM card with 4G data during the robot pairing process, you can do so by clicking on the status bar on the home screen:

1. Click on **the status bar** on the home page.
2. Click the **4G** button.
3. Tap **Activate** and wait for the activation to complete successfully.

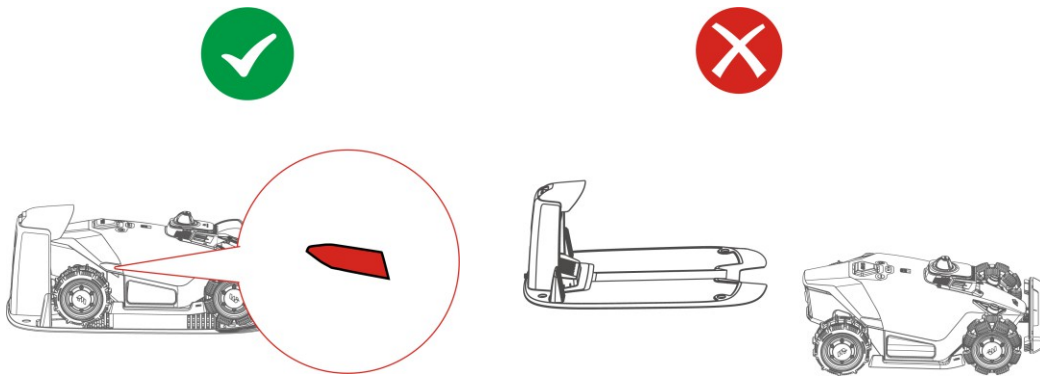


3.6 Preparation before mowing

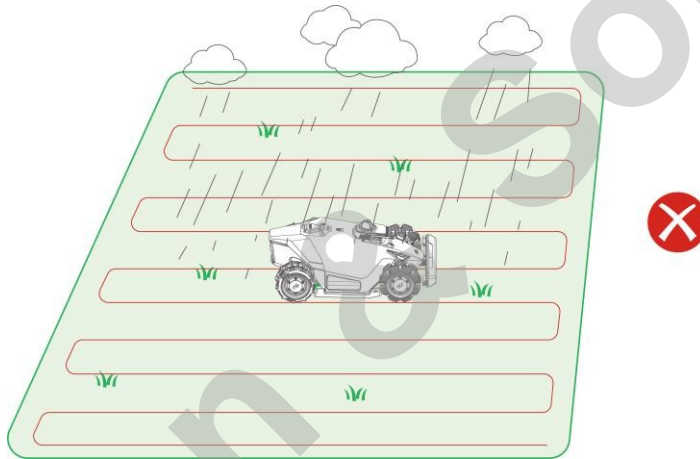
- Before using the mower for the first time, cut the grass to a height of no more than 10 cm.
- Remove any debris, piles of leaves, toys, wires, stones and other objects from the lawn.
- Make sure there are no children or pets on the lawn.



- Make sure the robot is properly connected to the charging base and that the side LED is lit red. Then complete the calibration in the app.

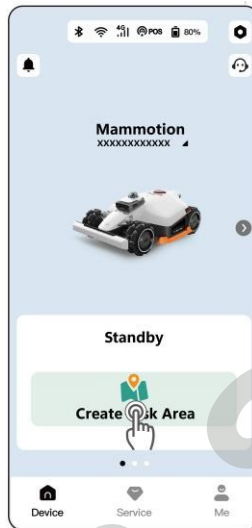



- For best mowing results, it is recommended to mow in dry weather. Mowing in the rain may cause grass to stick to the robot and cause it to slip. DO NOT mow in bad weather, such as heavy rain, storms or snow.

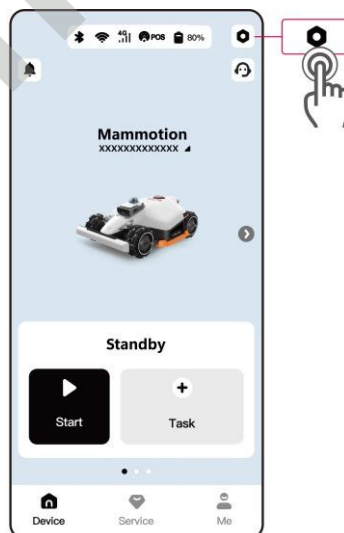


3.7 Mapping and mowing the lawn

1. Click on 'Create Area' on the home page.
2. Read and follow the instructions in the app to check that your robot is ready to map.
3. Click **Start mapping** to begin mapping your lawn.
4. Once mapping is complete, tap **Mow** to start mowing.



Do not move the RTK reference station after the map has been created. If the RTK reference station has been moved, go to  > **Robot Settings** > **Delete Map**, where you can delete the current map and then remap the lawn.



3.8 Charging



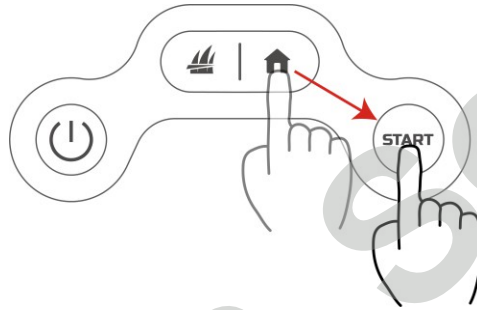
NOTE

To initiate a return to the charging base, the mower must be within the mowing area.

Returning to the charging base

● Tap '⚡' on the Map page in the Mammotion app. **OR**

● Click the '🏠' button, then the 'START' button on the mower body.



4 Daily mowing

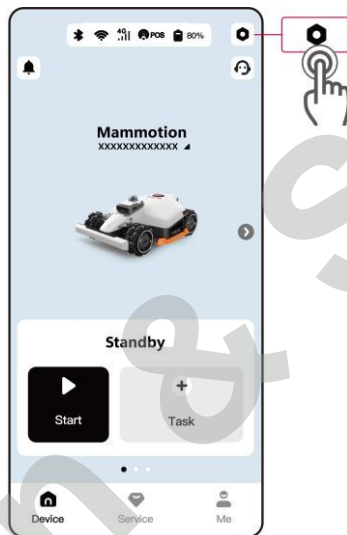
4.1 DropMow

In DropMow mode, no mapping is required – simply place the mower down, press the “Mow & Start” buttons, and the mower will begin mowing in a regular N-shaped pattern in the direction it is currently facing. The temporarily generated map is not saved, making this ideal for quick, one-off mowing. Recommended uses include:



- Mowing areas that the robot cannot normally reach.
- Temporary mowing tasks that do not require a complete map.

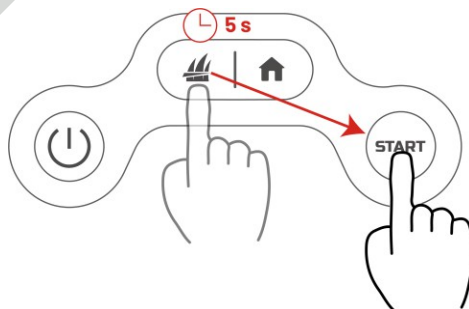
Using DropMow:

- Click on  > 'Beta Features' > 'DropMow' in the app.



OR

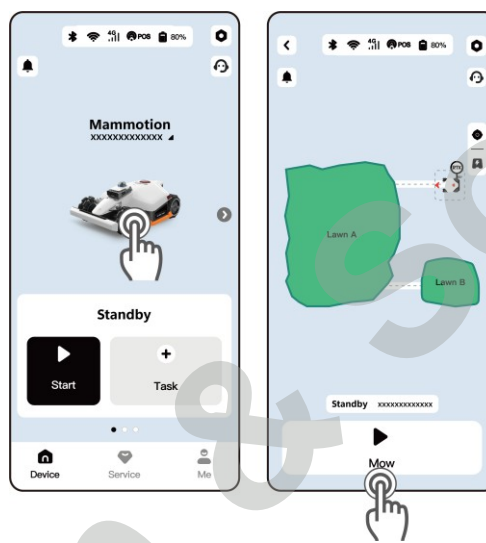
- Press and hold the  button for 5 seconds, then press the  button on the robot's body.



4.2 Standard task (Custom settings)

Customising the mowing task:

1. Click on the robot image in the app to go to the Map page.
2. Click on '▶' to go to the Areas page.
3. Click on 'Mowing Area' to select the area you wish to mow.
4. Click on **Settings** to configure the task settings.
5. Click **Start** to begin mowing.



4.3 Scheduled task

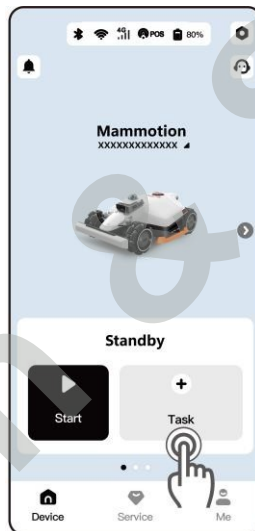
NOTE



- You cannot create tasks whilst the robot is working.
- Tasks can be set up after creating a mowing area.

Scheduling an automatic mowing task:

1. On the home page, click '+' if no job has been created yet.
2. Click on **Mowing Area** to select the area to be mowed.
3. Click on **Settings** to configure the parameters.
4. Click on **Scheduler** to set the date and time, then click on **Save**.
5. Finally, click **Save** to save the scheduled mowing task.



5 Mammotion app

With the Mammotion app, you can fully customise, manage and monitor your mower, allowing you to control mowing from anywhere via .

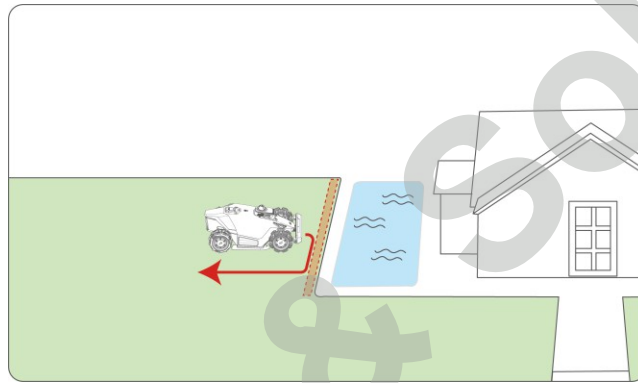
5.1 App features

Virtual fence

The virtual fence acts as an invisible barrier that defines boundaries or restricts access to areas where you do not want the robot to enter.

Recommended uses include:

- Lawns with unclear or undefined boundaries.
- Water features such as swimming pools or ponds (the edges of the water surface).



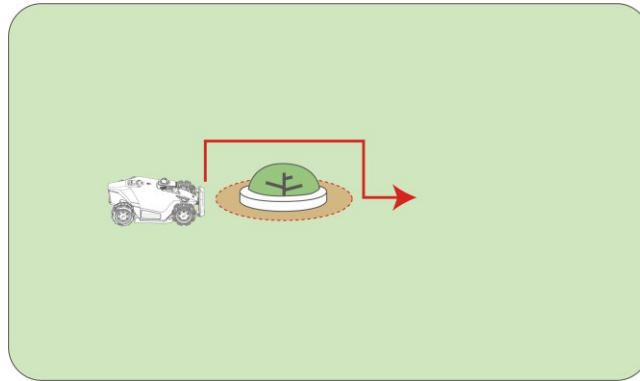
No-go zone

A no-go zone is an area that your robot should avoid entirely. It is essential for protecting the robot from damage and keeping it out of sensitive or hazardous areas. The robot will not mow in no-go zones.

Recommended uses include:

- Low flower beds, particularly those less than 20 cm high.
- The edges of bodies of water, such as ponds or swimming pools, particularly where there is no clear boundary.
- Transparent objects, such as insect screens or glass doors.
- Small or low-lying obstacles, e.g. washing lines, tent ropes or water pipes.
- Pet houses, e.g. dog kennels.

- Highly valuable or delicate plants, including crops and ornamental plants.
- Irrigation equipment, such as hoses and sprinklers.

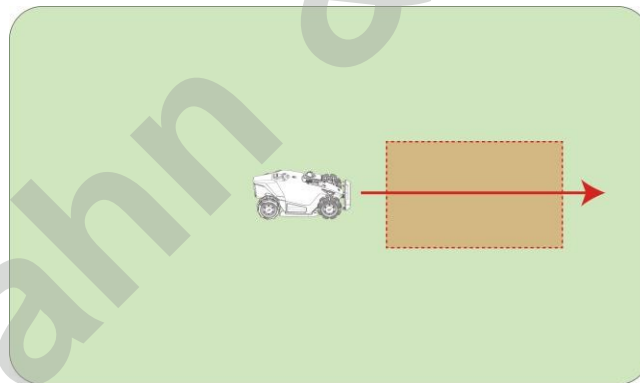


Pass-through zone

A passage zone is an area where the robot disables the obstacle avoidance function and does not stop at any obstacles on its way to the working area or another location, and when returning to the charging base. These are useful for complex but safe areas where the robot might otherwise get stuck.

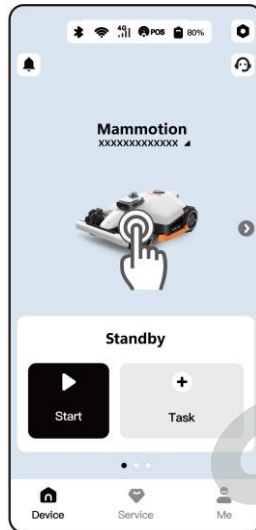
Recommended uses include:

- Areas of the green that may be mistakenly identified as out of bounds due to seasonal changes.
- Areas with low, safe obstacles.



Adding a virtual fence / No-go zones / Passage zones

1. Click on the robot image on the home page to access the Map page.
2. Click on **Map**.
3. Click on **Create**.
4. Select **Virtual Fence/No-go Zone/Passage Zone** and follow the instructions in the app to complete the process.



5.2 Mowing settings

Mowing mode

Select the optimal mode based on the condition of your lawn and the desired appearance in the menu **Mow > Settings > Mowing mode**.

- **Perimeter only:** Mowing the perimeter of the lawn only.
- **Zigzag:** Mowing in classic striped lines.
- **Checkerboard:** Cross-cutting for a dense and even lawn surface.
- **Adaptive Zigzag:** The robot automatically adjusts the mowing path along its length for greater efficiency.

Pattern (print on lawn)

Add text or images to the map. On the map, go to the **Create > Pattern** menu and add a pattern.

5.3 Safety and security

Obstacle detection

Adjust the robot's response to objects and changing terrain in its mowing path. In the **Mowing > Settings > Obstacle Detection Mode** menu, you can choose one of three sensitivity levels:

- **Sensitive:** Increases the robot's sensitivity to standard obstacles and non-grass surfaces (e.g. pavements, gravel). Use this mode on complex lawns.
- **Standard:** Detects and avoids common obstacles (e.g. toys, furniture) encountered whilst mowing. This is the recommended default setting.
- **Off:** Disables obstacle detection. Use only in specific, controlled environments where detection is not required or interferes with normal operation.

Rain sensor

Your robot is equipped with built-in rain sensors. If these sensors are activated, the robot will automatically stop mowing and return to the charging base as soon as it detects rain.

- You can enable/disable this function in **Settings > Rain Sensor**.

Safety for nocturnal animals

This feature helps protect nocturnal animals during night-time operation. You can set the robot to **Mow at low speed** or **Stop mowing** during the night.

- Enable this feature in **Settings > Safety for nocturnal animals**.

5.4 Security and Monitoring

Geo-fence Alarm

The app will send you a push notification if the robot moves more than 50 m away from the designated working area, alerting you to potential unauthorised movement.

- To use this feature, go to **Profile > Find My Device** and enable **Location Notifications**.

GPS tracking

If your robot goes missing, you can track its location in real time using GPS, provided the robot has been connected to the Mammotion app.

- To use this feature, go to **Profile > Find My Device** and enable **Location Tracking**.

5.5 Positioning

The robot uses a 360° LiDAR module and an AI Vision module for positioning, with an RTK reference station as an additional option. To switch the positioning mode, go to **Status Bar > Positioning Mode**. Antenna via data link.

Antenna via data link

The RTK reference station receives satellite signal corrections and transmits them directly to the robot via a dedicated LoRa signal. This mode offers the most stable and fastest communication of correction data.

Recommended use: Lawns where there is direct line of sight or minimal obstacles between the RTK reference station and the robot, and the robot is within LoRa signal range.

Internet antenna

The RTK reference station receives satellite signal corrections and sends them to the robot via the internet. This mode extends the operational range.

Recommended use:

- Large or complex lawns where the distance is too great for an antenna via a data link.
- Lawns with strong and stable Wi-Fi signal coverage for both the RTK reference station and the robot.

iNavi (NetRTK)


The robot receives RTK corrections directly from a remote cloud service via a 4G network, thereby eliminating the need for a local RTK reference station on your property.

Recommended use: Lawns where there are no suitable locations for installing an RTK reference station and which are covered by a stable 4G network.

5.6 Sending Logs

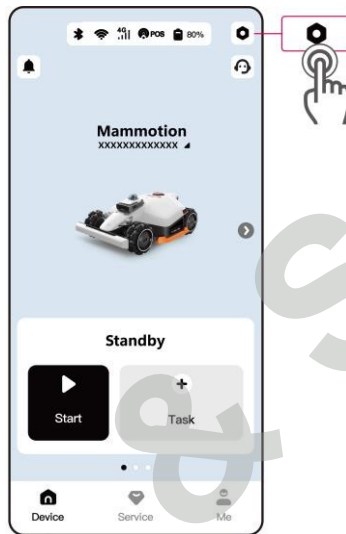
If you encounter any issues during use, you can upload the relevant logs, which will help our technical support team diagnose and effectively resolve the problem. At the same time, please contact your local authorised service centre to discuss the current situation and possible solutions.

Procedure for sending logs:

1. Click on  to access **Settings**.
2. Go to **Send Logs** and follow the instructions in the app.

OR:


Go to **Profile > Upload Logs** and follow the instructions in the app.



5.7 Firmware Update

For the best experience, make sure your robot is running the latest firmware; if not, update the firmware.

Firmware update:

1. Click on  > **Device Information** > **Robot Version** to update the firmware.
2. Make sure the robot is connected to a stable network (Wi-Fi or 4G).
3. During the update, do not close the app, perform any other operations, or switch off the robot.

6 Maintenance

For optimal mowing performance and to extend the life of your mower, Mammotion strongly recommends inspecting and maintaining the mower once a week. For safety and efficiency, always wear safety gloves, long trousers and work boots when maintaining or inspecting the mower; avoid wearing open sandals or going barefoot during maintenance.

- Before starting to clean the mower, make sure it is completely switched off and the key has been removed.
- Always switch off the mower if you are placing it upside down.
- When placing the mower upside down, always secure the LiDAR and Vision modules to prevent damage.
- DO NOT use a high-pressure cleaner or solvents to clean the robot.
- After washing, ensure that the robot is placed on the ground in its working position, not with its wheels facing upwards.
- Do not wash the robot's chassis or underside with a pressure washer or a hose. Use a soft brush, a plastic scraper and a damp cloth for cleaning.

6.1 Cleaning

Robot

WARNING



- Before starting cleaning, ensure that the mower is completely switched off and the key has been removed.
- Always switch off the mower if you are placing it upside down.
- When placing the mower upside down, always secure the LiDAR and Vision modules to prevent damage.

Mower housing

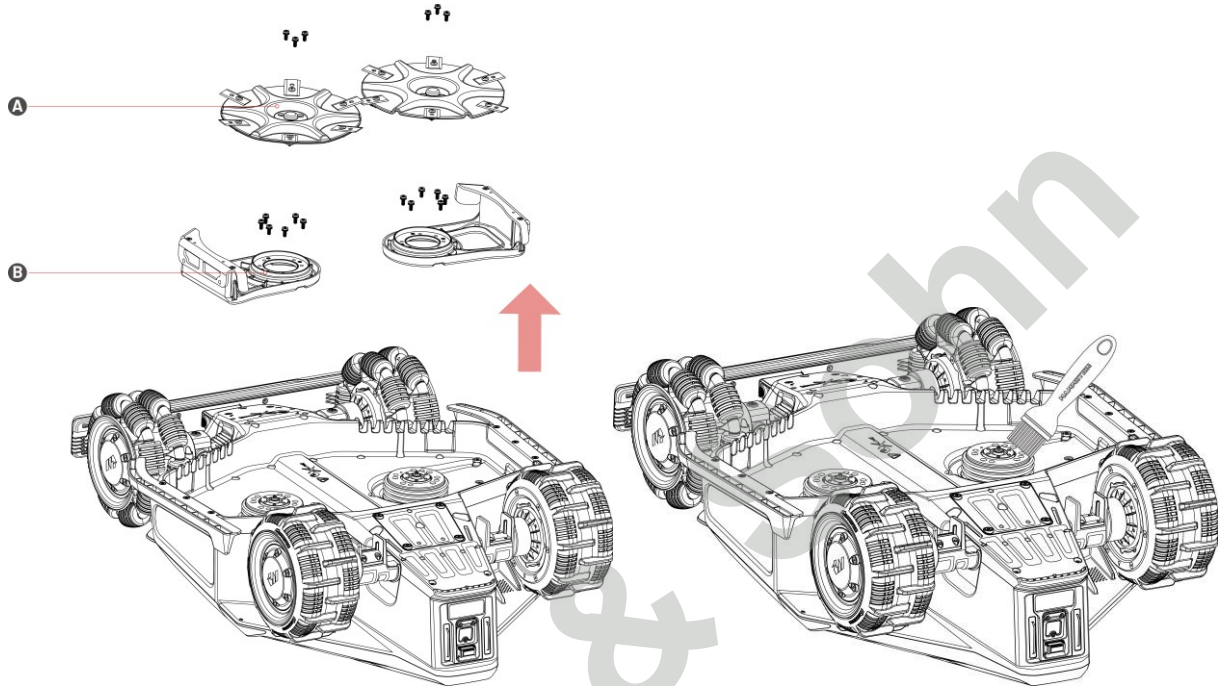
Use a soft brush or damp cloth to clean the mower cover. Do not use alcohol, petrol, acetone or other corrosive or volatile solvents, as these may damage the appearance and internal components of the mower

Underside of the mower

Wear protective gloves when cleaning. Use a brush or plastic scraper to remove dried-on dirt. Check the mower blades and discs, clean them of all dirt and check that they can rotate freely. Never use a water jet or pressure washer for cleaning.

Do not use sharp objects for cleaning

Remove the cutting discs (A) and the cutting disc guards (B), and clean the underside of the mower, the area beneath the cutting disc guards, the cutting disc guards themselves, and the cutting discs.



Wheels

Clean all dirt from the wheels using a brush.

Vision camera/LiDAR module

Wipe the front of the vision module and LiDAR with a soft microfibre cloth to remove any smudges and dirt.

Rear section with charging contacts

Regularly check and clean the charging contacts and infrared receiver with a soft cloth to remove grass clippings and dirt. Keeping these parts clean prevents charging failures. Treat the charging contacts with a contact cleaner, e.g. Kontakt 61. Prevent slugs or other animals from getting to the mower's charging contacts, as they may cause irreparable damage.

Cleaning the charging base

Clean the charging contacts and the infrared transmitter with a soft cloth to remove grass clippings and dirt. Keeping these parts clean ensures proper charging and prevents charging failures. Treat the contacts with a contact cleaner, e.g. Kontakt 61. Prevent slugs and other animals from getting to the charging contacts on the base, as they may cause irreparable damage.

6.2 Maintenance of mower discs and blades

WARNING

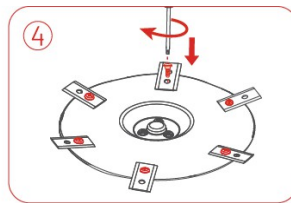
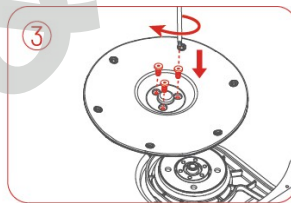
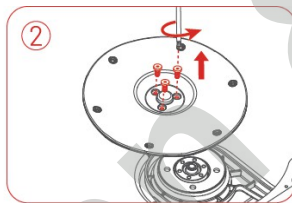
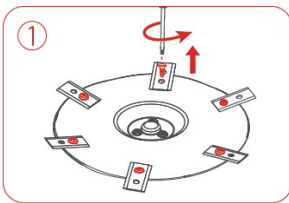
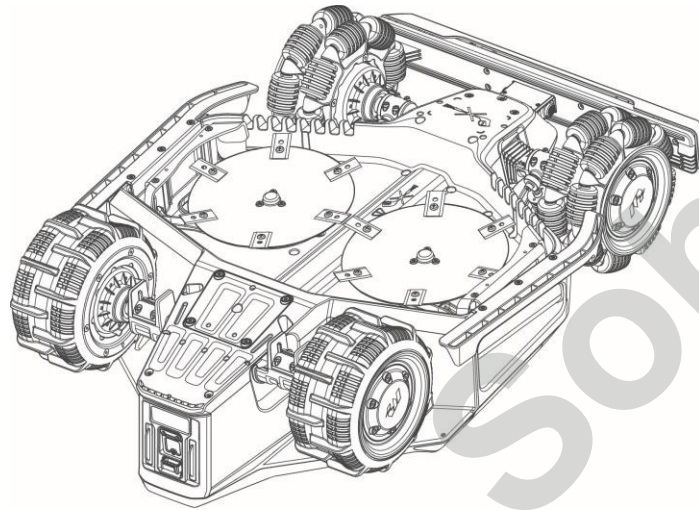


- Always wear protective gloves when replacing the mower disc or blades. **DO NOT** use an electric screwdriver when fitting the blades.
- When replacing the mower disc or blades, replace all bolts at the same time to ensure optimum cutting performance.
- After installation, ensure that all cutting blades rotate freely.

- To ensure optimum performance during long-term storage, keep the mower deck drive shaft dry and clean. Regular maintenance of the motor shaft helps prevent the build-up of dirt and moisture, which can affect the motor's performance.
- Mowing blades are considered consumables and should be replaced when they become heavily worn. It is recommended that mowing blades be replaced every 2–3 months or after 150 hours of use. With thicker grass, more frequent blade replacement may be necessary, approximately once every 1–2 months or after 150 hours of use.
- Wet grass is more likely to stick to the blades and the underside of the mower, which can impair performance and result in the need for more frequent cleaning. For optimal performance and the long-term health of your lawn, it is recommended that you avoid mowing in heavy rain or when the grass is too wet.

Replacing the cutting blades

1. Switch off the robot and remove the key.
2. Place the robot upside down on a soft, clean surface, taking care not to damage the LiDAR module.
3. Unscrew the old cutting blades using the supplied Phillips screwdriver.
4. Install the new cutting blades using the new screws provided. Ensure that the blades rotate freely and are securely installed.



6.3 Battery maintenance

- Before storing the battery for a long period, ensure it is fully charged to prevent it from becoming excessively discharged.
- Fully charge the battery every 90 days, even if it is not in use.
- Before storing or charging, ensure that the charging contacts on the robot are clean and dry.

6.4 Winter storage

To ensure your robotic lawnmower is in optimal condition for the next mowing season, store it and the charging base properly. If the ambient temperature drops below 0 °C in winter, keep the robotic lawnmower and charging base indoors.

Storing the robot

1. Operate the mower away from the charging base and ensure it is fully charged.
2. Switch off the mower and remove the key.
3. Clean the mower (cover, wheels, chassis, 3D Vision module, etc.) with a damp cloth or a soft brush. Never wash the mower with water before storing it.
4. Allow the mower to dry.
5. Apply anti-corrosion lubricant, such as Kontakt 61, to the charging contacts. DO NOT apply chemicals to any other parts of the mower, particularly metal contact surfaces, apart from the connectors.
6. Remove the front bumper, clean the connection slot with a brush and check the contacts.
7. Clean the front bumper with a soft brush.
8. Make sure once again that you have removed the key from the mower.
9. Store the mower indoors in a well-ventilated and dry place.
10. Before the next mowing season, reattach the bumper to the mower, insert the key and allow the mower to charge fully.

Storing the charging base

1. Unplug the power adapter from the socket and from the charging base.
2. Unscrew the pins from the base.
3. Use a soft brush and a cloth to thoroughly clean the charging base.
4. You can treat the charging contacts with an anti-corrosion lubricant such as Kontakt 61.
5. Store the charging base indoors in a dry and well-ventilated place.

Storing the RTK reference station

If the outdoor temperature does not fall below 0°C in winter:

1. Disconnect the adapter from the RTK reference station.
2. Wrap the RTK reference station cable around the station and screw on the protective cap.
3. Cover the RTK reference station with a plastic bag or cover.

If you follow these instructions and do not move the RTK reference station, you will not need to delete the map and create a new one for the next mowing season.

If the outdoor temperature drops below 0°C in winter:

If the RTK reference station is on the ground, proceed as follows:

1. Delete the map in the Mammotion app.
2. Disconnect the RTK reference station from the adapter.
3. Remove the RTK reference station from the mounting pole.
4. Unscrew the radio antenna.
5. Use a soft cloth to clean the RTK reference station.
6. Store the mounting pole.

In the new season, place the RTK reference station in the garden again and create a new map.

If the RTK reference station is mounted on a wall or roof, proceed as follows:

1. Disconnect the RTK reference station from the adapter.
2. Remove the RTK reference station from the wall bracket.
3. Unscrew the radio antenna.
4. Use a soft cloth to clean the RTK reference station.

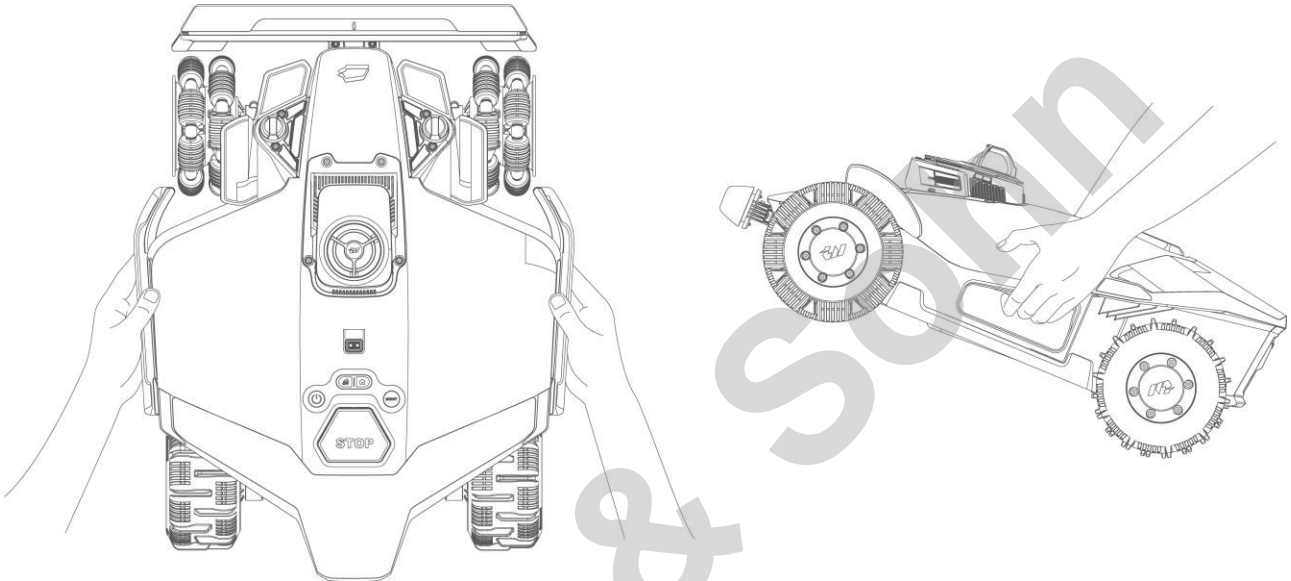
Reinstall the RTK reference station in its original position at the start of the new mowing season. There is no need to clear the map or remap, as the location of the RTK reference station remains unchanged.

7 Transport and handling

For long-distance transport, Mammotion recommends using the original packaging for the robot, the charging base and the RTK reference station.

To carry the robot safely:

1. Switch off the robot.
2. Lift the robot by the handles on the sides.
3. Keep the mowing discs away from your body.



8 Disposal

WARNING

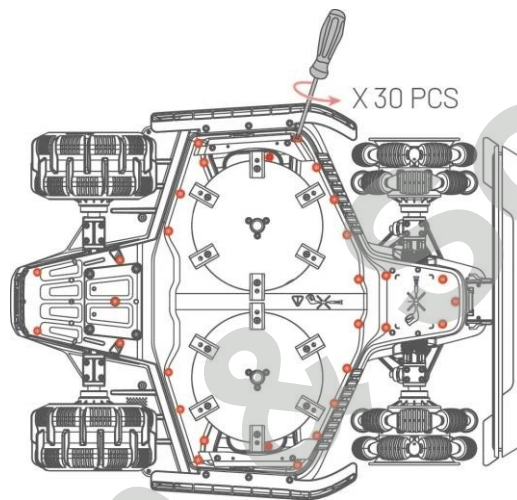


Only remove the battery when disposing of the product. Otherwise, you will void the warranty, as the battery may only be replaced by a qualified technician.

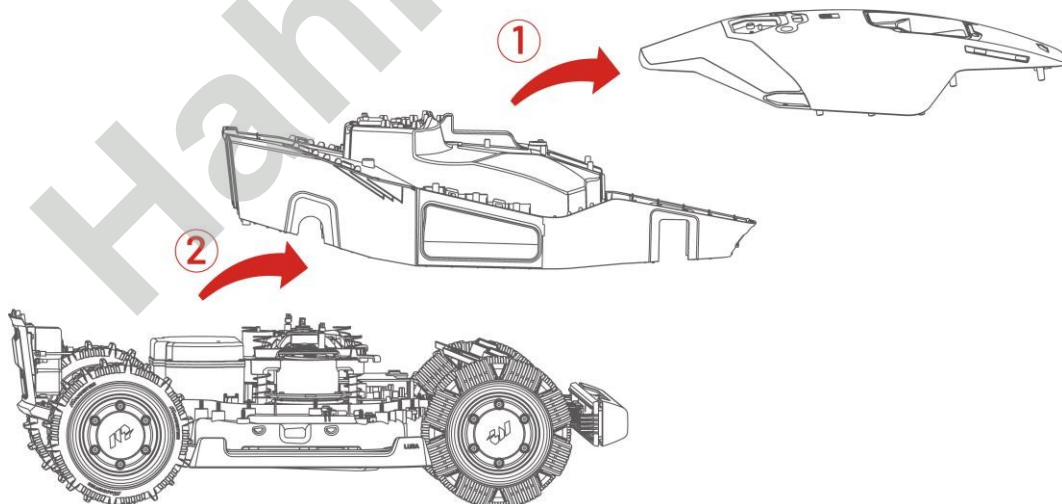
When disposing of the product, comply with local regulations and requirements. Do not dispose of batteries in normal household waste. Remove the battery and take it to a collection point.

Removing the battery:

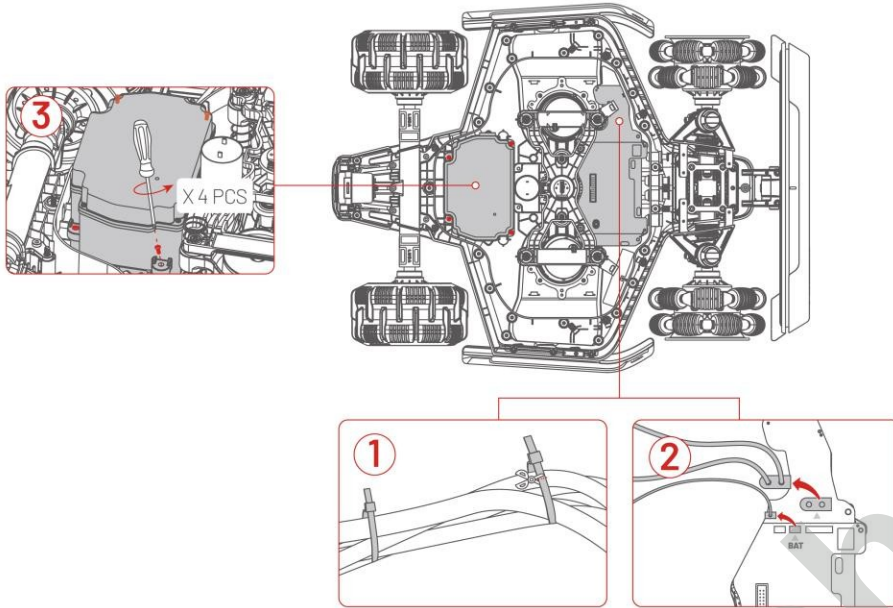
1. Switch off the robot, remove the key, turn the robot over and loosen the screws using the hex key provided.



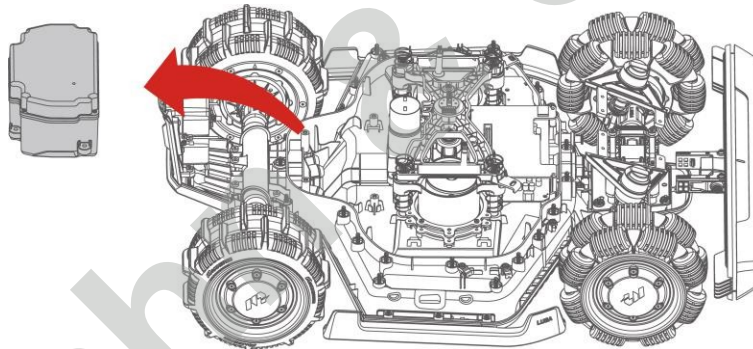
2. Turn the robot upright, then remove the top cover and the centre frame.



3. Cut through the cable ties and disconnect the battery cables.



4. Remove the battery.



9 Specifications

9.1 Technical Specifications

Standard version (Cutting height: 25–70 mm)			
Specifications	LUBA 3 AWD		
	1500	3000	5000
Model	LUB3S1	LUB3S2	LUB3S3
Max. mowing area	1,500 m ²	3,000 m ²	5,000 m ²
Max. number of areas	15	30	50
Mowing Drive	All-wheel drive (AWD)		
Max. slope angle	80% (38.6°)		
Max. side slope	40% (21.8°)		
Ground clearance	50 mm		
Cutting width	400 mm		
Cutting height (electronically adjustable)	25–70 mm		
Charging time (15–100%)	80 min	105 min	130 mins
Battery life (100–15%)	up to 113 mins	up to 150 mins	up to 180 mins
Automatic charging	yes		
GPS tracking	Yes		
Geo-fence alarm	Yes		
Vision Geo-fence	Yes		

Standard version (Cutting height: 25–70 mm)		
Lift sensor	Yes	
Tilt sensor	Yes	
RTK reference station	N/A	EU/UK models: no
		AU/NA models: Internet: 5 km Datalink: 120 m
Positioning and navigation	360° LiDAR Module & AI Vision	EU/UK models: 360° LiDAR Module & AI Vision & NetRTK (iNAVI)
		AU/NA models: 360° LiDAR Module & AI Vision & RTK reference station
Obstacle avoidance	360° LiDAR Module & AI Vision & Bumper	
Voice Assistant Support	Alexa & Google Home	
Vision Monitoring	Yes	
Connectivity	4G & Bluetooth & Wi-Fi	
A-weighted sound power level	LwA=64 dB, KWA=3 dB	
A-weighted sound pressure level	LPA=56 dB, KPA=3 dB	
Water resistance	Robot: IPX6 (in operating position) Charging base: IPX6 (in operating position) RTK reference station: IPX6	
Rain sensor	Yes	
Recommended operating and ambient temperature	5–40 °C	
Recommended storage temperature	0–40 °C	
Net weight	19 kg	19.35 kg

9.2 Operating range specifications (for EU models)

Robot

Category	Frequency range (MHz)	Maximum transmitter power (dBm)
LORA	863.1–869.85	<13.98
Bluetooth	2400–2483.5	<20
Wi-Fi	2400–2483.5	<20
	5500–5700	<20
	5745–5825	<13.98
GSM900	880–915 (Tx); 925–960 (Rx)	35
GSM1800	1710–1785 (Tx); 1805–1880 (Rx)	32
WCDMA Band I	1920–1980 (Tx); 2110–2170 (Rx)	25
WCDMA Band VIII	880–915 (Tx); 925–960 (Rx)	25
LTE Band 1	1920–1980 (Tx); 2110–2170 (Rx)	25
LTE Band 3	1710–1785 (Tx); 1805–1880 (Rx)	25
LTE Band 7	2500–2570 (Tx); 2620–2690 (Rx)	25
LTE Band 8	880–915 (Tx); 925–960 (Rx)	25
LTE Band 20	832–862 (Tx); 791–821 (Rx)	25

Category	Frequency range (MHz)	Maximum transmitter power (dBm)
LTE Band 28	703–748 (Tx); 758–803 (Rx)	25
LTE Band 38	2570–2620 (Tx); 2570–2620 (Rx)	25
LTE Band 40	2300–2400 (Tx); 2300–2400 (Rx)	25
GNSS	1559–1610 1164–1300*	N/A

*NOTE: LUBA 3 AWD 1500 / 3000 DO NOT SUPPORT THIS OPERATING FREQUENCY.

Hahn & Sohn

9.3 Battery specifications

Parameters	LUBA 3 AWD		
	1500	3000	5000
Adapter	<p>EU/UK/AU models</p> <ul style="list-style-type: none"> ● Model: TS-A210-2807501/E210-1C280750M6 Input: 200–240 V AC, 50/60 Hz, max. 1.5 A Output: 28 Vdc, 7.5 A, 210 W <p>NA models</p> <ul style="list-style-type: none"> ● Model: TS-A210-2807501/E210-1C280750M6 Input: 100–240 V AC, 50/60 Hz, Max 3 A Output: 28 Vdc, 7.5 A, 210 W 		
Battery	21.6 Vdc, 9.4 Ah, 203 Wh	21.6 Vdc, 12 Ah, 259.2 Wh	21.6 Vdc, 15 Ah, 324 Wh
Battery designation	MWBT06S04P-02	MWBT06S04P-01	MWBT06S05P-01
Robot	Input: 28 Vdc, 7.5 A		
Charging base	<p>Model:</p> <p>LUBA 3 AWD 1500/ 3000 / 5000: CHG4402</p> <p>Input: 28 Vdc, 210 W</p> <p>Output: 28 Vdc, 7.5 A</p>		
RTK reference station	N/A	Model: RTK300 Input: 12–28 Vdc, 2.3 W	
Charging ambient temperature	4–45 °C		
WARNING: Only use the power adapter supplied with this product to charge the battery.			

Warranty certificate

Model:
Serial No.:
Date of sale:
Dealer's stamp:

This warranty certificate applies to products imported into the Czech Republic by BLAKAR trading s.r.o., business premises: Azalková 1272, 252 42 Jesenice, Company ID: 282343391, VAT No.: CZ28234391.

WARRANTY TERMS

- The product is covered by a quality warranty for a period of 36 months from the date of sale to the consumer.
- The warranty covers defects demonstrably caused by faulty materials.
- The warranty does not cover defects caused by transport, failure to follow the operating instructions provided in the manual, poor maintenance, mechanical damage, tampering with the product, or faults caused by power supply failures, incorrect installation, or unsuitable placement (dusty, chemical or otherwise unsuitable environments).
- The warranty does not cover defects caused by normal wear and tear (in the case of batteries, in particular loss of capacity; the battery life is at least 6 months from the date of sale, or wear and tear mower blades, mower discs, tyres, wheels, etc.).
- To claim under the warranty, you must present proof of purchase (e.g. an invoice, receipt or a completed warranty certificate stamped by the seller)

Authorised service centre for the Czech

Republic: BLAKAR trading s.r.o., Azalková
1272, 252 42 Horní Jirčany, Czech Republic

Tel.: +420 606 839 644, +420 774 737 789

(Mon – Fri 8:00–16:30)

Email: servis@blakar.cz

www.lubasekacky.cz



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