

Operator's manual
HUSQVARNA AUTOMOWER®
435X AWD



EN, English

Read the operator's manual carefully and make sure that you understand the instructions before you use the product.

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1 Safety

1.1 Safety definitions

Warnings, cautions and notes are used to point out specially important parts of the manual.



WARNING: Used if there is a risk of injury or death for the operator or bystanders if the instructions in the manual are not obeyed.



CAUTION: Used if there is a risk of damage to the product, other materials or the adjacent area if the instructions in the manual are not obeyed.

Note: Used to give more information that is necessary in a given situation.

1.2 General safety instructions



WARNING: Read the warning instructions that follow before you use the product.

- Read the Operator's manual carefully and make sure you understand the instructions before you use the product. Keep for future reference.
 - This appliance is not intended for use by children or persons with reduced physical, sensory or mental capabilities (that could affect a safe handling of the product), or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the appliance by a person responsible for their safety. However, EU requirements allows this appliance to be used by children aged from 8 years and above and persons with reduced physical, sensory or mental capabilities or lack of experience and knowledge, if they have been given supervision or instruction concerning use of the appliance in a safe way and understand the hazards involved. Children shall not play with the appliance. Cleaning and user maintenance shall not be made by children without supervision.
 - The product must only be used with the equipment recommended by Husqvarna. All other types of use are incorrect.
 - Do not use the product when persons, especially children, or animals are in the work area.
 - Warning signs must be put around the work area of the product if it operates in public areas. The signs must have the text that follows: Warning!
- Automatic lawn mower! Keep away from the machine! Supervise children!
- Do not touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
 - Set the product to OFF before you clear a blockage, do maintenance or examine the product, and if the product starts to vibrate abnormally. Examine the product for damage before you start the product again. Do not use the product if it is damaged.
 - If an injury or accident occur, get medical aid.
 - Do not put power supply cable and extension cable in the work area. This can cause damage to the cables.
 - Do not connect a damaged cable or plug, or touch a damaged cable, before it is disconnected from the power outlet. Disconnect the plug from the power outlet if the cable becomes damaged while in operation. A worn or damaged cable increases the risk of electrical shock. A damaged cable must be replaced by service personnel.
 - When you connect the power supply to the power outlet, use a residual-current device (RCD) with a tripping current of maximum 30 mA.
 - Only charge the product in the included charging station. For safe disposal of the battery, refer to *Disposal on page 49*. Incorrect use may result in electric shock, overheating or leaking of corrosive liquid from the battery. In the event of leakage of electrolyte, flush with water/neutralizing agent. Get medical aid if corrosive liquid comes in your eyes.
 - Use only original batteries recommended by Husqvarna. Product safety cannot be guaranteed with other than original batteries. Do not use non-rechargeable batteries.
 - Follow the installation instructions that includes to specify the work area, refer to *Installation on page 12*.
 - Follow the instructions about to start and operate the product, refer to *Operation on page 27*.
 - If there is a risk of thunderstorm, Husqvarna recommends that the power supply and all the wires to the charging station are disconnected to decrease the risk of damage to electrical components. Connect the power supply and all the wires again if there is no longer a risk of thunderstorm. It is important that all wires are connected correctly.
 - Follow the maintenance instructions and if necessary use Husqvarna original spare parts, refer to *Maintenance on page 29*.
 - For technical data such as weight, dimensions and noise emission values, refer to *Technical data on page 51*.
 - The operator is responsible for accidents or dangers that occurs to other persons or property.

- The product must only be operated, maintained and repaired by persons that are fully conversant with its special characteristics and safety regulations.
- It is not permitted to change the initial design of the product.
- Obey national regulations about electrical safety.
- Husqvarna does not guarantee full compatibility between the product and other types of wireless systems such as remote controls, radio transmitters or equivalent.
- The built-in alarm is very loud. Be careful, especially if the product is handled indoors.
- Operation and storage temperature range is 0-50 °C / 32-122 °F. Temperature range for charging is 5-45 °C / 41-113 °F. Too high temperatures can cause damage to the product.
- Use the park mode or set the product to OFF when persons, especially children or animals are in the work area. Refer to *To set the product to OFF on page 28*. Husqvarna recommends to set the product to operate when the work area has no activity. The product can cause injury to animals at night in work area, for example hedgehogs. Refer to *Schedule on page 23*.
- Make sure that there are no objects such as stones, branches, tools or toys on the lawn. The blades can be damaged if it hits an object.
- Do not lift the product or move it when it is set to ON.
- Do not let the product collide with persons or animals. If a person or animal comes in the way of the product, stop the product immediately. Refer to *To stop the product on page 27*.
- Do not put objects on top of the product or its charging station.
- Do not use the product if the **STOP** button does not work.
- Always set the product to OFF when it is not in operation. The product can only start when you enter the correct PIN code.
- Do not use the product at the same time as a pop-up sprinkler. Use the *Schedule* function so the product and pop-up sprinkler do not operate at the same time. Refer to *Schedule on page 23*.
- Do not let the product operate when there is standing water in the work area. For example when heavy rain forms pools of water.

1.3 Safety instructions for installation



WARNING: Read the warning instructions that follow before you use the product.

- Do not install the charging station, including any accessory, at a location that is below, or within 60 cm / 24 in. from, any combustible material. In case of malfunction, heating of the charging station and the power supply may occur and create a potential risk of fire.
- Do not put the power supply at a height where there is a risk it can be put in water. Do not put the power supply on the ground.
- Do not encapsulate the power supply. Condensed water can harm the power supply and increase the risk of electrical shock.
- Do not install the charging station where there are pests, for example ants.
- Applicable to USA/Canada. If power supply is installed outdoors: Risk of Electric Shock. Install only to a covered Class A GFCI receptacle (RCD) that has an enclosure that is weatherproof with the attachment plug cap inserted or removed.
- Do not install the charging station where there is a risk of standing water.

1.4 Safety instructions for operation



WARNING: Read the warning instructions that follow before you use the product.

- Keep your hands and feet away from the rotating blades. Do not put your hands or feet near or below the product when it is set to ON.

1.5 Safety instructions for maintenance



WARNING: Read the warning instructions that follow before you do maintenance on the product.

- Set the product to **OFF** when you do maintenance on the product.
- Do not use a high-pressure washer to clean the product. Do not use solvents to clean the product.
- Disconnect the plug to the charging station before you clean or do maintenance of the charging station.

1.6 Battery safety



WARNING: Read the warning instructions that follow before you use the product.

- Lithium-ion batteries can explode or cause fire if disassembled, short-circuited, exposed to water, fire, or high temperatures. Handle carefully, do not dismantle, open the battery or use any type

of electrical/mechanical abuse. Avoid storage in direct sunlight.

1.7 To lift and move the product

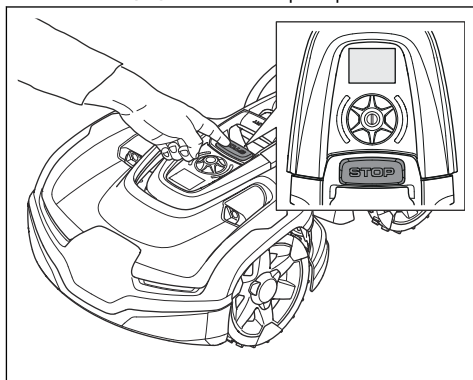


WARNING: The product must be set to OFF before you lift it. The product is OFF when the LED status indicator goes off.

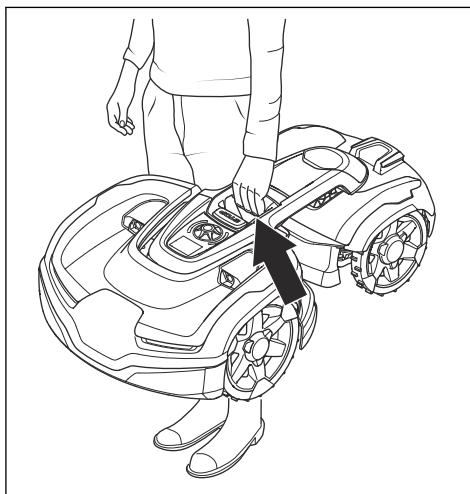


CAUTION: Do not lift the product when it is parked in the charging station. It can damage the charging station and/or the product. Push the **STOP** button and pull the product out of the charging station before you lift it.

1. Push the **STOP** button to stop the product.



2. Enter the PIN code if it is necessary.
3. Push the **jog wheel** for 3 seconds to set the product to OFF.
4. Make sure that the LED status indicator goes OFF.
5. Lift the product by the handle.



2 Introduction

Factory PIN code: 1234

Serial number:

Product number:

The serial number and the product number are on the product rating plate and on the product carton.

- Register your product on www.husqvarna.com. Enter the serial number of the product, the product number and the date of purchase to register your product.

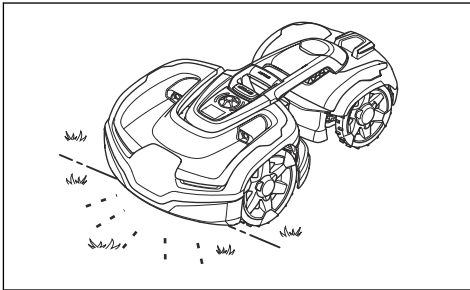
2.1 Support

For support about the product, speak to your Husqvarna servicing dealer.

2.2 Product description

Note: Husqvarna regularly updates the appearance and function of the products. Refer to *Support on page 6*.

The product is a robotic lawn mower. The product has a battery power source and cuts the grass automatically. It continuously alternates between mowing and charging. The movement pattern is random, which means that the lawn is mowed evenly and with less wear. The boundary wire and the guide wire controls the movement of the product within the work area. Sensors in the product senses when it is approaching the boundary wire. The front of the product always passes the boundary wire by a specific distance before the product turns around. When the product hits an obstacle or approaches the boundary wire the product selects a new direction.



The operator selects the operation settings in Automower® Access on the product. The display shows

the selected and possible operation settings, and the operation mode of the product.

2.2.1 Mowing technique

The frequent cutting technique improves the grass quality and decreases the use of fertilizers. Collection of grass is not necessary.

2.2.2 Find the charging station

The product operates until the battery state of charge is low, then it starts to go to the charging station. The product has 3 search methods to find the charging station. Refer to *To find the charging station on page 24*.

2.3 Automower® Access

The user interface of the product is called Automower® Access. It consists of the display, the **jog wheel**, the LED status indicator, the **START** button and the **STOP** button. Refer to *Automower® Access on page 9*.

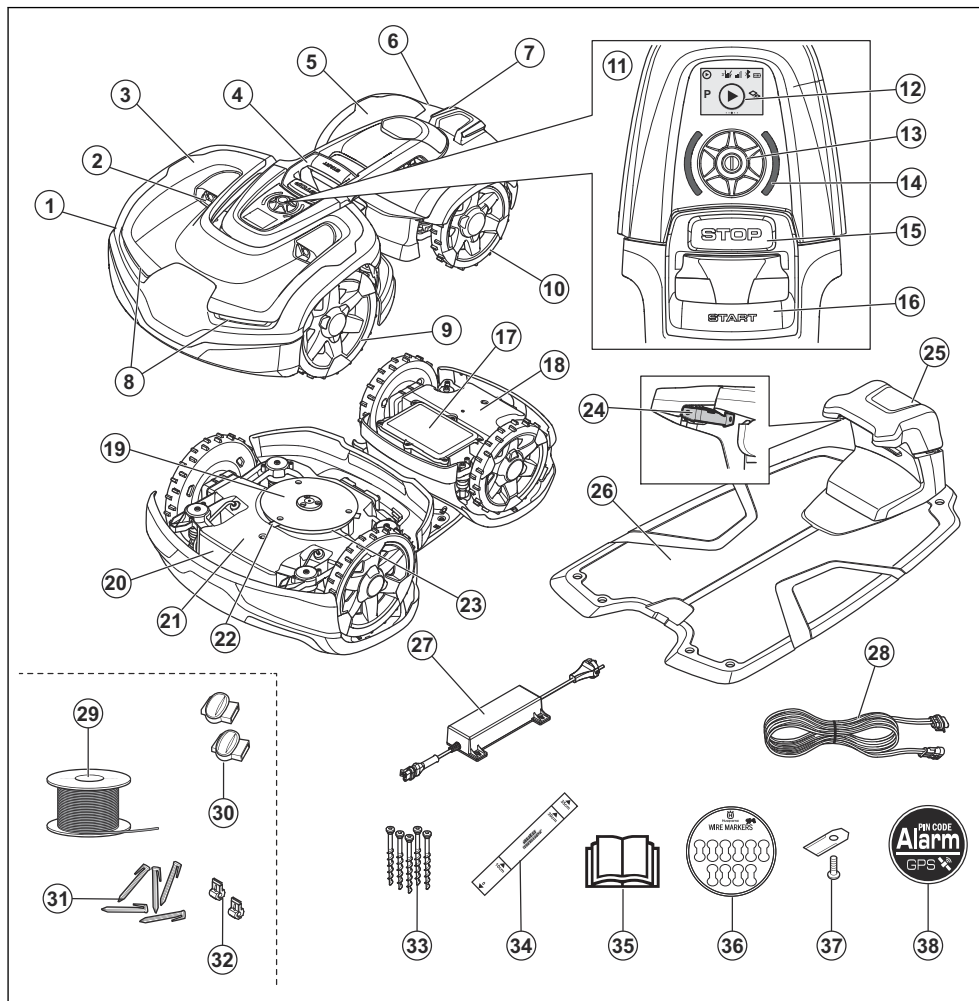
2.4 Automower® Connect

Automower® Connect is a mobile application that makes it possible to select the operation settings remotely. Refer to *Automower® Connect on page 20*.

2.5 Automower® Intelligent Mapping (AIM)

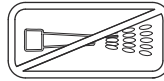
Automower® Intelligent Mapping (AIM) is available in the Automower® Connect app. Use Automower® Intelligent Mapping (AIM) to make a virtual map of your lawn and installation. In the map you can make virtual work areas and stay-out zones. Refer to *Automower® Intelligent Mapping (AIM) on page 21*.

2.6 Product overview

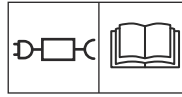


- | | |
|-----------------------|---|
| 1. Front body | 12. Display |
| 2. Ultrasonic sensors | 13. Jog wheel |
| 3. Front top cover | 14. LED status indicator |
| 4. Lifting handle | 15. STOP button |
| 5. Rear body | 16. START button |
| 6. Rear top cover | 17. Battery cover |
| 7. Charging plates | 18. Rear chassis box with electronics, motors and battery |
| 8. Headlights | 19. Skid plate |
| 9. Front wheels | 20. Rating plate (incl. product identification code) |
| 10. Rear wheels | 21. Front chassis box with electronics and motors |
| 11. Automower® Access | |

22. Blades
23. Blade disc
24. Contact plates
25. LED for operation check of the charging station and boundary wire
26. Charging station
27. Power supply¹
28. Low-voltage cable
29. Loop wire for boundary loop and guide wire²
30. Couplers for loop wire³
31. Stakes⁴
32. Connector for the loop wire⁵
33. Screws for securing the charging station
34. Measurement gauge for help when installing the boundary wire (the measurement gauge is broken loose from the box)
35. Operator's Manual and Quick Guide
36. Cable markers
37. Extra blades
38. Alarm decal



Do not use a high-pressure washer or even running water to clean the product.



Use a detachable power supply as defined on the rating label next to the symbol.



This product complies with the applicable EU Directives.



This product complies with the applicable UK Directives.



It is not permitted to dispose this product as normal household waste. Ensure that the product is recycled in accordance with local legal requirements.

2.7 Symbols on the product

These symbols can be found on the product. Study them carefully.



WARNING: Read the user instructions before operating the product.



WARNING: Disable the product before working on or lifting the product.



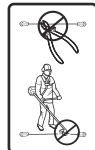
WARNING: Keep a safe distance from the product when operating. Keep your hands and feet away from the rotating blades.



WARNING: Do not ride on the product. Do not put your hands or feet close to or under the product.



The chassis contains components which are sensitive to electrostatic discharge (ESD). The chassis must also be resealed in a professional manner. For these reasons the chassis shall only be opened by authorized service technicians. A broken seal can result in the entire or parts of the guarantee no longer being valid.



The low-voltage cable must not be shortened, extended or spliced.

Do not use a trimmer nearby the low-voltage cable. Be careful when trimming edges where the cables are placed.

2.8 Symbols on the battery



WARNING: Lithium-ion batteries can explode or cause fire if disassembled, short-circuited or handled roughly. Do not expose to water, fire or high temperature.

¹ The appearance may differ depending on market.

² Is a part of the Installation kit which is purchased separately.

³ Refer to note 2

⁴ Refer to note 2

⁵ Refer to note 2



Read the user instructions.



Do not discard the battery into fire and do not expose the battery to a heat source.



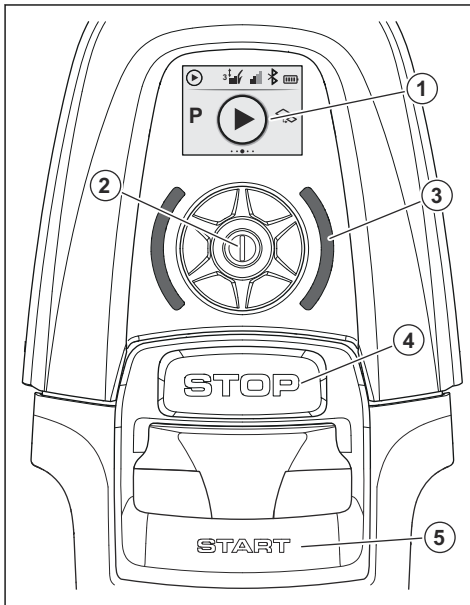
Do not immerse the battery into water.

2.9 General manual instructions

The following system is used in the Operator's Manual to make it easier to use:

- Text written in *italics* is a text that is shown in the display or is a reference to another section in the Operator's Manual.
- Text written in **bold** is one of the buttons on the product.

2.10 Automower® Access



1. The display shows the status bar and the main menu symbols. Refer to *Symbols on the display on page 9*.
2. Use the **jog wheel** to move through the menu structure and to select a menu option.

3. The LED status indicator shows the status of the product. Refer to *LED status indicator on page 11*.
4. **STOP** button
5. **START** button

2.10.1 Symbols on the display



The product is in operation.



The product is parked.



The product is paused.



There is an error.



Cutting height of the product.



Cellular signal strength.



Wi-Fi signal strength.



Bluetooth® connection is enabled.

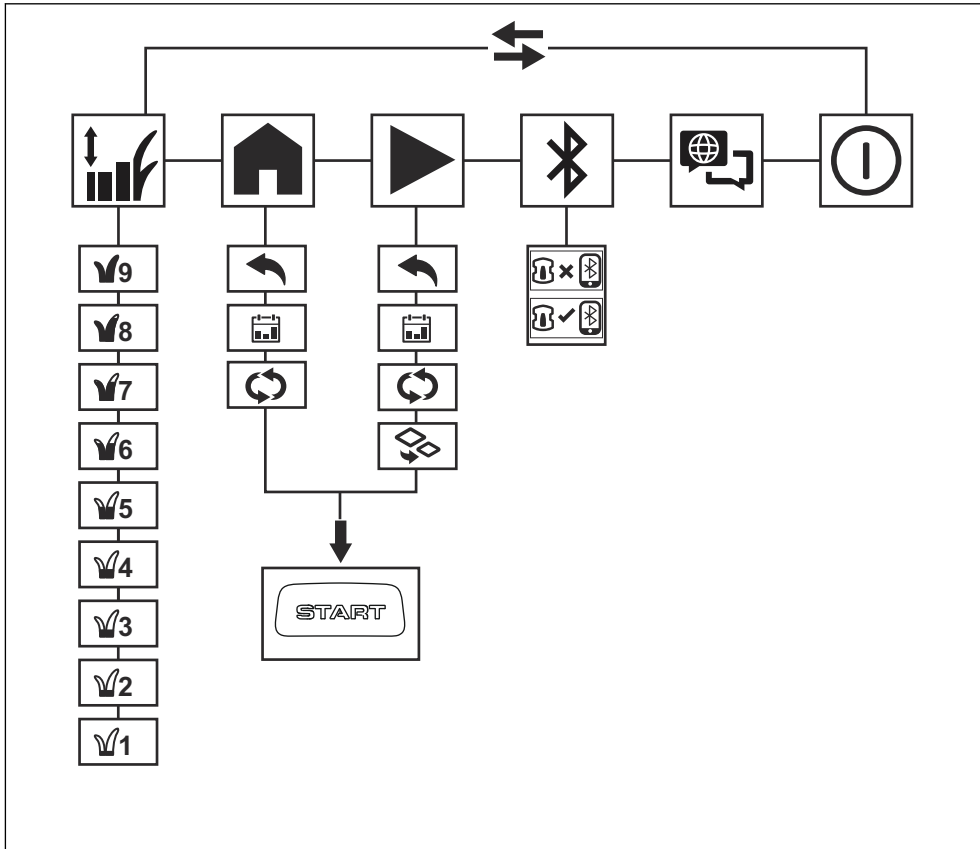


The battery is charging.



Battery level.

2.10.2 Menu structure overview in Automower® Access



2.10.2.1 Symbols in the main menu for Automower® Access



Cutting height

In the *Cutting height* menu you can adjust the cutting height in 9 steps.



Park

In the *Park* menu you can set the product to park until further notice or to the set schedule.



Mow

In the *Mow* menu you can set the product to cut to the set schedule or in secondary area mode.



Connect

In the *Connect* menu you can enable Bluetooth® and make a pairing operation with your mobile device.



Language

In the *Language* menu you can select a language in the display.



Power off

Power off sets the product to OFF.

2.10.2.2 Symbols in the submenu for Automower® Access



Cutting height

In the *Cutting height* submenu you can select a cutting height for the product.



Back

If you select *Back*, you go back to the main menu.



Schedule

In the *Schedule* submenu you can select the *Schedule* settings. The *Schedule* settings are set in the Automower® Connect app.



Selected operation mode

In this submenu you can select the product to operate continuously in the selected operation mode. The product continues to operate in this mode until you select a new operation mode.



Secondary area

In the *Secondary area* submenu you can select the *Secondary area* operation mode. Refer to *Secondary area on page 27*.



Connected

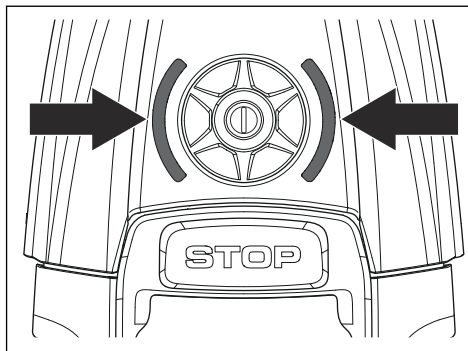
The product and mobile device are connected with Bluetooth®.



Not Connected

The product and mobile device are not connected with Bluetooth®.

2.10.3 LED status indicator



LED indication	Status
Green	In operation
Blue	Parked
Red	Error
Yellow	Paused/stopped
Flashes yellow	PIN code is necessary
Pulsates green/blue	Charging in progress
Flashes green/blue	Push the jog wheel to start operation
Flashes green slowly	Not in operation
White	The product sets to OFF

3 Installation

3.1 Introduction - Installation



WARNING: Read and understand the safety chapter before you install the product.



CAUTION: Use original spare parts and installation material.

Note: Refer to www.husqvarna.com for more information about installation.

3.2 Main components for installation

The installation involves the following components:

- A robotic lawn mower that mows the lawn automatically.
- A charging station, which has 3 functions:
 - To send control signals along the boundary wire.
 - To send control signals along the guide wire so that the product can follow the guide wire to specific remote areas in the garden and can find its way back to the charging station.
 - To charge the product.
- A power supply, which is connected to the charging station and a 100-240V power outlet.
- Loop wire, which is laid around the work area and around objects and plants that the product must not run into. The loop wire is used both as boundary wire and guide wire.

3.3 To prepare for installation

Read the installation chapter before you start the installation. Prepare the installation carefully to make the product operate satisfactorily.

- Make a blueprint of the work area and include all obstacles. This makes it easier to examine where to put the charging station, the boundary wire and the guide wire.
- Make a mark on the blueprint where to put the charging station, the boundary wire and the guide wire.
- Make a mark on the blueprint where the guide wire connects to the boundary wire. Refer to *To install the guide wire on page 18*.
- Fill in holes in the lawn to make it level.



CAUTION: Holes with water in the lawn can cause damage to the product.

- Cut the grass and trim the edges before you install the product. Make sure that the grass is maximum 10 cm / 4 in.

Note: The first weeks after installation the sound level when the product cuts the grass can be higher than usual. The sound level decreases after some time.

3.4 Before the installation of the wires

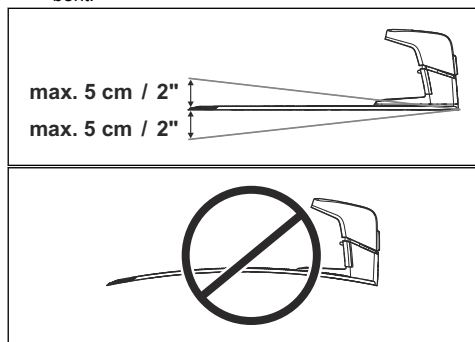
You can select to attach the wires with stakes or bury them. You can use the 2 procedures for the same work area.



CAUTION: If you use a dethatcher in the work area, bury the boundary wire and the guide wire to prevent them from damage.

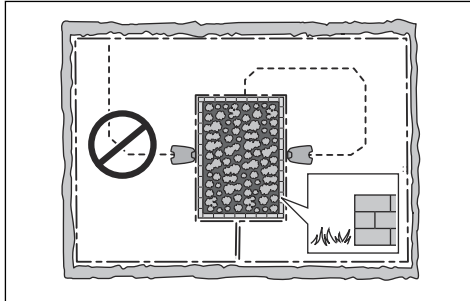
3.4.1 To examine where to put the charging station

- Keep a minimum 3 m / 10 ft. of free space in front of the charging station.
- Keep a minimum of 1.5 m / 5 ft. of free space to the right and to the left of the charging station.
- Put the charging station near a power outlet.
- Put the charging station on a level surface.
- The baseplate of the charging station must not be bent.



- Put the charging station in the largest open section of the work area.
- Put the charging station in an area without an irrigation system.

- Put the charging station in an area with protection from the sun.
- If the charging station is installed on an island, make sure to connect the guide wire to the island. Refer to *To make an island on page 15*.



3.4.2 To examine where to put the power supply



CAUTION: Make sure that the blades on the product do not cut the low-voltage cable.

- Put the power supply in an area with a roof and protection from the sun and rain.
- Put the power supply in an area with good airflow.
- Use a residual-current device (RCD) with a tripping current of maximum 30 mA when you connect the power supply to the power outlet.

Low-voltage cables of different lengths are available as accessories.

3.4.3 To examine where to put the boundary wire



CAUTION: There must be a barrier of minimum 15 cm / 6 in. in height between the boundary wire and water bodies, slopes, precipices or public roads. This will prevent damage to the product.



CAUTION: Do not let the product operate on gravel.



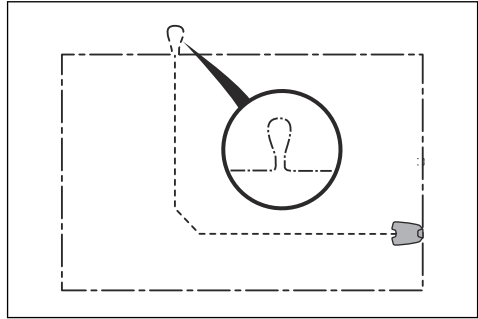
CAUTION: Do not make sharp bends when you install the boundary wire.



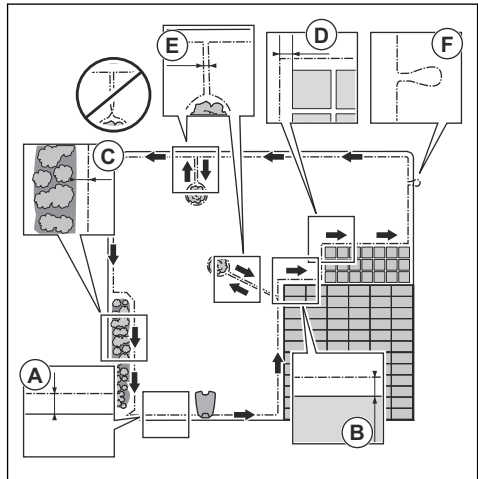
CAUTION: For careful operation without noise, isolate all obstacles such as trees, roots and stones.

The boundary wire should be put as a loop around the work area. Sensors in the product senses when the product approaches the boundary wire, and the product selects another direction. All parts of the work area must be maximum 35 m / 115 ft. from the boundary wire.

To make the connection easier between the guide wire and the boundary wire, it is recommended to make an eyelet where the guide wire will be connected. Make the eyelet with approximately 20 cm / 8 in. of the boundary wire.

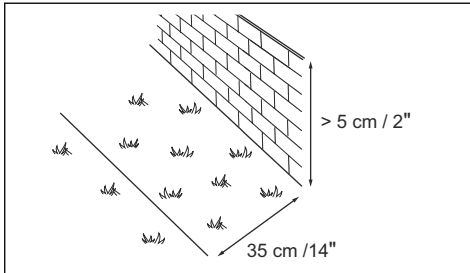


Note: Make a blueprint of the work area before you install the boundary wire and guide wire.

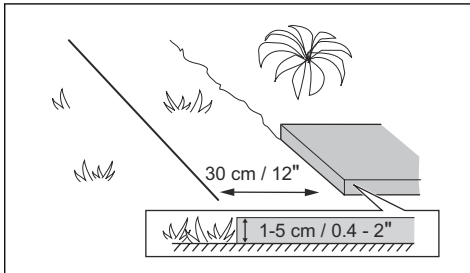


- Put the boundary wire around all of the work area (A). Adapt the distance between the boundary wire and obstacles.

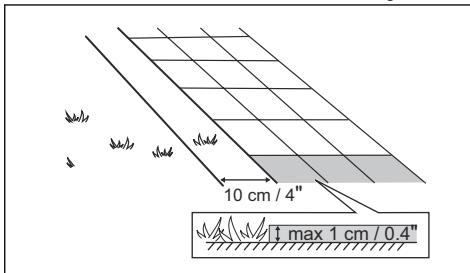
- Put the boundary wire 35 cm / 14 in. (B) from an obstacle that is more than 5 cm / 2 in. high.



- Put the boundary wire 30 cm / 12 in. (C) from an obstacle that is 1-5 cm / 0.4-2 in. high.



- Put the boundary wire 10 cm / 4 in. (D) from an obstacle that is less than 1 cm / 0.4 in. high.



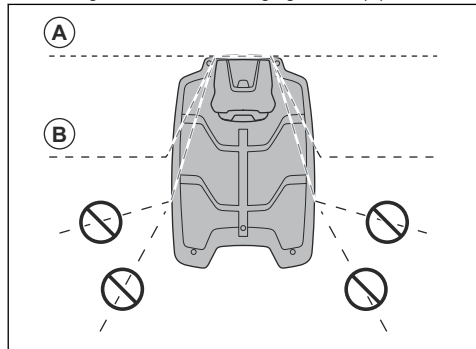
- If you have a paving stone path that is in level with the lawn, put the boundary wire below the paving stone.

Note: If the paving stone is minimum 30 cm / 12 in. wide, use the factory setting for the *Drive Past Wire* function to cut all the grass adjacent to the paving stone. Refer to *Drive Past Wire* on page 25.

- If you make an island, put the boundary wire that runs to and from the island near together (E). Put the wires in the same stake. Refer to *To make an island* on page 15.
- Make an eyelet (F) where the guide wire is to be connected to the boundary wire.

3.4.4 To examine how to put the boundary wire around the charging station

- Husqvarna recommends to put the boundary wires straight out from the charging station (A).

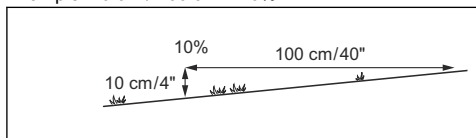


- If it is necessary you can put the boundary wire below the charging station in an angle (B).

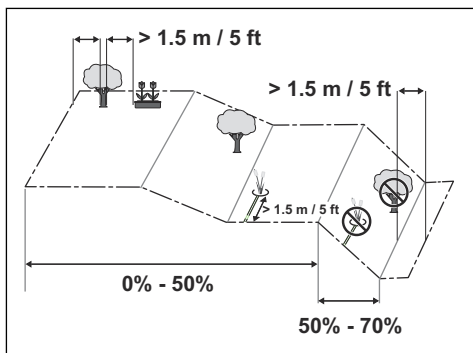
Note: Do not put the boundary wire too far below the charging station. The product can find it hard to find and enter the charging station.

3.4.4.1 To put the boundary wire in a slope

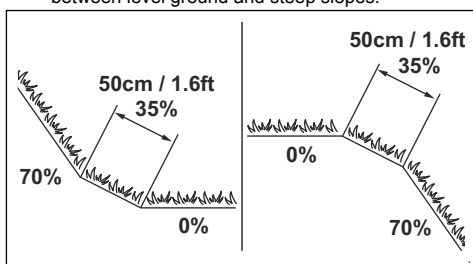
The product can operate in 70% slopes. Slopes that are more than 70% must be isolated with the boundary wire. The gradient (%) is calculated as height for each m. Example: 10 cm / 100 cm = 10%.



- The product operates as usual in slopes that are maximum 50% in the work area. Keep a distance of 1.5 between the boundary wire and obstacles, or between obstacles.
- For slopes between 50-70%, make sure that there are no obstacles in the slope. There must be a distance of 1.5 m / 5 ft from the bottom of the slope to the boundary wire.



- Make sure that there is an area of 50 cm / 1.6 ft. between level ground and steep slopes.



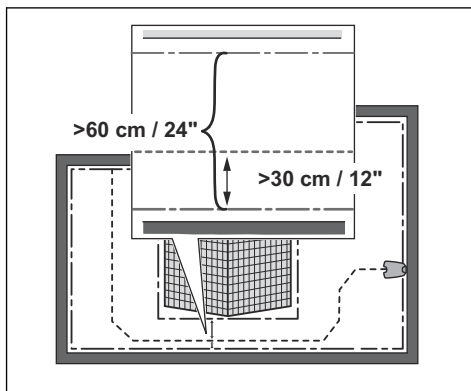
- For slopes adjacent to a public road, put an obstacle of minimum 15 cm / 6 in. along the outer edge of the slope. You can use a wall or a fence as an obstacle.

3.4.4.2 Passages

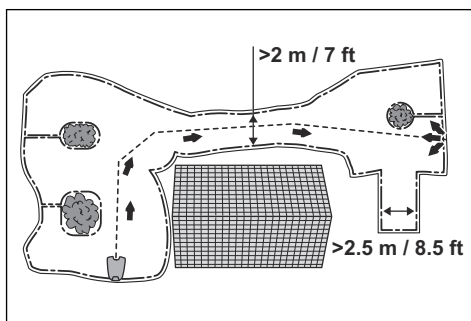
A passage is a section that has boundary wire on each side and that connects 2 parts of the work area. The passage must be a minimum of 2 m / 6.5 ft wide to get a good cutting result. Short passages can be as narrow as 60 cm / 2 ft., if a guide wire is installed through the passage. A long narrow passage can have a negative impact of the cutting result.

Note: If a passage is less than 2 m / 6.5 ft. wide, install a guide wire through the passage.

The product always runs to the left of the guide wire as seen facing the charging station. It is recommended that the distance between the guide wire and boundary wire is one third of the total width of the passage on the right side and two thirds of the total width of the passage to the left of the guide wire (A). The minimum distance between the guide wire and the boundary wire is 30 cm / 12 in.



A dead end must be a minimum of 2.5 m / 8.5 ft. wide.



3.4.4.3 To make an island



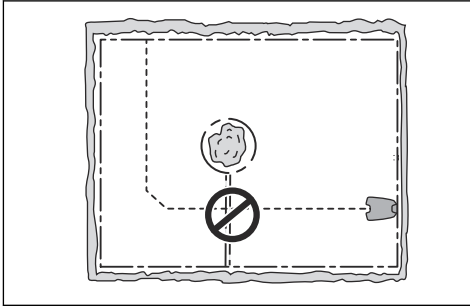
CAUTION: Do not put a section of boundary wire across the other. The sections of boundary wire must be parallel.



CAUTION: Do not put the guide wire across the boundary wire.



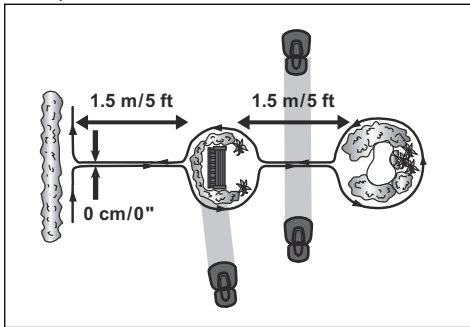
CAUTION: Isolate or remove obstacles that are less than 15 cm / 6 in. in height. Isolate or remove obstacles that slope slightly, for example, stones, trees or roots. This will prevent damage to the blades of the product.



To make an island, isolate areas in the work area with the boundary wire. We recommend to isolate all stable objects in the work area.

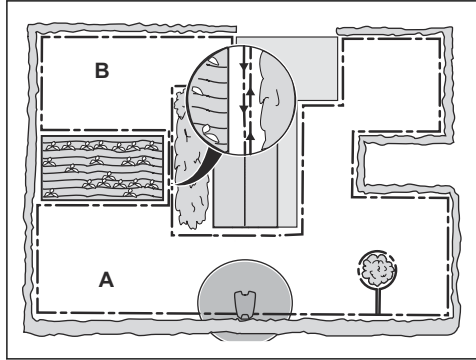
Some obstacles are resistant to a collision, for example, trees or bushes that are more than 15 cm / 6 in. in height. The product will collide with the obstacle and then select a new direction.

- Put the boundary wire to and around the obstacle to make an island.
- Put the 2 sections of boundary wire to and from the island close together. This will make the product run across the wire.
- Put the 2 sections of boundary wire in the same stake.
- Make sure that there is a minimum of 1.5 of empty space before an obstacle.



3.4.4.4 To make a secondary area

Make a secondary area (B) if the work area has 2 areas that are not connected with a passage. The work area with the charging station is the main area (A).



Note: The product must be manually moved between the main area and the secondary area.

- Put the boundary wire around the secondary area (B) to make an island. Refer to *To make an island on page 15.*

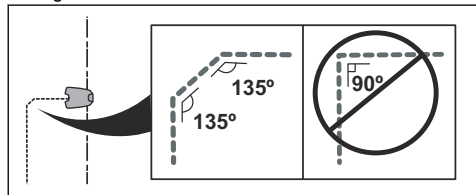
Note: The boundary wire must be put as 1 loop around all of the work area (A + B).

Note: When the product cuts grass in the secondary area, the *Secondary area mode* must be selected. Refer to *Secondary area on page 27.*

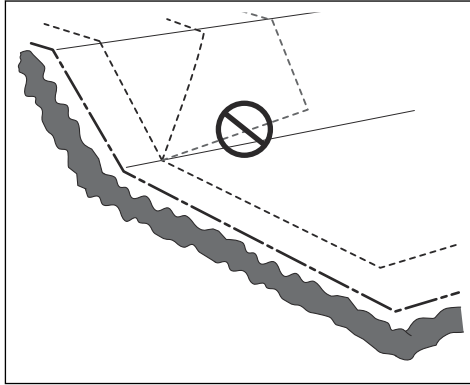
3.4.5 To examine where to put the guide wire

Put the guide wire from the charging station through the work area and connect it to the boundary wire. This product has 2 guide wires. Use the same approach for all guide wires.

- Put the guide wire in a line at a minimum of 2 m / 7 ft. in front of the charging station.
- Make sure that the guide wire has as much free area as possible to the left of the guide wire when facing the charging station.
- Put the guide wire minimum 30 cm / 12 in. from the boundary wire.
- Do not make sharp bends when you install the guide wire.



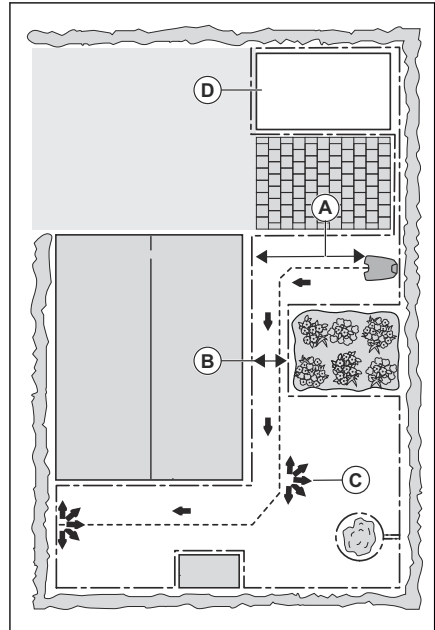
- If the work area has a slope, put the guide wire in a straight line from the bottom of the slope to the top of the slope. If it is not possible to make a straight line, put the guide wire diagonally across the slope.



CAUTION: Do not put the guide wire in parallel with the slope, as the illustration shows. This can increase the wear on the grass.

3.4.6 Work area examples

- If the charging station is put in a small area (A), make sure that the distance to the boundary wire is at a minimum 3 m / 10 ft. in front of the charging station.
- If the work area has a passage (B) with no guide wire installed, the recommended minimum distance between the boundary wires is 2 m / 6.5 ft. With a guide wire installed through the passage, the recommended minimum distance between the boundary wires is 60 cm / 24 in.
- If the work area has areas which are connected by a narrow passage (B), you can set the product to first follow and then leave the guide wire after a certain distance (C). The settings can be changed in *Lawn coverage* on page 24.
- Use the GPS Assisted Navigation that helps the product select the most optimal operation. Refer to *Lawn coverage* on page 24.
- If the work area includes a secondary area (D), refer to *To make a secondary area* on page 16. Put the product in the secondary area and select *Secondary area mode*.



3.5 Installation of the product

3.5.1 Installation tools

- Hammer/plastic mallet: To simplify putting the stakes into the ground.
- Edge cutter/straight spade: To bury the boundary wire.
- Combination pliers: For cutting the boundary wire and pressing the connectors together.
- Adjustable plier: For pressing the couplers together.

3.5.2 To install the charging station



CAUTION: Do not make new holes in the charging station plate.



CAUTION: Do not put your feet on the baseplate of the charging station.



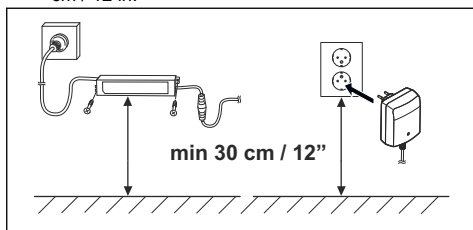
WARNING: Make sure that the plugs of the low-voltage cable and the power supply unit are clean and dry before you connect them.

When connecting the power supply, only use a power outlet that is connected to an residual-current (RCD) device.

1. Read and understand the instructions about the charging station. Refer to *To examine where to put the charging station on page 12*.
2. Put the charging station in the selected area.

Note: Do not attach the charging station to the ground with the screws until the guide wire is installed. Refer to *To install the guide wire on page 18*.

3. Connect the low-voltage cable to the charging station.
4. Put the power supply at a minimum height of 30 cm / 12 in.



5. Connect the power supply cable to a 100-240V power outlet.

Note: The product can be put in the charging station to charge while you install the boundary wire and the guide wire.

6. Put the low-voltage cable in the ground with stakes or bury the cable. Refer to *To put the wire into position with stakes on page 19* or *To bury the boundary wire or the guide wire on page 19*.
7. Connect the wires to the charging station after the installation of boundary wire and guide wire is complete. Refer to *To install the boundary wire on page 18* and *To install the guide wire on page 18*.
8. Attach the charging station to the ground with the supplied screws after the guide wire is installed. Refer to *To install the guide wire on page 18*.

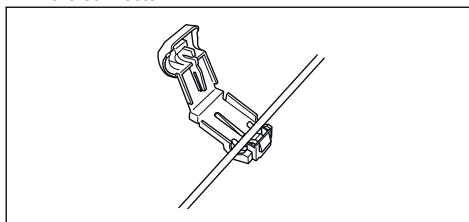
3.5.3 To install the boundary wire



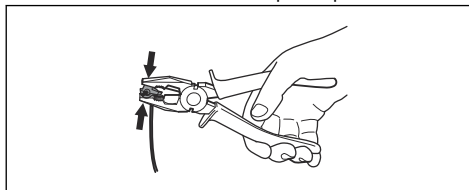
CAUTION: Do not put remaining wire in a coil. The coil causes interference with the product.

1. Put the boundary wire around all of the work area. Start and complete the installation behind the charging station.

2. Open the connector and put the boundary wire in the connector.



3. Close the connector with a pair of pliers.



4. Cut the boundary wire 1-2 cm / 0.4-0.8 in. above each connector.
5. Put the right end of boundary wire into the channel with the mark "AR".
6. Put the left end of boundary wire into the channel with the mark "AL".
7. Push the right connector onto the metal pin on the charging station with the mark "AR".
8. Push the left connector onto the metal pin on the charging station with the mark "AL".
9. Put the cable mark on the left and right boundary wire. Do not walk on the charging station.

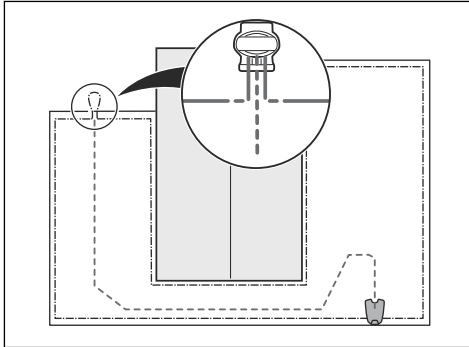
3.5.4 To install the guide wire



CAUTION: Twinned cables, or a screw terminal block that is insulated with insulation tape are not satisfactory splices. Soil moisture will cause the wire to oxidize and after a time result in a broken circuit.

1. Open the connector and put the wires in the connector.
2. Close the connector with a pair of pliers.
3. Cut the guide wires 1-2 cm / 0.4-0.8 in. above each connector.
4. Put the guide wires centrally below the charging station plate, and push them through the slot in the charging station tower.
5. Push the connector onto the metal pin on the charging station with the mark "G1" or "G2".
6. Disconnect the charging station from the power outlet.
7. Put the cable mark on the guide wires.

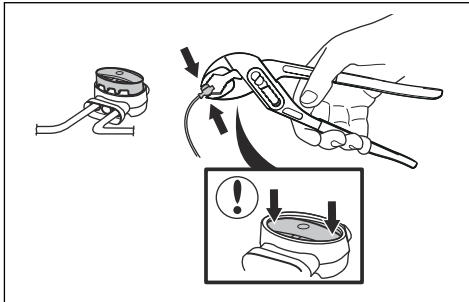
8. Put the end of the guide wires at the eyelet on the boundary wire.
9. Cut the boundary wire with a pair of wire cutters.
10. Connect the guide wires to the boundary wire with a coupler.



- a) Put the 2 ends of the boundary wire and the end of the guide wires into the coupler.

Note: Make sure that you can see the end of the guide wires through the transparent area of the coupler.

- b) Push down the cover on the coupler with adjustable pliers to attach the wires in the coupler.



11. Attach the guide wires to the ground with stakes or bury the guide wires in the ground. Refer to *To put the wire into position with stakes on page 19* or *To bury the boundary wire or the guide wire on page 19*.
12. Connect the charging station to the power outlet.

3.6 To put the wire into position with stakes



CAUTION: Make sure that the stakes hold the boundary wire and the guide wire against the ground.



CAUTION: Cutting the grass too low right after installation can damage the wire insulation. Damage to the insulation may not cause disruptions until several weeks or months later.

1. Put the boundary wire and the guide wire on the ground.
2. Put the stakes at a maximum of 75 cm / 30 in. distance from each other.
3. Attach the stakes to the ground with a hammer or a plastic mallet.

Note: The wire is overgrown with grass and not visible after a few weeks.

3.7 To bury the boundary wire or the guide wire

- Cut a groove in the ground with an edge cutter or a straight shovel.
- Put the boundary wire or the guide wire 1-20 cm / 0.4-8 in. into the groove.

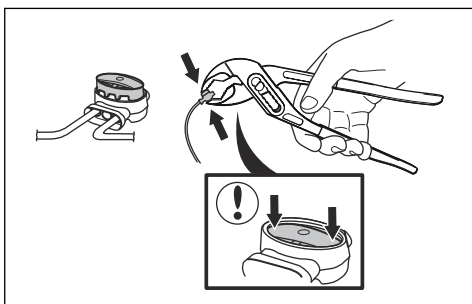
3.8 To extend the boundary wire or the guide wire

Note: Extend the boundary wire or the guide wire if it is too short for the work area. Use original spare parts, for example couplers.

1. Disconnect the charging station from the power outlet.
2. Cut the boundary wire or the guide wire with a pair of wire cutters where it is necessary to install the extension.
3. Add wire where it is necessary to install the extension.
4. Put the boundary wire or the guide wire into position.
5. Put the wire ends into a coupler.

Note: Make sure that you can see the ends of the boundary wire or the guide wire through the transparent area of the coupler.

6. Push down the cover on the coupler with adjustable pliers to attach the wires in the coupler.

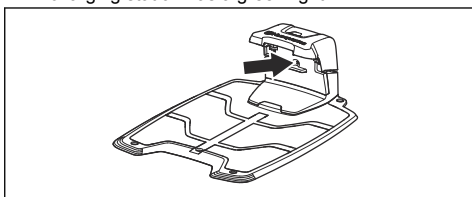


7. Put the boundary wire or the guide wire into position with stakes.
8. Connect the charging station to the power outlet.

3.9 After the installation of the product

3.9.1 To do a visual check of the charging station

1. Make sure that the indicator LED lamp on the charging station has a green light.

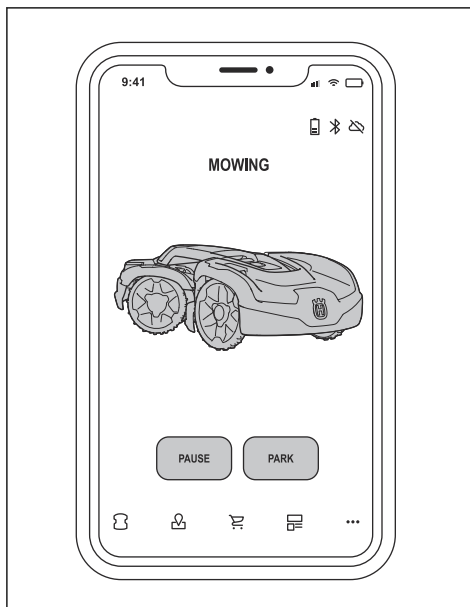


2. If the indicator LED lamp does not have a green light, do a check of the installation. Refer to *LED indicator of the charging station on page 44* and *To install the charging station on page 17*.

3.10 Automower® Connect

Automower® Connect is a free app for your mobile device. Use the app for installation, settings and operation of your product. You can also find more information for example about alarm and statistics in the Automower® Connect app.

The app gives 2 modes of connectivity: Long-range cellular connectivity and Short-range Bluetooth® connectivity.



- Dashboard that shows the current status of the product and the battery state of charge.

Note: All countries do not support cellular connection to Automower® Connect because of regional specified cellular systems. The included Automower® Connect lifetime service only applies if there is a third part sub-supplier of available in the operational area.

3.10.1 To install the Automower® Connect app

1. Download the Automower® Connect app on your mobile device.
2. Sign up for a Husqvarna account in the Automower® Connect app.
3. An e-mail is sent to the registered e-mail address. Follow the instructions in the e-mail in less than 24 hours to validate your account.
4. Log in to your Husqvarna account in the Automower® Connect app.

3.10.2 To pair Automower® Connect and the product

1. Do step 1-6 in *To start the product for the first time on page 21*.
2. Obey the instructions in the Automower® Connect app.

3.10.3 Download firmware over the air (Firmware over the air FOTA)

The product has a function that automatically downloads new firmware. When a new firmware is available, a notification shows in the app where you can select to install the new firmware. In the factory setting this function is enabled.

3.10.4 Automower® Direct

Automower® Direct uses short-range Bluetooth® communication, and is included in Automower® 435X AWD.

Husqvarna cannot guarantee the time period or coverage of the long-range cellular connectivity. It is possible to communicate with the product through Bluetooth® if you are in short-range of the product. You can use Automower® Direct without a Husqvarna account as long as you have the product PIN code.

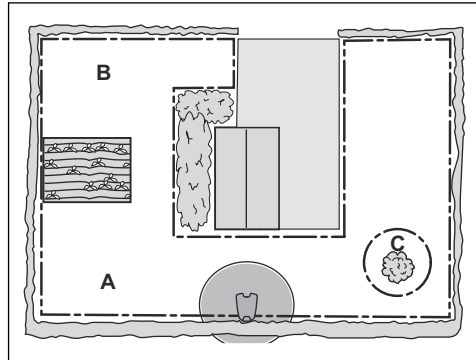
3.10.4.1 To start to use Automower® Direct

1. Download the Automower® Connect app on your mobile device.
2. Select Automower® Direct on the start screen of the Automower® Connect app.
3. Start Bluetooth® on your mobile device and on the product, refer to *To start the product for the first time on page 21*.
4. Go to the *Settings* symbol in the display and activate Bluetooth®.
5. Select the product to pair with in the Automower® Connect app.
6. Enter the PIN code for the product.

Note: You have access to the menus and functions as long as you are in Bluetooth® short-range.

3.11 Automower® Intelligent Mapping (AIM)

Automower® Intelligent Mapping (AIM) is available in the Automower® Connect app. The technology uses different sensors, GPS included, in the product. The precision of the map is approximately 1 m / 3.3 ft.



Some of the functions with AIM are:

- It shows a map of the lawn in Automower® Connect app with charging station, boundary wire, guide wire and islands.
- You can make work areas (A) and (B) in the installation where you can set a schedule and cutting height for each work area.
- You can make stay-out zones (C) in which the product cannot enter and cut grass.

Note: With the AIM function you can set work areas and stay-out zones with a precision of approximately 1 m / 3.3 ft.

The data collection for the AIM map starts automatically. The product collects data while it operates and the map is completed in 1-2 weeks. Remove temporary obstacles on the lawn when the product operates and collects data. If you change the installation of the wires or charging station, you must do a new map. Read more about AIM in the Automower® Connect app.

3.12 To start the product for the first time

When the product is set to ON for the first time, there are some basic settings to do before the product can start to operate.

1. Push the **jog wheel** for 3 seconds to set the product to ON.

Note: The Bluetooth® pairing operation mode of the product is enabled for 3 minutes. If the pairing operation between the product and the mobile device is not completed correctly, use the **jog wheel** to select Bluetooth® to enable it again.

2. Enter the factory PIN code 1234 on the product.
3. Log on to your Husqvarna account in the Automower® Connect app.
4. Start Bluetooth® on your mobile device.

5. Select *My mowers* in the Automower® Connect app, and add your product.
6. Follow the instructions in the Automower® Connect app.

Note: Husqvarna recommends to change the factory PIN code to a selected PIN code in the app.

4 Settings

The product has factory settings but the settings can be adapted to each work area.

4.1 Schedule



In *Schedule* you can change the schedule settings for the product.

The *Schedule* function controls which hours the product operates. When the product does not operate, it is parked in the charging station. You can see which hours and days the product operates in the schedule overview in the app.

You can set the Schedule if the work area is less than the maximum area capacity of the product. This prevents wear on the grass and the product. The factory schedule setting lets the product operate around the clock 7 days a week.

To calculate the schedule setting, refer to *To calculate the schedule setting on page 23*.

4.1.1 To calculate the schedule setting

1. Calculate the dimension of your lawn in m^2 / yd^2 .
2. Divide the m^2 / yd^2 of the lawn with the approximate operation capacity. Refer to table below.
3. The result is equal to the number of hours that the product must operate each day.

Note: The operation capacity is approximate and is calculated for flat and open work area. If the work area has a lot of slopes or obstacles, you need to increase the *Schedule* settings.

Model	Approximate operation capacity, $m^2 / yd^2 / h$
Automower® 435X AWD	146 / 175

Example: A lawn of $500 m^2 / 600 yd^2$, cut with an Automower® 435X AWD.

$500 m^2 / 146 \approx 3.5 h$.

$600 yd^2 / 175 \approx 3.5 h$.

Days / week	h / day	Schedule settings
7	3.5	10:00 - 13:30 / 10 am - 1.30 pm

4.2 Cutting height



4.2.1 Adjust the cutting height

The cutting height can be adjusted from 3 cm / 1.2 in. to 7 cm / 2.8 in.



CAUTION: The first weeks after a new installation, the cutting height must be set to 7 cm / 2.8 in. to prevent damage to the loop wire. The cutting height can then be lowered each week.

4.2.2 TargetHeight

Use the TargetHeight function to lower the cutting height from the maximum cutting height to the specified cutting height gradually during 10 days. If you change the cutting height manually during this time it will disable the TargetHeight function.

4.3 Operation



In *Operation* you can change the operation settings of the product.

4.3.1 Object avoidance

The *Object avoidance* function makes the product decrease speed when it comes near an obstacle to avoid to collide with it.

Note: This can cause that the grass is not cut around the obstacle. This function can cause the product to not cut high grass satisfactorily.

4.3.2 Weather timer

Weather timer automatically adjust the cutting time to the growth of the grass. The product is not permitted to operate more than the schedule settings.

Note: When using *Weather timer*, it is recommended to make as much operating time as possible available for *Weather timer*. Do not restrict the schedule more than necessary.

The first operation of the day is set by the schedule settings. The product always complete 1 mowing cycle, and then *Weather timer* selects if the product will continue to operate or not.

Note: *Weather timer* is reset if the product does not operate for more than 50 hours, or if a *Reset of all user settings* is done. *Weather timer* is not changed if a *Reset of schedule settings* is done.

4.3.3 ECO mode

ECO mode disables the signal in the boundary wire, guide wire and the charging station, when the product is parked or is charging. The LED indicator of the charging station flashes green when the loop signal is disabled.

Note: Use *ECO mode* to save energy and to prevent interference with other equipment, for example hearing loops or garage doors.

Note: To start the product manually in the work area you must first enable the loop signal.

4.3.3.1 To enable the loop signal

1. Set the product to ON.
2. Put the product in the charging station.
3. Push the **STOP** button.
4. Wait 2 seconds and then remove the product from the charging station.
5. Make sure that the LED indicator of the charging station is solid green.
6. Put the product where you want it to start to cut.

4.4 Installation



In *Installation* you can change the installation settings of the product.

4.4.1 To find the charging station

The product can be set to search for the charging station in 3 methods:

- *Charging station signal*
- *Follow boundary wire*
- *Follow guide wire*

The factory setting is set to use the 3 search methods at the same time. Use the factory setting to find the charging station as fast as possible and to keep the risk of tracks on the lawn to a minimum. The product always starts to search for the *Charging station signal*. After

a specified time interval, it also uses *Follow guide* and *Follow boundary wire*.

Causes why the product cannot follow the wire:

- Obstacles near the wire have not been isolated.
- The charging station, the boundary wire or the guide wire are not installed according to the instructions in *To examine where to put the charging station on page 12*, *To examine where to put the boundary wire on page 13* and in *To examine where to put the guide wire on page 16*.

4.4.1.1 Charging station signal

For some installations it is necessary to decrease the signal of the charging station. For example when the charging station is put near an obstacle, such as a bush or a wall. The product finds the charging station signal on the other side of the obstacle and tries to find the charging station, but the object prevents it to go to the charging station. You can set the charging station signal to *min*, *avg* or *max*.

Note: Husqvarna recommends to set the charging station signal to *max*. It is usually better to move the charging station, than to decrease the range of the charging station signal.

4.4.1.2 Follow guide wire and boundary wire

The time interval can be set for when the product starts to follow the boundary wire and guide wire to find the charging station.

4.4.2 Lawn coverage

The product has GPS Assisted Navigation that helps the product to select the most optimal operation.

Use the *Lawn coverage* function to set manual settings.

Note: If the GPS assisted navigation is enabled it is on while there is a GPS service. The product uses the manual settings for operation if the GPS service is not available.

4.4.2.1 To set the Lawn Coverage function

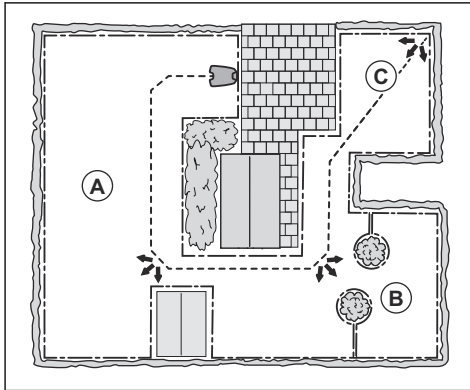
Use the *Lawn Coverage* function for the product to cut remote parts of the work area. Use the *Lawn Coverage* function if the work area includes remote parts that are connected with narrow passages to keep a satisfactorily cut work area. You can set a maximum of 5 remote areas where the product starts to cut.

The product first follows the guide wire until the set specified distance and then it starts to cut the work area.

Area A, approximately 50%

Area B, approximately 30%

Area C, approximately 20%



Each area can be enabled or disabled. Use the *Test* function to measure the distance from the charging station to where the product must start to cut.

The default settings lets the product follow the guide wire 300 m / 980 ft. in 20% of the times it moves out from the charging station. If the guide wire is less than 300 m / 980 ft. the product will follow it to the point where the guide wire is connected to the boundary wire.

4.4.3 Drive Past Wire

The front of the product always moves past the boundary wire by a specified distance before the product moves back into the work area. The factory setting for the *Drive Past Wire* function is 31 cm / 13 in. You can select a distance of 20-50 cm / 10-15 in.

Note: With the factory setting the product will cut 11 cm / 4.3 in. past the wire.

Note: If the *Drive Past Wire* distance is changed, the distance will change along the boundary wire everywhere in the work area.

4.4.4 Starting point

The *Starting point* function allows you to control how far the product drives forward from the charging station before it starts to operate. Use this function if the charging station is placed in an area with limited space.

Note: Starting point must not be set to a distance longer than the distance the guide wire is installed in a line in front of the charging station. Refer to *To examine where to put the guide wire on page 16*.

4.5 Accessories



In *Accessories* you can change the settings of the product accessories.

4.5.1 Headlights

There are 4 different headlight settings that control when the headlights are on:

- *Always on*
- *Evening only (19:00-00:00)*
- *Evening and night (19:00-07:00)*
- *Always off*

The default setting is *Always on*. The headlights can be set to flash if there is an error.

4.5.2 To avoid collisions with the Automower® house

When this option is enabled, the wear on the product and the Automower® house is reduced, but it can result in more uncut grass around the charging station.

4.6 General (Bluetooth® only)



This function is used to set time and date, or to reset to default settings.

4.6.1 Time & date

The time and date can be changed manually, or by using the time and date from the mobile device.

4.6.2 Reset to factory settings

The user settings can be reset to factory settings.

Note: *PIN code, Loop signal, Messages and Date & Time* will not be reset.

4.7 Security



The security settings controls the PIN code, the GeoFence and other security functions. The correct PIN-code must be entered to get access to the *Security* menu.

This menu is only available when your mobile device is connected to the product with Bluetooth®.

4.7.1 New loop signal

The loop signal is randomly selected to create a unique link between the product and the charging station. In rare cases, there may be a need to generate a new signal, for instance if 2 adjacent installations have a very similar signal.

4.7.2 Change PIN code

You can change the PIN code. Make a note of the new PIN code in Memo. Refer to *Introduction on page 6*.

4.7.3 Theft protection

In the *Theft protection* menu it is possible to set the alarm duration and also what events should trigger the alarm. The factory setting is to require PIN code and the alarm duration is 1 min.

4.7.3.1 Require PIN code

This function means that the product cannot be operated or controlled after the **STOP** button has been pushed without first entering the correct PIN code. If the incorrect PIN code is entered 5 times, the product is locked for a time. The lock is extended for each new incorrect try.

4.7.3.2 Alarm duration

There is a possibility to set how long the alarm signal should last. A setting between 1 and 10 minutes is possible.

4.7.3.3 STOP button pressed

If the alarm *"STOP button pressed"* is enabled, the alarm goes off if someone presses the **STOP** button and the PIN code is not entered within 30 seconds.

4.7.3.4 Carried away

If the alarm *Carried away* is enabled, the product senses unexpected motions, and the alarm goes off.

4.7.4 GeoFence

GeoFence is a GPS-based theft protection that makes a virtual fence for the product. If the product is more than a set distance away from the center position the product will be disabled and an alarm will start. The center position sets to the current position of the product when GeoFence is enabled. The PIN code is necessary to stop the alarm and to start the product again. The GeoFence is only enabled when the product is set to ON.

4.8 Automower® Connect (Bluetooth® only)



In *Automower® Connect* you can enable or disable the Automower® Connect module. You can also see the signal strength, connectivity status, initiate new pairing or remove the product from the paired accounts.

4.9 Messages

In this menu the previous fault and information messages can be found. For some of the messages, there are tips and advice to help to rectify the fault.

If the product is disrupted in any way, for example it is trapped or the battery is low, a message is saved relating to the disruption and the time it happened.

If the same message is repeated several times, this may indicate that an adjustment to the installation or the product is required. Refer to *Installation on page 12*.

4.10 Mowing profiles

You can save different sets of settings in the *Mowing profiles*. Use this function when you use one product for more than one location or to have different settings on the same location. In the *Mowing profiles* the product settings, map objects and their settings are saved.

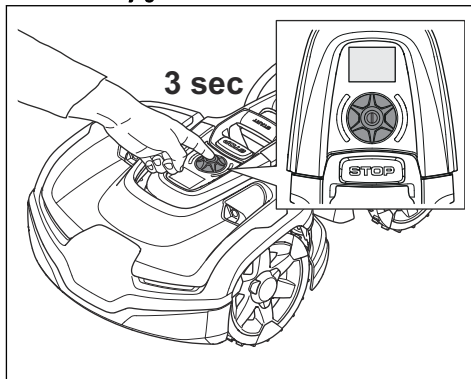
5 Operation

5.1 To set the product to ON



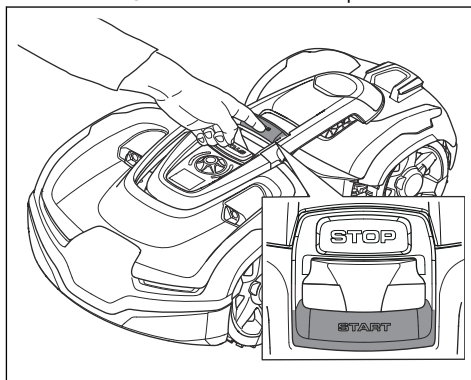
WARNING: Read and understand the safety chapter before you use the product.

1. Push the **jog wheel** for 3 seconds.



Note: Make sure that the **STOP** button is pushed down. If the **STOP** button is not pushed down a **STOP** symbol shows on the display.

2. Use the **jog wheel** to enter the PIN code. The correct PIN code must be entered to get access to the menu. If the incorrect PIN code is entered 5 times, the product is locked for a time. The lock is extended for each new incorrect try.
3. Select an operating mode and push the **jog wheel**. Refer to *Operating modes on page 27*.
4. Push the **START** button to start the product.



The product can only go from the charging station when the battery is full and if the *Schedule* is set to let the product to operate.

5.2 Operating modes

In the Automower® Access menu the following operation modes can be selected:

- Main area
- Secondary area
- Park

5.2.1 Main area

Main area is the standard operating mode where the product mows and charges automatically.

5.2.2 Secondary area

To mow secondary areas the operating mode *Secondary area* must be selected. In this mode, the operator must move the product manually between the main area and the secondary area. The product mows for a selected period of time or until the battery is empty.

5.2.3 Park

When the *Park* mode is selected the following operation selections can be chosen:

- Park until further notice
- Park for a specific number of hours

Refer to *Menu structure overview in Automower® Access on page 10*.

5.2.3.1 Park until further notice

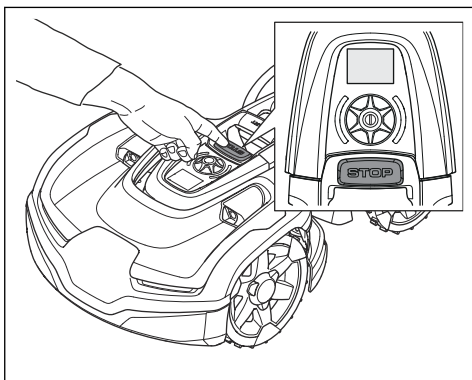
The product goes to the charging station where it stays until you select a different operating mode.

5.2.3.2 Park for a selected number of hours

The product goes to the charging station where it stays for a selected number of hours, then it automatically goes to the usual operation that is set in the *Schedule* settings. This operation selection is applicable when it is necessary to pause operation, for example for temporary irrigation or work on the lawn.

5.3 To stop the product

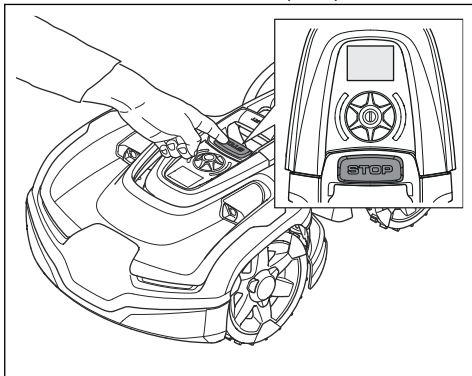
1. Push the **STOP** button on top of the product.



The product stops and the cutting motor stops.

5.4 To set the product to OFF

1. Push the **STOP** button to stop the product.



2. Enter the PIN code if it is necessary.
3. Push the **jog wheel** for 3 seconds. Make sure that the LED status indicator goes off.

Note: If the LED indicator is on or if it flashes. Refer to *LED status indicator on page 11*.

Note: The product cannot be set to OFF when it is in the charging station.

5.5 To charge the battery

When the product is new or after long-term storage, the battery can be empty. Charge the battery before you start the product.

1. Put the product in the charging station.
2. Put the product into the charging station until the charging plates touch the contact plates.

3. Do a check that the product charges in the display of the product.

Note: If the battery is empty the product must charge for a longer period of time before the product can start.

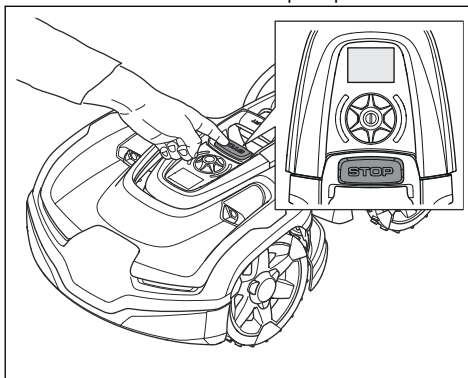
5.6 To adjust the cutting height with Automower® Access

The cutting height can be adjusted from MIN (3 cm / 1.2 in.) to MAX (7 cm / 2.8 in.).



CAUTION: The first weeks after a new installation, set the cutting height to MAX to prevent damage to the loop wire. You can then lower the cutting height each week.

1. Push the **STOP** button to stop the product.



2. Use the **jog wheel** to select *Settings*.
3. Use the **jog wheel** to select the cutting height symbol.
4. Turn the **jog wheel** to change the cutting height.
5. Push the **jog wheel** to select the cutting height.

6 Maintenance

6.1 Introduction - maintenance



WARNING: Set the product to OFF before you do maintenance on the product.



WARNING: Use protective gloves.

For better operation and lifetime of the product, make sure to clean the product regularly and replace worn parts.

When the product is new, examine the blade disc and blades each week. If the wear is low, you can increase the interval for the next time you examine the blade disc and blades. Examine the blade disc and the blades more regularly if there is much wear.

It is important that the blade disc rotates easily and that the edges of the blades are not damaged. The usual lifetime of the blades are 3 to 6 weeks. The conditions that follow can increase or decrease the lifetime of the blades:

- Operation time and dimension of the work area.
- Length and thickness of the grass.
- Soil, sand and use of fertilizers.
- Objects such as cones, tools, stones and roots in the work area.

Note: The cut result can be unsatisfactory if the blades are blunt. Refer to *Replacement of the blades on page 31* on how to replace the blades.

6.2 Maintenance schedule

The maintenance schedule shows how to do servicing and maintenance on the product. Follow the maintenance schedule for a better operation and to increase the lifetime of the product.

X = The instructions are given in this operator's manual.

O = The instructions are not given in this operator's manual. Speak to your approved servicing dealer.

To prepare	Weekly	Every year	Every third year
Clean the product. Refer to <i>Clean the product on page 30</i> .	X		
Examine the product for damage and wear.	X		
Do an update of the firmware.		O	
Do a check of the servicing messages for recommended upgrades.		O	
Servicing			
Examine the blades and replace the blades and blade screws if it is necessary. Refer to <i>Replacement of the blades on page 31</i> .	X		
Examine and polish the contact plates on the charging station.		X	
Examine and polish the charging plates on the product.		X	
Charge the battery fully before you put the product into storage. Refer to <i>To charge the battery on page 28</i> .		X	
Examine the wheels for wear.		O	
Examine and clean the collision columns. Do a check of the tightening torque on the front and rear collision columns.		O	
Make sure that the product is docking and charging correctly.		O	
Examine the cable and connector to the charging plates on the body of the product.		O	

To prepare	Weekly	Every year	Every third year
Examine the rubber grommets on the chassis to make sure that it is sealed correctly.		○	
Examine the skid plate and skid plate bearing.		○	
Examine the rubber bellows in the cutting height adjustment system.		○	
Examine the rubber bellows for the collision columns.		○	
Replace the rubber bellows for the collision columns.			○
Examine and clean the airflow filter.		○	
Replace the airflow filter.			○
Do a check of the tightening torque of chassis screws.		○	
Open the chassis and replace all sealing strips.			○
Examine the front/rear wheel bearings and link arm bearings.		○	
Last step			
Use a software service tool to do a function test of the functions of the product.		○	

6.3 Clean the product



CAUTION: Do not use a high-pressure washer or running water to clean the product. Do not use solvents for cleaning.

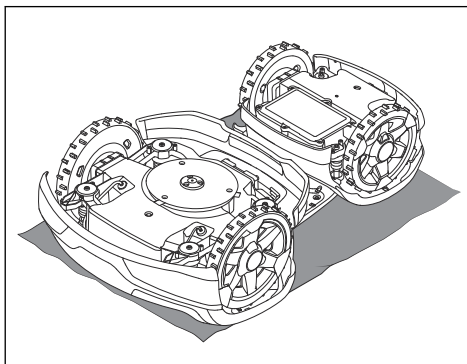
The product does not operate satisfactorily in slopes if the wheels are blocked with grass. Use a soft brush to clean the product.

Husqvarna recommends to use a special cleaning and maintenance kit, available as accessory. Speak to your Husqvarna representative for more information.

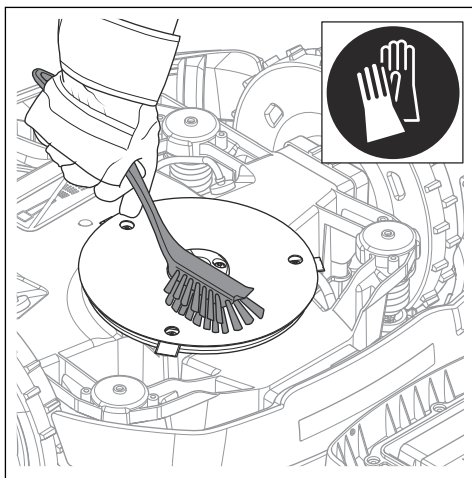
6.3.1 To clean the blade disc

Examine the blade disc and blades weekly.

1. Set the product to OFF. Refer to *To set the product to OFF on page 28*.
2. Put the product with the blade disc up on a soft and clean surface.



3. Clean the blade disc with a brush.



4. Make sure that the blade disc can rotate freely.
5. Make sure that the blades are not damaged and can pivot freely.

6.3.2 To clean the chassis

- Clean the bottom of the chassis with a brush or a moist cloth.

6.3.3 To clean the wheels

The product does not operate satisfactorily in slopes if the wheels are blocked with grass.

- Use a soft brush to clean the wheels.

6.3.4 To clean the body of the product

- Use a moist cloth and a weak soap solution to clean the body of the product.

6.3.5 To clean the charging station



WARNING: Disconnect the power supply from the power outlet before maintenance, or when you clean the charging station or power supply.



CAUTION: Do not use a high-pressure washer or running water to clean the charging station.

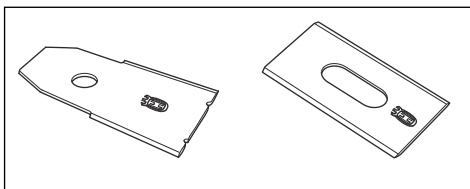
Note: The product cannot enter the charging station if there are objects in the charging station. Clean the charging station regularly.

- Remove grass, twigs and other objects from the charging station.

6.4 Replacement of the blades



WARNING: Husqvarna can only guarantee safety if you use Husqvarna original blades with the embossed crowned H-mark logotype.

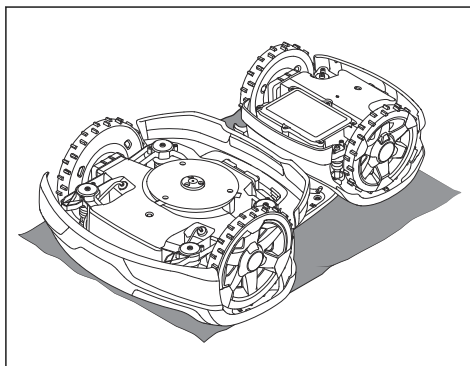


WARNING: You must replace the screws when you replace the blades. The used screws can wear quickly and make the blade come loose, this can cause serious injury.

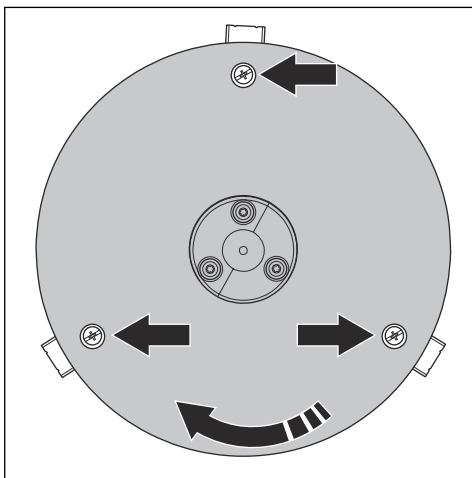
Replace worn or damaged blades for a safe operation. Replace the blades regularly for a satisfactory cut result and a low energy use. All 3 blades and screws must be replaced at the same time to get a balanced cutting system.

6.4.1 To replace the blades

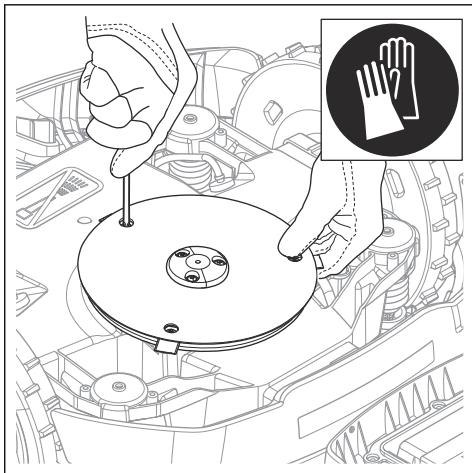
1. Set the product to OFF. Refer to *To set the product to OFF* on page 28.
2. Put on protective gloves.
3. Put the product with the blade disc up on a soft and clean surface.



4. Rotate the skid plate until its holes align with the screws for the blade.



5. Remove the 3 screws.



6. Remove each blade and screw.
7. Install new blades and screws.
8. Make sure that the blades can pivot freely.

6.5 To replace the top covers

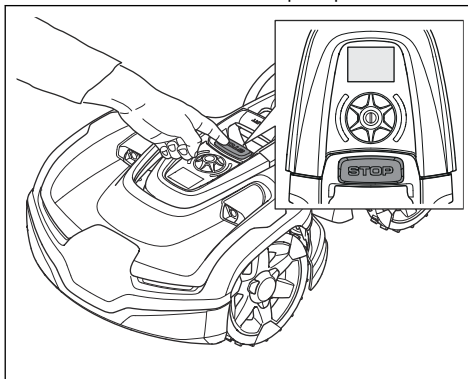
The top cover is an accessory available in different colors. Speak to your local Husqvarna representative for more information.



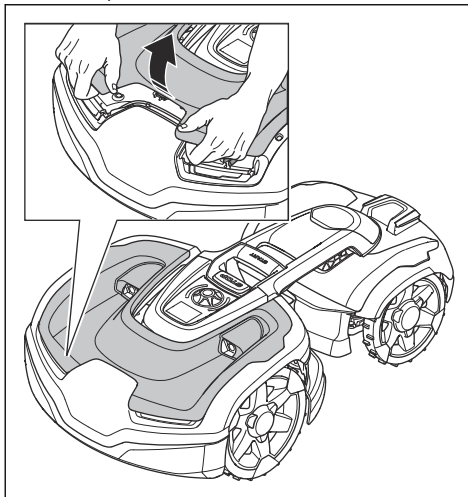
CAUTION: Clean grass and dirt from the product before you remove the covers.

6.5.1 To remove the front top cover

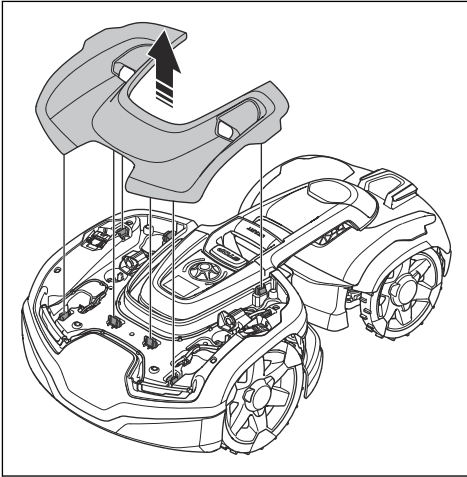
1. Push the **STOP** button to stop the product.



2. Remove the front top cover from the snap-on clips on the product.

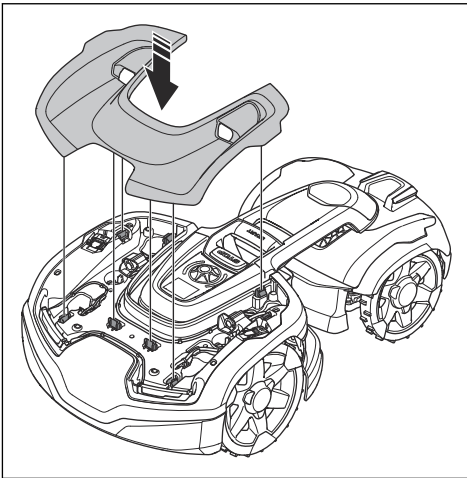


3. Lift the front top cover.

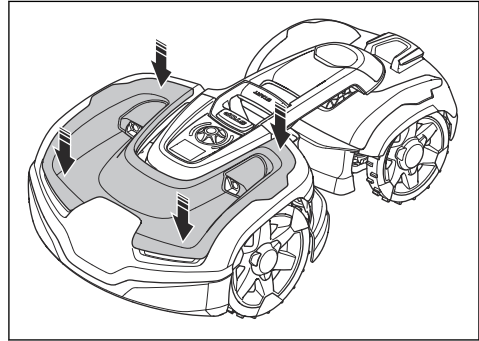


6.5.2 To install the front top cover

1. Put the front top cover on the snap-on clips.

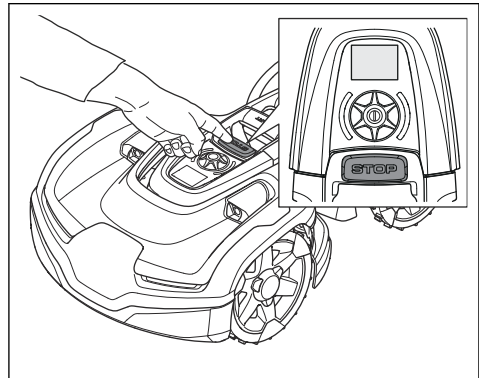


2. Push the front top cover into position.

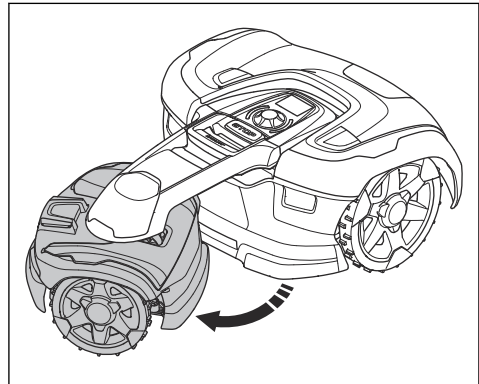


6.5.3 To remove the rear top cover

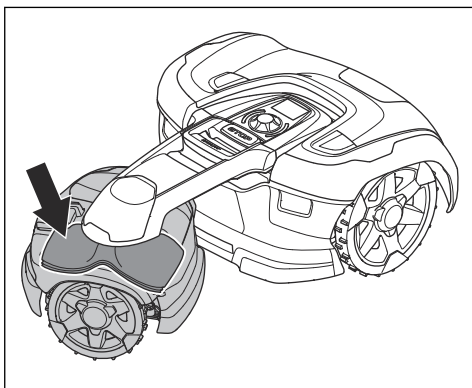
1. Push the **STOP** button to stop the product.



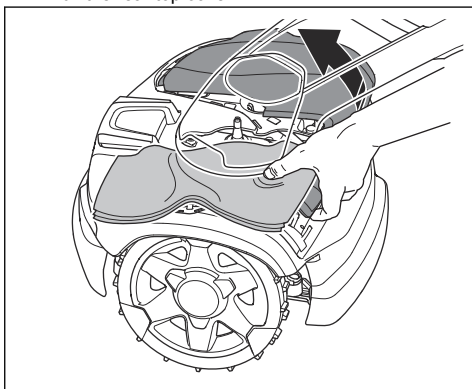
2. Turn the rear body to the left or right side.



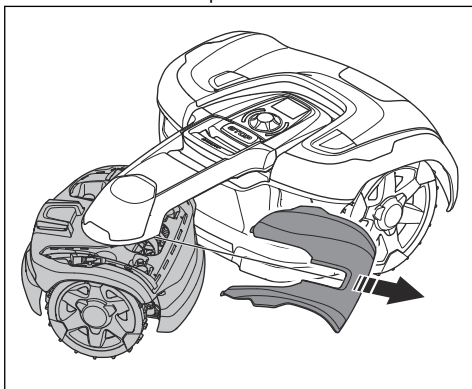
3. Put a protection between the rear top cover and the link arm. This is to prevent damage to the rear top cover.



4. Pull the rear top cover.

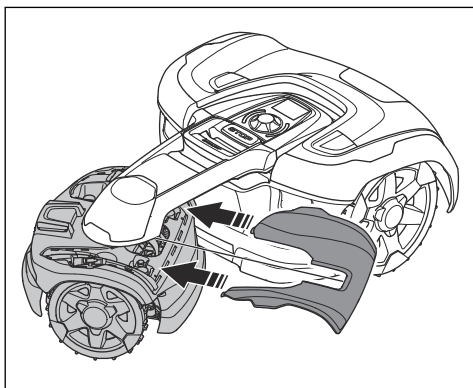


5. Remove the rear top cover.

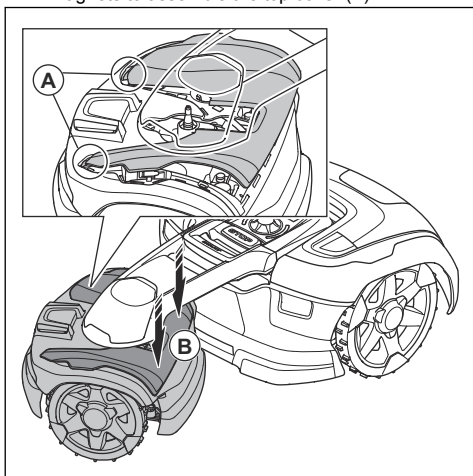


6.5.4 To install the rear top cover

1. Put the top cover on the rear body.



2. Put the top cover in position (A) and push the 2 magnets to assemble the top cover (B).



6.6 Battery



CAUTION: Charge the battery fully before you put the product into storage. If the battery is not fully charged it can cause damage to the battery.

If the operating time of the product is shorter than usual between charges, this means that the battery is at the end of its life cycle. Replace the battery to extend the operating time.

Note: The battery life is related to the length of the season and how many hours a day the product operates. A long season or many hours of operation a day means that the battery must be replaced more regularly.

6.7 Winter service

Take your product to your Husqvarna central service for service prior to winter storage. Regular winter service will maintain the product in good condition and create the best conditions for a new season without any disruptions.

Service usually includes the following:

- Thorough cleaning of the body, the chassis, the blade disc and all other moving parts.
- Testing of the product's function and components.
- Checking and, if required, replacing wear items such as blades and bearings.
- Testing the product's battery capacity as well as a recommendation to replace battery if necessary.
- If new firmware is available, the product is updated.


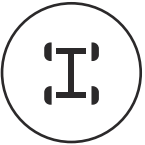

7 Troubleshooting






7.1 Introduction - troubleshooting

In this chapter, a number of messages are listed which may be shown in Automower® Connect and Automower® Access if there is a malfunction. There is a proposal action to the cause and steps to take for each message. This chapter also presents some symptoms that can guide you if the product does not work as expected. More suggestions for steps to take in the event of malfunction or symptoms can be found on www.husqvarna.com.

7.2 Error symbols in the Automower® Access display

If an error symbol is shown in the Automower® Access display, push the **STOP** button to go to the main menu. More information about the error can be found in Automower® Connect.

Error symbol	Description	Action
	The product stopped.	Examine the cause of the problem. For example, if the product is not in the work area or if the product is on top of an object. Start the product.
	The product stopped because of grass or other object around the drive wheels.	Examine the drive wheels and remove grass or other objects. Start the product. If the problem stays, speak to your local Husqvarna representative.
	The product stopped because it cannot find the loop signal.	Refer to the error message <i>No loop signal</i> in <i>Fault messages on page 37</i> .

Error symbol	Description	Action
	<p>The product stopped because the battery is low.</p>	<p>Refer to the error message <i>Empty Battery</i> in <i>Fault messages on page 37</i>.</p>
	<p>The product stopped because of a blockage to the cutting system.</p>	<p>Examine the blade disc and its adjacent area. Remove grass or other objects that can cause blockage to the cutting system.</p>
	<p>The product stopped because of a temporary electronic or firmware problem.</p>	<p>Restart the product. If the problem stays, speak to your local Husqvarna representative.</p>
	<p>The product stopped because the alarm started.</p>	<p>Start the product. You can change the settings for the alarm in the <i>Security</i> menu in the Automower® Connect app.</p>
	<p>The product stopped because an incorrect PIN code was entered.</p>	<p>Enter the correct PIN code. If the PIN code is forgotten, use the app to send the PIN code to your registered e-mail address. If you have not registered your e-mail address, speak to your local Husqvarna representative.</p>

7.3 Fault messages

The table below shows a number of fault messages that may be shown in Automower® Connect. Some of the errors can be confirmed in the Automower® Connect and some the message needs to be confirmed in Automower® Access

display on the product. Speak to your local Husqvarna representative if the same message shows frequently. For more information, refer to *Messages on page 26*.

Message	Cause	Action
<i>No loop signal</i>	The power supply or the low-voltage cable are not connected.	Examine the LED status on the charging station. If the LED is not lit, it indicates that there is no power. Examine the power outlet connection and whether an earth-fault breaker has tripped. Make sure that the low-voltage cable is connected to the charging station.
	The power supply or low-voltage cable are damaged.	Replace the power supply or low-voltage cable.
	The boundary wire is not connected to the charging station.	Make sure that the boundary wire connectors are fitted properly to the charging station. Replace connectors if damaged. Refer to <i>To install the boundary wire on page 18</i> .
	The boundary wire is broken.	Check the signal given by the LED on the charging station. If the LED indicates break in the boundary wire, find out where the break is. Replace the damaged section of the loop with a new loop wire and splice using an original coupler. Refer to <i>Find breaks in the loop wire on page 47</i> .
	<i>ECO mode</i> is activated and the product has attempted to start outside the charging station.	Put the product in the charging station. Start the product.
	The pairing between the product and the charging station is lost.	Put the product in the charging station and generate a new loop signal. Refer to <i>New loop signal on page 26</i> .
	The boundary wire is crossed on its way to and from an island.	Make sure that the boundary wire is installed correctly. Refer to <i>To install the boundary wire on page 18</i> .
	Disturbances from metal objects (fences, reinforcement steel) or buried cables.	Move the boundary wire and/or make more islands in the work area to increase the signal strength.
	The product is too far from the boundary wire.	Redo the installation of the boundary wire so that all parts of the work area is maximum 35 m / 115 ft. from the boundary wire.
<i>Wheel motor blocked</i>	Grass or other object has wrapped around the drive wheel.	Examine the drive wheel and remove the grass or other object.
<i>Wheel drive problem</i>		
<i>Cutting system blocked</i>	Grass or other object has wrapped around the blade disc.	Examine the blade disc and remove the grass or other object.
	The blade disc lies in a pool of water.	Move the product and prevent the collection of water in the work area.

Message	Cause	Action
<i>Trapped</i>	The product is stuck in a small area behind a number of obstacles.	Examine if there are any obstacles which make it hard for the product to move away from this location.
<i>Wrong PIN code</i>	Wrong PIN code has been entered. Five attempts are permitted, and the product is then blocked for a period of time.	Enter the correct PIN code. If the PIN code is incorrect, use the link in the app to send the PIN code to your registered e-mail address. If you have not registered the e-mail address, contact your local Husqvarna representative.
<i>Empty battery</i>	The product cannot find the charging station.	Change the position of the guide wire. Refer to <i>To install the guide wire on page 18</i> . Check the installation settings about how to find the charging station. Refer to <i>To find the charging station on page 24</i> .
	The battery is spent.	Replace the battery. Refer to <i>Disposal on page 49</i> .
	The charging station's antenna is defective.	Check if the indicator lamp in the charging station flashes red. Refer to <i>LED indicator of the charging station on page 44</i> .
<i>Slipped/No Drive</i>	The product is caught in something and has been slipping.	Free the product and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the product.
	The work area includes a steep slope.	Maximum guaranteed slope is 70%. Steeper slopes should be isolated. Refer to <i>To put the boundary wire in a slope on page 14</i> .
	The guide wire is not installed correctly in a slope.	Make sure that the guide wire is installed diagonally across the slope. Refer to <i>To install the guide wire on page 18</i> .
<i>Wheel motor overloaded</i>	The product is caught in something.	Free the product and rectify the reason for the lack of drive. If it is due to wet grass, wait until the lawn has dried before using the product.
<i>Charging station blocked</i>	The contact between the charging strips and contact strips may be poor and the product has made a number of attempts to charge.	Put the product in the charging station and check that the charging strips and contact strips make good contact. Clean the contact and charging plates.
	An object causes a blockage and the product cannot enter the charging station.	Remove the object.
	The baseplate is tilted or bent.	Make sure that the baseplate is put on level ground.
<i>Stuck in charging station</i>	The product slips on the baseplate.	Clean the baseplate.
	There is an object in the way of the product preventing it from leaving the charging station.	Remove the object.
<i>Upside down</i>	The product is leaning too much or has turned over.	Turn the product the right way up.

Message	Cause	Action
<i>Mower tilted</i>	The product is tilted more than the permitted slope.	Move the product to a flat area.
<i>Lifted</i>	A blockage has activated the lift sensors and caused the product to stop.	Remove the product from the blockage. If the problem remains it requires action by authorized service technician.
<i>Lifted in link arm</i>	A blockage has activated the lift sensor in the link arm and caused the product to stop.	Remove the product from the blockage. If the problem remains it requires action by authorized service technician.
<i>Slope too steep</i>	The product stopped because the slope is too steep.	Change the installation of the boundary wire to exclude this steep part of the work area. Refer to <i>To examine where to put the boundary wire on page 13</i> .
<i>Alarm! Mower switched off</i>	The alarm was activated because the product was set to OFF.	Adjust the security level in the <i>Security</i> menu, refer to <i>Security on page 25</i> .
<i>Alarm! Mower stopped</i>	The alarm was activated because the product was stopped.	
<i>Alarm! Mower was moved</i>	The alarm was activated because the product was moved.	
<i>Alarm! Outside geo-fence</i>	The alarm was activated because the mower was outside its GeoFence.	Adjust the theft protection area (GeoFence) in the <i>Automower® Connect</i> menu.
<i>Electronic problem</i>	Temporary electronic or firmware related issue.	Restart the product. If the problem remains, the message requires action by authorized service technician.
<i>Loop sensor problem</i>		
<i>Tilt sensor problem</i>		
<i>Temporary problem</i>		
<i>STOP button problem</i>		
<i>Ultrasonic problem</i>		
<i>GPS navigation problem</i>		
<i>Angular sensor problem</i>		
<i>Switch cord problem</i>		
<i>Invalid sub-device combination</i>		
<i>Invalid system configuration</i>		
<i>Lift sensor problem</i>		
<i>Collision sensor problem</i>		

Message	Cause	Action
<i>Temporary battery problem</i>	Temporary battery or firmware related issue.	Restart the product.
<i>Battery problem</i>		If the problem remains, the message requires action by authorized service technician.
<i>Charging system problem</i>	There is corrosion or dirt on the charging plates and contact plates.	Restart the product. Clean the charging plates on the product and the contact plates on the charging station.
	Temporary electronic or firmware problem in the product.	Restart the product. If the problem stays, speak to your approved servicing dealer.
<i>Battery temperature outside limits</i>	The product does not operate if the battery temperature is too high or too low.	The product starts to operate again when the temperature is between the set limits and the schedule settings let the product to operate. Make sure that the charging station is put in an area with protection from the sun.
<i>Faulty mix of batteries</i>	The battery type is incorrect.	Only use original batteries that are recommended by the manufacturer.
<i>Charging current too high</i>	Wrong or faulty power supply unit.	Restart the product. If the problem remains, the message requires action by authorized service technician.
<i>Connectivity problem</i>	Problem with the Automower® Connect module.	Restart the product. If the problem remains, the message requires action by authorized service technician.
<i>Connectivity settings restored</i>	The connectivity settings for the Automower® Connect module was restored because of a fault.	Do a check of the settings and change the settings if needed.
<i>Outside work area</i>	The boundary wire connections to the charging station are crossed.	Make sure that the boundary wire is connected correctly. Refer to <i>To examine where to put the boundary wire on page 13</i> .
	The boundary wire is too close to the edge of the work area.	Make sure that the boundary wire has been laid according to the instructions. Refer to <i>To install the boundary wire on page 18</i> .
	The work area slopes too much by the boundary loop.	
	The boundary wire is laid in the wrong direction around an island.	
	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Move the boundary wire and/or make more islands in the work area to increase the signal strength.
	The product finds it hard to distinguish the signal from another product installation close by.	Put the product in the charging station and generate a new loop signal. Refer to <i>New loop signal on page 26</i> .

Message	Cause	Action
<i>Limited cutting height</i>	The cutting height adjustment cannot move.	Examine the cutting height adjustment and remove grass and other unwanted material. If the problem remains, the message requires action by authorized service technician.
<i>Unexpected cutting height</i>		
<i>Cutting height problem, drive</i>		
<i>Cutting height blocked</i>		
<i>Cutting height problem</i>		
<i>No power in charging station</i>	Wrong or faulty power supply unit.	Examine the power supply. If it is necessary, replace the power supply.
	Power failure.	Find and rectify the cause of the power failure.
	No contact between the contact plates and the charging plates.	Make sure that the charging plates and the contact plates are connected.
<i>Cutting system imbalance</i>	Too few or too many blades.	Examine the blades on the blade disc.
<i>Weak GPS signal</i>	The sky is obstructed in large parts of the work area.	If possible, remove obstructing objects. Disable the GPS navigation function and use the lawn coverage function instead. Refer to <i>Lawn coverage on page 24</i> .
<i>Collision sensor problem, front/rear</i> <i>Collision</i>	A blockage has caused the product to stop.	Remove the product from the blockage and examine the cause of the stop.
	The body of the product cannot move freely around the chassis.	Remove dirt and unwanted material between the chassis and the body to make sure that the body of the product can move freely around the chassis.
	The body of the product is not installed correctly in the rubber dampers.	Make sure that the rubber dampers are attached correctly in the body of the product and in the chassis. If the problem remains, the message requires action by authorized service technician.
<i>Destination not reachable</i>	The product cannot reach the destination because there is no guide wire or boundary wire within the work area.	Edit or make a new installation of the work area in the app and include a guide or a boundary wire in the work area.
	The product cannot reach the destination because there is a stay-out blocking the way to the work area.	Edit or remove the stay-out zone or make a new installation of the work area.
<i>Destination blocked</i>	The way of the destination is blocked by an obstacle.	Remove the obstacle that blocks the way to the destination.
<i>Battery needs replacement</i>	The battery state of health is low.	Replace the battery. Speak to your authorized service technician.
<i>Battery near end of life</i>	The battery state of health is critically low.	Replace the battery. Speak to your authorized service technician.

Message	Cause	Action
<i>Invalid firmware configuration</i>	The firmware in the product is invalid.	Put the product in the charging station and update the firmware via . If the problem remains, speak to your authorized service technician.
<i>Map problem</i>	The map object file is incorrect	Do a check of the map in the app. Adjust the map and save it.
		Delete the map and do a new installation.

7.4 Information messages

The table below shows a number of information messages that may be shown in Automower® Connect. Contact your local Husqvarna representative if the same message appears often. For more information, refer to *Messages on page 26*.

Message	Cause	Action
<i>Settings restored</i>	Confirmation that <i>Reset all user settings</i> has been carried out.	This is normal. No action required.
<i>Guide 1/2 not found</i>	The guide wire is not connected to the charging station.	Check that the guide wire's connector is tightly connected to the charging station. Refer to <i>To install the guide wire on page 18</i> .
	Break in the guide wire.	Find out where the break is. Replace the damaged section of the guide wire with a new loop wire and splice using an original coupler.
	The guide wire is not connected to the boundary loop.	Check that the guide wire is connected correctly to the boundary loop. Refer to <i>To install the guide wire on page 18</i> .
<i>Connection changed</i>	New loop signal successfully changed.	No action.
<i>Connection NOT changed</i>	Failed to change the loop signal.	Create a new loop signal, try several times. If the problem remains, the message requires action by authorized service technician. Refer to <i>New loop signal on page 26</i> .
<i>Slope too steep</i>	The product stopped mowing because the slope is too steep.	If this problem occurs frequently, change the installation of the boundary wire to exclude the steep part of the work area.
<i>Poor signal quality</i>	The Automower® Connect module in the product is assembled upside down, or the product is tilted or upside down.	Make sure that the product is not upside down or tilted. Speak to your authorized service technician if the problem stays.
<i>ComBoard SW must be updated</i>	The firmware in the Automower® Connect module needs to be updated.	Speak to your authorized service technician to get the firmware updated.
<i>Geofence problem</i>	The Geofence is not working because of unsatisfactory or no communication with the GPS system.	Put the product in an area with open sky and wait around 15 minutes. Speak to your authorized service technician if the problem stays.
	The GPS signal is weak for the current work area. GPS assisted navigation cannot be used.	If the message shows frequently, disable the GPS assisted navigation and use the manual settings for <i>Lawn coverage</i> .

7.5 LED indicator of the charging station

The LED indicator of the charging station is green when the installation is correct. If the LED indicator of the charging station is not green, follow the troubleshooting table below.

Speak to your local Husqvarna representative or go to www.husqvarna.com for more information.

LED indicator	Cause	Action
Constant green	The signals of the charging station are good.	No procedure is necessary.
Flashes green	The signals of the charging station are good and <i>ECO mode</i> is enabled.	No procedure is necessary.
Flashes blue	The boundary wire is not connected to the charging station.	Connect the boundary wire to the charging station.
	The boundary wire is damaged.	Replace the damaged section of the boundary wire with new boundary wire.
Flashes red	Interference in the antenna of the charging station.	Speak to your local Husqvarna representative.
Constant red	Error in the circuit board or incorrect power supply in the charging station.	The error must be corrected by an authorized service technician. Speak to your local Husqvarna representative.

7.6 Symptoms

If your product does not work as expected, follow the symptoms guide below.

There is a FAQ (Frequently Asked Questions) on www.husqvarna.com which provides more detailed answers to a number of standard questions. Speak to your local Husqvarna representative if you still cannot find the reason for the fault.

Symptoms	Cause	Action
The product has difficulty docking.	The boundary wire is not laid in a long straight line that is far enough out from the charging station.	Check that the charging station has been installed according to the instructions. Refer to <i>To install the charging station on page 17</i>
	The charging station is on a slope.	Place the charging station on a surface that is entirely level. Refer to <i>To examine where to put the charging station on page 12.</i>
The product runs at the wrong time.	The clock needs to be set.	Set the clock. Refer to <i>Time & date on page 25.</i>
	The start and stop times for mowing are incorrect.	Reset the start time and change the <i>Schedule</i> settings. Refer to <i>Schedule on page 23.</i>
The product vibrates.	Damaged blades lead to imbalance in the cutting system.	Inspect the blades and screws and replace them if necessary. Refer to <i>Replacement of the blades on page 31.</i>
	Too many blades in the same position lead to imbalance in the cutting system.	Check that only one blade is fitted at each screw.
	Different versions (thickness) of Husqvarna blades are used.	Check if the blades are of different versions.
The product runs, but the blade disc does not rotate.	The product searches for the charging station.	No action. The blade disc does not rotate when the product is searching for the charging station.
The battery is empty and you put the product in the charging station, but it does not charge and cannot be set to ON.	If the battery has been deeply discharged, it will take a long time to charge the battery and before the product can be set to ON.	Keep the product in the charging station for 24 hours and test if the product can be set to ON. If the problem remains, speak to your authorized service technician.
The product mows for shorter periods than usual between charges.	Grass or other foreign object blocks the blade disc.	Remove and clean the blade disc. Refer to <i>Replacement of the blades on page 31.</i>
	The battery is spent.	Replace the battery. Refer to <i>To remove the battery on page 49.</i>
Both the mowing and charging times are shorter than usual.	The battery is spent.	Replace the battery. Refer to <i>To remove the battery on page 49.</i>
The product is parked for hours in the charging station.	The STOP button has been activated.	Make sure that the START button is pushed down.
	Parking mode is activated.	Select the operating mode in Automower® Access or Automower® Connect.
	The product is not allowed to operate if the battery temperature is too high or too low.	Check that the charging station is placed in an area with protection from the sun.

Symptoms	Cause	Action
Uneven mowing results.	The product works too few hours per day.	Increase the mowing time. Refer to <i>Schedule on page 23</i> .
	The settings for <i>Lawn coverage</i> function are incorrect in relation to the layout of the work area.	Do a check of the settings for the <i>Lawn coverage</i> function. Refer to <i>Lawn coverage on page 24</i> .
	The shape of the work area requires the use of <i>Area 1-5</i> for the product to find its way to all remote areas.	Use <i>Area 1-5</i> to steer the product to a remote area. Refer to <i>Lawn coverage on page 24</i> .
	The work area is too large.	Try to limit the work area or extend the work time. Refer to <i>Schedule on page 23</i> .
	Blunt blades.	Replace all the blades. Refer to <i>Replacement of the blades on page 31</i> .
	Long grass in relation to the set cutting height.	Increase the cutting height and then successively lower it.
	Accumulation of grass by the blade disc or around the motor shaft.	Check that the blade disc rotates freely and easily. If not, screw off the blade disc and remove grass and foreign objects. Refer to <i>To clean the blade disc on page 30</i> .
The product is not connected to the Automower® Connect app.	The product has not been connected to the app before and the product is not included in the list <i>My mowers</i> in the Automower® Connect app.	Do a pairing operation between the product and the mobile device. <i>To pair Automower® Connect and the product on page 20</i> .
The product only has Bluetooth® (short range) connection with the Automower® Connect app and not cellular (long range) connection.	The product does not have cellular connection to the Automower® Connect app.	Enter the Automower® Connect app on your mobile device. Select Automower® Connect and do a new pairing operation.
You cannot connect with the product with an additional mobile device.	Only one mobile device can be connected to the product with Bluetooth® at the same time.	Disable the Automower® Connect app in all other connected devices. If the problem stays, set the connected mobile device to OFF and start it again. If the problem stays, speak to your dealer.
The cellular connection has worked before, but does not work now.	There is a problem with the cellular connectivity.	<ul style="list-style-type: none"> • Make sure that you have cellular coverage in the area. • Disable Automower® Connect in the app and enable it again. Wait 1 hour and try again. • Restart the product. • If a new firmware is available in the app, install it to make sure that you have the newest firmware. • Make sure that you have the newest version of the Automower® Connect app installed. • If the problem stays, speak to your dealer.

7.7 Find breaks in the loop wire

Breaks in the loop wire are usually the result of unintentional physical damage to the wire such as when gardening with a shovel. In countries with ground frost, also sharp stones that move in the ground can damage the wire. Breaks can also occur due to the wire being stretched excessively during installation.

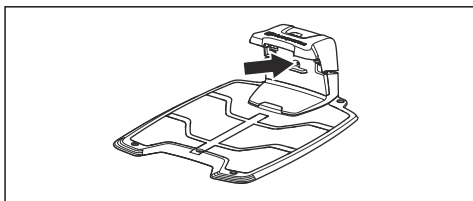
Mowing the grass too low right after the installation can damage wire insulation. Damage to the insulation may not cause disruptions until several weeks or months later. To avoid this, always select the maximum cutting height the first weeks after installation and then lower the height one step at a time every second week until the desired cutting height has been reached.

A defective splicing of the loop wire can also lead to disruptions several weeks after the splice was done. A faulty splice can, for example, be the result of the coupler not being pressed together hard enough with a pair of pliers, or that a coupler of lower quality than the original coupler has been used. Please first check all known splices before further troubleshooting is done.

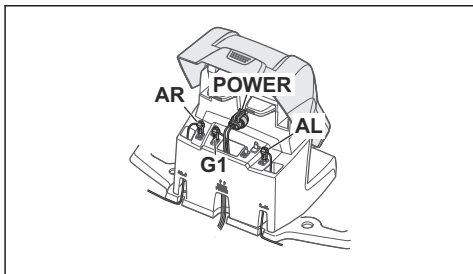
A wire break can be located by gradually halving the distance of the loop where the break may have occurred until there is only a very short section of the wire left.

The following method does not work if *ECO mode* is activated. Make sure first that *ECO mode* is turned off. Refer to *ECO mode on page 24*.

1. Check that the indicator lamp in the charging station flashes blue, which indicates a break in the boundary loop. Refer to *LED indicator of the charging station on page 44*.



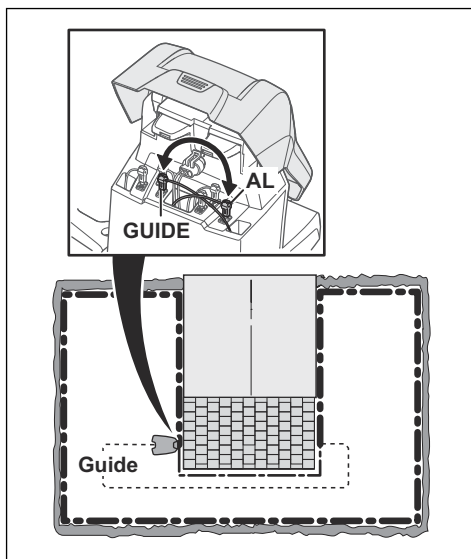
2. Check that the boundary wire connections to the charging station are properly connected and not damaged. Check that the indicator lamp in the charging station is still flashing blue.



3. Switch the connections between the guide wire and the boundary wire in the charging station.

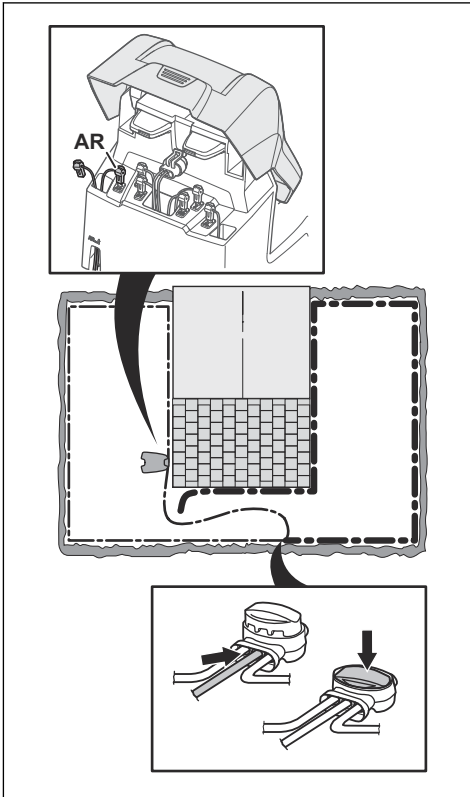
Start by switching connection AL and G1. Some models have additional guide wires (G2, G3). The same procedure can be followed for them.

If the indicator lamp is lit with a solid green light, then the break is somewhere on the boundary wire between AL and the point where the guide wire is connected to the boundary wire (thick black line in the illustration).

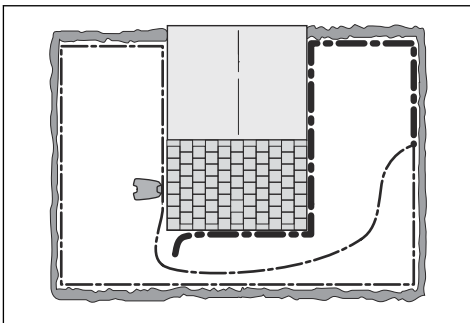


To rectify the fault you will need boundary wire, connector(s) and coupler(s):

- a) If the suspected boundary wire is short then it is easiest to exchange all of the boundary wire between AL and the point where the guide wire is connected to the boundary wire (thick black line).
- b) If the suspected boundary wire is long (thick black line) then do as follows: Put AL and G1 back to their original positions. Then disconnect AR. Connect a new loop wire to AR. Connect the other end of this new loop wire at the middle of the suspected wire section.

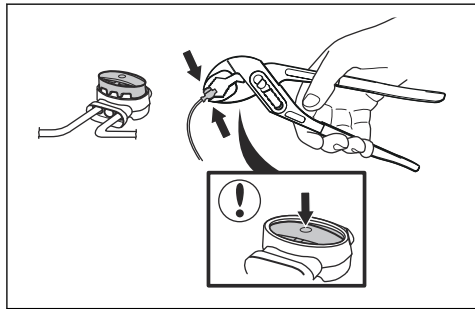


If the indicator lamp now is green, then the break is somewhere in the wire between the disconnected end to the point where the new wire is connected (thick black line below). In that case, move the connection for the new wire closer to the disconnected end (roughly at the middle of the suspected wire section) and check again if the indicator lamp is green.



Continue until only a very short section of the wire remains which is the difference between a solid green light and a flashing blue light. Then follow instruction in step 5 below.

4. If indicator lamp still flashes blue in step 3 above: Put AL and G1 back in their original positions. Then switch AR and G1. If indicator lamp now is lit with a solid green light then disconnect AL and connect a new boundary wire to AL. Connect the other end of this new wire at the middle of the suspected wire section. Follow the same approach as in 3a) and 3b) above.
5. When the break is found, the damaged section must be replaced with a new wire. Always use original couplers.



8 Transportation, storage and disposal

8.1 Transportation

The supplied Li-ion batteries obey the Dangerous Goods Legislation requirements.

- Obey all applicable national regulations.
- Obey the special requirement on package and labels for commercial transportations, including by third parties and forwarding agents.

8.2 Storage

- Fully charge the product. Refer to *To charge the battery on page 28*.
- Set the product to OFF. Refer to *To set the product to OFF on page 28*.
- Clean the product. Refer to *Clean the product on page 30*.
- Keep the product in a dry, frost free space.
- Keep the product with all wheels on level ground.
- If you keep the charging station indoors, disconnect and remove the power supply and all the connectors from the charging station. Put the end of each connector wire in a connector protection box.

Note: If you keep the charging station outdoors, do not disconnect the power supply and the connectors.

- Speak to your Husqvarna service for information about available storage accessories for your product.

8.3 Disposal

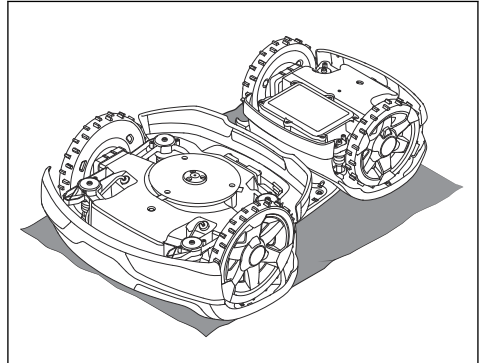
- Obey the local recycling requirements and applicable regulations.
- For questions about how to remove the battery, refer to *To remove the battery on page 49*.

8.3.1 To remove the battery

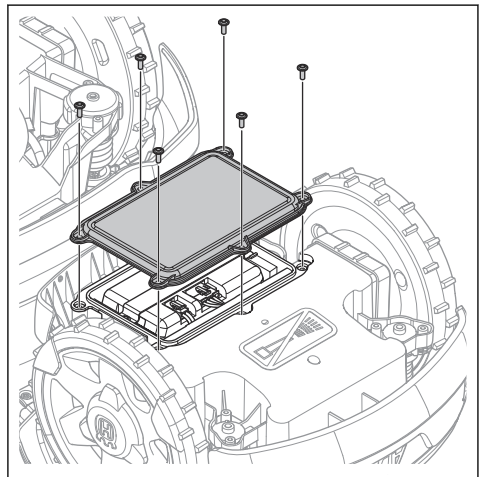


CAUTION: Only remove the battery when you dispose the product.

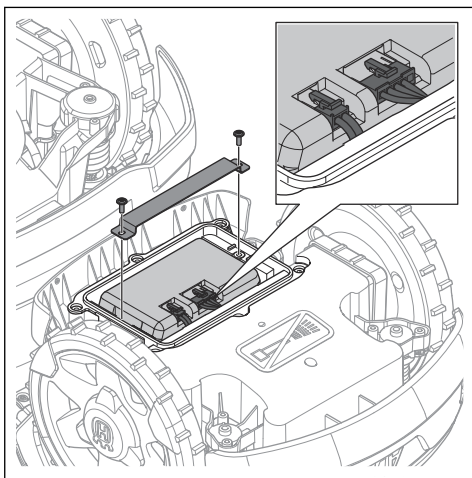
1. Set the product to OFF. Refer to *To set the product to OFF on page 28*.
2. Put the product with the blade disc up on a soft and clean surface.



3. Remove the 6 screws and remove the battery cover.



4. Remove the 2 screws and remove the bracket.



5. Disconnect the 2 cables from the battery and remove the battery.

9 Technical data

9.1 Technical data

Dimensions	Automower® 435X AWD
Length, cm / in.	93 / 36.6
Width, cm / in.	55 / 21.6
Height, cm / in.	29 / 11.4
Weight, kg / lbs	17.6 / 39

Electrical system	Automower® 435X AWD
Battery, Lithium-Ion 18.0 V/8.0 Ah Art. No.	534 19 93-01
Battery, Lithium-Ion 18.0 V/8.4 Ah Art. No.	534 19 93-02
Power supply (28 V DC), V AC	100-240
Low-voltage cable length, m / ft	10 / 33
Mean energy consumption at maximum use	24 kWh/month in a 3500 m ²
Charge current, A DC	7
Type of Power Supply Unit ⁶	FW7458/28/D/XX/Y, ADP-200MR XX
Typical mowing time, min	145
Typical charging time, min	45

Boundary wire antenna	Automower® 435X AWD
Operating Frequency Band, Hz	100-80000
Maximum magnetic field, dBuA/m ⁷	82
Maximum Radio-frequency power ⁸ , mW @60m	<25

Sound data ⁹	Automower® 435X AWD
Sound level perceived, dB (A)	60
Measured sound power noise level, dB (A)	60
Guaranteed sound power noise level, dB (A)	62
Noise emissions uncertainties KWA, dB (A)	2
Sound pressure noise level at the operator's ear ¹⁰ , dB (A)	49

⁶ XX, YY can be any alphanumeric characters or blank for marketing purpose only, no technical differences.

⁷ Measured according to EN 303 447.

⁸ Maximum active output power to antennas in the frequency band in which the radio equipment operates.

⁹ Determined according to Directive 2006/42/EC and standard EN 50636-2-107. Except Sound level, perceived that is measured according to ISO 11094:1991.

¹⁰ Sound pressure noise uncertainties K_{pA}, 2-4 dB (A)

Mowing	Automower® 435X AWD
Cutting system	3 pivoted cutting blades
Maximum cutting motor speed, rpm	2475
Power consumption during cutting, W +/- 20 %	40
Cutting height, cm / in.	3-7 / 1.2-2.8
Cutting width, cm / in.	22 / 8.7
Narrowest possible passage, cm / in.	60 / 24
Maximum slope for work area, %	70
Number of guides	3
Maximum slope for boundary wire, %	50
Maximum length boundary wire, m / ft	800 / 2600
Maximum length guide loop ¹¹ , m / ft	400 / 1300
Working capacity, m ² / acre, +/- 20%	3500 / 0.9

IP-code	Automower® 435X AWD
Robotic lawn mower	IPX4
Charging station	IPX1
Power supply	IP44

Frequency Band Support	
Bluetooth® Frequency range	2400.0-2483.5 MHz
Automower® Connect 2G	GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz
Automower® Connect 3G	Band 19 (800 MHz), Band 5 (850 MHz), Band 8 (900 MHz), Band 2 (1900 MHz), Band 1 (2100 MHz)
Automower® Connect 4G	Band 12 (700 MHz), Band 17 (700 MHz), Band 28 (700 MHz), Band 13 (700 MHz), Band 20 (800 MHz), Band 26 (850 MHz), Band 5 (850 MHz), Band 19 (850 MHz), Band 8 (900 MHz), Band 4 (1700 MHz), Band 3 (1800 MHz), Band 2 (1900 MHz), Band 25 (1900 MHz), Band 1 (2100 MHz), Band 39 (1900 MHz), Band 18 (850 MHz), Band 66 (1700 MHz), Band 85 (700 MHz)

Power Class		
Bluetooth® Output power	8 dBm	
Automower® Connect 2G	Power Class 4 (GSM/E-GSM)	33 dBm
	Power Class 1 (DCS/PCS)	30 dBm
	Power Class E2 (GSM/E-GSM)	27 dBm
	Power Class E2 (DCS/PCS)	26 dBm
Automower® Connect 3G	Power Class 3	24 dBm
Automower® Connect 4G	Power Class 3	23 dBm

¹¹ The guide loop is the loop that is formed by the guide wire and the part of the boundary wire from the junction with the guide wire to the right connection in the charging station.

Deviations from this general technical data are included in the country specific chapters.

Husqvarna AB does not guarantee full compatibility between the product and other types of wireless systems such as remote controls, radio transmitters, hearing loops, underground electric animal fencing or similar.

The products are made in England or the Czech Republic. See information on the rating plate. Refer to *Introduction on page 6*.

9.2 Registered trademarks

The *Bluetooth®* word mark and logos are registered trademarks owned by *Bluetooth SIG, inc.* and any use of such marks by Husqvarna is under license.

10 Applicable to US/CA market

10.1 Supplier's Declaration of Conformity

Responsible party: Husqvarna Consumer Outdoor Products N.A., Inc, 8825 Statesville Road, Charlotte, NC 28269, Tel: +1 704 597 5000, www.husqvarna.com/us/support/e-mail/.

- Reorient or relocate the receiving antenna.
- Increase the separation between the equipment and receiver.
- Connect the equipment into an outlet on a circuit different from that to which the receiver is connected.
- Consult the dealer or an experienced radio/TV technician for help.

10.2 Compliance requirements

FCC ID: XPYUBX20VA01 / XPYUBX18ZO01
(Automower® Connect 2G/4G)

FCC ID: ZASHQ-BLE-1C (Bluetooth® module).

The Bluetooth® module is located on the application circuit board (PCBA) in the upper chassis. It must only be accessed by an authorized service technician.



WARNING: Cancer and Reproductive Harm - www.P65Warnings.ca.gov.



WARNING: To comply with RF exposure requirements, please maintain a separation distance of at least 20 cm/7 inches from any part of the product.

Note: Changes or modifications made to this equipment not expressly approved by Husqvarna may void the FCC authorization to operate this equipment.

Note: This device complies with Part 15 of the FCC Rules [and with Industry Canada licence-exempt RSS standard(s)]. Operation is subject to the following two conditions: this device may not cause harmful interference, and this device must accept any interference received, including interference that may cause undesired operation.

Note: This equipment has been tested and found to comply with the limits for a Class B digital device, pursuant to part 15 of the FCC Rules. These limits are designed to provide reasonable protection against harmful interference in a residential installation. This equipment generates, uses and can radiate radio frequency energy and, if not installed and used in accordance with the instructions, may cause harmful interference to radio communications. However, there is no guarantee that interference will not occur in a particular installation. If this equipment does cause harmful interference to radio or television reception, which can be determined by turning the equipment off and on, the user is encouraged to try to correct the interference by one or more of the following measures:



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www.husqvarna.com

Original instructions



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