



Operator's manual
HUSQVARNA AUTOMOWER®
430V/450V NERA



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 particularly 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.
- To prevent damage to the product and accidents to vehicles and persons, do not install work areas and transport paths across public pathways.
- The product is not a toy. The blades of the product can cause injury to persons and animals.
- Do not let children less than 8 years of age be in the work area during operation. Children and animals must be supervised at all times during operation.
- All persons must be a minimum of 3 m/10 ft away from the product when it is in operation. Do not for example sleep or sunbathe in the work area when the product is in operation.
- 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 run when you operate the product manually with appDrive. Make sure that you have a safe and stable position at all times. Make sure that there are no persons near the product when it operates in steep slopes. Always wear substantial footwear and long pants when you operate the product with appDrive.
- To set the product to OFF, go behind the product and push the STOP button. You can use the app to pause the product if it is applicable for your product. When the product is set to OFF, wait minimum 3 seconds before you move the product.
- 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.
- Do not touch moving hazardous parts, such as the blade disc, before it has come to a complete stop.
- If an injury or accident occurs, 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 36*. 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 *Work area on page 15*.
- Follow the instructions about to start and operate the product, refer to *Operation on page 21*.
- 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 23*.
- For technical data such as weight, dimensions and noise emission values, refer to *Technical data on page 37*.
- 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 0-45 °C / 32-113 °F. Temperature range for charging is 5-45 °C / 41-113 °F. Too high temperatures can cause damage to the product.

1.3 Safety instructions for installation



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

- Do not install the charging station in an area where there is a risk that persons trip on it.
- 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.
- 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 21*. 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 17*.
- Make sure that there are no objects such as stones, branches, tools or toys on the lawn. The blades on the product and the objects can be damaged.
- 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 21*.
- 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 17*.
- Do not let the product operate when there is standing water in the work area. For example when heavy rain forms pools of water.

1.5 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.
- Do not use a damaged battery. Dispose the battery if it is damaged. Refer to *Disposal on page 36*.

1.7 To lift and move the product



WARNING: The product must be set to OFF before you lift the product. The product is disabled when the indicator on the **jog wheel** goes off.



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

To safely move the product from or in the work area:

1. Push the **STOP** button to stop the product.
2. Set the product to OFF.
3. Lift the product by the handle with the blade disc away from your body.



1.8 Cyber security

Security recommendations:

- Do not set up or operate the product on untrusted or public networks.
- At regular time intervals, do a check if there are firmware updates available to install to keep the system secure.

1.8.1 Bluetooth® interface

The Bluetooth® interface is enabled by default to help with set up, mobile device connection, local device control and configuration of the product with a mobile device. The Bluetooth® connection uses a PIN code or password that is different for each product through the app. All device connection are made safe with a standard BLE encryption. Use a strong, unique PIN to increase security.

1.8.2 Wi-Fi interface

The Wi-Fi interface on the product enables connection to your private Wi-Fi network for remote control through the companion app and for firmware updates, and location-based services. The Wi-Fi connections are protected with WPA2/WPA3 encryption protocols. Use a strong, unique password for your private Wi-Fi network and make sure that the product connects only to trusted networks.

1.8.3 Cellular interface

The cellular interface enables remote access through the companion app, supports firmware updates, and provides location services. The product uses industry-standard protocols to make cellular connections secure.

1.8.4 Location service

The location service uses GPS to show the product location. This is to enable the geofencing function (theft protection) and to let operators see the product location through the companion app.

1.8.5 External services

These services are available through the network interfaces:

- **Backend Services:** Enables secure management and configuration of the product through authenticated access with the app or web-based portal, as well as telemetry data exchange.
- **Firmware update service:** This service sends new firmware over the air (FOTA) to the product. These updates keep the product security and product functions up to date.
- **Location service:** This service shows the position of the product with GPS. You must enable this service in the app before you can use it.

1.9 Data privacy

Images are processed in the product and is not stored or shared. Data leaving the product is stored in Europe in accordance with applicable laws.

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, go to the Support section on www.husqvarna.com to access instructions, troubleshooting guides, or to use the Husqvarna Self-Service and the Product Assistant (if available in your market). For more support about the product, speak to your Husqvarna servicing dealer.

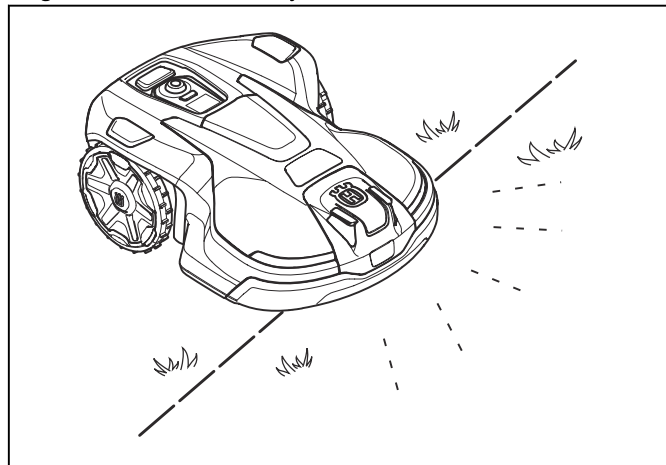
2.2 Product description

Note: Husqvarna regularly updates the appearance and function of the products. Refer to *Support on page 7*.

The product is a robotic lawn mower. The product has a battery power source and operates automatically. When the battery state of charge is low the product goes to the charging station to charge. The product starts to operate again when the battery is fully charged.

The product has an advanced vision technology system for object avoidance. It can identify and classify the type of object and then act accordingly.

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



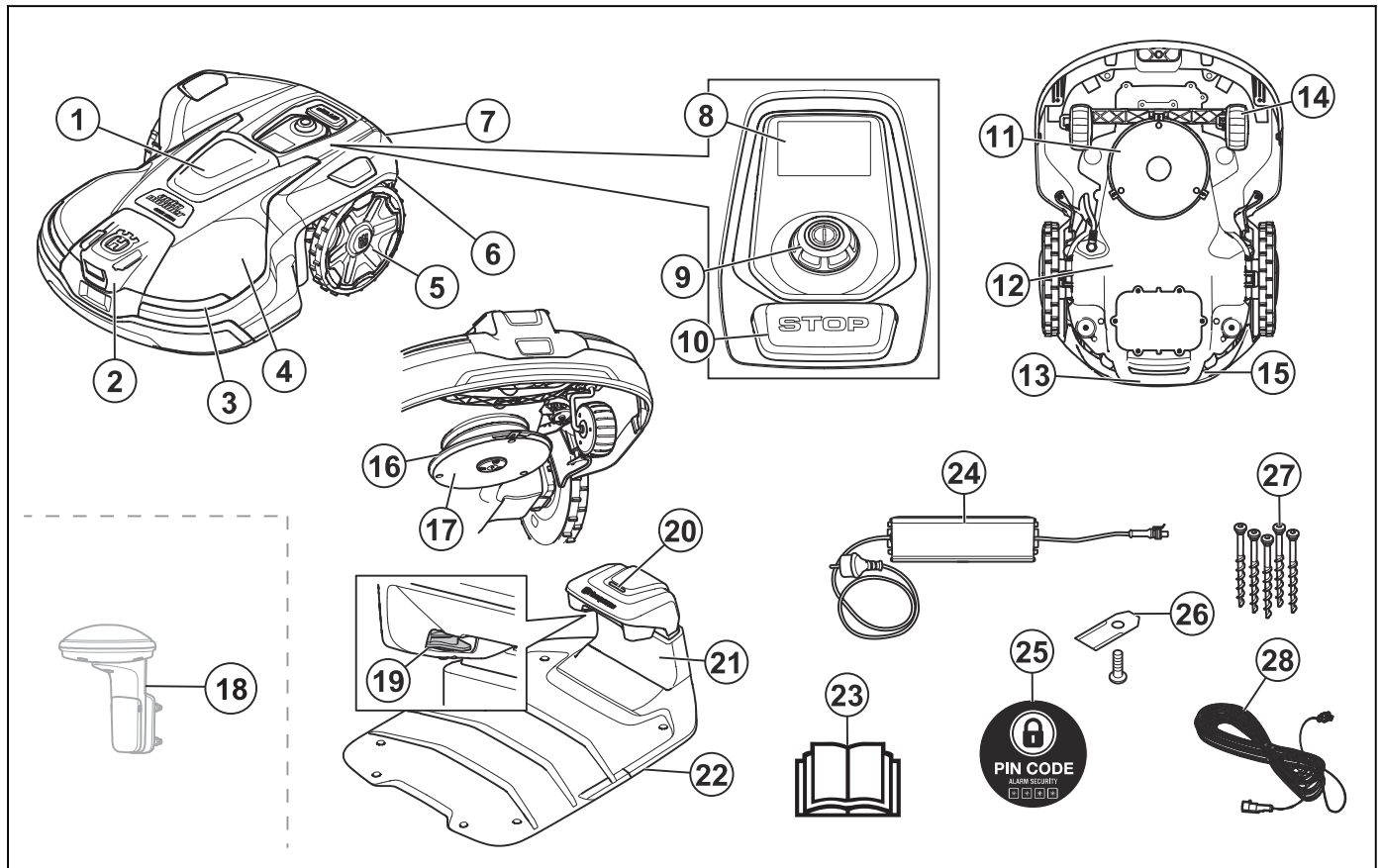
2.2.1 Automower® Connect

Automower® Connect is a mobile application that makes it possible to select settings remotely. The product can connect to the app with Bluetooth®, cellular connectivity and Wi-Fi. When you are near the product you can connect your mobile device and the product with Bluetooth®. It is necessary to be connected with Bluetooth® to make some settings. When the product is connected to your Wi-Fi network or the cellular network you can control the product from everywhere.

2.2.2 Automower® Access

Automower® Access is the user interface on the product. It includes the display, the **jog wheel** and the **STOP** button. Refer to *Menu structure overview in Automower® Access on page 10*.

2.3 Product overview



1. EPOS® module
2. Vision module
3. Headlights
4. Top cover
5. Rear wheels
6. Handle
7. Product body
8. Display
9. Jog wheel
10. STOP button
11. Cutting system
12. Chassis with electronics, battery and motors
13. Handle
14. Front wheels
15. Rating plate
16. Blade disc
17. Skid plate
18. Reference station EPOS® RS1¹
19. Contact plates
20. LED indicator of the charging station
21. Hatch
22. Charging station
23. Operator's manual and Quick guide

24. Power supply²
25. Alarm decal
26. Extra blades
27. Screws to attach the charging station
28. Low-voltage cable

2.4 Symbols on the product

These symbols can be found on the product. Make sure that you understand them.

¹ Purchased separately.

² The appearance can be different for different markets.



WARNING: Read the operator instructions before you operate the product.



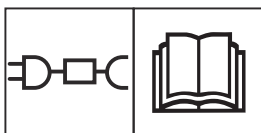
WARNING: Disable the product before maintenance or before you lift the product.



WARNING: Keep a safe distance from the product when it is in operation. Keep your hands and feet away from the rotating blades of the product.



WARNING: Do not sit on the product. Do not put your hands or feet near or below the product.



Use a detachable power supply as specified on the rating plate adjacent to the symbol.



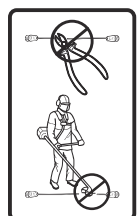
This product complies with the applicable EU Directives.



The product is not domestic waste. Recycle the product at an approved disposal location for electrical and electronic equipment.



Warranty seal. The warranty will not be applicable if the seal is broken.



Do not make modifications on the low-voltage cable.

Do not use a hedge trimmer or a grass trimmer near the low-voltage cable.

2.5 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.



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.

2.6 Symbols on the display



The product is in operation.



The product is parked.



The product is paused.



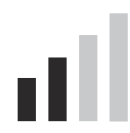
There is an error.



The product is remotely controlled.



Cutting height of the product.



Cellular signal strength.



Wi-Fi signal strength.



Bluetooth® connection is enabled.

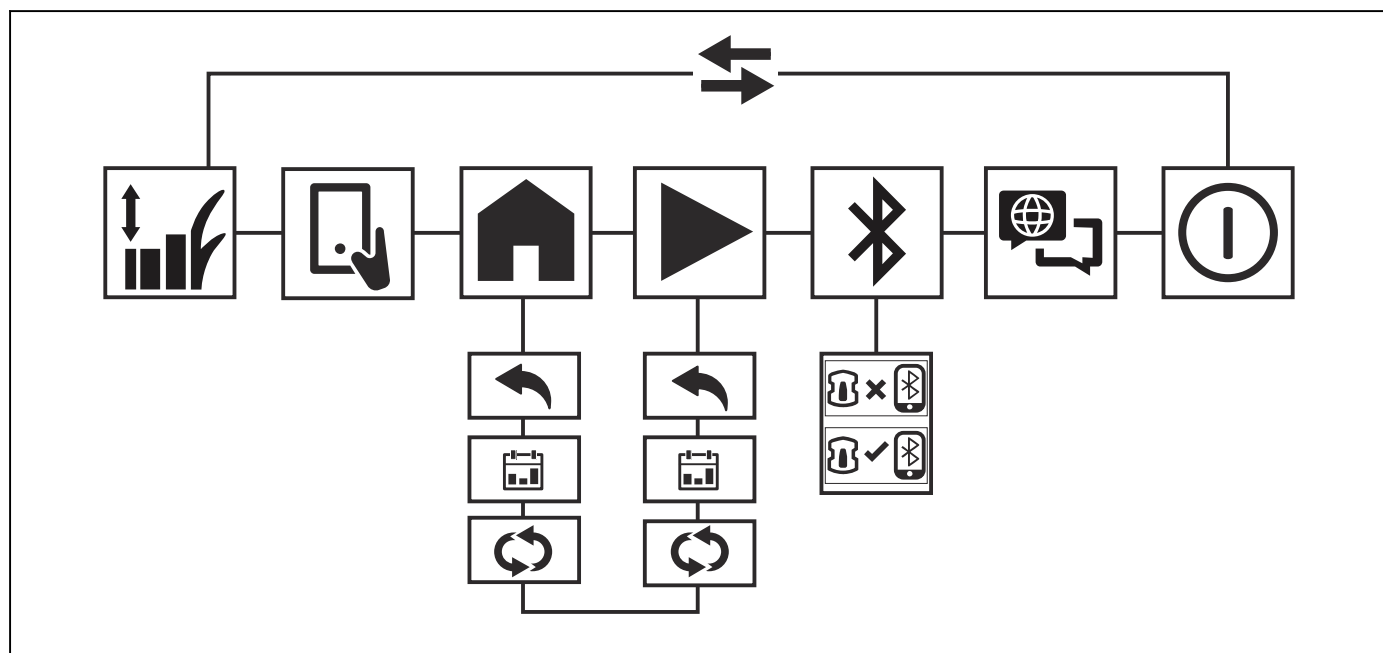


Battery level.



The battery is charging.

2.7 Menu structure overview in Automower® Access



2.7.1 Symbols in the main menu for Automower® Access



Cutting height

In the *Cutting height* menu you can adjust the cutting height.



Remote control

In the *Remote control* menu you can select to remote control the product with the Automower® Connect app.



Park

In the *Park* menu you can set the product to park until the next scheduled operation starts or until further notice.



Mow

In the *Mow* menu you can set the product to operate according to schedule or in the override schedule 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

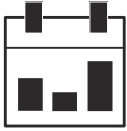
Power off sets the product to OFF.

2.7.2 Symbols in the submenu for Automower® Access



Back

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



Schedule

In the *Schedule* submenu you can select to operate according to the schedule that is set in the Automower® Connect app.



Override schedule

In the *Park* menu, you can select to override the schedule and park until further notice.

In the *Mow* menu you can select to continue to operate and override the schedule.

If you only have one work area, you can select to override the schedule and continue to cut until you change the operation mode.

If you have more than one work area you can select to override the schedule and only cut one of the work areas. For work areas with irregular mowing, the product will cut this area until you change the operation mode. For systematic work areas, the product will cut until the area is completed and then it will park in the charging station.



Connected

The product and mobile device are connected with Bluetooth®.



Not Connected

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

2.8 Product damage

We are not responsible for damages to our product if:

- the product is incorrectly repaired.
- the product is repaired with parts that are not from the manufacturer or not approved by the manufacturer.
- the product has an accessory that is not from the manufacturer or not approved by the manufacturer.
- the product is not repaired at an approved service center or by an approved authority.

3 Installation with virtual boundary

3.1 Introduction



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

3.2 System description

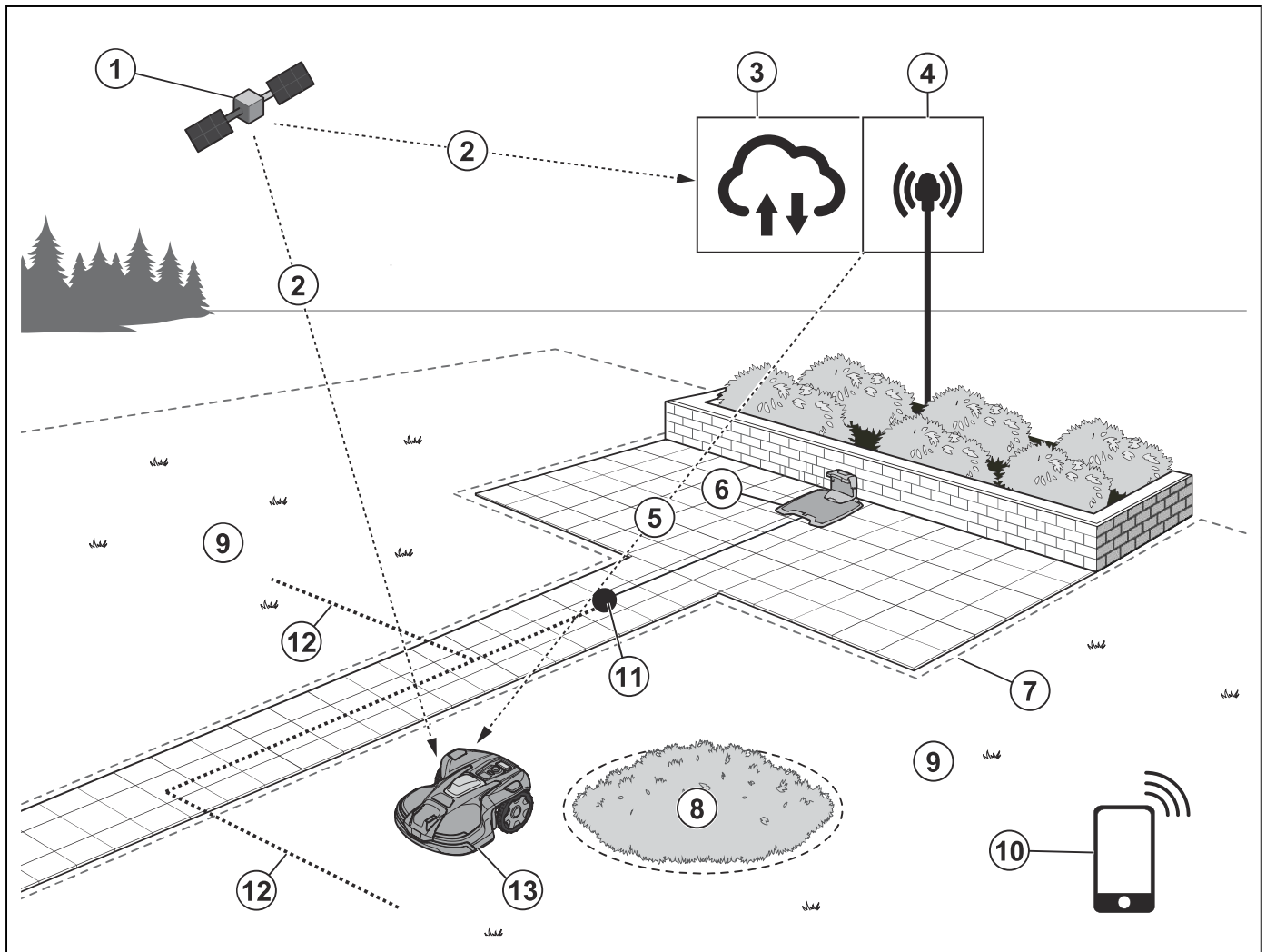
The product uses satellite signals and correction data to navigate. Satellite signals can be inaccurate because of atmospheric interference. Correction data compensates for this interference and it helps the product to operate with high position control. Correction data is available through EPOS® via Husqvarna® Cloud using cellular communication or Wi-Fi, or a reference station. If you use EPOS® via Husqvarna® Cloud, make sure to have full cellular coverage or Wi-Fi coverage in the work

area. A reference station is an optional accessory when cellular coverage or Wi-Fi is not available.

Note: All countries and regions do not support reference stations or correction data through the Husqvarna® Cloud. Speak to your local Husqvarna representative for information.

The work area is the area where the product can cut grass. You can make stay-out zones to stop the product from entering specified areas. The docking point is a position in front of the charging station. The product uses this point to go to and from the charging station. The mower uses transport paths to move between the work areas.

3.3 System overview for EPOS® installation



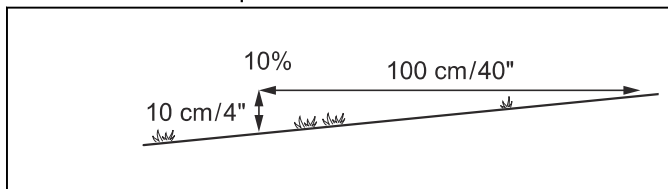
- 1. Satellites
- 2. Satellite signals

- 3. Husqvarna® Cloud

4. Reference station³
5. Correction data
6. Charging station
7. Virtual boundary
8. Stay-out zone
9. Work area
10. Mobile device
11. Docking point
12. Transport path
13. Robotic lawn mower

3.4 To plan the installation

- Read the installation chapter before you start the installation.
- Make a blueprint of the work area. Include all obstacles and mark on the blueprint where to put the charging station, the work areas, stay-out zones, the maintenance point, the transport paths and the reference station.
- The product can operate in 50% slopes in the work area. At the virtual boundaries the maximum slope is 25%. The slope (%) is calculated as height for each m. Example: 10 cm / 100 cm = 10%.



3.5 To prepare the work area

- Fill in holes in the lawn to make it level.
- Cut the grass before you install the product. Make sure that the grass is maximum 6 cm / 2.5 in.
- Make sure the product can get correction data from the Husqvarna® Cloud. The product can get correction data if cellular coverage or Wi-Fi is available in the full work area. If cellular coverage or Wi-Fi is not available in the full work area, to install a local reference station or an Automower® Connect kit are alternative ways to get correction data.
- The vision system supports EPOS® technology navigation in areas with low satellite coverage, for example narrow passages, L-shaped buildings and below large trees near the virtual boundary. The product continues to operate when it detects grass in front of it and its EPOS® position is inside the virtual boundary. If a virtual boundary is installed in an area with low satellite coverage and grass directly outside the virtual boundary, Husqvarna recommends installation of a protective barrier. The protective barrier must have a height of minimum 15 cm / 6 in.

- If the installation is near water, slopes, precipices, or a public road, install a protective barrier. The barrier must have a height of minimum 15 cm / 6 in.



CAUTION: The protective barrier stops the product from falling into water, going down slopes, or entering public roads.

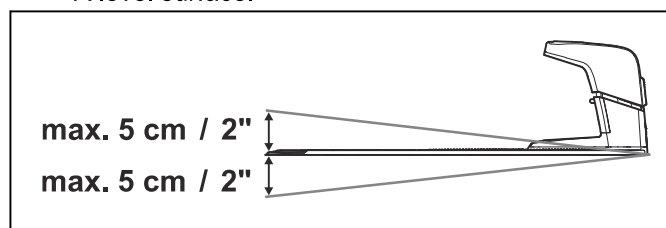
3.6 To prepare for the charging station installation

Before you install the charging station, make sure that these conditions can be fulfilled in the installation area:

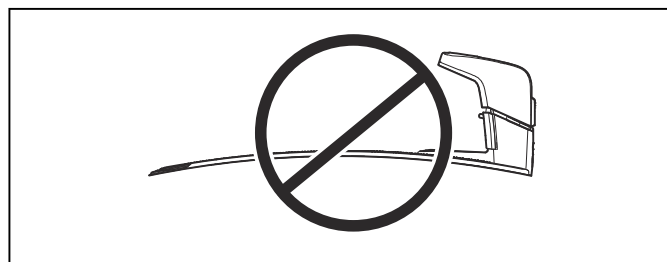
- An open area with more than 6 m / 20 ft. in front of the charging station. Make sure that the area does not have high objects, for example, hedges or buildings.
- The area has no metal objects in the ground.

Note: Metal objects can cause interference to the signal that the product uses to find and move into the charging station.

- A level surface.



- A flat surface. The baseplate of the charging station must not be bent.



- The charging station can be installed inside or outside the work area.
- There is access to a power outlet with a Class A ground fault circuit interrupter (GFCI) or a residual-current device (RCD) of maximum 30 mA.
- The power supply unit for the charging station must be installed in an area with protection from the sun and rain and with good airflow.
- If the work area has slopes, Husqvarna recommends to put the charging station in the lower part of the area.

³ Optional accessory which is purchased separately.

3.6.1 To install 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.

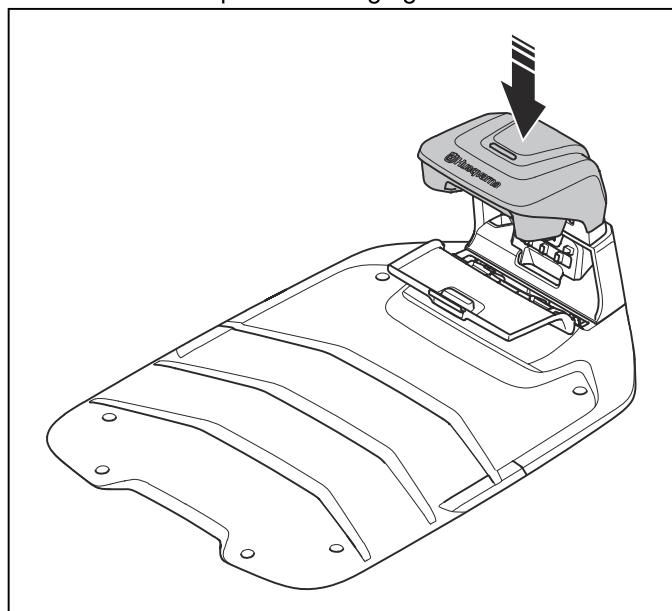


CAUTION: Make sure that the blades on the product do not cut the low-voltage cable.

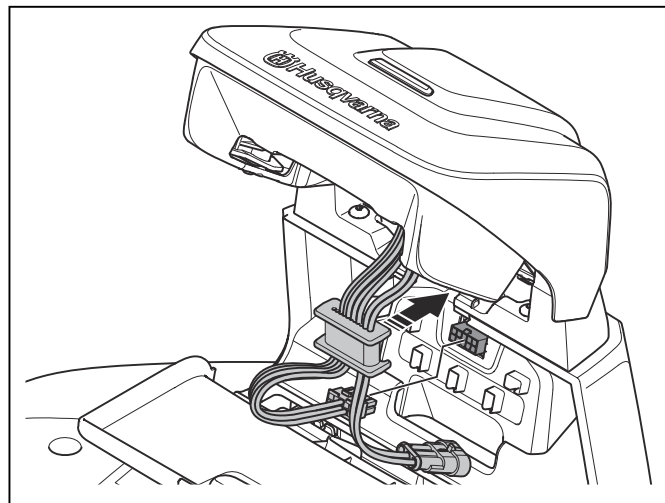


CAUTION: Do not put the low-voltage cable in a coil or below the charging station plate. The coil causes interference with the signal from the charging station.

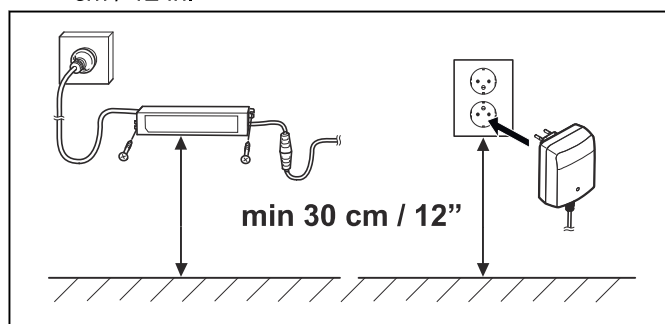
1. Put the charging station in the selected area.
2. Open the hatch on the front of the charging station.
3. Attach the top of the charging station.



4. Lift and tilt the top of the charging station.
5. Put the grommet with the cables into position.
6. Connect the cable to the charging station.



7. Connect the low-voltage cable to the charging station and to the power supply unit.
8. Close the hatch on the front of the charging station.
9. Put the power supply at a minimum height of 30 cm / 12 in.



10. Connect the power supply cable to a 100-240V power outlet.
11. Put the low-voltage cable in the ground with stakes or bury the cable.
12. Make sure that the indicator LED lamp on the charging station has a flashing blue light.
13. Attach the charging station to the ground with the supplied screws.

3.6.2 To charge the product

1. Put the product in the charging station.

Note: The product starts to charge automatically when the product is in the charging station.

3.6.3 Installation of the reference station

If EPOS® via Husqvarna® Cloud is not available, a reference station can be used. Install the reference station according to the instructions in the Operator's manual for the reference station.

3.6.4 To do a pairing operation with the Automower® Connect app

1. Download the Automower® Connect app on your mobile device.

2. Sign up for a Husqvarna account and follow the instructions.
3. Enter the factory PIN code 1234 on the product.
4. Enable Bluetooth® on your mobile device.
5. Push the Bluetooth® button on the product.
6. Select *My mowers* in the Automower® Connect app and add your product.
7. Follow instructions in the Automower® Connect app.

3.6.5 Installation of map objects

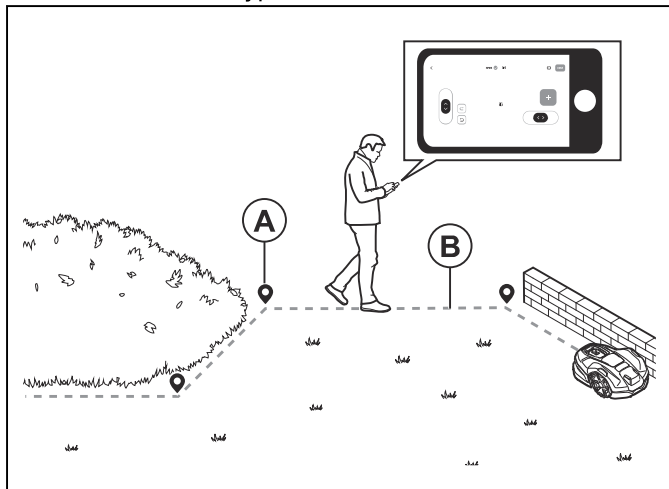
The installation of the map objects is made in the Automower® Connect app. Select the *Map* and then the plus sign to install different map objects on the map.

3.6.5.1 appDrive

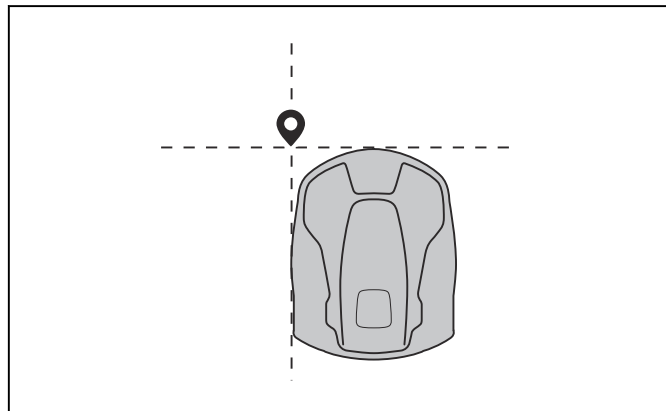
To install objects on the map, operate the product with the appDrive function and add waypoints on the map.

3.6.5.2 Waypoints

The waypoints (A) are positions that make the virtual boundaries and paths (B). You can add, remove, and change the waypoints in the app after the installation. Husqvarna recommends that you use a small number of waypoints. The lines between the waypoints are straight. To make a smooth curve, use more waypoints. Husqvarna recommends a minimum distance of 30 cm / 1 ft. between the waypoints.



Note: The position of the waypoint when you install a work area or a stay-out zone is in the front left corner of the product.



Note: The position of the waypoint when you install a transport path or a path to a maintenance point is in the middle of the product between the drive wheels.



3.6.5.3 Docking point

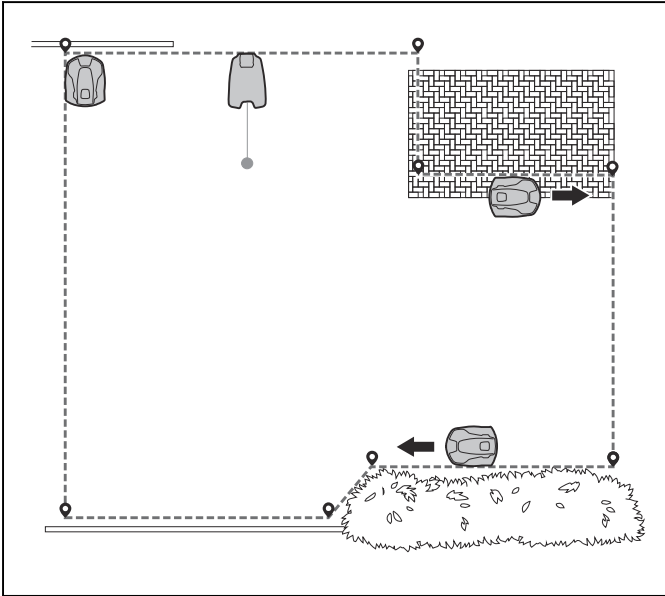
There is a docking point in front of the charging station. It is used for the product to navigate to and from the charging station. The docking point should have unimpeded sky view. If the docking point is outside the work areas, install a transport path from the docking point to the work areas. Refer to *Transport path* on page 16.

The docking point can be set 70-250 cm / 28-98 in. from the charging station.

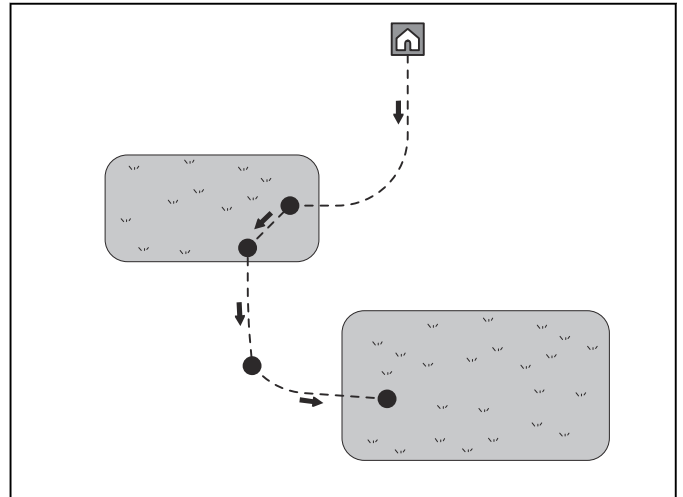
Note: Short distance between the charging station and the docking point decreases the risk of track marks. A long distance can be necessary to have good satellite signals at the docking point.

3.6.5.4 Work area

A work area is the area where the product operates and cuts grass. When you install a work area the product is operated with appDrive clockwise around the boundary of the work area and waypoints are set along the way.



not cut grass when it moves on the transport path. You can use one transport path for several work areas. At least one waypoint for the transport path needs to be put inside the work area.



The corridor width of the transport path can be set between 1.2–5 m / 4.0–16.4 ft. Do not install the transport path across a stay-out zone.

3.6.5.7 Maintenance point

A maintenance point is a defined point where you can park the product. It includes a path to the docking point. First set the maintenance point and then make the path from the maintenance point to the docking point.

The corridor width of the path can be set between 1.2–5 m / 4.0–16.4 ft. Do not install the path across a stay-out zone.

3.6.5.5 Stay-out zone

A stay-out zone is an area where the product must not go. When you install a stay-out zone the product is operated with appDrive counterclockwise around the boundary of the stay-out zone and waypoints are set along the way.

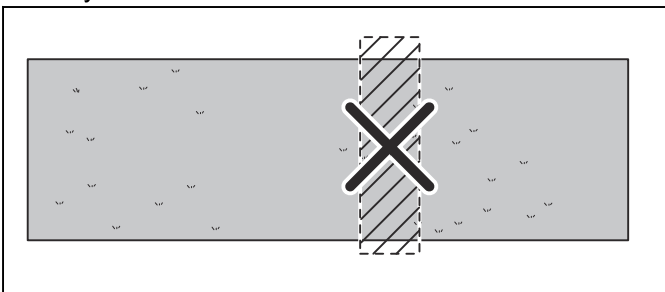
Stay-out zones are recommended:

- Around all obstacles, for example trees, roots, and stones.
- To not include slopes in the work area that are more than 50%.

A stay-out zone must have a minimum size of 30 × 30 cm / 1 × 1 ft.

Note: The product has an object avoidance function to avoid temporary objects on the lawn, but Husqvarna recommends to use Stay-out zones around permanent objects. The stay-out zones helps the product to navigate in the work area with increased efficiency.

Note: Do not make a stay-out zone across the work area to stop the product from going to the other side of the stay-out zone.



3.6.5.6 Transport path

If the docking point is outside the work area, you must make a transport path. The transport path guides the product to and from the work area. The product does

4 Settings

This chapter gives information about the settings for the product that you can make in the Automower® Connect app. All setting for the product are available in Automower® Connect. Some settings can also be made in Automower® Access, refer to *Menu structure overview in Automower® Access on page 10*.

4.1 Schedule



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

The *Scheduler Tool* adapts the schedule to the size of your work area. 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.

4.1.1 To set the schedule for systematic mowing

- Set the schedule to let the product operate for as long time as possible.

Note: After the product has cut the full work area, it goes back to the charging station. When the next session starts, the product cuts the full work area again.

Note: If the product has not cut the full work area before the session ends, it goes back to the charging station. When the next session starts, the product continues to cut from where it stopped.

- To cut a work area 2 times a day, you can set 2 different schedules. Set the schedule for the product to have sufficient time to cut the complete work area.
- With 2 or more parallel schedules, the product starts to cut where it has not cut for the longest time.
- Make sure that the product completes to cut each work area in less than 24 hours. If the product must cut a work area for more than 24 hours, divide the work area into smaller work areas.

4.1.2 To set the schedule for irregular mowing

The product operates the complete scheduled time with irregular mowing.

- Decrease the scheduled time to prevent wear on the grass.
- If the cutting result is not satisfactory, increase the scheduled time. Refer to *Schedule on page 17*.
- With 2 or more parallel schedules in different work areas, the product first starts to cut 1 work area. After each charging of the product, the product starts to cut another work area.

4.2 Cutting height



4.2.1 Adjust the cutting height

The cutting height can be adjusted from 2 cm / 0.8 in. to 6 cm / 2.4 in.

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 Pattern



The settings for pattern can be set for each work area with an EPOS® installation. You can do these settings:

- Set the pattern for how the product operates.
- For some patterns you can set the direction of the pattern.
- For some patterns you can set the type of the *Border mowing*. With *Fixed border mowing* the product always operates in the same paths to keep a sharp border around the work area. With *Variable border mowing*, the product operates in different paths to decrease the risk of track marks along the virtual boundary.

Husqvarna recommends to use systematic pattern on large and open work areas. If you use systematic pattern on a work area with obstacles, make stay-out zones around obstacles and use a pattern with many directions for the best possible cutting result.

Husqvarna recommends to use irregular pattern if the work area is complex and has many obstacles or includes steep slopes.

4.4 Operation

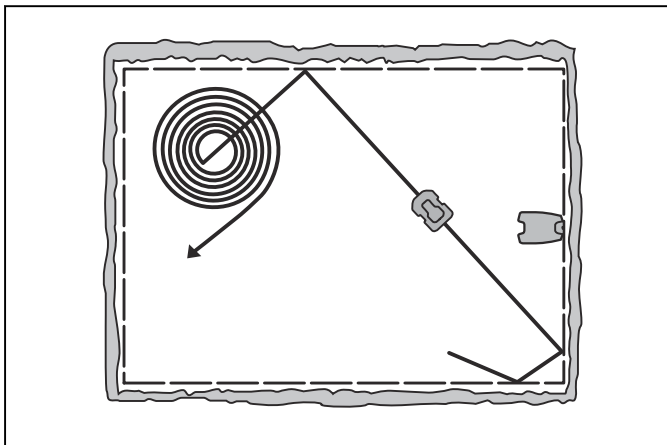


In *Operation* you can change the operation settings of the product.

4.4.1 Spiral cutting

Spiral cutting is only applicable for work areas with irregular pattern. If the product enters an area where it senses the grass is longer than average, it can change the movement pattern to *Spiral cutting*. This means that the product mows in a spiral pattern to faster cut the area with longer grass. It is possible to set the intensity of the *Spiral cutting*. *Very low / Low* intensity means that *Spiral cutting* begins less often. *High / Very high* intensity means that *Spiral cutting* begins more often.

Note: *Spiral Cutting* does not start in slopes steeper than 17%.



4.4.2 Object avoidance

The product uses AI vision technology to detect objects on the lawn and to avoid them. This function helps prevent damage to the product and to objects in the work area. You can disable the function in the app. Heavy rain can decrease the visibility of the camera.

You can set how the product must operate when visibility is low. If you select *Keep Mowing*, the product continues to mow with reduced object detection, but this can cause collisions with objects. If you select *Pause*, the product stops operation until visibility becomes good again.

4.4.3 Weather timer

Weather timer automatically adjust the cutting time to the growth of the grass. *Weather timer* adjusts the cutting time only for work areas with irregular pattern. 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 completes 1 mowing cycle per scheduled work area, then the *Weather timer* selects if the product continues to operate.

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.

4.4.4 ECO mode

ECO mode disables the signal in 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.

4.4.4.1 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.

4.5 Reinstall EPOS®



In this menu, you can reinstall EPOS® through Husqvarna Cloud if it is necessary.

4.6 Accessories



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

4.6.1 Headlights

Headlights is only available for 430V/450V.

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.

4.6.2 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.

4.7 General



In the *General* menu you can set the time and date, or reset to factory settings.

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

4.7.1 Time & date

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

4.7.2 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.

4.8 Security



The security settings controls the PIN code, the 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®.

4.8.1 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.

4.8.2 Change PIN code

You can change the PIN code. Make a note of the new PIN code in Memo. Refer to *Introduction on page 7*.

4.8.3 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.

4.8.3.1 Require PIN code at STOP

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.

4.8.3.2 Alarm duration

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

4.8.3.3 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.

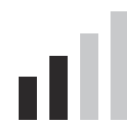
4.8.3.4 Carried away

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

4.8.4 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.

4.9 Automower® Connect



In *Automower® Connect* you can connect the product to a Wi-Fi network. You can also see the signal strength and connectivity status.

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

4.10 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 with virtual boundary* on page 12.

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

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. The LED indicator of the product pulsates when the firmware update is ongoing. If the product does not use cellular connectivity, it downloads new firmware when it is parked in the charging station. The product must have Wi-Fi coverage in the charging station to download new firmware.

4.12 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.

4.13 To reinstall the charging station on the map

Reinstall the charging station on the map if you move or replace the charging station. You can also reinstall it if the product cannot dock or connect to the charging station.

1. Select *Map objects > Charging station* in the app.
2. Select *Reinstall charging station* and follow the instructions.

Note: Other devices with Bluetooth® enabled can cause interference with the pairing operation. Disable Bluetooth® on the other devices if it causes interference with the pairing operation.

4.14 To reinstall the reference station on the map

Reinstall the reference station on the map if you move or replace the reference station.

1. Select *Map objects > Reference station* in the app.
2. Select *Reinstall reference station* and follow the instructions.

Note: If you move the reference station, you must make a factory reset and install all the maps again.

5 Operation

5.1 To set the product to ON



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

- Push the **jog wheel** for 3 seconds.
- Use the **jog wheel** to enter the PIN code if it is necessary.

5.2 To start the product

1. Push the **STOP** button.
2. Use the **jog wheel** to enter the PIN code if it is necessary.
3. Use the **jog wheel** to select the operating mode. Refer to *Operating modes - Start on page 21*.
4. Push the jog wheel to confirm.

Note: The first weeks after installation the perceived sound level when cutting the grass may be higher than expected. When the product has cut the grass for some time, the perceived sound level is much lower.

5.2.1 Operating modes - Start

The operation modes can be set on Automower Access on the product, refer to *Menu structure overview in Automower® Access on page 10*, and in the Automower Connect app described below.

5.2.1.1 Resume schedule

You set the product to operate according to schedule.

5.2.1.2 To select a work area or override schedule

You can select to mow a specified work area in the app. For work areas with irregular pattern you can set for how long the product operates. For work areas with systematic pattern, the product mows the complete area one time. Then the product parks in the charging station.

If the product cannot go to the work area from the docking point or by a transport path, follow these steps:

1. Use appDrive or lift and manually move the product to the work area.
2. In the app, select *Start > Select work area* and select the work area where you put the product.

5.3 appDrive

Use the appDrive to operate the product manually from the app.

5.3.1 To operate the product with appDrive

Use the buttons to operate the product:

1. Push the **STOP** button.
2. Use the jog wheel to enter the PIN code if it is necessary.
3. Use the jog wheel to select the Remote control menu.
4. Push the jog wheel to confirm.
5. Remote control the product with the Automower® Connect app.

5.4 To park the product

1. Push the **STOP** button.
2. Use the **jog wheel** to enter the PIN code if it is necessary.
3. Use the **jog wheel** to select the park mode. Refer to *Operating modes - Park on page 21*.
4. Push the jog wheel to confirm.

5.4.1 Operating modes - Park

The operation modes can be set on Automower Access on the product, refer to *Menu structure overview in Automower® Access on page 10*, and in the Automower Connect app described below.

5.4.1.1 Resume schedule

You set the product to operate according to schedule.

5.4.1.2 Park until next start

Set the product to park until the next start in the app. Use this function to send the product to the charging station. The product stays in the charging station until the next *Schedule* setting.

5.4.1.3 Park until further notice at maintenance point

If you have set a maintenance point, you can park the product there to do maintenance on the product. The product is parked at the maintenance point until you select a new operation mode.

5.5 To stop the product

1. Push the **STOP** button to make the product and the cutting motor stop.

5.6 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 to set the product to OFF. You can also use the jog wheel to select *Power off* in the menu in the display.
4. Make sure that the LED indicator on the jog wheel is not lit.

5.7 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. Set the product to ON.
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 or in the Automower® Connect app.

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 discs and blades each week. If the wear is low, you can increase the interval for the next time you examine the blade discs and blades. Examine the blade discs 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 cutting result can be unsatisfactory if the blades are blunt. Refer to *Replacement of the blades on page 26* 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 24</i> .	X		
Examine the product for damage and wear.	X		
Do an update of the firmware.	X		
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 26</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 22</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 skid plate and skid plate bearing.		O	
Examine the rubber bellows in the cutting height adjustment system.		O	
Examine the rubber bellows for the collision columns.		O	
Replace the rubber bellows for the collision columns.			O
Examine and clean the airflow filter.		O	
Replace the airflow filter.			O
Do a check of the tightening torque of chassis screws.		O	
Open the chassis and replace all sealing strips.			O
Last step			
Use a software service tool to do a function test of the functions of the product.		O	

6.3 Clean the product



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

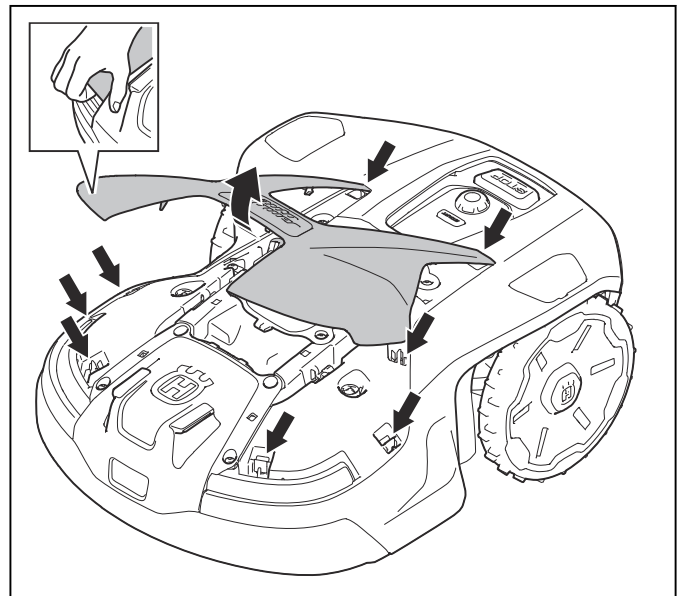
The product does not operate satisfactorily in slopes if the wheels are blocked with grass. Clean the product with a brush or running water from a water hose.

Husqvarna recommends to use a special cleaning and maintenance kit. Speak to your Husqvarna servicing dealer for more information.

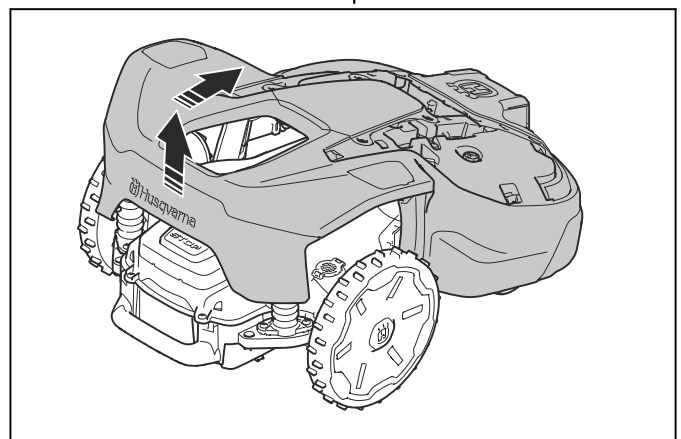
6.3.1 To clean the body, chassis and blade disc

Examine the blade disc and blades weekly. To clean the product fully, the top cover and the body of the product can be removed. If the product is dirty, use a weak soap solution if necessary. Use a brush or a water hose to clean the product. Do not use a high-pressure washer to clean the product.

1. Set the product to OFF.
2. Carefully pull the top cover at the rear, the middle and the front.

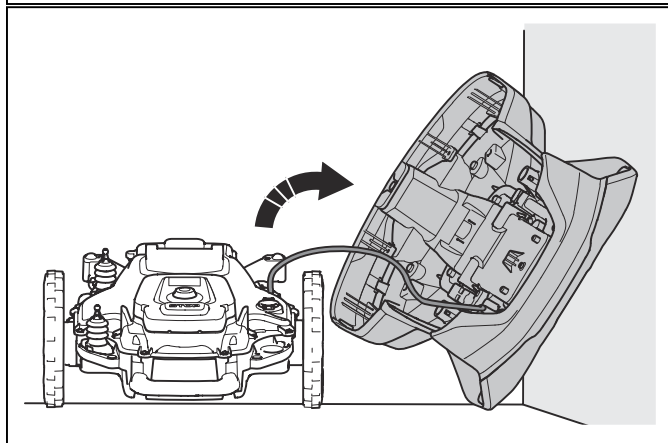
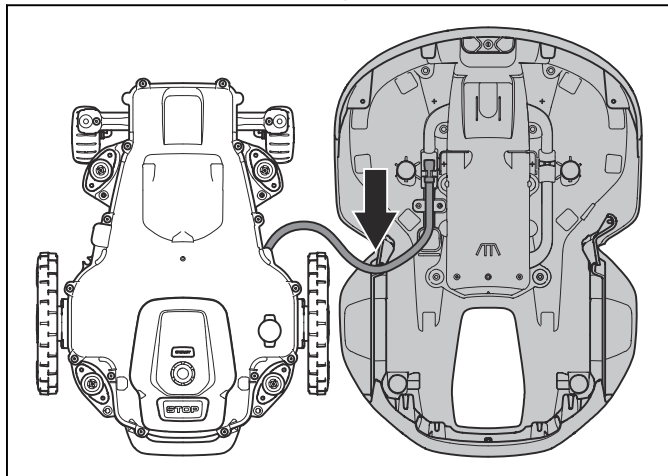


3. Hold the chassis with one hand and remove the body with a fast and short pull upwards and towards the front of the product.

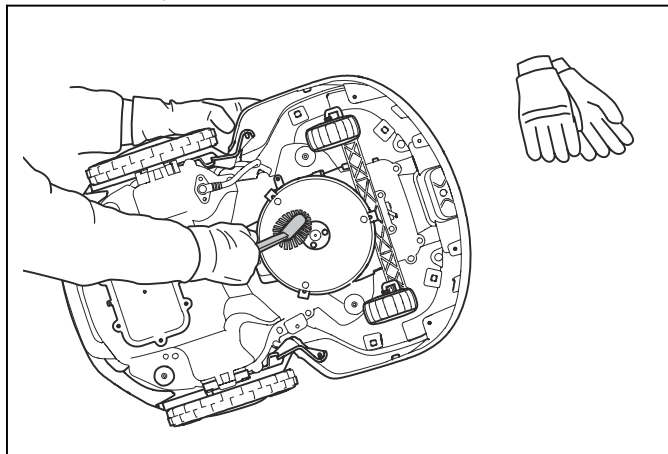


WARNING: If your hands come between the body of the product and the chassis, there is a risk of injury.

- Put the body of the product adjacent to the chassis of the product or tilt it against a wall.



- Put the product onto its side.



- Clean the blade disc bellows for the blade disc and chassis with a brush. At the same time, make sure that the blade disc rotates freely. Make sure that the blades are not damaged and can pivot freely.

6.3.2 To clean the vision window



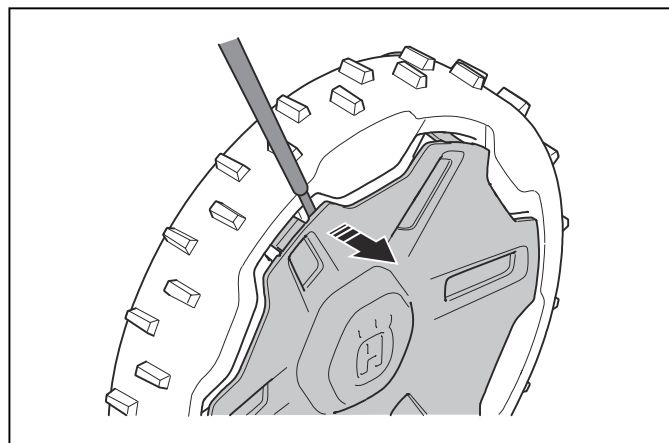
CAUTION: Do not use paper towels, scouring pads, brushes, steel wool, acids, alkalis, glass cleaners, or solvents. They can cause damage to the vision window.

- Remove dust from the vision window. Use water or compressed air.
- Clean the vision window with lukewarm water and a soft cloth or sponge. Apply light pressure.
- Flush the vision window with water.
- Dry the vision window with a soft cloth or compressed air.

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.
- If it is necessary, remove the wheel cover with a flat screwdriver.



6.3.4 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.

- Remove grass, twigs and other objects from the charging station.
- Use a brush or a water hose to clean the charging station.

6.4 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.

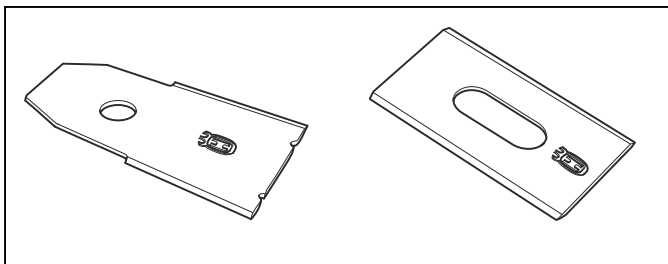
Note: The battery life is related to the length of the season and how many hours a day the product operates. A long season or many hours of operation a day means that the battery must be replaced more frequently.

5. Attach new blades and screws.
6. Make sure that the blades can move freely.

6.5 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.

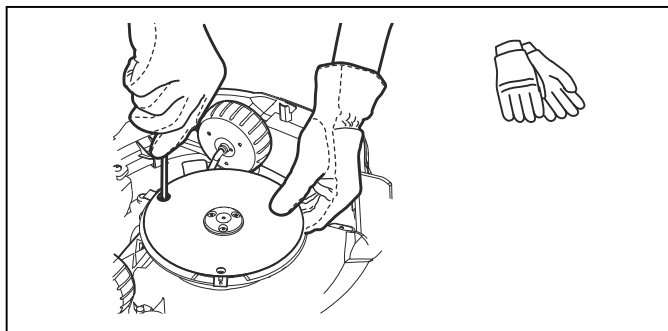
Replace worn or damaged blades for a safe operation. Replace the blades regularly for a satisfactory cut result and a low energy use. All 3 blades and screws must be replaced at the same time to get a balanced cutting system.

6.5.1 To replace the blades



WARNING: Use protective gloves.

1. Set the product to OFF.
2. Put the product with the blade disc up on a clean and soft surface.
3. Rotate the skid plate until the holes align with the screws for the blade.
4. Remove the 3 blades and 3 screws.



7 Troubleshooting

7.1 Messages

The messages in the table below are shown in Automower® Connect and Automower® Access. Speak to your Husqvarna representative if the same message shows frequently.

Message	Cause	Action
<i>Wheel motor blocked, left/right</i>	The drive wheel is blocked by grass or other objects.	Examine the drive wheel and remove the grass or other object.
<i>Wheel motor overloaded, left/right</i>		
<i>Wheel drive problem, right/left</i>	The drive wheel is blocked by grass or other objects.	Examine the right drive wheel and remove the grass or other objects. If the problem stays, speak to your authorized service center.
<i>Cutting system blocked</i>	The cutting system is blocked by grass or other objects.	Examine the cutting system and remove the grass or other objects.
<i>Cutting system major imbalance</i>	There is vibrations in the blade disc.	Continued operation can cause damage to the cutting system. Make sure that the blades and screws are not damaged or worn. Make sure that all blades are correctly installed and that there is only one blade attached in each position on the blade disc.
		Clean the blades and the cutting disc.
<i>Cutting height blocked</i>	Grass or other objects is wound around the cutting height adjustment, or between the blade disc and chassis.	Examine the blade disc and the bellows around the cutting height adjustment, and remove any grass or other objects that may have got stuck.
<i>Unexpected cutting height adj</i>	The cutting height adjustment cannot move.	Examine the cutting height adjustment and remove grass or other objects. If the problem stays, speak to your approved servicing dealer.
<i>Limited cutting height range</i>		
<i>Cutting height problem</i>		
<i>Cutting system imbalance</i>	The product has discovered vibrations in the blade disc.	Make sure that the blades and screws are not damaged and worn. Make sure that all blades are correctly installed and that there is only one blade attached in each position on the blade disc. Clean the blades and the cutting disc.

Message	Cause	Action
<i>Outside work area</i>	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Change the position of the charging station.
	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 19</i> .
<i>Upside down</i>	The product is leaning too much or has turned over.	Turn the product the right way up.
<i>Mower tilted</i>	The product tilts too much.	Move the product to a level area.
<i>Lifted</i>	The lift sensor has been enabled because the product has been lifted.	Make sure that the body of the product body can move freely around its chassis. Remove or make an island around objects that can cause the body to be lifted. If the problem stays, speak to your authorized service center.
<i>Trapped</i>	The product is blocked in a small area behind a number of obstacles.	Examine if there are obstacles which make it hard for the product to move away from this location.
<i>Slipped</i>	The product slips because there is an obstacle.	Remove the obstacle.
	The product slips because of wet grass.	Wait until the lawn is dry before you start the product again.
	The product has hit an obstacle and stopped or the wheels cannot move on the wet grass.	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 product slips because the slope is too steep.	Make a stay-out zone to exclude the slope from the work area.
<i>Collision</i>	The body of the product cannot move freely around its chassis.	Make sure that the body of the product can move freely around its chassis. Examine that the body of the product is correctly installed and there is no dirt blocking it. If the problem stays, speak to your authorized service center.
<i>Alarm! Mower stopped</i>	The alarm was started because the product was stopped.	Enter the PIN code to disable the alarm. The settings for the alarm can be changed in the <i>Security</i> menu. Refer to <i>Security on page 19</i> .
	The alarm was started because the product was lifted.	
	The alarm was started because the product was tilted.	
<i>Alarm! Mower was moved</i>	The alarm was started because the product was moved.	
<i>Alarm! Outside Geo-Fence</i>	The alarm was started because the product was outside the GeoFence.	
<i>Temporary problem</i>	Temporary electronic or firmware problem in the product.	Update the firmware via FOTA. Restart the product. If the problem stays, speak to your authorized service center.

Message	Cause	Action
<i>Electronic problem</i>	Temporary electronic or firmware problem in the product.	Restart the product. If the problem stays, speak to your approved servicing dealer.
<i>Loop sensor problem</i>		
<i>Tilt sensor problem</i>		
<i>Invalid sub-device combination</i>		
<i>STOP button problem</i>		
<i>Connectivity problem</i>		
<i>Safety function faulty</i>		
<i>Invalid system configuration</i>		
<i>Lift sensor problem</i>		
<i>Collision sensor problem</i>		
<i>Temporary battery problem</i>		
<i>GPS navigation problem</i>		
<i>Vision system problem</i>		
<i>Battery problem</i>	Temporary battery or firmware problem in the product.	Restart the product. If the problem stays, speak to your approved servicing dealer.
	Incorrect type of battery.	Use only original batteries recommended by the manufacturer.
<i>Empty battery</i>	The battery is at the end of its life cycle.	Speak to your authorized service center to replace the battery.
	The product cannot enter the charging station because the antenna in the baseplate of the charging station is damaged.	If the indicator lamp on the charging station flashes red, the antenna is damaged. Speak to your authorized service center.
	The product is in the charging station, but does not charge the battery.	Make sure that the charging plates on the product and the contact plates on the charging station are in contact. Clean the contact plates and charging plates.
<i>Battery needs replacement</i>	The battery state of health is low.	Replace the battery. Speak to your authorized service center.
<i>Battery near end of life</i>	The battery state of health is critically low.	Replace the battery. Speak to your authorized service center.
<i>Temperature restriction</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.

Message	Cause	Action
<i>No charging station signal</i>	There is no power in the charging station. The LED indicator on the charging station is not on.	Examine if the power supply unit or the low-voltage cable is damaged or not installed correctly to the power outlet or the charging station. Examine if there is a power failure or if a residual-current device is enabled.
	<i>ECO mode</i> is enabled and the loop signal is disabled when the product is started in the work area.	Put the product in the charging station and start the product. To start the product manually in the work area, push the STOP button before you remove the product from the charging station.
	The product does not find the loop signal from the charging station.	Put the product in the charging station and generate a new loop signal. Refer to <i>New loop signal on page 19</i> .
	Disturbances from metal objects (fences, reinforcement steel) or buried cables close by.	Change the position of the charging station.
<i>Charging current too high</i>	The battery charges with a too high current. The power supply unit is incorrect or damaged.	Make sure that the power supply unit and charging station are not damaged. Make sure the that you use the correct power supply unit and charging station. Restart the product. If the problem stays, speak to your authorized service center.
<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>No power in charging station</i>	The power supply unit is incorrect or damaged.	Examine the power supply unit. Replace if necessary.
	Power failure.	Find and correct the cause of the power failure.
	The product cannot charge because there is no contact between the contact plates and the charging plates.	Make sure that the charging plates and the contact plates are in contact. Clean the contact plates and charging plates.
<i>Charging station blocked</i>	The product cannot go into the charging station because it is blocked or the baseplate of the charging station is tilted or bent.	Examine why the product cannot go into the charging station. Remove any objects and make sure that the baseplate of the charging station is level.
	The product cannot go into the charging station because it is blocked or the baseplate of the charging station is tilted or bent.	Examine why the product cannot go into the charging station. Remove any objects and make sure that the baseplate of the charging station is level.
<i>Stuck in charging station</i>	The product cannot leave the charging station because it is blocked or it slips on the baseplate of the charging station.	Examine why the product cannot leave the charging station. Remove any objects and clean the baseplate of the charging station.

Message	Cause	Action
<i>Charging station communication problem</i>	The mower cannot communicate with the charging station.	Create a new loop signal or reinstall your charging station under map view in the app. If the problem stays speak to your authorized service center.
	Power failure	Find and correct the cause of the power failure.
<i>Charging aborted</i>	The charging is aborted due to too high temperature and will instead mow according to schedule.	No action needed.
<i>Slope too steep</i>	The product stopped because the slope is too steep.	Make a stay-out zone to exclude the slope from the work area.
<i>Accessory power problem</i>	There is a power problem with the accessory port.	Set the product to OFF and disconnect and connect the accessory to the accessory port. Set the product to ON. If the problem stays, speak to your service center.
<i>Work area tampered</i>	The charging station or the reference station was moved.	Do a new installation of the map.
<i>Too many waypoints</i>	There are too many waypoints in the current work area.	Do a new installation of the work area, stay-out zone and transport paths. Divide the current work area into more work areas.
<i>No correction data available</i>	Technical problems with EPOS® through the Husqvarna® Cloud.	Restart the product. If the problem remains, the message requires action by authorized service technician.
	The product does not have cellular connection or Wi-Fi connection and cannot receive correction data.	Make sure that you have cellular coverage or Wi-Fi connection in all parts of the area where the product operates.
<i>Searching for satellites</i>	Weak satellite signal to the reference station.	The satellite signal is temporarily weak. The product will start to operate when the satellite signals are good.
		Examine the installation of the reference station.
	Weak satellite signal to the product.	The satellite signal is temporarily weak. The product will start to operate when the satellite signal is good.
		Examine if there is an object between the product and the sky that causes interference with the satellite signal. Remove the object or do a new installation to not include these parts in the work area. Refer to <i>Installation of map objects on page 15</i> .

Message	Cause	Action
<i>Reference station communication problem</i>	The product is not connected to the reference station.	Do a pairing operation between the product and the reference station.
	The reference station is not installed correctly.	Examine the installation of the reference station.
	The product does not receive the radio signal from the reference station in all areas where the product operates.	Test if the product has radio signal from the reference station in all of the work area. If not, make a new installation of the reference station or a new installation of the map. Refer to <i>Installation of map objects on page 15</i> .
	Power failure.	Examine and correct the cause for the power failure of the reference station.
	There is an error in the reference station and the LED indicator flashes red.	Disconnect the power to the reference station and connect it again to restart the reference station. If the problem stays, speak to your approved servicing dealer.
	There is interference with another reference station or other radio systems in the area.	Restart the product. If the problem stays, speak to your approved servicing dealer.
<i>EPOS® plug-in not found</i>	The EPOS® Plug-in has been installed earlier, but cannot be found.	Make sure that the EPOS® Plug-in is installed correctly and that the cable is connected. Restart the product. If the problem stays, speak to your authorized service center.
<i>Invalid firmware configuration</i>	The firmware in the product is not updated.	Update the firmware to the latest version.
<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.
<i>Destination not reachable</i>	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.
	There is no transport path to the work area.	Edit or remove the stay-out zone or make a new installation of the work area.
	The way back to the charging station is blocked by an obstacle.	Remove the obstacle.
	The way to the maintenance point is blocked by an obstacle.	
<i>Destination blocked</i>	The way of the destination is blocked by an obstacle.	Remove the obstacle that blocks the way to the destination.
	The way of the destination is blocked by a stay-out zone.	Edit or remove the stay-out zone or make a new installation of the work area.
	There is no transport path to the work area.	Make a transport path to the work area.

7.2 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.

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 charging station is powered, but the installation in the Automower® Connect app is not completed.	To do a pairing operation with the Automower® Connect app, refer to <i>To do a pairing operation with the Automower® Connect app on page 14</i> .
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.

7.3 Symptoms

If the product does not operate as usual, follow the symptoms table below. Speak to your Husqvarna customer service if you cannot find the cause for the fault.

Symptoms	Cause	Action
The product vibrates.	The cutting system is not in balance because of damaged blades.	Examine the blades and screws and replace them if necessary. Refer to <i>Replacement of the blades on page 26</i> .
	The cutting system is not in balance because of too many blades in the same position.	Do a check that only one blade is attached at each screw.
	Different thickness of blades are installed on the product.	Do a check if the blades are of different thickness and replace if necessary.
The product operates, but the blade disc does not rotate.	The product searches for the charging station, or is moving to the starting point.	Usual operation for the product. The blade disc does not rotate when the product is searching for the charging station.
The product operates for shorter periods than usual between charges.	Grass or other object causes a blockage to the blade disc.	Remove and clean the blade disc. Refer to <i>To clean the body, chassis and blade disc on page 24</i> .
	The battery is at the end of its life cycle.	Replace the battery. Refer to <i>Battery on page 25</i> .
	Blunt blades. More energy is necessary when cutting the grass.	Replace the blades. Refer to <i>Replacement of the blades on page 26</i> .
Mowing and charging times are shorter than usual.	The battery is at the end of its life cycle.	Replace the battery. Refer to <i>Replacement of the blades on page 26</i> .

Symptoms	Cause	Action
The product is parked for hours in the charging station.	Parking mode is enabled.	Change the operating mode. Refer to <i>Operating modes - Start on page 21</i> .
	The product does not operate if the battery temperature is too high or too low.	Make sure that the charging station is put in an area with protection from the sun.
Uneven mowing results.	The product operates for a small number of hours per day.	Increase the cutting time. Refer to <i>Schedule on page 17</i> .
	The work area is too large.	Decrease the size of the work area or extend the schedule. Refer to <i>Schedule on page 17</i> .
	Blunt blades.	Replace all the blades. Refer to <i>Replacement of the blades on page 26</i> .
	Long grass in relation to the set cutting height.	Increase the cutting height and then lower it when the grass is shorter.
	Collection of grass by the blade disc or around the motor shaft.	Remove the collection of grass and clean the product. Refer to <i>Clean the product on page 24</i> .
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.

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.
- For how to remove the battery, refer to the complete Operator's manual on www.husqvarna.com.

8.2 To put the product into storage



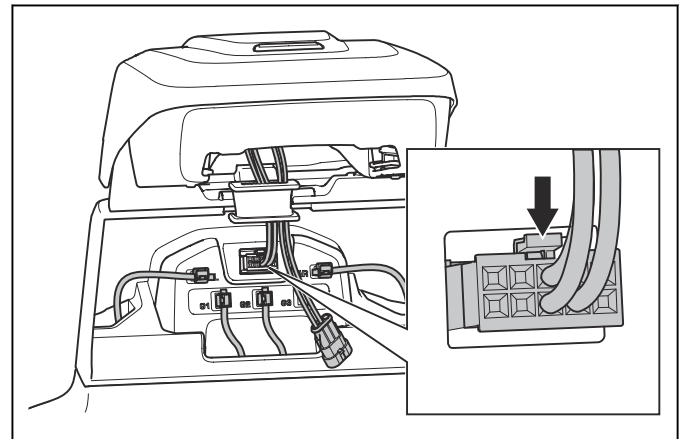
CAUTION: Charge the battery fully before you put the product into storage. If the battery is not fully charged it can cause damage to the battery.

- Charge the product fully. Refer to *To charge the battery on page 22*.
- Set the product to OFF. Refer to *To set the product to OFF on page 21*.
- Clean the product. Refer to *Clean the product on page 24*.
- Put the product in a dry, frost-free area.
- We recommend to put the product in the package of the product or put the product with all wheels on level ground. You can also hang the product on a Husqvarna wall hanger. Speak to your Husqvarna representative for more information about available wall hangers.

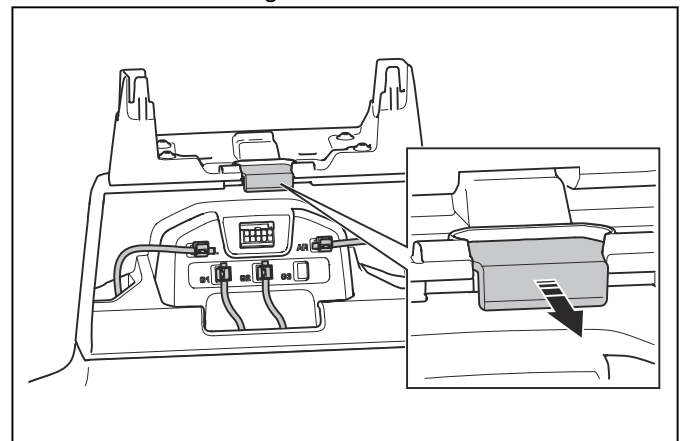
8.3 To put the charging station into storage

You can remove the top of the charging station and put it into storage. It is not necessary to put the baseplate of the charging station into storage.

1. Lift and tilt the top of the charging station and open the hatch.
2. Disconnect the power supply unit from the charging station and from the power outlet.
3. Disconnect the cable.



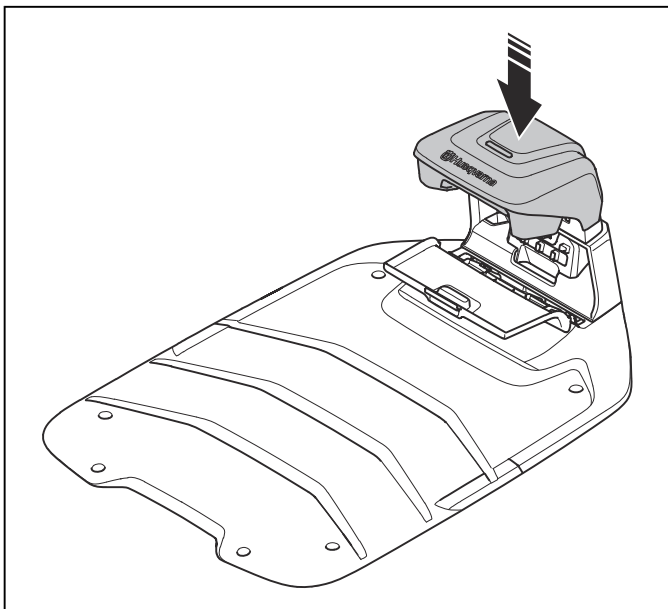
4. Remove the grommet with the cables.
5. Pull the top of the charging station up and remove it.
6. Close the sealing lid.



7. Close the hatch.
8. Put the power supply unit and the top of the charging station in a dry, frost-free area.

8.4 To install the charging station after storage

1. Open the hatch.
2. Push in the sealing lid.
3. Attach the top of the charging station.

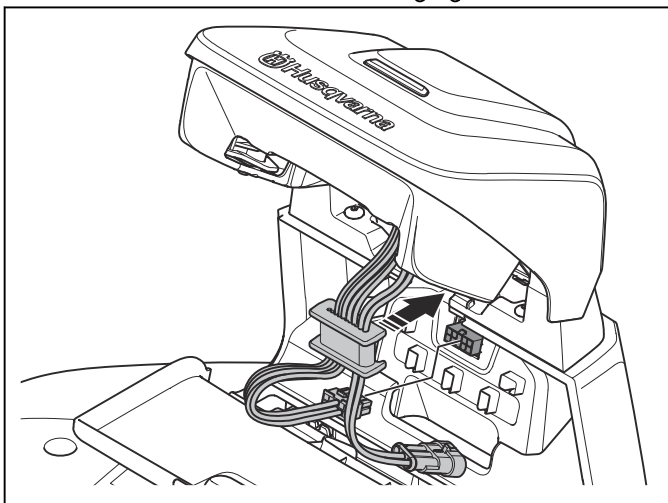


Note: The symbol shows on the product or package of the product.

8.5.1 Battery removal

For information about how to remove the battery, refer to the full Operator's manual in the Automower® Connect app and on Husqvarna's web site.

4. Lift and tilt the top of the charging station.
5. Put the grommet with the cables into position.
6. Connect the cable to the charging station.



7. Connect the power supply unit to the power outlet and to the charging station.
8. Close the hatch.

8.5 Disposal

The symbol means that the product is not domestic waste. Recycle it through your local collection system for electrical and electronic equipment. This contributes to proper end of life waste management. Contact local authorities, domestic waste services, your dealer or retailer for information. Incorrect disposal may have potential negative effects on the environment and human health, due to the potential presence of hazardous substances.



9 Technical data

9.1 Technical data

Dimensions	Automower® 430V NERA	Automower® 450V NERA
Length, cm/in.	75/29.6	75/29.6
Width, cm/in.	54/21.4	54/21.4
Height, cm/in.	28/11.1	28/11.1
Weight, kg/lb	12.8 / 28	14.6 / 32

Electrical system	Automower® 430V NERA	Automower® 450V NERA
Battery, Lithium-Ion 18. V/4.9 Ah Art. No.	590 81 01-02	
Battery, Lithium-Ion 18.0 V/5.0 Ah Art. No.	536 81 24-01, 590 81 01-01, 590 81 01-03	
Battery, Lithium-Ion 18.5 V/5.0 Ah Art. No.	536 81 24-02	
Battery, Lithium-Ion 18.0 V/5.2 Ah Art. No.	590 81 01-04	
Battery, Lithium-Ion 18.0 V/7.5 Ah Art. No.		599 78 86-01
Battery, Lithium-Ion 18.0 V/8.4 Ah Art. No.		599 78 86-03
Battery, Lithium-Ion 18.5 V/7.5 Ah Art. No.		599 78 86-04
Battery, Lithium-Ion 18.0 V/12 Ah Art. No.		540 22 34-01, 540 22 34-02
Power supply (28V DC), V AC	100-240	100-240
Low-voltage cable length, m/ft	10/32.8	10/32.8
Mean energy consumption at maximum use	13 kWh/month for a work area of 2200m ² /0.55acre	18 kWh/month for a work area of 3200m ² /0.8acre
Charging current, A DC	4.2	7.0
Type of Power Supply Unit ⁴	ADP-60PR	ADP-200MR XX X; DT
Average mowing time, min	95	160
Average charging time, min	50	55

Charging station antenna	Automower® 430V NERA	Automower® 450V NERA
Operating Frequency Band, Hz	100-80000	100-80000
Maximum magnetic field, dBuA/m ⁵	82	82
Maximum Radio-frequency power, mW@60m ⁶	<25	<25

⁴ XX, YY can be any alphanumeric characters or blank for marketing purpose only, no technical differences. The "XX" specifies the country version, such as JP, and the "Y" specifies the product revision, such as V.

⁵ Measured according to EN 303 447.

⁶ Maximum active output power to antennas in the frequency band in which the radio equipment operates.

Sound data ⁷	Automower® 430V NERA	Automower® 450V NERA
Sound level, perceived, dB (A)	56	58
Measured sound power noise level, dB (A)	55	58
Noise emissions uncertainties, KWA dB (A)	1	1
Sound pressure noise level at the operator's ear, dB (A) ⁸	47	50

Mowing	Automower® 430V NERA	Automower® 450V NERA
Cutting system	3 pivoted cutting blades	3 pivoted cutting blades
Cutting motor speed, rpm	2300	2300
Power consumption during cutting, W+/- 20%	19	26
Cutting height, cm/in.	2-6/0.8-2.4	2-6/0.8-2.4
Cutting width, cm/in.	24/9.4	24/9.4
Narrowest possible passage, cm/in.	120/48	120/48
Maximum slope for work area, %	50	50
Maximum slope at virtual boundary, %	25	25
Area capacity - irregular, m ² / acre	3200/0.8	5000/1.25
Area capacity - systematic, m ² / acre	4800/1.2	7500/1.9

IP-code	Automower® 430V NERA	Automower® 450V NERA
Robotic lawn mower	IPX5	IPX5
Charging station	IPX5	IPX5
Power supply	IP44	IP44

Frequency Band Support	
Bluetooth®	2402-2480 MHz
SRD868	863-870 MHz
Automower® Connect 2G	GSM 850 MHz, E-GSM 900 MHz, DCS 1800 MHz, PCS 1900 MHz
Automower® Connect 4G	Band 1 (2100 MHz), Band 2 (1900 MHz), Band 3 (1800 MHz), Band 4 (1700 MHz), Band 5 (850 MHz), Band 8 (900 MHz), Band 12 (700 MHz), Band 13 (700 MHz), Band 18 (850 MHz), Band 19 (850 MHz), Band 20 (800 MHz), Band 25 (1900 MHz), Band 26 (850 MHz), Band 27 (850MHz), Band 28 (700 MHz), Band 66 (1700 MHz), Band 71 (600 mHz), Band 85 (700 MHz)

⁷ 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.

⁸ Sound pressure noise uncertainties K_{pA}, 2-4 dB (A)

Power Class		
Bluetooth® Output power	9 dBm	
SRD868	13 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)	27 dBm
Automower® Connect 4G	Power Class E2 (DCS/PCS)	23 dBm

Wi-Fi	
Frequency band support	Channel 1-11 (2412-2462 MHz)
	Channel 12-13 (2467-2484 MHz)
	Channel 14
Operating frequency band, MHz	2402-2480
Maximum transmitted power, dBm	20

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.

9.1.1 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.

The Wi-Fi CERTIFIED™ logo is a registered trademark of Wi-Fi Alliance®. This product is Wi-Fi Alliance® certified.



9.2 Free and Open Source Software

This product contains software components that are licensed by the copyright holders as Free Software or Open Source software under the GNU General Public License version 2 and/or 3, and/or GNU Lesser General Public License version 2.1, and/or Mozilla Public License version 2.0. Anyone can obtain the source code for these software components from us on a data carrier (CD-ROM, DVD or USB memory stick). This offer is valid within three years after the most recent conveyance of the object code by us, and valid for as long as we offer spare parts or customer support for the respective product.

Please send your request through our customer support web page at <https://www.husqvarna.com/uk/support/contact-us/>.

Please specify the address to which you wish us to send the source code. Additional product information (e.g. explicit product name, serial number etc.) will help

us to identify the corresponding source code for you. The source code will be sent to the given address after reimbursement of the expenses actually incurred for providing the data carrier and shipping.



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www.husqvarna.com

Original instructions



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