Sveabot™ S100 Multi-functional Cleaning Robot User Manual

Copyright Notice:

Revisions:

Version	Date	Description
1.0	2023.03.28	First release

Read Before Use:

⚠ 📖	**Operate in strict accordance with this user manual.** Improper use may result in damage or performance degradation. If you have any questions during use, contact the customer service.

Disclaimer:

- The purchased products, services, and features are stipulated by the contract. All or part of the products, services, and features described in this manual may not be within the scope of your purchase or usage. Unless otherwise specified in the contract, all the content in this manual is provided "AS IS" without warranties of any kind, express or implied.
- The content of this manual is subject to change due to product upgrades and other reasons. Sveabot Tek AB reserves the right to modify the content of this manual without notice.
- This manual only provides guidance for use of this product. Every effort has been made in the preparation of this manual to ensure accuracy of the content, but no information in this manual constitutes a warranty of any kind, express or implied.

Preface

Thank you for using a product from Sveabot Tek AB. This manual provides detailed instructions on features, installation, debugging, deployment, and operation, as well as safety instructions of Sveabot™ S100 Multi-functional Cleaning Robot. You are advised to read this manual carefully before use, and use this product in accordance with the instructions herein. If you have any questions, contact our customer service.

Purpose and Intended Users

This manual only applies to Sveabot™ S100 Multi-functional Cleaning Robot, referred to as the robot for short hereinafter.

Technical Support

- Sveabot Tek AB official website: www.sveabot.com
- Sveabot Tek AB technical service: support@sveabot.com

Tutorial Videos

You can check the user manual and tutorial videos of the robot in the robot app or mobile app.

Safety Instructions

Before using this product, read the safety instructions in this section and throughout this manual carefully. Ensure that your use of the product complies with the safety instructions herein and all applicable local laws and regulations.

The safety instructions must be followed in using this product and performing operations around the product to prevent personal injury or property damage. They are intended to help you:
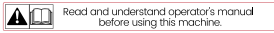
- Identify and prevent hazards;
- Use the product and related devices correctly and safely;
- Check the safety signs attached to the product;
- Operate in a safe environment.

Safety Notice

To avoid personal injury or property damage, read this manual carefully before installation.

Safety Signs

Read and understand the following safety signs that might be used on the product to help you operate the product safely.

Safety Sign	Meaning	Description
Read and understand operator's manual before using this machine.	Read the manual.	Users must read and understand this manual to reduce the risk of personal injury.
EMERGENCY STOP	Emergency stop button.	Users can press this button to stop the robot in case of emergency.
(pinch point symbol)	Pinch point hazard.	Warns the users about the pinch point.
(UV symbol)	UV light hazard.	Warns the users about the UV lamp. Users must not look at the UV lamp directly when it is turned on.
CLEAR WATER INLET 12.5 L • Add detergent according to the recommended ratio • Be sure to insert the water pipe into the correct tank. • Adding flammable or hazardous liquids may cause explosion or fire.	Use the solution tank hose properly.	• The hose must be installed properly into the solution tank. • The solution must be prepared according to the recommended dilution ratio. • Only water or detergent solution are allowed in the tank. To prevent fire or explosion, do not add flammable or noxious liquid into the tank.
Be sure to insert the water pipe into the correct tank. 12.5 L WASTE WATER OUTLET	Use the recovery tank hose properly.	The hose must be installed properly into the recovery tank.
CLEAN WASTE WATER PIPE	Hose identification.	Indicates the position of the solution tank hose and the recovery tank hose.
LIFT HERE	Lift point.	Indicates the position for lifting the robot.

Nameplate

The nameplate on the back of the robot includes the following information:
- Name, model, and SN of the robot;
- Key parameters and symbols;
- Manufacturer and date of manufacture.
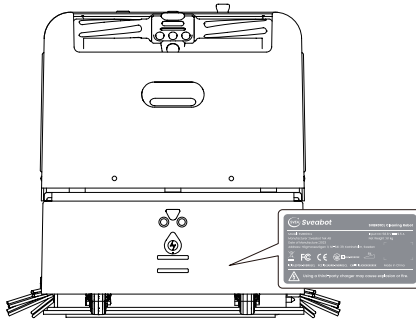
Precautions

Operator

- Only trained personnel are allowed to use this product. Any loss and damage caused by improper use shall be borne by the user.
- Clean and maintain the robot only when it is powered off.
- Do not disassemble the robot without authorization.

Operation

- This product is designed only for floors in commercial settings. Do not use it for outdoor sites, uneven grounds or other inapplicable scenarios.
- The purchased products, services, and features are stipulated by the contract. All or part of the products, services, and features described in this manual may not be within the scope of your purchase or usage, for which Sveabot will not make additional statements.
- Avoid operation by children.
- Avoid operation by people with physical, mental, or sensory disabilities.
- Avoid putting fingers in gaps to prevent injury.
- Do not add any flammable or noxious liquid into the tanks. Otherwise it may cause a fire or explosion.
- Do not stand, sit, or put anything on the robot or the charging pile.
- When the robot is working, stay away from the rotating parts to avoid injury.
- The robot is equipped with a UV lamp on the bottom. Do not look directly at the UV lamp when it is turned on.
- Do not push or pull the handle lever by force.

Operating Environment

- Do not use the robot when the ambient temperature is above 45ºC or below 0ºC.
- Do not use the robot where there is an obstacle whose height is between 10 mm and 100 mm.
- Do not use the robot to clean any burning objects, such as cigarette butts, matches, and ashes that are still burning.
- Do not use the robot to clean any flammable and explosive objects.

Operating Area

- Do not use the robot for stairs or other places with a large height difference.
- Do not use the robot in ponding areas.
- Keep the robot away from open flames, heat sources, and areas where the robot can be suspended.

Inspection Before Use

- Ensure that the hoses of the solution tank and recovery tank are properly installed.
- Ensure that there are no obstacles in the robot's way.
- Ensure that there are no obstacles within 2 meters of the charging pile.

Battery and Charging

- Only use the charger, charging pile, and charging cable that come with the robot. If any is damaged, stop using it and contact customer service.
- The charging pile is only for charging the S100 robot.
- Ensure that the power supply is certified and properly grounded, and meets the requirement of the input voltage of the charger.
- Do not disassemble the battery without authorization. Dispose of the waste batteries according to local laws and regulations.
- If the charging pile is not to be used for a long time, disconnect it from the power supply.
- Do not wipe the charging contacts of the charging pile with wet cloth, wet wipes, or wet hands.
- Take proper protective measures when using the robot in areas where thunderstorms are more likely to occur or the supply voltage is unstable.
- Ensure that the robot is powered off during transport. We recommend you to use the original packaging.

Loading, Transport, and Unloading

- Handle with care during loading and unloading to avoid damaging the robot.
- Ensure that the robot is well protected against vibration during transport to avoid damaging the robot.
- The robot is valuable. To carry the robot, have two people hold it by the load-bearing positions on both sides. Keep the robot balanced and upright during the whole process.

Emergencies

- In case of emergencies, for example, when the robot is not working normally or out of control, press down the emergency stop button to stop the robot and avoid damage.
- If water enters other parts than the tanks, press down the power button to power off the robot in time. Otherwise the internal components may be burned.

Contents

1 Product Introduction

1.1 General

Sveabot™ S100 Multi-functional Cleaning Robot is a cleaning robot designed for commercial settings such as shopping malls, supermarkets, hospitals, and office buildings. It supports multiple cleaning modes including the vacuum cleaning and scrubbing modes, and these cleaning modes can be switched easily. By integrating multiple sensors and advanced navigation algorithms, the robot can perform auto operations and avoid obstacles safely and reliably. With a 10.1-inch onboard screen and user-friendly interactive interface, the robot can be operated easily. The mobile app and web management platform also allow for easy remote control and digital management.

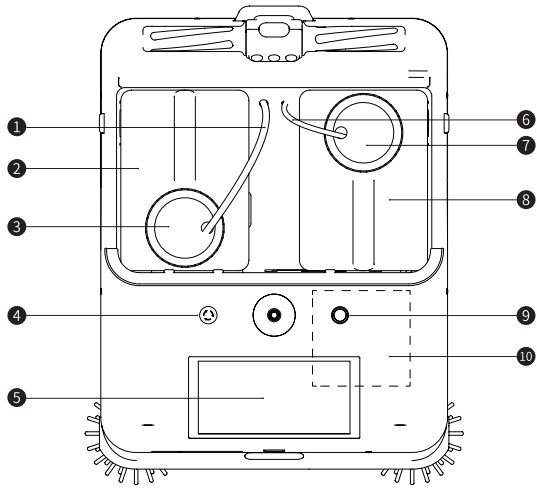## 1.2 Main Components

1.2.1 Robot
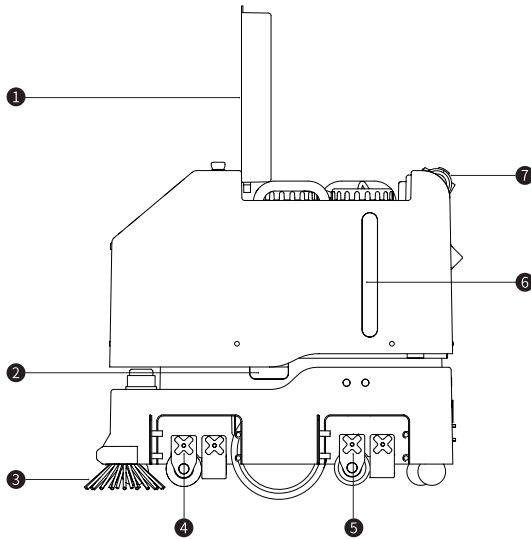
No.	Component	No.	Component
1	Top cover	5	Roller mop
2	Lifting handle	6	Sight glass
3	Side brush	7	Handle lever
4	Roller brush		

No.	Component	No.	Component
1	Recovery tank hose	6	Solution tank hose
2	Recovery tank	7	Solution tank cover
3	Recovery tank cover	8	Solution tank
4	Emergency stop button	9	Power button
5	Screen	10	Dust bin
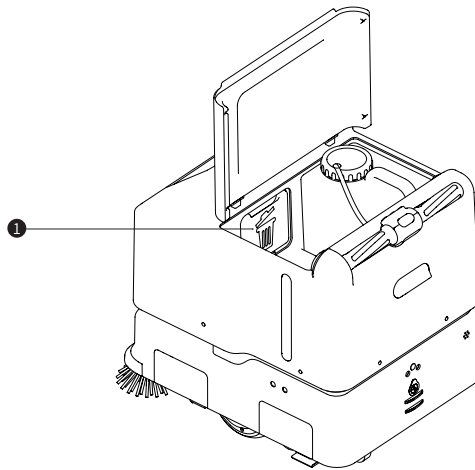
No.	Component
1	Dust bin
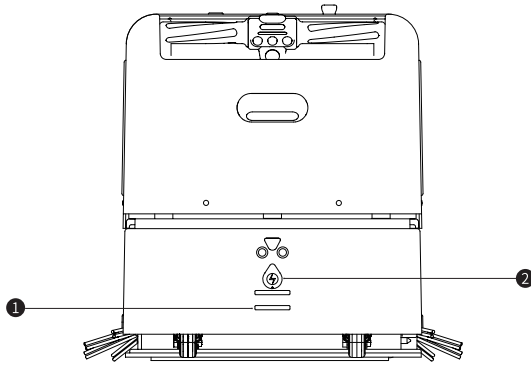
No.	Component	No.	Component
1	Charging port	2	Charging contact

1.2.2 Charging Pile
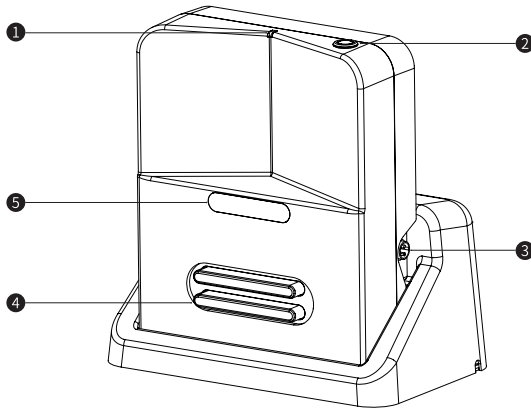
No.	Component	No.	Component
1	Status indicator	4	Charging contact
2	Power button	5	Infrared sensor
3	Charging port		

1.3 Safety System
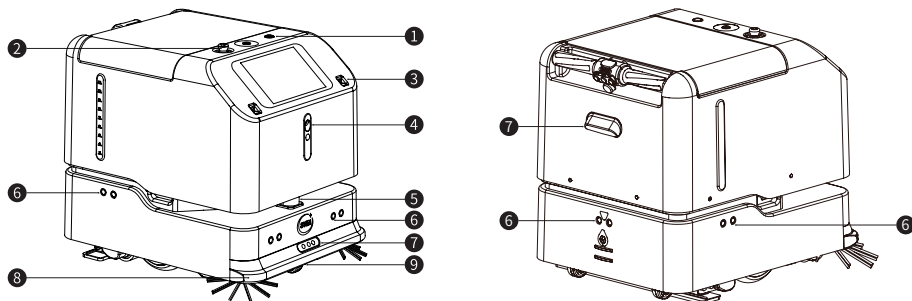
No.	Component	Qty.	Purpose
1	Power button	1	Powers on or off the robot.
2	Emergency stop button	1	Stops the robot in case of emergency.
3	ToF sensor	2	Prevents impact. There are two on the front.
4	Front camera	1	Detects ground type.
5	LiDAR	1	Navigates the robot and avoids obstacles.
6	Ultrasonic radar	5	Prevents impact. There are two on the front, one on the rear, and one on each of the right and left sides.
7	Depth vision camera	2	Prevents impact. There are one on the front and one on the rear.
8	Safety edge	1	Detects impact and stops the robot.
9	Cliff detector	2	Detects cliff and stops the robot to prevent falling. There are two installed on the bottom of the robot's front part, facing the ground.

1.4 Key Specifications

The robot supports vacuum cleaning and scrubbing. See the following for the key specifications.

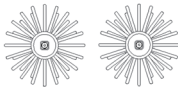| Specifications			
Brush	2 side brushes, 1 roller brush, and 2 roller mops	Degree of vacuum	≥13 kPa
Brush disinfection	UV disinfection	Solution tank capacity	12.5 L
Cleaning width	600 mm	Recovery tank capacity	12.5 L
Cleaning efficiency	700 ㎡/h to 1,000 ㎡/h	Charging time	≤2.5 h
Working width	800 mm	Battery life	4 h to 6 h

1.5 Detailed Specifications

Category	Specifications		Category	Specifications	
Robot	Function	Vacuum cleaning, scrubbing, and elevator riding	Cleaning module	Brush	2 side brushes, 1 roller brush, and 2 roller mops
	Working mode	Manual, auto		Brush disinfection	UV disinfection
	Handle lever	Supported		Cleaning width	600 mm
	Electronic power assist	Supported		Cleaning efficiency	700 ㎡/h to 1,000 ㎡/h
	Dimensions	495×645×585 mm		Working width	800 mm
	Net weight	61 kg		Replacement of dust bag	Supported
	Braking system	Electronic braking		Degree of vacuum	≥13 kPa
	Travel speed	0.1 m/s to 1.2 m/s		Ground type detection	Supported
	Climbing height	≤10 mm		Solution tank capacity	12.5 L
	Gradeability	8°		Auto drain of solution tank	Supported
	Min. turning radius	0 m		Auto drain stop of solution tank	Supported
	Noise	≤70 dB		Flow adjustment	Supported
	Operating temperature	0℃ to 45℃		Recovery tank capacity	12.5 L
	Storage temperature	−10℃ to 55℃		Filter element replacement of dust bin	Supported
	Humidity	10% to 95%		Real-time level monitoring	Supported
Power supply	Battery capacity	1,008 Wh	Network communication	Wi-Fi	2.4 GHz/5 GHz/40 m
	Battery operating voltage	37.8 V to 58.8 V	Human-machine interaction	10.1-inch touch screen, emergency stop button, human emotion icons, voice prompts, indicators, mobile app, and web platform	
	Battery type	Lithium battery pack			
	Battery life	4 h to 6 h			
	Charging time	≤2.5 h	Navigation system	LiDAR, gyroscope, and top vision	
	Max. charging voltage of battery	58.8 V	Safety system	Obstacle avoidance by using the LiDAR, ultrasonic radars, depth vision cameras and ToF sensors; impact detection; cliff detection; front camera; infrared sensor-based docking	
	Input voltage of charging pile	AC 100–240 V 50/60 Hz			
	Output voltage and current of charging pile	DC 58.8 V 9.5 A			

2 Preparations Before Use

2.1 Installation Tool

No.	Tool	Specs.	Qty.	Purpose
1	Hex key	2 mm	1	Installs the SIM card.

2.2 Packing List

No.	Component	Qty.	Remarks
1	Robot	1	
2	Side brush	4	
3	Safety guide	1	
4	Cleaning brush	1	
5	Dust bag	12	
6	Hex key	1	
7	Charging pile (separately packaged)	1	

> **!** **Note:** The actual packing list may vary, depending on your purchase contract. Check the components provided carefully according to your packing list or purchase contract, and contact your local dealer in case of any doubt or problem.

3 Operation Instructions

3.1 Check Before Use

- The emergency stop button is released.
- The solution tank and recovery tank are installed.
- The solution is sufficient, while the recovery tank is not full.

- The top cover is closed.
- The battery level is high.

3.2 Refill and Drain

Follow the steps below to refill the solution tank.
1. Open the top cover, remove the hose of the solution tank, take out the solution tank, and fill up the tank.
2. Put back the tank, and install the hose.

Follow the steps below to drain the recovery tank.
1. Open the top cover, remove the hose of the recovery tank, take out the recovery tank, and drain and clean the tank.
2. Put back the tank, and install the hose.

For details, refer to the tutorial video "Add and Drain Water" in the robot or mobile app.

3.3 Power-on

To power on the robot, press and hold the power button for three seconds.
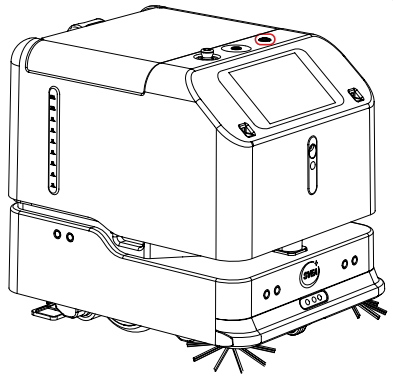
3.4 Starting the App

1. The robot starts up and plays the boot animation, and then starts the system app automatically.
2. The system goes to the home screen after the robot self-test and positioning are completed.
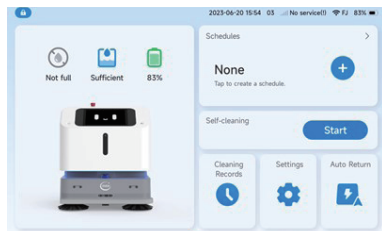
3.5 Manual Mode

▽	**Preparation:** Move the robot to a level ground and pull out the handle lever.

1. The handle lever can be used to control the robot to move forward, backward, stop, turn, or switch modes (vacuum cleaning and scrubbing).
2. The suction and water flow can be configured for different modes in the app.
3. The handle lever can be pulled out to start a task directly, and the robot uses configuration of the last task when no configuration is made. The default setting is low.
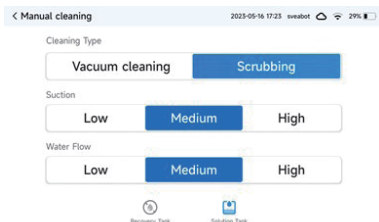
3.5.1 Vacuum Cleaning Mode

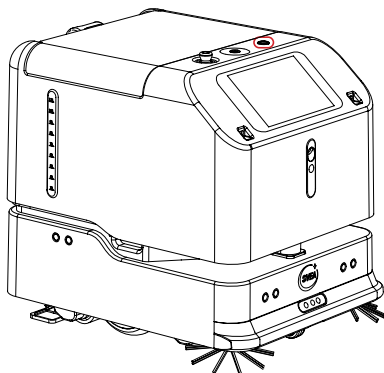Set the suction power on the following screen.
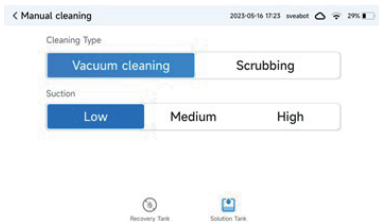
3.5.2 Scrubbing Mode

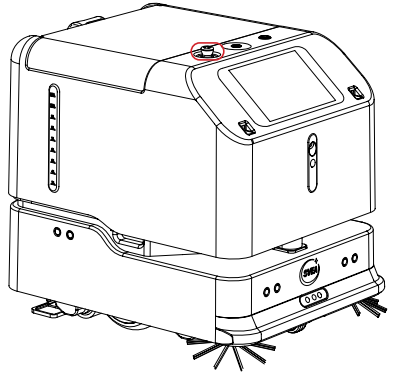Set the suction power and water flow on the following screen.

3.5.3 Power-off and Emergency Stop

To power off the robot, press and hold the power button for five seconds.

In case of emergency, press down the red emergency stop button to stop the robot. Rotate the button to release it.

3.6 Auto Mode

	Preparation: The robot must be at the start point on a level ground with the handle lever pushed back.

Tasks can be created for auto operation. Once started, the robot will
1. Plan the cleaning paths dynamically for the cleaning zones and clean the zones one by one.
2. Follow the specified paths to perform the cleaning.

Zone 1 to be cleaned   Zone 1 cleaned

Zone 3 being cleaned   Zone 4 cleaned

Cleaning path map (for reference)
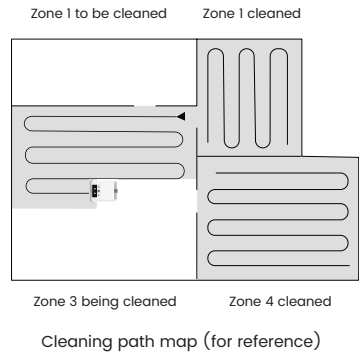
3.6.1 Map and Element Configuration

Before starting an auto operation for the first time, contact your FAE (field application engineer) to configure a map in the robot app.

3.6.2 Tasks in Selected Zones

Start the robot or mobile app, and select zones on the map to create a task. The robot will clean the zones selected.

✓ Zone A   ✓ Zone C   Zone B

3.6.3 Tasks in Drawn Zones

Start the robot or mobile app, and draw zones on the map to create a task. Press and hold a point of the drawn quadrilateral to adjust the zone scope. The robot will perform the cleaning as planned.
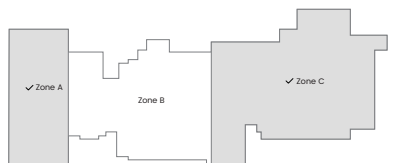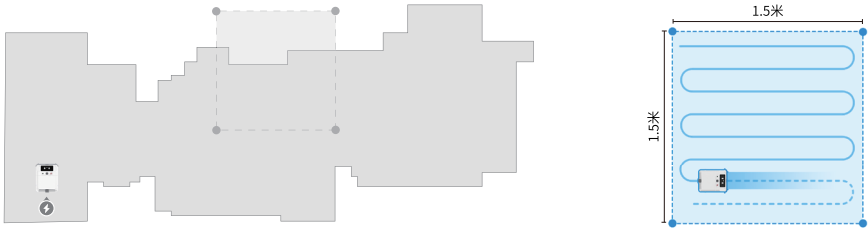
3.6.4 Advanced Tasks

Create advanced tasks in the robot app, and the robot will perform the cleaning as set.
You can set the following for an advanced task.
1. Change the task name.
2. Add zones/paths (The number of cycles, cleaning mode, suction or water flow can be adjusted for each zone/path).
3. Select the operation mode.
4. Select the end point.
Note: The actual app features and details may vary slightly because of constant development and upgrades.

3.6.5 Random Tasks

Select a task from the task list in the robot or mobile app, and the robot can start the cleaning immediately.

3.6.6 Scheduled Tasks

Set the schedule for a task selected from the task list in the robot or mobile app, and the robot will start the cleaning as scheduled. To change, enable, or disable a schedule, go to the Schedules screen.

3.6.7 More Features

Update the map in real time.	Use the mobile app to check the scanning and mapping.	Control the robot through buttons on the handle lever.
Check the robot location in real time.	Remove noise from maps.	Remind the user through indicators.
Check the robot status in real time.	Manage the restricted zones.	Play voice prompts.
Check the cleaning records.	Manage the cleaning zones and cleaning paths.	Return for charging automatically.
Adjust the suction power.	Manage the points.	Resume cleaning from a breakpoint automatically.
Adjust the water flow.	Manage the environment.	Avoid obstacles automatically.
Adjust the down pressure.	Push notifications.	Display the service time of consumables.
Update the firmware.		

Note: The actual app features and details may vary slightly because of constant development and upgrades.

3.7 Indicator Status

No.	Indicator Color	Indicator Status	Meaning	Robot Status
1	Red	Blinking rapidly	Impact detected.	Abnormal (highly severe)
2	Red	Solid on	Exceptions detected in self-test.	Abnormal (severe)
3	Red	Solid on	Emergency stop.	Abnormal (severe)
4	Orange	Blinking slowly	Positioning failure.	Abnormal (medium)
5	Orange	Blinking slowly	Low battery.	Abnormal (medium)
6	Orange	Blinking slowly	Low solution level.	Abnormal (medium)
7	Orange	Blinking slowly	Full recovery tank.	Abnormal (medium)
8	Blue	Solid on	Power-on self-test.	Working
9	Blue	Solid on	Waken from standby mode.	Working
10	Blue	Solid on	Positioning.	Working
11	Blue	Solid on	Working.	Working
12	Blue	Blinking once	Self-test passed or turning during operation.	Working
13	Blue	Blinking slowly	Mapping.	Mapping
14	Green	Solid on	Return for charging.	Not working
15	Green	Breathing	Charging.	Not working
16	Off	Off	Standby/power-off.	Standby/power-off

3.8 Voice Prompts

No.	Scenario		Voice Prompt	
	Module	Description	Voice Message	Mode
1	Self-test	The power-on self-test is passed.	Hello, I'm Loki. I'm glad to be at your service.	Play once.
2	Auto task	The task is started.	Cleaning started.	Play once.
3	Auto task	The task is paused.	Cleaning paused.	Play every 5 seconds.
4	Auto task	The task is resumed.	Cleaning resumed.	Play once.
5	Auto task	The task is stopped.	Cleaning stopped.	Play once.
6	Auto task	The task is in progress.	Task in progress. Please keep clear.	Play every 15 seconds.
7	Auto task	The task is terminated manually.	The cleaning task has come to a forced end.	Play once.
8	Auto task	The task is aborted unexpectedly.	The cleaning task has come to a forced end.	Play once.
9	Emergency stop	The emergency stop button is pressed.	Emergency stop button pressed.	Play every 5 seconds.
10	Emergency stop	The emergency stop button is released.	Emergency stop button released.	Play once.
11	Battery level	The battery level is only 20%, 10%, or 5%.	The battery is running out. Please charge.	Play once.
12	Top cover	During a task, the top cover is opened.	The top cover is open. Please close it.	Play every 5 seconds.
13	Line laser sensor	During a task, the sensor is activated and detects a falling risk.	Risk of falling detected. Please move me to a safe place.	Play every 5 seconds.
14	Solution tank	During a task, the solution tank is removed.	Please put back the solution tank.	Play on repeat without interval.
15	Recovery tank	During a task, the recovery tank is removed.	Please put back the recovery tank.	Play on repeat without interval.
16	Solution tank level	During a task, the tank is emptied.	The solution tank is empty. Please refill it. (This message is not played when the solution tank is not installed.)	Play every 5 seconds.
17	Recovery tank level	During a task, the tank becomes full.	The recovery tank is full. Please empty it. (This message is not played when the recovery tank is not installed.)	Play every 5 seconds.
18	Return for charging	The robot is returned and connected to the charging pile.	Charging started.	Play once.
19	Return for charging	The return for charging is started.	Returning to the charging pile.	Play once.
20	Return for charging	The return for charging is canceled.	Returning canceled.	Play once.
21	Update mode	The OTA update is started.	Update in progress. Please wait.	Play every 30 seconds.

3.9 Charging the Robot

Sveabot's technical staff will install the charging pile for you.

3.9.1 Quick Charging

Push the robot to the charging pile, so that the charging contacts on the back of the robot are in contact with those of the charging pile. Then, tap Fast Charging on the robot screen.

3.9.2 Automatic Charging

In auto mode, when the cleaning task is completed or the robot battery level is below 20%, the robot returns to the charging pile for charging. Alternatively, tap Stop and Return to stop the operation and make the robot return to the charging pile.

3.9.3 Manual Charging

Push the robot to an electrical outlet. Plug the dedicated charger into the charging port of the robot and into the electrical outlet.
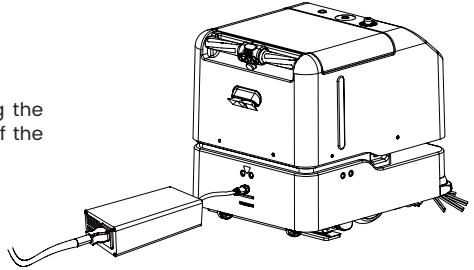
3.10 Self-cleaning

Self-cleaning must be started manually by tapping Start on the home screen after the completion of each task.
Self-cleaning can also be started by tapping Start on the home screen when the robot is in idle state.

3.11 Managing the Robot via Platform

Contact our technical support to create an account.
Log into the Sveabot Connect website https://cleanrobot-client.sveabot.cn to manage the robots, tasks, maps, and check the operation data analysis.
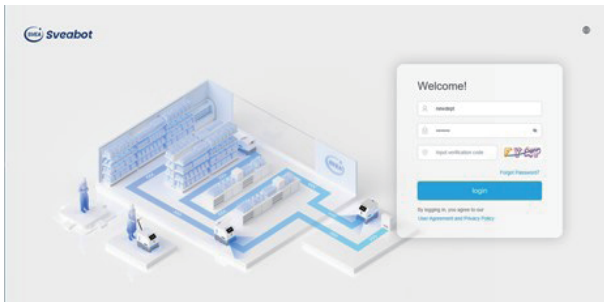
## 3.12 Managing the Robot via Mobile App

3.12.1 Download the App

The robot can be controlled via the mobile app. For more features, refer to the instructions in the manual or in the app.

Download path:

3.12.2 Log In

Contact our technical support to create an account. Log into the mobile app to control all the robots bound. By logging in, you have read and agree to the Service Agreement and Privacy Policy.
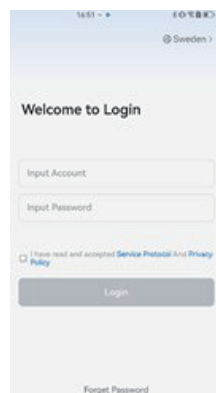
4 Maintenance

## 4.1 Daily Maintenance

4.1.1 Clean the Dust Bin and Drip Tray

1. Clean the dust bin
The dust bin, with a capacity of 0.5 L, stores large trash. You need to empty the dust bin regularly as required, clean it and allow it to dry, and then put it back. Follow the steps: ① open the left door; ② turn the star knob five turns anticlockwise, and pull out the dust bin; ③ clean the dust bin.
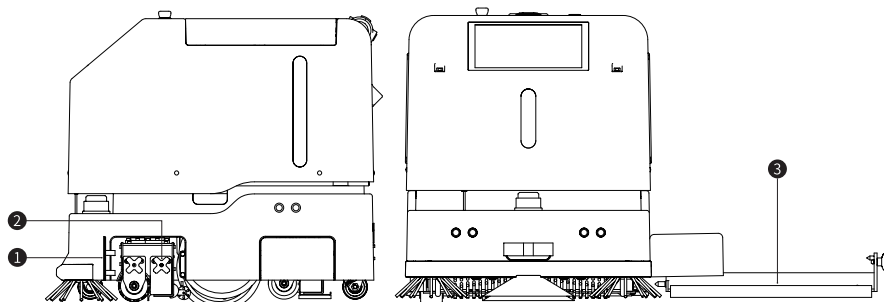
2. Clean the drip tray
The filter plate in the drip tray filters large trash from drips. You need to clean the drip tray regularly as required, allow it to dry, and then put it back. Follow the steps: ① open the right door; ② turn the star knob five turns anticlockwise, and pull out the drip tray; ③ clean the drip tray.
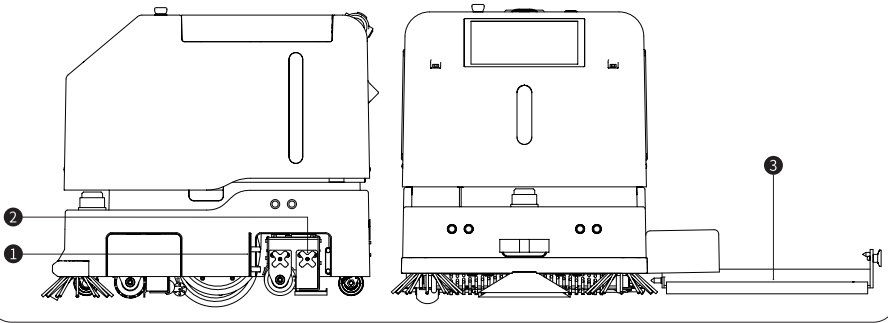
4.1.2 Clean the Recovery Tank

The recovery tank will have sediments if used for a long time and must be cleaned regularly. Follow the steps: ① open the top cover; ② remove the recovery tank hose; ③ take out and clean the recovery tank.
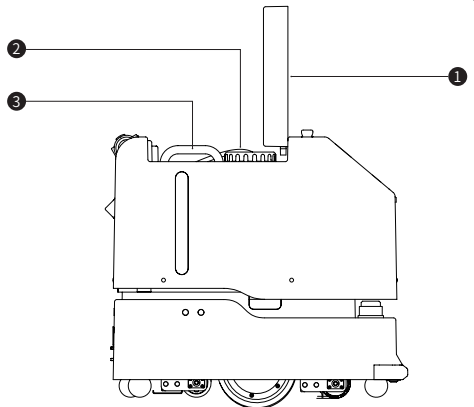
4.2 Maintenance Tasks

Note: The actual service life of consumables may vary depending on the usage environment. The maintenance tasks listed below can be performed by yourself. For other maintenance tasks and maintenance frequency, refer to your local dealer or aftersales service.

| Maintenance Task	Frequency			
	First Use	Every Month	Every 3 Months	Every 6 Months
Clean tanks	▲	▲		
Replace the dust bag		▲		
Replace the scrubbing pad			▲	
Replace side brushes				▲
Replace the roller brush				▲
Replace the roller mop				▲

4.2.1 Replacing the Side Brushes

① Remove the used side brushes, and magnetically attach the new ones in place.
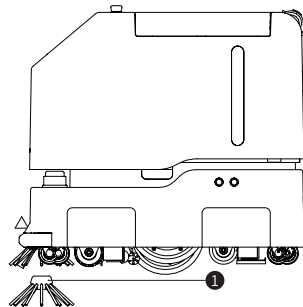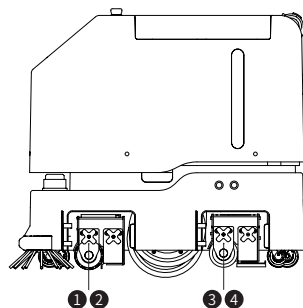
Go to Cleaning Settings > Consumable Maintenance > Side brush, tap Reset, and then tap OK on the popup screen. The used hours become zero as shown below.
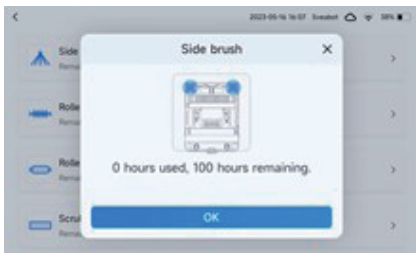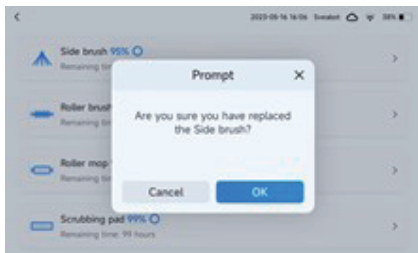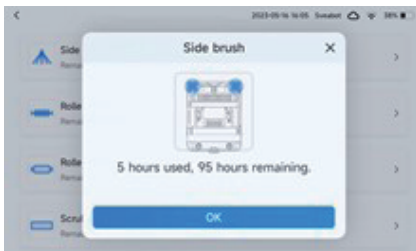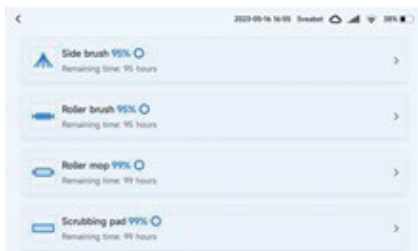
4.2.2 Replacing the Roller Brush and Roller Mop

Roller brush: ① Turn the star knob five turns anticlockwise, and pull out the roller brush. ② Insert a new roller brush in place, and turn the star knob clockwise until it is tightened.
Roller mop: ① Turn the star knob five turns anticlockwise, and pull out the roller mop. ② Insert a new roller mop in place, and turn the star knob clockwise until it is tightened.

Go to Cleaning Settings > Consumable Maintenance > Roller brush or Roller mop, tap Reset, and then tap OK on the popup screen. The used hours become zero.

4.2.3 Replacing the Scrubbing Pad

① Turn the star knob five turns anticlockwise, and pull out the drip tray. ② Remove the used scrubbing pad, and stick a new scrubbing pad to the drip tray. ③ Insert the drip tray in place, and turn the star knob clockwise until it is tightened.
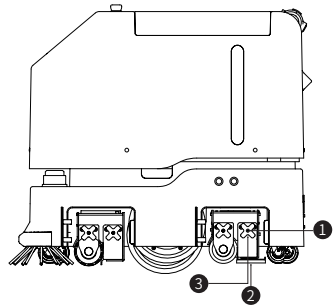
Go to Cleaning Settings > Consumable Maintenance > Scrubbing pad, tap Reset, and then tap OK on the popup screen. The used hours become zero.

4.2.4 Replacing the Dust Bag

① Open the top cover; ② take out the solution tank; ③ open the cover of the dust bin; ④ pull out the dust bag, and install a new dust bag.
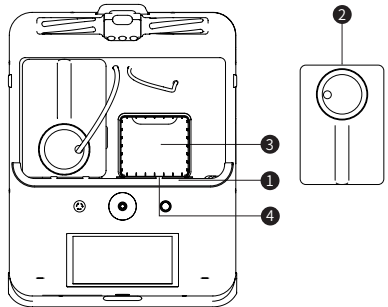
Go to Cleaning Settings > Consumable Maintenance > Dust bag, tap Reset, and then tap OK on the popup screen. The used hours become zero.

4.3 Storage

1. If the robot will not be used for a long time, charge the robot battery to 50%, and then power off the robot and the charging pile. It is recommended to fully charge the robot every two or three months. Do not move the charging pile and the robot, and drain the solution and recovery tanks.
2. Install the charging pile on a level ground against the wall. Clear the area within 2 meters of the charging pile. Do not operate the robot during charging; instead, keep it still.

4.4 Others

1. When the cleaning result is unsatisfactory or a lot of water remains on the floor, check the status and wear of the brushes, the mop, and the pad.
2. Refill the solution tank and drain the recovery tank concurrently to ensure the optimal performance. After that, put back both tanks, tighten their caps, and install the hoses.

5 Troubleshooting

No.	Fault	Cause	Solution
1	The robot does not work.	Robot exceptions unresolved	Check whether any exception is displayed on the app. Follow the instructions to remove exceptions. Contact our aftersales service if necessary.
2	The robot cannot return for charging.	Charging pile problem	Check whether the charging pile is powered on and its indicator works properly. Contact our aftersales service if necessary.
3	Abnormal robot positioning	Map change	The robot must be connected to the charging pile before creating a map or powering on. In case of abnormal positioning, push the robot to the charging pile, restart it, and wait until its positioning becomes normal.
4	Loss of travel control	Cause to be determined during power-off	Power off the robot and contact our aftersales service.
5	The mobile app does not work.	Network connection problem	Ensure that the mobile app is connected to the robot. Ensure that the robot is connected to the network. Ensure that nothing stands in the way of the robot.
6	No Wi-Fi signal	Network connection problem	Ensure that the network connection is normal, and restart the robot.
7	Charging failure	Charging problem	Ensure that the charging contacts on the back of the robot are in contact with the charging contacts of the charging pile. Ensure that the charging pile is connected to a power supply. Restart the charging pile and the robot.
8	The robot cannot power on.	Low battery	Check whether the battery is in sleep, and charge the robot with the adapter to activate the battery.
9	The light strip does not work.	Light strip damage	Manually turn on or off the light strip to check whether it is damaged. Contact our aftersales service for replacement if necessary.
10	Robot rollover	Rollover	Contact our aftersales service.
11	The UV lamp does not work.	Lamp damage	Contact our aftersales service for replacement.
12	The voice prompt feature does not work.	Low volume	The voice prompt feature is turned off or the volume is set too low. Adjust the settings.
13	The automatic navigation does not work.	Navigation problem	The robot is caught in a blind spot of the map. Power off the robot, move it to the charging pile, and start the navigation. The vision module is covered. Ensure that the vision and positioning module is clean and not obscured. Radar fault. Check whether LiDAR works properly. Safety edge fault. Check whether the collision switch is squeezed. The robot is obscured. Ensure that nothing stands in the way of the robot. Low battery. Ensure that the robot has a high battery level.

! **Note:** The common faults are listed above. If your problem remains, contact our aftersales service.

6 Waste Disposal

The product contains metal and electronic components. Waste must be disposed of in an environmentally safe way according to local laws and regulations. Any waste (such as packaging materials, metal parts, and electronic components) must be delivered to local recycling facilities for disposal.

7 Hazardous Substances

The following table is prepared in accordance with SJ/T 11364.
O: The concentration of such hazardous substance in all homogeneous materials of the component is below the limit specified in GB/T 26572.
X: The concentration of such hazardous substance in at least one homogeneous material of the component is above the limit specified in GB/T 26572.
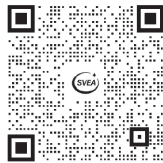
Hazardous Substance / Component	Lead and Its Compounds	Mercury and Its Compounds	Cadmium and Its Compounds	Chromium VI Compounds	Polybrominated Biphenyls (PBB)	Polybrominated Diphenyl Ethers (PBDE)	Remarks
Circuit board assembly	X	O	O	O	O	O	
Battery	X	O	O	O	O	O	
Wiring harness	X	O	O	O	O	O	
Non-flame retardant plastic and polymer component	O	O	O	O	O	O	
Flame retardant plastic and polymer component	O	O	O	O	O	O	
Metal component	X	O	O	O	O	O	