



AUTONOMOUS VACUUM 40

USER MANUAL

Disclaimer

Original instructions

CAUTION Read the instructions before using the product.

Before using this product, please read this user manual and this statement carefully. Once you use this product, it will be deemed that you recognize and accept all the contents of this statement. You promise to use this product only for legitimate purposes.

This manual is applicable to Vacuum 40 series products, including Vacuum 40, Vacuum 40 Sprayer, Vacuum 40 1.4.5, Vacuum 40 1.5, Vacuum 40 Diffuser 1.5, Vacuum 40 1.6, Vacuum 40 Diffuser 1.6 and other product models.

If you do not follow the instructions of this user manual, or forcibly dismantle the product, or the product is damaged/cannot work properly due to reasons other than the product's own fault, Gausium will not bear the corresponding after-sales return and replacement obligations, and the resulting maintenance, parts replacement and transportation costs will be borne by yourself.

Please use this product in strict accordance with the instructions of this user manual. Gausium will not bear the relevant responsibilities and costs for any use behavior that violates the instructions of the user manual and causes you or a third party to suffer from physical injury, disease or property losses.

If you install or attach equipment, third-party accessories, structures or application software that are not sold by Gausium on this product and cause damage to the product, Gausium will not be responsible for its after-sales repair and maintenance; At the same time, in case of product damage or failure caused by additional parts, Gausium will not bear the obligation of after-sales return and replacement, and the resulting maintenance, parts replacement and transportation costs will be borne by you.

If Gausium subsequently declares exemption through other official channels (if any), it will not be included in responsibilities of Gausium, either.

Please do not operate or maintain the product until you have fully read and accurately understood all the contents of this manual.

This manual is only for the reference of the end user. Shanghai Gausium Automation Technology Development Co., Ltd. reserves the right to modify and interpret this manual.

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Safety Instructions

WARNING: To ensure safety, please follow the instructions below when operating and using Vacuum 40:

1. Do not operate the product under the following conditions:

- If you have not received formal training or authorization;
- If you do not carefully read and fully understand the user manual;
- If the product is installed with accessories or consumables not authorized by Gausium, the use of other consumables or accessories may cause danger;
- Do not use the product in an unsuitable environment, ground surfaces, or areas where there is a risk of falling objects. If you have any questions, please contact Gausium after-sales service.

2. Before starting the product:

- Check whether the emergency stop button works normally;
- Check whether there are alarms.

3. Precautions during manual operation of the product:

- Strictly follow the user manual to control the movement and other operations of the product;
- In case of emergency, press the red emergency stop button immediately.

4. When the cleaning work is finished:

- Be sure to completely power off, except when charging.

5. Ensure to completely cut off the power when maintaining the product:

- Use the accessories and consumables certified by the manufacturer for replacement;
- Do not disassemble the product without authorization. If maintenance is required, please contact the professional maintenance personnel designated by the manufacturer;
- Do not retrofit and change the original design or configuration of the product without authorization.

6. Other WARNINGS

- Use the charger designated with the product.
- It is forbidden to conduct cleaning operations with the product on the ground where the ramp exceeds the operation requirements.
- To satisfy RF exposure requirements, a separation distance of 20 cm or more should be maintained between this device and persons during device operation. To ensure compliance, operations at closer than this distance is not recommended. The antenna used for this transmitter must not be co-located in conjunction with any other antenna or transmitter.
- The battery of this product must be taken out and disposed safely before being scrapped.

- Proper disposal of this product.



This marking indicates that this product should not be disposed of with other unsorted municipal waste throughout the EU. To prevent possible harm to the environment or human health from uncontrolled waste disposal, recycle it responsibly to promote the sustainable reuse of material resources. To recycle your used device, please use the return and collection systems or contact the retailer where the product was purchased. They can take this product for environmental safe recycling.

- Children should be supervised to ensure that they do not play with the appliance.
- This machine is not intended for use by persons (including children) with reduced physical, sensory or mental capabilities, or lack of experience and knowledge.
- This machine is intended for commercial use, for example in hotels, schools, hospitals, factories, shops, offices and rental businesses.
- In order to prevent unauthorized use of the machine, the power source shall be switched off or locked, for example by removing the key of the main switch or the ignition key.
- Machines left unattended shall be secured against unintentional movement.
- WARNING Operators shall be adequately instructed on the use of these machines.
- CAUTION This machine is for indoor use only.
- CAUTION This machine shall be stored indoors only.
- WARNING Do not use for cleaning purposes on surfaces having a gradient exceeding that marked on the machine.
- WARNING Do not allow the supply cord to come into contact with the rotating brushes.

When maintaining this machine

1. Replace with accessories and consumables specified by the manufacturer;
2. Do not disassemble the machine without authorization. If maintenance is required, contact the professional maintenance personnel designated by the manufacturer;
3. Do not modify the machine without authorization, or change its original design or configuration;

Transportation

If you need to transport the machine to another place for some reason, pay attention to the following:

1. Make sure the machine is turned off;
2. To reduce the freight pressure and avoid the leakage of garbage in the garbage boxes and dust boxes during transportation, dump all the garbage in the garbage boxes and dust boxes before transporting the vacuum cleaner robot;
3. Before packing, use foam to wrap the casing and important sensors of the machine, such as lidar sensors and cameras, to avoid scratches and bumps, which will affect the use;
4. If the machine is to be transported by vehicle, use packing tape, cardboard boxes, wooden pallets, and foam pack and protect the machine to avoid unnecessary damage during transportation. Fix the wooden board between the front and rear wheels to avoid damage to the machine due to excessive inertia during transportation. When using the packing tape to fix the machine, do not directly



touch the surface of the machine, so as not to rub off the paint and affect the appearance. Paper corner protectors or other soft materials can be used as isolation layers for protection;

5. When loading and unloading the machine, do not move the machine horizontally;

Storage

After each use of the machine, dump all the garbage in the garbage box and dust box in a timely manner, and park the machine in a dry and ventilated place where the temperature and humidity meet the storage standards of the machine. Do not store the machine in a damp and non-ventilated place, so as not to affect its service life. When the washing machine is not used for a long time, in addition to meeting the above requirements, fully charge the battery and disconnect the power supply. Be sure to fully charge it once every 1 month to ensure sufficient power. Avoid long-term non-use of the battery to cause failure. If the machine is not unpacked for use (and the air switch is turned off), fully charge the robot every 3 months.

Repair

1. Do not disassemble the machine without authorization, such as the panel and the internal control box. Once found, the user shall not be able to enjoy the warranty policy.
2. If the machine works abnormally and cannot be solved through routine investigation methods, please contact Gausium technical support or agent in a timely manner to inquire about warranty issues.



Warnings

- To stop the machine quickly in an emergency situation, press the red pause button immediately.
- Read all safety warnings and instructions before use. Failure to follow warnings and instructions may result in electric shock, fire or serious injury.



Note

- Do not pour liquid into the battery connector, and short-circuit the positive and negative terminals of the connector
- The machine is waterproof to a certain extent, but do not directly splash water on the machine or wash the machine. Do not use the machine outdoors in rainy days.
- The operator does not need to accompany or follow the robot all the time while the robot performs cleaning tasks. However, some designated workers should be prepared to receive any warning messages from the robot in response. This role should be trained by Gausium Robotics or its authorized resellers/service providers so as to know how to respond to any issues that may arise.
- The Vacuum 40 (Diffuser) should be prevented from accidental movement when unattended.



Tips

- If there is a place or object that is more than 20 mm from the ground in the working environment of the machine, remove it or draw a virtual wall to isolate it.
- The robot can only be used unattended. Human intervention is only suitable for maintenance purposes.

After machine operation is finished

1. Always power off the machine completely, except while charging.
2. Clean the dust box, roller brush and side brush.
3. Park the machine in the specified position, which must be a flat ground.

Environmental Instructions

1. This robot is mainly suitable for flat ground. Use with caution in environments with steps and steep slopes.
2. It is recommended not to use the robot on very wet or obviously water-filled ground.
3. Objects such as power cords scattered on the ground may snag or wrap around the robot, so be sure to remove them before use.
4. If the product is used in the state of obvious protrusions such as thresholds on the ground, make sure that the height of the protrusions on the site is within 3 cm.
5. The minimum passing width of the robot must be greater than 87 cm. Long passages longer than 10 m have the best smoothness.
6. The robot is designed to have a maximum driving gradient of 14% under non-working conditions, and a maximum cleaning gradient of 8%. Do not use the robot on surfaces with slopes greater than 8%.
7. Add fences or other barriers to places where there is a risk of the robot falling, such as the edge of the stairs and the entrance to the downhill.
8. The machine is only used for cleaning. If it is used for other purposes, Gausium shall not be liable for any damages caused thereby.
9. To maintain the excellent performance of the machine, do not expose the machine to a temperature higher than 45°C or lower than -20°C for more than 24 hours.
10. When the machine needs to be parked for a long time, try to park it on a flat surface. When the machine is parked in a dry and ventilated environment away from heat sources, it is recommended to use a coverall to cover it, which helps reduce the aging of rubber parts and paint surfaces.

The machine is used for commercial purposes such as hotels, schools, hospitals, manufacturing plants, shopping malls, small and medium markets, offices and rental businesses, and exhibition halls.



Tips

- Do not use this product on surfaces that are not suitable for Vacuum 40 (Diffuser) work, such as soil surfaces, grass, and artificial turf. Do not use this product in scenes with poor ground conditions, such as uneven ground, potholes, and leaves; in this case, clean or maintain the floor until the cleaning standard is met before starting cleaning with the Vacuum 40 (Diffuser).
- If the surrounding ground is surrounded by glass walls or other highly transparent materials, some sensors of the Vacuum 40 (Diffuser) will not work properly. Therefore, we do not recommend you to use the Vacuum 40 (Diffuser) machine in the above environment to avoid unnecessary danger.
- If the ground where the machine is located is a pure slope of more than 8%, do not use the machine on the ground. Vacuum 40 (Diffuser) only supports flat ground or $\leq 8\%$ slope for automatic operations.
- If the outdoor environment is rainy, foggy, or snowy, the vacuum 40 (Diffuser) sensor will not work properly. Therefore, you are advised not to use the Vacuum 40 (Diffuser) machine in the above environment to avoid unnecessary danger.
- Take preventive measures if the machine is located in an environment where there is a risk of falling. Precautions such as deploying virtual walls and physical fences to avoid unnecessary dangers.



- This product can clean general garbage, and is not suitable for cleaning ropes, belts, toxic and harmful objects, and high-temperature objects.
- This machine should only be stored indoors.
- Qualified service personnel use only identical replacement parts for repairs. This ensures that product safety is maintained.

Precautions for Power and Electricity Usage

1. When the remaining power of the robot is less than 10%, charge it in a timely manner. Prolonged low battery operation will shorten the battery life.
2. When the battery is in normal use, it needs to be fully charged and discharged once a month.
3. When the battery is stored for a long time (more than 1 week), disconnect the circuit breaker after the battery is fully charged; otherwise, the battery may be damaged. It needs to be fully charged every 3 months.
4. Disconnect the power supply in a timely manner after charging is complete. Do not charge for a long time when the machine is fully charged.
5. Always use the original factory-designed rechargeable battery and charging device. Do not charge the robot with non-original chargers.
6. Charge the host according to the power supply voltage indicated on the nameplate of the charger.
7. Make sure that the power supply voltage matches the voltage marked on the charger; otherwise, the charger may be damaged.
8. Take care to protect the power cable. Do not pull and twist the power cable.
9. Assign a special person in charge to charge the machine. Do not charge the machine unattended.
10. Do not charge the machine near inflammable and explosive objects.
11. Keep the robot storage and charging location dry and at room temperature. It is strictly forbidden to place the machine and the charger in a high temperature area ($> 40^{\circ}\text{C}$). The machine is not waterproof. The machine and charger must not have water ingress.
12. The charger should not collide with foreign objects and cause damage to the charger.
13. If the charger is damaged and the charging current is abnormal, replace the charger in a timely manner.
14. This product contains a non-replaceable battery;
15. For charging the battery, use only the detachable power supply unit delivered along with this device.
16. The Vacuum 40 (Diffuser) can only be used with specially designated battery packs. Using any other battery pack may cause injury and fire.
17. When the battery pack is not in use, keep it away from other metal objects such as paper clips, coins, keys, nails, screws, or other small metal objects that may connect one terminal to another. Shorting battery terminals together may result in burns or fire.
18. In harsh conditions, battery fluid may be ejected from the battery. Avoid contact with battery fluid. In case of accidental contact, rinse with water. Seek additional medical help if liquid contacts eyes. Liquid sprayed from the battery may cause irritation or burns.
19. Do not use damaged or modified battery packs. Damaged or modified batteries can cause unpredictable conditions, leading to fire, explosion or injury.
20. To prevent accidental activation, make sure that the switch is in the off position before connecting to the battery pack.
21. Do not expose battery packs or equipment to fire or excessive heat. Exposure to fire or temperatures above 130°C may cause an explosion. A temperature of 130°C can be replaced with a temperature of 265°F .
22. Do not modify or attempt to repair the device or battery pack unless otherwise stated in the use and care instructions.
23. Follow all charging instructions. Do not charge the battery pack or device outside the temperature range specified in the instructions. Improper charging or temperatures outside the specified range may damage the battery and increase the risk of fire.



Battery dormancy and activation: After the battery is stored for 7 days without current output, the battery automatically enters the hibernation mode. To use the machine, the battery needs to be activated. Activation procedure: The red output plug of the charger is connected to the machine, and the input plug is connected to the 110V/230V power supply. When the charger has voltage output, the battery detects the input voltage and the activation is successful.

Safety Instructions

1. The machine should be powered off during cleaning and maintenance.
2. Do not play in front of the robot to avoid unnecessary injury.
3. If the robot wanders around and the screen operation fails or other emergencies occur, press the pause switch.
4. This product is a wheeled robot, which is limited to use in indoor flat areas (smooth ground, slope less than 8 degrees, and protrusions no higher than 3 cm). Do not use it outdoors (such as open balconies) and rough ground (such as stairs).
5. Do not use the robot in an environment where the temperature is higher than 45°C or lower than 0°C or there is any liquid and viscous material on the ground.
6. Before use, put away all kinds of wires on the ground to avoid dragging when the host is running. Remove sharp objects on the ground (such as decoration waste, glass, and iron nails) before use to avoid damage to the chassis of the machine.
7. To push or transport the robot while the machine is in motion, tap the screen to pause it.
8. Do not spill any liquid inside this product.
9. Do not place any non-transportable objects (including children, pets) on the stationary or running main unit.
10. Children should not use this machine.
11. Cleaning and user maintenance should not be left unattended by children.
12. The robot has the automatic obstacle avoidance function, but do not suddenly block the robot when the robot is running at high speed; otherwise, a safety accident may occur.
13. This machine is not intended for persons (including children) with reduced physical, sensory or mental abilities, or lack of experience and knowledge.
14. This product may only be used by authorized and specially trained personnel. All maintenance, overhaul and repair work must be performed by personnel.
15. Do not use the robot in unsuitable environments, ground materials, areas with the risk of falling from the ground, and areas with the risk of falling objects. For any questions, please feel free to contact Gausium after-sales service.



Instructions for Using the Diffuser

Humidify Usage Restrictions

1. Do not use chlorine-containing disinfectant. Representative products on the market include 84 disinfectant, chlorine-containing effervescent tablets, and sodium hypochlorite disinfectant. This disinfectant is highly corrosive and will irritate the skin and mucous membranes greatly, so it cannot be used for air disinfection.
2. Do not use phenolic disinfectant. The representative products on the market are Dettol and Willows. They do not have the effect of air disinfectant and are not recommended.
3. Do not use alcohol, which is flammable and volatile. 75% alcohol has a flash point of about 23°C, and is a Class A fire-hazardous liquid. Spray disinfection is prohibited to prevent alcohol explosion in indoor closed environment.
4. Do not use ether or chloroform. Diethyl ether is flammable and explosive, and chloroform can easily produce highly toxic phosgene and cause death when it is not kept well. Therefore, these dangerous goods are not recommended for use.
5. Except for the above restricted disinfectants, other non-recommended disinfectants are not recommended. Otherwise, the atomization effect of the machine and the service life of the machine may be affected, and there may even be a health hazard!

Aromatherapy Liquid Use Restrictions

1. Do not add powder, granule, block and other solid aromatherapy; otherwise, it will cause damage to components such as blockage.
2. Do not use aromatherapy without relevant national certification; otherwise, there will be potential safety hazards.

Do not use the aromatherapy essential oil after blending it with water; otherwise, the atomization effect and the life of the atomization components may be affected.

Safety Signs

Please refer to the safety signs in the chart below to avoid danger. If the product is not operated safely according to this WARNING, the losses and risks brought to your company or individual shall be borne by the user.

Sign	Description	Sign	Description
 WATCH YOUR HAND	Watch out for hand pinch: Do not put your hand into the place where this label is affixed		Clean the water tank every three days
 WARNING AUTOMATIC START-UP	This machine is an automatic intelligent cleaning robot. Please stay away before starting automatic work	 CLASS 1 LASER PRODUCT	Class 1 laser products
 NO PUSHING	It is forbidden to push the machine manually, and only the operator is allowed to move it manually during the task		This product complies with applicable EC directives
 WARNING NO STEPPING ON SURFACE	It is forbidden to step on any part or platform of the machine		Warning: This product is not allowed to be treated as ordinary domestic waste. Ensure that products are recycled in accordance with local legal requirements.
 WARNING PLEASE PARK THE MACHINE AT FLAT PLACE AFTER POWER OFF	The machine must be parked on a flat surface		This product complies with applicable British regulations and standards
 14 %	The maximum climbing gradient is 14%		

Application Scenarios

Vacuum 40 is mainly used to clean the dust and small garbage on the flat ground made of carpet and epoxy resin, marble, terrazzo, floor tiles and other materials. Typical application scenarios are as follows:

- Hotel, office building, office

- Banks, hospitals, schools
- Small shopping malls, small and medium-sized stores, exhibition halls

Description of improper working scenarios

Vacuum 40 is only suitable for proper working scenarios. In order to maximize the effectiveness and efficiency of the product, please do not use the product on the ground that is not suitable, such as soil surface, grass, artificial turf; Also, do not use the product in scenarios with poor ground conditions, such as uneven ground, holes, leaves and other situations that are not suitable for the product. In this case, please clean or maintain the ground first until the working conditions are met, and then use the product to start cleaning.

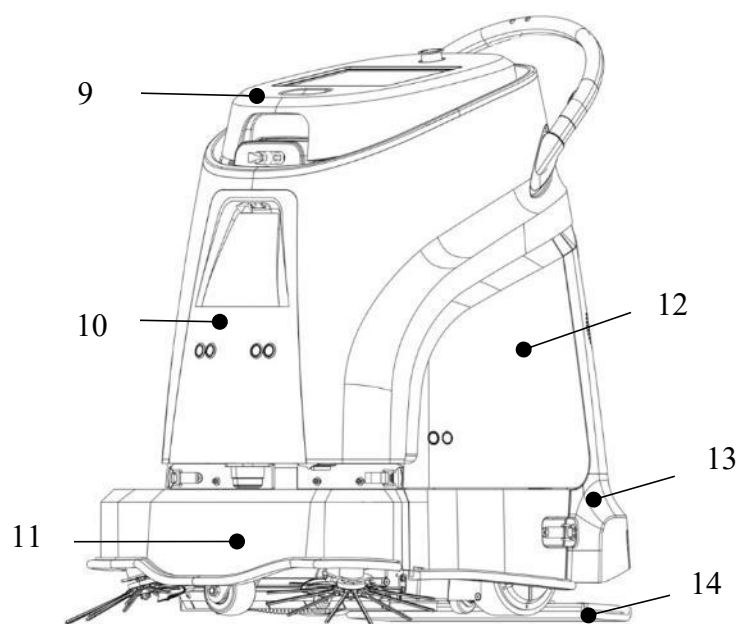
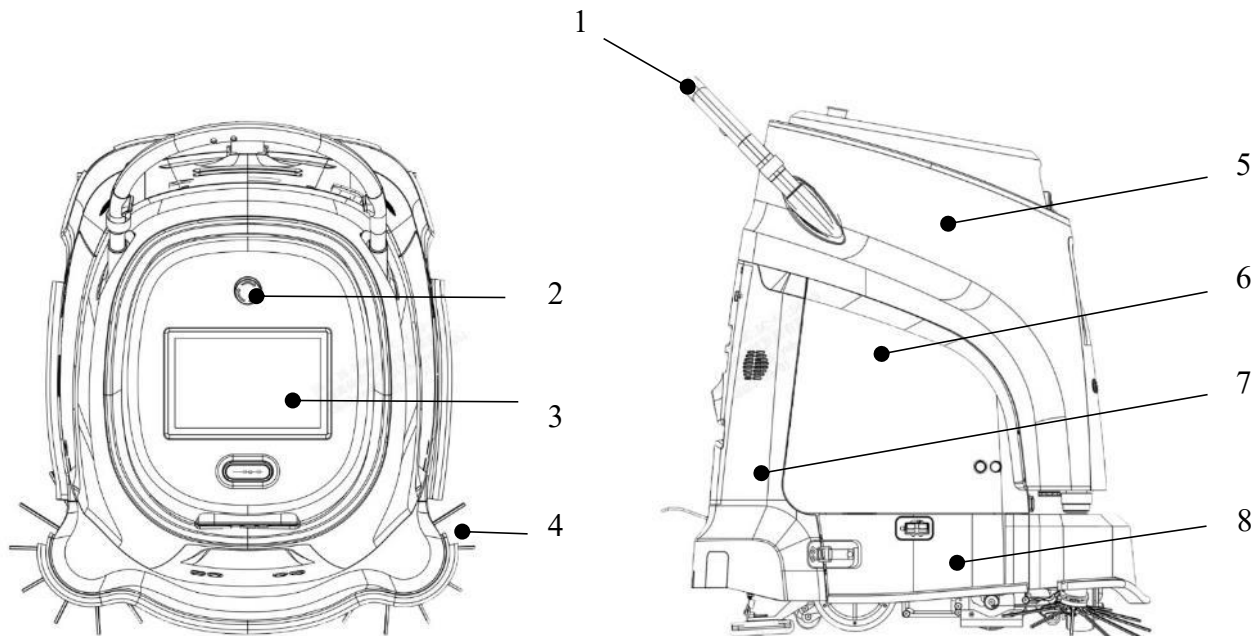
If the environmental floor is surrounded by glass walls or other highly permeable materials, some sensors of the product will not work properly. Therefore, we do not recommend that you use the product in the above environment to avoid unnecessary dangers.

If the ground where the product is located is a slope, and the slope angle of the ground is greater than 14%, please do not use the product on this ground.

If you are not sure whether the product can be applied to your working scenario, please contact Gausium technical support for details.

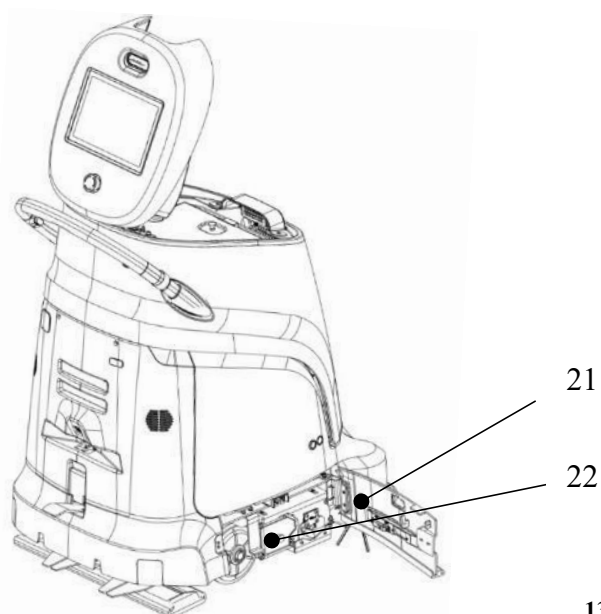
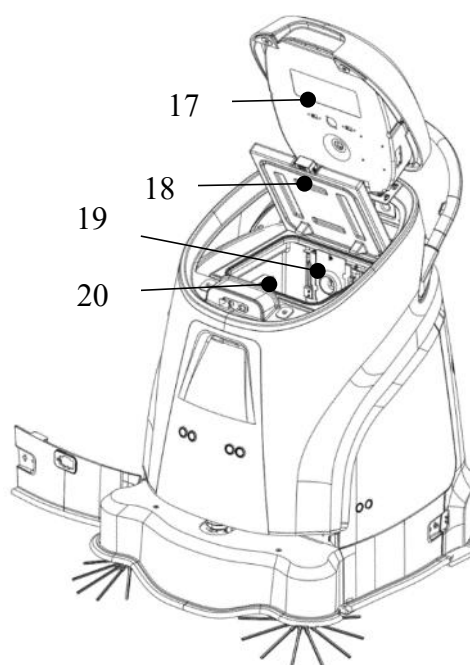
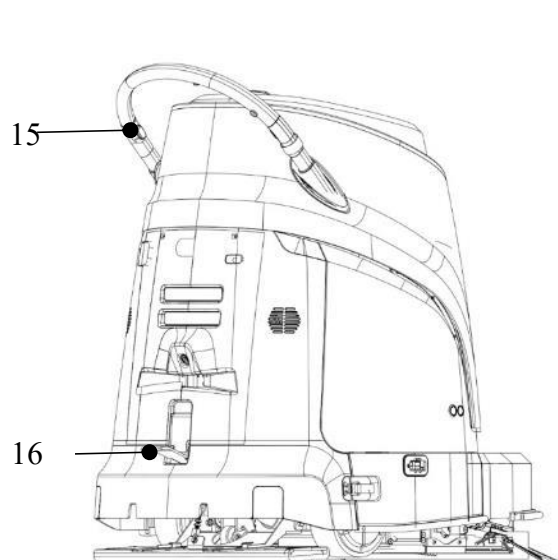
Product Structure

Appearance Parts

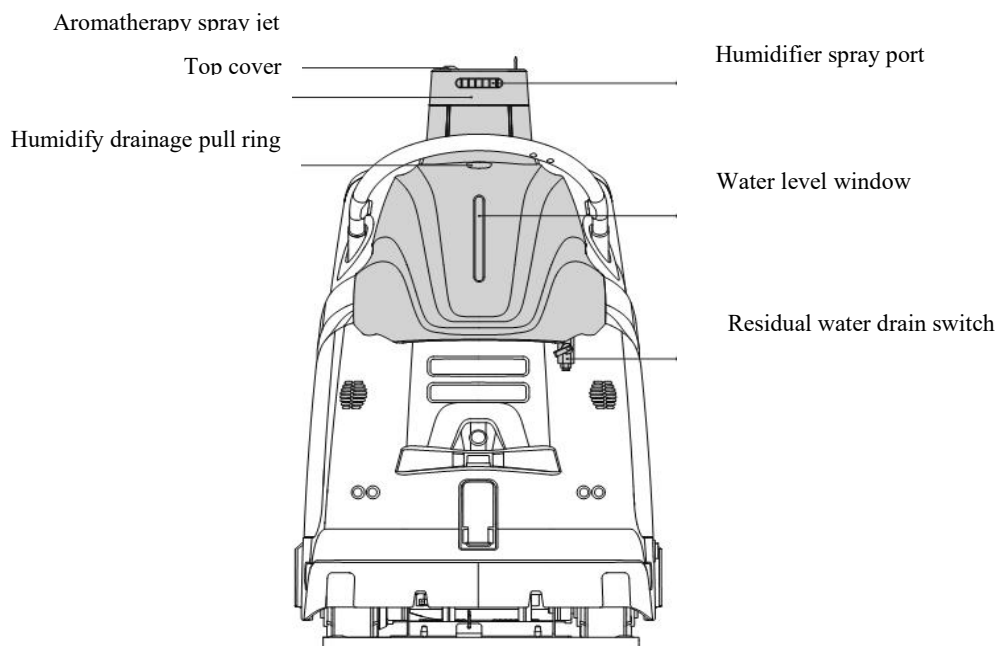


SN	Name	Remarks
1	Handle	Standard configuration
2	Emergency Stop button	Standard configuration
3	Display screen	Standard configuration
4	Side brush	Standard configuration
5	Main front cover	Standard configuration
6	Right side shell	Standard configuration
7	Rear cover	Standard configuration
8	Bottom right opening	Standard configuration
9	Cap shell	Standard configuration
10	Small front shell	Standard configuration
11	Crash front shell	Standard configuration
12	Left side shell	Standard configuration

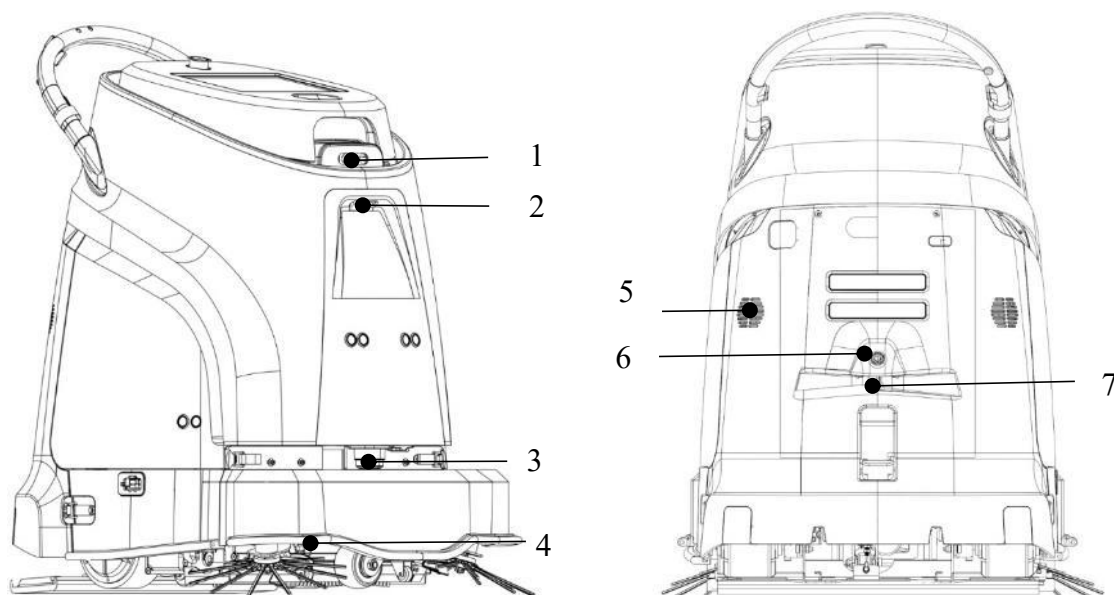
SN	Name	Remarks
13	Rear cover	Standard configuration
14	Dust mop	Standard configuration
15	Handle release button	Standard configuration
16	Pedal	Standard configuration
17	Cap cover	Standard configuration
18	Dust box cover	Standard configuration
19	Dust bag	Standard configuration
20	HEPA filter	Standard configuration
21	Bottom right opening	Standard configuration
22	Trash box	Standard configuration



Components of the disinfecting bag/aromatherapy bag



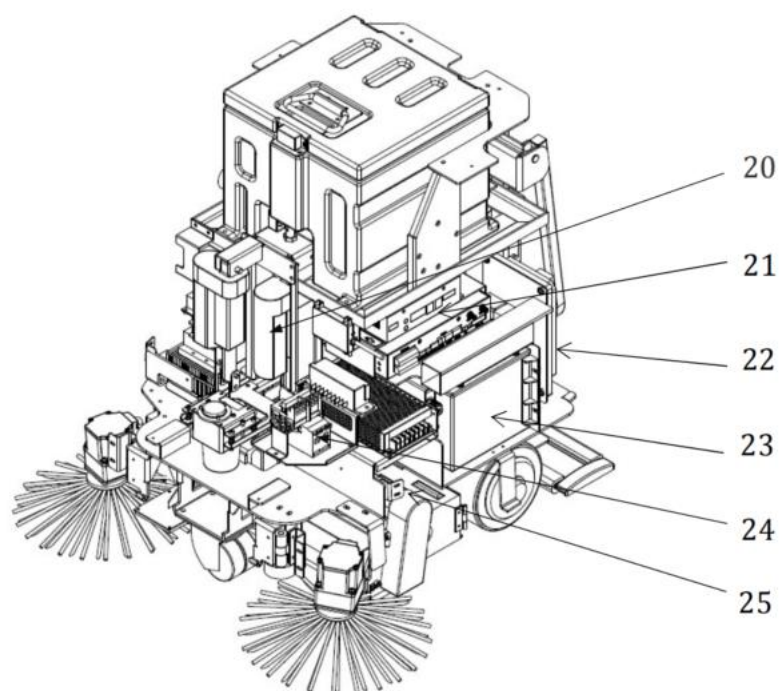
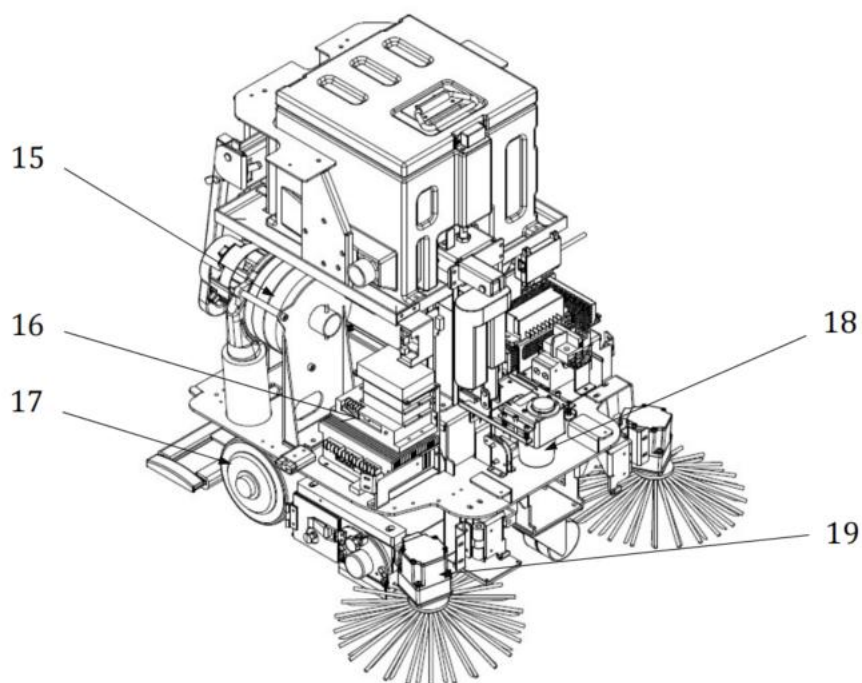
Safety Components



SN	Sensor Type	Quantity	Description	Remarks
1	Front depth camera	1	Avoid obstacles and obtain real-time colored pictures	Standard configuration
2	Front Oblique depth camera	1	Obstacle avoidance	Standard configuration
3	Laser sensor	1	Detection distance of 25 meters, scanning and positioning, obstacle avoidance	Standard configuration

4	Anti-collision strip	1	Collision buffer: avoid secondary damage	Standard configuration
5	Trumpet	1	Broadcast voice to remind pedestrians to avoid the robot	Standard configuration
6	Rear camera	1	Avoid obstacles and obtain real-time colored pictures	Standard configuration
7	Post laser	2	Obstacle avoidance and piling	Standard configuration

Electrical System Structure



SN	Name	Comments
15	Suction motor	Standard
16	Servo driver	Standard
17	Hub motor	Standard
18	Laser sensor	Standard
19	Side brush motor	Standard
20	Actuator motor	Standard

SN	Name	Comments
21	Control box	Standard
22	Motor controller	Standard
23	Battery	Standard
24	Circuit breaker	Standard
25	Roller brush motor	Standard

Product specification

Main Parameters

Structural Specification

	Specification	Remarks
Length	800mm (standard version)	
	810mm (Diffuser version)	
Width	690mm	
Height	890mm (standard version)	
	990mm (Diffuser version)	
Total weight	87 kg (Vacuum 40 -40Ah) 93 kg (Vacuum 40 Diffuser-40Ah) 91 kg (Vacuum 40-60Ah) 97 kg (Vacuum 40 Diffuser-60Ah)	
GVWR	120kg	
Dust bag capacity (L)	12	
Trash box capacity (L)	2.5L	

Electrical Specification

	Specification	Remarks
Battery type	lithium battery	
Runtime	Vacuuming 3h Mopping 18h	Unlimited runtime with charging dock.
maximum power	1000W	
Rated voltage	24 V	

Maximum vacuum degree	24kpa	
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Cleaning Specification

	Specification	Remarks
Cleaning width	720mm (including edge brush)	
Cleaning efficiency	1200 m ² /H	The actual efficiency of the test data of Gausium Laboratory is related to the on-site environment and deployment mode
Safety system	Laser radar * 2, depth camera * 2, RGB camera, anti-collision strip, anti presser foot sensor	
Speed	≤1m/s	

Other Specification

	Specification	Remarks
Working temperature	0°C ~ +40°C	
Working humidity	20% ~ 75% RH	
Storage temperature	-20°C ~ +45°C	If low-temperature storage (below 0°C) is required, water shall be drained from water tanks and all water pipelines to ensure water-free storage.
Storage humidity	20% ~ 93% RH	
Running noise	≤70 dB (a)	
Gradeability	≤14%	

Diffuser Parameters

Humidify

Volume (L)	4
Maximum spray time (h)	3.6
Maximum atomization volume (L/h)	1.1
Maximum spray distance (m)	1
Water quality requirement	Purified or Distilled water

Aroma diffuse

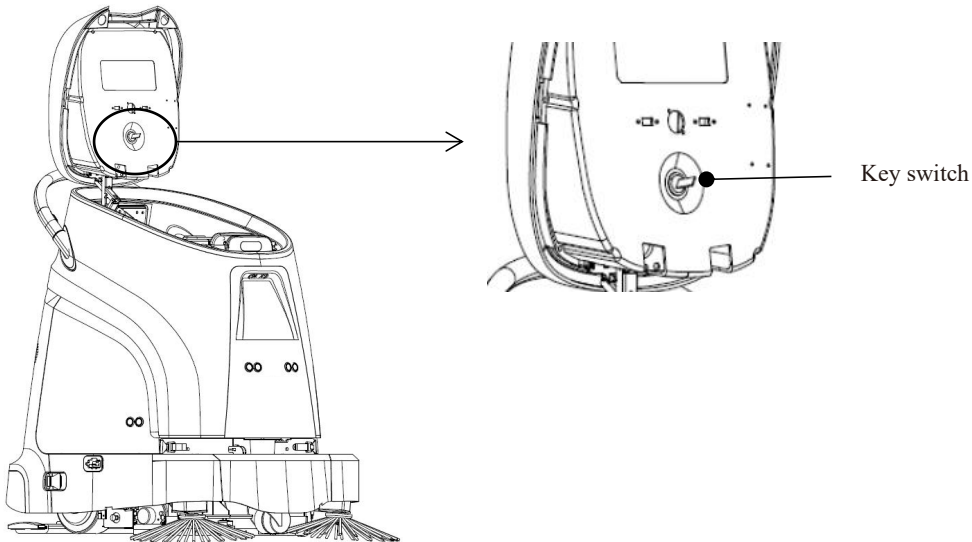
Volume (mL)	500
Maximum atomization volume (mL/h)	6
Types of aromatherapy additions	Aromatherapy oil

Product Use

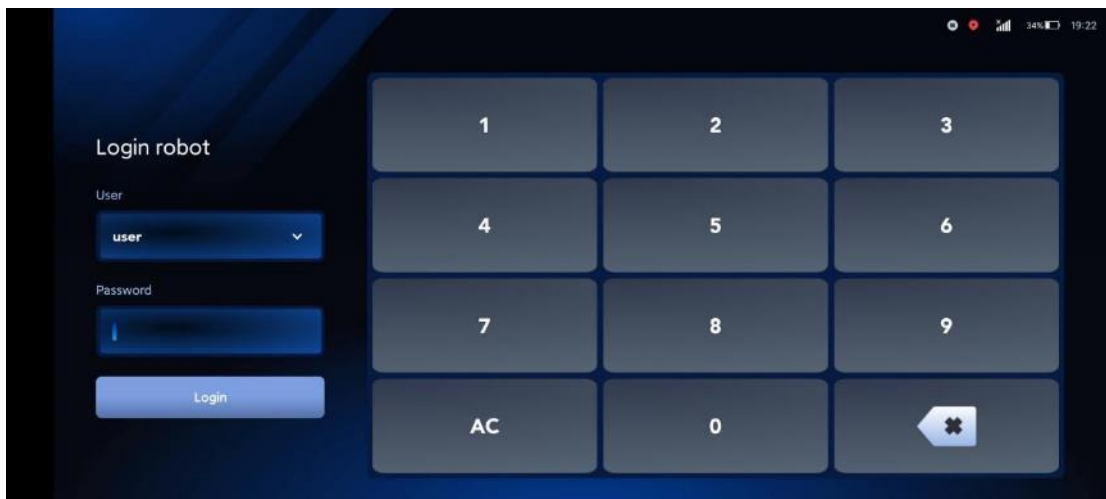
Power-On, Shutdown, Pause, Start, Finish

Startup

Open the top cover and turn the key switch to "ON" to power on the machine. The screen enters the working mode, and the startup is successful. By default, the machine enters automatic mode after startup. At this time, the machine cannot be moved manually. Do not push it by force to avoid damage to the motor.



About 30 seconds after startup, the Gausium Smart Wizard app starts, as shown in the figure below. The login interface will appear on the screen. In the login options, select the user name and enter the password to enter the Gausium Smart Wizard app.

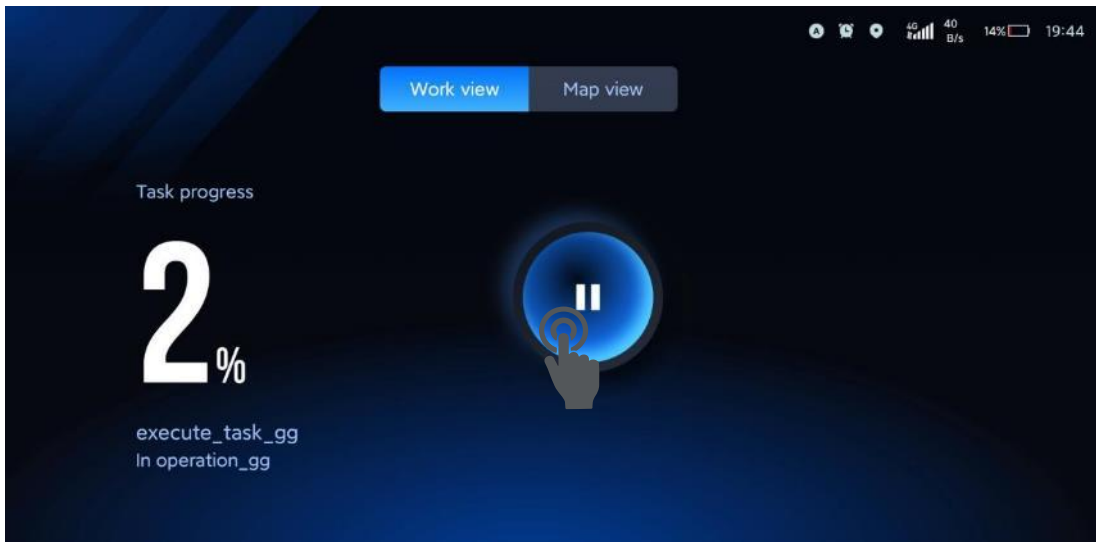


Shutdown

Open the top cover and turn the key switch to the "OFF" position. The machine is turned off and enters the low power consumption mode.

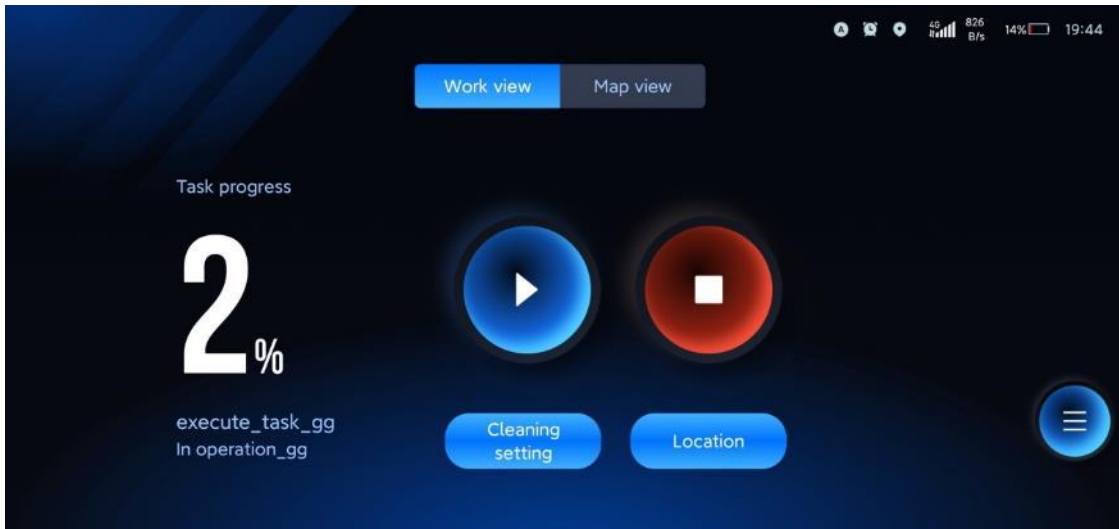
Pause

During the robot running process, tap the screen. The robot will stop working.



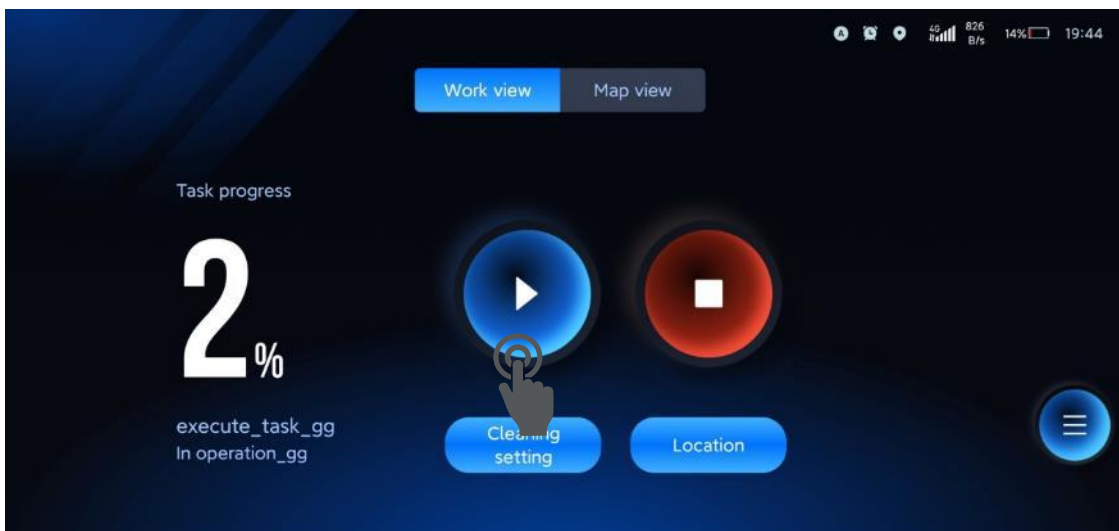
Pausing

The screen enters the pause interface.



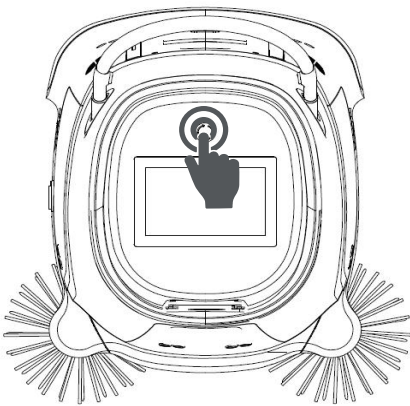
Startup

To continue running, click the Start button. After the start button is clicked, the machine continues the task.



Finish

If the machine does not need to continue running, tap the Finish button. After tapping the Finish button, the machine stops executing the current task.



Note

Emergency pause

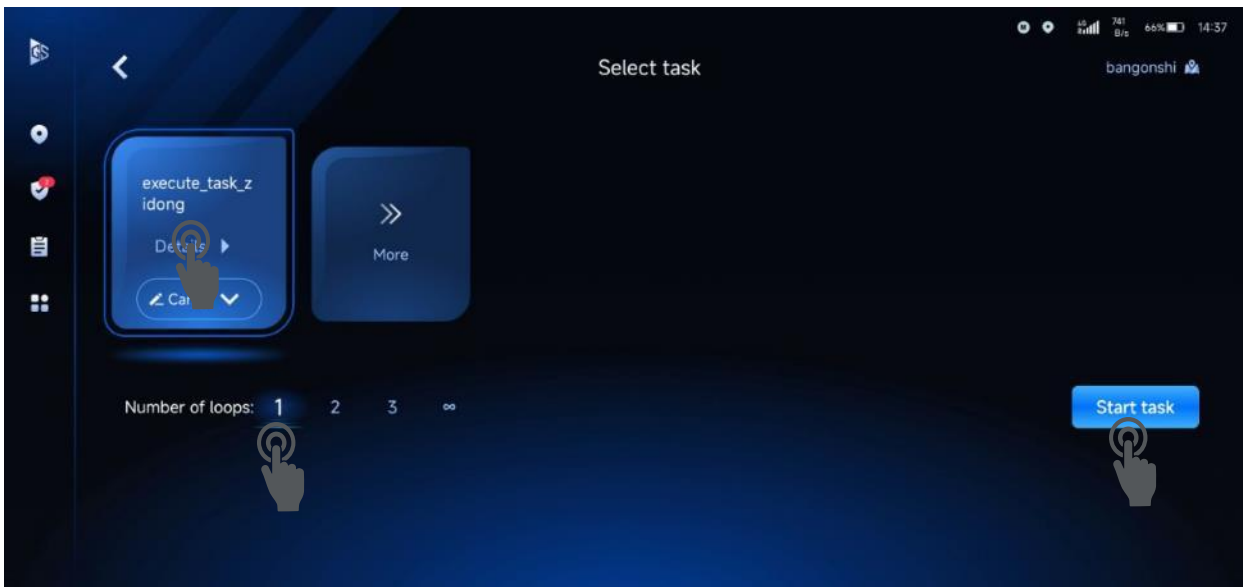
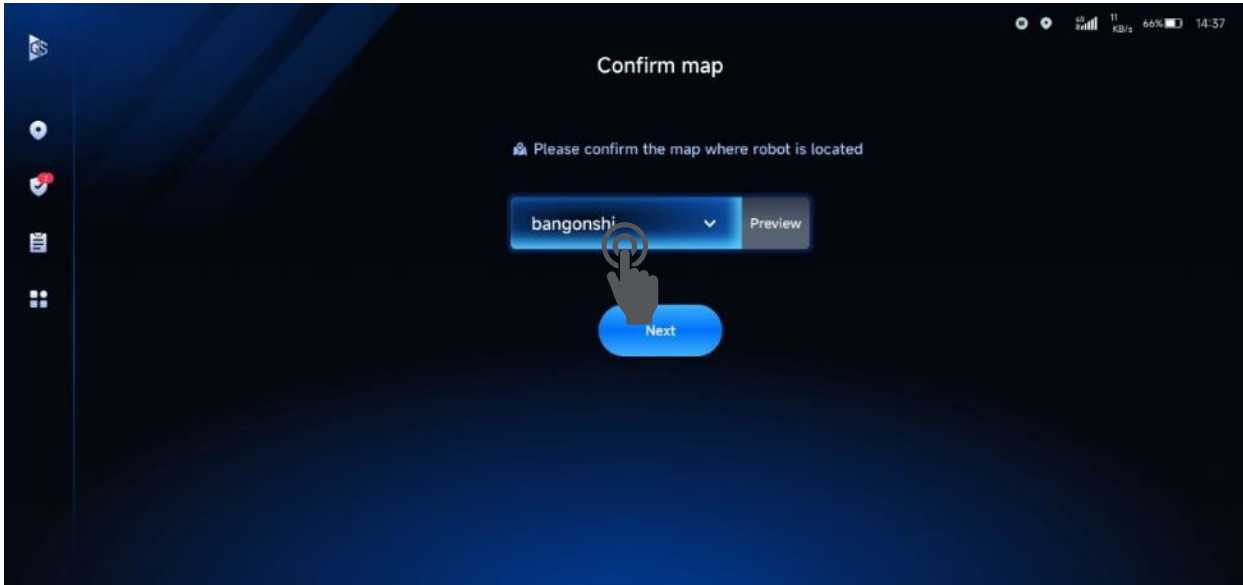
To stop the machine quickly in an emergency, directly press the red pause button on the control panel to quickly stop the machine. At this time, the machine will not be powered off but will stop working (Note: the suction motor will not stop).

Task Creation, Manual Operation, Cleaning Mode

Task creation

After clicking "Login", you will enter the main interface of the app. On this interface, you can select the corresponding map and area, set the appropriate cleaning mode and cycle times, and start the task. After the setting, the robot will complete the task autonomously according to the selected task and the setting number of cycles.

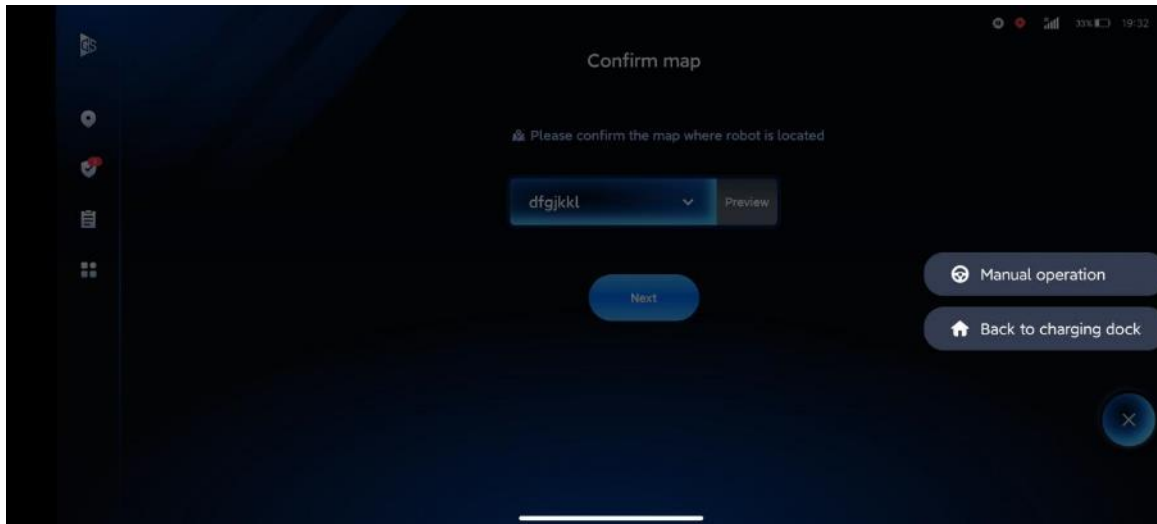
On the task creation interface, ① Select the corresponding map and area. ② Select the cleaning mode of the task. ③ Set the number of cycles. ④ Click "Start Task". The machine starts the cleaning task and enters the automatic operation mode.



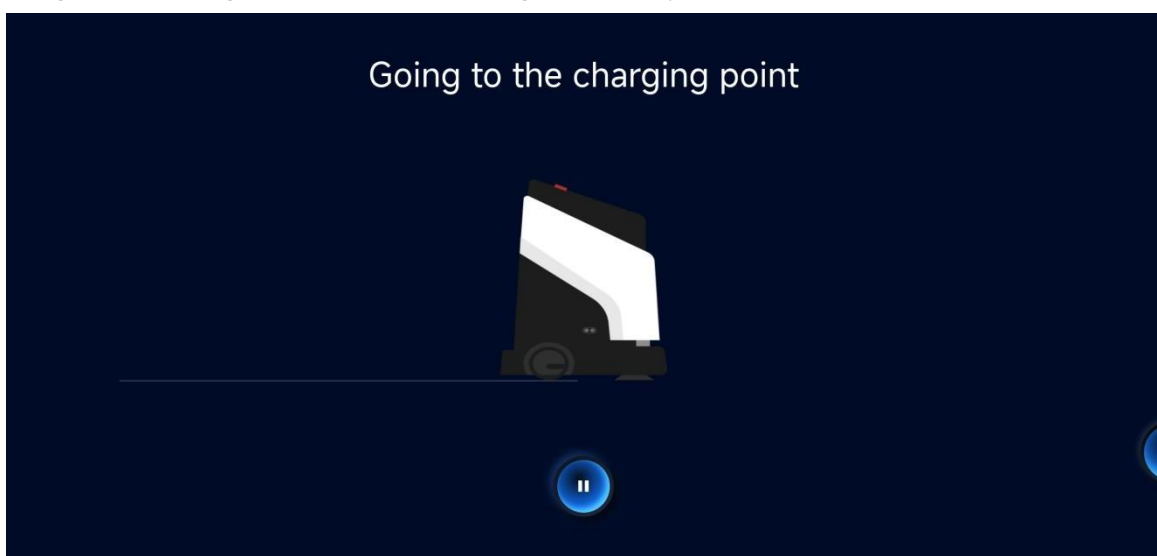
Manual operation

The intelligent machine completely retains the manual operation function of the traditional machine and supports manual cleaning. The cleaning staff can control the movement and steering of the intelligent machine through the handle to clean manually. After the cleaning task is set, click the "floating ball" icon in the lower right corner to switch to "manual operation".

"Manual work": The robot can be pushed. The machine can work according to the preset settings in this mode.



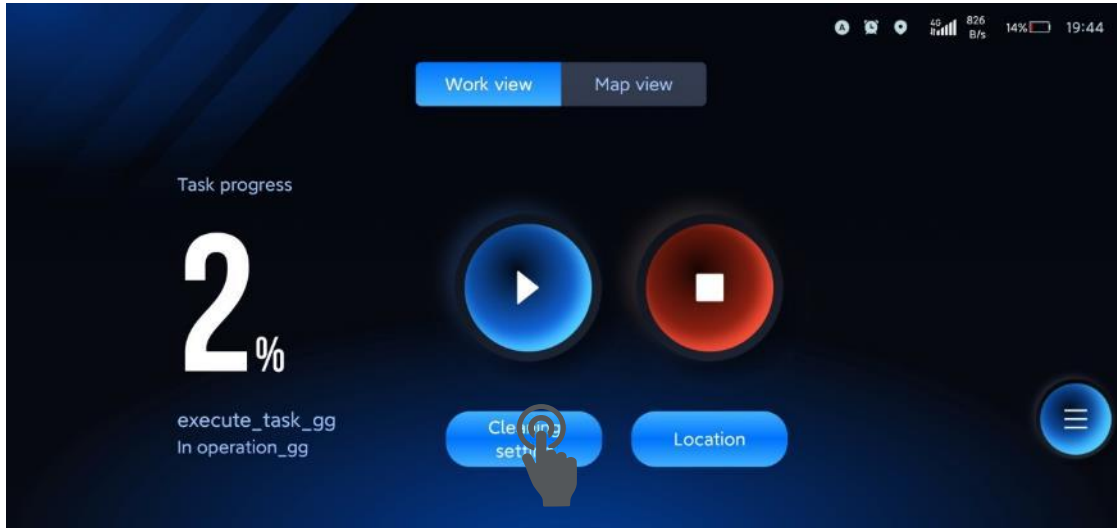
"Go home": If a charging pile/workstation is configured, click Home to recharge with one click. If no charging station/workstation is configured, select a target location. The machine can go automatically.



Cleaning mode

When the machine is working, you can select or switch the cleaning mode, or adjust the equipment level in the cleaning mode or switch the mode.

1. Tap the "Cleaning Mode" button to display the cleaning mode selection interface.



Charging

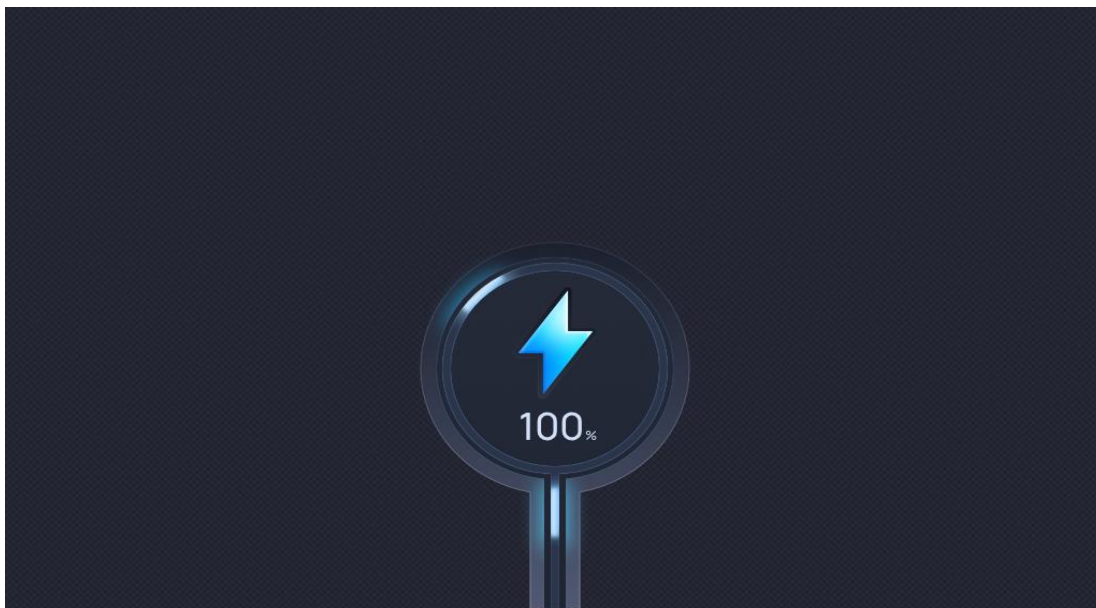
Charging method (manual charging): Connect the charging port of the robot to the charging cable, and ensure that the charging port of the fuselage is connected to the charging cable. If the connection is successful, the robot screen will display a charging animation, and the power adapter indicator will light up, indicating that it is charging, as shown in the figure below.

Precautions for electricity use:

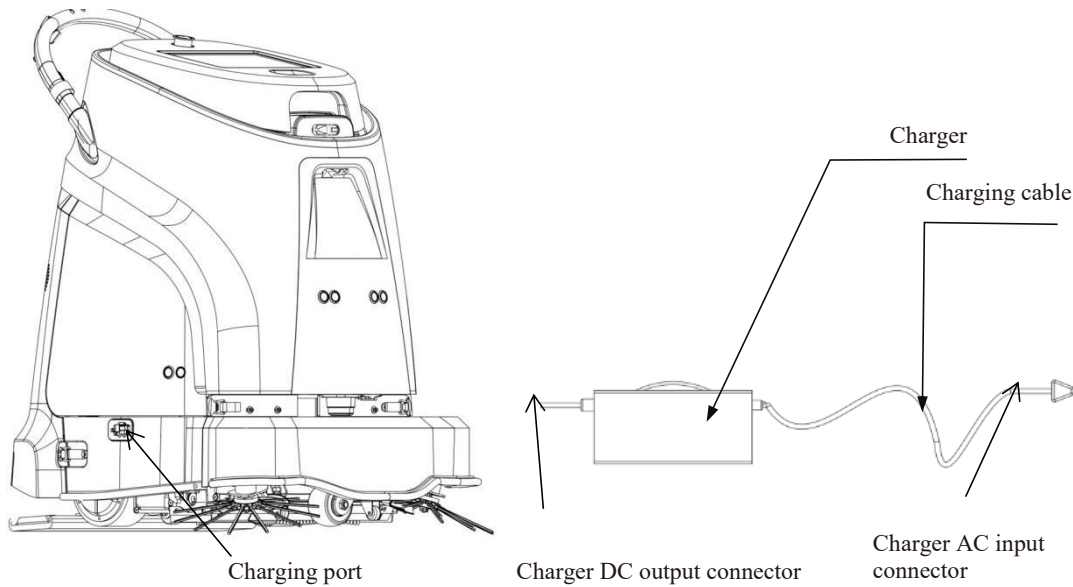
1. To ensure the efficiency and battery life of the robot, keep the power of the robot above 10% at any time;
2. When the battery is lower than 10%, the robot is in a low battery state and needs to be charged immediately;
3. When the power is lower than 1%, the robot is in battery protection state and cannot perform tasks. It needs to be charged before use.



If the screen shows the charging indication,
the machine starts charging.



After charging is complete,
the screen shows 100% charging.



Warnings

- The machine needs to use the charger of the specified model of Gausium. Do not connect any third-party chargers to the machine; otherwise, personal and property hazards may occur.
- During the charging process, pay attention to waterproofing to avoid safety accidents.



Tips

- The charging time will be extended due to the influence of environmental temperature, battery life and other factors.
- When the charging indicator shows abnormal charging, try charging again. If the machine still cannot be charged properly, please contact the Gausium Service Center.
- In the automatic operation mode, the machine will automatically go to the charging pile during the task. After the charging is completed, the machine continues the task at the pause point of the previous task.
- It is recommended to choose a flat, dry place as the charging point, avoiding humidity and vibration. The area must be protected to prevent children from touching and causing dangerous accidents;
- Do not charge in direct sunlight in summer.

Charging method (automatic charging):

The current remaining power of the machine is less than 10%, and the machine will prompt that the power is insufficient. At this time, the machine cannot be cleaned properly, and the machine will automatically return to the charging point and the charging pile is fully charged before proceeding to the next step.



Note Do not manually operate the driving machine for pile alignment and pile withdrawal, which has the risk of misoperation.

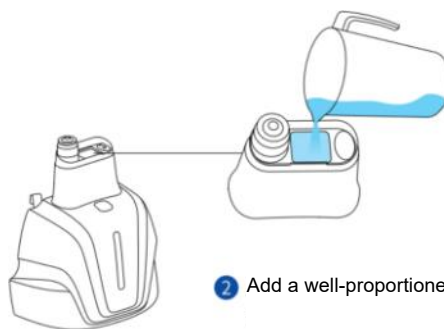
Diffuser Product Use

Humidify

Add Purified / Distilled water



- 1 Open the top cover of the backpack.



- 2 Add a well-proportioned solution

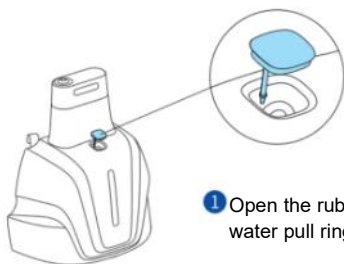


- 3 The liquid level should not exceed the maximum line.
(recommended single addition volume < 4 L)



- 4 After adding disinfectant, reinstall the top cover of the backpack

Discharge of residual water



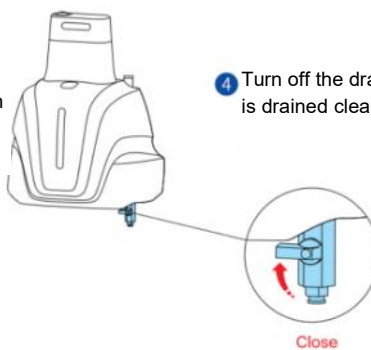
- 1 Open the rubber cover of the cup water pull ring.



- 2 Pull up the drain ring until all the water in the atomization chamber flows to the water tank.



- 3 Connect the container under the drain outlet and turn on the drain outlet switch until the solution in the water tank is drained cleanly.

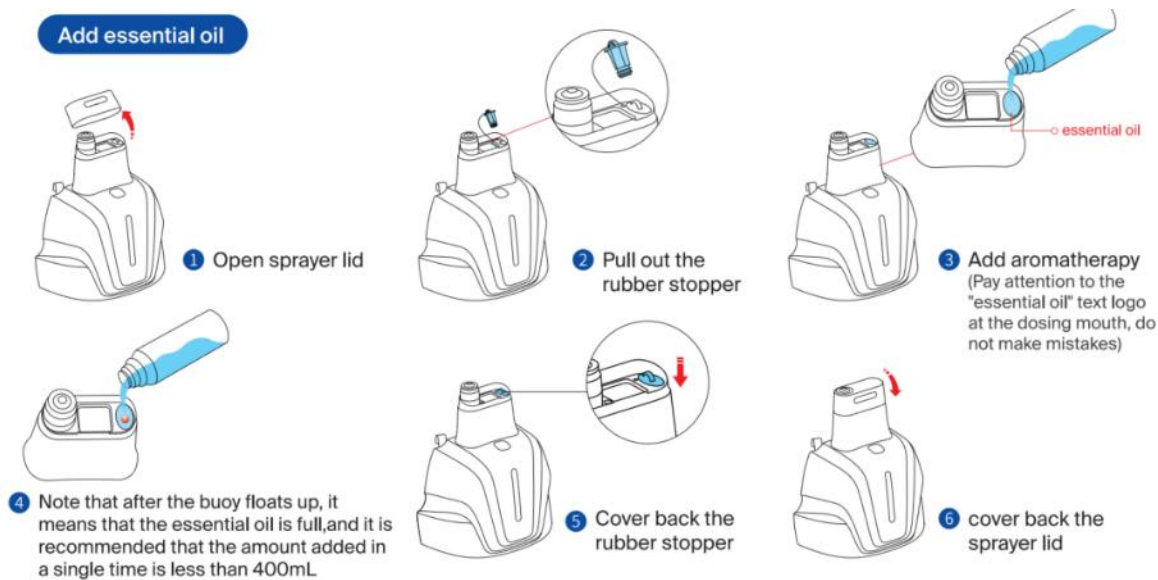


- 4 Turn off the drain switch after the solution is drained cleanly.

Aromatherapy

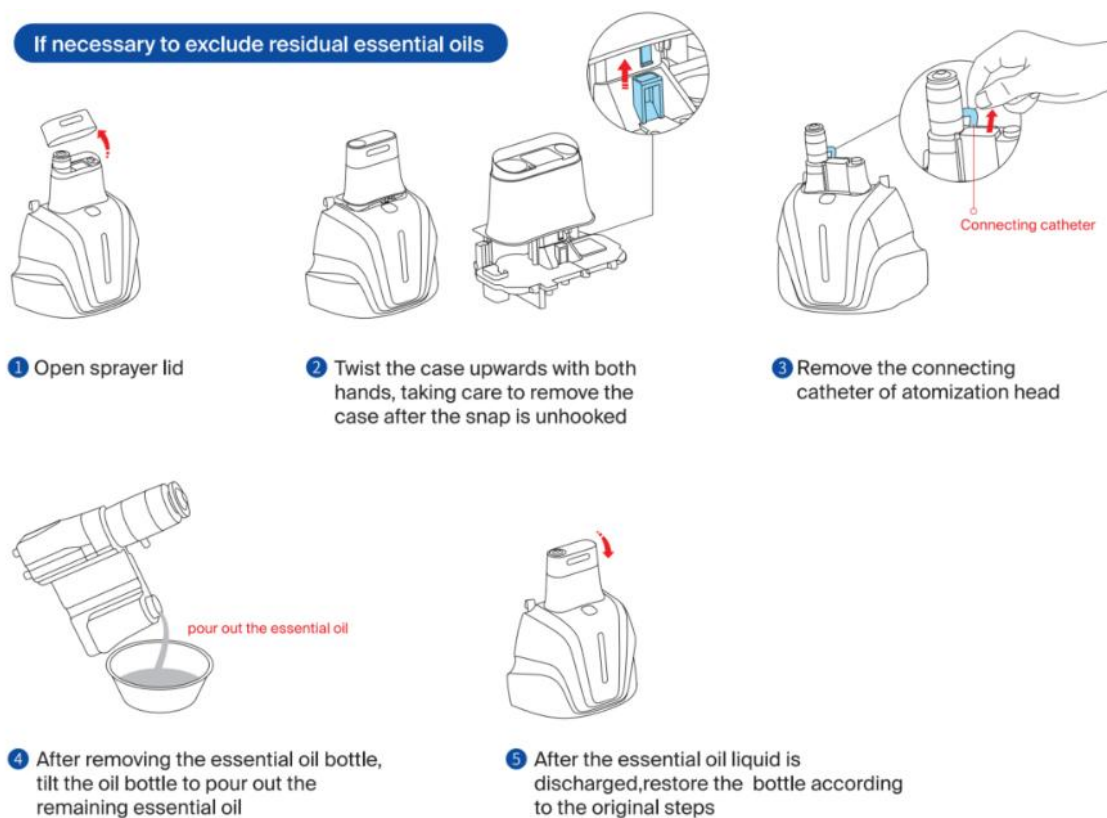
Add essential oil

Add essential oil



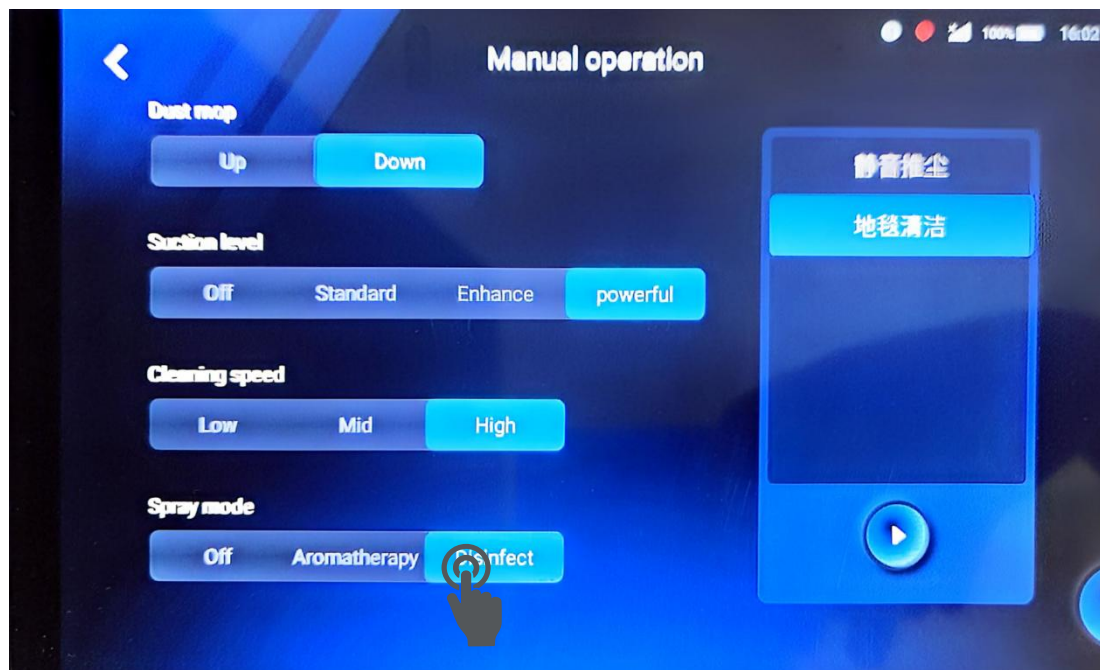
Drainage essential oil

If necessary to exclude residual essential oils



Humidify & Aromatherapy function on or off

In "cleaning configuration", enable or disable the Aromatherapy or Humidify, as shown in the following figure:



Tips

- Be aware that high humidity levels may encourage the growth of biological organisms in the environment.
- Do not permit the area around the humidifier to become damp or wet. If dampness occurs, turn the output of the humidifier down. If the humidifier output volume cannot be turned down, use the humidifier intermittently. Do not allow absorbent materials, such as carpeting, curtains, drapes, or tablecloths, to become damp.
- Unplug the appliance during filling and cleaning.
- Never leave water in the reservoir when the appliance is not in use.
- Empty and clean the humidifier before storage. Clean the humidifier before next use.
- Warning: Micro-organisms that may be present in the water or in the environment where the appliance is used or stored, can grow in the water reservoir and be blown in the air causing very serious health risks when the water is not renewed and the tank is not cleaned properly every 3 days.
- Empty the tank and refill every third day. Before refilling, clean it with fresh tap water or cleaning. Remove any scale, deposits, or film that has formed on the sides of the tank or on interior surfaces, and wipe all surfaces dry.
- If the water tank is not cleaned for three days, the machine will generate a sound and light alarm.

Maintenance

When using the Vacuum 40 (Diffuser) machine, perform simple maintenance before and after each use, perform necessary inspection and maintenance periodically, and replace the consumables regularly to ensure the optimal performance of the machine and extend the service life as much as possible.

- Before maintenance, the power supply must be turned off to prevent accidental electric shock or damage to parts.
- If the storage environment temperature is lower than 5 degrees centigrade, ensure that the inside and outside of the product is free of water .
- When the battery is in normal use, it needs to be fully charged and discharged once a month; When the battery is stored for a long time (more than one week), ensure to turn off the circuit breaker after fully charged, otherwise the battery may be damaged, and it needs to be fully charged every three months.

Maintenance Frequency

To maintain the peak performance of the host, it is recommended to perform maintenance on the parts with reference to the following frequency:

Classification	Part	Maintenance frequency	Replacement frequency (any condition)
Class A consumables	Front brush	Once/day	300 h/3 months
	Side brush	Once/day	300 h/3 months
	Dust blocking strip	Once/day	300 h/3 months
	Dust box sealed dust bag	Once/day	600 h/6 months
	Machine HEPA filter	Once/day	600 h/6 months
	Dust mop	Once/day	600 h/6 months

Routine Maintenance

In daily use, perform necessary maintenance to increase the lifespan and maintain the cleaning effect, so that the machine is in good condition for a long time and create more application value for customers.



Tips



- Before maintenance, turn off the power switch and disconnect the power plug to prevent accidental electric shock or damage to parts.
- Place the machine in a dry and ventilated place to avoid the damp environment affecting the electronic and electrical components and shortening the life.

Daily Maintenance

1. Dump the garbage in the garbage box and dust bag to avoid the accumulation of garbage and odor.
2. Clean up the rubbish on the surface of the dust mop and add dust mop oil. If the dust mop is dirty, replace and clean it in a timely manner.
3. Check whether there is dust or other foreign objects on the sensor. Wipe it gently by using a paper towel or a softer cloth, instead of directly with your hands.
4. Check the power after the machine operation is finished. Charge it in a timely manner if necessary.

Weekly Maintenance

1. Check for any dirt on the sensor. Use a softer cloth or paper to gently wipe. Do not wipe directly with your hands; otherwise, scratches and other damages may occur.
2. Check the wear of the dust blocking strip, and replace it if necessary.
3. Check the HEPA in the dust box and clean or replace it in a timely manner.
4. Check whether the connecting pipe between the dust box and the suction motor is damaged, and replace if necessary.
5. Remove the roller/side brush weekly. Clean the roller/side brush, which may have hair or other contamination entangled on it.

Long-term Maintenance

1. Check for abnormal noise in the robot that affects normal use.

Battery Maintenance

1. Keep the battery away from heat sources, high-voltage places, and long-term sunlight exposure.
2. Do not put the battery into water or fire.
3. Do not reverse the positive and negative poles of the battery.
4. Do not short-circuit the positive and negative poles of the battery with metal.
5. Avoid excessive physical vibration and impact on the battery. Do not impact, fall or step on the battery.
6. Do not disassemble or assemble the battery without the permission and guidance of the manufacturer.
7. Do not mix batteries of different manufacturers, types and models.
8. Charge the battery as soon as it runs out (within 2 hours).
9. Use the matching or recommended professional lithium battery charger.
10. When loading and unloading the battery during transportation, do not drop it. Do not stack the batteries in more than 3 layers. Turn them over to ensure that the front side is facing up.



Warnings

- Stop using the battery when there are abnormal conditions such as odor, discoloration, noise, liquid leakage, and severe deformation.
- If the electrolyte leaks and splashes into the skin and eyes, rinse with clean water and seek medical care immediately.
- Do not use or store in a high temperature ($> 45^{\circ}$) environment; otherwise, the battery will heat up, catch fire or reduce its service life.
- Improper battery disassembly and storage will result in personal injury and environmental pollution.
- Do not operate the battery without wearing protective equipment to avoid danger.
- Keep the battery out of the reach of pets and children, and protect children from touching the battery



Note

- When the battery is in normal use, it needs to be fully charged and discharged once a month. When the battery is stored for a long time (more than 1 week), disconnect the circuit breaker after it is fully charged; otherwise, the battery may be damaged. Fully charge the battery every 3 months;



Environmental Protection

- Batteries contain toxic and corrosive substances. Scrapping or discarding power batteries at will will pollute the environment, and the owner of the machine shall bear the legal responsibility.

Humidify Tank Maintenance

1. If the humidification function is not used for a long time, the water in the water tank should be promptly emptied.
2. It is recommended to clean the water tank every 3 days. When cleaning, first drain the remaining water, and then add clean water to rinse repeatedly. After flushing, drain the waste water and close the drain switch.

Consumables Maintenance

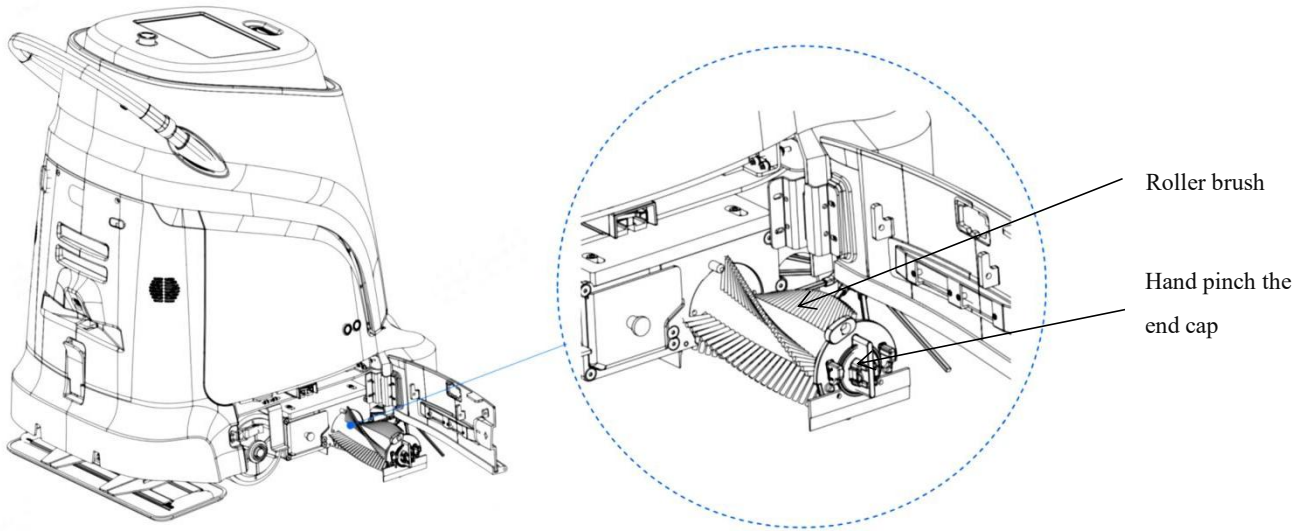
Brush Maintenance

Open the lower right side of the case, twist the hand screw, open the roller side cover, and remove the roller brush to replace.



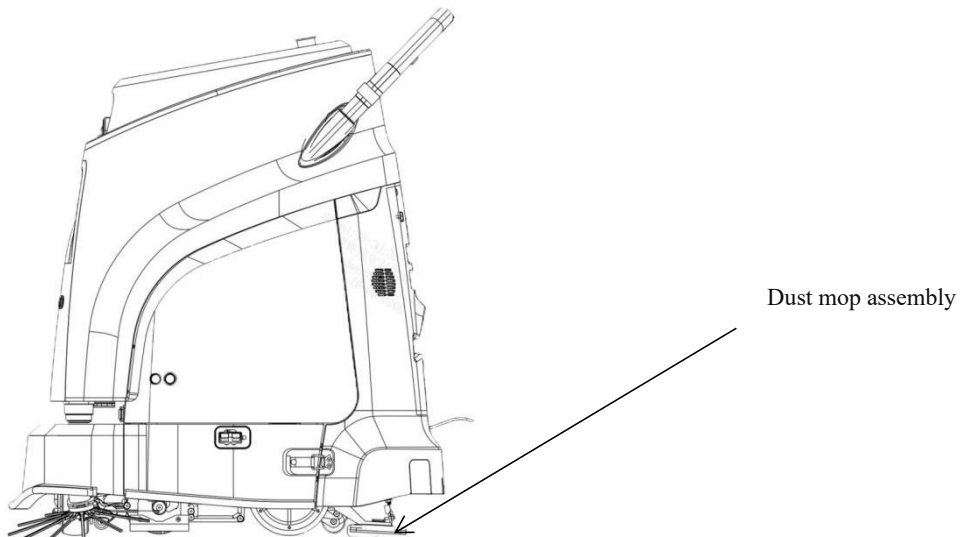
Note

There are important and small sheet metal parts on the roller brush. After replacement, make sure the relevant parts are securely fastened. Otherwise, the roller brush motor will not be able to drive the roller brush to rotate after replacement!



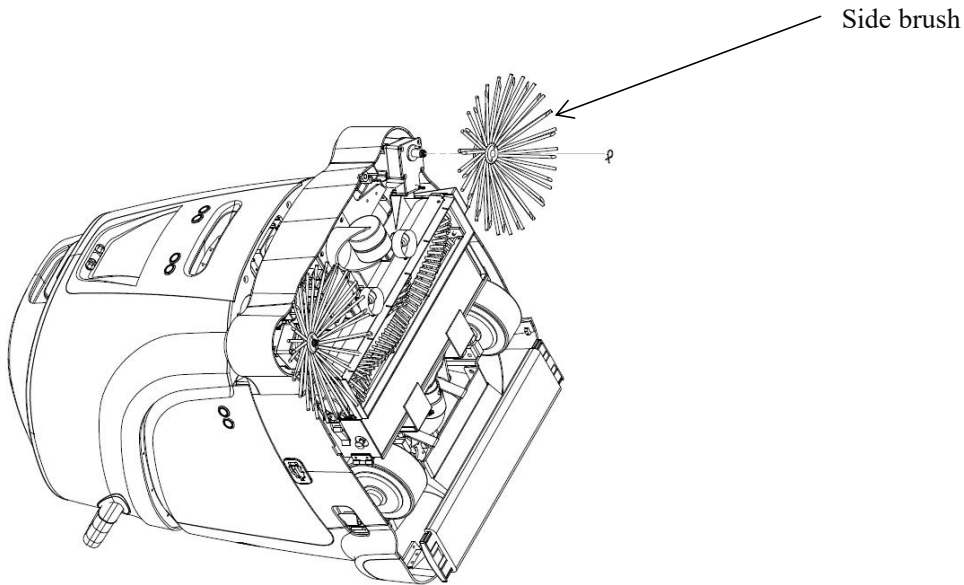
Dust mop maintenance

Remove the dust mop assembly, peel off the dust mop from the dust mop plate, and replace it with a new dust mop.



Side brush maintenance

The machine stops, and the side brush is raised to the highest position. Reach the bottom of the side brush with your hand and pull the side brush straight down.



Troubleshooting

Symptom	Causes	Solution
Unclear drawing or drawing overlapping	The machine travels very fast, resulting in poor mapping quality.	Control the machine to run at a slower speed
	The sensors are stained with dust or sheltered by obstacles.	Use a lint-free cloth to clean the outside of the laser sensor, and check for any foreign object near the sensor. If so, remove it immediately.
	The conditions are complicated, with highly transparent materials such as glass walls.	If any highly transparent materials are found around during drawing, promptly draw a virtual wall to control map boundaries.
Machine not moving	The machine is out of power or cannot be started.	Connect the charger to the charging port of the machine. After the battery is fully charged, control the movement of the machine.
	The machine is not turned on and cannot move.	Use the power-on key to turn the power-on hole on the machine's control panel to start the machine, and control the machine's movement.
	Under automatic mode	Switch to manual mode by hand
	The red pause button on the control panel is pressed, resulting in the emergency braking of the machine.	Rotate the red pause button clockwise to resume the machine's motion function.
The side brush/roller brush does not rotate.	The side brush/roller brush wraps around linear litter, gets stuck and cannot turn.	Remove the side brush/roller brush for cleaning, and then put it back into the machine.
The robot does not suck dust.	The suction button on the control panel is off and cannot be vacuumed.	Open the suction button on the control panel, and observe whether the suction function is normal.

	The vacuum hose is poorly connected or blocked by unknown objects.	Check whether the vacuum tube is properly connected to the roller brush assembly, and whether there is any blockage. If yes, adjust or remove it in a timely manner.
The machine has poor cleaning effect.	The side brush/roller brush has not been cleaned for a long time, and it is contaminated with a lot of dust and garbage, which affects the cleaning effect.	Remove the side brush/roller brush for cleaning, and then put it back into the machine after cleaning.
	The side brush/roller brush is heavily worn and have poor cleaning performance.	Replace with new side brushes/roller brushes of the same size.
	If the ground to be cleaned is dirty or there is solid waste, the machine cannot be cleaned at one time.	Pre-clean the ground, remove the garbage, and start cleaning. You can repeat the cleaning to ensure the final cleaning effect.
Charging failure	The power outlet is powered off, and no power is supplied.	Make sure the power outlet has power, and connect the charger to another outlet for verification.
	The charger is damaged.	Check whether the indicator of the charger is always on red, which means the charging is normal. If the indicator is off or flashing, the charger is working abnormally. In this case, please contact Gausium technical support for repair.
	The batteries are damaged.	If the charger is normal, but the battery percentage does not increase over time, the battery is damaged or abnormal. Please contact Gausium technical support to apply for battery replacement.
The device cannot start.	The air switch is off. The batteries are out of power. The key switch has not been turned on.	Turn on the power switch. Charge the batteries. Long press the power button for 3s to power on/off

If the fault persists or the problem you encounter is not in the above list, please contact Gausium technical support in a timely manner for further assistance. Thanks for your support!

After-sales Service

Free warranty service

Shanghai Gausium Automation Technology Development Co., Ltd. promises that under the following circumstances, from the date of product receipt, it shall provide free product warranty services within 1 year of the product's valid warranty period: If the warranty period is exceeded or it is not a free product warranty service, a certain fee shall be charged at the normal price. Please contact the after-sales service hotline for product maintenance.

Free warranty shall be subject to the following conditions

1. The purchased product is used properly within the specified product warranty period, and there are non-artificial quality problems;
2. No unauthorized disassembly, no modification or installation guided by unofficial manuals, or other non-human-caused failures;
3. The product SN, factory label and other labels are not torn or altered;
4. Provide valid proof of purchase, receipt and order number;
5. The damaged spare parts replaced during the free warranty period shall belong to Gausium and shall be returned as required by Gausium; otherwise, Gausium shall have the right not to provide free warranty services.

The following situations do not belong to the free warranty

1. Collision and burning not caused by the quality problems of the product itself, as well as the quality problems caused by man-made unauthorized modification and entry of foreign objects (water, oil, sand, etc.);
2. Damage caused by unauthorized modification, dismantling, shell opening, etc. guided by unofficial manuals;
3. Damage caused by improper installation, use and operation not in accordance with the instructions;
4. Damage caused by the customer's own repair in the absence of official instructions and guidance;
5. Damage caused by improper use of circuit modifications, battery packs, and chargers guided by unofficial manuals;
6. Damage caused by use under the safe load weight;
7. Damage caused by insufficient discharge due to insufficient power, or use of batteries with quality problems;
8. Services such as secondary on-site deployment or installation and commissioning required due to the customer's own reasons;
9. Failure or damage caused by force majeure factors (such as earthquake and fire);
10. Other situations that do not meet the free warranty conditions.

Warranty period

1. The date of receipt of the product recorded in the Gausium after-sales service system is used as the start date of the warranty.

Returns may be requested if one of the following conditions is met:

1. Within 7 natural days after the customer receives the goods, obvious manufacturing defects are found when the goods are not used; the round-trip freight shall be borne by Gausium.

Gausium shall reserve the right to refuse the return request in the following cases:

1. The goods are damaged, but the delivery person is not required to return the goods on the spot when receiving the goods;
2. The return request is made after the product return period of more than 7 natural days (calculated from the date of receipt);
3. The returned product is incomplete, the outer packaging, accessories, gifts, instructions are incomplete, or the appearance is artificially damaged;
4. Legal proof of purchase or documents cannot be provided when the goods are returned, or the documents are forged or altered;
5. Collision and burnout not caused by the quality of the product itself, as well as quality problems caused by man-made unauthorized modification, entry of foreign objects (water, oil, sand, etc.), incorrect installation, and use and operation not in accordance with the instructions;
6. Labels, machine SNs, waterproof marks, and anti-counterfeiting marks are torn or altered;
7. Damage caused by force majeure, such as fire, flood, lightning strike, and traffic accident;
8. Gausium shall have the right to reject your request if the corresponding item is not sent within 7 days from the date of contacting Gausium.

An exchange shall be requested if one of the following conditions is met:

1. Within 15 natural days after the customer receives the goods, obvious manufacturing defects are found when the goods are not used; the round-trip freight shall be borne by Gausium;
2. Within 15 natural days after the customer receives the goods, the product cannot be started properly according to the instructions or under the guidance of technical personnel after unpacking, or non-artificial product quality defects are found; the round-trip freight shall be borne by Gausium;
3. The customer unpacks and inspects the product in front of the deliveryman when receiving the goods, and finds that the product is damaged due to transportation; the round-trip freight shall be borne by Gausium;
4. There are obvious discrepancies between the actual received goods and the description of the goods; the round-trip freight shall be borne by Gausium.

Gausium shall have the right to refuse the customer's exchange request in the following cases:

1. Legal proof of purchase or documents cannot be provided when the goods are exchanged, or the documents are forged or altered;
2. The goods are damaged, but the delivery person is not required to return or exchange the goods on the spot when receiving the goods;
3. The exchange request is made after the product exchange period of more than 15 natural days (calculated from the date of receipt);
4. The exchanged product is incomplete, the outer packaging, accessories, gifts, instructions are incomplete, or the appearance is artificially damaged;
5. The goods have been tested by Gausium technical support department, and there is no quality problem;
6. Collision and burnout not caused by the quality of the product itself, as well as quality problems caused by man-made unauthorized modification, entry of foreign objects (water, oil, sand, etc.), incorrect installation, and use and operation not in accordance with the instructions;
7. Labels, machine SNs, waterproof marks, and anti-counterfeiting marks are torn or altered;
8. Damage caused by force majeure, such as fire, flood, lightning strike, and traffic accident;
9. Gausium shall have the right to reject your request if the corresponding item is not sent within 7 days from the date of contacting Gausium.

After-sales service process

1. Please contact Gausium technical support in a timely manner by 400 888 3065;
2. The technical support personnel will fill in the relevant forms according to your product situation;
3. The technical support personnel will review and confirm your request within 7 working days for further processing.

Return and exchange and free maintenance instructions

1. Remote technical guidance service

Gausium officially provides online and remote technical support channels, and customers need to cooperate with technical engineers in troubleshoot;

2. Door-to-door service

If the problem must be solved onsite according to diagnosis by Gausium technical engineers, Gausium shall assign professional technicians to provide free door-to-door service;

3. Return processing time

After your return request is approved, Gausium shall complete the exchange for you within 7 days from the date of receipt of the defective product returned by you;

4. Exchange processing time

After your exchange request is approved, Gausium will complete the exchange within 15 days from the date when receiving the goods you sent back;

5. Factory repair time

After your repair request is approved, Gausium will complete the repair within 15 days from the date when receiving the goods you sent back; If the after-sales service center of some brand manufacturers delays providing services due to national statutory holidays, the repair time shall also be extended accordingly. Sorry for the inconvenience caused to you;

6. Refund time

After approval by Gausium, the refund will be transferred to your bank account within 10 working days after receiving the return.

After-sales service outside the scope of warranty

For after-sales services that are not within the scope of the free warranty (beyond the warranty period or do not meet the free warranty terms during the warranty period), Gausium shall provide after-sales services for a fee.



Remote technical guidance service

Gausium officially provides online and remote technical support channels, and customers need to cooperate with technical engineers in troubleshoot.

Door-to-door service

If the problem must be solved onsite according to diagnosis by Gausium technical engineers, Gausium shall assign professional technicians to provide door-to-door service;

After-sales service fee standard

For after-sales services beyond the scope of the free warranty, you shall fill in the *Gausium After-sales Service Record Form* as required; Gausium service fees include after-sales maintenance costs and spare parts costs.

Gausium technicians provide remote technical guidance services, and customers assist in after-sales problems; Gausium shall only charge for spare parts;

Gausium technicians provide door-to-door service for after-sales problems. The service fee includes the cost of spare parts and after-sales maintenance.

After-sales service consultation

For any questions, please feel free to contact Gausium customer service hotline 400-888-3065;

The working hours of Gausium after-sales service personnel are 7*24 h.