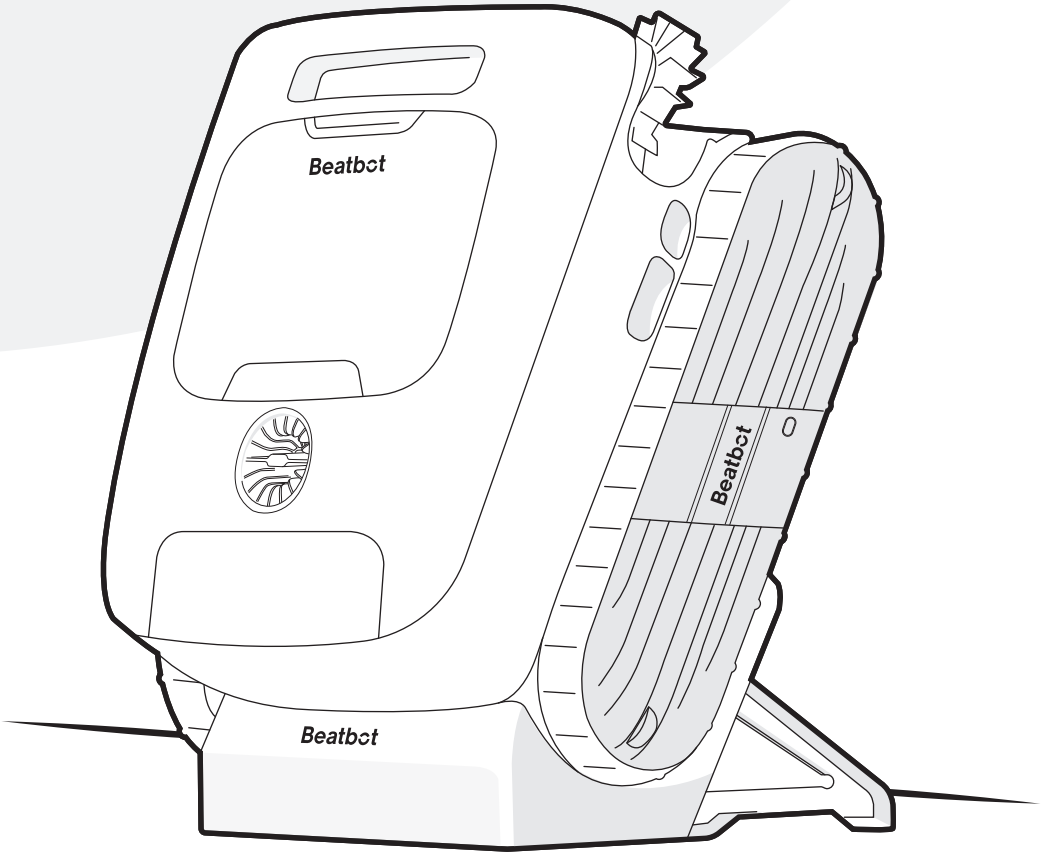
Beatbot

User Manual

AquaSense 2 Ultra



1 Safety Regulations

⚠ IMPORTANT SAFETY INSTRUCTIONS

READ ALL INSTRUCTIONS BEFORE USING

When installing and using this electrical equipment, basic safety precautions should always be followed, including the following:
WARNING: Read all safety warnings and instructions. Failure to follow the warnings and instructions may result in electric shock, fire and/or serious injury.

1.1 Warnings and Cautions

- READ AND FOLLOW ALL INSTRUCTIONS.

- This product can be used by children aged 8 years and above and persons with physical, sensory, or intellectual deficiencies, or limited experience or knowledge under the supervision of a parent or guardian to ensure safe operation and to avoid any risks. Cleaning and maintenance shall not be done by children without supervision.
- Children shall not play with this product. Ensure children and pets are kept at a safe distance from the robotic pool cleaner while it is in operation.
- Prevent unintentional starting. Ensure the robot is turned off before picking up or carrying it. Carrying the robot with your finger on the power button invites accidents.
- Under abusive conditions, battery liquid may be expelled. Avoid contact. If contact occurs, rinse with water. If liquid contacts the eyes, seek medical attention. Battery liquid may cause irritation or burns.
- Do not use a battery or appliance that is damaged or modified. Damaged or modified batteries may exhibit unpredictable behavior resulting in fire, explosion or risk of injury.
- Do not use any third-party battery pack or charging dock. Use only with Beatbot RCDS01 supply unit specified by the manufacturer. If the supply cord is damaged, it must be replaced by the manufacturer, its service agent or similarly qualified persons in order to avoid a hazard.
- Make sure the robot is turned off and the charging dock is unplugged before performing maintenance.
- Do not place the charging dock near a heat source. Follow all charging instructions and do not charge the appliance outside of the temperature range specified in the instructions. Charging improperly or at temperatures outside of the specified range may damage the battery and increase the risk of fire.
- This product contains batteries that can only be replaced by qualified technicians. Do not modify or attempt to repair the appliance or the battery except as indicated in the instructions for use and care. Have servicing performed by a qualified repair person using only identical replacement parts. This will ensure that the safety of the product is maintained.
- Do not enter pool while the robot is working in water.

- When the robotic pool cleaner is underwater or other scenarios where it is not convenient to lift the robot directly, it needs to be pulled out using the supplied hook. Please use the hook correctly and carefully to avoid any accidental injury.
- Do not expose a battery pack or appliance to fire or excessive temperature. Exposure to fire or temperature above 130°C may cause explosion. The temperature of 130°C can be replaced by the temperature of 265°F.
- Under normal use of condition, this equipment should be kept a separation distance of at least 20 cm (7.87 inches) between the antenna and the body of the user.

- The robot is equipped with a range of cutting-edge sensors that play a crucial role in its functionality and performance. To ensure the robot's performance and lifespan, please do not place the robot under extreme environmental conditions for a long time, such as high temperature, strong light, or low temperature. It is recommended to use and store the robot within the requirements of this manual.
- Exceeding an altitude of 2100 m (6889.77 ft) will cause the robotic pool cleaner to be unable to function properly. Therefore, please ensure that the robot is used in areas that comply with this altitude restriction to avoid any issues arising from operating the robot at high altitudes.
- SAVE THESE INSTRUCTIONS.

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1.2 FCC/IC Statement

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

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

1.3 5G Statement

- The device for operation in the band 5150-5250 MHz is only for indoor use to reduce the potential for harmful interference to co-channel mobile satellite systems;
- For devices with detachable anterna(s), the maximm antenna gain peruitted for devices in the bands 5250-5350 MHz and 5470-5725 MHz shall be such that the equipment still complies with the e.i.r.p. limit.

1.4 MPE Requirements

To satisfy FCC / IC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation. To ensure compliance, operation closer than this distance is not recommended.
Under normal use conditions, this equipment should be kept a separation distance of at least 20cm between the antenna and the body of the user.

1.5 CEC

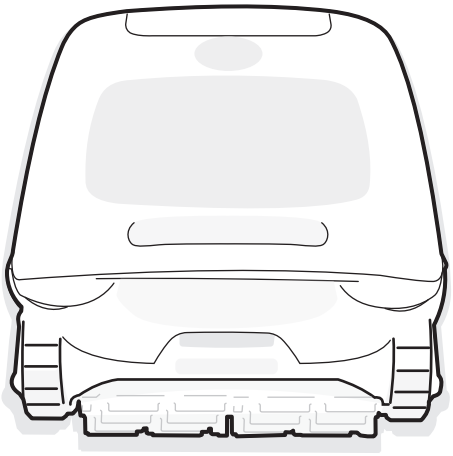
Press and hold "Custom Mode" button for about 20s to enable CEC Mode. And press any button to disable it.

1.6 Sensor Description

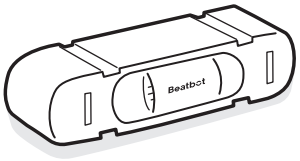
Sensor	Description
AI Vision Sensor	It is used for capturing environmental imagery and identifying object types through AI algorithm to optimize cleaning performance. Model: XBC20E70 V3, Specification: 640H*480V@10bit 180fps, Test distance: Max 70cm
Ultrasonic Sensor	It employs directional transmission of ultrasonic wave and echo analysis to roughly differentiate object types while measuring the distance of surrounding objects. Model: AW-UD1000DV3.3.0-2S5-3L1001, Specification: Test distance: 60-2000mm
TOF Sensor	It utilizes directional emission of infrared light wave and reflection analysis to identify pool boundaries, measuring both reflection presence and intensity for mapping. Model: A05, Specification: Max 1000mm in water
Water Pressure Sensor	It measures the water pressure to calculate the water depth, and can also measure water temperature. Model: LIGOFA05LRYT4-02, Specification: 75-150kpa, -40-125°C

2 Packaging and Accessories

Robotic Pool Cleaner



AquaRefine Kit- Clarifying Agent



Charging Dock



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Genuine Dust and Water-Proof Cover



Hook

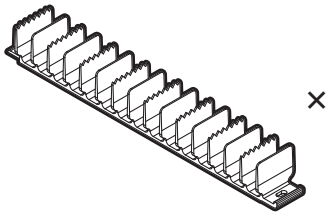


Spare Screws For Side Brush



× 4

Side Brush

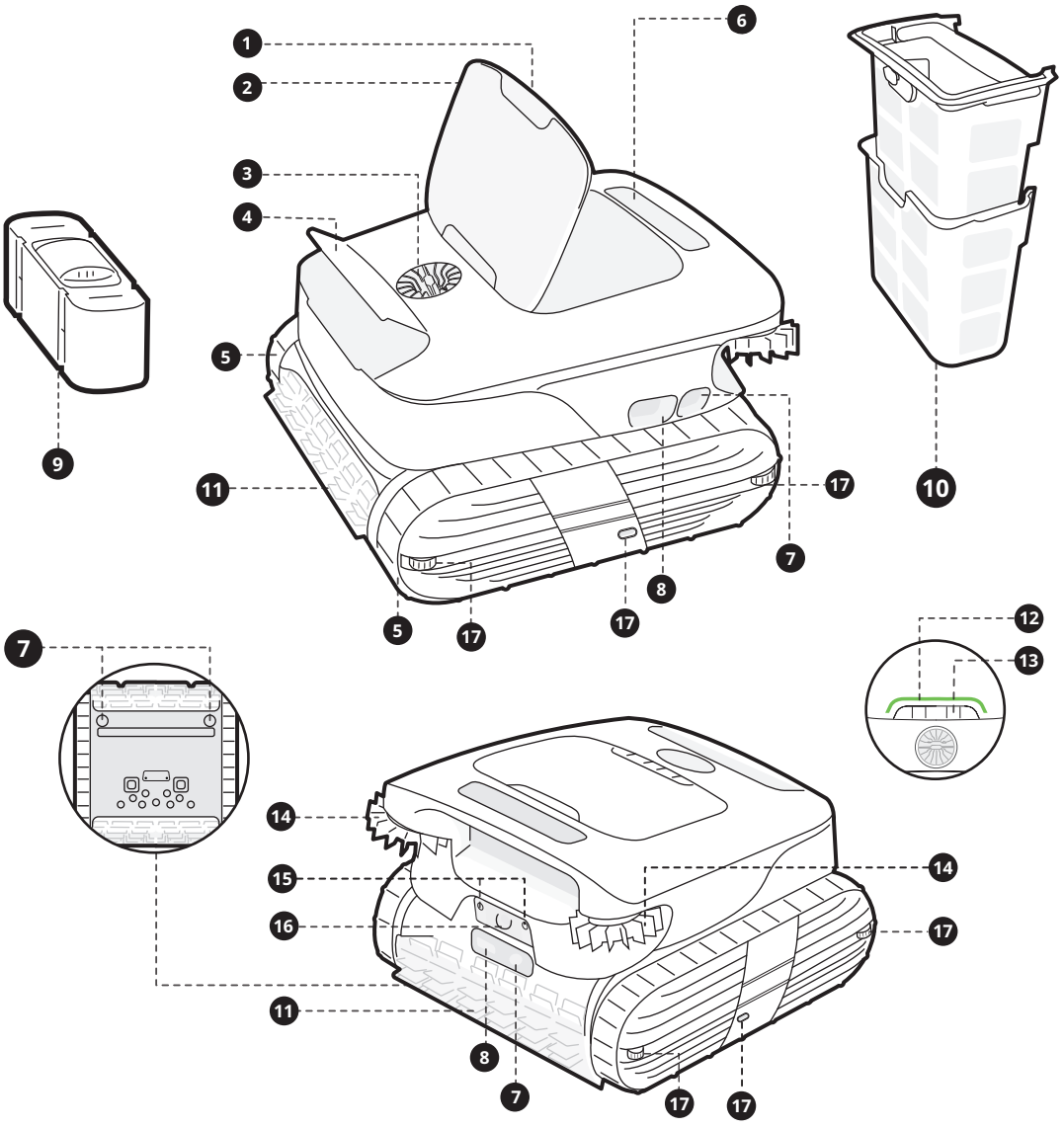


× 4

Screwdriver



3 Product Structure Diagram



1. Push-to-Open Switch
2. Filter Basket Cover
3. Water Outlet
4. Kit Cover
5. Track Wheel*2
6. Handle
7. Ultrasonic Sensor*4
8. TOF Sensor*2
9. AquaRefine Kit – Clarifying Agent
10. Dual Filter Basket
11. Dual-Group Roller Brush
12. Panel Indicator
13. Mode Button
14. Side Brush*2
15. Supplementary Light*2
16. AI Vision Sensor
17. Guide Wheel*6

* The diagram is for reference only. Please refer to the actual product for accuracy.

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4 Product Specifications

4.1 Basic Parameters

Model	AquaSense 2 Ultra
Working Voltage	Robotic pool cleaner: 21.6 V
Charge Input	Charging dock: 100-240 V, 50/60 Hz
Charge Output	Charging dock: 28 V⎓3 A
Nominal Capacity	13400 mAh
Run Time	≈ 4.5 h
Charging Time	≈ 4.5 h
Max Capacity of Filter Basket	3.7 L
Charging Environment Temperature	0°C~40°C (32°F~104°F)
Storage Temperature&Humidity	-20°C~45°C (-4°F~113°F) RH<=75%
Ingress Protection	IP68 for robotic pool cleaner, IPX4 for charging dock

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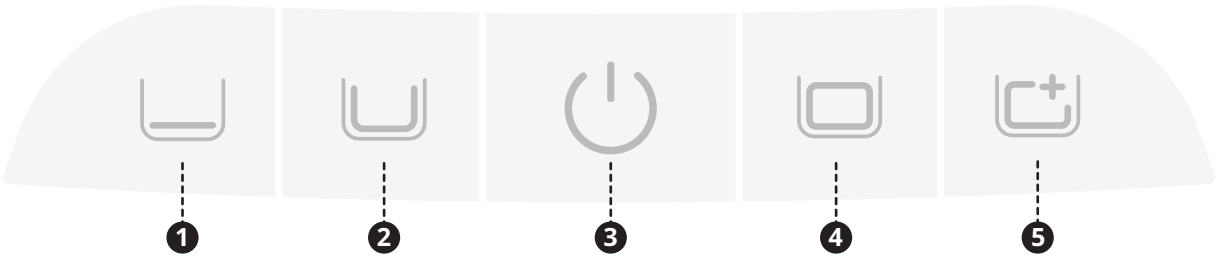
4.2 Wireless Technology Specifications

Wi-Fi	
Operating Frequency	2.4G: 2.400-2.4835 GHz 5G: 5.150-5.725 GHz
Transmitter Power (EIRP)	2.4G: ≤ 19 dBm 5G: ≤ 21 dBm
Bluetooth	
Operating Frequency	2.400-2.4835 GHz
Transmitter Power (EIRP)	≤ 10 dBm

4.3 Water Conditions for Robot Use

Chlorine	Max 4 PPM
Salt	Max 5000 PPM
Working Temperature	6-35°C (43-95 °F)
PH	Recommended 7.0-7.8
Water Depth	0.5-3.0 m (1.64-9.84 ft)

5 Robot Buttons



- **Power Button 3**
  Short press to turn the robot on, and press and hold for about 3s to turn it off.

- **Mode Button**
  Short press the corresponding mode button to switch.
  - Floor Mode (1): Clean the floor;
    (Press and hold for about 3s to enable the dispensing of clarifier.)
  - Standard Mode (2): Clean in the order of floor, walls and waterline;
  - Pro Mode (4): Clean in the order of floor, walls, waterline and surface;
  - Custom Mode (5): You can set the cleaning area and duration according to your needs via the App. Once your settings are successfully configured in the App, they will sync with this mode button.

- **Hotspot Configuration**
  Press and hold both the "Power (3)" and "Floor Mode (1)" buttons simultaneously for about 3s to trigger the hotspot configuration.

- **Factory Reset**
  Press and hold the "Standard Mode (2)", "Power (3)" and "Pro Mode (4)" buttons simultaneously for about 10s to restore the factory settings.

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6 Lighting Effects

Solid green light		Battery sufficiently charged
Solid yellow light		Battery low
Solid orange light		Battery nearing depletion
Solid purple light		Clarifier dispensing
Flashing orange light		Robot malfunction
Flashing blue light		Network configuring/OTA upgrading
Breathing light		Charging

* During the charging process, the light color reflects the current battery level.

7 APP

7.1 Instructions for Using the APP

- **APP Download**

  You can either scan the QR code below or search for "Beatbot" in the App Store or Google Play to download the latest App.

- **Robot Connection**

  Please check the following items before connecting:

  - Make sure the robot is turned on;
  - Confirm that both your mobile phone and the robot are within the same Wi-Fi coverage range with a strong signal;
  - Ensure your phone is connected to Wi-Fi;
  - Bring the phone close to the robot (the distance between your phone and the robot should be within 1m).

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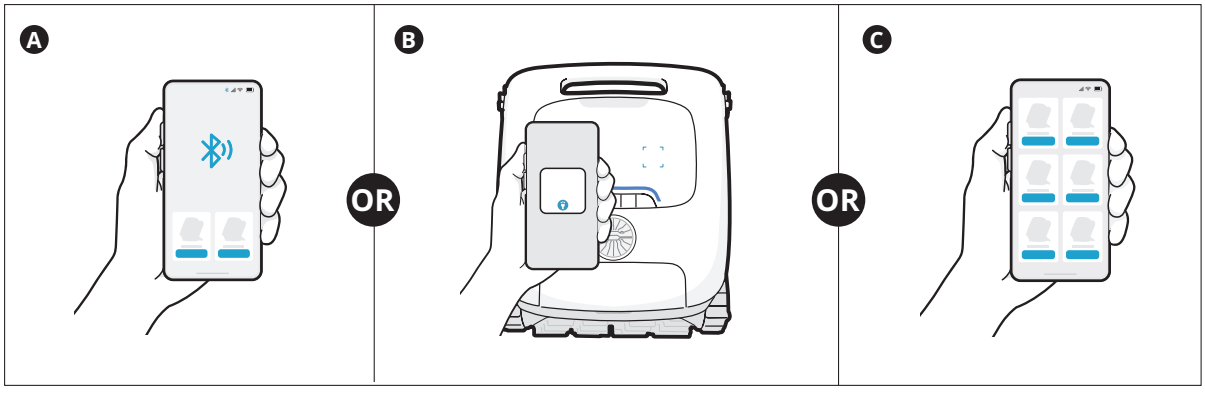
Press the "Power" and "Floor Mode" buttons simultaneously for about 3s, and when you see the indicator flashing blue, the robot is ready for network setup. Then, you can choose either of the following methods to complete the connection:

A. Add via Bluetooth: Make sure that the bluetooth of your mobile phone is turned on before connection. Tap "Add Device" on the home page of the App, and it will automatically search for your robot model. Follow the App instructions to complete the connection.

B. Scan to Add: Tap the "Scan to Add" on the home page of the App, aim the camera at the QR code on the robot, and follow the App instructions to complete the connection.

C. Add Manually: Tap the "Add Device" on the home page of the App, choose your robot model, and follow the App instructions to complete the connection.

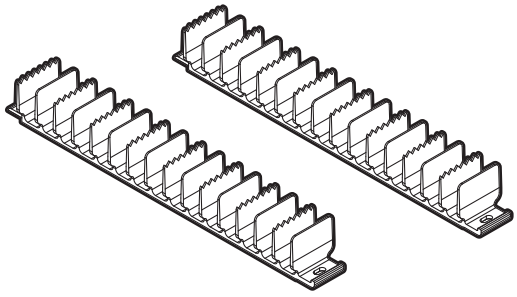


8 Product Operation

8.1 Installation of Side Brush

- Take out the side brushes from the package (❶).
- Attach one end of the brush to the protrusion (❷).
- Rotate the brush around the hub and secure the other end to the protrusion (❸).
- Ensure both brushes are firmly attached and rotate freely (❹).

❶



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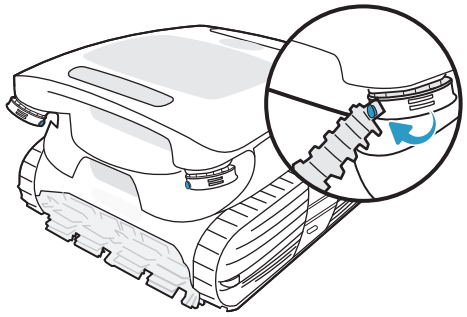

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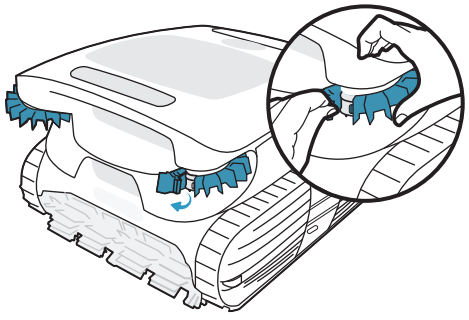

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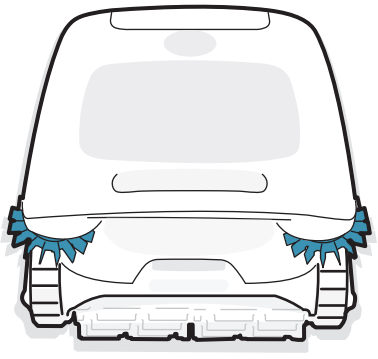

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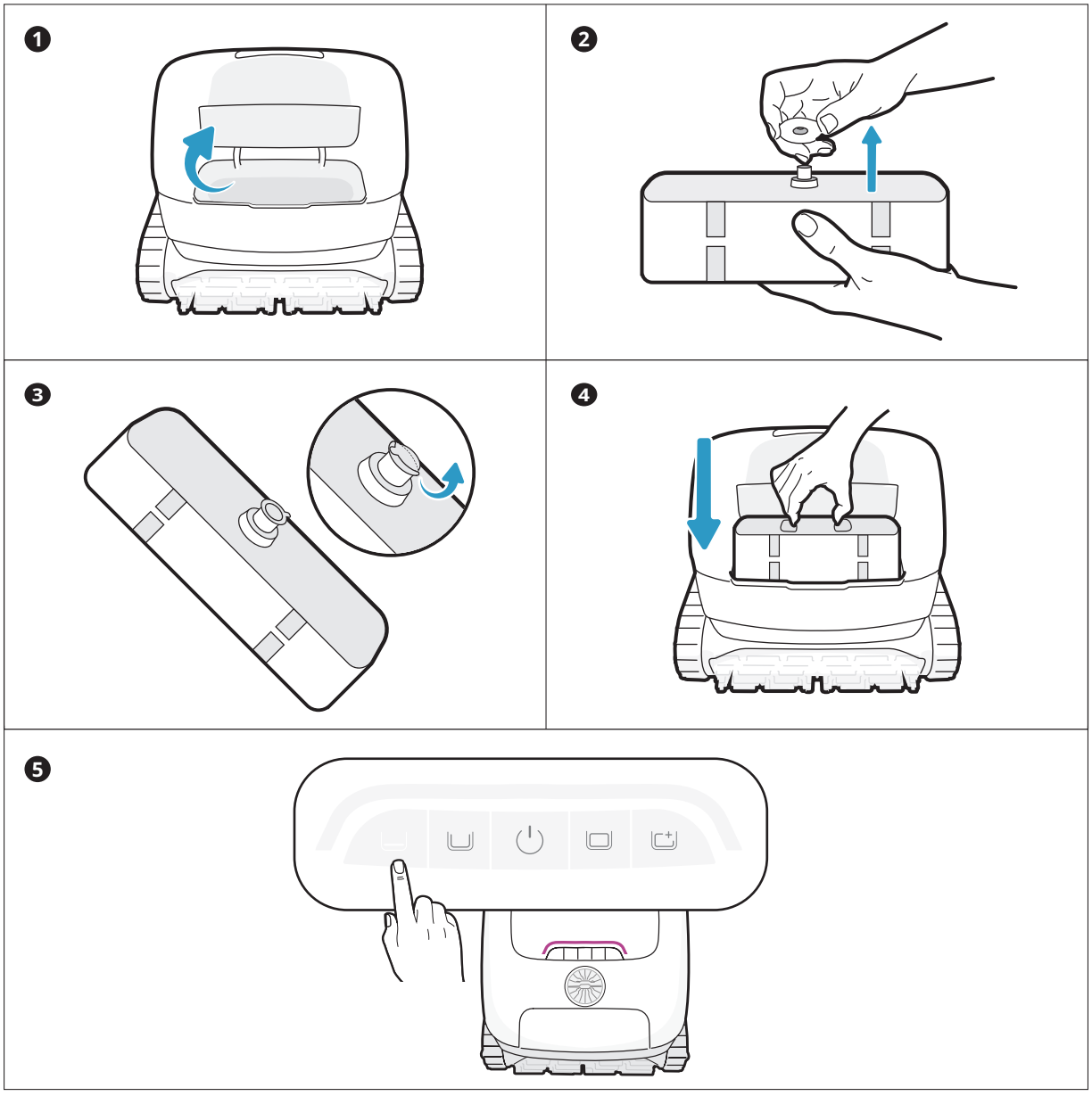
8.2 Installation of AquaRefine Kit- Clarifying Agent

- Open kit cover of the robot (❶).
- Take out the kit and remove the cap (❷).
- Tear off the aluminum film on the interface of the kit (❸).
- Position the kit onto the robot with the interface facing downwards. Gently but firmly press it into place until you hear a "click" sound or a voice prompt. Then, close the cover (❹).
- Press and hold the "Floor Mode" button for about 3s to activate the clarifying agent dispensing. The purple light on the robot indicates a successful activation. Press and hold the button for about 3s again to deactivate it (❺).



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8.3 Charging

- **Install the charging dock**

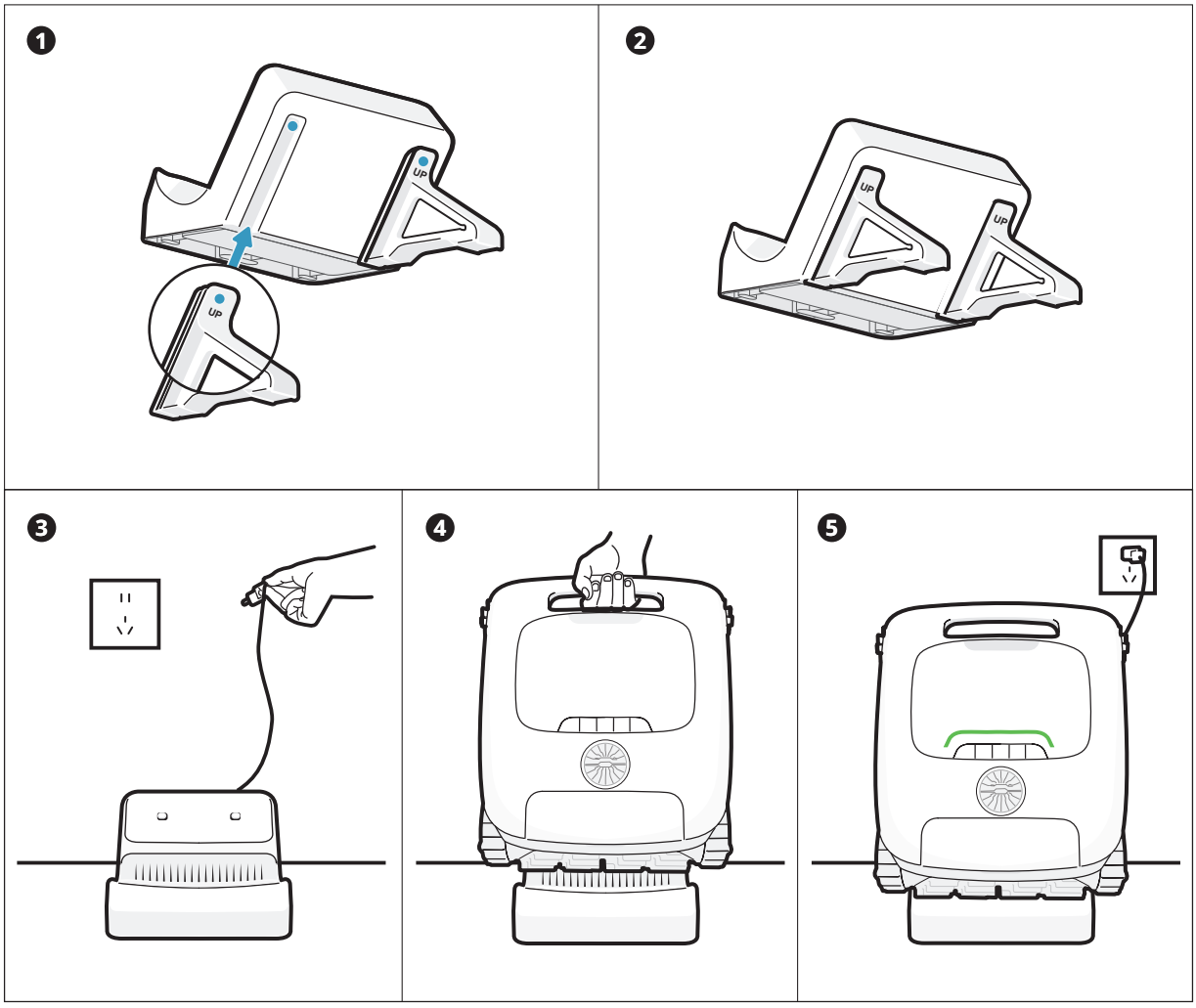
  Push the bracket from the bottom up into the groove on the back of the charging dock (❶). It is properly installed when you hear a "click" (❷).

- **Connect the power supply**

  Plug into the power source (❸).

- **Charge the robot**

  Place the robot on the charging dock (❹). When the panel indicator on the robot shows a breathing light (❺), it means the robot is charging.



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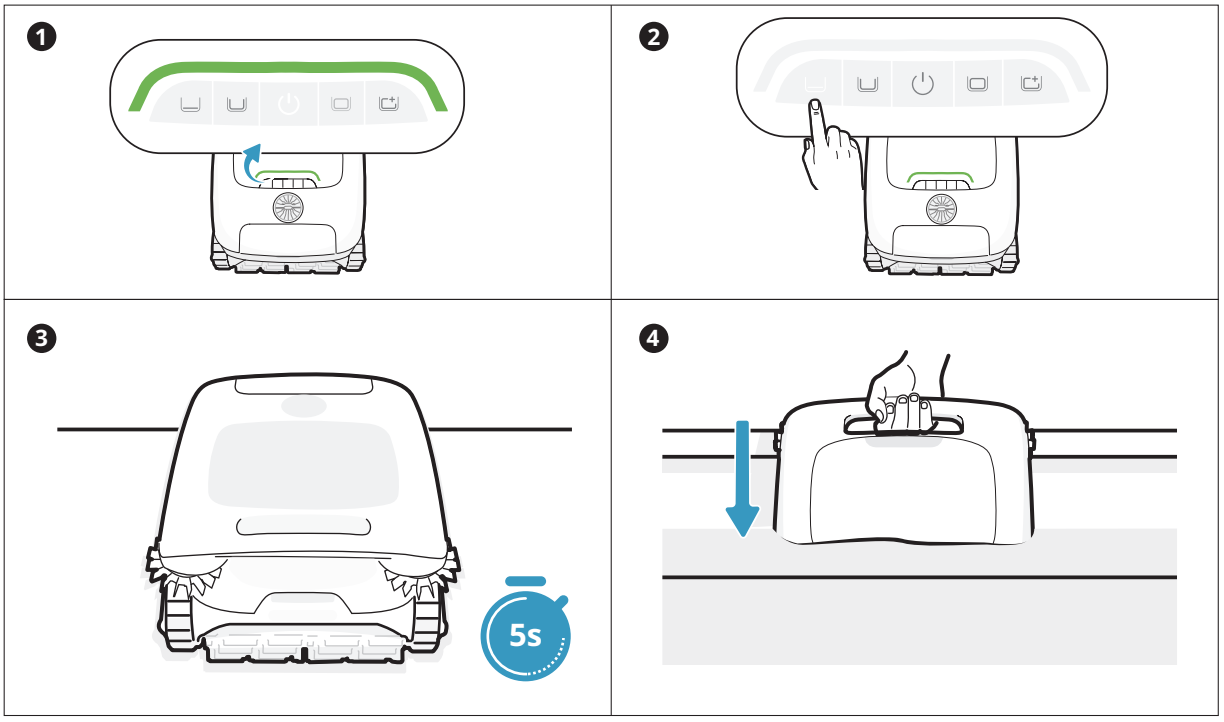
Tips

- Before using the robot, please make sure it is sufficiently powered.
- The charging temperature is 0~ 40°C /32~104°F. While charging, it is recommended to keep the robot within the Wi-Fi coverage area and away from moisture and direct sunlight.

8.4 Preparations Before Cleaning

- Before cleaning, make sure the robot is turned on and has enough power. The panel indicator on the robot should be solid green when the robot is fully charged (❶). (If you have connected the robot to the App, you can also check the power level within the App).
- Set the cleaning mode, and the selected mode button will show solid white (❷).
- **Before entering the water, place the robot on a level surface and wait for about 5s for it to calibrate (❸).**
- After placing the robot in the water, it will start cleaning automatically (❹).



Before entering the water, it is crucial to place the robot on a level ground and to wait for about 5s for it to calibrate. By following these steps, you ensure maximize the effectiveness of the robot's cleaning path.

Tips

- Before cleaning, please make sure there are no foreign objects such as towels or toys in the pool.
- Avoid animals and people from entering the pool during cleaning.
- For optimal cleaning results, it's recommended to operate the robot separately from the circulation pump.
- When the robot enters the water, the Wi-Fi signal weakens and it disconnects from the phone. Once the robot exits the water, including when it is on the water's surface, the Wi-Fi signal will be restored. The App will automatically reconnect and synchronize the relevant cleaning data.

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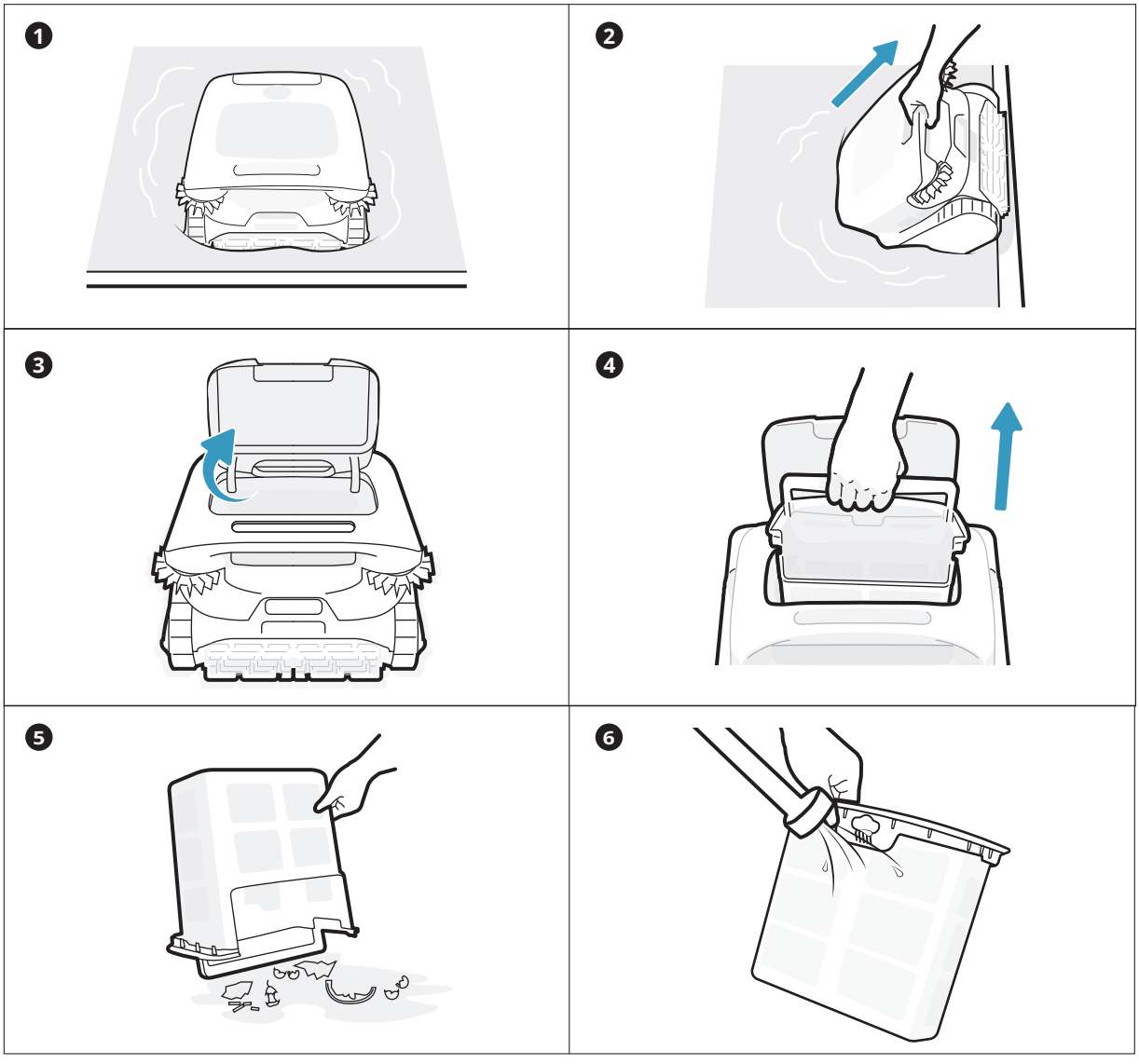
8.5 Post-Cleaning Maintenance

- **After completing the cleaning task, the robot will automatically park itself at the edge of the pool (❶).**
- **Pull the robot out of the swimming pool gently (❷).**
- **Clean the filter basket**
  Open the top cover of the robot (❸), take out the filter basket (❹). Empty the filter basket (❺), and rinse it with water (❻).



Tips

- After completing the cleaning and being lifted out of the water, the robot will automatically drain.
- After the robot stops dripping water, put it back on the charging dock for the next use.
- If the robot fails to return to the poolside automatically, you can manually guide it using the parking/remote control function on the App, or use the supplied hook to lift the robot out.

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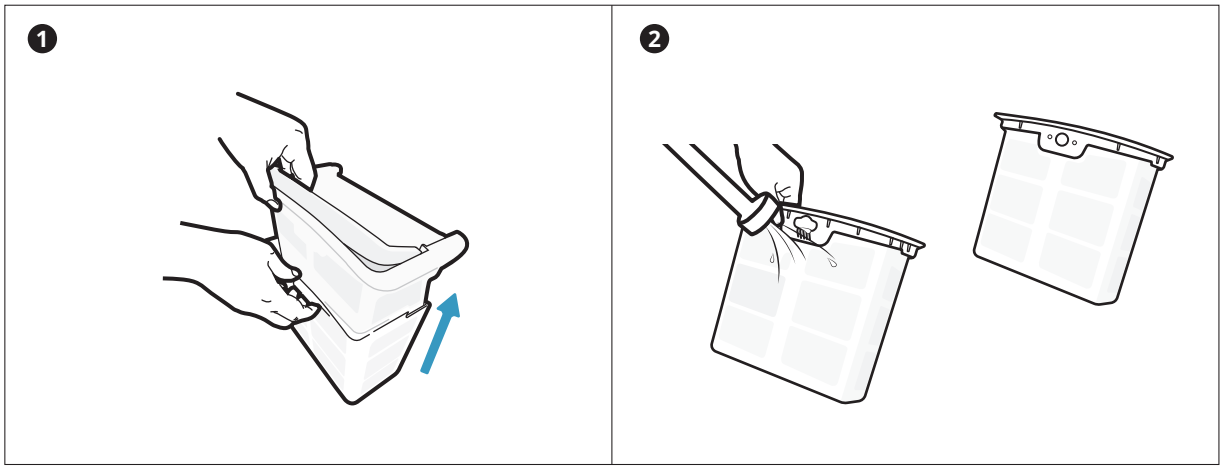
9 Maintenance and Replacement

Ensure that the robot is disconnected from the power before performing maintenance.

Dual Filter Basket

Clean the basket every 2-3 days or as needed based on its dirtiness of it to maintain optimal working efficiency.

- Separate the outer and inner baskets.
- Rinse them with water. For persistent algae buildup, use a brush for cleaning.



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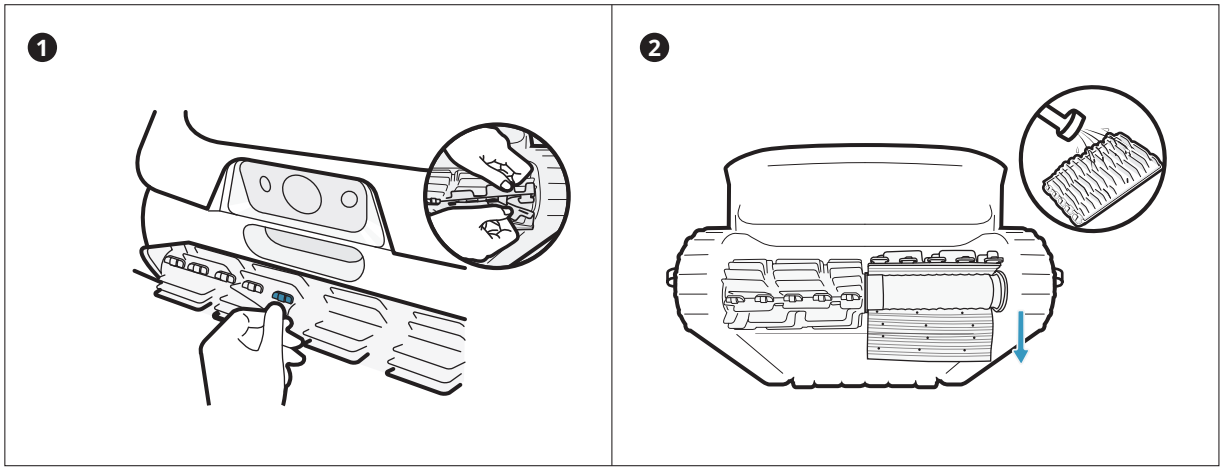
Tip To avoid causing damage to the filter basket during this process, it is essential to use a soft-bristled brush and handle it with care.

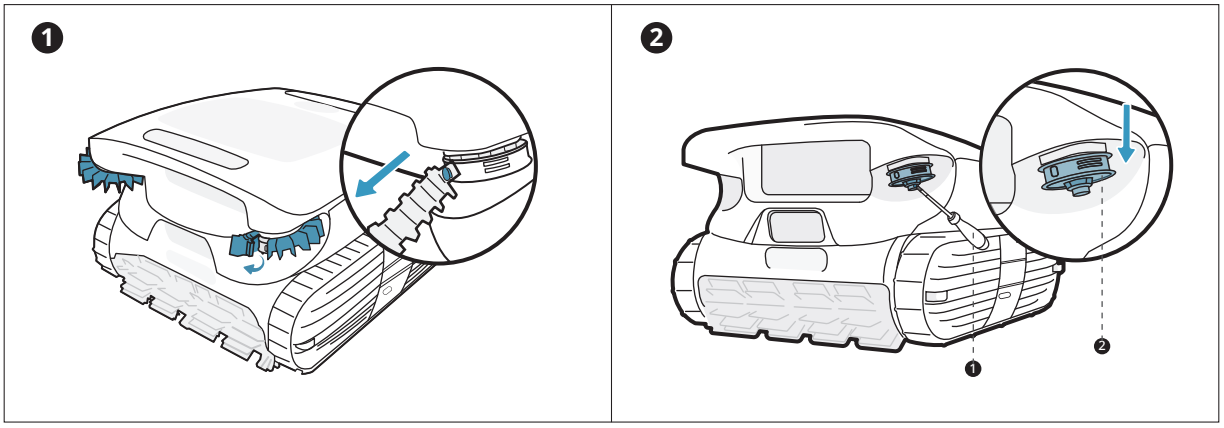
Roller Brush

- Unfasten and remove the roller brush.
- If the brush has accumulated debris like mud or tangled hair, rinse it thoroughly using a hose.



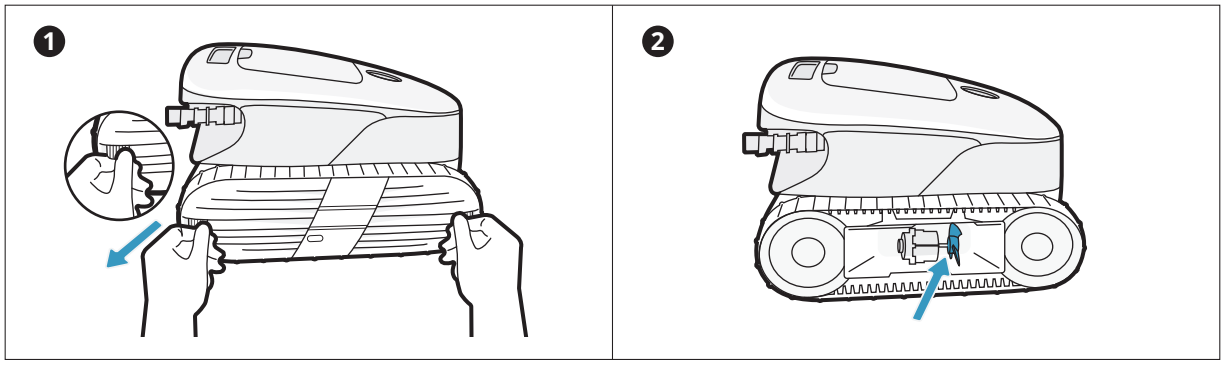
Side Brush

- Unfasten and remove the side brush.
- Use the supplied screwdriver to remove the bottom screw, then pull out the hub. Clean any debris or entanglements from it.



Propeller

- Securely grasp the guide wheels with both hands, and gently slide out the side panel.
- Ensure there are no obstructions wrapped around the propellers.



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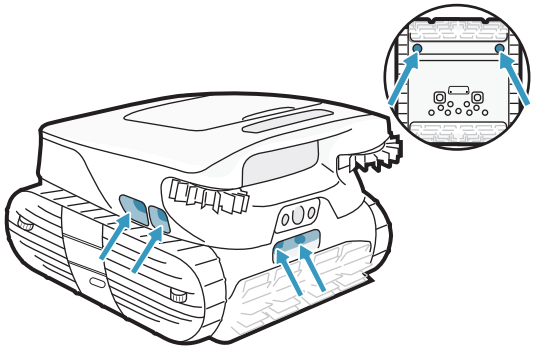
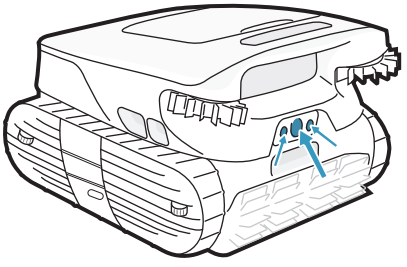
Ultrasonic Sensor&TOF Sensor

Wipe them with a soft dry cloth.



AI Vision Sensor&Supplementary Light

Wipe them with a soft dry cloth.



10 Storage

Safety Precautions: Keep the robot away from extreme temperatures, open flames, and places accessible to children.

Storage Environment: Find a cool, dry indoor storage space that is shielded from direct sunlight, rain, and frost.

Draining: For long-term storage, press and hold the "Pro Mode" button for 3 seconds to ensure all water inside the robot is fully drained. Please wait approximately 3 minutes for the draining process to complete.

Dust Protection: Properly protect the robot from dust when stored for a long period of time. It is recommended to use the supplied cover for storage. Please check the accessory manual for details.

Power Off and Battery Management: Power off and disconnect the robot from the power source when storing. Check the battery level at least every 6 months and charge it to around 50%.

11 FAQ

11.1 Why does the robot not move or move slowly at the pool floor?

- It's recommended to operate the robot separately from the circulation pump.
- The robot may be stuck by the drain or other obstacles on the pool floor. If it does not get out of the trap successfully after a few minutes, please help it manually by using the hook. And the robot will resume cleaning after getting out of the trap.
- If the pool is too dirty, the robot will quickly suction up debris and sludge. Please check the filter basket promptly to see if it needs cleaning.

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11.2 Why does it take so long for the robot to enter the water?

The robot needs some time to release the air in the buoyancy chamber when it enters the water. Please wait patiently for about 3 minutes.

11.3 Why is the robot offline?

- Weak Wi-Fi signal: The robot may be too far from the Wi-Fi signal range or could have entered the water, causing the network to disconnect. The robot will reconnect automatically once the signal is restored.
- Robot shutdown: The robot automatically shuts down when the battery runs out. After charging and powering it on, the robot will reconnect automatically.
- Robot connected by another account: The robot may be connected to another user's account. You can reset its Wi-Fi settings and reconnect.
- Router related: If the router is rebooting, if there are changes to the router's Wi-Fi name or password, or if the router has blacklisted the device, please address these issues first to determine if the device comes back online. If the issue persists, reset the Wi-Fi and reconnect.

11.4 Why can't the robot be charged?

- Please check if the charging dock is properly plugged in.
- Ensure that the robot is correctly positioned on the charging dock.
- Examine whether the charging pins of the dock and the robot are rusted or soiled. If so, please clean them before attempting to charge again.

11.5 Why is there noise before the robot starts cleaning and finishes cleaning?

This is normal. The robot is draining, and it is expected to last for about 3 minutes.

* If you encounter any issues during usage, please visit the official website/APP to check the FAQ or contact our customer service for help.

12 After-sales Service

Warranty Policy	3-year warranty
After-sales Email	service@beatbot.com
Official Website	www.beatbot.com
North America Toll Free	(833) 702-4399 Mon-Sun 9:00 am-6:00 pm (CST)

* For the latest after-sales policy, please refer to the Beatbot official website.

The lithium-ion pack contains substances that are hazardous to the environment. Before disposing of the robot, please remove the battery pack, then discard or recycle it. It is used according to local laws and regulations of the country or region.

WEEE Information

All products bearing this symbol are waste electrical and electronic equipment (WEEE as in directive 2012/19/EU) which should not be mixed with unsorted household waste. Instead, you should protect human health and the environment by handing over your waste equipment to a designated collection point appointed by the government or local authorities for recycling waste electrical and electronic equipment. Correct disposal and recycling will help prevent potential negative consequences to the environment and human health. Please contact the installer or local authorities for more information about the location as well as the terms and conditions of such collection points.