



# DEEBOT **N20** PRO

# DEEBOT **N20**

## Instruction Manual

# Important Safety Instructions

## IMPORTANT SAFETY INSTRUCTIONS

When using an electrical Appliance, basic precautions should always be followed, including the following:

## READ ALL INSTRUCTIONS BEFORE USING THIS APPLIANCE SAVE THESE INSTRUCTIONS

1. The Appliance is not intended for use by persons(including children)with reduced physical, sensory or mental capabilities, or lack of experience and knowledge, unless they have been given supervision or instruction concerning use of the Appliance by a person responsible for their safety.
2. Clear the area to be cleaned. Remove power cords and small objects from the floor that could entangle the Appliance. Tuck rug fringe under the rug base, and lift items such as curtains and tablecloths off the floor.
3. If there is a drop off in the cleaning area due to a step or stairs, you should operate the Appliance to ensure that it can detect the step without falling over the edge. It may become necessary to place a physical barrier at the edge to keep the unit from falling. Make sure the physical barrier is not a trip hazard.
4. Only use as described in this manual. Only

use attachments recommended or sold by the manufacturer.

5. Please make sure your power supply source voltage matches the power voltage marked on the Docking Station.
6. For INDOOR household use ONLY. Do not use the Appliance in outdoor, commercial or industrial environments.
7. Use only the original rechargeable battery and Docking Station provided with the Appliance from the manufacturer. Non-rechargeable batteries are prohibited.
8. Do not use without dust bin and/or filters in place.
9. Do not operate the Appliance in an area where there are lit candles or fragile objects.
10. Do not use in extremely hot or cold environments (below -5°C/23°F or above 40°C/104°F).
11. Keep hair, loose clothing, fingers, and all parts of body away from any openings and moving parts.
12. Do not operate the Appliance in a room where an infant or child is sleeping.
13. Do not use Appliance on wet surfaces or surfaces with standing water.
14. Do not allow the Appliance to pick up large objects like stones, large pieces of paper or any item that may clog the Appliance.
15. Do not use Appliance to pick up flammable or combustible materials such as gasoline, printer or copier toner, or use in areas where they may be present.









16. Do not use Appliance to pick up anything that is burning or smoking, such as cigarettes, matches, hot ashes, or anything that could cause a fire.
17. Do not put objects into the suction intake. Do not use if the suction intake is blocked. Keep the intake clear of dust, lint, hair, or anything that may reduce air flow.
18. Take care not to damage the power cord. Do not pull on or carry the Appliance or Docking Station by the power cord, use the power cord as a handle, close a door on the power cord, or pull power cord around sharp edges or corners. Do not run Appliance over the power cord. Keep power cord away from hot surfaces.
19. If the power cord is damaged, it must be replaced by the manufacturer or its service agent in order to avoid a hazard.
20. Do not use the Docking Station if it is damaged. The power supply is not to be repaired and not to be used any longer if it is damaged or defective.
21. Do not use with a damaged power cord or receptacle. Do not use the Appliance or Docking Station if it is not working properly, has been dropped, damaged, left outdoors, or come in contact with water. It must be repaired by the manufacturer or its service agent in order to avoid a hazard.
22. The lithium battery type suitable for CH2405 is max. 8 cells, max. nominal voltage DC 14.4 V, and rated capacity 4,800 mAh. The battery must be removed and discarded according to local laws and regulations before disposal of the Appliance.
23. Turn OFF the power switch before cleaning or maintaining the Appliance.
24. The plug must be removed from the receptacle before cleaning or maintaining the Docking Station.
25. Remove the Appliance from the Docking Station, and turn OFF the power switch to the Appliance before removing the battery for disposal of the Appliance.
26. The battery must be removed and discarded according to local laws and regulations before disposal of the Appliance.
27. Please dispose of used batteries according to local laws and regulations.
28. Do not incinerate the Appliance even if it is severely damaged. The batteries can explode in a fire.
29. When not using the Docking Station for a long period of time, please unplug it.
30. The Appliance must be used in accordance with the directions in this Instruction Manual. ECOVACS ROBOTICS cannot be held liable or responsible for any damages or injuries caused by improper use.
31. The robot contains batteries that are only replaceable by skilled persons. To replace the robot's battery, please contact Customer Service.
32. If the robot will not be used for a long time, power OFF the robot for storage and unplug the Docking Station.
- 33. WARNING: For the purposes of recharging the battery, only use the detachable supply unit CH2405 provided with the Appliance.**

**Device Update**

Typically, some devices are updated bi-monthly, but not always so specific.  
Some devices, especially those that went on sale more than three years ago, will only be updated if a critical vulnerability is found and fixed.

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.

Ensure the robot is always connected to a network, for smart features to function properly.

	Class II
	Short-circuit-proof safety isolating transformer
	Switch mode power supply
	For indoor use only
	Direct current
	Alternating current
	Read all instructions before using (this appliance)
	Time-lag miniature fuse-link

**For EU Countries**

For EU Declaration of Conformity information, visit <https://www.ecovacs.com/global/compliance>



**Correct Disposal of this Product**

This marking indicates that this product should not be disposed of with other household 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 safely recycle this product.

## European Union Compliance Statement Information on Disposal for Users of Waste Electrical & Electronic Equipment



This symbol on the product or on its packaging indicates that used electrical and electronic products should not be mixed with unsorted municipal waste. For proper treatment, it is your responsibility to dispose of your waste equipment by arranging to return it to designated collection points.

Disposing of this product correctly will help save valuable resources and prevent any potential negative effects on human health and the environment, which could otherwise arise from inappropriate waste handling.

To return your used device, please use the return and collection systems or contact the retailer where the product was purchased, which is free of charge, please contact your local authority for further details of your nearest designated collection point.

Penalties may be applicable for incorrect disposal of this waste, in accordance with your national legislation.

## Restriction of the use of certain hazardous substances (RoHS) Directive

Ecovacs Home Service Robotics Co., Ltd. hereby declares the whole product including parts (cables, cords, and so on) meets the requirements of RoHS Directive 2011/65/EU and amendment Commission Delegated Directive (EU) 2015/863 on the restriction of the use of certain hazardous substances in electrical and electronic equipment ("RoHS recast" or "RoHS 2.0").

## Radio Equipment Directive

Ecovacs Home Service Robotics Co., Ltd. hereby declares that the product listed in this section comply with the essential requirements and other relevant provisions of the Radio Equipment Directive 2014/53/EU.

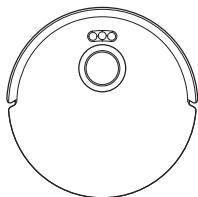
## Europe Authorised Representative:



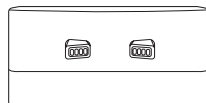
ECOVACS Europe GmbH  
Holzstrasse 2 | D-40221 Düsseldorf | Germany

Ecovacs Home Service Robotics Co., Ltd. hereby declares that the product comply with the essential requirements and other relevant provisions of the RoHS Directive 2011/65/EU and amendment Commission Delegated Directive (EU) 2015/863, the Radio Equipment Directive 2014/53/EU. The declaration of conformity can be viewed at the following address: <https://www.ecovacs.com/global/compliance>.

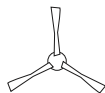
# PACKAGE CONTENTS



Robot



Docking Station



Side Brush



Instruction Manual



Plugs

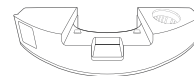
## OZMO Pro 2.0 Vibrating Mopping System and Vacuum Module (DKX55)



OZMO Pro 2.0  
Vibrating Mopping System

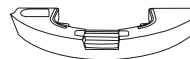


Washable Mopping Pad

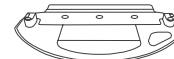


Vacuum Module  
(pre-installed)

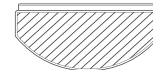
## Reservoir and Mopping Pad Module (DKX56)



Reservoir  
(pre-installed)



Mopping Pad Plate

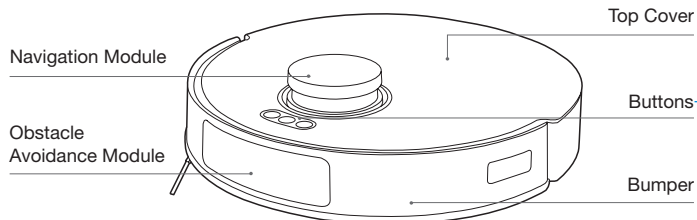


Washable Mopping Pad

**Note:** Figures and illustrations are for reference only and may differ from actual product appearance. Product design and specifications are subject to changes without notice.

# PRODUCT DIAGRAM

## Robot

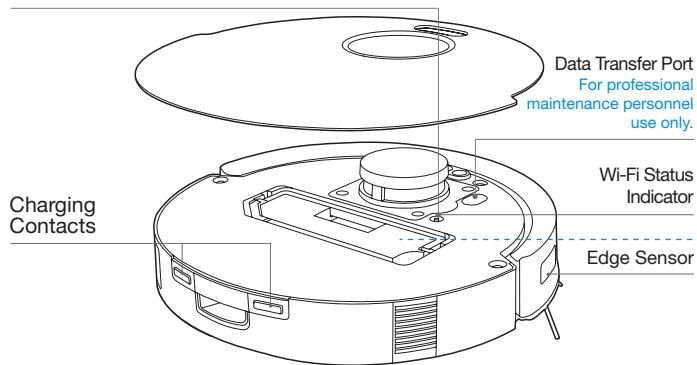


## Buttons

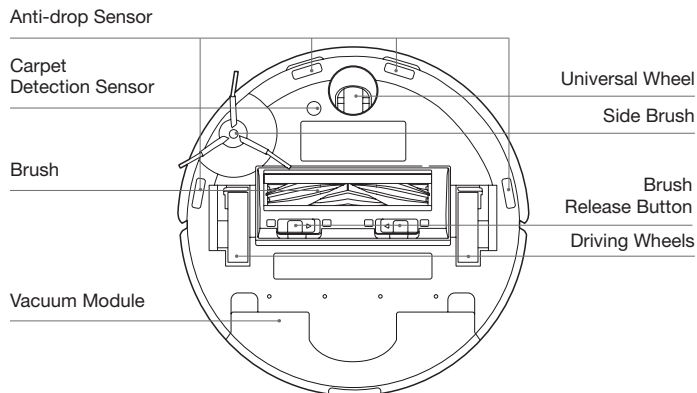
- Short Press: Exit/Return to the Station
- Short Press: Start/Pause/Continue    Long Press: Power on/off
- Short Press: Start/End Spot Clean    Long Press: Child Lock

## RESET Button

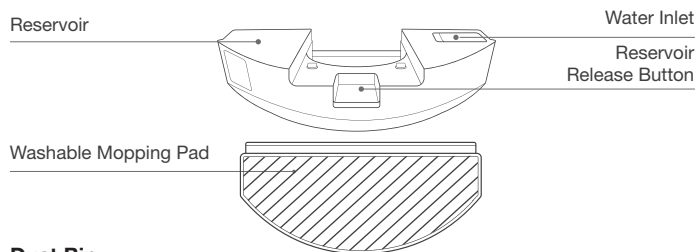
**Connect to App:** Short press RESET button and follow voice prompts to connect to the App.  
**Restore to default settings:** Press and hold RESET Button for 5 s. After you hear the voice prompt, the startup music will be played and the robot will be restored to default settings.



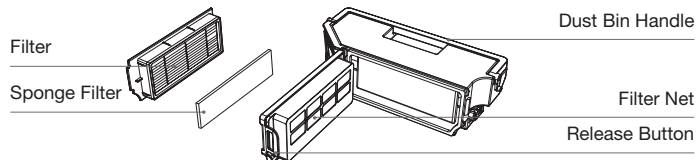
## Bottom View (DKX55)



## OZMO Pro 2.0 Vibrating Mopping System



## Dust Bin



**Bottom View (DKX56)**

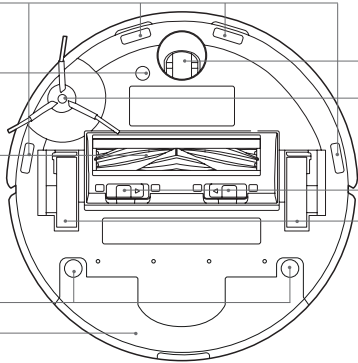
Anti-drop Sensor

Carpet  
Detection Sensor

Brush

Mounting Slots for  
Mopping Pad Plate

Reservoir



Universal Wheel

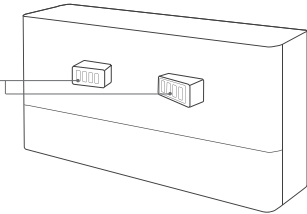
Side Brush

Brush  
Release Button

Driving Wheels

**Docking Station**

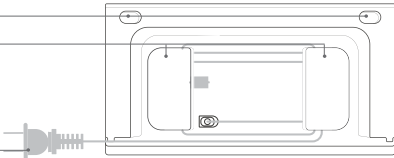
Charging Contacts



Plug Installation Holes

Cable Trunking

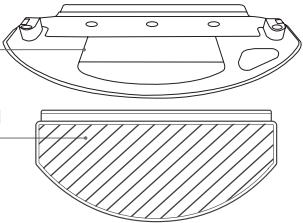
Power Plug



**Mopping Pad Module**

Mopping Pad Plate

Washable Mopping Pad



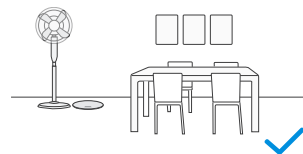
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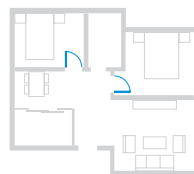
## SENSORS

Name	Functional Description
Navigation Module	By utilizing the principle of triangulation, which involves emitting and receiving laser beams reflected by surrounding objects, precise distance measurement information between the DEEBOT and nearby objects can be calculated through algorithms. When the DEEBOT moves within a certain environment, the positions of surrounding objects are determined to create a spatial map of the DEEBOT's surroundings. The measurement range is 8 m.
Obstacle Avoidance Module	With three sets of infrared transmitter and receiver pairs, it operates on the principle of infrared reflection to gauge obstacle distances by signal strength. The maximum detection range is approx. 10 cm.
Anti-drop Sensor	With infrared distance measurement, the infrared sensor can detect the distance between the bottom of DEEBOT and ground. DEEBOT will not move forward when there are stairs in front or the identified distance exceeds the preset threshold, realizing the Anti-drop. The trigger distance is approx. 60 mm.
Carpet Detection Sensor	The ultrasound probe can emit ultrasonic waves with a frequency of 300KHZ. The energy of the ultrasonic waves is absorbed by the carpet. If the reflected energy is below the threshold, the DEEBOT recognizes the presence of the carpet. According to ECOVACS lab tests, currently, over 50 types of carpets available on the market can be identified.
Edge Sensor	With infrared distance measurement, DEEBOT can detect the distance between itself and objects on its right side. When there is a wall or obstacle on the right side, DEEBOT will perform edge cleaning to avoid missing spots or collisions.
Anti-collision Sensor	When the transmitted signal is blocked by an obstacle, the signal receiver will not be able to receive the signal. With this principle, the robot will avoid obstacles when colliding with them.

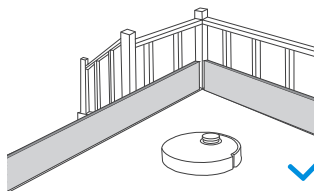
## NOTES BEFORE CLEANING



Tidy up the area to be cleaned by putting furniture, such as chairs, in their proper place.



During the first use, make sure each room door is open to help DEEBOT fully explore your house.



It may be necessary to place a physical barrier at the edge of a drop to stop the unit from falling over the edge.



Put away objects including cables, cloths and slippers, etc. on the floor to improve the cleaning efficiency.



Before using the product on a rug with tasseled edges, please fold the rug edges under.



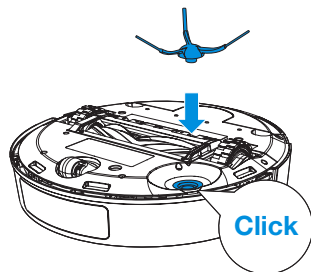
Please do not stand in narrow spaces, such as hallways, and make sure not to block sensors.

## QUICK START

Please remove all protective materials before use.

### 1 Installation

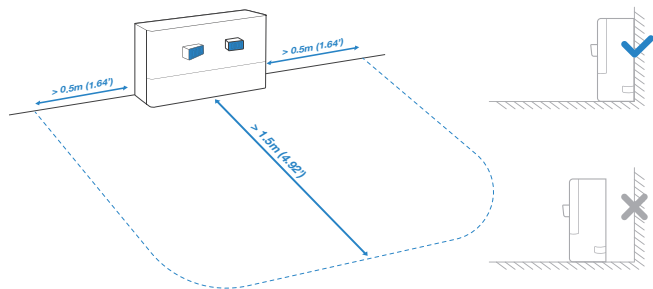
The sound of Click indicates proper installation.



### 2 Place the Docking Station

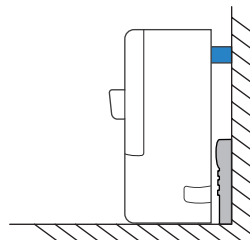
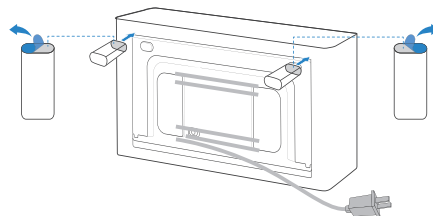
Keep the area around the Docking Station clear of objects, especially objects with reflective surfaces.

**Note:** It is recommended to place the Docking Station on a hard floor to experience complete DEEBOT functions.



### 3 Install Plugs (for homes with baseboards)

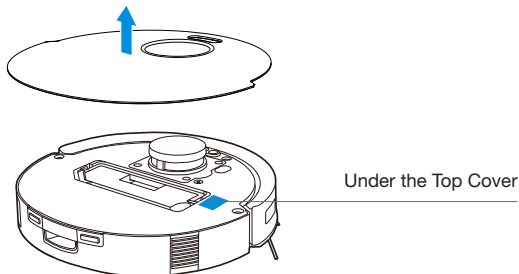
Remove the protective sticker and insert the sticky end into the installation holes.



## DOWNLOAD THE ECOVACS HOME APP

To enjoy all available features, it is recommended to control your DEEBOT via the ECOVACS HOME App.

1. Scan the QR Code under the Top Cover to download the App.

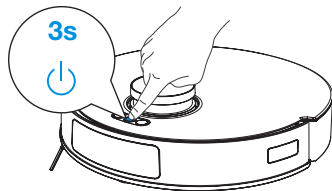


2. Search ECOVACS HOME to download the App.



## POWER ON DEEBOT

Press and hold  for 3 seconds to power on DEEBOT.




## CONNECT DEEBOT WITH APP

### Wi-Fi Network Requirements:

- You are using a 2.4 GHz or 2.4/5 GHz mixed network.
- Your router supports 802.11b/g/n and IPv4 protocol.
- Do not use a VPN (Virtual Private Network) or Proxy Server.
- Do not use a hidden network.
- WPA and WPA2 using TKIP, PSK, AES/CCMP encryption.
- WEP EAP (Enterprise Authentication Protocol) is not supported.
- Use Wi-Fi channels 1-11 in North America and channels 1-13 outside North America (refer to local regulatory agency).
- If you are using a network extender/repeater, the network name (SSID) and password are the same as your primary network.
- Please enable the WPA2 on your router.

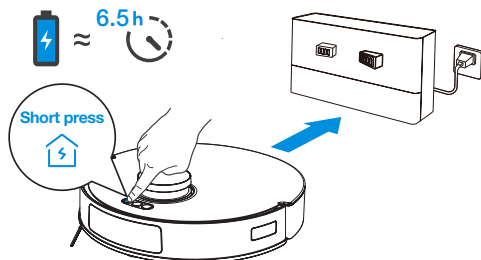
### Wi-Fi Indicator

	Flashing slowly	Disconnected to Wi-Fi
	Flashing quickly	Connecting the App
	On	Connected to Wi-Fi

Please be aware that the realization of intelligent functions such as remote startup, voice interaction, 2D map display and control settings, and personalized cleaning (depending on different products) requires users to download and use the ECOVACS HOME App, which is constantly updated. You need to agree to our Privacy Policy and User Agreement before we can process some of your basic and necessary information and enable you to operate the product. If you do not agree with our Privacy Policy and User Agreement, some of the aforementioned intelligent functions cannot be realized through the ECOVACS HOME App, but you can still use the basic functions of this product for manual operation.

## CHARGE DEEBOT

Short press  to recall DEEBOT to enter the Docking Station to charge.




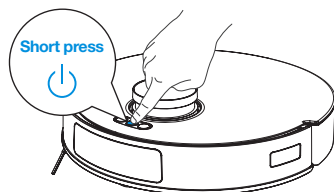
## OPERATE DEEBOT

Remove the Mopping Pad Plate/Module before mapping. When creating a map for the first time, please follow DEEBOT to help eliminate some minor issues.

For example, DEEBOT may get stuck under the furniture. Please refer to the following solutions:

- ① Raise your low sitting furniture if possible;
- ② Cover the bottom of the furniture;
- ③ Set up Virtual Boundary via the App.

Before first vacuuming, please make sure DEEBOT is in the Docking Station and fully charged. Short press  to start cleaning and mapping.



### Note:

- Do not frequently remove washable mopping pads.
- Do not use a rag or any other object to scratch the Mopping Pad Plate.
- When the ECOVACS HOME App prompts that the mopping pad needs to be replaced, please replace it in time. Explore more accessories at ECOVACS HOME App or at <https://www.ecovacs.com/global>.

## REGULAR MAINTENANCE

### Maintenance Frequency

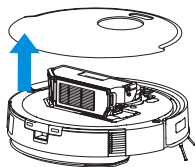
To ensure optimal performance, perform maintenance tasks and replace parts at the following frequencies:

Part	Maintenance Frequency	Replacement Frequency
Washable Mopping Pads	After each cleaning	Every 1-2 months
Side Brush	Every 2 weeks	Every 3-6 months
Brush	Every week	Every 6-12 months
Filter	Every week	Every 3-6 months
Navigation Module Obstacle Avoidance Module Anti-drop Sensors Carpet Detection Sensor Edge Sensor Bumper Charging Contacts Universal Wheel	Every week	/

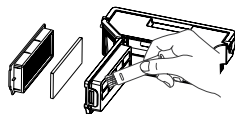
**Note:** Explore more accessories in the ECOVACS HOME App or at <https://www.ecovacs.com/global>.

## Maintain Dust Bin

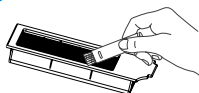
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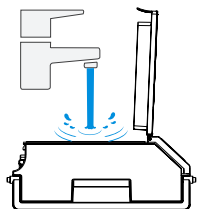
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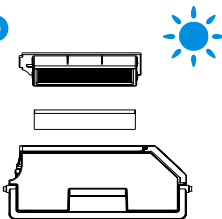
3



4



5



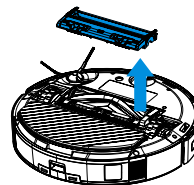
**Note:** Completely dry the Filter before use.

It is recommended that you purchase filters and cleaning tools from the ECOVACS HOME App store or the official ECOVACS online store at <https://www.ecovacs.com/global>.

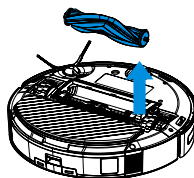
## Maintain Brush and Side Brush

Brush

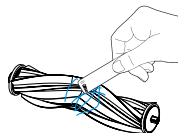
1



2

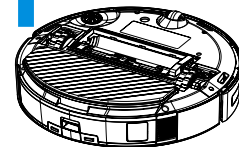
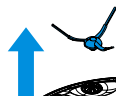


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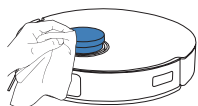
Side Brush

1

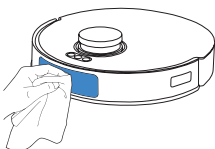


## Maintain Other Components

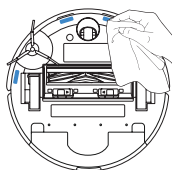
Navigation Module



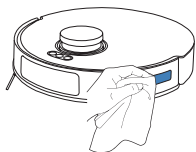
Obstacle Avoidance Module



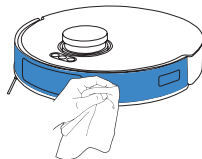
Anti-drop Sensors



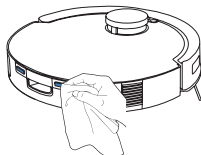
Edge Sensor



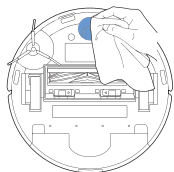
Bumper



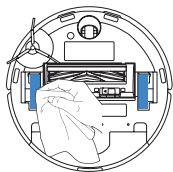
Charging Contacts



Universal Wheel



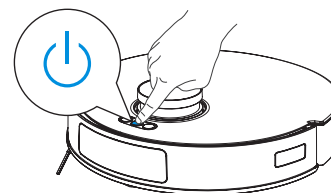
Driving Wheels



## Storage

Press the Power Button for 5 s to power the robot off.

Make sure to fully charge and power OFF the robot before storing it. Recharge it every 1.5 months to prevent the battery from over-discharging.



Please note that the robot cannot charge when powered OFF.

\* when the robot is not in use, it is recommended to keep it powered ON and charging, to prepare for the next cleaning cycle.

\* If the battery becomes over-discharged or remains unused for an extended period, the robot may not charge properly. In this case, please contact us for assistance. Do not attempt to disassemble the battery on your own.

## TROUBLESHOOTING

No.	Malfunction	Possible Cause	Solution
1	The robot is not able to connect to ECOVACS HOME App.	Incorrect Wi-Fi username and password entered.	Make sure to enter correct Wi-Fi username and password entered.
		The robot is not within range of your home Wi-Fi signal.	Make sure that the robot is within range of your home Wi-Fi signal.
		The robot is not in the configuration state.	When the robot is powered on, press the RESET Button and release it after hearing the voice prompt for starting network setup. The Wi-Fi indicator will flash, indicating that the robot is in the configuration state.
		You are not using a 2.4GHz or 2.4/5 GHz mixed network.	The robot currently does not support 5 GHz networks. Please use the 2.4 GHz or 2.4/5 GHz options instead.
		Incorrect app installed.	Please download and install the ECOVACS HOME App.
2	The map is lost.	The map might be lost if you move the robot when cleaning.	Move the robot to the front of the Station to retrieve the map. Find the restored map in <b>Map Management</b> and tap "Use This Map" to retrieve it. If this issue persists, please restart mapping.
3	Unable to create the furniture map in the App.	The robot does not start cleaning from the Station.	The robot must start cleaning from the Station.
		Moving the robot during cleaning might cause the map to be lost.	During cleaning, do not move the robot.
		Auto cleaning is not finished.	Make sure the robot automatically return to the Station after cleaning.
4	No signal found. Unable to return to the Station.	The Station is incorrectly placed.	Please place the Station correctly according to the instructions in the [CHARGE DEEBOT] section.
		The Station is out of power or manually moved.	Check whether the Station is connected to the power supply. Do not manually move the Station.
		The robot does not start cleaning from the Station.	It is recommended that the robot start cleaning from the Station.
		The charging route is blocked. For example, the door of the room with the Station is closed.	Keep the charging route clear.
5	The robot returns to the Station before it has finished cleaning.	The room is so large that the robot needs to return to recharge.	Please enable Auto Resume. For more details, please follow the App instructions.
		The robot is unable to reach certain areas blocked by furniture or barriers.	Tidy up the area to be cleaned by putting furniture and small objects in their proper place.

No.	Malfunction	Possible Cause	Solution
6	The robot is unable to charge.	The Station is not connected to the power supply.	Make sure the Station is connected to the power supply and its indicator light is on.
		The robot's Charging Contacts are not fully in contact with the Station's.	Make sure that the robot's Charging Contacts have full contact with the Station's, and the button flashes. Check whether the robot's and Station's Charging Contacts are dirty. Please clean these parts according to the instructions in the [REGULAR MAINTENANCE] section.
		The battery temperature is too high or too low.	Please charge and use the robot within the temperature range of 0-40°C.
		The battery over-discharges due to prolonged periods of non-use.	It is recommended that you use this product regularly. If charging issues occur due to prolonged non-use, please contact customer service for assistance.
7	The robot is very loud during cleaning.	The Brush/Side Brush is entangled, or the Dust Bin/Filter is blocked.	It is recommended to clean the Brush, Side Brush, Dust Bin, Filter, etc. regularly.
		The robot is in Strong Mode.	Switch to Standard Mode.
8	The robot gets stuck while working and stops.	The robot is tangled with objects on the floor (electrical wires, curtains, carpet fringing, etc.)	The robot will try various ways to free itself. If it is unsuccessful, manually remove the obstacles and restart.
		The robot might be stuck under furniture with an entrance of similar height.	Please raise the furniture, set a physical barrier, or set a Virtual Boundary via the ECOVACS HOME App.
9	During cleaning, the robot may encounter issues like a disorderly route, biased movement, repeated passes over the same spots, and missing small areas. (If a large area is temporarily missed, rest assured that the robot will autonomously return to ensure thorough cleaning.)	Objects such as wires and slippers placed on the ground may obstruct the robot.	Before cleaning, please tidy up scattered wires, slippers, and other objects on the ground as much as possible. If there is any area missed during cleaning, the robot will correct it automatically. Please refrain from interfering (such as moving the robot or blocking its route).
		The Driving Wheels may slip on the ground when the robot climbs steps, thresholds, and door bars, which can affect its ability to navigate the entire home environment.	It is recommended to close the door of the affected area and cleaning it separately. After cleaning, the robot will return to its starting location. Please feel confident in using this method.
		On freshly waxed or polished floors, as well as smooth tiles, there may be less friction between the Driving Wheels and the floor.	Please wait for the wax to dry before cleaning.
		Due to different home environments, some areas cannot be cleaned.	Tidy up the home environment to ensure that the robot can enter for cleaning.
		The Navigation Module may be dirty or blocked by foreign objects.	Wipe it with a clean, soft cloth or clear any foreign objects.



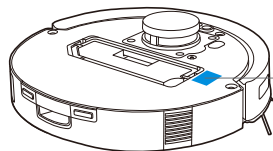
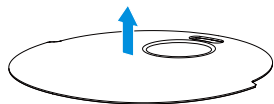
No.	Malfunction	Possible Cause	Solution
10	Dust leakage occurs during working.	The outlet of the Dust Bin is blocked by foreign objects.	Remove the Dust Bin and clear the foreign objects on the outlet.
11	The Reservoir/Dust Bin drops off.	It is not properly installed.	Make sure it clicks into place.
12	Driving Wheels are stuck.	Driving Wheels are tangled or obstructed by foreign objects.	Rotate and press the Driving Wheels to check for any wrapping or obstruction by foreign objects. If any foreign objects are found, please clean them promptly. If this issue persists, please contact customer service for assistance.
13	The robot fails to perform Auto Resume.	The robot is in Do Not Disturb mode.	The robot cannot perform Auto Resume in Do Not Disturb mode.
		The robot does not automatically return to the Station.	Auto Resume will not take effect if you manually move the robot back to the Station.
14	The cleaning task is not conducted at the scheduled time.	The schedule has been canceled.	Reschedule the cleaning task.
		The robot's battery is low.	Charge it.
		The robot is in Do Not Disturb mode.	The robot cannot perform scheduled cleaning in Do Not Disturb mode.

## TECHNICAL SPECIFICATIONS

<b>Model</b>	<b>DKX55/DKX56</b>		
Rated Input	20 V === 1 A	Charging Time	6.5 h
<b>Docking Station</b>	<b>CH2405</b>		
Rated Input	100-240 V ~ 50-60 Hz 0.5 A		
Rated Output	20 V === 1 A		
DEEBOT Dimensions (L*W*H mm)	353*351*96		
Docking Station Dimensions (L*W*H mm)	218*73*111		

**Output power of the Wi-Fi module is less than 100 mW.**

**Note:** Technical and design specifications may be changed for continuous product improvement.  
Explore more accessories at <https://www.ecovacs.com/global>.



**Please use the mobile camera  
to scan the QR code and  
obtain the user guide.**

**Ecovacs Home Service Robotics Co., Ltd.**

No.518 Songwei Road, Wusongjiang Industry Park, Guoxiang Street,  
Wuzhong District, Suzhou, Jiangsu, China.

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