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- › [Makita](#) /
- › [Makita DRC300Z Robotic HEPA Filter Vacuum Instruction Manual](#)

Makita DRC300Z

Makita DRC300Z Robotic HEPA Filter Vacuum Instruction Manual

1. PRODUCT OVERVIEW

The Makita DRC300Z is an 18V X2 LXT Brushless Cordless Smart Robotic HEPA Filter Vacuum designed for automated cleaning of large flooring spaces in commercial environments. It features a brushless motor for extended run time and tool life. The vacuum utilizes LiDAR sensor technology and a front camera sensor for room mapping and obstacle detection, enabling efficient cleaning across areas up to 100,000 square feet across five rooms. It operates with 18V LXT batteries (sold separately) and offers up to 200 minutes of continuous operation with two 5.0Ah batteries.



Image 1.1: The Makita DRC300Z Robotic HEPA Filter Vacuum. This image shows the top-down view of the robotic vacuum cleaner,

highlighting its compact, circular design with a grey and white finish, and the Makita logo prominently displayed.

2. SAFETY INFORMATION

General Safety Precautions

- Read all instructions before using the appliance.
- Do not allow children to operate the vacuum. Supervise children and pets when the vacuum is in operation.
- Do not use the vacuum on wet surfaces or to pick up liquids.
- Ensure the battery compartment is securely closed before operation.
- Do not operate the vacuum if it is damaged or malfunctioning. Contact customer support for assistance.
- Keep hair, loose clothing, fingers, and all parts of the body away from openings and moving parts.
- Only use Makita 18V LXT batteries and chargers.

3. PACKAGE CONTENTS

The Makita DRC300Z is sold as a tool-only unit. Batteries and charger are not included. The package typically includes:

- Makita DRC300Z Robotic HEPA Filter Vacuum (Tool Only)
- Main Brush Roller (Part No. 191P20-2)
- Main Brush Cover, DCR300 (Part No. 191P24-4)
- HEPA Filter, DRC300 (Part No. 191P31-7)

4. SETUP

4.1 Battery Installation

The DRC300Z operates using one or two 18V LXT Lithium-Ion batteries. For optimal performance and extended run time, two batteries are recommended.

1. Open the battery compartment cover located on the top of the vacuum.
2. Align the battery with the battery slot and slide it in until it clicks into place.
3. If using two batteries, repeat for the second slot.
4. Close the battery compartment cover securely.



Image 4.1: A hand inserting an 18V LXT battery into the designated slot on the Makita DRC300Z robotic vacuum. The battery compartment is located on the side of the vacuum's top panel.

4.2 App Connection and Room Mapping

The DRC300Z connects to a smartphone via a dedicated app for smart cleaning features, including LiDAR mapping. This allows the vacuum to map and save up to five rooms, covering over 100,000 square feet.

1. Download and install the official Makita robotic vacuum app on your smartphone.
2. Follow the in-app instructions to pair your DRC300Z with your smartphone.
3. Initiate the mapping process through the app. The vacuum will use its LiDAR sensor to create a detailed map of your cleaning area.
4. Once mapped, you can define up to 100 programmable boundary lines per room to restrict the vacuum's travel.

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Video 4.2: This video demonstrates the Makita DRC300Z robotic vacuum's LiDAR mapping capabilities and smart sensor technology. It shows the vacuum navigating a room, mapping its layout, and detecting obstacles, highlighting its ability to clean efficiently in complex environments.

5. OPERATING INSTRUCTIONS

5.1 Navigation Options

The DRC300Z offers two primary navigation modes:

- **Mapping Pattern Navigation:** For efficient cleaning of registered rooms. The vacuum follows a systematic path based on the stored map.
- **Free Mode:** For immediate cleaning without requiring a pre-registered room map. The vacuum navigates randomly until the battery is low or the area is covered.

5.2 Cleaning Modes

Select the appropriate cleaning mode based on the debris type:

- **Main Brush Only:** Ideal for collecting large debris.
- **Main Brush Plus Vacuum:** For comprehensive cleaning, collecting both large debris and small particles.

5.3 Obstacle Detection

The vacuum is equipped with six ultrasonic sensors, one bumper sensor, and one LiDAR sensor (2D) for robust obstacle detection, allowing it to navigate around furniture and other impediments.

5.4 Remote Control

A remote control is included, providing wireless capability to set most operating functions, including the location beacon feature.



Image 5.1: Top view of the Makita DRC300Z robotic vacuum, showing the control panel with various buttons and LED indicators for mode selection, battery status, and other functions.

6. MAINTENANCE

Regular maintenance ensures optimal performance and longevity of your Makita DRC300Z vacuum. All cleaning components are removable and washable.

6.1 Dust Collection Box and HEPA Filter

The debris collection box has a large capacity (3.1 quarts / 0.79 gallons) and is easily accessible for emptying. The filtration system includes a HEPA filter to capture micro dust particulates.

1. Open the top cover of the vacuum.
2. Lift the dust collection box by its handle.

3. Empty the contents into a waste receptacle.
4. Remove the HEPA filter from the dust box. Clean the filter by tapping it gently or rinsing with water if heavily soiled (ensure it is completely dry before reinstallation).
5. Reinstall the HEPA filter and dust box, then close the top cover.



Image 6.1: A hand lifting the dust collection box from the top compartment of the Makita DRC300Z robotic vacuum. The box is grey with a handle for easy removal.

6.2 Main Brush Roller

The main brush roller should be cleaned regularly to remove tangled hair and debris.

1. Turn the vacuum upside down.
2. Locate the main brush cover and release the latches.
3. Remove the main brush roller.
4. Clean any hair or debris from the brush and its bearings.
5. Reinstall the main brush roller and secure the cover.

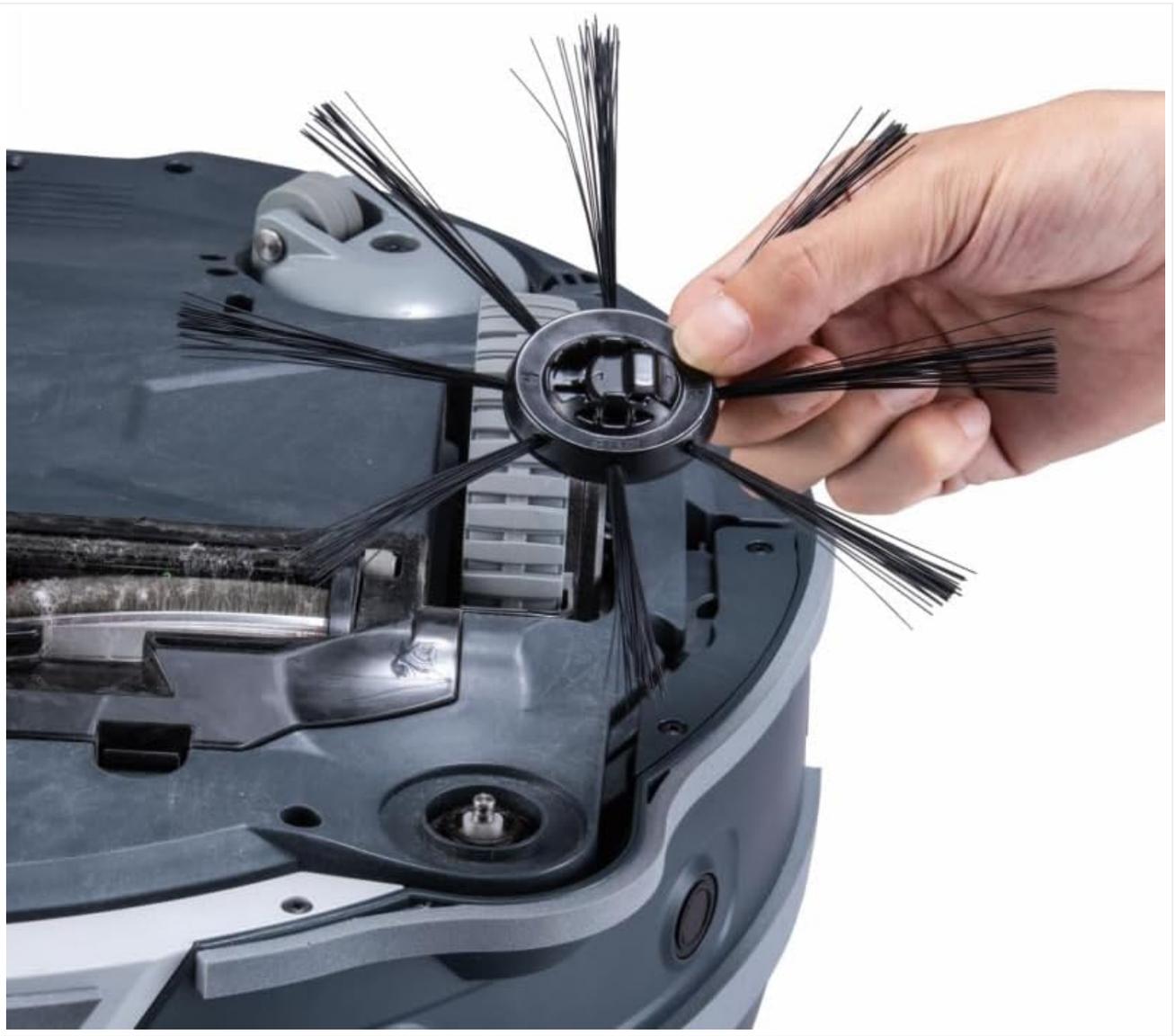


Image 6.2: A hand removing the main brush roller from the underside of the Makita DRC300Z robotic vacuum. The brush is red and white, and the roller mechanism is visible.

6.3 Side Brushes

Inspect and clean the side brushes periodically. Replace them if they are worn or damaged.

1. Turn the vacuum upside down.
2. Gently pull the side brushes upwards to remove them.
3. Clean any debris from the brushes and their mounting posts.
4. Press the side brushes back onto their posts until they click into place.



Image 6.3: A hand installing a black side brush onto the underside of the Makita DRC300Z robotic vacuum. The brush has multiple bristles and is being pressed onto a central post.

7. TROUBLESHOOTING

If you encounter issues with your Makita DRC300Z, refer to the following general troubleshooting steps:

- **Vacuum not starting:** Ensure batteries are fully charged and correctly installed. Check that the power button is pressed.
- **Poor cleaning performance:** Empty the dust collection box and clean the HEPA filter. Check and clean the main brush and side brushes for tangled debris.
- **Vacuum getting stuck:** Clear any obstacles from the cleaning path. Ensure boundary lines are correctly set in the app. Clean sensors if they appear dirty.
- **App connectivity issues:** Ensure your smartphone's Bluetooth or Wi-Fi is enabled and the vacuum is within range. Restart both the vacuum and the app.
- **Unusual noises:** Turn off the vacuum and inspect the brushes and wheels for any foreign objects.

For persistent issues or error codes, consult the detailed troubleshooting section in the full product manual or contact Makita customer support.

8. SPECIFICATIONS

Feature	Specification
Brand	Makita
Model Name	DRC300Z
Power Source	Battery Powered (18V LXT Lithium-Ion)
Battery Type	2x 18V LXT Lithium-Ion (batteries not included)
Battery Life	Up to 200 minutes (with two 5.0Ah batteries)
Capacity	3.1 Quarts (0.79 Gallons)
Filter Type	HEPA Filter
Special Features	Cordless, LiDAR Navigation, Smart App Control, Obstacle Detection
Navigation	LiDAR sensor technology, Front camera sensor
Obstacle Detection	6 ultrasonic sensors, 1 bumper sensor, 1 LiDAR sensor (2D)
Mapping Capability	Maps up to 5 rooms, totaling over 100,000 sq ft
Boundary Lines	Up to 100 programmable boundary lines per mapped room
Cleaning Modes	Main Brush Only, Main Brush Plus Vacuum
Control Method	App Control, Remote Control
Recommended Uses	Hard Floor, Office, Commercial
Product Dimensions	19.75"L x 19.75"W x 8"H
Item Weight	21.2 pounds
Noise Level	62 Decibels

9. WARRANTY AND SUPPORT

Makita provides a limited warranty for its products. Please refer to the warranty card included with your purchase or visit the official Makita website for detailed warranty terms and conditions. For technical support, service, or to order replacement parts, please contact Makita customer service or an authorized service center. Keep your purchase receipt as proof of purchase for warranty claims.

Makita Customer Service: Please visit www.makitatools.com for contact information and support resources.

