

Smart Windoro for Cleaning Window !

WINDORO



WINDORO User Manual

Please read this manual before using the product.

It is the user's responsibility to use it correctly in safety to prevent property loss.

www.iwindoro.com

Ilshim Global Co., Ltd.

Product Strengths



Windoro, the window cleaning robot is operated in tandem with two modules : the inner and the outside portions. The inside module works as the navigation unit and the outside module cleans using the spinning microfiber pads.



The outside module attached to the outside window pane cleans as the inside navigator module navigates itself around the window.

Inside navigator tool
Outside cleaning tool
Window

One Button Cleaning !

Open the window that is needed for cleaning and attach Windoro on both sides of the window. Once Windoro is attached press the button on top of the machine. Windoro will then automatically wipe the glass clean.

Excellent Safety !

The robot will remain tightly attached to the window whether or not the power has been turned off. It consists of two modules that fit excellently on opposite sides of the window and hold each other using permanent magnets.

End Signal and Automatic Return !

The user will be alarmed by a beep from the machine, after Windoro will then return to its initial spot of attachment.

Magnetic Force Controller !

The magnetic force is controlled by the magnetic sensor, and it cleans windows with a wide range of thickness varying from 5~15mm or 16~28mm.

Perfect Cleaning !

The combination of a precise amount of detergent spray and the spinning microfiber pads clean the window perfectly.

Convenient Detachable Pad !

The microfiber pad with Velcro tape can be conveniently detached and re-applied after washing.
(For perfect cleaning of a dirty window, clean the window repeatedly after changing pads.)



Content

Product Strengths

2

Safety Instructions

4 ~ 5

| | |
|--------------------------|---|
| Main power | 5 |
| Before using the product | 5 |
| While using the product | 5 |
| Product Maintenance | 5 |

Part Names and Functions

6 ~ 8

| | |
|---|---|
| Inside window navigation, state display | 6 |
| Outside cleaning tool, state display | 7 |
| Remote controller | 8 |

Product Features and Components

9

Usage

10 ~ 13

| | |
|--|---------|
| Vertical or Horizontal Initialization of the product | 10 |
| How to equip edge cleaning kit | 11 |
| Usage according to the procedure | 12 ~ 13 |

FAQ

14

NOTE

15

Warranty

16

Safety Instructions



This page is to prevent injury and property damage to the user. Read this page carefully and use the product safely. The product contains strong permanent magnets and if you do not read these directions properly, you could be seriously injured or the product could be damaged.



Do not touch the product or detach it from the window.

The product contains permanent magnets to be attached to the window.
If you touch or detach the inside navigator tool or the outside cleaning tool device whilst the product is cleaning, the navigator tool or outside cleaning tool device will fall. Keep children or pets away from the product to prevent them from touching or detaching it.



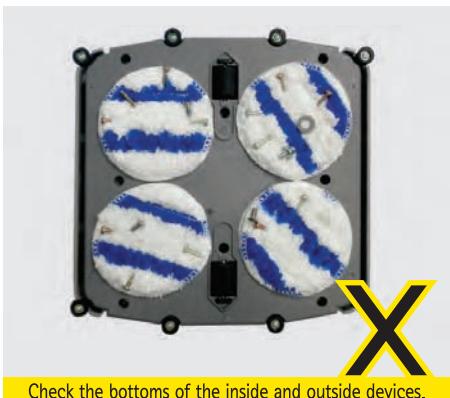
Keep the inside and outside devices separated from each other.

If you place the inside and outside devices close to one another, they could become attached to each other due to their strong magnetic force.
When the inside and outside devices are attached to each other, it is difficult to separate them. Also, if you try to separate them by excessive force, it can cause damage to the product.
If your body becomes trapped between the inside and outside devices, you can be injured.
Keep children away from this product.



Keep the wheels of the inside and outside devices clean.

When dust and foreign substances are formed on the wheels, the vertical movement could become impossible. Keep the wheels of the inside and outside devices clean.



Check the bottoms of the inside and outside devices.

Foreign substances such as nails and wires could cause damage to the window.

Safety Instructions

This page is to prevent injury and property damage to the user. Read this page carefully and use the product safely. The product contains strong permanent magnets and if you do not read these directions, you could be seriously injured or the product could be damaged.



Warning

If you ignore the warnings, you can be seriously injured or die.



Notice

If you ignore the notices, you can be injured or experience some property damage.



Help

Information for the users to help understand the usage of the product.

The Main Power Supply



- Do not excessively bend the power supply cable or put heavy things on the cable.
- Wipe off the dust or water on the connection to the main power plug.
- Do not pull the cable or touch the plug with wet hands.
- Use only 220V power and do not plug multiple products into one socket.
- Do not expose the cable to the floor.
- The adapter is only for WINDORO.
- Do not put metallic substances on the charging port.

Electrical shock hazard,

Operation fault and electrical shock hazard,

Electrical shock hazard and fire hazard,

Electrical shock hazard and fire hazard,



Fire hazard and operation fault,



Operation fault,

Before using the product



- Check the window.
- Check the bottoms of the inside and outside devices of WINDORO.
- Do not use the product near flammable materials.
- Do not use when the weather could cause the product to fall.
- When the product is used in high places, install the secondary safety device.
- Keep children and pets away from the product.

Check the thickness of the window and remove any obstructive attachments on the window.

Nails and wire can cause damage to the window. The dust and foreign substances on the wheels can cause the product to slip or not move.

Do not use the product near lighting or heaters.

Typhoons, strong winds, rain and lightning are hazardous to WINDORO.

Install the safety reel to the outside cleaning tool.

Children and pets can be interested in the cleaning robot.

If any body parts and clothes are squeezed between the inside and outside devices, there can be an injury and the cleaning robot can fall.

If you interrupt the cleaning robot, it regards you as an obstacle (window frame) and cannot continue cleaning.

When the emergency switch is turned off, all functions and the main power are blocked. When the product is attached to the window, it does not fall regardless of whether the power is on or off.

While using the product



- Do not touch or detach the inside navigation device while the product is working.
- The cleaning robot cannot be used for windows beyond the specified standard thicknesses for window panes. Thin windows can get broken and thick windows can cause the product to fall.
- When the product stops out of your reach because of an operation fault, do not try to detach it. Call the service center immediately.
- Places where the product cannot go such as corners or window frames are not perfectly cleaned.
- This product is only for cleaning.
- Only use microfiber pads for WINDORO.
- Do not press the bumper strongly.
- Be careful not to allow fingers, clothes or curtains to come into contact with the wheels while the product is working.
- Turn off the product immediately if you notice a strange sound, smell or see smoke.
- Do not use the product at a low temperature.
- Do not give a strong impact on WINDORO or drop it.
- Do not hang things on WINDORO.

The outside cleaning tool will fall.

Standard thickness of windows

: single pane type 5~15mm, double pane type 16~28mm.

The product could fall.

Other pads can cause an operation fault.

Trouble in the sensor can cause the product to crash into obstacles.

Injury or operation fault.

Fire hazard and operation fault.

Frozen detergent can cause a cleaning failure.

Injury or operation fault.

Injury or operation fault.

Product Maintenance



- Do not pour water on the product or wipe it with volatile materials such as benzene, thinner or alcohol.
- Do not press the bumper strongly.
- Only qualified technicians can disassemble or alter the product.
- When the power connection is broken, call the service center to send a qualified technician to change it.
- Before and after using the product, remove dust and foreign materials from the wheels.
- As the product contains strong magnets, put away things influenced by magnetic force such as credit cards, mobiles and watch.
- Call the service center to change the consumable materials such as batteries, running/side/auxiliary wheels, detergent, and microfiber pad.

It can cause the product serious damage.

Trouble in the sensor can cause the product to crash into obstacles.

It can cause the product serious damage.

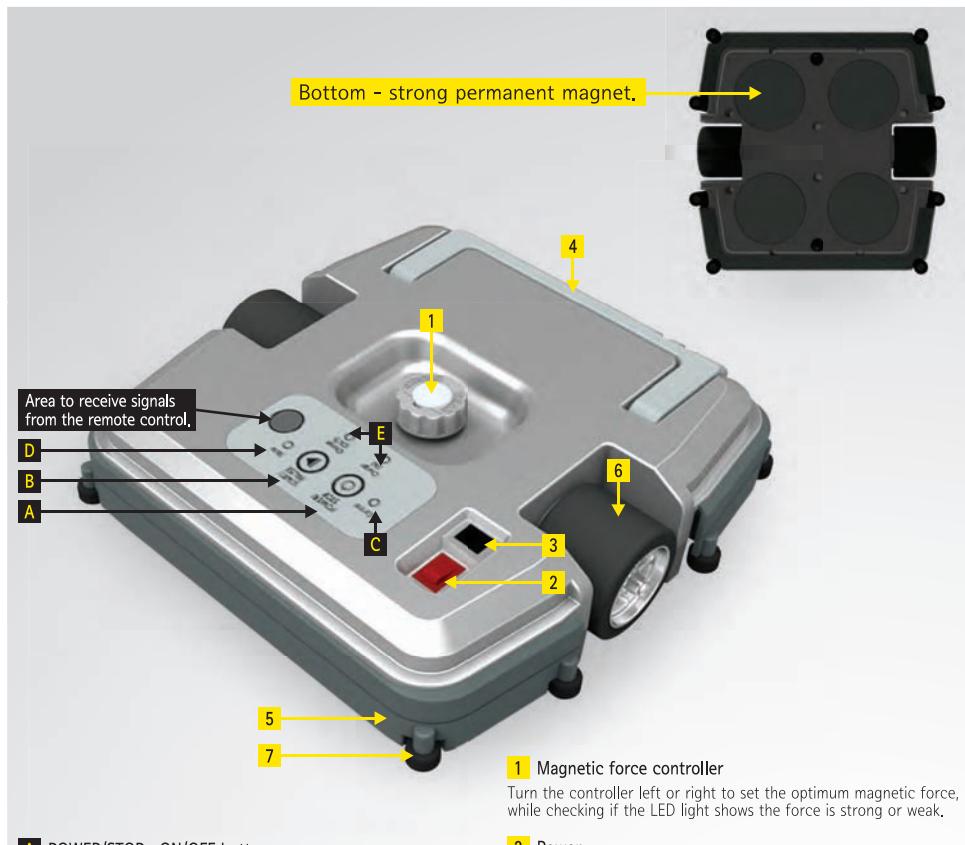
Electronic shock hazard or fire hazard.

The inside navigation could slip.

Strong magnetic force can damage the things.

Unqualified consumables will cause an operation fault.

Part Names and Functions Inside Navigation



A POWER/STOP : ON/OFF button

Press the button for more than 2 seconds, and the product will power on with a beeping sound. Press it for more than 2 seconds once again, and the product will power off with a beeping sound.

B START/PAUSE : Button to start cleaning or pause

Press the button for more than 2 seconds when the product is in stop mode, and the product will start cleaning. If you press the button when the product is working, it will pause cleaning.

C CONTROL : Optimum magnetic force lights

RED too strong - make the magnetic force weaker to use the product.
GREEN the machine is at the optimal force level.
YELLOW too weak - make the magnetic force stronger to use the product.

D STATE : Signal lamp

This lamp twinkles every second when the inside and outside devices successfully send and receive signals from each other.

E CHARGE (IN/OUT) : Embedded battery lamp

Its color changes to green, yellow and red in turn. Recharge the product when the lamp is red. When the product uses 80% of the battery, it will return to the initial place it was attached and stop.

1 Magnetic force controller

Turn the controller left or right to set the optimum magnetic force, while checking if the LED light shows the force is strong or weak.

2 Power

Magnetic force is maintained regardless of whether the power is on or off.

3 Charging Port

Charge the product using a qualified adapter.

4 Handle

Hold the handle when you attach the product. Otherwise, fingers can be squeezed between the product and the window which will cause an injury.

5 Bumper

When the bumper sensors reach the end of the inside navigation area, the product will move in the opposite direction. Strong pressure on the bumpers can cause an operation fault.

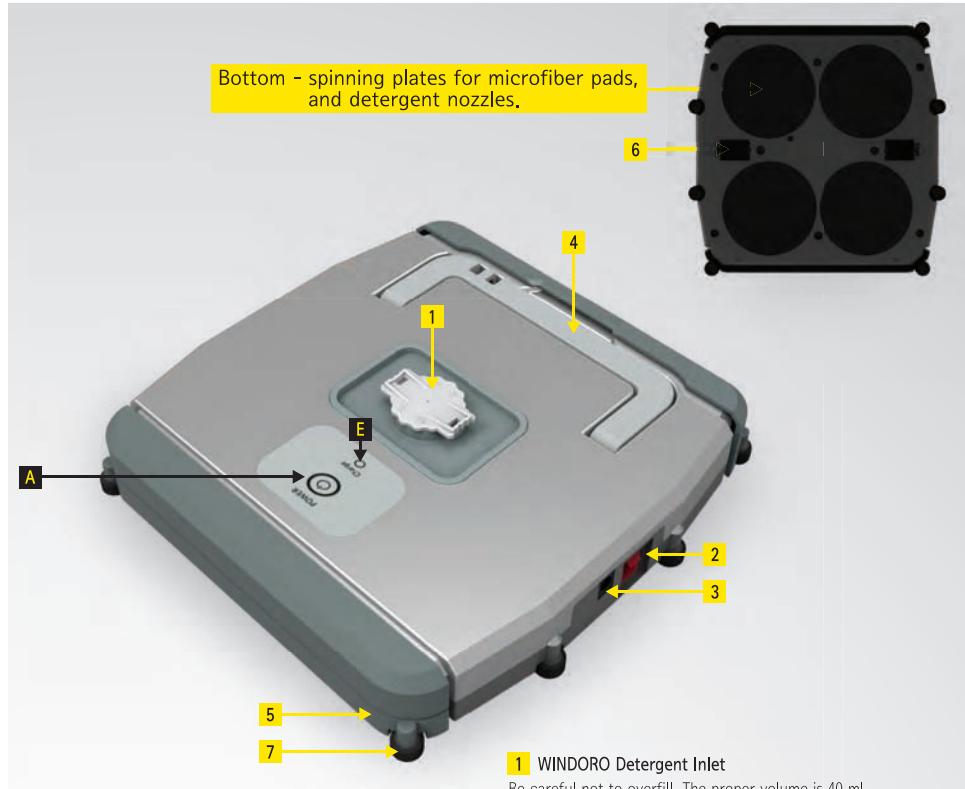
6 Running Wheels

Before and after using the product, remove dust and foreign substances from the wheels.

7 Side Wheels

Before and after using the product, remove dust and foreign substances from the wheels.

Part Names and Functions Outside Cleaning Tool



Bottom - spinning plates for microfiber pads, and detergent nozzles.

A POWER : ON/OFF button

Press the button for more than 2 seconds, and the product will power on with a beeping sound. Press it for more than 2 seconds once again, and the product will power off with a beeping sound.

1 WINDORO Detergent Inlet

Be careful not to overfill. The proper volume is 40 ml.

2 Power

Magnetic force is maintained regardless of whether the power is on or off.

3 Charging Port

Charge the product using a qualified adapter.

4 Handle

Hold the handle when you attach the product. Otherwise, fingers can be squeezed between the product and the window which will cause an injury.

5 Bumper

Strong pressure on the bumpers can cause an operation fault.

6 Auxiliary Wheel

Before and after using the product, remove dust and foreign substances from the wheels.

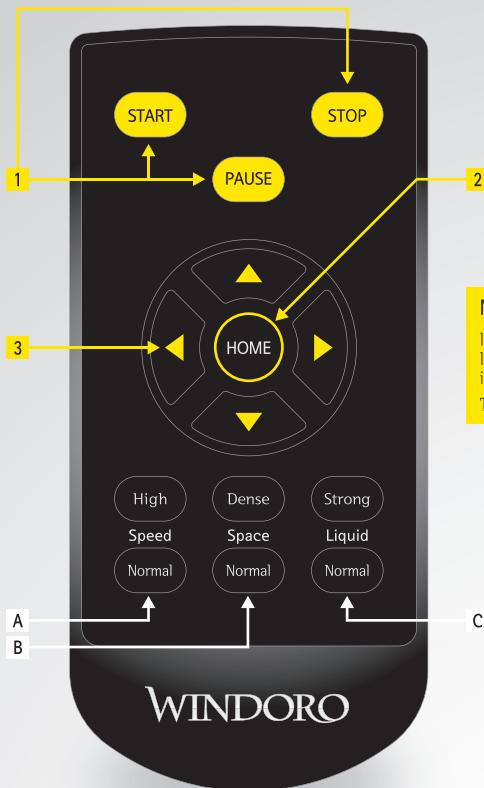
7 Side Wheels

Before and after using the product, remove dust and foreign substances from the wheels.

E CHARGE (OUT) : Embedded battery lamp

Its color changes to green, yellow and red in turn. Recharge the product when the lamp is red. When the product uses 80% of the battery, it will return to the initial place it was attached and stop.

Part Names and Functions Remote Controller



Note for remote controller usage.

It can work only within 3 meters of the unit.
It can send a signal only to the inside device
in which a receiver is embedded.

The outside device does not have a receiver.

1 Automatic Mode

START: Button to start or restart cleaning.
STOP: Button to stop cleaning.
PAUSE: Button to pause cleaning.

2 Home

The robot returns to the original position where it was first attached.

3 Manual Mode

UP/DOWN: After spinning vertically, the robot moves up and down.
LEFT/RIGHT: After spinning horizontally, the robot moves from left to right.

A SPEED - moving speed

High : Speed increase, the maximum speed 10cm/sec.
Normal: Speed decrease, the minimum speed 6cm/sec.

B SPACE - cleaning space

Dense: The robot cleans densely, the maximum value is 3.
Normal: The robot cleans lightly the minimum value is -3.

C LIQUID - the volume of detergent

Strong: The volume increases.
Normal: The volume decreases.



Product Features and Components

Please be aware of the features and components of this product, Since this product contains strong permanent magnets, if you are not aware of the information below, you can be seriously injured or the product can be damaged.

| WINDORO | |
|--------------------|--|
| Size | [inner] 218 x 211 x 51mm, [outer] 210 x 208 x 47mm |
| Weight | 2.9kg (IN: 1.6kg, OUT: 1.3 kg) |
| Moving speed | 8 centimeters per second |
| Voltage | Less than 25 Watts |
| Adapter | Rated voltage AC 100/240v, voltage DC 15v, 1.5A |
| Battery | Li-ion body [inner](11.1v 2200mAh), [outer] (7.4v 2200mAh) |
| Charging time | Around 150 minutes |
| Usage time | Around 90 minutes |
| Remote control | IR receiver system |
| Cleaning mode | Zigzag |
| Noise | Less than 60dB |
| Thickness Criteria | Window thickness 5~15mm |
| Frequencies | 2.4GHz |
| Channel | 1CH |



1 WINDORO inside/outside bodies

WINDORO consists of an inside navigation device and an outside cleaning tool.

2 One Remote Controller

After attaching the WINDORO device to the window, you can use the remote controller inside to operate the product safely and conveniently.

3 The WINDORO Adapter

The Y-type adapter is only for WINDORO. You can use it to charge the inside and outside devices at the same time.

4 WINDORO Detergent

Pour it into the inlet of the outside cleaning tool to a maximum of 40 millilitres. You will need to use our specific WINDORO detergent only. If you use other detergents, it can cause imperfect cleaning or operation faults.

5 WINDORO Microfiber pads

There are twelve microfiber detachable pads included with the units. After using them, thoroughly wash them for reuse. Use WINDORO pads only. The magnetic force of the product is adjusted to the thickness of the WINDORO pads, hence if you use other pads, it can cause imperfect cleaning, operation faults, or the product to fall.

6 WINDORO Edge cleaning kit

Edge pad+Fix plate. The Edge cleaning kit can be used to clean the edge of the window, attached to the edge of the outside cleaning tool. Only the Edge cleaning kit can be used for Windoro.

Usage

The Vertical and Horizontal Initialization of the product



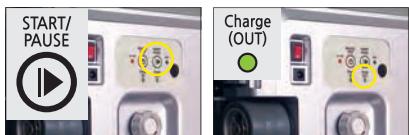
Since this product contains strong permanent magnets, if you do not follow the directions below, you can be seriously injured or the product can be damaged.

The Vertical and Horizontal initialization of WINDORO.

WINDORO has a sensor to detect its position vertically and horizontally by measuring where to locate itself for correct operation. However, a sudden change in temperature and a strong magnetic force can influence the sensor and measurement values.

When WINDORO is operated distortedly more than 30°, initialize the product vertically and horizontally as follows. Vertical/horizontal initialization is set with the inside navigation.

1 Press the START/PAUSE button on the inside navigation device for 5 seconds until it makes a beeping sound.



- Check that the Charge (OUT) LED twinkles in green.
- WINDORO enters the vertical/horizontal initialization mode.

2 Locate the inside device to a horizontal position against the window as indicated in the picture.



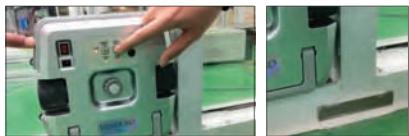
- Make the LED display of the inside device point right with the inside device horizontal to the floor.
- Use the corner of the window or the wall to make it easier.

3 Press the START/PAUSE button on the inside navigation for a short time.



- The X-axis is set with a beeping sound. Check that the Charge (OUT) LED twinkles with a red light.

4 Locate the inside device at a vertical position against the window as indicated in the picture.



- Make the LED display of the inside device point to the top, and the inside device vertical to the floor.
- Use the corner of the window or the wall to make it easier.

5 Press the START/PAUSE button on the inside navigation for a short time.



- The Y-axis is set with a beeping sound. Check that the Charge (OUT) LED light is red, not twinkling.
(The light will vary to green, yellow or red lights according to its charge.)
- Vertical/horizontal initialization is completed.

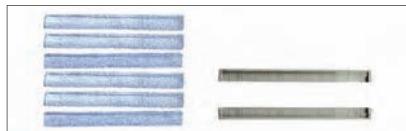


Usage

How to equip edge cleanig kit

Since this product contains strong permanent magnets, if you do not follow the directions below, you can be seriously injured or the product can be damaged.

1 Components.



- Edge Cleaning kit : Edge pad+Fix plate
- The Edge cleaning kit can be used to clean the edge of the window, attached to the edge of the outside cleaning tool.
- Only the Edge cleaning kit can be used for Windoro.

2 Find where the Edge Cleaning kit should be placed.

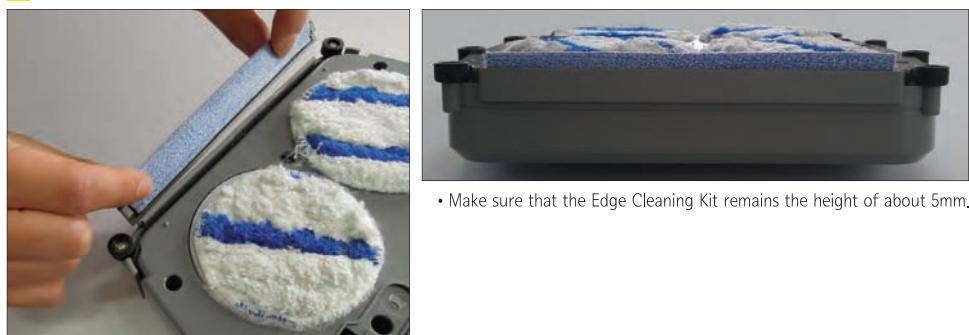


- Under the bumper of the outside cleaning tool.

3 Fix the Edge pad to the plate.



4 Put the Edge Cleaning Kit under the bumper of the outside cleaning tool.



- Make sure that the Edge Cleaning Kit remains the height of about 5mm.

User's tip/ Note

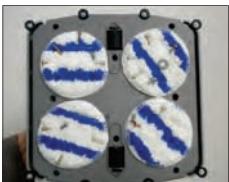
- Before using Windoro, it would be better to wet the pad with the Windoro detergent.

Usage



Since this product contains strong permanent magnets, if you do not follow the directions below, you can be seriously injured or the product can be damaged.

1 Check the inside and outside devices of WINDORO before using the product,



Clean the wheels of the inside and outside devices. Dust and foreign substances formed on the wheels cause the product to slip or not to operate properly. Check the bottoms of the inside and outside devices. Foreign substances such as nails or wires can cause damage to the window. Pour the WINDORO detergent into the inlet of the outside device to a maximum of 40 millilitres. Attach the pads on the bottom of the outside cleaning tool.

Tip if the window is very dirty, put a little amount of the detergent onto the pads, or clean the window again after changing the pads for maximum results.

2 Turn on the inside and outside devices.

When the Charge LED is red, charging is needed. Follow the instructions below when recharging.



- Turn on the power switch on the top of the inside device and on the side of the outside device.
- Turn on the power for the inside and outside devices by pressing the buttons on the top of the devices.
- Inside device: press the POWER/STOP button for more than 2 seconds, and the lamp light will be turned on with a beeping sound.
- Outside device: press the POWER button for more than 2 seconds, and the lamp light will be turned on with a beeping sound.

- Charge the product with the WINDORO adapter.
- Turn off the power switch of the inside and outside devices. When the power is on, charging is impossible.
- The LED is red whilst being charged, and it turns green when the charging process is completed.

3 Attaching the product.

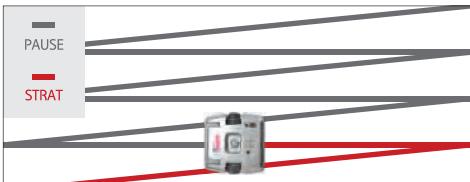
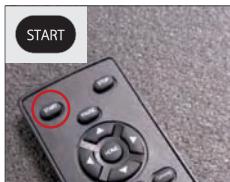


- Turn the magnetic force controller onto weak.
- Attach the inside and outside device with the handles pointing in the same direction. If they point in different directions, the product cannot be attached or can be attached incorrectly because of the differences of the magnetic N-S forces.
- Attach the product 10 centimetres from the window frames.
- After attaching the product, check the Control LED of the inside device for the state of the magnetic force. The product works only when the Control LED is green. Turn the magnetic force controller if necessary.
 - Yellow: the magnetic force is too weak to work. Turn the controller onto strong.
 - Red: the magnetic force is too strong to work. Turn the controller onto weak.
 - Green: the magnetic force is ready to work. However, despite being green, the magnetic force can be a little bit weak depending on the situation.

Usage

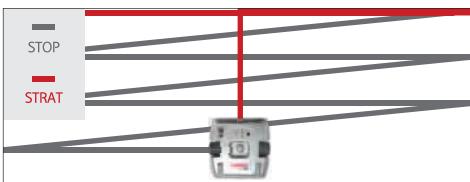
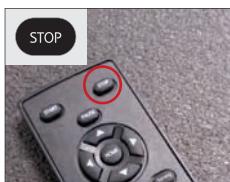
Since this product contains strong permanent magnets, if you do not follow the directions below, you can be seriously injured or the product can be damaged.

4 Cleaning, Starting and Pausing



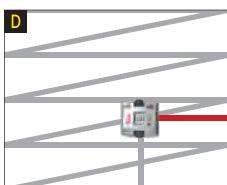
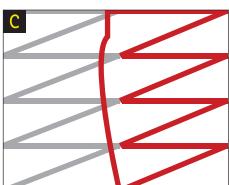
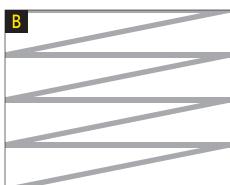
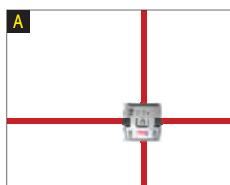
- Press the START/PAUSE button to make the product start cleaning.
- Press the START button on the remote controller to make the product start cleaning.
- Press the PAUSE button to pause cleaning.

5 Stop



- Press the POWER/STOP button to stop cleaning.
- Press the STOP button on the remote controller to stop cleaning.
- When the product restarts cleaning it will starts cleaning from the beginning.

6 Cleaning



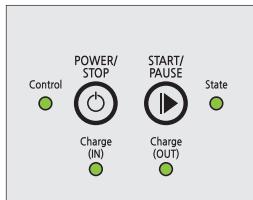
- A. The product moves from top to bottom and from left to right to check the width of the window to be cleaned.
B. When the width of the window is less than 2 metres, the product will clean the window in single mode.
C. When the width of the window is more than 2 metres, the product will clean the window in double mode.
D. After the cleaning process is finished, the product stops in the initial place and makes a beeping sound three times.
The position where the product stops can be different from the initial place if there is dust on the window.

Frequently Asked Questions



The questions below are often asked.

When the product is malfunctioning, check the questions below for solutions.



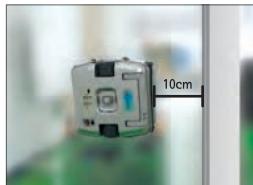
Q What should be done if the product does not work?

- Check the LED display. When none of the lamps on the display are lit, check if the power is turned on. (See pages 6 to 7, and 12)
- Check if the IN/OUT Charge LED in the LED display on the inside tool light is green. If the lamp is red, charge the product. (See pages 6, 7, and 12)
- Check if the Control LED in the LED display on the inside tool light is green. If the lamp is yellow or red, the product does not work. (See page 12)



Q What causes the inside navigation to slip?

- Even though the Control LED display light is green, the magnetic force can be malfunctioning. Turn the magnetic force controller onto strong. (See page 12)
- Check if there is dust or foreign substances on the wheels of the inside navigation and the inside of the window. Always clean the wheels before using the product.



Q What can be done when the WINDORO sticks on the window frame and does not move?

- It can happen if the product does not have enough space when it starts cleaning. Attach WINDORO 10 cm from the window frame before it starts working.
- When the product stops out of reach, do not try to detach it from the window. If you do that, the product can fall. Contact the service center.



Q How can the product be detached from the window when it is out of reach?

- Pull the inside navigation in the direction that the wheels are rolling pointing until the outside device comes within reach. Make sure that the outside device is moving in unison with the inside device. If you move the product in the opposite direction of the wheels, it can fall.
- When the inside and outside devices come within reach, grab the handle and detach the product from the window.



Q What is the reason for using the WINDORO detergent and WINDORO pads?

- Like the wheels and other components, the microfiber pads influence the optimum magnetic force of WINDORO. If you use other pads, the optimum magnetic force cannot be adjusted.
- Other detergents can block the nozzles. Use the WINDORO detergent only.
- The spray volume of the outside cleaning tool is set for the WINDORO detergent. Other detergents can cause imperfect cleaning and stains on the window.



NOTE

Retain this page for any future warranty or repair services.

This page is the information on free and paid services. Read this page first, and then apply for services. You can be provided with free or paid services only when you have the warranty.



Service center

Telephone (rep.): +82 53 852 5237

Inform the Service Center the model number, nature of the fault, contact details and the staff will kindly consult your questions and provide service.

Service Description

According to the notice from the Fair Trade Commission on consumer disputes resolutions by product, ILSHIM GLOBAL Co., LTD guarantees the product as follows: ILSHIM GLOBAL Co., LTD or other partners will provide services when you apply for services during the warranty period.

The compensation, acceptance and notification of services to be performed will be indicated within ___ days from the request, and the compensation will be provided within ___ days from the customer notification.

The terms of guarantee of WINDORO (WCR-1001) is one year, and the part is guaranteed for five years.

| | | | |
|------------------|----------|------------|----------|
| Product | WINDORO | Model name | WCR-1001 |
| Date of purchase | 20 . . . | Agent | |
| Serial No. | | | |

Free Services

When the product has a problem, the customer can receive free services for one year after purchasing the product. However, if the customer's negligence or natural disasters cause the trouble, the customer can only receive service by paying for the repairs even during the warranty period. Also, if the customer uses the product for business purposes, the terms of guarantee will be reduced by 50%.

Service Charges will be Required in the Following Circumstances:

- Repairs caused by the customer's careless treatment, disassembling or improper repair of the WINDORO.
- Repairs caused by injecting the wrong substances into the product.
- Repairs or damage caused by dropping the unit or trauma to the unit.
- Repairs caused by the wrong voltage.
- Disfigurement or deformation from organic solutions such as thinner or benzene.
- Repairs caused by using other consumable materials (adapters, batteries, pads, detergent and cleaning kit) and optional materials (safety reels and stands), instead of materials created exclusively for the product.
- Repairs caused by repairs carried out by technicians not from ILSHIM GLOBAL CO., LTD., the contractors, or their partners.
- Repairs caused by natural disasters such as: lightning, fire, typhoons or floods.
- In situations where the product life of the consumable materials (running wheels, auxiliary wheels, microfiber pads and WINDORO detergent, WINDORO cleaning kit) has finished, there will be a charge for replacements.
- The batteries and motors of the product are consumable materials, so the period for free service is six months.
- When the "safety instructions" in the user's manual have been ignored, you will be charged for the repairs.
- You will be charged for repairs caused "customer negligence."

CONTACT INFORMATION

Manufacturer Address : Songnae-Ri 30, Namsan, Kyungsan-City, Kyungbuk 712-862, Republic of KOREA

To locate in-country ILSHIM GLOBAL Co., Ltd. distributors of the WCR-I001,

please refer to the ILSHIM GLOBAL Co., Ltd. Website <http://www.iwindoro.com>

These distributor(s) represent local contacts for this product.

CORPORATE HEADQUARTERS:

ILSHIM GLOBAL Co., Ltd.

Songnae-Ri 30, Namsan, Kyungsan-City, Kyungbuk 712-862, Republic of KOREA

Tel: 82-53-802-5237

Fax: 82-53-802-5239

Web: <http://www.iwindoro.com>

EUROPEAN UNION “DECLARATION OF CONFORMITY”

DECLARATION OF CONFORMITY

ILSHIM GLOBAL Co., Ltd.

Songnae-Ri 30, Namsan, Kyungsan-City, Kyungbuk 712-862,
Republic of KOREA

declare under our sole responsibility that the product(s)

Window cleaning Robot – WCR-I001

to which this declaration relate(s) is in conformance with the following standards:

EN 60335-1:2002+A1: 2004+A11:2004+A12:2006+A2:2006+A13:2008

EN 55014-1:2006+ A1:2009

EN 55014-2:1997+A2:2008

EN 61000-3-2:2006+A1:2009+A2:2009

EN 6100-3-3:2008

EN 301 489-1 V1.8.1:2008

EN 301 489-17 V2.1.1:2009

EN 300 328 V1.7.1:2006

following the provisions of the 1999/5/EC Directives.



Ilshim Global Co., Ltd.

ADD. Songnae-Ri 30, Namsan, Kyungsan-City, Kyungbuk 712-862, Republic of KOREA
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