



## ABOUT Yujin iCLEBO

iCLEBO is a wholly owned subsidiary of Yujin Robot, Inc. which has been focused on robotic technology since 1988. Yujin Robot has developed the most advanced robotic technology in the world, creating dynamic products from toy robots to complex military robots. iCLEBO's passion and experience have led to consumers raving about its products.

iCLEBO is creating tremendous excitement in the industry by consistently surpassing other brands and competitors due to its vast knowledge of robotic technology. iCLEBO products are spreading around the world, currently supplying major European companies such as Phillips and Miele.

The company's flagship product, iCLEBO, is the first robotic vacuum cleaner that has revolutionized the market with its integrated "Camera Vision Mapping," iCLEBO is optimized for all environments. Built in Wifi allows consumers to have complete access and control via their smartphones.



1988 manufacturing automation systems



1999 Soccer robot



2002 Home robot <PEGASUS>



2003 Rescuing robot



2004 Home robot <iRubi>



2005 Cleaning robot <iClebo>



Home robot <Jupiter>



2007 Cleaning robot <iClebo free>  
Ubiquitous robot <iRubi Q>



2008

2010 Cleaning robot <iClebo smart>



2011 Language Tutoring robot <Robosem>



2012 Cleaning robot <iClebo Arte>



Educational robot platform for developers <Kobuki>



## ***YUJIN Robotic Product Highlights***

- ❖ **Basic robotic vacuum cleaners** do not have an upward-pointing camera and cannot recognize the geometry of the room-allowing them to move around “blindly”. When they come across an obstacle, they change direction and clean haphazardly.
- ❖ **Our robotic vacuum** offers the most operation modes, which are: auto, random, spot, max and climb.
- ❖ **Smart Navigation** - a ceiling camera, gyro sensor and innovative software provides a maximum floor coverage. With this intelligent navigation, even difficult to access areas and edges are cleaned precisely, thoroughly and reliably.
- ❖ **Hybrid Function** - cleaning and moping in one machine (2 in 1).
- ❖ **Four Cleaning System** - swipes, mops, brushes and vacuums.
- ❖ **Non-Stop Power** - rechargeable battery last for up to 2 hours (1,600 Sq. Ft) without a break. It also lasts 3 times longer than competitors.
- ❖ **Furniture Protection System** - Our robotic vacuums recognize objects, and prevents collisions. Its stair detection sensors prevent it from falling down the stairs.
- ❖ **Advanced Corner Cleaning** - Our robotic vacuums assuredly find every corner and edge, removing dust and dirt.
- ❖ **Timer** - You decide when our robotic vacuum clean your floor. Even when nobody is at home.
- ❖ **Lightest in weight** - 6-7 lbs. In box 13 lbs.
- ❖ **Shortest charging time** (120 minutes - competitors are all around 180 minutes).
- ❖ **Highest performance in hard floor cleaning**, rated at 89.7% via IEC sand.
- ❖ **Highest performance in carpet cleaning**, rated 99%.
- ❖ **Best threshold** or doorsill crossing, up to 2.0 cm - competitors barely reach 1.5cm.
- ❖ **Quietest at 56 dB** - competitor are around 60dB.



# “ARTE” - TOP 3 FEATURES



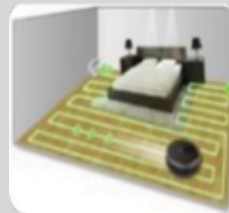
## Camera Vision Mapping technology

- Innovative and systematic cleaning algorithm developed by a robotic manufacturing company with 20+ years of robotic experience
- Precisely maps your home so it knows its layout and never misses an area that needs cleaning



## Intelligent Obstacle Detection System

- The advanced camera, IR sensors and mechanical bumper all collect data to send information to the on board CPUs in order to calculate an accurate map for cleaning
- The 3 CPUs generate the following: precise control, power management, and impeccable vision



## Superior Logical Cleaning Method

- Uses the most advanced, meticulous mapping system which allows for effective and efficient cleaning
- It cleans without error or stop page. Has a remarkable ability to escape situations (doesn't get stuck on rug tassels and other strings as found in other brands)

# Remote Control and Display Panel

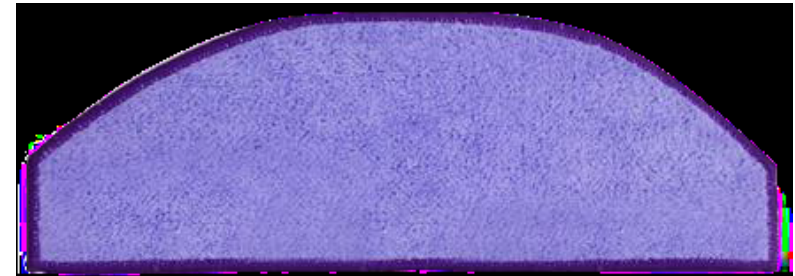
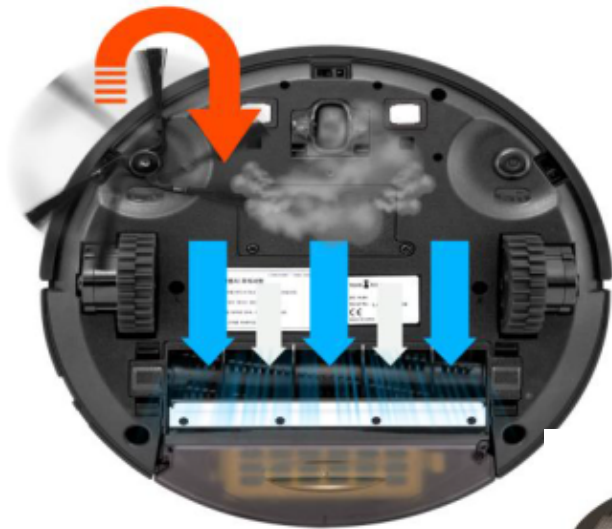


All our robotic vacuums come with a remote controller unlike iRobot Roomba.

## Robotic Vacuum 2-In-One Cleaning Method

The separated bristles pick up more hair without becoming tangled.

- The new and improved separated bristles are engineered to sweep up fine hairs, dust particles and allergens to keep your floor clean and to spend less time vacuuming.
- Dual counter-rotating extractors grab and break down dirt and debris from any floor type.



- Safe to use on all hard floors including vinyl, hardwood, laminate and tile.
- The Microfiber pad picks up 50% more dirt and dust per swipe than traditional mops.
- Reusable microfiber pad is simple to remove and can be washed up to 100 times.
- Microfiber is a super fine filament that grabs onto dirt and dust.

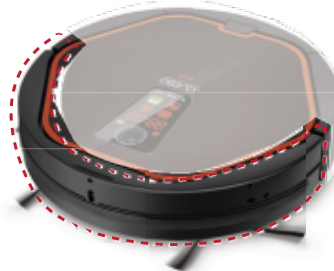




## “Camera Vision Mapping”



**Step 1 / IR Bumper Sensor**



**Step 2 / Mechanical Sensor**



**Step 3 / Vision Mapping**

All the data and images from the bumper, IR sensors and camera are sent to the on - board CPU will calculate and generate a map for cleaning.





The 3 CPUs work together to generate the following:

1. **Precise Navigation**
2. **Power Management**
3. **Dynamic Vision**



## “*Camera Vision Mapping*” in Detail

iCLEBO “eX 500” model is the only robotic cleaners on the market that literally generate a detailed map of your home to effectuate a plan for precise cleaning.

By photographing the room, never misses an area that needs cleaning.

Other products clean erratically, missing random areas and users end up having to manually clean those overlooked spots with another vacuum - totally defeating the purpose of owning a robotic vacuum cleaner in the first place!







# Cleaning Operational Functions

## Step 1

Strong spinning of 2 side brushes

## Step 3

Vacuum suction



## Step 2

Spinning of one powered roller brush

- **STEP 1:** 2 Side brushes enable Robot to clean corners, wall and furniture edges.
- **STEP 2:** The spiral shaped roller brush loosens the dust free, and then vacuumed into the dust container.
- **STEP 3:** The suction power generated by the vacuum motor ensures that all dirt particles are sucked into the dust container.



## Easily Maneuvers under Furniture



3.5 in

The slim design (3.5 in. height) allows the vacuum to easily clean hair, dirt and other things under furniture.



## Arte vs. Roomba 770

“Target Comparison Chart”



Model #	Arte	Roomba 770
Touch pad feature	YES	NO
Offers Unique Product Designs	YES 4 styles	NO 1 style
Camera Vision Mapping (no missing spots to clean)	YES	NO
Room-to-Room Navigation	YES	NO
Lightest Weight	YES 6.17 lbs	NO 8.16 lbs
Shortest Height	YES 3.5 in	NO 3.54 in
Wet Cleaning (mop mode)	YES	NO
Higher Door Sill Crossing	0.78 in	0.59 in
Longer Cleaning Time	120 min	80 min
Shorter Charging Time	110 min	180
Cleaning Method (larger sq ft performance)	Utilizes camera vision map cleaning to spot dust particles	Irregular and random cleaning that results in poor performance





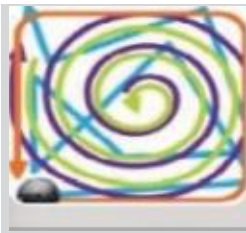
## iCLEBO *Arte* vs. Neato *XV-21*



Model #	iCLEBO Arte (Camera Vision)		Neato "XV-21" (Old Laser Technology)	
Camera Vision Mapping	YES		NO	
Wet Cleaning	YES		NO	
Touch Pad Feature	YES		NO	
Longest Cleaning Time	YES	120 min	NO	70 min
Shortest Cleaning Time	YES	110 min	NO	180 min
Longest Battery Life	YES	1 year	NO	6 months
Lightest in weight	YES	6.17 lbs	NO	8.60 lbs
Thinnest in height	YES	3.5 in	NO	4.0 in
Highest Reach	YES	0.78 in	NO	0.39 in



## “Arte” - TOP 3 FEATURES



### Double Whirling

- The eX300 automatically detects the most efficient method of cleaning an area
- Triple cleaning system that is meticulously thorough (clockwise, counter-clockwise, random and corners)
- Intensive cleaning (no area missed)



### Long Lasting Lithium-ion Battery

- Other brands average approximately 70 minutes of cleaning time while the eX300 can clean up to 120 minutes
- Charging time is only 110 minutes while the other brands take approximately 180 minutes for battery recharge



### Wet Cleaning (mop mode)

- Yujin most affordable model the eX300 includes a wet mop mode unlike other brands at this comparable price
- Polishes the floor with the removable micro fiber mop for a shiny finish

Meticulous cleaning in small or large complex structures using Environmental Analysis robot-driving **FAS Algorithm!**

iCLEBO

iCLEBO cleans any complex home environment meticulously using the **FAS (Field Awareness System) Algorithm** to analyze complex spaces efficiently.

It recognizes cleaning space and uses a sensor to clean complex spaces of any size.

1<sup>st</sup> Step - **Random**



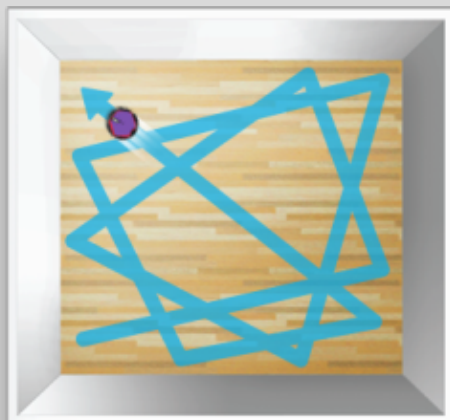
2<sup>nd</sup> Step - **Hurricane**



3<sup>rd</sup> Step - **Wall-following**



Competitor's



VS



iClebo





## 5 Circular Cleaning Mode

Easy and Convenient~

iCLEBO

It is very easy and convenient for the elderly, singles, working moms, or nursing moms to select the mode appropriate for the home environment.



Maximum +Threshold	Maximum	Standard + Threshold	Standard	Spot

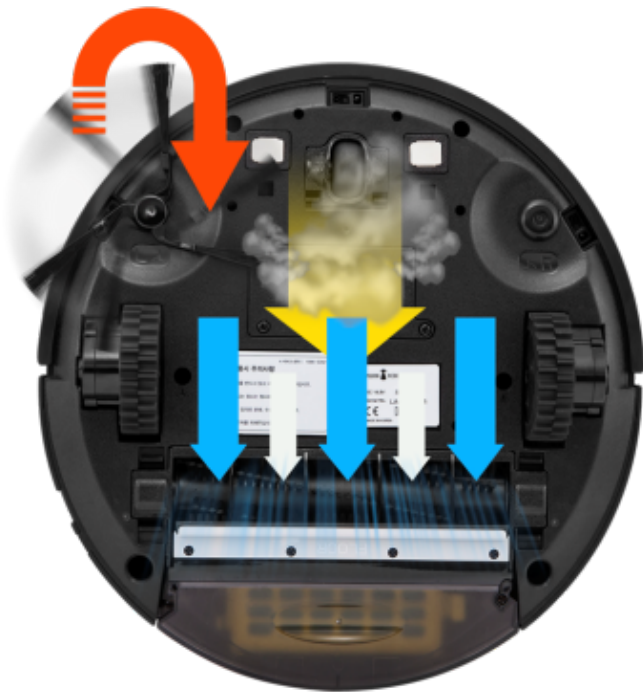
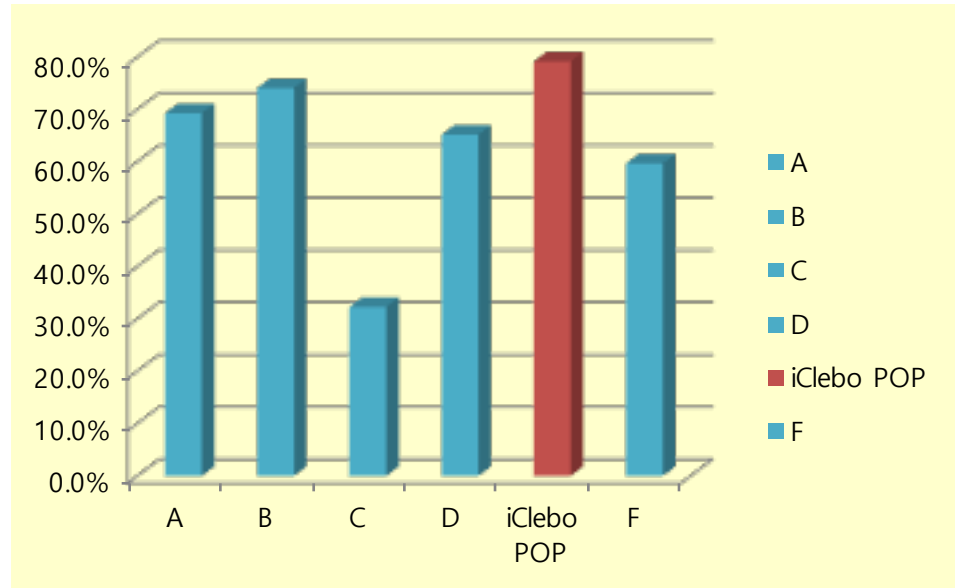




# Cleaning Every Corner with Incomparable Cleaning Performance!

iCLEBO

iCLEBO performs the most powerful suction of fine dust among competing products.



Test Period : December 2013  
Test by : International Robot Industry Advancement  
Test Method : IEC60312-3 Dust removal test - Box  
Test Item : Miele, Philips, Roomba, Neato & iClebo







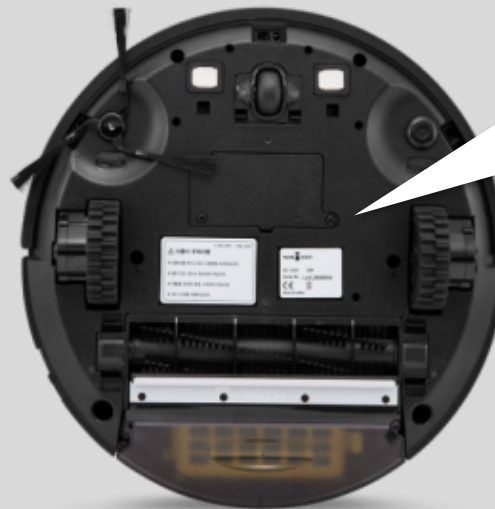
# Long-Lasting Powerful Lithium-ion Battery

iCLEBO

iCLEBO uses a powerful and long-lasting lithium-ion battery which does not have memory problems found in nickel-hydrogen batteries.

Its high energy efficiency offers more than 120 minutes of cleaning time.

\* Battery hours vary according to the space structure.



**Standby Power 0.6W**  
Lowest Among  
Competing Products!





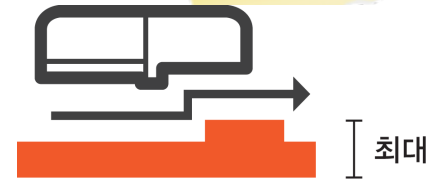
## Different Cleaning Modes

Clean conveniently with **0.71 inch Threshold mode**.

# iCLEBO

Select Maximum mode to clean floors with a rug or a mat. Select Threshold (Climb) mode to clean floors with a rug or a mat and a threshold.

“You can select the mode to climb threshold of floors.”



iCLEBO	A Company	B Company
0.71 inch	0.59 inch	0.39 inch

