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# About LionsBot

LionsBot International is a Singapore-based robotics company that creates cleaning robots as a service for commercial, industrial and public spaces.

## Built from Scratch

Every single aspect of LionsBot cleaning robots is entirely designed and produced locally with the aim for mass-market deployment globally.

Equipped with our own in-house team of highly skilled and talented engineers, our hardware and software are all proprietary and exclusively made for LionsBot. Our homegrown solutions offer you complete peace of mind as we know the ins and outs of our robots thoroughly.

*“Driven by innovation and the desire to advance lives, all our LeoBots are purposefully designed, built with cutting edge technology and brilliant expertise to enhance our quality of life.”*

*Dylan Ng  
CEO & Co-founder*

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## Born with a Strong Singapore Identity

Proudly made in Singapore, LionsBot cleaning robots are 100% Singaporeans through and through. Each of them is a cleaning specialist, yet all charged with the same purpose to ease human-intensive cleaning workforce with efficient technologies.

## LionsBot with LionsHeart

Every LionsBot has an illuminated beating heart, illustrated by the flashing light of the logo. Bits of sand from Singapore is placed in the nose of the LionsBot logo; as a representation of its roots and as a symbolism to bring a piece of Singapore along to wherever places the robot travels to.

The interactive features of the robot include introducing Singapore's food, places and culture. A QR code is located on each robot. Upon scanning the code, communications can be made with the robot through our LionsClean mobile app. No matter which part of the world these robots are being deployed, they proudly play the role of little ambassadors of Singapore.



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LionsOS:

# Powering LionsBot

Cloud Operating System that  
brings Exceptional Value

## The DNA of LionsBot

The distinctive characteristics of our LionsBot robots are proudly boosted by Lions Operating System (LionsOS) – the software that empowers our robots for optimal performance. Using cutting-edge technology in artificial intelligence, we focus on building a pleasant user experience while placing a strong emphasis on total safety, total security and total solutions from the ground up.

## Self-owned Technology Activated by Active AI

All LionsBot robots are built with Active AI, which constitute a vital part of LionsOS to drive its performance capabilities. Active AI forms the foundation to provide the outstanding functions of our connected robots - which translates to the high productivity results we seek to achieve for your business.





# We Optimise Cleaning Efficiency

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## Easy Deployment

Path planning is optimised through analysis of big data for smarter navigation. The autonomous cleaning robots are able to self-assign roles via teamwork and collaboration, with minimum human intervention and maximum efficiency.

## Competent Scheduling

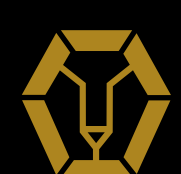
Having the ability to activate and auto call for respective scheduled robots to perform tasks by the robots themselves, the cleaning process is seamless and smooth. Our robots even go one step further to self-learn upon each activation and improve scheduling.

## Effective Monitoring

All the robots' individual cleaning reports are compiled into one comprehensive summary for a convenient consolidated study. Using predictive analysis, our robots' performance and condition are constantly being monitored so as to deliver consistent high performance.

## Improved Productivity

Every area that requires cleaning has to be mapped only once for data to be shared across all robots. Coupled with our unrivalled high speed mapping and contextual mapping, productivity is greatly improved through the in-built collaboration and intelligent features.





# Be Worry Free with LionsBot Cleaning Robots

LionsOS-empowered Cleaning Robots free you from constant maintenance concerns as our cloud infrastructure allows us to:

Operate Robots Anywhere, Anytime, via LionsClean App

Share Real-time Updates to Monitor Cleaning

Receive A Compiled Report

Provide 24x7 Cloud Service Support

Manage Robots Tracking



# Robots People Love

Serving the needs, while delighting all

## Get To Know LeoBots

Business owners, public, users and building contractors love our robots as they are painstakingly developed to suit different cleaning requirements.

## Specialised Cleaners

We develop a wide range of specialised cleaning robots to cater for the various cleaning needs; these models include different capacity sizes, different cleaning mechanism and variants for indoor and outdoor.





## Robots with Personality

Created to be engaging, LionsBot cleaning robots are injected with personalities via their emotional responses, such as through their expressive eyes and voices. Our humanised robots also embody Singaporean traits; for instance, friendliness, diligence and efficiency which are reflected via the interactive features and high productivity.

## Attractive Appearance

Beyond building effective robots, we put in equal efforts to ensure a beautiful form. The slim and sleek look of our cleaning robots are intentionally created using nice curved edges all round. Fashioned to be approachable and appealing, we aim to captivate hearts and minds.



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# High-performance Robots



## Better coverage for tight areas

LionsBot's proprietary Nimble-Tec platform greatly enhance the mobility of all our LeoBots robots to work in enclosed facilities. Being nimble allows them to move around easily for better area coverage and entering smaller and tighter spaces.

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## Eco-friendly and Safe

Specifically for LeoScrub and LeoMop, our water-saving technology uses up to 70% less water than other cleaning robots yet achieves the same high cleaning results. With Active-DryTec, they also leave behind much drier floors than current solutions due to stronger water extraction to provide safer surroundings.

LeoBots are also the first robots in the world to clean exclusively with Z water - a professional cleaning chemical that is totally safe and environmentally friendly.

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# High-performance Robots



## Noise-friendly Machines

With the QuietTec feature, our LeoMop and LeoPull are the quietest professional cleaning robots in the LeoBots range – close to silent – hence, enabling them to operate at any time of the day during business hours and night time, without causing any disturbances. LeoVac and LeoScrub function with low volume motor sound, thus allowing normal conversation to take place while they are at work.

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## Customised Cleaning

During the contextual mapping process, our cleaning robots are able to detect and determine what level of cleaning is required via DynaTec, so as to exert varying pressure on the floor depending on soiling condition. Water and time are greatly saved, resulting in better cleaning efficiency.

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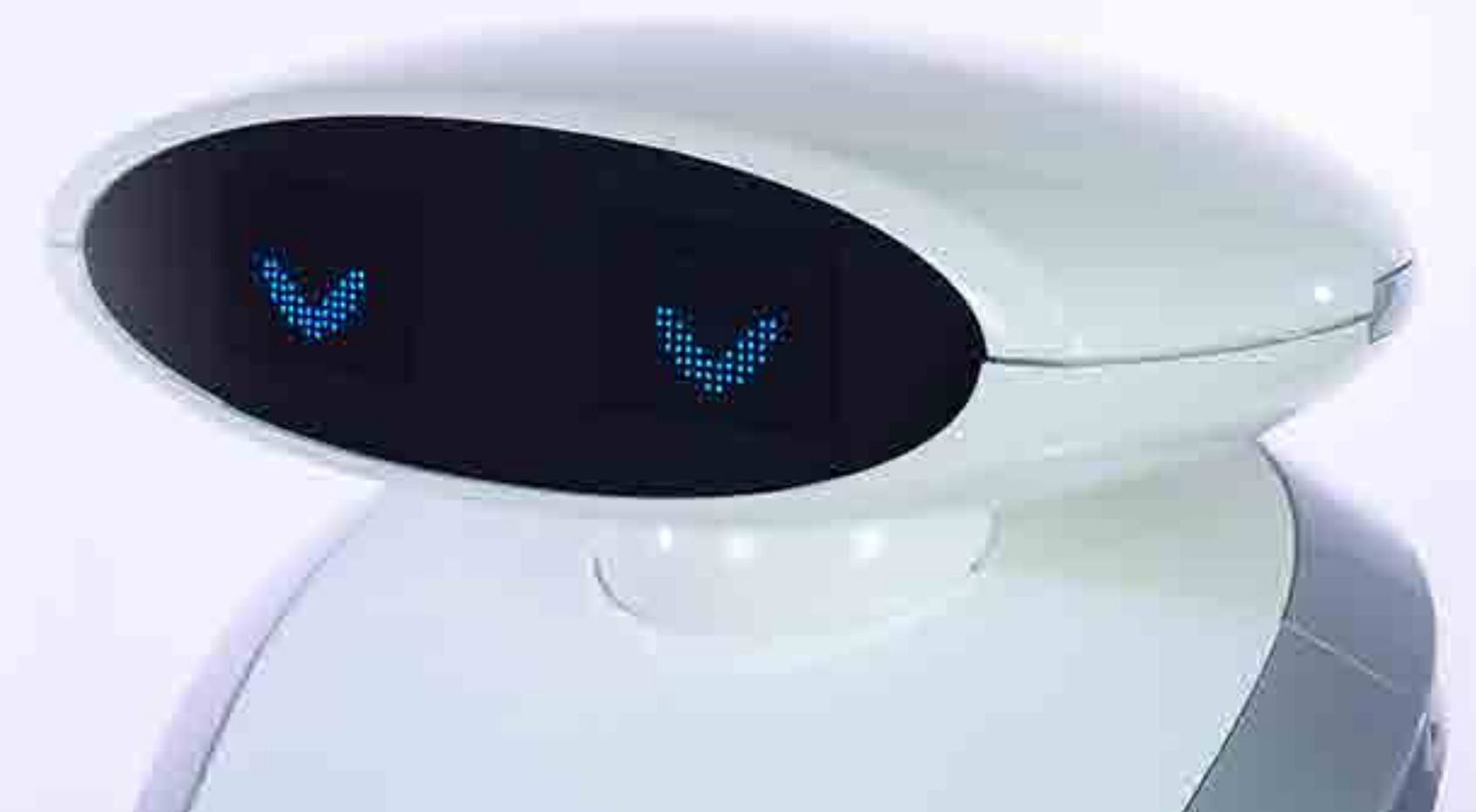
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# What Makes LeoBots Special

The distinctive characteristics of LeoBots serve to make them unique and set them apart from the rest.



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## Assist Cleaners

Our cleaning robots are specifically created to support the existing cleaning crew with manual work while enabling them to perform supervisory duties. They help to speed up the cleaning tasks while delivering greater cleaning consistency.



## Draw Crowds

More than just cleaning, LeoBots are crowd minglers that bring joy and delight. They are able to inform, entertain, and even exchange a simple conversation with you upon activated via QR code.







### Homepods Docking Station

The Homepods are where LeoBots go to rest. Upon finishing their assigned duties, the smart robots self-dock, and are able to automatically recharge, refill clean water and discharge waste water. These user-oriented smart functions help to prepare the cleaning robots in ready mode at all times.



### Flexible Cleaning Modes

The multiple, versatile cleaning modes cater to different facilities and situations. The cleaning robots are able to operate by solo mode or in a team; and in manual or automatic mode. In particular, LeoVac is able to transit smoothly between cleaning on carpet and hard-floor surfaces.



### Teamwork

LeoBots are great team players. All of them can be linked and assigned to work together. Smart cleaning is achieved via data sharing among the robots for full-scale cleaning operations, or to get the cleaning completed at a faster time.

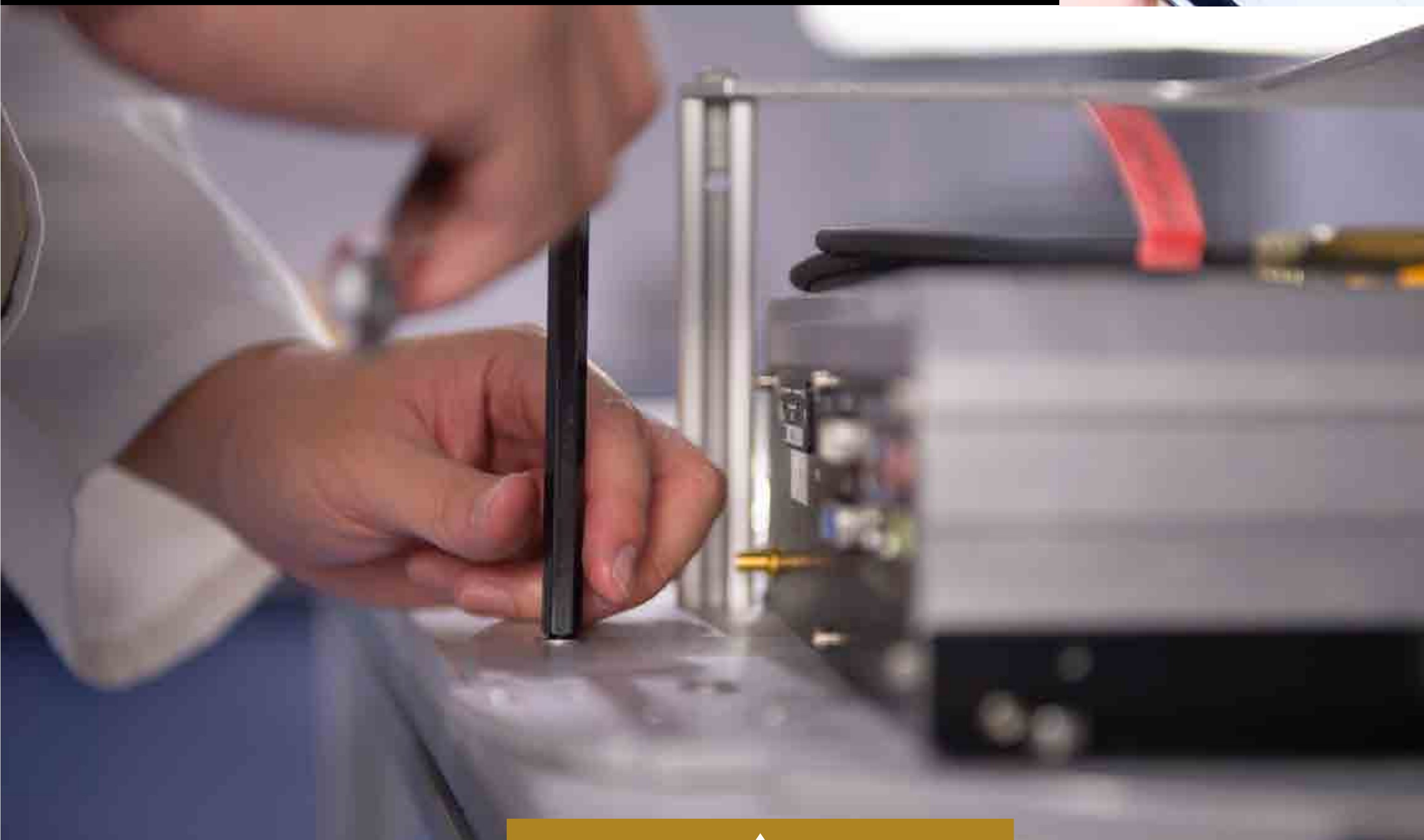


## LionsClean Mobile App

Operating of our cleaning robots is entirely via LionsClean mobile app, which is extremely user-friendly and comes with a high-security login system. The interface is intuitive and simple to use, through selection of the pre-set cleaning modes. Real-time updates are provided, with notification alert sent whenever a job is completed.



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## Class Leading Safety Features

LionsBot has a well-planned and comprehensive approach to building safe cleaning robots. From the physical design, to the advanced sensors and special mechanisms, they are all thoughtfully devised and incorporated to minimise any unsafe situations from arising.

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# Designed for Safe Usage

Right from the start, every part of our robots' construction is tediously studied and considered to ensure they are exceptionally safe. Deliberately constructed by our engineers who look into both form and function, all LionsBot robots are powered by our LionsOS that supports the multiple safety features.



## Well-integrated Sensors

Our range of sensors which include Precision Lidars, Sonars and Light-enabled Safety Bumper are well-integrated to equip our cleaning robots with the capability to cleverly see the environment around them and to respond accordingly, meeting the objective to detect and avoid any potential collisions in the cleaning path.

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## Auto Adjustments for Safety Control

Using smart algorithms, the robots are able to auto adjust their travelling speed depending on distance of people or objects detected as a protection feature. Upon identifying the obstacles, they are also capable of actively avoiding and smartly navigating around them to continue with performing their cleaning tasks.

### Advanced Security

Our cloud storage is strongly encrypted to secure communications between LionsBot robots and the Cloud to prevent cyber attacks.

#### Sensors

Multiple sensors are integrated into the robot to detect objects.

#### Depth Camera

The depth camera is carefully calibrated and fine-tuned to detect and avoid objects that the robot may encounter on its path.

#### Soft Bumpers

They act as a physical barrier to cushion against any hard collisions.

#### E-stop Button

A resettable physical switch is easily accessible to stop LeoBots at once for emergencies.

#### Safety Lights and Sound

All LeoBots are equipped with clear warning lights and sound to capture people's attention of their presence.



## Physical Design

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# Specialised Floor-cleaning Robots First-of-its-kind

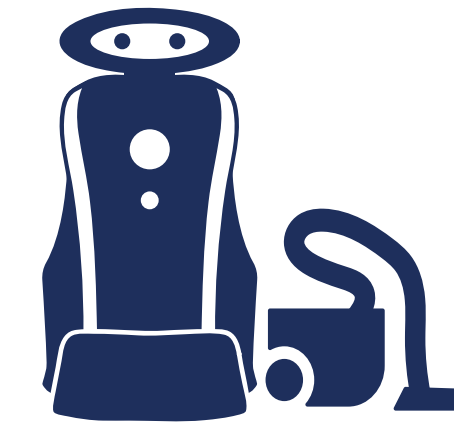
LeoBots, our floor-cleaning robots, are a family comprising of 4 different models. Each of them is made to perform a specific task so as to achieve maximum efficiency in its cleaning operation. Equivalent to the Walk Behind cleaning machine, these highly likeable bots can also entertain and share nuggets of helpful information when required.

[Watch More](#) 



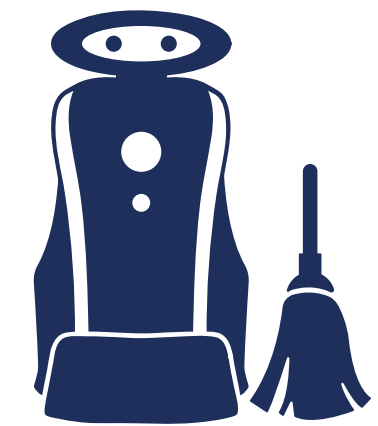
## LeoScrub

Scrubbing expert.  
Uses up to 70% less water with high cleaning results.



## LeoVac

Vacuum genius.  
Comes with Optional HEPA filter for cleaner air.



## LeoMop

Silent mopper. Leaves behind much drier floors.



## LeoPull

Small but strong worker.  
Able to pull 450kg Bin.

[View specs](#)

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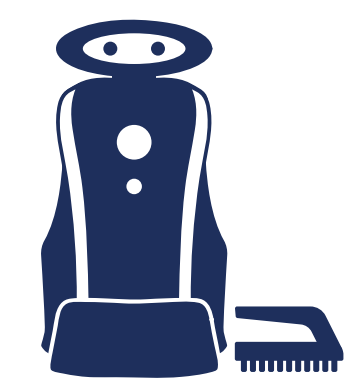
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LeoScrub

**Dimension**

840mm (L) x 660mm(W)  
x 1160mm(H)

**Scrubbing Width**

500mm (2 x 10")

**Brushing Pressure**

50Kg, 63 g/cm<sup>2</sup>

**Solution Tank**

21L  
(equivalent to 52L  
water tank)

**Recovery Tank**

25L

**Chemical**

1L Refillable Pouch  
(Z Water)

**Noise Level**

75dB

**Auto Docking**

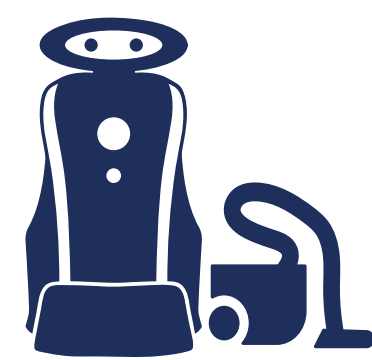
Optional with water refill

**Running Time**

4 - 5 Hours

**Charging Time**

1 - 2 Hours



LeoVac

**Dimension**

840mm (L) x 660mm(W)  
x 1160mm(H)

**Vacuuming Width**

450mm  
(1 Cylindrical Brush)

**Vacuum Tank**

16L

**Filter**

Paper Filter, Motor Filter,  
Optional HEPA Filter

**Noise Level**

62dB

**Auto Docking**

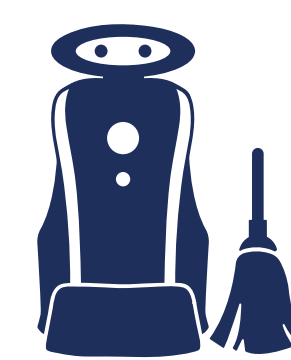
Optional

**Running Time**

5 Hours

**Charging Time**

1 - 2 Hours



LeoMop

**Dimension**

840mm (L) x 660mm(W)  
x 1160mm(H)

**Mopping Width**

450mm

**Solution Tank**

21L  
(Uses 80X less water)

**Recovery Tank**

25L

**Chemical**

1L Refillable Pouch  
(Z Water)

**Noise Level**

Silent

**Auto Docking**

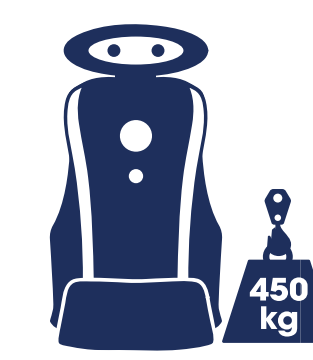
Optional with water refill

**Running Time**

20 Hours

**Charging Time**

1 - 2 Hours



LeoPull

**Dimension**

840mm (L) x 660mm(W)  
x 1160mm(H)

**Pull Capacity**

Trolley (Optional) fits  
standard 450kg bin

**Turning Radius**

2.5m

**Movement Speed**

0.3 - 0.5m/s

**Capability**

Stop Button  
Go Home Button  
Fit Standard 450kg Bin

**Noise Level**

Silent

**Auto Docking**

N.A.

**Running Time**

20 Hours

**Charging Time**

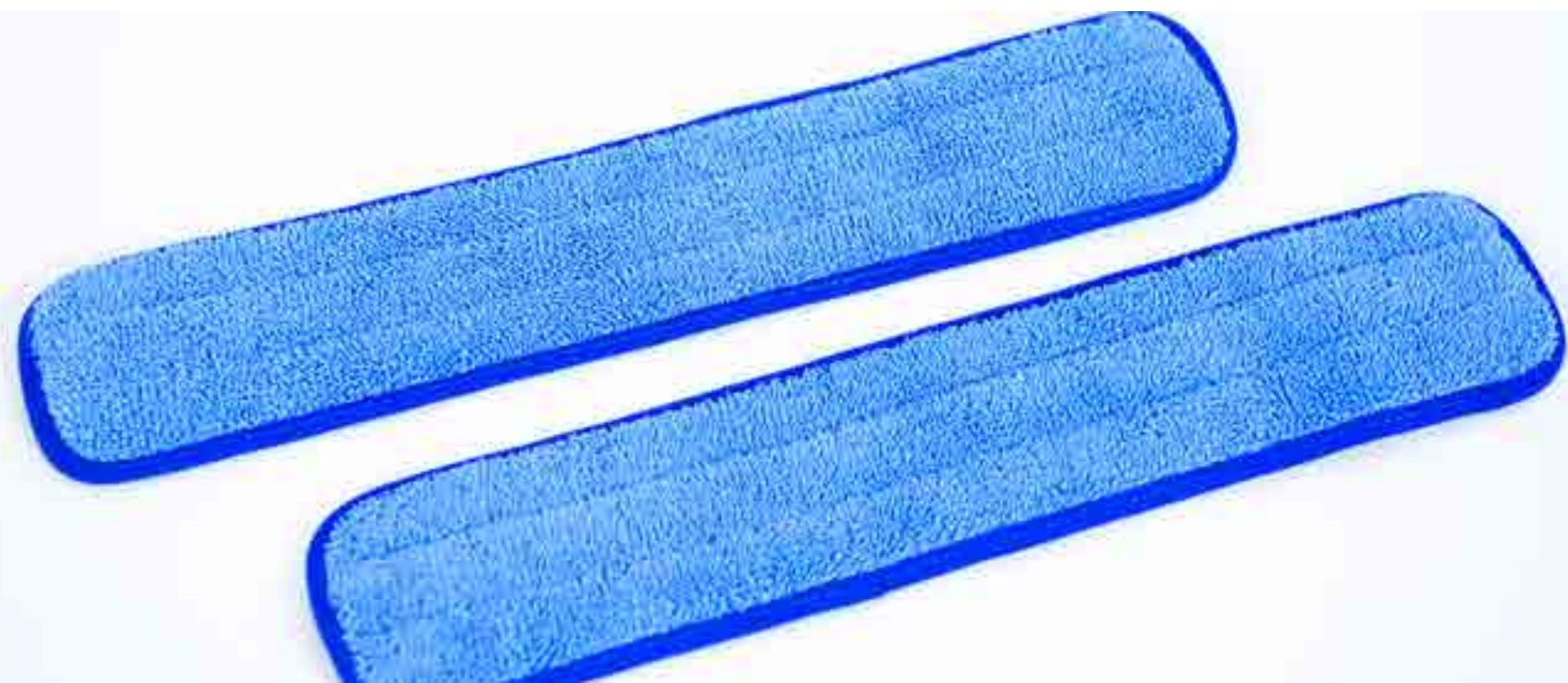
1 - 2 Hours





# Accessories

To complement our cleaning robots, we have developed our own exclusive range of accessories for each of our specific LeoBot model. Contact us to obtain the full list and understand how they can further boost your current cleaning performance.



LeoMop Microfibre Pad



LeoVac Cylindrical Brush



LeoVac Paper Bag



LeoScrub Squeegee



LeoScrub Disc Brush



LeoScrub Diamond Pad





# Robots as a Service

## The World's First Cleaning Robots as a Service Concept

We believe that cleaning robots work best in teams, hence we have pioneered the world's first "Robots-as-a-Service" (RaaS) concept.

RaaS is a unique rental-based business model, in which customers are able to rapidly deploy teams of robots at an affordable rental rate compared to the astronomical purchase price of other cleaning robots.



### It's as Easy as 1-2-3

Step 1: Sign up for a package of cleaning robots from Distributor

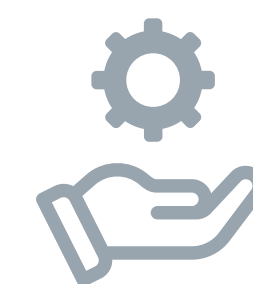
Step 2: Quick consultation on suitable types of robots to use on jobsite

Step 3: Setup onsite, robots deployed, ready to use



### Affordable Solution

A more affordable and accessible solution. With no ownership hassle, no capital expenditures, and no maintenance worries, your cleaning requirements are taken care of readily. Just let us know what your needs are, and we will take charge of the rest.



### No Hardware And Infrastructure Headaches

Comprehensive technical support is fully provided round the clock by LionsBot through a dedicated service command centre. You no longer have to worry about faulty machines or lack of spare parts, we have got it covered.

