



**Vacuum 40**  
AI-integrated Vacuuming Expert

# PRODUCT RANGE



## ABOUT GAUSIUM

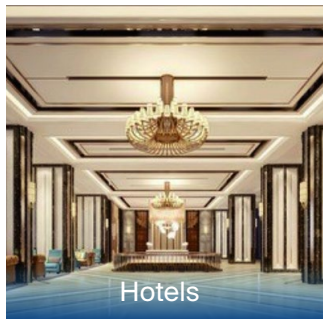
Gausium (alias "Gaussian Robotics") develops and manufactures cleaning robots to co-work with people. The Gausium cleaning robots are comprehensive range of floor cleaning robots, which includes: Vacuum 40, Scrubber 50, 50 Sprayer, Scrubber 75, Sweeper 111 and more in the pipeline. They have been deployed in thousands of commercial, institutional and industrial facilities around the globe to deliver professional and consistent cleaning services.

Founded in 2013 out of a passion for autonomous driving, Gausium built its class-leading autonomous navigation based on advanced SLAM technology and integrated it into cleaning machines. It has since grown into a global leader and is now setting the benchmark for the cleaning robot industry. Today, it has rapidly expanded into a team of over 1000 employees with its headquarter in Shanghai and overseas offices in Singapore, Hong Kong and the Netherlands.

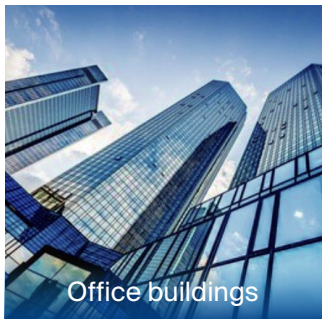


# APPLICABLE SCENARIOS

Vacuum 40 is applicable in a variety of small-medium indoor environments, including Office buildings, Hotels, Hospitals, Schools, SME markets, Pavilions, etc.



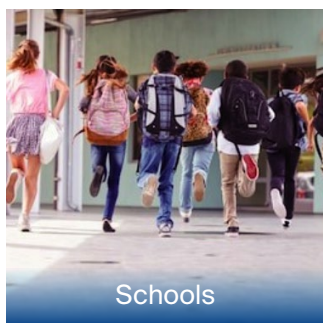
Hotels



Office buildings



Hospitals



Schools



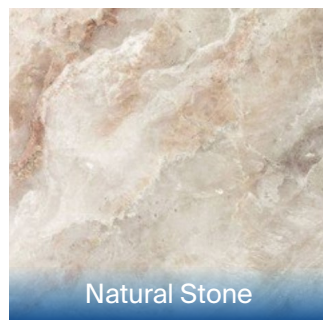
SME markets



Pavilions

# FLOORING TYPES

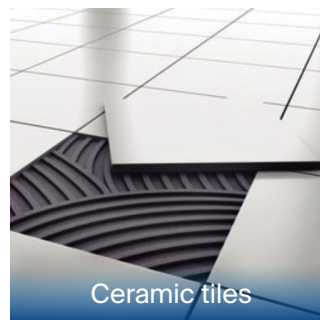
The combo of side brushes and adjustable roller brushes enables Vacuum 40 to clean different types of hard and soft flooring, including Natural Stone, PVC, Ceramic tiles, Epoxy, Concrete, Carpet tiles, etc.



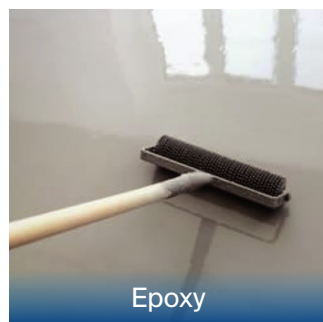
Natural Stone



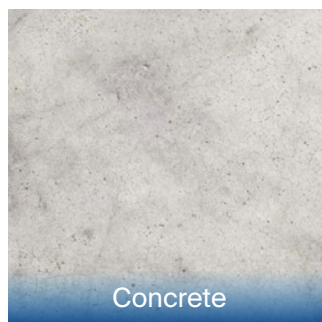
PVC



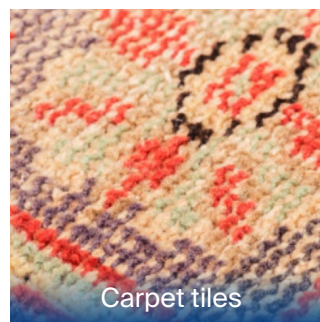
Ceramic tiles



Epoxy



Concrete



Carpet tiles

# CORE STRENGTHS

## SIMPLICITY – Minimal Human Intervention Operation (M.H.I.O)



### Easy Deployment

- User-friendly display with intuitive menu, accelerating setup and adoption
- Flexible operation methods, controlling the machine through touch screen, mobile APP or cloud platform
- Mapping, map editing and task creating can be done by the operator on the display without external assistance



### Minimal Maintenance

- Optional charging dock for automatic charging & discharging, realizing 7/24 uninterrupted operation
- Only 2 hours required per month for general maintenance



### Dual Operation: Autonomous + Manual

- Switches between autonomous and manual mode with a simple command

## INTELLIGENCE – Boldly go where no other cleaning robot has gone before



### Advanced AI navigation system empowered by semantic SLAM

- Real-time Auto-cover: Dynamically maps and plans cleaning paths to maximize cleaning coverages in a changing environment
- Incredibly fast mapping: 30 mins to map a 2,000 sqm site(\*)
- Flexible map editing (marking virtual walls and highlight areas to avoid collision and damage)



### Remote task scheduling, activation and maintenance

- Real-time data transmission and monitoring, getting real-time information of the operational status and cleaning progress
- Sends detailed cleaning task reports via email or SMS, letting your data demonstrate your commitment to a quality clean



### Flexible task combination, customizing cleaning plans in complex scenarios

- Teach & Follow (Auto repeat)
- Auto-cover (Auto fill-in)
- Real-time Auto-cover (Returning to occupied spaces)
- Sketch (Point to point)



### Recovery

- Resumes previous unfinished task after interruption

## PRODUCTIVITY – Remove the clingiest dusts on the carpet in one sweep



### Advanced cleaning efficiency

- Integrates vacuuming, sweeping, and dust-mopping in one unit
- Up to 1,200 m<sup>2</sup>/h cleaning efficiency(\*)



### Super capacity

- 12L Dust Bag
- 2.5L Trash Tray



### Powerful suction motor

- Super strong suction performance of 24KPa, effortlessly picking up fine dust and debris from hard floors and carpets



### Excellent air purifying capability

- H13 HEPA filter



### Near to wall cleaning

- Side brush enabling 0-2cm edge cleaning

## MANEUVERABILITY – Access restricted area while cleaning



### Agile and compact design

- 90cm passage width + 110cm turning diameter- Able to clean narrow corridors

## SAFETY – Cutting-edge obstacle detection & avoidance



### Multi-sensor fusion

- Reacts to the changes correspondingly and automatically while cleaning, detecting and avoiding static and dynamic obstacles in real time
- Equipped with anti-fall sensor, anti-collision sensors, soft-touch bumper, E-stop button etc., providing all-round safety

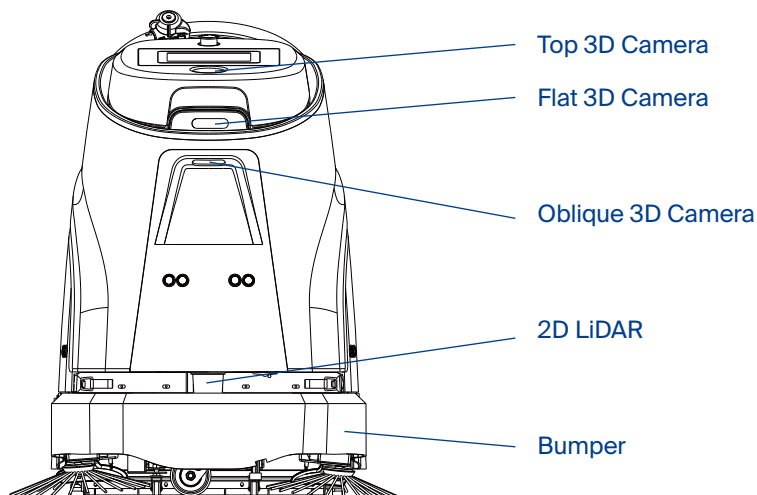


Figure 1: Vacuum 40 Sensors

(\*Under ideal conditions)



# KEY BENEFITS

## SUSTAINABILITY – Create long-term value by taking an eco-friendly approach



### Energy Saving

- Calculates the most efficient path to reduce energy consumptions



### Soundproofing

- Operating noise level as low as 55 dB, ideal for noise-sensitive environments and daytime cleaning



### High Filtration

- Exhausts air with Hepa filtration, preventing the spread of fine dust and pollen

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## COST-EFFICIENCY – Invest in Gausium's quality and technology that significantly drive down cleaning cost



### Low total cost of ownership

- The large capacity, Lithium batteries, elevator integration and optional charging dock, all ensure a high ROI and low maintenance costs



### Cut down labor cost

- Functions of task scheduling and real-time reporting simplify your cleaning management and lower labor costs

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## BETTER IMAGE – Enhance facility image by embracing a consistent, sustainability oriented clean



### Marketing value

- The visual appearance of the Gausium robot shows visitors your taking their health and safety seriously, demonstrating your company as a clean and trendsetting organization
- The adoption of Gausium's water-saving and energy-efficient cleaning solutions manifests your company's commitment to CSR initiatives

# WHAT OUR CUSTOMERS SAY

“ The robot takes a lot of time off our work in the area, which we can put into more elaborate handicrafts. We have tested it intensively here and are sure that it will soon support us permanently in our day-to-day business.

(translated from German)

— Georgios Sarantos  
Dussmann Service (Germany)

“ The cleaning service partners operating the Gausium robot at the airport generally find it safe, easy and efficient to use it. The robot's adoption and awareness of its capabilities by the cleaning team and leveraging on its technology for its daily cleaning operations is increasingly improving.

— Jerome Francis  
Changi Airport Operations  
Management (Singapore)

“ Our robots work 24 hours a day without compromising the efficiency. So, we provide a cleaner service with a unique quality and comfort level for our customers.

(translated from Polish)

Seris Konsalnet (Poland)

“ Our train presentation and station cleaning teams have been working tirelessly throughout the pandemic and the new Eco Bot (Scrubber 50) will help free up a lot of time, so colleagues can focus on additional sanitisation.

— Simone Bailey  
Greater Anglia (UK)

“ With this technological robot, it renews itself day by day. It has systems that can take the elevator. Scrubber 50, a small one of which can take the elevator, charge itself, fill and empty its own water...If it sees a living thing, it changes its path. You can manage it via the panel, web or mobile. You have the cleaning done over and over again by using the remote panel without being there.

(translated from Turkish)

— Nazlı Uzunlar  
UFS Facility Services (Turkey)

“ Continuing to implement our innovative cleaning solutions with these robotic floor scrubbers and driers... There's a reason we're one of the UK's leading cleaning service providers.

Mitie Cleaning Services (UK)

## SPECIFICATION

|   |  |
|---|--|
| FEATURE                                   | VACUUM, SWEEP, MOP   |
| SIZE                                      | L700*W570*H875MM (L27*W22*H34 IN)  |
| UNLADEN WEIGHT                            | 80KG (176LB)   |
| CLEANING WIDTH                            | 720MM (28 IN)  |
| THEORETICAL MAX.<br>CLEANING PRODUCTIVITY | 1,200M <sup>2</sup> /H (13,000FT <sup>2</sup> /H)                          |
| RATED VOLTAGE                             | 24V DC   |
| MAX. OUTPUT POWER                         | 1,000W(1.34HP)   |
| MAX. AIR FLOW VOLUME                      | 2.0 M <sup>3</sup> /MIN  |
| MAX. CLIMBING SLOPE DEGREE                | 4.6°   |
| MAX. MOVING SPEED                         | 1M/S (2.2MPH)  |
| SIDE BRUSH                                | HEIGHT ADJUSTABLE Ø260MM (10 IN)   |
| ROLLER BRUSH                              | HEIGHT ADJUSTABLE<br>Ø90*440MM (3.5*17 IN)                                 |
| DUST BAG                                  | 12L (3 US GAL)   |
| TRASH TRAY                                | 2.5L (0.7 US GAL)  |
| MAX. VACUUM PRESSURE                      | 24 KPA (3.4PSI)  |
| AIR FILTER (HEPA)                         | H13  |
| SENSOR SYSTEM                             | 2D LIDAR, 3D CAMERA,<br>AIR PRESSURE COLLISION SENSOR,<br>ANTI-DROP SENSOR |
| UPTIME                                    | 3-18H  |

\*Due to ongoing product updates, specifications are subject to change without notice and will vary throughout the operation.

### Gaussian Robotics

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