

Company Name: Nilfisk

Product Name: VP25

Product Category: Robotics

Current Market Availability: Available now and ready to ship to customers

Service / Support infrastructure: Established network of authorized service providers in North America, remote diagnostic and troubleshooting support available

Product Description

The Nilfisk VP25 is an autonomous robotic vacuum that delivers consistent, high-performance cleaning in large commercial spaces. Designed for both hard floors and carpet, it uses advanced navigation, LiDAR, depth cameras, sonar, and a dual-brush system to clean efficiently while avoiding obstacles. HEPA filtration improves air quality, and automation frees staff for higher-value tasks.

What makes your product innovative?

The VP25 transforms commercial vacuuming through autonomous operation, using LiDAR, depth cameras, sonar, and intelligent route optimization to deliver consistent cleaning with minimal operator involvement. Its dual-brush system, HEPA filtration, and proof-of-clean capabilities help facilities improve productivity, indoor air quality, and cleaning outcomes while addressing labor shortages.

Please provide any applicable product specifications or technical details.

- Cleaning system: Dual-roller brush design (poly brush and microfiber roller)
- Navigation technology: 3D LiDAR with front and side depth cameras and sonar for obstacle detection and route optimization
- Cleaning path: 25.7 in. (65.4 cm)
- Runtime: Up to 3 hours per charge
- Battery: 24V / 40Ah
- Productivity: Up to 1,317 m²/hr (14,176 ft²/hr)
- Coverage area: Approximately 500-2,400 m² (5,000-25,000 ft²) of cleanable space per charge
- Dust capacity: 20 L (5.3 gal) dust bag
- Filtration: Certified HEPA filter capturing 99.97% of airborne particles, including allergens
- Sound level: Less than 66 dB(A)
- Safety: IEC-certified autonomous cleaning platform (CSA/ANSI C22.2 No. 336-17 robotic safety standard)

Is your product sustainable / environmentally friendly? If so, please explain why below.

Yes. The VP25 supports sustainability initiatives by improving cleaning efficiency, reducing resource consumption, and extending operational productivity. Its intelligent navigation system optimizes cleaning routes to minimize unnecessary travel and energy use while maximizing floor coverage. The large 20 L dust collection capacity reduces interruptions and waste associated with frequent bag changes.

The certified HEPA filtration system captures 99.97% of airborne particles, helping improve indoor environmental quality and creating healthier spaces for occupants. Additionally, by automating repetitive vacuuming tasks, facilities can maintain consistent cleaning standards with fewer repeated passes, reducing overall energy consumption while making better use of available labor resources.

The result is a more efficient, data-driven approach to floor care that supports both operational sustainability and healthier indoor environments.

Product Name: VP25



Company Name: Gausium

Product Name: Marvel

Product Category: Robotics

Current Market Availability: Available for pre-order with confirmed shipping date

Service / Support infrastructure: Established network of authorized service providers in North America, direct manufacturer support, third-party service partnerships

Product Description

Marvel is Gausium's autonomous sweep-scrub robot for warehouses, plants, garages and retail sites. Brushes deliver sweeping, scrubbing & optional polishing in one pass, no manual prep. 3D LiDAR +360° vision enables AI autonomous work amid forklifts. Large tanks, 120Ah LFP & Self-Cleaning 2.0 support long unmanned cleaning. Optional display enables ads. It prioritizes data security and eco-design.

What makes your product innovative?

Marvel features true front-sweep rear-scrub integrated structure to avoid pipeline clogging. Its AI spot cleaning boosts efficiency by 400%. Adjustable heavy scrub pressure, Self-Cleaning 2.0 and adaptive 3D perception deliver stable performance. Quick-release hardware and flexible extensions simplify deployment & maintenance.

Please provide any applicable product specifications or technical details.

Marvel is Gausium's autonomous sweep-and-scrub commercial robot floor cleaner, purpose-built for large, complex, and high-soiling environments including warehouses, manufacturing plants, underground parking garages, and large retail complexes. Its front-mounted dual side brushes and rear disc brushes / pads enable sweep, scrub (and shine -if requested) in a single pass, simultaneously collecting coarse debris & dust and delivering deep floor scrubbing without the need for manual pre-sweeping (or afterwards polishing). It supports AI Patrol Cleaning mode and Full Coverage cleaning mode. Powered by a 3D LiDAR + 360° vision system with zero-blind-spot perception, the robot operates fully autonomously in dynamic environments with mixed forklift-pedestrian traffic. Equipped with ultra-large water tanks, a 120 Ah LFP long-endurance battery, and the next-generation Self-Cleaning System 2.0, Marvel supports extended uninterrupted unmanned cleaning operations. It also features quick-release maintenance components, a power-assisting handle bar, and an optional stand-on pedal, seamlessly balancing fully autonomous operation with manual transport and maneuvering. This significantly reduces cleaning labor input and the frequency of manual intervention, enabling stable, reliable automated floor cleaning in large-scale, high-duty-cycle environments. Furthermore, Marvel is tailored to the comprehensive needs of target scenarios with multiple expansion options. For example, in retail environments, Marvel can be equipped with an on-board display screen, achieving both cleanliness standards and advertising promotion.

1. Structural True Front-Sweep, Rear-Scrub Integrated Architecture: Addressing the industry pain point of ""pseudo sweep-and-scrub integration,"" Marvel not only executes sweeping and scrubbing simultaneously but delivers both capabilities at equally high performance. This is achieved through equally robust sweeping and scrubbing configurations within a compact footprint. The sweeping module uses front-mounted dual side brushes and a 10L large-capacity debris tray to collect debris, followed by rear disc brushes for scrubbing. The dry-wet separation structure fundamentally eliminates pipeline clogging; it can directly handle large-volume debris, truly eliminating the need for manual pre-sweeping. Long-term field testing in retail, logistics and parking scenarios has confirmed zero pipeline clogging, redefining the product design benchmark for large-space cleaning robots.
2. Breakthrough Dry & Wet Debris Spot Cleaning Capability: Trained on massive datasets of dry and wet debris commonly found in large spaces, the AI model enables the robot to accurately identify debris characteristics and intelligently and autonomously switch between sweeping and scrubbing strategies, achieving human-like operational decision-making. Field testing demonstrates that in Patrol Cleaning mode, the overall cleaning efficiency is improved by 400%.
3. 55kg Adjustable Down-Pressure Heavy-Soil Scrubbing Solution: Significantly exceeding the industry mainstream level, this system removes workshop oil stains, parking garage tire marks, and caked stubborn dirt in a single pass, suited for high-soiling industrial-grade environments.
4. Next-Generation Self-Cleaning System 2.0: Achieves 360° automatic flushing of the waste water tank and suction pathway. The filter basket maintenance cycle is extended by 3x, reducing manual dirty-work cleaning and solving the traditional pain points of odor and clogging in scrubber waste water tanks.
5. All-New Whole-Machine Hardware Architecture + 360° 3D Perception AI Algorithm: Independent electronic control compartment and independent battery compartment airflow designs significantly extend machine lifespan and operational stability. 3D LiDAR + RGB depth cameras deliver omnidirectional zero-blind-spot perception. The AI adaptive cleaning algorithm automatically adjusts brush pressure, travel speed, and water flow based on floor soiling levels and surface materials, adapting to dynamic and complex warehouse and parking environments while ensuring safe operation in mixed human-vehicle conditions.
6. Whole-Machine Quick-Release Design: Disc brushes, squeegee, and bumper shell achieve second-level quick disassembly; all high-frequency maintenance components are exposed and easily accessible, lowering the maintenance threshold for cleaning staff. The power-assisting handle bar and optional stand-on pedal balance automation with ergonomic manual operation.
7. Scenario-Specific Deep Requirement Extensibility: The on-board display screen provides integrated cleaning + advertising services for retail and warehouse club environments. The detachable stand-on pedal flexibly switches between fully autonomous operation and manual push mode, and the machine can smoothly traverse speed bumps, adapting to complex terrain in parking garages and factories. The device efficiently handles various large-volume debris, while the Self-Cleaning System reduces manual dirty-work cleaning. Leveraging 3D perception for smart deployment and smart cleaning, with support for remote map deployment and voice interaction, no complex on-site debugging is required, significantly lowering the labor threshold for deployment,

operation, and maintenance, and making automated cleaning in medium-to-large spaces simple and accessible.

- Cleaning Mode: True front-sweep, rear-scrub integrated architecture; sweeping and scrubbing completed in a single pass.
- Deep Cleaning: Adjustable down-pressure up to 55kg; on board automatic cleaning solution mixing and water spraying for more thorough scrubbing.
- Debris Tray Capacity: 10L large debris tray; capable of handling items such as 300ml plastic bottles, wood shavings, and 200mm wood blocks; high load capacity significantly reduces manual emptying frequency; dual side brushes prevent debris tangling.
- Water Tanks: 80L clean water tank, 70L waste water tank.
- Battery: 120 Ah LFP battery; 5–10 hours of continuous runtime.
- Perception Hardware: 3D LiDAR + RGB depth cameras; 360° zero-blind-spot environmental perception.
- Intelligent Capabilities: Three operation modes — Full Coverage / Efficiency-First / Patrol Cleaning; AI adaptive cleaning algorithm. Highest experience level of data processing by millions of square meters, no need for power-consuming and heat-creating super chips.
- Self-Cleaning: Self-Cleaning System 2.0; multi-dimensional automatic flushing of waste water tank, suction pathway, and squeegee.
- Maintenance Features: Disc brush 2-second quick release; squeegee 10-second quick release; front bumper shell single-person 1-minute maintenance; power-assisting handle bar + optional stand-on pedal.
- Applicable Scenarios: Manufacturing plants, logistics & warehouses, underground parking garages, large retail complexes. Accurately identifies dynamic and static obstacles including forklifts, AGVs, vehicles, pedestrians, cables, and escalators for safe operation.
- Dry & Wet Debris Spot Cleaning: In this mode, the robot actively identifies common dry and wet debris, achieving a 400% efficiency improvement compared to standard mode.

Is your product sustainable / environmentally friendly? If so, please explain why below.

1. Water & Resource Conservation: The ultra-large water tank configuration reduces the need for frequent refills and water changes, lowering water consumption. The AI adaptive cleaning algorithm dynamically adjusts water flow and cleaning agent dosage based on floor soiling levels, reducing water and chemical consumption. A built-in waste water circulation system further enhances energy and water efficiency.
2. Reduced Labor & Carbon Emissions: Fully autonomous unmanned operation replaces extensive manual cleaning labor, reducing carbon emissions associated with staff commuting. It also replaces traditional fuel-powered ride-on scrubbers, eliminating tailpipe emissions from combustion-engine equipment.
3. Long-Lifespan Hardware Design: The all-new independent airflow bus architecture with separate heat dissipation for the electronic control and battery compartments extends the service life of core

components, reducing the frequency of equipment replacement and lowering waste output over the product's entire lifecycle.

4. Reduced Consumable Waste: The Self-Cleaning System 2.0 reduces pipeline clogging and extends the service life of consumables such as squeegee blades and filter baskets, lowering replacement frequency. The large debris tray reduces emptying frequency and eliminates non-value-added labor in cleaning operations.

5. Ready to use with Gausium Leaves - the unique PVOH & single use plastic free detergent. Saving >90% Co2, transport, volume and cost in use.

Product Name: Marvel



Company Name: Kärcher

Product Name: KIRA

Product Category: Robotics

Current Market Availability: Available now and ready to ship to customers

Service / Support infrastructure: Established network of authorized service providers in North America, direct manufacturer support, third-party service partnerships, remote diagnostic and troubleshooting support available, preferred partners are growing annually to support autonomous solutions

Product Description

Keeping facilities clean is hard work. With KIRA (Kärcher Intelligent Robotic Applications), you can easily automate daily scrubbing or daily vacuuming; and refocus your team on higher-value tasks. Built for real-world environments, these next-generation autonomous scrubbers get the job done right with minimal supervision.

What makes your product innovative?

Professional-grade solutions built for real-world environments. Whether you need the high-productivity KIRA B 200 scrubber, the versatile KIRA B 50, or the compact KIRA CV 50 robotic vacuum, these machines deliver consistent results and boost productivity.

Increased Productivity Through AI
Smart Detection System
Cloud Connected Touchscreen Interface
Simple Controls
Unmatched Safety
Return on Investment

Please provide any applicable product specifications or technical details.

Please visit our website:

<https://www.kaercher.com/us/commercial/autonomous-cleaning-equipment.html>

Or speak to you local Kärcher Representative or submit request for information at:

<https://www.kaercher.com/us/commercial/autonomous-cleaning-equipment.html>

Is your product sustainable / environmentally friendly? If so, please explain why below.

Yes! Our measures are aimed at reducing emissions in production, recycling of raw materials and a reduction in plastic packaging. Sustainability is deeply embedded in the global supply chain. When it comes to social and societal issues, we concentrate on preserving values.

For more information, please visit our website: <https://www.kaercher.com/us/inside-kaercher/sustainability/sustainability-goals-2025.html>

Product Name: KIRA

KÄRCHER

BIG JOBS. SMART SOLUTION

Highly-productive, fully autonomous
floor scrubber designed for large
areas. karcher.com/us



PROFESSIONAL | KIRA B 200 FLOOR SCRUBBER

Company Name: Tennant Co.

Product Name: X2 ROVR SCRUB

Product Category: Robotics

Current Market Availability: Available now and ready to ship to customers

Service / Support infrastructure: Established network of authorized service providers in North America, direct manufacturer support, remote diagnostic and troubleshooting support available

Product Description

The X2 ROVR SCRUB is an autonomous floor scrubber designed for small, high-traffic spaces. Its compact design and intelligent navigation deliver consistent cleaning in dynamic environments, while the X2 Dock RFSH™ automates charging, clean-water refills, recovered-water disposal, and chemical dilution, creating a true low-touch cleaning experience and enabling cleaning teams to focus on higher-value facility tasks.

What makes your product innovative?

The X2 ROVR SCRUB combines Tennant's proven cleaning performance with advanced autonomous navigation to deliver consistent cleaning results at scale. The addition of the X2 Dock RFSH™ further reduces operator touchpoints by automating charging, water refill, recovery tank emptying, and chemical dilution.

Please provide any applicable product specifications or technical details.

The X2 ROVR SCRUB delivers powerful autonomous cleaning with 25 lb (11.3 kg) brush/pad downforce, a 16 in (406 mm) dual-disk scrub path, pivot-in-place turning radius, and navigation through aisles under 30 in (762 mm). SelfPath™ AI dynamically plans and optimizes cleaning routes, helping maximize coverage and operational efficiency.

Is your product sustainable / environmentally friendly? If so, please explain why below.

Yes. The X2 ROVR SCRUB features Velocity Controlled Solution Flow, which automatically adjusts water application based on operating speed. By dispensing only the amount of solution needed for the cleaning task, it helps conserve water, reduce waste, and improve resource efficiency while maintaining consistent cleaning performance.

Product Name: X2 ROVR SCRUB



Company Name: VIGGO

Product Name: VIGGO SC50ProPlus

Product Category: Robotics

Current Market Availability: Available now and ready to ship to customers

Service / Support infrastructure: Established network of authorized service providers in North America

Product Description

VIGGO SC50 Pro Plus is a mid-size commercial cleaning robot for parking garages, transit hubs, commercial properties, industrial facilities, and warehouses. It integrates scrubbing, sweeping, vacuuming, and dust mopping, with 46 kg brush pressure, a 500 mm cleaning path, and 1,800 m²/h productivity. It supports 6 cm obstacle crossing, 8° climbing, and autonomous operation in dynamic environments.

What makes your product innovative?

SC50 Pro Plus delivers three key innovations: ****industrial-grade cleaning**** with 46 kg brush pressure and 1,800 m²/h scrubbing productivity; ****dynamic-scene navigation**** with parking-space recognition, adaptive route planning, and human-vehicle interaction; and ****360° multi-sensor perception**** with top-mounted 3D LiDAR, enabling stable navigation across complex, weak-texture environments and obstacles up to 6 cm.

Please provide any applicable product specifications or technical details.

****Core Technical Specifications****

****Specifications (SC50 Pro Plus)****

****Overall Dimensions (L × W × H)****

800 × 700 × 1,200 mm

****Vehicle Weight****

180 kg

****Cleaning Modes****

Scrubbing / Sweeping / Dust Mopping / Vacuuming

****Cleaning Path Width****

Scrubbing: 500 mm / Sweeping: 800 mm

****Maximum Cleaning Productivity****

1,800 m²/h

****Brush-to-Floor Contact Pressure****

Brush Version: 46 kg / Disc-Brush Version: 42 kg

****Passability & Terrain Adaptability****

Obstacle-Climbing Height: 6 cm / Maximum Gradient: ≤8°

****Sensor Configuration****

1 × 3D LiDAR + 1 × 2D LiDAR + 5 × RGB-D Depth Cameras + 8 × Ultrasonic Sensors + 3 × Collision Sensors + IMU + Wheel Encoders

****Tank Capacity****

Clean Water Tank: 42 L / Recovery Tank: 30 L / Debris Bin: 1.5 L

****Battery & Runtime****

24 V / 60 Ah; Scrubbing: 2–3 h / Dust Mopping: 6–8 h

****Smart Features & Maintenance****

Automatic Recovery-Tank Flushing / AI Inspection & Spot Cleaning / Parking-Space Obstacle Avoidance & Intelligent Vehicle Passing / Internal Lighting / Flashing Warning Light / Mechanical Emergency Foot Pedal for Manual Relocation

Is your product sustainable / environmentally friendly? If so, please explain why below.

Sustainability and Environmental Benefits

High Mechanical Pressure Reduces Reliance on Chemical Cleaners

With ****46 kg brush pressure / 42 kg disc-brush pressure****, SC50 Pro Plus uses strong mechanical agitation to remove dirt in heavily soiled environments such as industrial floors and underground parking garages. This reduces reliance on high-concentration degreasers and aggressive chemical cleaning agents, helping reduce chemical wastewater discharge at the source.

Route Planning and Dynamic Navigation Reduce Energy Consumption

For large-area cleaning and human-vehicle mixed environments, zone-based route planning connects parking spaces and driving lanes to reduce repetitive cleaning. Cleaning efficiency can be increased by ****more than 30%****, with scrubbing productivity of up to ****1,800 m²/h****. Dynamic intersection avoidance also reduces deadlocks and prolonged idling, helping lower energy consumption per square meter and associated operational emissions.

Self-Cleaning and Fast Recharging Reduce Resource Consumption

The ****docking-station automatic recovery-tank flushing system**** uses a closed-loop water flow to remove accumulated sediment and dirt, reducing water consumption associated with repeated manual flushing.

Combined with ****1–1.5 hour fast recharging**** and a durable industrial-grade chassis, the system supports frequent continuous operation while helping extend equipment service life and reduce resource consumption over the product lifecycle.

Product Name: VIGGO SC50ProPlus



Company Name: VIGGO

Product Name: VIGGO Mix1Pro

Product Category: Robotics

Current Market Availability: Available now and ready to ship to customers

Service / Support infrastructure: Established network of authorized service providers in North America

Product Description

VIGGO Mix1Pro is a compact commercial cleaning robot for offices, healthcare, hotels, and schools. It integrates scrubbing, sweeping, vacuuming, dust mopping, and disinfection with adaptive cleaning modes. It delivers a 520 mm cleaning path, 1,197 m²/h productivity, and 13 kg brush-to-floor contact pressure. Its 569 mm low-profile design enables quiet operation below 45 dB for dust mopping and 55 dB for scrubbing.

What makes your product innovative?

VIGGO Mix 1 Pro combines compact design with high mechanical cleaning performance, delivering 13 kg brush-to-floor contact pressure, a 520 mm cleaning path, and 1,197 m²/h productivity. Its five-in-one system integrates sweeping, scrubbing, vacuuming, dust mopping, and disinfection, with optional 222 nm Far-UVC. Operating noise is below 45 dB for dust mopping and 55 dB for scrubbing.

Please provide any applicable product specifications or technical details.

****Overall Dimensions (L × W × H)****

732 × 600 × 569 mm

****Cleaning Path Width****

520 mm

****Scrubbing Productivity****

1,197 m²/h

****Brush-to-Floor Contact Pressure****

13 kg

****Integrated Cleaning Functions****

Sweeping / Scrubbing / Vacuuming / Dust Mopping / UVC Disinfection

****Operating Noise Level****

Dust Mopping < 45 dB / Scrubbing < 55 dB

****Tank Capacity****

Clean Water Tank: 15 L / Recovery Tank: 12 L / Debris Bin: 1 L

****Battery Capacity & Charging****

25.6 V / 60 Ah; Charging Time < 2.5 h

****Runtime****

Scrubbing: 3.5 h / Dust Mopping: 20 h

****Passability & Obstacle Crossing****

Minimum Passage Width: 750 mm / Obstacle-Climbing Height: 20 mm

Is your product sustainable / environmentally friendly? If so, please explain why below.

Sustainability and Environmental Benefits

1. "Mechanical Cleaning First" — Reduced Reliance on Chemical Cleaning Agents

With a **13 kg brush-to-floor contact pressure**, the Mix 1 Pro uses high-intensity mechanical agitation to remove both routine and stubborn stains. This reduces reliance on high-concentration chemical cleaning agents, helping minimize chemical consumption at the source, reduce the chemical load of wastewater discharged into drainage systems, and lower the potential for chemical residues in indoor environments.

2. High Energy Efficiency and Low-Energy Operation

The **520 mm cleaning path** and **1,197 m²/h cleaning productivity** help reduce unnecessary back-and-forth movement and repetitive cleaning paths, improving overall energy utilization. Equipped with a **25.6 V / 60 Ah high-density battery**, the Mix 1 Pro provides up to **20 hours of runtime in dust-mopping mode** and **3.5 hours in scrubbing mode**, with a **charging time of less than 2.5 hours**. This supports efficient daily operation, extended cleaning cycles, and reduced energy consumption.

3. Human-Centered Indoor Environmental Health

The Mix 1 Pro combines **ultra-low-noise acoustic design** with optional **222 nm Far-UVC disinfection technology**, reducing reliance on conventional chlorine-based disinfectants and their associated odors. This helps maintain a more comfortable acoustic environment while supporting **indoor air quality (IAQ)** and a healthier indoor environment.

Product Name: VIGGO Mix1Pro

