



ALPHAROBOTICS SOLUTIONS
SMART TECH. HUMAN TOUCH

AlphaRobotics SC50 Plus

Autonomous Scrubber & Sweeper

Leading the New Era of Cleaning Robotics

19.7 in | 500 mm
Scrubbing width

**19,375 ft²/h | 1,800
m²/h**
Max cleaning efficiency



Shopping
Centers

Warehousing

Hospitals

Hotels

Scrubbing, sweeping and dust mopping in one — the top choice for small and medium-sized indoor spaces.



Operational Overview & Applications

The AlphaRobotics SC50 Plus is a versatile autonomous floor scrubber that integrates washing and sweeping in a single machine. An upgraded top-mounted 360° radar delivers rapid, precise positioning in complex environments, while automatic charging, water inlet/drainage and wastewater filtration make it ideal for challenging spaces such as supermarkets and factories.



11.1 gal | 42 L
Solution tank

101 lbs | 46 kg
Roller brush
pressure

1–1.5 h
Fast charging time

Ideal Environments

Shopping Centers

Warehousing

Hospitals

Hotels

Core Operating Value

3-in-1 cleaning

Scrubbing, sweeping and dust mopping across epoxy, marble, PVC, ceramic, cement, emery and more.

Hands-free operation

Automatic charging, water inlet/drainage, wastewater filtration, breakpoint resume and missed-spot cleaning.

Cloud-connected management

Scheduled tasks with cloud task and data reports, synchronized across mini-programs, apps and web.



Key Technology Features

360° fusion positioning, AI obstacle identification and fully automatic operation.

Superior Positioning

Top-mounted 360° radar fused with a bottom 2D LiDAR achieves rapid, precise positioning in complex, dynamic scenarios.

Intelligent Obstacle Avoidance

RGBD obstacle-avoidance modules on both sides minimize blind spots for quick, flexible avoidance.

AI Intelligent Identification

Multi-sensor fusion identifies characteristic obstacles — escalators, isolation belts, forklifts and more.

Professional Cleaning

The roller brush applies 101 lbs / 46 kg of ground pressure with adaptive lifting to tackle light and heavy stains.

Fully Automatic Operation

Elevator and access-control integration, auto charging, draining and refilling, breakpoint resume and missed-spot cleaning.

Safety Certification

CE full-function certified, including functional safety certification, plus FCC and NCC certification.





Safety Systems & Maintenance

A full sensor suite and certified functional safety for people and machines.

Multi-Sensor Safety Suite

360° LiDAR, 2D LiDAR, five RGBD modules, six ultrasonic radars plus collision and anti-drop sensors watch every direction.

Optional Workstation

The WSC50 workstation adds automatic alignment, charging, water addition and drainage — less manual intervention.

Worry-Free Deployment

Scheduled tasks and planned work schedules with cloud-based task reports and data reports keep fleets easy to run.

Certified & Compliant

CE full-function certification including functional safety, FCC and NCC certification for peace of mind.





Complete Specification Matrix

Manufacturer specifications preserved in dual units — imperial and metric.

PARAMETER	TECHNICAL VALUE
CLEANING	
Scrubbing Width	19.7 in 500 mm
Sweeping Width	31.5 in 800 mm
Max Cleaning Efficiency	19,375 ft ² /h 1,800 m ² /h
Roller Brush Pressure	101 lbs 46 kg
Solution Tank Capacity	11.1 gal 42 L
Recovery Tank Capacity	7.9 gal 30 L
Trash Can Capacity	0.4 gal 1.5 L
POWER & RUNTIME	
Battery	24V / 60Ah LiFePO4
Charging Time	1–1.5 hours
Runtime per Charge	2–2.5 h (scrubbing) / 5–7 h (mopping)
DIMENSIONS & MANEUVERABILITY	
Dimensions (L×W×H)	31.5 × 27.6 × 47.2 in 800 × 700 × 1,200 mm
Net Weight	397 lbs 180 kg
Minimum Traffic Width	35.4 in 900 mm
Minimum Turning Radius	47.2 in 1,200 mm
Max Slope	≤ 8°
Max Travel Speed	3.3 ft/s 1 m/s
Obstacle Crossing Height	0.6 in 15 mm
SENSORS & NOISE	
Operating Noise	≤ 70 dB(A)
Sensor Configuration	360° LiDAR ×1, 2D LiDAR ×1, RGBD ×5, ultrasonic radar ×6, collision sensor, anti-drop sensor, IMU, wheel speedometer

Note: Specification values reproduced from the manufacturer source brochure; actual performance may vary in specific applications.



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AlphaRobotics SC50 Plus

The Reliable, Hassle-free Robots You Can Trust



Leading the New Era of Cleaning Robotics

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Smart Tech. Human Touch.