



ALPHAROBOTICS SOLUTIONS
SMART TECH. HUMAN TOUCH

AlphaRobotics L50

AI-Powered Scrubber-dryer Robot

Leading the New Era of Cleaning Robotics

SCRUB



Retails

Healthcare

Hospitality

Shopping
Mall

Office
Buildings

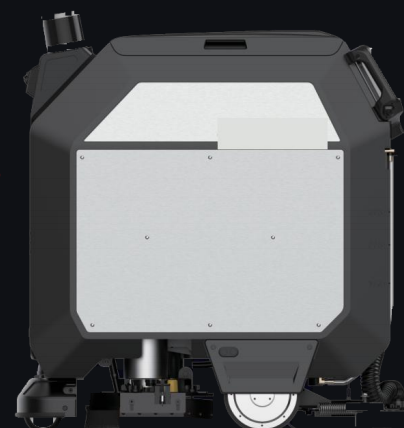
Commercial autonomous floor scrubbing for high-traffic facilities.



Operational Overview & Applications

Productivity, coverage and facility fit for commercial cleaning teams.

The AlphaRobotics L50 provides strong cleaning productivity for commercial spaces. With a 55 L / 14.5 gal water tank, 120 Ah battery and full-coverage productivity up to 2,570 m² / 27,641 ft² per hour, it is engineered to cover larger surface areas while supporting consistent cleaning results.



27,641 ft²/hr

Max. theoretical
productivity

14.5 gal / 55 L

Clean / waste water
tanks

6 hours

Maximum runtime

Applicable Environments

Retails

Healthcare

Hospitality

Shopping
Mall

Office
Buildings

Core Facility Fit

Designed for retail, healthcare, hospitality, shopping malls and office buildings requiring dependable autonomous scrubbing.

Edge and Route Efficiency

Operates as close as 50 mm / 2 in from walls and adapts its mapping for efficient route planning.



Key Technology Features

Core systems engineered for dependable autonomous scrubbing.

Superior Cleaning Productivity

55 L / 14.5 gal tank and 120 Ah battery help cover larger surface areas in less time.

Human-like Intelligent Cleaning

32-beam 3D LiDAR and AI computing enable mapping, route optimization and adaptive cleaning.

Hassle-free Service

Strong mapping capabilities, advanced algorithms and free OTA updates support dependable operation.

Easy Maintenance

Automatic refill and drain water support, charge / discharge capability and modular components simplify upkeep.

Built to Last

Rotational molding and well-tested components support durable operation over an extended service life.

High Level of Safety

Multiple sensors and three-dimensional, 360-degree safety protection support safe autonomous operation.



Technology stack: 32-beam 3D LiDAR, 3D depth camera, bumper sensor, IMU sensor and NVIDIA AI edge computing.



Safety Systems & Maintenance

Sensor architecture, wall-edge behavior and serviceability controls.

360-Degree Safety Protection

Multiple sensors and a three-dimensional safety system help the L50 operate safely around people and objects.

Mapping Sensor

3D LiDAR with 150 m / 492 ft detection range supports localization and safe autonomous route execution.

32-beam

3D LiDAR

2 in / 50 mm

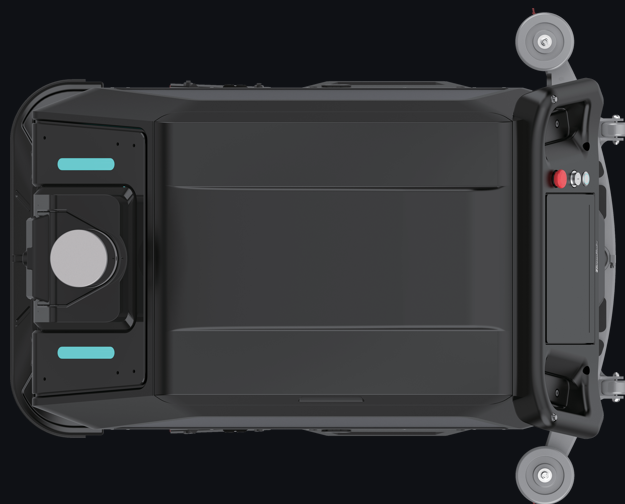
Wall distance

67 dB(A)

Sound
pressure

8%

Gradeability



Maintenance & Docking

One-stop Service Docking

Automatic refill and drain water system with charge and discharge capability through the docking station.

Modular Components

Interior design supports easier maintenance and troubleshooting tasks.

Durable Construction

Rotational molding and well-trying components support long service life.

OTA Updates

Software updates can be performed without requiring a technician to come on-site.



Complete Specification Matrix

Manufacturer specifications preserved in dual units — imperial and metric.

PARAMETER	TECHNICAL VALUE
DIMENSIONS	
Length	40.6 in 1,030 mm
Width (w/o squeegee)	22.8 in 580 mm
Height	41.1 in 1,045 mm
Weight	485 lb 220 kg
Cleaning Width	20 in 510 mm
Squeegee Width	33.1 in 840 mm / 30.3 in 770 mm (optional)
CLEANING	
Max. Theoretical Productivity	27,641 ft ² /hr 2,570 m ² /hr
Brush Pressure	55.1 lb 25 kg
Disk Brush Speed	220 RPM
Clean Water Tank Capacity	14.5 gal 55 L
Waste Water Tank Capacity	14.5 gal 55 L

PARAMETER	TECHNICAL VALUE
MOVEMENT	
Max. Speed	3.13 mph 1.4 m/s
Min. Distance from Wall	2 in 50 mm
Min. Passable Width	37 in 940 mm / 35.4 in 870 mm (optional)
Gradeability	8%
POWER	
Battery Type	Lithium Iron Phosphate
Battery Capacity	120 Ah
Rated Voltage	24 VDC
Charging Time	4 hours
Max. Runtime	6 hours
SENSING	
Sensing System	32-beam 3D LiDAR, 3D Depth Camera, Bumper Sensor, IMU Sensor
SOUND PRESSURE LEVEL	
Sound Pressure Level	At least as 67 dB(A)
KEY COMPONENTS FOR AI	
Process Chip	Nvidia AI edge computing chips with up to 100 TOPS AI performance
Mapping Sensor	3D LiDAR with 492 ft / 150 m detection range

Note: Specifications are derived from manufacturer brochure data; actual performance may vary by application.



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Smart Tech. Human Touch.