ADLATUS SR1300 + S1300

Fully autonomous sweeping vacuum robot system

DESIGNED TO SERVE...

MISSION

Designed to serve ...

The mission of ADLATUS Robotics GmbH.

Digitalization and globalization are driving the change in the facility management of and demands new products and solutions from the companies. ADLATUS Robotics GmbH supports this change through innovative autonomous service robots for professional use.

Adlatus comes from Latin and means helper. This is also the idea of ADLATUS Robotics GmbH „to provide companies with a helper who can take care of tasks independently". From the beginning ADLATUS has chosen the approach of an integrated automation for its service robots and increases their autonomy with service stations.

Our assistants should make life and work easier and as a colleague successfully provide services independently.

ADLATUS Robotics GmbH develops, produces & distributes service robots and offers complete solutions including consulting, commissioning, training and service.

INNOVATION, COMPETENCE & SAFETY

... these are our strengths in the development and realization of fully autonomous cleaning robot systems.

Due to the shortage of skilled workers in many areas, the demand for the automation of processes is increasing. A major disruptive factor for process reliability is dust and dirt. To minimize this, regular maintenance cleaning is a must, but due to the shortage of labor, it can often only be carried out infrequently.

These challenges motivate ADLATUS Robotics from the very beginning, with a lot of passion, perseverance and team spirit for the professional cleaning of floors. With the ADLATUS Trusted Robotics platform, ADLATUS Robotics is focusing on full autonomy and high safety performance, ADLATUS Robotics focuses on data protection and robot systems data security of their users.

EFFICIENCY, FLEXIBILITY, USER-FRIENDLY ...

... and thus cost savings, reduction of workload, increase in quality, security or transparency are examples of factors motivating our customers to use our products.

Economic efficiency
Cleaning frequencies can be increased flexibly at no extra cost, cleaning processes can be efficiently, individually adapted and integrated into the existing workflows. Employees who were previously tied up can be used for other activities that are less stressful for the body or more efficient.

Flexibility
Cleaning times can be flexibly adjusted according to traffic outside working hours. Increase in cleaning quality through efficient regular maintenance cleaning increases work safety.

User-friendly
Due to the simple and user-friendly user interface the system can be started by the cleaning staff without any extensive training. Either directly at the touch display of the robot, directly at the device or remotely via a mobile device. In addition to the manual start of the cleaning programs, it is also possible that the robot start the cleaning programs independently via a time control.

High safety performance level
The interaction of different intelligent sensors ensures navigation stability and brings collision avoidance to a performance level that complies with the worldwide safety standard IEC 63327. This increases the autonomy of the ADLATUS robotic systems and ensures safety in environments ensured.

Data protection GDPR* compliant
Privacy by design and default – at ADLATUS, data protection already begins with the product development and has the claim not to record any personalized or environment-related data.

* General General Data Protection Regulation

Connectivity
The robotic sweeper system is equipped with the possibility of individual communication with technical installations. It can be integrated into the building infrastructure or IOT systems and enter into a kind of dialog with fire detection or alarm systems, operate automatic doors and gates or, for example, the fully automatically generated documentation of the cleaning work performed as a protocol via e-mail.

Transparency through documentation
Fully automated logging after each use of the service robots facilitates the documentation and verification of services for billing purposes, performance records or audits. Such as about the areas cleaned, time spent and so on. The documentation of the cleaning process is certified and compliant with data protection regulations.

ADLATUS SR1300

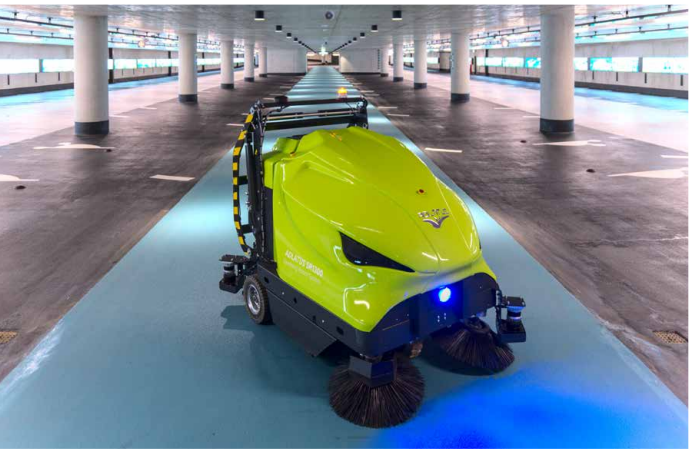
FULLY AUTONOMOUS CLEANING ROBOT

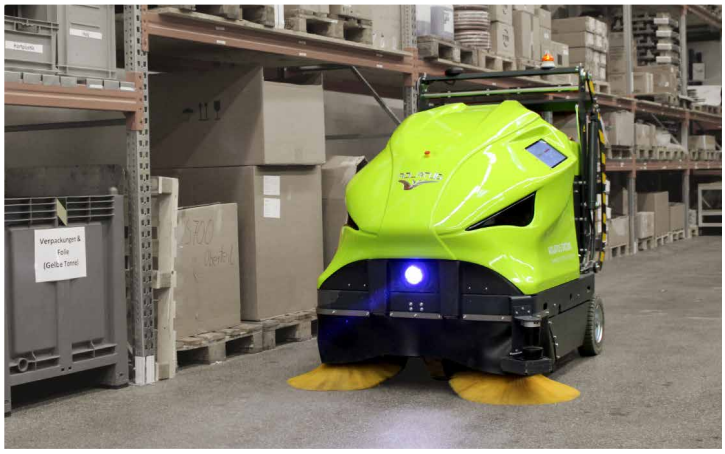
With the ADLATUS sweeping robot system, ADLATUS Robotics presents a fully autonomous vacuum sweeper. The vacuum sweeper robot is equipped with a service station where the battery is automatically charged. In addition the system offers a fully automatic emptying of the swept up dirt, which can be tipped into a container and disposed of.

The fully autonomous sweeper is built on a robotics platform, ADLATUS Trusted Robotics. This platform supports the intelligent autonomy of the vacuum sweeper and offers, in addition to the highest process stability in navigation, an economical use of smart features and security in handling data of our customers.

The robotic sweeper system is specially designed for logistics/industrial areas to efficiently remove coarse dirt in large halls or warehouses. The sweeper is able to rotate on the spot and can therefore be used for cleaning in confined spaces. The system can overcome ramps with up to 20% slope.

The automatic emptying of the dirt collection container and the automatic charging of the batteries increases the level of automation of the autonomous sweeping robot and reduces the manual supervision effort to a minimum.





TECHNICAL ADVANTAGES AT A GLANCE

Full autonomy with service station
A fully automated service station increases the degree of automation of the autonomous cleaning system and minimizes the need for personnel. In addition to battery charging, cleaning programs are started automatically and the dirt collection tank is emptied.

Sustainable battery expansion
Depending on the desired area performance, the robotic sweeper SR1300 system can be equipped with a different number of batteries. The extension of the batteries is possible from three to eight batteries and a battery capacity from 180 Ah–480 Ah, which allows a runtime of up to eight hours.

Navigation with own software platform
ADLATUS cleaning robot systems are operated on a specially developed software, which, in combination with powerful sensor technology, ensures high stability in navigation. The software is continuously developed and extended by customer requirements.

Together with a sensor manufacturer, ADLATUS has developed a sensor system, in which sensors interact, increase the stability of the navigation and improve the collision avoidance to a performance level that complies with the European EN IEC 63327. Lidar sensors enable a reliable detection of obstacles or persons and the early detection of landings, levels and steps. ADLATUS is one of the few manufacturers that does not use high-resolution cameras for navigation. 2D and 3D lidar sensors are used for this purpose, which do not record personal data and do not recognize any environmental details during operation. Data of the environment is only recorded as coordinates.

Autarkic operation
The operation of the cleaning robots is completely self-sufficient and no connection to a WLAN network or a continuous Internet connection is required. Risks in terms of IT security in companies are thus minimized. This makes the use of ADLATUS cleaning systems possible even in security-relevant environments, such as in prototyping public buildings or other sensitive environments.

User interface
The system is operated on a touch display, which is intuitive and can be used by any worker without much prior knowledge. The user interface is multilingual and cleaning programs can be started by self-explanatory icons, which after a short training can be operated by anyone. The daily start of the cleaning programs is time-controlled at any day of the week and at any time of the day and only has to be started optionally by the cleaning personnel.

Industrial suitability
The robotic sweeper system is CE certified, has an industrial suitability and is characterized by a quality-conscious, robust construction, which is designed for long-lasting load. High quality components and parts are used, such as stainless steel elements or maintenance-free brushless motors.

ADLATUS SR1300

CLEANING ROBOT SR1300

TECHNICAL INFORAMTIONS

Voltage	**24 V**
Maximum installed power	**2,63 kw**
Width of the main brush / cleaning width	**800 mm**
Width of the main brush + one side brush	**1163 mm**
Width of the main brush + two side brushes	**1271 mm**
Maximum cleaning capacity with two side brushes (theoretical)	**5000 m²/h**
Drive	**Front**
Max. forward speed	**1,11 m/s = 4 km/h**
Max. negotiable slopes	**20% = 11,3°**
Minimum distance between two walls for turning maneuvers	**3000 mm**
Filter area (with pocket filter)	**5,5 m²**
Filter area (with cartridge filter)	**6,4 m²**
Capacity of the sweepings container	**115 l**

DIMENSIONS OF THE SR1300

Weight (Standard equipment)	**485 kg**
Width	**1,3 m**
Length	**1,7 m**
Height	**1,5 m**

Side brush
Dust and dirt is fed into the machine via the side brush. This is mainly used for cleaning of corners and edges, after which it is usually switched off and raised to avoid unnecessary dust swirling.

Cylindrical brush
The cylindrical brush or main brush directs dust and dirt into the hopper and is the main cleaning element of the machine. Depending on the type of soil or material to be picked up it is adjustable in height.

Cartridge or pocket filter
The filter system ensures during operation that the robotic sweeper system dœs not stir up dust in the environment. Different class M filters in various substances and treatments can be used. Cartridge filters are used only in the case of light dust, otherwise they quickly become clogged. On the other hand, they can be used in environments where moisture can occur on the floor.

The cleaning of the filter is integrated in the software application through an automated shaking.

FULL AUTONOMY WITH THE S1300 SERVICE STATION

DIMENSIONS OF THE S1300

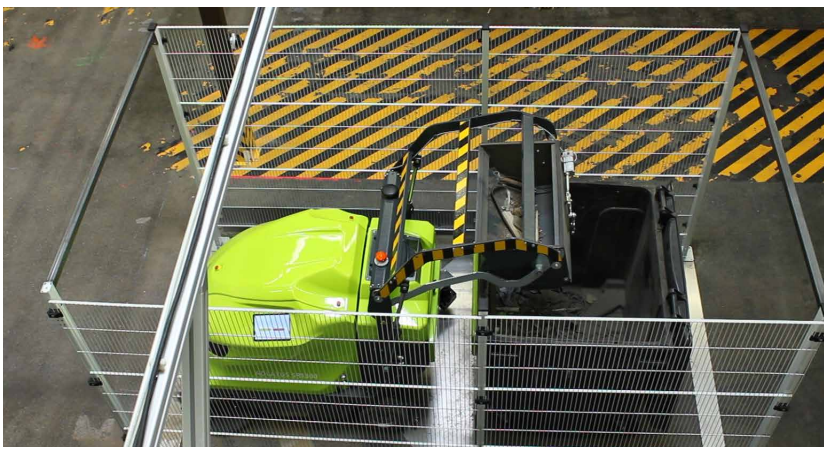
Weight approx.	ca. 240 kg
Width	2 m
Length	3,5 m
Height	2 m

The emptying of the sweeping robot system takes place fully autonomously in an area monitored by safety sensors, where the batteries of the robot are also charged wirelessly. With a discharge, the swept material is emptied into standard trash containers.

- Discharge station with safety zone
- Inductive battery charging
- Automated high discharge up to 1450 mm from the ground
- Suitable for waste containers DIN EN 840 (1,100 liters)
- Automatic emptying of the sweepings container

TECHNICAL INFORMATION

Battery capacity for standard version	approx. 180 Ah (expandable up to 480 Ah)
Charging time (standard equipment)	5 h
Charging time (optional – double charging equipment)	2,5 h



Commissioning and production support
Experienced ADLATUS Robotics specialists are on hand during all phases of commissioning. This starts with the first application steps and continues with the efficient integration of the ADLATUS cleaning robots. From the start-up phase during commissioning to optimization during operation, ADLATUS Robotics is at your side. With the goal of securing and increasing the efficiency and productivity of maintenance cleaning.

Service and Support
During normal business hours on working days and individually for contract customers even beyond, ADLATUS Robotics offers its customers accessibility and reliable telephone and online support by experts.

Through a comprehensive international service network with ADLATUS Robotics partners and distributors we offer our customers on-site service.

With preventive maintenance management, customers benefit from maximum availability. The individual design of ADLATUS Robotics service and maintenance contracts ensures that our customers receive service support that exactly meets their wishes and needs.

Training and education
For the users and operators ADLATUS Robotics offers a comprehensive training and education program for operation and maintenance of the service robot systems. Depending on the cleaning requirements and application of the customer, we offer a training package adapted to the company.

ADLATUS Robotics GmbH

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International sales and service network

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