



# Product Catalogue 2023

Disinfection and Multi-function robots

**dss-robotics**



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## About us

The group has been designing and manufacturing special automated systems and robots for 20 years. Each system we design is unique and meets the exact needs of the customer. The group currently has offices in 6 countries.

Our main product is a line of UV-C disinfection and multifunctional autonomous robots, exclusively designed and manufactured by our experienced engineers and selected partners to guarantee quality and the highest standards.



**20+**  
years of experience  
in automation and robotics



**15+**  
design engineers



**18+**  
countries with partners



**6+**  
countries with offices



# CERTIFICATE

**ÉMI-TÜV SÜD Kft.**  
HU – 2000 Szentendre, Dózsa György út 26.  
hereby certifies that

**dss·mp | dss·robotics**

**DSS Technologies Kft.**  
HU – 1147 Budapest  
Benkő utca 4.

has established and applies  
a Quality Management System for

**Design, development and manufacture of  
custom automatic parking systems and robots.**

An audit was performed, Report No. 732097029  
Proof has been furnished that the requirements  
according to

**MSZ EN ISO 9001:2015**  
are fulfilled. The certificate is valid from 2021-02-05 until 2024-02-04.  
Certificate Registration No. 24 100 2122



ÉMI-TÜV SÜD Kft.  
Szentendre, 2021-02-05



MANAGEMENT SYSTEM  
CERTIFICATION BODY



# UV-C Technology

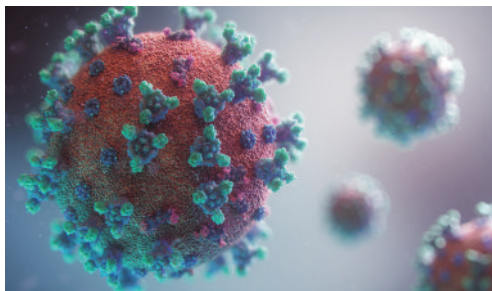


The light emitted by UV-C luminaires neutralizes pathogenic microorganisms, thus reducing the spread of infection by viruses and bacteria.

The basis of disinfection is that when UV-C radiation in the wavelength range of 100–280 nm reaches microorganisms, the DNA is altered in a very short time, so it can no longer reproduce. The cleaning effect takes place with the highest efficiency at 260 nm. The germicidal lamps used emit light at a wavelength of 254 nm, very close to maximum efficiency, and is also ozone-free.

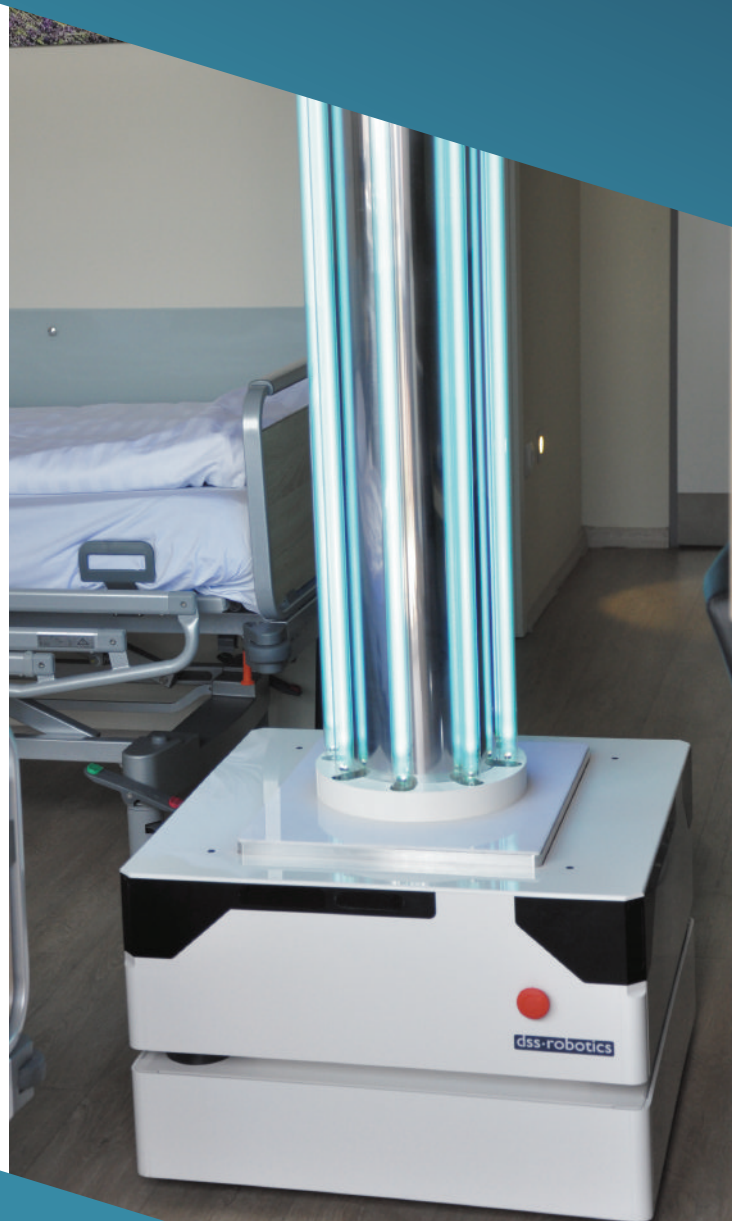
## RELIABLE TECHNOLOGY

Special germicidal (UV-C) lamps emit high-intensity ultraviolet light that clean the air, water and surfaces without the use of corrosive chemicals that harm the environment. This method of disinfection has been used safely and effectively for over 40 years.



## PROTECTION AGAINST COVID-19

Devices that take advantage of these properties of UV-C also play a major role in the defense against SARS-CoV-2 virus. Scientific studies demonstrate that these viruses are also killed during UV-C disinfection.



## Areas of application



- Hospital theaters, wards
- Treatment areas, waiting areas
- Reception and public assembly areas
- First aid & emergency treatment areas
- Airports
- Worship places
- Communal transport systems
- Wellness centers
- Schools, daycare, and play areas
- Retirement homes
- Veterinary services
- Gymnasiums & Sports Clubs



- Public & private toilet facilities
- Tourism premises & facilities
- Retail premises & supermarkets
- Shopping malls
- Fruit & vegetable processing & storage
- Wineries and breweries



## Robots

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### OMNIDIRECTIONAL DRIVE

Due to the special drive used, the robot is able to move in any direction without turning. It is also able to rotate in place making it much easier to maneuver in tight spaces.



### CAMERAS AND SENSORS

Our robot is equipped with state-of-the-art 3D cameras and sensors that allow for autonomy and safe operation. With the built-in laser scanners, the robot can also map rooms and entire buildings to locate itself, as well as determine the optimal disinfection route.



### AUTONOMOUS OPERATION

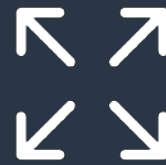
The robot can map its environment and localize itself simultaneously. This enables unhindered navigation without human intervention. Therefore it can automatically plan and execute tailored and optimized disinfection procedures in wide variety of environments.

# Robots



## COLLABORATIVE NATURE

The robot can interact with authorized personal via an on-board display or via a tablet. Also, the robot can be set to follow a selected person automatically. The tablet allows the operator (user) to give instructions and to manage and monitor the entire disinfection cycle.



## IDEAL SIZE

The 65 × 65 cm (25 × 25 in) robot size, combined with the special omnidirectional drive is ideal for disinfecting small rooms with tight spaces. With its 190 cm (75 in) height, the standard door sizes and interior heights pose no obstacle.



## SAFETY

Due to the harmful effects of UV-C radiation for the human body, our robot is able to detect the human presence with sensors and cameras immediately turning off the UV-C radiation. In addition, the robot is able to avoid and get around obstacles in its path, as well as people

# UV-C Disinfection robot



## HIGH EFFICIENCY

The fully autonomous robot is able to neutralize 99.99% of pathogens and viruses in an average-sized room in a few minutes.



## SMARTY BATTERY

The battery is charged / replaced automatically, the robot detects when it needs recharging and then runs automatically to the charging station.



## RELIABLE UV-C LAMPS

The fluorescent lamps used have an operating time of 8,000 hours. They can operate properly for years without replacement.



## LONG OPERATING TIME

Our UV-C robot with its own battery can last up to 4 hours, so it can disinfect larger rooms without charging.





# Multi-function Robot



During COVID-19 there is a growing need for hospital nurses but often the resource capacity of institutions is finite. Our robot is designed to overcome this problem by being able to help the work of nurses, cleaners, all with the help of artificial intelligence that controls the robot automatically. It is able to perform various tasks on its own (such as UV disinfection; aerosol disinfection; food delivery and drug delivery to inpatients; dirt removal). It performs them in the shortest possible time, thus helping the daily work of hospital staff.



## CUSTOM MODULES

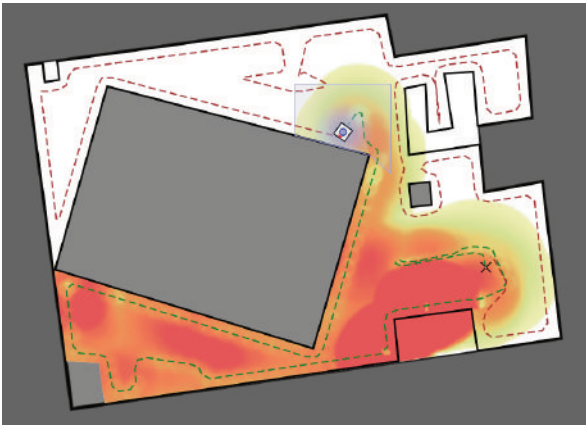
Our modules are primarily optimized for hospital tasks such as food and drug delivery or disinfection but they can be customized on demand to fulfill further tasks in any other environment.

## AUTONOMOUS MODULE CHANGE

The module change is executed with a fully autonomous mechanism in a control room specially designed for our robots.



## Multi-function robot



### INTELLIGENT SOFTWARE

The robot's decision-making software selects the workflow to be performed based on the pre-programmed priorities and arranges the automatic replacement of the modules and then for the execution of the activity, thus optimizing the institutional logistics tasks.

### HUMAN-ROBOT INTERFACE

Besides controlling our robot via tablet, all of our modules are equipped with an additional touch screen that executes the human-robot interaction. With the help of this interface the multi-function robot can function as a collaborative machine.



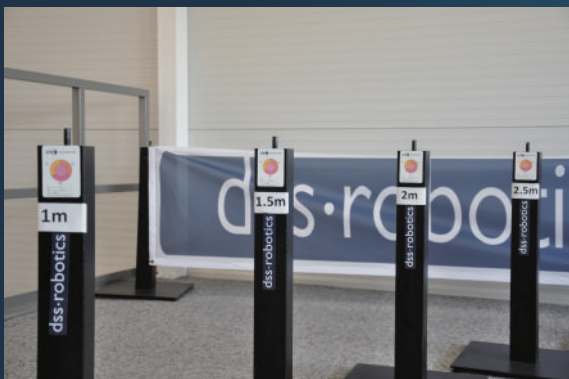
# Research and development

An R&D center has been set up in the EU for the design, development and manufacture of robotic systems.

Our research and development center is a great arena for practical testing of our robots, implementation of newly developed technologies, investigation of common problems and finding solutions. We test our robots with innovative and creative ideas for many different tasks that it may encounter in real life conditions. We already have a solution for most of the problems that could arise during the robots' institutional integration.



In our R&D center we have executed various tests and measurements to validate our UV-C disinfecting system. Full documentation on our UV-C tests is available on request.



# Representatives

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Check out our UV-C Disinfection robot in operation



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