

The Challenge: Bacterias, Germs, Molds, Viruses  
The Answer: Our UV-C Disinfection Robot – CAREtaker2 HERO21



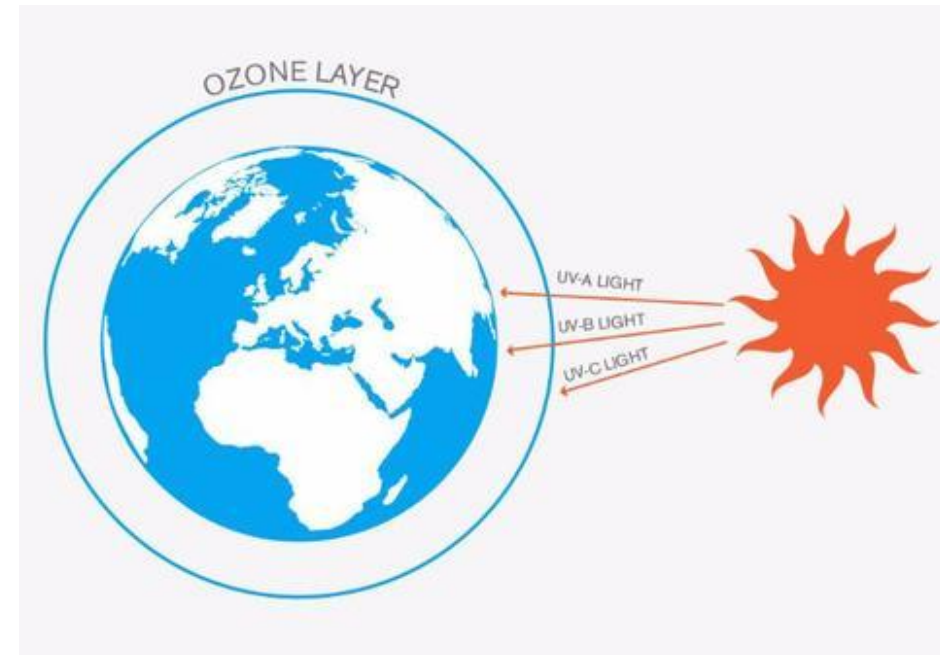
360° Disinfection of surfaces and ambient air – Medical Validated

## Impact of UV and UV-C Light for Disinfection

**Microorganisms** do not have a natural resistance against **UV-C Light**

The sun emits UV-A, UV-B and UV-C Light. UV-A and a small portion of UV-B find its way through the atmosphere and reach the surface. UV-C is fully absorbed and reflected by the atmosphere. Hence, Microorganisms have not developed a natural resistance against UV-C Light.

UV-C Light, applied in a very specific wavelength is a proven methodology to successfully disinfect and destroy the DNA of Bacteria, Germs, Mold and Viruses at the same time.



## Impact of UV and UV-C Light for Disinfection

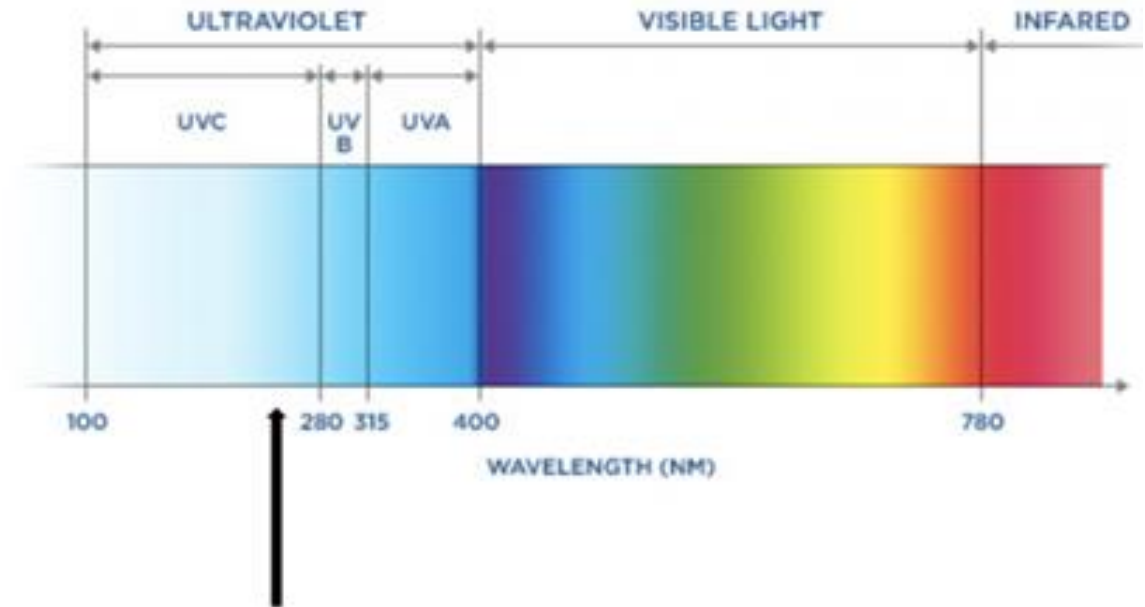
UVGI Disinfection Method applying UV-C Light using a wavelentgh of 254nm

Alcoholic/chemical disinfection methods are inactivating Bacterias and others. They do not necessarily destroy their DNA. Depending on their environment, temperature, humidity and other parameters, the may be able to survive reactivate and reproduce themselfe.

The UVGI (Ultraviolet Germicidal Irridation) method uses UV-C light in a very specific wavelength to both disinfect and destroy their DNS of Bacterias and other Microorganisms. Applying UV-C using UVGI they are loosing the ability to reactivate and reproduce themselves.

### Well established and proven Method

This methodology is well proven since many years and successfully applied to many stationary processes in the F&B, Pharmaceutical, Healthcare and other industries.



## Impact of UV and UV-C Light for Disinfection

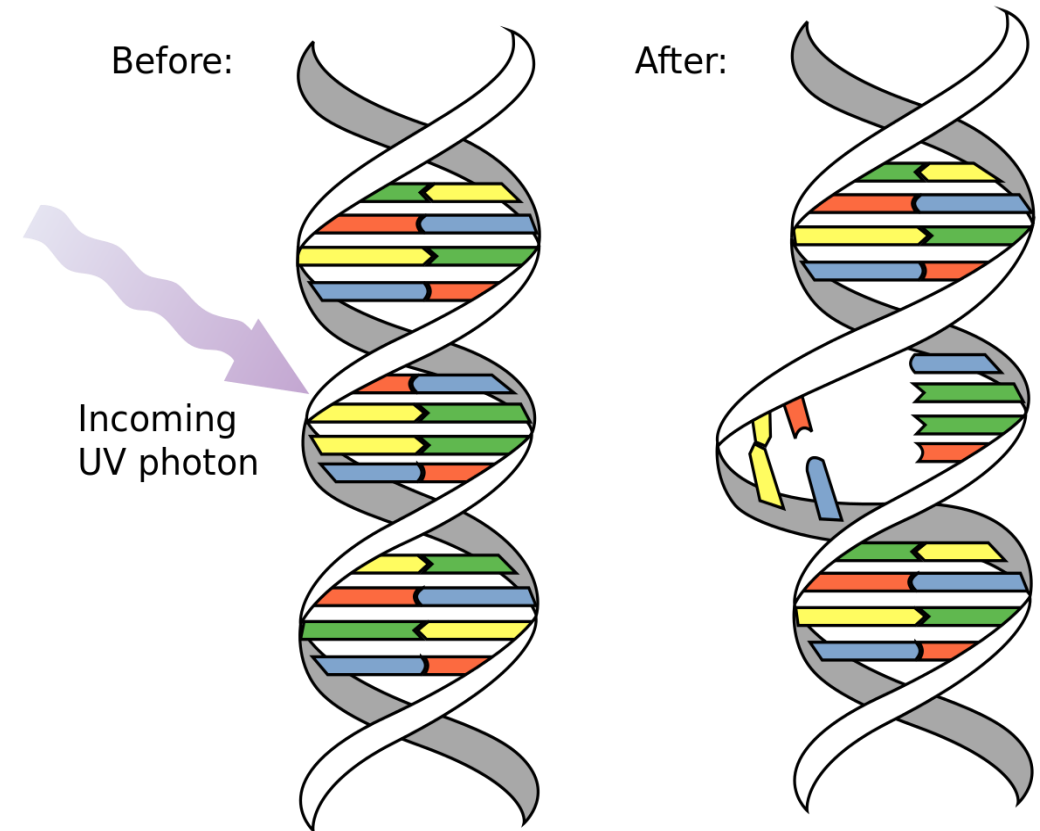
### UVGI Disinfection applying UV-C Light at 254nm Wavelength

Important! To successfully disinfect and destroy the DNA of Bacteria and others, only a very specific section of the UV-C bandwidth around 254nm can be used. Simply speaking all other UV light is just light and has basically no impact. The CAREtaker therefore applies its light energy into exactly this specific UV-C bandwidth to disinfect and to destroy the DNA of Bacteria, Germs, Molds and Viruses at the same time.

The function, impact and positive results applying the CAREtaker has been tested by independent studies and is clinically proven.

The CAREtaker is used to disinfect Air and Surfaces at the same time, applying UV-C light in a 360° coverage to disinfect and destroy the DNA, such as SARS, MERS, INFLUENZA, MRSA, CORONA,...

All tests done applying the international NFT72-281 Test setup  
Ref. LOG Table 1-7, complete range



## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21

### CAREtaker2 HERO21 Function

The CAREtaker2 HERO21 is based on a well proven industrial robot platform, combined with the latest state of the art UV-C disinfection technology. This allows a secure and save operation of the CAREtaker in a broad range of different situations and environment, not only in the health and medical segment, but also across industrial and other environments in a 24/7 application.

The CAREtaker2 HERO21 applies the UV-C light, using a precise wavelength of around 254nm with a > 90% efficiency, only a very small fraction of the energy is seen as light. With a reach of 360° the CAREtaker2 HERO21 disinfects Air and Surfaces up to around 250cm from floor level in one cycle at the same time and destroys the DNA of the Bacterias and others.

This save and environment friendly method makes the CAREtaker2 HERO21 the ideal system accomplishing disinfection and Health & Safety Compliance at the same time.

The CAREtaker2 HERO21 can easily be operated manually, semi automatic or in a full predefined autonomous mode.



## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21

Stationary and mobile Application easy to move around

- Offices, Administration, Service Buildings
- Meeting- and Conference Rooms
- Receptions, and Counters
- Production, Logistics, Warehousing
- Kitchens, Canteens, Restaurants
- Sanitary, lockers and Social facilities
- Medical, Clinical, Laboratories
- Pharmaceutical, Chemical production and labs
- Exhibition and Conference Centers
- Airports, Trainstations, Metros, Lounges
- Trains, Subways, Ferries, Cruise ships
- Retail, Shopping Malls
- Hotels, Residences, Apartments, Care Centers
- Sport Facilities, Stadiums, Gyms
- Schools, Kindergardens, Social Centers
- Barracks, Dormitories
- Cinemas, Theaters, Concert Halls



## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21



Application Health & Safety, hospitals, labs and many others

## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21

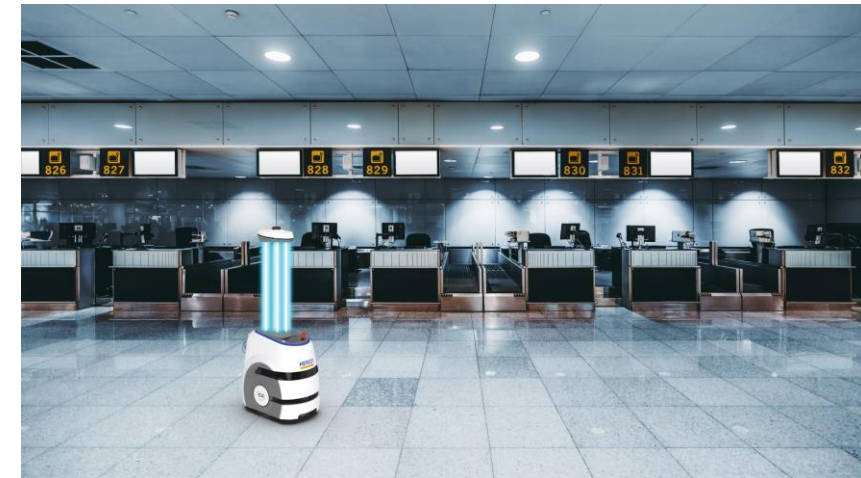
Auszug weiterer Anwendungen



Offices / Administration



Production / Logistic



Airport / Train Station / Others



## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21

### Key Facts and Application Datas

- Clinically tested and approved, fully certified system
- Disinfects and destroys the DNA of Bacterias, Germs, Molds, Viruses at the same time
- Manual, semi automatic, full automatic operation
- Easy use and control
- Developed and verified in close cooperation with hospitals and official authorities
- Easy integration in Health & Safety Compliance Systems and daily routines
- Covers all 7 LOG levels (medically defined) 99.99%
- 360° coverage of air and surfaces, integrated camera and sensor control
- Automatic Shut of and Safety mode
- Easy selection of mode, intensity and duration, easy to replicate
- Automatic data collection and data analysis, IT integration (ISO/QS)
- Clear, error free setup, procedures and cycles, repeatable for clear and save operation
- Accuracy +/-50mm
- Automatic Charging incl. Docking Option and Home Function
- UV Tube lifetime 12.000 hours with same set



## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21

### Save, Repeatable, Environment friendly

- Operation 100% repeatable and documented
- Disinfects Air and Surfaces in one cycle, destroys DNS structures
- Save and secure validation and data transfer (H&S Compliant)
- No hazardous or environmentally dangerous disinfection liquids
- No risk of poisoning People, Air, Water
- No Aerosols and other poisoning particles
- No risk of storing, doses, applying or disposing
- No need for separate storage, hazardous material
- No known impact to surfaces, plastics, colors and others
- No negative CO2 impact
- No Allergies



## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21

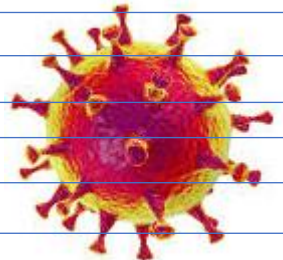
### Model and Technical Specifications

Model	CAREtaker
Dimensions	L: 93 x W:66 x H:171cm (Height H&S compliant)
Weight	120 Kg (Total incl. Batteries)
Floor clearance	50mm
Operation duration	3,5 hours per charging
Charging time	2,5 / 3,5 hours when fully empty (autocharge/ manual charge)
Coverage	360°
Reach	appr. 8.000-10.000m <sup>2</sup> one charging cycle
Connectivity	WLAN and LTE (optional)
Speed	1 Meter /Sec.
Wavelength	254nm (UV-C)
Charging Current	220-240 VAC / 50Hz (Optional 85-264 VAC/60Hz)
Safety	Software & Sensors, Automatic off Function Blue Tooth Door Protection and Control
Certification	CE, TÜV, ...



# Common Disinfection and Sterilization Methods

Disinfects	Manual	Spray	UV-C Light 254nm	Sterilization
1 Bactrias	Green	Green	Green	Green
2 Germs	Green	Green	Green	Green
3 Molds	Green	Green	Green	Green
4 Viruses	Green	Green	Green	Green
5 MRSA	Green	Green	Green	Green
Destroys DNA 1-5	Red	Red	Green	Green
360°	Red	Green	Green	Green
Air and Surface	Red	Green	Green	Green
Automatic Mode	Red	Yellow	Green	Green
H&S Compliant	Yellow	Yellow	Green	Green
Duration	Red	Yellow	Green	Red
<b>Risks and Danger</b>				
Hazardouz	Red	Red	Green	Green
Poisoning	Red	Red	Green	Green
Storing	Red	Red	Green	Green
Applying	Red	Red	Green	Green
Dosage	Red	Red	Green	Green
Validation	Yellow	Yellow	Green	Green
Color Impact	Red	Red	Green	Green
Surface Impact	Red	Red	Green	Green
Air/Water Impact	Red	Red	Green	Green
CO2 Impact	Red	Red	Green	Green
Allergies	Red	Red	Green	Green



## UV-C Verification and Validation



### Results, Validation, Analysis

The proof, validation and analysis of the actual disinfection can be done, using different methodologies.

- Manual validation by smear test
- Applying special UV stickers using a standard ref. Table
- Automatic recording during the process itself
- Using a GRMD (Radiometer)

Using the CAREtaker, data can be collected automatically and used for further Health&Safety Compliance analysis, reporting and proof.

## UV-C Disinfection – Air- and Surface Model – CAREtaker2 HERO21



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GoGaS CAREtaker2 HERO21 is fully tested and validated, by the Ruhr University of Bochum and is certified According to the latest medical and safety standards. The robot is developed and manufacturer by GoGaS`Technology and Innovation Partner ICA Dortmund. For further information, pricing and delivery times, please contact us at [protect@gogas.com](mailto:protect@gogas.com)