

at least
99%
desinfection rate
tested by Heraeus
Noblelight



Air Disinfection Robot

Produces up to 99.6% sterile indoor air

Aerosols: viruses, bacteria, germs, yeasts, spores,

Covid-19 without chemicals and the use of disinfectants

Mobile UV-C Disinfection Robot

- without disrupting work processes
- self-driving 24/7
- easy handling
- no danger to people and surfaces

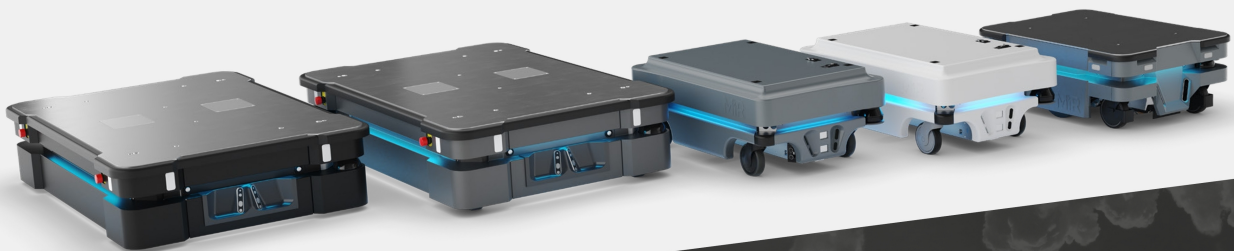
Industrial hygiene for all areas

- Construction Halls
- Canteens
- Common Rooms
- Open Space Offices
- Trade Fair

Multiple Use

With our Autonomous Mobile Robots from Mobile Industrial Robots we can manage loads from 100 kg to 1000 kg fully automatically. The robots are easy to program and very flexible in use. You can easily automate your internal logistics without changing your current infrastructure!

- kit for retrofitting on an existing MIR
- as a disinfection robot during night
- during the day as AMR (Autonomous Mobile Robot) for transportation of goods



Usage where is high people traffic

- Retail Trade
- Supermarkets
- Construction Stores
- Department Stores
- Kindergartens
- Schools
- Public Buildings (Community center)



Freely navigating vehicle – no following installations necessary

external dimensions:
1200 x 600 x 1000 mm
(L x W x H)

.....
ground clearance: 50 mm

.....
range: up to 4 hours or 10 km,
depending on the expansion
variant

.....
battery charging time: 80% in
2 hours - depending on the
expansion variant

.....
communication:
WIFI, Bluetooth, Ethernet and
PLC (Programmable logic
controller)

.....
top speed: 4.9 ft / s

- fully automatic loading function of the mobile disinfection robot
- user friendly interface, configurable dashboard
- the charging capacity, lamp life etc. is displayed
- the operation of several vehicles can be controlled via a fleet software
- depending on the extension variant of the UV-C lamps you can reach 80% disinfection of indoor air up to 2,500 m³ room volume
- lamp life up to 10,000 hours of use
- the low pressure UV lamps work without the formation of OZONE and emit a wavelength of 254 nm
- at this wavelength, germs, bacteria, viruses and spores are going to be reliably eliminated
- A special covering in the lamp glass guarantees stable UV-C radiation. The Lamp glass also forms a filter against UV radiation ranges < 240 nm
- fan can be switched on with up to 700 m³ / h
- can be retrofitted for existing systems



Figures Data Facts

At the end of the specified lamp life the UV lamps have at least 60% of the initial radiation intensity. Because of a special UV-C permeable covering no broken glass items can reach the radiation space or that medium to be irradiated, in case the lamp or the quartz protection tube

breaks. The splinter protection is only used for the quartz protection tube. This enables an optimal UV-C yield and good usage features. This is particularly important in areas of application in food production and processing.

Basics about UV-C

Through effective hygiene with UV-C microorganisms are exposed to the natural sunlight, so they will naturally be killed. According to this principle from nature many years ago the artificial UV-C was developed. UV-C rays are short wave rays in the range of 280-100 nm that are not visible to the human eye.

In the range of 254 nm UV-C rays have a very strong germicidal effect so that even dangerous germs, bacteria, viruses, mold, etc. are destroyed within a very short time. And all of this without the use of chemicals. The nucleus of the microorganisms' DNA is changed in such a way that reproduction is no longer possible. As a result, the microorganisms die. Ultraviolet radiation is therefore an economical and environmentally friendly alternative to chemical disinfection.

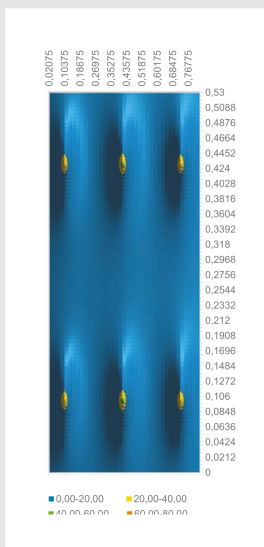
The possible uses are very diverse and almost unlimited:

- Health care
- Water supplier
- Air conditioning / ventilation systems
- Food industry
- Pharmaceutical industry
- Industrial hygiene etc.

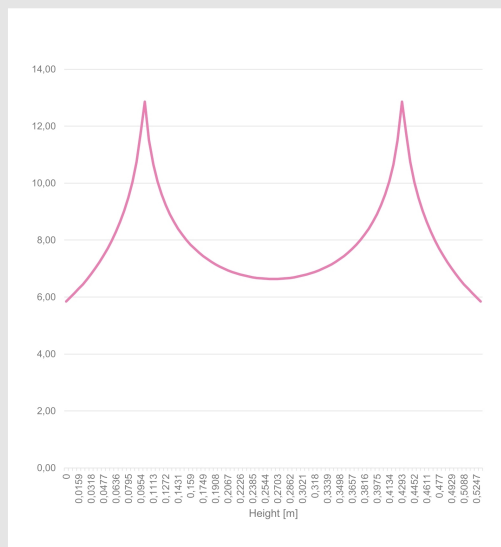
The Air purifier was specially developed for the disinfection of air and surfaces. Due to the complete shielding of the UV-C tubes, people can stay safely in the room. The built in fan guides the ambient air past the UV-C tubes and ensures effective room air disinfection. The result is an extremely effective, economical and environmentally friendly air disinfection. Unwanted microorganisms, viruses, germs, yeasts and spores are destroyed up to 99.6% without the use of chemicals.

Disinfection rate of at least 99% with an air flow rate of 1,770 m³ / h

Irradiation in the duct (side view)



Total dose at the end of the duct [mJ/cm²]



UVC Dose in an air duct

Hight of the lamp [m] / Position of the lamp	Hight of the duct H	Width of the duct B	Length of the duct L
Lamp 1 h	0,53 m	1,242 m	0,83 m
l	0,1	0,793 m	16 W
Lamp 2 h	0,1	0,793 m	16 W
l	0,415	0,793 m	16 W
Lamp 3 h	0,1	Air flow	1777 m³/h
l	0,73	Needed Dose	5,8 mJ/cm²
Lamp 4 h	0,43	Air velocity	0,75 m/s
l	0,1	Time in the irradiation field	1,11 s
Lamp 5 h	0,43	Total dose passing through	
l	0,415	Worst-Case-Point:	5,8 mJ/cm²
Lamp 6 h	0,43	Maximum-Point:	12,9 mJ/cm²
l	0,73	Total irradiation on a filter	
Lamp 7 h	0,43	Worst-Case-Point:	4,4 mW/cm²
l	0,73	Average irradiation	5,5 mW/cm²
Lamp 8 h	0,43	Maximum-Point:	6,2 mW/cm²
l	0,73		
Lamp 9 h	0,43		
l	0,73		

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Calculation by Heraeus Noblelight GmbH.

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