

Delivering state of the art
UltraViolet Germicidal
Irradiation (UVGI) products.
Let's fight the Corona Virus
together



CORPORATE UV DISINFECTION SOLUTIONS

Air Disinfection Solutions

Zephyrous UV: HVAC UV air disinfection system

Vital Aire UV: Plug & Play air disinfection device

Surface Disinfection Solutions

Lumos UV: Portable UV Tower disinfection device

Helios UV: Ceiling mounted UV disinfection device

UV Conveyor: Conveyor UV disinfection system

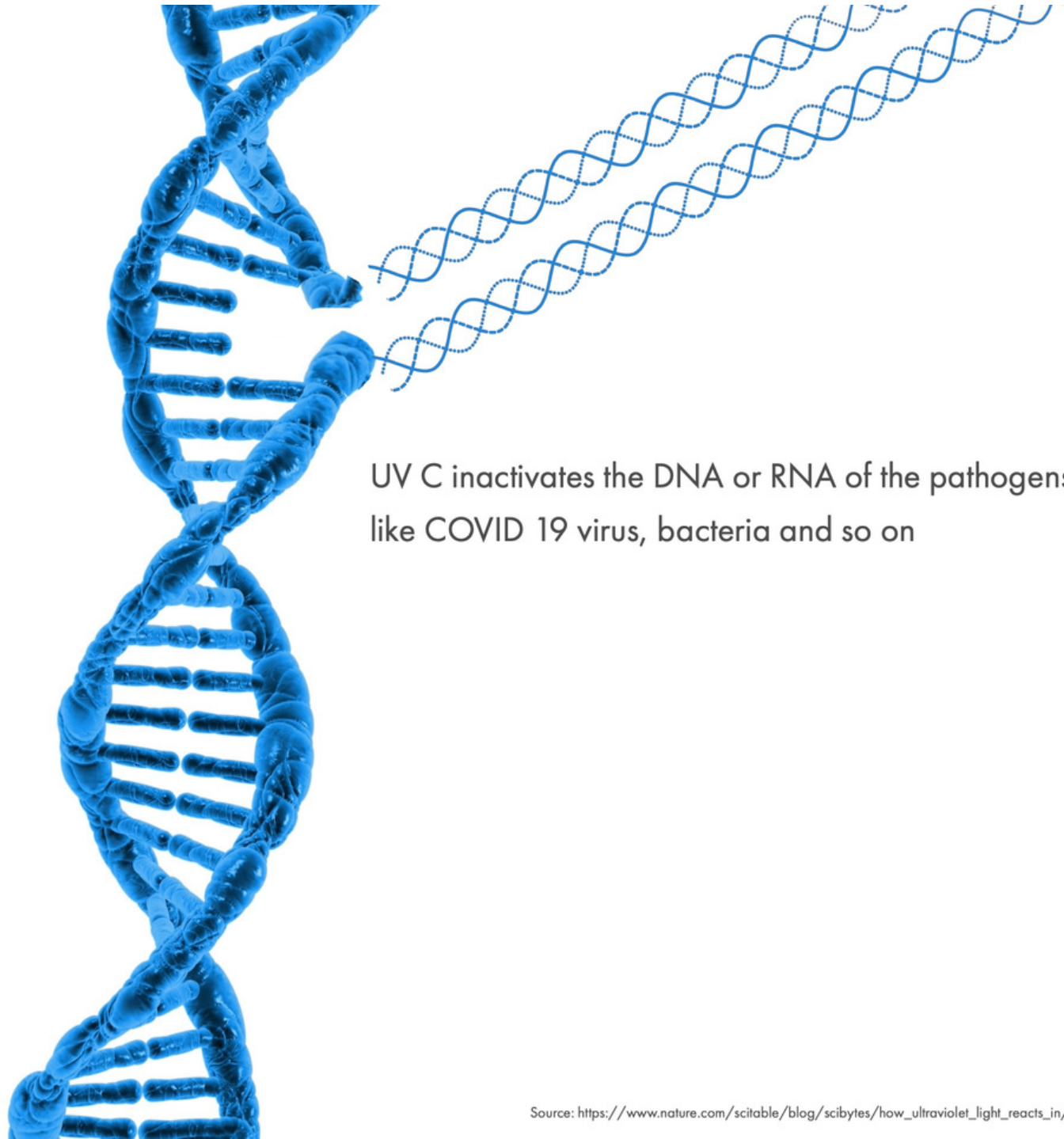
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HOW DOES ULTRAVIOLET GERMICIDAL IRRADIATION WORK?

UV has been in use for germicidal irradiation purposes for decades now. It is a proven technology for disinfection uses.



UV C inactivates the DNA or RNA of the pathogens like COVID 19 virus, bacteria and so on

Source: https://www.nature.com/scitable/blog/scibytes/how_ultraviolet_light_reacts_in/

Overview

We at Finsen Ritter are Ultraviolet Disinfection Experts. We deliver to our customers the state of the art Ultraviolet Germicidal Irradiation(UVGI) devices.

UVGI vs. Chemical Disinfection

	Chemical Disinfection	UVGI
Confidence Building Measure	✗	✓
Cost effectiveness Upto 40 times cheaper	✗	✓
Rapid Disinfection [5 mins to disinfect 250sqft*]	✗	✓
Food Friendly	✗	✓
Chemical Free & Eco Friendly	✗	✓
Machinery & Electronics Safe	✗	✓
Non Flammable	✗	✓
No Refills	✗	✓



Industrial UV Disinfection Product Range



LUMOS UV

A POWERFUL & SMART UV DISINFECTION
TOWER



LUMOS UV M

A POWERFUL & SMART UV DISINFECTION
TOWER



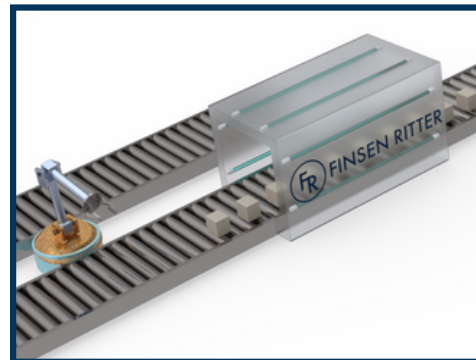
VITAL AIRE UV 75

A POWERFUL UV AIR STERILISER



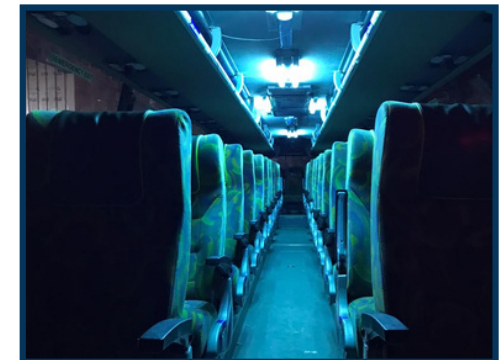
ZEPHYROUS UV FOR HVAC

ESPECIALLY DESIGNED FOR CENTRALISED AC
UNITS



UV CONVEYOR BELT

DISINFECT PRODUCTS FROM ON CONVEYOR



HELIOS UV

CEILING AND WALL MOUNT UV DEVICE FOR
AIR DISINFECTION

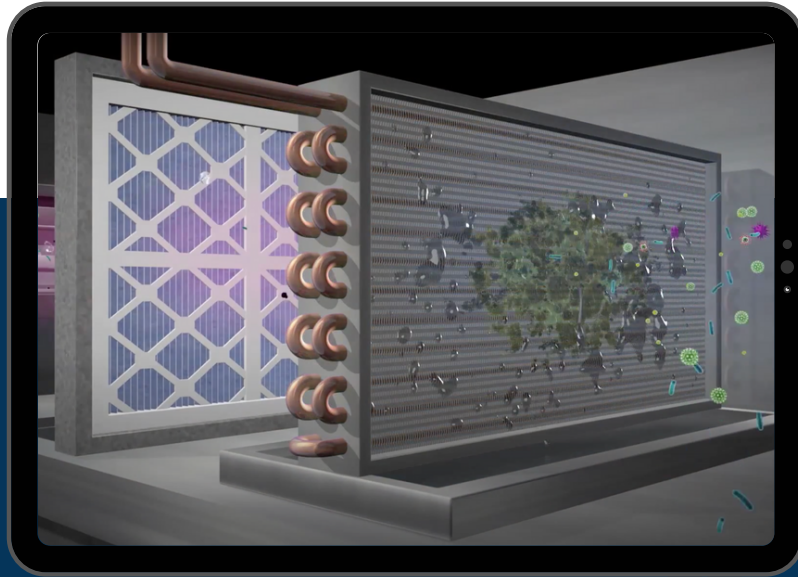
ZEPHYROUS UV

HVAC AIR DISINFECTION SYSTEM

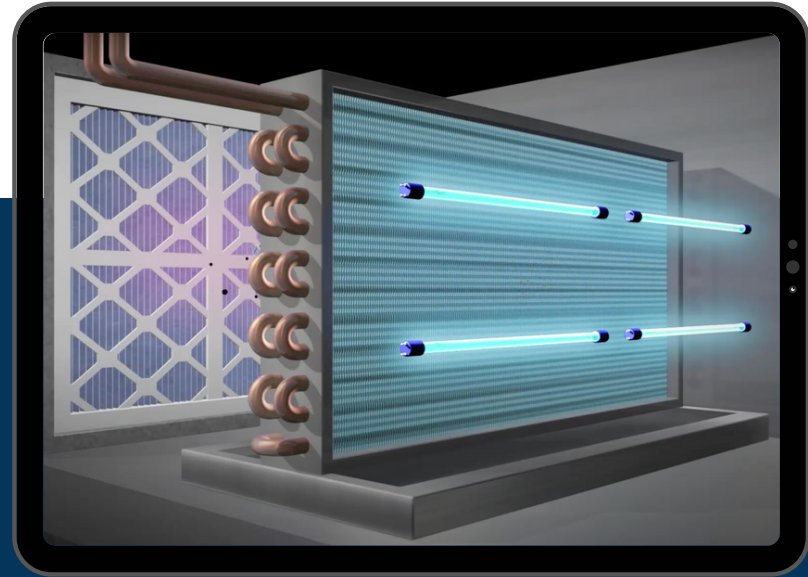


ENERGY EFFICIENCY WORKING PRINCIPLE

Development of Bio-film & no air disinfection



Bio-film gets removed increasing efficiency & air is disinfected



AIR DISINFECTION WORKING PRINCIPLE

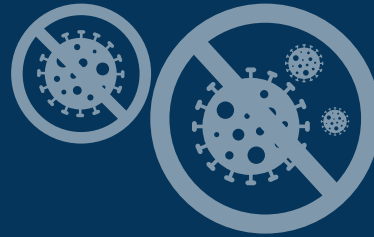
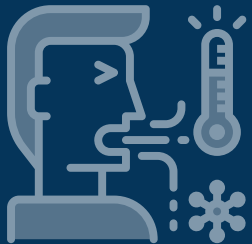
1) Airborne Corona Virus

2) Zephyrous HVAC UV System

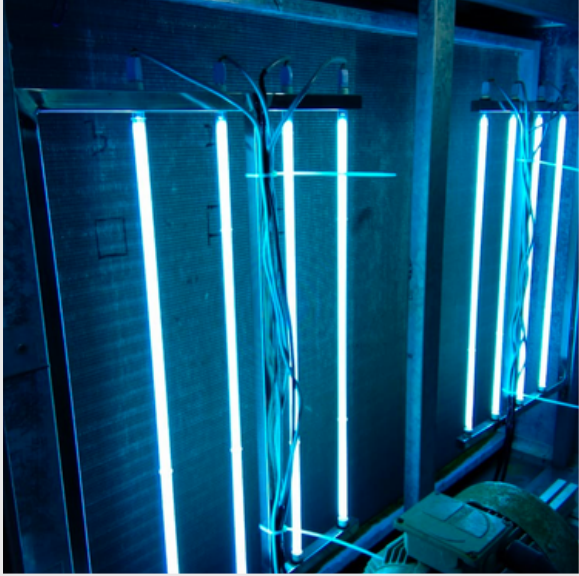
3) UV Light Kills/Inactivates Corona Virus

4) Air Handling Unit (AHU)

Corona Free Air



SYSTEMS FOR ALL YOUR NEEDS



AHUs



Ducts



Buses, Trains & Metros



Cost Effective: UV air disinfection costs just Rs. 5 to run for an hour, which is multiple times cheaper than other technologies



Continuous air disinfection- It is effective against bacteria, fungi and virus. Corona virus spreads via air. Buildings with HVAC are at high risk spread of COVID-19. UV device continuously disinfects air in the building.



Saves Power: UV prevents mould formation on coil. Hence saves power by increasing efficiency.

TECHNICAL SPECIFICATIONS & CONSULTATION

Specifications	Zephyrous 75	Zephyrous 150	Zephyrous 225
Power	75 W	150 W	225 W
Weight	4 Kg	4.4 Kg	5 Kg
Wavelength	254 nm	254 nm	254 nm
Structure	Stainless Steel SAE 304 grade	Stainless Steel SAE 304 grade	Stainless Steel SAE 304 grade
Power to UV-C efficiency	34%	34%	34%
Operating Voltage	220 V AC/ 24 V DC/ 110 V DC	220 V AC/ 24 V DC/ 110 V DC	220 V AC/ 24 V DC/ 110 V DC
AC Voltage Frequency	50 Hz	50 Hz	50 Hz
Lamp Life	9000 hr	9000 hr	9000 hr

Consultancy

We at Finsen Ritter Provide consultancy for your custom requirements and needs. Providing one stop end-to-end solutions for UV disinfection methods and protocols at no additional cost.

Installation

Installation support is provided as an option. We provide full literature and installation guide for customers who avail the self installation module.



VITAL AIRE UV

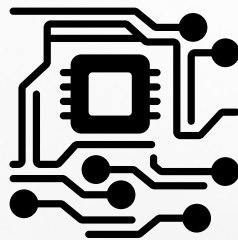
Effectively Disinfect Air With Power Of Ultraviolet Light

WORKING PRINCIPLE

How Air Disinfection Works



High Output Non Ozone
Forming UV Lamp



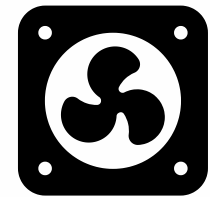
Industrial Grade
Electronic Ballast



Baffle Filters Lets Air Pass &
Completely Blocks UV light



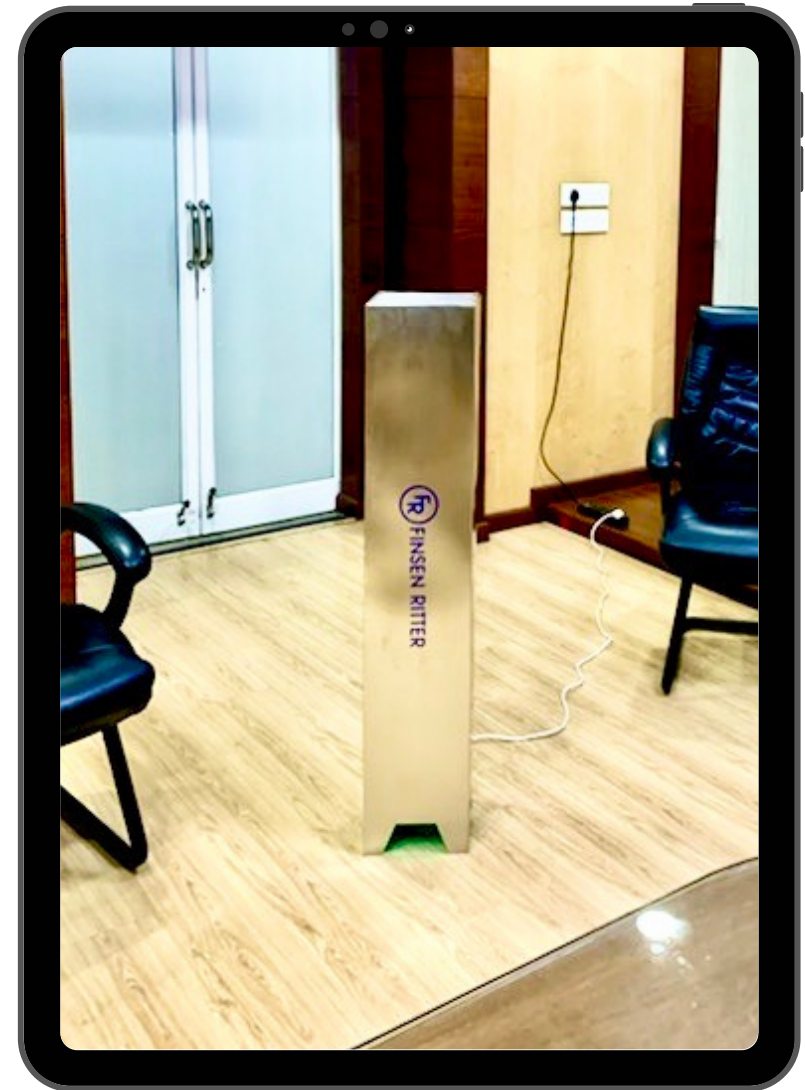
Stainless Steel Body



Industrial Grade AC Fan

TECHNICAL SPECIFICATIONS & FEATURES

Specifications	Vital Aire 75	Features	Description
Power	75 W	Ozone Formation	Non Ozone Forming
Fan Power	50 W	Speed Regulator	Yes
Total Power	125 W	24/7 Operations	Yes
Weight	7.1 Kg	Stainless Steel	Yes
UV Wavelength	254 nm	Heavy Duty Electronic Ballast	Yes
Power to UV-C efficiency	34%	Baffle Filters	Yes
Operating Voltage	220 V AC 50 Hz		
Noise	Max 56 dBA		
Dimensions	1200 x 220 x 200		
Lamp Life	9000 hr		
Air Flow	360 CFM		



LUMOS UV

India's most powerful & smartest
UV disinfection tower



DESIGN



LUMOS UV 600



RF Remote

Provides connectivity through the walls



Smart Phone App

Bluetooth enabled smartphone app for connectivity



Stainless Steel SAE Grade 304

Durability Guaranteed



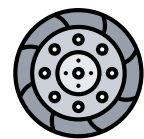
600 W UV Lamps

Providing the best in class chemical free disinfection



Motion Sensors

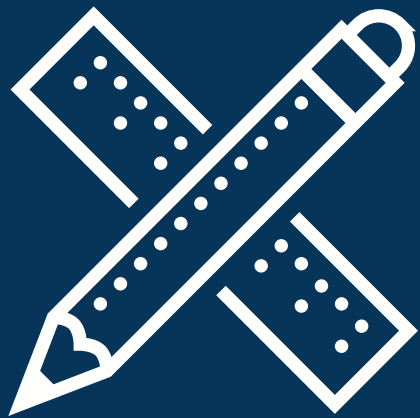
Motion sensors to automatically start and stop sanitisation safely



Stainless Wheels for easy mobility

Take our product to places

DESIGN



LUMOS UV 150 M



RF Remote

Provides connectivity through the walls



Smart Phone App

Bluetooth enabled smartphone app for connectivity



Stainless Steel SAE Grade 304

Durability Guaranteed



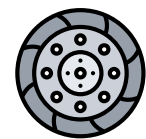
150 W UV Lamps

Providing the best in class chemical free disinfection



Motion Sensors

Motion sensors to automatically start and stop sanitisation safely



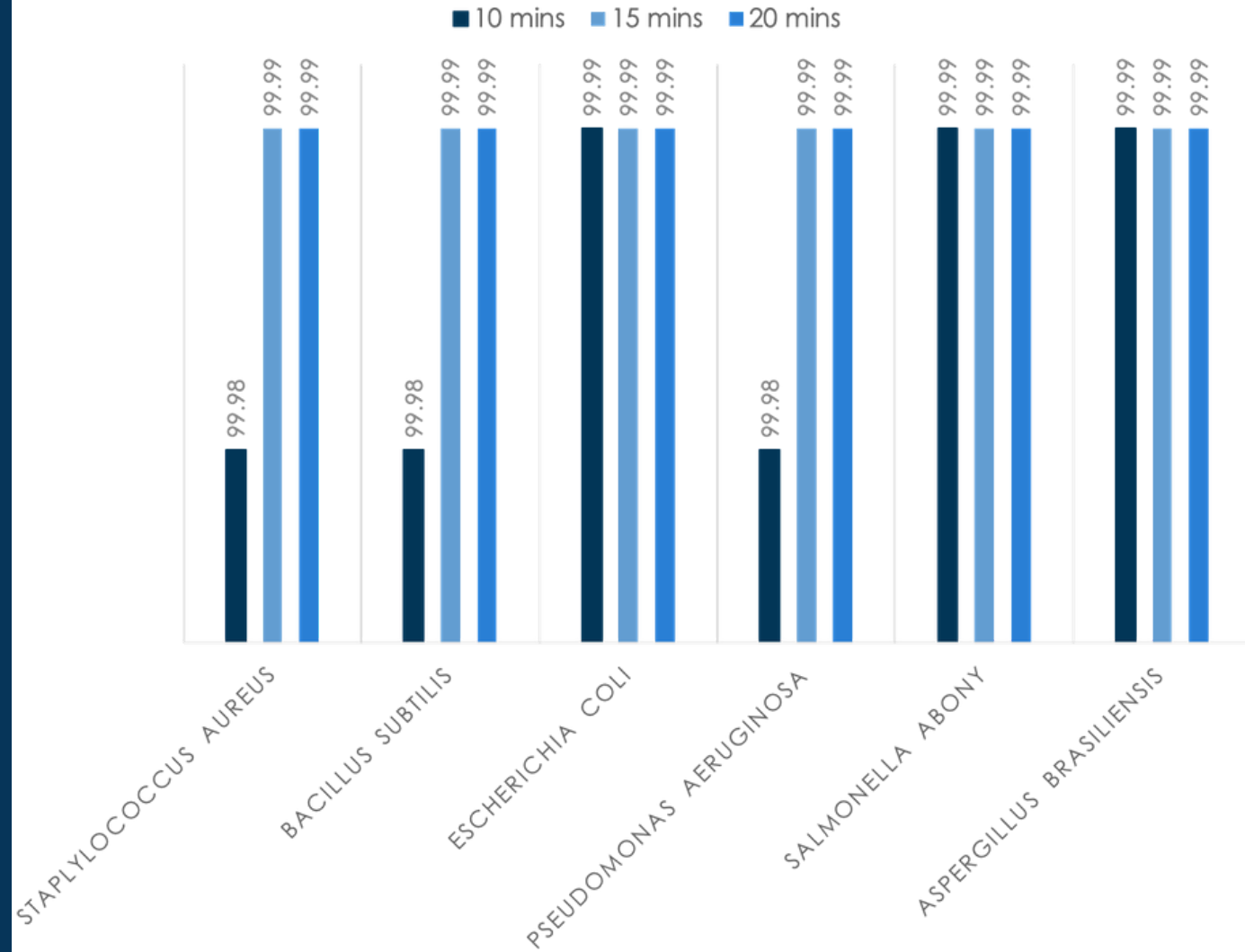
Stainless Wheels for easy mobility

Take our product to places

EFFECTIVENESS



CULTURE TEST RESULTS



NABL accredited lab results show 99.99% disinfection against gram positive bacteria, gram negative bacteria, and fungi.

GALLERY



TECHNICAL SPECIFICATIONS

Specifications	Lumos 600	Lumos 450	Lumos 150 M	Lumos 75 M
Power	600 W	450 W	150 W	75 W
Weight	17.1 Kg	16.4 Kg	7.7 Kg	7.1 Kg
Material	Stainless Steel 304 Grade	Stainless Steel 304 Grade	Chrome Plated Steel	Chrome Plated Steel
Wavelength	254 nm	254 nm	254 nm	254 nm
Power to UV-C efficiency	34%	34%	34%	34%
Operating Voltage	220V AC 50Hz	220V AC 50Hz	220V AC 50Hz	220V AC 50Hz
Lamp Life	9000 hr	9000 hr	9000 hr	9000 hr
RF Remote Range	40 feet	40 feet	40 feet	40 feet
Wheels	✓	✓	✓	✓
Bluetooth	✓	✓	✓	✓
Smartphone App	✓	✓	✓	✓

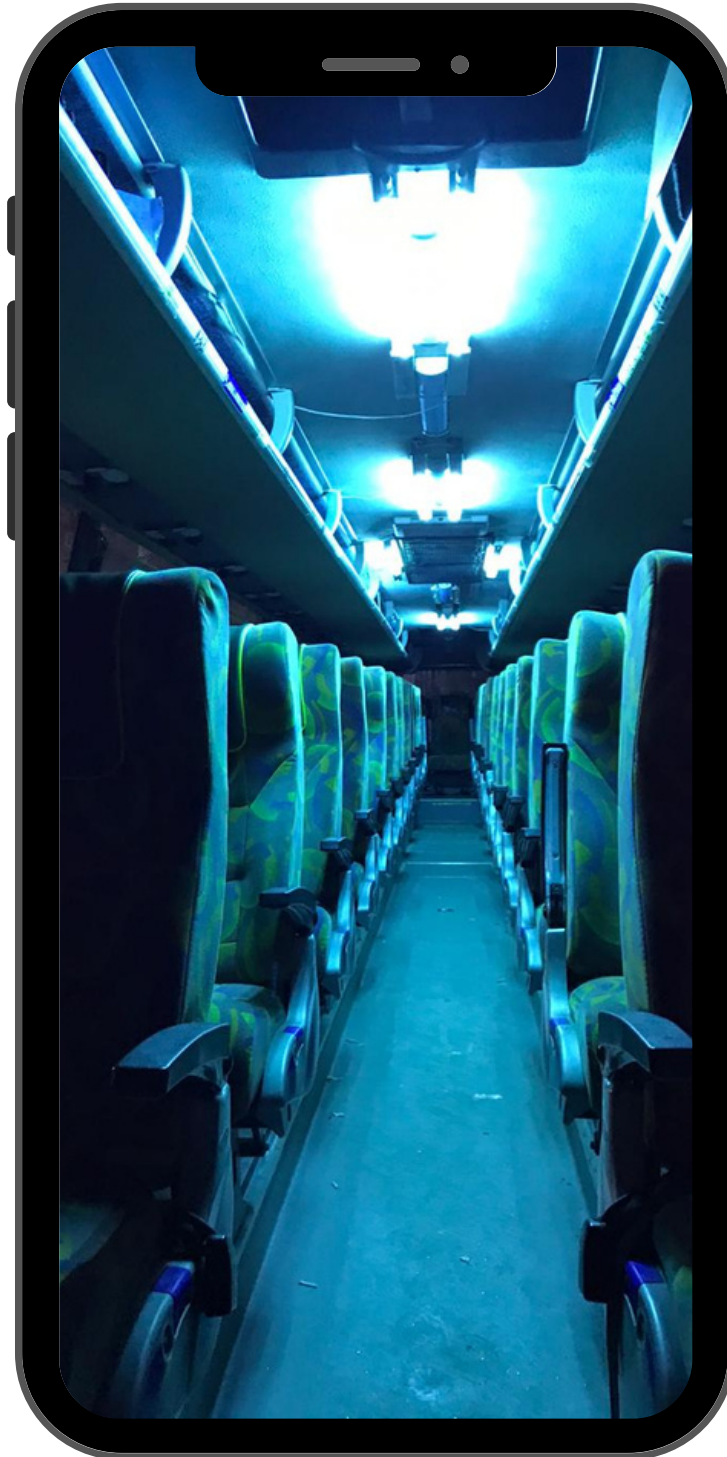


HELIOS UV

Celing mounted UV disinfection device



DESIGN



Motion Sensors: Motion sensors to automatically start and stop sanitisation safely



Smartphone App & Bluetooth- Use our Finsen Ritter smartphone app to control the device from a distance



SAE 304 Grade Stainless Steel
Medical grade steel for best in class finish and durability



RF Remote
Long range remote which works through walls

WORKING PRINCIPLE

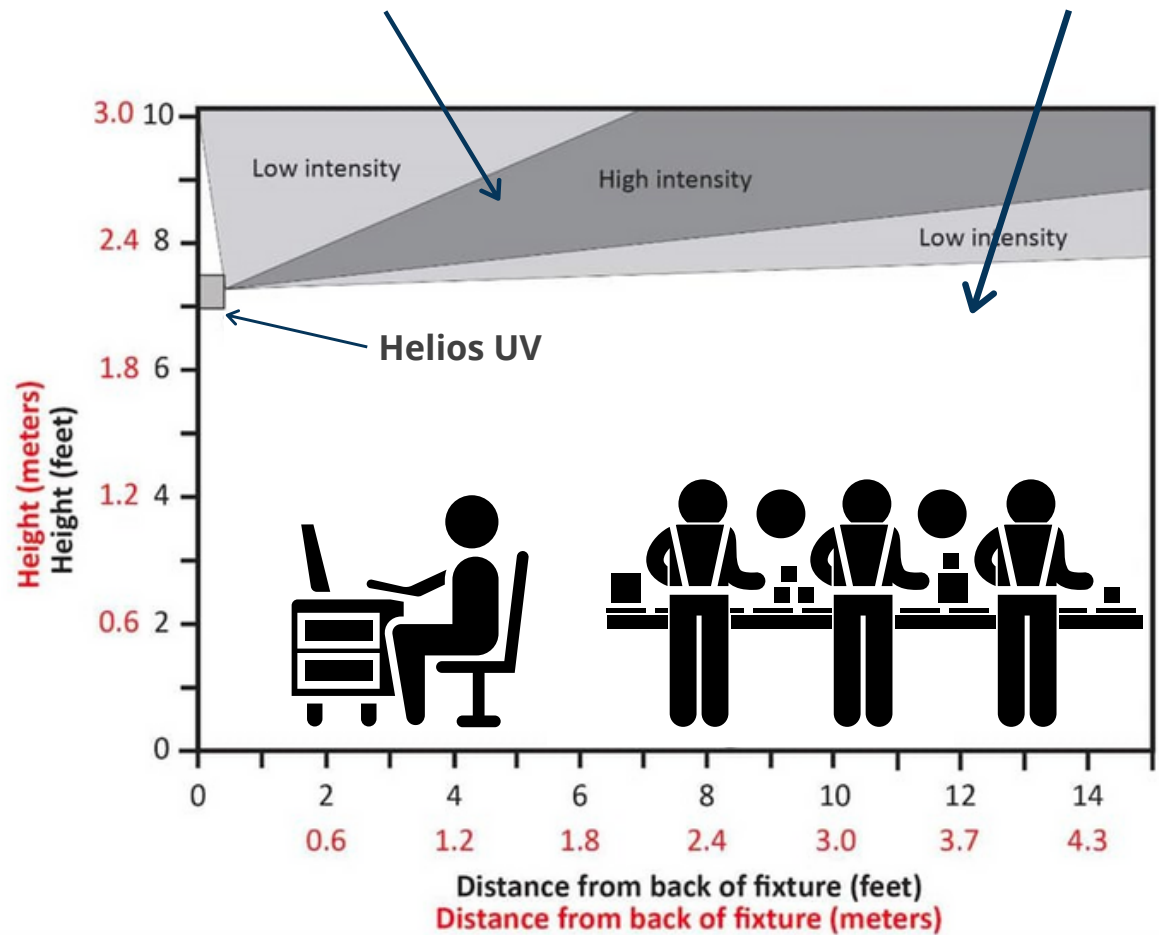
Have a look at how the device looks on the wall

Helios UV is designed to be used in an occupied room



UV light disinfects the air in the factory floor continuously

Device can be used in an occupied factory floor



The wall mount device continuously disinfects the air in the upper air column. The workers below remain safe from the UV lights

TECHNICAL SPECIFICATIONS

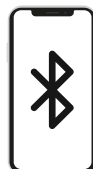
Specification	Helios 150	Helios 75	Helios 40	Helios 22
Power	150 W	75 W	40 W	22 W
Weight	2.9 Kg	2.7 Kg	1.2 Kg	0.7 Kg
Wavelength	254 nm	254 nm	254 nm	254 nm
Power to UVC efficiency	34%	34%	34%	34%
Operating Voltage	220 V AC	220 V AC	220 V AC	220 V AC
AC Voltage Frequency	50 Hz	50 Hz	50 Hz	50 Hz
Lamp Life	9000 Hz	9000 Hz	9000 Hz	9000 Hz

OPTIONAL FEATURES



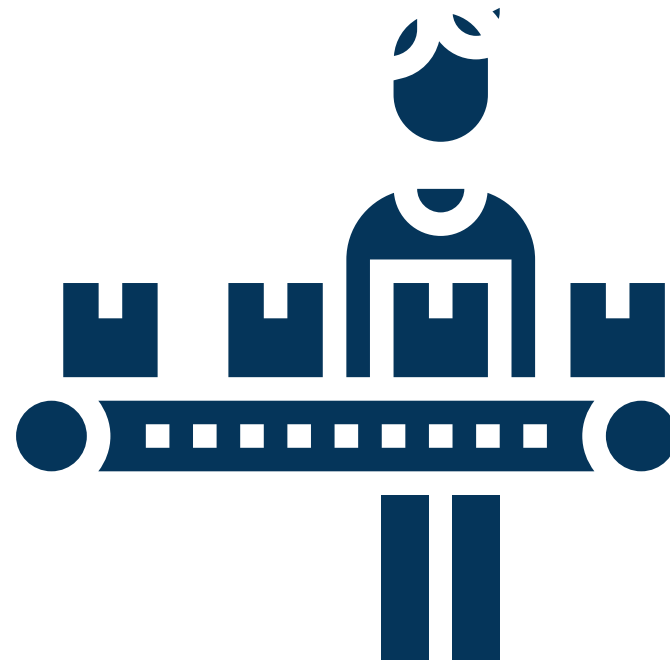
Cloud Integration & Electronic Control Panel- Use cloud computing feature to monitor the use of the system.

Motion Sensors: Motion sensors to automatically start and stop sanitisation safely



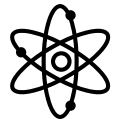
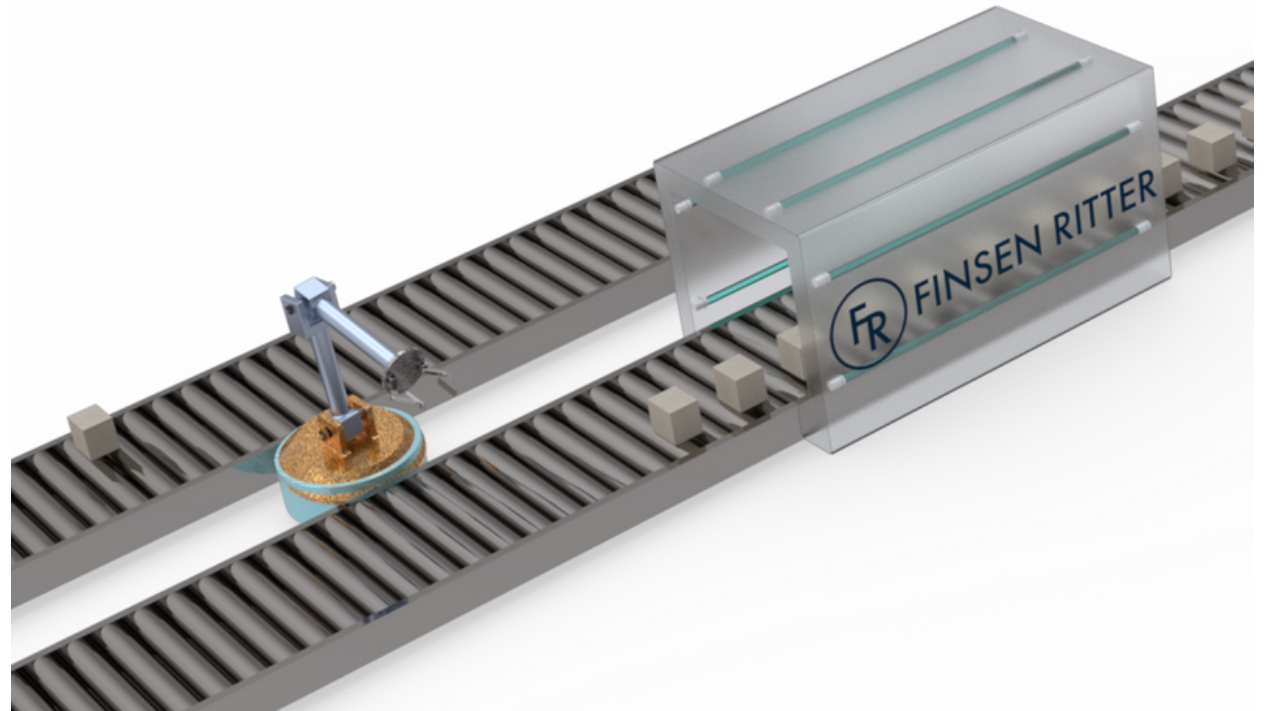
Smartphone App & Bluetooth- Use our Finsen Ritter smartphone app to control the device from a distance

UV CONVEYER TUNNEL



UV CONVEYER TUNNEL

DESIGN



Calibrated Dosage: With 70 mJ/sq cm we deliver Factor of Safety of 3

Comprehensive Sterilisation on all exposed surfaces



Fully Automated: Minimal Human Intervension required

UV Safe: No UV leakage in the design



Does it work on Corona Virus (SARS CoV-2)?

Yes. UVGI inactivated the Corona Virus on sufficient exposure.

WHAT IS UV-C and UVGI?

Ultraviolet radiation is divided into three categories UV-A (315 - 400 nm), UV-B (280 - 315 nm) & UV-C (200 - 280 nm). UV C is the light with the higher frequency and smaller wavelength. UVGI refers to radiation with specific wavelength (254 nm), scientifically proven to kill and inactivate most harmful Microbial Pathogens

WILL UV-C DEGRADE OBJECTS IN THE ROOM?

UV-C is a short wavelength light and does not penetrate most objects. Hospital room disinfection does not accumulate sufficient exposure time to cause any material degradation.

IS UV-C LIGHT HARMFUL?

UVC radiation refers to wavelengths shorter than 280 nm. These wavelengths are entirely absorbed by our atmosphere and no natural UVC radiation reaches the surface of the earth. These wavelengths are available to us through artificial sources, such as UVC LEDs or mercury lamps. UVC does not penetrate the skin and is almost entirely absorbed by the outer dead layer (stratum corneum) and outer skin (Outer Epidermis) and negligible radiation reaches the living cells of the skin. Human Eyes are most susceptible to UVC exposure due to absence of an outer dead protective layer of skin. Exceeding the threshold level of exposure will cause a painful irritation of the cornea similar to looking directly at Sun. This damage is painful but transitory with corneal shedding and replacement in a day or two. The intensity from point sources like UVC LEDs falls off as 1 over distance squared, and once it gets past the scattering length, it falls off exponentially. This means that the further away a UVC source from a human, the lesser dose they are exposed to.

FREQUENTLY ASKED QUESTIONS

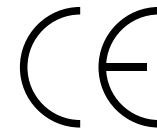
FREQUENTLY ASKED QUESTIONS

HOW DOES IT WORK?

Multiple Scientific Papers and Research Studies prove conclusively that when Pathogenic organisms are irradiated with UV-C light with specific wavelength(UVGI), The UV Photons interact Photochemically with DNA and RNA molecules. Photon absorption by DNA or RNA (specifically by thymine bases) is known to cause inactivation of the DNA or RNA double helix strands through the formation of thymine dimers. If enough of these dimers are created in DNA, the DNA replication process is disrupted and the organism cannot replicate rendering it inactive

SHOULD I CLEAN MY DEVICE?

Yes - depending on the surrounding environment, UVC lamps should be checked periodically (approximately every three months) and can be cleaned with a dry cotton cloth or paper towel.



For more information visit:
www.finsenritter.com

Email us: contact@finsenritter.com

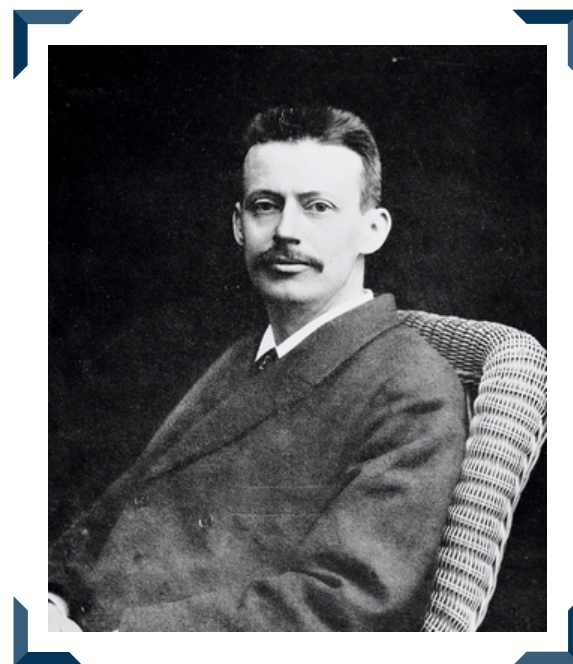
OUR TRIBUTE



NIELS RYBERG FINSEN

15 December 1860 – 24 September 1904

He was one of the pioneers to use UV light in medicine. In 1903, he was awarded the Nobel Prize in Medicine and Physiology "in recognition of his contribution to the treatment of diseases, especially lupus vulgaris, with concentrated light radiation, whereby he has opened a new avenue for medical science."



JOHANN WILHELM RITTER

16 December 1776 – 23 January 1810

Johann Wilhelm

Ritter was a German chemist, physicist and philosopher. He was one of the first to document the UV rays. In 1801, after hearing about the discovery of "heat rays" (infrared radiation) by William Herschel (in 1800), Ritter looked for an opposite (cooling) radiation at the other end of the visible spectrum. He did not find exactly what he expected to find, but after a series of attempts he noticed that silver chloride was transformed faster from white to black when it was placed at the dark region of the Sun's spectrum, close to its violet end. The "chemical rays" found by him were afterwards called ultraviolet radiation

