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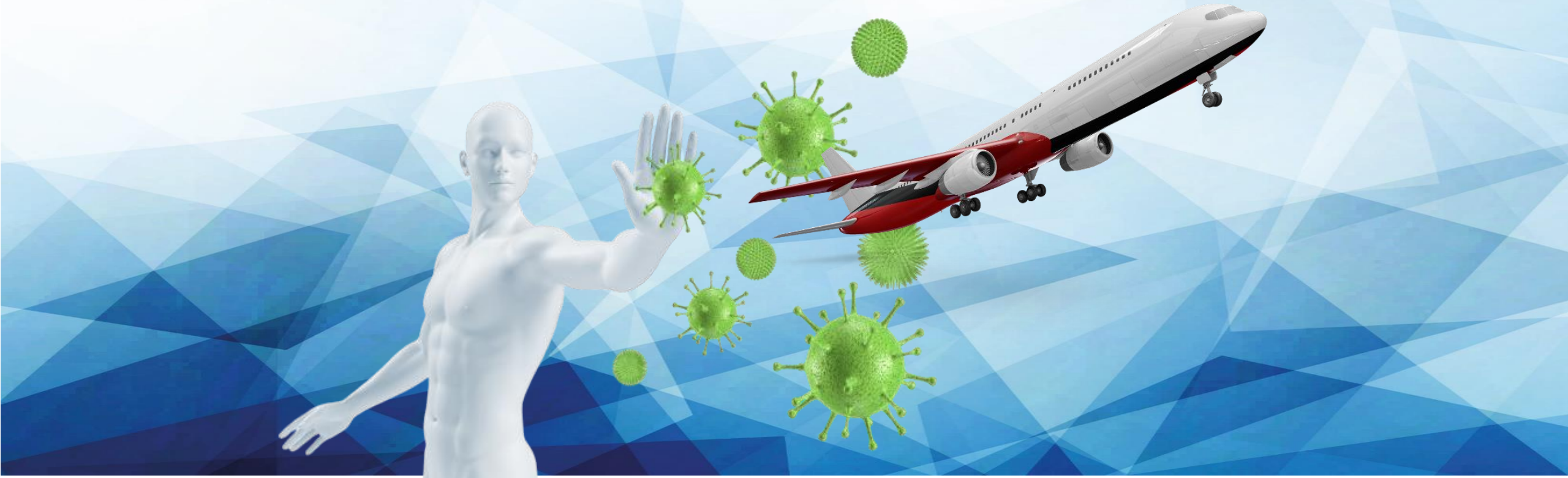
MAKING THE WORLD A BETTER PLACE

AIRport Solutions

we stop viruses from flying around the world



Risks through pandemics

Numbers of infections and deaths

COVID-19

- > 1.600.000 victims through the corona virus
- > 67.000.000 infected

SARS

- > 1.000 victims in Asia through SARS
- > 8.000 infected

Ebola

- > 11.000 victims through Ebola
- > 21.000 infected

MERS

- > 500 victims through MERS
- > 1.500 infected

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Risks in airports

Contamination risks in airports

Important

Airports contribute to the uncontrollable and potential spread of pandemics and diseases due to the high number of people from all over the world in an enclosed space

Contamination risks in airports

Important

- High risk of cross-contamination
- Security checks are one of the highest risk areas in airports
- Trays collect bacteria from people's belongings

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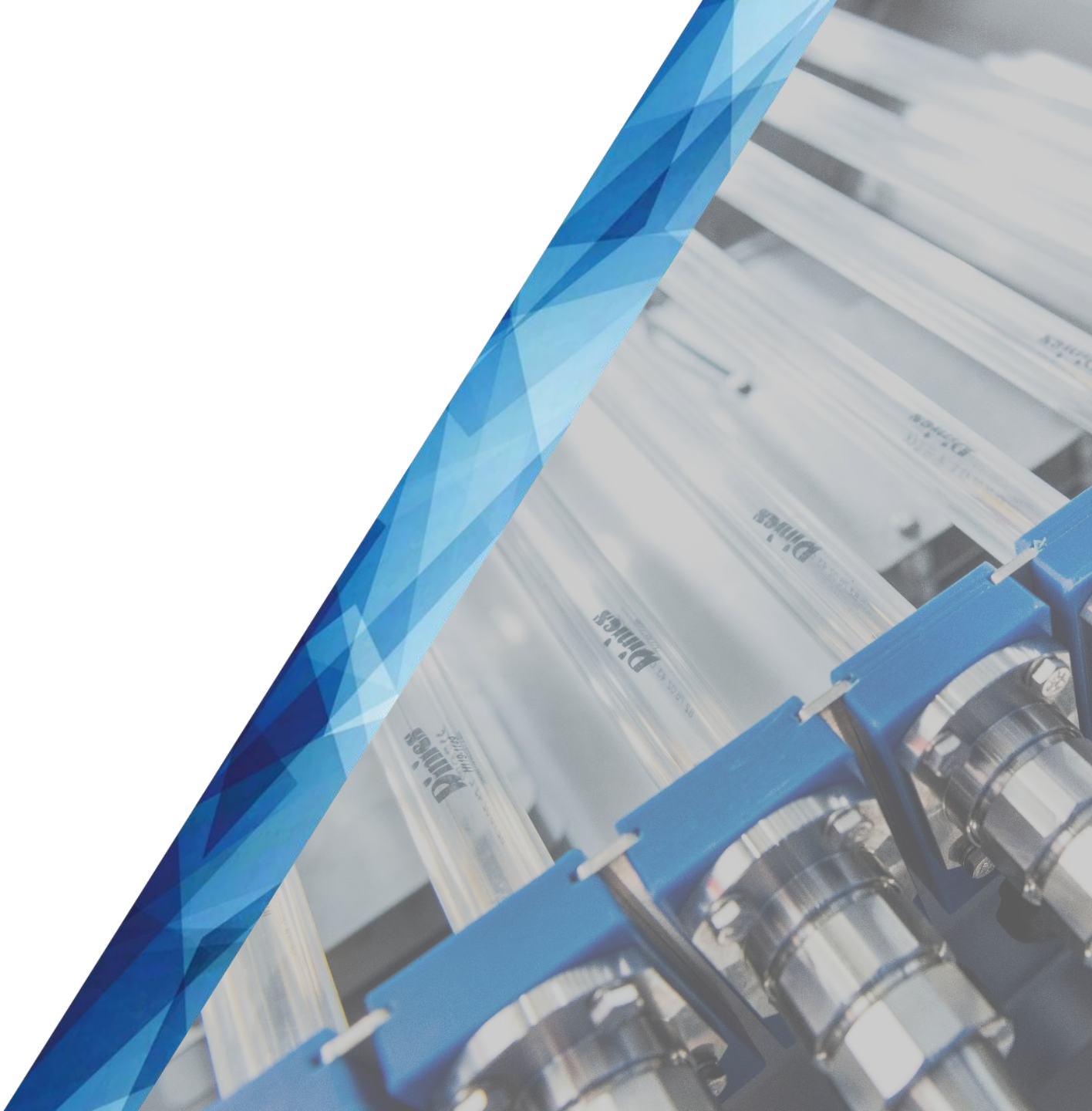
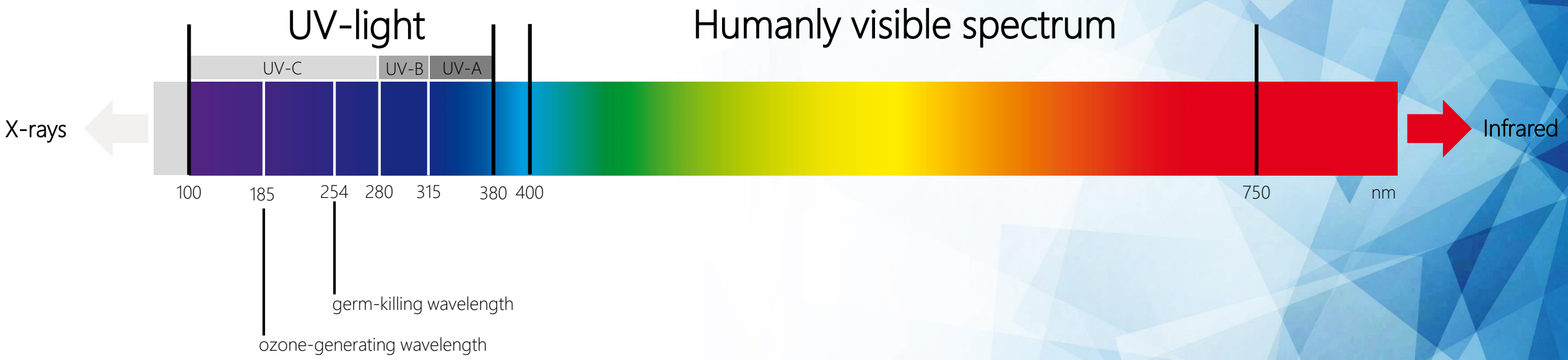
UV-C light



What is UV light?

How does it work?

UV light is invisible to the human eye, but it can be used to eliminate microorganisms



4 Factors for UV-C disinfection

What is important?

1.

2.

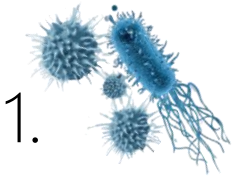
3.

4.

1. Microorganisms
2. Distance
3. UV-C power
4. Time

Important radiation doses

Lethal doses to kill microorganisms

1. 
2. 
3. 
4. 

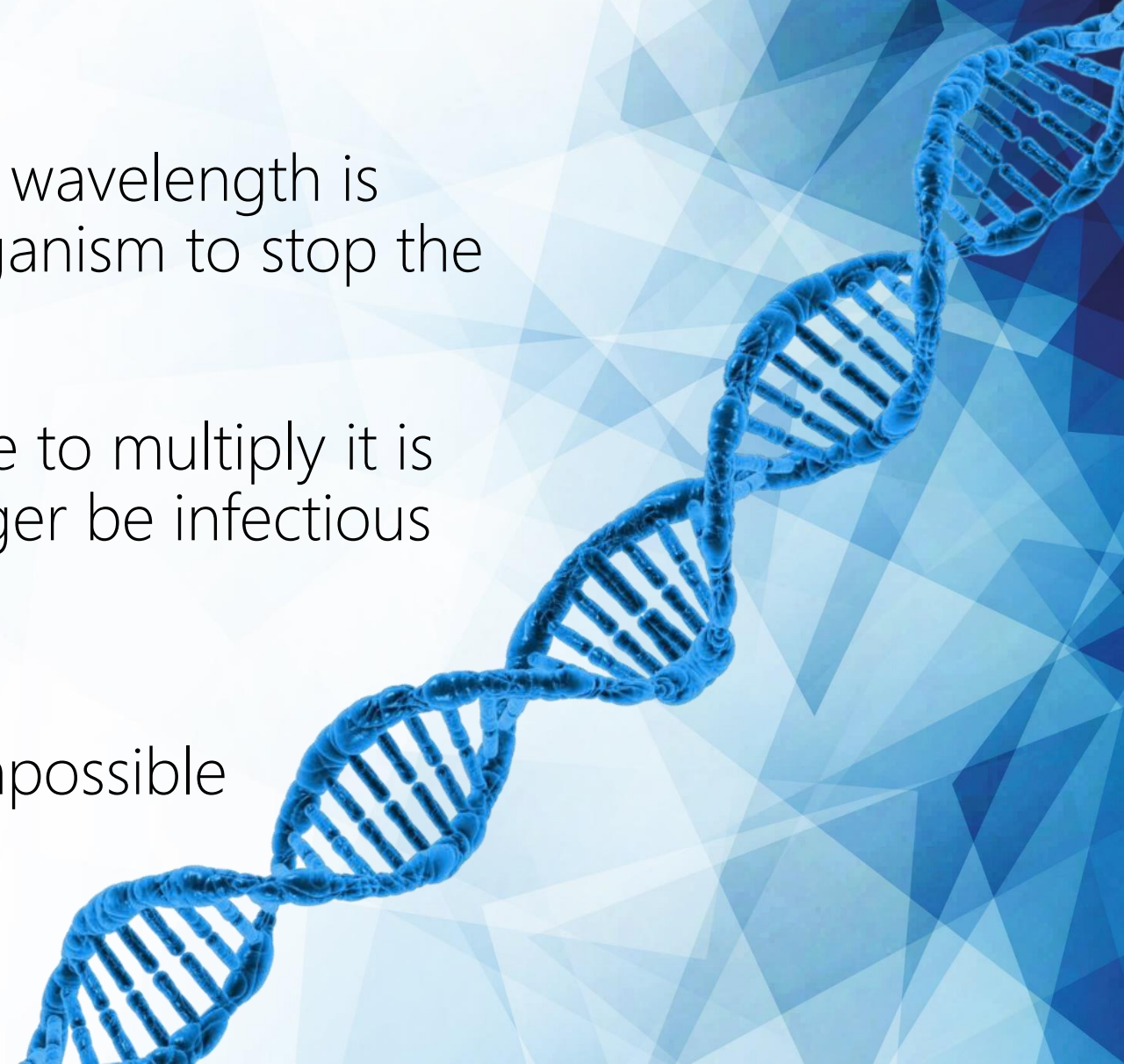
Microorganism	Distance	Radiation dose*	Time
Bacteria			
Escherichia coli	5 cm	9 mWs/cm^2	0,74 sec
Legionella pneumophila	5 cm	2,8 mWs/cm^2	0,23 sec
Mycobacterium tuberculosis	5 cm	30 mWs/cm^2	2,46 sec
Viruses			
Influenza virus	5 cm	10,2 mWs/cm^2	0,84 sec
SARS-CoV-2	5 cm	10,6 mWs/cm^2	0,80 sec
Mold spores			
Aspergillus niger	5 cm	396 mWs/cm^2	32,46 sec

*radiation dose necessary for 90% disinfection / log 1

UV-C disinfection

What is happening?

- The UV-C irradiation with 254nm wavelength is modifying the DNA of a microorganism to stop the reproduction
- When a virus or bacteria is unable to multiply it is considered dead and can no longer be infectious
- Very short deactivation time
- Development of a resistance is impossible



Use of our UV-C light products is safe for humans

No direct exposure to the UV-C rays

- Direct contact with UV rays is dangerous for humans
- However, our products can be used safely with NO risk of harm
- The UV-C light is part of an enclosed system and the disinfection takes place inside the robust casing
- As a result, our products can be used in rooms while people are there
- Our products comply with high quality standards and they have passed all necessary safety tests

UV-C light

Summary

- Disinfection up to 99.9%
- Elimination of all microorganisms
- Very effective and quick disinfection method
- Low maintenance and inexpensive
- Chemical free

UV-C light is effective against SARS-CoV-2

Studies

UVC irradiation represents a suitable disinfection method for SARS-CoV-2. High viral loads of 5 *106 TCID50/ml SARS-CoV-2 can be inactivated in 9 minutes by UVC irradiation

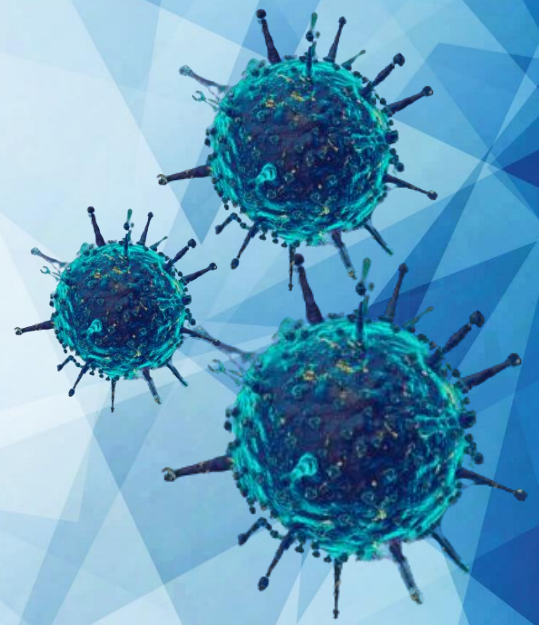
→ Study can be found here Link

SARS coronavirus is likely to be sensitive to irradiation of UV and it is more likely inactivated up to an undetectable level when exposed to irradiation of UV

→ Study can be found here Link

Our study demonstrates that THERAFLEX UV-Platelets (UVC) effectively reduce the infectivity of SARS-CoV, CCHFV and NiV in platelet concentrates and plasma, respectively

→ Study can be found here Link



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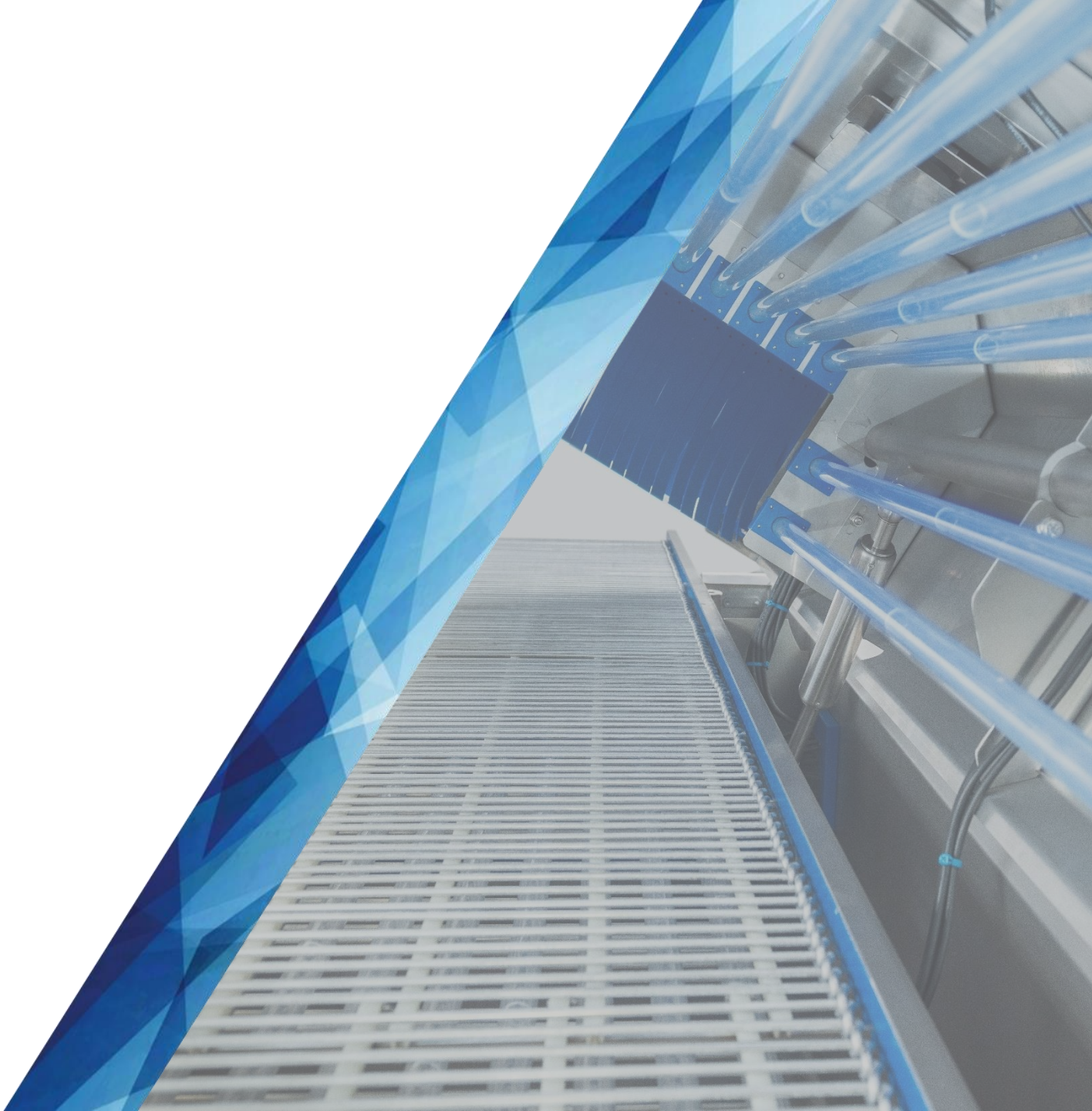
Product specifications

Details



UV-C Tunnels

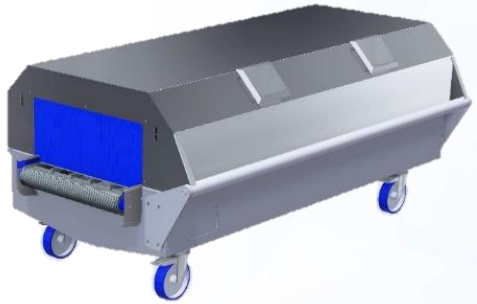
Product pictures

Airport UV-C Tunnel

Example

Product features

Airport UV-C Tunnel



- Stainless steel
- CE approval
- Automated disinfection solution
- Splinter protection and non flammable
- Environmental friendly

Specification sheet

For Airport UV-C Tunnels

	Safety check UV-C Tunnel	Tray UV-C Tunnel	Luggage UV-C Tunnel
Application	Disinfection of hand luggage	Disinfection of check-in trays	Disinfection of luggage
Max. product size	660 x 550 x 350mm	720 x 550 x 150mm	1000 x 850 x 700mm
Rated power	4,4 kW	4,1 kW	6,9 kW
Lamp power	3360 W	3120 W	5800 W
UV disinfection	360°	360°	360°
Number of lamps	28 lamps (12/12/2/2)	26 lamps (12/12/1/1)	48 lamps (24/24/7/7)
Rated voltage*	380V/50Hz	380V/50Hz	380V/50Hz
Dimension (LxWxH)	1600x900x1000mm	1600x900x800mm	1800x1200x1300mm
Conveyor speed max.	14m/min	14m/min	14m/min
Belt width	600mm	600mm	900mm
Illumination length	1400mm	1400mm	1400mm
Size of entry	600x400mm	600x200mm	900x750mm
UV wavelength	254nm	254nm	254nm
Lamp life spam	12000h	12000h	12000h
Lamp control	yes	yes	yes
System integration	possible	possible	possible
Splitter protection	yes	yes	yes

** Adaptable to 60Hz*

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Use in airport

Areas suitable for UV-C disinfection

Standard luggage size

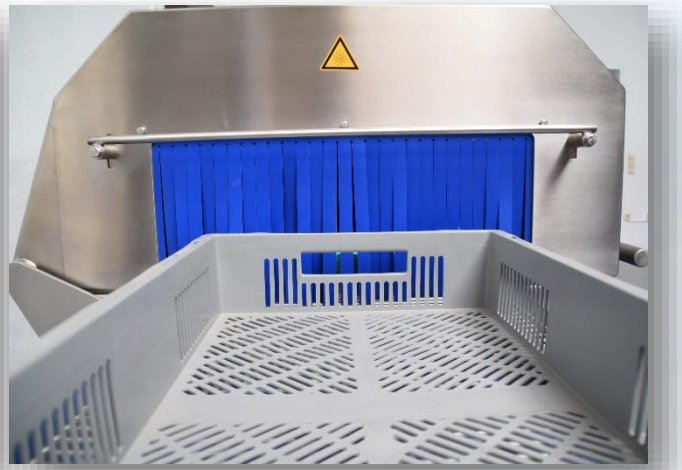
Check-in luggage	100cm x 85cm x 70cm
Hand luggage	66cm x 55cm x 35cm
Safety check boxes	72cm x 55cm x 15cm

UV-C Tunnel use at airport

4 different areas

- Inbound luggage before entering the airport
- Check-in luggage
- Hand luggage during safety check
- Boxes from safety check

Boxes

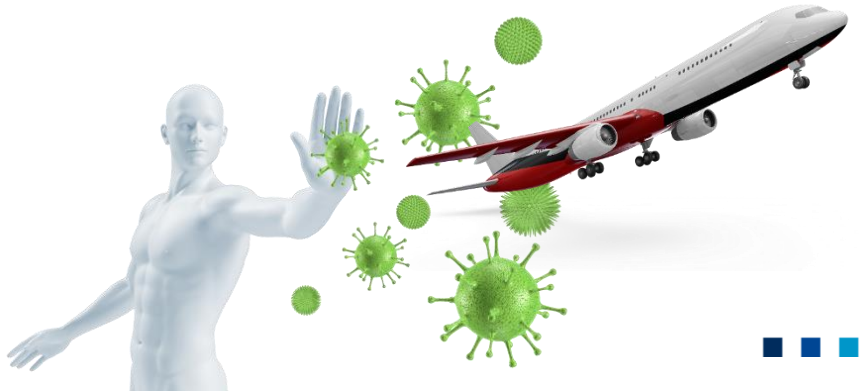


Boxes with hand luggage

Hand luggage

Check-in luggage

Thank you for your attention



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