

# UVC Air Sanitizer - powered by UVpro

Preliminary info sheet

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V1000E

## UVC Air Sanitizer

- ▶ cleans the air from viruses, bacteria and mould spores
- ▶ high UVC doses
- ▶ inactivates up to 99,9 % of corona viruses \*1
- ▶ different products depending on the application
- ▶ external control and internal self-monitoring
- ▶ easy setup, also for temporary installation
- ▶ german engineering

The current pandemic with the SARS-CoV-2 virus shows how important hygiene measures are to avoid its spread. But, despite all the rules, not everything can be cleaned with disinfectants. The aerosols in the air are a major risk that can be reduced with UVC technology.\*1 Especially in public spaces such as event locations, waiting areas, conference rooms etc. The EXACT solutions UVC Air Sanitizer range can help to minimise the risk situations.

UVC light has the ability to destroy the DNA of a life form. This works very efficiently on simple life forms such as viruses and bacteria. A commonly used value to define the efficiency of UVC products is the LD90 dose, which is defined as the UVC dose that kills 90 % of a virus. There is data available listing the needed radiation dose, depending on the virus type. In case of SARS-CoV-2 research has not yet concluded the needed radiation dose. Various sources indicate that the needed LD90 dose for SARS-CoV-2 is 4 mJ/cm<sup>2</sup>.\*2 For a disinfection of even up to 99,9 % the needed dose should be about three times the LD90 dose. For corona viruses this would result in a dose between 12 and 18 mJ/cm<sup>2</sup>.\*2

Unfortunately, UVC light is also dangerous for human skin and eyes. As UVC Air Sanitizer products emit the UV light inside an encapsulated housing, nearly no UVC light is emitted outside the housing. Nevertheless, it is important to choose the right product for the right installation.

The UV-C Air sanitizer product range works by directing air through a housing which is equipped with UVC light emitting tubes. The used UVC tubes are made by the German company UVpro and are a warrant for reliability and efficiency. These products stand out in comparison with the widely used standard UVC emitting tubes.

\*1 On June 8th 2020 the German Federal Ministry of Health has posted an official COVID-19 related update in which the importance of aerosol infection risk beside a droplet infection was confirmed.

\*2 Exemplary values from the literature without guarantee and claim to completeness

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The different products can be compared in table 1. For very large halls, multiple units can be combined to increase the maximum air volume. The products V300E and V1000E offer the possibility of external control by ethernet connection. V-LabE offers the programming of operating times.

	V300E	V1000E	V-LabE
UVpro tube	2 x 41 W	6 x 41 W	2x 31 W
Total UVC output [W 253,7 nm]	28	84	22
Air volume [m <sup>3</sup> /h]	250	250 / 800 (adjustable)	0 – 100
UVC dose [mJ/cm <sup>3</sup> ]	6,5	12,5 / 6,5 (see air volume)	9,0
Corona reduction *2	99 %	99,9 / 99 % (see air volume)	>99 %
Noise emission [dB]	41	max 52	max 36
Mount	2 eye bolts	2 eye bolts	wall mounting
Size [mm]	1,092 x 234	1,092 x 314	846 x 402 x 136
Weight [kg]	14.5	27	13.4
Tube replacement interval [h]	12,000 (75 % +/- 5 %) output performance	12,000 (75 % +/- 5 %) output performance	12,000 (75 % +/- 5 %) output performance
Supply voltage	230 V / 50 Hz	230 V / 50 Hz	230 V / 50 Hz
Input power [W]	max 100	max 300	80
Operating temperature [°C]	0 - 35	0 - 35	0 - 35
Remote control	LAN	LAN	/
Remarks	logging of operating time, power cycle	logging of operating time, power cycle	sheduling of operating times

Please find below an overview of system accessories:

- ▶ protective clothing
- ▶ dosimeter (dose validation in a simple way)
- ▶ lampchecker (measuring tool to determine the tube performance)
- ▶ radiometer (measuring the prevailing UVC radiation)
- ▶ safety tool (measuring the UV risk)



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V-LabE