

Certificate of design and performance of SanAer 45 active devices

1. Technical structure

SanAer 45 active consists of a closed aluminum housing. The room air is sucked in by a fan and is led inside the aluminum housing past a UV lamp. The maximum distance of the air to be disinfected from the UV lamp is 30 mm. The sterilized air then is exhausted out of the housing. Cabling and the electronic ballast are integrated in the aluminum profile.

UVC High Output Lamp	Power electrical: 48 W Power UVC: approx. 18 W Radiator useful life: 10.000h
Fan	Fan Air circulation rate: 24 m ³ /h
Electrical connection	110-240 V 50/60 Hz
Housing protection class	IP 54

Table 1: Technical data SanAer 45 active



Illustration: schematic structure of SanAer 45 active function

2. Disinfection performance of the SanAer 45 active

It was determined by the GMBU Jena (Society for the Promotion of Medical, Bio- and Environmental Technologies e.V.), that due to the construction of the aluminum housing and the built in UV lamp with a power of 90W, as well as the used fan with a circulation rate of 24 m³/h it is ensure that at least a radiation dose of 65 J/m² for disinfection is applied to the passing air.

With a maximum air flow of 24 m³/h a sufficient lethal dose for disinfection is given. The air led out of the aluminum housing is 99,9% free of bacteria.

Bacterium	Lethale Dose at 99% efficiency	Guaranteed minimum dose SanAer 45 active
Bacterium coli (in air)	14 J/m ² for 99,9% IA	69 J/m ²
Influenza	62 J/m ² for 99,9% IA	
Poliovirus	60 J/m ² for 99,9% IA	
Eberthella typhosa	45 J/m ² for 99,9% IA	
Corynebacterium diphtheriae	65 J/m ² for 99,9% IA	

Table 2: Selected microorganisms with known necessary irradiation dose for 99,9% inactivation (IA)

3. Result

The SanAer 45 active is suitable to effectively increase the disinfection level of room air. A degree of disinfection of 88% is ensured for room volumes up to approx. 45m³. A degree of disinfection of 80% is ensured for continuous operation up to approx. 300 m³ room volume by using a SanAer 45 active.

4. Safety and guidelines

SanAer 45 active is constructed and designed in accordance with all valid EC directives for machines, as well as the EU directive 2002/95/EC (ROHS).

Berlin, October 19, 2020

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ISO 9001 : 2015
Reg. - Nr. 109253-QM15