

## AIR DECONTAMINATION MODULE FOR PASSENGER ELEVATOR CABINS USING THE UV SPECTRUM (UVC)



## **UVECO**

MADE BY ELMAS / BRASOV-ROMÂNIA

Based on the current context (COVID-19), in the manufacturing process of ELMAS passenger elevators, we also directed our attention on the safety in operation, from an epidemiological standpoint.

By attaching the UVECO module to the elevator cabin, an efficient neutralization of the aeromicroflora inside the passenger elevators is obtained.

**Decontamination with UVC** ultraviolet light (with a wavelength of 254 nm) is a particularly effective method, used in other fields, such as medical, food, drinking water treatment, etc.

Recent studies conducted and published by various prestigious universities in EUROPE and the USA confirm the effectiveness of UVC light in the fight against SarsCov2, which causes COVID-19.

The germicide action of UVC light is based on the destruction of the DNA structure of microorganisms, so that they no longer have the ability to reproduce and become harmless.

Thus, the application of a UVC dose of 5ml/cm<sup>2</sup> for 6 seconds on the microorganisms in suspension, leads to the destruction of SarsCov2 in a proportion of 99%.

The aeromicroflora has a very dynamic component, which results very naturally from the air exhaled by the people transported in the elevator.

Considering that the UVC light is particularly harmful to the eyes and skin, ELMAS-Romania has developed the UVECO modular system which is mounted outside the cabin.

By recirculating the air, this system neutralizes 99% of the bacteria, viruses and fungi existing in the air inside the elevator car, without any risk for the people in the car. **The UVECO scalable module** made by ELMAS-Romania has a recirculation and neutralization flow of approximately 28 m<sup>3</sup>/h.

Depending on the volume of the cab and the requirements of the users, one or more UVECO modules can be attached. Air recirculation and neutralization are performed automatically. The system starts when the elevator car doors are closed and remains in operation after the elevator is stopped at the final station, for a variable and adjustable time "T", depending on the car volume, user requirements and the number of scalable modules attached to the car.



In case of heavy use of the elevator, each new closing of the cab doors resets the value "T" to the value initially programmed (0-30 minutes), in order to keep the systems active.

The estimated service life of the lamps included in the UVECO module is of 18,000 hours. For a proper functioning of the system, within the annual maintenance schedule of the elevator, it is necessary to clean / sanitize the interior of the system, as well as to replace the dust filters.

ELMAS analyzes and addresses with seriousness and consistency all the factors that ensure the protection of people who use its products. Good functionality, operational safety of the products manufactured by the company, are an integral part of the innovative spirit of ELMAS company.

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