



CONTRIBUTING TO A SAFER ELEVATOR RIDE

KONE Elevator AirPurifier provides cleaner, fresher air inside the elevator car by using PCO™ (Photocatalytic Oxidation) air cleaning technology to reduce impurities.

How does it work?

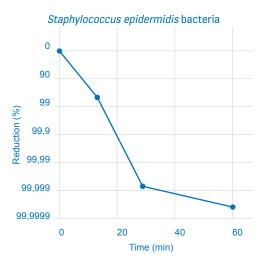
KONE Elevator AirPurifier is discreetly located in the elevator ceiling structure. A centrifugal fan draws the air into the air purifier. The air first flows through a polyester filter which retains dust and other larger particles. A fan then pushes the air through a catalyzer. In the catalyzer, UV light combined with a photocatalysis reaction creates oxidizers, which reduce viruses, bacteria, odors, air pollutants, VOCs (chemical odors), smoke and mold in the air. Purified air is then returned to the elevator car.

KEY BENEFITS

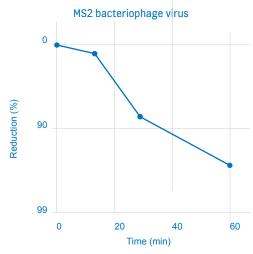
- Enhanced passenger experience
- Reduced air impurities
- Chemical-free cleaning
- Quick and easy to install

FEATURE	DESCRIPTION	
Ventilation factor	Airflow is up to 39 m3/h.	Air passes through the KONE Elevator
		AirPurifier up to 12 times/hour in a reference
		car size 1100mm x 1400mm x 2100mm.
Photocatalyst reaction	The photocatalyst reaction generates hydrogen peroxide	The photocatalyst reaction is effective in
	in small quantities (below 0.02 PPM).	reducing the microbial load in the air.
Patented PCO™	The Dust Free module (UV lamp + catalyzer) generates	The hydroxyl radicals are able to destroy most
(Photocatalytic Oxidation)	natural hydroxyl radicals. Those hydroxyl radicals are able	pollutants in the air.
Dust Free	to destroy most pollutants in the air.	
Maintenance and repairs	Regular maintenance includes for example replacement	As any technical solution, in order to work
	of the filter and UV lamp. The expected lifetime at 100%	efficiently, the solution needs to be maintained
	performance is 5 years when maintained according to the	and replaced at the end of its effective
	instructions.	lifetime.
Compatibility	KONE Elevator AirPurifier is generic solution and can be	Placement of the KONE Elevator AirPurifier
	applied to any elevator type with following limitations:	might be affected by the design of the ceiling
	• at least 70 mm gap between the suspended ceiling and	(position and size of spotlights or lamps) and
	the car roof	the car roof.
	• at least about 20-25 mm gap between the ceiling panels	
	and side/back walls	

Reduction of bacteria and viruses in an elevator equipped with KONE Elevator AirPurifier has been tested against *Staphylococcus epidermidis* bacteria and the MS2 bacteriophage virus. MS2 is typically used as a surrogate for human viral pathogens such as norovirus and coronavirus in disinfection efficacy tests.



In elevator equipped with KONE Elevator AirPurifier, more than 99.99% of *Staphylococcus epidermidis* bacteria is reduced in 30 minutes.



In elevator equipped with KONE Elevator AirPurifier, more than 80% of MS2 bacteriophage virus is reduced in 30 minutes and 95% in 60 minutes.

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Independent tests were carried out in 2020 by VTT Technical Research Centre of Finland Ltd. in a test environment consisting of an approximate 3 cubic meter closed chamber designed to simulate the most common elevator car size.

Right, a schematic of the experimental setup. The blue arrows represent the direction of the airflow.

