



HALO P Smart

Healthcare Facilities Air Purifier

- Full staff and patients protection from airborne contaminants
- Prevention of hospital acquired infections
- Proven high efficacy through independent test reports
- No HVAC connection and aircon air consumption
- Simple to install, to connect and to control



UP TO 99,99995% EFFICIENCY AIR PURIFICATION SYSTEM FOR VIRUSES, BACTERIA, ALLERGENS AND DUST FOR HEALTHCARE CONFINED SPACES



OVER 50 YEARS DEVELOPING FILTRATION TECHNOLOGIES TO HELP CHEMISTS AND BIOLOGISTS TO BREATHE A SAFE CLEAN AIR !

Erlab was created in France in 1968 to develop for the first time fume hoods for chemistry laboratories, filtering the chemicals handled inside by the chemists and recirculating a clean air into the room...quite a tough challenge as a large variety of chemicals are used and none shall return into the lab room. In more than 50 years, its R&D laboratories have acquired a unique expertise in filtering chemicals which is helping Erlab to keep its world leader position with over 150,000 filtered systems for laboratories sold on the 5 continents.

Healthcare facilities: where the contamination risk is by far the highest...

Healthcare facilities, such as hospital rooms (receptions, waiting areas, medical examination rooms, surgical rooms, sickrooms, etc), elderly nursing homes, dentists facilities, etc. are at a high contamination risk for the staff and for all the sick patients who meet there, as they all inhale the room air which can be easily infected.

The Covid-19, as the other viruses, is emitted and transferred by infected people when coughing, sneezing and talking. Coughing and sneezing emit visible droplets carrying the virus which fall to the ground between 1 to 2 meters away. But talking emits also **aerosols** which are not visible and much smaller than droplets, not even retained by a surgical mask. Each aerosol may contain a large quantity of viruses staying in the air for a very long period of time. If the ventilation of the room is not strong enough and this is the case in the majority of healthcare facilities, everyone can be easily infected just by crossing areas where infected people were present.



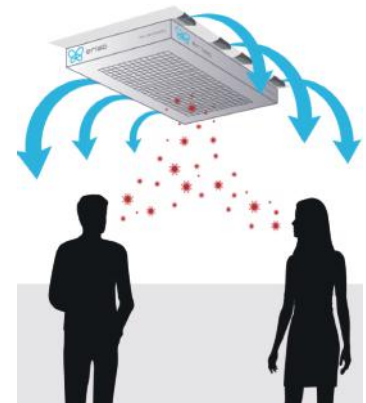
From laboratory safety to healthcare safety...

Based on the principle of the **HALO C** launched successfully on the world market 10 years ago to filter the air of chemistry and biology laboratories, Erlab has developed a specific version for healthcare, the **new HALO P**, designed to purify permanently the air in hospitals, medical centers, nursing homes,

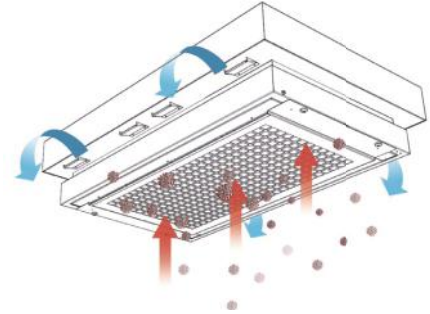
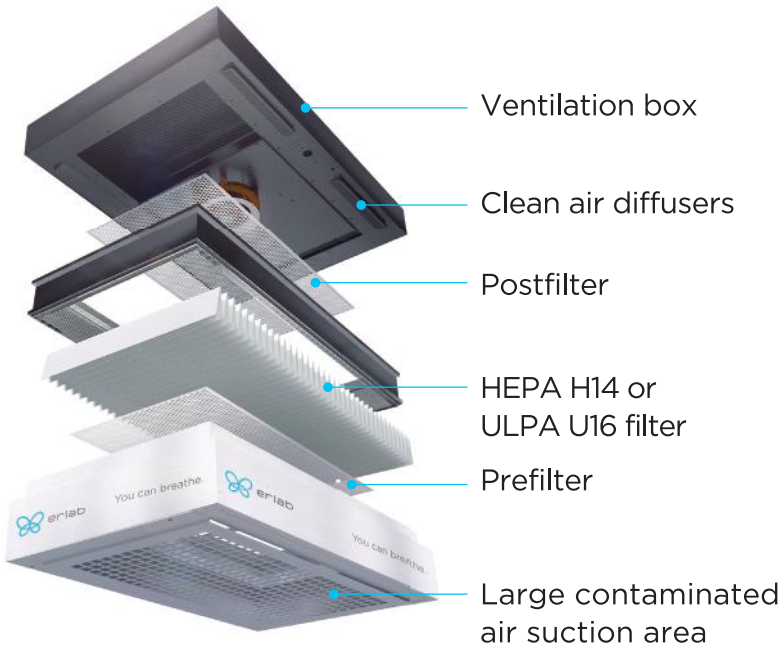
How HALO P Smart prevents contamination from Covid-19 in healthcare facilities

The HALO P is equipped with a laboratory grade HEPA H14 or an ULPA U16 particulate filter offering a filtration efficiency of 99,995% up to 99,99995% for particles larger than 0,01 Qm. The performances of those filters comply with the EN 1822 : 1998 Standard. All viruses (including the SARS-COV-2), bacteria, allergens, dust, etc. are retained efficiently in a HALO P. It prevents the staff from being contaminated, the patients to be contaminated through hospitals acquired infections.

As HALO C, **HALO P** is fixed in the middle of the ceiling of the room to be filtered. This location has been proven to suck, filter and redistribute evenly the room air.



HALO P: HOW IT WORKS



MAIN TECHNICAL SPECIFICATIONS

Dimensions	W 592 x D 892 x H 303
Airflow	mm 300 m ³ /h
Voltage	80-240VAC 50/60Hz
Noise level	from 39 to 50 dB(A) at 1 m. distance
Power Consumption	50 watt
Weight	(excl. Filter) 31 kg

HALO P: AN EFFICACY PROVEN BY INDEPENDENT TESTING ORGANIZATIONS!

(Full tests reports available on request!)



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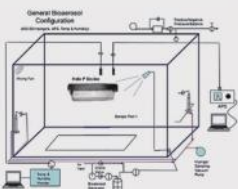


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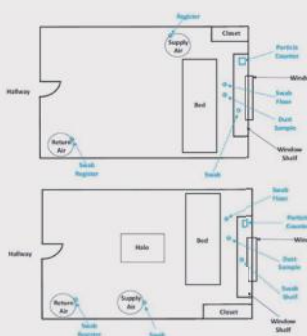
Efficacy of the Erlab HALO P against Aerosolized MS2 virus

When challenged in a room with the emission of MS2, a surrogate for the Covid-19, the HALO P was able to achieve within 15 minutes an average 90% reduction of the surrogate and within 45 minutes to achieve an average 99% reduction!



Airborne COVID-19 tests in rooms with positive residents with and without HALO P (Hidaho Health Care Association)

A HALO installed at an AVAMERE nursing home for the elderly in a room occupied by a patient infected with Covid-19 shedding the virus at a high rate completely eliminates the presence of airborne Covid-19 in the air unlike a room without HALO P occupied by a patient at the end of the infection excreting the virus at a low rate!



Room 118 without HALO P occupied by a patient shedding low rate of Covid-19.

3500 RNA copies detected in the air

Room 120 with an HALO P occupied by a patient shedding high rate of Covid-19.

No RNA copies detected in the air !

HALO P : FREQUENTLY ASKED QUESTIONS



How the HALO P can clean evenly the room air?

Attached to the room's ceiling and dispersing the filtered air through vents oriented horizontally on both sides, the HALO P has been developed to take advantage of the Coanda effect. The ejected air at the ceiling level tends to follow the ceiling, then down along the walls to the floor which causes a depression from the floor to the ceiling entraining naturally all the air particles towards the suction zone of the HALO P. This allows a natural and total cleaning of the room air without creating any dead zones, as floor standing air cleaners would do !

How to install a HALO P?

A HALO P shall be fixed to the ceiling. It is supported by 4 bars or 4 cables anchored to the ceiling in the same way ceiling air conditioners are attached and only requires an electrical connection! Unlike floor-standing air cleaners, it doesn't occupy floor space and cannot be disconnected by inadvertence.



How many HALO P units to install?

One HALO P is efficient to clean a room of up to 75 m³ (i.e. a room with an approximate surface of 25 m² and a height of approx. 3 m.) by providing an equivalent of 4 additional air exchanges per hour (ACH). It cleans all the airborne particles completely in just 15 min.



How to monitor the air quality?

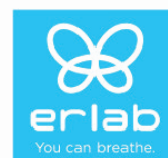
The Covid-19 is travelling in the air being supported on aerosols of a size of <2.5µm when infected people talk. Therefore a PM2.5 monitor placed in the room can show permanently the concentration of particles / aerosols ≤2.5µm.

When to change the HEPA H14 or ULPA U16?

The main HEPA (or ULPA) filter shall be changed every 3 years as any live viral particles captured will be deactivated within a short period of time due to organic dessication and accelerated due to air movement. The prefilter should be changed annually. Before changing a prefilter or a filter, a decontamination by nebulization of a mist of 4% of hydrogen peroxide during half a day is recommended.

IMPORTANT:

The HALO P eliminates the aerosols supporting the Covid-19 present in the room's air but not on the surfaces (shelves, tables, beds, etc.) which shall be regularly disinfected with appropriate cleaning equipment. It is recommended to follow a layered approach to reduce exposures to COVID-19. While ventilation improvement through the installation of a Halo P is a very effective mitigation measure, other mitigation strategies such as physical distancing, wearing face masks and hand hygiene should be pursued.



PLEASE SPEAK TO YOUR HEALTHCARE MANAGER FOR FURTHER INFORMATION