



Air is life

AN EFFECTIVE TECHNOLOGY  
**AGAINST COVID-19**



## DEPURO PRO SERIES

Air sanitisers and purifiers  
for commercial use





Air is life

*It is possible to live for weeks  
without eating, for some  
days without drinking, **for very few  
minutes without breathing.***

# THERE IS NO LIFE WITHOUT AIR

*It cannot be seen, it cannot be  
felt, its actual presence cannot be  
perceived. However, it is the only  
element in the world that we use  
from birth to death and without  
which our lives could not exist.*



# THE IMPORTANCE OF AIR PURIFICATION AND SANITISATION

To improve the quality of life

**We breathe about 15 times a minute, 900 times in an hour, 22,000 times in 24 hours.** On average, we introduce **10,000 litres of air a day** in our lungs.

This air is often very polluted, especially in closed environments; in fact, the air we breathe at home or in the office is very often more polluted than the air that we breathe in the streets of our cities.

This can seriously put our health at risk. Nevertheless, human beings have always paid more attention to what they eat or

drink than to what they breathe. If this behaviour could have been acceptable until a few decades ago, nowadays, due to the progressive environmental degradation and worsening of the air quality, we are bound to, in order to preserve our well-being and health, protect the air quality by removing chemical, physical, biological polluting agents, dust and impurities, thus restoring that purity which, after decades of mindless emissions, we have taken away from the air.

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**The DEPURO PRO EVO products kill COVID-19 thanks to the photocatalysis module, whose effectiveness is certified by the University of Milan in cooperation with the Department of Biomedical and Clinical Sciences of the Hospital “Luigi Sacco” of Milan.**

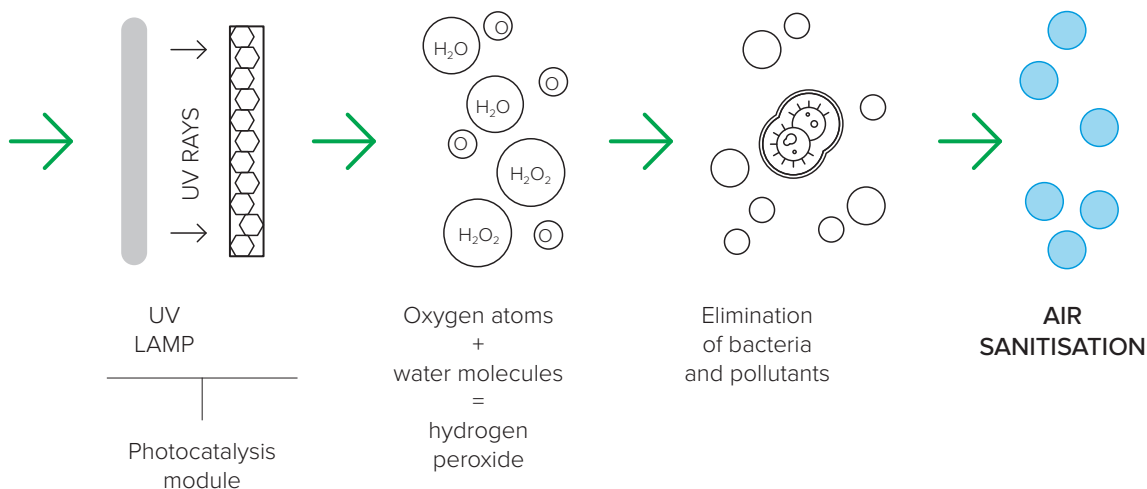


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## How a photocatalytic system works\*



*\*Schema purely as an example of a generic photocatalysis process.*

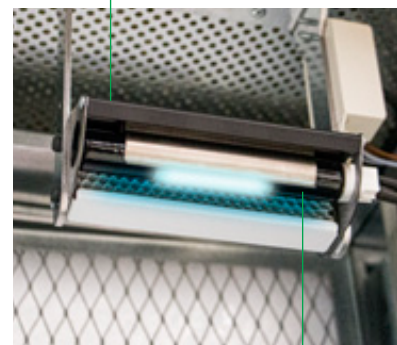
## Photocatalysis module

The photocatalysis unit used is based on the photocatalytic oxidation process (used in hospitals and in the aerospace, medical and food industries), which is a natural phenomenon that occurs in the presence of ultraviolet rays from the sun, air humidity and of some noble metals.

The combination of these three factors triggers the release of oxidising ions capable of neutralising the majority of pathogens in the air, which are potentially dangerous to our health. The DEPURO PRO EVO ultraviolet (UV) lamp illuminates a catalyst made from a special alloy based on titanium dioxide (TiO<sub>2</sub>), which causes a photochemical reaction where oxygen (O) atoms bind with molecules of water (H<sub>2</sub>O) dissolved in the air in the form of vapour.

The hydrogen peroxide molecules (H<sub>2</sub>O<sub>2</sub>) generated from this reaction are sufficient to eliminate most of bacteria, viruses and allergens present both in the air and on surfaces, SANITISING THEM. The estimated service life of the UV-C lamp is two years.

Metal housing which encloses the electronic transformer of the UV lamp.



Titanium dioxide catalyst (TiO<sub>2</sub>) which encloses the UV lamp.



## RIASSUNTO CONCLUSIVO

### DICHIARAZIONE EFFICACIA TECNOLOGIA DUST FREE

Dalla sperimentazione condotta all'interno del Dipartimento di Scienze biomediche e cliniche "Luigi Sacco" si evince che la tecnologia Dust-Free FC UNIT 3" ha mostrato capacità di abbattere la carica virale di SARS-CoV-2 inoculata in fase liquida sia su una superficie che su un tessuto.

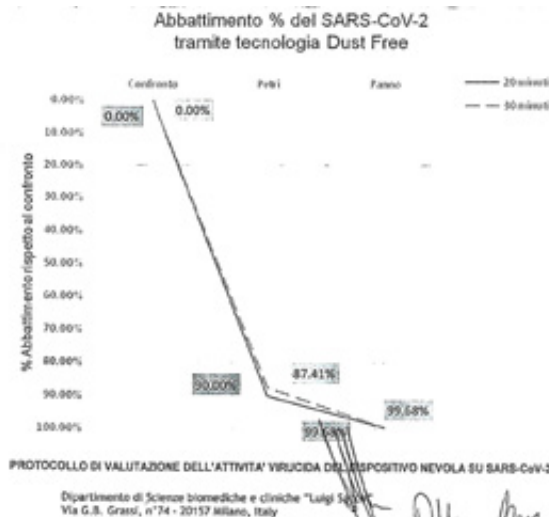
L'abbattimento verificato sul petri inoculato di SARS-CoV-2, esposto all'aria trattata per 20 minuti in un volume di 2,13 m<sup>3</sup>, ha mostrato una riduzione di 1.0 log (90.0%) maggiore rispetto al decadimento naturale del virus verificato nella prova di controllo, eseguita a pari condizioni, ma senza tecnologia Dust Free.

L'abbattimento verificato sul panno costituito per il 45% in polietere e 55% cellulosa, inoculato di SARS-CoV-2, esposto all'aria trattata per 20 minuti in un volume di 2,13 m<sup>3</sup>, ha mostrato invece una riduzione di 2.5 log (99.7%) maggiore rispetto al decadimento naturale del virus verificato nella prova di controllo, eseguita a pari condizioni, ma senza tecnologia Dust Free.

Il ventilatore impiegato ha portata d'aria pari a 35 mch.

### PROTOCOLLO DI VALUTAZIONE DELL'ATTIVITA' VIRUCIDA DEL DISPOSITIVO NEVOLA SU SARS-CoV-2

	NOME	FUNZIONE	FIRMA	DATA
Redatto da	David Mito	Principal Investigator		09/11/2020
Revisionato da	Luca Gatti	Committente (Air-Control Srl)		09/11/2020
	Luca Tabanelli	Produttore Nevola (Kemin Textile Srl)		09/11/2020
Approvato da	Maria Rita Giromondo	Supervisore		9/11/2020



### DECLARATION EFFECTIVENESS "DUST FREE TECHNOLOGY "

From the experimentation conducted within the Department of Biomedical and Clinical Sciences "Luigi Sacco" it is clear that the Dust-Free FC UNIT 3" technology has shown the ability to break down the viral load of SARS-CoV-2 inoculated in liquid phase both on a surface and on a tissue. The abatement verified on the inoculated petri dish of SARS-CoV-2, exposed to treated air for 20 minutes in a volume of 2.13 m<sup>3</sup>, showed a reduction of 1.0 log (90.0%) greater than the natural decay of the virus verified in the control test, performed under equal conditions, but without Dust Free technology. The abatement verified on the cloth consisting of 45% polyether and 55% cellulose, inoculated with SARS-CoV-2, exposed to the treated air for 20 minutes in a volume of 2.13 m<sup>3</sup>, showed a reduction of 2.5 log (99.7%) greater than the natural decay of the virus verified in the control test, performed under the same conditions, but without Dust Free technology. The fan used has an air flow rate of 35 mch.



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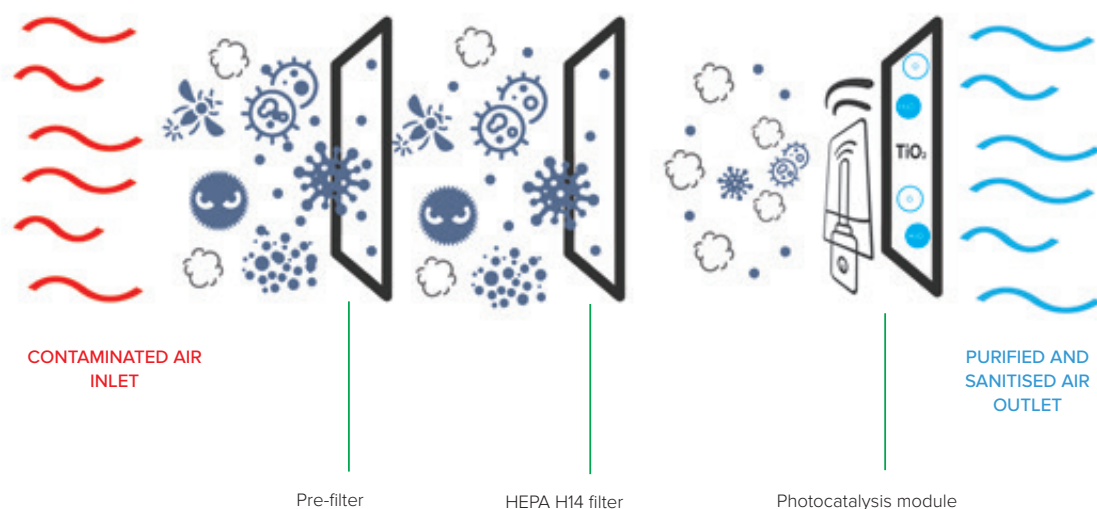
## DEPURO PRO **EVO** Air sanitisers and purifiers

The DEPURO PRO EVO Series is equipped with the technology able to kill COVID-19.

Both air purification and sanitisation, thanks to the certified technology of photocatalysis, are able to synergically act on pathogens such as viruses and bacteria by removing them, thus ensuring people's health and safety in closed environments.

PRODUCT	CODE	V~50/60Hz	W max	A max	RPM max	MAX FLOW RATE (m <sup>3</sup> /h)	SURFACES UP TO (m <sup>2</sup> )	Lp dB (A) 6m	TEMP. °C min/max	WEIGHT Kg
DEPURO PRO EVO 150	25089	220-240	34	0.40	3,980	300	50	41	-25/50	30
DEPURO PRO EVO 300	25090	220-240	78	0.70	3,600	600	100	44	-25/50	50

### Filtering and sanitising process





**STOP**  
COVID-19

**2 HEPA H14 FILTERS**, capable of retaining up to 99.995% of microparticles (equivalent diameter  $\leq 0.3\mu\text{m}$ ).

Panels with quick release closure devices, providing easy access to the filters.

Quiet operation, guaranteed by sound-absorbing sandwich panels.



Plug&Play.



**STOP**  
COVID-19

**Photocatalysis module**

Control panel for the adjustment of Depuro Pro Evo.



Equipped with Brushless motors.



Low consumption.



Power cable 3 metres long with Shuko plug.

Easily portable, thanks to 4 wheels for an easier movement of the product.





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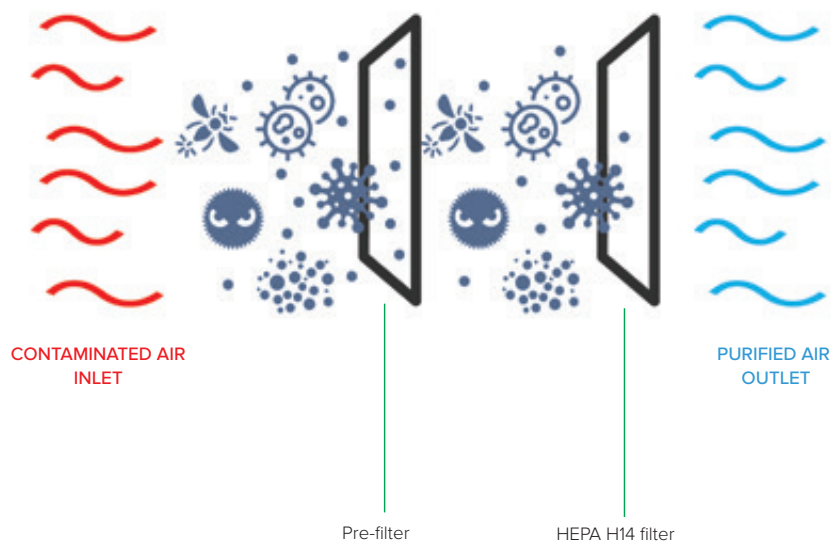


## DEPURO PRO Air purifiers

IT IS proven that fine dust and the droplets emitted when we sneeze and breathe are potential vectors for the spread of viruses, including COVID-19, in closed environments. The DEPURO PRO products, thanks to the action of the two HEPA H14 filters, are able to retain up to 99.995% of pollutants and to reduce the risk of pathogens such as COVID-19, viruses and bacteria.

PRODUCT	CODE	V~50/60Hz	W max	A max	RPM max	MAX FLOW RATE (m <sup>3</sup> /h)	SURFACES UP TO (m <sup>2</sup> )	Lp dB (A) 6m	TEMP. °C min/max	WEIGHT Kg
DEPURO PRO 150	25038	220-240	34	0.40	3,980	300	50	41	-25/50	30
DEPURO PRO 300	25039	220-240	78	0.70	3,600	600	100	44	-25/50	50

### Filtering process







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# SOME OF OUR APPLICATIONS

Health and sport facilities, places of worship and aggregation, schools, commercial, industrial and services sector.

Health



Sports



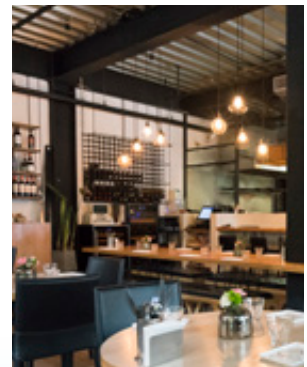
Worship



School



Commercial





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**DEPURO PRO**

Udinese Calcio 1896 DACIA Arena Stadium, locker rooms and entrance of the commercial area



DEPURO PRO

Udinese Calcio 1896 DACIA Arena Stadium, press room



DEPURO PRO

Udinese Calcio 1896 DACIA Arena Stadium, entrance of the commercial area





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**DEPURO PRO**

Hockey Club Ambrì Piotta Locker room - Switzerland



DEPURO PRO  
Hockey Club Lugano Locker room - Switzerland





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**DEPURO PRO**  
Professional practice - Barcelona - Spain



**DEPURO PRO**  
Business - Barcelona - Spain



**DEPURO PRO**  
School Kindergarden - Montagnola Lugano - Switzerland







**DEPURO PRO**  
NHS hospitals in Essex (UK)



**DEPURO PRO**  
Pharmacy - Bernasconi Bironico - Switzerland



**DEPURO PRO**  
Pharmacy - Barcelona - Spain





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# AN EFFECTIVE TECHNOLOGY AGAINST COVID-19



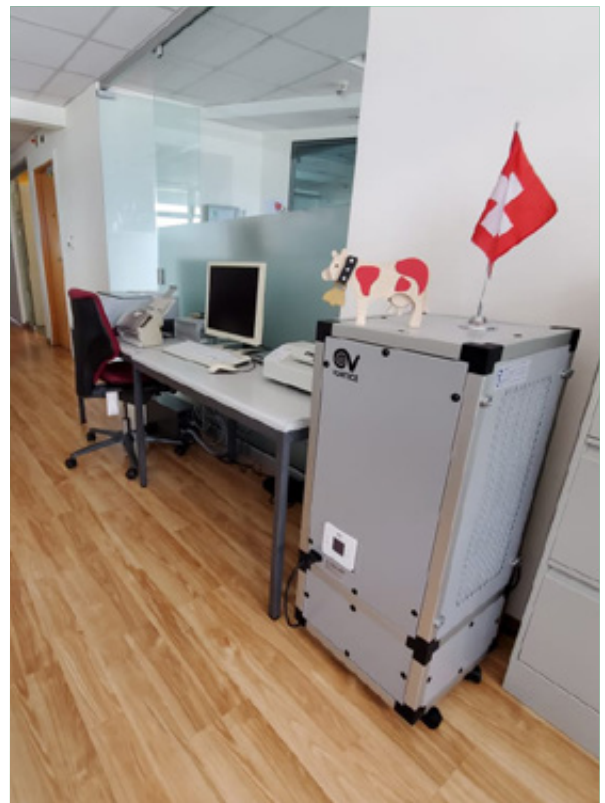
DEPURO PRO  
Fitness centre - Lugano - Switzerland



DEPURO PRO  
Business - Barcelona - Spain



DEPURO PRO  
Swiss Embassy - Costa Rica





**DEPURO PRO**  
Restaurant - Barcelona - Spain

**DEPURO PRO**  
School - Barcelona - Spain





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DEPURO PRO at ITIS ALESSANDRO VOLTA  
Institute of Higher Education - Lodi



DEPURO PRO  
School  
Tel Aviv - Israel

DEPURO PRO  
Church and oratory of Merlino - Lodi





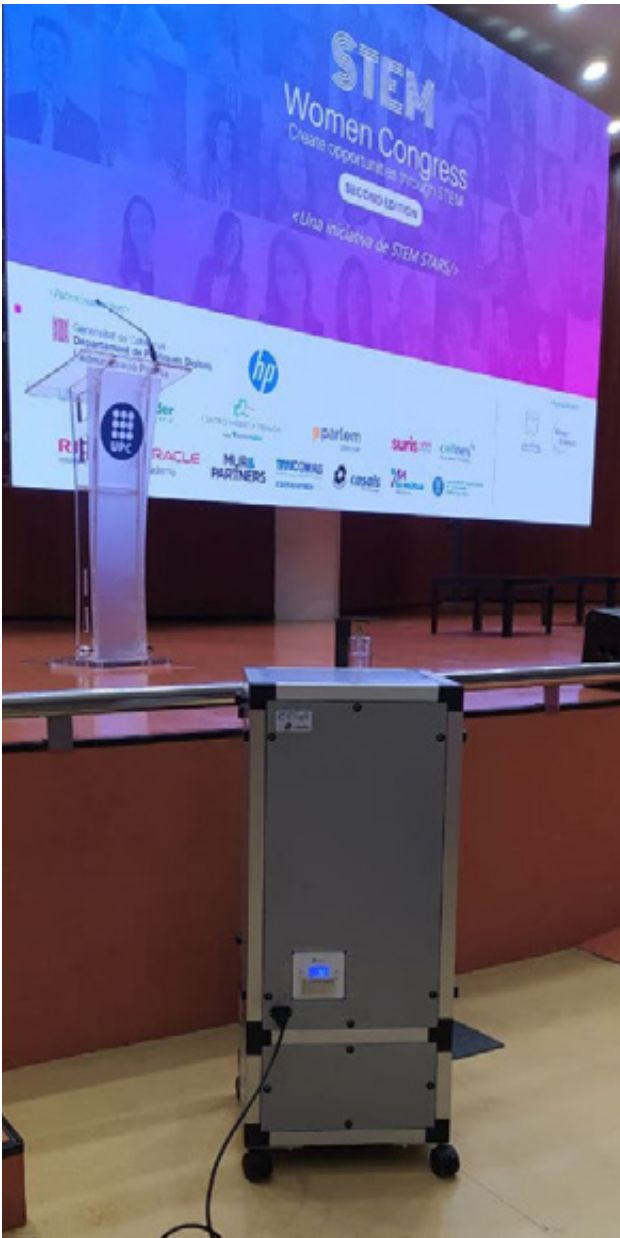
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# AN EFFECTIVE TECHNOLOGY AGAINST COVID-19



## DEPURO PRO EVO

Polytechnic University of Catalonia - Barcelona - Spain



**DEPURO PRO EVO**

CASALS Ventilación operational headquarters offices  
Sant Joan de les Abadeses (Girona) - Spain



**DEPURO PRO EVO**

Offices Thermador Groupe  
St-Quentin - France



**DEPURO PRO EVO**

VORTICE S.p.a. entrance and reception - Tribiano (MI)





vortice.com

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