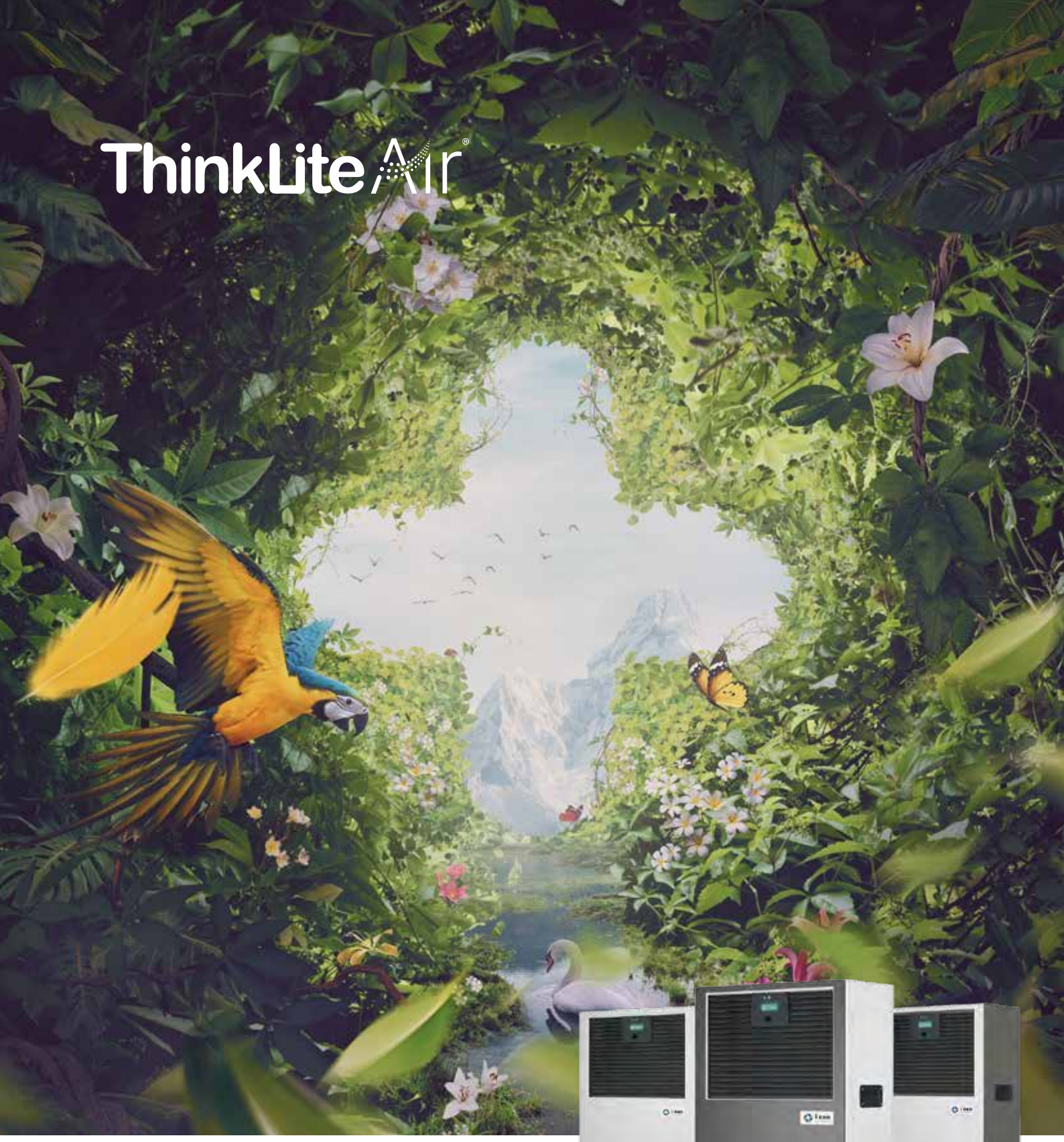
ThinkLiteAir®



The newest, most advanced technology in air purification. New World-Class Air Healer

ICON Pro Air Healer®

Professional solution for professional applications
Best for: fitness clubs, hospitals and clinics, offices and public buildings, K-12 and higher education schools, hotels and restaurants, and beyond.

Learn More at
www.ThinkLiteAir.com

We have become the indoor generation. We all spend over 90% of our time indoors, being exposed to air quality that is up to 10 times worse than the air outdoors.

Indoors, we are exposed to hundreds of different and dangerous contaminants :

Particulate matter (PM) of which 99% are invisible to naked eye. Commonly known as PM2.5 or PM10. It is a complex mixture of solid and liquid particles, suspended in the air. Those smaller than 1.0 microns are especially hazardous.

General source of PM pollutants: heavy industry, vehicle exhaust, products and materials we use every day are we are exposed to.

Volatile Organic Compounds (VOC) very complex group of gaseous contaminants, emitted from solids or liquids.

General source of VOC's is a wide variety of products we use, like: paints, cleaning detergents, building materials, cosmetic products, pesticides, and many, many more.

Microbiological contamination, mainly bacteria, viruses, molds, but also animal dander, saliva and many more...

They may come from many different sources, like: waste containers, pets, HVAC systems, kitchens, hazardous microbs in hospitals etc...

Some of the contaminants are highly poisonous, and some have even fatal impact on your life. All of them generate diseases with different symptoms, such as :

Brain
affects cognitive functions, kills creativity, causes headaches and migraines, memory impairments ...

Heart
arrythmia, increased risk of heart stroke, chronic heart disfunctions...

Lungs
asthma, respiratory tract irritation, dyspnea, lung cancer...

Liver
chronic liver disfunctions,

Kidneys
glomerulonephritis, general damage and disfunction...

Other
eye, nose and skin irritation, emesis, fatigue, dizziness, allergies...

Breathing clean and healthy air will significantly improve your health, well-being and productivity. To help you breathe healthier air, we have created the ICON Air Healer, a revolutionary new product class, with the most advanced FS-ACT® technology.

ICON Pro is the high capacity Air Healer designed to improve indoor air quality in commercial spaces up to 5,500 sqft or 140,000 cubic ft of air volume.

With its innovative FS-ACT technology, ICON Pro :

a. filters out all dust and particles (PM) to a MERV 19 level (highest rating achievable),
b. destroys all microbes, **including viruses**, with maximum germicidal UVC light and Advanced PCO technology,
c. safely neutralizes all VOCs in a photocatalytic oxidation chamber designed by a NASA Dual Use Technology Partner,
d. returns hospital-grade clean air to the interior environment

FS-ACT
full spectrum-
air cleaning technology

POWERED BY pureti™

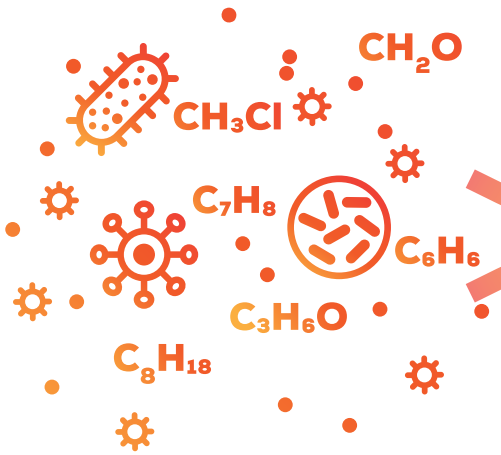
* -Smaller models will be launched soon.

This is how the FS-ACT technology purifies the air and can improve your health and standard of living.

Crystal clean and healed air, MERV 19 rated
– unbeatable standard for any stand-alone unit worldwide. ICON contamination reduction rate is difficult to match:

≥99.999% Particle Matter at ≥0.2µm
≥99.9999% microbes
≥97% VOC's

And all this at a high air flow rate, even above 600m³/h



A 3-step in air purification process

3 High grade HEPA filter

Collects even the smallest particles ≤0.2µm. It also collects the residue of the neutralized microbs. High capacity allows the filters to be used for a long time, up to two years.

Innovation

2 Patent Pending technology of Neutralization Chamber

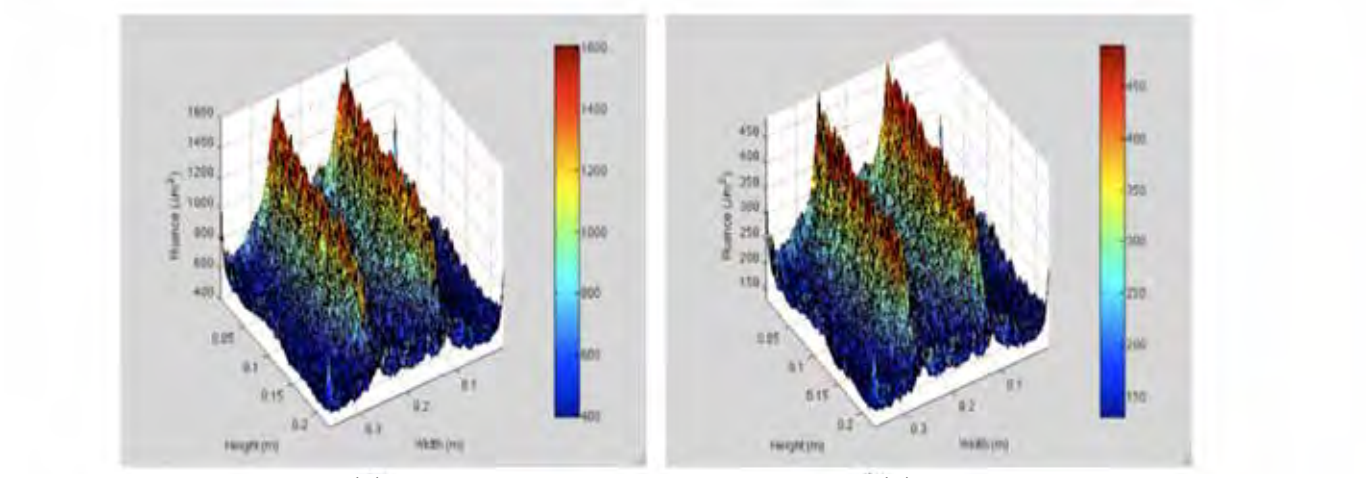
The ICON core - a total dust control, total germ kill, and self-cleaning, VOC oxidation chamber - achieves the highest air neutralization rates possible.

1 Prefilter with active carbon

Stops heavy dust and dirt and absorbs odors and bad smells.

FS-ACT is a highly sophisticated and advanced technology, developed during years of studies, computer modeling and testing processes during the prototyping phase. Extensive testing was done to achieve the unbeatable results in stand-alone, commercial units, for professional use in medium to large spaces up to 5,500 sqft or up to 140,000 cubic ft of air volume.

Numerous tests have been run in addition to computer fluence models at the University of Colorado (Boulder, USA), to prove the effectiveness of ICON's Neutralization Chamber.



(a) (b)

Microorganisms' fluence based on initial position for (a) isolation and (b) freestanding mode.

The above plots show that the microorganisms that enter the system in the corners associated with the end of the UVC lamps receive the least amount of fluence. In addition, it shows that those that enter in-line with the UVC lamps receive the most. The ICON system's fluence and effectiveness can be seen in Table 1.

Table. 1 ICON UVC & UVA system fluence and effectiveness in inactivating B. Subtilis and M parafortuitum.

				Effectivenes	
Operational mode	Flow rate		Fluence	B. subtilis	M.parafortuitum
	(CFM)		J/m²	(%)	(%)
Isolation	24	Minimum	400	›99.9999	›99.9999
		Median	658	›99.9999	›99.9999
		Meam	407	›99.9999	›99.9999
		Maximum	1601	›99.9999	›99.9999
Freestanding	75	Minimum	130	›99.9999	›99.9999
		Median	212	›99.9999	›99.9999
		Meam	225	›99.9999	›99.9999
		Maximum	488	›99.9999	›99.9999

The ICON system's predicted mean inactivation effectiveness was modeled to be over 99.9999% for both B. subtilis and M. parafortuitum for both isolation and freestanding operational modes.

ICON's Neutralization Chamber destroys all microbiological contaminants at an unbeatable rate of 99.9999%, including viruses!

Full scope of ICON performance evaluation research was performed in July and August 2020, at Lublin University of Technology, Department of Indoor and Outdoor Air Quality, (Lublin, Poland).

Research Conclusions (excerpts):

- The air purifier achieved 100% efficiency in reducing mesophilic and psychrophilic bacteria, in 90 minutes and 120 minutes, respectively.
- Under real conditions, fungi aerosol removal reached 93%
- No strains of bacteria were found in the ICON air outlet, in test chamber.
- The air purifier effectively (>99.9%) removes fine dust particles from the air.
- In the air outlet of ICON, the tested PM fraction was below the measuring range of a particle counter.
- The tested air purifier is NOT the source of Ozone for indoor air.
- The air purifier does not ionize the air during the operation.

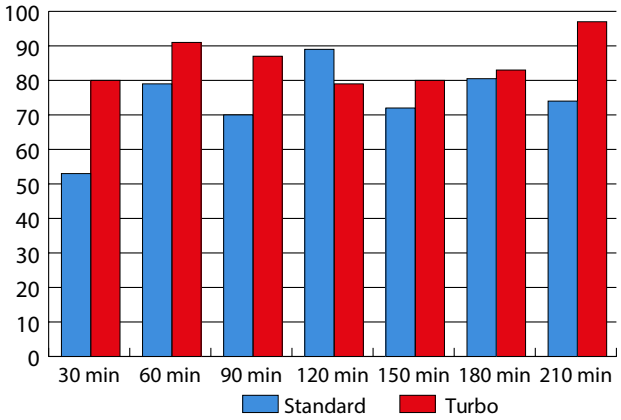


Fig. 1.Fungi removal, Room 1

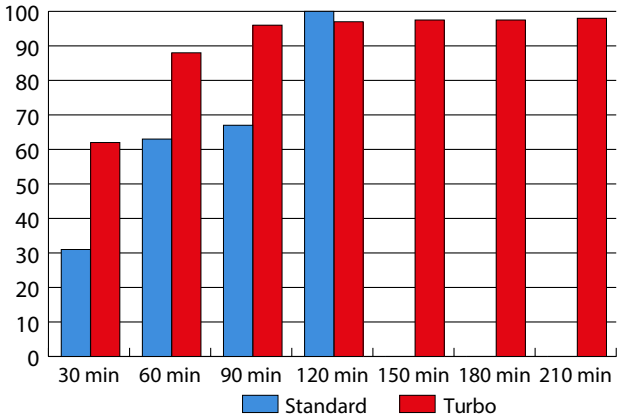


Fig. 2. Mesophilic bacteria removal, Room 1

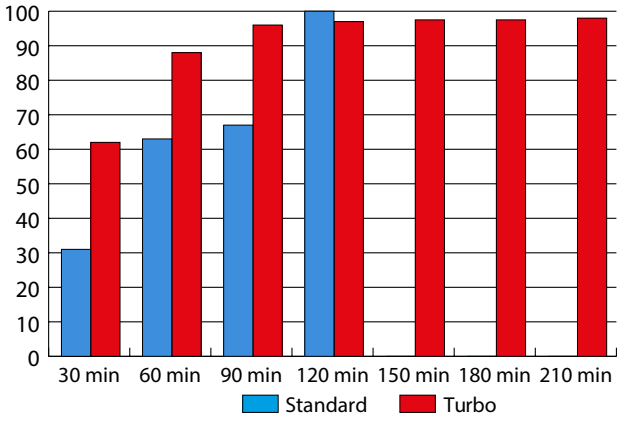


Fig. 3. Psychrophilic bacteria removal, Room 1

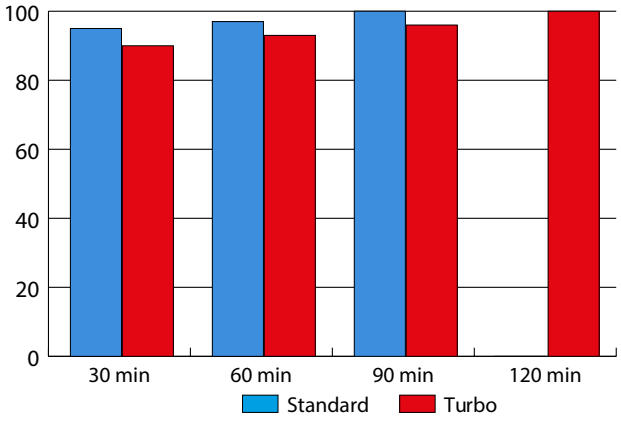


Fig. 4. Test chamber, *M.luteus removal*

Full scope of ICON performance evaluation research, performed in July and August 2020, at Lublin University of Technology, Department of Indoor and Outdoor Air Quality, (Lublin, Poland).

Microbial decontamination test results, continued:

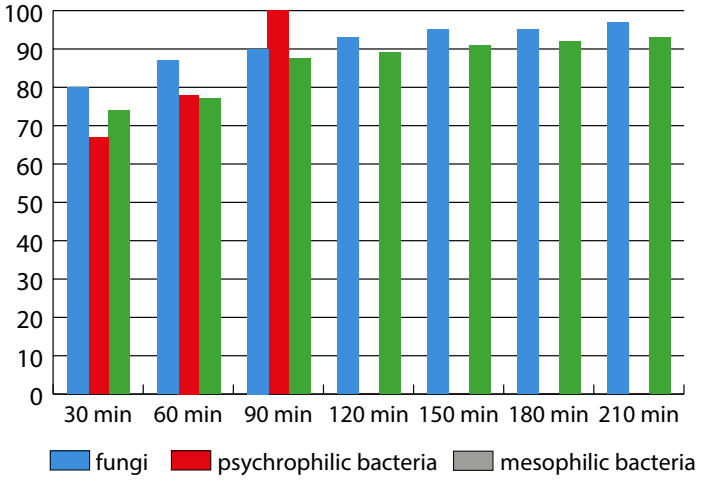


Fig. 5. Room 2, changes in bioaerosol concentration

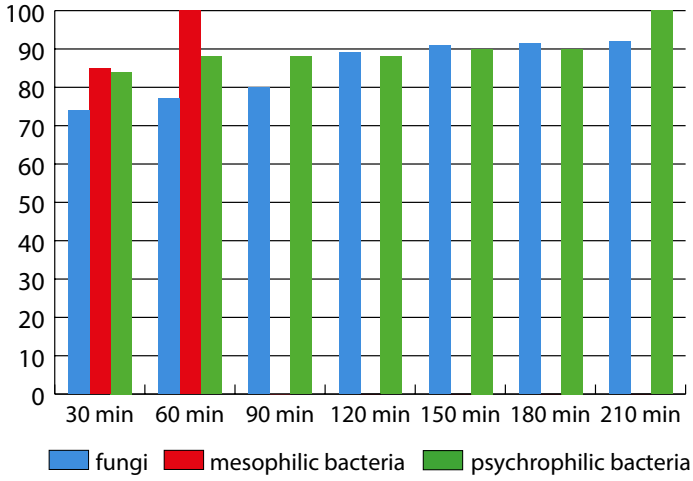


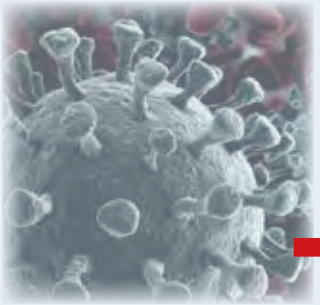
Fig. 6. Room 3, changes in bioaerosol concentration

"No strains of bacteria were found in the ICON air outlet..."

ICON Pro is highly effective in microbial decontamination, and by far exceeds American FDA recommendations for air purifiers.

(FDA COVID-19 Sterilizers, Disinfectants, Purifiers Guidance, March 2020)

SARS-CoV-2 is one of RNA coronaviruses enveloped in lipid bilayer...and is one of the least resistant microorganisms.



Most Resistant

Least Resistant

- Bacterial Spores
- Mycobacteria
- Nonlipid or Small Viruses
- Fungi
- Vegetative Bacteria
- Lipid or Medium-Size Viruses

Modified from Favero. M.S. and Bound, W.W., Chemical Disinfection of Medical and Surgical Materials. In Disinfection, Sterilization and Preservation, 5th Ed Phila: Lippincott Williams & Wilkins 2001: 881-917.

ICON Pro by far exceeds FDA recommendation of demonstration of 4log reduction (through the combination of capture and/or destruction)

"Air pollution makes you more likely to contract and die from COVID-19"

- Recent Georgia State study has shown that exposure to air pollution may influence the severity of Coronavirus.
- Researchers compared data from the US Environmental Protection Agency and the COVID-19 mortality data collated from Johns Hopkins University.
- They found a small decrease of one microgram of particulate matter per cubic meter of air reduces the number of deaths by 3 to 5%.
- It also reduces the number of newly confirmed COVID-19 cases by 2%.

"In the air outlet of ICON, the tested PM fraction was below the measuring range of a particle counter" (conclusions of test research of Lublin University of Technology, Lublin, Poland) – ICON is extremely effective in PM reduction of the indoor air.

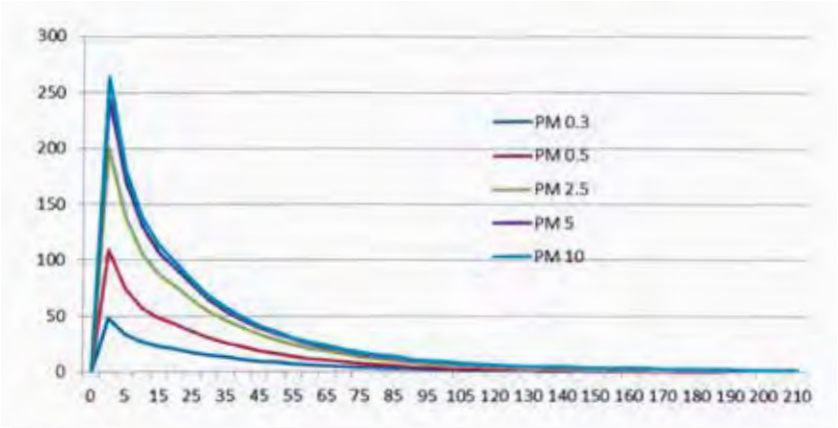


Fig. 7.
PM concetration in Room 1
(Standard) [µg/m³]

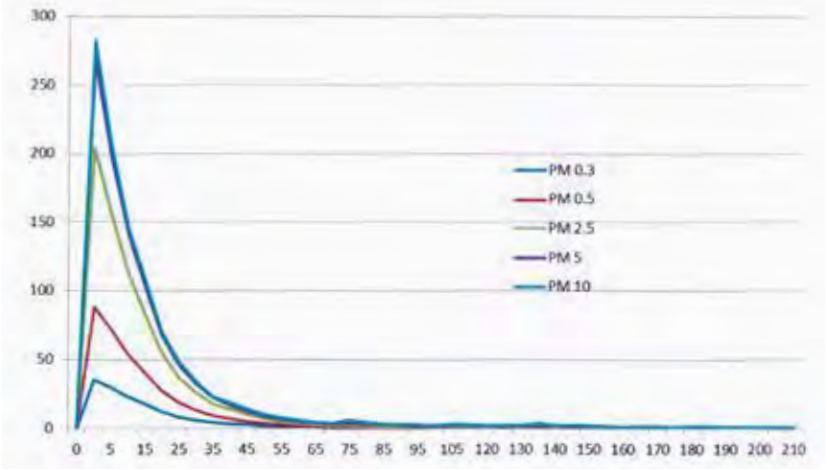


Fig. 9.
PM concetration in Room 1
Turbo [µg/m³]

ICON Pro reduced the most deadly PM fraction -0,3µm, from 35,53µg/m³ to below 1,00µg/m³ in just 60 minutes!
(test results, Room 1, Turbo mode)

The COVID-19 pandemic has increased the world's use of disinfectants (mainly alcohol based), every day. Despite the good side – killing harmful microbes – this also delivers more deadly VOCs to our indoor air.

ICON Pro will help reduce VOC level when used indoors.

ICON's Neutralization Chamber was recently tested for VOC reduction performance in Sun Katalyst Laboratories (Prague, Czech Rep).

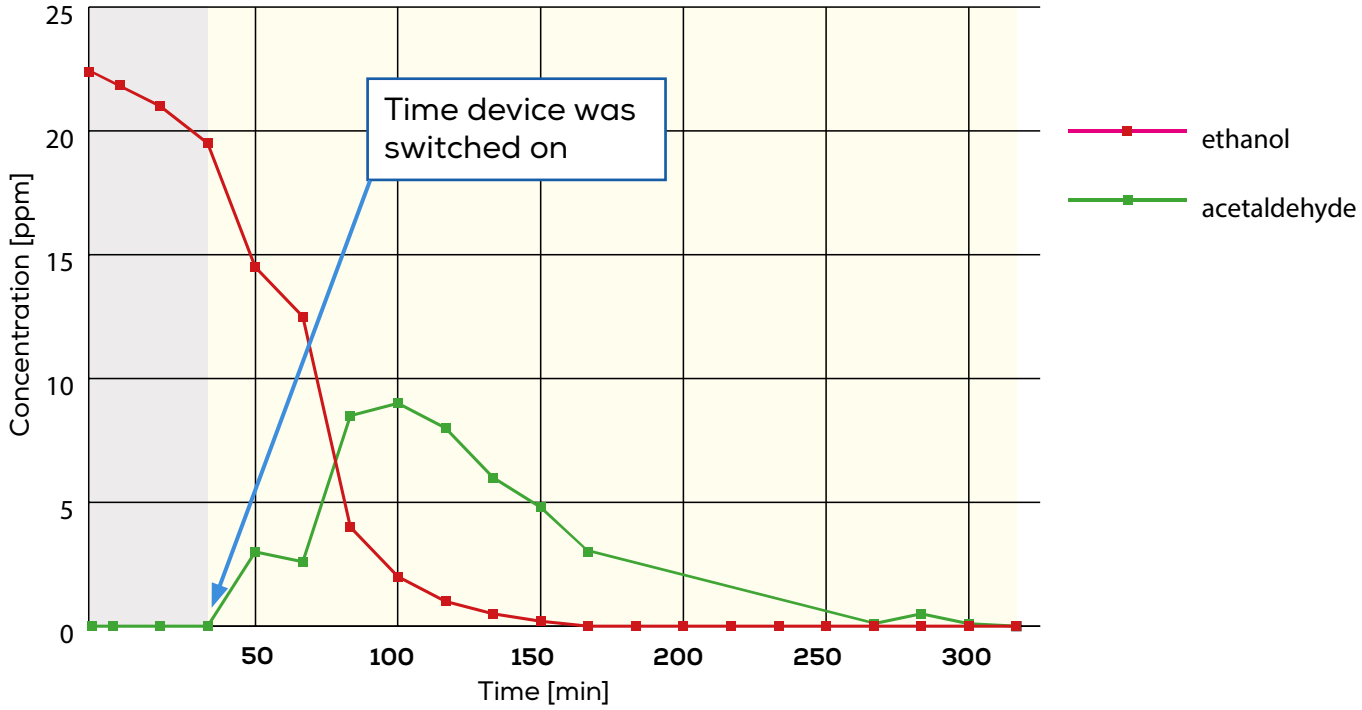


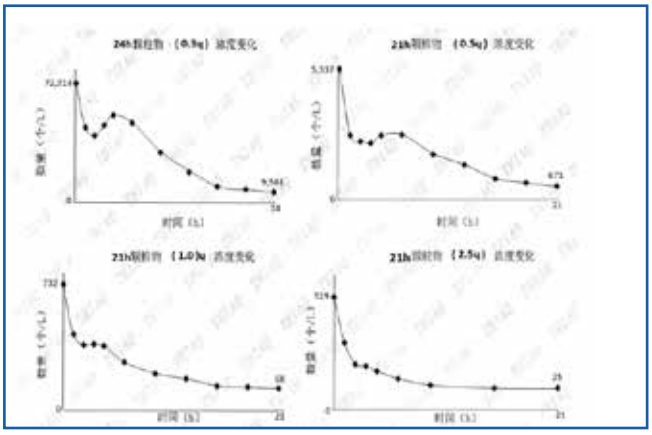
Fig. 10. Graph of concentration of two VOCs against time. The grey area refers to time before the device was switched on and the golden area refers to time after the air purifier was switched on.

Test conclusions:

"The air purifying unit was tested and it removed >99% of all VOCs ..." said Dr. David Hazafy.

ICON is highly effective in airborne particulate reduction, it removes even the smallest particles <0,2µ. The performance of the ICON has been tested in numerous locations.

PM reduction tests were performed at Tsinghua University in Beijing, China, a city with one of the highest air contamination levels in the world.

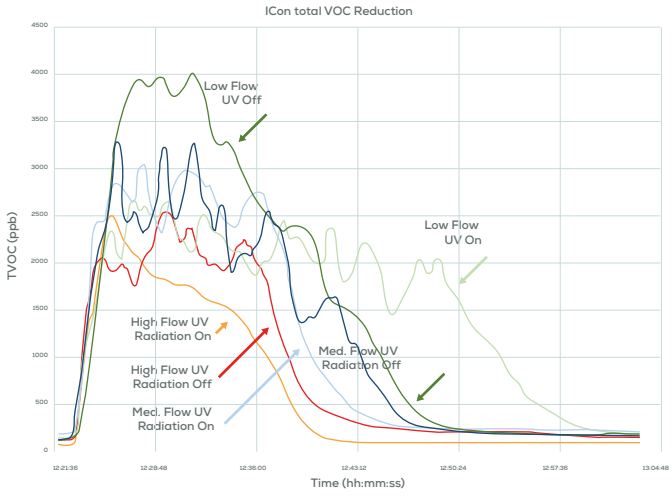


High efficiency of ICON's PM reduction was proven during the test protocol in test chamber:

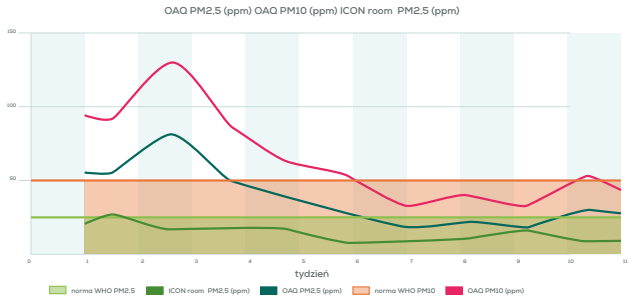
After 21 hours, following PM reduction level has been recorded :
>91% PM ≥0,2µ
>94% PM ≥0,5µ
>95% PM ≥1,0µ
>96% PM ≥2,5µ

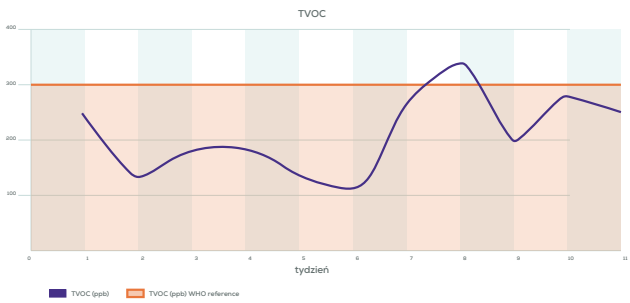
Number of particles of ≥0,2µm in ICON output air = 0,0ppm

ICON is highly effective in VOC and PM reduction, as proven in a laboratory and real life testing.



Intensive and long term tests of Neutralization Chamber VOC reduction have proven ICON to be very effective, especially on higher working modes.

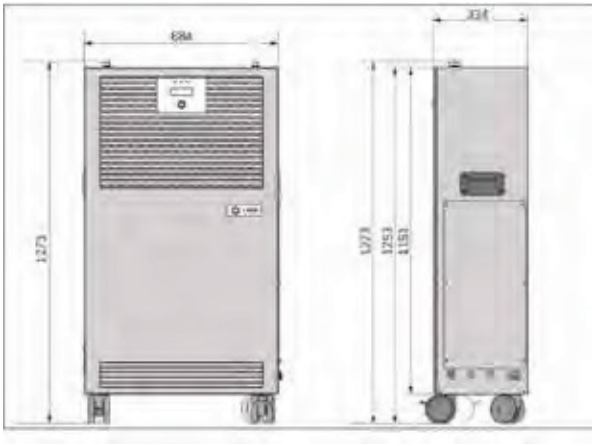




ICON was tested outside of the laboratory for 11 weeks in a 330m2 office in Krakow, Poland, to measure the PM and VOC levels in the space. The results showed ICON's high efficiency and yielded constant healthy indoor air quality levels for both for PM and VOCs, with the recorded VOC levels always registering below the norm of 25ppm, and TVOC level always falling below the normal reference level of 300ppb.

ThinkLite Air's ICON Pro Air Healer is a professional unit for use in commercial spaces. Each unit handles over 140,000 cubic feet of air volume.

Basic data and technical specification:



ICON Pro is available in:

- Body and front - white RAL 9003

General specifications	
Power requirement	110/230V 50/60Hz
Energy Consumption, 4 fan speeds	LOW 203W, MEDIUM 210W, HIGH 236W, MAX 250W
Dimensions (without/with packaging)	1273x684x334 mm 1328x794x444 mm
Weight (without/with packaging)	72/80kg
Fan motor	AC 230V (EU version), AC 115V (US version), long lifespan, non-stop use OK
Control Panel	20 character, 4-line LCD display encoder
Air output (Low-Max)	200-600m³/h
Housing material	Metal
Color of main housing/ locking arms	RAL7042/RAL7016
Noise Level, 4 fan speeds	LOW 32dB, MEDIUM 52dB, HIGH 56 db, MAX 61dB
Performance	
EN 1822 filter classification	HEPA H14 ≥99,999%
Main HEPA filter life	Recommended main filter replacement every 12 months, with 24/7 operation. In low PM pollution up to 24 months
PM particle filtration at ≥0,2µ (H14)	≥99,999%
VOC reduction (TVOC)	≥95-97%
Microbiological contamination reduction level	≥99,9999%
Output air quality, MERV standard	MERV 19
Other features	
Recommended room area	3,000-5,500 sqft, depending on air contamination level
Max room volume	Up to 140,000 cubic ft
Neutralization chamber	Self-cleaning, long life, maintenance free 48 months (standard working mode, no boost function used, On UV-ECO Mode)
Display languages	English
Fan speed settings	4
Control via local LAN	Yes, dedicated website
UV lamps life status	Real Time control
Working modes	Manual/Automatic
Dust level, output air	Yes, LCD display
VOC level, output air	Yes, LCD display
Boost function	Extra neutralization power, highest VOC and microbes reduction level
Electrical safety	CE, EMC certification

POWERED BY pureti™

ICON Pro was developed by professionals for professionals. It will bring exceptional results when used in medium to large spaces of up to 5,500 sqft, in various applications*.

IAQ problems and challenges	Improvements with the ICON Pro
Fitness Clubs, sport venues	
•Large number of customers at a time in relatively small spaces. •High level of microbiological contamination – users breathe out a lot of "dirty" air, the sweat gets decomposed •High VOC level, due to chemicals and sanitizers used, •Typical fitness club smell •People expect high standards	•Effective neutralization and decontamination of microbiological contamination •Effective VOC reduction and ionization of indoor air •Healthy air to get healthy •Comfort and safety to all users and personnel •Unpleasant smell elimination •Higher standard = higher profits •Clean and Healthy air as a competitive advantage
Office rooms, open space	
•Long hours spent indoors by users in a closed space •Users' activities create contamination, they bring contaminants from outside •People as a source of harmful pathogens •A lot of cleaning chemicals used, air fresheners as a source of heavy VOC contamination •Office equipment creates additional contamination – dust, VOC's •High absenteeism rate due to bad IAQ •Low efficiency and productivity due to poor IAQ	•Clean and Healthy air results in happy users •Higher efficiency and productivity •Lower absenteeism rate •Higher office building rating due to healthy air (MERV 19) •Clean and healthy air as a major advantage in Well & Healthy Building Rating •Nasty odor elimination •Clean air as market competitive advantage
Hospitals and clinics	
•High number of patients with health issues in small spaces of waiting rooms •Patients as a source of harmful pathogens – high concentration – high risk of cross contamination •High VOC level due to use of cleaning and disinfection chemicals •Dangerous working place for personnel due to high air contamination	•Cross contamination risk reduction – safer place to visit and work •VOC reduction – safer place to work, higher productivity •Patients are not exposed to harmful pathogens •Lower personnel absenteeism rate •Increased working place comfort •Safe and healthy environment= higher profits
Education- schools, universities, kindergartens	
•Large numbers of people together in relatively small rooms for long hours resulting in high concentration of different contaminants. •Lower hygiene awareness of kids and young people which results in higher air contamination •High contamination levels affect cognitive functions, creativity, test scores and ability to focus •Use of cleaning chemicals create high VOC levels •Most schools are in old buildings with low quality ventilation, which results in additional contamination.	•Clean and healthy indoor air as the market advantage. Be different, be better. •Lower absence rate due to sickness for students and staff •Cross contamination risk reduction •Safer work place, better learning environment •Distracting and unpleasant odor reduction •Clean and healthy indoor air as an important Well&Healthy standard point
Hotels, Restaurants	
•Staff and guests spend long hours indoors, resulting in higher air contamination •High use of cleaning chemicals, kitchen exhausts, other agents - resulting in higher contamination level •Frequently used air fresheners create a high VOC level of contamination, up to dangerous levels •There is a high risk of microbiological contamination where people spend more time indoors	•Clean and healthy indoor air as a market advantage. •Higher customer comfort results in higher customer satisfaction •Healthy air restaurants attract more customers •Cross contamination risk reduction •Safer and better work environment for staff •Reduction of strong smells •Clean and Healthy indoor air as an important Well&Healthy standard point

*the maximum room space that the ICON Pro can solve the air pollution in depends on room layout and room height in addition to air pollution levels. You may have to use more than one unit.

Should you require more information and/or support on how to improve the Indoor Air Quality in your building, please contact us at air@thinklite.com

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