



UV-C AIR STERILISATION TECHNOLOGY



ILIMEX AIR PURIFICATION AND STERILISATION

Ilimex Ltd. uses a combination of sterilisation technologies to continuously eliminate >99.9% of airborne pathogens on the first pass through the Ilimex air sterilising unit.

The technologies involved are:

- Wide band extra long-life UV sources including high efficiency LEDs to reduce operating cost
- Titanium Dioxide Photocatalytic Filtration
- Silver-ion doped HEPA 13 filtering to PM1 (antibacterial filter)
- Activated Carbon



Ilimex air purifiers uniquely kill Viruses and Bacteria on the first pass along with improving air quality by removing pollutants and health hazards such as:

- VOCs
- Formaldehydes
- Benzene
- Nitrogen Dioxide
- Mold spores
- Smoke and Particulate matter
- Pollen and Allergens
- Pollutants
- Dust etc

No harmful Ozone is produced by the air sterilisation process.

Uniquely Ilimex air sterilisers do not rely on filters to kill Viruses and Bacteria. This is done in our proprietary kill chamber by our wide band UV and Photocatalytic reaction. Therefore, the size and type of Virus or Bacteria is irrelevant. We kill them all quickly and on the first pass.

WHY ILMEX?

Ilimex air sterilizers are one of the few low maintenance products of this type on the market with the UV source lasting 60,000hrs negating the need for annual changes of lamps.

Ilimex Air Sterilising units ensure 5 air changes in a room per hour, this is above what most other similar products are capable of achieving. Ilimex Air Sterilisation complements existing air conditioning systems to ensure your buildings are protected from Sick Building Syndrome and all airborne pathogens giving the best possible ambient air quality.

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Ilimex air sterilising units are available in 4 models, the Ilimex 200, Ilimex 300, Ilimex 400 and the Ilimex 70.

The Ilimex 200 model is sufficient for small office space or toilets. The Ilimex 300 is ideal for a small open plan office space and the Ilimex 400 is perfectly suited to larger office spaces or classrooms in schools or lecture theatres in universities. For bigger areas, several units can be installed.

The Ilimex 70 is a compact easy to retrofit unit designed for cafes, restaurants, retail shops, small rooms (toilets etc.) that can be instantly installed using its lighting track adapter or surface connector.

We have also provided an App for the commissioning of the Ilimex air sterilisation unit. This App will also monitor the health of the unit and inform you when components require replacing.

We have a team of trained installers available nationwide, simply contact us using the contact details at the end of the brochure for details of trained installers in your area.



ILIMEX ADVANTAGES

SAPT (Single Air Pass Technology)

Incredible efficiency allows for Viruses and Bacteria to be killed instantly on the first pass. Unlike other systems that take hours or even days.

IoT Enabled

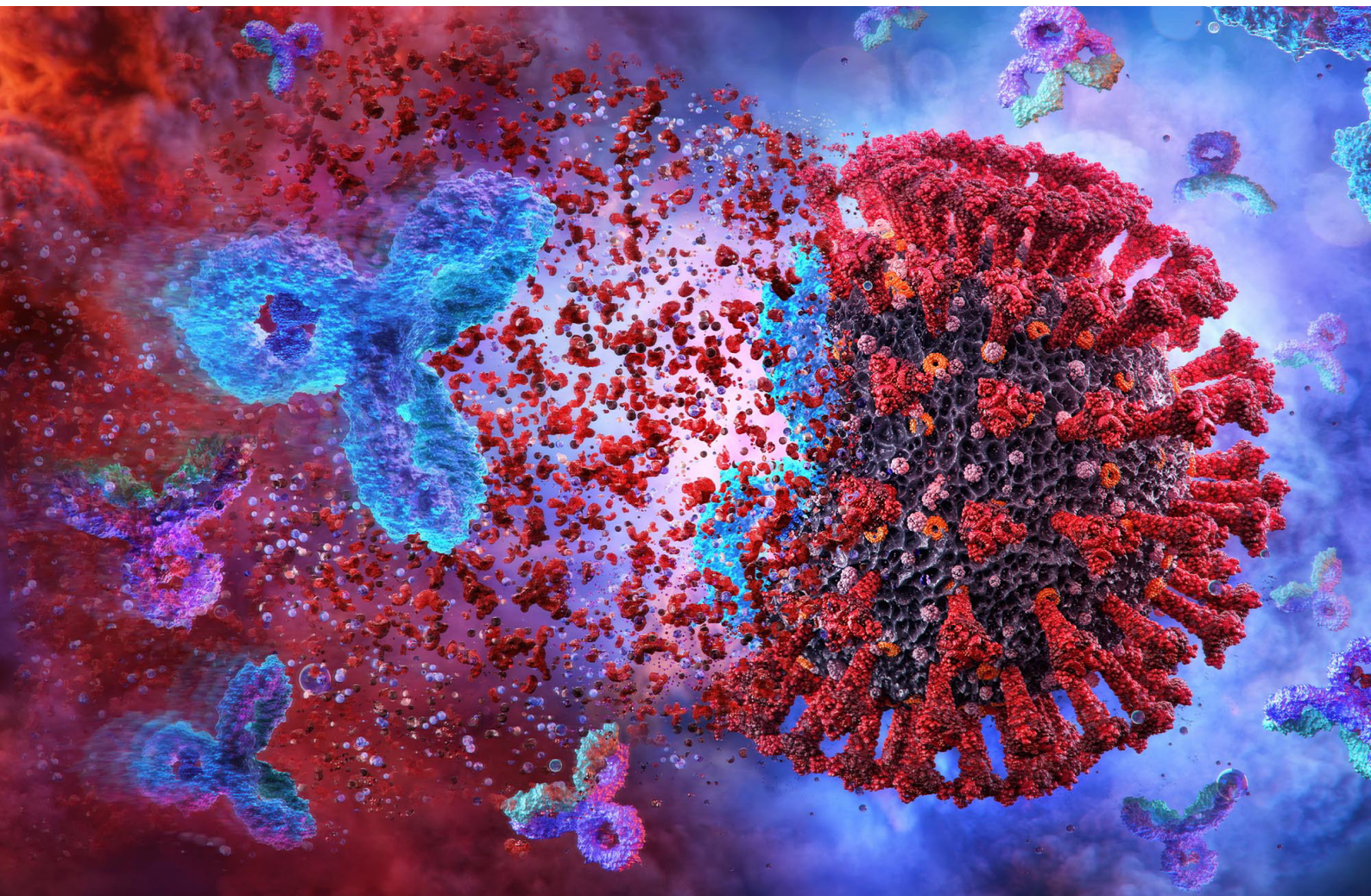
Peace of mind and ease of use guaranteed with IoT remote control and monitoring of our units and automatic fault alerting.

Low Running Costs

Proprietary ultra-efficient kill chamber uses multiple technologies to kill airborne pathogens quickly with unrivaled lifetime.

Ease of Use and Comfort

Plug and Play, No specialized installation. Complements existing air handling and conditioning. Low noise for large air volume handling.



THE PROBLEM WITH COVID-19

William Wells a scientist who studied tuberculosis transmission in the 1930s stated that when you exhale, sneeze, or cough, you release a cloud of gas and liquid droplets.

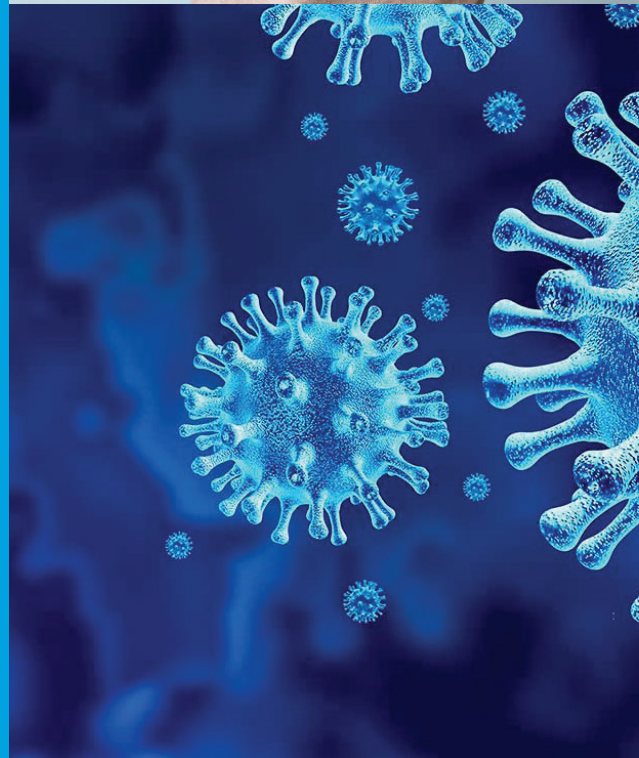
The heavier droplets will fall to the ground as raindrops do. If there are germs in that droplet, they can alight onto surfaces where they can be transmitted to people who unwittingly put their hand on the surface.

This view is now considered outdated and the actual picture is a lot more complicated. We are all always exhaling a gas cloud that contains within it a spectrum of droplet sizes. If propelled by a cough or a sneeze, droplets can travel upward of twenty feet.

There is now growing theoretical evidence for the airborne spread of the coronavirus. Lab studies, in idealized conditions, also show that the **virus can live in an aerosolized form for up to 16 hours** (the scientists in this case intentionally created aerosolized droplets with a machine).

Another study tracked with lasers the various droplets expelled from a human mouth during speech. It found “normal speech generates airborne droplets that can remain suspended for tens of minutes or longer and are eminently capable of transmitting disease in confined spaces.”

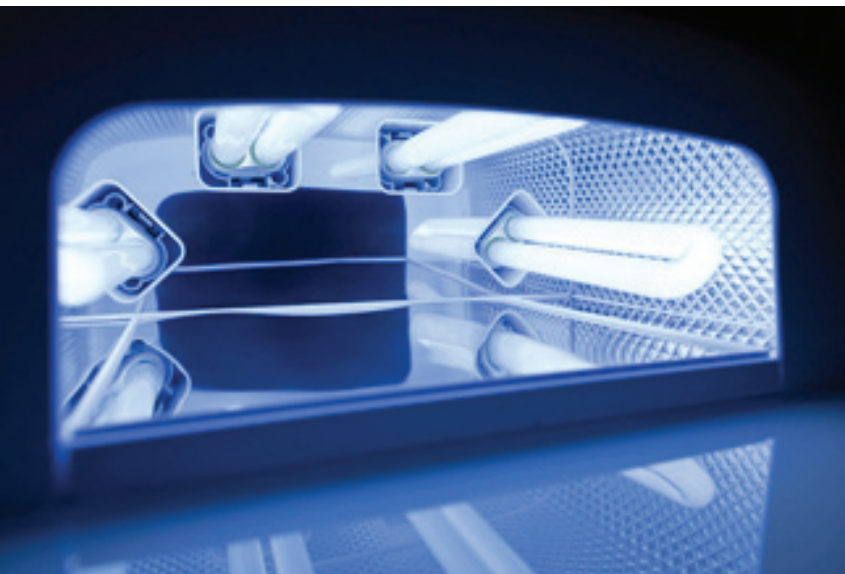
Initially it was believed that the big drops fall on surfaces, and those surfaces can become contaminated too. Luckily, in the case of Covid-19, there is a growing consensus that getting sick from touching contaminated surfaces is quite rare. What has been shown in studies is that 80% of infection has been transmitted through the air.



THE SOLUTION

Ilimex have combined several technologies to create an air sterilizing unit that kills viruses, bacteria etc. instantly and continuously. It includes UV lamps, HEPA filters, Activated Carbon and Titanium dioxide photocatalytic filters.

It works by drawing air from a space into the unit and through an activated carbon pre-filter, the pre-filter will remove most of the larger dust, hair, PM10 and pollen particles from the air. The second stage high-quality HEPA filter removes the finer particles that escape from the pre-filter. The remaining pathogens present in the air will then pass through the UVC kill chamber which kills them instantly on the first pass.



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has shown that the
UVC kill chamber alone
kills >99.9%***

see Efficacy and University Results

Independent testing has shown that the UVC kill chamber alone kills >99.9% (see Efficacy and University Results), this combined with the other sterilisation technologies produces a kill rate far greater than other products available on the market. Once the air has passed through the UVC kill chamber it is returned to the space with pathogens removed. This process allows for the air in any given space to be sterilised 5 times an hour with an appropriately sized Ilimex air sterilisation unit.

Efficacy and University Results

The air sterilising unit was submitted for testing to Ulster University earlier this year. Bacteriophage MS2 was used as a viral surrogate to assess the efficacy of the air sterilising unit, the results of the testing were then used to extrapolate a kill rate for the Covid-19 Coronavirus.

MS2 is considered a very robust challenge organism requiring a high UVC dose to cause inactivation as it is commonly held to require 7-10 times greater UVC dose than Coronavirus.

The results of the testing provide confidence that a >3log (>99.9%) reduction of coronavirus is attainable with the underpinning Ilimex technology.

APPLICATIONS

Schools and Universities

Hospitality:

- Hotels
- Restaurants
- Pubs
- Takeaways
- Coffee Shops

Industrial:

- Warehouses
- Factories

Commercial:

- Office Blocks
- Retailers
- Salons
- Barbers
- Bookmakers

Transportation:

- Trains
- Buses

Health Care Facilities:

- Clinics
- Surgeries
- Pharmacies

Nursing Homes



EASE OF USE

The installation of Ilimex Air purifiers and sterilisers could not be easier. All models just simply plug in and are ready for use. Each unit comes IoT enabled and can be monitored and controlled remotely via our proprietary App.

Customers can create their own account and each uniquely identified unit can be controlled remotely. In addition, each unit monitors several metrics and will alert you to any faults or if the machine needs any maintenance.

The Ilimex air units can be wall hung, ceiling hung or free standing with an adapter base plate and just needs to be plugged in to commence operation.

Options

1. Adapter base plate for free standing unit.
2. Inline conversion kit to work with existing vent systems.
3. Extra-long IEC power lead.
4. Ceiling mount plate for Ilimex Ret-Can unit.





PRODUCTS

Ilimex 200

The Ilimex 200 in
BHC Distributors office



Ilimex 300

The Ilimex 300 situated at the
Reception in the Salhouse Hotel.



Ilimex 400

The Ilimex 400 mounted
in an office space.



Ilimex 70

Coming soon the Ilimex 70

UNIT SIZING

Sizing a Unit for your Requirements

Product Name	Power (W)	Airflow (m ³ /h)	Noise (dB)**	Room Size (m ²)*	Typical Example
Ilimex 200	195	180	31	14.4	Dental Surgery
Ilimex 300	325	450	38	36	Open Plan Office
Ilimex 400	465	750	45	60	Large Classroom
Ilimex 70	57	100	30	9	Table for 4 in a Café or Restaurant

**Assumes Ceiling Height of 2.5m.*

***30dB is approximate to a quiet library / 40dB is approximate to a quiet office.*

Calculation to Size a Unit for your Premises

The calculation and the figures in the table above are based on 5 air changes per hour.

Example: A room with dimensions: H: 2.5m; L: 6m W: 4m

$2.5 \times 6 \times 4 = 60\text{m}^3$ Room Size (*5 Air Changes/hr.) = $300\text{m}^3/\text{hr.}$ Airflow

From the table above, a room that size would require the Ilimex 300.

CASE STUDY

Salthouse Case Study



The Salthouse Hotel is a luxury eco hotel situated in the county Antrim countryside overlooking Ballycastle and the Antrim coastline. The Salthouse has purchased a number of our Ilimex 200 and 300 units and placed them around the hotel for the safety and benefit of both their staff and visiting guests.

Carl McGarrity, operator of the hotel stated that “the purpose of these air sterilising units is to make our staff and guests feel comfortable to be here. We’re a carbon neutral venue, so we’re very conscious of having a clean safe environment for staff and guests alike.”

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To find a local Installer please contact us.



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