ILIMEX

UV-C AIR STERILISATION TECHNOLOGY

ILIMEX AIR PURIFICATION AND STERILISATION

Ilimex Ltd. uses a combination of sterilisation technologies to continuously eliminate >99.9999% 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
- Anti-Bacterial filter (Silver-ion doped HEPA 13 filtering to PM1)
- Activated Carbon

Ilimex air sanitisers 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
- Viruses

No harmful Ozone is produced by the air sterilisation process, tested and verified by Ulster University.

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 ILIMEX?

Ilimex air sanitisers are one of the few low maintenance products of this type on the market with the UV source lasting 60,000 hours 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.

Ilimex air sterilising units are available in 4 models,the Ilimex 70, the Ilimex 200, Ilimex 300, Ilimex 400. All models cater for different room sizes.

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 adaptor or surface connector.

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.

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.

If you require the unit to be wall or ceiling-mounted, we have a team of experienced installers available nationwide, simply contact us for details of experienced installers near your location.

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**

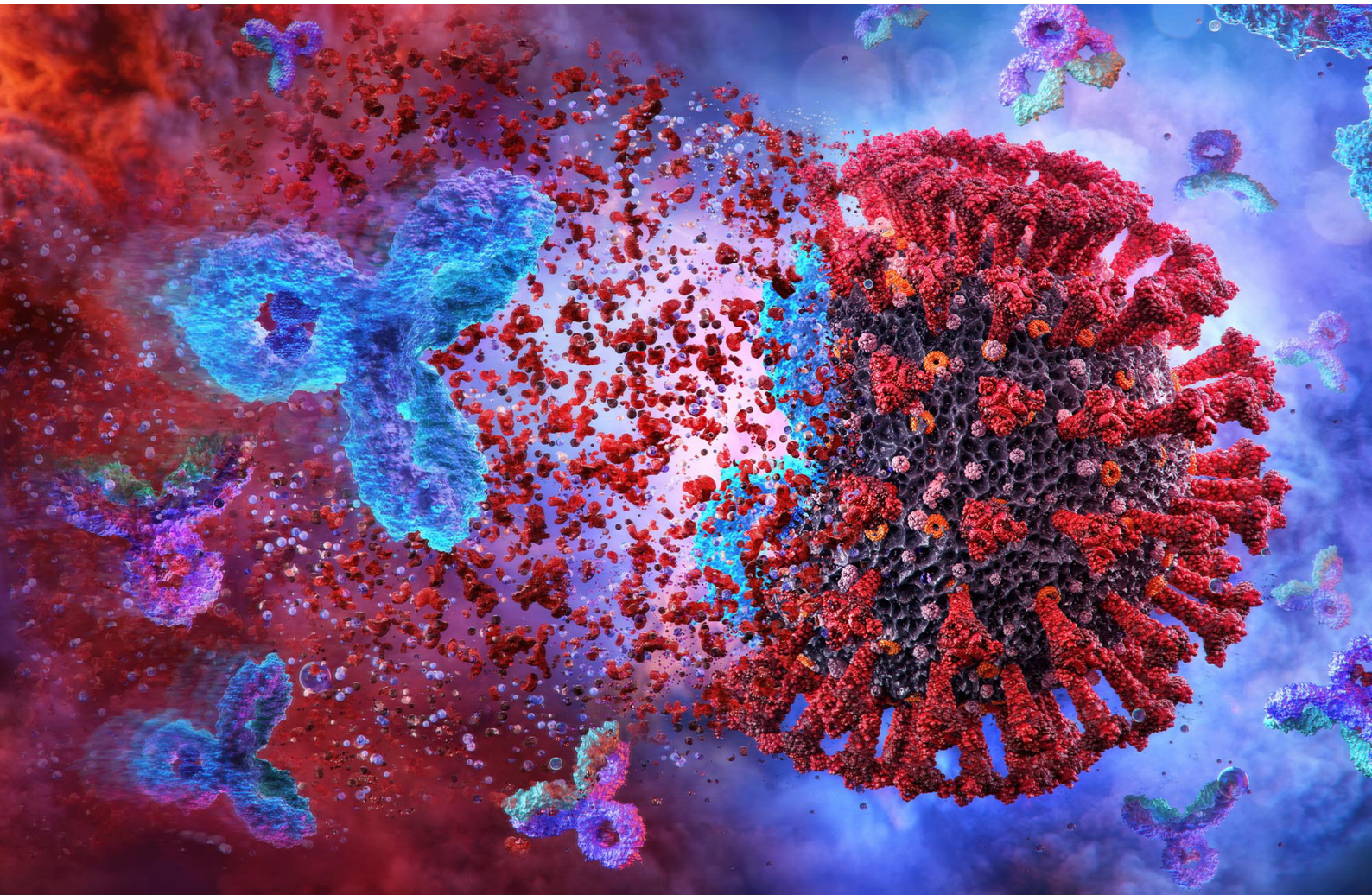
  Peace of mind and ease of use guaranteed with IoT remote control and monitoring of our units and automatic fault alerting.

- **Low Running Costs**

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

- **Ease of Use and Comfort**

  Plug and Play, No specialised installation. Complements existing air conditioning. Low noise with 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.

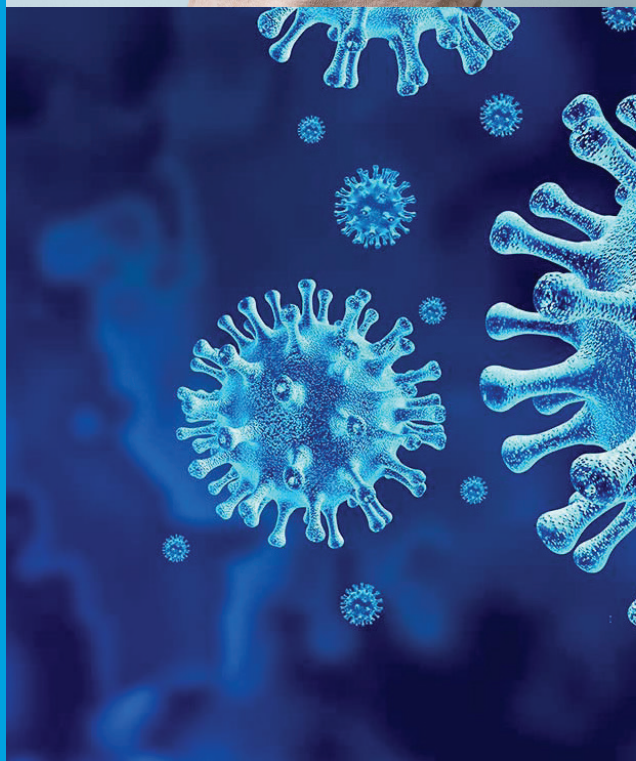
The heavier droplets will fall to the ground as raindrops do. If there are germs in that droplet, they can alight onto surfaces where they can be transmitted to people who unwittingly put their hand on the surface.

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 a spectrum of droplets. If propelled by a cough or a sneeze, droplets can travel upward of 6-7 metres.

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 using lasers the various droplets expelled from a human mouth during speech. It identified “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.”

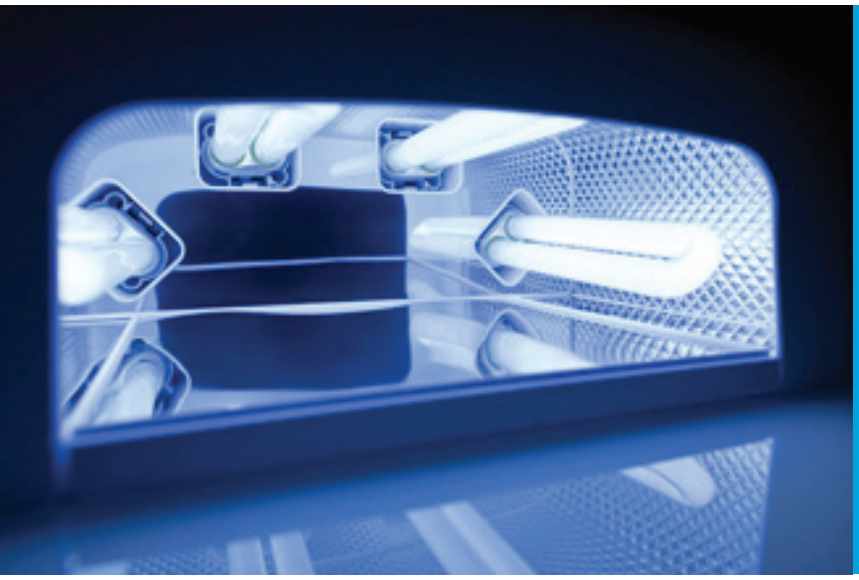
Initially it was believed that the large drops fall on surfaces, and those surfaces can become contaminated. Luckily, in the case of Covid-19, there is a growing consensus that getting sick from touching contaminated surfaces is relatively rare. Studies have shown that 80% of infection has been transmitted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



THE SOLUTION

Ilimex have combined several technologies to create an air sterilising unit that kills viruses, bacteria and other harmful pathogens instantly and consistently. It involves the UV of lamps, HEPA filters, Activated Carbon and Titanium dioxide photocatalytic filters.

1. 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 parti-cles from the air.
2. 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.



Independent testing has shown that the UVC kill chamber alone kills >99.9999%

see University Results and Efficacy

Independent testing has shown that the UVC kill chamber alone kills >99.9999% (see University Results and Efficacy), 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.

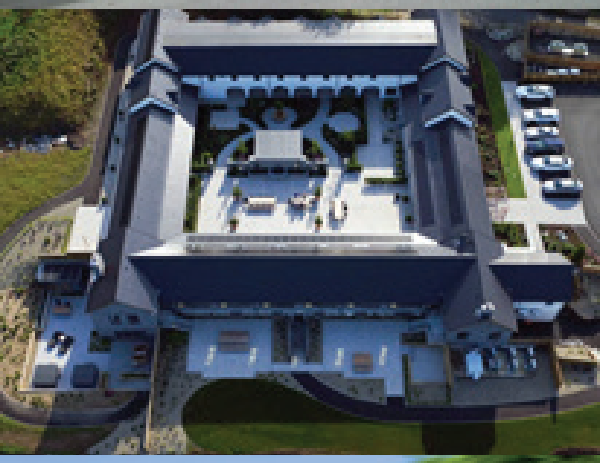
University Results and Efficacy

The Ilimex air sterilising unit was submitted for testing to Ulster University earlier this year in 2021. 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.

Conclusion

The results of the testing provide confidence that a >6log (>99.9999%) 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 Sterilisers could not be easier. All models just simply plug in ready for use. Each unit comes IoT enabled and can be monitored and controlled remotely via the Ilimex App.

Customers can create their own account and each 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 or ceiling mounted or free standing with an adaptor base plate and just needs to be connected to a wall socket.

Options

1. Adaptor base plate for free standing unit.
2. Extra-long IEC power lead.
3. Ceiling mount plate for Ilimex 70 unit.
4. Bespoke wrapping of the units are available.

PRODUCTS

Ilimex 70

Ceiling mounted

Ilimex 200

The Ilimex 200 in
BHC Distributors office

Ilimex 300

The Ilimex 300 situated at the
reception in Ilimex Ltd

Ilimex 400

The Ilimex 400 mounted
in an office space.

UNIT SIZING

Sizing a Unit for your Requirements

Product Name	Power (W)	Airflow (m^3/h)	Room Size (m^2)*	Typical Example	Price (£) (Ex VAT)
Ilimex 70	57	100	5	Cafe Table	£499
Ilimex 200	195	180	16	Dental Surgery	£2,800
Ilimex 300	325	450	36	Open Plan Office	£3,400
Ilimex 400	465	750	60	Large Classroom	£3,995

Assumes Ceiling Height of 2.5m.

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.

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