UVent
ultra-clean air from Mansfield Pollard
ULTRAVIOLET AIR STERILISATION SYSTEMS
MOBILE - CEILING JET - DUCT MOUNTED

ics cool energy

UV - MOBILE
PORTABLE AIR STERILISATION UNIT
Operation and Maintenance

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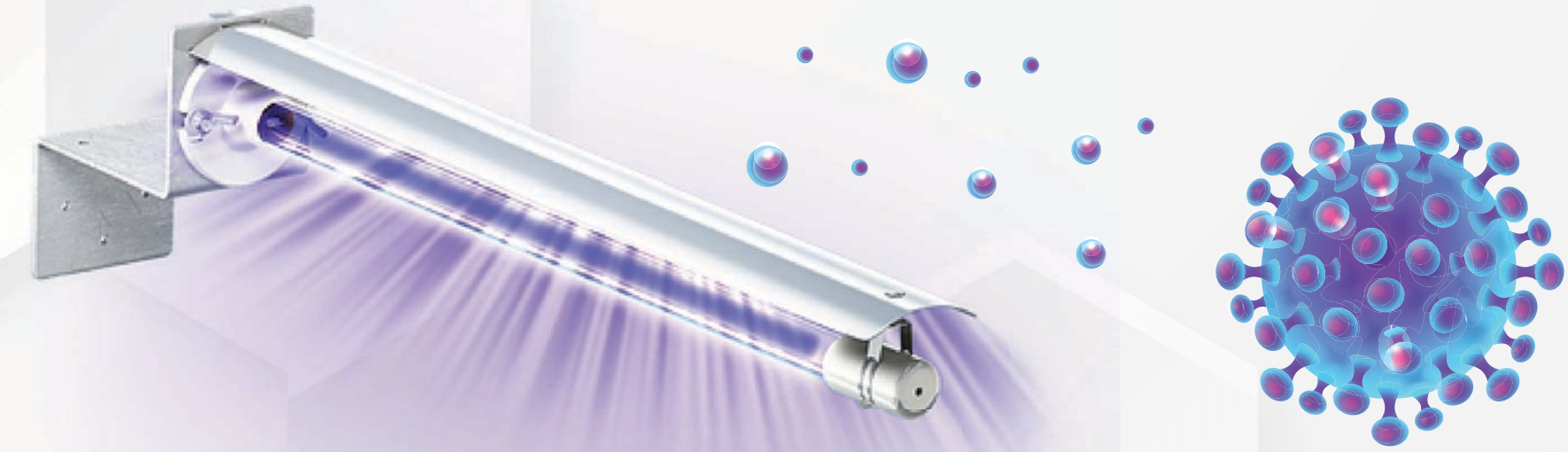
AIR STERILISATION UNITS

Mansfield Pollard's specialist business unit **UVent** is the UK's leading designer & manufacturer of revolutionary **UV-C** air sterilisation products to supply **ultra-clean air** to hospitals, healthcare facilities and other environments.

GUARANTEED RESULTS

Our range of products remove airborne pathogens including bacteria and viruses through **ultra-violet germicidal irradiation** with measurable performance and guaranteed results.



ULTRA-VIOLET AIR STERILISATION SYSTEMS

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UV-C technology is the most effective ways of destroying airborne pathogens including bacteria and viruses.

DNA RUPTURE
OF AIRBORNE MICRO-ORGANISMS

UV-C exposure directly attacks the DNA of micro organisms, stopping their capacity for reproduction. With the initial exposure, UV-C has properties that alter the cells of living tissue, particularly microbes. UV-C radiation triggers **the formation of peptide bonds** between certain amino acids in the microbe's DNA molecules

PEPTIDE BONDS
AND DEHYDRATION SYNTHESIS

A peptide bond is a chemical bond formed between two molecules when the carboxyl group of one molecule reacts with the amino group of the other molecule, releasing a molecule of water (H_2O). This dehydration synthesis reaction between amino acids renders bacteria, viruses and molds harmless by robbing them of the ability to reproduce. If the germ cells are exposed for longer periods, they start breaking down to the molecular level (carbon, oxygen, hydrogen, nitrogen ions, etc.).

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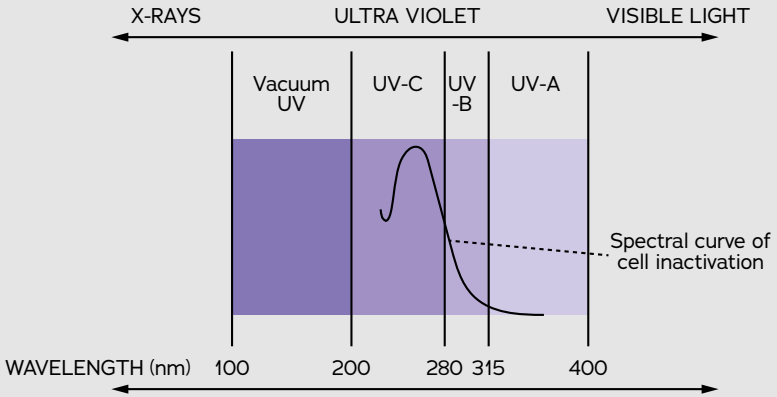
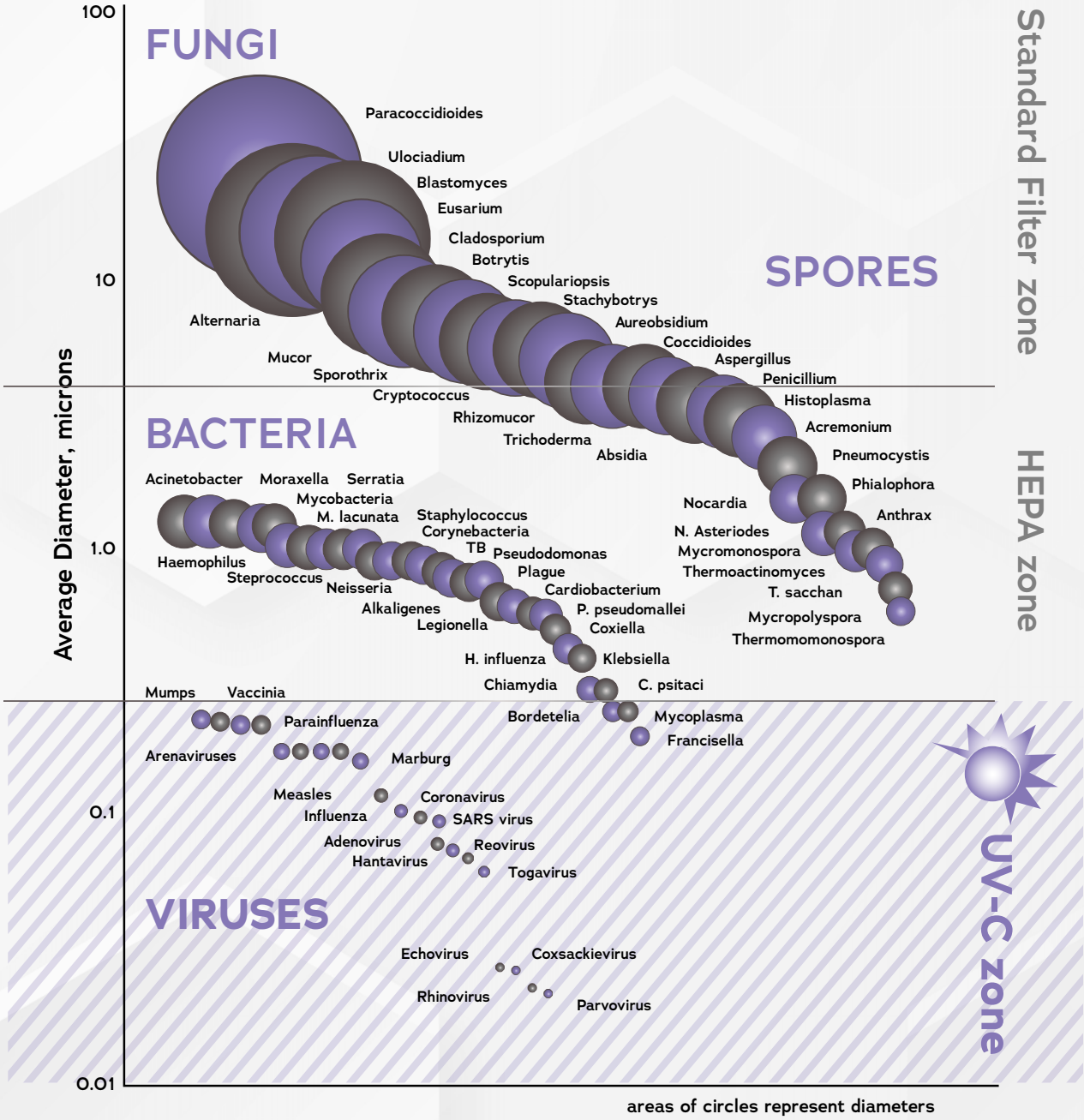
The science.....

ULTRA-VIOLET
GERMICIDAL IRRADIATION

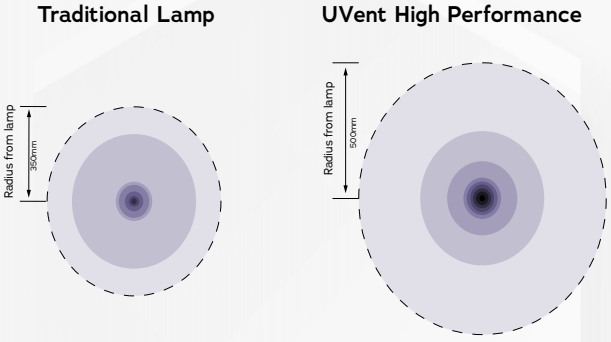


UV or ultra-violet light is presented between 100 and 400nm wavelength of the electro-magnetic spectrum. All UVent products work within the UV-C wavelength of 280nm or less and it is here that the sterilisation process is most efficient.



> **Maximum dwell time combined with maximum UV-C intensity delivers the ultimate in mobile air sterilisation technology.**

MAXIMISING THE KILL ZONE



Specialist UV-C lamps create a kill zone that is up to x4 larger than traditional lamps and up to x5 the irradiation intensity for superior performance.

INNOVATIVE REFLECTIVE TECHNOLOGY

Enhanced integral reflective zone magnifies irradiation intensity and provides 360° field coverage to maximise UV-C consistency levels throughout the unit.

AIR MANAGEMENT EXPERTISE

The perfect balancing of air volume and velocity maximises dwell time and UV-C exposure levels resulting in highly efficient pathogen elimination.

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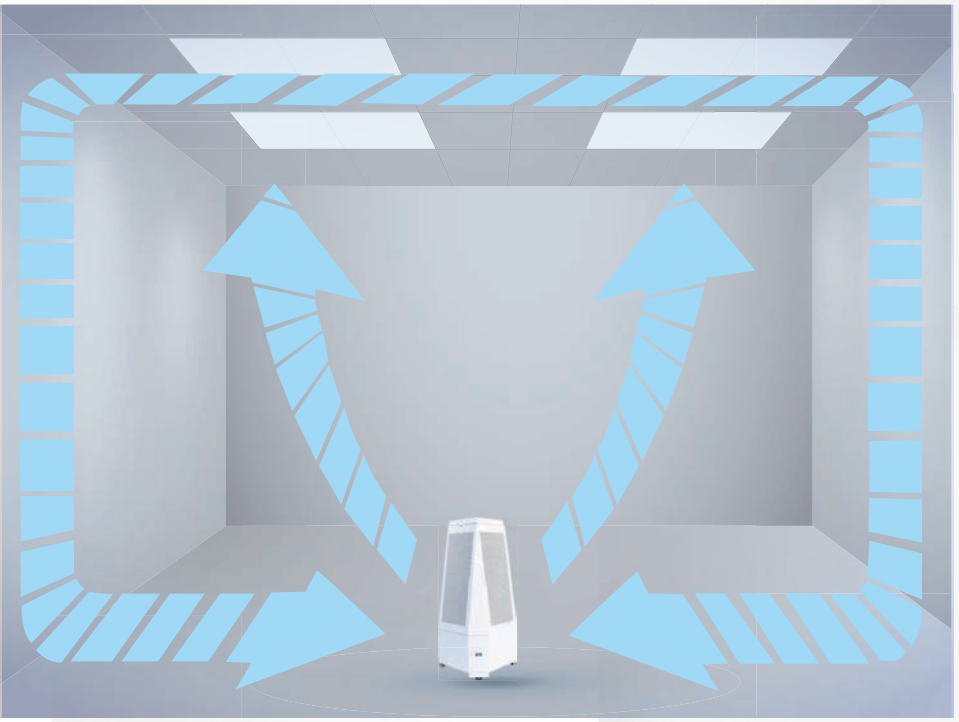
The unit.....



INDUSTRY LEADING PERFORMANCE

UNIQUE

latest air handling technology and unique design to maximise sterilisation volumes and dissipate air throughout the entire room including areas of high biological concentration.

FLEXIBLE:

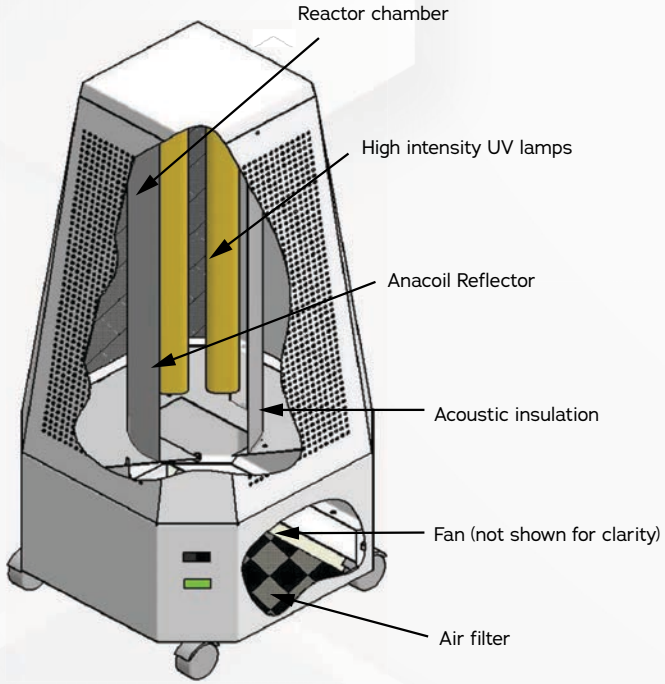
Fully portable and mobile, with simple plug and play set up to sterilise any specific spaces including corners plus switch for 'high pulse' operation for immediate room purging

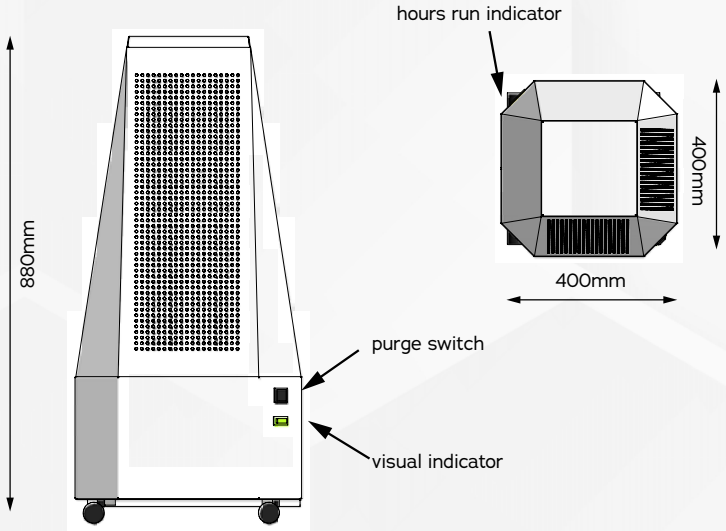
EFFICIENT:

Integrated energy controller to provide variable speed operation at designated times to suit the particular room environment

756m^3/h	25	80m^3	40dB(A)	13,000h
unit airflow capability	air changes per hour	sterilised air distribution zone	ultra quiet operation	ultra-long lamp life

The unit.....





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Operational details

Unit dimensions (HxWxD) mm	880 x 400 x 400
Unit weight	20Kg
Power Supply	220 – 240 AC / 50 Hz / 1 Phase
Tube replacement	13,000 hours (max)
Air filter (mm)	340 x 210 x 12
Finish	White polyester gloss (RAL 9003)
Sterilisation area	50-80 cu m

Setting	Air volume m³/h	dB(A)	Air changes/hr
Standard	360	40	12
Purge / Boost	756	57	25

ASU 6000 in-situ

Independent testing.....

OUR PARTNERS
IN DEVELOPMENT

UNIVERSITY OF LEEDS

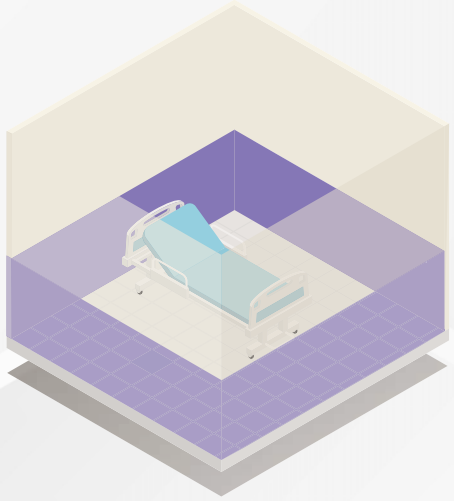
Rigorous and independently verifiable test data under laboratory conditions to reflect actual live HVAC conditions. Tests were carried out by The Pathogen Control Engineering Research Group, School of Civil Engineering (Dr CJ Noakes, Dr LA Fletcher, and Dr PA Sleigh). Additional testing took place at the Health Protection Agency (now Public Health England) in Porton Down and also at Bradford University led by Professor Beggs, one of the world leading experts in the prevention and control of healthcare associated Infections

Public Health England
Porton Down

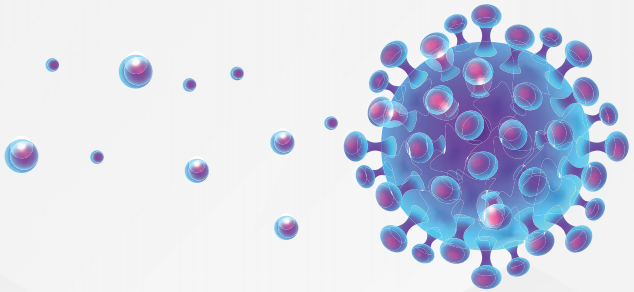
UNIVERSITY OF BRADFORD

STEADY STATE
ROOM TESTS

A 32m³ aero-biology test chamber was created to simulate a room inhabited by an infectious individual who is constantly emitting harmful organisms. The device was placed into the sealed ventilated chamber and a constant supply of airborne bacteria introduced. Tests were carried out in the chamber in order to determine the efficiency of the device in terms of its ability to inactivate airborne micro-organisms.



BACTERIAL TEST
ORGANISM



Staphylococcus aureus a gram positive bacterium that is a major cause of hospital acquired infectious. Hospital strains are usually resistant to a variety of antibiotics (e.g. MRSA) and many are resistant to antiseptics and disinfectants which aids its survival in the hospital environment.

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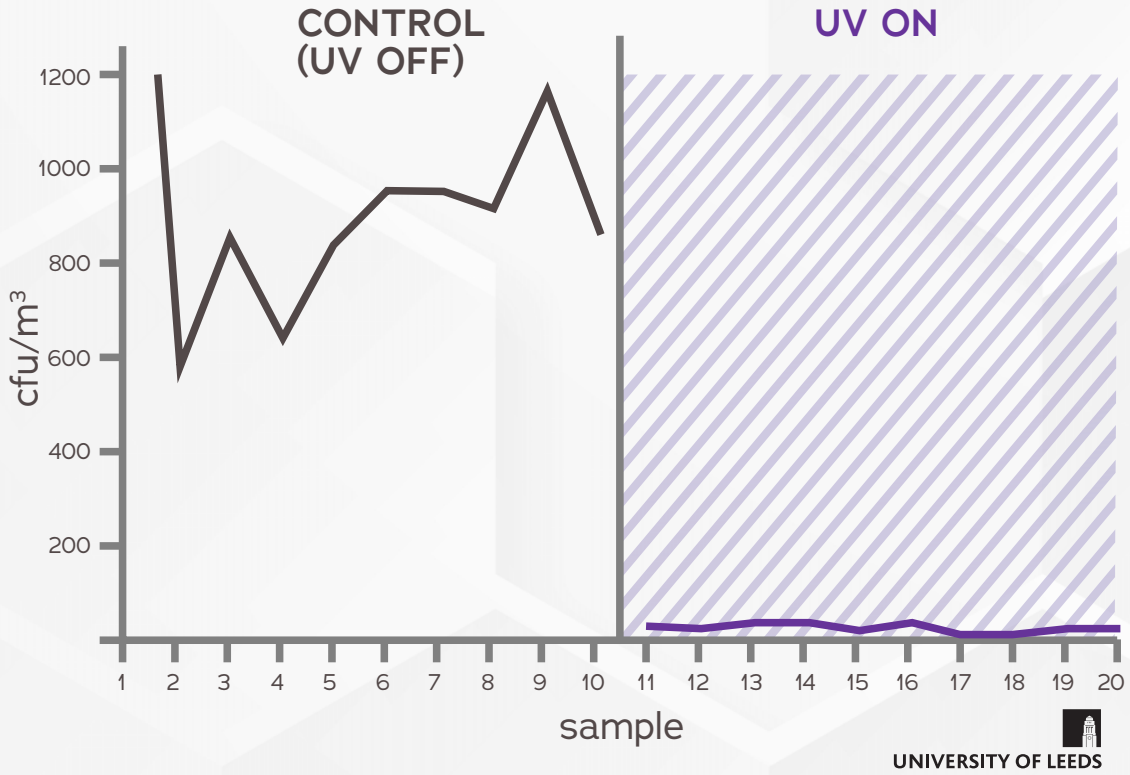
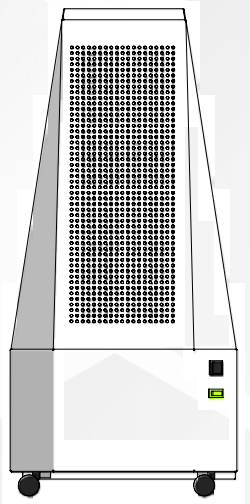
Test results.....

> The perfect synthesis of exacting UV-C science and specialist air management technology has created a unique product that is unrivalled in air sterilisation performance.



UNIVERSITY OF LEEDS

97.6%
KILL PERCENTAGE



Quality & compliance.....

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DECLARATION OF CONFORMITY

According to EN 45014

UVent
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Edward House, Parry Lane, Bradford, West Yorkshire BD4 8TL

We hereby declare that this product complies with the following directives and standards:

Product Description: Air sterilising unit

Product Number: ASU 6000

2014/30/EU EMC Directive

✓ BS EN 55015:2013	Limits and methods of measurement of radio disturbance characteristics of electrical lighting and similar equipment.
✓ BS EN 61000-3-2: 2018	Electromagnetic compatibility (EMC) -Part 3-2: Limits -Limits for harmonic current emissions (equipment input current greater than or equalto 16 A per phase).
✓ BS EN 61547:2009	Specification for equipment for general lighting purposes. EMC immunity requirements.
✓ CE marking	CE

This is to certify that the product complies with the required standards.

Signed:_____**Date: 18 April 2019**

Name: Bryan Bentley

Alcumus ISOQAR

Certificate of Registration

This is to certify that the Management System of:

Mansfield Pollard & Co. Limited

Edward House, Parry Lane,
Bradford, West Yorkshire, BD4 8TL

has been approved by Alcumus ISOQAR and is compliant with the requirements of:

ISO 9001: 2015

0026

Certificate Number: 14694-QMS - 001
Initial Registration Date: 16 January 2020
Expiry Date: 16 January 2023

Scope of Registration:

Design, manufacture of air management systems.

Signed:
Steve Stubley, Technical Director
(on behalf of Alcumus ISOQAR)

This certificate will remain current subject to the company maintaining its system to the required standard. This will be monitored regularly by Alcumus ISOQAR. Further clarification regarding the scope of this certificate and the applicability of the relevant standards' requirement may be obtained by consulting Alcumus ISOQAR.

Alcumus ISOQAR Limited, Alcumus Certification, Cobra Court, 1 Blackmore Road, Stretford, Manchester M32 0QY.
T: 0161 865 3699 F: 0161 865 3685 E: isoqarenquiries@alcumusgroup.com W: www.alcumusgroup.com/isoqar
This certificate is the property of Alcumus ISOQAR and must be returned on request.

We have developed a world leading suite of UV-C products to suit any application and environment

CEILING JETS

A compact UV sterilisation unit sized to replace a single standard ceiling tile, this ultra-powerful yet quiet unit sterilises a variable air volume to suit the specific room requirements for both medical and commercial applications

IN-DUCT UNIT

The most powerful and efficient air sterilisation unit of its type with formidable UV-C dwell time and destruction zone. Fully scalable to deal with any airflow duty and can be easily retro-fitted into existing ductwork installations

088 258 2570

info@icscoolenergy.nl

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VERKOOP. VERHUUR. SERVICE.

ICSCOOLENERGY.NL
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