UVent

ultra-clean air from Mansfield Pollard

UV - DUCT MOUNTED

System Integrated Air Sterilisation Unit

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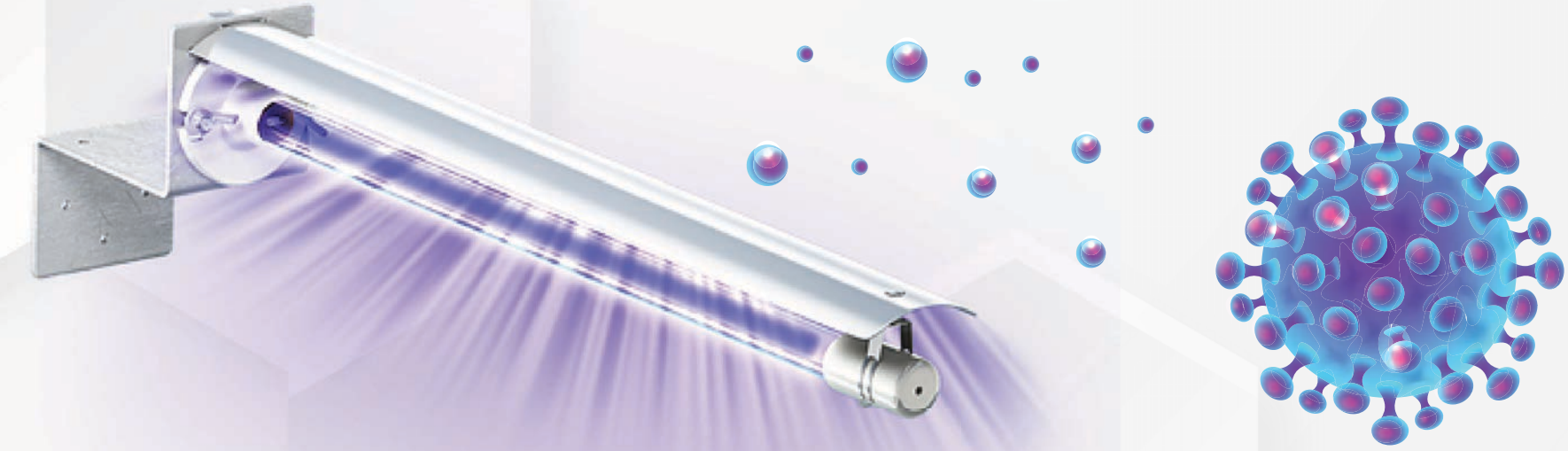
AIR STERILISATION UNITS

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 **ultraviolet germicidal irradiation** with measurable performance and guaranteed results.



ULTRAVIOLET AIR STERILISATION SYSTEMS

MOBILE - CEILING JET - DUCT MOUNTED

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

DNA RUPTURE
OF AIRBORNE MICRO-ORGANISMS

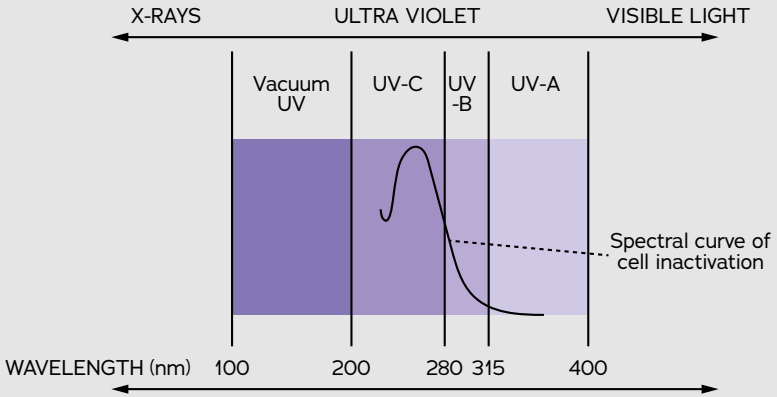
UV-C exposure directly attacks the DNA of micro organisms, stopping their capacity for reproduction. With the initial exposure, UV-C has properties that alter the cells of living tissue, particularly microbes. UV-C radiation triggers **the formation of peptide bonds** between certain amino acids in the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

PEPTIDE BONDS
AND DEHYDRATION SYNTHESIS

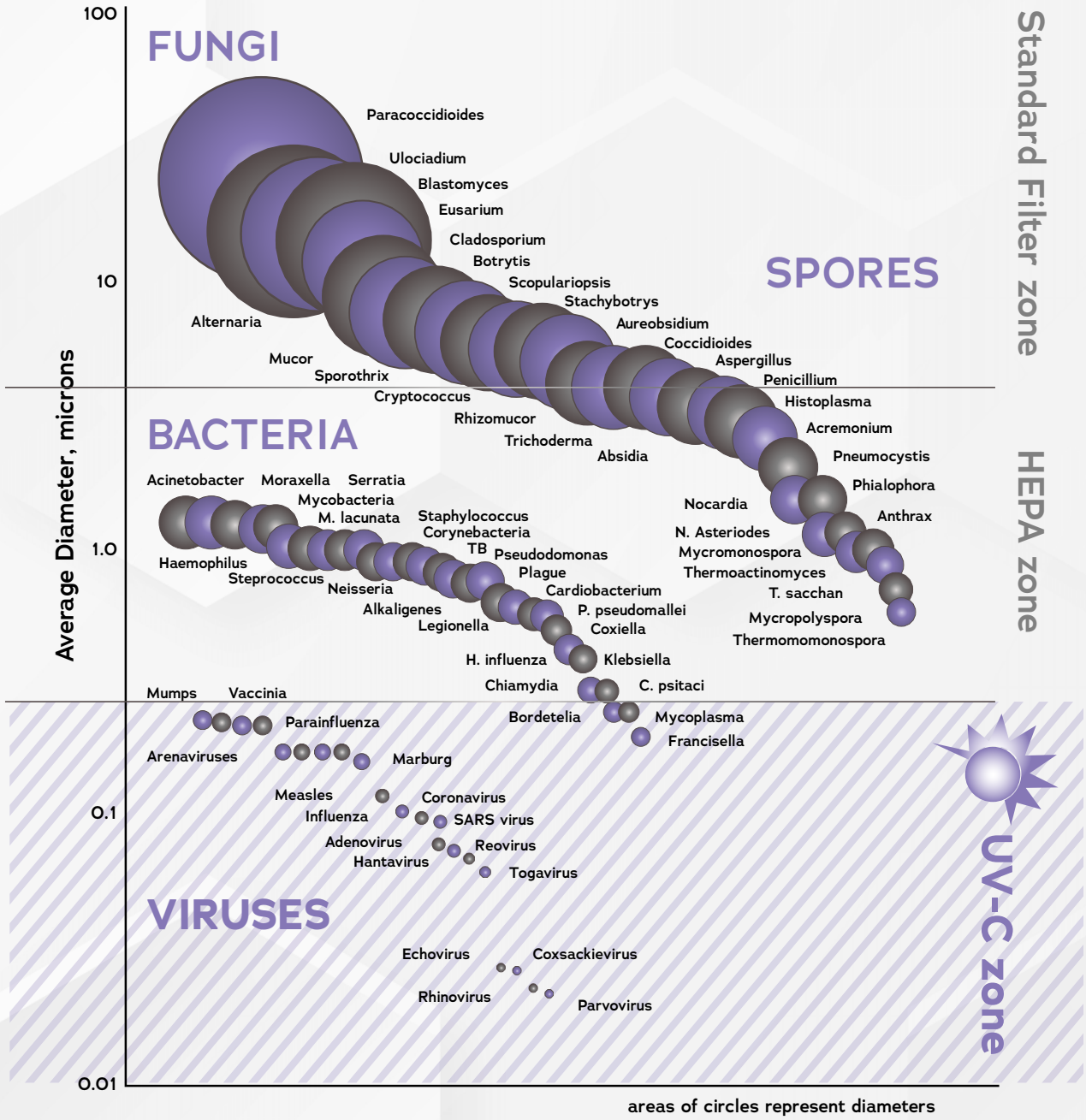
A peptide bond is a chemical bond formed between two molecules when the carboxyl group of one molecule reacts with the amino group of the other molecule, releasing a molecule of water (H_2O). This dehydration synthesis reaction between amino acids renders bacteria, viruses and molds harmless by robbing 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.).

The science.....

ULTRA-VIOLET
GERMICIDAL IRRADIATION

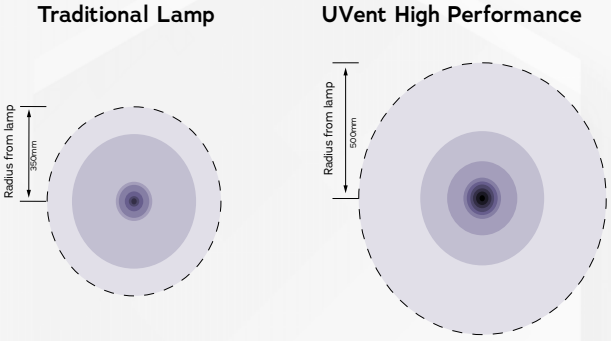


UV or ultra-violet light is presented between 100 and 400nm wavelength of the electro-magnetic spectrum. All UVent products work within the UV-C wavelength of 280nm or less and it is here that the sterilisation process is most efficient.



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.

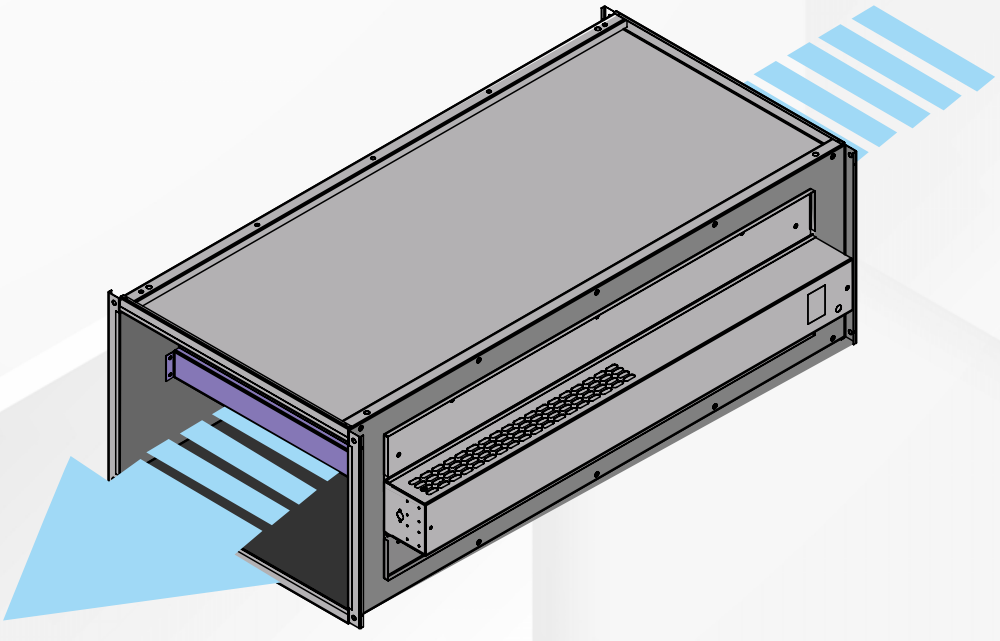
INNOVATIVE REFLECTIVE TECHNOLOGY

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.

The unit.....



INDUSTRY LEADING
PERFORMANCE

SCALABLE:

Options for single or double rack high efficiency UV tubes and in addition the units can be multi-assembled to accommodate and given air volume or required plant position

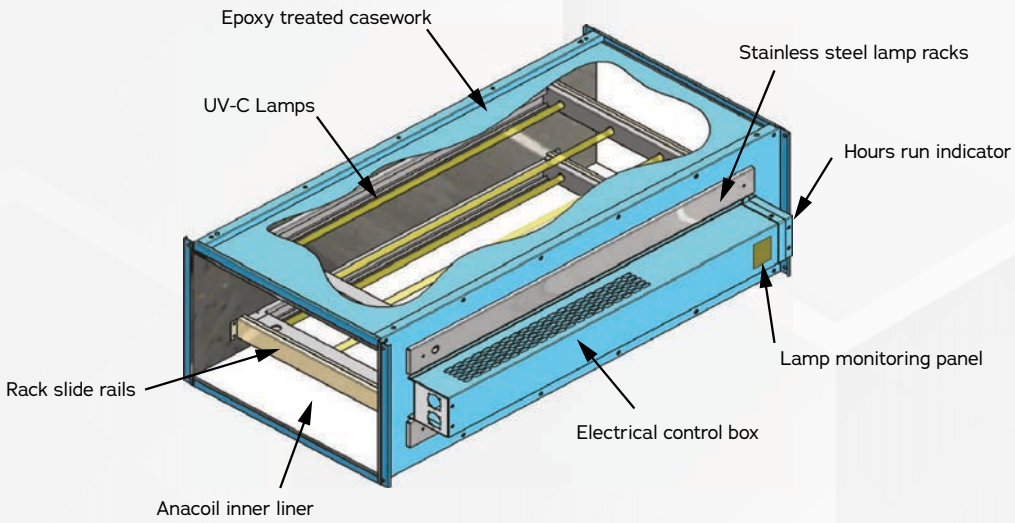
UNIQUE

Designed to create the most comprehensive microbiological destruction zone possible with internal reflective surfaces adding further to the units formidable single pass performance.

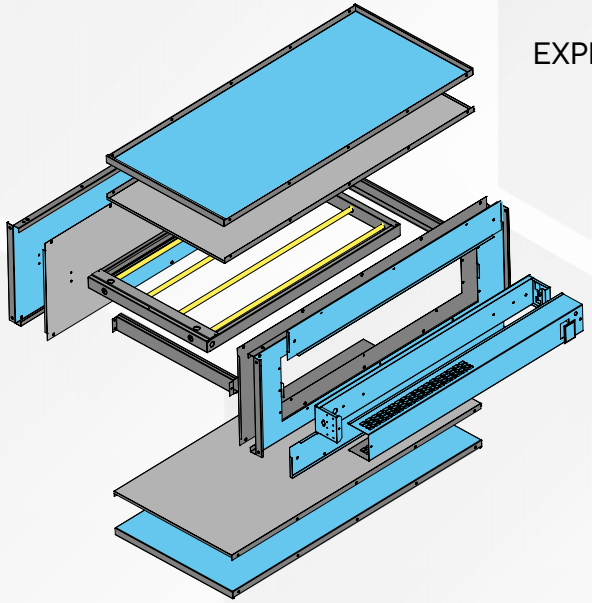
EASY MAINTENANCE:

Visual lamp monitoring system with integrated energy controller for remote operation. Specially designed access panels enable quick and simple unit management.

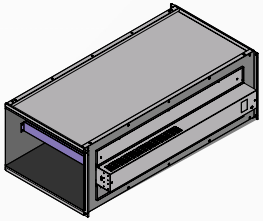
The unit.....



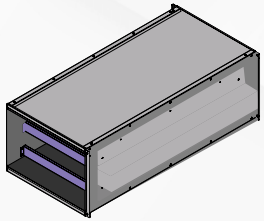
EXPLODED VIEW



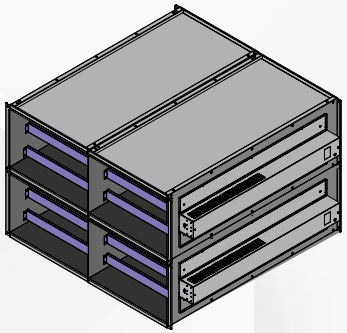
Fully modular.....



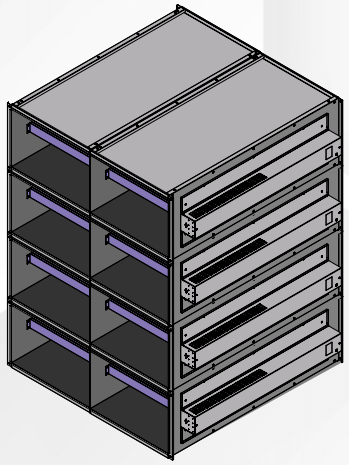
Single rack

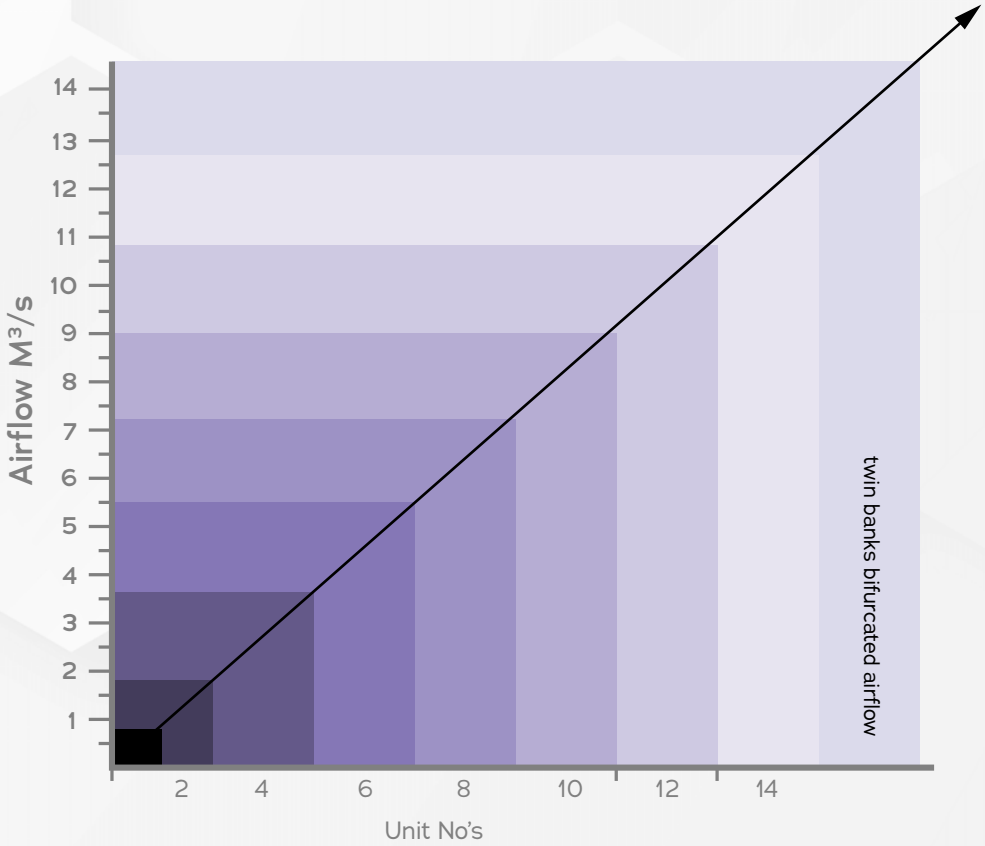


Double rack



Stacked





MULTI ASSEMBLY:

For total design flexibility the units are capable of multi assembly to match most given air volumes without any compromise in sterilisation efficiency. For duties above 12.6m3/s twin banks can be used in a bifurcated format

Independent testing.....

OUR PARTNERS
IN DEVELOPMENT

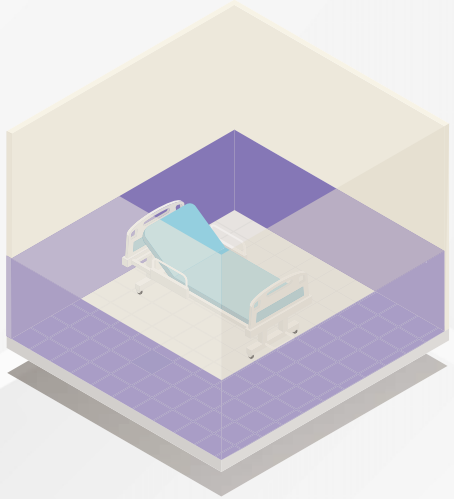
UNIVERSITY OF LEEDS

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). All data was analysed and verified by Professor Clive Beggs (then of The University of Bradford), who is one of the world leading experts in the prevention and control of healthcare associated Infections

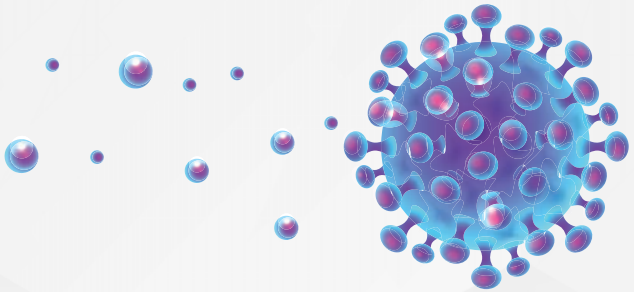
UNIVERSITY OF BRADFORD

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.

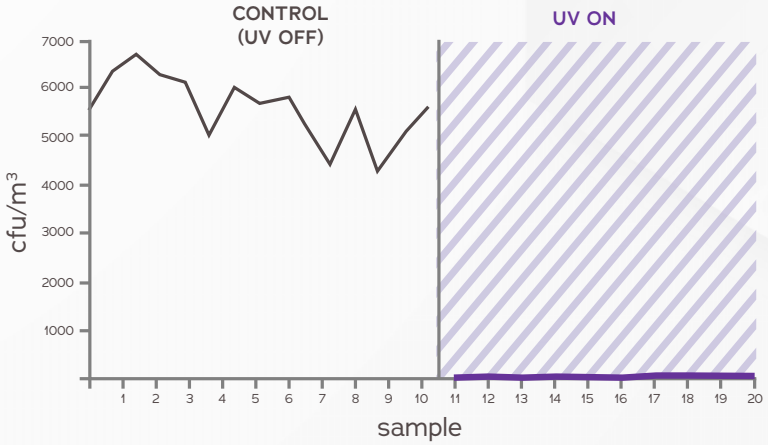


BACTERIAL TEST
ORGANISM



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.

Test results.....

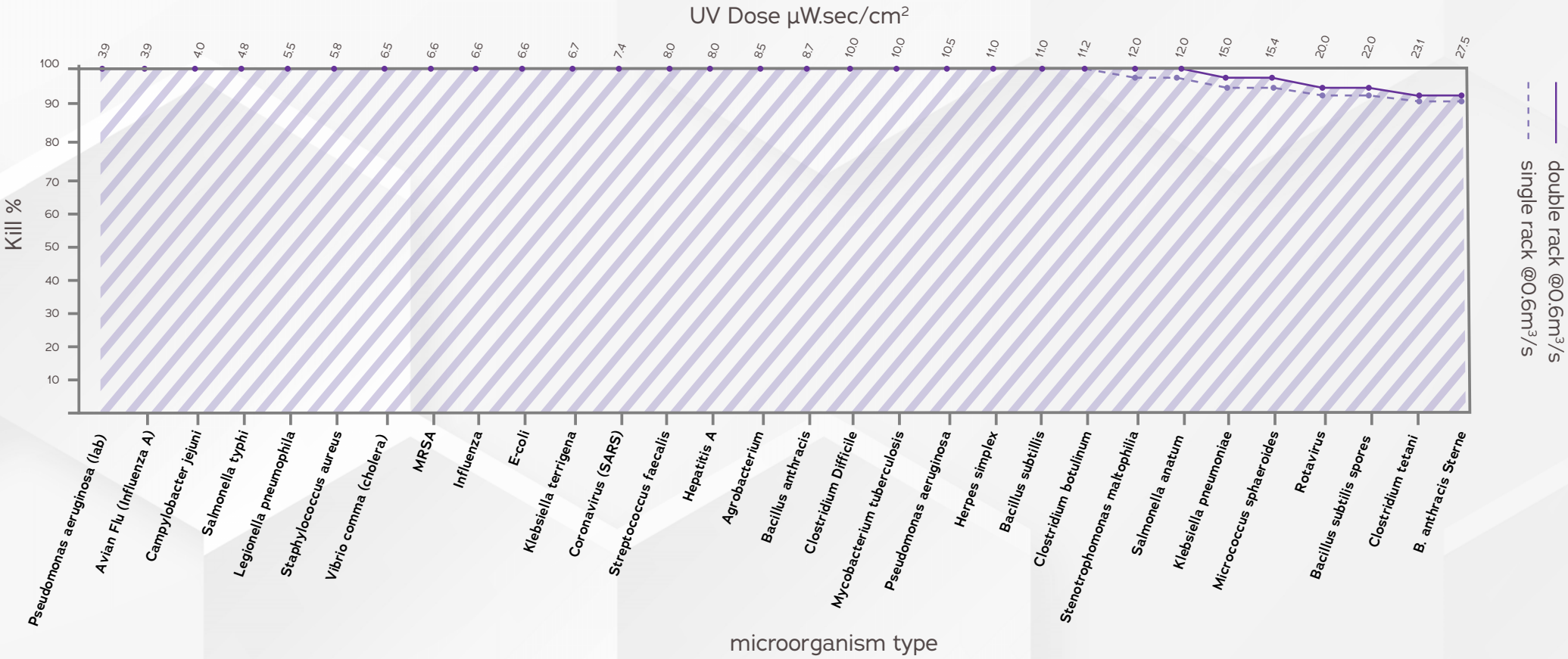


>99%
KILL PERCENTAGE
staphyloccocus aureus

>90%
KILL PERCENTAGE
bacillus subtilis

Performance tests carried out in partnership with ***Pathogen Control Engineering Research Group*** at the School of Civil Engineering, ***University of Leeds***

UNIVERSITY OF LEEDS



Quality & compliance.....

DECLARATION OF CONFORMITY

According to EN 45014

UVent

ultra-clean air from Mansfield Pollard

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 Acumus ISOQAR.

Alcumus ISOQAR Limited, Alcumus Certification, Cobra Court, 1 Blackmore Road, Streford, 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.

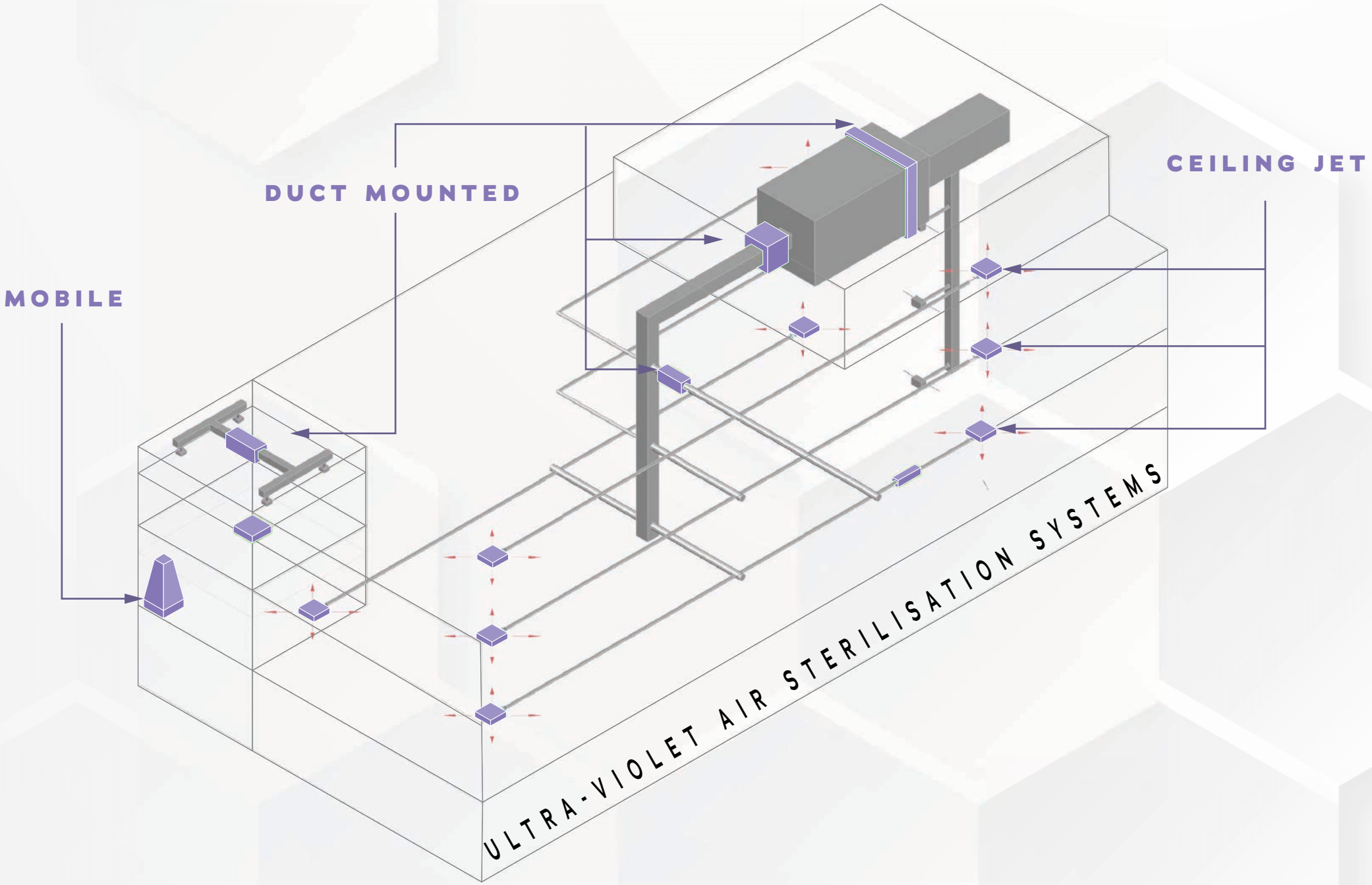
We have developed a world leading suite of UV-C products to suit any application and environment

FREE STANDING

A flexible and fully portable UV sterilisation unit to sterilise any specific space. Its unique design and latest air handling technology maximises sterilisation volumes and high pulse operation allows immediate room purging.

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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CEILING JET
MOBILE
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