![Inivos logo] Inivos®

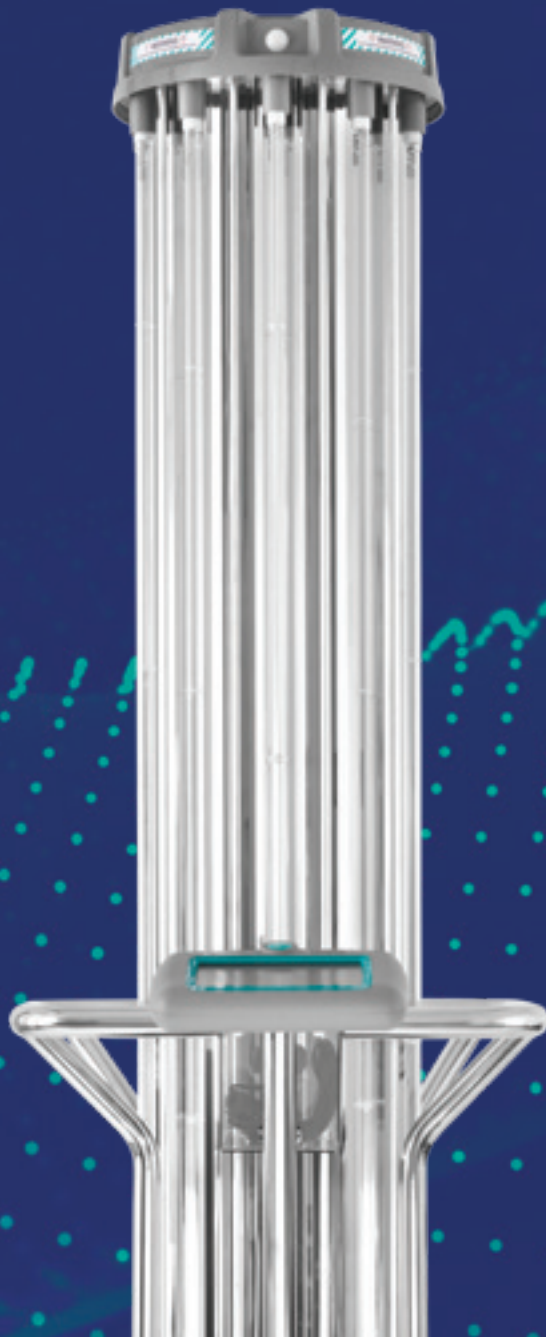# ULTRA-V™

High intensity UV-C light for portable,
validated decontamination

surfaces

Your partner in infection prevention and control.
Enabling you to deliver better care, faster.

We are experts in infection prevention and control, providing decontamination solutions for the four key vectors of transmission; surfaces, water, air, and people.

Our knowledge and expertise have led us to create innovative products which we use to carry out effective decontamination.

With our knowledge of infection prevention and control, and our innovative hydrogen peroxide vapour and ultraviolet-C light technologies, our decontamination services are a proven, efficient, safe, and rapid means of eradicating harmful microorganisms.

We harness our technology to provide managed services and reactive assistance in decontaminating spaces, with independent validation of the efficacy of our machines carried out by leading authorities. A wealth of organisations around the world rely on our products and services to meet their decontamination needs.

The Inivos® process

Our process ensures that our solutions are the best to meet your requirements.

Understand

To understand the solutions you need, we need to understand you. We analyse your data, assess your infrastructure and study your organisation to achieve the outcomes you really need.

Design

Using our analytics, we design solutions with you in mind. We ensure we understand your priorities, budget, safety and more before working with key stakeholders across your organisation to design solutions fit for your needs.

Deliver

Our tailor-made design, and analysis of your organisation, means we truly deliver. Going the extra mile makes us a confident leader in our field.

Introducing
Ultra-V™
Fast, portable decontamination

- Portable UV-C decontamination technology
- High-intensity UV-C action for rapid decontamination
- Single-user operation
- Validated performance
- Auto deactivation safety sensors
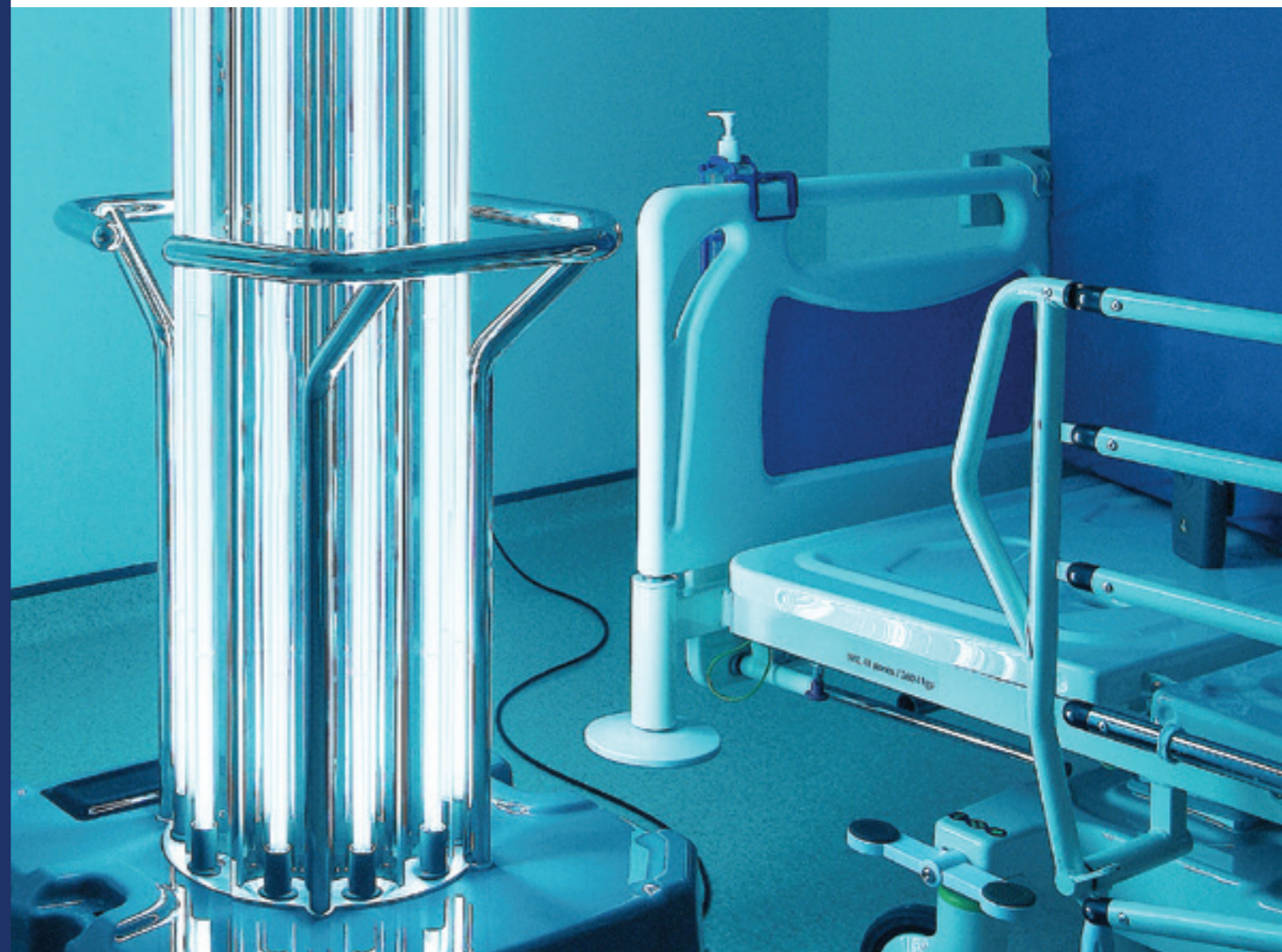
Ultra-V™

Ultra-V™ uses high-intensity UV-C light to automatically decontaminate rooms and surfaces.

It's ideal for high-risk, high-throughput areas such as intensive care units (ICUs), neonatal intensive care units (NICUs), side rooms and operating theatres.
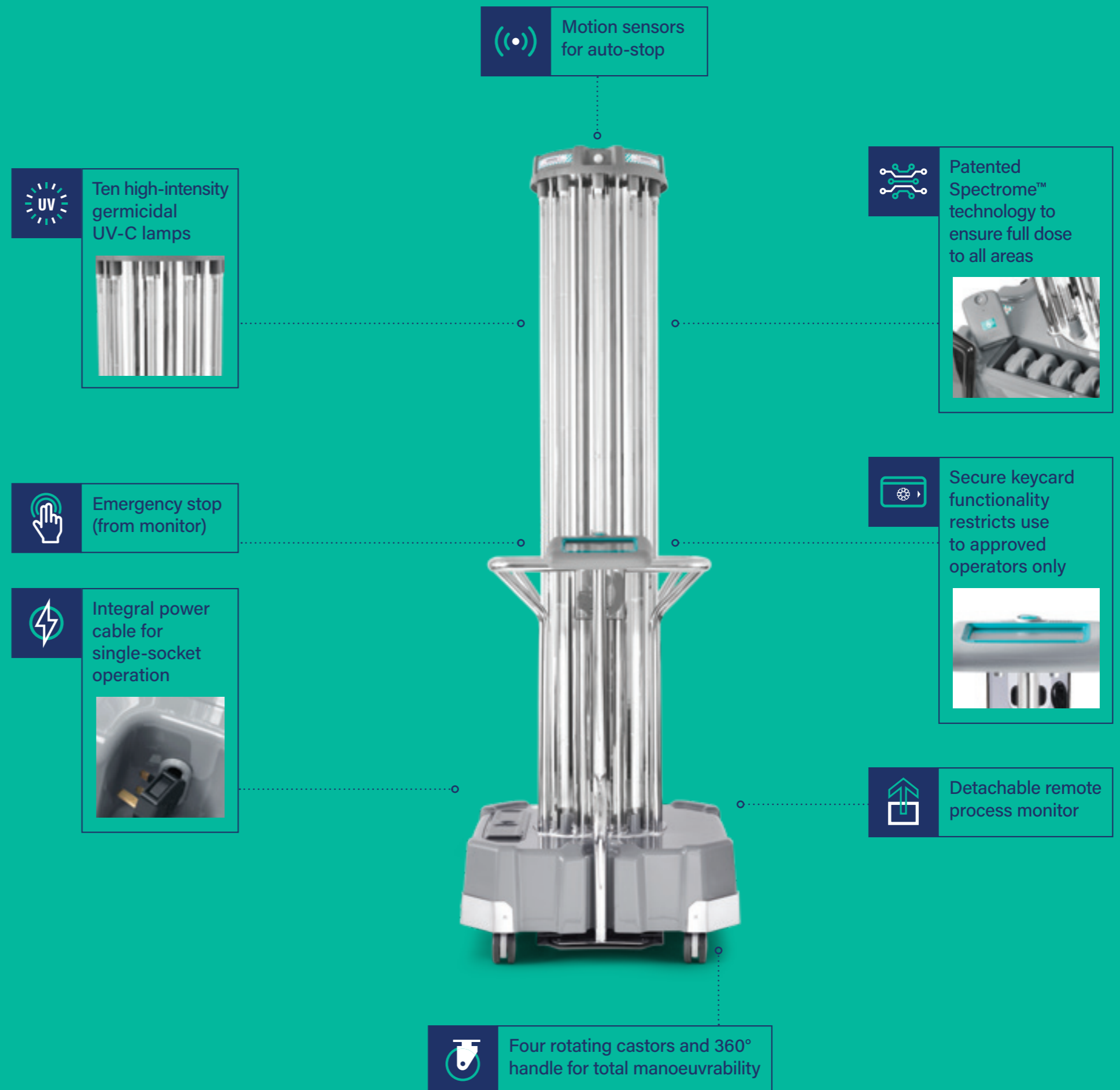
Ultra-V™ offers reliable, repeatable decontamination with consistent efficacy that has been independently validated.

Designed to be simple to use with robust yet comprehensive safety features.

- Repeatable, effective automatic decontamination
- Rapid cycle (under an hour)
- Independently tested for efficacy
- Easy, single-user operation
- Robust safety features

Full technical specifications can be found at the back of brochure.

Motion sensors for auto-stop

Ten high-intensity germicidal UV-C lamps

Patented Spectrome™ technology to ensure full dose to all areas

Emergency stop (from monitor)

Secure keycard functionality restricts use to approved operators only

Integral power cable for single-socket operation

Detachable remote process monitor

Four rotating castors and 360° handle for total manoeuvrability

A key part of your cleaning programme

Ultra-V™ provides powerful, independently validated decontamination using UV-C light. It works alongside your regular cleaning programme to give you an extra level of infection control, safety and reassurance.

Powerful against pathogens

Our hospital studies show that a manual deep clean followed by a decontamination with Ultra-V™ delivers the same pathogen reduction as multiple manual deep cleans, in a fraction of the time.

As an example of this, Clostridium difficile is highly resistant to manual cleaning and can remain viable on surfaces for several years. However, carrying out a single treatment with Ultra-V™ rapidly deactivates C-diff spores.

Where to use Ultra-V™

Ultra-V™ is ideal for spaces where infections pose a greater risk to vulnerable patients who are either extremely ill or weak already, or immune-suppressed due to treatment or illness. These locations can include intensive care units (including NICU), high-dependency units, isolation rooms, A&E facilities and operating theatres.

It's also well suited for high-throughput areas where patients are being regularly admitted and discharged, allowing you to maintain turnaround speeds and prevent backlogs without compromising on patient safety.

Proactive infection control

Ultra-V™ facilitates a more proactive approach to infection control. For example, you can decontaminate side rooms before high-risk patients move in, to minimise their risk of infection. Ultra-V™ can also be used for decontamination of hospital equipment.

The decontamination process is fully repeatable, allowing you to achieve high-efficacy results on a consistent basis. All results are documented, so you always have the ability to demonstrate that validated decontamination has been completed in the space.

We provide full training to enable your staff to use Ultra-V™ safely and effectively.
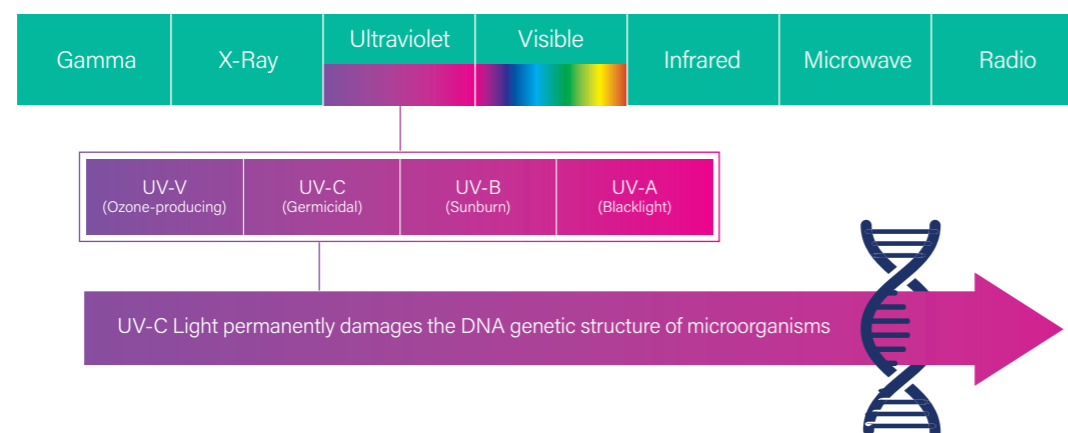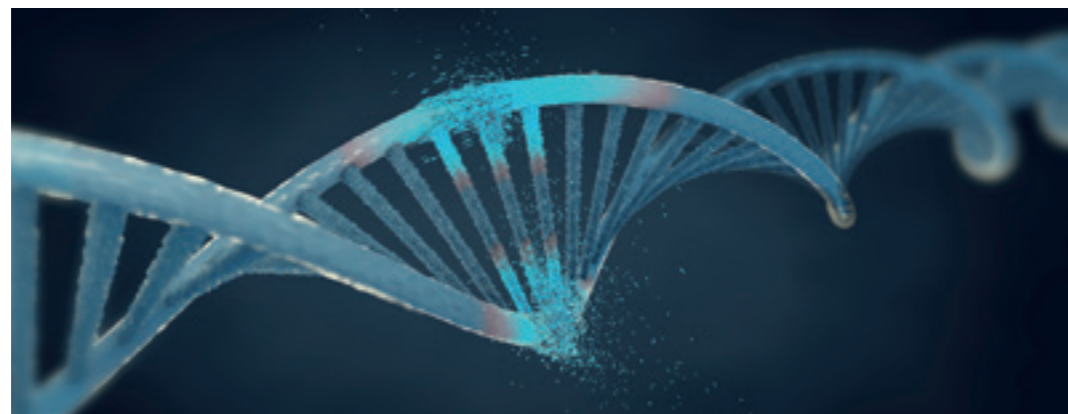
The science behind Ultra-V™

Ultra-V™ decontaminates using UV-C light ray technology.

Ultraviolet light (UV-C) is a form of electromagnetic radiation with a shorter wavelength than that of visible light – primarily 254nm.

UV-C has been proven to kill deadly bacteria. It effectively destroys the DNA of pathogens by breaking down the outer layer of the organism and destroying the genetic material inside.

In a hospital setting, this prevents organisms that can cause Hospital Acquired Infections (HAIs) from performing vital cellular functions, thereby breaking the chain of infection.

Gamma	X-Ray	Ultraviolet	Visible	Infrared	Microwave	Radio

UV-V (Ozone-producing)	UV-C (Germicidal)	UV-B (Sunburn)	UV-A (Blacklight)

UV-C Light permanently damages the DNA genetic structure of microorganisms

Ultra-V™ emits its UV-C rays via a 360° array of 10 high intensity germicidal lamps. The constant UV output provided over their 9,000 hour life makes them a reliable and highly efficacious disinfection system.

The efficacy of Ultra-V™

Effective

Ultra-V™ is proven to significantly reduce biological contamination across a broad range of organisms.

As a result, it reduces the risk of Hospital Acquired Infections (HAIs) in acute healthcare environments.

The system can achieve between log 6 and log 4 reduction of a broad spectrum of pathogens, including log 6 reduction of Clostridium difficile spores and log 5 reduction of bacteria.
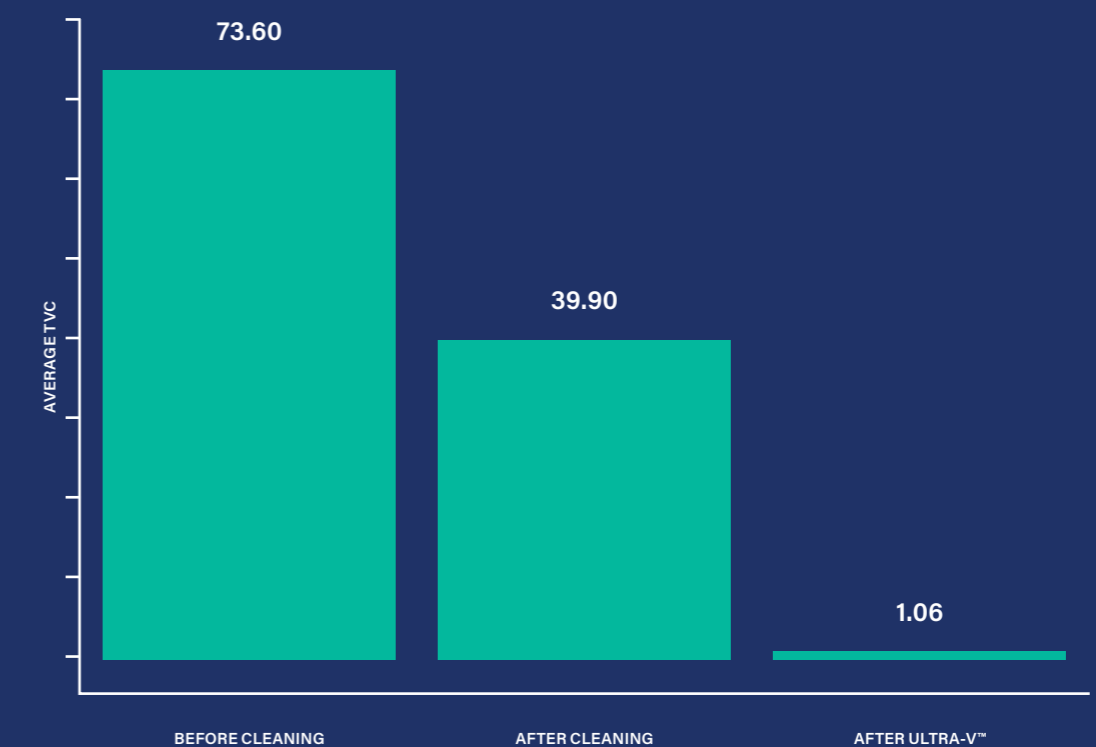
Ultra-V™ can therefore inactivate C-diff, Methicillin-resistant Staphylococcus aureus (MRSA) and Vancomycin-resistant Enterococci (VRE).

Proven to perform

An NHS hospital study tested multiple touch-points within a patient area at three stages: before cleaning, after cleaning and again after one cycle of treatment with Ultra-V™.

The results are shown on the graph below. While normal manual cleaning does make a big difference, it still leaves many viable pathogens in place.

Ultra-V™, however, reduces pathogens almost to zero, significantly reducing the risk of HAIs for the next patient or occupant.

AVERAGE TVC

73.60 — BEFORE CLEANING
39.90 — AFTER CLEANING
1.06 — AFTER ULTRA-V™

How Ultra-V™ works, step-by-step

1. Preparation

Your staff clean the room with your standard process

2. Spectrome™ Set Up

Position the six included Ultra-V™ Spectromes™ around the room; these are used to validate the process efficacy

3. Safety Checks

Ultra-V™ guides the operator to carry out all necessary safety checks

6. Reporting

Ultra-V™ automatically sends you an email confirming that decontamination has been carried out

5. Completion

The process typically takes 15–45 minutes depending on room size. The space can be used again immediately

4. Decontamination

Ultra-V™ treats the room with UV-C light. The six Spectromes™ measure the saturation of UV-C light to ensure 100% exposure has been made

Preparation

Ultra-V™ is a supplement to manual cleaning, not a replacement. Before the system is used, the area should be manually cleaned as normal, using your usual processes.

Once that's done, the next step is to position the Ultra-V™ unit near the centre of the space to be decontaminated. The handles and castors on the Ultra-V™ make it easy for a single team member to move and operate the machine.

Ultra-V™ uses UV-C, so you must be able to close the area off to contain the UV-C light. Open areas are not suitable for decontamination with Ultra-V™, however, it is safe to use within glass fronted areas as the glass thoroughly diffuses the UV-C wavelength.

Dosage check

Ultra-V™ uses six measurement devices called Spectromes™ to gauge the correct exposure for every environment.

Once activated, Ultra-V™ will guide the operator to place the Spectromes™ to suit the shape of the room and ensure full dose is provided to all areas.

With the unit and Spectromes™ in position, the operator removes the process monitor and takes it outside the room with them. They then sign in with a swipe card to begin the decontamination cycle.

Positioning of the Spectromes™

WiFi link between Ultra-V™ (in room) and removable process monitor (outside room)

Ultra-V™ Main Unit   Spectrome™

Safety checks

Before decontamination can begin, the operator must confirm on the process monitor that everything is properly prepared – including ensuring there is nobody present in the room, safety sensors are working and safety signs have been placed in position.

Decontamination and completion

Once preparation is complete, decontamination begins.

Ultra-V™ gauges the germicidal dose being delivered by measuring the levels of UV-C reaching the Spectromes™ around the room.

The operator can monitor the UV-C exposure at each Spectrome™ as it increases throughout the process. The levels are displayed on a bar chart as a percentage of the required dose.

If any areas aren't receiving 100% exposure, the system informs the operator that the Ultra-V™ unit needs to be moved in order to ensure full dosage throughout the room.

Process times vary, but a typical side room will be decontaminated in around 45 minutes, while a sluice or en-suite would take as little as 10 to 15 minutes.

On completion of the process, decontaminated rooms are available for the next patient immediately. The Ultra-V™ UV-C decontamination process leaves no residue and there is therefore no dispersal or deactivation delay.

Reporting

The Ultra-V™ system logs all the results achieved and submits an email report, giving you a full written audit trail of your decontamination process and which operator carried it out, room by room.

Validated assurance

Intelligent reporting

After the decontamination process has been completed, Ultra-V™ produces an email report on every cycle and sends it direct to your inbox.

The Ultra-V™ system generates a robust audit trail of your decontamination programme for each space, including the duration of the process and details of the operator who carried out the work.

Spectrome™ monitoring

The Spectrome™ devices included with Ultra-V™ ensure effective decontamination on each and every cycle.

Positioned throughout the target space, they communicate wirelessly with Ultra-V™ to confirm that all areas are exposed to the right levels of UV-C light.

Safe and simple

User-friendly

Ultra-V™ has been specifically designed for ease of use. The operator simply positions the device and sets up the Spectromes™ accordingly. The system will then perform a calibrated process using a precise, measured dose of UV-C decontamination.

The process is controlled from the detachable process monitor, placed outside the room. There's no programming – the operator simply presents their dedicated keycard and follows the on-screen instructions.

Easy to move and position

Ultra-V™ is designed to be easily transported and set up by just one person.

The main unit is lightweight and well-balanced. Four 360° turning-wheel castors allow for completely fluid movement, and the all-round handle makes the machine easy to steer through rooms and corridors.

Built-in safety features

Ultra-V™ includes a comprehensive range of features to ensure safety in operation.

Four integrated passive infrared (PIR) sensors offer full room coverage and will detect anyone entering the room during decontamination, and automatically pause the process.

Ultra-V™ also has an emergency stop button, so the operator can instantly halt the process at any time.

Chemical-free

Ultra-V™ uses no chemical compounds, avoiding any of the potential risks or environmental problems of biochemical disinfection.

That also means that Ultra-V™ requires less preparation than other decontamination systems such as hydrogen peroxide vapour (HPV), where operators must spend time sealing up airways such as ventilation ducts and fire-detector heads.

Technical information

UV-C lamps	10 low pressure mercury lamps
Frequency of light	254nm
Dimensions (without monitor)	1880 H x 660 W x 610 D (mm)
Dimensions (with monitor)	1880 H x 660 W x 720 (mm)
Weight	Approx. 72kg
Connectivity	Wireless
Operational temperature range	0-30°C
Operational humidity range	0-95% RH
Power consumption	1430W at 230V supply voltage
Supply voltage range	230V UK // 120V AC US
Supply frequency	50Hz UK // 60Hz US
Fuse rating	13A UK
Warranty	1 year on all equipment and accessories
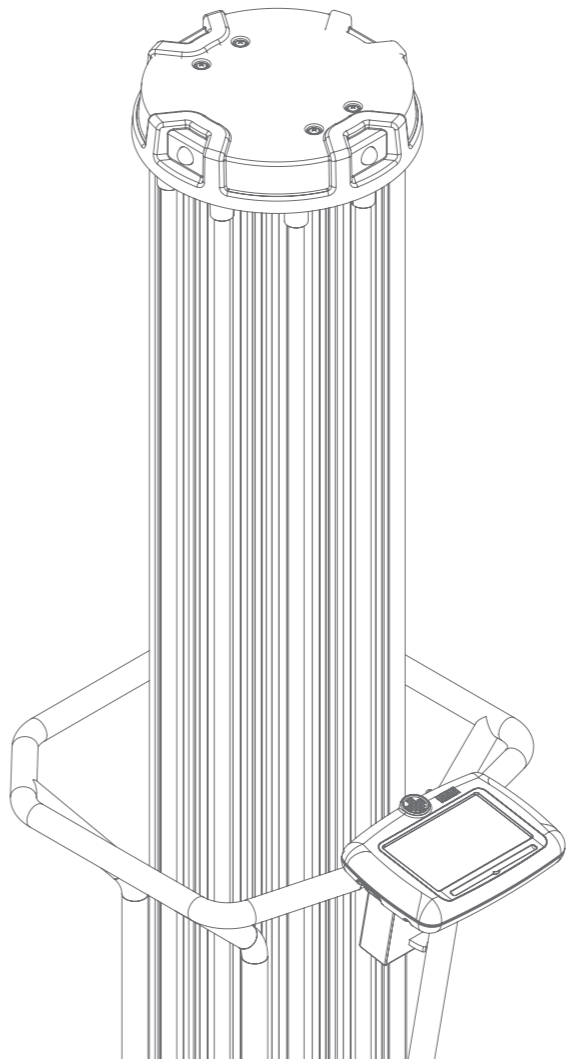
Introducing Ultra-V Connect™

Ultra-V Connect™ is an evolution of Ultra-V™; a sleek, ceiling-mounted appliance for routine decontamination. Using the same UV-C light ray technology, Ultra-V Connect™ is installed in a room which regularly requires decontaminating, such as patient rooms and dental surgeries, to allow for fast, effective and routine disinfection; eliminating pathogens and reducing the threat of HAIs.

Through the use of Ultra-V™ and Ultra-V Connect™, we can provide patients and staff with a rapid turnaround of proven effective decontamination, without lasting residues, in both permanent and changing locations.

Tested and trusted

At Inivos®, we work with experts in infection prevention and control to develop practical solutions to the real problems that hospitals face.

As a result, our products and services are trusted by hospitals around the world and used in over 50% of UK NHS Trusts.

Our products and services are proven to be safe and effective, and have been independently verified by clinical research centres and governing bodies, including Public Health England.

Our in-house development team carry out extensive in-house testing to maximise the efficacy and efficiency of the system.

To ensure the safety of staff and patients, we create a Standard Operating Procedure for every product, and deliver comprehensive training for users.

And that's why Inivos® is a name you can trust.