



# PROXCIDE™

Robotic HPV decontamination  
with validated results and monitoring





## 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 ProXcide™ Fully automated robotic HPV decontamination

- Automatically tailors the process to ensure efficacy in every environment
- No operator programming required
- Comprehensive, reliable surface decontamination for critical care units
- Class-leading decontamination process times
- Tested for efficacy at Porton Down Bio-safety Unit





## ProXcide™

ProXcide requires no user programming. In-built software intelligence adjusts every decontamination process to the specific environment around it, ensuring that process outcomes are consistent with the independent efficacy validation.

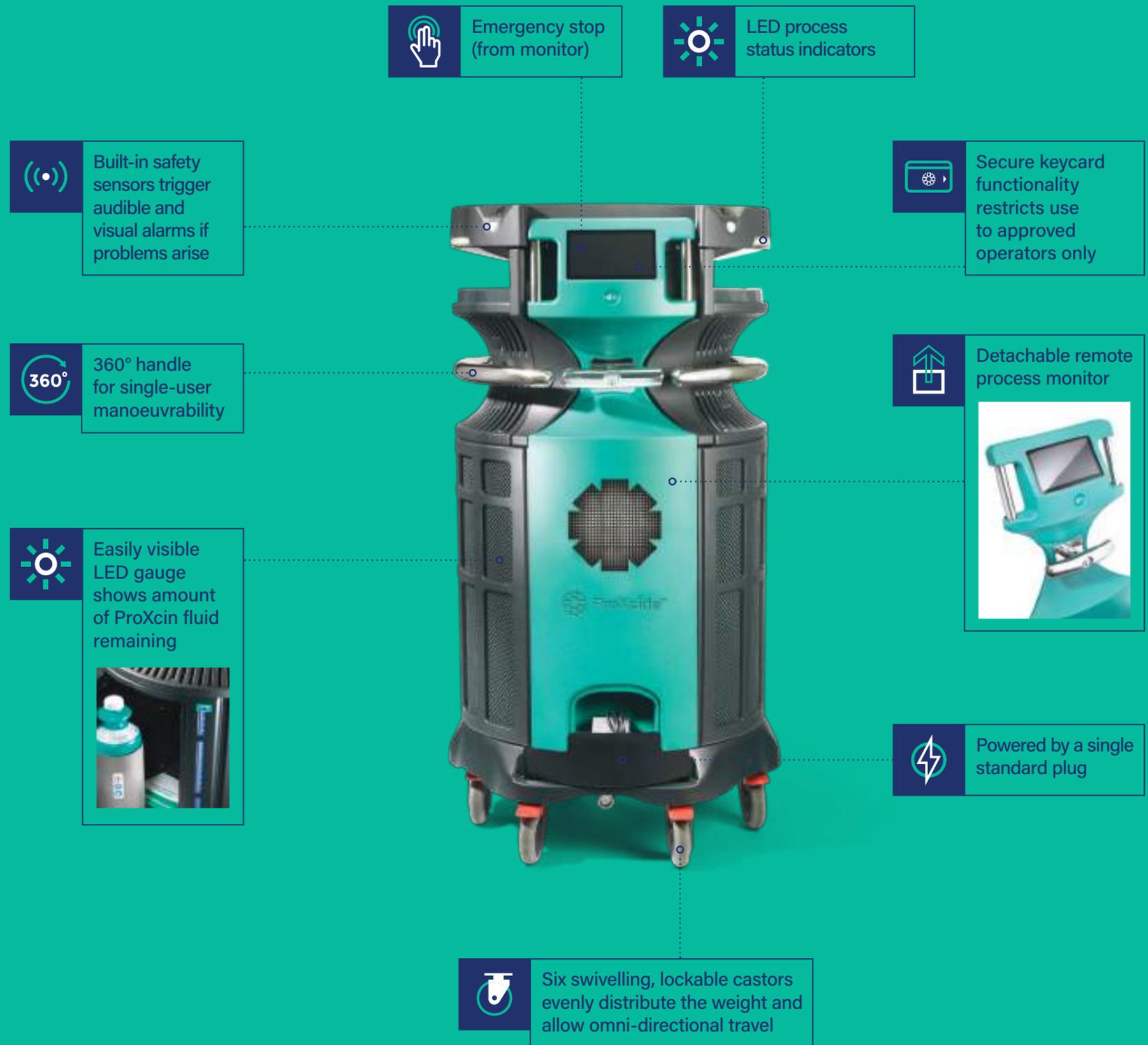
ProXcide uses our unique vapour dispersal technology to deliver ProXcin™ – vaporised 7.9% hydrogen peroxide – throughout the room.

Its powerful circulation, driven by pulsed fan control, ensures that the vapour is evenly distributed and makes contact with every surface in the room.

ProXcide features in-built hydrogen peroxide deactivation technology which automatically and rapidly deactivates the hydrogen peroxide to safe levels to allow the operator to re-enter the room.

- ☼ Repeatable, effective automatic decontamination
- ☼ Fast HPV cycles (under 2 hours)
- ☼ Proven to achieve log6 reduction on the most resistant organisms
- ☼ Easy, single-user operation
- ☼ Robust safety features
- ☼ Easy to move and operate
- ☼ Developed and manufactured in the UK

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





## Proactive infection control

ProXcide provides an extremely powerful, independently tested decontamination using a low concentration hydrogen peroxide vapour to achieve the greatest efficacy in areas where the infection risk is highest. The class-leading cycle times provided by ProXcide allows for increased routine use to tackle the most vulnerable areas or integrate into regular patient equipment cleaning.

### Powerful against pathogens

Our hospital studies have proven the efficacy of ProXcide against even the most resilient microorganisms. If used following a manual deep clean, ProXcide can deliver a log6 reduction with re-entry and use of the room in under 2 hours.

### Where to use ProXcide

ProXcide has been especially developed for critical areas in high risk hospitals. Each unit can treat a volume of up to 170m<sup>3</sup> – enough to treat side rooms, toilets and small bays. Larger areas such as multi-bed wards can be decontaminated by deploying ProXcide in conjunction with Inivos temporary ward dividers.

- Intensive Care Units (ICUs)
- Neo-Natal Intensive Care Units (NICUs)
- High Dependency Units (HDUs)
- Any other high-risk areas such as side rooms (single-bed wards).

### Infection control for high risk areas

ProXcide can be used as a proactive approach to infection control. For example, you can decontaminate side rooms before high-risk patients move in, to minimise their risk of infection. ProXcide 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 always provide full training to enable your staff to use ProXcide safely and effectively.



## Why choose ProXcide™ ?



### Single-system operation

ProXcide incorporates injection, dwell and deactivation technology in a single system.

### Tried and tested

The ProXcide system has been independently validated by The Bio-safety Investigation Unit at Porton Down.

Tests reported >log6 reduction of microorganisms associated with HAIs.

### Consistently effective

ProXcide automatically self-calibrates before each decontamination process, and in doing so delivers a consistent, guaranteed level of efficacy every time.

### Time-efficient

ProXcide typically completes a decontamination in under two hours.

The duration of the process will vary depending on the environmental parameters, the size of the space and its contents.

### Remotely controlled

ProXcide can be safely activated, monitored and controlled from outside the treatment environment.

The operator can terminate the decontamination process at any time, and go straight to the deactivation stage with no need to enter the room.

### Responsive and reliable

ProXcide achieves optimum decontamination quality in every environment by monitoring variables such as temperature, humidity and absorbency, and automatically adjusting the process to ensure an efficacious process is completed.

### A safer solution

ProXcide uses our own specially developed ProXcin™ hydrogen peroxide solution. At just 7.9% concentration, ProXcin is safer to store and use than the solutions used in many similar systems, and also allows quicker deactivation once decontamination has been completed.

ProXcide also prompts operators to work through an electronic process check sheet before every process, so staff and patients are never put in danger.

A fail-safe function ensures rapid reduction of hydrogen peroxide concentration in the event of technical issues. The fail-safe is automatically triggered if motion sensors on the ProXcide unit detect entry to the treatment space.



## The efficacy of ProXcide™

### Effective

ProXcide 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 is designed to achieve greater than log6 reduction of Clostridium difficile spores, which is widely acknowledged as one of the most resistant organisms, and is therefore also effective against a broad range of less resistant organisms.

### Proven efficacy against the toughest microorganisms

The following organisms are irradiated by ProXcide from highest resistance (8) to lowest resistance (1)

#### HIGHEST RESISTANCE TO DECONTAMINATION AND CLEANING...



8. Bacterial endospores



7. Mycobacteria



6. Small non-enveloped viruses



5. Gram-negative bacteria

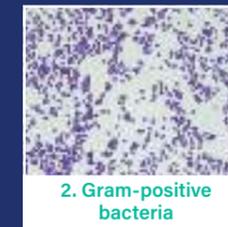
#### ...LOWER RESISTANCE TO DECONTAMINATION AND CLEANING



4. Fungi



3. Large non-enveloped viruses



2. Gram-positive bacteria



1. Enveloped viruses

### Faster results

ProXcide provides class-leading process times from start to re-entry, incorporating enhanced injection and deactivation techniques to achieve a full cycle (injection, dwell and deactivation) in under 2 hours. The unit automatically adjusts to environmental parameters to deliver a fully controlled and predictable decontamination cycle. It has the fastest process time of any similar technology on the market, completing a full cycle of a single room with en suite in around 1 hour 40 minutes.

Unlike traditional technologies, it is not heavily dependent on other environmental factors.

On completion of the process, a report is issued and logged, demonstrating a completed process which has successfully deactivated organisms within the room.



## How ProXcide™ works, step-by-step



### Deep Cleaning

First, the space should be thoroughly deep cleaned in line with your normal infection control procedure.

All absorbent materials must be removed, smoke detectors must be deactivated and doors, windows and ventilation ducts must be sealed off.

### Auto Calibration

The operator then positions the unit in the centre of the room to be decontaminated, allowing the ProXcide to auto calibrate to the environment.

### Injection Phase

During the injection phase, ProXcide aerosolises ProXcin™ into the air and circulates it throughout the room.

ProXcide uses a unique method of vapour dispersal based on ultra-sonic cavitation, with no reliance on heat or pressure. Only the smallest, most mobile droplets are dispersed, allowing the system to achieve high efficacy with a low-concentration chemical (7.9%).

Built-in air-flow technology with 30,000m<sup>3</sup>/hour circulation. This disrupts all naturally occurring air flows, such as convection currents near radiators, to ensure 'homegenous' diffusion of vapour throughout the treatment space and consistent exposure of all surfaces.

### Dwell Phase

Once the correct ProXcin concentration and humidity have been achieved, ProXcide enters the dwell phase.

During this stage, the ProXcin vapour gets to work by contacting all exposed surfaces and decontaminating them from harmful microorganisms.

### Deactivation

At the end of the process, ProXcide quickly and efficiently deactivates all the hydrogen peroxide vapour in the room.

The deactivation is fully controlled, and uses catalytic action instead of relying on the natural deactivation/ degradation of hydrogen peroxide. Due to the special low concentration formula used, deactivation is rapid and efficient. Deactivation is fully integrated into the main unit.

Once the process monitor shows that the cycle is complete, and the operator has confirmed that the area is safe, staff can re-enter the room and begin using it again.

### Monitoring, Reporting & Audit Trail

ProXcide monitors all key parameters throughout the decontamination process in real time, to ensure optimum output parameters are met on each deployment. The effectiveness of each process is validated based on achieving arbitrary output standards.

To guarantee an efficacious process, ProXcide will only confirm and record a successful cycle completion if the space has been fully decontaminated.

ProXcide generates a soft report of each deployment, including date, location, time, operator and process parameters. This report is then sent to a nominated recipient.

ProXcide provides a complete audit trail of all deployments, with location, date, time, completed checklist and operator details. A cloud-based app is in development that will support the creation of management reports from deployment data.

## A safer operation from start to finish

ProXcide achieves class-leading efficacy results, whilst using a low concentration hydrogen peroxide formulation. This is achieved due to the system design which selects the most mobile droplets of H<sub>2</sub>O<sub>2</sub> vapour generated by the ultrasonic system.

The lower concentration ProXcin solution reduces the potential storage hazard whilst minimising the risk posed to operators when compared to typical higher concentration formulations.





## Validated assurance

After the decontamination process has been completed, ProXcide generates an email report on every cycle and sends it direct to your inbox.

The ProXcide 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.

## Dedicated Decontamination with ProXpod™

The combination of ProXcide along with our decontamination chamber, ProXpod, provides an ideal solution that provides a dedicated space in which to decontaminate hospital equipment.

Easy to deploy and upscale, the ProXpod can provide an agile solution to your needs with initial set up in just 4 hours.



### A central decontamination point

The chamber's design allows it to be an effective central point for the decontamination of PPE. The interior is clad with PVC to facilitate cleaning, there are racks and hangers for the storage of PPE and an electrical socket for the installation of auto-decontamination equipment.

### Built for efficiency

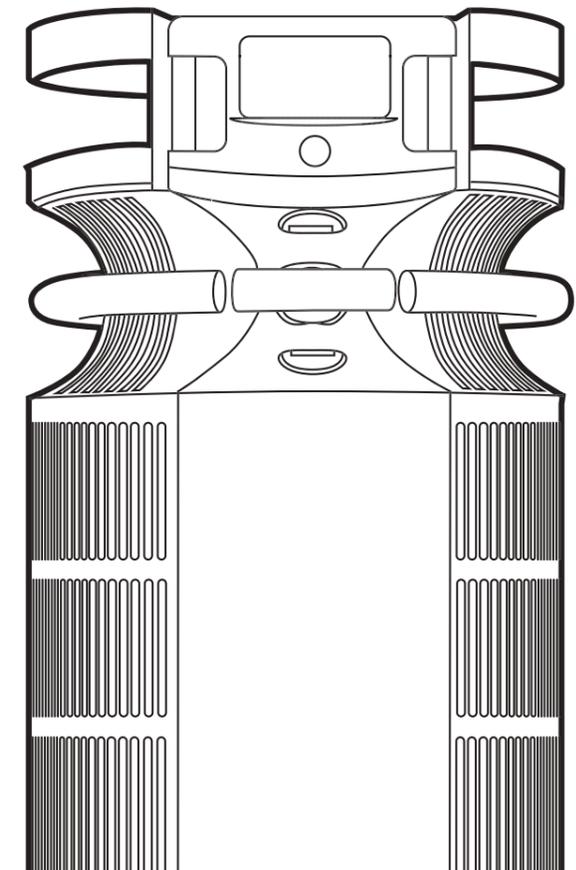
Two doors to encourage clean/dirty process management and segregation, minimising contact, whilst the minimal footprint facilitates local or departmental level deployment and use. Locks provide security and prevent contamination during decontamination and LED lighting is a power-saving utility.

Dimensions: 2.4m (w) x 2.4m (d) x 2.1m (h)



## Technical information

Formulation	ProXcin™, Hydrogen Peroxide
Dimensions (with monitor)	1275mm H x 725mm W x 650mm D
Weight	Approx. 113Kg (drained of fluid)
Connectivity	Wireless
Atomised droplet size	2-5µm
Distribution flow	3500 m <sup>3</sup> /h (Static pressure=0Pa)
Fluid storage capacity	6.8L (full), 7.5L (max)
Operational temperature range	10-30°C
Operational humidity range	15% - 85% RH (Max)
Maximum treatment volume	170m <sup>3</sup> for rooms (subject to environmental conditions)
Power consumption	804W at 230V supply voltage
Supply voltage range	230V UK // 120V AC US
Supply frequency	50Hz UK // 60Hz US
Fuse rating	13A UK
Warranty	4 years on all equipment and accessories





## Innovation vs infection

ProXcide is part of a family of products and solutions designed and manufactured by Inivos to help combat the risk of infection within hospitals and healthcare facilities.

Visit [inivos.com](http://inivos.com) for more information on the full product range.



Ultra-V™ and Ultra-V Connect™, automated UV-C decontamination



## 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 40% 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.

To learn more about our infection control products  
contact Inivos at [customerservices@inivos.com](mailto:customerservices@inivos.com)

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[inivos.com](http://inivos.com)