

CASE STUDY

MAT ECO-FLOW STEALTH UCV SYSTEM BEST CHOICE FOR NEW ON-DEMAND ULTRACLEAN OPERATING THEATRE



Photo Copyright© of Darwin Group® 2026



Darwin Group has launched a hireable HBN- and HTM-compliant operating theatre, the first of its kind, to help clear the backlog for NHS elective surgery.

MAT designed, supplied and installed the complete critical ventilation system to the operating theatre suites, including air handling units, HVAC BMS controls, and ventilation ductwork, as well as delivering design co-ordination, supply, and installation of the theatre specialist equipment - operating lamps, pendants, theatre control panel and PACS. At the theatre's heart is an MAT ECO-flow Stealth ultraclean ventilation (UCV) canopy.

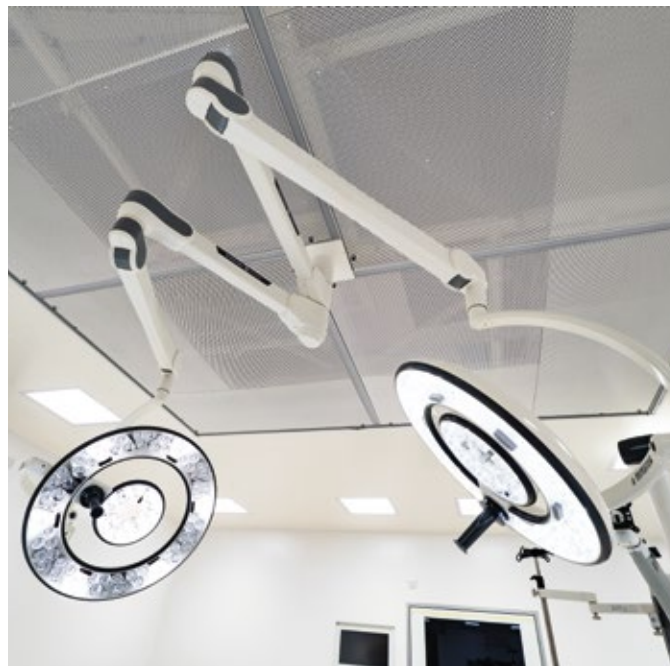
More NHS and private healthcare patients could receive life-changing operations sooner with the launch of the first hireable operating theatre by Darwin Group. The modular theatre provides NHS trusts and private healthcare organisations with the additional surgical capacity needed to help clear the elective backlog.

The On-Demand Ultraclean Operating Theatre can also support trusts and organisations needing to undertake maintenance and lifecycle programmes of work to their existing theatres, acting as a decant space and allowing elective procedures to continue throughout any maintenance programme. It can be provided with a full team of dedicated staff enabling it to be fully operational without impacting other services within a hospital.

Ultraclean ventilation and orthopaedic surgery

Orthopaedic and trauma care carries the largest elective surgery backlog. Designed in line with the requirements of HTM 03-01 (2021), canopies from the MAT ECO-flow range support hospitals in the fight against surgical site infection, one of the most frequently reported types of healthcare associated infection.

Reducing bioburden and airborne bacteria in the operating theatre is vital for successful surgery and improved patient outcomes. Thanks to UCV technology, the incidence of deep sepsis in orthopaedic surgery has been dramatically reduced. Ultraclean also provides significant benefits in multidisciplinary surgical procedures, reduces waiting lists, and increases flexibility for elective procedures.



The ECO-flow Stealth UCV canopy

The flush-to-ceiling ECO-flow Stealth is the latest generation of MAT's ECO-flow ultraclean ventilation system. It removes dangerous airborne bioburden within the operating theatre room for safer surgery. Quieter than traditional systems, it has also been engineered to be more energy-efficient, thus supporting net zero targets.

As well as complementing the modern operating theatre with its streamlined appearance, the UCV canopy's design means there are zero architectural clashes with other equipment such as lights and pendants. Helpful perimeter LED lighting changes colour to indicate canopy status:

- **Green = UCV mode**
- **Amber = Conventional mode**
- **Red = UCV fault**
- **Blue = HEPA filter dirty**

A specialist contractor

Medical Air Technology (MAT) supplies specialist critical ventilation solutions for the NHS, private healthcare providers, and life science facilities such as universities and research establishments.

Critical ventilation specialists in:

- Operating theatre suites & recovery
- Aseptic suites
- CL2 and CL3 containment laboratories
- Cleanrooms

Partnering with MAT brings a team of established specialist contractors into projects. Customers have direct access to MAT's in-house design and project management expertise. MAT manages all key elements for the defined scope of works – including cost, risk, programme and compliance – to ensure the project runs smoothly, efficiently, on time, and to budget.

Whether delivering a turnkey installation or a bespoke critical ventilation solution (MCP - MAT Core Package), for a new build, reconfiguration or refurbishment project, MAT has the expertise necessary for a successful outcome. A service contract with MAT's facilities management division, MAT FM, then provides ongoing maintenance for compliant, safe, energy-efficient



Written and distributed by:

Further information:

Call:

Email:

Medical Air Technology Ltd

Will Evans

+44 (0)844 871 2100

will.evans@medicalairtechnology.com

Need solutions? Let's work together

At Medical Air Technology, we aim high - we are committed to being the automatic choice for every healthcare and life sciences facility that needs safe, clean, productive environments.