OR1 NEO for Spire Harpenden

Needing to increase its facilities in response to ever-growing demand for surgery, Spire Harpenden recently selected Karl Storz's OR1 NEO integrated operating theatre system, which is specifically designed for minimally invasive surgery.

Karl Storz was asked to install two bespoke theatres, one including an



ultraclean canopy, increasing the number of theatres at the hospital to five. Space constraints and planning permission issues necessitated one being a modular build.

The company said: "OR1 NEO integrates the complex requirements of an operating theatre, bringing together endoscopy, full HD camera technology, visualisation, documentation, and communication. The entire surgical environment is configurable for different procedures and individual surgeon preferences, and controllable from a centrally located touch panel.

"OR1 NEO also provides connectivity with hospital ICT systems to enhance audiovisual communication from the operating theatre, whether for teleconferencing, teaching, or telesurgery."

Quiet, 'green', and efficient

With the NHS under constant pressure to minimise its environmental impact, the ECO-flow range of self-contained ultraclean ventilation canopies from Medical Air Technology are said to 'significantly reduce energy usage and cost, without any reduction in efficacy'.

Energy efficiency is achieved 'through innovative internal design', and infinitely variable-speed DC motors, while 'highly efficient centrifugal fans' reduce the energy drain required for cooling. LED cruciform lighting has also been added to the canopies, which use 'up to 60% less power than other similar canopies', even in full ultraclean mode, resulting in potential annual savings of up to £7,000 per unit.

In addition, the new canopies allow larger clinical clean zones, are 'exceptionally quiet', and feature an optimised control panel, which allows



individual control and monitoring of fan speeds and lighting. The panel also provides an alarm when filters require changing, and links simply to a building energy management system using the latest protocol.

Later this year MAT will launch the skirtless ECO-flow DYNAMIC, a 'streamlined' canopy.

Designed 'from the ground up'

Trumpf Medical describes its new operating table, the TruSystem 7000, as its most advanced operating table ever.

Developed with input from clinicians and usability studies, the table reportedly meets and accords with all current protocols and practices. Trumpf describes it as 'one table with optimum specification, in terms of range of motion and articulation, for all procedures'.

The company said: "The ease with which staff can attach and detach removable operating tables was the main subject of the collaborative process. An oversized latch hook and mating feature on the exterior show the current state of the mechanism: locked, unlocked, or misaligned." With patients 'generally getting bigger', Trumpf Medical stresses that the lightweight materials in the TruSystem 7000 do not compromise its overall loadbearing capacity. It added: "Removable components weigh an average of 30% less than previous models, drive systems are lighter, and load sensors clarify limits of safe use."

The TruSystem 7000dV model codeveloped with Intuitive Surgical is specifically for use in robotic surgery. Other features include 'an extreme range of Trendelenburg positions – up to 45°', and an 'extra low operating height' of 57.9 cms, which allows surgical equipment to be placed above the site.

Turnkey project completed at Homerton

Olympus Medical has recently completed a new 'turnkey' project in Obstetrics and Gynaecology at Homerton Hospital, East London.

The company has developed a strong relationship with the Homerton University Hospital NHS Foundation Trust following the installation of an Olympus ENDOALPHA integrated theatre in 2011, followed by a video routing solution to stream live surgery from the hospital's theatres and endoscopy department to its lecture theatre. Olympus has partnered with it again to deliver a first dedicated Obstetrics suite.

Olympus Medical said: "The Trust recently required a clinical area for emergency deliveries. Working with the hospital's clinical and non-clinical leads, we completed an installation which includes custom glass walling, a scrub area, and storage solutions, plus new ventilation, pendant design, and lighting control."

Flexible hybrid theatre solution



Maquet and GE Healthcare are jointly developing a new flexible angiography hybrid operating theatre solution.

The combined system will comprise GE Healthcare's Discovery IGS 730 angiography system and Maquet's MAGNUS operating table. With a laserguided mobile gantry, the Discovery IGS 730 can be conveniently positioned throughout the theatre 'with high predictability, to provide the medical team with full patient access'. The system offers left and right customisable parking locations in a single room, while its mobile design 'allows greater flexibility in the installation of ceiling-suspended elements'.

The MAGNUS operating table (pictured) is a 'fully-fledged and versatile' operating table with a 'floating function' that enables quick, precise movements during catheterbased interventions.

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'Strength to strength' for UCV canopy

Since the launch of its Exflow Evolution ultraclean canopy in 2012, clean air engineering specialist, Howorth Air Technology, says it has found the system to be 'the preferred choice' of both NHS and private hospitals in the UK and globally.

It added: "In fact, so much so has this been the case that, in this short period, we have supplied nearly 140 units."

At the system's core is the patented Coanda active air displacement device, designed to replace the controlled airflow of the solid side screen. Howorth said: "Primary airflow to the theatre remains the same as with other Exflow models, with the increased air volume required by competitive systems not needed, which lowers running costs."

Tom Ford, group sales director, added: "With Howorth's 150 years' plus of



experience in engineering clean air, the Exflow Evolution ultracean canopy is designed to meet the needs of 21st century operating theatres. Digital technology systems, including monitors, integrated scanners, X-ray machines, and microscopes, can all be housed within the 'clean zone', providing a hospital with maximum operating theatre flexibility."

Minor surgery light's many benefits

Astralite plus, Brandon Medical's latest minor surgical/examination light, is an extension to its Astralite HD-LED range.

The company said: "Higher intensity bright light at 1 m provides 100,000 lux or 60,000 lux, providing ample light for the most demanding procedures. With a larger illuminated area of 195 mm diameter, Astralite plus makes it easy to illuminate large areas of tissue, and to target light on the wound. The beams of light have a focus depth of 970 mm to penetrate into deep cavities. Astralite plus reproduces all of the visible The light head is positionable 'all the way around the couch', while LED life is 50,000 hours. Astralite plus uses <30 Watt to produce 100,000 lux or <18 Watt to produce 60,000 lux. LEDs are mercury-

free, and do not contain CFCs, POPs, VOCs, halogens, 'or other harmful chemicals'.

Brandon added: "LEDs only emit cold light without any infrared – ideal for comfort and safety. Variable intensity control allows setting of optimum illumination levels for the

procedure. By spreading the LEDs across the whole lighting

surface, a much better light distribution is provided, enabling excellent shadow control."

Daray lighting for dermatology unit

Daray Medical has recently supplied multiple LED operating theatre lights for use in a new dermatology unit at Solihull Hospital.

colours naturally and accurately."

The Heart of England NHS Foundation Trust, which operates the facility, has equipped its three new theatres with Daray's SL450 dualhead LED operating lights from its SL400 Series.

Daray says it was chosen to supply the lighting primarily due to its ability to deliver UK-manufactured products 'that combine vast energy reduction with noticeable cost savings, while exceeding quality and infection control standards'. "The SL400 series LED operating

theatre light boasts a variable intensity beam with excellent shadow

reduction and accurate colour rendering," explained Daray. "A fully enclosed head contributes to the effective management of infection control, while a springbalanced arm makes light work of positioning the cool, low-power,

focusable beam." A wide range of standard mounting options extends the lights' flexibility, 'making them ideal for the vast majority of surgical procedures'.

Regular fire damper tests essential

With operating theatres incorporating a host of expensive equipment that could be damaged or destroyed in the event of fire, an integral part of the fire protection system is the network of fire dampers – designed to close when the temperature within the ductwork reaches a certain level.

To ensure that these dampers operate when they should, an annual 'Drop Test' should be performed, the results recorded, and any necessary remedial action undertaken, as per the BS9999: 2008 Code of practice for fire safety in the design, management and use of buildings.

If not tested, or compromised, the adverse effects of smoke contamination or fire damage could take any affected theatre 'off line' for a considerable time.

Ductbusters has developed a programme which will allow hospitals to comply with BS9999 and B&ESA SFG 20, and can offer advice, whether fire dampers can be indentified from drawings, or via site inspection.

Mobile unit boosts capacity



On 11 May the first patient was treated within a mobile operating theatre at the Alexandra Hospital, Redditch, supplied by Vanguard Healthcare, 'to assist the Worcestershire Acute Hospitals NHS Trust in increasing patient access and reducing the risk of cancelling operations'.

The mobile unit incorporates an anaesthetic room, two-bed recovery area, and a laminar flow theatre. It will be used for general and gynaecological procedures, allowing the Trust to organise its waiting lists around the extra capacity. The hospital expects it to allow up to an extra 50 procedures per week to be undertaken.

At an opening ceremony and staff open day, the unit was officially opened by Redditch's Mayor, Pat Witherspoon.