

Health Sector News

Quick and easy-to-clean patient chair

Will Beck, the High Wycombe-based furniture manufacturer, has launched an attractively finished patient chair designed specifically for healthcare applications which incorporates anti-microbial fabric, has features that make it quick and easy to clean, and is manufactured using traditional joinery methods to maximise its longevity.

Steve Tarling, managing director of the family-owned British company, which was established in 1958 by his father-in-law, Peter Leeds, says: "The new Genesis Kleenchair (pictured) was developed in response to NHS and wider healthcare sector demand for a traditionally produced patient chair, which, by being quick and easy to clean, would help in the battle against healthcare-acquired infections. It is already being used in a number of English and Welsh hospitals, the largest order so far having been for 250 chairs for the new Aneurin Bevan Hospital in Ebbw Vale, South Wales, one of the Principality's first 100% single-bed hospitals, to which we also supplied a

substantial package of other furniture."

Features include a 'unique ergonomic design with integral handgrips', smooth wood and upholstery with minimal gaps, a 'hygiene gap' for easy cleaning and hoist lift access, three coats of antimicrobial polish, a 'Reflexion pressure relief seat' that can be removed and wiped clean as standard, a choice of seat heights (from 14-21 in), and sustainable timber construction. The Genesis Kleenchair comes with a five-year guarantee, and is part of a comprehensive Will Beck furniture range widely specified for use in hospitals, health centres, and the care sector.

Steve Tarling said: "We have been on the NHS Framework Agreement for Wooden Upholstered Furniture for over 50 years, and our product range includes not only a wide range of chairs – for applications ranging from waiting and hospitality areas to wards, cafés, and offices, but also



tables, cabinets, and beds.

At around the same time as we launched the Genesis Kleenchair, we also introduced our Titan Bariatric chair, again in response to customer demand."

Tested by FIRA to 50 stone (318 kg), the Titan Bariatric is again designed to be quick and easy to clean, with a removable, wipeable seat as standard, is available in

fixed or drop arm options, comes with a choice of seat heights, incorporates anti-microbial wood polish, and is manufactured with heavy duty bolts for strength and longevity. Described as 'over-engineered for tough, heavyweight applications', it has a 28 in (700 mm) seat width, and can be supplied with a wide choice of fabric or vinyl upholstery.

Both the Genesis Kleenchair and Titan Bariatric are described and shown in a new, fully illustrated, 52-page catalogue covering Will Beck's entire range.

Cover Story

Integrated digital theatres for pioneering Kent hospital

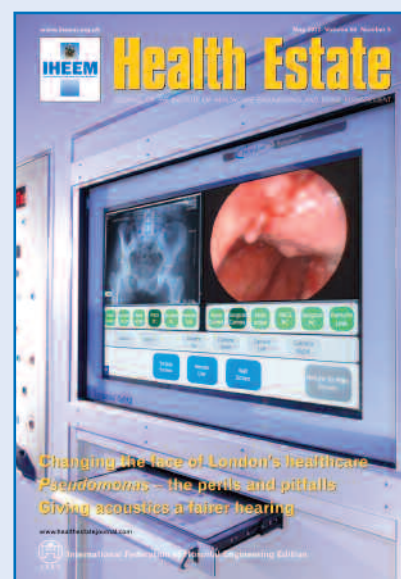
Brandon Medical's fully integrated digital operating theatres have been installed at the Tunbridge Wells Hospital in Kent, England's first '100 per cent single-bed' acute healthcare facility.

Eight of the hospital's theatres were equipped by the UK manufacturer with what it claims are the market's first 'fully integrated' digital operating theatres. Brandon Medical's Symposia is a digital media package incorporating a complete range of medical audio-visual products servicing a number of users and applications. The system connects medical professionals to a range of A/V resources, which can be accessed immediately from any location.

Symposia CoPAX, an integrated control and display system that combines the display and distribution of high definition laparoscopic images, audio-visual control, and display functions – all incorporated into a single, simple-to-use, integrated

wall unit – forms the central control in digital operating theatres. The 42 in touchscreen features what Brandon says are 'unique applications', for instance automatic emailing and recording of documents such as operating information. Bespoke functions, designed with the NHS client, can also be integrated. These include swab and suture count, WHO safety checks, ancillary theatre equipment control, and even the manoeuvring of the operating theatre table.

Brandon Medical's Symposia Digital Theatre allows medical professionals live interaction with surgeons in operating theatres. The technology provides a tool for knowledge sharing, including via surgical skills best practice, tele-mentoring, medical lectures, and communication between multi-disciplinary teams. The integrated digital theatre technology builds on Brandon Medical's specialist skills in developing surgical training centres.



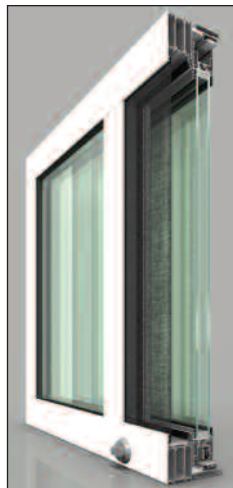
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Sliding aluminium window for anti-ligature applications

Façade specialists, Wicon, and glazing manufacturer, Fendor, have jointly launched a sliding aluminium window system specifically designed for anti-ligature applications.

Wicon will produce the profiles for fabrication and installation by Fendor's team. Key features, including those designed to make the window 'anti-ligature', and reduce risks relating to absconding or the passing of illicit substances through, while still maintaining fresh air flow, include:

- A smooth, flush internal face with no ledges or lips, and fewer joints.
- Anti-ligature hardware.
- A perforated aluminium mesh to maximise fresh air.
- An easy-to-clean, low maintenance design.



- Full compliance with Building Regulations Part L 2010, and thermally broken for energy efficiency.
- Sight lines reduced by around 40 per cent to allow a high level of natural light.

- Available in a 'highly durable' white polyester powder coating, and with other single and dual colours.
- Attractive aesthetics.
- A robust, easy-to-use, sliding mechanism.
- Concealed fixings.

Potential applications include mental health facilities, secure 'category A' hospitals, adult learning, high dependency, forensic, young offender establishments, custodial suites, children's secure centres, and women's refuges.



Rigel passes the test in South Africa

Rigel Medical analysers have been specified for a South African project designed to improve standards of medical device safety and performance inspection.

The Rigel 288 electrical safety analyser, Uni-Pulse defibrillator analyser, and Uni-Sim – reportedly the first 'all-in-one' vital signs simulator, are among several precision testers being used by Pretoria's National Department of Health for its health technology audit and asset management scheme. This aims to create seven teams of highly trained technicians and equip them with the skills to understand better the importance of electrical safety testing and how to service and maintain medical equipment. Once qualified, they will embark on a programme of safety and performance inspections of biomedical equipment using the Rigel instruments, thus improving national safety testing procedures, and ensuring that more electrically operated equipment, such as X-ray machines, ECGs, and blood pressure units, used throughout South Africa, are safe for use by medical staff and patients.

Rigel Uni-Therm (formerly the 377) electro-surgical analysers and Med-eBase PC database software are also being used to improve the technicians' skills.

'Fully integrated' theatre solution

S-equip is the new name for Starkstrom's fully integrated operating theatre equipment 'solution'.

The company says that, as sole supplier, it can 'guarantee full and faultless communication between all the products which form the 'solution'.

Equipment includes clinical lighting, pendants, surgeons' control panels, isolated power (IPS), and uninterruptible power supplies (UPS), PACS viewing stations, battery back-up systems, operating tables; transfer trolleys; MRI, RF, CT, and X-ray shielding, UCV canopies, SCP clocks, and consumables. S-equip also includes Starkstrom's new 'multi-level, vendor-neutral, and bespoke' audio-visual system, VisionOR.

Products can be purchased and

installed separately, but Starkstrom says its ability to provide and fit a comprehensive package of integrated operating room and critical care equipment, and offer 'the fullest post-installation service provision and warranty', make S-equip 'stand out from the competition'.



Wind tower ventilation modelling simplified

Monodraught and building performance analysis specialist, IES, have developed Performance Components – 'a revolutionary way of modelling natural ventilation systems' using the IES Virtual Environment Suite.

Monodraught explained: "While Monodraught pioneered its Windcatcher natural ventilation system over 20 years ago, until recently modelling such wind tower systems was considered time-

consuming and complicated. Architects and consultants often encounter problems understanding the true impact of incorporating Windcatcher systems within their buildings, due to the difficulty in verifying the achievable improvements. Conventional modelling involves constructing a 3D representation within a specific model, and assigning each face with a performance factor that quantifies its ability to 'catch' the air. However, the

process is often misunderstood and time-consuming."

Monodraught's 'vision' was a library of predefined 3D representations of its systems easily 'draggable' from a catalogue of products onto a building model. With the launch of Performance Components, it says 'there is now a defined method for modelling wind tower natural ventilation systems that can be recognised across the sector'.

Surgeon 'operates by torchlight' after power loss

NHS Lothian confirmed last month that it would be taking legal advice after an Edinburgh Royal Infirmary surgeon had to finish an operation by torchlight when maintenance workers at the health board's 'PFI provider', Consort, allegedly failed to follow its 'critical procedures', turning off the electricity supply to two operating theatres 'too early' on 29 March as part of planned maintenance.

According to the Press Association, an operation in one theatre that had not begun had to be postponed until power returned, while staff in the other had to complete an operation by torchlight.

Alan Boyter, executive director at NHS Lothian, said: "We have reached the point where we can no longer tolerate the repeated, serious, and potentially life-threatening nature of these incidents at the Royal Infirmary by our PFI provider, Consort. We are currently consulting with

our lawyers to discuss what options we have in relation to the contract. Patient safety is always our absolute priority, and we will not allow that to continually be put in danger by a third party. We are angry and frustrated with the performance of Consort."

Alan Boyter explained that the health board had 'detailed contingency measures' to ensure that patient safety is maintained. The health board would not comment on the type of the operation completed by torchlight.

In a BBC News story broadcast on 20 April, Consort director, Stephen Gordon, said the company had 'taken this incident very seriously', and had 'undertaken a thorough investigation into this matter in conjunction with NHS Lothian to review the current operating procedures in place for works of this nature'. He is reported to have said the power to the theatres had been disrupted 'for about 10 minutes'.

Easier showering for the less mobile

Impey Showers has unveiled its latest showering technology for those with mobility issues.

Its Impey Freedom air-assisted doors incorporate a 'unique' air-assisted spring mechanism that lifts the doors clear off the ground at the press of a lever.

The door can be secured by gently pressing down on the handgrip, and the specially designed floor seal creates a completely watertight seal. The 'durable and strong' doors have a lightweight, powder-coated frame and anti-shatter PETG panels, and are covered by a lifetime guarantee, while the spring mechanism is 'maintenance-free'.

Impey Showers' technical manager, Shaun Hunt, said: "Opening and closing conventional shower doors can be difficult, as the rubber floor seal can drag



and wear badly. Unless the door is manually lifted clear of the floor, some users – and especially those in a wheelchair, the frail, and the elderly – may experience difficulty. We wanted to overcome this obstacle."

Pegler's comprehensive new brochure

Pegler Yorkshire has brought its well-known Belmont range of commercial radiator valves under its 'Pegler Commercial Valve Range', which now offers a much wider portfolio.

The company has also launched a new 'comprehensive' brochure featuring best practice and compliance sections offering technical help to specifiers, contractors, and service engineers.

The brochure offers comprehensive technical data, including system design consideration and best practice, performance – with pressure / temperature ratings and flow rates, material and operating specifications, and diagrammed connect and control information. It also features additional accessories – from radiator valve security measures to a telescopic tailpiece.

News in brief

Bringing the outside in

Ambius, a specialist in enhancing buildings through planting, scenting, and artwork, has launched a free Biophilia toolkit to explain how plants and natural elements should be used in building interiors for maximum benefit. The Biophilia Toolkit draws on scientific studies which show the link between closeness to nature and well-being. It provides key pointers for FM professionals on techniques and tools to help create environments in which people 'naturally feel engaged and productive'.

Higher level FM apprenticeships

The British Institute of Facilities Management (BIFM) has announced that it is part of the Asset Skills-led project to develop degree-level apprenticeships in facilities management. Over £1 million has been secured by Asset Skills and the project team from the Government's Higher Apprenticeship Fund to support FM apprenticeships up to levels 4, 5, and 6. The BIFM says the apprenticeships will offer 'an excellent way for new or existing employees to master practical skills in the workplace, while gaining a formal qualification'.

Fire panel to take pride of place

Pride of place on C-TEC's stand at this month's IFSEC exhibition (14-17 May at Birmingham's NEC), will be the company's new ZFP multi-loop analogue addressable touchscreen controlled fire panel. Fully EN54 part 2 and 4-compliant, the ZFP's Hi-Net high-integrity network can accommodate up to 64 nodes (panels), and over 10,000 programmable and indicatable detection zones. The 'intuitive' 4.3 in touchscreen provides clear, constant feedback on of system activity, while the on-screen QWERTY keyboard simplifies programming and installation.

From catering to cleaning

Medirest, the catering and support services provider to the healthcare market, has won a three-year contract worth £1.9 million per annum to provide catering and support services at South Bristol NHS Community Hospital. From 30 March this year, Medirest has worked with the Trust to deliver catering solutions for patients, visitors and staff, alongside support services including cleaning, logistics, security, linen and laundry, waste management, and mail room services.

Unobtrusive security shutters

Charter Specialist Security's Charter-Integr8 security shutters are protecting North Lincolnshire's newest health and social care facility – the Ironstone Centre in Scunthorpe.

Health and social care amenities there include GP's surgeries and a pharmacy, specialist clinics, physiotherapy, dental services, and social services.

Forty-eight Charter-Integr8 180C security shutters have been installed to all ground floor windows, and five Charter-Integr8 180FR fire-rated shutters feature internally as part of the building's fire strategy. The

shutter mechanics are integrated into the building fabric, and, in the raised position, the shutter is completely concealed from view. In the lowered position, the shutters ensure effective security.

The 180C features an aluminium hood box and guide rails with a neat, compact design to minimise visual impact, with the shutter curtain comprising twin wall extruded aluminium sections designed for maximum security.

The 180FR galvanised steel fire-rated shutters can be polyester powder coated to any RAL/BS colour, are tested to BS476



Part 22, and come with a choice of 1 hour and 2 hour certification and optional audio-visual warning. Operated via a link to the fire alarm system, they lower automatically upon activation.



'Cutting-edge' research facility

The Leadbitter Group has completed the £29 million second phase of the Institute of Life Science and the £22 m Centre for NanoHealth at Swansea University.

The seven-storey building now houses a new clinical research facility, a clinical imaging suite, the Centre for Health Informatics, Research and Evaluation, and the Centre for NanoHealth (CNH). It also provides business incubation units, tripling the space available to grow related businesses.

The full-height glazed atrium cuts a path through the tower of the structure, linking the University with the adjacent Singleton Hospital. The tower includes high-quality incubator offices and meeting spaces, inpatient facilities, and a fifth floor terrace with extensive views.

The ground floor Centre for NanoHealth incorporates laboratory facilities, a cleanroom, and nanoprobe and e-beam machines. The sensitive equipment necessitated anti-vibration concrete foundations and floors.

As the complexity of the CNH facility meant work needed to proceed simultaneously with construction of the seven-storey tower, Leadbitter installed temporary support steels, weathered for water tightness, and erected a cantilever scaffold to full height on the tower, allowing progression in tandem.

Fire detection 'industry first'

ADT Fire & Security says its latest fire detection solution innovation, Generation 6 Detection Technology, offers 'unique functionality and additional benefits' to provide speedier installation, more efficient programming, and 'a superb detector lifespan between service changes'.

Generation 6 detectors feature a remote wireless link built into the housing, enabling two-way communication with the new 850EMT Engineering Management Tool. Reportedly an industry first, this allows engineers and service technicians to adjust settings and parameters using the simple hand-held device without having to manually access each detector.



ADT explained: "In applications with numerous detectors or access issues, this offers time savings, and makes installation and programming of the detectors significantly safer, by allowing engineers to work at ground level."

The new range is said to offer 'superior detection performance, greater fault tolerance, and improved environmental protection'.

'Advanced design, manufacture, and use of new algorithms' are said to give a 10-year lifespan for carbon monoxide detectors between service changes, and a 20 year lifespan for smoke detectors – 'twice the industry average at half the cost'.

Access control system impresses French hospital

An ongoing upgrade of security at the CHU Annonay Hospital in France's Rhône-Alpes region has seen the hospital install Ingersoll Rand's PegaSys electronic access control system to cover 64 doors, three buildings, and four car parks.

Wanting to retain its existing locks, and needing a flexible access control system capable of meeting changing needs and providing secured access to several buildings, the facility chose PegaSys both due to its low installation costs, and



the ability to upgrade in future without having to provide wiring to individual doors.

The system was initially installed on a small number of doors, and then extended to provide greater security to secretarial offices. By incorporating online validators, hospital administrators can control access rights without having to programme badges individually at the front desk.

Future expansion plans will cover a further two buildings – a PegaSys system can incorporate up to 65,000 doors.

Hong Kong nurses' UK training

A group of senior nurses from several Hong Kong hospitals recently visited Eastwood Park in Gloucestershire, as part of a UK study tour arranged and co-ordinated by the specialist healthcare training facility in conjunction with the Hong Kong Hospital Authority.

The month-long visit was arranged to strengthen the group's decontamination knowledge and skills through practical experience. The nursing team undertook intensive decontamination training courses at Eastwood Park, including hands-on practical training within the safe environment of the centre's

sterilisation unit, several days at the central sterilising facility at B.Braun Sterilog in Birmingham, and a period 'experiencing the realities of a busy SSD department' at the Bristol Royal Infirmary.



Steering operations



Dave Hogan CEng FIET FlntLM, employed for the past 10 years at BAE Systems, most recently as manager of Engineering, Programmes & Support, has joined the Engineering Council as operations director.

He said: "I join at an exciting time, as we seek to balance the UK economy with manufacturing and infrastructure at the heart of the political agenda. It is here that the contribution of the UK's engineers and technicians is crucial. As part of this, I will be looking to build on my past experience in driving forward the benefits to the UK, to business, and to the individual, of professional registration as a means of identifying those engineers and technicians who display not only technical skills, but equally a commitment to developing their professionalism, and adherence to our ethical principles."

Dave Hogan previously spent 26 years in the Royal Navy, working his way up from Artificer Apprentice to Leadership Training Officer for 2nd Sea Lord.

Alongside sitting on the Engineering Council's Board of Trustees in the year before his appointment, he worked closely with the Professional Engineering Institutions to help embed professional registration into BAE Systems' staff structure, and has also been involved in the Technician Council's work.

Special luminaire benefits patient sleep patterns

A recent study by Montagnese & De Rui (2011) from Padova University, investigating the benefits of strong light signals administered in the morning on an 82-year-old female cirrhosis patient with a chronic tendency to sleep-wake inversion – causing both delayed wake-up time and disturbed night sleep – utilised the 'Amadea' wall-mounted luminaire developed by Brandon Medical's partners, Derungs-Licht.

After chronotherapy with the polychromatic light – which is specifically designed to simulate the body's natural sleep-wake cycle – her sleep-wake problem 'progressively improved'.

To advance her sleep-wake cycle, the lamp was set to automatically switch on at 6.30 am, and off at 10.30 pm. The Visual Timing Light provided a smooth transition from cold white light in the morning (6,500 K > 3,000K), to a mixed light at noon, and

finally through to warm red enriched light in the evening (3,000 K > 6,500 K).

Brandon MD, Graeme Hall, said: "The Amadea Visual Timing Light simulates a 24-hour light sequence – from sunrise to sunset." On leaving hospital, the patient received advice on sleep and light hygiene at home, and, after four weeks, remained well, 'with a residual tendency to delayed sleep habits, but with considerable improvements to her night sleep quality'.

Reader in Medicine, Sara Montagnese, first became aware of Brandon Medical after reading an article in the *Financial Times* on the company's winning of a £50,000 prize in the 2009 Chamber Awards, in the Technology Through Innovation category, for its medical lighting technology. She and her team are now interested in confirming the findings via formal clinical trials, and Brandon is keen to be involved in any further research.

