

# Sensor products used as part of 'visionary' project

**Paul Musgrove, UK Development manager at Conti+, explains how, as part of a major development project at the charitable Hospital of St John & St Elizabeth in London, the hospital's Estates Management team has worked closely with the manufacturer of taps, washroom fittings, and sanitaryware, on the roll-out of sensor washbasin mixer and shower products as an integral part of its water management programme.**

The charitable Hospital of St John & St Elizabeth is implementing a water management system as part of its 'visionary' HJE2020 development project, which is seeing an updating of the whole site in London's St John's Wood. The Estates Management Team, led by director of Estates and Projects, Steve Kimp, has collaboratively initiated a hospital-wide masterplan which encompasses a large mix of building stock, dating from 1899

through to the present. Incorporated within the vision is the need to effectively control water management within the healthcare facility. Working with Swiss manufacturer, Conti+, the team has tested, and is in the process of rolling out, sensor products as an integral part of its water management programme.

## **Building on 'a unique model of care'**

Founded in 1856 under the care of the Sisters of Mercy, an order of nuns which



**Just a gentle tap of the exposed control will start and stop the flow, making control easier for any patients weakened by illness.**

worked with Florence Nightingale in the Crimean War, the Hospital of St John & St Elizabeth pioneered the use of advanced nursing techniques to help the sick and dying in the local community. Now, over 160 years later, the nuns have gone, but their ethos remains at the heart of what is regarded as a unique London hospital. The Hospital of St John & St Elizabeth is a charity, with all profits funding St John's Hospice, located within the hospital's grounds. The hospice,

inpatient, day care, and community facility provides care, without charge, to people living within its wide catchment area. With this unique model of care comes an added responsibility, with the Estates team ever mindful of the need to carefully manage budgets, while providing the highest quality healthcare

environment. Both the hospital and the hospice also take great pride in their heritage, and especially in the Catholic ethos upon which they were founded; this assures patients of a commitment to care and compassion in the delivery of their healthcare.

## **A sizeable site**

The hospital and hospice cover a complete site of approximately 14,000 m<sup>2</sup> - with five operating theatres and 70 inpatient bedrooms - and care for around 80,000 patients and visitors annually.

## **Collaborative approach to water control**

As in all healthcare facilities, water management and the control of infection are critical concerns for the Estates

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## WASHROOM SYSTEMS

Management Team. Under the careful and astute watch of Steve Kimp, director of Estates and Projects, the small and highly motivated team has planned and implemented a series of initiatives across the range of properties, which are providing a safe environment for patients and visitors. Central to the implementation has been a collaborative management approach. The entire Estates team has been involved in the identification of key issues, and the proposal of solutions, followed by implementation and analysis – so that any systems put in place are supported by the whole team. Regular testing has been critical to the success of the programme, allowing the team to quickly identify and isolate any problem areas.

A key part of the extensive water management programme has been the testing and rolling out of sensor washbasin mixers and showers for public areas. Safety and infection control were central to the decision-making, but a number of additional requirements also drove the team towards the specification of the Conti+ product range. There were three key selection criteria – the chosen products had to be reliable, ‘functional first’, and with spare parts simple to manage.

### Sensor selection process

There has always been discussion around the use of sensor products within healthcare environments. While touch-free activation gives clear and clean benefits, there is also a perception that such products can be unreliable, unhygienic, and expensive. It didn't take long, however for the Estates team at the Hospital of St John & St Elizabeth to realise that with Conti+ sensor products any such concerns were unfounded.

With patient safety at the heart of their operation, the sensor products are



Steve Kimp said: “Conti+ was a clear choice based upon the quality of its products and unique features.”



Easy maintenance is ensured, with above deck access to all working parts.

suitable for use by a wide range of patients and visitors, including children, and those with mobility restrictions.

Touch-free controls are a clear benefit for less able patients, who struggle to grip and turn a control. Scalding risk is eliminated with pre-mixed water, which can be preset to an optimum temperature. With Conti+ sensor products the temperature can even be preset in the factory, to reduce the workload of the installer prior to onsite temperature checks as part of the commissioning process.

Initial testing within the hospital's Management Offices demonstrated the quality and reliability of the products, and indeed all the interested parties – including installers, maintenance personnel, and users, confirmed their confidence in the products.

### Demonstration gave reassurance

The perception that the solenoid within the sensor tap can be a breeding ground for bacteria and biofilm was also quickly eliminated, with a simple demonstration showing that, due to the unique design of the Ultra tap, the water does not even pass through the solenoid. Within the tap are larger than average filtration holes, which enable larger debris to be flushed away, in turn preventing a build-up of material to which bacteria can adhere. A regular hygiene flush removes any stagnant water, while empty patient rooms, where risk is increased, are quickly identified through internal management processes.

### Reflection issue

Concerns were also raised, based on past experience, of water flow from sensor taps being triggered by reflections from mirrors, and even ‘hi-vis’ jackets hung in washroom spaces. With knowledge of how the sensor taps work, planners avoided, for example, placing mirrors opposite the tap sensor to ensure that there were no obvious such risks, while remaining reassured that the sensor ranges can be easily adjusted to suit individual circumstances on site. Simple-to-use controls on the Ultra allow users to adjust the individual products with ease.

Unexpected benefits of the use of sensor products included the ability to set flow rates, not only enabling the Estates team to efficiently control water usage, but also assisting cleaners – by setting flow rates at optimum levels to reduce the risk of splashing, thus keeping wash areas cleaner. Energy usage can also be reduced by pre-setting the water temperature to levels which are sufficiently high for effective cleaning of hands.

While there is certainly an initial cost increase when deploying sensor taps, both the measurable and user benefits made the sensor selection process a straightforward one for the Estates team looking to the long term.

### Realising the water management ‘vision’

Following an extensive period of testing by the Estates team, management, patients, and visitors, the first taps are now to be installed during the current 15-bedded ward refurbishment. A small unit consisting of seven day case beds has also seen Ultra deck mounted taps, Lino clinical wall-mounted taps, and Tipolino showers installed.

The stylish design of the Ultra tap was an additional benefit, with its ‘smart’ electronics cleverly concealed. Useful functions – such as the ability to turn off the system while cleaning takes place – are easily activated, simplifying the task for cleaning personnel. Aerators and the control electronics are all integrated into the ‘crown’ of the product, which is also protected against tampering, with access only possible with the use of an Allen key. The incorporation of all the hydraulic components, including the filters, valves, and isolation valve, within the ‘crown’

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The variable 12 or 24-hour hygiene rinse prevents the unwanted build-up of germs, and ensures hygienic delivery of water.

means that all maintenance can take place from above.

**Easier servicing**

The modular design of the tap means that servicing can be carried out in seconds with the ability to quickly change a filter without the need for tools. The ‘TwistStop’, a unique and fully-automatic water cut-off, means that individual taps can have water isolated from above deck with ease. Small LEDs in the electronic modules signal the maintenance status and provide a straightforward diagnosis.

The electronically controlled shower faucet, Tipolino, with exposed installation, operates with a simple tap of the stop/start control on the side of the unit. Even patients with limited strength can control the shower with a gentle touch. The temperature can be easily adjusted thanks to its reliable thermostatic cartridge with anti-scalding and auto-thermic protection. Manufactured in brass



The extra high tap with a spout height of 162 mm (additional models with 94 mm and 51 mm spout heights are available) enables hands to be thoroughly cleaned up to the elbow.

with a chrome finish ensures that the unit remains cool to touch throughout its use. Showers have been pre-set on a timer for three minutes for water saving, but can easily be adjusted on site should users require.

**Hygienic flush**

Maintaining both showers and taps has proven simple, with a 12, 24, or 48-hour hygienic flush activated by the Estates team using a simple stop/start button, reassuring them of a bacteria-free system. Additional maintenance should also be reduced to a minimum, thanks to the reliability of the Swiss products, which come with a two-year guarantee.

**Powerful installation options**

With the sensor products available in mains, battery, solar, and turbine options, the Hospital of St Johns & St Elizabeth quickly decided that the battery-powered option would best meet its maintenance needs. This simplified the installation process, since no hard wiring was required. There was also an opportunity to reduce the number of tradesmen required on site during the installation process, with no need for complex channelling for a mains supply. The battery-powered system, which utilises standard AA batteries, provides an anticipated battery life of around four years.

**Refining spare parts and maintenance**

One of the critical issues for the Estates team was to have sensor products which could be easily maintained, with any spare parts required easily obtained. Above deck access provided the team with all the control it needed. All electronic working parts of the Ultra tap, including access to filters, the solenoid, and the battery, can be accessed above deck. The

crown is secured against tampering via an Allen key, and can be easily removed for maintenance without the need to reach difficult-to-access areas under the washbasin or within IPS or vanity units.

Spare parts across most Conti+ products are also standardised, meaning that an Estates team needs only hold a limited number of parts to service the taps and shower units. To complete and complement the installation at the Hospital of St John & St Elizabeth, Conti+ provided full training to the Estates team, with the Conti+ team on hand to share its expertise, and ensure that products are set up efficiently and effectively on site. Products are held readily in stock with distribution partner, Challis Water, to ensure prompt and efficient delivery to site.

“At the Hospital of St John & St Elizabeth we are always looking for innovative ways to deliver excellence,” said Steve Kimp. “Conti+ was a clear choice based upon the quality of its products and their unique features, yet all available at a commercially viable price.”

“The safety and wellbeing of our patients and visitors is central to everything we do, and it is thus refreshing to discover new products that support this whilst making our jobs easier,” added head of Estates, Richard Metcalfe.

**Success of a collaborative approach**

The internal collaborative approach was something we at Conti+ embraced. Working closely with the Hospital of St John & St Elizabeth’s Estates team from an early stage has enabled us to deliver a solution which works to deliver the team’s many goals.



Paul Musgrove

Paul Musgrove has 20 years’ experience delivering efficient and effective water management solutions to healthcare clients including NHS Trusts and private clinics.



# Reduce infection. Ease maintenance.

The ULTRA tap from Swiss manufacturer CONTI+ gives reliable hands-free use with the water flow hygienically triggered via a robust infrared sensor.

Maintenance is simple with above-deck access to all parts allowing you to change the battery, solenoid or even isolate the water in seconds. Spare parts are common throughout most CONTI+ products giving purchasers a simple solution for their maintenance teams. The ULTRA tap concept can be powered by mains, battery, solar or turbine with batteries lasting on average 4 years.

Manufactured in Switzerland with stock available in the UK.

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