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Smart fan coil control for modern hotel refurbishments

How the SAUTER Smart Actuator simplifies renovation projects while improving efficiency and guest comfort



Renovating occupied buildings presents a unique challenge: operators want to improve comfort and energy efficiency without extending construction time or increasing installation complexity. In a recent hotel refurbishment project, the SAUTER Smart Actuator proved to be the key technology for achieving exactly that.

As part of the complete modernisation of a nine-storey hotel with 192 guest rooms, the existing fan coil systems were replaced with a new HVAC solution designed around the SAUTER Smart Actuator. By integrating control intelligence and valve actuation into a single device, the project team was able to streamline installation, accelerate commissioning and create a future-ready room automation solution.

A renovation with ambitious goals

Originally constructed in the 1980s, the hotel required a comprehensive refurbishment to meet today's expectations for comfort, sustainability and operational efficiency. The existing HVAC installation had become increasingly inefficient, resulting in higher energy consumption and excessive water usage throughout the guest room areas.

The refurbishment therefore pursued several objectives:

- Modernise the guest room climate control systems
- Improve heating, cooling and ventilation efficiency
- Reduce installation effort during renovation
- Simplify operation and maintenance
- Deliver a better guest experience while lowering operating costs

Beyond replacing the fan coil systems, the project also included improvements to the building management system and water infrastructure to support more sustainable building operation.

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The SAUTER Smart Actuator at the heart of the solution

Rather than relying on conventional fan coil control with separate automation components, the project centred on the SAUTER Smart Actuator.

The Smart Actuator combines the automation controller and valve actuator into one compact device. This integrated design reduces the number of individual components required for each fan coil unit while simplifying both installation and commissioning.

Its compact architecture also enables cleaner installations with fewer electrical connections, making it particularly well suited for refurbishment projects where space and installation time are limited.

Faster installation through intelligent design

One of the greatest advantages of the Smart Actuator became evident before installation even began.

The complete fan coil units—including the Smart Actuator—were pre-assembled and fully tested in the workshop before delivery to site. This significantly reduced the amount of work required during installation and ensured consistent quality across all guest rooms.



Additional benefits included:

- pre-assembled cables that reduced wiring effort
- fewer junction boxes and electrical connections
- lower risk of installation errors
- faster commissioning
- shorter installation times on site

By shifting much of the assembly and testing to the workshop, the installation team was able to meet the demanding refurbishment schedule while minimising disruption to hotel operations.

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Simplified commissioning and maintenance

The benefits of the Smart Actuator extend well beyond installation. Thanks to its smartphone connectivity, maintenance personnel can quickly access important device information, perform diagnostics and configure parameters without requiring complex tools. This makes commissioning more efficient and simplifies future service work throughout the building's lifecycle. For facility managers, this means less maintenance effort, faster troubleshooting and reduced operating costs.

Comfort that guests notice

Modern room automation is about more than technical efficiency—it also improves the guest experience. The Smart Actuator works seamlessly with modern touch room controllers on BACnet/MSTP to provide precise temperature control and intuitive room operation. The interface can be customised to display only the information relevant to guests, creating a clean and user-friendly experience while supporting the hotel's individual branding and operating requirements.

Combined with accurate room-by-room climate control, the solution delivers consistent comfort while helping to optimise energy consumption across the entire building.

A smarter approach to refurbishment

This project demonstrates how integrated room automation can simplify complex renovation projects without compromising quality or performance. By making the SAUTER Smart Actuator the central component of the new HVAC installation, the project achieved faster installation, reduced system complexity and improved long-term maintainability. At the same time, building operators benefit from greater energy efficiency, simplified servicing and enhanced guest comfort.

For refurbishment projects where time, reliability and lifecycle performance are critical, the SAUTER Smart Actuator offers a smart, future-oriented solution that delivers value well beyond installation.

About SAUTER

New building, refurbishment or building operation - SAUTER is your reliable partner for sustainability, operational safety and comfort of real estate. With our intelligent solutions for building control, room automation and technical facility management, we safeguard your investment and support you in achieving your ESG goals. We create sustainable environments. Since 1910.

The SAUTER Group

- Global company headquartered in Basel, Switzerland
- Technology leader in the field of building automation, system integration and building services
- Focus: maximum energy efficiency and sustainability
- Goal: investment and operational safety throughout the entire building life cycle
- Member of the [BACnet Interest Group \(BIG-EU\)](#), [BACnet International](#), [EnOcean Alliance](#) as well as the [eu.bac](#), [KNX](#) and [DALI Alliance \(DiiA\)](#)