

# Centre Hospitalier de Belle-Île-en-Mer



Hospitals are typically large building complexes with a multifaceted infrastructure. With their physical environment having a significant impact on patients' recovery times and outcomes, creating the right setting is of utmost importance. For 2 years, until June 2019, the Vannes-Auray CHBA built a new 166-bed hospital on the island Belle-Île-en-Mer. SAUTER was commissioned to equip the site with its technologies and solutions, thereby creating an energy pole that not only allows supplying the new building, but also incorporating existing ones such as the kitchen building.

Belle-Île-en-Mer is the largest of Brittany's islands and located 15 km off the coast of the Gulf of Morbihan. It is precisely the fact, that the hospital was built on an island, which presented the largest challenge of the project, especially since it was to be connected to a central location on the mainland. Renowned for its temperate climate, 41% of the energy necessary for warm water production is generated by means of a solar system.

## The colder, the safer

A hospital visit is mostly a chilly experience – not only because of the place it represents, but because of the temperature that needs to be held consistently at a low level with a temperature of 21 °C in the rooms. Providing an adequate and reliable building management system (BMS) for critical infrastructure can present a big challenge, especially with hospitals being complex environments in which different aspects from patients to staff to equipment and services are interfaced.

There are many challenges which need to be overcome in the management of hospitals. Top priority is maintaining the safety of patients and staff and continuously improving it. A building's technical management system must also help to minimize disruption to the therapeutic environment. Among the many difficulties of managing a hospital building is also the fact that different rooms have different ideal temperatures and humidity in order to curb bacteria and virus growth and prevent them from becoming airborne.

Hence, hospitals require reliable systems that ensure rooms have the right preconditions and that alarm operators immediately when deviations occur. Operating theatres are typically among the coolest rooms. The "American Society of Heating, Refrigeration and Air Conditioning" (ASHRAE) recommends a temperature of around 18–20 °C with a relative humidity of 70% to keep the risk of infection at a minimum. With these two factors having a significant impact on the survival of airborne pathogens and hence patient safety, oversight and control become very important – core competences of SAUTER.

## Building on an existing relationship

The customer can already look back on a functioning relationship having tested SAUTER products and technical solutions in Vannes and Auray, France. Apart from the reliability of its products and the excellent price-performance ratio, it was especially the open system architecture and the possibility of integrating multiple products from different manufacturers that convinced the customer to once again rely on a SAUTER solution. In this case, third-party components included



heating, ventilation and air-conditioning systems from different manufacturers (Toshiba, Daikin, Aldès), a solar system from Heliopac, vacuum equipment by MILS as well as systems for medical fluids (TLV), measuring instruments and inverters (Socomec, Schneider).

### Advantages of a SAUTER solution

The customer was already well aware that relying on SAUTER provides a combination of high-quality products with comfortable operation and high user-friendliness. An important aspect of this project was also the possibility of interconnecting several locations, especially considering that this hospital would be on an island. With SAUTER solutions enabling remote control and use, this challenge could easily be overcome.

For regulating, controlling, monitoring and optimising of the operational systems, SAUTER equipped the building with its modular automation stations modu525. Based completely on the manufacturer-independent BACnet and IP communication according to EN ISO 16484-5, the integration of all the various components was easily achieved. Meanwhile, the Energy Monitoring Module (EMM) integrates energy meters to create a comprehensive energy consumption display that can be automatically calculated and visualised in diagrams – a feature of high interest for a customer whose energy generation depends in part on a solar system.

These automation stations collect thousands of data points, which are visualised in the SAUTER Vision Center. This web-based building management solution is especially suited for central building management with visualisation of decentralised installations. Its modular concept makes it highly customisable thereby allowing it to be completely adapted to the specific needs of a hospital. The individually configurable dashboard makes sure to provide an ideal oversight of the comprehensive information. Apart from visualisation, the easy-to-use SAUTER Vision Center includes everything necessary for an energy efficient and cost-optimized building operation: from reporting to sending out alarms all the way to remote monitoring and a flexible room configuration. The building management solution of SAUTER provides all the means to ensure smooth operation in critical infrastructure. By making the information available anywhere and anytime, even the setting on an island can easily be overcome.

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