Patient rooms with quickly adaptable room climate using Belimo products

Serious illnesses and injuries place high demands not only on the personnel and infrastructure of a hospital. In particular, patients are faced with the major challenge of long stays and extensive treatments.

The University Hospital Zurich (USZ) has always been a leader in the treatment of burn injuries and was able to further strengthen its position by opening the new «SUED2» building. Among other things, it is equipped with a specialised clinic for the treatment of burn victims, which offers the highest degree of comfort for patients through the use of Belimo products and also makes longer stays in the clinic more pleasant. The building was planned and designed by the USZ Real Estate Directorate in collaboration with the Canton of Zurich Construction Directorate. The HVAC installation was planned by Hochstrasser Glaus & Partner Consulting AG, system integrator was Burkhalter Technics AG.
Individual conditions in each patient room.

The planning of the building called «SUED2» started in 2011 and commissioning was completed in October 2019. It is designed for a service life of 20 years and will then be dismantled. It creates flexible areas which are necessary for the further development of the USZ site in particular.

320 employees care for over 440 patients - the building houses a ward for stem cell transplants, an intensive care unit for burn victims, an endoscopy centre, an interdisciplinary intensive care unit and an outpatient clinic. The specialised medicine housed in the «SUED2» building places high demands on the infrastructure, which were impressively met by the use of Belimo products.

Sophisticated heat supply system with proven technology from Belimo

For example, one of the many challenges in this project was the separate control loops in the burn victim ward. «These allow the air humidity and room temperature of each patient room to be adjusted to the individual needs of the patient», explains Hans-Peter Rüegsegger from the Real Estate Directorate of the USZ.

«The replacement air receives secondary treatment after it has already been treated by a pre-treatment. The proportion of replacement air for the burn victims is approx. 10%, air humidification is provided by means of ultrapure steam. The recirculation and fresh air is fed or circulated into the rooms via nozzles in the ceiling», adds Remo Vetterli, Project Manager at Burkhalter Technics.

«Shortest delivery times and a proactive and personal support were decisive factors in choosing Belimo».

Remo Vetterli, Project Management Burkhalter Technics AG, Zurich
Central success factor: Modbus
A further challenge during the implementation was the tight time schedule. «Due to the little available time, Belimo components with Modbus played a major role in the success of the project», says Vetterli. «Thanks to these components, entire monoblocs could be wired in advance and checked with data point tests, even if they were not yet connected to the switchgear combination. The same applies to all control devices in the nozzle ceilings of special rooms (heating or cooling coils, valves and sensors). The room installations could be tested in advance before the suspended ceilings were closed.»

Furthermore, the building is connected to an energy recovery (ER) network, which is operated with the waste heat from chillers. This temperature level is sufficient for the floor heating systems. For the air heaters, however, a higher temperature level is required. A reheater is used here, which can raise the ER temperature even further. Here, Modbus devices from Belimo were also used throughout. This considerably simplified the work for the electricians, as all components could be pre-installed.

Proactive customer service and short delivery times – even under time pressure
Belimo has always placed great importance on excellent customer care and the best service. «Belimo is a Swiss company and well known for its high quality. They offer a 5-year guarantee and very good support. All this has a high value for us as the operator», adds Rüegsegger. «We also received training from Belimo prior to commissioning».

In working with Belimo, the lack of storage space was compensated by extremely short delivery times for the entire product range.
All inclusive.

As a global market leader, Belimo develops innovative solutions for the regulation and control of heating, ventilation and air-conditioning systems. In doing so, actuators, valves, and sensors make up the core business.

With a consistent focus on customer value, we deliver more than just products. We offer you the complete product range of actuator and sensor solutions for the regulation and control of HVAC systems from a single source. At the same time, we rely on tested Swiss quality with a 5-year guarantee. Our worldwide representatives in over 80 countries guarantee short delivery times and extensive support through the entire product life. Belimo does indeed include everything.

The "small" Belimo products have a major impact on comfort, energy efficiency, safety, installation and maintenance. In short: small devices, big impact.