

Energy efficiency thanks to renewable energies.

From a historic factory building to one of the most modern and sustainable car centres in Switzerland: The new flagship store of the second-generation Swiss family business "Kenny's Auto-Center" covers more than 6,200 m² and includes a large workshop, a modern showroom and an in-house café. The building, which opened in 2022, is designed to be CO_2 -neutral and will be powered by geothermal probes and a 2,000 m² solar installation. The latter has a peak output of 500 kWp and, in addition to powering the building, will also supply the energy needs of 30 vehicle charging stations by producing excess energy during the summer months and feeding it into electric vehicles.

Belimo supplied a range of products for the HVAC systems in the flagship store, including electronic pressure-independent control valves, zone valves and duct sensors, which, thanks to factory parametrisation and connectivity, reduced installation time to a minimum. The HVAC design was carried out by Virtuos 3D Modelling AG and the system integration by gatec AG.

BUILDING TYPE

Auto-Center (offices, showroom and workshop)

PROJECT

New building

TRADES

Climate, single room control

PRODUCTS

Electronic pressure-independent control valves (EPIV), Modbus zone valves. Duct sensors for air and differential pressure, frost monitors, rotary actuators



Reduce installation time, increase energy efficiency.

All that remains of the former factory hall is the steel structure of the building. The rest of the building was newly constructed. A key challenge of the project was the size of the hall, which required large distances to be bridged. With a total cable length of almost 700 m, a Modbus system was chosen for its ability to support a high number of subscribers (up to 30 per communication line) and for its ease of installation and commissioning. As all Belimo field devices are Modbus compatible, they can be easily integrated into the building automation system. The use of building automation solutions has the decisive advantage of data-based use of building energy, which enables demand-driven and therefore energy-efficient operation.

An additional hurdle was the production deadline for the building services equipment. Due to an important customer event, the system integrators at gatec AG had to get all the HVAC systems up and running as quickly as possible. It was therefore important to ensure that the plant components could not only be delivered quickly, but also installed and commissioned easily and quickly. To meet this tight deadline, all Belimo components were pre-tagged at the factory. In addition, the devices were pre-parameterised, which greatly simplified installation and commissioning and ensured that the project was completed on time.



Optimum room climate in the showroom with the help of fan coils

Implementing communicative solutions.

The showroom and offices are supplied by an air handling unit inclusive heat recovery, air heaters and air coolers. Belimo temperature sensors were used to accurately record the temperature of the supply and extract air. This ensures not only efficient operation of the air handling unit, but also optimum indoor comfort in the showroom.

The showroom as well as the offices were all divided into zones to ensure optimal room comfort with energy-efficient operation. The offices are heated and cooled by heating/chilled ceilings.



"Belimo is making an important contribution to achieving the energy targets in Switzerland."

Thomas Nebl, Head of Building Automation, gatec AG Belimo zone valves with condensation switches were used for zone control. The condensation switches were connected via Belimo rotary actuators. The maximum flow rate of the valves is set at the factory. Belimo also took care of the pre-addressing of the communication parameters. The intelligent field devices and all other Belimo components could be connected to the Modbus system.

Belimo electronic pressure-independent control valves (EPIV) were used for precise and reliable control of the heating distribution. The EPIVs were also pre-set at the factory so that they could be connected to the Auto-Center's building management system and put into operation very quickly.



Cooling distribution with electronic pressure-independent valves (EPIV).

Creating sustainability together.

"In my opinion, Belimo is making an important contribution to achieving the energy targets in Switzerland," says Thomas Nebl, Head of Building Automation at gatec AG. "Smart field devices should not have a proprietary design, but should enable open protocols and standardised use. This means that data can be easily tapped and fed into a higher-level system. This is something we particularly value in Belimo products," he adds. Overall, Thomas Nebl looks back on a positive collaboration: "Belimo supported us from the very beginning and was a competent partner in technical matters right up to the end of the project. We appreciated the uncomplicated communication between us and the expertise of the Belimo employees," he sums up.



Circuits for heating/cooling coils of ventilation with electronic pressure-independent valves (EPIV) and temperature sensors.



Heating distribution with electronic pressureindependent valves (EPIV), temperature sensors and temperature monitor

All inclusive.

Belimo is the global market leader in the development, production and sales of control devices for energy-efficient control of heating, ventilation and air-conditioning systems. Damper actuators, control valves, sensors and meters make up the company's core business.

Always focusing on customer value, we deliver more than only products. We offer you the complete product range for the regulation and control of HVAC systems from a single source. At the same time, we rely on tested Swiss quality with a five-year warranty. Our worldwide representatives in over 80 countries guarantee short delivery times and comprehensive support through the entire product life. Belimo does indeed include everything.

The "small" Belimo devices have a big impact on comfort, energy efficiency, safety, installation and maintenance.

In short: Small devices, big impact.





5-year warranty



On site around the globe



Complete product range



Tested quality



Short delivery times



Comprehensive support

