SUCCESS STORY WILD & KÜPFER AG, SCHMERIKON (CH)

20 % energy savings in heating and cooling generation and air conditioning.

Investments in a sustainable development of the production location.

For more than 40 years, the family-run high-tech company Wild & Küpfer AG in Schmerikon has been developing, producing and assembling high-precision plastic parts and assemblies for their customers' most complex applications in industry and medical technology.

The above-average high growth in the MedTech sector necessitated the construction of an extension annex for clean rooms, assembly, logistics and storage capacity. The new three-storey building was put into operation in Autumn 2019 following a two-year construction period. Clean-room capacity was tripled in the ground floor to a total of 1800 square meters. The basement floor is being used for new storage areas and the second floor for production and assembly. An in-house staff restaurant designed to serve around 200 employees was then opened on the top floor in 2020.

TYPE OF BUILDING
Production building with integrated restaurant

PROJECT
Extension annex

TRADES
Heating, ventilation, air-conditioning, cooling technology, Photovoltaics

PRODUCTS
Globe valve actuators and valves, butterfly valves, Rotary actuators, sensors, VAV controllers, zone valves

BELIMO

Realising a new building that is a step ahead in terms of energy consumption.

It is a very complex new building with a large amount of installed technology. Starting with the energy piles with integrated heating/cooling technology, through machinery cooling units, compressed air technology and internal water treatment to the technical installations for restaurant operation and a photovoltaics plant on the roof. In addition, redundancy to the existing running plants was ensured. An intelligent linking of the various waste heat sources from the production process and the energy sources was a pre-requisite.

Successful further development of the entire energy generation.

Around 100 energy piles generate the energy for free cooling and heat exchange. The heat pump is used reversibly for cooling and heat generation (heating and domestic hot water). A high-efficiency operation can be run with the utilisation of internal waste heat and its integration as an energy source. Intelligent field devices from Belimo are integrated in the superordinate automation level for all plants to enable optimum operations. Via Near Field Communication (NFC), important data such as the running time but also other

Belimo valves and sensors monitor and ensure that the right quantities of energy for cooling or heating are made available.

"Belimo has the same high expectations of energy-efficient plants as we do. Our collaboration with the company was teeming with good ideas and completely met our expectations. Having Belimo as a partner can really be called a success story."

Daniel Wild, Technical Head and Member of the Executive Committee at Wild & Küpfer AG.

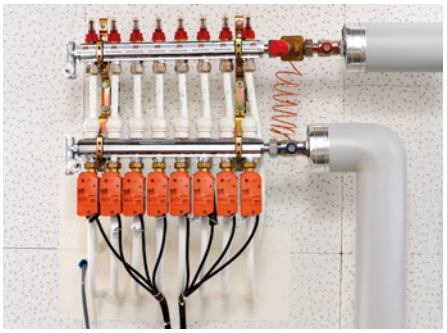
Ventilation and air-conditioning system in the top floor with sensors, valves and damper actuators from Belimo.

settings can be set or, for example, the current position and much more can be read out.
The reversible heat pump, with its four-compressor-unit operation, has a cooling output of around 400 KW and supplies energy not only to various heating groups but also to the cooling distribution network. It is equipped with frequency converters in order to be able to react as rapidly as possible to load changes. The cooling tower on the roof relieves the energy piles during maintenance work or energy peaks. The waste heat from the process cooling, together with the energy from around 100 energy piles, creates a temperature level that ensures optimum heat pump operation thanks to the source storage.

Sensors and globe valves from Belimo monitor the cooling water and help ensure that it is distributed into the zones at the correct temperature and in the correct volume.

Regulated air distribution in the zones as required.

Numerous ventilation systems were installed for the production and laboratory areas and the staff restaurant. They are all equipped with heat recovery, air heaters and coolers and supply the rooms via Belimo volumetric airflow controllers as required according to utilisation and zone. These are integrated via Belimo MP-Bus® into the building management system that, starting with the air handling unit, provides the required air volumes in optimum quantities via the Fan Optimiser function. This means that the lowest possible air pressure is used in order to still guarantee the air requirement up to the most distant air outlets. Outdoor air can be centralised pre-warmed or pre-cooled in the source circuit. The technical room for the air supply is located on the top floor..



The TABS (thermo-active component systems) are flooded with chilled water as required. Regulation is carried out using high-quality Belimo zone valves which can be closed air bubble-tight. The ball valve technology thus prevents cooling energy from being wasted unnecessarily in the building during transition periods.

Cooling exchangers equipped with Belimo temperature sensors and a Belimo butterfly control valve help ensure the correct tempering of the cooling water.

All inclusive.

Belimo is the global market leader in the development, production, and sales of field devices for the energy-efficient control of heating, ventilation and air-conditioning systems. The focus of our core business is on damper actuators, control valves, sensors and meters.

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

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