SUCCESS STORY BELIMO ATRIUM (CH)

Modern workspaces with optimum room comfort.

Between tradition and innovation.

Since 1987, Belimo's headquarters have been located in Hinwil in the canton of Zurich (Switzerland). The original building, which Belimo moved into twelve years after it was founded, has had extensions added to it over time as the company has grown, and was remodelled shortly after the turn of the millennium. It houses offices, workshops, storage rooms and laboratories as well as an Experience Center. On the top floor of the building - in the "Belimo Atrium" - the offices of the Finance and Business Services division are located across 1,000 m². The increasing number of employees required an increase in the number of workstations. At the same time, the general building technology was to be renewed. As a consequence, a comprehensive renovation project was launched. One of the aims of the total refurbishment of the floor was to provide employees with a state-of-the-art office that offers excellent room comfort at all times thanks to smart design and heating, ventilation and air conditioning as required. The building technology was planned by Jobst Willers AG, and the system integration was carried out by Demont Engineering GmbH.

BUILDING TYPE
Office and production buildings

PROJECT
Renovation

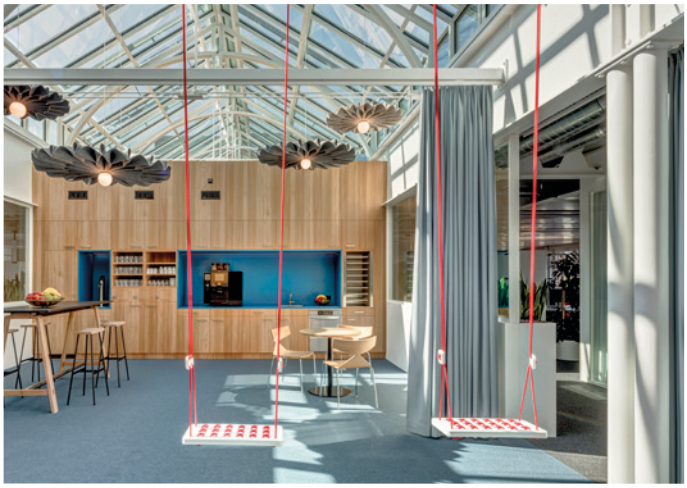
TRADES
Heating, ventilation, cooling, building automation

PRODUCTS
Belimo Energy Valves, Control Valves, VAV actuators, sensors

BELIMO®

Aesthetics and functionality combined.

"One of the biggest challenges was to harmonise the sophisticated building technology with the existing architectural conditions. All of the new systems had to be seamlessly integrated into the existing building management system," says Marco Manfredi, Global property manager at Belimo. "In addition to the energy efficiency of the HVAC systems in the Belimo Atrium, it was also important to fully meet the aesthetic requirements of the space," he adds.



The new recreation area in the Belimo Atrium with modern design elements

Transparent data for maximum efficiency.

For demand-controlled supply of heating and cooling, the entire floor was divided into different zones. To ensure precise measurement of energy consumption and efficient control of heating and cooling energy, all zones were connected to Belimo Energy Valves. Thanks to PoE (Power over Ethernet), the installation effort was minimal. The Energy Valves were connected to the Belimo Cloud and, thanks to BACnet connectivity, easily and conveniently integrated into the existing building management system.

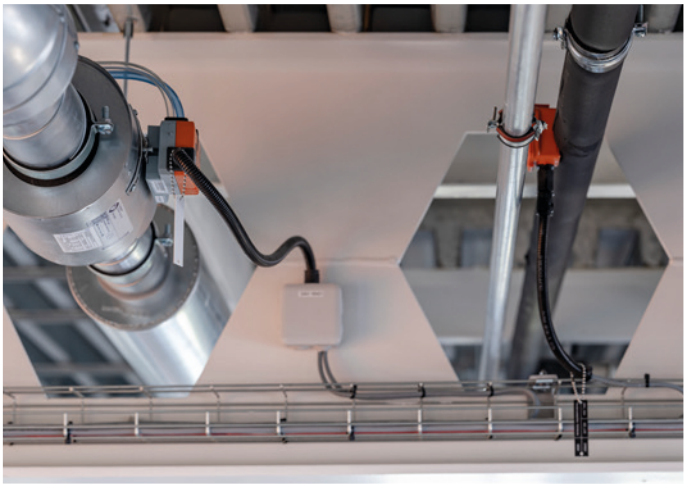
The heating and cooling operation in the Belimo Atrium is dependent on the desired room temperature, whereby the setpoint is calculated using a weather-compensated linear curve. When the window is open, the regulation is blocked, thus saving valuable energy. The radiators are all equipped with control valves. The pipe routing and hydronic balancing are carried out according to the Tichelmann system. Radiators are also installed on the window fronts, which are controlled with a minimum actuating variable to counteract a drop in cold air. The Atrium is cooled via chilled ceilings equipped with pressure-independent control valves. In order to limit the cooling setpoint, the current dew point temperature for the room is continuously calculated. Thanks to the communicative valve actuators, the installation effort required for the heating and cooling systems was low. The communicative heating/cooling valves were easily

"With the help of demand-controlled HVAC solutions, we can offer our employees the best room comfort at all times - and with the highest energy efficiency."

Marco Manfredi,
Global property manager FFM, Belimo

integrated into the system via BACnet MS/TP.

To ensure that the rooms in the Belimo Atrium are ventilated as required, volumetric flow controllers (VAV) were installed in the supply and extract air. For this purpose, the required air volume is regulated depending on the CO_2 value measured in the room. Meeting rooms can be used as flexibly as possible with a given air volume thanks to ducts and room connections that were designed based on the maximum possible occupancy and regulated according to the air volume effectively required in the room. The current air quality in the room is visualised by means of a traffic light function (green, yellow, red) on the installed room operating units for continuous transparency.



VAV actuator (left) and pipe sensor for cooling (right)

Optimal planning and implementation down to the last detail.

The entire project was planned and implemented in an extremely target-oriented and efficient manner. "We particularly appreciated the competent support from the product managers regarding technical questions and general support from the entire facility management team," says Michael Reuteler from Jobst Willers AG. "The products from Belimo are pioneering and stand out due to their quality. We would like to rely on Belimo products in the future," adds the project manager for building technology. "The Belimo Atrium is an excellent example of a successful symbiosis between aesthetics and functionality."

All of the zones in the Belimo Atrium were equipped with Belimo Energy Valves.

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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