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SUCCESS STORY — HOTEL GUGLWALD (AT)

# The quickest route to energy efficiency lies in the heating plant

## Sustainable comfort

Hotel Guglwald, located in the Austrian Mühlviertel region, is a 4-star superior wellness hotel with 70 rooms and a 4,200 m² wellness area. Following the expansion of the wellness area in 2019, the hotel's own biomass cogeneration plant reached its capacity limits. The increased heat demand was met using an oil-fired boiler — an inefficient and costly solution. However, the root cause lay deeper: Hydronic weaknesses in the system prevented heat from reaching where it was needed.

As part of a Belimo RetroFIT+ project, the Belimo Energy Valve™ was identified as an appropriate solution, and nine Energy Valves were installed. This resulted in a measurable improvement in energy efficiency throughout the complex, and the existing oil-fired boiler was taken out of service permanently. The payback period for the installation was less than a year.

**BUILDING TYPE**
Hotel

**PROJECT**
RetroFIT+

**TRADES**
Heating

**PRODUCTS**
Belimo Energy Valves.

BELIMO

# Making energy flows visible

Rising and fluctuating energy costs are posing increasing challenges for hotels. For Hotel Guglwald, the solution was not a complete renovation, but a targeted optimisation of the existing system. At the suggestion of a guest, the building technology was subjected to a systematic evaluation. Technicians from BELIMO Automation Handelsgesellschaft m.b.H. first measured the energy flows throughout the entire system and identified the hydronic weaknesses. The result: The heat distribution was not hydronically balanced — energy was being generated, but not efficiently transported to where it was needed. Following this, nine Energy Valves were installed in close cooperation with the customer and the long-standing building services company.

The Belimo Energy Valve™ combines several functions in a single device: It measures flow rate in a continuous and contactless manner using ultrasound, precisely controls the volumetric flow, and simultaneously monitors the supply and return temperatures, as well as the amount of heat transferred, in real time. Based on these continuous measured values, the hydronic balance was restored throughout the system — thus creating the conditions necessary to permanently shut down the oil-fired boiler. "The heating system is like the human body: When the pumps transport the energy to where it's needed, there are no bottlenecks," explains Harald Kreuter, Project and Planning Manager at Belimo.

A crucial factor here was planning certainty for the owner of the hotel. Belimo substantiated the projected savings before the start of the project using a standards-based calculation tool — the Belimo RetroFIT+ Assessment Tool — thus creating the basis for the investment decision. "Using our tool, we demonstrated, in accordance with the relevant standards, that savings would be achieved. And these savings did indeed materialise," emphasises Jürgen Obmauer, Sales Manager at Belimo.

Plant room at Hotel Guglwald complete with Energy Valves.

"The gold lies in the heating plants. Savings of 20% on the heating side are possible almost everywhere."

**Jürgen Obmauer**
**Sales Manager Austria**
**Belimo**

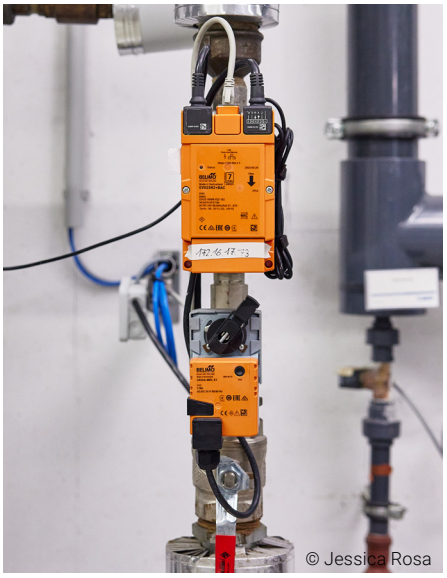
## Small devices, big impact

Since their installation more than 13 months ago, the Energy Valves have been continuously measuring the flow of energy in the hotel. Current savings on the heating side amount to 12%, and a further increase is expected. This is because it takes several cycles to fully optimise systems of this size. The Energy Valves provide the data required to further develop the system in a step-by-step manner that is in accordance with standards.

"A system is perfectly balanced when there is neither a shortage nor a surplus," states Harald Kreuter. The payback period for the entire installation is less than a year — a value that is exceptionally short in the hotel industry and underlines the economic appeal of RetroFIT+ measures.

Another added benefit becomes apparent in day-to-day operations: The in-house technician now digitally monitors the entire system via a building management technology control centre, without having to physically visit the plant rooms. Faults and deviations are identified at an early stage, and the amount of manual work has been significantly reduced. The transparency regarding energy flows created by the Energy Valves not only changes the efficiency of the system, but also the way the building is operated.

Sales Manager, Jürgen Obmauer, sees Hotel Guglwald as proof of the potential across the industry: "The gold lies in the heating plants. We have looked into the potential of a few hotels. Savings of 20% on the heating side are possible almost everywhere." This does not require a complete renovation, but rather the targeted measurement, evaluation, and hydronic optimisation of existing systems. Particularly in the hotel industry, where energy costs account for a significant proportion of operating expenses and where guest comfort must never be compromised, Belimo's RetroFIT+ approach offers a cost-effective and technically sound solution for more efficient operation.




Belimo Energy Valves measure and control heating and cooling energy in a single unit.

The energy flows are represented in a digital format.

# 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, and sensors and meters.

Always focusing on customer value, we deliver more than only 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 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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