



SUCCESS STORY AR BYGG, SWEDEN

Maximising building efficiency with the Belimo Energy Valve™.

IMAGE SOURCE: AR-T ARKITEKTER OCH INGENJÖRER AB

Ensuring efficiency for commercial success.

The Belimo name is trusted to deliver high quality HVAC solutions, which has put our devices in some of the most complex commercial buildings around the globe. However, smaller projects are also on our program. When it comes to comfort and energy efficiency, we rise to all challenges, both great or small.

Therefore, when AR Bygg, a company based in the north of Sweden (Umeå), asked us if we would contribute our expertise to a smaller residential development, we were very excited about this unique project.

BUILDING TYPE

Residential apartments

PROJECT

Building renovation and new construction

FACILITIES

Heating and cooling from a geothermal source with built-in energy storage

PRODUCTS

Energy Valve and temperature, humidity, pressure and differential pressure sensors

BELIMO[®]

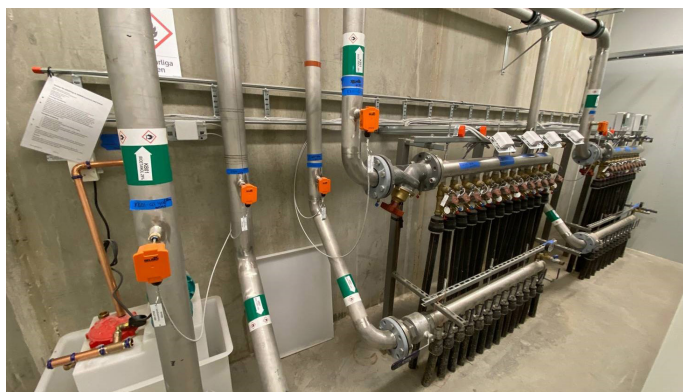
Complete control and continuous visibility.

AR Bygg is a construction company that deals with new builds, renovations and conversions of residential/industrial buildings. However, the company's post-development activity in property management makes energy efficiency a key commercial goal for every project. Its latest one involves a residential development of 49 apartments, which requires an energy-efficient system to provide complete control and continuous visibility. This sounds straightforward, but the complexities arise in the details. Firstly, the development is split between an existing building made of concrete – to be renovated – and an entirely new build made of glulam and cross-laminated wood. Therefore, an efficient system is needed for buildings with different insulation properties.

In addition, the energy supply for both buildings will be from a single geothermal source with built-in energy storage. Heating in the harsh winters, and balanced cooling in the summer months are requirements, as well as a backup connection to the district heating system if the stored energy doesn't meet demands. With all these factors in mind, the right solution is critical for long-term energy savings.

Total solution for the project: Energy Valve and Belimo's broad line of sensors.

Rikard Ågren, a project manager at AR Bygg with a focus on building automation and energy systems, contacted Annakarin Eriksson from Belimo Sweden for advice and solutions. Rikard Ågren commented: «Belimo has a long history in Sweden, especially with its damper actuators. I have always viewed its products as being of the highest quality, and when I got to try the sensors out, it really showed me how easy the devices are to work with.»



Energy supply from a geothermal source with built-in energy storage for heating and cooling and a backup connection to the district heating system.



«With the Energy Valve and the wide range of available sensors, Belimo provided me with a holistic solution for the project.»

**Rikard Ågren, Project Manager,
AR Bygg, Umeå, Sweden**

Monitoring consumption for the purpose of energy optimisation.

Due to the different construction materials used in the two buildings, there are still some uncertainties regarding energy consumption after the completion of the construction phase, which also affects the long-term costs of the project. Ongoing monitoring was therefore considered a crucial system requirement in order to control the heating and cooling as needed. Belimo's Energy Valve is designed for precisely this: stable control, intricate energy measurement and detailed monitoring of a system. AR Bygg installed two Energy Valves in the first stage of the development, which are already providing valuable data before the project has even finished.

Rikard Ågren continued: «With the Energy Valve, you can follow the energy consumption easily via the web interface. This will be a big help moving forward, especially when trying to optimise the original building, where there are currently so many unknowns around projected energy consumption. The challenges between each building are very different, but with the Energy Valve, you can see where the energy is needed.»

Simplicity through integration.

Device performance is just one cog in the Belimo machine that helps to maximise our customers' business efficiencies. Ease of integration and ongoing technical support make Belimo a versatile partner for virtually any project. In this case, AR Bygg chose a variety of Belimo sensors – monitoring temperature, humidity, pressure and differential pressure – to work in combination with the Energy Valves to enhance overall system management and control. Choosing a single supplier for all these devices simplified integration and set-up, avoiding the potential challenges and delays associated with using components from many different suppliers.

Rikard Ågren concluded: «Integration with all the devices has been a straightforward process. The Energy Valves, for example, use the Modbus protocol to communicate, which is easily integrated into our building automation system, with the documentation on Belimo's website providing everything we needed.»



Injection Circuit with 2-way Belimo Energy Valve™



Annakarin Eriksson, Sales Application Manager
BELIMO AB (Sweden)

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



BELIMO Automation AG

Brunnenbachstrasse 1, 8340 Hinwil, Switzerland
+41 43 843 61 11, info@belimo.ch, www.belimo.com

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