

We want to sustainably increase the value of the company for the benefit of our shareholders. We are committed to the environment and to the efficient use of resources.



Products and Applications

Sustainability in the Development Process

Environmental responsibility already starts with product design. The focus falls on a sustainable and eco-efficient product development process that takes account of the entire useful life. This means minimized power consumption and the conservation of resources, minimized environmental impact at disposal, the use of materials that generate low emissions in the case of fire and the extension of the useful life by applying state-of-the-art technologies. The optimization of current products leads to some considerable savings of material and energy during the production process.

Customers are involved in the development process at an early stage in order to jointly search for innovative solutions and verify ideas that promise success.

Innovative Application Solutions

Belimo guarantees its customers superior solutions with products that offer more comfort, increased energy efficiency and safety, and are easier to install and maintain.

Belimo solutions enable the optimized operation of HVAC plants by offering the following features:

- Minimized power consumption by Belimo actuators for all applications
- Preventing circulation losses thanks to seal-tight characterized control valve technology in water applications
- Increasing plant efficiency by making smart use of actuator and sensor technology, such as in the Belimo Energy Valve™ and the ZIP Economizer™

Also in 2016 5.9 million newly installed Belimo actuators helped customers become more energy-efficient, making savings many times higher than the annual electricity consumption of Belimo at its two largest production sites. The following credentials provide tangible evidence of how innovative application solutions have made plants more efficient:

- Galliker Transport AG is an international provider of logistics services with some 2700 employees based in six countries. Its new logistics center in Dagersellen, Switzerland, is thermotechnically autonomous and fully relies on renewable resources to generate its electricity. Its various storerooms provide ideal climatic conditions to store foodstuffs and pharmaceuticals. The valves and actuators used have to work reliably and deliver the flow rate required. With conventional valves unable to offer this assurance, Galliker Transport AG instead chose the electronic pressure-independent valve EPIV. As the valves are inaccessible during day-to-day operations, they need to guarantee dynamic balancing while also being able to be monitored from the control center in real time. The customer's objective – not wasting any energy – can only be achieved with a precise control setup with integrated monitoring. This is made possible by the use of Belimo products.
- Between seven and eight metric tons of mushrooms leave Kuhn Champignon AG's production facility every day. Temperature and humidity levels must be kept constant if the mushrooms are to be harvested within three weeks. The decision was made to overhaul the entire facility in order to save energy and switch to a system of variable water volumes. The new butterfly valves and PR actuators of Belimo draw heat away from Kuhn Champignon AG's production facility by channeling hot water into the ground water to cool. One benefit of the new PR actuator is its high degree of energy efficiency: combined with the new butterfly valve, the smaller contact surface between the valve seal and

valve disk delivers energy savings of up to 80 percent. In addition, this innovative product features simple commissioning, parameterization and maintenance by Near Field Communication (NFC) technology as well as operational reliability.

- Since its first classes were held in 1957, the University of Nevada, Las Vegas (UNLV), has undergone an amazing transformation – from an outpost on the south edge of town to a thriving urban research institution consisting of some 69 buildings. UNLV has used environmentally friendly methods in all aspects of its facility management for many years as a way of reducing costs and the harmful ecological impact of its energy and water consumption. One example for its commitment was the decision to fit Belimo Energy Valves™ to its largest HVAC plant. These products enable to precisely control the flow of cooling water, which according to UNLV saves over USD 70 000 per year in energy and costs. The positive results have prompted the institution to opt for the energy-efficient water applications of Belimo in all its future new buildings and retrofits.

Further Developing Building Technology

With buildings being responsible for some 40 percent of energy consumption and climate-damaging CO₂ emissions, standards and laws that govern the quality of indoor air and the efficiency of heating, ventilation and air conditioning plants are being revised around the world.

Belimo actively participates to shape these changes and constantly further develops building technology. The Company is an active member of numerous industry associations including REHVA (Federation of European Heating, Ventilation and Air Conditioning Associations) and ASHRAE (American Society of Heating, Refrigerating and Air-Conditioning Engineers). These organizations are geared toward developing sustainable, energy-efficient building technology as well as corresponding standards.

Internal Processes and Standards

Environmental Directives

The Belimo sites in Hinwil, Switzerland, and Danbury, United States, apply the international environmental management standard ISO 14001 and undergo regular audits by the Swiss Association for Quality and Management Systems (SQS).

Belimo also adheres to the RoHS environmental directive, which prohibits the use of substances that are harmful to the environment. Compliance is implemented on the basis of a list of banned substances, which is aligned to products and their areas of application. Suppliers also undertake not to use any of the banned substances in the parts they deliver.

Materials

The materials used are carefully selected to ensure that as little damage as possible is caused to the environment. Auxiliary materials such as solvents, resins, paints or lead are not used at all, or only in very small quantities.

Cardboard packaging from suppliers based in the European Union is produced in accordance with the RESY guidelines and the one from suppliers based in the United States in accordance with equivalent principles, meaning that all transport packaging consists of ecologically harmless materials and can be recycled. The consistent use of reusable cardboard packaging between the Belimo sites

Ecological Awareness

and suppliers saves on packaging materials. Once they have served their purpose they are recycled.

Procurement

More than 80 percent of product manufacturing costs at Belimo are incurred by a network of suppliers and partners. They make a major contribution to quality, innovative capacity and sustainability. When it comes to environmental and social standards, Belimo is as demanding on itself as it is on suppliers. They are involved in the environmental and quality policy of Belimo.

Procurement by region



■ Europe 75%
■ Asia/Pacific 18%
■ Americas 7%

Belimo expects its suppliers to make a clear commitment to sustainability principles. These requirements are set out in the code of conduct for suppliers and reflect what is in internal guidelines. The code of conduct has been signed by more than 100 suppliers, which equates to around 90 percent of the procurement volume. Both new and existing suppliers are regularly audited on site.

Production and Logistics

The transfer of knowledge and technology between production locations ensures safe, efficient and resource-saving production processes. On almost every continent, the final assembly of the valve-actuator combinations takes place on site. Any components that need to be bought in are delivered by the suppliers to customizing centers either directly or in collective shipments, where they are assembled on site, shortening the transport routes to customers.

Belimo also addresses environmental issues in its regular review and adjustment of logistics processes. Transport mileage is reduced by means of internal collective shipments within the Company and consolidated direct deliveries to customers. The share of energy-intensive air freight is minimized on an ongoing basis. Standardized reusable packages are increasingly being used for deliveries between Belimo sites, allowing for automatic storage or further processing without having to be repacked.

Waste management



■ Recycling 63%
■ Disposal 37%

Recycling and Disposal

Waste is sent for recycling whenever possible. It is properly sorted and recycled at internal collection points, allowing more than half of the waste produced to be recycled. The remaining waste is sent to the nearby waste incineration plant. Disposal transportation is consolidated.

Energy-Efficient Premises

The office, production and logistics facilities in Hinwil are heated from the nearby waste incineration plant, which is connected to the district heating network.

The premises in Hinwil are continually reviewed and adapted for comfort and energy efficiency. The site is gradually switching its lighting (for example floor lamps) over to energy-saving LEDs. An analysis program evaluates environmental and facility data, providing the basis for optimization measures. Seven charging points for electric cars are available at the main building.

The logistics expansion in Hinwil was built to meet the latest energy-saving criteria. All storage and retrieval equipment in the automated warehouse and all goods lifts feature energy recovery systems. The internal logistics conveyor belts are all individually controlled and shut down when not in use. The logistics expansion was additionally insulated so as to minimize temperature fluctuations caused by the cold ground water.

The new production, logistics and administration building in Danbury has been built in compliance with the LEED gold standards for sustainable construction.

Ecological Awareness

Key figures 2012–2016

Locations Hinwil (Switzerland) and Danbury (CT, USA)

	Unit	2016	2015	2014	2013	2012
Environmental indicators						
Number of actuators produced	in million items	5.9	5.6	5.5	5.1	4.8
Utilization						
Paper (A4, A3 sheet) only office						
Copiers, printers	kg per FTE	11.9	13.8	15.4	12.8	13.9
Buildings and total energy consumption						
Electricity	MWh	7 011	7 360*	5 312*	4 782	4 275
Heat energy						
District heating (Hinwil)	MWh	1 295	1 154	814	1 191	1 199
Gas (Danbury)	MWh	1 464	2 870*	1 547*	973	1 040
Mains water	m ³	9 378	6 930**	8 682	8 647	8 486
Recycling and disposal						
Waste for recycling	t	498	458	452	340	377
Waste for incineration	t	226	190	165	145	116
Remaining waste	t	64	87	92	65	70
Hazardous waste (electronics, separated materials)	t	2		1	37	32
Sanitary water	m ³	8 892	6 490**	8 682	8 647	8 486

* Double occupancy because of the new buildings (logistics expansion Hinwil; production, logistics and administration building Danbury).

** Water usage for the fire line testing in Danbury as of 2015 not included anymore.

Social Responsibility

We treat each other with respect and stand up for each other.

Corporate Culture

Values

The mission statement and code of conduct contain the principles for internal cooperation, conduct at the workplace and interaction with suppliers and competitors. The values of trust and credibility also mean that employees get in touch with the appropriate contact person in the event of perceived violations of the applicable laws or ethical standards.

New employees learn about the values and quality standards during their introduction to the Company. The individual employee's long-term ability to internalize and put those values into practice is also part of the annual employee appraisal.

Society

An integral part of the Company's corporate culture is its longstanding partnership with the organizations: "Sonnhalde", Grünigen, Switzerland; "IWAZ" (the Swiss residential and employment center for people with restricted mobility), Wetzikon, Switzerland; and "Ability Beyond" in the United States. They support those whose impairments or illnesses mean that they need help to get on with their lives. The schemes provide work to over one hundred people; they make components for actuators, valves and sensors for Belimo.

Belimo conducts yearly visiting days for children of employees at its sites around the world. The daughters and sons accompany their parents for a whole day and get some insight of their working.

Sustainable Personnel Policy

Employees

Belimo values cultural diversity and assists employees from other countries with their integration, for example by providing free lessons in the local language. The high average length of service of eight years underlines the extent of employee loyalty and their identification with the Company. The part-time working models offered are equally valued by employees and the Company itself. In Hinwil, around 30 percent of the employees benefit from this.

Belimo works at all levels with a performance and behavioral appraisal system. This includes regular assessments of individual goal achievement, as well as a discussion of appraisals and the corresponding measures to be introduced with employees. A competence analysis is carried out every two years for employees at higher levels in the Company hierarchy. This is based on the Belimo competence model and supports individual development planning. The remuneration system allows employees to participate in the Company's success.

Training, Personal and Career Development

Belimo helps employees develop their specialist knowledge. Thorough introduction programs ensure that new recruits are fully familiarized with their tasks and responsibilities and the corporate culture. An internal training program enables knowledge and skills to be kept constantly aligned with responsibilities. Employees' personal development is supported. Time spent abroad at one of the Company's other locations is considered an opportunity for professional and personal development and brings added value for the Company.

Managers around the world regularly complete training courses on leadership issues. Belimo offers careers for managers as well as professional specialists.

Promoting New Talent

Together with local schools, Belimo helps young people to choose a profession and provides an insight into everyday working life. The Company provides apprenticeships to 21 trainees in six different professional areas at its Hinwil site.

Belimo also offers two places for apprentices looking to combine their basic vocational training with a career in top-level sport. This requires a flexible education program that fits working hours around their physical training and competitions. Belimo has been recognized by Swiss Olympic as a competitive sports-friendly apprenticeship company.

Following on from the positive experiences of last year, another apprentice completed a placement abroad in Danbury in 2016. Despite being so far away, the apprentice was able to continue his education without a hitch thanks to the latest communication tools. The Belimo model is now used as a case study in the guidelines of the umbrella organization Intermundo, which aims to promote youth exchanges.

Health and Safety

The first aid teams in Hinwil and Danbury are regularly trained in how to handle various medical emergencies. Expanding the logistics facilities in Hinwil has meant changing the escape routes. The new setup was tested in a surprise evacuation exercise, with the findings gained now being implemented in several stages.

Occupational safety and ergonomics also receive ongoing investment and are reviewed on site involving external consultants.

The program to promote occupational health includes targeted relaxation and strengthening exercises, training in workplace ergonomics and other activities and talks on specific topics.

