

Create Added Value



**Cleaning and Sterilising:
Innovative, Total Solutions for the Pharmaceutical Industry**

Belimed
Infection Control

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Success

« We create real added value for our customers through first class services. Because your success is also our success. »

Niklaus Sauter, Managing Director Belimed Group

Specialising in cleaning and sterilisation, focussing on our core skills – always one step ahead: The Belimed Group, a worldwide leading company in the field of cleaning and sterilisation, makes a substantial contribution to the success of its customers in the pharmaceutical industry, healthcare and laboratories. We are dedicated to finding the right individual solution for you – without compromise.

Our more than 30 years of experience, coupled with our widely supported know-how in our centres of competence, dynamic structures and efficient processes guarantee that your investments are future-proof. Continuous new developments based on the latest cGMP, GAMP, FDA and EU standards and a large number of patents emphasise our commitment to constant, lasting innovation.

State-of-the-art technology and comprehensive service and support facilities assure the highest standards of operating reliability over the entire lifetime of your plant and equipment. Worldwide presence through our own subsidiary companies and authorised partners keeps reaction times short. We strive for partnership with our customers so that, together, we can increase the productivity and quality of your processes, thus creating more sustainable benefits and real added value.



*The Directors of the Belimed Group, from left to right:
Dominik Sauter, Chief Marketing Officer,
Niklaus Sauter, Managing Director,
Eugen Moser, Chief Technical Officer*

« Commitment

Outstanding solutions always arise as a joint effort between our customers and us. This is what we mean by partnership.

Dominik Sauter, Chief Marketing Officer Belimed Group



Successful all over the world – and always one step ahead

Belimed is among the leading suppliers of complete solutions in the field of cleaning and sterilisation. Customers in the pharmaceutical industry, healthcare and laboratory sectors worldwide benefit from our concentration on core skills: the development and manufacture of first class, innovative products and the provision of customer-specific services with high additional value.



*Centre of competence for sterilisation,
Sulgen/Switzerland*



*Centre of competence for cleaning,
Mühldorf am Inn/Germany*

The Belimed Group originated from the merger of the Belimed, Kleindienst, Netzsch-Newamatic and Sauter Companies. With the amalgamation of these organisations the Belimed Group has one of the most experienced centres of competence in the entire field of cleaning and sterilisation. Over 30 years of manufacturing experience, state of the art technology and efficient processes are the basis for higher-than-average growth: An ever increasing number of customers worldwide benefits from our advice, support and longstanding know-how.

More than 600 motivated experts

Committed and highly motivated people stand behind the market services provided by the Belimed Group. They are all geared towards meeting the high demands of discerning customers, working together as a team for the continuous development of products and services. Targeted training programmes and constant contact with our customers provide for continuously updated know-how and a capacity for true innovation.

Customer benefits are at the centre of our innovation activities. For this reason, around one fifth of our employees are involved in either Research and Development or design to enable rapid implementation of the latest technology. Thus products from Belimed count among the most ground breaking cleaning and sterilisation equipment available on the market.

Worldwide presence

With 10 subsidiary companies in Europe and the USA and authorised partners worldwide, we are represented in more than 30 countries; therefore we are always close at hand. Our highly trained technicians provide a service network that guarantees short reaction times and maximum up times.

Strong parent company

The Belimed Group represents the Infection Control division within the Metall Zug Group, which has more than 2000 employees. The Swiss market leader V-ZUG AG, SIBIR Haushalttechnik AG and F. Gehrig AG make up the household appliances division. MZ-Immobilien AG, Parkhotel Zug AG and ZEW Immobilien AG belong to the real estate division.

Milestones

- 1968 Delivery of the first automatic washing machine for laboratory glass – the Netzsch-Newamatic 1-570
- 1973 Delivery of the first T-300 tunnel washer under the Netzsch-Newamatic brand name
- 1977 Delivery of the first steam steriliser from the Sauter Company
- 1990 Belimed AG, Switzerland, and Belimed GmbH, Austria, established; extension of the product range with cleaning and disinfection machines for the treatment of flexible endoscopes
- 1993 Entry into the development and production of cleaning plant and equipment for the pharmaceutical industry
- 1995 Establishment of Kleindienst-Belimed GmbH, Germany
- 1997 Acquisition of Netzsch-Newamatic GmbH, Germany and Slovenia
- 1997 Acquisition of Avenatech Inc., USA
- 1999 Acquisition of the Sauter Group, centre of competence for sterilisation
- 2000 Acquisition of Bisaco SA and transfer to Belimed SA, Belgium
- 2000 New market entry under the uniform Belimed brand name
- 2001 Belimed SAS, France established
- 2004 Belimed Limited, UK established
- 2005 Acquisition of the Infection Control activities of Schaeerer Mayfield Schweiz AG, Münsingen/Switzerland



« **Know-how** Belimed, in a timely and responsive manner, technically and professionally, provided a single piece of equipment that has impressed and satisfied our engineering, maintenance, validation and research staff. »

Dr. David Edelen, Alcon Laboratories, Inc., Forth Worth, Texas/USA





We are capable of complex thinking – and easy listening

We lay the foundations for future-proof, cost-effective solutions in the entire field of cleaning and sterilisation by active listening: Only by fully understanding your problems and needs do we find the way to the individual solution that is right for you. That is why our consultancy service begins by giving you the opportunity to talk.

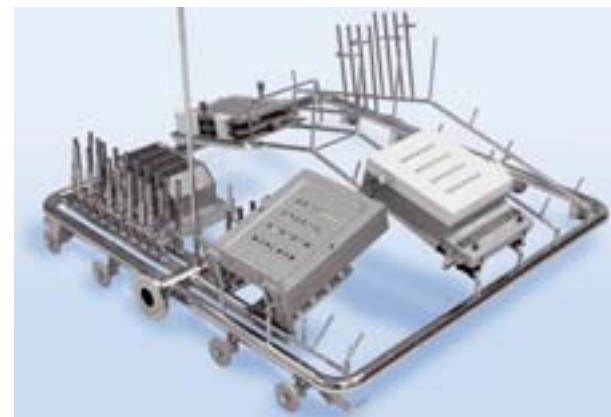
Clever engineering, sound know-how and longstanding experience in the development of custom-made solutions – Belimed is the right partner for your demanding challenges. Our consultants, planners and engineers are uncompromisingly dedicated to finding the application-specific solution to your cleaning and sterilisation problems.

Maximum flexibility and optimum support

The groundwork for an optimised, individual solution is done during the consultancy, planning and design stages: For example, your plant is dimensioned exactly, using throughput and capacity calculations. We demonstrate maximum flexibility in adapting to given spatial conditions – even in extremely restricted locations. We also have the necessary know-how in the planning of automated loading and unloading systems and the integration of cleaning and sterilisation processes into complex production operations. As a customer you benefit from maximum support and real additional services – right through to the design and creation of preparatory construction drawings and the planning and layout of supply and disposal lines.

State-of-the-art technology

Belimed's engineers are only satisfied when they can see no further potential for improvement. We are consistently geared to incorporate the most advanced levels of technology and thus we guarantee sustainable, high operating efficiency and productivity in our plant and equipment.



*Custom-made solution:
Loading rack of a cleaning system
for machine parts*

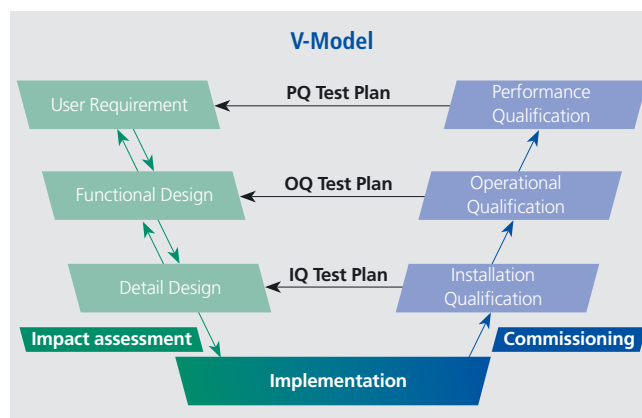
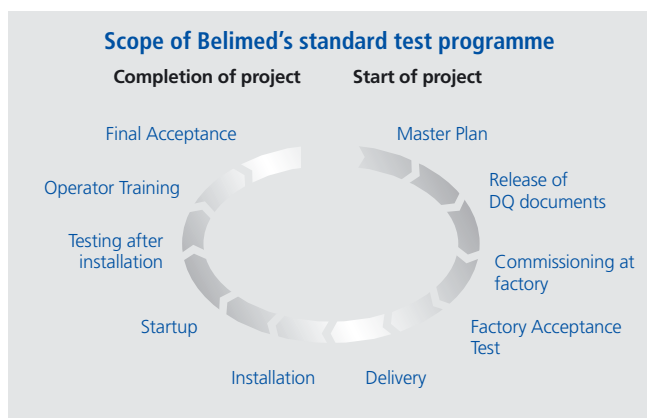
Top quality is no accident

Belimed guarantees top quality equipment and services due to continuous product development, based on customer needs and the latest Standards (cGMP, GAMP, FDA and EU Standards); at the same time supporting its customers to further improve their cleaning and sterilisation processes. In this way, Belimed provides for future-proof investment and meets the constantly increasing demands on preparation processes.

We work closely with our customers from as early as the concept and front end study stage, as only permanent exchange between user and manufacturer delivers maximum transparency for each individual product: Consistent adherence to customer requirements can be reviewed at any time and is continuously updated and documented.

High process reliability

The systematic execution of each individual order guarantees high process reliability and forms the basis for achieving the Belimed project manager's highest goal: To deliver flawless quality within the scope of agreed deadlines and costs.



The standard test programme includes detailed testing of the entire plant in the factory and also during commissioning following installation. The master plan describes the tests to be carried out and records the associated responsibilities. These tests support and significantly simplify qualification (IQ/OQ/IPQ), which Belimed also offers as a separate service and carries out in accordance with the well-proven V-Model.

As a competent partner to the pharmaceutical industry, Belimed is aware of the great importance of plant and equipment qualification. Systematised procedures and comprehensive documentation considerably simplify qualification for our customers and guarantee flawless project execution.



A clear test concept

It goes without saying that our high quality plant complies fully with the latest standards such as cGMP, GAMP (Good Automated Manufacturing Practice), FDA (Food and Drug Administration), ISPE (International Society for Pharmaceutical Engineering) and EU standards.

All new products and product enhancements are geared towards these standards, thus guaranteeing your future-proof investment. Even our clearly defined test and documentation concept is based on these standards and in this way provides for rigorous compliance with their requirements.



Belimed supplies comprehensive and needs-based validation services. Thus they offer equipment design, qualification and validation from one single source. This results in equipment which complies with international standards.



« **Innovation** The driving force behind genuine innovations is to increase the benefit to our customers. This is what we are committed to every single day.

Eugen Moser, Chief Technical Officer Belimed Group



Solutions are seldom obvious – they need to be worked out

Total concepts geared towards durability, intelligent, detailed solutions and the highest manufacturing quality: plant and equipment from Belimed excels due to state-of-the-art technology and cost effective operation. With our professional project management all facets remain under control – in the interests of on-time delivery, installation and commissioning.



Legendary quality for high long-term utility

Belimed products are outstanding at all times for their high quality and cost effectiveness. We focus all our attention on design, manufacture and service, to ensure that you achieve maximum utility from plant and equipment that is solid, long-lasting and efficient. Durable construction and first class manufacturing quality guarantee the highest reliability. Any downtime is kept within strict limits due to the service-friendly design concept. Your operating costs are also kept at a low level as a result of low consumption of energy and auxiliary resources.

First class references

It is not by accident that the Belimed name enjoys an excellent reputation with the leading companies from the pharmaceutical industry. We are trusted worldwide by prestigious customers for whom we have realised successful projects. Our permanent readiness to provide

increased efficiency and a continuous commitment to even greater customer satisfaction make us the reliable partner for complex cleaning and sterilisation solutions in the pharmaceutical industry.

Extremely user-friendly

Our high level of user-friendliness makes a decisive contribution to the efficient operation of Belimed applications. All operator panels are designed simply and clearly, in accordance with ergonomic principles.

IT integration

The modular construction of our software facilitates individual adaptation. The networking of control elements with higher level computer systems takes place via Profibus or Ethernet. Automated monitoring, remote diagnosis and complete traceability are thus assured.



*Installation of six
cleaning systems PH 840.2*

Top class in technology and processing

The Belimed name has stood for recognisable quality and efficient operation in pharmaceutical research and production for more than 30 years. The modular construction of standard products allows individual adaptation in accordance with your requirements and wishes. You gain time, reliability and productivity from optimum integration into your processes and systems – with cleaning equipment from the PH 8XX.2 series, for example.

Rounded corners, free of gaps and dead legs: Clever wash chamber design prevents dirt and deposits.



The Belimed product range for efficient solutions is as wide as the needs for cleaning and disinfection are varied. Both our standardised products and individually developed complete systems are outstanding in their far above average operating efficiency. The compact design saves valuable space and sets a new benchmark.

Maximum productivity and flexibility in cleaning

Belimed sets new standards for the automated cleaning process with the newly developed PH 8XX.2 range. Engineered according to the requirements of the pharmaceutical industry, its modularity and the quality of the materials and components used meet the highest demands for validation, reliability and durability. Specially developed cleaning processes guarantee optimum treatment of the respective wash objects. Individually developed loading carts increase productivity, thereby saving on energy and cleaning agents.

Designs suited to the pharmaceutical industry and maximum reliability

The high operational reliability of Belimed cleaning systems is based on individual customer requirements and consistent implementation of the latest regulations (cGMP, GAMP, FDA and EU standards). Of particular significance here is the wash chamber design which is free of gaps and dead legs and has rounded corners: dirt and deposits in the machine arising from the cleaning process have been prevented from the outset.

In respect to sensitive wash objects and the high requirements on the level of cleanliness to be achieved, Belimed pays particular attention to washing solution pressure and flow rate distribution settings as regards external and internal cleaning.

Well-engineered process controls combined with detailed batch documentation provide complete monitoring of the result of cleaning, which can be reproduced at any time.

A wide range of application fields

- Cleaning and drying of
- Glassware
 - Trays
 - Churns and funnels
 - Filling line change parts
 - Pump parts
 - Fittings and pipes
 - Drums
 - Kegs
 - Bulk containers
 - Tubes
 - ... and many more



(Image on the left) Maintenance-friendly concept: integrated technical and service compartment which houses the machine unit and enables placing of all media connections as well as storage of additives containers.

(Image on the right) The patented connection coupling with special sealing mechanism guarantees leak-free supply to the cleaning system at constant pressure, thus providing shorter cleaning times at higher wash jet pressure.

The benchmark in versatility

With over 2000 installations in leading pharmaceutical industry and biotechnology companies, laboratories and research institutions worldwide, Belimed also has the experience and know-how to tackle your challenges in a practical way. Whether using a standard product or a tailor made system solution, with Belimed you can rely on future-proof technology and maximum flexibility – as in the case of our PST series steam sterilisers.

The PST range of sterilisers was specially developed for the pharmaceutical industry and finds its application in research and production. The modular design allows numerous applications and offers maximum flexibility.

Equal to any task

There is scarcely any limit to the variety of applications for PST steam sterilisers. The sizes and designs which can be realised are correspondingly versatile: With chamber volumes from 100 litres to 60 m³, 1 or 2 door versions, custom-made accessories and a variety of options, our engineers can find the right solution for your application.

Highly reliable and extremely cost effective

Steam sterilisers from Belimed are outstanding not least due to their high cost effectiveness: Firstly, downtime is reduced to a minimum thanks to the service-friendly design; secondly, the durable construction combined with first class manufacturing quality guarantees the highest reliability and safety; and last but not least, operating costs are kept low due to the optimised consumption of energy.



Belimed offers custom-made solutions based on standard products and technologies. As well as special individual sizes we also develop new processes with the appropriate additional components such as, for example, the rotary actuator and shaking mechanism.

A variety of applications

- Solids (metal parts, plastic parts, vessels)
- Porous goods (textiles, breathable materials, packaging materials)
- Solid and liquid laboratory waste
- Liquids in open and enclosed receptacles (bottles, bags, ampoules, vials, syringes)
- SPF applications
- Special applications (emulsions, rubber stoppers etc.)
- ... and many more





Internal view of a hot water shower steriliser with a chamber volume of 60 m³, automatic conveying, and CIP system





« Safety »
Sterility is no accident: The Belimed Team offers us
tailor-made solutions and 100% support.

Evelyne Aufdenblatten, Environmental Monitoring Responsible, Lonza AG, Visp/Switzerland »



All have experience. Only a few have the right instinct.

Belimed's market services reach far beyond products and their service and support. Extensive experience in all validation processes, the conversion of existing plant and the joint execution of cleaning and sterilisation tests are examples which illustrate what we understand by customer-oriented solutions: an integrated package of services for all dimensions and facets of the cleaning and sterilisation process.

Alongside sound know-how and modern technology, Belimed also regularly applies one of the oldest instruments of all: instinct. The instinct for an unconventional approach to solution-finding, a sixth sense for the proverbial «devil in the details» – even in service and support.

Training and development

We provide our customers' new employees with regular training courses and seminars on an ongoing basis. Thanks to ease of operation and logical user guidance, participants gain a great deal of security in working with complex plant and equipment in a short time.

Test steriliser and cleaning plant

To resolve cleaning and sterilisation problems in your production processes, our centres of competence offer you a test laboratory with the latest generation of plant and equipment. This gives you the possibility to conduct your own tests and trial sequences, evaluate data immediately on site, compile reports, and exchange views with our experts. A free selection of procedures and programmes, customer-specific parameterisation and complete batch documentation opens up new approaches to solution-finding and new perceptions. Cooperation with Belimed process technicians guarantees optimum cleaning and sterilisation results – in the best sense of a strong partnership.



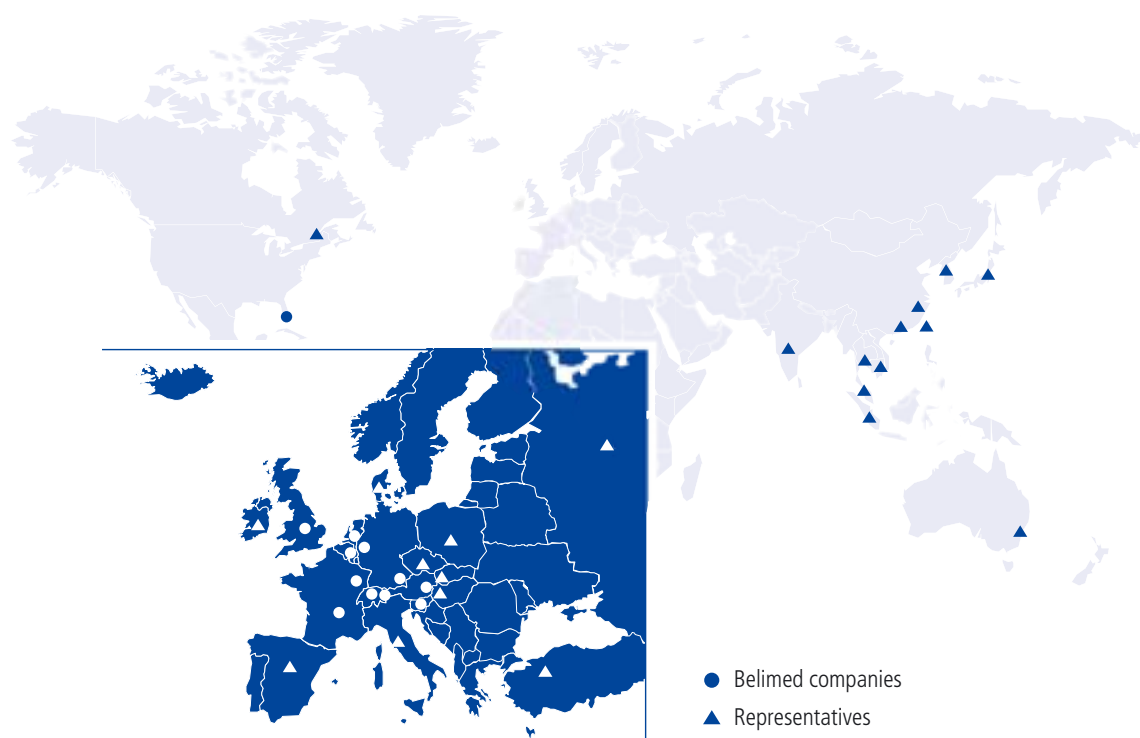
Service, maintenance and support: Always close at hand – worldwide

We also formulate our service and support package – which is tailored to your needs – in the same individual way as your cleaning and sterilisation solution. From prognostic maintenance in the context of individually drawn up service contracts through support services such as advice by telephone and remote maintenance via modem to the provision of service technicians on site: our supreme goal is the maximum operational reliability of your plant and equipment and the immediate availability of spare parts – irrespective of the model and year of manufacture.

Consultancy, training, service and maintenance in a strong network of our own subsidiary companies and authorised partners – an important cornerstone of Belimed's quality management.

Personal, competent and professional

Belimed guarantees its customers short reaction times and competent, personal support on site through our strong, worldwide distribution network. More than 30 years of know-how assures our customers of the highest level of plant availability and productivity.



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