



The advanced research laboratory dedicated to refrigeration innovation.

Belimo refrigeration laboratory



Learn more
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Belimo refrigeration laboratory.



Belimo refrigeration laboratory is a laboratory specifically created to design, develop, test and monitor components or systems in a technologically advanced environment capable of replicating the actual operating conditions of cooling systems.

This advanced research laboratory supports our client partners in the development of innovative solutions based on the integration of smart valves. The new generation of smart valves improve the productivity, safety, energy consumption and duration of refrigeration machines.

Suitable to be operated with different HFC/HFO refrigerants.



Research and equipment.



Innovation

Research dedicated to the development of innovative products, solutions and services in cooperation with our client partners.



Analysis and development

Study, analysis and development of new technologies and frameworks.



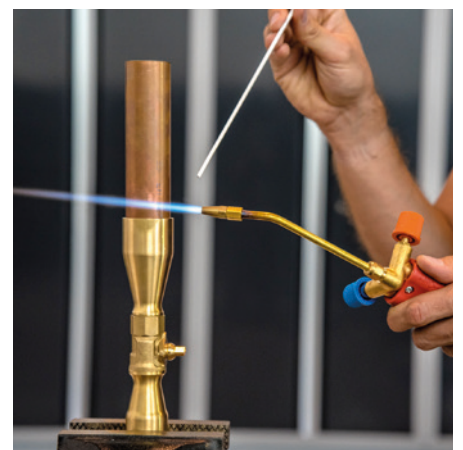
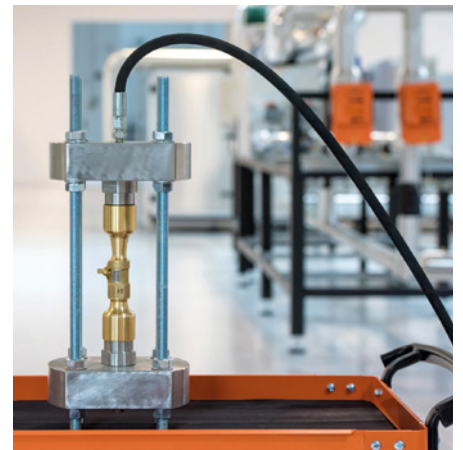
Testing and training

Testing of components and of refrigeration circuit control technologies.

Development and optimization of technological packages and of single components validated by laboratory tests.

Testing and performance measurement of components or systems.

Training and refresher courses for technicians and specialists.



Our advanced applied research laboratory.



Compressor

Inverter-driven screw compressors, up to 350 kW of cooling capacity each for a total of 700 kW, BLDC motors, managed by dedicated programmable controllers.

Flow meter

Coriolis mass flow meters, medium and high mass flow, less than 0.2% accuracy, integrated into plant control systems.

Test bench

LAB1 test benches: line 1 up to 400 kW of cooling capacity and line 2 up to 700 kW. Each with different testing lines in parallel and a by-pass line for low mass flow performance testing. Equipped with mass flow meter, temperature and pressure sensors for data monitoring and measuring.





Data acquisition system

Real-time data acquisition system:

- 40 4-20mA ch
- 10 0-10V ch
- 30 PT100 Temperature sensors ch
- RS485 port for Modbus com devices
- Expandible

Control room

Monitoring and controlling of LAB1 and LAB2 systems and face-to-face training lessons area.

Electrical substation

New dedicated electrical substation for high voltage power supply, equipped with a power transformer up to 400 kVA.

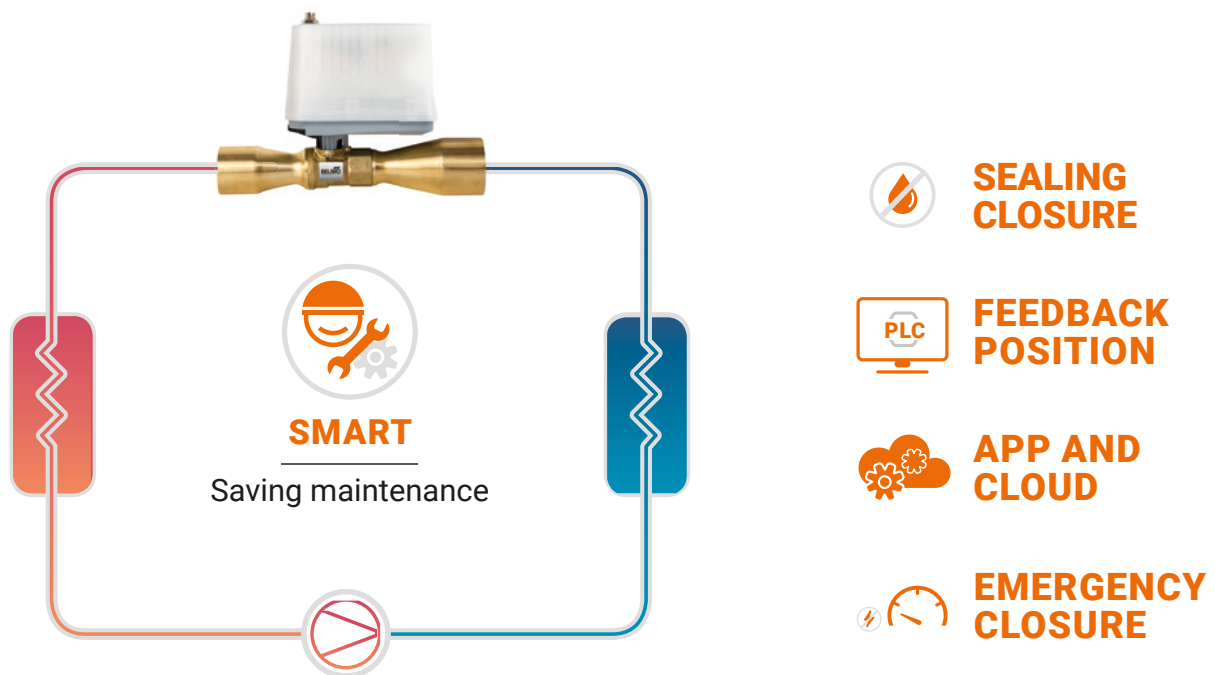


Manufacturing the new generation of smart refrigeration valves.

Belimo is dedicated to the innovation of HVAC components. Our mission is to produce the next generation of smart valves that improve the productivity, safety, energy consumption and duration of refrigerating systems.

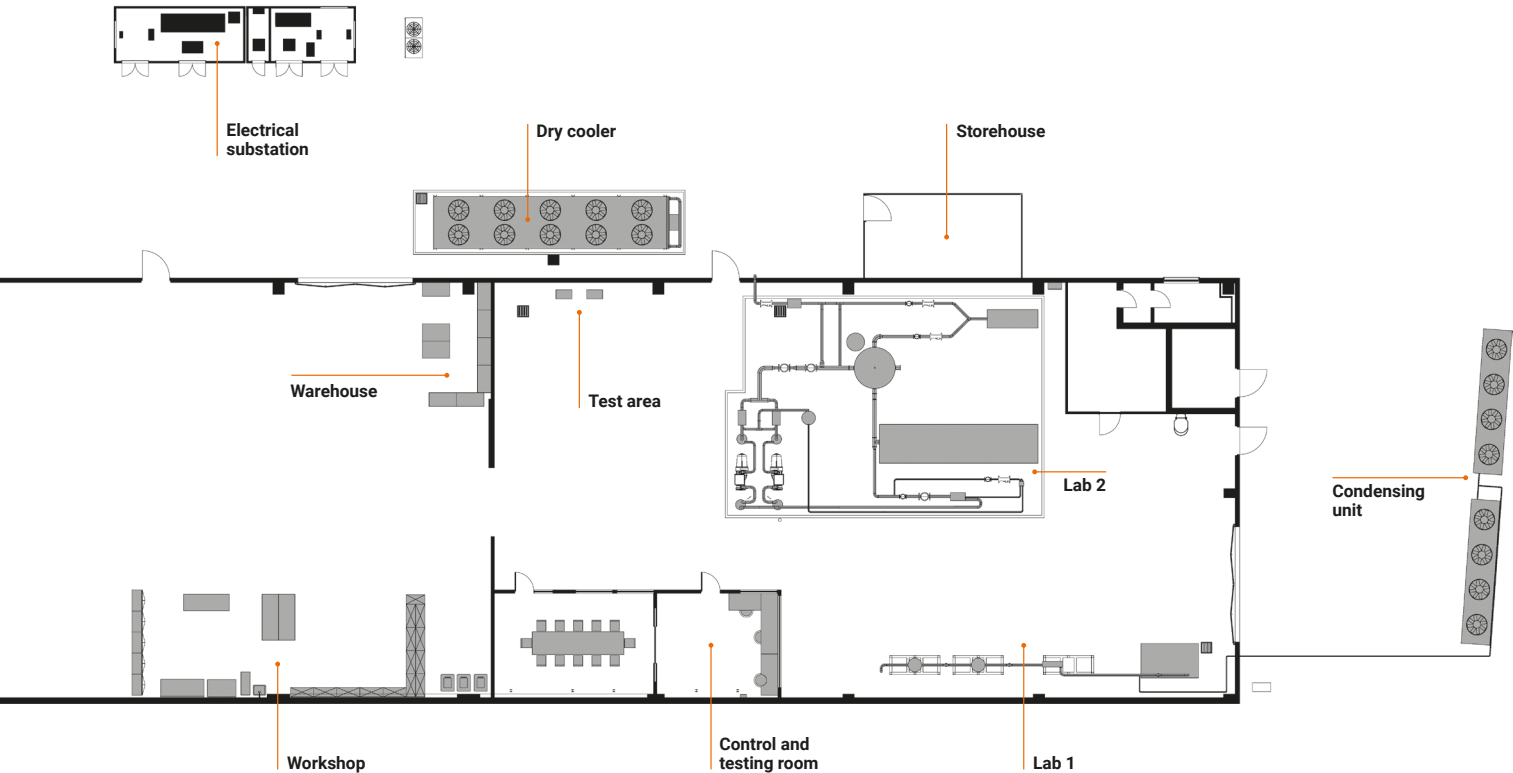
This is the vision behind xBALL, the system that transforms expansion valves into innovative components capable of regulating loads and of assuring perfect sealing when closed.

At Belimo we firmly believe in innovation as a result of cooperating with our customers and of listening to their needs. In our specially designed laboratory, you can experience how xBall products positively influence your system without having to organise your own test setup. We carry out the simulations and tests for you – quickly, precisely, and customised to your requirements.



The advanced laboratory

Thanks to our continuous investment in research and development we have become an excellence in manufacturing unique and dedicated solutions for the refrigeration market with the intention of meeting three fundamental needs: automation, connectivity and sustainability.



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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