SUCCES STORY LDR MÉDICAL

Control and balancing of heating and cooling flow in chilled beams.

Administration and Logistics Headquarters of LDR Médical

In 2016, the Franco-American company LDR, a specialist in spinal implants and thoracic/lumbar vertebrae disc prostheses, will move into their new company headquarters in the “Parc du Grand Troyes” industrial park (Département Aube). The construction project, with costs totaling 13 million EUR and a surface area of 7,000 m², is being headed by Linkcity, which, on a related note, is implementing its first planning and construction project in the Champagne region. The construction work carried out by Bouygues Bâtiment Nord-Est started at the beginning of 2015. One part of the building is intended for administration purposes and the other for logistics.

TYPE OF BUILDING
Office building

PROJECT
New building

SECTOR
Heating, ventilation and air conditioning (HVAC)

PRODUCTS
Pressure-independent 6-way zone valves, 6-way zone valves, pressure-independent zone valves PIQCV

BELIMO®

Requirements.

Initial situation

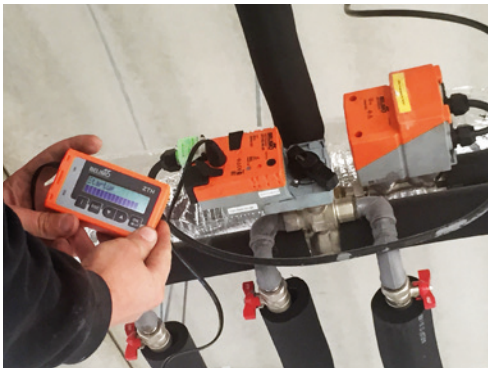
Bouygues Bâtiment Nord-Est wanted a single valve for precise temperature control that would enable control and balancing of the volumetric flows for heating and cooling in the chilled beams and fan coil units.

Project requirements

- Only one valve per end device
- Automatic, permanent hydronic balancing via the valve
- Analysis and diagnostics with regard to actual volumetric flow
- Simple parameterisation of the actuators
- Small number of different products

Belimo solution

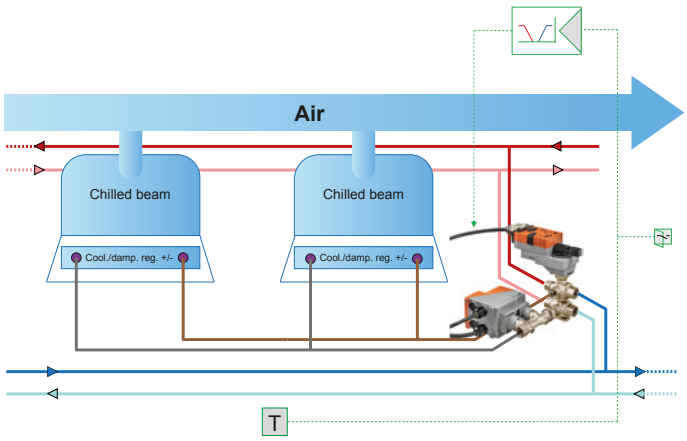
The pressure-independent 6-way zone valve was selected in order to meet the client's requirements. This solution comprises of one 6-way zone valve with permanent hydronic balancing. It thus means that the two functions are combined in a single valve housing. As such, the correct amount of water can also be ensured even with differential pressure changes in partial load operation. The SABIATHERM and SOLIDAIR end devices are regulated using a SAIA room controller. The location is equipped primarily with active chilled beams in change-over mode. Optimum hydronic balancing as well as precise and absolutely stable control ensure optimisation of energy use and a high degree of personal comfort.



Result.

Customer benefit

- Simple and rapid selection with only two valve sizes for all possible volumetric flows between 5% and 100% of the V'_{max} control range.
- Safe onsite use with the right valve in the right position. No installation errors as it is impossible to mix up the valves.
- Permanent hydronic balancing (no additional balancing apparatus required).
- Rapid commissioning as a result of flexible installation saves time and money.
- Different max. flow rates can be set for cooling and heating.
- Simple, rapid and exact reparameterisation of the volumetric flows when the areas to be regulated are changed.
- Volumetric flow measurement in real time.
- Monitoring, analysis and diagnostics regarding the actual volumetric flow values through the building management system.



Schematics of the integrated 6-way zone valve in the chilled beam

Customer satisfaction

The control of the pressure-independent 6-way zone valves (only one control signal for two control sequences) is a decisive advantage. Furthermore, it is possible to commission the product with the setting of the volumetric flows without any difficulty. For Bouygues Bâtiment Nord-Est, total costs played an important role, as did the possibility of guaranteeing the completion times.

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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