



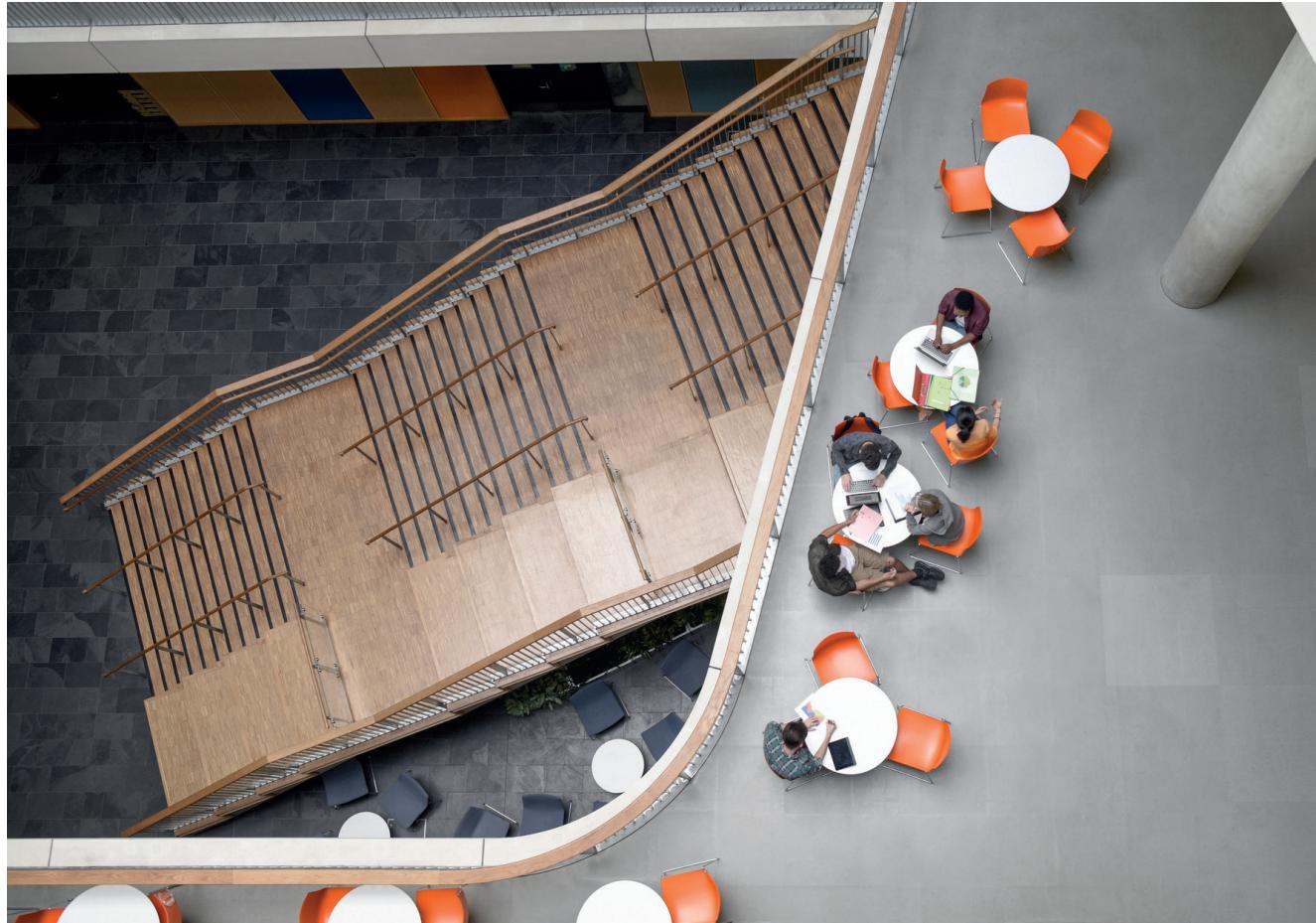
High Performance Solutions



**Belimo Energy Valve™, EPIV,
PIQCV and 6-way EPIV**

BELIMO
®

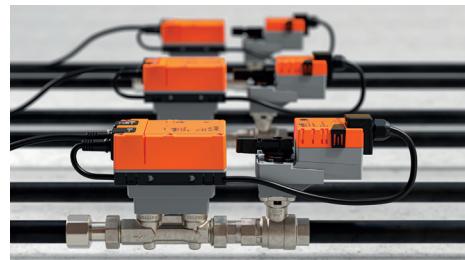
Energy efficient valves for optimal building comfort



Belimo pressure independent control valves ensure long-term efficiency and dynamic balancing in variable flow hydronic systems, providing a lifetime of worry-free operation.

Unlike traditional valves, Belimo pressure independent valves precisely regulate the water flow required by the coil, independent of system pressure fluctuations. Since they are selected based on the coil's flow requirements, there is no need for valve authority or Cv calculations. By maintaining accurate flow control, these valves eliminate the need for separate balancing valves, reducing installation costs. More importantly, they prevent overflow through the coil, which not only wastes pumping energy but also contributes to low Delta T syndrome in chilled water systems.

With Belimo's pressure independent technology, hydronic systems operate at peak performance—saving time, energy, and valuable resources.



Improves building performance

With Belimo's pressure independent control valve technology only a single valve is required to maintain proper flow through each circuit. Each valve is factory-set to a specific flow rate, which can be easily adjusted in the field if needed. From the moment of startup, the system operates at peak efficiency. Even if new circuits are added during facility expansion, the existing flow control remains unaffected, eliminating the need for system re-balancing.



Dynamic Balancing

Belimo's pressure independent valves ensure precise water flow to the coil and are not affected by pressure fluctuations in the system.



Energy Savings

Pressure independent control valves optimize energy efficiency by dynamically balancing the load in all conditions, preventing coil overflow and reducing pumping costs.



Zero Leakage

Belimo ball valve design offers zero leakage and eliminates energy loss while ensuring reliable operation throughout the entire life of the valve.

"The Belimo pressure independent control valve not only properly controls the flow of hot or chilled water to the classroom unit ventilator, it also prevents excess flow from going through the unit."

**Robert Morgan, P.E.,
Robert E. Morgan Associates**

Pressure independent products from Belimo at a glance

Belimo's pressure independent valve technology maximizes energy savings in variable flow pumping systems while addressing unique control challenges. The product range includes the super compact PIQCV, the EPIV (electronic pressure independent valve) with true flow measurement, and the Energy Valve, which optimizes, documents, and verifies water coil performance.

Feature	PIQCV	6-way EPIV	EPIV	Belimo Energy Valve™
Position Feedback	■	■	■	■
Glycol Monitoring		■	■	■
True Flow Measurement		■	■	■
Dynamic Balancing	■	■	■	■
Energy Meter				■
Position Control	■	■	■	■
Flow Control	■	■	■	■
Power Control				■
Delta T Manager				■
Power Supply via Ethernet (PoE)				■
Cloud Analytics				■
Live Data		■	■	■
Coil History				■
CCV Technology	■	■	■	■
0% Leakage	■	■	■	■
Field Configuration	□	■	■	■
BACnet MS/TP, Modbus RTU, MP-Bus and analog	■	■	■	■
BACnet/IP and Modbus TCP/IP				■
Near Field Communication (NFC)		■	■	■

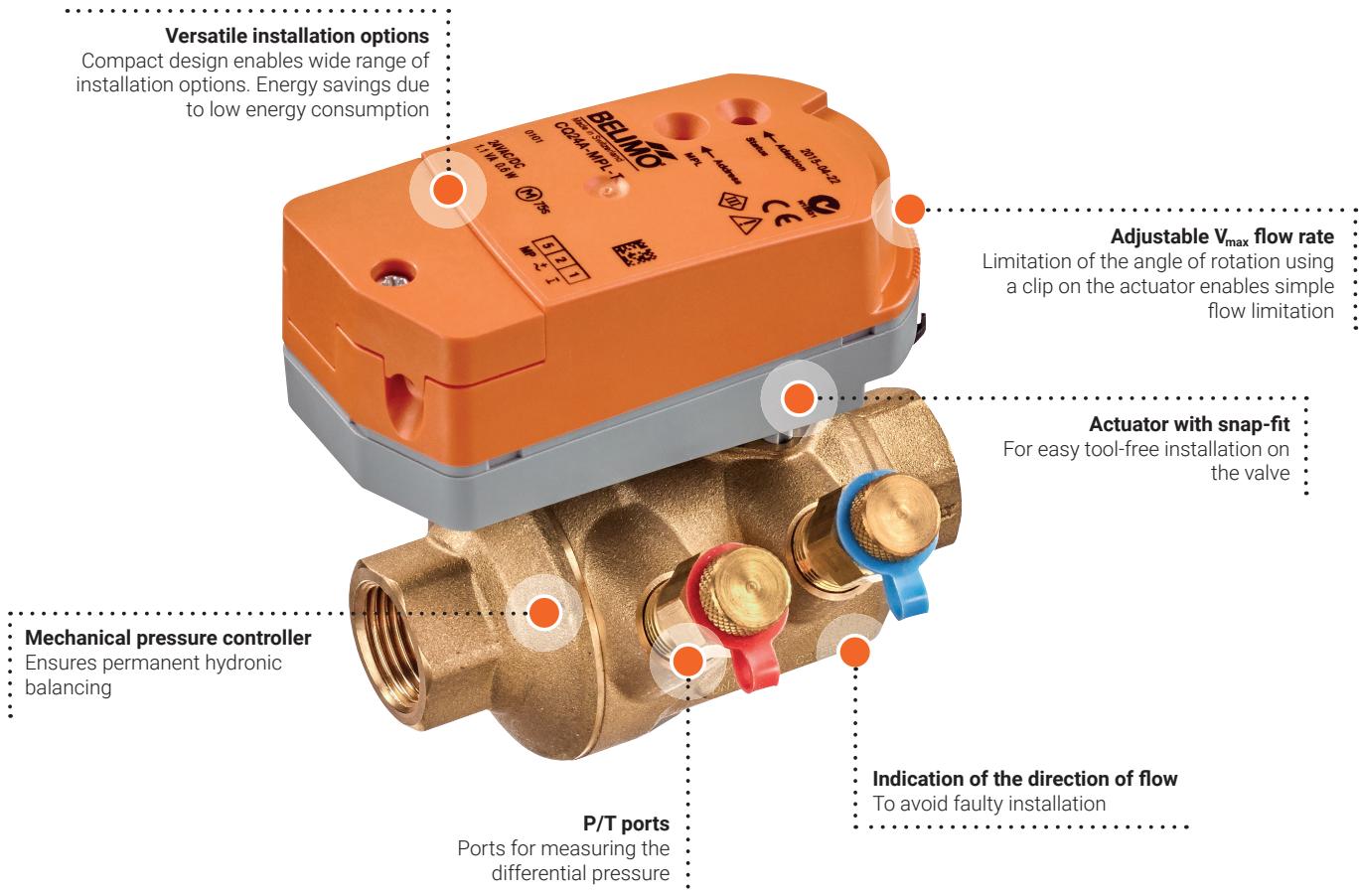
□ PIQCV is field adjustable

PIQCV

The PIQCV combines a differential pressure regulator with a 2-way control valve, ensuring a specific flow for each degree of ball opening, regardless of system pressure fluctuations. Combining the functions of both a balancing valve and a control valve in a single unit, it is available in $\frac{1}{2}$ " and $\frac{3}{4}$ " sizes.

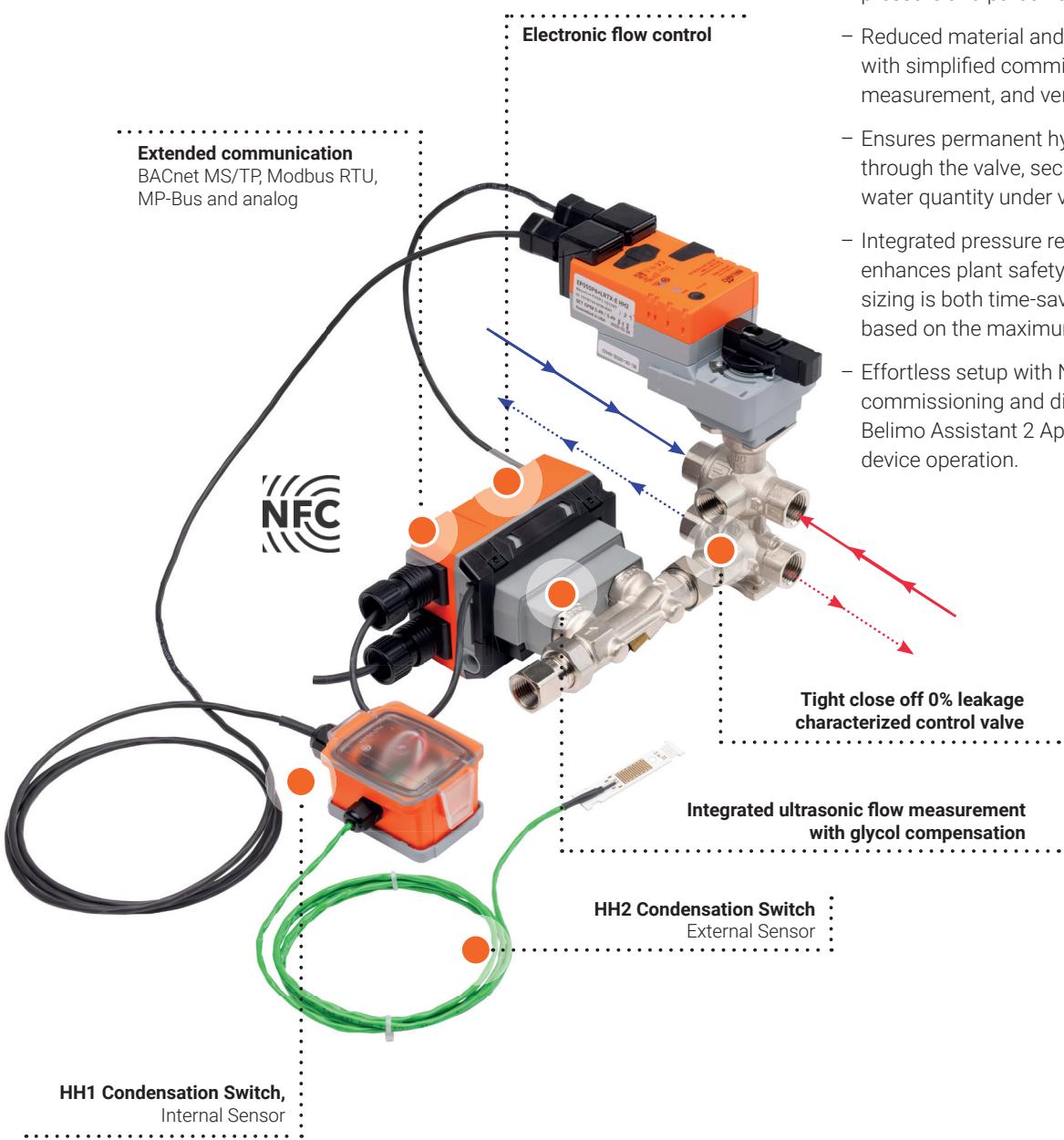
BENEFITS

- Smallest pressure independent characterized ball valve on the market.
- Energy-efficient actuator operates at just 0.3 W, reducing power consumption and transformer load.
- Adjustable flow at the actuator ensures precise, continuous balancing.
- Self-cleaning ball valve technology avoids clogging and offers zero leakage, eliminating energy loss.
- Permanent hydronic balancing.



6-way EPIV

The 6-way EPIV is the only valve of its kind designed for chilled beams, radiant ceiling panels, and 4-pipe fan coil units, providing true flow and dynamic balancing. By integrating the functionality of multiple valves, it minimizes material requirements and installation time. Available in $\frac{1}{2}$...1" sizes.

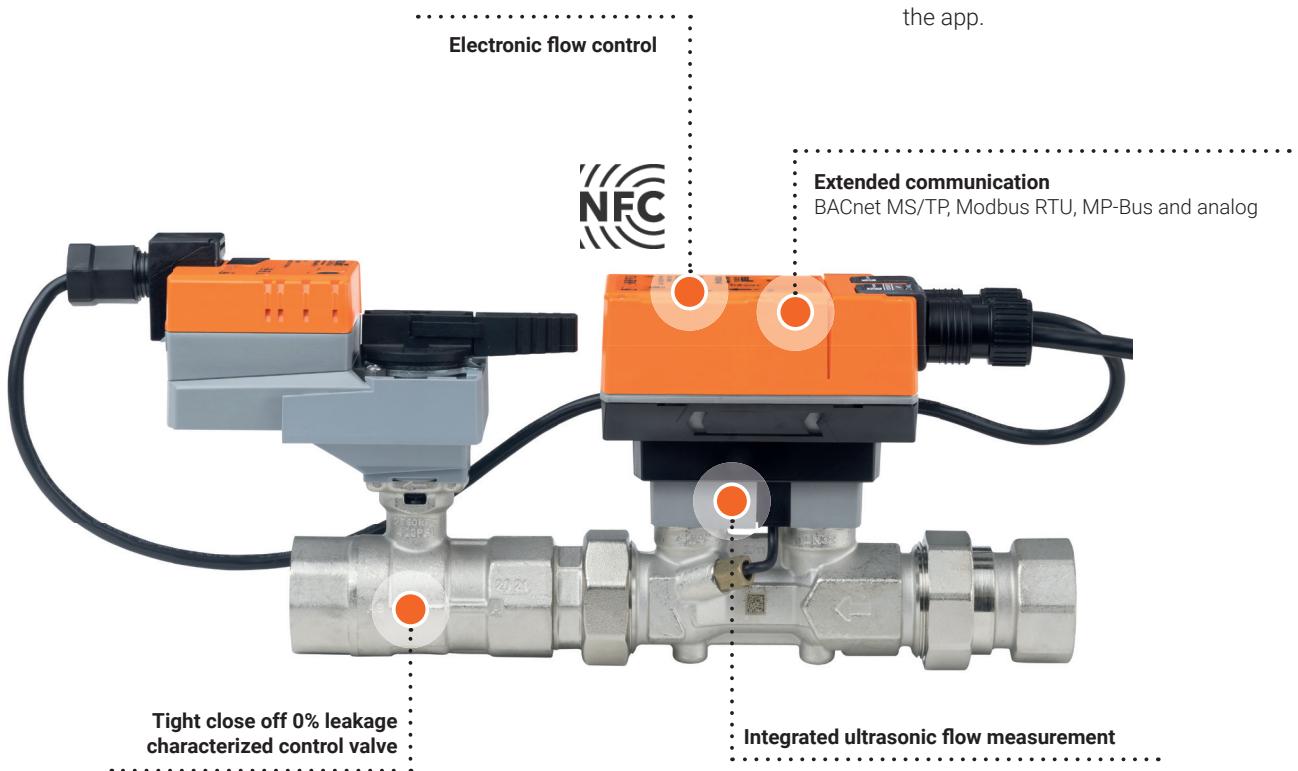


BENEFITS

- Performs changeover and modulating control for single coil 4-pipe systems, providing different flow settings for heating and cooling.
- Zero leakage design ensures energy savings and maintains accurate water flow, even with changes in differential pressure and partial loads.
- Reduced material and installation costs with simplified commissioning, flow measurement, and verification.
- Ensures permanent hydronic balancing through the valve, securing accurate water quantity under varying conditions.
- Integrated pressure relief function enhances plant safety, while the valve sizing is both time-saving and reliable, based on the maximum flow rate.
- Effortless setup with NFC-enabled commissioning and diagnostics via the Belimo Assistant 2 App for efficient device operation.

EPIV

The 2-way EPIV is a pressure independent characterized control valve with an integrated electronic flow meter and a powerful control algorithm. It compensates for pressure variations and performs dynamic balancing to maintain system performance at varying loads. The EPIV integrated control signal maintains a flow set point regardless of system pressure variations with its robust algorithm modulating the valve based on the actual measured flow. Valves are selected based on coil flow rate; no valve authority and Cv calculations are needed. Available in sizes $\frac{1}{2}$... 6".



BENEFITS

- Ultrasonic flow measurement technology and glycol compensation ensure true flow measurement and total volume readings.
- Integrated temperature sensor provides accurate fluid temperature measurement and glycol mixture monitoring.
- Pressure-independent operation removes the need for manual balancing valves, reducing installation and commissioning time.
- Digital workflows with the Belimo Assistant 2 App streamline commissioning and operation. The app enables remote calibration and automatic generation of commissioning reports.
- NFC compatibility allows easy commissioning and data retrieval via the app.

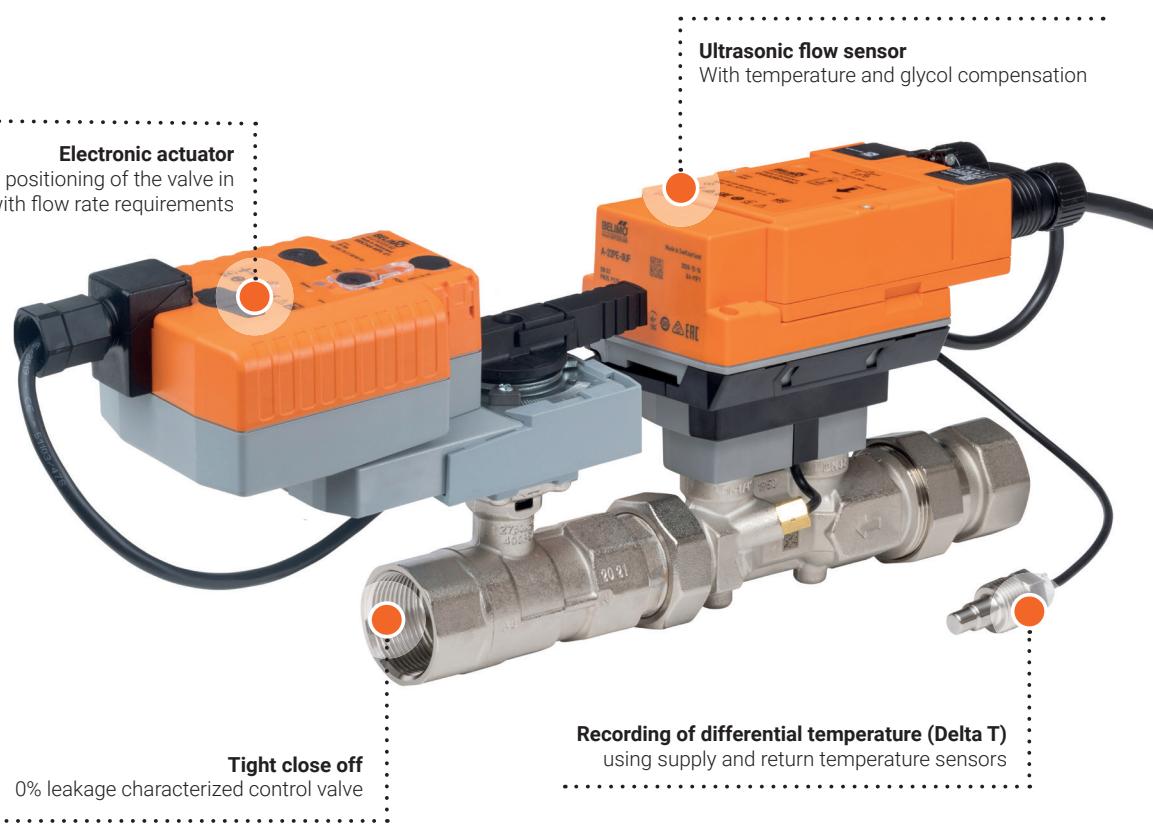
Belimo Energy Valve™

The Belimo Energy Valve is an IoT cloud-connected pressure independent valve that monitors coil performance and energy consumption while maintaining Delta T. A patented glycol monitoring and compensation feature provides accurate, repeatability flow measurement and ensures glycol content meets design requirements. Integrating Belimo's Thermal Energy Meter with the Energy Valve (½...2") allows for easy energy control and transparent tenant billing. Designed according to EN1434/CSA C900 standards, they offer an accurate measurement and monitoring of energy consumption in a heating and cooling system with direct IoT-based cost accounting using a single device.

Connecting to the Belimo Cloud offers lifetime data storage, setpoint recommendations, and performance reporting. Local data storage and trending capability coupled with BACnet, Modbus, MP-Bus, and analog communication provide the ability to monitor energy usage and develop energy savings strategies through the building automation system. Available in sizes ½...6".

BENEFITS

- Built-in patented Power Control and Delta T Manager logic optimizes the available energy of the coil by maintaining Delta T.
- Glycol monitoring ensures concentration meets design requirements, reducing unnecessary pumping and optimizing heat exchange for safe, efficient operation.
- Dynamic coil performance provides real-time insights into coil operation, accurately highlighting power degradation and other operational issues, ensuring full transparency.
- Simplified commissioning with flow measurement and verification.



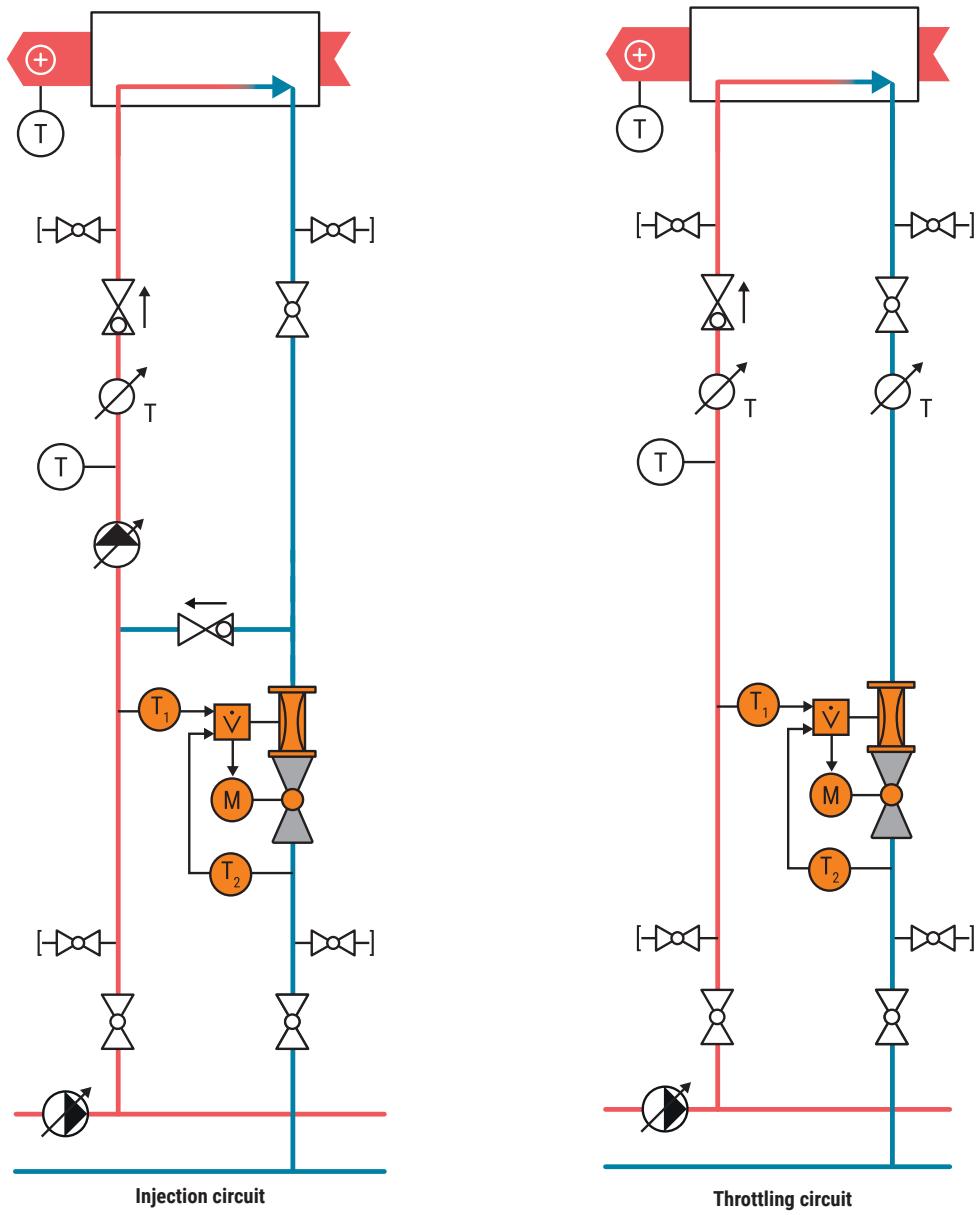
Solutions for maximum efficiency

Product Range		Valve Nominal Size		Suitable Actuators	
Valve Type	Flow (GPM)	Inches	DN [mm]	Non-Fail-Safe	Electronic Fail-Safe
PIQCV NPT and Press Fit	0.9*	½	15	CQ	CQK
	2.0*	½	15		
	4.3*	½	15		
	9.0*	¾	20		
6-way EPIV	5.5	½	15	LRX-E	LRTX-E
	11	¾	20		
	18.2	1	25		
	6.6*	½	15		
EPIV	11*	¾	20	LRX-E	
	18.2*	1	25		
	28.5*	1¼	32		
	44*	1½	40		
Energy Valve	66*	2	50	NRX-E	ARX-E N4 AKRX-E AKRX-E N4
	100*	2	50		
	1.65...6.6*	½	15		
	2.7...11*	¾	20		
EPIV and Energy Valve ANSI 125 and ANSI 250	4.5...18.2*	1	25	ARX-E	ARX24 AKRX24
	7.1...28.5*	1¼	32		
	11...44*	1½	40		
	16.5...66*	2	50		
	25...100*	2	50	GRX24	GKRX24
	127*	2½	65		
	180*	3	80		
	317*	4	100		
	495*	5	125	GRX24	GKRX24
	713*	6	150		

*Vⁿom = Maximum flow for each valve body size.

Basic hydronic circuits for heating applications with Belimo Energy Valve™

The injection circuit allows for varying temperatures across different circuits, though it is more complex and requires additional equipment. Throttling control valves, while offering several efficiency benefits, cannot provide different flow temperatures to multiple circuits.



Tools and apps

Tools to Achieve Efficient Building Performance

Belimo provides an array of online tools from sizing and selection of HVAC products to energy-saving calculators that help you achieve increased building performance efficiently.

Belimo SelectPro is an online and offline sizing and selection tool for actuators, valves, sensors, and retrofit solutions. SelectPro offers:

- Intuitive User Interface – navigate through the tool with ease
- Flow and Cv clip setting offered in SelectPro for ZoneTight Zone Valves
- Reference Documents – locate information in one central location
- Contact Profiles – ability to save multiple contact profiles
- Quote Generator – create a professional quote from your schedule
- Media Download – save a ZIP file of your entire schedule's media

Belimo RetroFIT+ App allows you to quickly and easily find replacement solutions for valves, actuators and sensors. Replacement solutions ensure reliable, functioning heating and cooling HVAC systems and boost the performance and efficiency of integrated building technology. The Belimo RetroFIT+ app is FREE and can be downloaded from the Apple App Store or Google Play.

The **Belimo Assistant 2 App** enhances efficiency with swift programming, commissioning, and diagnostics for Belimo devices. Key features include identification of device type, parameter customization, and visualization of operational data. The Belimo Assistant 2 App is FREE and can be downloaded from the Apple App Store or Google Play.

Savings Estimator Tools estimate the annual cost and energy savings you can expect when installing the Belimo Energy Valve or Belimo Damper Actuators. These tools have an Excel-based platform and are available online at belimo.com.

Belimo Hydronic Simulator™ identifies and illustrates when the system needs to be balanced and how adjusting the valve could impact the entire system. The primary purpose of the Belimo Hydronic Simulator is to educate on the importance of why pressure dependent valves are not recommended in a dynamic system.

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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



Belimo Americas

USA, Canada, Brazil, Latin America, and the Caribbean
www.belimo.com

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