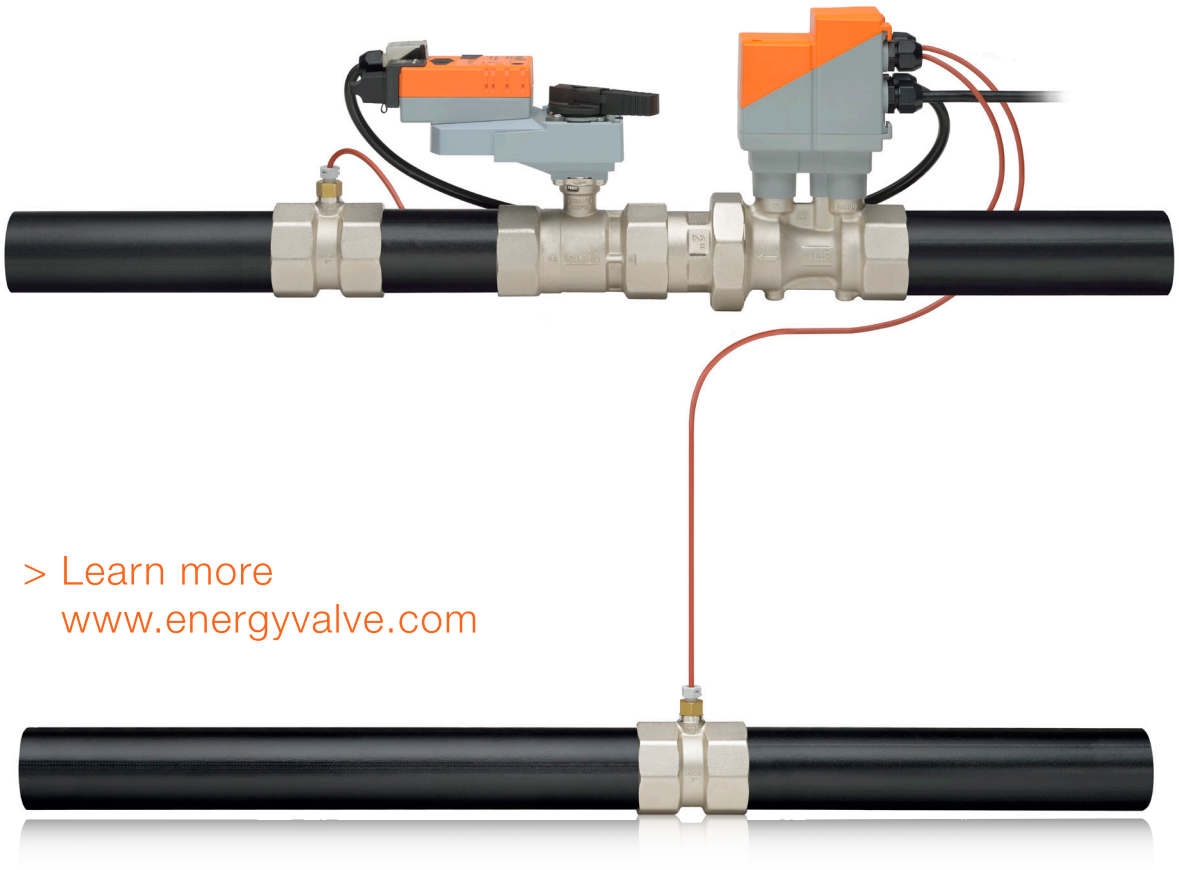
Belimo Energy Valve™
Knowledge is Power.



> Learn more
www.energyvalve.com

Measures Energy	Controls Power	Manages Delta T

EXPERIENCE
EFFICIENCY

BELIMO

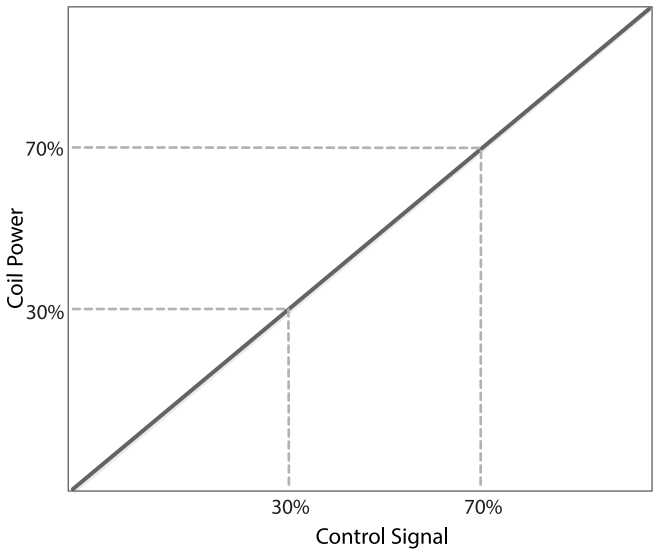
One Optimised Complete Solution.

The Energy Valve is a pressure independent valve that measures and manages coil energy by using an embedded electromagnetic or ultrasonic flow meter, along with supply and return water temperature sensors. The Energy Valve also has the patented Power Control and Belimo Delta T Manager™ logics built-in that monitors coil performance and optimises the available energy of the coil by maintaining the Delta T. In addition to the standard analog signal and feedback wiring, it communicates its data to the Building Management System via BACnet MS/TP or BACnet IP. The built-in web server collects up to 13 months of data that can be downloaded to external tools for further optimisation. Some of these features contribute to LEED points.

Measures Energy	Integrated energy meter provides accurate coil performance data. The data is used to verify system performance during commissioning and act as a baseline standard for system performance over time. This feature helps achieve LEED points through Energy and Atmosphere within credits 1 and 5.
Controls Power	Built-in power control logic provides linear control of coil heat transfer adapting to system changes. This mode allows for quick and precise reaction to all system variables.
Manages Delta T	Belimo Delta T Manager algorithm reduces pumping and chiller/boiler operating costs by increasing chiller plant efficiency and eliminating waste zone operation.

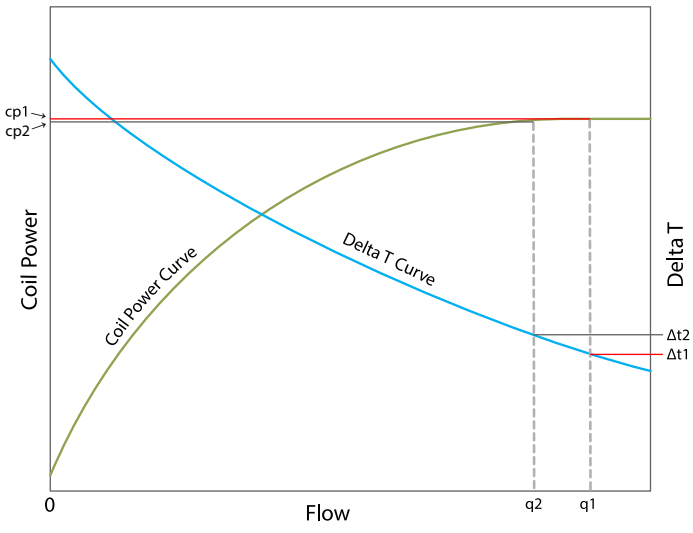
The Delta T Manager maintains temperature differential based on a customer defined setpoint by regulating the flow using the Delta T measurement across the coil.

Controls Power



- Control algorithm that maintains coil power setpoint
- Linear relationship between control signal and power
- Coil power setpoint adaptable to changes in building operations: supply/return water temperature, system variables and building load

Manages Delta T



- Increase in Delta T (Δt1 → Δt2) and decrease in flow (q1 → q2) leads to almost no change in coil power (cp1/cp2 less than 1% difference)
- Reduces overflow in coil
- Saves on pump and chiller/boiler operating costs

Most Capable Valve in the HVAC Industry.

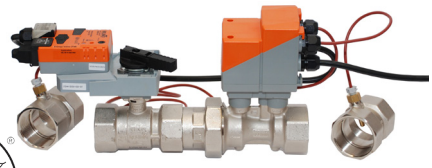
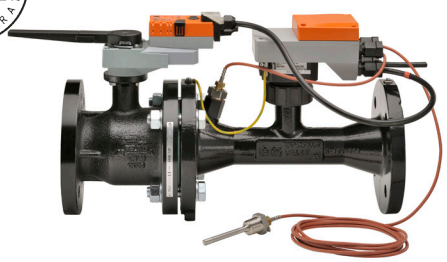
Pressure Independent Valve Comparison

Features	Traditional PI Control Valve	Energy Valve
True Flow		•
Dynamic Balancing	•	•
Energy Meter		•
Power Control		•
Delta T Manager		•
Live Data		•
Coil History (13 Months)		•
CCV Technology		•
Leakage	ANSI Class IV / EN 12266-1	0%
High Close-off		•
Low Minimum Pressure Drop		•
Field Configuration		•
BACnet MS/TP or IP		•
5-Year Warranty		•

The Energy Valve provides the same reliable, automatic, pressure independent flow control you've come to expect, and offers so much more.

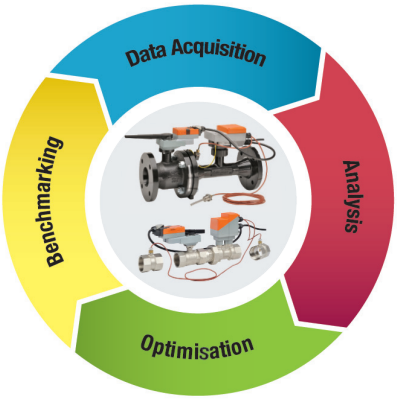
Never before has one valve done so much – measures energy, controls power, manages Delta T, communicates, trends, and diagnoses.

www.energyvalve.com

	Pipe Connector	Flow Range (l/s)	Nominal Diameter Range DN (mm)	Actuator Type
	Internal Thread	0.35 - 4.8	15 - 50	• Non-Spring Return • Electronic Fail-Safe (SuperCap)
	Flanged	8 - 45	65 - 150	

One solution, so many benefits!

Belimo Energy Valve:



- **Energy Meter** measures energy usage, flow and differential temperature across the coil which creates load transparency.
- **Power Control** allows you to set your power output to a specific value in a linear response. Coil and valve characteristics become irrelevant. Coil control is now both pressure and temperature independent.
- **Delta T Manager™** continuously monitors the coil Delta T and compares it to the desired Delta T setpoint. If the actual Delta T is below the setpoint, the valve will readjust flow to bring Delta T back to the desired setpoint.
- **True Flow** is achieved with the built-in electronic flow meter which can be shared with the DDC system. Flow verification is simple and troubleshooting is fast.
- **Dynamic Balancing** provides pressure independent operation by maintaining constant flow regardless of pressure differential fluctuations.
- **Coil Data (13 Months)** is stored to provide ongoing commissioning. This valuable data give a level of operation transparency that was never previously available.
- **Characterised Control Valve** technology improves light load control, provides self-cleaning, higher close-off, and zero leakage eliminating “ghost energy” losses in the system.
- **BACnet** communication provides the ability to read values and write settings through a BACnet IP or BACnet MS/TP network.

www.energyvalve.com
Belimo Worldwide: www.belimo.com

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