



Multifunctional Belimo Energy Valve™. Transparent energy monitoring with the Belimo Cloud.





Know where the energy is going.

The Belimo Energy Valve™, which consists of a 2-way characterised control valve, volumetric flow meter, temperature sensors and an actuator with integrated logic combines many functions in a single installation-friendly unit.

Building owners, facility managers, contractors and system integrators will not fail to recognise the advantages of this intelligent technology such as:

- Quick and certain dimensioning as well as simple commissioning
- Energy-saving through automatic, permanent hydronic balancing
- Correct volume of water despite differential-pressure changes and partial loads
- Efficient operation ensured through the Delta-T management

With the integration of the Belimo Energy Valve™ into the Belimo Cloud the users create their own account to have full transparency about the energy consumption in the cooling/heating application – anytime and from everywhere and whenever they want.

One optimised complete solution – now cloud based.

The Belimo Energy Valve™ is an Internet of Things (IoT) device – a smart connected pressure-independent valve that measures and manages coil energy consumption by utilising an embedded flow meter, along with supply and return water temperature sensors. The Belimo Energy Valve™ also has power control and Delta-T manager logics built-in that monitors coil performance and optimises the heat transfer of the coil by maintaining the Delta-T.

transparent

Integrated logic and sensors provide accurate coil performance data. Energy monitoring data is used to verify system performance during commissioning and acts as a baseline standard for system performance over time. Transparency with respect to energy consumption for heating and cooling is achieved.

connected

Cloud connection to control, optimise, monitor energy usage and provide advanced system data reporting driving product and system functionality delivering optimal performance. Enhanced communication allows for expanded system integration and BMS control with the addition of Modbus RTU and TCP/IP. Other integration possibilities include BACnet MS/TP and BACnet IP, Belimo MP-Bus®, and one analog connection.

efficient

Belimo Delta-T manager algorithm reduces pumping and chiller/boiler operating costs by increasing plant efficiency and mitigating low Delta-T syndrome. Power control allows the user to set the 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.

Where power control is easier than ever before.

Useful functions in one valve unit ...

NEW

Multi-bus connection

Bus-connection to BACnet, MP-Bus® and Modbus with the same valve.

Controlling and Balancing

Control of valve position, flow or power for perfect modulation of the coil.

Monitoring

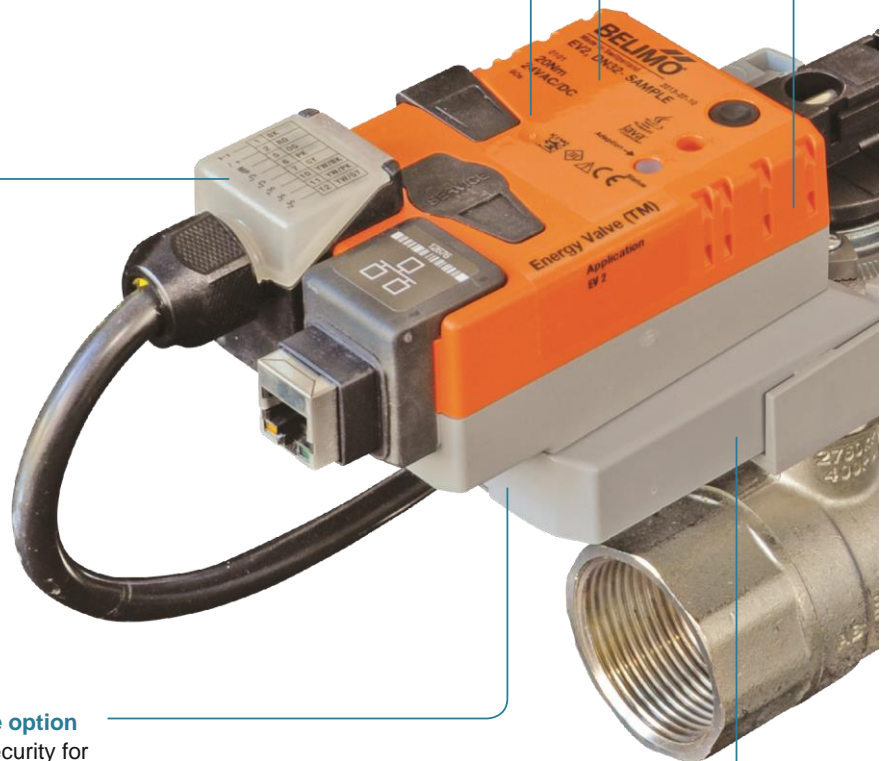
Integrated Webserver.

Electronic fail-safe option

provides security for safety sequences upon a loss of power.

Power Control and Delta-T manager

logic built-in monitor coil performance and optimise the available energy of the coil by maintaining the Delta-T.



measurement.

NEW

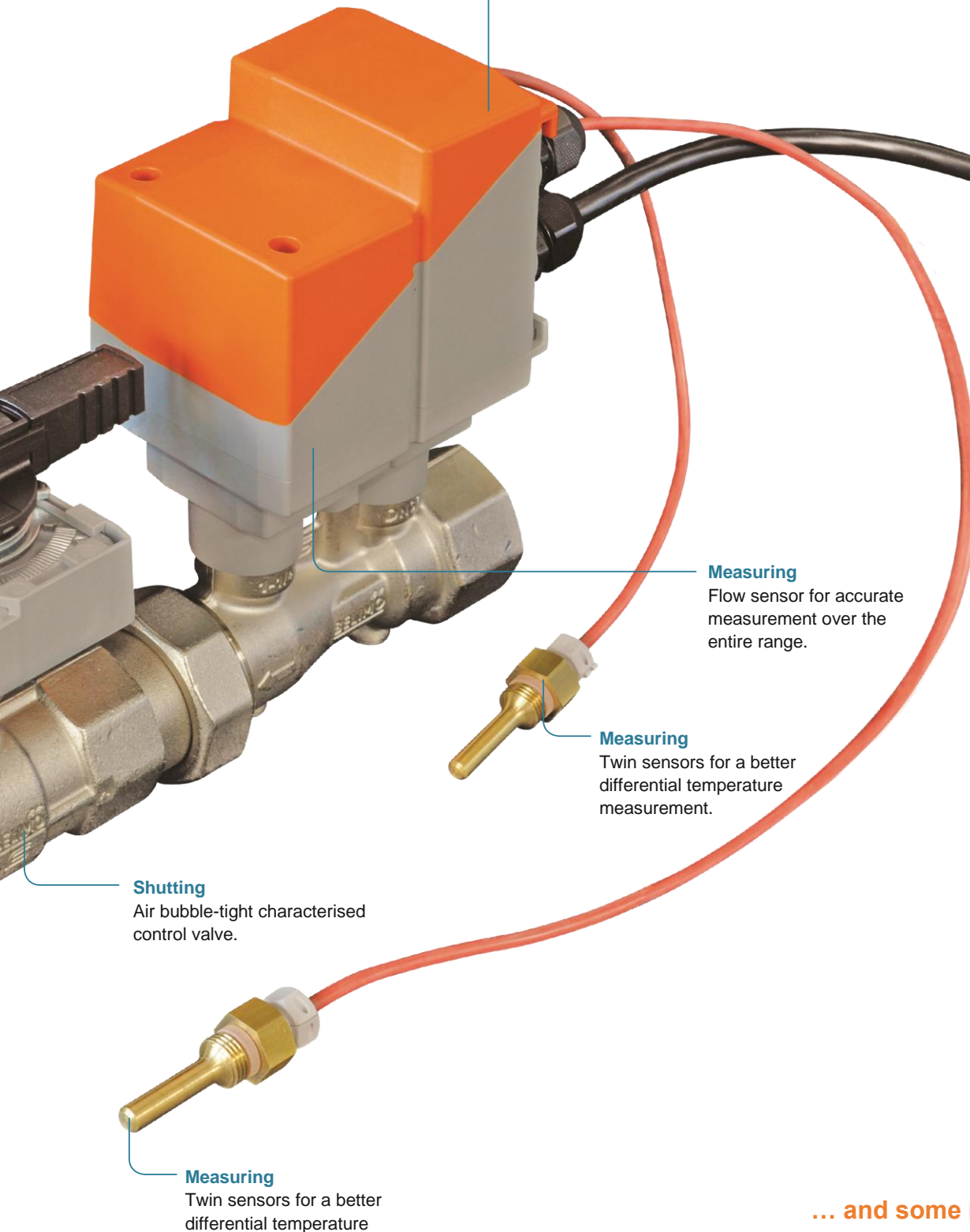
Webserver design

New designed user interface with an intuitive installation setup to make it ready in only a few steps.

NEW

Glycol monitoring option

is an exclusive Belimo Energy Valve™ feature that utilises an embedded temperature sensor and advanced logic algorithms to monitor the percentage of glycol content in the HVAC system.



Measuring

Flow sensor for accurate measurement over the entire range.

Measuring

Twin sensors for a better differential temperature measurement.

Shutting

Air bubble-tight characterised control valve.

Measuring

Twin sensors for a better differential temperature

... and some new highlights.

Where independency generates exceptional value.

The future begins now. With the integration of the Belimo Energy Valve™ into the Belimo Cloud the users create their own account to have full transparency about the energy consumption in the cooling/heating application – from everywhere and whenever they want. The access to the Belimo online services makes life easier and gives the security to always have the best settings for the devices.

The Belimo Cloud
Optimisations make full
use of the energy
potential

Optimisation of the Delta-T and flow values

- Cloud Analytics offers recommended Delta-T settings by Belimo experts for efficient operation.
- System performance and stability are improved.

Cloud produces a clear report of
operating data, which can be easily
shared by e-mail

The online updates from the Belimo Cloud
ensure that the Belimo Energy Valve™ is
fully up-to-date at all times

Software updates

- The Belimo Cloud Service regularly provides users with software updates.
- Online downloads make updates easier than ever before.

Even better support is made possible with Belimo
Cloud Support thanks to the assistance provided
by the manufacturer's experts

Support powered by Cloud

- Belimo Cloud Support helps to commission and produce the optimum setting for the Belimo Energy Valve™ in all operating phases.
- Experienced Belimo technicians help users to solve technical problems.

The Belimo Cloud provides straightforward
access to all data over the entire life cycle
of the Belimo Energy Valve™

Lifetime data access

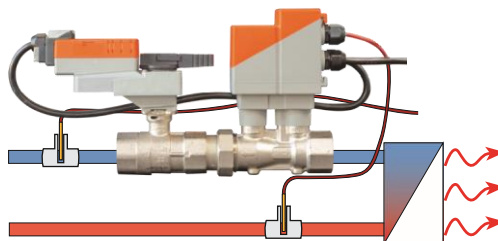
- The Belimo Cloud stores the entire history of the Belimo Energy Valve™ and its operating data in one location.
- The online database forms the basis for future operation optimisation.

Performance reporting

- Belimo Cloud Reporting permits a complete overview of the current and previous performance data such as flows, energy consumption, power requirements and Delta-T.
- The most important performance indicators are shown in graphs.



Where intelligence generates maximum efficiency.



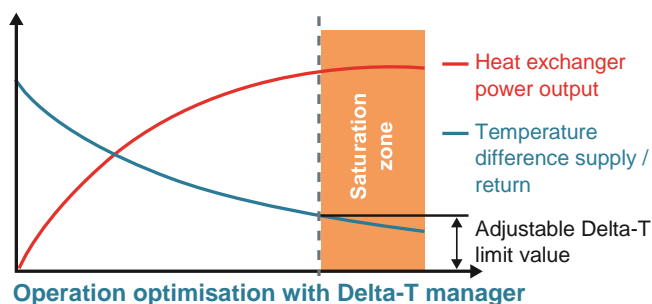
Energy monitoring

Provides full transparency about the system

Delta-T management

Always ensures an efficient operation

Full range from DN 15 to DN 150 mm



If cooling or heating coils are operated at an excessively high flow rate and thus at an excessively low differential temperature, above a certain operating point the energy consumption of the pumps and of the cooling and heating generators will rise – without increasing the power output.

Delta-T management, either integrated in the Belimo Energy Valve™ or done by Belimo experts via the Belimo Cloud, always ensures an efficient operation. Therefore the overflow of the heat exchanger is no longer possible.

Flow rate V'

Belimo Energy Valve™		
Nominal diameter DN [mm]	15...50	65...150
V_{nom} [l/s]	0.35...4.8	8...45
V_{nom} [l/min]	21...288	480...2700
Adjustable maximum flow rate [l/min]	6.3...288	216...2700

Medium temperature: -10 °C...120 °C System pressure (ps): 1600 kPa

All-inclusive.

Belimo worldwide: www.belimo.com