



Intelligent Valve transforms building operations

The self-optimizing dynamic balancing valve makes it easy to measure and control flow, temperature, and energy.

usa.siemens.com/intelligent-valve

SIEMENS

Inefficient operation, high energy consumption, increased costs, and inconsistent room temperature are common concerns in building operation. Digital strategies and technologies address these concerns and create adaptable, people-centric environments that boost comfort and productivity.

When planning HVAC systems on building sites it's all about operational efficiency, and that's why Siemens developed the dynamic Intelligent Valve. The Intelligent Valve optimizes consumption, increases energy efficiency, and reduces operating costs. In every project phase, it makes your work easier, saves you time, and helps to ensure both room comfort and maximum energy efficiency. The Intelligent Valve is the ultimate solution for heating and cooling systems.



Benefits over the entire lifecycle

From planning to ongoing operation, the Intelligent Valve from Siemens is more than a conventional dynamic valve. With its built-in intelligence, it is the ultimate solution offering guaranteed benefits throughout the full lifecycle:

- Increases energy efficiency
- Facilitates productivity
- Ensures comfort in buildings

The Intelligent Valve is the ideal valve for HVAC systems in each individual phase.



It's a snap:

- **simple**
- **flexible**
- **transparent**

Planning

Adjustable settings, verifiable energy optimization, and dynamic hydronic balancing: The Intelligent Valve significantly reduces time and effort during planning, configuration, and testing.



Snap!

Everything is in balance

Forget complicated hydronic calculations. The Intelligent Valve's adaptive flow optimizer continuously measures flow rate, temperature, position, and power electronically and easily balances fluctuations in pressure. The optimum volumetric flow rate is automatically determined. What's more, the dynamic balancing system is intrinsically energy efficient and ensures the greatest possible room comfort.

It's integrated

Benefit from easy and cost-effective integration into building automation with BACnet IP.

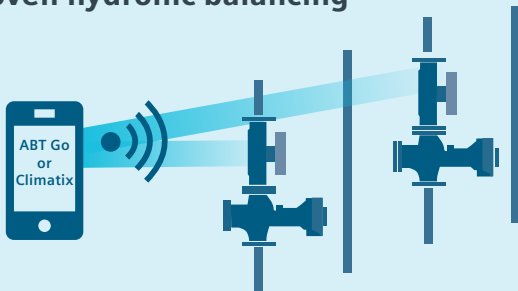
Delta-T is under control

Just use the standard setting values for the delta-T limitation, and the Intelligent Valve will take care of the rest. It adjusts itself automatically and ensures lower volumetric flow rates, providing a comfortable room environment.

Intelligent Valve. Your benefits during planning:

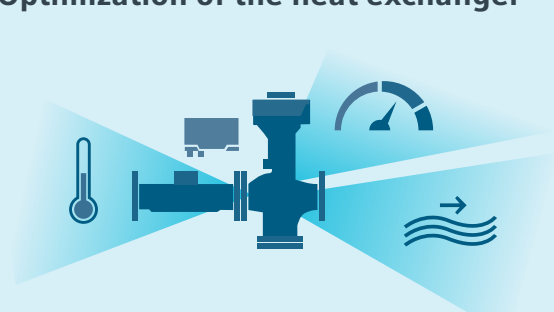
- Less effort and significantly less time spent on planning, configuration, and acceptance tests
- Quick and easy adjustment to new requirements and changes in plans
- Full transparency over the valve settings
- Fact-based analysis with verifiable hydronic balancing at the end of the project
- Energy-efficient operation

Proven hydronic balancing



Verifiable hydronic balancing: Values are available via the free Climatix mobile app, ABT Go and ABT Site.

Optimization of the heat exchanger



Even if design parameters are not known, the Intelligent Valve Adaptive Flow Optimizer automatically determines and adjusts to the optimum settings.

Installation

Flexible mounting, optimal connectivity, and simple configuration:
The Intelligent Valve prevents errors, saves time, and offers full transparency of valve settings.



Snap!

It's installed

The Intelligent Valve means maximum flexibility. For example, you can install the flow sensor in the supply line and the valve in the return line to save installation space. The controller box can be mounted parallel or crosswise on the flow sensor, on the wall, or even separate from the flow sensor.

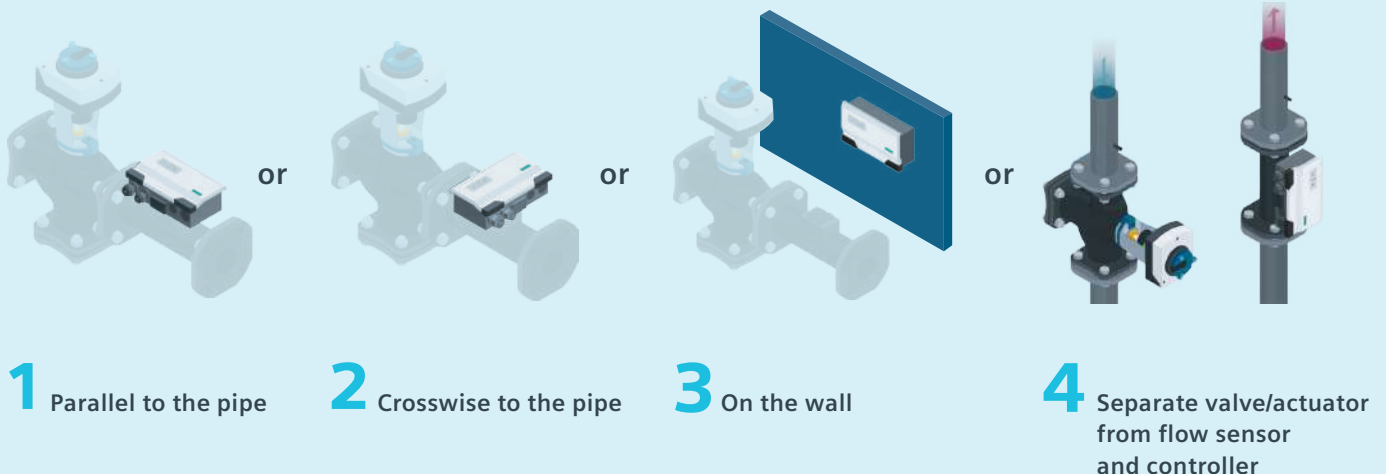
It's connected

Connect your devices quickly and effortlessly with color-coded plug-in connectors. The controller box is easily connected, automatically detects the flow sensor and actuator, and adapts itself to the settings. What's more, all controller boxes are compatible with all Intelligent Valves, so you don't have to worry about which box goes with which valve.

Intelligent Valve benefits during installation:

- Less effort and significant time savings
- Fewer sources of error
- Simple, flexible, flawless installation
- Quick and easy configuration – Wi-Fi interface to ABT Go and Climatix mobile app
- Full transparency of valve settings at all times
- Easy integration into Siemens BMS using ABT Site

Flexible installation



Commissioning

Fast and easy configuration and testing and verifiable hydronic balancing: The Intelligent Valve saves time and offers a clear overview of all settings during commissioning.



Snap!

Everything is in balance

Rely on automatic hydronic balancing as you would with a pressure independent control valve. With the Intelligent Valve, you don't need flow-regulating valves, balancing valves or complicated hydronic calculations. Thanks to this self-optimizing dynamic valve, the HVAC system is always automatically balanced. Even when there is a change of tenant, no intervention is required. The Intelligent Valve automatically adjusts the flow to the new demand.

All the valves are tested

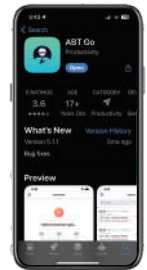
Start the flow test by pressing the service button or by using ABT Go or the Climatix mobile app. The test results are available directly via Wi-Fi on the apps.

Intelligent Valve benefits during commissioning:

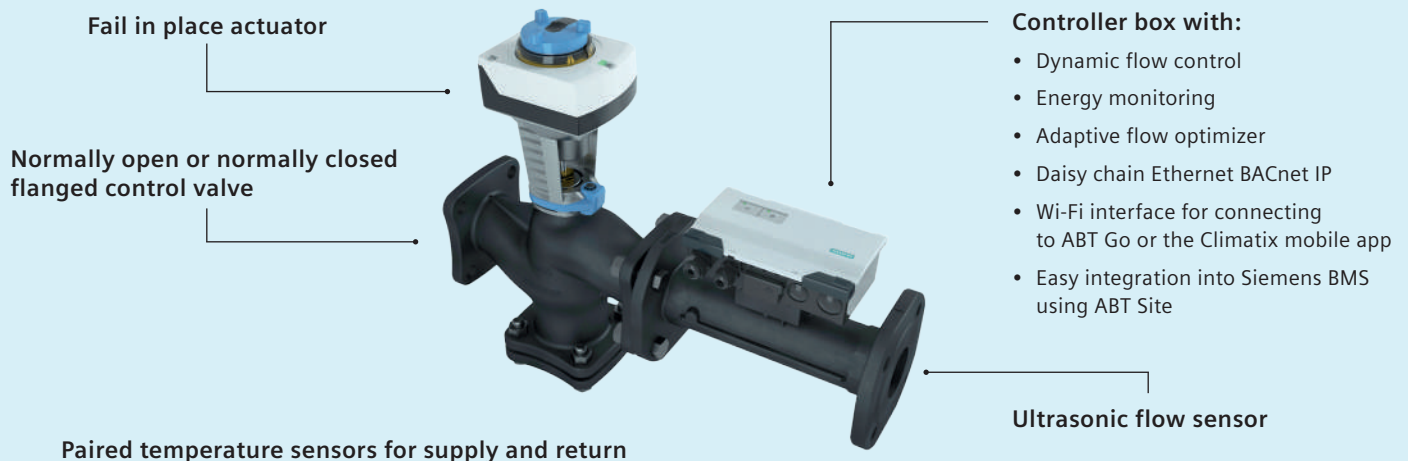
- Fast and easy commissioning with Wi-Fi interface to ABT Go and Climatix mobile app
- Easy integration into Siemens BMS using ABT site
- Less effort and significant time savings
- Reduced susceptibility to error
- Verifiable hydronic balancing
- Full transparency of valve settings at all times



Climatix mobile app



ABT Go



Operation

Operation is as efficient as on the first day: The Intelligent Valve ensures maximum efficiency and greater comfort in buildings.



Snap!

Always efficient

Optimize the system – without on-site technicians. The Intelligent Valve continuously monitors temperature, flow rate, valve position and power – and adapts the valve characteristic to the coil. This helps ensure that the system always operates as efficiently as it did on the day it was commissioned. This means significant savings on energy costs with no additional effort.

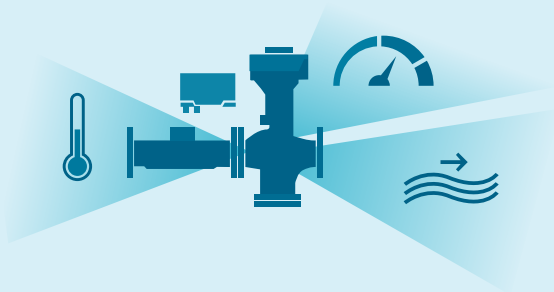
Building users enjoy total comfort

The Intelligent Valve isn't just self-optimizing, it's also dynamic. It balances all fluctuations in pressure to help ensure a stable room climate and a high level of comfort. This is highly efficient and leads to significant reduction in energy use.

Intelligent Valve benefits during operation:

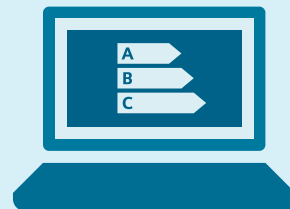
- Maximum efficiency with minimal effort
- Operation always as efficient as on the day of commissioning
- High comfort, low energy costs
- Energy monitoring
- Troubleshooting via remote access
- Easy system expansion and changes in building use

Automated optimization



Does the flow characteristic fit the heat exchanger?
If not, the valve will adapt.

Energy monitoring



Proven efficiency: Values for systematic comparisons can be retrieved from the building management system.

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