



EU legislation promotes the optimization of HVAC through inspections



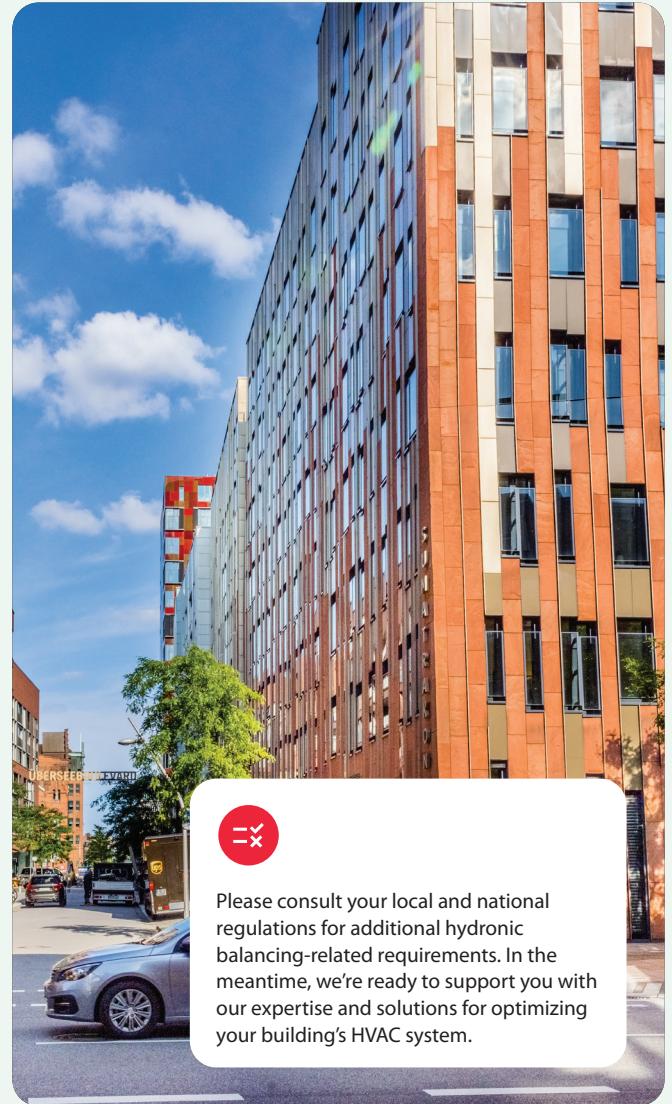
In 2024, the EU adopted the **Energy Performance of Buildings Directive (EPBD)** to renovate existing buildings, enhance new construction quality, save energy and improve comfort.

What's new?

HVAC inspections: an opportunity to improve energy performance

- According to the EPBD¹, **heating, cooling and ventilation systems with a rated power above 70kW will need to be inspected periodically**. Among other aspects, the inspection will include **an assessment of the hydronic balancing** and control systems.
- During the inspection, the technician needs to consider how to **optimize** hydronic system performance in a **cost-effective way** under typical or average operating conditions and draft an **inspection report with recommendations**.
- Since 2025, non-residential buildings with HVAC systems over 290kW must be equipped with a Building Automation and Control System (BACS). From 2030, **non-residential buildings with HVAC systems over 70kW** will need to meet the same requirement.
- As solutions for temperature control and variable flow circuits are becoming increasingly common in multifamily and commercial buildings, **dynamic hydronic balancing technologies are best suited to comply** with the Directive in most cases.

The Directive introduces **new and important legal requirements related to hydronic balancing**, which will certainly accelerate the deployment of these technologies in the market.



Please consult your local and national regulations for additional hydronic balancing-related requirements. In the meantime, we're ready to support you with our expertise and solutions for optimizing your building's HVAC system.

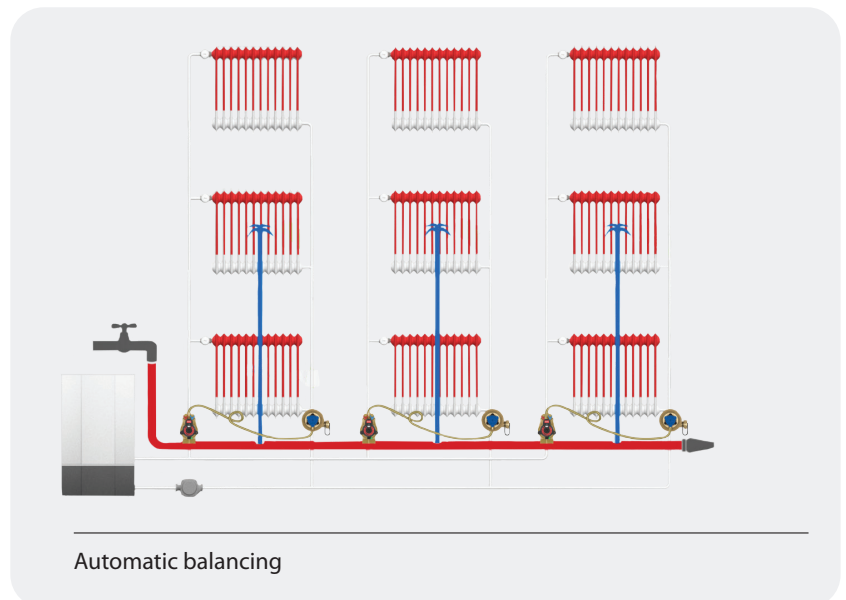
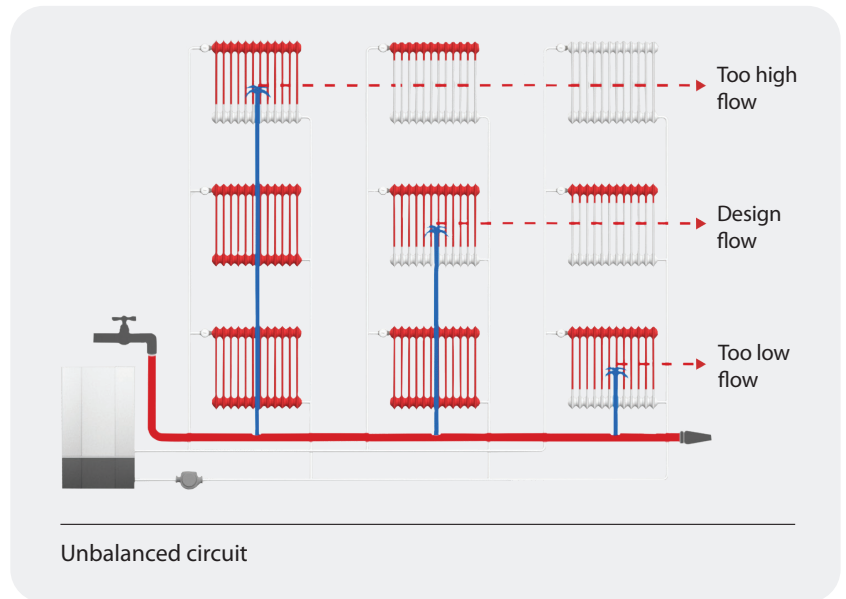
How to take advantage of the opportunity

- **Over 80% of all existing heating systems have an immense potential for optimization.** Hydronic balancing ensures the optimal flow distribution in a heating system, which means that the right amount of water is available in the right place at the right time.
- **This enables energy savings of up to 38%**, optimizes heat/cooling generator function, reduces water pump usage and greatly improves thermal comfort for users.

¹For further information on the Energy Performance of Buildings Directive (EPBD), please see <https://eur-lex.europa.eu/eli/dir/2024/1275/oj/eng>, in particular art. 13.1 and 13.3.

Find the right solution

- For **small or single-family housing**, **static pre-balancing combined with automatic flow control** based on room temperature gives the best results for underfloor heating in existing buildings, due to the inertia of the system. The necessary components for this are easy to retrofit.
- For radiator systems in **single-, multi-family or commercial buildings**, the combination of **dynamic balancing and automation** offers the greatest **optimization potential**, both in new and existing buildings.
- In **large-scale systems** with more than 20 radiators or heating circuits, **pressure-independent valves must always be used on the radiators or in the risers**, to guarantee reliable temperaturebased automatic control.



How we can support you

Energy-efficient technologies for hydronic balancing projects



Differential pressure control valves & actuators:



Radiator valves:



Electronic radiator thermostats:



Hydronic floor heating:





Find out more about hydronic balancing



Find out more about
hydronic balancing



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