

NEW ODENSE UNIVERSITY HOSPITAL

FOCUS PROJECT

CALEFFI
Hydronic Solutions

THERMOSTATIC REGULATOR VALVES, ADJUSTABLE THERMOSTATIC MIXING VALVES AND DIRT SEPARATORS WITH MAGNET

CONSTRUCTION SITE: Located in a strategic position in the heart of Denmark, the new Odense University Hospital (Nyt OUH) is the largest healthcare facility in the country.

This innovative project, covering over **250,000 square meters** and comprising approximately 10,000 rooms, represents a highly complex structure from both a technological and urban perspective — a space where the relationships between patients, the local community, and the surrounding environment are seamlessly integrated.

The hospital includes **900 beds**, outpatient clinics, day hospitals, offices, and educational laboratories. It is directly connected to the city and the main transport routes, and adjacent to the university campus.

The concept of **sustainable construction** played a central role in both the design and the building phases. Renewable energy sources account for at least 20% of the hospital's total energy consumption, while external solar protection systems help to reduce cooling demands during the

summer season. The deliberate use of **recycled and inert materials** further reflects a conscious approach to environmental responsibility.

The plant design followed the same philosophy, incorporating devices that ensure maximum **energy efficiency** in the distribution and regulation of domestic hot water, as well as effective **anti-legionella treatment**, providing comfort and safety for all users of the facility.

In line with the hospital's broader sustainability and innovation goals, all patient records are stored digitally, eliminating the use of paper files. The facility is equipped with **two independent data centers**, ensuring operational continuity and data security. Their **cooling systems** are protected by dedicated solutions designed to prevent the accumulation of impurities that could compromise performance.

LOCATION: Odense (DENMARK)

PRESCRIBING SUSTAINABLE SAFETY



INSTALLATION DETAILS:

The regulation and balancing of the domestic hot water system are managed by **Caleffi thermostatic regulator 116 series**, which automatically control and modulate the hot water flow to each outlet, also allowing system flushing operations for **legionella prevention**.

The regulation of water temperature for sanitary use and the **protection of end users** are ensured by **Caleffi adjustable thermostatic mixing valves, 5200 series**, equipped with an **anti-scald safety function** that guarantees constant temperature control and user safety.

For the **air conditioning system**, the installation of **Caleffi dirt separators with magnet, 5466 series**, ensures the highest quality of technical water required for proper operation. This prevents impurities and air from circulating within the system, allowing **control valves, generators, FCU/AHU units, CRAH units, and pumps** to function efficiently and reliably.

These solutions collectively ensure **optimal performance and maximum reliability** of the entire system.

PRODUCT FEATURES:

The **thermostatic regulator** is used for the automatic balancing of recirculation circuits in domestic hot water distribution systems, ensuring that all outlets within the system reach the required temperature. It can also be equipped with a **bypass mechanism** for **thermal disinfection against legionella**, as applied in this project.

The **adjustable thermostatic mixing valves** precisely regulate the outlet water temperature, maintaining stability despite variations in inlet temperature, pressure, or flow rate. They are also equipped with an **anti-scald safety function**, which immediately shuts off the flow of hot water in the event of a cold water supply failure.

The **dirt separators with magnet** are used to continuously remove impurities present in the hydraulic circuits of cooling systems, ensuring optimal system cleanliness and operational efficiency.

