



'MINI ENERGY CENTRE' SOLUTION FOR MAJOR BANK'S NEW OFFICE CAMPUS

A global bank improved energy efficiency and comfort at its sprawling new UK campus with an innovative HVAC 'mini energy centre'.

Project Description

A major bank's new state-of-the-art campus underwent a complete HVAC installation, encompassing the design, supply, and implementation of a sophisticated system that could effectively meet the cooling and ventilation needs of the sprawling office complex. An innovative 'mini energy centre' concept was adopted to maximise performance and energy efficiency and simplify the overall system management. Low-GWP refrigerants, advanced filtration systems, and optimised airflow have maintained both comfort and sustainability objectives across the entire campus.

Background

The bank's new UK campus was designed with sustainability and employee well-being in mind. With goals of achieving BREEAM Excellent and WELL Gold certifications, the building had to offer high-quality indoor air and consistent temperatures across a large, multi-zone space. Given the size of the campus, home to 6,000 employees, the HVAC system required a scalable, energy-efficient solution. The project aimed to not only reduce the building's environmental footprint but also provide superior comfort for its occupants, driving productivity and ensuring a healthy, pleasant workspace.

Challenges and Solutions

One of the key challenges was designing an HVAC system that could maintain optimal temperature and air quality across a large office space while also meeting stringent sustainability standards. The 'mini energy centre' concept was chosen to address these needs. This system combined chillers, air handling units, and a water-source heat pump into one efficient, centralised solution. The chillers provided the cooling power, while strategically placed air handling units ensured even distribution of conditioned air. The heat pump tapped into an existing heat network, providing additional energy efficiency and reducing the building's overall carbon footprint.

Product Focus

The mini energy centre integrates multiple components to create a streamlined and highly efficient complete HVAC system:

- **The latest generation of chillers:** Five AquaForce® Vision 30KAV liquid chillers with R-1234ze refrigerant were selected for their high efficiency and reliability, providing ample cooling capacity for the building's needs.
- **Air Handling Units (AHUs):** Sixteen ClimaCIAT Air Access and Power CIAT AHUs were strategically placed throughout the HQ, ensuring even air distribution and precise temperature control in different zones.
- **Water-source Heat Pump:** A Carrier AquaForce® 61XWH water source heat pump was installed and connected to a heat network. Using the heat energy from the network, the heat pump efficiently delivered up to 85°C hot water to the bank's estate.

