Schwank
Heating. Cooling. Systems.

Case Study

A Step Towards Sustainable Profitability: Logistics Enterprise Trusts in Hybrid Climate Solution by Schwank – Reduces CO_2 Emissions and Saves €280,000

The Project

A reputable logistics company has realised an impressive project: a modern distribution centre covering 20,000 m², setting new standards in sustainability. The goal was clearly defined from the outset – the entire operation was defined to be 100% CO_2-neutral. This ambitious plan includes not only the heating and lighting of the distribution- and office areas, but also the supply of e-charging stations for cars and trucks, as well as air conditioning and hot water for the office spaces.

A complete energy concept that combines ecological responsibility with economic efficiency – and demonstrates what modern distribution centres can look like today.

The Challenge

A forward-thinking logistics company set itself an ambitious goal: the new distribution centre was to be functional and efficient but also towards to make an active contribution to CO_2 neutrality. A large-scale photovoltaic system with 2.0 MWp was planned for the roof to supply electricity for internal use – also to heat the 13-metre-high building. The challenge: even on cold winter days, a constant indoor temperature of 17 °C had to be maintained – as climate-neutral, economical, and comfortable as possible. A major challenge is, that winter temperatures can to -20 °C. The original idea of heating the facility exclusively with heat pumps proved to be too costly. A more efficient and flexible solution was needed – which was delivered by Schwank.

The Implementation

The initial plan involved a purely electric heat pump solution – but the investment costs were high. Schwank then developed an innovative hybrid concept: a combination of heat pumps and industrial electric radiant heaters. The result: **40% lower investment costs – while staying CO_2-free**. Today, 13 Schwank heat pumps (each 25 kW nominal heat load) cover the base load. On particularly cold days, 21 eSchwank electric radiant heaters (each 18 kW) handle the peak load. The system is controlled bivalently: the heat pumps run continuously, and the radiant heaters automatically turn on when the outside temperature drops below 2 °C. Without this hybrid solution, 21 additional heat pumps would have been required – at a significantly higher investment.

The Conclusion

Schwank's hybrid solution is convincing both technically and economically: **around EUR 280,000 in investment costs were saved**. At the same time, the **valuable roof area was freed up for additional photovoltaic modules** and roof penetrations were minimised. The system also performs well in operation: the low-maintenance eSchwank heaters require only annual cleaning – which is significantly cheaper than traditional heat pump maintenance. With this solution, the client has invested not only into a future-proof heating system, but also into greater comfort, flexibility, and climate protection. The zone-specific control of the heaters ensures demand-driven heat – exactly where it's needed.

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