Peneder: higher productivity and efficiency for our customers

PENEDER
FAST FORWARD

"As a family business with almost 100 years of history, we are aware of our responsibility towards future generations. Our energy-efficient building technologies and renewable energies make an important contribution to climate and environmental protection."

Christian Peneder, CEO

Peneder is a specialist in smart industrial and commercial buildings for new build, expansion and modernisation. Even in the most complex projects, it increases its clients' energy efficiency as well as productivity with smart building technologies and automation. Through its tailored energy concepts, energy costs can be reduced by over 30 %. Peneder also sets standards in its own company buildings: The modern headquarters in Atzbach scores high in functionality and efficiency as well as being heated and cooled in an environmentally-friendly manner – with regional biomass.

Peneder Basis (Headquaters)

Office building with restaurant, underground car park, cafe, bar, hotel, event rooms and company nursery school

Year of construction
2010

Biomass plant
- 2x500 kW with moving floor conveyor system
- Fuel consumption: 440 tonnes of wood chips/year
- Absorption chiller: 475 kW cooling capacity

Heat distribution
- Concrete core activation of ceilings for heating and cooling
- Flow temperature: 25 degrees

Lighting and shading concepts
- Movement detectors
- Daylight sensors
- Consideration of the sun's position and radiation

Waste heat recovery
- for hot water generation
- for pre-drying of wood chips

PV system (42 kWp)

ENERGY TRANSITION LEADERS

The Peneder concept: one-stop shop for customised turnkey solutions

Starting out as a blacksmith and then a locksmith, Peneder developed into a specialist in fire protection solutions and industrial and commercial construction, and made a name for itself as an expert in smart buildings for businesses. Peneder plans, constructs and operates smart, customised office, logistics and manufacturing buildings. Each project begins with an interactive process to analyse the customer's individual requirements, processes and potentials. The building and its technologies are then planned, from the inside out, based on the flow of goods and people, and optimised for the specific production processes. Heating with waste heat from production or cooling with renewables are part of Peneder's standard programme. The same goes for smart and efficient building automation, which is implemented in cooperation with the Upper Austrian company STIWA. In addition, Peneder's industrial and commercial buildings have an unmistakable architecture, making them both brand-building and identity-creating.

Innovative, bold, efficient: the Peneder Basis

Peneder Basis, the distinctive headquarters built in 2010 in Atzbach, successfully showcases Peneder's integrated building concept in practice. The building, which highlights steel as main construction material, offers high functionality, optimal working conditions and indoor climate with very low energy costs. It is literally a "village within a village" and combines many services under one roof. The building contains offices, a hotel, a restaurant, a childcare centre, a cafeteria and an event hall that is also used for local events.

OÖENERGIESPARVERBAND

upper austria

"We increase our customers' productivity through optimised production and functional processes, long building life cycles, forward-looking planning and high user-comfort and energy efficiency."

Markus Brychta, Process and Energy Management

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Perfect indoor climate through thermal component activation

Heating and cooling of the Peneder Basis occurs via thermal component activation of the concrete ceiling. By using such a large surface for heat transfer, the system manages to heat and cool the building with very low temperature differences – thus offering optimal indoor climate without drafts. Underfloor convectors prevent condensation on the glazed facade. A ventilation system with heat recovery and humidity regulation also ensures good air quality.

Cooling with biomass

In Austria, heating with biomass is widespread, also in the business sector. However, this is not yet the case for cooling with biomass. Peneder has a biomass-based heating and cooling system: 2 wood chip boilers, equipped with a moving floor conveyor system, heat the building and supply an absorption chiller with the energy required for cooling. 440 tonnes of regionally sourced wood chips per year provide CO_2-neutral heating and cooling for 9,500 m² of office space and production. 25 % of the biomass is used for cooling, around 30 % for heating. The rest of the heat goes to the production processes.

Smart lighting and air conditioning

Light sensors and movement detectors regulate lighting and air conditioning according to actual demand. A shading system with daylight optimisation is automatically activated depending on the position of the sun, indoor temperature and solar radiation in order to prevent overheating in summer or annoying glare. These smart building systems contribute significantly to a performance-enhancing work environment and minimise the energy requirements for lighting and air conditioning.

Energy monitoring for continuous improvement

All these measures have resulted in optimal indoor, working and manufacturing conditions with low energy consumption. An energy monitoring system automatically records and documents energy consumption. This ensures that further improvement potentials are identified in a timely manner so that action can be taken.

And it goes on

As next step, Peneder plans to implement an energy strategy with defined energy targets and pursue climate-friendly solutions for its large vehicle fleet.

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OÖENERGIESPARVERBAND

upper austria

The company – key facts & figures

Peneder Holding GmbH

Founding year
1922

Products
- Industrial and commercial buildings
- Halls and arched roofs (self-supporting up to 25 metres)
- Solutions for fire protection

Locations
- in Upper Austria: Atzbach, Fraham
- further branches in Austria, Germany and Switzerland

Employees
383

Annual turnover
around 95 million Euro

Legal structure
Owner-managed family business

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