

CASE STUDY: MAXIMUM COMFORT – MINIMAL RESOURCE CONSUMPTION



PROJECT:
Hotel Poststadl

LOCATION:
Rohrdorf, Germany

COMPLETION:
2015

APPLICATIONS:
Surface heating and cooling
HVAC
Potable water

PRODUCTS:
aquatherm black system
aquatherm blue pipe
aquatherm green pipe

THE CHALLENGE

With regard to energy balance and the climate, the goal was to maximize comfort while minimizing resource consumption.

THE SOLUTION

Thanks to the component activation of the floors and ceilings into which aquatherm black system has been installed, guests can look forward to pleasant warmth in winter and cooling in summer with energy-saving operation.

„POSTSTADL“ SETS NEW STANDARDS IN TERMS OF ENERGY BALANCE AND CLIMATE AWARENESS

The hotel “Zur Post” in the Bavarian town of Rohrdorf looks back on more than 200 years of history. Founded as a restaurant in 1803, the hotel is now a popular address in southern Bavaria, from where the beauties of the Inn Valley and Chiemgau can be easily reached. In order to meet the increasing demands of the guests, the Albrecht-Stockner family, who has been running the hotel for generations, have had the “Poststadl” built, a guest house that sets new standards in the Rosenheim district with regard to energy balance and climate sensitivity.

The “Poststadl,” which was opened after only 10 months of construction, combines a traditional construction with contemporary architecture: the structure, materials and shape of the building with its plastered ground floor and its wood-clad upper floor refer to the classic construction of the Bavarian courtyard building. The curtain larch-slatted facade serves as a combination instrument to harmonize all functions

and requirements of a modern guest house by combining a contemporary facade design with an individual spatial experience. The 36 rooms of the three-story “Poststadl” offer guests four-star comfort and a living space of over 30 square metres with a balcony or terrace. They are furnished with noble woods, warm colors and a lot of window area. Well thought-out details ensure a Bavarian feel-good atmosphere and contemporary comfort.

COMFORT IN ALL AREAS

“Our goal was to maximize comfort and at the same time minimize the consumption of resources,” explains Thomas Albrecht, owner of the “Zur Post” and “Poststadl” hotels. “We have been following this principle for over 20 years, since we were one of the first hotels in Germany to be certified according to the EC Eco Audit Regulation 1836/93. We had set ourselves high goals for the new building.”





Therefore, extremely heat-insulating building materials were installed, the building was connected to an existing wood chip heating system, and a photovoltaic system for in-house electricity was installed. The climate concept is based on the use of geothermal energy for heating and industrial water and on the enrichment of a central ventilation system with heat recovery. In addition, the ceilings and walls were activated, which means that the ceilings and walls of the individual guest rooms can heat or cool. They ensure maximum comfort at all times of the year and day. This is made possible by the aquatherm black system surface heating and cooling system, which was installed in the ceilings and walls of the hotel. The black grids made of corrosion-resistant polypropylene give off the temperature of the water flowing through them by means of radiation. Drafts or swirling dust are eliminated by this process and the feeling of comfort in the room increases. The system also works with lower flow temperatures than conventional heating or higher flow temperatures than other cooling systems, thus enabling particularly efficient and energy-saving operation.

USE IN CEILING AND WALL

The builders made high demands on the quality of the building materials used. "When we do something, we do it right," says Thomas Albrecht. The fact that "Made in Germany" applies to all aquatherm products and that only selected raw materials are used that are further developed and refined to aquatherm polypropylene granulate was key for the use in the "Poststadl". Thomas Albrecht:

"We were also able to convince ourselves of the aquatherm black system in other construction projects, including a large hotel project."

In the "Poststadl," a total of 740 square metres of black grid were precisely fitted into the ceilings of the rooms and the walls of the bathrooms. The use in the bathroom again serves the comfort of the guests: aquatherm black system has been integrated into the walls for heating and drying towels and bathrobes in two places.

The assembly took place within a short period of time. This was made possible by the object-specific production: In the main plant of the aquatherm group of companies in Attendorn, aquatherm black system was produced in the sizes 240 x 4750 millimetres and 800 x 4750 millimetres according to customer requirements, so that the installation time in the object could be significantly reduced.

"Our guests are very satisfied with the air conditioning in their rooms," said Albrecht. "In winter, the heating of the rooms are perceived as very pleasant because there is no drafts. In the summer months, the cooling ensures pleasant temperatures. The system worked smoothly from day one."

In addition to the aquatherm black system, two other products from aquatherm were used in the "Poststadl": The heating centre was equipped with aquatherm blue pipe OT. The oxygen-tight pipe made of corrosion-resistant and diffusion-proof polypropylene is designed specifically for the transport of cooling and heating media in closed systems. The physical properties of the plastic are tailored to the special needs of the heating and cooling sector and are characterized by their high temperature and pressure resistance.

In order to ensure the drinking water distribution in the building, aquatherm green pipe was

installed. The hygienically perfect, odorless and tasteless pipe system guarantees that the drinking water quality is maintained permanently. aquatherm green pipe is not only corrosion-resistant, but physiologically and microbiologically harmless and has proven its technical suitability in decades of worldwide use.



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