

## Tourist Information Centre, Hameln, Germany

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[www.architekturbuero-hagemann.de](http://www.architekturbuero-hagemann.de)



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## **General description**

Hameln's tourist information centre was inaugurated on 26 May 2000. The building became the mutual home of different municipal institutions working in the field of tourism.

- Hameln Marketing und Tourismus GmbH
- Stadtmarketing- und Verkehrsverein Hameln e.V.
- Weserbergland Tourismus e.V.
- Flotte Weser GmbH & Co. KG
- Erlebniswelt Renaissance Projektentwicklung GmbH
- DEHOGA - Deutscher Hotel- und Gaststättenverband Kreisverband Hameln Stadt und Land

The 3-story building provides office spaces in the upper floors. The information counter, the souvenir shop and a small amphitheater on the ground floor serve as the central contact point for tourists of the local area „Weserbergland“.

The building design focused in particular on an innovative energy concept, meeting the “Passive House” energy standard.

A “Passive House” is a building in which a comfortable interior climate can be maintained without active heating and cooling systems (Adamson 1987 and Feist 1988). The house heats and cools itself, hence "passive". For Germany prerequisite to this capability is an annual heating requirement that is less than 15 kWh/(m<sup>2</sup>a), not to be attained at the cost of an increase in use of energy for other purposes (e.g., electricity). Furthermore, the combined primary energy consumption of a passive house should not exceed 120 kWh/ (m<sup>2</sup>a) for heat, hot water and household electricity.

With this as a starting point, additional energy requirements may be completely covered using renewable energy sources.

This means that the combined energy consumption of a passive house is less than the average new home requires for household electricity and hot water alone. The combined end energy consumed by a passive house is therefore less than a quarter of the energy consumed by the average new construction that complies with applicable national energy regulations (for further details please refer to <http://www.passiv.de/>).

Basic features employed within the building to meet the passive house standard are:

- Compact form and good insulation of building exterior
- Use of energy-efficient window glazing and frames
- Building envelope air-tightness
- Highly efficient heat recovery from exhaust air using an air-to-air heat exchanger:
- Hot water supply using regenerative energy sources:
- Energy-saving household appliances
- Fixed PV-shading of the south facing facade
- Overhead PV-Shading system of the glazed atrium roof

- Solar evacuated tube collectors for hot water supply
- Use of rainwater
- Green roof

All in all the building serves as a regional showcase for sustainable building design and strengthens Hamelin's efforts to be the „Solar City“ of northern Germany.

The building received several solar awards, such as:

"Innovative Solarprojekte in Niedersachsen" 1999

"Niedersächsischer Solar-Preis" 2002

"Energy Globe, Österreich" 2002

## **Photovoltaics**

In front of the south facing facade 54 PV-Modules are used as a fixed shading device. These semitransparent Glass-Glass PV-modules (Type: SOL94K) has been manufactured by Solarnova, a company specialized on custom made BIPV applications. In total 61,66m<sup>2</sup> of PV are installed with a total capacity of 5,076kWp.

In addition 40 PV-Modules are used for the overhead-glazing structure of the atrium. The semitransparent Glass-Glass PV-Modules (Type: SOL 109 ISO) are used as a fixed shading device and prevent the glazed atrium from overheating in summer. Due to building regulations in Germany these modules needed to be constructed out of laminated safety glass. The modules cover an area of 80,3m<sup>2</sup> and have a total PV-capacity of 4,36kWp.

For both type of modules multi-crystalline PV-cells from Schott Solar are used. The module support structure is out of steel and has been produced by the company Metallbau Meier, Hameln.