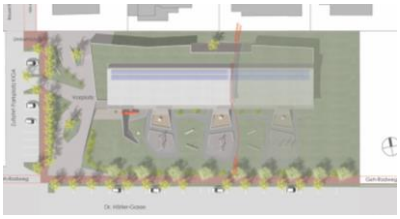
AT_Gänserndorf_NÖ Landeskindergarten Dr. Hans-Hörler-Gasse

Image 01: Entrance area ©atelier deubner	**Image 02:** View from south ©atelier deubner	**Image 03:** Topview ©atelier deubner
		

Building Specifications

Address	Dr. Hans-Hörler-Gasse, 2230 Gänserndorf, Österreich
Building Category	Educational
Year of Construction	2015
Special Qualities	Near Passive House Standard
Location	48° northern latitude, 17° eastern longitude, 167 m above sea level, located between other single and two story houses in the outskirts of a town with a population of approximately 11.000 in the lowlands of Lower Austria.
Climate	Cfb (warm temperate, fully humid, warm summer), monthly mean temperature below 20 °C, at least seven months with a monthly mean temperature above 10 °C

Vent. Cooling Site Design Elements (Solar Site Design and Wind Exposure Design, Evaporative Effects from Plants or Water)

n/a

Vent. Cooling Architectural Design Elements (Form, Morphology, Envelope, Construction & Material)

Morphology: The roof is raised towards the roof windows for an optimized airflow.

Construction & Material: The thermal storage mass of the wooden construction is enhanced with cement-bonded wood fibre plates. An atrium is used for natural ventilation.

Vent. Cooling Technical Components (Airflow Guiding Components, Airflow Enhancing Components, Passive Cooling Components)

Airflow Guiding Components: Ventilation openings in the south facade and roof can be opened and closed automatically.

Airflow Enhancing Components: The buoyancy effect is enhanced by the raised roof.

Actuators, Sensors and Control Strategies

Sensors: In- and exterior temperature sensors and a time controller

Control Strategies: The ventilation openings are controlled by time and temperature. In the hot months they are only open during the night, in the transitional season the ventilation openings also open during the day in dependence of the exterior temperature.

Building Energy Systems (Heating, Ventilation, Cooling, Electricity)

Heating: The building is connected to the district heating system to cover its space heat demand. The hot water is supplied decentralized by electric water heaters.
Ventilation: All rooms are connected to a mechanical ventilation system with heat recovery.
Cooling: Groundwater can be used to condition the supply air of the mechanical ventilation system.
Electricity: A 20 kWp PV-system is installed on the roof with solar optimized pitch. Plans to further increase the system to 40 or 50 kWp are in place.

Building Ownership and Building Facility Management Structures

The building is owned and run by the *Stadtgemeinde Gänserndorf*.
Architect: Atelier Deubner

Aknowledgements

The building has a positive CO_2 balance and is highly recyclable.

Datasheet Source:
Institute of Building Research & Innovation