




AT_Neumarkt_Schule in Naturpark		
Image 01: Exterior view of west façade with flaps ©Baustein	Image 02: Exterior view courtyard ©Baustein	Image 03: Interior view of the new atrium ©W. Luttenberger
		
Building Specifications		
Address	Meranerweg 3, 8820 Neumarkt, Austria	
Building Category	Educational	
Year of Construction	2011	
Special Qualities	Renovation – Passive house	
Location	47° northern latitude, 14° eastern longitude, 847 m above sea level	
Climate	Dfb (Temperate climate snow, fully humid, warm summer (monthly mean temperature always under 22 °C, at least four month 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)		
The project is a comprehensive renovation, thus the site already existed. Due to the rural area and the high sea level no special site design has been developed. Ventilative Cooling is just necessary in the atrium due to the western glass facade.		
Vent. Cooling Architectural Design Elements (Form, Morphology, Envelope, Construction&Material)		
<p>Form: No changes of the existing form.</p> <p>Envelope: The façade is a passive house façade with outer shading system to reduce solar gains. The west facade (entrance and atrium) was designed with a large glass front. This is the only part of the building, where night cooling is necessary. During night times cool air flows through weather protected air inlets from the basement to the automatically controlled flaps on the top of the façade.</p> <p>Construction & Material: The existing construction (massive) was combined with wooden elements and ecological insulation materials.</p>		
Vent. Cooling Technical Components (Airflow Guiding Components, Airflow Enhancing Components, Passive Cooling Components)		
Airflow Guiding Components: In the atrium the cooling is done by natural ventilation with flaps at the top of the glass facade (see Architectural design elements).		
Actuators, Sensors and Control Strategies		
Sensors and Control Strategies: Automatic control of sun shading system, daylight guidance and night ventilation		

IEA EBC Annex 62 Ventilative Cooling

Building Energy Systems (Heating, Ventilation, Cooling, Electricity)
Heating: District heating (biomass) Ventilation: Centralised ventilation for each block with heat recovery (83%)
Building Ownership and Building Facility Management Structures
Building Owner: Schulbauerrichtungs- und Sanierungs-KG Architect: ARCH+MORE ZT GmbH
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