

coolregion


WP 3 - D19 (FEWE, POLAND)

Best practice example No. 3

General data

Name of the building :	Didactic building “B” Police Academy in Katowice
Country :	POLAND
Address :	Szkoła Policji w Katowicach , ul. Gen. Jankego 276 40-684 Katowice Poland
Google Earth link (50 m) :	
Google Earth coordinates :	
Building owner/user :	Police Academy in Katowice
Building type:	Education (lecture rooms)

Building information

Picture of the building: (103 mm width)	
Description of the building: (architecture/construction) <i>Please describe location insulation, window efficiency, building</i>	Didactic building “B” which is a part of the complex of buildings of Police Academy was modernized in 2003 - 2004. After that a possibility of replacing the natural ventilation for mechanical ventilation with a controlled air flow

<i>materials</i> → <i>summarize highlights of building</i>	system and with use of renewable energy source like GHE was taken into consideration. Unfortunately this investment was delayed in the time.
Year of construction	
Total gross area (m2)	2 485
Volume (m3)	8 975
No. of floors	4
Glazed surface level	about 50%

Cooling concept

Cooled area :	2 485 m ²
Cooling approach (description) :	At the beginning of 2008 a decision was made on reconsideration of the modernization of the ventilation and the air-conditioning system along with application of an innovative and efficient ventilation and air-conditioning technology such as a Ground Heat Exchanger (GHE) with a natural bed of clean, rinsed gravel, located in soil. The Ground Heat Exchanger designed for the didactic building purposes will have capacity 10 000 m ³ /h. Average cooling output from GHE amount to 33 640 W and the maximum output 40 368 W. Average heating output from GHE amount to 23 661 W, and the maximum 72 193 W. Technical and economic analysis show reduction of the annual consumption of the electricity for air-conditioning by approximately 4 500 kWh and reduction of natural gas for heating by almost 8 700 m ³ what is giving the reduction CO ₂ emission by 21 500 kg per year.
Annual electricity consumption (kWh _{el} /m ²):	No data

Building concept

Comfort	High
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Solar protection	Standard solar protection based on use of internal windows blinds.
Lighting performance:	Medium
Office equipment:	No data
Regulation:	High level

Links and download files

<http://www.eplan.info.pl/coolregion/>

Contact

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