IVOCLAR AG

A comfortable indoor climate resulting in increased productivity was the main reason for choosing enercret energy piles

IVOCLAR AG
Schaan–Liechtenstein

Modern architecture - enjoyable climate
The style of a building and the quality of the workplace are an expression of corporate culture. An open design creates a transparent atmosphere and encourages an open, cooperative and creative attitude towards work. And this is where planning the airconditiioning calls for particular expertise.

Enjoyable climate – increased productivity
An international study has revealed the relationship between indoor climate and productivity. If productivity is 100 % at a room temperature of 20°C, for example, productivity decrease to 60 % if the temperature increases to 25°C.

Energy source
enecret energy piles absorb coolness and warmth from the ground. The heat pump raises the temperature to a level suitable for heating purposes. Cooling is achieved by ”direct cooling“ with cooled fluid flowing within the energy piles.

Thermo-active ceilings
Heating and coolng is achieved by flowing water within a piping system integrated into the concrete ceilings.

Project data

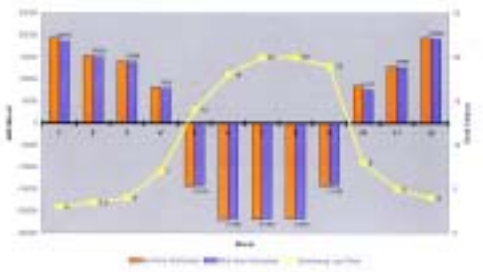
99 precast driven piles in rainforced concrete
400/400 mm, 13 m long
Area of therno-active ceilings: 2430 m2
Heating load: 85 kW, Cooling load: 110 kW

Heating and cooling requirements of offices

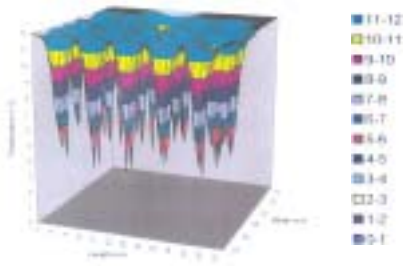
	Heating (kWh/Month)	Cooling (kWh/Month)
Januar	18575	7.820
Februar	15038	8.160
März	13888	9.280
April	7850	10.700
Mai	4169	12.820
Juni	1265	13.660
Juli	604	14160
August	690	14160
September	1811	13.080
Oktober	7447	11.130
November	12594	9.240
Dezember	19035	8.600
SUMME:	102966	132810

Simulation results

IVOCLAR: heating/cooling capacity, brine temperature



Underground temperatures in 12 m depth on Febr. 1st



ENERGY PILES (THERMO-ACTIVE FOUNDATION)

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