



Seit 1877

Kiefer

Luft- und Klimatechnik

Neue Wege mit Luft

Concrete core cooling with air CONCRETCOOL

Jacob-and-Wilhelm-Grimm-Zentrum, Humboldt University, Berlin

To celebrate the two hundredth anniversary of the oldest university in Berlin, the Jacob-and-Wilhelm-Grimm-Zentrum, the new central library of the Humboldt University, was opened on 12th. October 2009; its name honours the great efforts of the Grimm Brothers as academics and librarians.

Here under the guiding hand of architect Max Dudler, a luxurious temple of books has been created incorporating a high, a cathedral-like reading room and displaying the architect's characteristic austere sense of form; it not only combines unique aesthetics with a high degree of comfort and the most modern technology, it is also the largest open access library in Germany and allows direct access to books on every floor.

Besides the University Library, twelve more branch and subject libraries for the humanities, cultural studies, social sciences and economics are accommodated there. And of course there are also multi-media workplaces, a video-conference room, the library's own research room, numerous group and individual workplaces, and separate parent-child rooms.

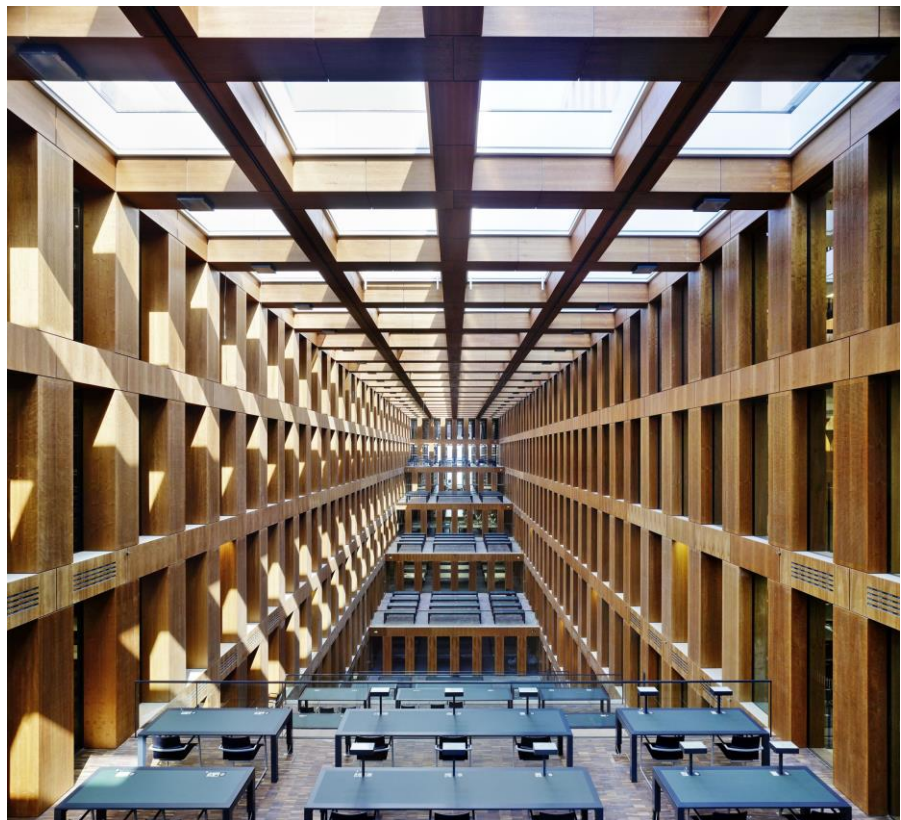


Photo © Stefan Müller

Elegant reading terraces on five levels in the Jacob-und-Wilhelm-Grimm-Zentrum, the new library of the Humboldt University in Berlin

Building:	Jacob-und-Wilhelm-Grimm-Zentrum, Central Library, Humboldt University, Berlin
Proprietor:	Humboldt-Universität, Berlin
Architects:	Max Dudler, Berlin, Zurich, Frankfurt
Consultant:	Zibell, Willner + Partner, Berlin
Media inventory:	2.5 million
Building volume:	144,000 m³
Volume of concrete:	23,350 m³ 10,400 m² air-conditioned surface
Cooling system:	Concrete core cooling with air CONCRETCOOL
Inauguration:	12th. October 2009





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Unity of design

The new building, whose facades feature a travertine-like natural stone, has a formal austerity with a classical modern basis; its dynamism is underlined by the numerous rectangular windows in three different formats. The large storerooms are protected from daylight behind narrow slits, whereas the reading areas are illuminated through wider windows. The interior fittings are strictly oriented on the geometry of the facades. Walls, shelves and study tables are aligned with the building's grid pattern. The tables are exactly the width of the spaces between the windows, and the sitting areas are precisely the width of the windows with clear vistas from all work-places. In this way the interior fittings and the architecture of the building form a harmonious unit with full consciousness of its significance as a design element in the urban setting.



Photo © Stefan Müller

Exterior view of the Jacob-und-Wilhelm-Grimm-Zentrum – Max Dudler's buildings employ a specific architectural language whose art is expressed in simplification.



Source: grimm-zentrum.hu-berlin.de/download

Installing reinforcement

Function CONCRETCOOL

In contrast to conventional systems, in which supply air is fed directly into the working areas, the air first flows through aluminium cooling tubes cast into the ceilings. Thereby the supply air cools the ceiling. At the same time the gain of heat is used to warm up the supply air.

System advantages

- Optimum thermal comfort
- Additional ceiling cooling with water is not required
- Free cooling provides energy savings of up to 50%
- Full flexibility due to modular positioning of cooling tubes
- Cooling with outdoor air – no air circulation required
- Construction costs reduced due to low floor height

