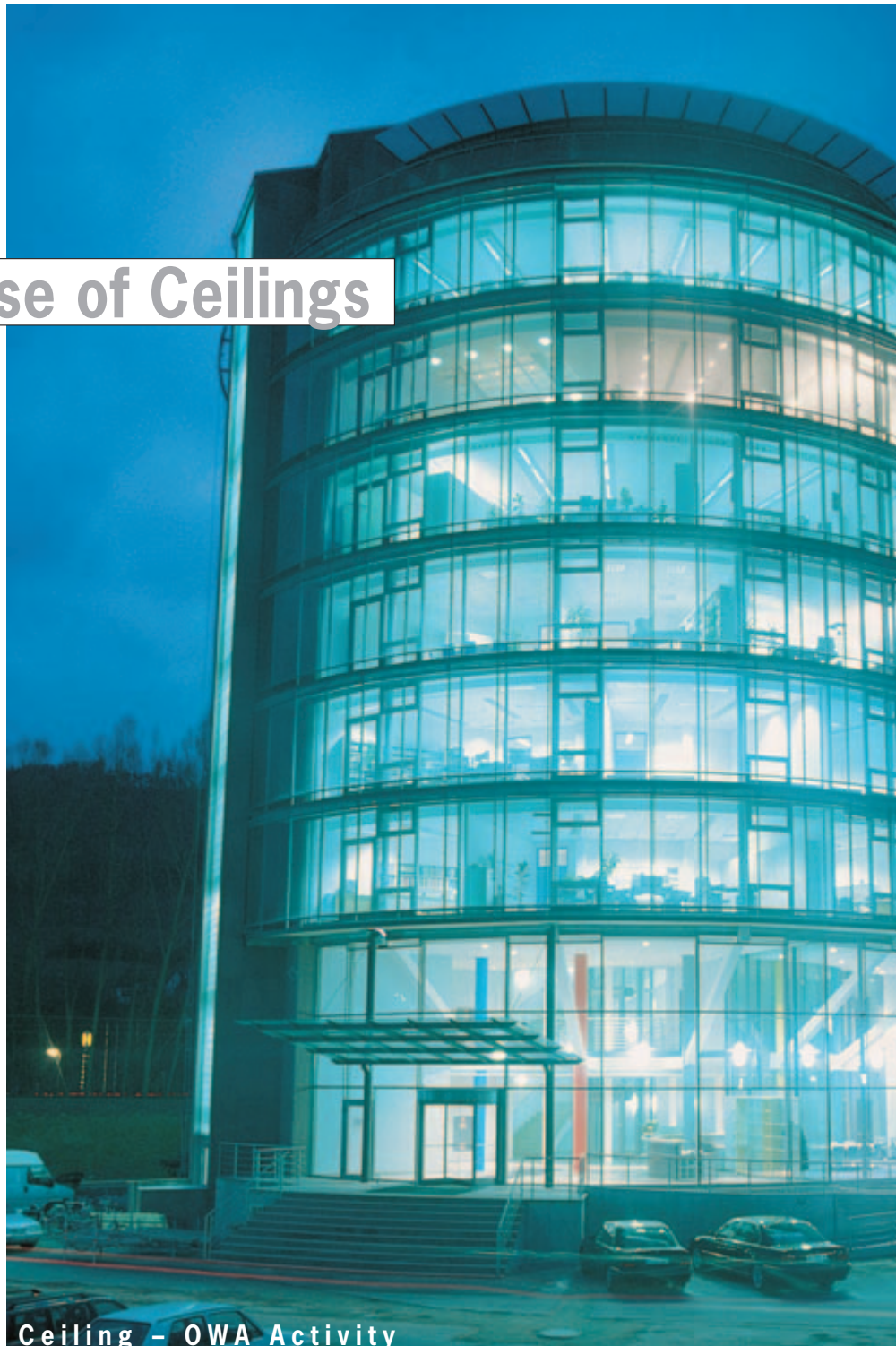


The OWA HQ Office Building
and Development Center

A House of Ceilings

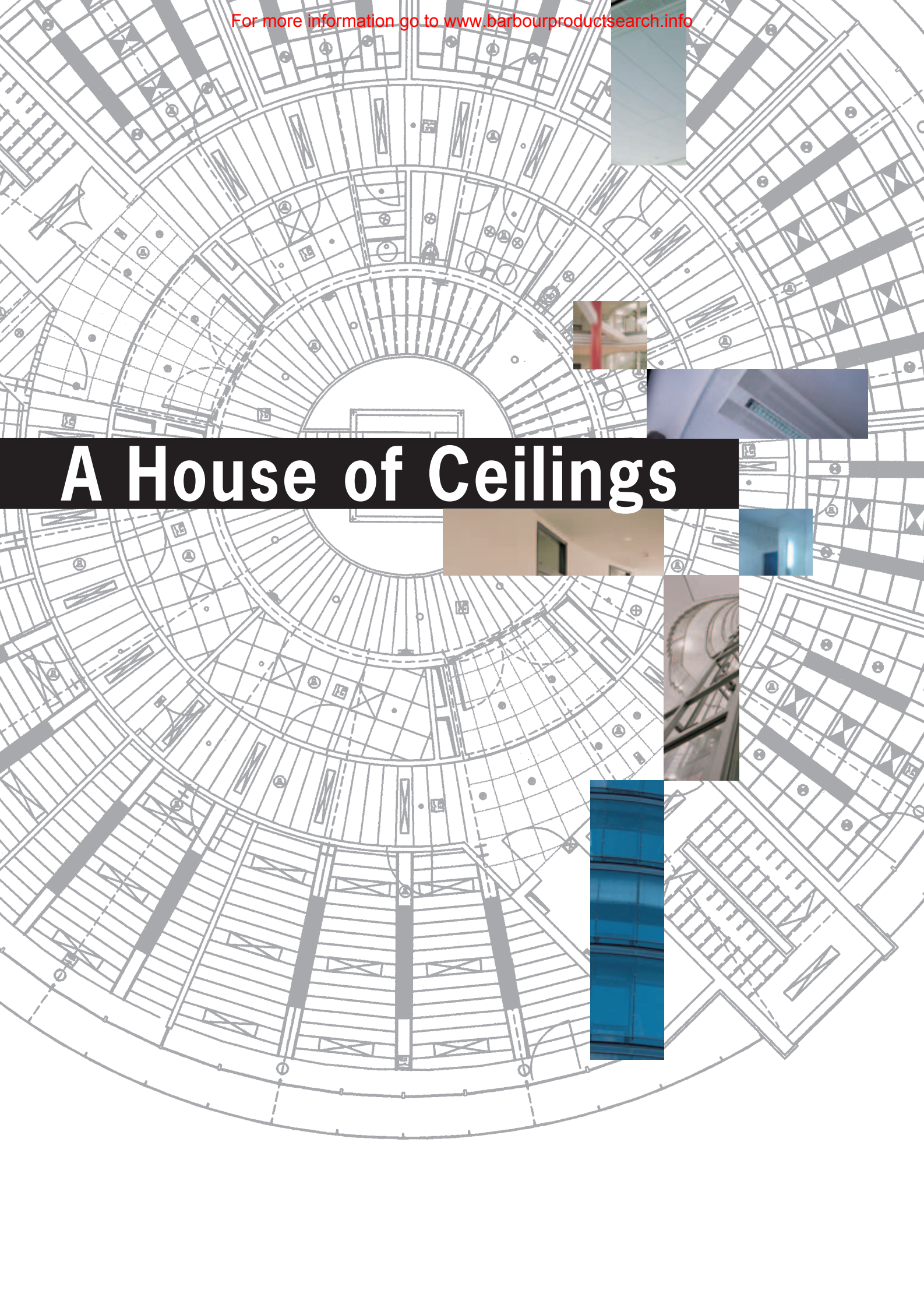


Focal point Ceiling - OWA Activity

OWA

For more information go to www.barbourproductsearch.info

A House of Ceilings



High, Circular and Transparent



A Performance Center



Amorbach. On the periphery of this small picturesque baroque town you can enter an entirely different world: the OWA factory with its HQ office building and development center.

The OWA factory and office building are proof that an industrial facility does not necessarily have to be in conflict with either an urban culture or a highly sensitive and vulnerable landscape. It demonstrates that both worlds can successfully complement each other – tradition and technology, urbanity and industrial facilities, rural landscape and raw material silos.

There is no doubt, however, that this concrete, steel and glass tower forms a counterpoint to the rural landscape surrounding it. The first impression of the office building located at the eastern entrance of the OWA works is that it resembles the bridge of a large ship.

The radial construction allows structures and geometrical forms that are more than mere features of the outer appearance of the building, they also have an impact on the working environment within the walls – a successful architectural concept.

The Reception Area

Welcome to OWA.

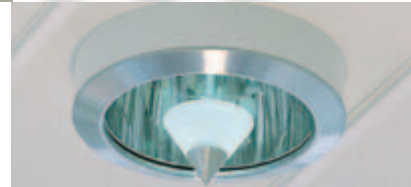
The reception area features OWAplan a jointless acoustic plaster covered mineral base ceiling with a monolithic eye catching surface.





OWAcoustic® radial
Suspended ceiling system featuring
trapezoidal elements.

πr^2



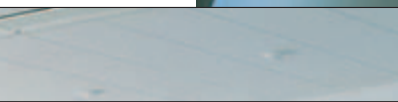
4,682 m² of usable space:

$$\pi \times r^2 \times 6.$$

Working space is contained on six upper floors. The total usable area is 4,682 m² which includes 90 offices incorporating ancillary and conference rooms – complemented by a basement, first floor, and a two-floor entrance hall.

The circular shape is the dominant factor – certainly, as far as the design and realization are concerned. Circular forming moulds had to be used for the solid concrete core and the projecting concrete floors. The separating corridor walls had to be curved in the floor and ceiling planes by using special templates.

The exterior glazing of the double glass curtain walling follows the radius of the tower. It involved much detailing – as well as the challenge of integrating rectangular elements into the circular concept.



OWAcoustic® Finetta – Fine fissured mineral wool ceiling tiles in an OWAconstruct® exposed grid suspension system.

Lighting: OWA Opta – double-parabolic 60° integrated light fittings with lateral and transverse mirror louvred reflectors.

Chilled elements manufactured by Trox-Hesco (ceiling induction throughput DID) – directly integrated into the ceiling. If any subsequent modifications are required they can easily be integrated or removed, respectively.

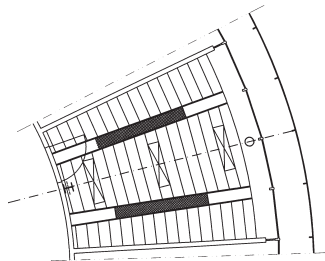
Architecture and Ceiling Construction

The latest news on Squaring the Circle

According to mathematicians – the area of a circle is not equal to the sum of all the rectangular components of the surface area – no matter how small they are or how many their number.

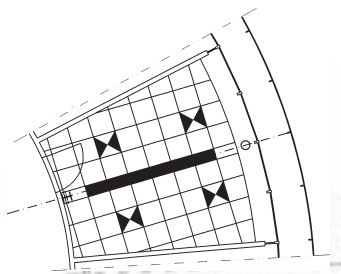
Our ceiling designers were confronted with exactly this problem: all the rooms are segments that – like slices of a cake – do not have any right angles. On the other hand, however, the right angle is the geometric basis of ceiling panels.

There are two solutions to this problem: either the panels must be changed or the areas in which they are to be installed must be changed – We did both.



Solution 1:

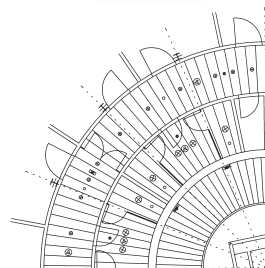
The ceiling areas of some rooms were taken as a sequence of segments of a circle – oriented towards the centre of the tower. Each ceiling panel had to be individually tailored during installation to make it fit as a “slice into the cake”. There were no right angles involved.



Solution 2:

In other areas the geometry of the circular segments has been ignored and rectangular panels are installed – only the sides of the panels were trimmed until they fitted the shape of the circle.

As an interesting variation, in some offices the total perimeter edge is in the form of an orbital frieze.

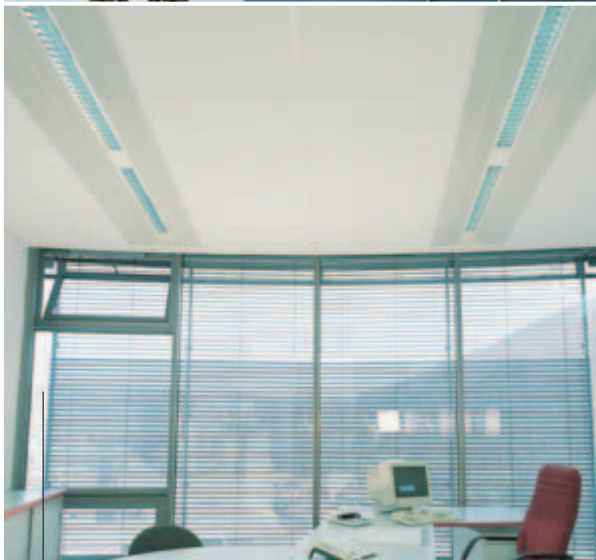


And a completely different solution:

The corridors feature the latest OWA innovation: in these areas prefabricated radial ceiling panels were installed for the very first time. In the meantime, however, this panel type has now been integrated into the OWA product program under the name OWAcoustic® radial. These panels are machined during production to fit the specific radius of a circular building.

OWAcoustic® ceiling panels in Cosmos surface design are combined with a variation of the OWAspectra® STAR suspension system.
Trox-Hesco cooling element – an aesthetic complement to the ceiling design (ceiling induction throughput DID).

OWAtecta® Perfora – metal ceiling system with outstanding acoustical features installed in a metal pan grid.
Chilled ceiling tiles – copper cooling coils integrated into an **OWAtecta® metal ceiling**. The microperforations of “Perfora” ensures excellent acoustical features in combination with maximum of light reflection.
Light fitting: OWA Downlights



OWAcoustic® ceiling combined with exposed and concealed suspension sections featuring the Sandila surface pattern.
Cooling elements within integrated light fittings – this combination has been specifically developed for the OWA House of Ceilings by Luft- and Filtertechnik GmbH.

OWAcoustic® linear planks, Molinari grey, with concealed installation of OWAspectra® STAR profiles.
Trox-Hesco cooling element (ceiling induction throughput DID).

OWAcoustic® linear planks
(concealed suspension system)
Integrated cooling elements
INDUCOOL – efficient cooling with low
energy consumption.



OWAtecta® Perfora— a metal ceiling system with excellent acoustical features.

Chilled ceiling system with copper cooling elements integrated into an **OWAtecta® metal ceiling**.



OWAcoustic® ceiling
(direct installation)
Constellation surface
design in the emergency
escape staircase.



**Product Presentation –
our objective:**

Pro Domo Ceiling D

The design of the OWA House of Ceilings was closely connected to the challenge of entering hitherto uncharted territory in the field of ceiling design.

For this reason proven and prestigious OWA products were used in combination with innovative ideas:

These were:

OWAcoustic® mineral wool ceiling systems in different variations and designs – for acoustic and fire protection ceilings

OWAtecta® perforated metal ceiling system

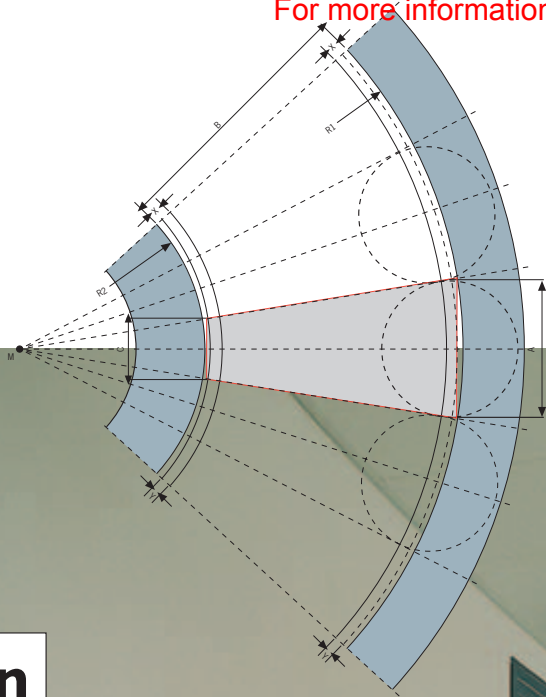
OWAspectra® acoustic plaster-coated ceiling system

OWAconstruct® exposed and concealed suspension systems

... and OWA Light fittings:

OWA Opta, OWA Terra, OWA Lex, OWA Inlight, Downlights and several innovative lamp designs

For more information go to www.barbourproductsearch.info



OWAcoustic radial[®] – trapezoidal ceiling panels – an OWA innovation specifically designed for circular buildings.

esign



OWAcoustic® ceiling, Regular Perforated pattern surrounded by a banded frieze in Universal design.
Trox-Hesco cooling element (ceiling induction throughtput DID).
Lamps: OWA Opta – double-parabolic 60° integrated lamp with lateral and transverse mirror finish louvred reflectors.



Dimensions and Quantities

Some technical data:

Height:	41 m
Usable surface area:	4,682 m ²
Number of floors:	6 full upper floors, basement, ground floor, intermediate floor and roof floor
Facilities:	90 offices with ancillary, meeting and conference rooms, 2-floor entrance hall
Foundation:	Foundation 90 cm thickness plate on 19 piles, each of a depth of 7 m and a diameter of 0,5 m
Building material:	3000 m ³ of concrete, 210 tonnes of steel



OWAcoustic®,
Design Molinari grey,
herringbone installation



**A material
with excellent
features:**



Glass for the OWA House of Ceilings

Glass is an important material to OWA: it is not only a prime component of white wool, the basic material of OWAcooustic® mineral board, it is also – together with concrete and steel – the dominant material used for the exterior walls of the OWA House of Ceilings.

The glazed curtain walling is conceived as an energy-preserving sandwich construction exterior facade:

An exterior glazing providing protection against wind and weather, wrapped around the whole building like a weatherproof coat. This attractive glass exterior is – a consequence of the circular shape of the building – curved to fit the radius of the tower.

Internal high-level glazing with efficient ventilating units installed at floor and ceiling levels: Due to constant air circulation in the cavity between the internal and external glass walls, the surface temperature of the inner glazing only rises by a minimal amount, even on very hot, sunny days.

A positive effect for the colder periods of the year: The temperature of the interior glazing decreases only very slowly – an important energy-saving feature.

Elevator constructed of glass and steel





Lighting and Light fittings

All rooms are flooded by daylight – there are no solid exterior walls preventing natural daylight from entering the building. The entire building is surrounded by room-high windows that can, when required, be shaded by full height Venetian sun blinds.

A number of different light fitting lamp types have been integrated into the ceilings – most of them are part of the OWA program: OWA Opta, OWA Terra, OWA Lex, OWA Inlight and Downlights. In total these elements are a presentation of the many possibilities of combining different types of ceiling designs, suspension systems, and light fittings.

The lumen level of the artificial lighting is controlled automatically depending on the intensity of natural daylight entering the area.

A good example of a well-integrated ceiling design is on the 4th and 6th upper floor where the light actually comes from the chilled ceiling.

Here the lamps and cooling elements have been combined in one functional building element.

OWAcoustic® linear planks, Cosmos needled surface design in a semi-concealed system with mirror finish main tee sections.



Suspension system OWAspectra® STAR
With specific and variable design options, interesting geometric forms due to special grid assembly.



Chilled Metal ceiling – **OWAtecta® Perfora** in combination with a cooling system.
Lamps: OWA Opta for efficient basic lighting.



Coolness falls from the ceiling ...

Suspended Cooling Units with integrated lighting.



Cooling element **INDUCOOL**

OWAspectra® Carré – a design resembling stucco work. Here directly installed into an **OWAcoustic® Universal ceiling** and combined with integrated **cooling elements made by Trox-Hesco** (ceiling induction throughput DID).

We are ready for the summer – cooling ceilings in all areas provide a well-balanced working environment. The cooling agent is supplied by water from our own well which has a constant temperature of 6 – 8 °C. It runs through the heat exchangers in the cooling ceilings and from there to the production facilities. Energy consuming air-conditioning systems are redundant.

The building is equipped with two different cooling systems:

Cooling elements integrated into **OWAcoustic® ceilings**

Rooms with mineral wool ceilings are cooled by means of convector units which are directly integrated into the ceiling construction. The special position of the baffles of these cooling elements ensures consistent air circulation and draughtless temperature exchange in all areas.

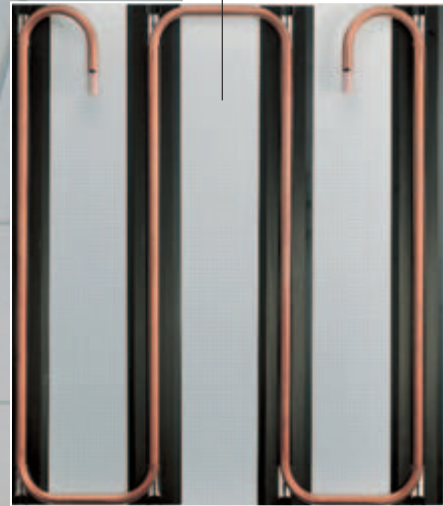
Besides providing a good climate, the integrated cooling elements also have an effect on the room design – obviously a very positive one.

Cooling ceilings combined with **OWAtecta® metal ceilings**

This is a cooling system using the total ceiling surface as a chilling element – like a radiator in a central heating system. Copper cooling coils are fixed into the **OWAtecta®** panels deflecting the chilling over the metal surface – and thus providing silent and draughtless cooling combined with the excellent acoustical features of the **OWAtecta® Perfora** product.



Cooling coils on the rear of a OWAtecta® Perfora metal ceiling.



Metal Pan ceiling OWAtecta® Perfora with cooling system



... and heat recycled from the production process

The heating energy required for the OWA House of Ceilings is recycled from our production processes. It is fed into the heating system in the form of warm water.

Intelligent electronic systems help to save energy: As soon as a window is opened, the respective room or area is disconnected from the heating or cooling system.



Outlook:

Excellent Perspectives for the Future

The perspectives from our tower vantage are excellent – in all directions:

Looking at our factory we see production facilities representing the latest state of the art manufacturing – enabling us to produce high-quality ceiling panels in an economically realistic way.

Looking at the beautiful landscape surrounding us we can be sure that our activities have no negative effects on the environment.

Looking at new concepts we create new marketing and distribution structures ensuring our long-term competitiveness on the domestic and international markets.

These are good perspectives with which we can meet the challenges of the future – and in continual pursuit of the highest standards of excellence in the design and manufacture of ceiling systems.

For more information go to www.barbourproductsearch.info



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