

ARCHITECTURE AND BUILDING ENGINEERING

METAL ARCHITECTURE DESIGN AND CONSTRUCTION

BURKHARD FRÖHLICH,
SONJA SCHULENBURG (EDS.)

BIRKHÄUSER DBZ

A Residential and Office Building in Dortmund, Germany

Architects: Hansen+Petersen, Dortmund

Many passers-by react with a mixture of surprise and curiosity when they see the new building at Dortmund's Ostwallmuseum. Glistening silver during the day and illuminated at night, it sends its surroundings a variety of signals of modern city life.

Until recently, the rather tranquil, dreary environment where the new building stands seemed to have got stuck in its post-war past. Where two small interlocking residential buildings dating from the late 18th century once formed a single block, there now stands a large residential and office building that distinctly pays homage to modern technology and transparency.

The building, which was designed by Dortmund architects Hansen and Petersen, is demonstrative, but not insistent. They filled the gap, which was almost eighteen metres wide and fifteen metres deep, with a structure six storeys high; on the roof, they placed a transverse cuboid structure that projects well over the building line to the street. The almost storey-high strip windows, which are separated by thin aluminium strips, are the most striking feature of the building on the street side. They are composed of frameless window panes of various lengths, which are interrupted here and there by sequences of industrially manufactured cast glass elements.

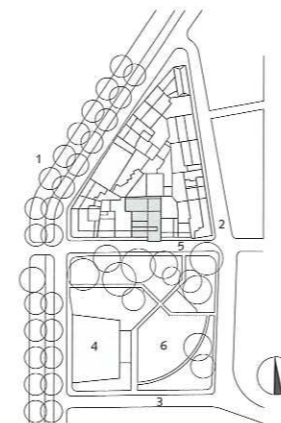
This skin is exceptionally smooth, elegant and precise. It exposes much of the building's inner life, only to conceal it again elsewhere, revealing at best mere outlines. No railings or radiators block one's view of the interior, which not only contains the architect's office but also a two-storey restaurant, a lawyer's office and an apartment. Only the ventilation flaps in the aluminium strips project beyond the building line, apart from, of course, the cuboid structure on the roof: an aluminium-clad box, which seems to float and projects a good three and a half metres. This is,

as the French say, a *point de vue*, which brazenly towers above the nearby treetops and offers residents unexpected views.

This is, indeed, a manifesto announcing the dry approach of both architects Jürgen Hansen and Ralf Petersen and the contemporary architecture in the inner city, which it revitalises with means quite unlike those typical of critical reconstruction. The architecture stringently, clearly and constructively embodies a modular building concept, tailored to suit the plot's particular location, and combines different uses with extraordinary experiences of space.

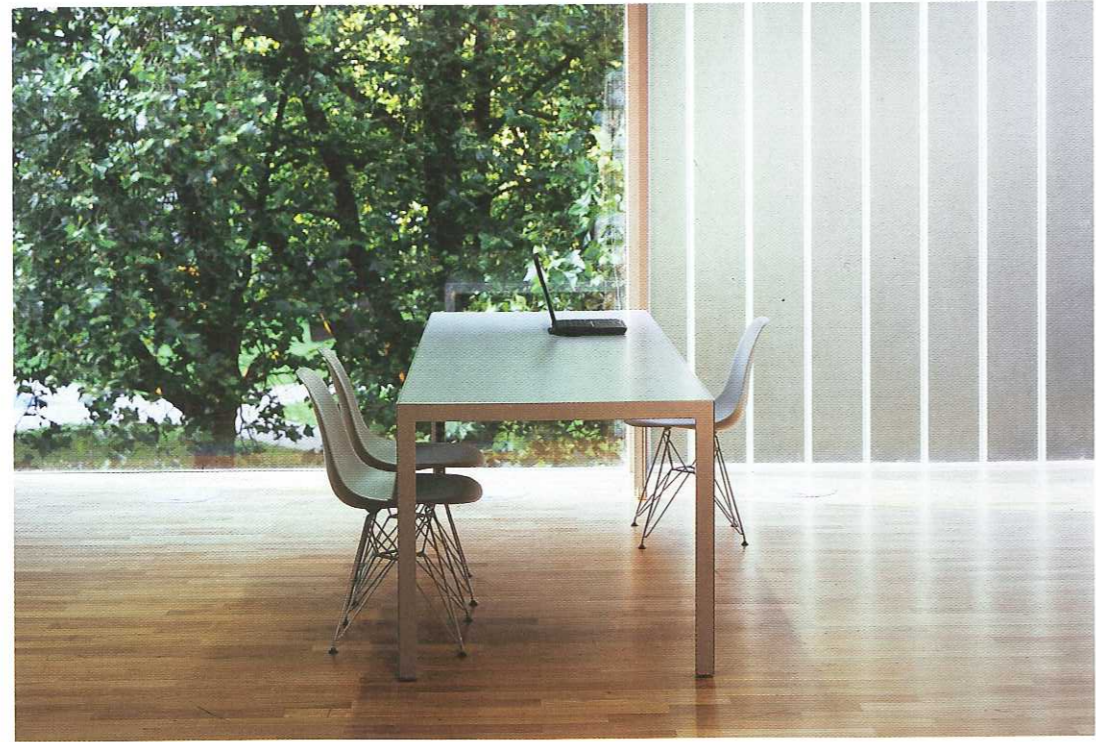
A storage system with hollow-core elements, each spanning the ten metres between the supports, creates column-free levels, each of which can be filled and furnished to meet users' requirements. The only limitation here is the vertical access core which, supplemented by other services, divides the building into two asymmetrical parts. On the upper floors, the core accommodates a kitchen and a conference area; on the first two storeys it houses the rooms adjoining the restaurant and a car lift.

The storeys seem to have no tangible boundaries. Users and visitors feel as if they have been transported to a park. Surprising sequences of transparency and translucence, of frameless clear glass and cast glass transport them into the atmosphere of a contemporary art museum that shows appealing excerpts from the real city and park in place of large photographs. Unclad concrete walls and ceilings, meticulously finished parquet flooring, as well as metal and glass elements for all the fittings and furnishings that are



Location plan 1:4000

Close to nature: the building skin is barely perceptible. A surprising shift from clear glass to cast glass, transparency and translucence provide a framed view of the city and the park.

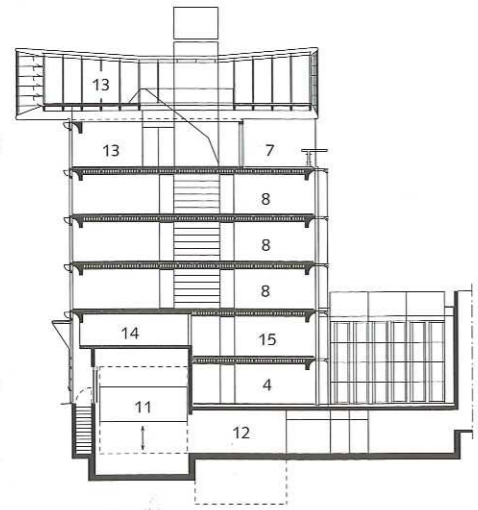


needed in this two-storey lawyer's office with its modular offices, contribute to a concentrated working atmosphere.

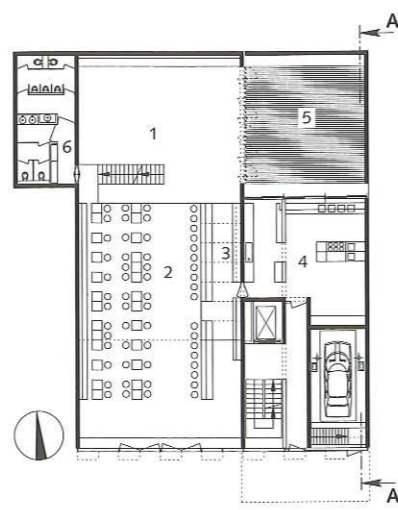
Although it was the northern side of the building, facing the street and the park, which made it possible to gain these experiences, it was in their design of the southern side, with its rather unattractive courtyard, that Hansen+Petersen really showed what they can do. Fabric sunblinds and large sliding and bottom hung windows ensure adequate cross ventilation. An unassuming terraced landscape completes the scene. By filling the plot to the limits of the permissible, responding to the countless projections and setback walls of the neighbouring buildings with a variety of alignments and heights, they created very inviting free spaces.

There is a large terrace above the two-storey restaurant that occupies the entire courtyard section of the property. On the final full storey, the building line retreats, providing the apartment there with an open terrace as wide as the building. The box above it projects further and more impressively here than it could have done on the street side. Neither autarchic nor autistic, but closely interlocked constructively and energetically into its urban surroundings, the building offers a variety of permeably composed rooms on the smallest of areas. Visitors can experience this in the restaurant, which the Veltins Brewery brilliantly furnished in a cool, rational style whose puritanism has evidently met with a very positive response.

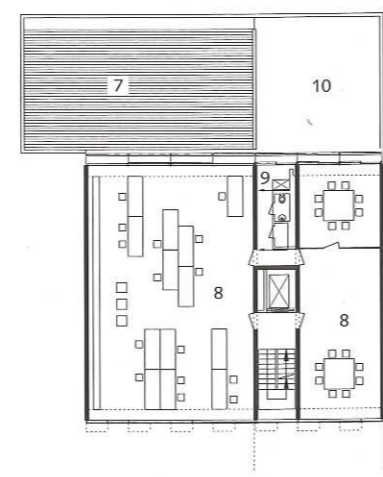
- 1 Restaurant
- 2 Bistro
- 3 Bar
- 4 Kitchen
- 5 Patio
- 6 WC ladies/gentlemen
- 7 Terrace
- 8 Office
- 9 Small kitchen
- 10 Air space
- 11 Car lift
- 12 Underground garage/storeroom
- 13 Residential
- 14 Technical room
- 15 Social rooms



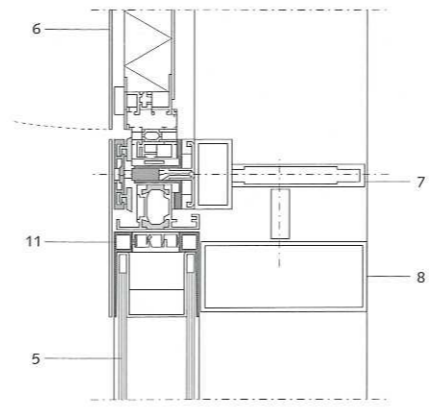
Section AA 1:500



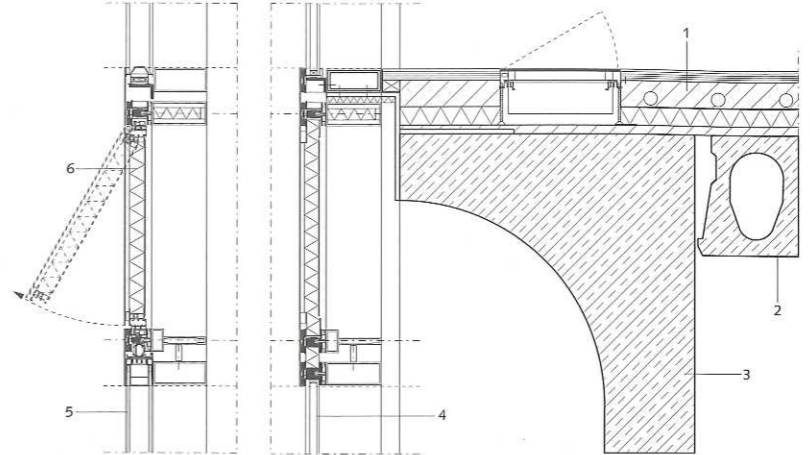
Ground floor 1:500



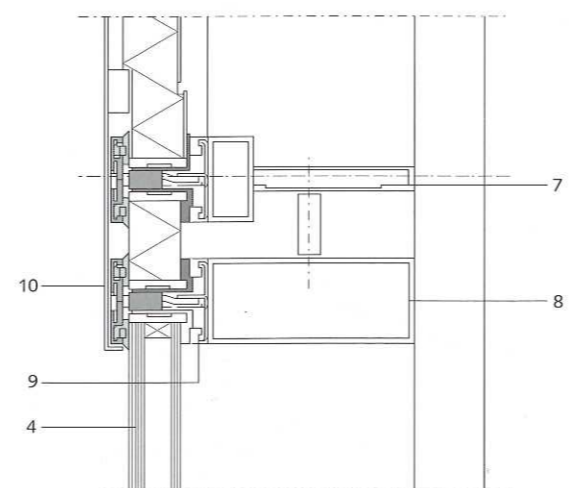
First floor 1:500



Detail figured glass 1:5



Detail North façade 1:15

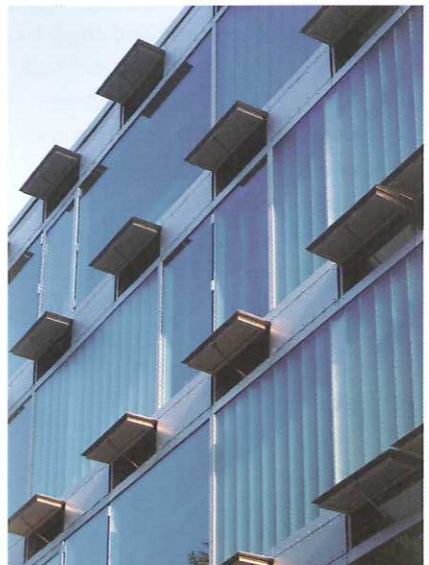


Detail fixed glazing 1:5

- 1 Floor structure:
25 mm ship-parquet
62 mm floating screed with integrated underfloor heating
38 mm insulation
20 mm levelling layer
- 2 265 mm
- 3 Fair-faced concrete
- 4 Fixed glazing:
exterior: 8 mm toughened safety glass
sun-protection layer
LZR: 16 mm
interior: 16 mm laminated safety glass
- 5 Fixed glazing:
60 mm cast, rolled glass
heat insulated
- 6 Top-hung window, motor driven
- 7 50/125 mm T-bolt
- 8 50/125 mm bolt
- 9 50/125 mm glass terminal strip
- 10 Aluminium sheet
- 11 Aluminium section

Building data

- Building: Archlab
- Location: Olpe 39, 44135 Dortmund
- Client: HBP Grundstücksverwaltung, Dortmund
- Completion: 2002
- Specialists: TB Bauwesen Horn, 04129 Leipzig, structural design
IBS Burkamp-Stratmann, 59755 Amsberg, building services
Hansen + Petersen, lighting design, interior design
C.H.P. Ingenieurgesellschaft, construction supervision
- Structure: Reinforced concrete and prefabricated elements
- Materials: Concrete, glass, wood, aluminium
- Size of plot: 496 m²
- Gross floor area: 1,884 m²
- Volume: 6,594 m³
- Construction cost: € 2,720,000



Left: the external skin consists of storey-high strip windows. Frameless glazing alternates with cast glass elements; ventilation flaps are concealed behind the narrow aluminium strips.
Right: Hansen + Petersen created a terraced landscape facing the south-side courtyard. The intermediate storeys accommodate the architect's office. The transverse slab at the top contains an apartment.