

HÖRMANN

# PORTAL 05

PORTAL 05  
SEPTEMBER 2005

INFORMATION FOR ARCHITECTS  
FROM HÖRMANN



## Industrial Buildings and Structures

Projects from Zaha Hadid, gmp – von Gerkan,  
Marg and Partners as well as aIB agiplan GmbH

# CONTENTS

3

## EDITORIAL

4 / 5 / 6 / 7

### PORTAL TALKS TO BARKOW LEIBINGER ARCHITECTS

More than simply a shell: the Berlin architects on location context and the human dimension in industrial construction

8 / 9 / 10 / 11 / 12 / 13 / 14 / 15

### BMW WORKS IN LEIPZIG

Everything in a state of movement: the central building at the BMW Works in Leipzig is dynamics cast in concrete

Design: Zaha Hadid Architects, London

16 / 17 / 18 / 19 / 20 / 21

### AIRBUS A380 MAJOR COMPONENTS ASSEMBLY HALL IN HAMBURG

A giant of a hall for a giant of a bird: the customized production facility for the Super Jumbo

Design: von Gerkan, Marg and Partners, Hamburg

22 / 23 / 24 / 25 / 26 / 27

### THE ASSEMBLY PLANT OF PORSCHE AG IN LEIPZIG

Where the Cayenne grows: at Porsche "white-collars" and "blue-collars" all work under one roof

Design: aIB agiplan GmbH, Duisburg / CEPEZED, Delft

28 / 29 / 30 / 31

### HORMANN COMPETENCIES

Doors for industrial construction

32 / 33

### ARCHITECTURE AND ART

Anna Reinert: "Façade" and "Stairways"

34 / 35

### PREVIEW / IMPRINT



Martin J. Hörmann, Thomas J. Hörmann and Christoph Hörmann

## Dear Readers,

The project research for the current issue of PORTAL that you hold in your hands today was at first accompanied by scepticism. Good industrial buildings and structures - is there such a thing? After all, for years industrial construction here in Germany was the stepchild of architecture and exemplary buildings were correspondingly thin on the ground. Yet at the outset of the 20th century Peter Behrens and Walter Gropius had placed landmarks of this then still young building type. In a text from 1914, Gropius ranks the construction of factories to be among the building tasks that captivate the true designer much more intensely than traditional construction problems because it is precisely at the core of those new tasks that his imagination can develop more independently. Today, at least in those cases where building owners and contractors allow the architect the necessary freedoms, industrial construction returns to its avant-garde roots. For the new central building of the BMW Works in Leipzig Zaha Hadid has just received the German Architect's Prize and with it Germany's most prestigious award in the field of building culture. Reason enough for us, dear readers, to present details of this project in this current issue of PORTAL. With the Airbus assembly hall in Hamburg by von gmp – von Gerkan, Marg and Partners and the Porsche Plant in Leipzig by alB agiplan, we have chosen two further projects in which the outer shell is at least just as interesting as the product being manufactured inside it

- and in view of the product - the new Airbus A380 - that's saying something indeed! This time our questions on the topic of industrial construction are being answered by Frank Barkow and Regine Leibinger from Berlin. Barkow Leibinger may justifiably claim that their projects for the laser manufacturer Trumpf have helped to initiate the present trend towards high-quality industrial buildings. On the pages of this issue covering "Architecture and Art" we take pleasure in drawing your attention to a "new discovery". The young Polish painter Anna Reinert first caught our eye during the opening of the Galerie ASPN in the Leipzig Cotton Spinning Mill. By the way, the area, the centre of the young Leipzig art scene, proves to be a fascinating journey of discovery for anyone interested in architecture and art.

Finally, we would like to focus your attention on a special service which we are offering in this issue of PORTAL: on the "competence pages" towards the end of the issue we present clearly and concisely to you the most important doors from the Hörmann product range specifically geared to industrial construction.

Further details on the individual products can be found, as always, at [www.hoermann.com](http://www.hoermann.com).

Thomas J. Hörmann  
Personally liable shareholder

## PORTAL TALKS TO REGINE LEIBINGER AND FRANK BARKOW

**Barkow Leibinger Architects ranks today as one of the leading architect's offices for industrial construction here in Germany. Founded in 1993 as a German-American architect's office in Berlin, they have so far realized numerous projects above all in Germany, Switzerland and the USA. PORTAL talked to Regine Leibinger and Frank Barkow about their experience in designing industrial buildings and their personal approach to tackling challenges of this kind.**

**PORTAL:** As with virtually all your office facilities and public buildings you endeavour, particularly in the case of your industrial structures, to reduce the size of the volumes to a human scale by segmenting, folding and breaking-up the surfaces. How important is the human dimension to you, especially in the field of industrial construction?

**REGINE LEIBINGER:** It is of course always important. And particularly in industrial construction where extremely large-volume buildings are involved, this should never be overlooked. A machine couldn't care less what its surroundings look or feel like, but we build first and foremost for people. And when people are at their workplace, where after all they will spend most of their lives, they shouldn't get the feeling that they were left out of the design. An important break in the scale is achieved alone by the fact that wherever possible we always try to avoid separating production and administration. We do not design a gigantic hall, only to then stand a small office building in isolation next to it. We bring both areas non-hierarchically together under one roof - making for shorter routes and improved in-house communication and coordination.

**FRANK BARKOW:** That we experiment a lot with our facades has something to do with the fact that the shell or casing of a building represents more than simply protection against the elements. The facade is like a filter, it lets you look in or transfers images to the outside, it catches colours and light states or throws them back, it gives the

building a face. To treat facades like a spatial layer, for example by folding, underlines their effect as corrective or a mediator between the interior and the exterior.

**PORTAL:** In an interview with Marcella Gallotta you say that you want to confront globalized world architecture by designing buildings that arise out of the specific situation of a location. Can you explain this strategy using your industrial buildings as an example?

**FRANK BARKOW:** If we take a look at the two exhibition halls in Grüşch and the customer and training centre in Farmington, then it soon becomes apparent that we do not travel to a location with a prefabricated architectural language and then allow our personal geometric preferences to run riot. If possible, we seek an unbiased debate with the context that we find there, taking into account the special features of a location or also any local architectural traditions, which we can pick up on and continue. This generates important impulses for the design, the method of construction or the choice of materials. Irrespective of the spatial agenda, a project in the Swiss mountains is therefore entirely different to one in the middle of an industrial park on the east coast of the USA.

**PORTAL:** "Even industrial buildings that have been well done are mostly no more than decorative shells covering neutral, flexible large-volume spaces." Do you agree with this or is there still sufficient creative scope despite all the functional constraints?



**REGINE LEIBINGER**

born 1963 in Stuttgart  
1989 Diploma, TU Berlin  
1991 Master of Architecture, Harvard University  
1993–97 Member of the scientific staff at the TU Berlin  
Since 1993 Joint office Barkow Leibinger Architects, Berlin  
Since 1997 Visiting professorships and part-time lectureships at the University of Fine Arts, Hamburg, Harvard Design School, Cambridge and Architectural Association London

**FRANK BARKOW**

born 1957 in Kansas City, USA  
1982 Bachelor of Architecture, Montana State University  
1990 Master of Architecture, Harvard University  
Since 1990 Visiting professorships and part-time lectureships at the Cornell and Rome, University of Minnesota, Harvard Design School, Cambridge and Architectural Association London  
2005–06 Visiting professorship, State Academy of Fine Arts & Design, Stuttgart



Photo: Corinne Rose, Berlin

Customer and Training Centre in Farmington/Connecticut, USA (below).  
Business Incubator, Research and Administrative Building in Grünsch, Switzerland (far bottom).



Photo: Paul Warchol Photography, New York



Photo: Margherita Spiluttini, Vienna

**REGINE LEIBINGER:** That's almost the same as saying: even well done museums are only decorative casings around a few walls on which you can hang up pictures. But it's still about space and what you do with it!

**FRANK BARKOW:** Of course in industrial construction we often have to contend with major functional constraints. We must plan our projects so that they are ready and can be used at any time, but can be further developed later on based on a long-term laid out masterplan. But that in no way means that our creative scope is limited to decorative packaging. In good industrial buildings the spaces are not neutral but the constructed expression of processes that take place within them. What may look simple and diagrammatical on the floor plan is in the end always three-dimensional space in which we have to make decisions about views, the quality and condition of materials or the incidence of daylight.

**PORTAL:** A company like Trumpf, for whom you have already realized a number of projects, is surely a stroke of luck because here building culture is regarded as a natural part of the corporate culture. How do you convince "more difficult" clients of the value of good architecture for industry?

**REGINE LEIBINGER:** With powerful arguments. It is completely understandable that a company should at first be interested in efficiency and cost-effectiveness - and not in aesthetics. We must therefore explain why it is worthwhile investing in good architecture. Fortunately, it has since been generally accepted that better working conditions prevail in a good industrial building than in a trapezoidal sheet metal box put together with neither love nor care and which really only the very short-sighted would still regard as being "cheaper". Because better working conditions have a positive effect on all sectors

Laser Factory and Logistics Centre in Ditzingen, Germany



Photo: Margherita Spiluttini, Vienna

Interior space of the production hall, Laser Factory and Logistics Centre in Ditzingen, Germany (below)  
Production and Administration Building in Baar, Switzerland (far bottom)

involved: workforce satisfaction increases, operational processes can be optimized. Sustainable planning secures not only flexibility for forthcoming developments but also produces lower operating costs long-term. At Trumpf in particular the architecture is also assigned a particularly prestigious function. The buildings transport values which make the company strong in its branch, laser and machine tool technology, namely quality awareness, precision and innovative strength.

**PORTAL:** We all like to seek out models that inspire our work. What industrial buildings - apart from your own - would you recommend young architects today to take a look at?

**FRANK BARKOW:** That's easy to answer: the buildings of Albert Kahn – above all the River Rouge Complex built for Ford near Detroit.

**PORTAL:** Will industrial buildings continue to play a dominant role in your work or do you intend to increasingly push forward into other architectural fields?

**FRANK BARKOW:** As a matter of fact we have been active in other fields right from the word go. Our list of references covers virtually everything from public buildings to office facilities and kindergarten. With these building types the way to new orders is still primarily via competitions, so we continue to invest a great deal of time and energy in them.

**REGINE LEIBINGER:** But of course industrial construction will remain one of our main areas of focus - to have acquired so much know-how in this specialized field and then not to place it at anyone's disposal, would indeed be wasteful! We believe that in future more and more companies will wish to express their identity through architecture, and not just via products, services and the aid of marketing tools. The "constructed" identity will become increasingly important - and that means more than just having the largest logo in the industrial park.



Photo: Margherita Spiluttini, Vienna



Photo: Margherita Spiluttini, Vienna

## BMW WORKS IN LEIPZIG

**Automobile construction has a long tradition in the Free State of Saxony. Since 1932, when the Audi AG was founded in Chemnitz, the automobile and car components industry there has continued to grow. The latest project to spring to life here is the BMW production plant in Leipzig. With a machine-like elegant architecture, its central building penned by the architect Zaha Hadid skilfully places the image of the BMW brand and the manufacturing process in the limelight.**

Ever since Volkswagen AG with its "car city" in Wolfsburg and its "glass factory" in Dresden has been promoting the product "motorcar" as a marketable event, the new trend has also won over other automobile concerns to the idea. The facility is designed to give customers the opportunity to see their vehicles being assembled first-hand - in other words to make car production more accessible. As a result, over the past few years we have also seen other car manufacturers jump on the bandwagon, no less than Porsche with their production plant and customer centre in Leipzig and DaimlerChrysler with their Mercedes Museum in Stuttgart. Also the Bavarian Motorcar Works (BMW) can take them all on at any time and in collaboration with Coop Himmelblau plans to create the "BMW-Welt" in Munich - and has recently become a talking point primarily due to the futuristic central building of its factory in Leipzig. In an open competition, it was finally Zaha Hadid Architects with the landscape architects Gross.Max who were able to assert themselves against such high-calibre international competitors as Peter Kluska (3rd prize), Lab Architecture Studio with Karres en Brands (2nd prize). The jury was taken by the captivating way in which Hadid's design met the integrative and communicative requirements of the task not only in the external language of the building structure but also in the internal space. And indeed, the requirements of the client were astonishingly well served by Zaha Hadid's ideas. The departure point for her design was provided by the existing production buildings. Between the gigantic halls of bodywork construction, the auto paint shop and assembly there extends an almost 80 metre wide and 250 metre high "hole" which as the central place in the plant must, from an organizational point of view, fulfil

several functions: as a through room for the semi-finished vehicles from one production area to another, as a main entrance to the factory halls and the offices, as a canteen, coffee zone and as a presentation and discussion forum. Thus Zaha Hadid sees her building as being the nerve centre of the entire factory complex in which the flow of energy and communication is concentrated and from where the many activities taking place in the various areas radiate back out again. It superimposes the movements of production and people and thus develops a building shape that appears to be continually in motion. At first glance the central building comprises one single large room that snakes its way from production hall to production hall. In its interior ceiling-suspended conveyor belts transport the semi-finished cars in a soft-looking illuminated blue: like one big staircase several levels rise up to the upper storey and beyond until over the foyer. There are no office cells. All the workplaces are located in the same space, together with the conveyor belts and the entire opening-up of the building. In this way practically everyone passes someone else, whether blue-collar worker or member of the executive board - the aim being to promote communication and team spirit as a result. The sharp edges of Zaha Hadid's architecture shooting through the room illustrate in an exemplary fashion the "car" as a leitmotif: nowhere does the eye of the viewer dwell at the same point. Continual motion pursues you in the same way as in a moving car. Zaha Hadid's central building is not just a simple building shell - it itself becomes a machine whose engine is the motion of the people and the cars.



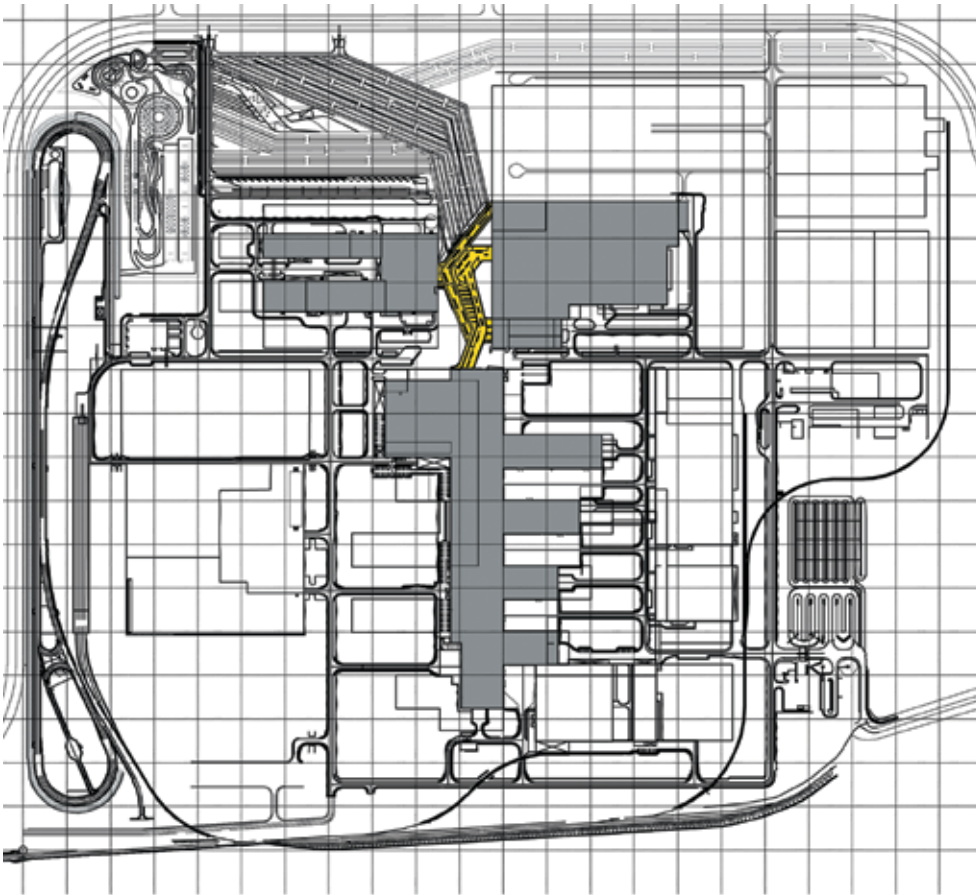




Masterplan of the BMW Works in Leipzig. Located in the centre (yellow) the central building (location plan).

Aerial photo of the central building (bottom left).

The materiality of the facade already betrays from the outside the open and streamlined design of the interior space (bottom right).



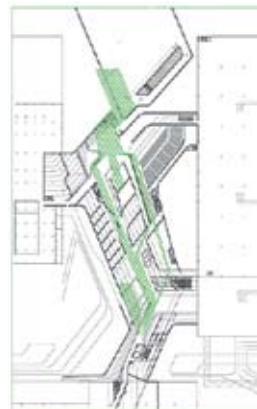
Various currents of movement of both people and production are superimposed and thus generate the characteristic shape of the building (schematic diagrams).

Providing fire protection between the central building and the assembly hall: steel sliding doors from Hörmann (bottom left).

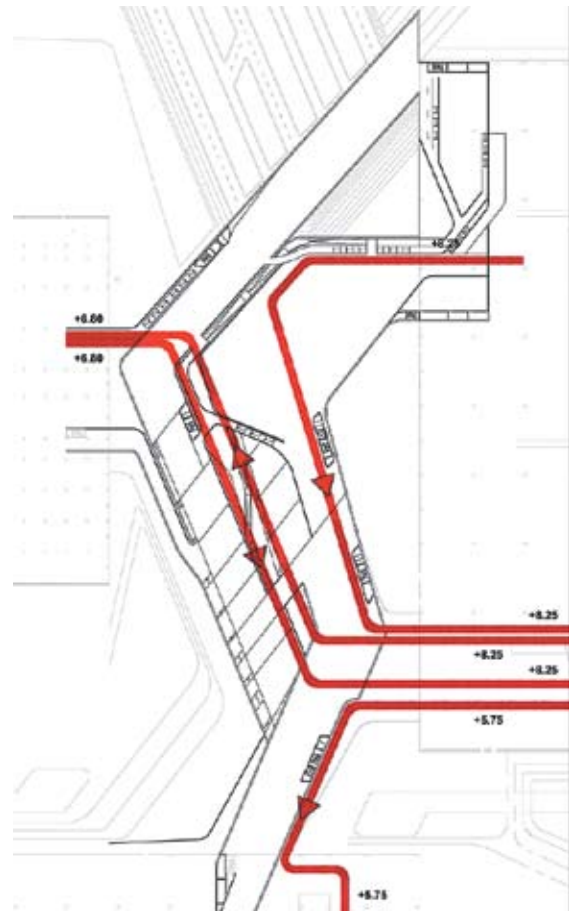
A first glance into the main space of the central building from the foyer detects the complex guidance of the various routes (bottom right).



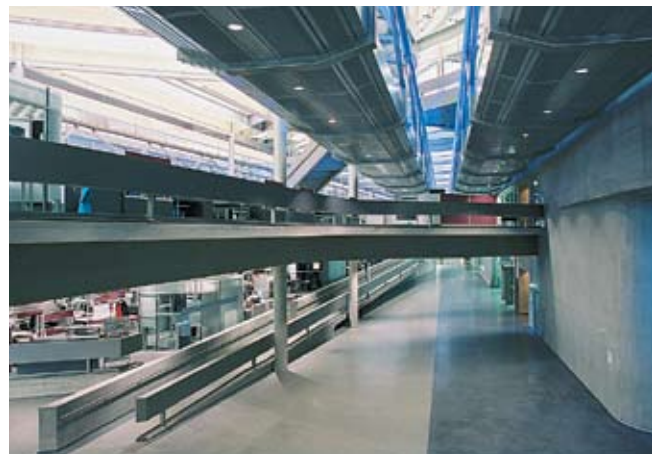
Route for blue-collar

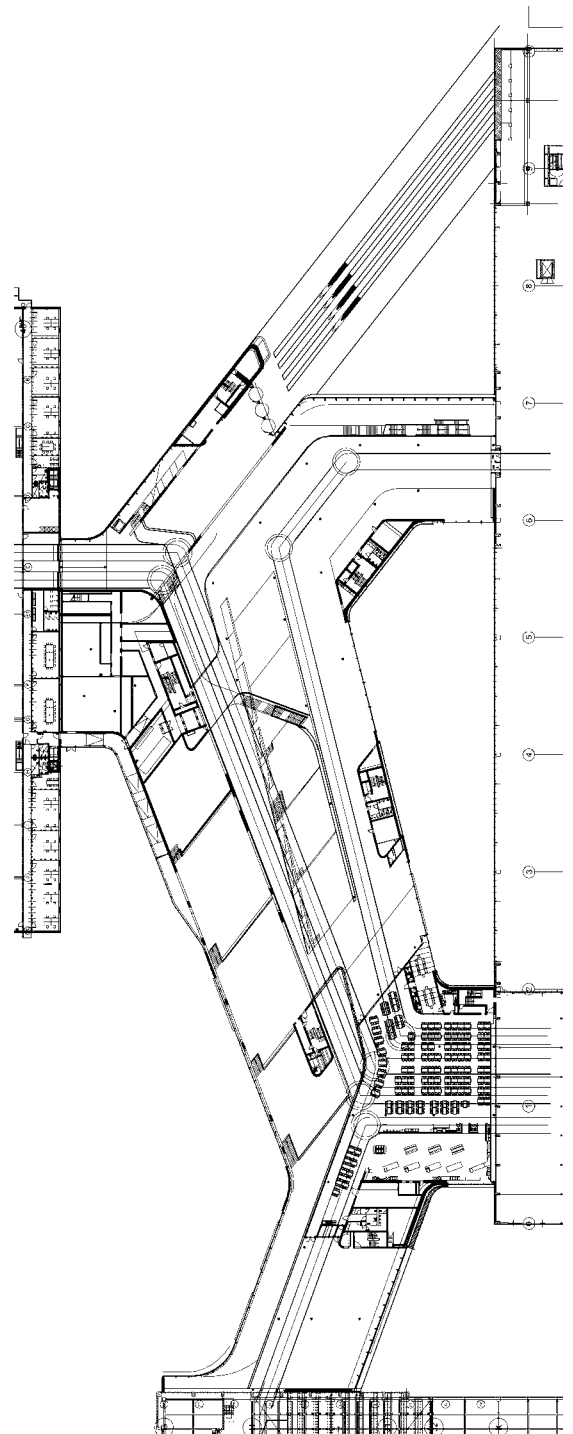
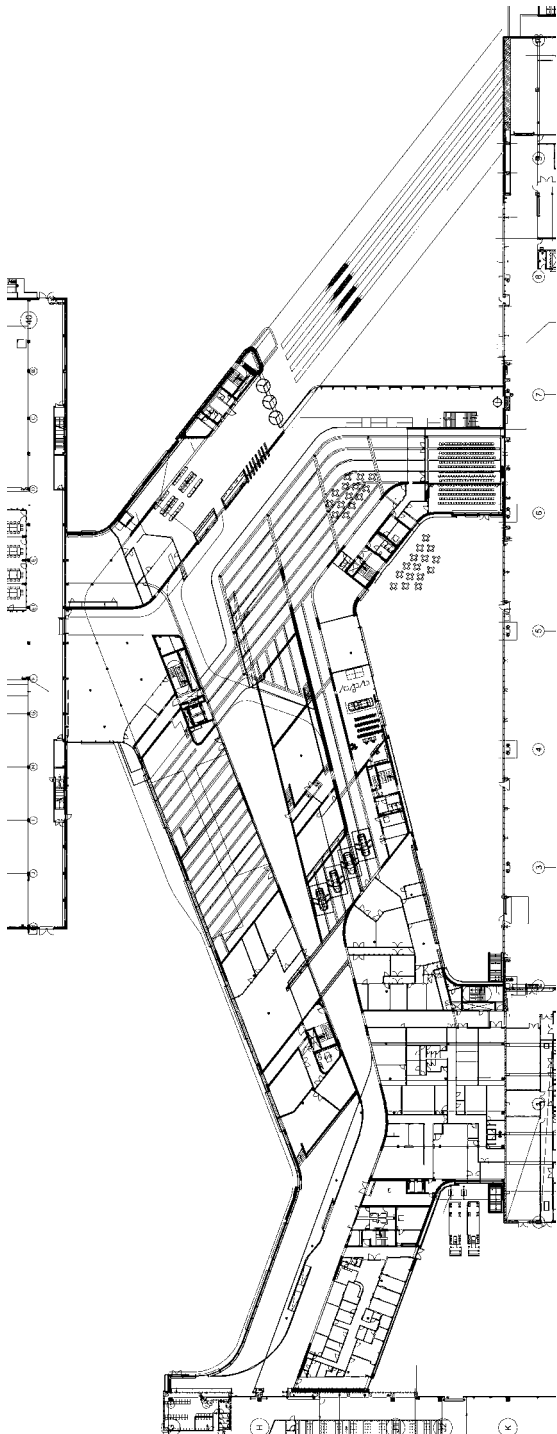


Route for white-collar



Conveyor systems







Floor plan of the first floor and floor plan of the upper storey (on left). Like a staircase, the office areas climb up to the upper storey, from where, behind the conveyor belt, they ascend further back again until over the foyer (bottom).



In the thoroughfares between the halls Hörmann sliding fire doors have been fitted (top and centre). They allow two transport robots to pass at the same time (centre). At a number of work stations the relevance to the production line is particularly evident (bottom).





Between the two office areas rising up like a staircase, a “ravine” emerges marking the access route to the production hall of the assembly facility.

**CONTRACTOR**  
BMW AG, Munich

**DESIGN**  
Zaha Hadid Architect, London  
with Patrik Schumacher  
Project Architects: Jim Heverin,  
Lars Teichmann

**LANDSCAPE DESIGN**  
Gross. Max, Edinburgh  
Project Architect: Daniel Reiser

**SUPPORTING STRUCTURE**  
IFB Dr. Braschel AG, Stuttgart  
Anthony Hunt Associates, London

**LIGHTING DESIGN**  
Equation Lighting, London

**PHOTOS**  
Martin Klindtworth, Leipzig

**HÖRMANN PRODUCTS**  
Single and double-leaf T30 H3  
steel fire doors;  
single and double-leaf T90 H16  
steel fire doors;  
T90-1 H16 steel fire shutters;  
T90-1 HG27 steel fire door;  
double-leaf D45 steel doors;  
single-leaf sliding fire doors  
T30 HG 21; double-leaf sliding fire  
doors T30 HG 15; single-leaf sliding  
fire doors T90 HG 18



# Airbus A380 Major Components Assembly Hall in Hamburg

**The A380 embarked on her maiden flight on 27th April on a wave of unbridled enthusiasm and excitement. The successful implementation of this project can be attributed to the close collaboration between various locations throughout the whole of Europe. Thus, it came about that specifically for equipping the cabins and cargo holds of the A380, an assembly hall, whose form and facade were to show the flagship in a favourable light, was built in Hamburg according to the plans of the architects von Gerkan, Marg and Partners.**

The site for the assembly halls of the Airbus A380 in Finkenwerder, a district of the city to the west of Hamburg, was for a long time the subject of dispute. Specifically for the new assembly facility, a 140 ha area was reclaimed from the "Mühlenburger Loch" on the Elbe River (a starting and landing strip for seaplanes built in 1935), thereby claiming almost 1/5th of its expanse of water. According to Airbus Germany it was necessary to do this in order to secure the site for the partial assembly of the A380 because the existing halls were not large enough to cope with the gigantic dimensions of this the world's largest passenger aircraft: with a length of 72.7 metres, a span of 79.8 metres and a height of 24.1 metres, the Airbus is barely longer than the previous "Master of the Skies", the Boeing 747, but exceeds it in span and height by almost 25 per cent. The right architectural solution for this prestigious construction project was to be found by putting the project out to international tender. Airbus was in search of a building that could meet all the requirements of an assembly hall at the same time as placing the A380 in the public eye as a symbol of European cooperation. In December 2000 the jury finally opted for the design of the architects von Gerkan, Marg and Partners from Hamburg. One factor above all others tipped the scales in their favour: its elegant simplicity and formal clarity, turning the architecture into a mediator between the viewer and the product. The architectural concept nevertheless appears to be simple: in order to optimize the spatial volume and reduce it to an economic minimum, the architects developed a building whose shape echoes the contours of the A380: on the south side, on which over five floors all

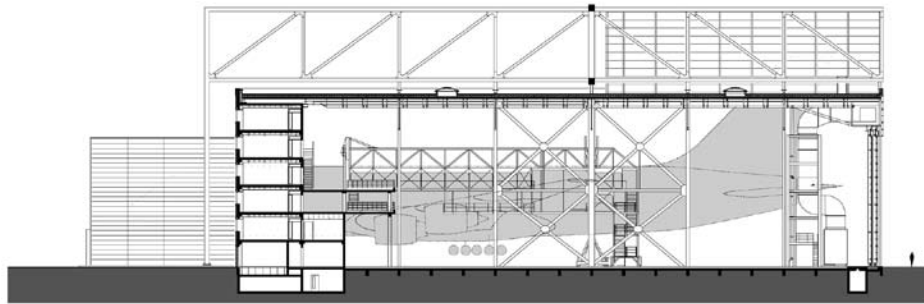
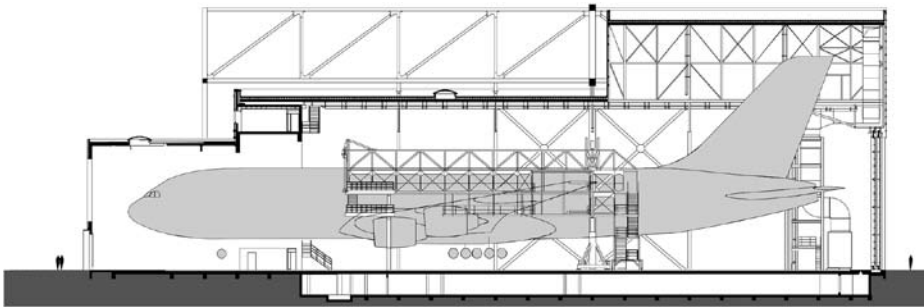
the ancillary functional rooms are additionally located, the 370 x 80.5 metre large main hall is literally penetrated by the nose of the A380 – and enclosed by pocket-like modules, the so called "nose boxes", which dock with the façade as architectural add-ons. It's a similar picture under the roof. Here the hall roof makes way for the large tail empennage up to a height of 31.30 metres – together with the ten metre high main supporting structure of steel trussed girders, the "tail vaults" thus emerging lend the roof landscape its characteristic appearance.

The hall is worth seeing, particularly from its north side: here it opens up entirely as a glass façade, comprising two 17 metre high sliding doors per assembly area. Thus, during the day the workers are afforded an imposing panoramic view of the sunny hillslope of the Elbe River and the passing tubs. At dusk the outsider gets an exclusive view of the activities taking place inside the assembly hall which becomes a show window, with the large aircraft and the workers as protagonists. This effect is emphasized by a lighting concept that refrains from illuminating the façades, in favour of an effective illumination of the interior. This also shows the fire protection sections in an advantageous light. Here the decision fell in favour of Hörmann fire doors because of the appropriate aesthetics and superior quality. What the huge main supporting structure on the roof gives away, is brought to light by the main hall's interior. The four assembly areas command an enormous support-free space of some 92 x 72 metres. Here, using state-of-the-art technology, the A380 is given an "inner life" before being transferred to the paint shop for the final operation in the production process.





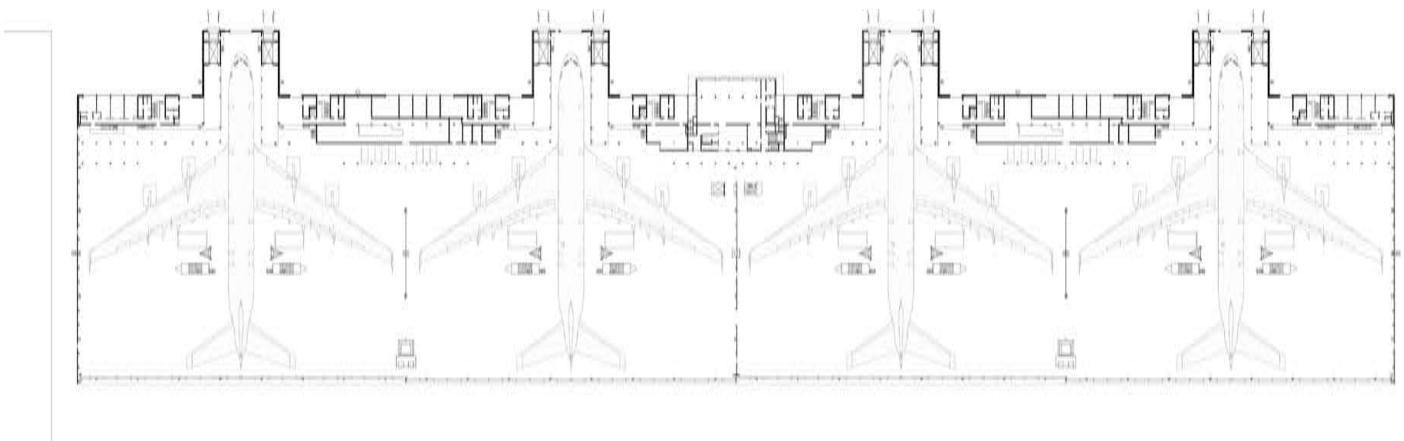
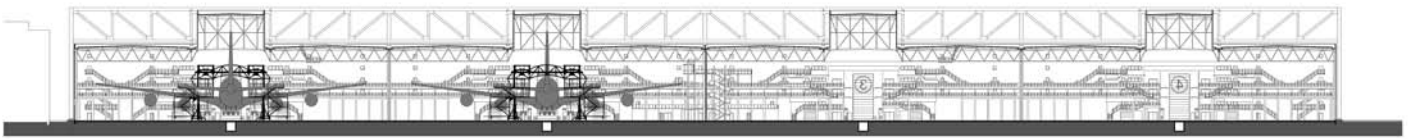
The shape of the building echoes the contours of the A380 and optimizes the interior volume and the supporting structure (top and centre). Particularly eye-catching is the striking landscape of the roof as viewed from the north (bottom).







In the longitudinal section the dimension of the huge main load-bearing structure becomes clear (top).  
The south facade houses all the ancillary functional spaces which are organized as a rising five-storey horizontal span member (centre).



## AIRBUS A380 MAJOR COMPONENTS ASSEMBLY HALL IN HAMBURG

Particularly at night the assembly hall reveals its true beauty: using minimum lighting in the outdoor space, it effectively reveals its interior to the world outside.





Each assembly area provides a column-free space of 92 x 72 metres for the aircraft. The hall is served by the functional rooms via fire doors and stairs in the rear area (top).

Thanks to the ceiling-high glazing of the fire doors, the internal stairwells and corridors present themselves as open and transparent areas. Quality was a top priority, also in the details.. Thus the doors are equipped with integral overhead door closers (centre). Hörmann F30 fixed glazing between the staff canteen and the assembly hall affords interesting views - from the inside out and vice versa (bottom).

#### CONTRACTOR

Airbus Deutschland GmbH, Hamburg

(p. 18–20), Hörmann (p. 17/21)

#### DESIGN

von Gerkan, Marg and Partners, Hamburg

Partner: Nikolas Goetze  
Design: Volkwin Marg, Marc Ziemons

#### DESIGN OF SUPPORTING STRUCTURE

Engineering Office Dr. Binnewies, Hamburg (massive construction)  
Schlaich, Bergemann + Partners, Stuttgart (steel construction)

#### PHOTOS

Heiner Leiska, Curau + Hamburg

#### HÖRMANN PRODUCTS

S-line tubular frame elements:  
single-leaf T30 steel tubular frame doors HE 310 S, double-leaf steel tubular frame doors  
HE 320 S, F30 steel fire-proof glazing HE 330 S, steel smoke-tight doors S/RS-100 S, S/RS-200 S, steel smoke-tight glazing S/RS-300 S; F90 steel fire-proof glazing HE 930; single and double-leaf steel fire doors  
T30 H3; single and double-leaf steel fire doors T90 H16; single and double-leaf steel doors D45



# Assembly Plant and Integration Centre of Porsche AG in Leipzig

**For some time now there have been regular additions to the product family of Porsche AG: in August 2002 the series production of the off-road vehicle Cayenne got underway. A good year later it was the turn of the GT. At the same time as expanding production, new locations were also sought. Assembly of both models takes place in the new production plant in Leipzig, designed by the architects aIB agiplan.**

In 1999, Porsche AG had checked out 17 different locations in the new federal states before finally opting for the former parade ground in Leipzig. According to the concern, subsidies did not play any part in the decision; it being the corporate philosophy that luxury and aid do not go together. The new works premises includes a production plant for final assembly and quality control of the vehicles, a customer centre, a running-in and test circuit and an off-road circuit for off-road safety training. The main development extends over a central north-south axis; to the west of the site there is also a railway siding for taking delivery of car bodies. Sited opposite each other on the central axis are the customer centre of the Hamburg architects gmp – von Gerkan, Marg and Partners (Portal 01) and the assembly hall.

## **The entire workforce under one roof**

The specs for the Duisburg general designer aIB agiplan called for an open and communicative production plant in which the traditional distinction between “blue-collars”(fitters) and “white-collars” (office staff) is dispensed with. The “integration centre” in the south of the works hall is the junction at which all routes cross. Its east facade projecting beyond the building line and its cantilever roof with circular light capitals characterize it as an entrance to the manufacturing plant. Inside the staff is received into a hall-like space in which offices, a cafeteria and changing rooms for the fitters (the latter in inserted two-storey room elements) are all united under one roof. The works hall is a sheer steel construction with modular façade made up of three different materials: transparent

insulating glass, insulated, opaque glass panels and insulated metal panels. Its aesthetics are characterized by a uniform modular grid spanning the entire surfaces. Since at the time a corresponding product was not available on the German market, the architects adapted a Dutch façade system to comply with German building regulations and obtained a technical approval for it.

## **The facade: the production plant’s “bodywork”**

The choice of materials for the facade is geared to functional and creative aspects. The northern façade that solely directs dazzle-free light into the interior, is fully glazed, likewise the entrance facade to the integration centre. In the east, on the central axis, we are presented with the production hall’s “show side”. The three bottom areas of the facade are fully glazed across the full breadth of the building. They grant visitors heading for the customer centre a fleeting glance of the production process, without subjecting the fitters to too much glare. The top part of the facade consists of insulated glass panels, while the façades at the rear were clad with insulated metal panels. Also the outdoor installations of the new Porsche Plant in Leipzig represent a piece of corporate culture. In the south-west of the area “energy fields” were laid out which are cultivated with regenerative building materials and energy plants. As a compensation measure for constructing the terrain sport course Porsche AG settled 50 aurochs and 20 Exmoor wild ponies on the plant grounds. The two endangered species were not only given a new habitat – they are also highly efficient when it comes to halting the growth of shrubs on the grassed areas.





View of the north side of the production hall featuring Hörmann sectional doors. Clearly visible is the change of materials from opaque to translucent glass whereby the same facade grid is retained (top).  
General view (bottom).





The interior of the integration centre receives its light from above through circular "light capitals". This is where the offices of the administrative staff are sited, but also the changing rooms for the fitters.





Aerial photo of the works premises with the reception building (top).  
Modular concept with extensions (bottom).



Series (in-line) module



Mirror-inverted module



Extension module

**CONTRACTOR**  
Dr. of Engineering. H. C. Ferdinand  
Porsche AG, Stuttgart

**DESIGN**  
aIB agiplan Integrale Bauplanung  
GmbH, Duisburg

**LOCATION**  
Porschestraße, Leipzig

**SUPPORTING STRUCTURE DESIGN**  
Engineers Office Baum and Weiher,  
Bergisch Gladbach

**TECHNICAL BUILDING EQUIPMENT**  
PKA, Essen

**COLLABORATION IN THE PROJECT**  
**PLANNING**  
CEPEZED, Delft

**PHOTOS**  
Porsche AG (p. 25),  
aIB agiplan GmbH (p. 26),  
Hörmann KG

**HÖRMANN PRODUCTS**  
Speed sectional doors SPU 40;  
high-speed doors V 4014;  
Decotherm® rolling shutters

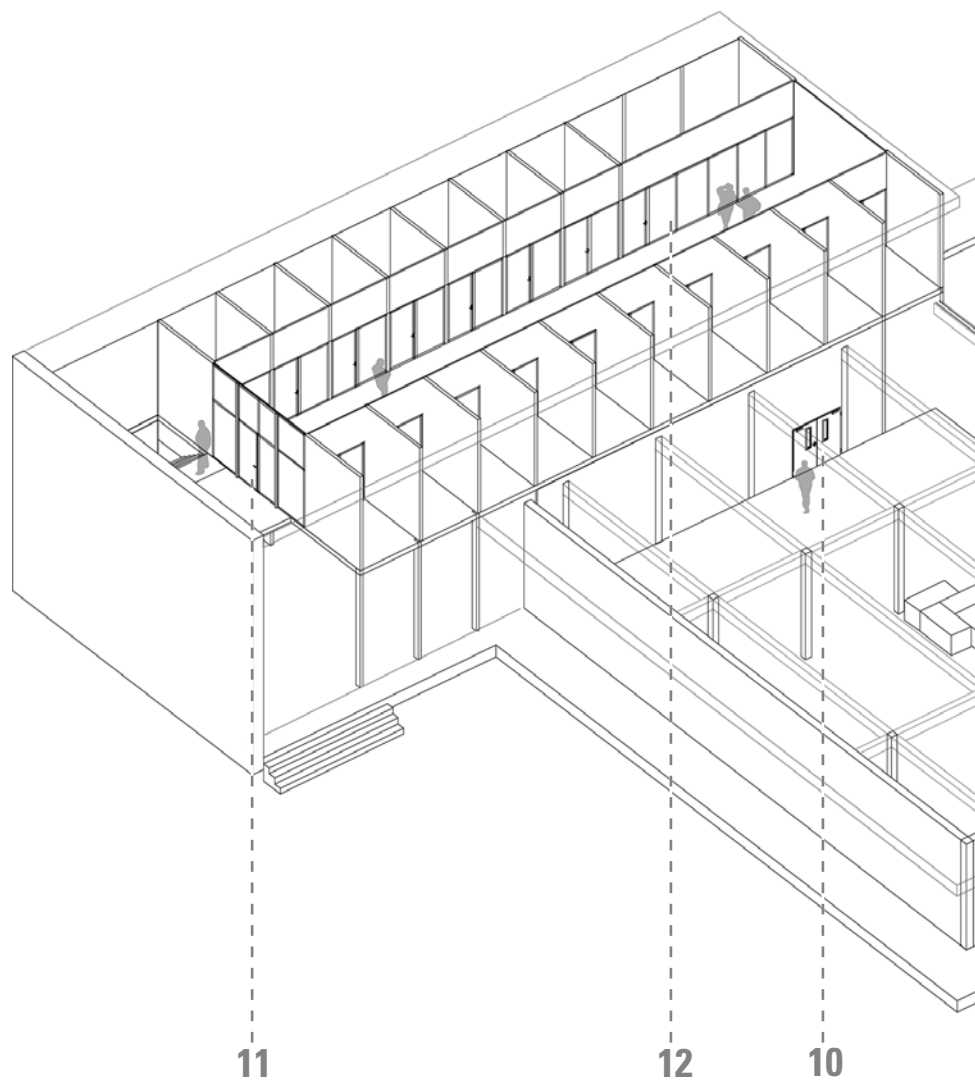
General layout (top).  
In the assembly hall Hörmann high-speed doors ensure  
smooth-running work processes (bottom).





# HÖRMANN COMPETENCES: INDUSTRIAL CONSTRUCTION

As a building materials specialist Hörmann provides the planner with tailored solutions for industrial construction from a single source. The following two pages show exemplary solutions based on a fictitious industrial building.

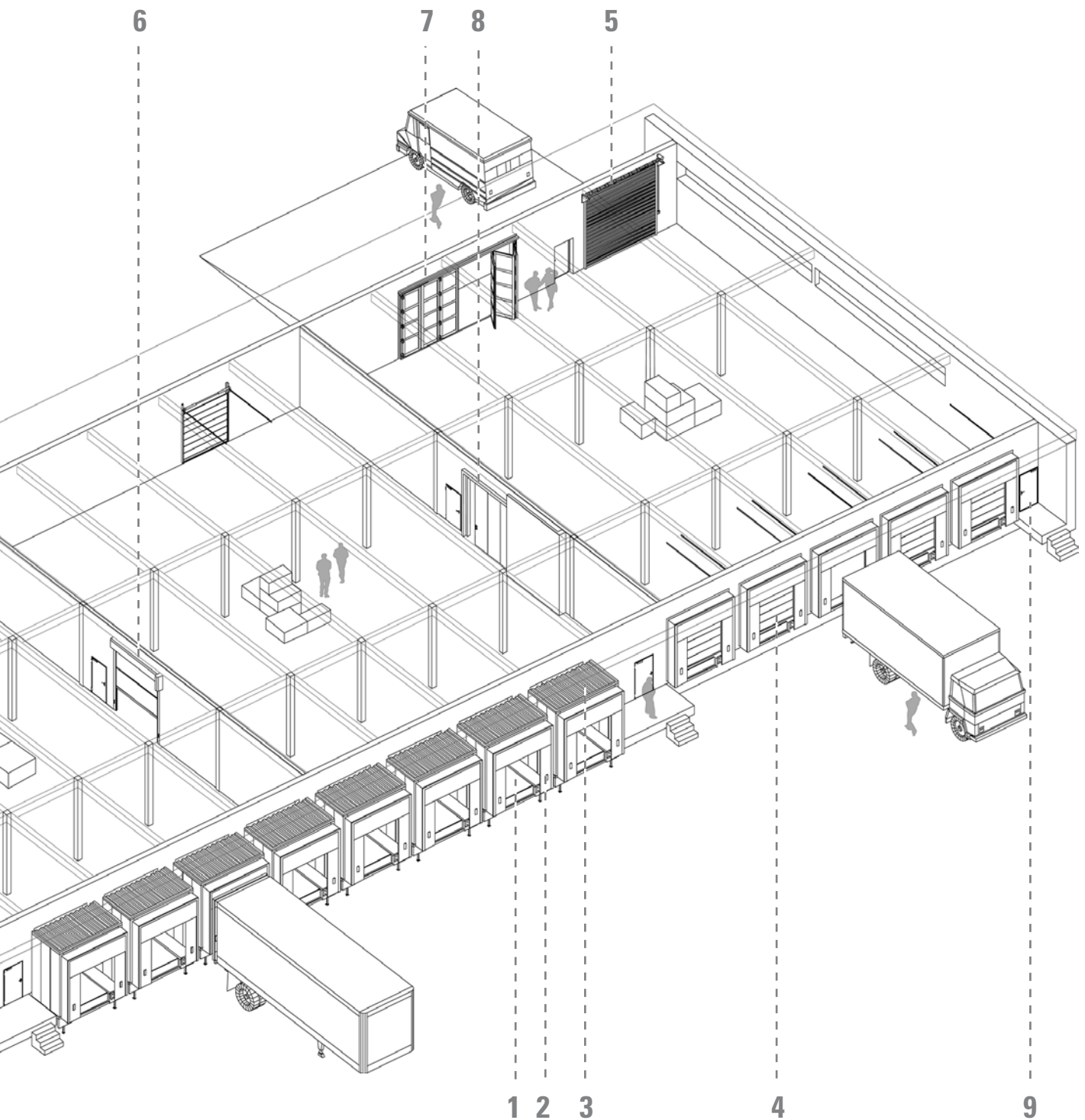




- 1. Dock leveller
- 2. Dock shelter/seal
- 3. Loading house
- 4. Sectional door
- 5. Rolling shutter

- 6. High-speed door
- 7. Folding door
- 8. Sliding fire door
- 9. Multi-purpose door
- 10. Steel fire door

- 11. Fire protection and smoke-tight tubular frame elements
- 12. F30 system wall



1



## Loading equipment

Hörmann offers complete loading systems for the logistics sector. The benefits are sound planning, reliable execution of construction work and a high level of functionality thanks to precisely matching components.

### 1. Dock levellers

In transport logistics Hörmann's stationary dock levellers are indispensable elements for efficient loading and unloading. They bridge the gap between the lorry and loading platform at the same time as compensating the height difference between the loading platform and the vehicle deck.

### 2. Dock shelters/seals

Dock shelters/seals protect goods and personnel against the weather and drafts. They save energy costs and have been developed as flap shelters, inflatable shelters/seals or cushion seals to meet a variety of requirements.

### 3. Loading houses

Loading houses are complete units comprising dock leveller and dock shelter/seal and are ideal for retrofitting in front of existing buildings. They do not infringe on the building's storage area and help reduce construction costs.

4



## Industrial door systems

Hörmann has characterized the industrial door sector for over four decades. A wide range of industrial doors, operators and door controls, developed and produced in-house, ensures perfectly matched door systems.

### 4. Sectional doors

Sectional doors are door systems that open vertically upwards, thus saving space in front of and inside the building. On account of the various track applications, these doors can be adapted to suit any type of industrial building. So, whether for new buildings or renovations, you have this additional assurance already at the planning stage. Hörmann offers customized solutions for each and every application: sectional doors with maximum glazing offer a clear view of the interior space; thermally insulated, double-skinned, 80 mm thick DPU doors ensure stable temperatures, e.g. in the fresh food logistics sector. Latest innovations, such as the wicket door with trip-free threshold which, under certain circumstances, also meets the requirements of an emergency escape door, or door systems for explosion-endangered areas round off Hörmann's range of sectional doors.

5



## 5. Rolling shutters

The simple design of rolling shutters using very few components makes them particularly cost-effective. Hörmann supplies rolling shutters up to 11.75 metres wide and 9 metres high, as special doors even higher. Rolling shutters are a good choice for loading bay situations because where vehicles must manoeuvre within a confined space, doors must be robust enough to remain fully functional even after receiving a knock or two. If lack of space means that the rolling shutter cannot be fitted internally, then an external rolling shutter is the answer. The various window types and colours available provide plenty of creative scope.

### 6. High-speed doors

Hörmann high-speed doors are used for both internal and external applications to optimize the traffic flow, improve the atmospheric environment as well as save energy. The range includes vertically and horizontally opening transparent doors with flexible curtain as well as rolling shutters, sectional doors and folding doors as secure outdoor closures. As day/night-time closures Hörmann offers flexible high-speed doors also in combination with rolling shutters and sectional doors. The SoftEdge technology specially developed by Hörmann (patent pending) with integral anti-crash/collision protection makes high-speed doors particularly safe and highly efficient.



## 7. Folding doors

Hörmann folding doors in steel and aluminium are recommended for high traffic frequencies, for halls with minimum headroom and in those situations where no extra load may be placed on the roof. Folding doors incorporate very few wearing parts, so are maintenance-friendly and low in repair costs.

Typical fields of use are manually operated doors in building yards, vehicle depots and service halls

## 8. Sliding fire doors T30/T90

For the non-domestic building sector Hörmann supplies single and double-skinned sliding door solutions, depending on the required fire protection class, on request also with wicket door. For escape routes also with smoke-tight function.

The fire protection constructions are tested to DIN 4102 and approved by the German Institute for Construction Technology (DiBT).

## Doors and frames

Hörmann offers a comprehensive range of doors and frames and is a recognized partner for safe, technically perfect and architecturally convincing solutions. From multi-purpose doors excluding any special requirements to fire-retardant/fire-resistant and at the same time smoke-tight door systems with side assemblies and transom lights, to fire-proof fixed glazing in a casing frame Hörmann offers solutions that cover virtually any application in the industrial building sector.

## 9. Multi-purpose doors

Hörmann multi-purpose doors in steel and aluminium are ideal for versatile indoor and outdoor use.

The single and double-leaf doors can be used in any situation where robust door sets are called for. In the case of more exacting standards, the use of Hörmann aluminium doors is recommended.

## 10. Steel fire doors

Fire-retardant and fire-resistant fire doors in steel are designed to cope with the tough conditions encountered in industrial environments. Hörmann supplies these as single and double-leaf elements, with the corresponding equipment also smoke-tight, acoustic-rated and with

security features. For functional rooms with special requirements Hörmann additionally offers stainless steel doors in T30/T90.

## 11. Fire protection and smoke-tight tubular frame elements

For aesthetically demanding areas, e.g. for the administrative facilities of an industrial building, Hörmann offers doors and fixed glazing elements in steel and aluminium. The coordinated design within the systems – irrespective of the required fire protection class – guarantees matching aesthetics. Integrated hinges and overhead door closers make for particularly attractive door elevations. In the process, Hörmann has pushed forward the development of ever more slender profile systems. A good example of this is the steel S-line system which is also used by Airbus in Hamburg (see pages 16–21). The newly developed F30 system wall, without posts or rails to obstruct the view, offers maximum light-flooded fire protection (see point 12, page 28).



# ARCHITECTURE AND ART ANNA REINERT: "FAÇADE" AND "STAIRWAYS"

No streaks dull the panes, the floor shines as if freshly waxed and even the corners are completely free of dust. The buildings, streets and interiors that Anna Reinert paints are devoid of any traces of wear and use. Ideal facades that could serve as backdrops for film takes because they are so perfect, so optimally illuminated and so archetypal for what we imagine built-up urban areas to be.

Yet it is precisely this perfection that sets a trap for the eye: in scanning the scenery the spaces suddenly disintegrate into surfaces, depth breaks down into flat graphical shapes and supposedly easily distinguishable materials become similar and mixed up in the interplay of refraction, translucency and shadowy dark. It is as if you are granted X-ray vision, the beguilingly smooth surfaces take you on and beyond and show no mercy.

Anna Reinert's painting focuses on archetypal situations of contemporary reality. By presenting them ad perfektum, they become subject to doubt.

The further away one is, the more enticing the illusion - the closer one gets, the more clearer its defragmentation becomes.

Arne Linde

"Façade"

120 x 150 cm, acrylic on canvas, 2004

"Stairways"

120 x 150 cm, acrylic on canvas, 2004



**ANNA REINERT**

born 1979 in Danzig, lives and works in Sopot, Poland.

Prizes  
2004  
2003

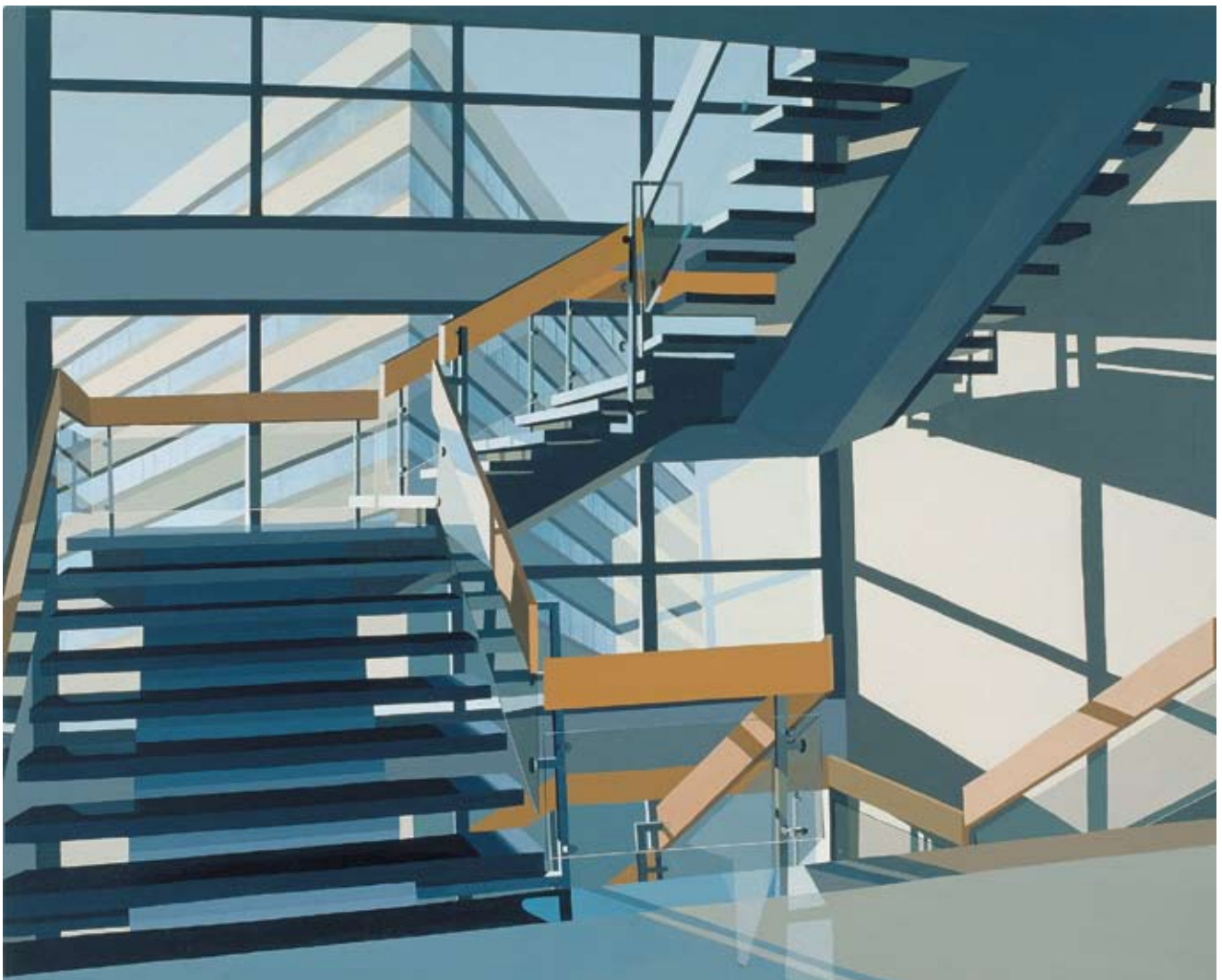
II prize – Samsung Art Master  
The President of Gdanskí Award  
for Young Artists

1999 – 2004 Study of painting at the Academy of Fine Arts, painting faculty, in Danzig, Poland

Exhibitions

- 2005 CSW Łaznia, Danzig, Poland – “urbantic”
- 2005 ASPN Galerie, Leipzig – “A2”
- 2005 Karowa Galerie, Warschau, Poland – “6 a.m.”
- 2004 Fabryka Trzciny Galerie, Warschau, Poland – “an apartment”
- 2003 Mm Galerie, Danzig, Poland

Contact: Galerie ASPN,  
Spinnereistr. 7, Halle 4,  
Leipzig, Arne Linde  
Tel.: +49(0)341-96000-31  
Fax: +49(0)341-96000-36  
[www.ASPNgalerie.de](http://www.ASPNgalerie.de)



## PREVIEW

### Topics in the next issue of PORTAL: **Renovating and preserving building stock**

Letting old look like old and new look like new – this was, roughly translated, one of the main requirements of the 1964 Charter of Venice. To this very day it still forms the only binding international basis for dealing with historical architectural fabric. That city fathers and investors are quick to shrug off such “obligations” when profits beckon or the will of the people commands it is substantiated by controversial projects such as the rebuilding of the city palaces in Berlin and Brunswick and the reconstruction plans for Schinkel’s Bauakademie. The next issue of Portal will address the question of how crucial the much invoked “crucial reconstruction” is today – and what new opportunities the renovation and preservation of building stock, in this country making up around 60 per cent of all works, opens up to architects and users.



Foto: Stephan Falk/baubild

Old electricity works  
in the centre of Berlin;  
reconstruction by Hoyer  
+ Schindele  
Architects, Berlin



**PUBLISHER**

Hörmann KG  
Verkaufsgesellschaft  
Postfach 1261  
33803 Steinhagen - Germany  
Upheider Weg 94-98  
33803 Steinhagen - Germany  
Phone: +49 (0)5204 915-0  
Fax: +49 (0)5204 915-277  
Internet: <http://www.hoermann.com>

**EDITORS**

Certified Engineer Ralf Biegert  
Dr. Eng. Dietmar Danner  
Certified Engineer Jakob Schoof

**PUBLISHING HOUSE**

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Curau + Hamburg



Ritz-Carlton, Berlin

## The Top Address for Your Individual Fire Protection Concept



NEW: concealed hinges

Hörmann offers you Europe's most comprehensive fire protection range. Complete fire and smoke-tight protection in steel and aluminium, T30/60/90, in a coordinated design with

matching doors.

**Now new:** concealed hinges lend T30 tubular frame doors in steel particularly elegant door aesthetics.

# HÖRMANN

Doors – Gates – Frames – Operators

