HÖRMANN

PORTAL 18

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INFORMATION FOR ARCHITECTS
FROM HÖRMANN

Schools

Projects by Lederer + Ragnarsdóttir + Oei;
agn Ludwigsburg; Hahn Helten Architekten;
Donnig + Unterstab

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Cover picture:
Science College, Jülich
Photo: Jörg Hempel, Aachen

Christoph Hörmann, Martin J. Hörmann and Thomas J. Hörmann
Personally liable shareholders

Dear Readers,

No later than the publication of the results of the latest PISA study three years ago, the Federal Republic of Germany has recognized the need to reform its educational system. However, so far the reform attempts are being undermined by structural debates. With their individual gifts, children cannot be forced into a mould. If Germany wants to remain ahead in terms of education on an international scope, its school system must be more diversified to give each child the opportunity of an education. Architecture can play a key role in this regard. It can substantially contribute to promoting the imagination through creative designs. PORTAL introduces four schools that not only meet architectural demands, but have already moved beyond Germany's traditional trinomial school system. While Waldorf schools are not a new invention, their holistic educational approach still appeals to many parents. In Freiburg, the firm of Lederer + Ragnarsdóttir + Oei has planned an extension to an existing Waldorf school with a keen sense for the school's unique style.
The Science College in Jülich, designed by architects Hahn Helten + Assoziierte, accepts especially gifted students who are primarily interested in the sciences. With bright colours and open layouts, the impression of the building is totally opposed to that of an austere elite school. Applying a rather more traditional approach to the educational curriculum, the school centre in Neckargemünd focuses more on ecology. The facility, which was built by the firm Donnig + Unterstab, is one of the very few schools in line with the passive house energy standard. In Ludwigsburg near Stuttgart, the Schiller Gymnasium was enhanced by a specialized classroom section that attractively combines with the existing 19th century buildings. The architects of the firm agn, which operates across Germany, pay particular attention to the lifecycle costs of school buildings. At the expansion of the German school in Beijing, Hörmann once again proved the international scope of its activities. In an interview, Meinhard von Gerkan, co-founder of the well-known Hamburg-based firm gmp, explains the situation of today's China. Author Gert Kähler reminisces on how much schools have changed in the course of the past few decades. With all this information awaiting you, we would like to also inform you that Hörmann is going to celebrate its 75th company anniversary this year. To mark this occasion, special collections of garage doors, operators and entrance doors will be available at very attractive prices throughout the year. Read more about the company anniversary in the next issue. We wish you pleasant and interesting reading

Martin J. Hörmann

Thomas J. Hörmann

Christoph Hörmann

FRIENDLY INSTRUCTORS
THE IMPACT OF SCHOOL REFORMS ON ARCHITECTURE

Schools continue to be associated with the obligation to study. However, the learning environment of today's students differs vastly from that of earlier times. Not only are there no longer authoritarian teachers that threaten to use canes as they teach order and discipline, but the school buildings themselves have evolved into bright, colourful learning environments where young people like to spend their time. However, the long journey of education to today's schools was and still remains accompanied by political influences and discussions.

The "Petersschule" by Hannes Meyes, conceived in 1926 for Basel, Switzerland, but never implemented, still represents the most modern type of school building – with an inner city location, compact structure and schoolyards that require no additional ground floor space, as they are arranged as "hanging gardens" across several levels and on the flat roof (which nowadays would probably consist of solar panels). It is remarkable though that the rigid classroom layout of the Petersschule is still present today in most new school buildings, making us wonder if their design, focusing on lecture-style teaching, is in line with the frequently stated demand that "the third educator is the room." If that is true – after all, the commissioning authorities must know what they are doing – are order and discipline still the primary educational goals? The word "school" originates from the Greek language and means "leisure". The ancient Greeks did not consider leisure to be "doing nothing", but rather a purposeless active preoccupation with intellectual pursuits, which was the privilege of a small elite. In the first years of education, sports and fine arts dominated, while reading, writing and arithmetic were the prerequisites for continuing education in the "seven liberal arts", or perhaps even lessons by one of the great philosophers. But even at that time, the purpose of schools was not to offer individual entertainment or intellectual exercises, but rather to serve the state. This is why only men and free citizens were allowed to receive an education – a minority's privilege. Education as a tool to shape a person who upholds the ideals of those who created the educational institution is a concept that applies to all educational institutions from the medieval monastery to today's schools. "Whoever pays, provides," is still applicable today, especially in the educational sector. State-supported education served and continues to serve the state. It is surely oversimplified to claim that compulsory education, which was introduced in the 19th century with the aim of teaching everyone to read and write, was only based on the concern that future soldiers may not be able to read the instruction manuals of their assault rifles. Yet it would be equally wrong to assume that general compulsory education is a purpose-free outcome of public welfare applied by the state.
Let's have a look at rural schools in the mid-19th century. They are known as one-room schools because students of different ages were gathered in a single room, the girls seated on the side, without writing desks. The teachers obviously were only able to gain respect with a cane; intelligence was not their key strength. They also knew little about educational methods and seemed to only be familiar with military drills. This was further intensified by the deliberate gap between grammar school (Gymnasium) and state-supported primary school (Volksschule) teachers. For the former, a university education became compulsory in 1826 while the latter were educated in seminars. At least in cities there was a system of secondary schools with primary schools for preparing students, private schools and knight academies for the education of young noblemen. The less affluent strata of

GERT KÄHLER
Born 1942 in Hamburg

1962 – 69	Degree in architecture from the Technische Universität Berlin (Technical University of Berlin)
1981	Doctorate degree
1985	Post-doctoral qualification
Since 1988	Free-lance journalist and scientist. Many articles on the topic of city and architecture of the 20th century in publications such as "Die Zeit", "Frankfurter Allgemeine Zeitung", "Süddeutsche Zeitung" and specialized magazines. Co-publisher and author of many books, including the five-volume "Geschichte des Wohnens (History of Residences)" and "Schulen in Deutschland (Schools in Germany)".

society could attend charity schools (Armenschule) that conveyed a minimum of knowledge. But higher education remained unattainable for girls. Fundamental changes were not introduced until the establishment of the German Reich in 1871. The "Wilhelmian school" is a term still applied today both to a building style and an institution (as can be found in the novel "Die Buddenbrooks" by Thomas Mann). The separation of church and state in Prussia in 1872 strengthened the education of the Volksschule and the Mittelschule (intermediary school). The educational level of rural and urban areas was to be assimilated. In 1888, the Volksschule was exempted from school fees, but the same did not apply to higher schools. The seemingly logical premise that those who require a great amount of education should also pay a great amount of money, inevitably led to education based on income, not necessarily on capabilities. Due to the population increase of those years, many schools were established across Germany – with a clear architectural discrepancy according to social class: the Volksschule was furnished rather sparsely while the Gymnasium was furnished elaborately. Apparently, people only counted after receiving the Mittlere Reife (equivalent to O-levels) certificate. The spreading industrialisation, however, increasingly demanded basic abilities such as reading, writing and arithmetic. While this improved the level of Volksschule education, it did nothing to further equal chances across society. It was a closed system: members of the bourgeois and the working class were seen as separate, different beings. Today there is more of a gap between high and low income families. The architectural style of the time, especially that of Volksschule buildings, resembled military barracks. In these schools, order, discipline, austerity and cleanliness were the basis of teaching – with up to 70 children per class. Most students were members of the proletariat, i.e. they were living in devastating situations with totally inadequate hygienic facilities. Schools were regarded as institutions to raise loyal citizens. In 1889, German Emperor Wilhelm II issued an order for schools to "oppose the distribution of socialist and communist ideas" (quote from E. Inckemann: Die Rolle der Schule im sozialen Wandel (The role of schools in social change). Bad Heilbrunn, 1997, p. 187).
In line with the Republican (social) Democrat claim of the Weimar Republic, the educational system was also adjusted to the new social ideals – for the first time, primary education was available for all, an initial step

The Mümmelmannsberg school in Hamburg shows the typical architectural characteristics of a school building of the 1960s.

Photo: Schweger Architects, Hamburg

Photo: plus + bauplanung, Neckartenzlingen

The students, supervised by architect Peter Hübner, were involved in planning the Protestant Comprehensive School in Gelsenkirchen

towards the elimination of class barriers. This reformation concept was also apparent in the newly constructed schools. The architectural modernity style is, for example, found in Ernst May's Reformschule am Bornheimer Hang in Frankfurt, Main (1930), or more moderately, in the many schools of Hamburg designed by Fritz Schumacher as urban planning instruments for law and order. The "lifestyle reform" movement, which began in 1900 with a special focus on the education of young people, could already be felt, even though it was not widely spread yet. For the first time, a school system was established based on a four-year common school, stipulated eight years of compulsory schooling, and allowed continued schooling up to the age of 18. The Mittelschule and the Gymnasium were integral parts of the system, while private schools had to be approved by the state. In theory, there was no longer an educational system that determined an individual's chances in life upon birth. At the same time, it was obvious that the formal opening of schools for everyone still had to become a social reality.

The West German educational system after 1945 was based on the key structures of the Weimar Republic. This meant the cultural sovereignty of the individual states, tripartite educational system with a four-year elementary school, and a civil service system for teachers. Even though discussion and reformation approaches continued, parallel to the Restoration phase of the Republic, the school types that were formally considered obsolete were gradually reintroduced by rehiring the former teachers while the old schoolbooks continued to be in use. The fact that the national socialism era was frequently not discussed in the classroom, as the middle generations can confirm, is evidence that this time was suppressed in school as it was in society. The German Democratic Republic, however, took another approach with a ten-year single school type.

Nevertheless, the transition options and the transfer between the school types were considerably improved. Instead of allocation by the teacher or an admission test, a transition stage after the elementary school was introduced. This was accompanied by a rethinking process in society, in which education was no longer seen as the privilege of a specific social class or wealth, but as a natural right for all. In the mid-1960s, the discussion of the educational system was revived in West Germany, when some of its weak points became apparent. In 1964, the educational planner Georg Picht put the issue in a nutshell when he spoke of the "education catastrophe". This indicated the fear that the low number of academic graduates may cause the scientific standard of the Federal Republic to lag behind other industrial nations, and thus cause its failure in economic competition in the long run – a discussion that is more topical than ever today. However,

until the late 1960s, a university education remained by and large a privilege of the educated bourgeoisie, the number of university students from blue-collar families was very small.
Comprehensive schools were intended to be the transmission belts of the educational policy change, they became the epitome for progressive education and architects were their prophets. However, what was still possible in the "Wilhelmian school", i.e. a uniform building type, a uniform architectural expression of the intended education, was not possible anymore. On the one hand, there were the large-scale schools that were developed based on educational considerations and usually located in the periphery of cities. These were intended to be flexible and variable, equipped for "team teaching" and featuring language laboratories – schools that were technical machines. On the other hand there were school such as the one built by Günter Behnisch in Lorch: buildings that were at the same time "friendly instructors". This contradiction is still predominant today – the comprehensive school by Peter Hübner in Gelsenkirchen (2004), which was for the most part designed by the students themselves is diametrically opposed to the Marie-Curie Gymnasium in Dallgow-Döberitz (2005) by the Berlin architects Grüntuch & Ernst. The two buildings reflect a polycentric society that cannot be pinned down to a single style. It was stated earlier that "state-supported education served and continues to serve the state and thus society". Seen under this viewpoint, today's diversity has its own quality.

School yard of the Marie-Curie-Gymnasium in Dallgow-Döberitz, built in 2005 by architects Grüntuch & Ernst.

Photo: Werner Huthmacher, Berlin

PORTAL INTERVIEW WITH MEINHARD VON GERKAN

The Hamburg firm gnp of Gerkan Marg und Partner is among the few German architectural firms that implemented initial projects in China ten years ago. The German school in Beijing was the starting point for a series of plans and implementations on the Asian continent. In the meantime, the facilities had to be expanded to accommodate the growing enrolment demand – a result of the exploding construction boom of the past few years in which an increasing number of German companies were involved. Hörmann has been active in China for eleven years and also participated in the expansion of the German school.

PORTAL: How did this at the time unusual contract come about?
MEINHARD VON GERKAN: In 1998, the Bundesbaudirektion (Federal Building Authority) initiated a competition among German and a number of European architecture firms and invited all participants to an opening event for the competition in Beijing to introduce them to the building plot and the local situation. Our design won first place and we were subsequently commissioned with the implementation.
PORTAL: Is the room concept of a German school abroad, and in this case specifically in China, similar to that of schools in Germany?
MEINHARD VON GERKAN: The room concept and thus also the layout of the German school in Beijing, are largely in line with the requirements for a Gymnasium and general-education schools in Germany.
PORTAL: Can you tell us a bit about the significance of education in China?
MEINHARD VON GERKAN: Education is very important in China as professional success and careers rely heavily on an individual's performance in school and university. Actually, this reflects an ancient Chinese tradition: during the emperor dynasties era, leadership positions were awarded solely based on education and the passing of strict examinations, not on heritage or social status.
PORTAL: Can school buildings in China have distinguished architectural styles?
MEINHARD VON GERKAN: The vast majority of schools built in China do not have distinguished architectural styles. However, a school established abroad has a representative function for Germany, especially since it is also used as a venue for social activities. For Germans living in Beijing especially, this building is a popular meeting point.
PORTAL: The German school will turn ten next year and already needed an extension. What are the reasons for this?
MEINHARD VON GERKAN: The extension of the school became necessary because the enrolment demand increased significantly with the growing number of Germans working in China and the premises were simply too small.
PORTAL: To what degree is German construction quality valued in China, are people willing to pay more for it?
MEINHARD VON GERKAN: One of the reasons for our particular success in China is certainly the fact that we emphasize quality in planning and supervising of the construction activities and do not simply focus on aesthetic qualities. This is true for all of our construction projects in China.

MEINHARD VON GERKAN
Born in 1935 in Riga, Latvia

1964	Degree in architecture from the Technische Universität Braunschweig (Technical University of Braunschweig)
Since 1965	Free-lance architect together with Volkwin Marg
1972	Establishment of the firm of Gerkan Marg und Partner in Hamburg, later also in Berlin, with international projects, especially in China
1972	Professor at Technische Universität Braunschweig, various visiting and honorary professorships, numerous awards and recognitions
2007	Establishment of the gmp fund for the support of architectural education
2009	Awarded the Officer's Cross of the Order of Merit of the Federal Republic of Germany

Photo: © wilfried-dechau.de

PORTAL: Which key architectural prerequisites should schools in Germany comply with in your opinion?
MEINHARD VON GERKAN: The most important prerequisite for the construction of good schools, in addition to their functionality for instructional operations, is the atmosphere that is expressed by the rooms within a school. The perceptions of students and teachers within a building is decisive for a good teaching atmosphere. Architecture can contribute significantly to this. It can create a cadet school-like atmosphere or a home for teachers and students where they all like to spend their time.

Photos: Jang Chaoying

The German school in Beijing is located in the diplomatic quarter of the Chinese capital (top).
Divided from its heterogeneous surroundings by fixed boundaries, the facility offers an interplay of open spaces inside (centre).
Entrance foyer of the school (bottom right)
Fire protection door in the extension building (bottom left)

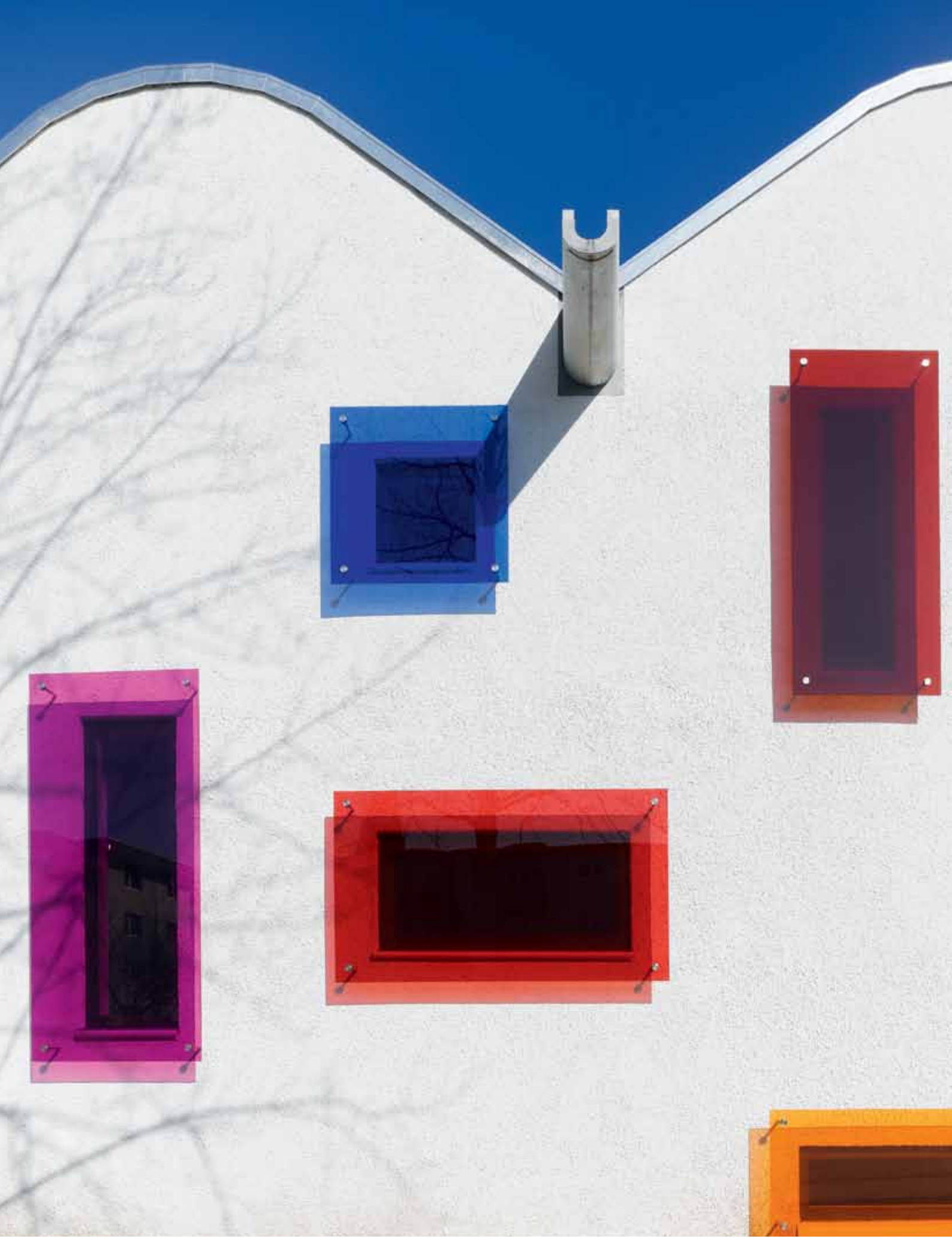
Waldorf School in Freiburg

The Stuttgart architecture firm Lederer + Ragnarsdóttir + Oei skilfully applied the Waldorf schools' peculiarity of avoiding right angles in their architecture. In Freiburg, the firm enhanced an existing school facility from the 1980s with a white solitary building containing classrooms and a multi-purpose hall.

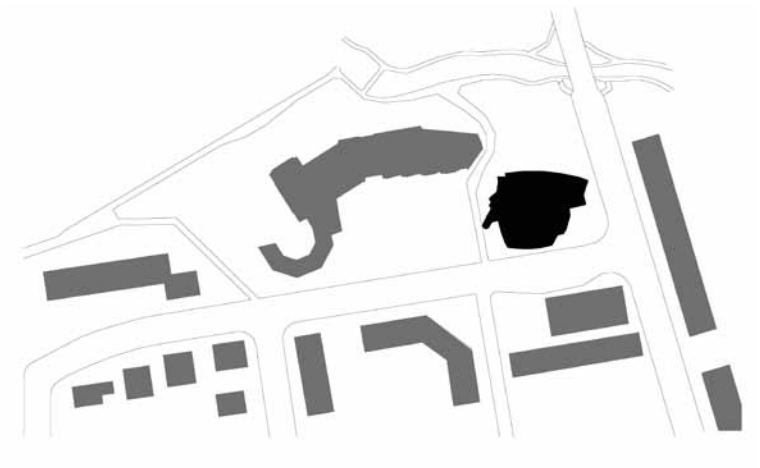
The publication of the PISA studies between the years 2001 and 2006, eroded the trust of many parents in the public school system. Especially among middle class parents there is growing demand for private educational institutions. Waldorf schools are among the officially recognised private schools whose curricula are adjusted to those of public schools. They were already established in the early 20th century by Austrian native Rudolf Steiner. However, their underlying philosophy remains controversial to this day. Nevertheless, many parents still appreciate the holistic approach with an anthroposophical philosophy. At any rate, the "Waldorfians" cannot complain about a lack of students.

In the St. Georgen district of Freiburg, a new building was added to the Waldorf school buildings from the 1980s and 1990s. It adds a three-floor tract with eleven classrooms and a large multi-purpose hall. According to Steiner, the philosophy of seeking harmony for individuals and the world should also be expressed in the school buildings. While there is no specifically required architectural style, right angles should be avoided and flowing shapes used instead. The Stuttgart-based architects LRO – Lederer + Ragnarsdóttir + Oei were commissioned by the Breisgau Waldorf school association to design the polygonal-shaped white plastered building whose northern facade is structured by differently styled rows of windows on every floor. This provides the classroom on this side with glare-free northern light. In contrast, the walls of the two-storey hall, facing south, include erratically positioned small window openings. Coloured glass panes placed in front of them on the outer facade create an introverted atmosphere inside. Their colourful reflections travel with the sun across the floor and along the walls.

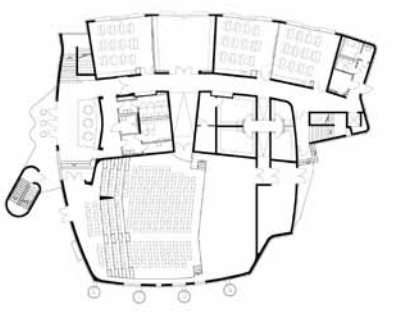
The beams of the roof construction, which has several inclinations, swing up and down, providing the hall with a plastically moving view from below. They are matched on the outside by the arched eaves mouldings of the roof edge. The curved roof surfaces distinguish the building even further while facilitating the draining of rainwater via water spouts. Between the hall and the classroom section there is room for two eurhythmy rooms that receive most of their daylight from dome lights. Eurhythmy, a performance style consisting of dance and movements, is a compulsory subject in the curriculum of Waldorf schools, similar to Mathematics and German. A small glass-roofed inner courtyard links both rooms and provides each with an exit outdoors. Plastered walls, exposed concrete stairs and parquet floors made of oiled oak are the predominant materials used in the interior decoration of the entire new building. In contrast to the rather cowering older buildings, the bright white building is located close to the traffic intersection, moving the entire school premises closer to the public eye. This clever positioning created a generous and at the same time sheltered outdoor area facing the classrooms of the new building.

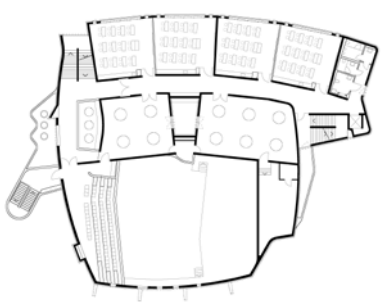


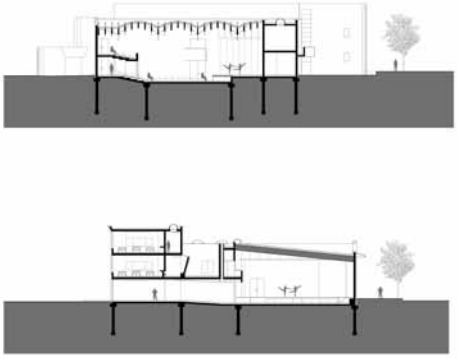
The new building opens invitingly towards the street (above).
Site plan (below).



The large multi-purpose hall has a direct connection to the outdoors (above left).
Through the large windows plenty of daylight enters the north-facing classrooms (above right).
Layout of the ground floor (bottom left)
and layout of the first floor (bottom centre), as well as longitudinal and cross-section (bottom right).







The curved roof shape of the extension is visible on the ceiling of the hall. The coloured panes placed on the outside create an introverted atmosphere inside.

OWNER
Waldorfschulverein Breisgau e.V.

DESIGN
LRO – Lederer + Ragnarsdóttir + Oei, Stuttgart

SUPPORT STRUCTURE PLANNING
Büro für Baurealisierung

LOCATION
Freiburg im Breisgau

PHOTOS
Zooey Braun, Stuttgart

SCHÖRGHUBER PRODUCTS
T30 timber fire doors,
T90 timber fire doors

The entrance hall also serves as the foyer for the hall, which a Schörghuber special door provides with fire protection. View of the two-floor multi-purpose hall with the stage and orchestra pit (below).

Extension of a Gymnasium in Ludwigsburg

Within the past few years, a backlog of public buildings requiring renovations has accumulated, especially buildings from the 1960s and 1970s. School buildings from that era in particular still have quite some savings potential. Nevertheless, there are instances where a new building proves to be more cost-efficient, such as the specialised classroom section of the Friedrich-Schiller Gymnasium and the Mörike Gymnasium in Ludwigsburg.

Commissioned by the city of Ludwigsburg to renovate the school, the firm agn already established in an initial evaluation that the obsolescent structure of the existing classroom section, which was previously used by both schools, could not be renovated cost-effectively. A tricky escape route situation, unsuitable room layouts and too little space were just a few of the obstacles confronting planners in the existing structure. To avoid expensive compromise solutions and to develop a solution customised to today's requirements, a new building was added to the school and simultaneously the listed Feuersee sports hall was turned into a cafeteria.
The three-storey new building is situated south of the Stadtbad (public bath) on the premises of the former Feuersee. With dark-grey plastering and an extensively greened flat roof, the angular reinforced concrete construction is attached to the single-storey Feuerseehalle built in 1910. Despite the contrast with the steep hipped roof and the light historic plastered facade, the old and the new building constitute a balanced U-shaped ensemble with a sheltered school yard in the middle. The area in the gap between the two buildings serves as the main entrance and common foyer. With floor-to-ceiling glazing, the access corridors stretch along the school yard and culminate in a stairway each. An elevator at the intersection of both extended structures allows barrier-free access. A major advantage of the new building was the possibility to optimize the ratio of circulation and usable areas. Compared to the existing building, the new building has bigger classrooms, while the partition wall to the corridors contains built-in cabinets, cloak rooms and wash basins. The smart positioning of doors in the separating cabinet zone, allows for a better utilization of the corridors. However, to avoid them turning into pure circulation areas, the radiators and window sills facing the yard are designed as seats. The high design standards applied to the furnishings also applies to other aspects such as economy and sustainability. For example, the materials for surfaces were chosen for their durability and ease of cleaning to lower maintenance and operational costs – in the corridors the exposed concrete and ashlars are glazed against graffiti, while the classroom floors are covered in hard-wearing linoleum. The rigidity of the rooms is balanced by a powerful colour concept. Strong hues in shades ranging from blue to turquoise create individual accents in the post and mullion glazing of the corridors, as well as in the door recesses, the colour scope of the linoleum floors in the classroom, as well as the chairs and wall covers of the cafeteria. The construction of the cafeteria fulfilled the desire of the city to offer qualified full-time care. A total of 4,000 students from seven schools of the "Inner city school campus" have lunch here every day. In addition, they are offered quiet study rooms for whole-day use. The cafeteria with its mobile stage is frequently used by local residents of Ludwigsburg as a venue for cultural events. Dark strip flooring with white walls and chairs in the accent colours blue to turquoise offer the appropriate design for the setting.

The new specialised classroom section of the Schiller and the Mörike Gymnasium are attached to the listed Feuersee cafeteria (top).
In the new building, generously applied glazing of the corridors provides views of the school yard (bottom left).
A steel fire door protects the chair storage area (bottom right).

OWNER
Stadt Ludwigsburg
Dezernat 3, Technik + Bauen
Hochbau und Gebäudewirtschaft
(City of Ludwigsburg Department
3, Technology + Construction
Structural engineering and Facility
management)

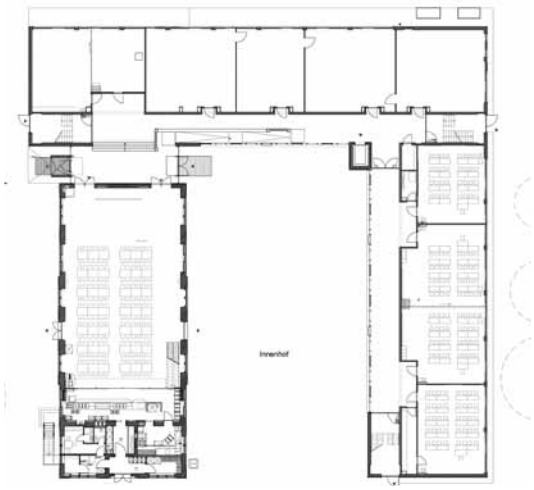
DESIGN
agn Ludwigsburg GmbH
architekten | ingenieure |
generalplaner

LOCATION
Ludwigsburg

PHOTOS
Dietmar Strauß,
Bietigheim-Bissingen
baubild / Stephan Falk / Hörmann KG

HÖRMANN PRODUCTS
Single and double-leaf T30 sheet
steel fire doors H3, H3D

Site plan (top left)
Layout of the ground floor (top right)
View of the central school cafeteria (bottom)



Science College in Jülich

“Only those firmly connected to the ground can reach for the stars” — a saying that is very true for the Science College planned by Hahn Helten Architekten in Jülich-Barmen. It provides young people with a solid education in various sciences, such as biology, physics, chemistry and last, but not least, astronomy.

Since 1918, the friars of the order of the Oblates of St. Francis de Sales, have been operating a school in Jülich-Barmen in the German state of North Rhine-Westphalia, in addition to a monastery. This is not surprising since the Sales-Oblates consider schools and education to be an important obligation in addition to the duty to spread information about the life, teachings, work and spirituality of their patron saint. Over the years they created the educational centre “Haus Overbach” which includes, other than the school and the monastery, a state-approved Gymnasium, a youth education institution with a focus on music and a boarding school. But that is not all: in the year 2006 a design competition was held for a youth and educational centre for scientific communication and innovation, which was won by the Aachen-based firm Hahn Helten.

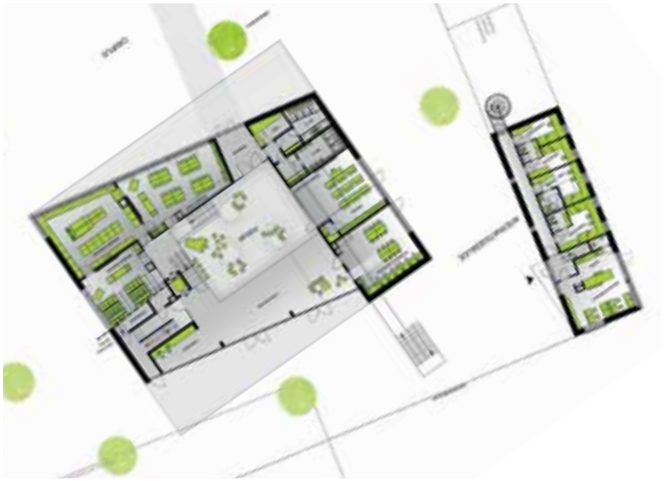
Despite the initially unclear financing, since summer 2009 young, gifted people from around Europe together with young people from Africa and eastern Asia receive training and support in the natural sciences, mathematics, computer sciences and technology at the Science College. The co-operation of the school, university, business and science institutions also allows the incorporation of the current scientific stand to the educational institution.

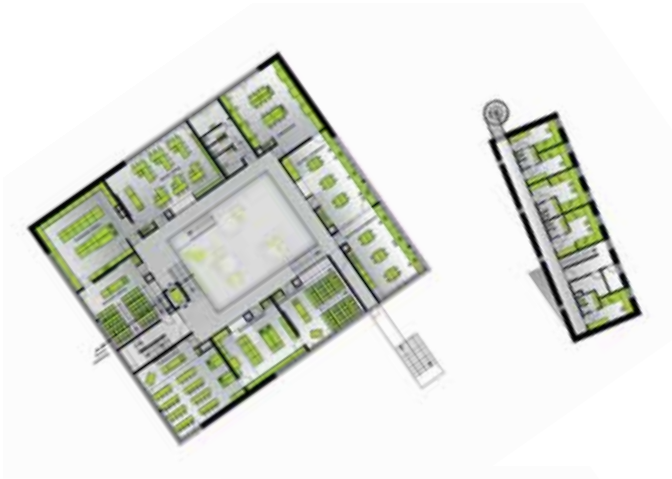
The college stands alone in the courtyard of the today U-shaped former farm building section on the Oblate premises, with an extensive view of a landscape conservation area bordering it to the south. With its simple exterior design, the Science College blends in with the historical buildings. Together with the buildings of the former farm and the new guest house, it forms a generously-proportioned campus. A roofed entrance area takes visitors through a vestibule straight to the heart of the concentric building structure. This is the location of the forum, a meeting and communication area, which is also used for exhibitions, concerts and lectures with up to 150 seats. A clever illumination solution was implemented on the roof, where heliostats act as “light wells” that conduct the daylight inside the building. The classrooms are wound helix-like around the forum up to the highest point. Starting from the Biology and Chemistry rooms, via the learning station, the student laboratory and the PC work stations up to the rooms for Physics and Astronomy, they culminate in a roof terrace where the budding scientists can explore the astronomy of the sky. The main routes through the building also follow the spiral movement around the forum. Together with the open class rooms, this results in a variety of visual connections. The Science College is planned as an energy-efficient “3 litre school” and will include an elevator for handicap accessibility. Its energy concept not only sets new standards in energy-efficient construction, but will also be subjected to scientific monitoring, which was already preceded by various tests. Thus the college itself is turned into the subject of scientific research.

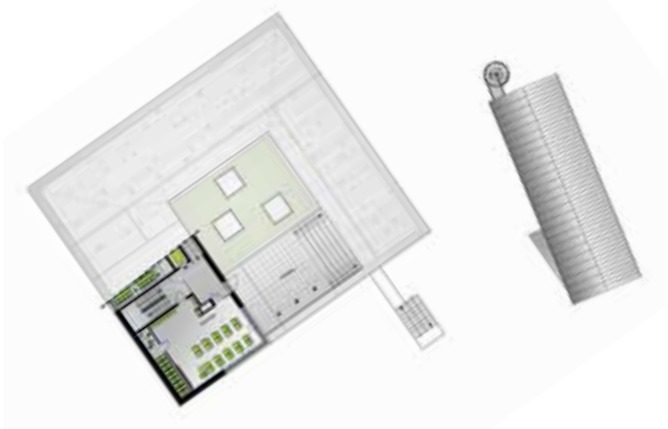
In the immediate vicinity of the educational centre, a guest house for 12 students was created, which is a continuation of the eastern building wing, adopting the historical dimensions of the existing facility. Two storeys contain three double and six single rooms, as well as a living area with a kitchen facing south.

Whether as a recreation area on school days or an attractive venue for exhibitions and concerts: the central forum offers many possibilities.

Layout, ground floor, first and second floor (top to bottom)







The surrounding rows of windows of the Science College define the spiral-shaped basic structure of the building on the outside as well. The central forum is also suited for lectures (bottom left). Schörghuber special door for acoustic, smoke, and fire protection (bottom right).

OWNER
Ordensgemeinschaft der Oblaten des hl. Franz von Sales (OSFS) e.V. Provinzialat Haus Overbach, Jülich

DESIGN
Hahn Helten + Assoziierte Generalplaner GmbH, Aachen

LOCATION
Jülich-Barmen

PHOTOS
Jörg Hempel, Aachen

HÖRMANN PRODUCTS
Single-leaf and double-leaf T30 steel fire protection doors HE 310, HE 320; single-leaf T30 steel sheet fire protection hatches H3

SCHÖRGHUBER PRODUCTS
T30 timber acoustic, smoke and fire protection doors

The recreation room of the guest house has a bright and friendly design (top).
The shape and size of the guest house blend in with the existing buildings of the former four-sided farm (bottom).

School Centre in Neckargemünd

In early summer 2003, a fire damaged the school centre in Neckargemünd so severely that the community decided to tear down the no longer functionable building complex. In 2005, a competition for the new construction was launched. The situation was convenient for the development of a consistently sustainable school concept, which three years later resulted in the implementation of Germany's largest school complying with the passive house standard.

With just 15,000 residents, the small town of Neckargemünd, located west of Heidelberg, has a wide range of schools in relation to it size. The new school centre located on the Alter Postweg, again combines a Realschule with a Gymnasium in a single constructional unit. The city centre is shaped by the topography of the Neckar valley, where slopes extend all the way down to the river. For the centrally located school plot, this meant that the rear part of the two parallel rectangular structures had to be cut out of the slope, while the ground floor of the intermediary building linking them was already located on the lower level of the "An der Münzenbach" street. This provided ideal development conditions. The main entrances, which are separate for each school, generously welcome visitors. In between lies the assembly hall, which has been designed in a way that allows its use for events not related to the school. Along the curved flow of the facade, there is enough space inside and outside to provide the entire school centre with a prestigious entrance. The actual school activities begin on the first floor, where the classrooms of the Gymnasium and the Realschule meet. This is also the area from which students can access the school yard. As the U-shaped facilities are matched to the natural course of the terrain, the campus is located one storey higher than the entrance level. The spacious school yard contains terraces and a cut out atrium, which create attractive outdoor areas for recesses, sports and outdoor lessons. On the southern end, the sports hall is located on the same level.

Even beyond energy considerations, the common use of the assembly hall, school yard and sports hall has other economic advantages.
From the outside, the steel skeleton building has a classic punctuated facade, covered in coloured ventilated panels – with the exception of the entrances that are post and mullion constructions.
The forward-looking energy standard posed extreme challenges to the architecture as well as the construction work. The high thermal standard of the building envelope had to be achieved by all means. There had to be practically no thermal bridges to ensure the air tightness of the building. Added to this was the installation of a controlled ventilation system. Only once these conditions are met without fault, heat loss from transmission and ventilation heating can be minimised to such a degree as to render separate heating superfluous. At the same time, extreme weather is provided for. Two wood pellets boilers in combination with geothermal energy therefore suffice for the entire school complex. Due to the highly efficient waste heat recovery, heat is also gained from passive energy sources from inside the building, generated by people and devices as well as solar radiation. Beyond the purely regenerative heat supply, the ventilation system considerably contributes to improving the ambient air by reducing CO2. Approximately 1000 square meters of photovoltaic cells on the greened roofs further reduce CO2 emissions. Energy conservation and increased comfort go hand in hand in this school building.

The two rectangular buildings housing the Gymnasium and the Realschule constitute a U-shaped facility together with a jointly used diagonal structure (top).
Due to the extremely sloped terrain near the Neckar the buildings had to be partially cut out of the slope (bottom).

OWNER
City of Neckargemünd

DESIGN
Donnig + Unterstab, Rastatt

SUPPORT STRUCTURE PLANNING
Lydia Thisemann, CBP

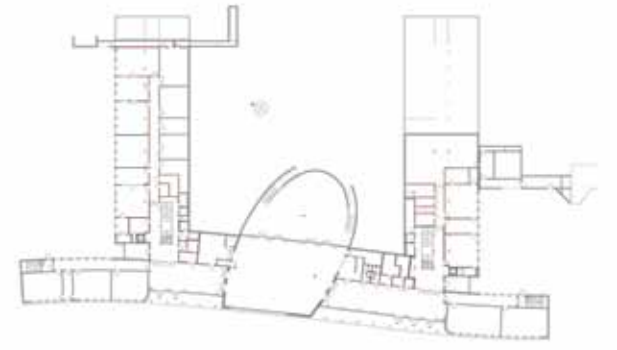
LOCATION
Alter Postweg 10, Neckargemünd

COMPLETION
May 2008

PHOTOS
Klaus Meyer, Heidelberg;
Irene Heermann, Neckargemünd
Boris Golz, Arnsberg;
baubild / Stephan Falk / Hörmann KG

HÖRMANN PRODUCTS
Single and double-leaf T30 steel fire doors, tubular frame S series
HE 310 S, HE 320 S

Ground floor layout with the centrally located assembly hall and the connected forum one storey below, as well as the layout of the first and second floor (left, top to bottom)
View of a classroom (top right)
A tubular frame element door made of steel in the foyer area (bottom right)



CORPORATE NEWS

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1. HÖRMANN CELEBRATES ITS 75TH COMPANY ANNIVERSARY

In 2010, the Hörmann Group will have been in business for 75 years. The family-owned company is celebrating its anniversary with a large marketing campaign. Hörmann has launched nine new special offers for private building owners – in highly demand products at low prices. The campaign intends to support the company's distribution partners to address their local markets. Hörmann will provide specialised dealers with a comprehensive package of customisable advertising media. Additionally, the company promotes its campaign offers with strong advertising efforts such as football

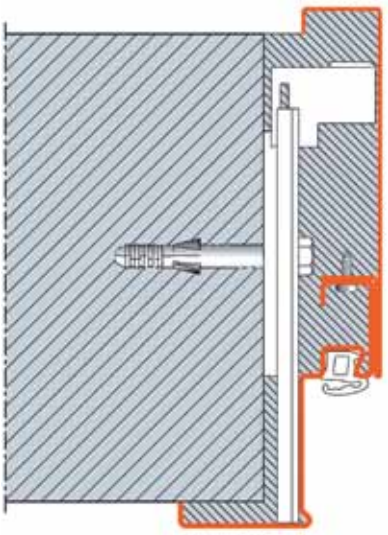
perimeter ads, a large-format poster campaign, advertisements and campaign pages on the website.

2. SECOND PLANT IN CHINA STARTS PRODUCTION

In the past year, positive business developments in the Far East necessitated the establishment of a second Hörmann plant in China. The 16,000 sqm plant in the Chinese development zone Baodi, a district of Tianjin in Northern China, manufactures industrial sectional doors, high-speed doors, and rolling shutters, as well as dock levellers and dock shelters, exclusively for the Chinese market. The facility, planned by the Bielefeld-based architectural firm of Wannenmacher + Möller, consists of a large production hall with an incoming and outgoing goods section, a social and technical section, as well as an office building with a neighbouring showroom. The building was erected on a plot of 90,000 square metres in such a way that allows the expansion of the hall by 60,000 square metres in six additional building phases. The architecture of the complex has been purposely kept stark and is derived from the functional requirements of the individual areas. In the office building, the desire for flexibly dividable rooms with natural lighting determined the architectural design. The colour blue applied in the hall and the colour orange of the offices and the social and technical section represent the colours of the German family-owned company and is used for almost all 22 existing plants.

3. INVISIBLE FIXING

Hörmann offers a new double-shell profile frame for its multi-purpose doors. Previously, the closed steel doors were available with corner, block, and counter or single-leaf profile frames. The new frame offers a solution that is suitable for existing buildings or retrofitting with a high optical appeal. The new double-shell profile frame allows fitting of the frame without visible fixing points. The two profiles of the frame are screwed into the rebate, where the heads of the screws are later covered by the frame sealing. This way, the new frame appears visually uninterrupted. It is suitable for fire, multi-purpose and security doors up to WK2 and can be fitted into brickwork, exposed concrete or F90-A steel framework.



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4. CONQUERING THE CRISIS WITH INVESTMENTS

To continue to improve product quality and delivery, Hörmann has also invested in its German plants during the crisis year 2009. The investments, exceeding ten million euros, benefit especially the production of aluminium entrance doors and sectional garage doors. At the Ichtershausen location, Hörmann has erected a new hall where wicket doors for sectional garage doors are primarily produced. Due to the special construction of the low threshold rail, which minimises the risk of stumbling, this type of production is particularly personnel and space consuming. With the investment of around two million euros in the East German plant, the seventh construction segment has been completed and the total area has grown to more than 69,000 square metres. The Eckelhausen plant also received investments in excess of six million euros for offices, social rooms and a new coating system. All coloured aluminium profile and infill panels are now coated on location at the plant.

5. AUTOMATIC FIRE PROTECTION

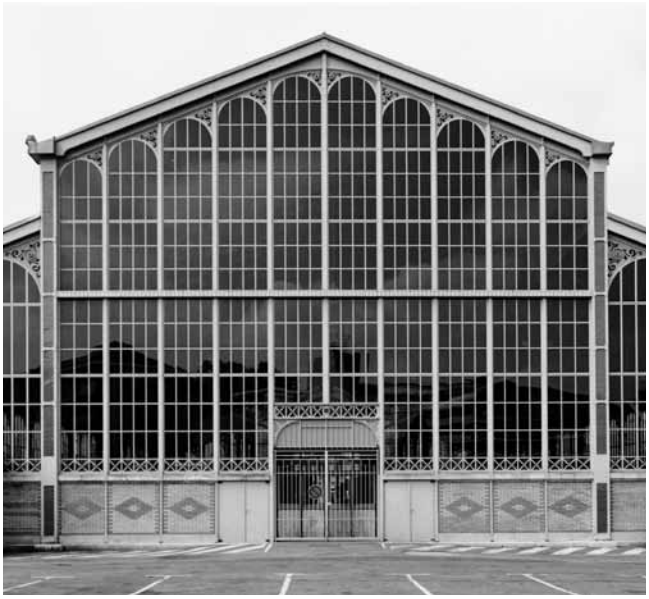
Hörmann KG's T30 automatic sliding door remains the world's only automatic fire and smoke protection sliding door. It is particularly suited as a fire cut door in clinics or nursing homes, as door opening is triggered via a motion sensor. This ensures unimpeded and speedy transport of beds. As opposed to swinging doors, the area in front of the door remains free and can be used otherwise. The glazed leaves do not run in a floor track. This way, the passage remains threshold-free. Recently, the T30 automatic sliding door received the building authority approval of the DiBt (German Institute for Structural Engineering). This means that an individual approval process is no longer required. During the planning phase already, the declaration of conformity verifies that the door complies with T30 requirements. Especially narrow tubular frame parts and a seven-centimetre-high operator are used in the construction of the sliding door. This results in a slim and elegant appearance. Available in single and double-leaf versions, this automatic door can be fitted in front of the wall, in dry construction walls and in glazed fire protection walls from Hörmann.

6. NEW FRAME WITH MINERAL WOOL BACK-FILLING

A new corner frame improves the fitting of Hörmann steel fire protection doors. As the DryFix frame is back-filled with mineral wool strips at the factory already, costly mortar work at the construction site is eliminated. Mortar-free fitting is cleaner and less time-consuming as the waiting time for the mortar to harden is not needed. Subsequent work such as painting and fine-fitting can be carried out immediately. In addition, the frame ensures immediate fire protection. The new through-plug fitting method further reduces the fitting time. Immediately following the positioning of the frame in the structural opening, the holes can be drilled and the frame fixed to the brickwork, concrete or timber framework through the openings in the frame rebate. The heads of the screws can be covered with a flush-fitting cover, making them practically invisible when painted over. The DryFix frame is suitable for fitting in brickwork and concrete, as well as as F90-B timber framework.

ARCHITECTURE AND ART
MANFRED HAMM: PHOTOGRAPHY

Since the 1970s, Manfred Hamm has been tracing architecture with his large-scale plate camera. While working as a press photographer in Berlin, he captured the stony witnesses of a city in black-white pictures and combined them in large-scale illustrated books. Later he specialised on select themes such as coffee shops, stock markets, theatre halls and libraries. Hamm applies an elaborate photography method. He works only with natural lighting for photos that are as realistic as possible. His work has already been published in more than 20 photo books. The hand impressions with their compelling aura are present in many international collections and museums. His most recent series focused on the buildings of the Industrial Age. In addition to large European train stations and abandoned coal-mines, he most recently paid special attention to the familiar sight of market halls, often located in city centres. Increasingly, these intricate constructions have to make way to modern urban development plans. The most famous example was certainly the tearing down of the Paris halls in the 1960s. Manfred Hamm's unique depiction of European market halls from the 18th to the 20th century constitutes an (in)complete collection of a building type that has to a large extent been part of everyday life of the Industrial Era but is now on the verge of extinction in its original function. For his next project, Manfred Hamm has chosen stock markets as another type of key trading places.



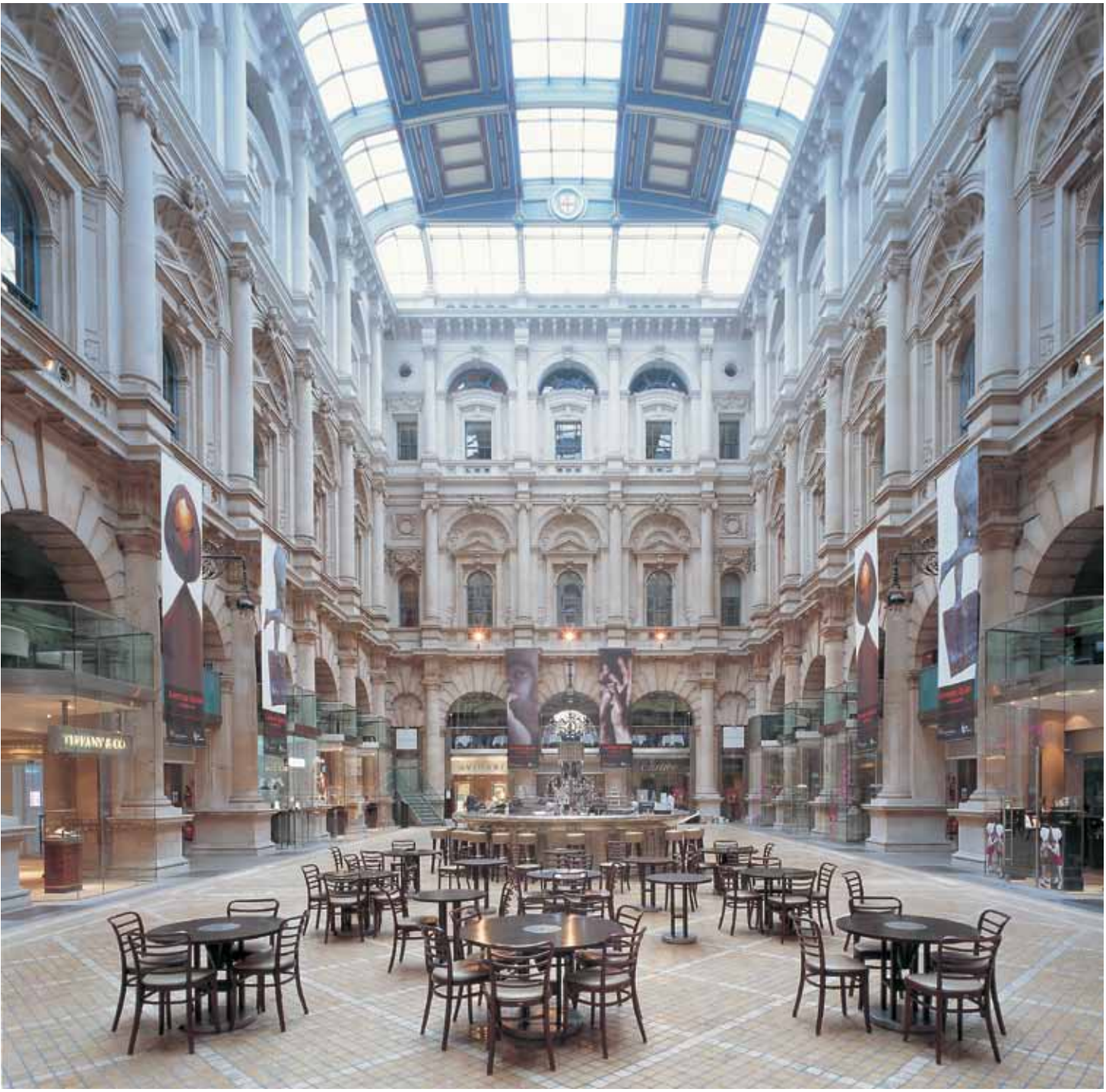
Halles Fréry, Belfort / F 2003, Edition III, Format 24 x 30 cm Ilford Gallery Paper (top left)

MANFRED HAMM
Born in 1944 in Zwickau
Photographer

1961 – 63	Training as a photographer in Ulm and Munich
1965 – 67	World tour with extended stays in Australia and the South Seas
1967 – 70	Co-operation with the Gallery S, Ben Wargin, Berlin
Since 1970	Press photographer in Berlin
Since 1976	Photo exhibitions and publications, incl. the illustrated book "Markthallen (Market Halls)", 2008, published by Nicolai-Verlag, Berlin
Since 1984	Appointed member of the Deutsche Gesellschaft für Photographie e.V. (DGPh – German Society for Photography)
	Various individual exhibitions in Germany, France (Lyon) and Italy (Milan)

Galerie Hubert Schwarz
Markt 15 – 18
17489 Greifswald Germany
www.galerie-schwarz.de

Photo: Esko Männikkö



PREVIEW / IMPRINT

Topic of the next issue of PORTAL:

Built for the Future

Hörmann was established as a small, steel-manufacturing company 75 years ago. Today the Group employs more than 6,000 professionals around the globe. Even at the end of the crisis year, the company is well positioned. It has invested in plants inside and outside Germany. The 23rd plant of the group took up production in China recently. On the occasion of the company anniversary, PORTAL wants to take stock and look back but also venture to look ahead to the future. Based on trend-setting projects, PORTAL will show visions for production and office buildings as well as buildings for sales and communication.

The glass screen of the Unilever building in Hamburg balances climate differences. Energy efficiency is integral to buildings of the future.

Photo: Adam Mørk, Kopenhagen

HÖRMANN IN DIALOGUE

Building with Hörmann –
Your project in PORTAL

Volksschule = Primary School (grades 1-9)
Grundschule = Primary School (grades 1-4)
Gymnasium= Grammar School (grades 5-12)
Mittelschule= Intermediary School (grades 5-10)
Realschule = Secondary School (grades 5-10)
Gesamtschule = Comprehensive School

All locations in this issue are in Germany unless stated otherwise.

At four-monthly intervals, PORTAL reports about current architecture and the framework conditions under which it evolves. And if you so wish, PORTAL could soon serve as the showcase for one of your own projects! Send us information on the buildings you have been involved with using Hörmann products – as a short documentation with plans and photos, maximum A3 scale, to be posted or e-mailed to:

Hörmann KG Verkaufsgesellschaft, attn. Alexander Rosenhäger, Upheider Weg 94–98, D–33803 Steinhagen
a.rosenhaeger.vkg@hoermann.de

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D–33792 Steinhagen
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D–33803 Steinhagen
Tel.: (05204) 915-521
Fax: (05204) 915-341
Internet: http://www.hoermann.com

EDITORS
Alexander Rosenhäger, M.A.
Dr.-Ing. Dietmar Danner
Dipl.-Ing. Cornelia Krause
Dipl.-Ing. Marina Schiemenz

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Photo: baubild / Stephan Falk / Hörmann AG

Porsche plant, Zuffenhausen

Optimally suited for prestigious construction projects: Hörmann industrial doors.

For an exclusive look:
flush-fitting glazing

Hörmann offers the largest range of industrial door systems throughout Europe. Our selection contains all the important designs in a variety of versions. For example, ALR Vitraplan with flush-fitting glazing. This gives the door a clear and elegant note. The optimal choice for exclusive and representative doors.

HÖRMANN

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