HÖRMANN

PORTAL 13

PORTAL 13

INFORMATION FOR ARCHITECTS
FROM HÖRMANN

Fire

Projects from thelenarchitekten; architekten prof. klaus sill; Müller Truniger Architekten and Studio Aldo Rossi

CONTENTS

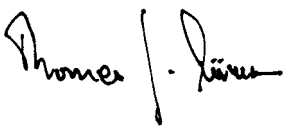
Cover illustration:
Arne Quinze: "Uchronia"
Photo: Arne Quinze

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

Dear Readers,

Fire is one of the greatest enemies of all man-made structures. This has always been the case and was made clear once again this past February: the "Villa NM", completed early 2007 by UN Studio in New York state caught on fire and was reduced to the meagre skeleton of its steel girders. Though perhaps a geographically far-fetched example, it still goes to show: even the buildings of prominent designers do not last forever and, particularly in the case of experimental structures with non-traditional construction methods, fire can often wreak enormous damage. In the current edition of PORTAL, we will embark on a journey through the common history of architecture and fire. On the following pages, architect, fireman and historian Dirk Leupold, Ph.D., will explain how fire has shaped our cities. He relates how large-scale fires often triggered innovations in construction, and how preventive measures against fire have significantly influenced how we build today. It is reassuring to learn about the advances in fire fighting since the Middle Ages: today it is no longer necessary to cover up fireplaces so that stray cats or dogs do not wander in and start a large-scale fire. Nonetheless, fires are still with us today. The four project reports in the current issue attest to that fact. We will introduce three fire stations with different layouts and varying tasks: from the small, bright red volunteer fire department station in Nettesheim-Butzheim to the spacious, elegant fire and rescue station in Löhne. Versatility is the key at the intervention centre in the Swiss town of Frutigen: not only the local fire department but also the fire brigade for the new Lötschberg Tunnel has been stationed there for the last few months.
Our last project contribution is devoted to a structure steeped in tradition, also known as a "hotspot" in a more tragic sense. Teatro La Fenice in Venice, the most important playhouse in "la Serenissima" and the location of numerous world premieres, has burned down three times in the course of its history – most recently in 1996. An electrician facing 7500 euros in damage claims was responsible for starting the fire. The costs for the planned reconstruction by Aldo Rossi, on the other hand, amounted to about 55 million euros.
With its true-to-original restoration and complete modernisation, La Fenice shines again.
Adding to this effect are Schörghuber doors, which seamlessly blend into the Rococo style of the theatre's interior. We hope you enjoy this edition of PORTAL.

Martin J. Hörmann



Thomas J. Hörmann

Christoph Hörmann

THE FIRE-PROOF CITY: HOW FIRE HAS CHANGED THE FACE OF OUR CITIES

Fire has played a double role in shaping our cities. Large-scale fires have always provided a foundation for wide-reaching innovations in construction. Efforts aimed at preventing fires from starting or quickly extinguishing them had effects on building forms and materials, eaves heights and setbacks.
Thanks to strict building regulations and well-equipped fire stations, the ideal of a "fire-proof city" has been realised to a large extent.

Fires are a phenomenon as old as the construction of communities and towns. Ever since the beginning of human settlements, humans have lived with the fear of fire escaping from the hearth and destroying their entire livelihood – the same fire that cooks food, bakes bread, drives out the harshest cold and provides the basis for pottery, ironwork and the whole of human civilisation. People often experienced the destructive aspect of fire as God's wrath, analogous to the fire in the Old Testament that falls from the sky as one of the "plagues of Egypt". In 1913, Gustav Effenberger recorded over 3000 urban fires in his publication "Die Welt in Flammen" ("The World in Flames").
Written accounts of devastating urban fires have come down to us from antiquity. Probably the most famous fire in ancient history is the burning of Rome in July of 64 AD, in which three of the Rome's 14 districts were completely destroyed and seven severely damaged. After this fire, which produced much speculation as to its cause, course and effect, the reconstruction of the city followed according to an urban planning design that provided for wide streets, limited building heights and free courtyards, as well as basements constructed of fire-resistant stone, all designed to protect the city from future conflagrations. Just as the expansion of Roman rule was responsible for the spread of stone cities throughout Europe, stringently designed according to the "Hippodamian plan", this project was abandoned with the collapse of the Roman Empire from the 4th century. In Central Europe, the typical mediaeval city consisted of half-timbered houses. Fire-safe constructions with stone walls and tiled roofs were only attainable for the wealthy; in the German language still referred to as the "stone-rich". For the large majority of the population, half-timbered homes of wood and wattle-and-daub with thatched roofs remained the only affordable option. In mediaeval towns, houses were clustered together, separated only by narrow lanes. Thus, fire had sufficient fuel to cause entire towns to burn to the ground. Until the 19th century, successful fire-fighting usually meant tearing down neighbouring houses quickly enough to remove potential fuel and allow the fire to die out.

Dogs, cats and other fire causes
Fires mostly started due to carelessness. Today we might regard it as a rather bizarre fact that in some areas fireplaces had to be covered to prevent burning cats and dogs from starting a town fire. As a deplorable act of warfare, the burning of towns also accounted for a large portion of conflagrations.
From the 13th century, mostly in the wake of town fires, the first fire regulations were created containing rules for fire-safe construction, chimney sweeping, the responsibility of citizens to assist in the event of a fire and the maintenance of fire-fighting equipment. At the same time, the destruc-

DANIEL LEUPOLD
born 1973 in Cologne

1992—1998 Study of History at Cologne University; Degree: Magister Artium
1998—2003 Study of Architecture at Aachen University of Applied Sciences, M. Eng. (UAS)
2003 Dissertation on the institution of fire fighting up to 1918, Ph.D.
2003/2004 Training in professional technical fire fighting service in Munster, Berlin and Düsseldorf
seit 2004 Employed since 2004 at the municipal fire brigade in Cologne, preventive fire control and resource planning; active in various working groups on the history of fire prevention

tion caused by fire also provided an opportunity for a town's more affluent inhabitants to sponsor a new church or an ample stock of equipment, and thus secure their place in heaven.

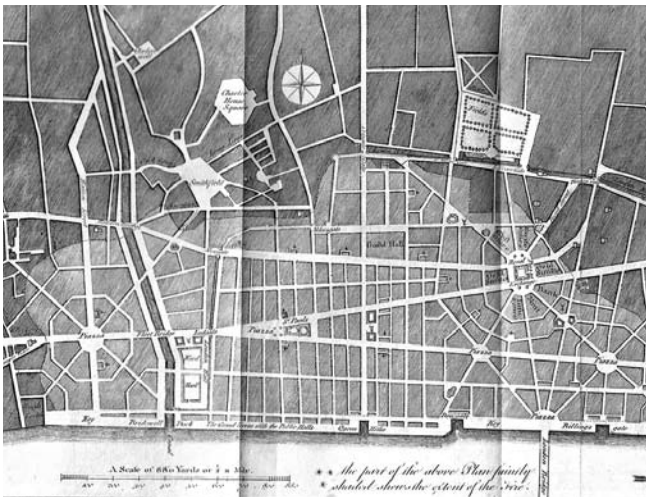
Apocalypse in London: The Great Fire of 1666

One of the most significant urban fires in the early modern era was the Great Fire of London in September, 1666. Over 13,000 homes and 87 churches fell victim to the blaze. Ignited by carelessness in a bakery, the flames destroyed approximately 80% of the city. The fire rapidly grew too large to be conquered by man and machine alone, so the only possibility was to detonate buildings using gunpowder in order to curb the flames. While a city in rubbles was the cause for terror and panic among inhabitants, it was also a dream come true for urban planners. The ensuing reconstruction provided the opportunity for various professionals to present their models of ideal urban planning. Christopher Wren proposed an urban version of the Gardens of Versailles with many diagonals. In the end, however, the large-scale plans were doomed to failure because of limited financial resources. Nevertheless, the proposed "Measures for the Reconstruction of City of London" ordered that new houses be built of tiles and stones; overhanging building floors were prohibited; streets were to be wide enough to serve as "fire barricades" and to provide sufficient access for rescue workers and fire brigades.

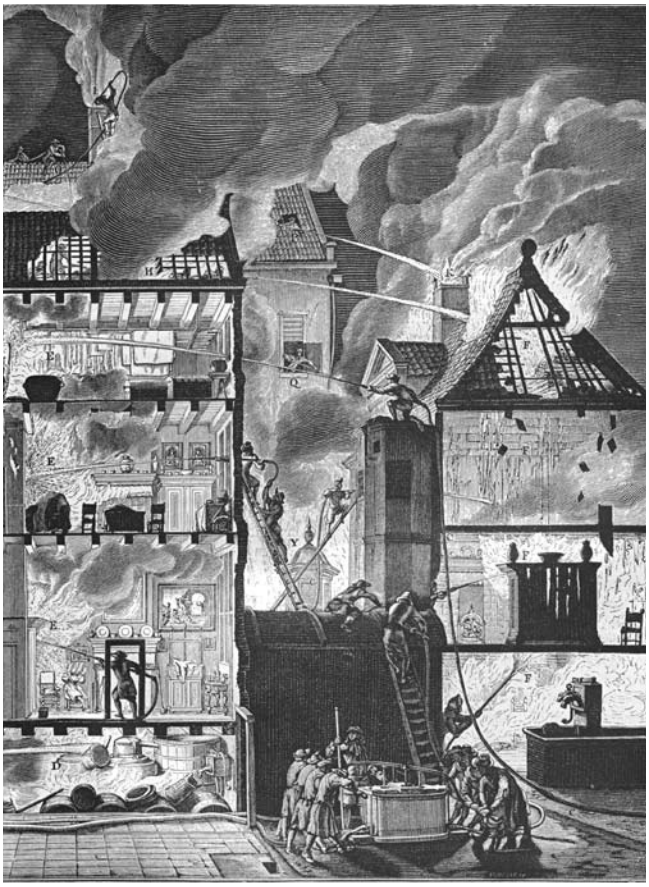
Although Christopher Wren was not able to implement his new plans for London, he was commissioned to participate in the reconstruction of burned-down churches. Moreover, he created the design for the Memorial Column of the Great Fire, which – erected in 1667 – serves as a memory of the city's past.

In Prussia, state treasuries were heavily taxed by a series of devastating fires at the end of the 17th century. Implementing fire-safe urban construction became the main component of the reconstruction and improvement strategies in towns levelled by fires. Fire safety corresponded with the concept of a well defined town structure, which in turn was embraced as an aesthetic ideal. Measures involved in "fire policing" efforts included replacing traditional half-timbered houses (gables facing the street) with solid construction and forward-facing eaves.

After the "Great Fire of London" in 1666, Christopher Wren created this (never realised) plan for rebuilding the city centre.



In 1842, Hamburg fell victim to a large-scale fire. The ensuing reconstruction also brought fundamental architectural changes.



Fire fighting in 1690 - depicted in a publication by Amsterdam fire chief Jan van der Heyde

Thatched, reed and wooden roofs were replaced by tiles; requirements were specified for fire partitions and side fire gables, stone fume outlets and chimneys; fire-resistant, functional spatial organisation and equipment in all buildings, but also revised city layouts. Fire-prone trades were relocated to the periphery. Well into the 19th century, these measures remained largely an ideal. However, within the variety of planned revisions, construction authorities made serious efforts to implement fundamental improvements. For the cities destroyed to a greater or lesser extent by fires, the local lords and the building authorities not only preferred maintaining fire-safe construction methods, but also completely new, clearly structured city layouts. Depending on the power and authority of the citizens, these plans could fail if the citizens objected. The cities' inhabitants usually did not favour leaving their ancestral land parcels, where they could rebuild their houses on top of their old stone foundations and cellars. In other places, completely new model cities were erected after fire-related catastrophes, such as in Neuruppin from 1788.
Fire fighting in the year 1690, shown in a publication of the fire marshal of Amsterdam, Jan van der Heyde.

Awards for fire-proof construction

As an additional important instrument for the implementation of fire-safe construction in the 17th and 18th centuries, various types of fire insurance were developed by local authorities. With the aid of insurance payments, taxed according to the value of a building, each city was supposed to generate a reserve fund. This reserve was to cover damages in the event of a fire. Already at that time, payments were scaled according to the construction method; higher tariffs were charged for particularly fire-prone buildings. State subsidies were available for new structures built with roofs made of tiles instead of straw and wooden shingles. For buildings restored using funds from fire insurance, special fire safety conditions were imposed on the payments of damages. This was meant to ensure that "the new building serves to embellish the locality and protects against future fires to the best possible extent with stone walls or other skilful and careful designs." The building codes of the 19th century generated many of the construction specifications for preventative fire protection which are still valid today. The building inspection regulations of the city of Berlin in 1853 merely stated that the inner courtyards needed to measure at least 5.34 x 5.34 m (the turn radius required by local fire fighting equipment) and the building height could not exceed the width of the street, protecting opposing houses in the event of the collapse of a street-front facade. In the Prussian uniform building code of 1919, we can already find requirements for two separate rescue routes, fire brigade access entrances and standards for the fire-

resistance of specific components.
We can also thank urban fires for the emergence of the fire station as a new construction task for cities in the 19th century. From the second half of the 19th century, the functional building, marked by exits to the street, a courtyard for staging drills and a lookout/hose tower became a mainstay in every city, similar to the fire engine houses in the villages. Today, large urban fires are a rare occurrence, thanks to fire-proof building materials. Different challenges have taken their place, such as the rescue of burn victims from large building complexes.

On the way to a fire-proof city

Steel, concrete and glass have become the materials of choice in our cities, not only because of their fire-resistant qualities, but also for reasons of design, static, costs and construction. Even though timber construction has received increasing attention since the 2002 German building code, the material still has a limited use in urban construction. Broad streets that could serve as protective aisles for fire are necessary in any event to handle modern traffic. With our building codes and special regulations, setbacks, solid roofing, fire walls, stipulated fire-resistance categories for components, defined rescue routes and extinguishing systems for certain buildings have become reality for every construction project. Although the number of building regulations is greater than ever, there are also numerous ways to fulfil the technical fire-proofing requirements other than those specified in the building codes.
For large modern buildings, fire-proofing is no longer visible from the outside. Thus, fire safety today is a reality, yet it doesn't make its presence felt in the shape of buildings or the layout of cities.
When a fire does occur, our fire brigades make sure that it is quickly extinguished. Professional fire brigades have become standard in all cities. We have developed and established a tightly coupled, coherent system containing elements of both preventive and defensive fire control.

Today, we no longer hear of entire cities being completely destroyed by fire. The "fire-proof city" has become a reality.

Fire-proof construction materials make large urban fires a rarity today. Other challenges, such as rescuing people entrapped by fire in large building complexes, have taken their place.

Fire Equipment House in Rommerskirchen

The new fire equipment house in Nettesheim-Butzheim, a district of Rommerskirchen, leaves no doubt as to its purpose: for any other building, this much red would have been a daring choice. thelenarchitekten from Düsseldorf created the new building's eye-catching design, which is tailored to the needs of a small town's fire brigade.

Green for the police, yellow for the post office and red for the fire brigade: in Germany, the idea that public functions needed to be conducted in an orderly manner, even when it came to their strict colour-coding, remained intact for a long time – until a German designer with an Italian-sounding name came out with blue uniforms for the Hamburger police. In Rommerskirchen in the Lower Rhine region, the colour-coded world of civil servants has preserved its order: in bright red – more precisely with plastering in RAL 3003 – the new building of the local volunteer fire brigade salutes the passing traffic on the national highway B 477. "The compact, nearly cubical layout was due to the necessity of an especially economical building", says architect Hans-Jörg Thelen. "To emphasise the building's monolithic character, we decided on monochrome plastered surfaces." Previously, the Nettesheim fire brigade had a small station in the residential area. The traditional construction with a gabled roof did not have good traffic access and could not be expanded easily.

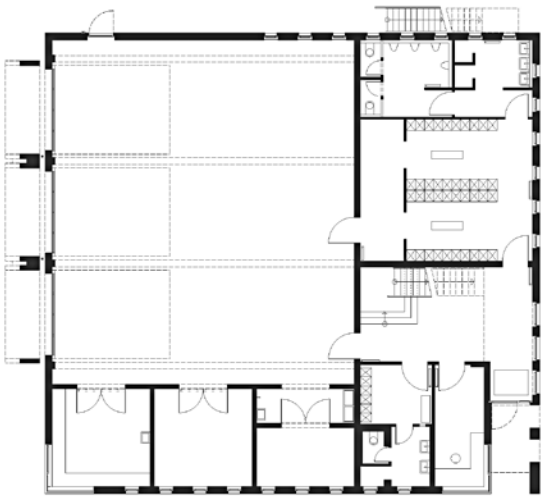
A few years ago, as a discussion concerning the extension of the brigade's fleet arose, it was clear that a new building in a different location would be necessary. At the time, thelenarchitekten had just finished an administrative building with an assembly hall in Rommerskirchen. The building's qualities caught the attention of the municipal administration. The two parties became acquainted and in the end the architects were directly commissioned with the project of the new building. "The municipality made a conscious decision against a system building provider and decided instead for individualized comprehensive planning by an architect for the same price," Hans-Jörg Thelen explained. The fire brigade station was constructed of prefabricated steel concrete components. It is divided into three parts: the vehicle hall, an adjoining lateral wing and the two-storey, retral crossbar with changing rooms, training rooms and common areas. Just a few elements add flavour to the building's clean cubature: three steel concrete canopies mark the entrance to the hall, which is accessed through sectional doors in a chequerboard design (alternating fields of glass and metal infill). A vertical slot extending along the full height of the building on the front side of the crossbar marks the entrance for pedestrians. The corner window directly to the side belongs to the brigade's office; it gives the director of operations an overview of the entrance area and car park. The room layout on the ground floor is oriented to the social structure of the brigade: alongside the large men's changing area is a smaller area for women. Next to the changing rooms in the flat wing are a workshop, storage area and decontamination room.

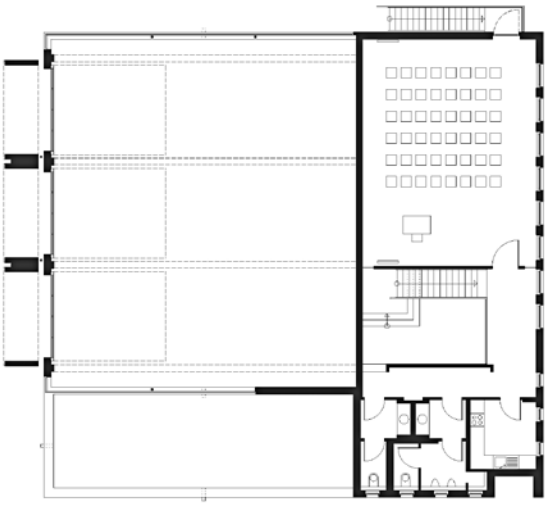
The second storey can be reached from the two-storey entrance hall, the hub of the building. Together with a small kitchen, it harbours the large seminar room, in which trainings are also held for junior fire fighters.

In the building's interior, red is only to be seen on the vehicles, on strategically important doors (leading to the vehicle hall and the changing rooms) and the lockers. The rest of the interior is dominated by white, grey and black. The floors consist of epoxy resin and anthracite-coloured tiles; the interior walls were constructed of unplastered concrete where possible. Only the partition wall to the hall was equipped with an insulating panel.


FEUERWEHR

No experiments were made in the facade design: the entire circumference of the building is plastered in fire-house red with rigorously aligned windows. Only the entrance area is marked by a cut-out section extending to the top of the building (above).
Layouts for the ground floor (below left) and upper storey (below right).





OWNER
Entwicklungsgesellschaft
Rommerskirchen mbH c/o Gemeinde
Rommerskirchen, Germany

DESIGN
thelenarchitekten, Düsseldorf, D

LOCATION
On highway B 477, Rommerskirchen, Germany

PHOTOS
Andreas Wiese, thelenarchitekten

HÖRMANN PRODUCTS
Aluminium sectional doors ALR 40

A corner window provides a view of the building's surroundings from inside the office (above left).
Few traces of red in the entrance hall: a steel grating staircase leads to the second storey; the steel concrete walls are left unfinished or painted white (above right).
The training room in the second storey is also used for the volunteer fire brigade's work with local youth (below right).

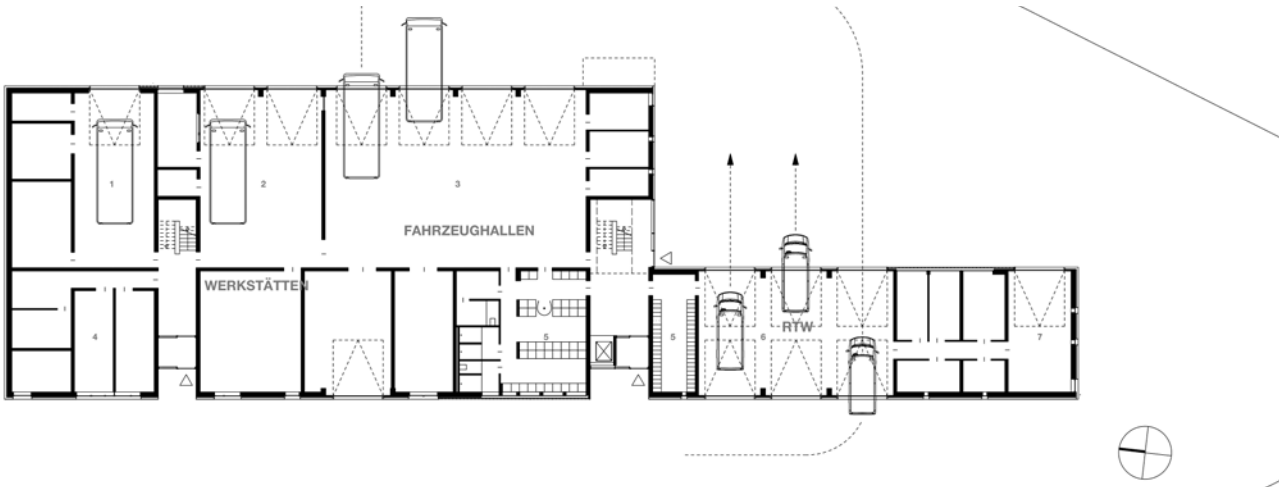
Fire and Rescue Station in Löhne

Eastern Westphalia, between Teutoburg Forest and the Weser river, not only has two buildings by Frank O. Gehry, but also excellent architecture for day-to-day use. The fire and rescue station in Löhne, for example, is more than a home base for fire and rescue vehicles. It also offers the employees a high-quality working atmosphere.

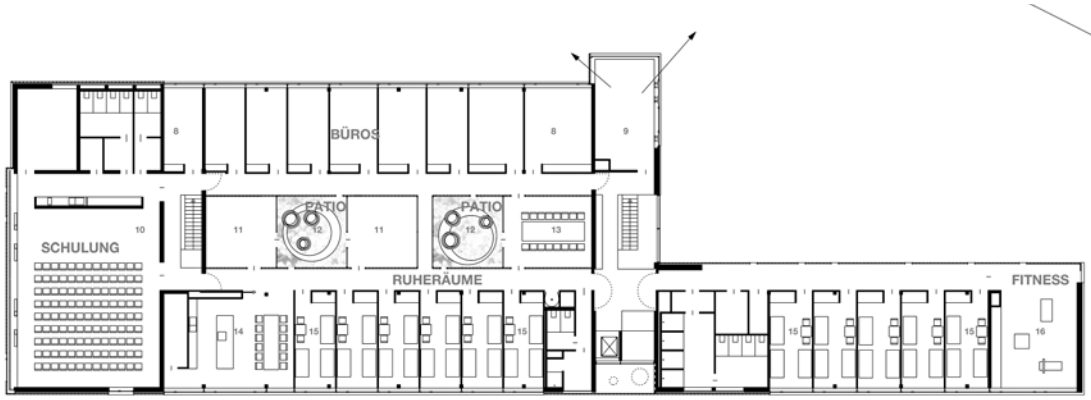
When the town of Löhne announced an architecture competition for a new fire and rescue station in 2001, Germany's architects were in the midst of some hard times. Contracts were a rarity, which is why over 1200 applicants expressed their interests in participating in the competition. Only 35 were permitted to compete; the Hamburg office of architekten prof. klaus sill came out as the winner.
The property is located to the north of the town centre, directly on the A30 highway between Osnabrück and Hanover. Unlike the former location of the fire brigade near the town market in Löhne, the location had sufficient space available. The architects designed an elongated two-storey building; its shorter side faces the highway to the south. The employee's break and office rooms point to the west and east looking out over the field. The graduated height of the building reflects the different spatial requirements of the station's fleet. The shorter rescue vehicles are housed in the narrower, southern part of the building; the fire engines are located in the wider northern part. This solution
capitalised on the nearly triangular form of the property. The new building's facades were designed in blue, grey and silver. The words "retten. löschen. bergen. schützen" ("save. extinguish. rescue. protect", the fire brigade's motto) as well as the emergency number for the fire station, 112, shine through the profile glass panes in the upper storey. The glass panes are tinted in three different tones of blue. On the ground floor and the front side of the building the panes are supplemented by dark grey coated aluminium panels. The office and break rooms contain generous ribbon glazing on the windows, with fascia cladding accented by coloured glass.
The proposed high-quality interior atmosphere was a decisive factor in determining the Hamburg architects as the winners of the competition. To take advantage of the 22.5 metre depth at the northern part of the building, the upper storey was conceived as a three-winged structure with meeting rooms on the interior and open patios. Via domelights, the latter also allow natural light to enter into the underlying vehicle hall. Two special applications are found at the ends of the building: to the south a fitness area and to the north a large event room with a separate exterior entrance. This enables use by external persons, such as the volunteer fire brigade, without the need to interrupt the station's daily operations. The head of the building takes on an impressive stature, especially by night: its two X-shaped supports are illuminated in blue and are visible from a distance through the high cast glass facade.

The entire budget for the station was limited to 5.2 million euros. In order to keep to this, the architects followed what they called a "building with simple materials" strategy: Materials retain the original colours, ceilings and supports are not covered. Most of the floors have been coated with a sturdy epoxy resin. Only the break rooms and event room have parquet flooring made of smoked oak. "Fire engine red" only plays a secondary role in the colour scheme for the station: It is only used on the vehicles and inside the jump shaft around the fire pole between the break rooms and changing rooms. A cool blue dominates in the break rooms and offices while the halls, stairwells and corridors are decorated in a fresh yellow-green.

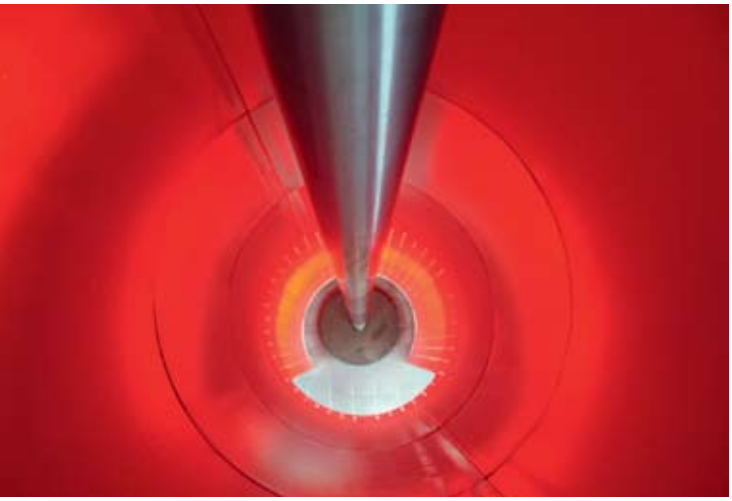
The office of the station head juts out from the building like a pulpit (image above). It separates the wing of the rescue station (left) from the hall with the fire engines (right).
Ground floor layout (below).

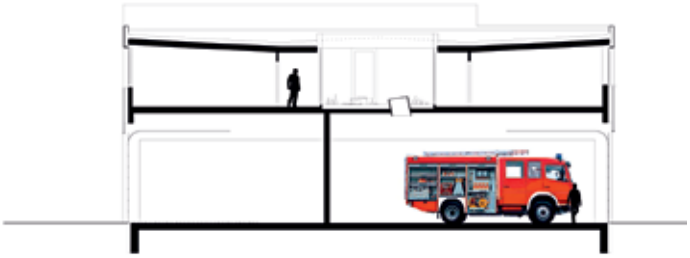


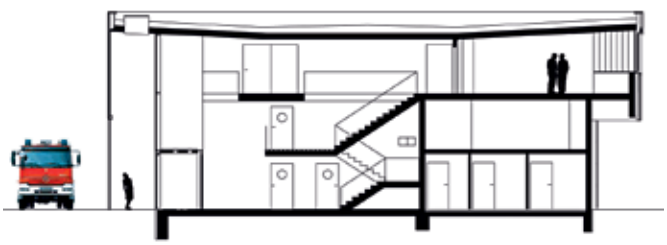
The facades consist of a composition of aluminium panels and different types of glass. The event room with its X-shaped supports was the only part of the building to be equipped with a steel support frame, all other areas are constructed of steel concrete (above).
Upper storey layout (below).



"Fire engine red" is only found on the chairs of the seminar room (above) and inside the jump shaft around the fire pole (below).
Site plan and cross sections (right, from above).







Hard to miss: the emergency number 112 for the fire station shines through the profile glass cladding of the station's head office. Sectional industrial doors from Hörmann allow for rapid exits by the fire and rescue vehicles.

Grey unplastered concrete, anthracite epoxy resin floors and yellow-green glass parapets complete the colour palette in the stairwell. Doors from Hörmann show what they're capable of: some display large lettering referring to their respective fire protection class.

OWNER
Town of Löhne

ARCHITECTS
architekten prof. klaus sill, Hamburg

EMPLOYEES
Lorenz Tettenborn, Karsten Buchner, Vera Dietl, Mirja Gawlista, Birgit Glasmacher, Danko Rebec

BID INVITATION AND SITE MANAGEMENT
baubüro.eins, Hamburg

LOCATION
Zur Feuerwache 6, Löhne, Germany

PHOTOS
Lorenz Tettenborn, Hamburg
Gebler Fotodesign, Hamburg
Hartmuth Klemme, Herford/Hörmann KG

HÖRMANN PRODUCTS
Sectional industrial doors SPU 40; double-leaf T30 steel hollow profiled section doors HE 320; single-leaf aluminium smoke-tight door A/RS-150; aluminium fire-resistant glazing A/RS-350; single-leaf T30 steel fire-protection doors H3, H3; single-leaf T60 steel fire-protection doors H16; single and double-leaf steel doors D45

Blue lighting in the event room: here the double-X steel frame provides a landmark visible from afar by night (above).
With its full cast glass facade, the upper-storey corridor makes visual contact with the building's surroundings (below).

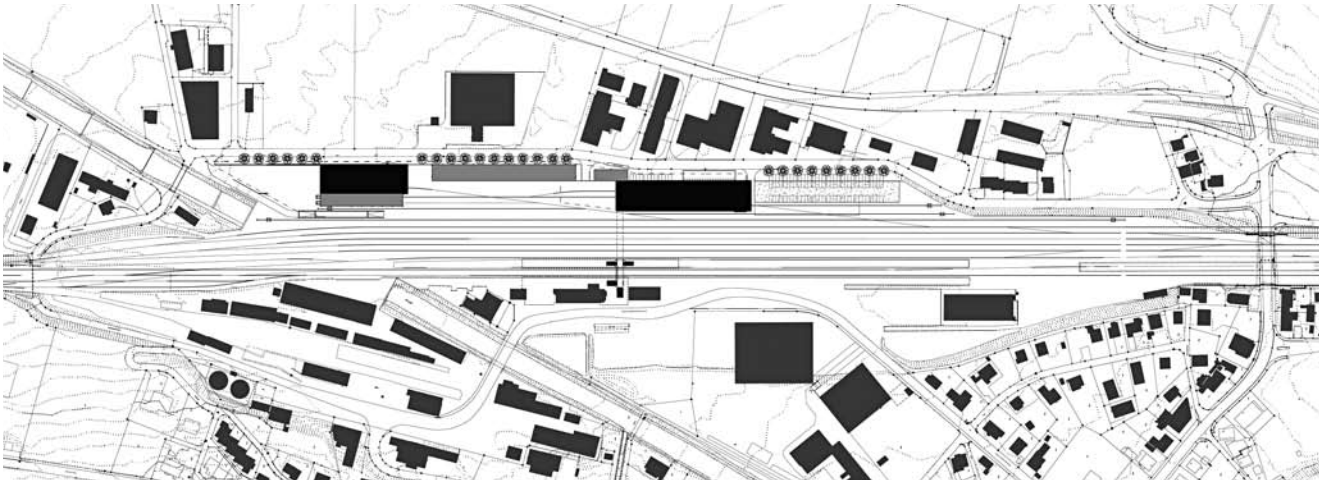
Intervention Centre in Frutigen

The long, narrow structure next to the Frutingen train station is a good example of innovation and versatility: during the construction of the Lötschberg base tunnel, it served as a workshop and assembly hall.
Today, it houses the fire and rescue vehicles for the tunnel as well as the local fire brigade. The variety of applications are housed by a widely stretched, delicate hall structure made of a rather usual material for fire stations: timber.

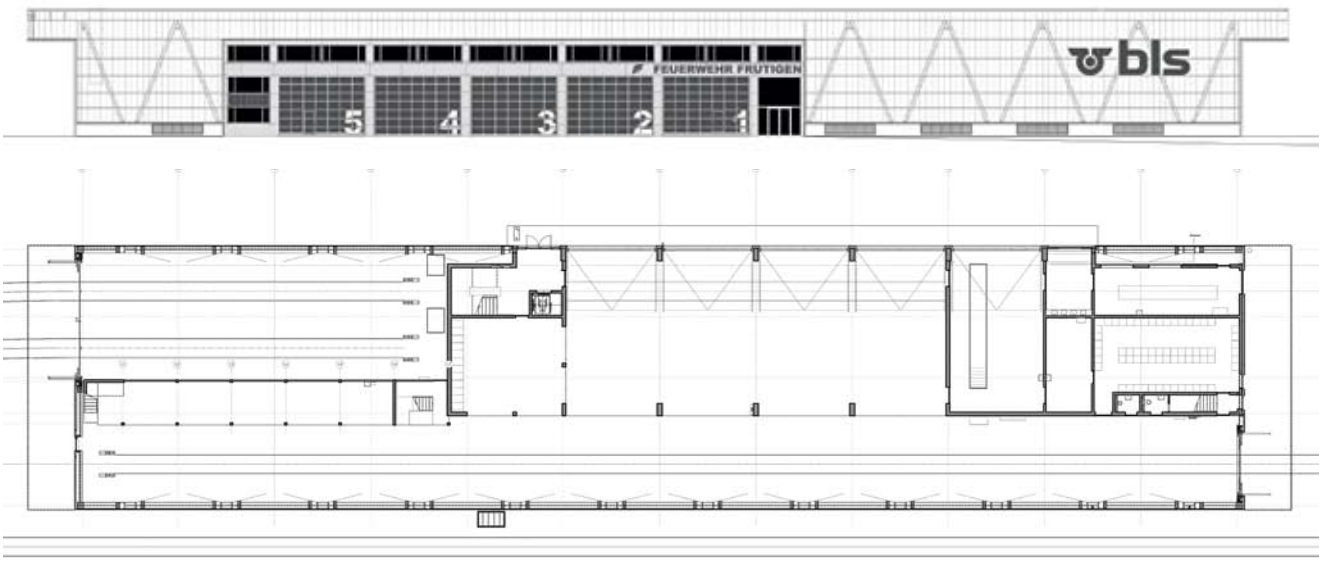
Frutigen is neither among the most important traffic junctions in Switzerland nor is it one of the country's tourist centres. Yet since April 2005, it is the final destination of the third longest railway tunnel in the world: the Lötschberg base tunnel measures 34.6 kilometres between Frutigen and Raron. Until the completion of its "big brother" at the Gotthard in 2016, it stands second only to the "Chunnel".
If a fire should ever break out in the base tunnel, two fire and rescue vehicles are on call in Frutigen and Brig. The fleets each consist of a tank fire engine and two pressure-resistant rescue vehicles equipped with their own air supply for runs up to four-and-a-half hours. The new home for the fire and rescue station is located next to the tracks of Frutigen's train station. Early on, the operating company BLS recognised that a new building at this location could also be used for other applications: together with the neighbouring maintenance centre, where railway vehicles are serviced, the hall was first put to use as a workshop for tunnel construction for one year.
During the subsequent expansion of the building as an intervention centre, a solid construction "house in a house" was inserted, which contains a cafeteria, offices, conference rooms, a training room and cloak room. The local fire brigade from Frutigen moved into the building in mid 2007.
Depending on the lighting, the hall can appear either as a monolithic structure or take on a delicate transparency. By day, the building appears as a solid dull grey or green-blue bar; by night, it becomes a gigantic yellow lantern. It is then that the unusual frame becomes visible through its polycarbonate skin. Double-jointed frames, each spanning approximately 21 metres, lean together in pairs like trestles and buttress the hall along its entire length. These supports made additional windbracings superfluous. Laminated longitudinal supports lie on the frame, which are adjoined by a shear connection with three-layer slabs at the roof level. At the base, the hall girders lie above steel joints on a steel concrete bottom section. The horizontal girders of the facade are attached to the frame shafts and suspended in the centre of each field via threaded rods from the roof construction.
Depending on weather conditions, the hall illumination is more or less diffuse. This is due to the facade of polycarbonate rib plates across the entire height of the facade. The average daylight quotient for the hall was measured at eight percent. This means that natural light alone guarantees a minimum illumination of 500 lux for over 90 percent of the annual operating time. The mountain water continuously accumulating in the base tunnel is used to heat the intervention centre: the temperature inside the tunnel can reach 35° Celsius. To avoid overheating the hall in summer, the rib plates have a g-value below 0.5.
In addition, the hall is cooled using night ventilation: exterior air flows through flaps at the base of the facade into the building interior and leaves the hall via ventilation slots in the centre of the hall ceiling. Mechanical ventilation only needs to be used in some interior rooms such as the cafeteria and common rooms. The workshops and offices, on the other hand, are located on the outer facade and receive external air directly through windows.


bls

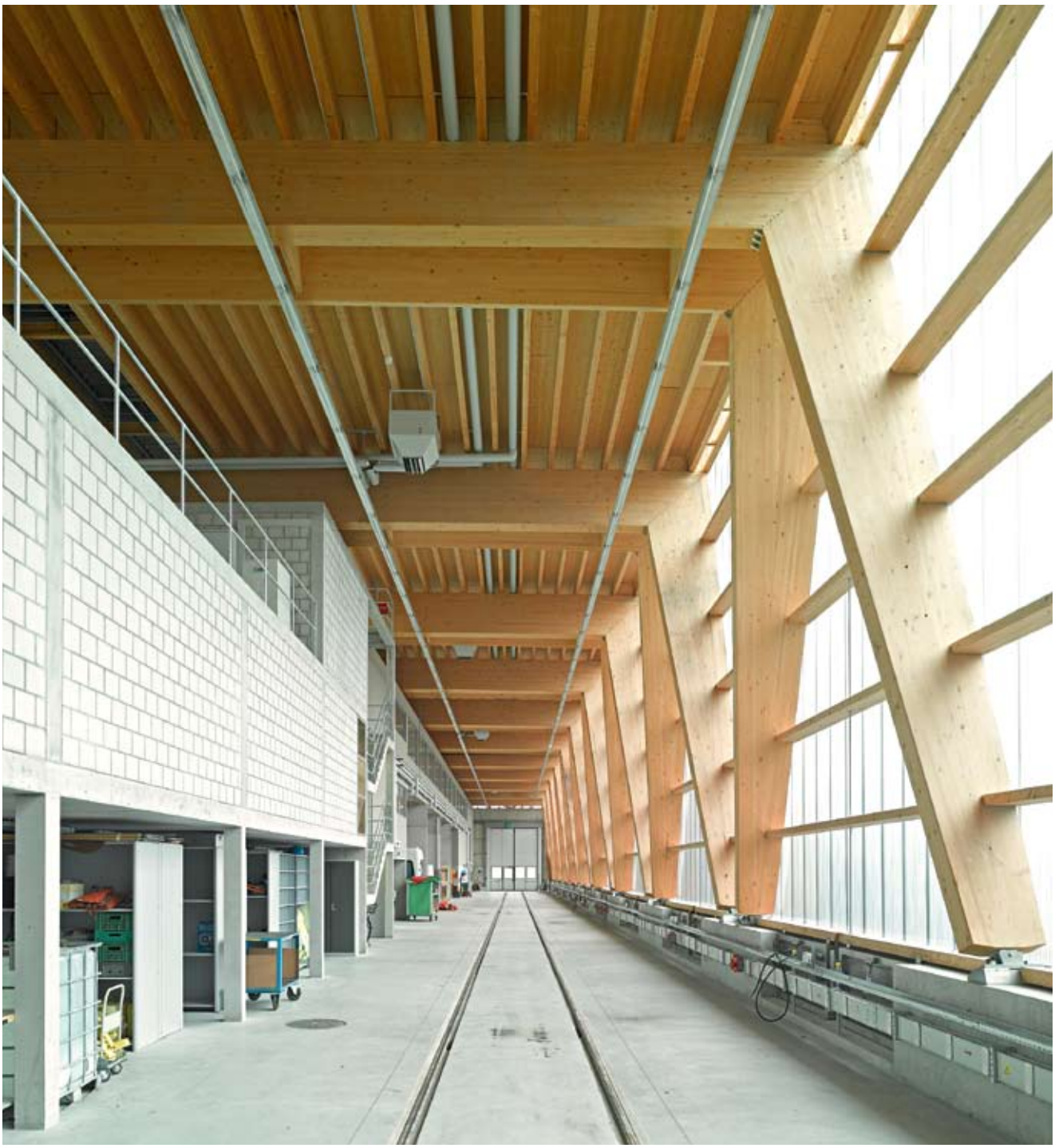
In the evening and night hours, the intervention centre emits a golden glow. The delicate construction of the seemingly monolithic building becomes visible (above). Site plan: on the left the maintenance centre, on the right the intervention centre (below).



In the evening and night hours, the intervention centre emits a golden glow. The intricate construction of the seemingly monolithic building becomes visible (above).
Site plan: on the left the maintenance centre, on the right the intervention centre (below).



House in a house: the rooms for the rescue team of the tunnel operator and rooms for the local fire brigade were subsequently inserted into the former workshop hall (image, left).



OWNER
BLS AG, Infrastruktur Anlagen, Bern, Switzerland

ARCHITECTS
Müller & Truniger Architekten, Zurich, Switzerland

GENERAL CONTRACTOR
ARGE Bahntechnik Lötschberg, Thun

GENERAL PLANNING
Ingenieurgemeinschaft Frutigland p.Adr. Kissling + Zbinden AG, Spiez, Switzerland

SUPPORT STRUCTURE PLANNING
Moor Hauser + Partner, Bern n'H, Neue Holzbau, Lungern, Switzerland

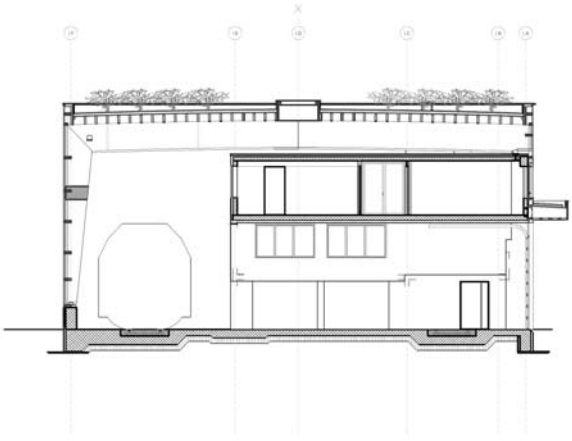
SITE MANAGEMENT
Allenbach + Trachsel AG, Frutigen, Switzerland

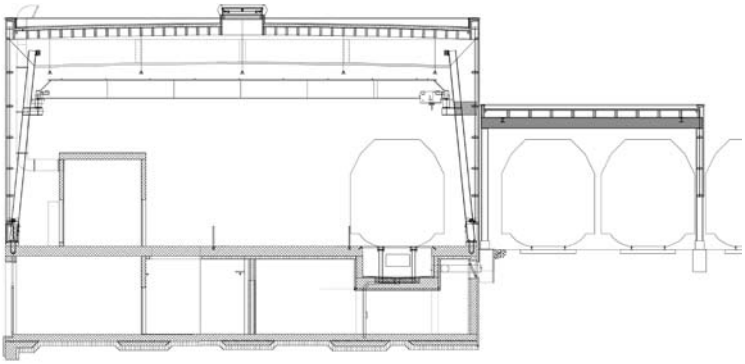
GROSS FLOOR AREA
3.100 m≤

PHOTOS
Wehrli Müller Fotografen, Zurich, Switzerland
baubild / Stephan Falk / Hörmann KG

HÖRMANN PRODUCTS
Aluminium sectional doors ALR 40, aluminium sectional doors ALR 40 with wicket doors with trip-free threshold

In the case of an emergency, Hörmann sectional doors clear the way for the vehicles in a matter of seconds (above left).
Like trestles, the double-jointed frames of the hall's infrastructure lean together in pairs (above right).
Cross section of the intervention centre (below left) and maintenance centre (below right).





A HOTSPOT: THEATRE LA FENICE IN VENICE

Three times consumed by flames and restored from the ruins: Venice's theatre La Fenice was and is closely connected to fire. The tradition-laden playhouse in Campo San Fantin last burned completely to the ground in 1996. The cause: a contract penalty of 7,500 Euro against an electrician involved in the renovation of the theatre. The costs for the reconstruction: approximately 55 million euros.

In the beginning there was...fire. It started in 1773, when Venice was among the most important theatre centres in Italy; it had seven stages. San Benedetto, the largest and best attended of the playhouses, caught on fire and burned down to its foundation. Shortly thereafter, it was rebuilt on the same site.
That might have been the end of the tale and the theatre's burning would have gone down as a footnote in Venetian history. Yet the theatre owners, Nobile Società di Palchettisti and the merchant family Venier, who owned part of the building property, had a legal dispute about who owned the new theatre and who should be permitted to use it. Venier won the case before the court and forced the Palchettisti to sell the theatre to the family. The banished party began to search for a location to build a new theatre, which would be unparalleled in its size and magnificence, to be named "La Fenice", the phoenix risen from the ashes. The Società finally found its site: in Campo San Fantin, roughly 300 metres to the west of Piazza San Marco. The location is ideal for a theatre: the piazza is large enough for the nightly promenade before and after the performances and yet small enough to allow the east facade of La Fenice to remain a dominating presence. The architect for the new construction was Gian Antonio Selva, who won a competition with 29 participants. Construction began in 1790 and the inauguration ceremony was already held in 1792.
To understand the Venetians' love of "their" La Fenice, one only needs to catch a glimpse of the development of the theatre in the 19th century. La Fenice saw a number of dazzling world premieres of works by Gioacchino Rossini, Vincenzo Bellini and Gaetano Donizetti and became internationally renowned. Giuseppe Verdi composed four of his operas for La Fenice, among them Rigoletto and La Traviata. After the Second World War, Igor Strawinsky, Benjamin Britten, Sergei Prokofjew and Luigi Nono continued with the tradition of the playhouse, staging their own world premieres. The story continued until the phoenix was called once again to rise from the ashes: in December 1836, the grand hall fell victim to flames. The main facade and the adjoining foyer, however, remained untouched. Architects Giambattista and Tommaso Meduna were commissioned with the reconstruction, and the interior decoration of the hall was the work of Tranquillo Orsi. The trio worked quickly: within the specified time frame of one year, La Fenice was reopened on Boxing Day in 1837.

Arsonist in La Fenice

Fire came for a third time during a restoration project that was actually meant to bring La Fenice in line with the latest technical standards. Late in the afternoon on January 29, 1996, electrical engineer Enrico Carella set fire to the theatre. Carella faced a contract penalty of 7,500 euros due to work delays, which he tried to avoid in this manner. And at first he was successful: La Fenice burned down to its foundation. Carella fled from the Italian authorities to Mexico; he was extradited to Italy in May 2007.

The space for the audience, constructed with five horseshoe-shaped rows of boxes, was recreated true to the original design (above).
In the "Sala Rossi" the facade of Andrea Palladio's basilica in Vicenza was recreated as a backdrop. The true-to-original "copy" is made of wood and measures two-thirds of the original in its size (below left).
The facade in Campo Fantin is still based on the design from Gian Antonio Selva (below right).

Because an electrician was faced with a contract penalty of 7,500 euros, La Fenice fell victim to flames in 1996 (below).
Model of Aldo Rossi's design in wood (view from the southeast).
A new, tower-like stairwell in the angle between the main building and south wing connects the levels (right).

One week after the fire, the decision was made to rebuild the theatre, and precisely "dov'era, com'era" (where and how it had been). A bid invitation was issued to teams of architects and building companies. On May 30, 1997, the winner had (apparently) been chosen: The Italian architect Gae Aulenti received the contract together with the Impregilo Group, finishing ahead of the group Aldo Rossi/Holzmann. Nevertheless, six months after the start of construction, the contract was revoked after inconsistencies in their offer had been discovered. The design – posthumously – used was that of Aldo Rossi, who died in an automobile accident in 1997. The design recreates all of the historically significant parts of the theatre true to the original, and also integrates the remaining fragments of the original structure. For the trained eye, those pieces are still clearly recognisable, marked by subtle details such as traces of soot. At the same time, the design rearranges the auxiliary rooms and brings them up to speed for the demands of a modern theatre and opera house.

The new spatial arrangement

From Campo Fantin, visitors arrive in the foyer and proceed from there to ascend a wide, noble staircase leading to the five Apollonian halls (Sale Apollinee), which suffered heavy damages in the fire. In the second storey, Rossi created a new room, which can be used for rehearsals during the day and as a bar for the upper box rows in the evening. Massive timber girders lend form to the low-ceilinged room. The next storey, beneath the theatre's gabled roof, was once the location of the backdrop painters' workshops. Today, the space is used for ballet rehearsals and exhibitions. In the large hall, the number of seats was increased from 840 to over 1000. Skilled professionals worked on the interior decoration in shifts around the clock. The materials used were primarily wood and plaster, the same as in 1837. Only on the interior walls of the boxes was the original beige replaced by light blue.

DESIGN (HISTORIC BUILDING)
Gian Antonio Selva

DESIGN (RECONSTRUCTION)
Studio Aldo Rossi

COMPLETION (HISTORIC BUILDING)
1790

COMPLETION (RECONSTRUCTION)
2003

LOCATION
San Marco 1965, Venice, Italy

PHOTOS
Michele Crosera (p. 27 above/below left), Pavel Krok/wikipedia (p. 27 below right), Andrea Merola/AFP/gettyimages (p. 28), Studio Aldo Rossi (p. 29)

SCHÖRGHUBER PRODUCTS
Hall doors with high acoustic rating up to 50 Db

In the basement, new rehearsal rooms were created, from which musicians can access the orchestra pits without having to make a detour through the audience. The theatre's dark blue curtains ensconce stage equipment which was considered the most modern worldwide at the time of its inauguration in 2004. An adjoining side stage to the north offers a "parking space" for the backdrops.
In the theatre's south wing on the opposite side, Aldo Rossi left an impressive testament to his creative power: in "Sala Rossi", the acoustics and seating position of the orchestra and choir were adjusted to match those of the main theatre. The room is used for large rehearsals, chamber orchestras and conferences and has its own entrance accessible from the building's exterior. Aldo Rossi had the front wall of the room covered in a wooden backdrop structure, which picks up elements from the facade of Andrea Palladio's basilica in Vicenza. Palladio's Teatro Olimpico in Vicenza, constructed in 1580, is regarded as the beginning of modern theatre architecture and thus part of La Fenice's heritage. On his theatre's stage, Palladio commissioned a backdrop similar to the one that Rossi created for La Fenice.
On December 14, 2003, La Fenice celebrated its reopening. Neither the architect (meanwhile deceased) nor his building contractor were in attendance: Philipp Holzmann AG already lost its construction contract in 2001 after estimated costs and deadlines had been significantly exceeded. For the completion of one of the most historic Venetian theatres, an Italian consortium finally took over the reigns.

HÖRMANN CORPORATE NEWS

1

1. ET 500 collective garage door

With the ET 500, Hörmann offers a new, architecturally sophisticated door for collective garages. Its completely new, nearly maintenance-free door construction features a long service life, security as well as smooth and exceptionally quiet door travel. The collective garage door largely eliminates any disturbance for inhabitants living above the structure and for neighbours. With its low required headroom and minimum door leaf travel radius, the ET 500 collective garage door is especially suited for limited spatial situations. With its perforated steel sheet, sectional and on site infills, the door can furthermore be customised to suit individual facade designs.

2. Rolling shutter innovations

The Decotherm® rolling shutter lath made of "full hard" steel was honoured with the 2006 German design award for innovation in steel ("Stahl-Innovationspreis").
In addition to this heavy-duty steel version, two additional laths are available: Decotherm® A and Decotherm® E, made of aluminium or stainless steel.
The light-weight aluminium lath is especially quiet and low-friction and is available in either a bright-rolled or colour coated version. The stainless steel lath is particularly advantageous if requirements call for high corrosion resistance or an elegant metallic appearance. The bright-rolled surface sealed with protective paint will retain its beautiful appearance for years to come. The leading photocell VLR for rolling shutters is another new product. With the VLR, obstructions are quickly and securely recognised even before direct contact is made. The system is integrated in the ends of the bottom profile and fully enclosed by the guide rail. This hides it almost completely from view and protects it against damage.

3. Hörmann visibility windows

Hörmann has expanded its range of door elements and frames with new visibility windows. These elements are an important architectural component, particularly for commercial buildings. Moreover, they are necessary for monitoring functions in some operations, for example in hospitals. The new Hörmann glazings with steel subframes can be used as transom lights, visibility windows or complete, floor-to-ceiling elements and fulfil a variety of functions. HW-D-Iso insulated glazing is suitable for interiors that need to be buffered from temperature differences in adjoining rooms – for example office rooms in warehouse, production or dispatch areas. The Ug value (thermal insulation) is 1.1 W/m² K.

Protection from noise in neighbouring rooms or halls is also important. A difference of even three decibels is easily heard. For this purpose, Hörmann now offers the acoustic-rated glazing HW-D-SD. The acoustic insulation values for single-sided glazing are RW.c:38 dB and for double-sided glazing RW.c:51 dB. HW-D-PB radiation protection glazing is suitable primarily for medical applications, in rooms where protection from x-rays is necessary. Its lead equivalent value (used to denote the shielding effect of a material) is up to 3.5. Fire and smoke protection are provided by G 30, F 30 and F 90, and fire protection glazings HW 330 G, HW 130 F and HW 190 F. All visibility windows can be optionally equipped with additional functions. HW-D-Iso insulated glazing, for example, can also be provided with radiation protection, fire protection or increased acoustic insulation (see table). Depending on design needs and planning requirements, the glazings can be equipped with different frame profile solutions. Options include clamping profile, hollow box sections, corner glazing strip, Z corner glazing strip and glazing without glazing bead. Windows with an integrated screen constitute an additional new product in the range. They contribute to interior design and regulate the entrance of light. Moreover, in application areas such as hospitals, they also provide discretion and keep out unwanted light.

4

5

Hörmann screens for visibility windows are available as roller blinds for dimming and are operated using a 24-volt motor. Blinds can also be integrated in the windows and controlled using 24-volt motor or by hand.
In addition, the visibility windows are also available with flush-fitting glazing in two different construction versions. With flush-fitting glazing in the frame, the glass pane is suspended mechanically but not visibly by point locking in the rebate, thus meeting design needs for high transparency. On the second frame construction with an edge recess profile variant, the glass pane is surface-mounted along the frame depth (Z corner glass strip). The glass panes on the flush-fitting constructions are delivered with all-round frame enamelling, which creates a smooth and attractive appearance along the sides of the visibility windows. Both versions are available with integrated screens. Additionally, glazing on both sides provides increased acoustic insulation.

4. New production location in China

In Tianjin, approximately 100 km southeast of Beijing, the second Hörmann production location is currently under construction in China. The architecture office Wannenmacher and Möller, located in Bielefeld, Germany, are in charge of project planning.
In the first construction stage, 100 new jobs will be created in the production and storage area of over 15,000 m². The Tianjin plant will manufacture rolling shutters, high-speed doors and sectional industrial doors specifically for the Asian market. Alongside its two production locations, Hörmann is already represented by eight own subsidiaries and numerous dealers in China.

5. Hörmann steps up its presence in the USA

In April 2008, Hörmann Flexon LLC and Hörmann Gadco LLC exhibited together for the first time at the IDA Expo 2008 in Las Vegas. The IDA Expo is one of the most important professional trade fairs in the USA. Their booth introduced, among other products, new high-speed doors as well as a new series of steel garage doors with a new finger trap protection, specifically for the US market.
Last autumn, Hörmann acquired the American company Flexon Inc., one of the leading manufacturers of high-speed doors in the USA. After acquiring garage door manufacturer Gadco in the previous year, Hörmann has thus taken steps to strengthen its competence in industrial doors on the US market and has simultaneously made its entrance in the US loading technology market segment.

Overview of glazing types for Hörmann visibility windows

	Thermal insulation	Acoustic insulation	Radiation protection	Fire protection			Screen
				G30	F30	F90	
Thermal glazing	●	○	○	○	○		○
Acoustic-rated glazing	○	●	○	○	○	○	○
Anti-radiation glazing	○	○	●	○*	○*		○
Fire protection glazing G30	○	○	○*	●			○
Fire protection glazing F30	○	○	○*		●		○
Fire protection glazing F90		○				●	

● = Main function
○ = Additional function – with corresponding equipment
* By agreement in individual cases

ARCHITECTURE AND ART
ARNE QUINZE: UCHRONIA

Uchronia was born in one of the numerous pubs in Brussels – as a sketch on a napkin. With their installation, the project's two conceptual founders, designer Arne Quinze and philosopher Jan Kriekel, wanted to communicate a message to the world: Rationality and emotion, the left and right halves of the brain, are inextricably linked.
In Greek "Uchronia" means "no time" and thus the temporal counterpart to utopia – "no place". As the ideal location for their "timeless" installation the two designers chose the annual art festival "Burning Man" in the Black Rock Desert of Nevada. The festival is held for eight days and reaches its pinnacle on the sixth, when a gigantic statue – the "Burning Man" – is ignited. Every year, approximately 47,000 people journey to the salt flats 150 kilometres northeast of Reno.
Without a doubt, Uchronia was the highlight of "Burning Man" 2006. Ninety assistants, paid by Quinze and Kriekel themselves, worked on the construction. Within three weeks they had nailed together 160 kilometres of wooden laths into a large-scale sculpture. It took on its form spontaneously on site, without the aid of any computer programs. Four entrances provided access to "Uchronia", whose delicate roof gave welcome shade in the desert. But the festival visitors were not able to enjoy shady relief for long: shortly after its completion, the installation was ceremoniously ignited. One of the basic principles of the Burning Man Festival is to leave no trace.

"Uchronia", 2006
Timber installation
Black Rock City, Nevada, USA

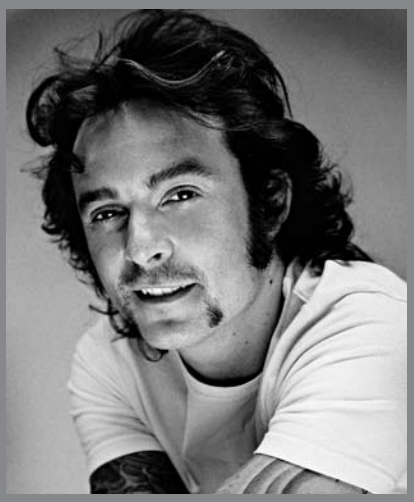
ARNE QUINZE
born 1971

Self-taught graffiti artist and designer

Pieces and exhibitions:

1999 seating furniture "Primary Pouf"
2004 "Seattle Frame Seat" for the Seattle Library (architecture: OMA)
2005 Lounge furniture "Matrass" chair "Club01"
2006 first children's furniture collection: "minus+" light sculpture "Oblivion" for Dark Installation, made of timber, polyester and lights, design: Post Köln Jaga Experiment Truck
2007 Installation: "Cityscape", Brussels
Seating furniture: "Infinity"
Piece: "Dreamsaver" for Swarovski
Installation: "Mutagenesis", Abitare Il Tempo, Verona

Gallery:
GALLERY 113
Walle 113a
B—8500 Kortrijk
Tel. +32 56 240 590
Fax +32 56 240 599
info@gallery113.tv
www.arnequinze.tv



PREVIEW / IMPRINT

Topic for the next edition of PORTAL:
Shopping

Spaces used to sell and present goods have developed a special status in architecture, a unique identity somewhere between art and commerce, kitsch and corporate identity. The displays are constantly being improved, yet are becoming increasingly similar.
At the same time, countertrends can be observed: stores where the focus lies on the products and nothing else, sometimes even void of furniture. What are the new trends in the aftermath of obsessive bargain-hunting? What should – and can – architecture offer when it comes to creating customer loyalty? You can read more about this topic in the next edition of PORTAL.

Making a sale means attracting attention: On the street in Berlin

Photo: Jakob Schoof

HÖRMANN IN DIALOGUE

Building with Hörmann –
Your project in PORTAL

Every four months, PORTAL reports on current architecture and the framework conditions in which it evolves. And, if you wish, PORTAL could soon serve as the showcase for one of your own projects! Send us information on the buildings you have realised using Hörmann products – as a brief documentation with plans and photos, maximum in A3 scale, by post or e-mail:

Hörmann KG Verkaufsgesellschaft, attn. Ralf Biegert
Upheider Weg 94-98, D-33803 Steinhagen
r.biegert.vkg@hoermann.de

PUBLISHER
Hörmann KG Verkaufsgesellschaft
Postfach 1261
D-33792 Steinhagen
Upheider Weg 94-98
D-33803 Steinhagen
Telefon: (05204) 915-100
Telefax: (05204) 915-277
Internet: http://www.hoermann.com

EDITORS
Dipl.-Ing. Ralf Biegert
Dr.-Ing. Dietmar Danner
Dipl.-Ing. Jakob Schoof
Dipl.-Ing. Daniel Najock
Dipl.-Ing. Thomas Geuder

PUBLISHER
Gesellschaft für Knowhow-Transfer
in Architektur und Bauwesen mbH
Fasanenweg 18
D-70771 Leinfelden-Echterdingen

PRINTERS
sachsendruck GmbH
Paul-Schneider-Straße 12
D-08252 Plauen

Foto: Stefan Falk / baubild / Hörmann KG

Crystal clear: Hörmann industrial doors and operators make a convincing case

Practice-oriented and safe:
wicket doors with trip-free threshold

Hörmann offers the largest selection of industrial doors and operators in Europe. Our programme contains all important construction styles in a variety of versions and with different glazings.
Only from Hörmann: extremely scratch-resistant DURATEC® plastic glazing for sectional industrial doors.

HÖRMANN

(Issue 06.08) 85 748 E/P - 1.96
Print 08.08