GLULAM
ROOF ELEMENTS FOR COMPLETE SOLUTIONS
WALL PANELS
CROSS-LAMINATED TIMBER PANELS
WOOD AND GLASS FACADES
COMPLETE SOLUTIONS
Rubner Holzbau is the ideal partner to trust when building complex timber structures and projects of high architectural quality. The constant thrust towards innovation and our wide experience gained over decades of work have allowed our company to become the technological leader and specialist in the field of timber.

Rubner Holzbau puts forward innovative solutions for:

- glulam constructions
- prefabricated roof and wall panels
- cross-laminated timber panels or wood-and-glass curtain walls
- complete building envelopes

This wide range of products has allowed the company to create, all over the world, buildings characterised by a common denominator: supreme mastery in the use of timber – a value that is actively experienced by all our staff at the production facilities in Bressanone - Brixen, Calitri and Ober-Grafendorf, as also in our design and sales offices all over Europe.

The passion for this raw material also emerges in the many types of projects we develop for public and private residential complexes:

- industrial and commercial buildings
- sports arenas and shopping centres
- churches
- congress and cultural centres
- bridges
- housing estate

The yearly production by Rubner Holzbau amounts to 300,000 m² of prefabricated roof and wall panels in solid wood, and 85,000 m³ of special glulam elements.

Rubner Holzbau is the leader in Europe for the construction of large timber buildings.
Glulam beams for roof structures of hall buildings of all kinds have been produced at Rubner Holzbau since the late 60s. To answer the requests of clients, architects and designers, who claim for larger building set-ups in always shorter erection times, the roof elements are prefabricated in large sizes. In the 80s the first concept for large prefabricated panels has been developed. These elements were delivered to the building site already complete with the roofing components and transport wrapping for installation. After that the system was completed by delivering elements complete with the necessary dome lights, continuous skylights, smoke extractors and other components and, if requested, by carrying out the installation. Rapid developments in this sector combined with constant innovation, timely recognition of trends and strict quality controls pushed Rubner Holzbau forward so that, from a former producer of load-bearing elements, it became the leading company in the sector of roofing elements, complete roofing packages and turnkey envelope structures. The solutions are always suited to the clients’ requirements.
The roofing elements of Rubner Holzbau – with a variety of realized options and build-ups – have established themselves within the last 20 years in the industrial and commercial building sector, and it has been continuously developing, even for special applications. Due to the wide range of possible applications, the roofing elements are used both in high-end projects demanding special properties such as fire and noise protection and in all other areas of industrial and commercial construction – especially when it comes to fast and cost-efficient construction.

The basic structure consists of load-bearing timber ribs, clad top and bottom with sandwiched thermal insulation (glass or rock wool). The moisture-adaptive vapour barrier, which is applied seamlessly across the full width of the element, fulfils all structural requirements. The result is a versatile roofing element that is ideally adapted to the various physical and load-bearing requirements and can also be installed in a time-saving manner.

The standard version of the roofing element by Rubner Holzbau is used for a maximum span of 7.50 m and is 16-28 cm thick, depending on the load situation. Special versions are also possible for a free span of 10 m or more. The element height in this case is 40-60 cm, with an integrated load-bearing structure made of glulam joists. The construction method also offers the developer a range of safety benefits, such as different attachments in accordance with fire resistance classifications and an unrestricted selection of underside to satisfy all requirements of architectural acoustics (sound absorption, sound insulation).
The design of the roofing elements by Rubner Holzbau allows a wide range of roof coverings to optimally fulfill the various requirements of a developer. In the construction of flat roofs and flat inclined roofs, it is possible to use PVC films, FPO films, EPDM films (rubber) and bitumen waterproofing (two-layer) as well as steel or aluminium profile roof systems. For pitched roofs, any chosen roof covering can even be installed on site onto a pre-fabricated sub-roof assembled at the factory.

In the standard version, the roofing elements by Rubner Holzbau always come with a factory-fitted roof covering that is already finished and thus sealed. This makes the roofing elements fully functional immediately after their assembly (immediately load-bearing, surface-ready, water-tight) and enables rapid construction progress with no delays for subsequent interior fitting works. Installation itself can be carried out virtually independent of the weather since the roof covering is already in place on the element. The creation of joints between the elements as well as other integrated components and attachments to the roof covering are performed by the company’s own or green rooftinsmith department, which begins this work as soon as the elements have been installed. Suitable versions with modified designs are also possible for membrane roofs with a gravel surface or green roof.
As for the roof coverings, Rubner Holzbau also offers a wide range of options to fulfill specific requirements for the selection of the underside of the roof. In general, almost all materials in panel form, such as wood or timber material sheeting (natural, sanded or painted, perforated or unperforated, plasterboard, trapezoidal sheet metal, Heraklit, etc.), as well as cladding (natural or painted) are suitable for factory assembly to the underside of the Rubner Holzbau roofing elements.

For particularly sophisticated projects, special materials are also offered, such as painted veneered plywood sheets with a precisely laid out matrix of holes and screw patterns. In general, the roofing elements can be appropriately equipped for any purpose. Choosing the right underside is especially important for determining how a roof will perform regarding sound insulation and sound absorption. We therefore place great value on being able to offer all possible options to ensure exactly the right variant for each specific case.

INTERNAL FACINGS
WIDE CHOICE OF MATERIALS
The behaviour of building elements in case of fire is one of the most important safety features of a building. Rubner Holzbau has taken this topic into consideration from the beginning. Therefore, the roofing elements have been regularly submitted to a fire safety test in a variety of installation scenarios since the 1990s. Only the classification report of a nationally accredited testing agency provides information on a structural element’s fire resistance class.

The roofing elements of Rubner Holzbau are rated for fire resistance classes REI 30, REI 60 and REI 90 in accordance with EN 13501-2. All roofing elements with a thermal insulation thickness of at least 18 cm fulfill the requirements of fire resistance class REI 30. Even the strict requirements of the new European standards, effective since 2010, have long since been exceeded by our roofing elements. Higher fire resistance classes can be achieved at relatively low additional costs. Early coordination with the authorities in the approval process can avoid the need for other, significantly more expensive fire protection measures.
Sound insulation and sound absorption are of particular importance for the quality of a room-enclosing element. For example, official requirements regarding permissible sound emissions and employee protection provisions concerning sound-absorbing surfaces are constantly being expanded.

Roofing elements by Rubner Holzbau have excellent sound insulating properties, as has been proven in extensive testing. Test results by an accredited testing agency are available for a total of 50 different installation configurations, with which sound insulation of up to 49 dB can be achieved (depending on the configuration variant) and a sound absorption coefficient of 0.21-0.96 at 500 Hz can be verified.

No additional work on the cladding is required at the construction site to achieve these properties thanks to the high degree of prefabrication. All sound insulation and absorption measures can be installed into the roofing element at the factory. The best sound absorption results are achieved with perforated materials. The highest quality configuration consists of perforated panels backed with an acoustic fleece cladding, behind which a sound-insulating layer made of mineral wool is installed.
Rubner Holzbau's many years of experience in the production of prefabricated wood elements for roofs represent an essential premise in ensuring the strength of the necessary connections to the roof and the relative accessories.

The high element prefabrication degree is reached by integrating in the same, during production, the drain wells complete with connections, installing the skylight fall protection gratings, laying the waterproof sheets with overlaps for connection to the skylights and carrying out other roof completion work at the Rubner Holzbau production facilities.

The accessories fitted at the building site during erection (anchor points, aeration channels etc.) are arranged at the design phase so that the roof can be quickly completed with simple work at site.

**SYSTEM DETAILS**

**WELL DEVELOPED AND DEFINED**
CONSTRUCTION STANDARDS
DEVELOPED AND TESTED

Universal roof panel
OSB panel
Technical specifications:
- Heat transmittance coefficient: $U=0.20 \text{ W/m}^2\text{K}$
- Fire resistance class: REI 30
- Soundproofing capacity: 46 dB
- Sound absorption coefficient: 0.21 (500 Hz)

Universal roof panel
Drilled and corrugated sheet
Technical specifications:
- Heat transmittance coefficient: $U=0.20 \text{ W/m}^2\text{K}$
- Fire resistance class: REI 30
- Soundproofing capacity: 40 dB
- Sound absorption coefficient: 0.96 (500 Hz)

Universal roof panel
Internal facing panel type 3S - three-layer, drilled, with soundproofing structure
Technical specifications:
- Heat transmittance coefficient: $U=0.14 \text{ W/m}^2\text{K}$
- Fire resistance class: REI 30
- Soundproofing capacity: 49 dB
- Sound absorption coefficient: 0.96 (500 Hz)

Sealing membrane with mechanical fastenings
OSB panel
Joists 24 cm
Intermediate insulation layer 24 cm
Variable vapour barrier
OSB panel
Sealing membrane with mechanical fastenings
OSB panel
Joists 28 cm
Intermediate insulation layer 24 cm
Variable vapour barrier
OSB panel
Sound absorbing felt, black
Internal facing in corrugated metal sheet (total hole section app. 15%)
Sealing membrane with mechanical fastenings
OSB panel
Joists 24 cm
Intermediate insulation layer 24 cm
Variable vapour barrier
OSB panel
Sound absorbing felt, black
Solid wood panel, drilled (total hole section app. 20%)
-Sealing membrane with mechanical fastenings
OSB panel
Joint between elements above supports
Joint between elements, with internal facing in corrugated metal sheet
Roof parapet with tie beam
Roof parapet with brick wall
Detail of eaves with snow catches and external gutter
-Joint between elements, with internal facing
in corrugated metal sheet
Sky light connection with wooden beam
-Joint between elements, with internal facing
in corrugated metal sheet
-Sky light connection with wooden beam
The aim of Rubner Holzbau has always been to offer its customers an optimal overall solution in the form of a complete roofing system that is economical to implement. Today, we are in a position to coordinate and implement all services related to the production and installation of a roof within our company. Our company’s own metal-working department consists of roughly 40 employees and delivers solutions to satisfy all requirements and details. All accessories such as flashing, skylights, smoke extractors, safety barriers, roof drains, water outlets and parapet coverings are taken into consideration, included in the quotation phase and optimally integrated into the roofing element in accordance to the chosen roof covering material. Throughout the execution of your project, a project leader from Rubner Holzbau takes care of all the details, coordinates with any sub-contractors and is available for you as your sole point of contact during the entire implementation phase.
In addition to a well-engineered and optimal roofing system, Rubner Holzbau offers wall elements made from timber as well. A wide range of facade systems (sandwich panels, siding, trapezoidal sheet metal) is available. The necessary wall surfaces can also be adapted precisely to the required qualities as concerns thermal insulation, fire resistance and building acoustics.

This range of services makes it possible to have both the load-bearing system and the complete building envelope built as glulam structures for industrial and commercial buildings as well as for public and sports buildings. During the offer phase we provide a holistic analysis of the requirements of the building envelope, after which we recommend the materials and implementation options that ideally fulfill the specifications with the greatest level of cost-benefit efficiency.

The advantages are clear: With Rubner Holzbau you have just a single, central point of contact for your project and a partner who handles the coordination and implementation of all the necessary details. This ensures the perfect conditions for a smooth project and the most efficient possible usage of the available time and budget.
The well-tested construction technique that uses Rubner Holzbau roof elements allows transport of very large components over great distances. All the elements leave the Rubner Holzbau facility protected by a thick covering and with a further film if necessary for protection during transport. The Rubner personnel on site not only coordinates the deliveries just-in-time but also organises the cranes and elevated platforms needed for erection work. So the installation of the roof covering on the supporting structure, independently of the type of material, reduces to just a few operations, reaching installation rates even higher than 1,000 m² per day.

Here the advantages of high level prefabrication and of centralised coordination of operations: quality controlled components produced and stored protected against bad weather, high safety level at the building site thanks to the limited need for completion work, critical mass for erection reached directly with quick construction times and early availability of the finished building. Assembly of the internal facings at the production site avoids the need for indoor scaffolding at the building site, so that other working skills can be deployed with no obstacles.

All other accessories are integrated into the roof directly at the Rubner production site, or pre-assembled and delivered to the building site for progressive installation, with any necessary sealing operations. The combined capabilities in the fields of wood structures and metal sheet working reduce the involved interfaces and allow speedy building progress.

LOGISTICS
SUPPLY AND ERECTION JUST-IN-TIME

Transport and erection of roof elements
Interspar, Eisenstadt (A)  
Architectural design: Architektur Consult ZT GmbH, Graz  
330 m\(^3\) of glulam  
5,500 m\(^2\) of roof elements  
3,802 m\(^2\) of wall elements

Stabilimento industriale Pircher Oberland AG, Rolo (I)  
Architectural design: arch. Erich Oberlechner  
810 m\(^3\) of glulam  
10,900 m\(^2\) of universal roof elements  
4,900 m\(^2\) of facade elements  
www.pircher.eu

BUILDINGS
CREATED WITH PASSION
Rubner, with decades of experience in high quality wood structures, has become the reference specialist in the field of made-to-measure wood buildings. This result is the fruit of the company philosophy that accompanies all members of our staff in their professional development, placing them at the centre of all decisions and activities.

The Rubner philosophy is based on eight key values that generate trust in the Rubner brand; because wherever you hear or read the name of Rubner, you can trust in these eight values.

**Attention and respect**
We have deep respect for wood and for the environment, but also for our staff, customers and suppliers. Behind all actions there are people, and success will be long-lived only if we work as a team and with reciprocal respect.

**Pioneering**
We define new standards in the fields of process and product technology and we have taken on a pioneering role in the wood processing sector. Our vision is always forwards and our constant research and development with the integration of innovative ideas underpin our approach, oriented to the future.

**Specialist in wood**
Our decades of experience have taught us to treat wood with great respect. Our staff is highly qualified and motivated, and bring their experience and capabilities into all our projects, to identify always the ideal solution that satisfies our quality standards and our customers’ demands. We live this specialisation day by day, with unfaltering conviction.

**Presence**
The many projects that we have completed all over the world underline our international character. With strength due to our widely distributed sales network, we can ensure our customers and partners will have quick and direct contact with our company. We are present at fairs, exhibitions, congresses and seminars and we maintain contact with our like-minded colleagues. We cooperate with universities and polytechnics because research and development are one of the main columns of our work.

**Precision**
We keep our promises, to the letter, defining the rules for operation with punctuality and with excellent quality standards, leaving nothing to chance in the green word for us our bond. We know that only reliability can generate trust and excellence in performance.

**Leadership**
Our objective is to reach excellence in all we do; and we consider even the most complex projects a stimulating challenge. Any jibe is worthy of the maximum respect and is faced by all our staff with an eye to maximum quality. We are proud of the enormous appreciation for Rubner products on the market in this field.

**Passion**
An essential premise to the creation of exciting products and services is the personal commitment of our staff, whose motivation and availability make their extraordinary performance possible, thus guaranteeing the customers excellent results for the future too.

**Advanced technology**
Only the combination of man and technology generates excellent performance. Thanks to extraordinary infrastructure we reach the maximum results in terms of quality and productivity, always searching for innovative solutions with the objective of extracting the best from wood. Our machinery is up-to-date and constantly perfected, allowing us to develop our technologies and ensure a position of competitive advantage on the market.
The Rubner family-managed Group is today one of the main European companies operating in the field of wood constructions. The company management, by now the third generation, has successfully realized the futuristic vision in the field of wood constructions and the evolutionary path has always been characterized by continuous growth and constant internationalization. In all these years, the creed of the Group, PASSION FOR WOOD, has never failed.

This same passion today still inspires the owner family represented by Stefan, Peter, Joachim and Alfred Rubner. Under the direction of Stefan Rubner, President of Rubner Holding, the Rubner Group today manages a business subdivided into five strategic sectors: wood industry, wood structures, large turn-key projects, wood homes and wood doors. Just as in an orchestra, the individual companies integrate in the Group to form a single great unit and fully develop their potentiality. The harmonious exchange between the various company sectors has allowed Rubner to reach the highest performance and to penetrate the market, becoming the specialist in the field of made-to-measure buildings in wood. The vertically integrated Rubner production range covers all the processes and operation phases, from raw materials to finished products.

The individual companies, part of the Group, each bring a wide range of experience and know-how, and their products satisfy the strictest quality requisites. These products range from sawn wood to pillar layer frame glue laminated, from panels in solid wood to glulam components or complex glulam structures, to doors and windows and home and to large turn-key projects, all manufactured by the Group with full respect for environmental sustainability and with advanced technical methods, so as to give life to customized projects and solutions.

The Rubner Group is based in Italy, Austria, Switzerland, Germany, Slovenia, France and Poland, with more than 1,500 staff, whose daily commitment to the valorisation of wood contributes to intensifying the importance of this natural and renewable raw material. Rubner creates comfortable living environments, but at the same time contributes, ever since company foundation more than 80 years ago, to the rational use of natural resources.

PASSION FOR WOOD