Leaflet

Appropriate handling of glued laminated timber

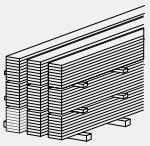
Glued laminated timber (glulam) is a refined building material made of natural wood. In the following, some generally valid, material-related rules will be explained, the observance of which will ensure the long-term durability of the structure and the preservation of its appearance.

PLANNING

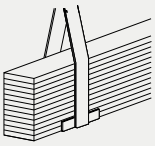
- Especially for constructions that are exposed to the weather without protection, the constructive wood protection must be planned professionally.
- When designing fixings and connections, the swelling and shrinkage behaviour of the material must be taken into account in addition to the static aspects.

TRANSPORT AND ASSEMBLY

- Soiling of glulam components should be avoided as far as possible, as cleaning is time-consuming and usually not possible without residual traces. Minor soiling and indentations of the surfaces are unavoidable and therefore permissible.
- Due to the often large dimensions and comparatively low lateral rigidity of these components, proper storage, anti-tipping and bracing must be ensured at all times during transport, intermediate storage and assembly.
- As far as possible, heavy-duty belts with edge protection should be used as slings for lifting operations.
- During assembly and installation, care must be taken to ensure that no unintentional eccentricity occurs, otherwise considerable additional stresses may occur which have not been taken into account statically.
- Any holes or cuts that appear necessary for assembly may only be made in consultation with the structural engineer.
- Roof and exterior wall surfaces should be closed as soon as possible after timber installation to prevent the timber from absorbing too much moisture.
- Special care must be taken to remove transport packaging quickly because of the risk of condensation with subsequent blue stain or mould. The components must then be protected against moisture penetration and soiling by suitable covers.
- In the case of trapezoidal sheet metal roofing, rainwater contaminated with the rolling oil of the sheets can cause contamination on the trusses in the area of the trapezoidal sheet metal joints. This can be avoided by drilling into the deep beads of the trapezoidal sheets in the middle of the field or by inserting sealing tape in the area of the trapezoidal sheet joints.

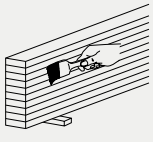


Stacking
Use wooden dunnage and stacking battens. Secure components against tipping.



Damage
Use wide straps and edge protectors. Avoid damage.

Wetness
Protect from wetness with tarpaulins. Remove wrapping foil immediately. Caution: condensation water.



Weather protection
Observe structural wood protection! Additionally: Moisture protection coating for short-term weathering as temporary protection during the construction period.

W. u. J. Derix GmbH & Co.
Dam 63 | 41372 Niederkrüchten
Tel: +49 (2163) 89 88 0
www.derix.de | info@derix.de

Poppensieker & Derix GmbH & Co. KG
Industriestraße 24 | 49492 Westerkappeln
Tel: +49 (5456) 93 03 0
www.derix.de | info@derix.de

DERIX
TIMBER IN A NEW DIMENSION

Appropriate handling of glued laminated timber

SAFETY INSTRUCTIONS AND PREVENTIVE MEASURES

- The accident prevention regulations (UVV) must be observed at every stage.
- We recommend the use of low-dust working methods and machines.
- If the technical protective measures are not sufficient, we recommend a combination of protective measures for sufficient dust reduction.
- Protective clothing (especially respiratory masks) should be worn during dust-intensive activities.
- In this context, we refer to the technical rules for hazardous substances TRGS 553.

COMMISSIONING

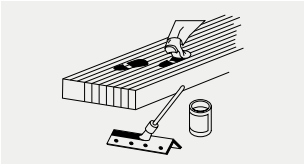
- In heated buildings, a deliberately slow increase of the room temperature must be ensured so that the wood moisture can slowly adjust to the air humidity. The building owner must be informed of this when handing over or accepting the building work.
- On the construction side, it must be ensured that a normal climate prevails in the hall, especially in the area of the supporting structure. The climate should not be extremely humid or very dry over a longer period of time. The roofing must be designed from a structural-physical point of view in such a way that no harmful condensate can settle on the roof girders if it does not dry off in the short term.

CARE

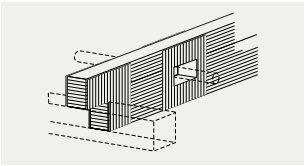
- Shrinkage cracks may occur on the surfaces of the glulam components - also along the glued joint. For components without system-related transverse tensile stress, such shrinkage cracks can be tolerated up to a depth of 1/6 of the component width (per side), for components with planned transverse tensile stress up to 1/8 of the component width (per side).
- Before repainting, the compatibility of the impregnating agent with the wood preservative used by the manufacturer must be clarified.
- Repeat coats are most likely to be necessary on wooden structures exposed to weathering. The summer months are best suited for this. Make sure that the impregnating agent penetrates deeply into any shrinkage cracks that may be present.

CHANGES

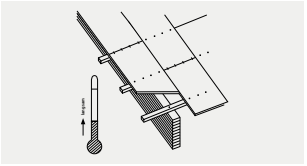
- Changes to the static system or in the loading and arrangement of additional cross-sectional weakenings (e.g. drill holes) may only be made after prior consultation with the structural engineer. Suspensions should always be connected in the upper area (> 70 % of the beam height) of the beams.
- Changes to the structural-physical boundary conditions due to e.g. subsequent cladding, intermediate ceilings or planking must be agreed with the planner in advance.



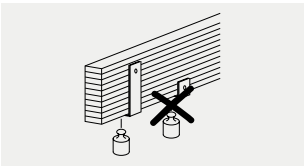
Contamination
Prevent soiling, e.g. by painting or covering. Avoid stains from impregnating salts and rusting steel parts.



Notches/breakthroughs
Constructive design on the basis of a static proof. Execution only by the glulam manufacturer.



Roof covering/heating
Rapid roof covering prevents moisture penetration and later cracks. Dry the building carefully (heat). Keep distance between heat source and glulam component.



Additional loads
The absorption of additional loads must be statically verified. Apply loads at the top. Avoid transverse tension.

W. u. J. Derix GmbH & Co.
Dam 63 | 41372 Niederkrüchten
Tel: +49 (2163) 89 88 0
www.derix.de | info@derix.de

Poppensieker & Derix GmbH & Co. KG
Industriestraße 24 | 49492 Westerkappeln
Tel: +49 (5456) 93 03 0
www.derix.de | info@derix.de

DERIX
TIMBER IN A NEW DIMENSION

Version 09/2021