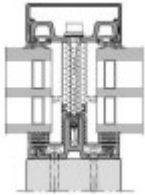


National Building Specification (NBS)

LARA GF + TWINLOC



Design description

Façade system LARA GF wood-aluminium systems as mullion-transom.

Technical requirements and system-specific verifications

The aluminium profiles are made of EN AW-6060 T66 in anodised quality and are available in accordance with DIN EN 755 and DIN EN 12020. The execution must be carried out in accordance with the relevant standards and guidelines, the recognized rules of technology and the specifications of the system provider.

Driving rain tightness RE 1200

Air permeability class AE

Wind load 1500Pa/2250Pa

Approval of fall-resistant glazing according to DIN 18008 T4

Test report 2018 - 3068

Approval of glass supports/connectors according to
ETA 17/0768 of 02.02.18.

Approval of the clamp connection Z-14.4-502 from 20.12.17.

U - values according to DIN 10077-2:2003-10, $U_m, t = 1.2 \text{ W/m}^2\text{K}$ (32mm) depending on profile geometry and filling thickness.

Subsized basic system.

Optional:

Face width 50 mm, wood width 50 mm

Face width 50 mm, wood width 58-60 mm

Face width 55 mm, wood width 58-60 mm

Face width 60 mm, wood width 58-60 mm

Face width 80 mm, wood width 80 mm

Basic profile

Glulam according to EN 14080 min. of strength class GL 24h. Alternative timber building materials can be found in the approval of the system manufacturer.

To transfer the weight load from the glazing and the wind load, a base profile made of aluminium is mandatory. The screw connection must be made with stainless steel screws at a distance of 150 mm. The screw connection must compensate for the loads arising from wind and dead weight by means of a static.

Calculation verifiably transferred to the timber construction. The base profile must have a screw channel to accommodate the fastening screws, as well as a rear ventilation duct with a cross section of 4 x 7 mm.

Seals

In order to create the required inner moisture and vapour-tight level, an APTK seal is required that covers the entire face width in one piece. The connection of the gasket to the T-joint must be made by an overlap of the gaskets. At this joint, the complete tightness of the joint must be established with system sealant and, if necessary, with a suitable sealing piece. In the case of further subdivisions of façade panels, further overlapping T-joints must be feasible. The system must therefore have at least 4 sealing levels with overlapping T-joints to be able to carry out even complicated façade divisions without sacrificing tightness. When installing self-cleaning glass, the use of siliconized seals should be avoided. Dry or sliding polymer-coated seals must then be used.

The execution must be carried out in accordance with the relevant standards and guidelines, the recognized rules of technology and the specifications of the system provider.

A pressure glazing system shall be designed in which the internal glazing gasket creates an absolute level of moisture and vapour. This is to be achieved in particular by a one-piece gasket over the entire width of the wood and by sealed overlapped T-joints.

Seam ventilation and drainage

The system is usually designed in the multi-field ventilation design. However, if necessary (if lower post ends are to be closed), ventilation and drainage must also be possible via openings in the underside bolt seal. (= bar drainage)

Insulator

The system will have an insulator the insulator must be made of material with a thermal conductivity of 0.038 W/mK. To carry out the controlled field-by-field drainage, the insulator separates the individual fields between the basic profile.

Glass overlay

The insulating glass weight is taken into the wooden construction via the glass supports with rod dowels or heavy-duty glass supports. The glass supports / rod dowel combination or heavy-duty glass supports are to be selected according to the weight and the glass thickness of the glass infills. The fastening of the glass supports is carried out in accordance with the system specifications. Glass or infill weights up to 600 kg are possible. Please contact your Gutmann technical representative for guidance if required.

Infills

Made of glass or panel with an installation thickness of up to 64 mm. The required infill thickness is determined according to building physics requirements (heat and sound insulation) as well as requirements for property protection (RC class) and requirements regarding fall protection (glazing according to DIN 18008-4).

Elements of use such as windows and doors are described separately.

Basic and cover profiles

The profiles must be anchored in the screw channel of the profile. Direct screwing into the wooden structure is not permitted, fixings will be stainless steel screws.

Diameter 5.5 mm to be used with sealing ring.

If required, the cover profiles must be designed with a slope of 15° so that the surface water is safely drained over the bars. The heights of the posts and beams must be graded by approx. 4 mm at the T-joints.

Post-and-beam connectors,

that are used in facades have a valid approval.

In this, the load transfer in connection with the various glass supports must be verified.

The connection must be able to transmit all loads occurring from the individual structural components safely and verifiably.

The execution and assembly must be carried out in accordance with the relevant standards and guidelines, the generally accepted rules of technology, the specifications of the system provider, as well as the ETA.

In addition, high visual requirements are placed on wooden facades and wooden roof constructions, whereby it must be ensured that the connection of the bolt to the post or the rafter to the purlin remains permanently closed without joint.

Connection

In principle, the connection must be suitable for connecting wood widths on transoms and posts of 50-80 mm, as well as wood thicknesses of 59-300 mm.

The joint must be made of metal for stability and durability. Plastics or wood connectors are excluded in this safety-relevant area.

The connection must be invisible on the inside of the wooden structure. Covers on the insides such as wooden dowels, caps or cap nuts are also not permitted. The bracing and fastening are always carried out exclusively from the outside of the wooden structure, which is later covered by the attached glazing system.

The connection must be designed in such a way that the assembly can also be carried out on the construction site, regardless of weather conditions. The use of wood glue is not allowed on the construction site because of the uncontrolled conditions.

In installation situations, it must also be possible to install the wooden components in front of concrete columns, ceiling mirrors or walls by hanging the bar sideways into the post. Connectors where assembly is only possible by sliding in from the inside are excluded.

The static design of the connection must take into account the position of all loads occurring (e.g., glass load, wind load, snow load, tensile load in bolt axis) and must be presented on request.

For this purpose, the specifications of the system manufacturer must be observed and implemented.

Pictures

