



Drei3Holz solar facade for architects Altmann + Zimmer, Wiesbaden 2002, German Architecture Prize 2003

OPTIWIN Solar facade

The solar façade is a wooden structure with either a wooden or an aluminium exterior. As with the Optiwin window systems, the outer layers are detachable. The solar façades are available in all systems (Zwoa-2Holz, Drei3Holz, AluHolz and Alu3Holz) and involve a high degree of pre-fabrication.

The Optiwin solar façade is based on a mullion-transom structure made of wood. The spacer between wooden outer layer and mullion-transom structure is thermally isolated and comprises of wood fibre insulation and wood. The weight of the panels is absorbed by glass supports of which the static characteristics have been calculated.

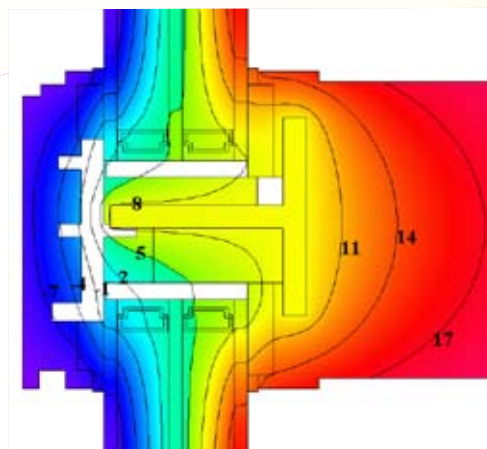
The wooden outer layer is simply a protective cladding and has no effect on structure. Different colour designs are possible because loose coatings are applied to top profiles. The Optiwin solar façade is certified by the Passive House Institute in Darmstadt.



Transporting the pre-assembled facade elements

Details

- Inner layer is the static bearing structure
- Outer layer detachable
- Different wood types possible
- Exterior: oak, larch, fir
- Interior: glulam
- Aluminium outer layer also possible
- Different colour designs for interior and exterior
- Short renovation times
- High level of pre-fabrication
- Short assembly times
- Passive house compatible – certified by the Passive House Institute Darmstadt
- Special functions – sound insulation, sun screen, intruder protection
- Custom detail planning
- U_w - value: 0,72 W/m²K at $U_g = 0,6$ W/m²K
- $U_f = 0,69$ W/m²K
- $\Psi_{\text{bezel}} = 0,036$ W/mK



Isotherme, Riegel Solar facade Drei3Holz



Alu2Holz solar facade for architect Amann, 2003



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Drei3Holz solar facade for architect Disch, Freiburg 2000