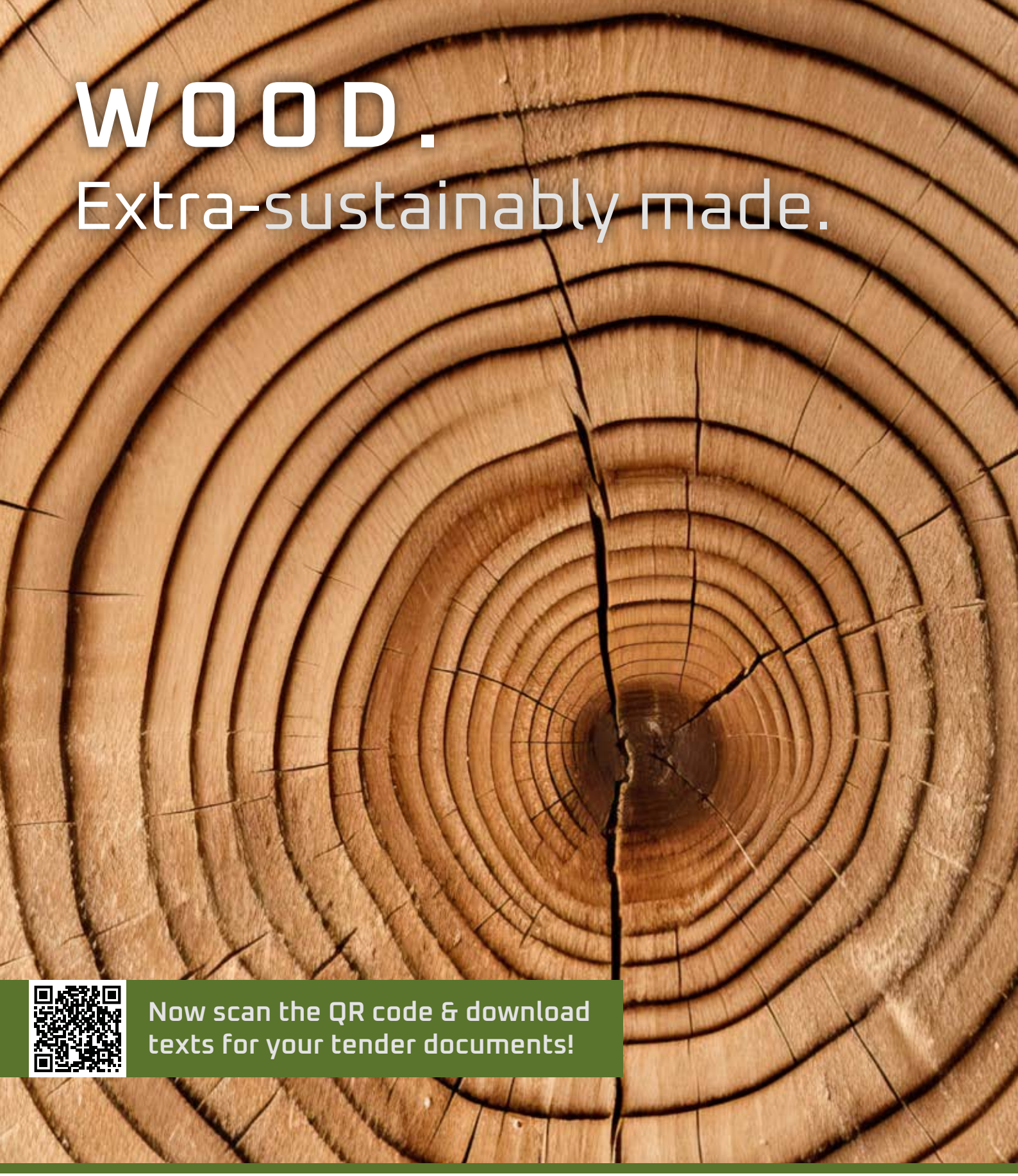

WOOD.
Extra-sustainably made.
Now scan the QR code & download
texts for your tender documents!

Woodbloc

WOOD.

Through and through.

PEFC-certified wood

energy-autonomous, automated production

circular economy down to the smallest detail

sustainable, glue-free bonded solid wood walls & ceilings

CO_2-savings for your construction projects

Highly ecological, modular building systems

SUSTAINABLE. BAVARIAN.

We are passionate about sustainable construction, the resource of wood, and our home - the Bavarian Forest, the largest contiguous forest area in Central Europe. We are Woodbloc from Regen, your strong partner from Lower Bavaria for innovative solid wood construction. Your walls and ceilings are manufactured in our new and one of the largest production halls in the region, built using solid wood construction methods. On approximately 6,000 m² of space, we produce your walls and ceilings, sustainably and energy-efficiently - with experienced carpenters and state-of-the-art technology, such as modern wood drying chambers, a four-sided planer, a cutting center, and a high-performance panel processing portal.

pure wood solid,
untreated spruce wood

- Lignoloc beech wood nails
- beech wood dowels

Natural. Regional.
Perfectly processed.

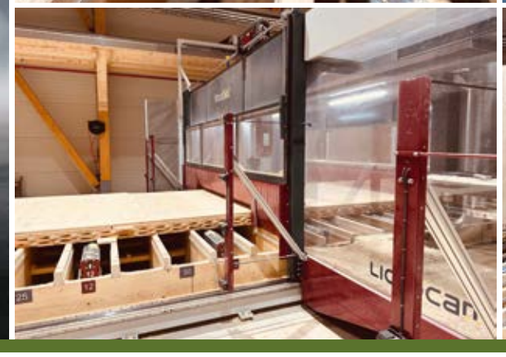
TO GET TO KNOW US:

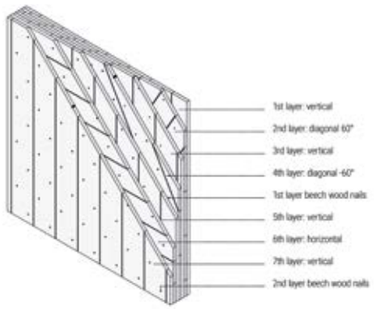
Feel free to visit our showroom or production facilities.
We are happy to arrange a guided tour!

Approvals, certifications and test reports can be found at www.woodbloc.de

SOLID WOOD WALLS

Processing with LIGNOLOC
beech wood nails





PLANNING EXAMPLE WALL STRUCTURE (exterior wall):

Woodbloc solid wood wall, 16 cm
+ softwood fiber insulation, 12 cm = **GEG**

Woodbloc solid wood wall, 16 cm
+ softwood fiber insulation, 18 cm
= **Efficiency House 40**

WOODBLOC - THE NATURAL SOLID WOOD WALL

- cross-laminated solid wood wall with
  - mit LIGNOLOC beech wood nails
- wall thickness: 9,0 cm (4 layers), 11,5 cm (5 layers), 16,0 cm (7 layers), 20,5 cm (9 layers); 25,0 cm (11 layers), 29,5 cm (13 layers) 34,0 cm (15 layers); 9,0 cm & 11,5 cm walls are non-load-bearing walls without diagonal nailing
- wall dimensions: 0,75 m x 0,75 m bis 8,0 m x 4,0 m
- raw material: spruce wood C16
- application: Interior and exterior walls, visible and non-visible; for visible surfaces, with selected board materials or the first layer as panel material; other visible surface options include white fir, larch, Swiss pine, or reclaimed woodh
- projects: esidential houses, apartment buildings, multi-story residential construction, commercial buildings, public buildings

U-Values [W/(m²K)]	Wall thickness [cm]				
Dämmung [cm]	160	205	250	295	340
10	0,253	0,231	0,212	0,197	0,183
12	0,226	0,208	0,193	0,18	0,169
14	0,204	0,189	0,177	0,166	0,156
16	0,186	0,174	0,163	0,154	0,145
18	0,171	0,16	0,151	0,143	0,136
20	0,158	0,149	0,141	0,134	0,128
22	0,147	0,139	0,132	0,126	0,12
24	0,137	0,13	0,124	0,119	0,114

GEG New Building Standard · 0,23 [W/(m²K)]

Efficiency House 40 · 0,176 [W/(m²K)]

KEY DATA SOLID WOOD WALL

wood moisture	12 - 15 %
thermal protection	thermal conductivity according to EN ISO 10456: λ = 0,13 W/mK, specific heat capacity: c = 1.600 J/kgK, U-values see separate table
air tightness	airtight from 7 layers (16 cm) (under testing)
usage class	1 (heated indoor spaces) + 2 (covered, open structures) according to EN 1995-1-1

FIRE PROTECTION

The Woodbloc solid wood walls have been tested for fire resistance durations of 30, 60, and 90 minutes. In combination with additional layers such as insulation materials and gypsum boards, wooden walls can be utilized up to Building Class V.

Fire behavior: D-s2, d0 (EN 13501)

Fire resistance of walls:
REI-30 with a wall thickness of 160 mm (load 90 kN/m)
REI-60 with a wall thickness of 160 mm (load 40 kN/m)
REI-90 with a wall thickness of 160 mm (load 40 kN/m)

SOUND INSULATION

DIN 4109 (Sound Insulation in Building Construction) differentiates between minimum requirements (Part 1) and higher requirements (Part 5). The „Informationsdienst Holz“ defines various sound insulation levels, with „Basic Level“ aligning largely with DIN 4109-1 (minimum requirements) and „Basic+“ aligning with DIN 4109-5 (higher requirements).

The required sound insulation level can be achieved through a layered construction of components. The targeted arrangement of hard and soft as well as heavy and light component layers enables components with excellent airborne and impact sound insulation. This is referred to as the spring-mass principle.

Woodbloc ceilings and walls have been measured with various constructions (values available on request).

SURFACE QUALITIES

Visible Quality Si

wood type	spruce (other types on request)
surface	smooth planed/tongue-and-groove boards with or without chamfer no visible nails
boards widths	18,5 cm

Non-Visible Quality Nsi

wood type	spruce/fir/pine/douglas fir
surface	milled
boards widths	18,5 cm

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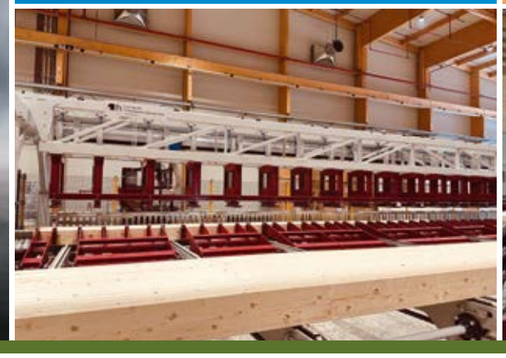
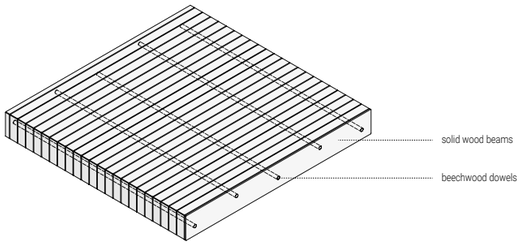
CEILINGS

joined with
beechwood dowels





WOODBLOC - THE DURABLE DOWELLED WOOD CEILING

- solid wood plank ceiling connected with beech wood dowels
- ceiling thickness: 80 mm to 240 mm
- ceiling dimensions: 30 cm to 240 cm in wide & 1 m to 13 m in length
- raw material: spruce wood 40 mm or 60 mm wide C16
- application: Ceilings and walls (alternative to concrete ceilings or in combination with wood and concrete)
- projects: Residential houses, apartment buildings, multi-story residential construction, commercial buildings, public buildings
- ETA-18/0960

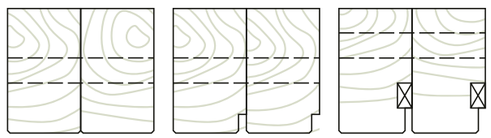
Now scan the QR code & download texts for your tender documents!

SURFACE QUALITIES

	Visible quality Si	Non-visible quality Nsi
wood type	spruce, fir (other types available on request)	spruce/fir/pine/douglas fir
lamella thickness	40 mm, 59 mm	varies/ 59 mm

PROFILE

In the visible quality of the ceilings, Si Bevel, Si Acoustic, or Si Acoustic+ with 10/20 mm wood fiber insert are possible.



SPAN LENGTHS

permanent loads* [kN/m²]	live load [kN/m²]	maximum length of single-span beam [m]										
		2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00	7,50
2,00	3,20	80	100	120	120	140	160	180	180	200	220	240
3,00	3,20	80	100	120	140	160	160	180	200	220	240	

permanent loads* [kN/m²]	live load [kN/m²]	maximum length of two-span beam [m]											
		2,50	3,00	3,50	4,00	4,50	5,00	5,50	6,00	6,50	7,00	7,50	8,00
2,00	3,20	80	80	100	120	120	140	140	180	180	200	220	240
3,00	3,20	80	80	100	120	140	160	160	180	200	220	240	240

permanent loads* [kN/m²]	live load [kN/m²]	maximum length of HBV ceiling [m]							
		6,00	6,50	7,00	7,50	8,00	8,50	9,00	9,50
2,00	3,20	160//70	160//80	180//80	200//90	200//110	220//90	220//110	240//110
		230	240	260	290	310	310	333	350
3,00	3,20	160//70	180//80	200/80	200/100	220//90	220//110	240/110	260//110
		230	260	280	300	310	330	350	370

* The self-weight of the dowel wood ceiling is considered. This table is for preliminary sizing only and does not replace a structural calculation.

Fire resistance: R60 R90

The following parameters and verifications were considered for the calculation: Use class 1 ▪ Duration of load effect class KLED: medium ▪ kmod = 0,8; kdef = 0,60 ▪ Glulam GL24c ▪ Serviceability limit state; initial deflection ≤l/300; final deflection ≤l/200, total deflection ≤l/300 ▪ Vibration verification: For DKL I ▪ Fire resistance verification: 3-sided char rate (left, right, bottom)

KEY DATA FOR DOWEL WOOD CEILING

wood moisture	12 - 15 %
sound insulation	see separate component constructions; measurements with various constructions are carried out (measurements available upon request) · more detailed information, see page 5
fire protection	D-s2, d0 · burning rate (EN 1995-1-2): β0 = 0,65 mm/min, βn = 0,7 mm/min
usage class	1 (heated indoor spaces) + 2 (covered, opend load-bearing structures) according to EN 1995-1-1

PEFC
PEFC/04-31-3797

The extra power in solid timber construction.

NATURAL WOOD FOR YOUR CLIENTS:

- boards made of 100% solid, untreated wood
- pure nature: no foils in the wooden wall, glue-free connection, no metallic connections
- diffusion-open construction: walls & ceilings that breathe
- pleasant indoor climate (ideal for allergy sufferers)
- excellent natural thermal insulation
- natural balancing of humidity & temperaturer
- healthy & ecological living environment
- high fire and sound protection
- sustainable, glue-free connected solid wood walls & ceilings
- fully finished wall and ceiling elements, including pre-milled installation layers

LOCAL WOOD FOR ENVIRONMENT & ECONOMY:

- construction with renewable resources
- spruce wood from our own forest and from local forestry within a 30 km radius
- utilization of storm-damaged or beetle wood
- processed at sawmills within a 20 km radius
- dried directly on the Woodbloc company premises
- short transport routes & processing by local wood experts
- significantly improved CO2 balance & energy-autonomous production
- climate-friendly construction with solid wood
- cost-effective & energy-efficient building
- high planning reliability & adherence to schedules

PERFECTLY PROCESSED WOOD FOR YOUR PROJECTS:

- multiple layers of wood for exceptional stability & strength
- biologically valuable and durable building material
- wood that does not „sweat“
- 100% dismantlable & recyclable
- simple, clean installation
- high flexibility for diverse projects
- more independence from weather conditions
- industrial prefabrication with consistent quality
- shorter construction times & sustainable solid wood construction

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