

KiriBloX®

THE SIMPLE WAY TO BUILD WITH WOOD

PRODUCT INFORMATION

WOOD ORIGIN	Agro-wood from agricultural land within the EU, no deforestation, partly organic certified, not from forests.
RENEWABLE / REGENERATIVE	Fast-growing (3–8 years), regrows after harvest (no replanting needed), EU agriculture, partly organic certified.
AGE OF TREE AT HARVEST	3–8 years.
FSC/PEFC CERTIFICATION	Not required. Since Kiri wood for KiriBloX® comes from agricultural land rather than forests, this type of certification is unnecessary. On the contrary, this approach goes beyond forest protection by reducing usage pressure on forests.
KIRI WOOD WEIGHT	Approx. 250 kg/m³.
SOLID WOOD UTILIZATION EFFICIENCY	Approx. 70% (from round log to KiriBloX®).
MANUFACTURER AND PRODUCTION SITE	KIRITEC GmbH, Tönisvorst, Germany.
SOLID WOOD CONTENT	In wall construction with 6 cm external insulation, solid wood content is approx. 75%.
LOAD-BEARING EXTERNAL WALL THICKNESS	25 cm + 6 cm diffusion-open external insulation + 2 cm interior lining = 33 cm for U-value 0.19. – Important: No gypsum board (GK), no OSB.
U-VALUE	The KiriBloX® 250 wall system achieves a U-value of 0.19 W/m²K with 6 cm fiber insulation outside and 2 cm plasterboard inside (standard wall structure).
FIRE PROTECTION	Fire resistance class REI90, no smoke penetration, no structural restrictions after 90 minutes of fire exposure at 1,000°C.
THERMAL INSULATION (λ) KIRI WOOD	Insulation value approx. 30% better than spruce or pine. With a thermal conductivity of $\lambda = 0.09$ W/mK, Kiri wood is significantly below the spruce/pine value of $\lambda \approx 0.13$ W/mK.
SOUND INSULATION	Material testing in preparation.
ROOM ACOUSTICS	Profiled wall surface improves room acoustics compared to flat surfaces.
WEIGHT	KiriBloX® 150: Approx. 11 kg KiriBloX® 250: Approx. 35 kg

ORIENTATION	The orientation of the KiriBloX® elements is done using conventional wooden beams or battens (floor sill). For wooden floors, direct mounting of KiriBloX® is possible. A horizontal moisture barrier is always installed beneath the elements to prevent rising damp
SUBSURFACE	OSB, multiplex, solid structural timber (KVH), or other suitable materials can be used as a sill, especially if the subsurface is uneven. On smooth surfaces (e.g., concrete), KiriBloX® is aligned on a horizontal moisture barrier. If the surfaces are sufficiently level or the ceiling is made of wood, KiriBloX® can be placed directly without leveling measures.
FLOOR ATTACHMENT	KiriBloX® walls are fastened to the floor slab using angle connectors according to the structural engineer's specifications. This is the standard method for attaching wooden constructions to slabs. If the wall is to remain visible, horizontally aligned angle connectors are used.
CEILING CONNECTION	The ceiling rests flush on the KiriBloX® wall. Whether it is a wooden ceiling (e.g., cross-laminated timber) or a concrete ceiling, it is connected to the KiriBloX® using standard fasteners (e.g., angles, screws, dowels, or plates) as specified by the structural engineer. This creates a flush exterior surface with the KiriBloX®.
FOIL / VAPOR BARRIER	Not required, since the monolithic wood mass evenly absorbs and releases indoor air moisture – without local condensation effects.
CAVITIES	Vertical cavities within the rectangular KiriBloX® must be filled on-site: blown-in insulation of the vertical cavities (all approved products).
FACADE CONSTRUCTION AND WALL PROTECTION	The exterior cladding must be applied from the outside – similar to other wall systems. It is crucial that the overall system remains vapor-permeable (e.g., through a ventilated facade or the use of mineral plasters and paints). Two proven solutions exist: ■ Vapor-permeable insulation board with mineral plaster – standard solution for simple, breathable facade design. ■ Vapor-permeable insulation board with vapor-permeable facade membrane – penetrations must be carefully sealed with suitable adhesive systems (e.g., adhesive tapes). A ventilated facade cladding (e.g., made of wood, metal, or stone) can then be applied. After installing the KiriBloX® shell, the exterior wall must be immediately protected from weathering – either by promptly installing the insulation boards or temporarily covering with foil.
INTERIOR CLADDING	Not mandatory. For smooth interior walls, an optional 2 cm plasterboard can be installed – only use diffusion-open components (boards, plasters, paints). Alternatively, interior can remain unclad.
EXTERIOR CLADDING	6 cm fiber insulation board is sufficient to achieve U-value mentioned above.
INSTALLATION AND ROUTING OF LINES	Installations along the vertical cavities on the interior side can be routed and concealed behind an interior cladding. Routing of cables and pipes is preferably done within the designated cavities to maintain the structural integrity of the KiriBloX® elements.
PIPE INSTALLATION	If a profile is removed for pipe installation, the shaft and pipe must be properly insulated. This is regulated by DIN standards; pipe shafts must always be insulated.

CO₂-STORAGE	63 kg per KiriBloX® 250 (permanently stored, as it is circular and reusable).
CIRCULARITY AND REUSABILITY	Reusable: Due to modular design, KiriBloX® can be used independently of buildings, fully recyclable, made of 100% wood.
FLEXIBILITY	Adaptations can be easily made during construction.
STRUCTURAL CAPACITY / MULTI-STORY	Load-bearing capacity unlimited: wall thickness of 25 cm successfully tested with 100 t load – equals approx. 4 stories. For higher loads, thicker walls required.
PLANNING TIME	Relatively short, thanks to standardization. Profile dimensions (E8 edge extension profile) expandable at will.
DIFFUSION-OPEN	Yes.
ESG CONFORMITY (SDGS)	7 Affordable and Clean Energy 8 Decent Work and Economic Growth 9 Industry, Innovation and Infrastructure 11 Sustainable Cities and Communities 12 Responsible Consumption and Production 13 Climate Action 17 Partnerships for the Goals
ETA APPROVAL	In progress.
EPD CERTIFICATION	In progress.
TRANSPORT EFFICIENCY	Approx. 40% more m ² per truck due to low weight and compact shape. Containers/trucks can be fully loaded.
WAREHOUSING LOGISTICS	Palletized, easy to store, lightweight.
ASSEMBLY TIME	Approx. 40% faster installation thanks to plug-in system.
ASSEMBLY COSTS	Fewer workers needed, significantly shorter assembly time.
MACHINERY / CRANE LOGISTICS	Mini cranes with gripper, 2–5 m reach sufficient.
FACTORY LEAD TIME / CONSTRUCTION TIME	No factory lead time necessary – assembly on-site possible within a few days.
DISMANTLING	Damage-free disassembly possible by sliding out dowels at joints.
SERIAL CONSTRUCTION	Highly standardized, modular, storable.
SKILLED LABOR REQUIREMENT	Low training effort, as construction is simple and self-explanatory.