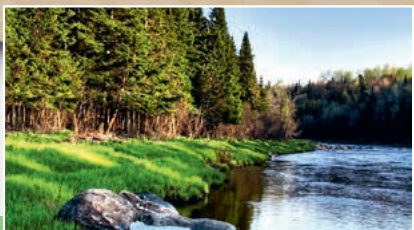


STEICO Building System

Product Information

Construction elements –
naturally made of timber



AREAS OF APPLICATION

I-Joists for floor joists,
rafters or wall studs.

Laminated Veneer Lumber
for joists, beams, studs, purlins,
header and sole plates,
lintels and structural panels.

- High load bearing capacity, long spans
- High dimensional stability
- Excellent manufacturing tolerances
- Compatible with existing timber sizes and connection methods
- High strength to weight ratio
- Reduced settlement
- Integrated construction and insulation system
- Efficient use of timber resources



STEICO construction products combine high load bearing capacity with the highest efficiency.

Nature shows us the way by producing slender constructions with maximum stability. The functional principles are simple: Reduction. Where no material is required then no material is wasted. The Result: Improved material properties with low weight and low primary energy consumption whilst providing the highest energy efficiency. The STEICO building system follows these principles.



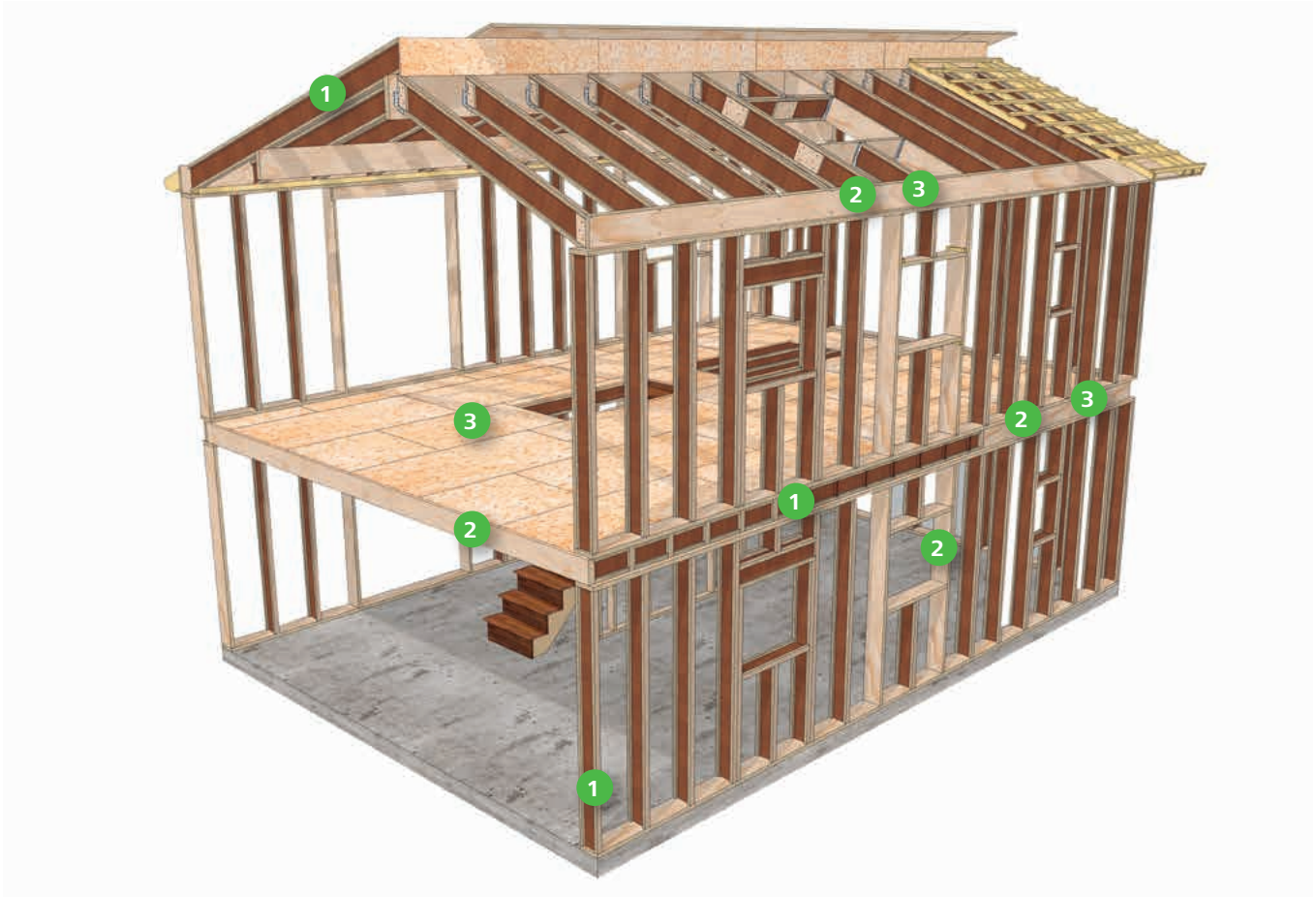
The STEICO Building System is certified by the Passive House Institute.

STEICOjoists are especially lightweight, energy efficient elements that uses a slender web material from natural fibreboard to connect the two flanges. The flanges are made of laminated veneer lumber STEICO LVL R. This guarantees consistently high quality and defined strengths.

STEICO LVL consists of several layers of bonded softwood veneers. This structure gives STEICO LVL its high strength. Laminated veneer lumber is one of the most resilient timber construction materials available.

STEICO Product overview

INDIVIDUAL COMPONENTS



STEICO I-joist



STEICOjoist

I-joist to European Technical Approval
ETA-20/0995

For use as floor joists, rafters or wall studs



STEICO Laminated Veneer Lumber



STEICO LVL R

CE certified and manufactured
to EN 14374

Laminated Veneer Lumber for joists, beams,
studs, purlins, rimboard



STEICO LVL X

CE certified and manufactured
to EN 14374

Laminated Veneer Lumber for structural panels,
rimboard, headers and sole plates

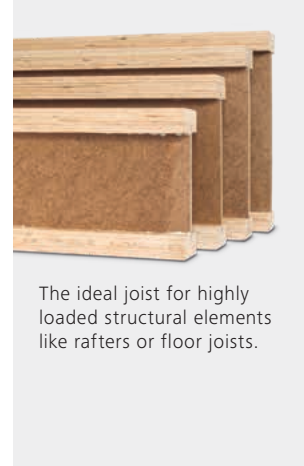


Product overview individual components: STEICO I-joists



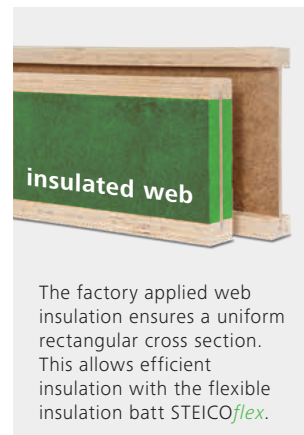
I-Joist Building System for roofs, floors and walls

STEICOjoist SJ _{LVL,HB} 45	STEICOjoist SJ _{LVL,HB} 60	STEICOjoist SJ _{LVL,HB} 90
Package = 43 pieces/package	Package = 33 pieces/package	Package = 23 pieces/package



Pre-Insulated joist – All I-joists are available with a pre insulated web

Package = 26 pieces/package	Package = 19 pieces/package	Package = 13 pieces/package



Example SJ_{LVL,HB} 45: S=STEICO, J=joist, LVL=Laminated Veneer Lumber flange, HB=Hardboard web, 45=width of the flange in mm

Product overview STEICO LVL

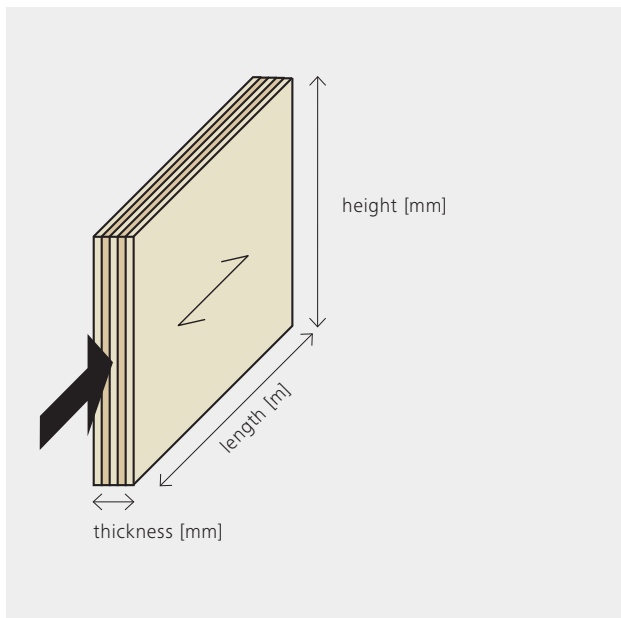
| STEICO LVL LAMINATED VENEER LUMBER

STEICO LVL is made of multiple 3 mm layers of graded laminated veneers. This disperses knots and irregular growth, producing a practically homogenous cross-section. This construction means that STEICO LVL is highly rigid and dimensionally stable.

STEICO LVL R

Laminated veneer lumber

Powerful engineered timber product for rectangular cross-sections. With STEICO LVL R elements all veneer layers are glued together longitudinally.

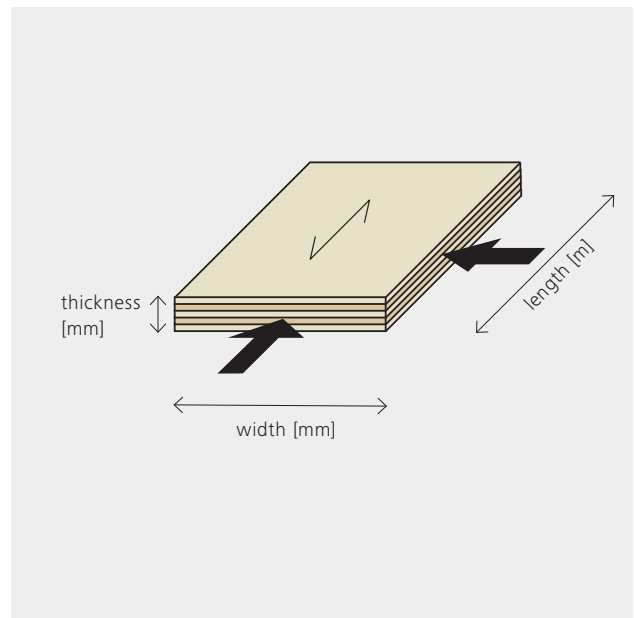


STEICO LVL R used for the construction of high load bearing floor structures

STEICO LVL X

Laminated veneer lumber with cross-layers

Cross laminated STEICO LVL X means that ca. one-fifth of the veneers are glued crosswise – improving the lateral bending strength and stiffness of the joist.



STEICO LVL X as a stiffening decking element for pre-assembled floor cassettes

Note: The available standard cross-sections of STEICO LVL laminated veneer lumber can be found in the current product list.

Advantages

ADVANTAGES OF THE STEICO BUILDING SYSTEM

Reduced thermal bridging	Improvement of base U-value levels by up to 15 %. – Reduction of low surface level temperatures
High load bearing capacity with low self-weight	Up to 3 times the weight saving
Pre-Insulated option	Factory insulated joists ensure uniform rectangular cross-section
Easy installation of services	Services can be run through holes in I-joist web
Defined moisture content close to the material norm (8 - 12 %)	Reduces swelling and shrinkage dimensions
Usage of dimensionally stable materials	Reduction in dimensional changes by up to 90 % with changes in moisture when compared to solid timber.
Cuts	Cuts available on request
Resource saving by using timber as a raw material	Timber is only used where it is required.
Usage of homogenous materials	Defined material stability and hence material reduction
Compatible components	Compatible material thickness with STEICO ^{flex} or STEICO ^{zell} STEICO ^{LVL} sizes in line with STEICO ^{joist}
Usage of renewable materials	STEICO products with PEFC certification ensure responsible forest stewardship.
Fire protection	Testing constructions available
Certified quality	Both the STEICO ^{joist} and STEICO ^{LVL} are CE certified. Production is supervised by independent 3 rd parties.
Design software	STEICO offers single member and full design software packages for STEICO ^{joist} and STEICO ^{LVL} . Please contact us.
Passive House certification	The STEICO Building System with STEICO ^{joist} and STEICO ^{LVL} are certified as Passive House components by the Passive House Institute.



Reduce thermal bridges



Light and easy to handle, perfect for use in conversion projects and sites with limited access



Usual rectangular section with web insulation



Easier Installation of building technology



Precise manufacturing tolerances



Can be processed using standard wood processing machines



Environmentally friendly and recyclable



Great bearing strength, large spans and stiffness enabling long spans



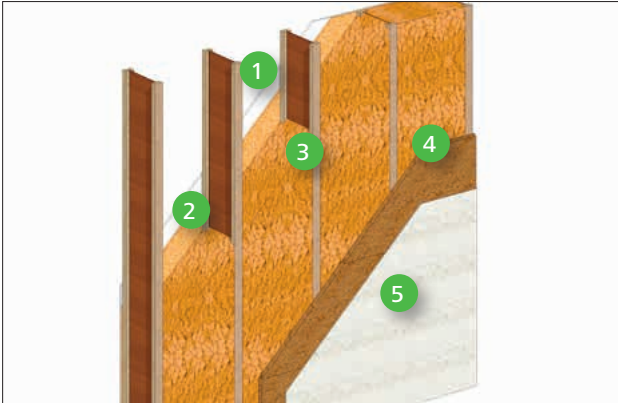
Available in standard joist dimensions and custom depths

Production is monitored internally and external in order to ensure consistent product quality. The STEICO I-joists are approved under ETA-20/0995.



Optimised building fabric

EXTERNAL WALL CONSTRUCTION



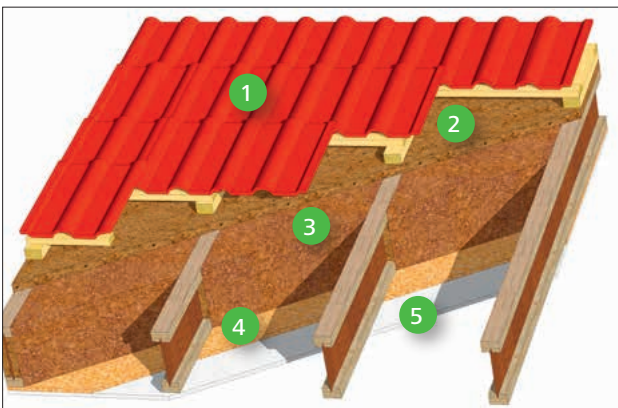
Build up from inside to outside

- 1 Plasterboard
- 2 Structural timber board
- 3 STEICOjoist with STEICOzell air-injected wood fibre insulation
- 4 STEICOprotect H external render board
- 5 Render system

Advantages of the system

- Only 5 elements to make an ecological vapour open system
- Robust external wood fibre insulation system
- Vapour open – no additional vcl required
- High specific heat capacity of the external wood fibre board – warm wall surface hence less risk of algae or mold
- Produced from renewable material
- Dimensional stability
- U values can be adjusted by varying the joist depth with minimal effect on cost.
- Defined material moisture content
- Fire certification available

ROOF CONSTRUCTION



Build up from outside to inside

- 1 Counter batten, tile batten, roof covering
- 2 STEICOuniversal sarking board
- 3 STEICOjoist with STEICOzell air-injected wood fibre insulation
- 4 Vapour control layer with batten
- 5 Plasterboard

Advantages of the system

- Secure STEICOuniversal sarking board
- Vapour open – no additional vcl required
- Excellent summer heat protection due to high specific heat capacity
- Often no purlins require and therefore increased internal room
- Produced from renewable materials
- Fire certification available
- U values can be adjusted by varying the joist depth with minimal effect on cost
- Dimensional stability
- Defined material moisture content