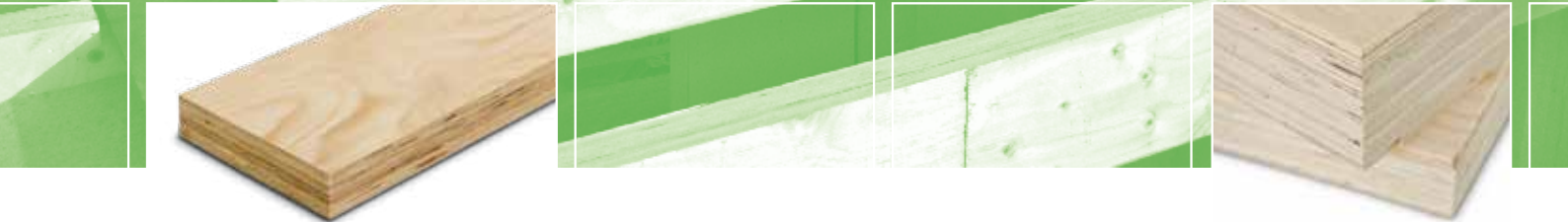


Construction elements –  
naturally made of timber



## AREAS OF USE

Joists, beams, studs, purlins, top plates, window and door lintels, main beams, structural boards etc.

Various industrial applications.

System component for the STEICO<sup>construction</sup> building system.



- LVL – Laminated Veneer Lumber for various applications
- available in a wide range of thicknesses and formats
- high strength to weight ratio
- dimensional stability
- high compression strength for Rimboard applications
- easily cut and machined using traditional tools
- minimal settlement
- high connection capacity and fixing withdrawal strength
- efficient use of timber resources

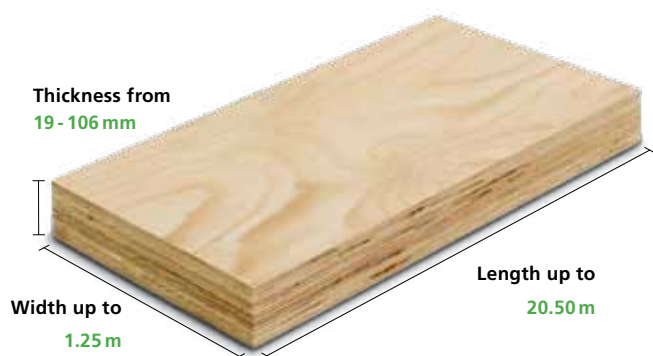
For further information, please visit [www.steico.com](http://www.steico.com)



# Quality and Efficiency

STEICO **LVL**: Laminated veneer lumber for the highest demands

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



Producing the product in this method also allows a larger variety of formats to be produced thanks to the production of a blank sheet up to 20.5 m long and 1.25 m wide.

## CE-certified

The Stuttgart Materials Testing Institute of the University of Stuttgart (Germany) have certified STEICO **LVL R**, with lateral veneer layers, and STEICO **LVL X**, with crosswise veneer layers according to EN 14374.

## INFINITE AREAS OF USE



Factory produced wall cassettes with STEICO **LVL R** and STEICOWall.



STEICO **LVL R** for high load-bearing capacity floor elements

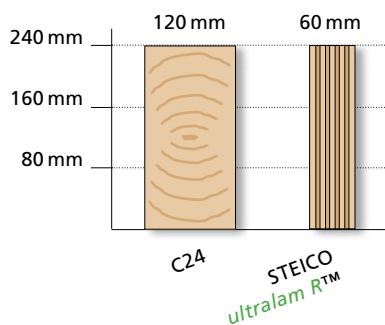


Pre-assembled box girders for roof construction.

Whether used as a Beam, Joist, Column, Sole Plate, Structural Roof Decking or for Industrial applications: STEICO **LVL** excels with its versatility.

Its increased structural integrity allows for high load bearing yet slender constructions which combine Architectural requirements with long term safety and security.

#### Cross sections with same bending strength

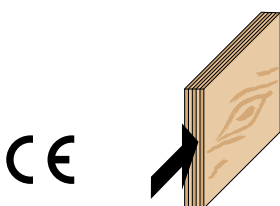


#### STEICO **LVL R** IS ONE OF THE MOST RIGID ENGINEERED WOOD PRODUCTS AVAILABLE

The current test figures that were identified during CE-certification, confirm the high quality of STEICO **LVL**. The vertical bending strength is 48 N/mm<sup>2</sup> and the characteristic flat bending strength is 50 N/mm<sup>2</sup>. This means that the bending strength is twice that of normal C24. The compression strength is an impressive 40 N/mm<sup>2</sup>, and the modulus of elasticity has an average of 14,000 N/mm<sup>2</sup>. This means: slender structural elements, less materials and reduced costs.

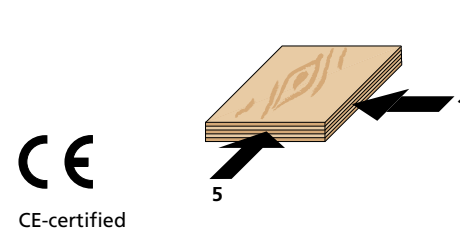
**STEICO **LVL R****  
ultralam Laminated Veneer Lumber

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



**STEICO **LVL X****  
ultralam Laminated Veneer Lumber

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 board.





## CERTIFICATION

STEICO **LVL R** is being produced and monitored according to the harmonised European product standard EN 14374 and bears the CE mark.

## STORAGE/TRANSPORT

STEICO **LVL** laminated veneer lumber should be stored flat. The distance between the supporting beams should not exceed 2 m. STEICO **LVL** should be protected from the elements.

## MOISTURE

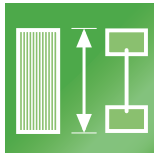
STEICO **LVL** should be protected from excessive exposure to moisture. STEICO **LVL** is produced and delivered with a moisture content of approximately 8-10%.



Production certified accor. to ISO 9001:2008



High load bearing capacity



Heights to match STEICO I-Joists



High dimensional stability



Easy to machine

## AVAILABLE FORMATS OF STEICO **LVL R**

Length [mm]	Thickness [mm]	Width [mm]	Pieces/Pak.	Weight/Pak. [kg]
12,000	39	200	30	ca. 1,690
		220	30	ca. 1,690
		240	25	ca. 1,690
		300*	20	ca. 1,690
		360*	15	ca. 1,690
		400*	15	ca. 1,690
12,000	45	200	30	ca. 1,950
		220	30	ca. 2,140
		240	25	ca. 1,950
		300	20	ca. 1,950
		360*	15	ca. 1,750
		400*	15	ca. 1,950
12,000	75	200	18	ca. 1,950
		220	15	ca. 1,790
		240	15	ca. 1,950
		300	12	ca. 1,950
		360	12	ca. 2,340
		400	9	ca. 1,950
12,000	90	200	18	ca. 2,340
		220	15	ca. 2,140
		240	15	ca. 2,340
		300	12	ca. 2,340
		360	9	ca. 2,100
		400	9	ca. 2,340

\* To be used as part of a multi-ply beam or rimboard only.

Customized sizes and qualities are available on request as well as special packaging and shipment. Formats for STEICO **LVL X** on request.

## CHARACTERISTIC DESIGN VALUES FOR STEICO **LVL**

according to EN 14374 to be used in design according to Eurocode 5 in N/mm<sup>2</sup>

Characteristic density = 480 kg/m<sup>3</sup>.  
Size effect parameter s = 0.15

	Panel Applications	Beam Applications
Bending strength $f_{m,0,k}$	50.0	48.0
Tension strength $f_{t,0,k}$	36.0	36.0
Compr. strength parallel to grain $f_{c,0,k}$	40.0	40.0
Compr. strength perpendicular to grain $f_{c,90,k}$	3.8	7.5
Shear strength $f_{v,k}$	3.2	4.6
Modulus of elasticity $E_{0,mean}$	14,000	14,000
Shear modulus $G_{mean}$	500	500

STEICO **LVL R**

Bending strength $f_{m,0,k}$	38.0	34.0
Tension strength $f_{t,0,k}$	24.0	24.0
Compr. strength parallel to grain $f_{c,0,k}$	34.0	34.0
Compr. strength perpendicular to grain $f_{c,90,k}$	4.2	8.0
Shear strength $f_{v,k}$	2.7	4.6
Modulus of elasticity $E_{0,mean}$	10,600	10,600
Shear modulus $G_{mean}$	550	550

STEICO **LVL X**