

Kerto® LVL

Qp-beam



Kerto® LVL Qp-beam is a dimensionally accurate roof beam that can be used in roof structures of new constructions and repairs. Qp-beam enables spacious rooms and reduces the need for supporting lines.

Kerto Qp-beam is made of the 3 mm thick strength graded softwood veneers. Two of the veneer layers are oriented in crosswise direction. The veneers are bonded with weather- and boil-resistant phenol formaldehyde adhesive. The cross-bonded veneer layers minimize swelling, cupping and other dimensional changes in the product.

Qp-beam is a stiff, rigid and precise roof beam with excellent strength-to-weight ratio. The use of high and slender beams reduces the need of support grids enabling the construction of spacious rooms, and increases the space for insulation.

Applications

Structural applications:

- Beams with greater height for roof constructions
- Other special roof applications

Major advantages

- Dimensionally precise
- Allows stiff beams with greater height
- Designed especially for highly insulated roof constructions
- Excellent strength-to-weight ratio
- Dimensional stability improved against warp and twist
- Easy to design with free Finnwood design software
- Great workability and quick to install
- Easy to fasten, nail and drill
- Ensures material efficiency with customised product dimensions
- Made of sustainable northern wood and PEFC certified
- Kerto LVL (1 m³) contains the stored carbon equivalent to 794 kg CO₂

Approvals and design properties

Kerto LVL Qp-beam is CE marked and the design properties are determined according to standard EN 14374. The design properties given in the Declaration of Performance (DoP) are to be used for structural calculations with EN 1995 (Eurocode 5). The DoP documents can be downloaded from www.metsawood.com/dop.

Qp-beam has also national approval in Germany.

Kerto LVL production is managed according to the principles of the ISO 9001. The quality and the constancy of the performance of the product is controlled by regular third party inspections and audits.

Overall dimensions

	MINIMUM (mm)	MAXIMUM (mm)
Thickness	39	75
Width/height	500	2,500
Length	2,000*	20,000

* Short lengths (< 2,000 mm) are available on request.

Standard tolerances

	SIZE	MINIMUM	MAXIMUM
Thickness	39 ≤ t ≤ 57 mm	-2.0 mm	+2.0 mm
	t > 57 mm	-3.0 mm	+3.0 mm
Width/height	< 400 mm	-2.0 mm	+2.0 mm
	≥ 400 mm	-0.5 %	+0.5 %
Length	All	-5.0 mm	+5.0 mm

In moisture content of 10 ± 2 %. Special tolerances are available on request.

SANDING OF KERTO LVL AFFECTS PRODUCT THICKNESSES

- Optical sanding reduces the original nominal thickness by approximately 2 mm. The standard thickness tolerances apply to the sanded nominal thickness. Structural design shall be made according to the sanded nominal thickness.
- Calibrated sanding reduces the original nominal thickness by approximately 3 mm. The thickness tolerance of calibrated sanded products is +/- 0.5 mm from the target thickness. The dark glue line may become visible as it is allowed to sand through the face veneers. Structural design shall be made according to the sanded nominal thickness.

Panel constructions

THICKNESS (mm)	NUMBER OF PLYS	LAY-UP
39	13	II-III-III-II
42	14	II-III-III-II
45	15	II-III-III-II
51	17	II-III-III-II
57	19	II-III-III-II
63	21	II-III-III-II
69	23	II-III-III-II
75	25	II-III-III-II

Special constructions are available on request.

Bonding

Kerto LVL is bonded with a weather- and boil-resistant phenol formaldehyde adhesive. The gluing meets the requirements of the standard EN 14374. The face veneer scarf joints on the front side of the product are glued with colourless adhesive.

During hot pressing the adhesive cures as thermoset plastic, and therefore is inert and non-hazardous to humans and animals.

Formaldehyde emissions

Determined according to EN 717-1, the formaldehyde emitted by Kerto LVL falls far below the Class E1 requirement of ≤0.100 ppm and also fulfils the most stringent requirements in the world (≤0.030 ppm). The formaldehyde emissions of Kerto LVL are approximately 0.018 ppm.

Further processing

Kerto LVL Qp-beam can be further processed in various ways according to end-use requirements.

Sanding	Optical sanding, 2 sided only Calibrated sanding, 2 sided only
Machining	Machined to special size and shape, notches and holes
Temporary weather protection - up to width 610 mm	WeatherGuard
Treatment against mould	MouldGuard

Packing

Products are packed in moisture-resistant plastic wrapping or packing hoods. Packages can be stored outside only temporarily. Longer-term storage is recommended under cover in dry conditions.

On request the products can be delivered without plastic wrapping. In this case products shall not be exposed to weather.

Further information

- Kerto LVL Qp-beam Declaration of Performance (www.metsawood.com/dop)
- Kerto LVL Manual (www.metsawood.com/kertomanual)
- Kerto LVL for Load Bearing Applications brochure

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