

Building elements
with innovative LVL

NEW

High load bearing
members



AREAS OF APPLICATION

For **load bearing elements**
(e.g. drop beams),
flat building components
(e.g. ceiling element) and
threshold material.



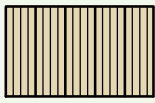
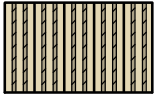
MATERIAL

The timber used in the production of STEICO *GLVL* originates from forests which are managed in accordance with the strict rules of the FSC® (Forest Stewardship Council®) or PEFC®.

- Glue bonded sections of STEICO *LVL R* or STEICO *LVL X*
- High load bearing, robust and dimensionally stable building element
- Alternative to the use of Steel beams (up to 50% reduction in weight)
- Heights up to 400 mm
Width up to 1,000 mm
Length up to 18 m
- Easy to process, just like softwood
- Product certified according to German Technical Approval AbZ Z-9.1-870

Further information can be found in the appropriate construction catalogue at www.steico.co.uk

PRODUCTION POSSIBILITIES FOR STEICO *GLVL* BONDED SECTIONS

Type	Application	Build-Up	Lamellas	Height	Width	Length
STEICO <i>GLVL R</i>	Primary and Secondary beams, Threshold, Lintels, Ceiling element		STEICO <i>LVL R</i> (parallel veneer layers)	up to 400 mm	up to 1,000 mm	up to 18 m
STEICO <i>GLVL X</i>	Threshold, Rimboard		STEICO <i>LVL X</i> (with cross veneer layers)	up to 400 mm	up to 400 mm	bis 18 m

Characteristic design properties for STEICO *GLVL*

Type	Strength and Stiffness	Unit	STEICO <i>GLVL</i>	Glulam GL 24c	Improvement
STEICO <i>GLVL R</i>	Bending strength parallel	$f_{m,0,edge,k}$	44 N/mm ²	24 N/mm ²	+83 %
	Compression strength perpendicular	$f_{c,90,edge,k}$	7.5 N/mm ²	2.5 N/mm	+200%
	Shear strength parallel	$f_{v,0,edge,k}$	4.6 N/mm ²	3.5 N/mm	+31%
	Modulus of elasticity parallel	$E_{0,mean}$	14,000 N/mm ²	11,000 N/mm	+27%
	Density	ρ_k	480 kg/m ³	365 kg/m ³	+32%
STEICO <i>GLVL X</i>	Bending strength parallel	$f_{m,0,edge,k}$	32 N/mm ²	24 N/mm	+42%
	Compression strength perpendicular	$f_{c,90,edge,k}$	9.0 N/mm ²	2.5 N/mm	+260%
	Shear strength parallel	$f_{v,0,edge,k}$	4.6 N/mm ²	3.5 N/mm	+31%
	Density	ρ_k	480 kg/m ³	365 kg/m ³	+32%

Comparison: STEICO *GLVL* vs. Steel with the same bending stiffness

Type	Steel profile			STEICO <i>GLVL R</i>	
	Profile	Width [mm]	Height [mm]	Width [mm]	Height [mm]
IPE	140	73	140	160	200
	160	82	160	160	220
	180	91	180	160	260
	200	100	200	240	260
	220	110	220	200	280
	240	120	240	200	340
HEA	140	140	133	200	220
	160	160	152	200	260
	180	180	171	240	280
	200	200	190	240	320
	220	220	210	240	360
	240	240	230	280	380
HEB	140	140	140	200	240
	160	160	160	200	300
	180	180	180	240	320
	200	200	200	240	360
	220	220	220	280	380
	240	240	240	320	400

Lower weight with the same bending stiffness and simplified details



STEICO
engineered by nature

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