

 **Pollmeier LVL S**



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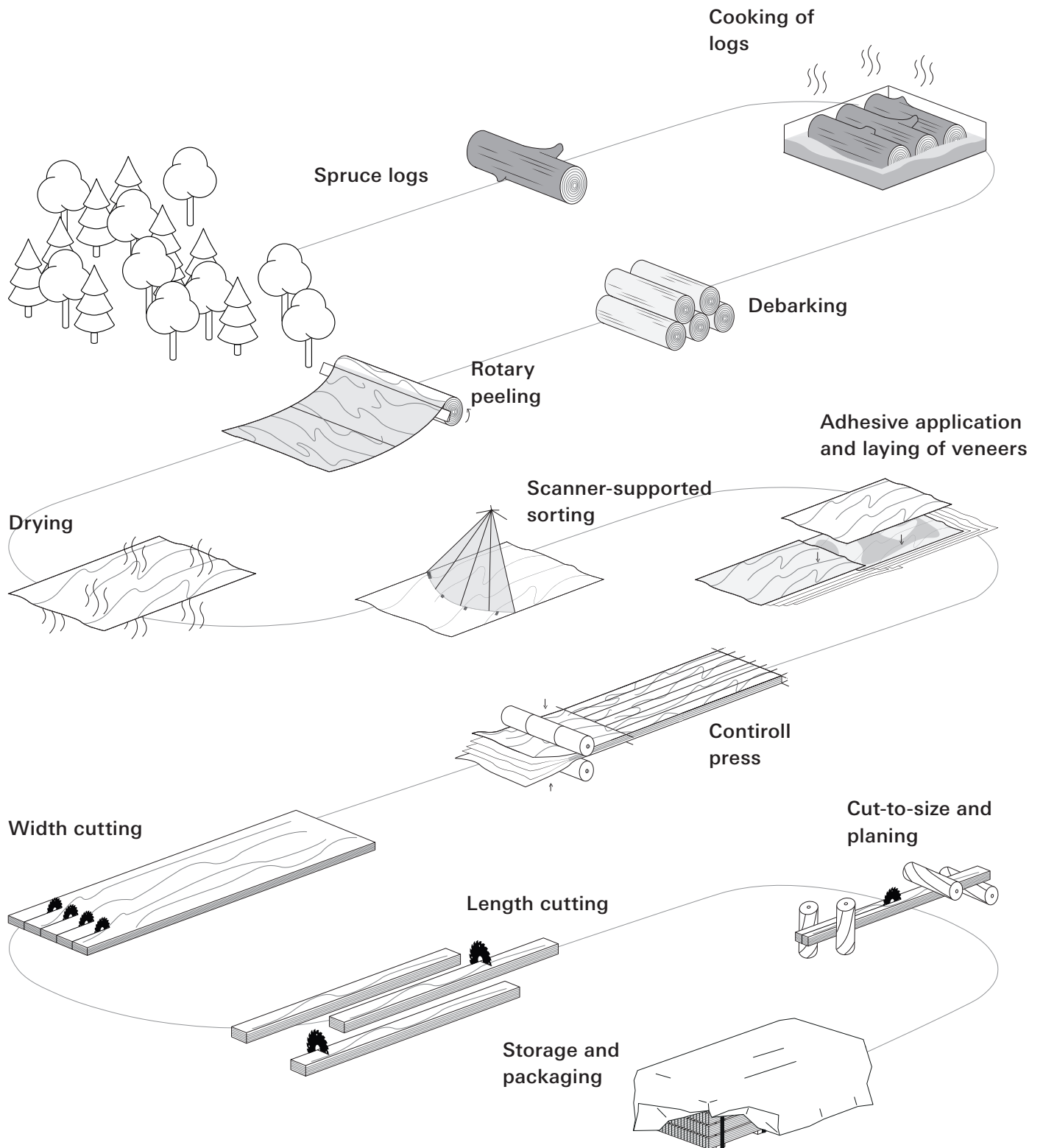
Pollmeier LVL Production

Innovative materials such as laminated veneer lumber (LVL) create new opportunities. LVL helps make wood more efficient. It offers greater possibilities in timber construction while simultaneously being cost-efficient in

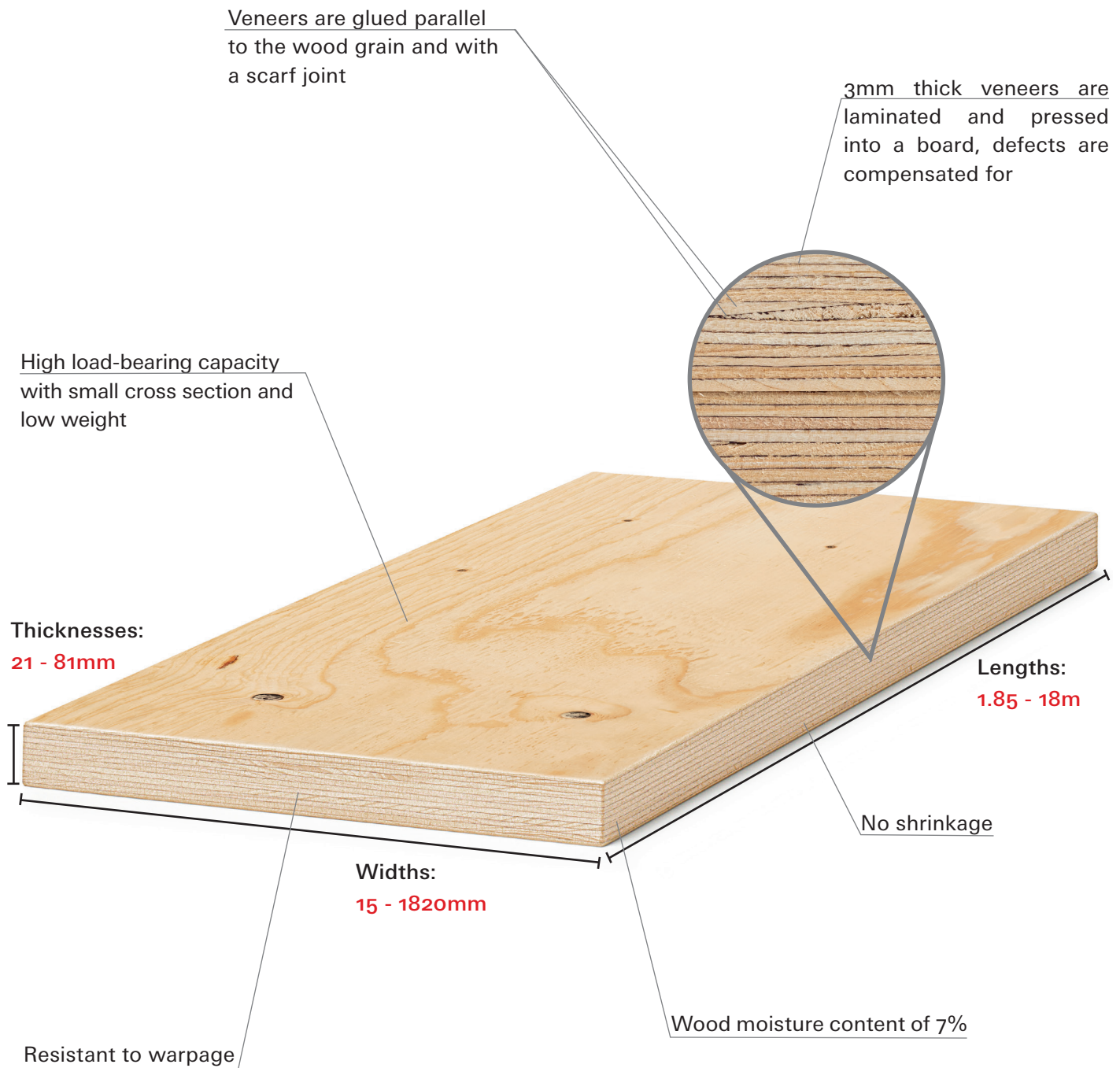
practical use. Pollmeier operates the most modern laminated veneer lumber factory in Europe with a capacity of 120,000 m³ Pollmeier LVL S. All products originate 100% from sustainable forestry.



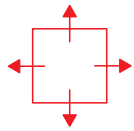
Production process – from log to LVL



What is Pollmeier LVL S?



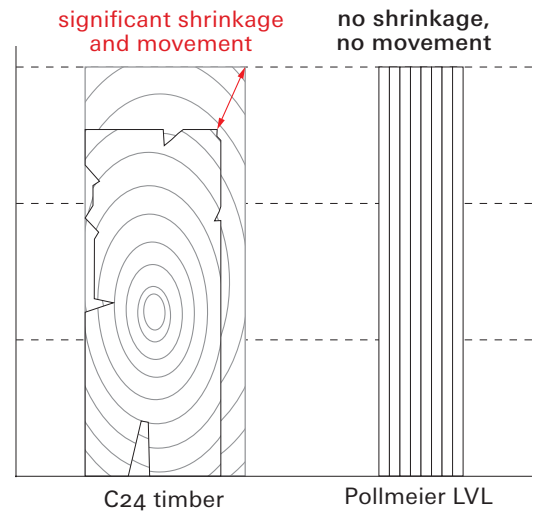
Your advantages at a glance



Dimensional Stability & No Shrinkage

- Straight construction parts - even when using long lengths
- No twisting or warping thanks to glued veneer layers
- Avoids settlement cracks
- Homogeneous material properties

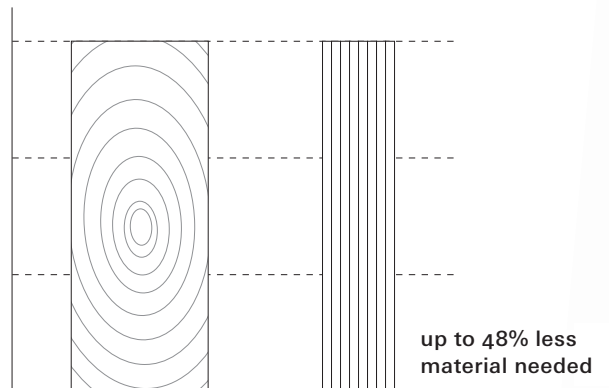
Dimensional Stability – cross-section



High Strength & Load-Bearing Capacity

- Slim and simultaneously highly stable cross-sections
- Material savings result in weight reduction
- Homogenous strength, no weak points unlike solid wood

Material Savings

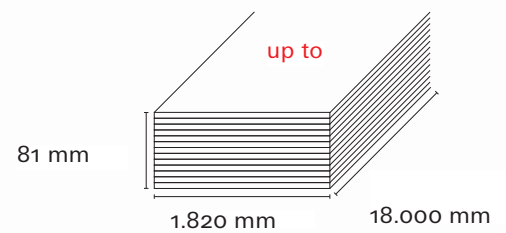
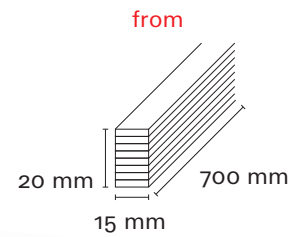


	Timber C24	Glulam GL24c	PM LVL S
E-Modul - $E_{o,mean}$	11000	11000	14000
E-Modul - $E_{o,05}$	7400	9100	12000
Bending strength edgewise $f_{m,k}$	24	24	44
Compressive strength edgewise $f_{c,90,k}$	2,7	2,5	7,3
Compressive strength flatwise $f_{c,0,k}$	21	21,5	40



Extreme Flexibility

- Bar-shaped elements are cut to size with millimeter precision
- Precise cut with beveled or sharp edge
- Very low tolerances thanks to the latest production technology



Easy Processing

- Easy processing with common tools: staples, nails, screws and drills. No special tools needed.
- Works and processes in the same way as solid wood and glulam
- High screw and nail pull-out strength



Application: Sole and Top Plate

Using Pollmeier LVL S to construct sole and top plates in timber frame construction increases the performance of wall constructions. LVL is also suitable for multi-story constructions. Where solid timber and glulam reach their technical limits, Pollmeier LVL S can be used without hesitation.

LVL offers you

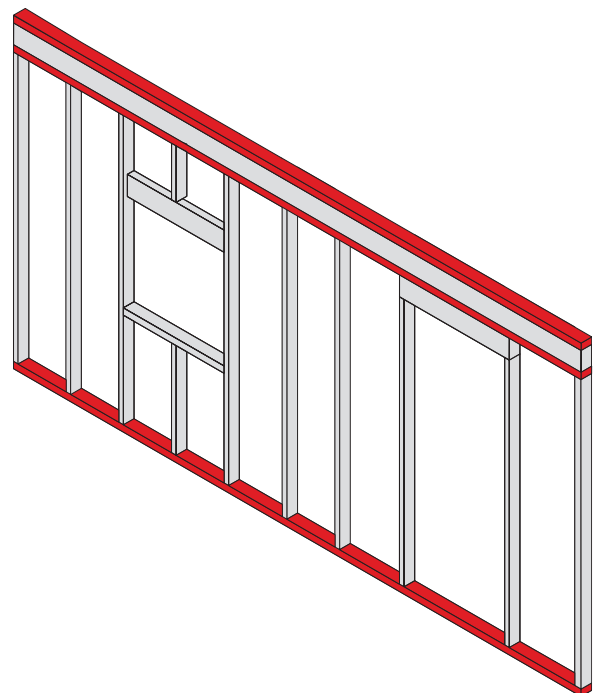
- High compressive strength
 - Resistance to twisting/warpage
 - No shrinkage
-

Your advantages

- Avoids settlement
 - Exceeds the performance of solid timber and glulam, also suitable for multi-story constructions
 - Precision fit components
 - No movement in the wooden frame
-

How you benefit

- No settlement cracks
- Inexpensive, simple and reliable solution to safeguard higher loads
- No repair work required
- Work time savings
- No replacement material necessary



Application: Wall Stud

LVL is often used as a highly resilient wood-based material wherever higher loads are required – e.g. as wall studs around door and window openings. Thanks to its high strength properties, it is easy to implement smaller cross-sections with Pollmeier LVL S.

LVL offers you

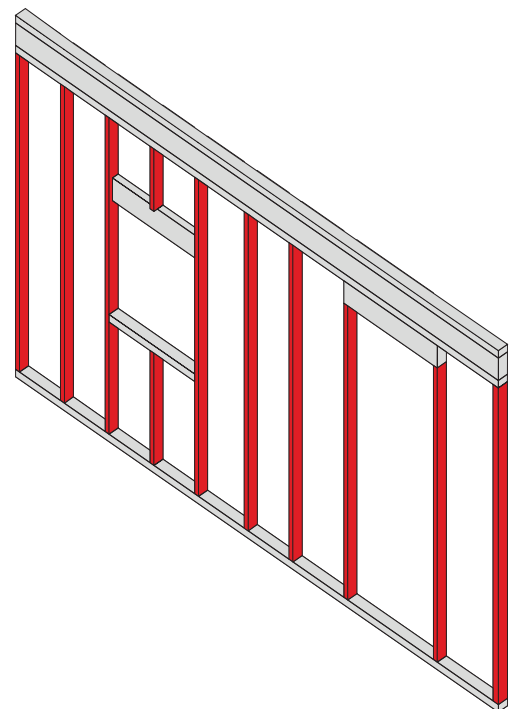
- High load-bearing capacity
 - Resistance to twisting/warpage
 - No shrinkage
-

Your advantages

- Smaller cross-sections
 - Precision fit components
 - No movement in the wooden frame
 - Straight walls from the start
-

How you benefit

- Reduced thermal bridges
- Gain in living space (more room)
- Work time savings
- No replacement material necessary
- Drywall panels can be attached directly to the wall studs
 - No wall straightening required
 - No cracks in the filler joints



Application: Lintel (Windows and Doors)

For wall openings, Pollmeier LVL S offers the required stability and flexibility in installation.

LVL offers you

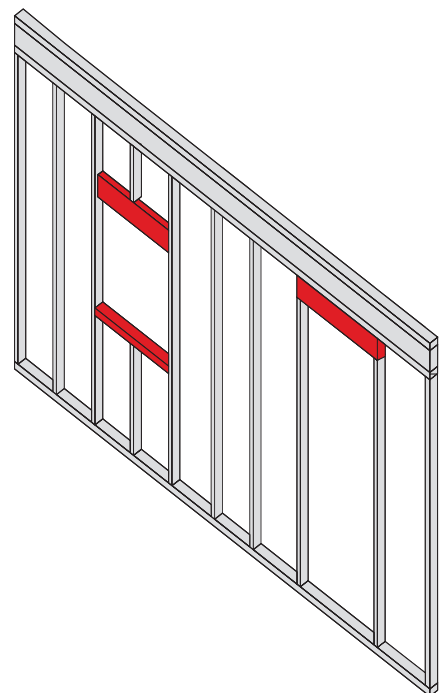
- High modulus of elasticity
 - Resistance to twisting/warpage
 - High strength with simultaneously low weight
 - Wood-to-wood connection
-

Your advantages

- Highly rigid component with reduced cross-sections, also for large spans
 - Refurbishment:
 - Easy to install and stack
 - Easily cut to size on site
 - Simple and reliable reinforcement of old construction parts
-

How you benefit

- Easy handling during assembly
- Precise installation of the structural elements
- Reliable protection for doors and windows
- Simpler, quicker, and cheaper solution for refurbishments



Application: Rim Board

The rim board closes off the ceiling construction on the outside and absorbs loads. By using dimensionally stable Pollmeier LVL S, settlement cracks can be avoided and pressure compression can be reduced. Together with the outer beams, the rim board forms a solid ring beam.

LVL offers you

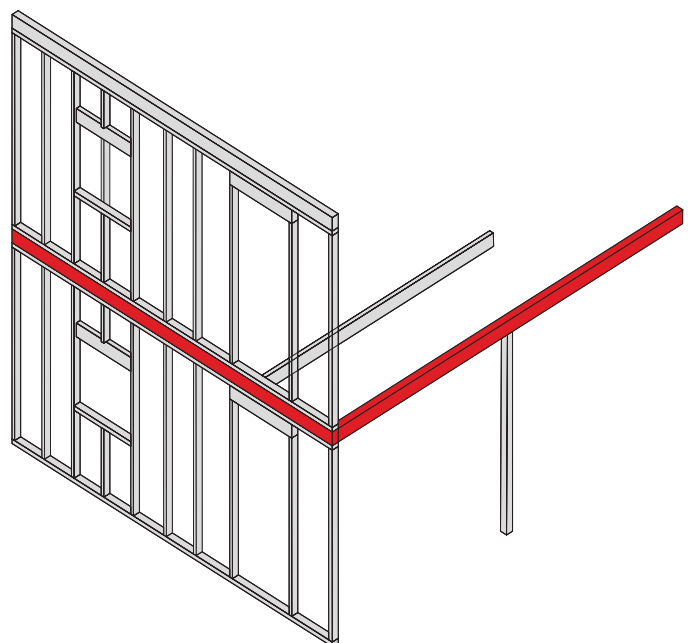
- Resistance to twisting/warpage
 - No shrinkage
 - High compressive strength
 - High embedment and pull-out strength of the fasteners
-

Your advantages

- High precision fit beam installation
 - Settlement is avoided and pressure compression is reduced
 - Smaller cross-sections
 - Larger wall support surfaces
 - Simple and reliable position fixing of the beam with fewer fasteners
-

How you benefit

- Work time savings thanks to quick and simple installation without repair work
- Inexpensive, simple, and reliable solution for bearing higher loads
- No settlement cracks
- Combination of the rim board and outer beams results in a heavy-duty ring beam
- Work time and cost savings thanks to fewer fasteners
- No replacement material needed



Application: Beam

Thanks to its high load-bearing capacity, beams made of LVL enable slim constructions for large loads and spans. The special structure consisting of firmly laminated veneer sheets ensures that LVL is a particularly dimensionally stable wood-based material. Its modulus of elasticity, compressive strength, tensile strength and flexural strength far exceed those of solid wood and glulam.

LVL offers you

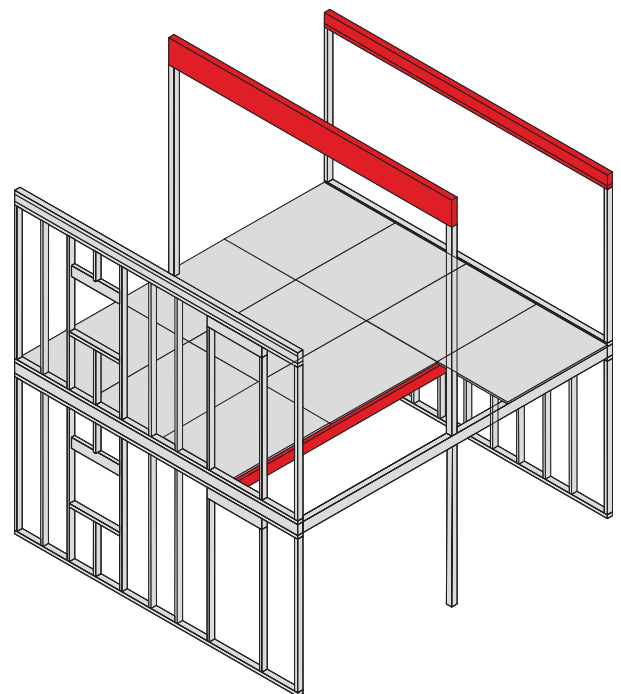
- High load capacity with simultaneously low weight
 - Resistance to twisting/warpage, no shrinkage
 - High embedment and pull-out strength of the fasteners
-

Your advantages

- Reduced cross-sections enable a slimmer ceiling construction
 - Unchanged slim ceiling structure even with open-ceiling concept
 - Particularly suitable for large spans without additional stud support
 - Ensures straight ceilings and floors = double effect
 - Precision fit components
 - No movement in the wooden frame
 - Simple and reliable position fixation with fewer fasteners
-

How you benefit

- Inexpensive, simple and reliable solutions for bearing higher loads
- Space gain and cost savings thanks to smaller cross-sections
- Open room concepts are easier to implement, more flexibility in design
- Work time savings thanks to fast and simple installation without repair work
- Both drywall and floor constructions can be carried out directly on the ceiling beam without leveling work and risk of crack formation
- Work time and cost savings thanks to fewer fasteners



Application: Drywall Construction

Thanks to its properties, Pollmeier LVL S can be used simply and easily in drywall construction.

LVL offers you

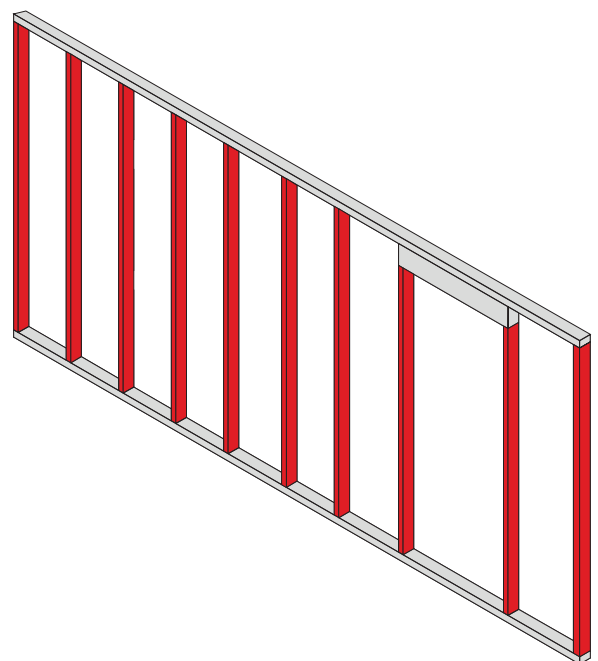
- Available in the typical drywall formats
 - Simple to screw, staple, and nail
 - Resistant to twisting/warping, no shrinkage
 - High load-bearing capacity of the structural elements' openings
 - No metal substructure
-

Your advantages

- Easy to implement LVL in the existing drywall construction systems, also in combination with standardized drywall construction profiles
 - Straight wall surface without leveling work
 - No crack formation in the filler joints
 - Enables secure fastening of wall cabinets and shelves to the drywall construction
 - No electro smog
 - Improved noise insulation of the substructure
-

How you benefit

- Simple and efficient use of wood in drywall construction
- No additional substructure required to hang heavy objects
- Flexibility for the future: stable wooden frame as the core for future installations and modifications
- Promotes healthy living



Application: Timber Frame Refurbishment

The combination of high strength, small cross-sections, and low weight makes Pollmeier LVL S the perfect material to use in the refurbishment of old timber frame structures

LVL offers you

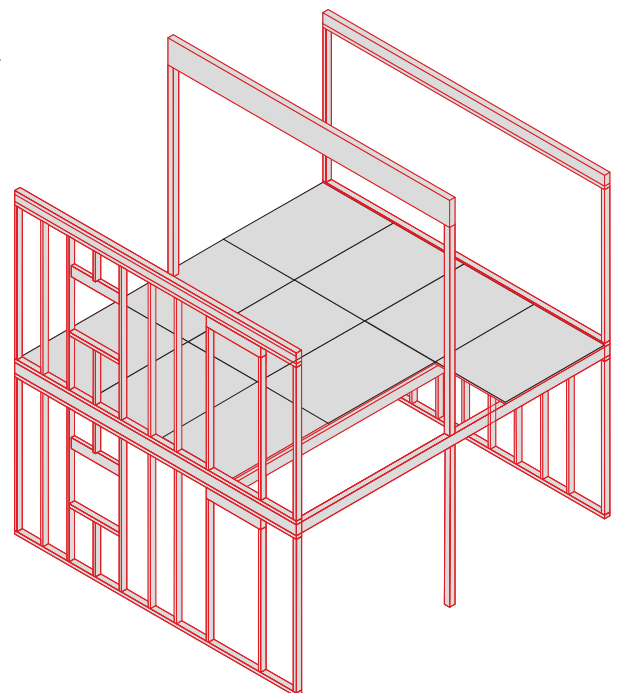
- High strength with a small cross-section and low weight
 - Flexible cuttings from large board formats
 - CE certified material
 - Use of wood instead of steel
-

Your advantages

- High stabilization effect with small and light components
 - Also suitable for larger spans and higher loads
 - Precise calculation of the component sizes required for refurbishment
 - Easily adjustable to the necessary formats on site
 - Simple assembly and wood-to-wood connection
 - Easy to double up
-

How you benefit

- Simple and highly flexible use with little pre-planning effort
- Perfect to use in small spaces, especially when dealing with space restrictions
- Can also be used in hard-to-reach places with few personnel
- Room openings with larger spans can also be realized without studs and disruptive cross-sections
- Offers more design options
- Time and cost savings



Technical specifications



Type of load		Pollmeier Spruce LVL S
Nominal thickness in mm		$21 \leq B \leq 81$
Characteristic strength values		
Flatwise load [N/mm ²]		
Bending	$f_{m,o,flat,k}$	50
Compression	$f_{c,go,flat,k}$	3,6
Shear	$f_{v,o,flat,k}$	2,6
Edgewise load [N/mm ²]		
Bending ^{b)}	$f_{m,o,edge,k}$	44
Tensile to grain	$f_{t,o,k}$	31
Tensile ⊥ to grain	$f_{t,go,edge,k}$	0,9
Compressive to grain	$f_{c,o,k}$	40
Compressive ⊥ to grain	$f_{c,go,edge,k}$	7,3
Shear	$f_{v,o,edge,k}$	4,6
Characteristic stiffness values [N/mm ²]		
Modulus of elasticity	$E_{o,mean}$	14000
	$E_{o,05}$	12000
Shear modulus edgewise	$G_{v,o,edge,mean}$	590
Shear modulus flatwise	$G_{v,o,flat,mean}$	570
Density [kg/m ³]		
Mean density	ρ_{mean}	540
Charact. density	ρ_k	480
Fire safety		D-s1, do
Formaldehyde emissions		E1 nach DIN EN 14374
Wood moisture		ca. 7%
Waste code (AAV)	030105/170201 (wood), simple disposal like wood and wood-based materials	

^{b)} Values valid for $H \leq 300$ mm. For $300 < H \leq 1000$ mm, the characteristic strength value must be multiplied with coefficient $kh = (300/h)^{0,15}$. H is the total cross section in mm relevant for the determination of the bending strength.

Contact us. We look forward to advising you.

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Arrange your personal consultation now



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