

Pollmeier Spruce LVL-S Beams



Engineered Wood Products represent a bold step forward, not only in terms of ease of use, excellent performance, and cost saving characteristics, but in the environmental credentials they offer to specifiers and end users who are increasingly required to prove the eco ratings of the buildings they construct.

The performance of Engineered Wood Products can be accurately predicted which means we can fine tune a design so that exactly the right amount of product is employed for any given situation.

Södra Wood is a leading supplier of Engineered Wood Products to the UK market and has a wealth of experience in the storage, handling and distribution of these high quality materials.

Pollmeier Spruce LVL-S is part of the Södra Wood EWP System which includes Masonite I-Joists, LVL Rim Board and Glulam beams. Information on these products is also available.

FEATURES	BENEFITS
Laminated Veneer Lumber	Stable, strong and reliable engineered wood product that will not shrink, twist, cup or bow like solid timber
Adaptability	Can be used in masonry or timber frame construction
Wide Range of Products	Competitive and compatible solutions
High Modulus of Elasticity	Allows more flexibility in design and smaller material cross sections
Tolerant of Holes and Notches	Allows access for services in accordance with structurally designed holes
Technical Support Team	Expert help is on hand for engineering and design queries
Forest Certification	Full PEFC chain of custody

Full load orders (min 45m³ mixed loads) from landed stock are available on a 48hr Just In Time (JIT) delivery basis, full load direct deliveries are also available.

Split packs and pack cuts require an additional 2 day lead time, full load direct deliveries are also available.

Delivery of part loads will be subject to other orders being available to fill the vehicle.

All Pollmeier products are PEFC Certified.

Product Range Availability

PIECES PER PACK, ALL PACKS ARE 12m LONG

THICKNESS mm	PRODUCT DEPTHS mm				
	220 **	240	253	300	400
38	32	28		24	
45	32	35	28	24	12*
90	15	12		12	

* This product is also available in individual pieces
 ** 220mm deep products are to order only

PERFORMANCE CHARACTERISTICS – TO EN14374:2004

ESSENTIAL CHARACTERISTICS	Characteristic values for use with EC5
BENDING STRENGTH Edgewise: Size Effect parameter: Flatwise:	44 N/mm ² 0.15 50 N/mm ²
TENSION STRENGTH Parallel to grain: Perp. to grain, edgewise: Perp. to grain, flatwise:	35 N/mm ² 0.9 N/mm ² NPD
COMPRESSION STRENGTH Parallel to grain: Perp. to grain, edgewise: Perp. to grain, flatwise:	40 N/mm ² 7.3 N/mm ² 3.6 N/mm ²
SHEAR STRENGTH Edgewise: Flatwise:	4.6 N/mm ² 2.6 N/mm ²
MODULUS OF ELASTICITY Parallel to grain (mean): Parallel to grain (5%-fractile):	14000 N/mm ² 12000 N/mm ²
SHEAR MODULUS Edgewise (mean): Flatwise (mean):	570 N/mm ² 590 N/mm ²
Density (5%-fractile):	480 kg/m ³
Reaction to fire class:	D-s2, d0
Release of formaldehyde class:	E1
Durability class:	4

Allowable Holes in Pollmeier LVL

Holes and notches in Pollmeier Spruce LVL-S Beams and Rim should be formed in accordance with the guidelines shown below.

The diagrams below are intended for use with LVL members that support mainly uniform load. Where the load is not uniform or large isolated point loads exist, contact Södra Wood for further guidance.

HOLES/NOTCHES THAT CAN BE FORMED IN LVL WITHOUT STRUCTURAL CALCULATION

For members that are predominantly uniformly loaded (i.e. by a series of point loads of essentially equal magnitude and spacing), the holes or notches shown in figures 1a-1c can be formed without recourse to structural calculation.

Figure 1a - Elevation on member – Notches on top edge

Notches of depth of $0.125H$ or 30mm , whichever is lesser, are permitted in this zone.

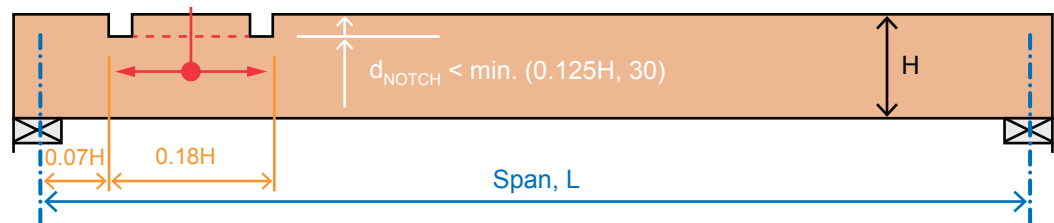


Figure 1b - Elevation on member – Holes on centreline

Circular holes of diameter $0.25H$ or 60mm , whichever is lesser, are permitted in this zone.

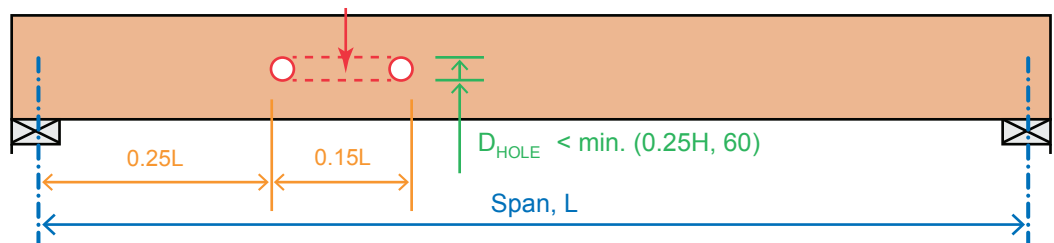
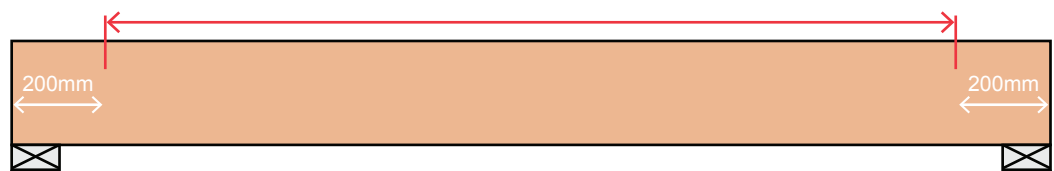


Figure 1c - Elevation on member – Small holes in centreline

Circular holes of diameter $0.1H$ or 30mm , whichever is the lesser, located on the member's centreline can be located at any point along the beam except within 200mm of the beam ends.



Minimum spacing between holes/notches = $\max. (3d_{\text{NOTCH}}, 3D_{\text{HOLE}}, 100\text{mm})$.

For a design method to calculate large circular holes in LVL, please contact Södra Wood on 01285 646000.

Forming multiple ply beams in Pollmeier Spruce LVL-S

The following table may be used for the identification of fixing configurations to accommodate long term uniform loads to multiple LVL Beams.

Table shows the maximum uniform long term load which can be applied to one face of composite LVL beams.

MULTIPLE PLY LVL MEMBERS - FIXING DETAILS	ALLOWABLE UNIFORM LOAD APPLIED TO MULTIPLE PLY LVL BEAM kN/m						
	2 PLY MEMBERS			3 PLY MEMBERS		4 PLY MEMBERS	
	38mm	45mm	90mm	38mm	45mm	38mm	45mm
Fixings							
2 rows 3.00mm x 75mm long nails at 300mm centres	4.46	4.46	–	3.33	3.33	–	–
3 rows 3.00mm x 75mm long nails at 300mm centres	6.69	6.69	–	5.00	5.00	–	–
2 rows Simpson SDW screws at 600mm centres	6.53 L=76	14.80 L=86	–	5.42 L=111	5.57 L=127	5.02	–
2 rows Simpson SDW screws at 300mm centres	13.06 L=76	14.80 L=86	–	10.84 L=111	11.14 L=127	10.04	–
2 rows M12 bolts at 600mm centres	10.04	11.87	20.53	6.79	7.86	6.06	7.02
2 rows M12 bolts at 300mm centres	20.08	23.73	41.05	13.58	15.72	12.12	14.04

Verify adequacy of beam to support applied loads.

Beams wider than 180mm require special consideration.

For 3 & 4 member assemblies nails should be driven from both sides into the centre piece.

Nails to be fixed 50mm from the edges & ends of the beam.

Simpson Strong Tie SDW screws to be driven from loaded face of beam.

Bolts to be installed 75mm from the edge & 50mm from the ends of the beam.

All bolts to be fitted with steel washers, minimum 36mm diameter x 3mm thick.

All loads are assumed to be long term, applied perpendicular to the grain on one face only.

Values apply to beams in service classes 1 & 2 only.

For a design method to calculate point load support in multiple ply LVL applications, please contact Södra Wood on 01285 646000.