



e-purlin®

e-strut®

Longer
Stronger
Straighter
Better

Faster, stronger, safer, cost effective roof.

Wesbeam's laminated veneer lumber (LVL) e-strut and e-purlin make building stick roofs for tile or metal sheet cladding easier. Which means that construction time is shorter.

And because it has been engineered to enable greater strut spacing, e-purlin creates stronger roofs using less material. It reduces the need for steel strutting beams and the costs associated with lifting and fixing them.

Purpose-engineered, e-strut and e-purlin have greater strength and uniformity than timber, and are comparatively lighter, making them safer and easier to work with.



engineered to load
engineered to length
engineered to last
end of story



e-purlin engineered LVL roof underpurlin to support stick roofs for tile and metal sheet cladding.

e-purlin offers the greatest flexibility in the design of stick roofs clad with tile or metal sheeting. They are available in a range of lengths from 3m to 10.8m with longer lengths available by special manufacture. e-purlins are design engineered to maximise the efficient use of material and time.

Features

- Engineered for straightness and consistent performance
- High load bearing capacity for greater maximum strut spacing
- Longer lengths available, minimising jointing and wastage
- High strength yet lighter and safer to handle
- Chamfered edges for safer and more comfortable handling
- Manufactured from 100% plantation pine
- Manufactured and properties evaluated in accordance with AS/NZS 4357 Structural Laminated Veneer Lumber – totally compatible for engineering design in accordance with AS 1720.1 Timber Structures Part 1: Design Methods.

e-purlin specification

e-purlin is manufactured from structural laminated veneer lumber in accordance with AS/NZS 4357 for N1, N2, N3 and N4 wind classifications.

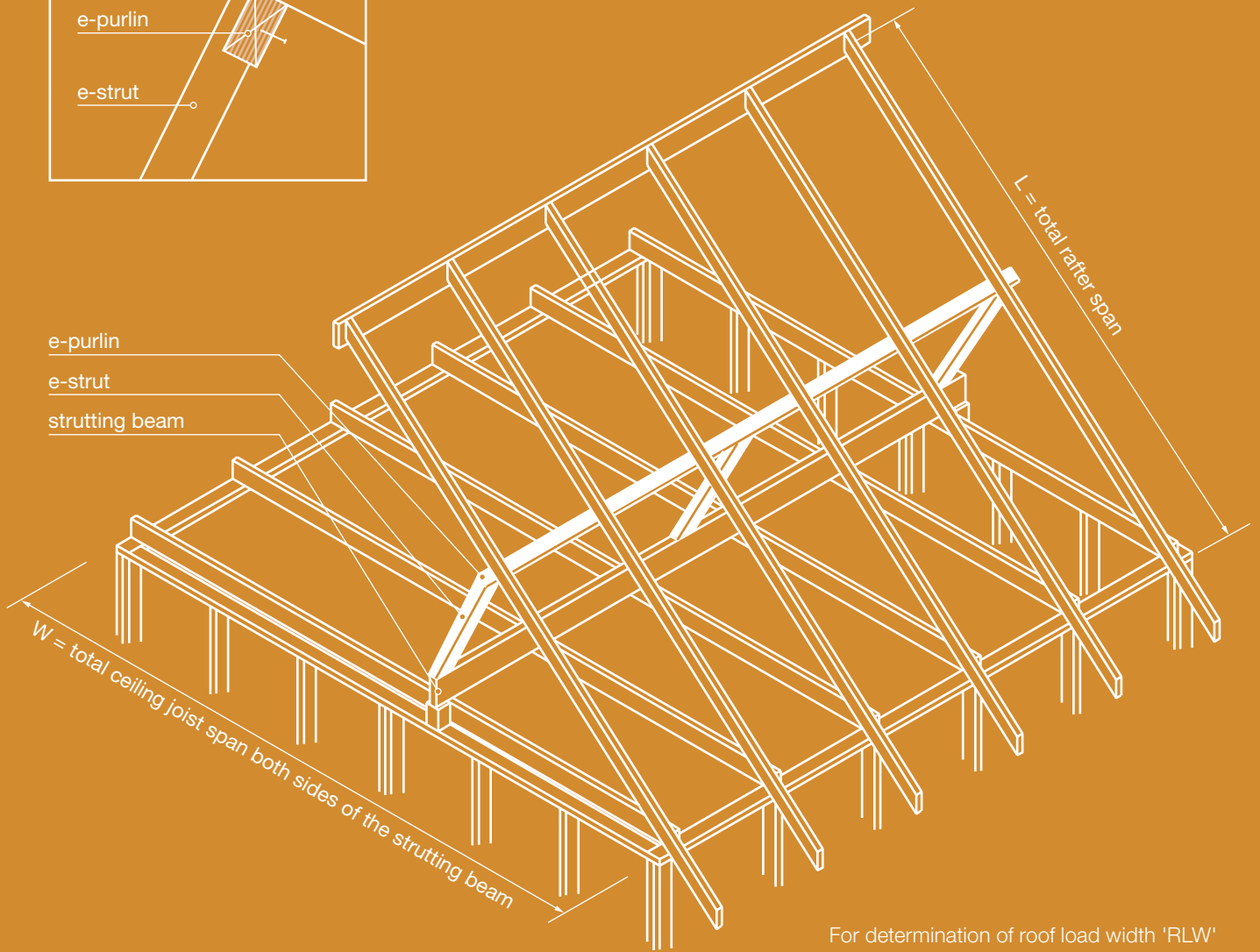
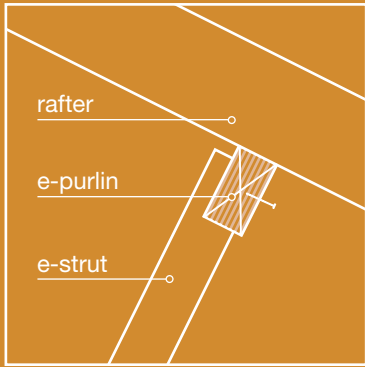
e-purlin span tables are engineer designed and certified to comply with AS1720.1 Timber Structures Part 1 : Design Methods, AS1684 Residential Timber Framed Construction – Part 1 Design Criteria, AS/NZS1170 Loading Codes – Parts 0 – 4 and AS4055 Wind Loading for Housing.

e-purlin span tables for N1, N2 and N3 Wind Classifications

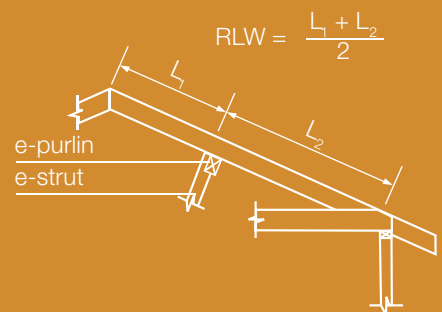
e-purlin section dxb (mm)	Roof Load Width – RLW (m)									
	1.8	2.4	3.0	3.6	4.2	1.8	2.4	3.0	3.6	4.2
	Single Span					Continuous Span				
Tile Roof - Maximum strut spacing (m)						For Wind Classification N1/N2/N3				
83 x 51	1.4	1.2	1.2	1.1	1.1	1.8	1.6	1.5	1.4	1.3
96 x 51	1.6	1.4	1.3	1.3	1.2	2.1	1.9	1.8	1.6	1.6
101 x 51	1.6	1.5	1.4	1.3	1.3	2.2	2.0	1.8	1.7	1.6
Sheet Roof - Maximum strut spacing (m)						For Wind Classification N1/N2/N3				
83 x 51	1.9	1.7	1.5	1.3	1.1	2.6	2.4	2.0	1.7	1.6
96 x 51	2.4	2.1	1.9	1.7	1.5	2.9	2.6	2.5	2.4	1.9
101 x 51	2.4	2.3	2.0	1.9	1.6	3.1	2.7	2.5	2.4	2.1

e-purlin span tables for N4 Wind Classifications

e-purlin section dxb (mm)	Roof Load Width – RLW (m)									
	1.8	2.4	3.0	3.6	4.2	1.8	2.4	3.0	3.6	4.2
	Single Span					Continuous Span				
Tile Roof - Maximum strut spacing (m)						For Wind Classification N4				
83 x 51	1.4	1.2	1.2	1.1	1.1	1.8	1.6	1.5	1.4	1.3
96 x 51	1.6	1.4	1.3	1.3	1.2	2.1	1.9	1.7	1.5	1.4
101 x 51	1.6	1.5	1.4	1.3	1.3	2.2	2.0	1.7	1.6	1.5
Sheet Roof - Maximum strut spacing (m)						For Wind Classification N4				
83 x 51	1.7	1.2	1.0	0.8	0.7	2.2	1.7	1.3	1.1	1.0
96 x 51	2.3	1.7	1.3	1.1	1.0	2.5	2.2	1.7	1.6	1.3
101 x 51	2.4	1.9	1.5	1.3	1.0	2.6	2.4	1.9	1.7	1.5



For determination of roof load width 'RLW' for underpurlins – see the diagram below.



All roof fixings and restraints to be installed in accordance with AS1684.



e-strut engineered LVL roof struts to support stick roofs for tile and metal sheet cladding.

e-struts offer minimum material and time wastage when used with e-purlins in the fabrication of stick roofs. Engineered e-struts are highly consistent in their performance and dimensional stability. They have superior compressive strength which resists the dynamic loads associated with high wind coastal conditions. And e-struts are available in lengths from 3.6m to 4.5m which enables design flexibility for the most complex roof shapes.

e-struts are comparatively lighter than timber products, making them safer to handle.

Features

- Engineered for straightness and consistent performance
- Greater length = greater design flexibility
- High strength yet lighter and safer to handle
- Chamfered edges for safer and more comfortable handling
- Manufactured from 100% plantation pine
- Manufactured and properties evaluated in accordance with AS/NZS 4357 Structural Laminated Veneer Lumber – totally compatible for engineering design in accordance with AS 1720.1 Timber Structures Part 1: Design Methods
- e-struts are 65mm wide x 63mm deep
- **Suitable for both metal and tile sheet cladding at maximum strut length of 4.5m**

e-strut specification

e-struts are manufactured from structural laminated veneer lumber in accordance with AS/NZS 4357 for N1, N2, N3 and N4 wind classifications.

e-strut is engineer designed and certified to comply with AS1720.1 Timber Structures Part 1 : Design Methods, AS1684 Residential Timber Framed Construction - Part 1 Design Criteria, AS/NZS1170 Loading Codes - Parts 0 - 4 and AS4055 Wind Loading for Housing.



Veneer

Thickness	3.2 mm (nominal)
Species	Maritime Pine and/or Radiata Pine
Joints	Outer 2 plies are scarf jointed Inner plies – scarf and/or butt jointed

Moisture Content

8% - 15% (at time of despatch)

Dimensional Tolerances

Length	-0 mm, + 20mm
Depth	-0 mm, + 2 mm
Thickness	-0 mm, + 4 mm

Straightness

Spring & Bow	1 mm in 1,000 mm AS/NZS 2098.10
Squareness	1 mm in 100 AS/NZS 2098.10
Twist	$< \frac{\text{Length (mm)} \times \text{Width (mm)}}{3500 \times \text{Thickness (mm)}}$ AS/NZS 2098.10

Density

650 kg/m³ (approximately)

Adhesive

Phenolic – AS 2754.1

Bond

Type A – AS/NZS 2098.2

Joint Group

JD4

Finish

Unsanded faces, sawn edges and arrised edges.

Branding

Each piece of e-purlin and e-strut is branded as least once with the product name for identification and evidence of compliance with manufacturing control standards.

Storage

Store on level bearers at maximum 1800mm centres well clear of the ground, and cover to keep dry but allow ventilation.

Material Safety Data Sheets (MSDS)

Please refer to the Wesbeam website at www.wesbeam.com to download the MSDS sheets.

Roof Installation Guide

For carpenters and builders to correctly install Wesbeam e-stick LVL roof framing products please refer to the Wesbeam website at www.wesbeam.com to download the document.

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