Prolam®
Engineered Laminated Timber

Structural Timber Guide 2020

Your preferred

CODEMARK®
BRANZ-CM-1018

H5 post supplier

Register Free for our Beam Calculator
www.prolamnz.com/specifiers

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The Prolam® Product Range

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- Prolam® Crib Walls
- Prolam® I-Joists
- Prolam® Pro Calculator — Specify with Certainty

Visual/Appearance A H5/ H3.2 KD Posts PLP – Prolam® Post

H5 Post

CODEMARK®
BRANZ-CM-1018

PLP8H5-100 / PLP8H3-100	88 x 88mm
PLP8H5-125 / PLP8H3-125	112 x 112mm
PLP8H5-150 / PLP8H3-150	135 x 135mm
PLP8H5-200 / PLP8H3-200	180 x 180mm
PLP8H5-250 / PLP8H3-250	220 x 220mm
PLP8H5-300 / PLP8H3-300	260 x 260mm
PLP12H5-125 / PLP12H3-125	112 x 112mm
PLP12H5-150 / PLP12H3-150	135 x 135mm
PLP12H5-200 / PLP12H3-200	180 x 180mm
PLP12H5-250 / PLP12H3-250	220 x 220mm
PLP12H5-300 / PLP12H3-300	260 x 260mm

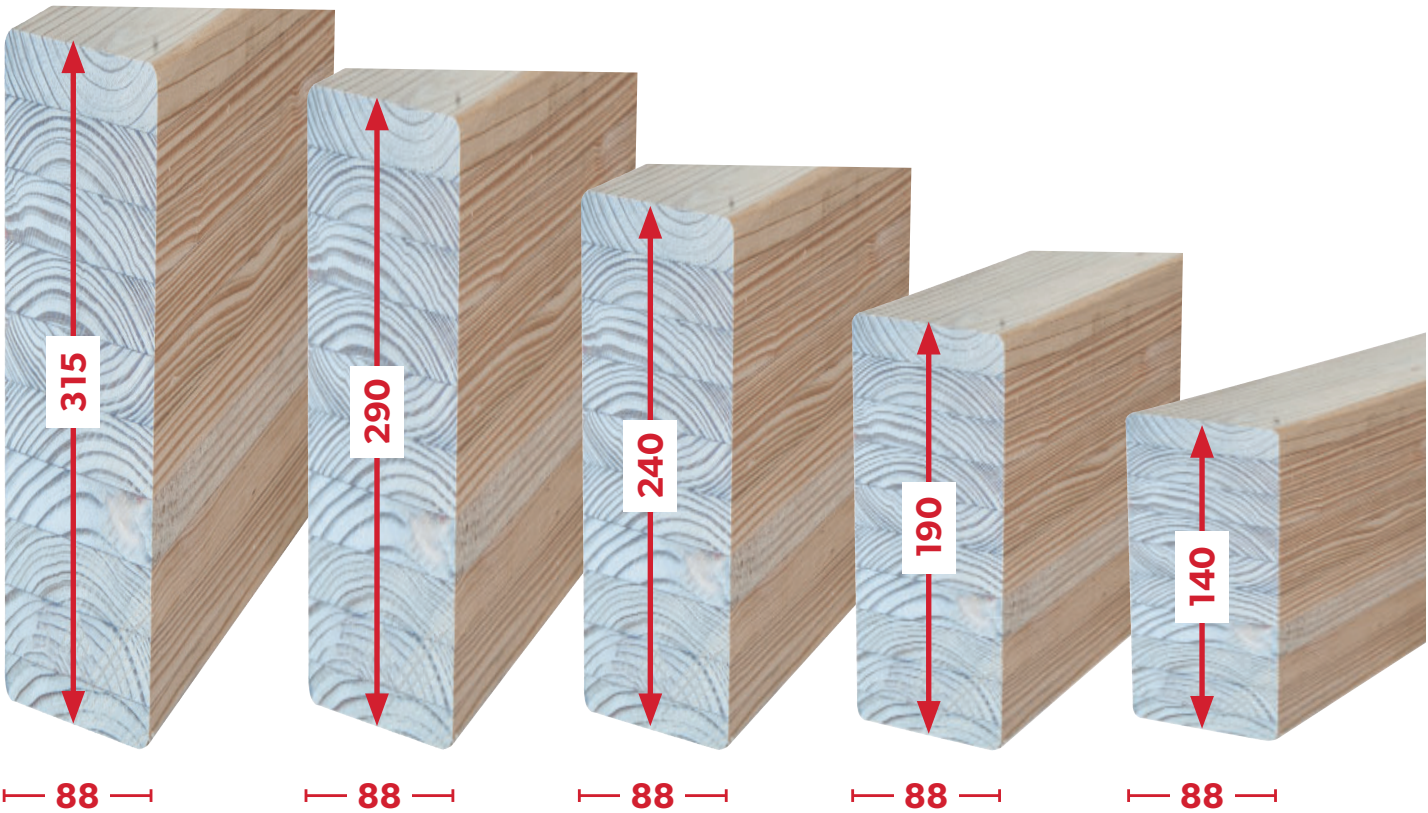
Visual Posts

Stock lengths:	2.4, 2.7, 3.0, 3.6, 4.2, 4.8, 5.4, 6.0, 7.2
Grade:	Visual / Appearance A Finger Jointed
Structural grade:	PL8 and PL12
Treatment:	CCA H5, H3.2 KD
Finishes:	Machined (in stock) Bandsawn (-6mm in size, per side) Sanded & Sealed Primed
Advantages:	H5 Posts Codemark Certified Do not need postbrackets Gives you bracing units (pg 83) Structually Stable Superior Fire Resistant Good load carrying capacity

Visual/Appearance A Beams 88mm

PLVL – Prolam® Visual Lintel
PL8, PL12 H3.2KD

(Bigger sizes available, refer pg 21)



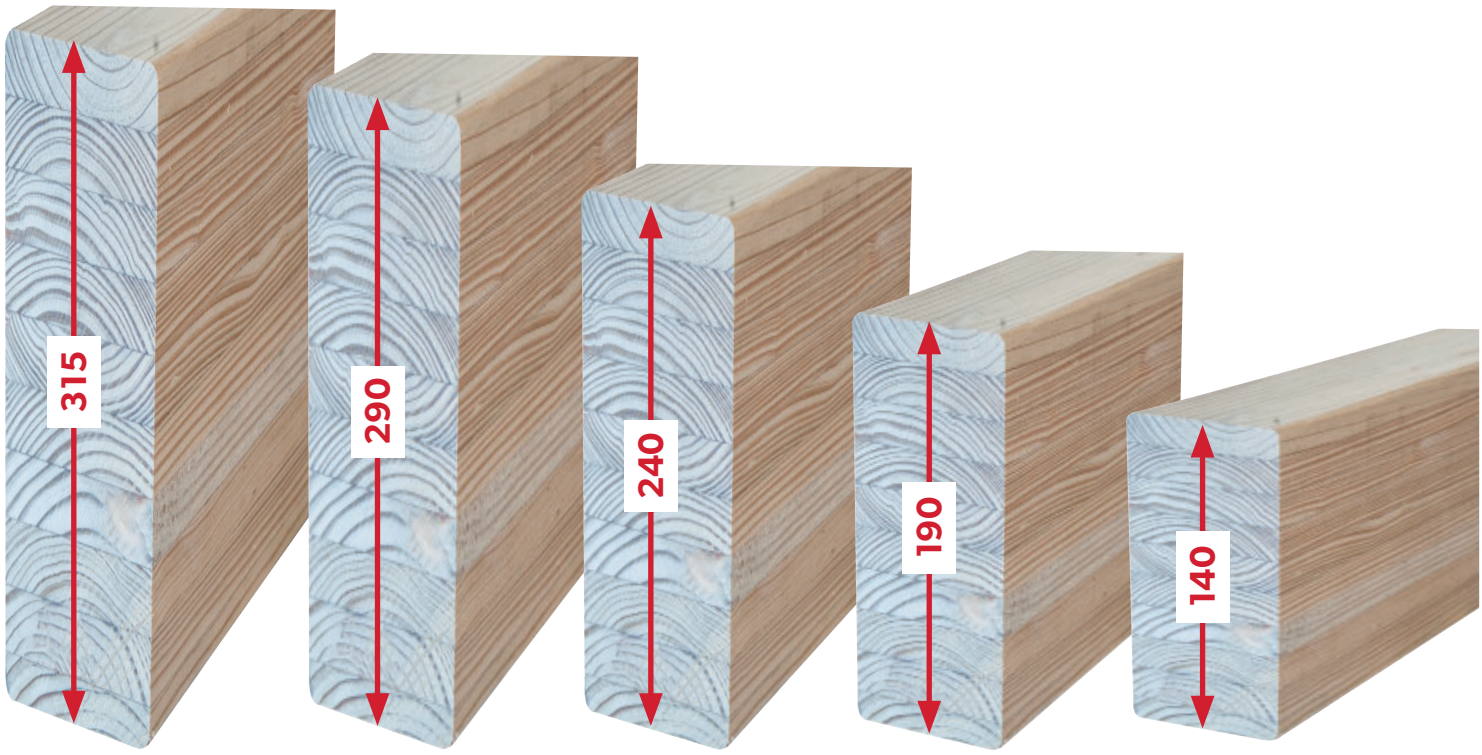
PLVL8H3-350100 **PLVL12H3-350100**	**PLVL8H3-300100** **PLVL12H3-300100**	**PLVL8H3-250100** **PLVL12H3-250100**	**PLVL8H3-200100** **PLVL12H3-200100**	**PLVL8H3-150100** **PLVL12H3-150100**

Stock lengths:	3.6, 4.2, 4.8, 5.4, 6.0, 7.2
Grade:	Visual / Appearance A Finger Jointed
Structural grade:	PL8, P12
Treatment:	CCA H3.2 KD
Finishes:	Machined (in stock) Sanded & Sealed Bandsawn (-6mm in size, per side) Primed
Other lengths:	7.8, 8.4, 9.0, 9.6, 10.2, 10.8, 11.4, 12.0

Visual/Appearance A Beams 63mm

PLVL – Prolam® Visual Lintel
PL8, PL12 H3.2KD

(Bigger sizes available, refer pg 21)



PLVL8H3-35075 PLVL12H3-35075	PLVL8H3-30075 PLVL12H3-30075	PLVL8H3-25075 PLVL12H3-25075	PLVL8H3-20075 PLVL12H3-20075	PLVL8H3-15075 PLVL12H3-15075

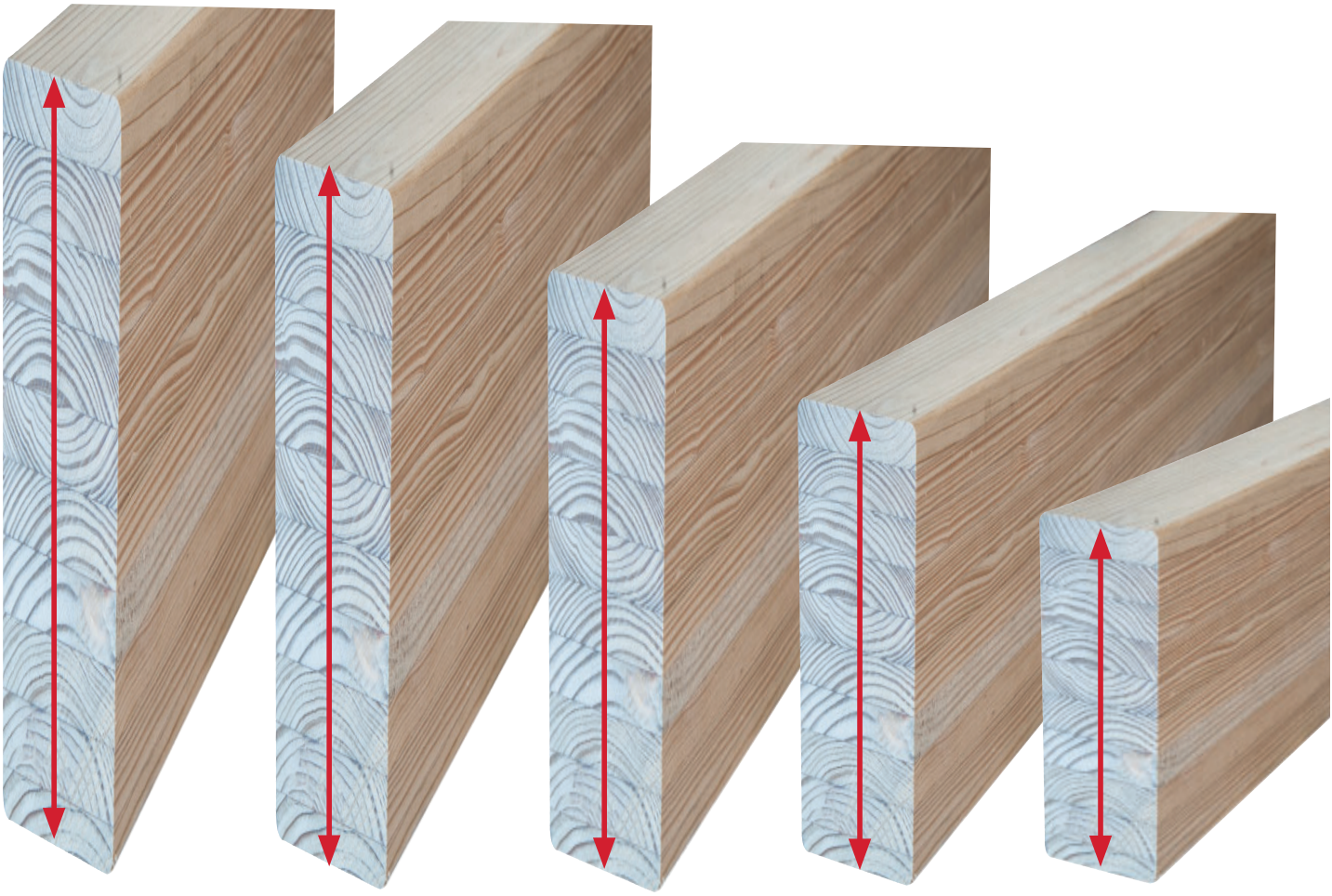
Uses: Verandah Lintels
Verandah Rafters

Advantages: Exterior treatment
Can be stained or painted

Visual/Appearance A Beams 42mm

PLVL – Prolam® Visual Lintel
PL8, PL12 H3.2KD

(Bigger sizes available, refer pg 21)



42 | 42 | 42 | 42 | 42

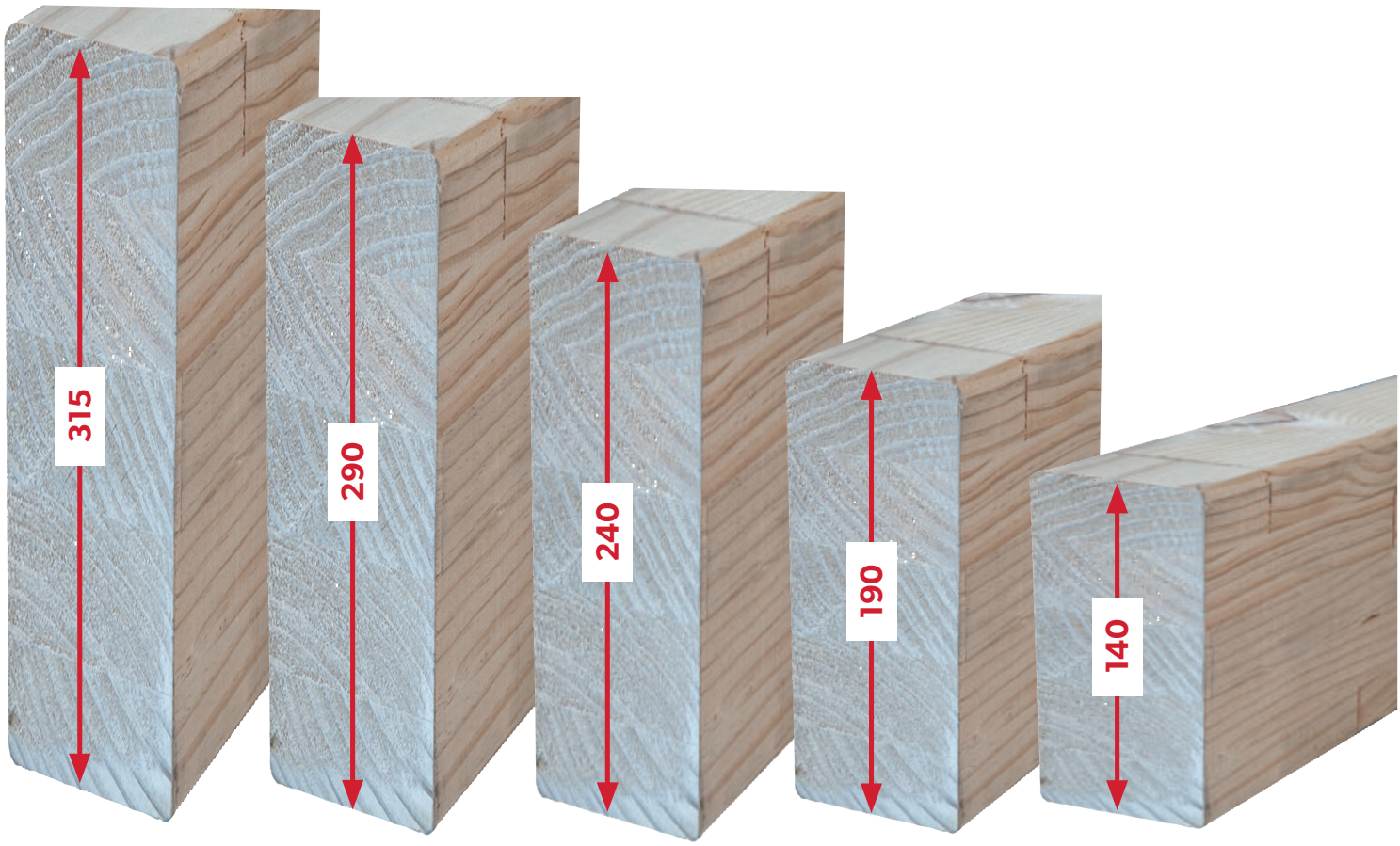
PLVL8H3-35050 **PLVL12H3-35050**	**PLVL8H3-30050** **PLVL12H3-30050**	**PLVL8H3-25050** **PLVL12H3-25050**	**PLVL8H3-20050** **PLVL12H3-20050**	**PLVL8H3-15050** **PLVL12H3-15050**

Uses: Verandah Rafters
Pergolas

Non-Visual Beams 90mm

PL – Prolam® Lintel
PL8, PL12 H3.2, H1.2

(Bigger sizes available, refer pg 22)



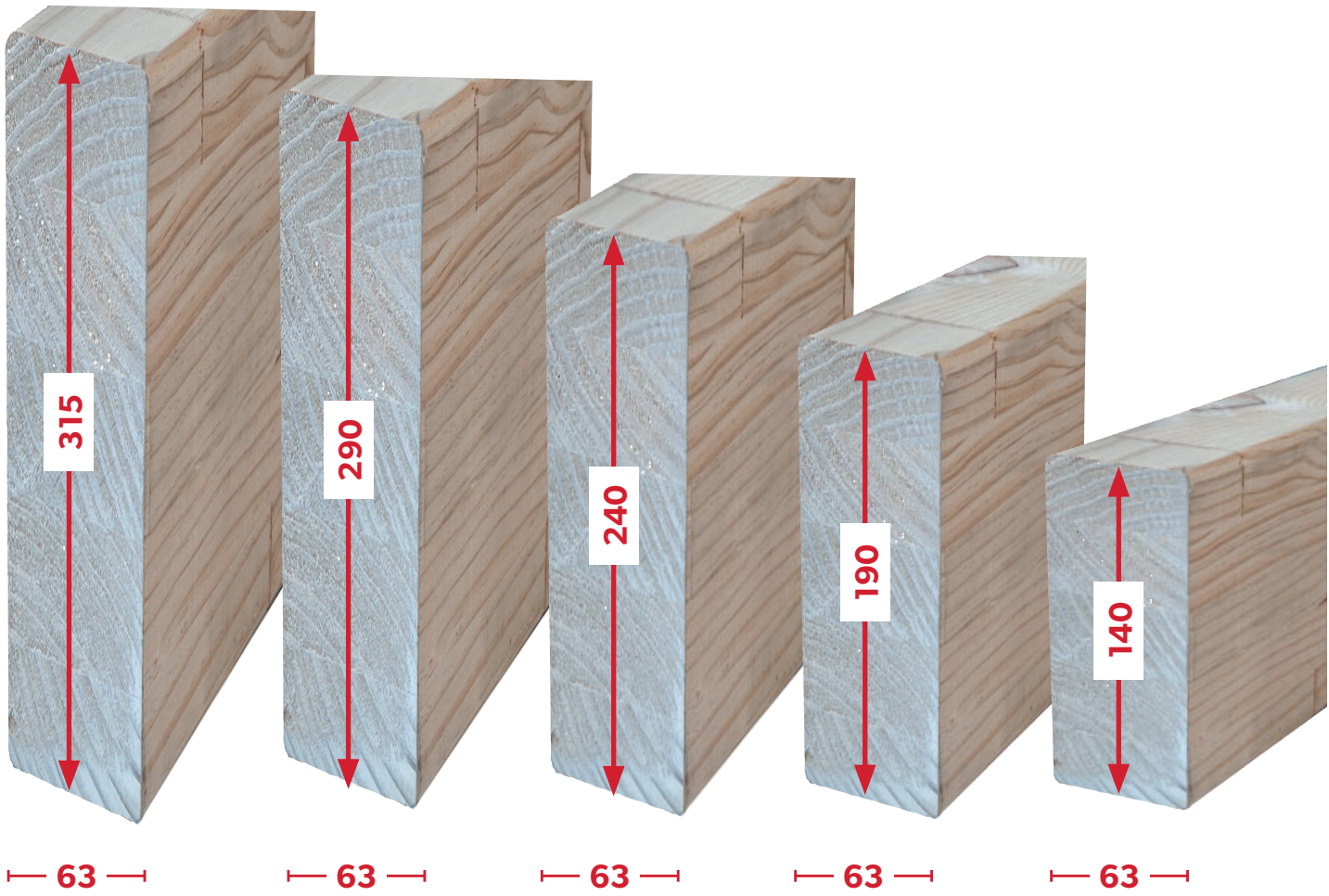
90	90	90	90	90
PL8H3-350100 PL12H3-350100	PL8H3-300100 PL12H3-300100	PL8H3-250100 PL12H3-250100	PL8H3-200100 PL12H3-200100	PL8H3-150100 PL12H3-150100

Stock lengths:	3.6, 4.2, 4.8, 5.4, 6.0, 7.2
Grade:	Non-visual, Utility
Structural grade:	PL8 / PL12
Treatment:	CCA H3.2 KD / H1.2
Finishes:	Dressed
Other lengths:	7.8, 8.4, 9.0, 9.6, 10.2, 10.8, 11.4, 12.0
Species:	Radiata, Douglas Fir

Non-Visual Beams 63mm

PL – Prolam® Lintel
PL8, PL12 H3.2, H1.2

(Bigger sizes available, refer pg 22)



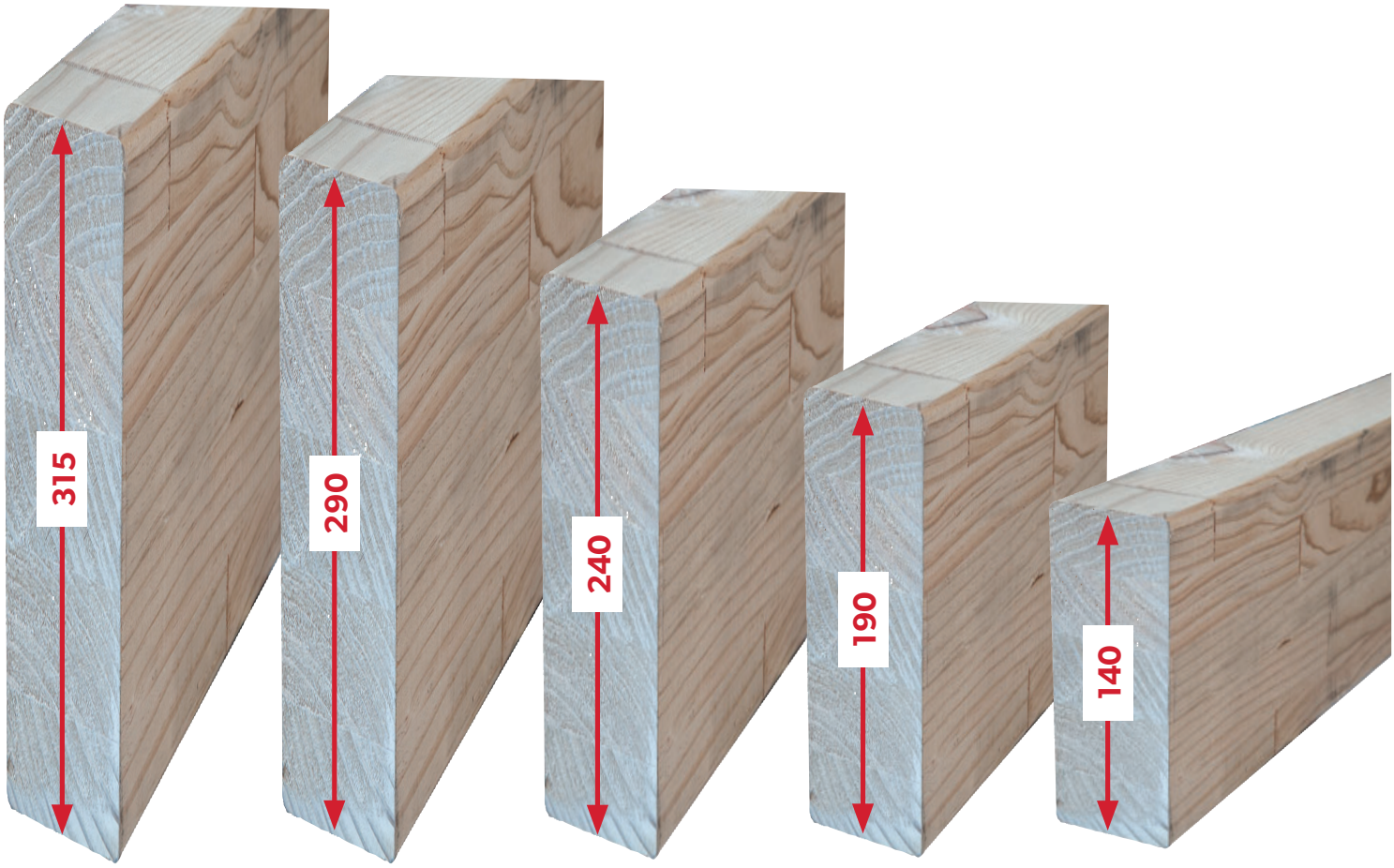
PL8H3-35075 **PL12H3-35075**	**PL8H3-30075** **PL12H3-30075**	**PL8H3-25075** **PL12H3-25075**	**PL8H3-20075** **PL12H3-20075**	**PL8H3-15075** **PL12H3-15075**

Uses:
- Garage Door Lintels
- Deck Bearers
- Deck Joists
- Floor Joists
- General Lintels
- Rafters

Non-Visual Beams 42mm

PL – Prolam® Lintel
PL8, PL12 H3.2KD, H1.2

(Bigger sizes available, refer pg 22)



42	42	42	42	42
PL8H3-35050 PL12H3-35050	PL8H3-30050 PL12H3-30050	PL8H3-25050 PL12H3-25050	PL8H3-20050 PL12H3-20050	PL8H3-15050 PL12H3-15050

Prolam® LVL 15

Prolam LVL 15 is manufactured from laminated Douglas Fir LVL and offers superior strength, stability, stiffness and decay resistance. LVL 15 Smartframe is available Boron treated or untreated as required. The 45mm LVL 15 actual size of 43.5mm fits within the 1.5mm nailplate tolerance as required by the Mitek and Pryda Manufacturing Specifications. Prolam LVL15 is available to specify on the Prolam specifier giving more options when specifying rafters, floor joists, lintels, roof trusses and framing! Superior strength, stability, stiffness and decay resistence.

Description

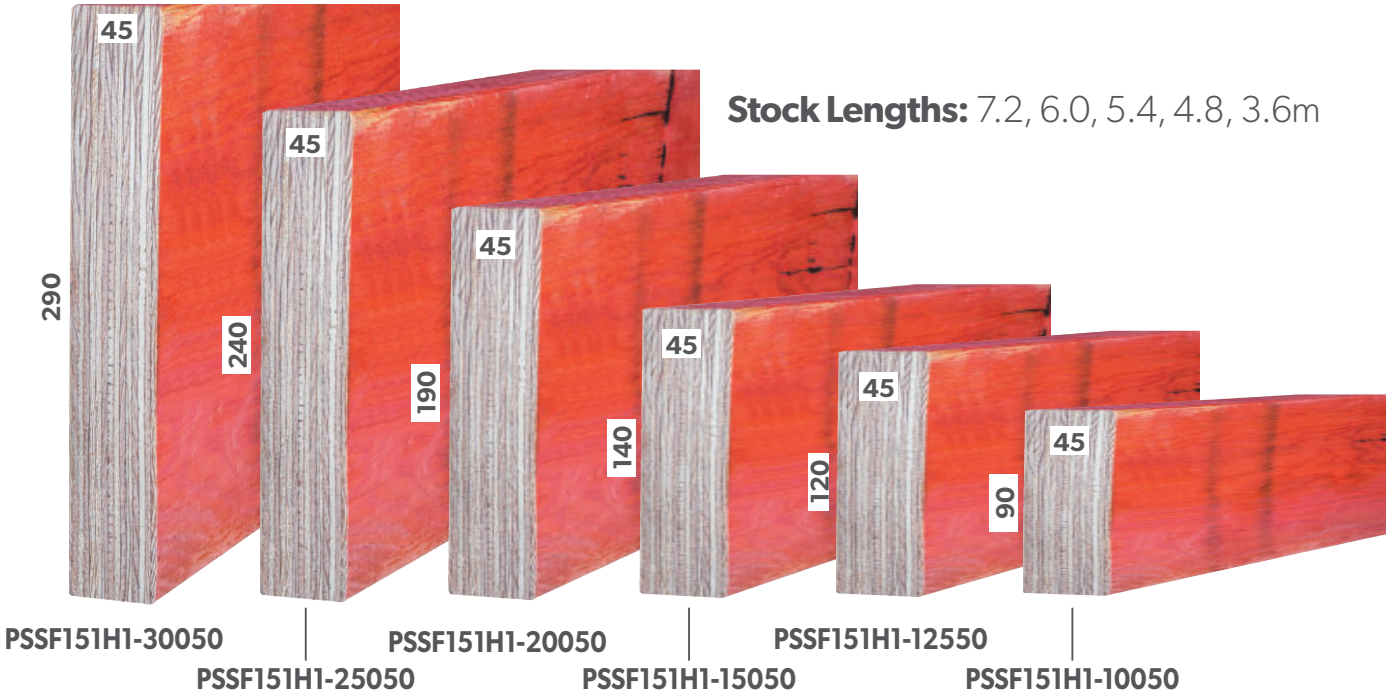
LVL15 is a Douglas Fir structural laminated veneer lumber (LVL) manufactured by Pacific Woodtech Corporation, Washington State, USA to meet the quality controlled process requirements of AS/NZS 4357 - Structural Laminated Veneer Lumber.

Treatment

LVL 15 can be supplied untreated, or treated in accordance with the Prolam LVL preservation treatment standard 20 June 2017 to meet the durability requirements where hazard class H1.2 or less applies.

Benefits

-Superior Strength product without the extra cost!
-Having increased strength its ideal for high stress cantilever situations where a larger member is often required.
-Ideal for low pitch roofs where there's limited space.
-Great for longer studs outside 3604 around stairs and chimneys.
-Loaded into MiTek and Pryda Systems.
-Quick Lead Times - Product is in stock ready for dispatch.



Stock Lengths: 7.2, 6.0, 5.4, 4.8, 3.6m

Prolam®

Prolam® I-Joists

Prolam I-Joists are manufactured from Ultra High strength Douglas Fir LVL flanges, and Orientated Strand board webs. The flanges are made up from ultrasonically graded LVL, bonded with exterior adhesive for more load bearing capacity. The webs being Orientated Strand Board (OSB) are known for their superior strength and consistant performance. I-Joists resists shrinking, twisting, warping and splitting for a squeak resistant floor and quality roofs and ceilings.

Advantages

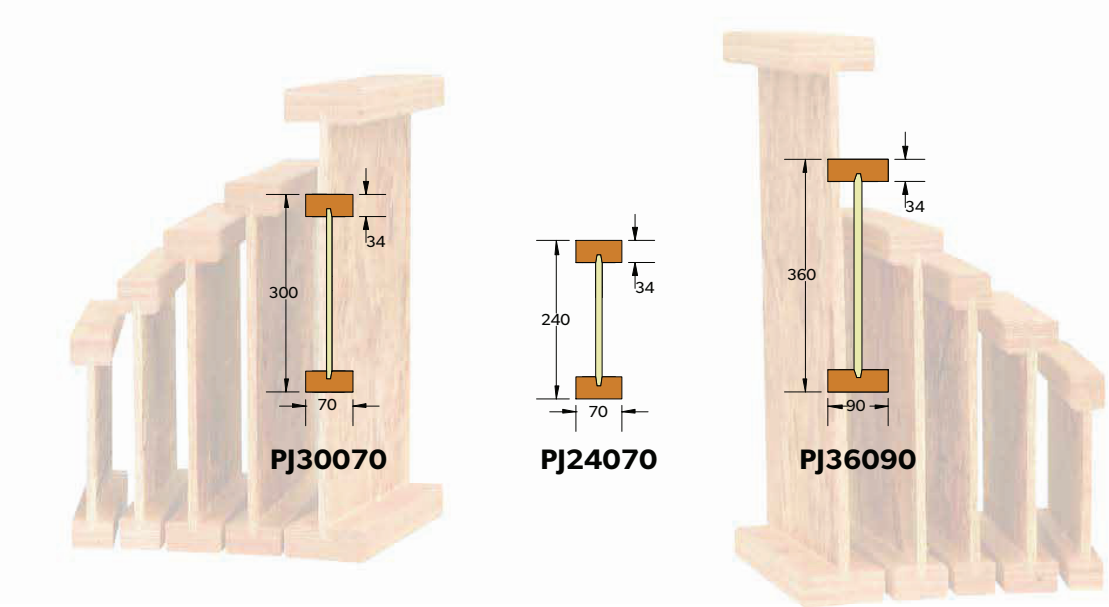
Holes may be easily cut in the web, allowing ducts and utilities to be run through the joists. Prepunched 40mm knockout holes are provided in the web for small diameter services or wiring.

Quality

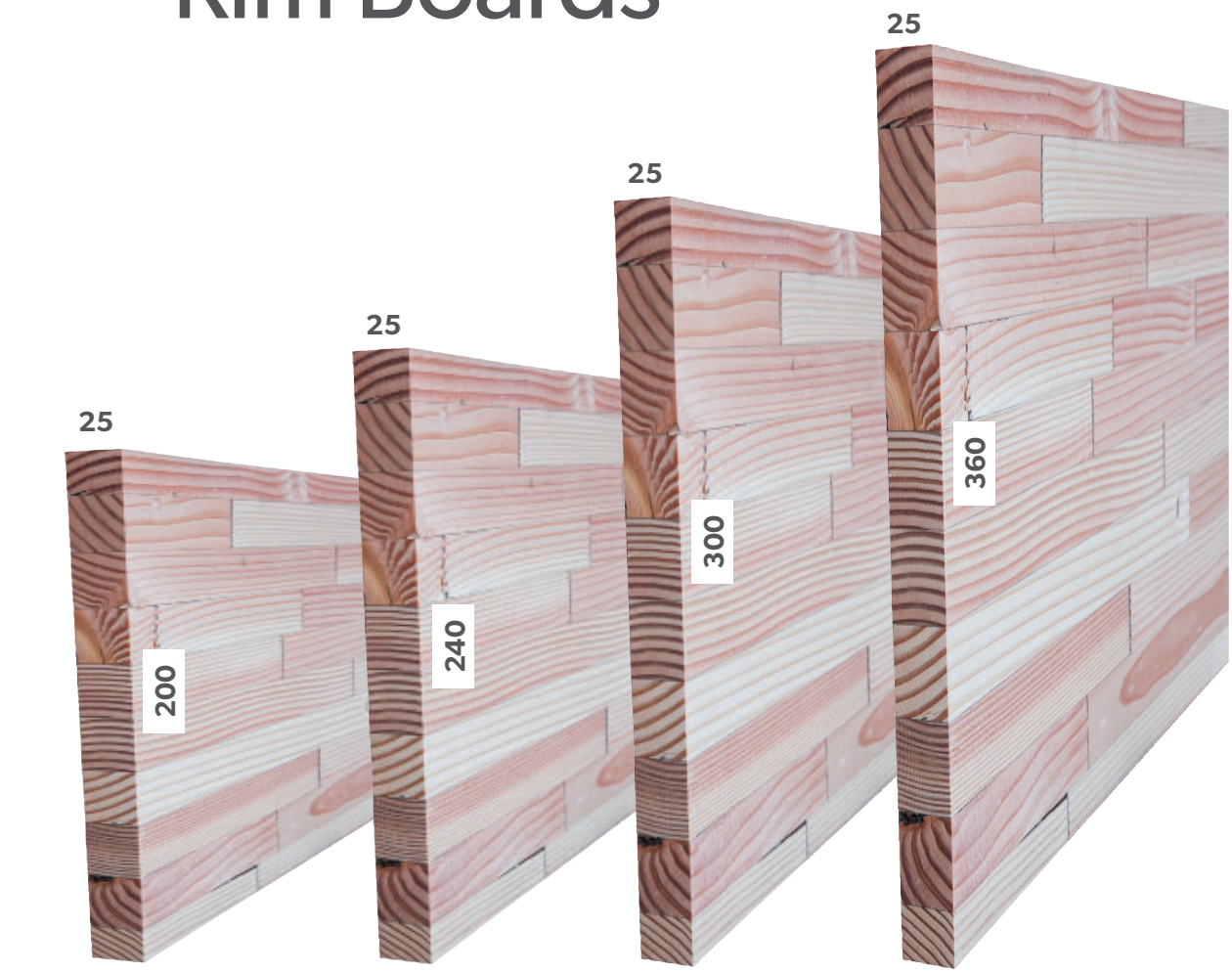
I-Joists are manufactured by Pacific Woodtech Corporation to the ASTM D 5055 standard for monitoring the structural capacities of prefabricated wood I Joists.

Treatment

I-Joists can be supplied untreated, or treated in accordance with the Prolam LVL preservation treatment standard 20 June 2017 to meet the durability requirements where hazard class H1.2 or less applies.



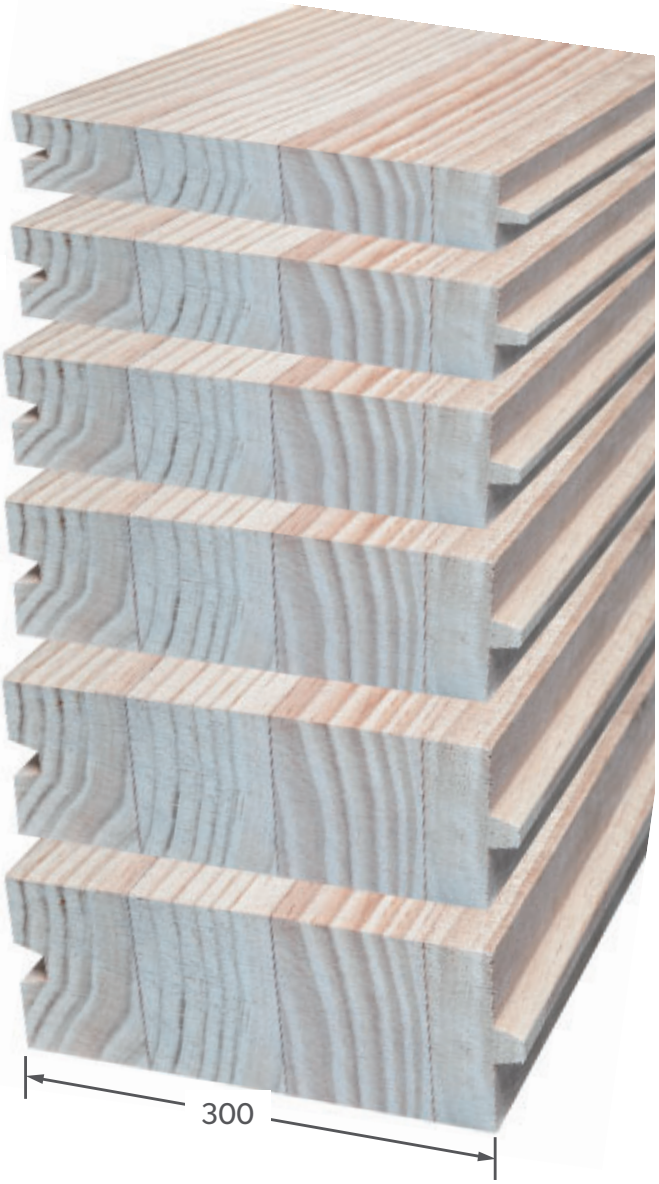
Prolam® Rim Boards



Stock lengths:	4.2, 4.8, 5.4, 6.0
Grade:	Rim Board
Treatment:	H1.2
Ideal for:	Rim Board
Advantages:	Laminated to eliminate twisting

Prolam® T & G Flooring

PLF-50	42
PLF-60	52
PLF-75	65
PLF-100	90
PLF-125	115
PLF-150	135

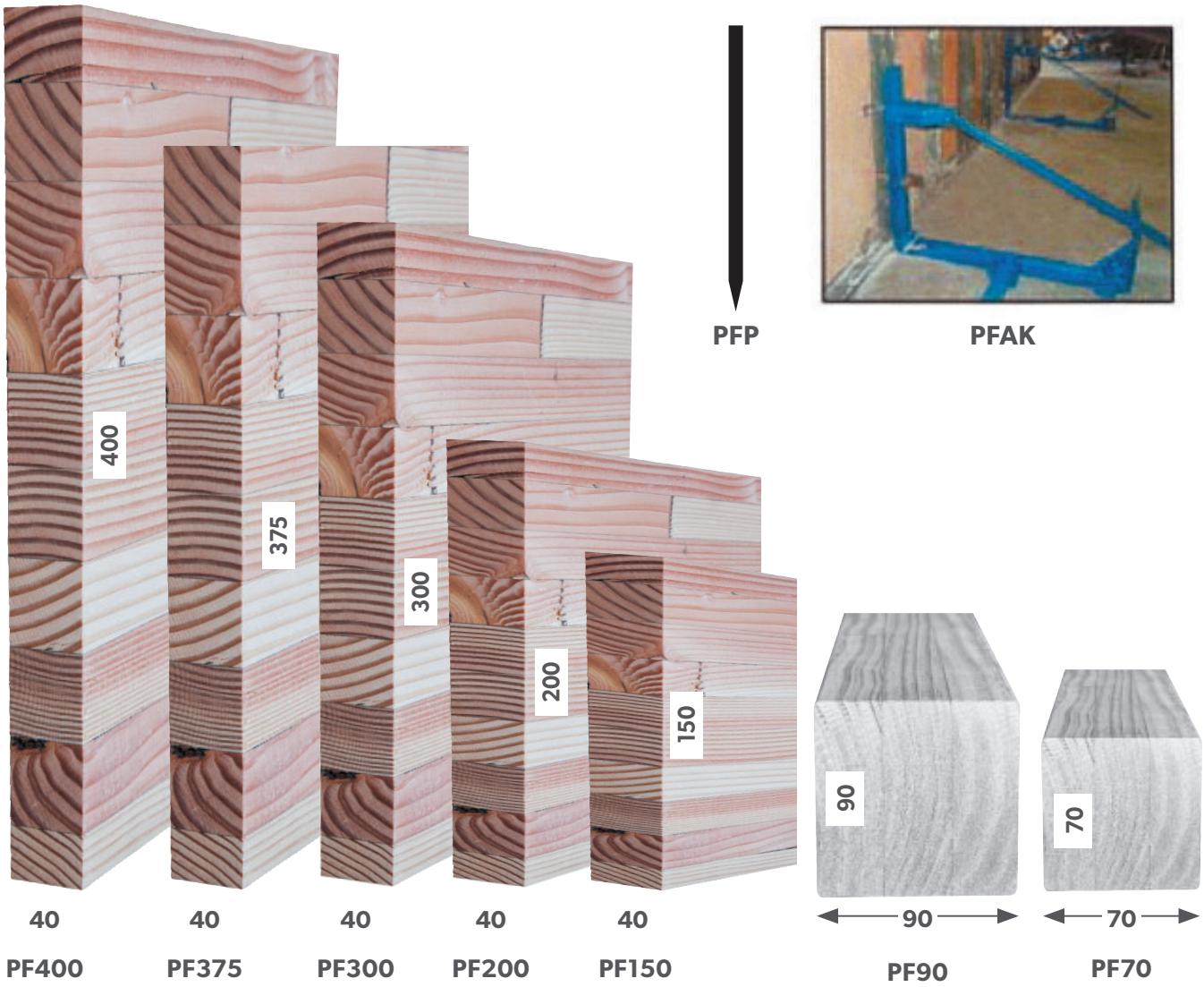


Prolam Tongue & Groove Flooring panels are a solid timber structural floor system. The beauty of T & G Flooring is that it gives you a very low profile floor cross section, as well as an attractive ceiling all in one. T & G Flooring is available in the sizes above and has spanning capabilities as on page 80. Effective fire resistance is also achieved as the natural benefits of Prolam, see page 44. Can also be used for roof panels. Available in both Radiata and Douglas Fir.

Notes

Prolam® Formwork

Prolam Formwork is manufactured from laminated Douglas Fir, offering superior strength, stability, stiffness and decay resistance. As a refractory species, Douglas Fir resists wetting, with natural ability. Formwork will withstand decay for longer. It also reduces the risk of cupping due to shrinkage by wetting and drying.



PFP

PFAK

Stock lengths: 4.8, 5.4, 6.0m

Prolam® Kicker

The Better Way

Prolam Kicker is the only steel brace that attaches to wood or steel forms and can be used on dirt, wood, or concrete surfaces. It eliminates the inefficiency of wood bracing resulting in higher profits. The quick adjustability allows for a faster, straighter wall line with zero waste, increasing production between 30% - 60%. With three standard and custom sizes available, it can withstand up to a 600mm pour. When the job is completed, it detaches and folds down for the next application.





Key Benefits

Adjustment Positions

The Kicker will adjust to various surface angles and establish required height elevations.

Straighter Edges

The precision of the Kicker allows for straighter edges with less work than wood bracing.

Fascia Any Size
PL8 / H3.2KD

Custom surface rebate

PL Fascia ___ width ___ thickness

Rebate height , depth , width

Treatment:	CCA H3.2 KD
Finishes:	Dressed, Bandsawn
Lengths:	Made to order – 2 week lead time
Other sizes:	Made to order
Advantages:	Exterior treatment Can be stained or painted

Prolam® Order Codes

Posts Visual PL8 H3.2

Width & Thickness

	88	112	135	180	220	260	300
Code	PLPH3-100	PLPH3-125	PLPH3-150	PLPH3-200	PLPH3-250	PLPH3-300	PLPH3-350

Posts Visual PL8 H5

Width & Thickness

	88	112	135	180	220	260	300
Code	PLPH5-100	PLPH5-125	PLPH5-150	PLPH5-200	PLPH5-250	PLPH5-300	PLPH5-350

Posts Visual PL12 H5

Width & Thickness

	112	135	180	220	260	300
Code	PLP12H5-125	PLP12H5-150	PLP12H5-200	PLP12H5-250	PLP12H5-300	PLP12H5-350

Beams Visual PL8 H3.2

Width and Thickness

		140	190	240	290	315	360
42	**Code**	PLVL8H3-15050	PLVL8H3-20050	PLVL8H3-25050	PLVL8H3-30050	PLVL8H3-35050	PLVL8H3-40050
63	**Code**	PLVL8H3-15075	PLVL8H3-20075	PLVL8H3-25075	PLVL8H3-30075	PLVL8H3-35075	PLVL8H3-40075
88	**Code**	PLVL8H3-150100	PLVL8H3-200100	PLVL8H3-250100	PLVL8H3-300100	PLVL8H3-350100	PLVL8H3-400100
112	**Code**	PLVL8H3-150125	PLVL8H3-200125	PLVL8H3-250125	PLVL8H3-300125	PLVL8H3-350125	PLVL8H3-400125
135	**Code**	PLVL8H3-150150	PLVL8H3-200150	PLVL8H3-250150	PLVL8H3-300150	PLVL8H3-350150	PLVL8H3-400150

Beams Visual PL12 H3.2

Width and Thickness

		140	190	240	290	315	360
42	**Code**	PLVL12H3-15050	PLVL12H3-20050	PLVL12H3-25050	PLVL12H3-30050	PLVL12H3-35050	PLVL12H3-40050
63	**Code**	PLVL12H3-15075	PLVL12H3-20075	PLVL12H3-25075	PLVL12H3-30075	PLVL12H3-35075	PLVL12H3-40075
88	**Code**	PLVL12H3-150100	PLVL12H3-200100	PLVL12H3-250100	PLVL12H3-300100	PLVL12H3-350100	PLVL12H3-400100
112	**Code**	PLVL12H3-150125	PLVL12H3-200125	PLVL12H3-250125	PLVL12H3-300125	PLVL12H3-350125	PLVL12H3-400125
135	**Code**	PLVL12H3-150150	PLVL12H3-200150	PLVL12H3-250150	PLVL12H3-300150	PLVL12H3-350150	PLVL12H3-400150

Non-Visual Beams PL8 H3.2

Width

		140	190	240	290	315	360
42	Code	PL8H3-15050	PL8H3-20050	PL8H3-25050	PL8H3-30050	PL8H3-35050	PL8H3-40050
63	Code	PL8H3-15075	PL8H3-20075	PL8H3-25075	PL8H3-30075	PL8H3-35075	PL8H3-40075
88	Code	PL8H3-150100	PL8H3-200100	PL8H3-250100	PL8H3-300100	PL8H3-350100	PL8H3-400100
112	Code	PL8H3-150125	PL8H3-200125	PL8H3-250125	PL8H3-300125	PL8H3-350125	PL8H3-400125
140	Code	PL8H3-150150	PL8H3-200150	PL8H3-250150	PL8H3-300150	PL8H3-350150	PL8H3-400150

Non-Visual Beams PL12 H3.2

Width

		140	190	240	290	315	360
42	Code	PL12H3-15050	PL12H3-20050	PL12H3-25050	PL12H3-30050	PL12H3-35050	PL12H3-40050
63	Code	PL12H3-15075	PL12H3-20075	PL12H3-25075	PL12H3-30075	PL12H3-35075	PL12H3-40075
88	Code	PL12H3-150100	PL12H3-200100	PL12H3-250100	PL12H3-300100	PL12H3-350100	PL12H3-400100
112	Code	PL12H3-150125	PL12H3-200125	PL12H3-250125	PL12H3-300125	PL12H3-350125	PL12H3-400125
140	Code	PL12H3-150150	PL12H3-200150	PL12H3-250150	PL12H3-300150	PL12H3-350150	PL12H3-400150

Non-Visual Beams PL8 H1.2

Width

		140	190	240	290	315	360
42	Code	PL8H1-15050	PL8H1-20050	PL8H1-25050	PL8H1-30050	PL8H1-35050	PL8H1-40050
63	Code	PL8H1-15075	PL8H1-20075	PL8H1-25075	PL8H1-30075	PL8H1-35075	PL8H1-40075
88	Code	PL8H1-150100	PL8H1-200100	PL8H1-250100	PL8H1-300100	PL8H1-350100	PL8H1-400100
112	Code	PL8H1-150125	PL8H1-200125	PL8H1-250125	PL8H1-300125	PL8H1-350125	PL8H1-400125
140	Code	PL8H1-150150	PL8H1-200150	PL8H1-250150	PL8H1-300150	PL8H1-350150	PL8H1-400150

Non-Visual Beams PL12 H1.2

Width

		140	190	240	290	315	360
42	Code	PL12H1-15050	PL12H1-20050	PL12H1-25050	PL12H1-30050	PL12H1-35050	PL12H1-40050
63	Code	PL12H1-15075	PL12H1-20075	PL12H1-25075	PL12H1-30075	PL12H1-35075	PL12H1-40075
88	Code	PL12H1-150100	PL12H1-200100	PL12H1-250100	PL12H1-300100	PL12H1-350100	PL12H1-400100
112	Code	PL12H1-150125	PL12H1-200125	PL12H1-250125	PL12H1-300125	PL12H1-350125	PL12H1-400125
140	Code	PL12H1-150150	PL12H1-200150	PL12H1-250150	PL12H1-300150	PL12H1-350150	PL12H1-400150

Prolam®

Engineered Laminated Timber

Prowood
283 Waiwhero Road, Motueka
Phone: 03 526 7436 Fax: 03 526 7437
sales@prowoodnz.com

Scan QR barcode
to place your order

Order from / Delivery address:

Alternate Delivery address:

Date	
Order #	
Quote #	

Product	Order Code, if known	Grade	Strength	Treatment	Size		Length	Finish	QTY
Prolam	PLVL12H3-300100SS	Visual	PL12	H3.2	290	88	5.4	Sanded & Sealed	2
Prospan		Non-Visual	LVL15	H1.2	240	42	3.6	---	6
Projoist		Non-Visual	----	H1.2	240	70	5.4	---	12
Proform		Non-Visual	----	NC	300	35	5.4	---	18
Prolam		Non-Visual	PL8	H1.2	315	90	6.0	---	22

Please use the below box to specify any sizes or finishes that do not appear in the drop down options or for any other special instructions.

Other:

Specials

Bridge Beams
Curved Fascia
Truss Cords
Curved Framing Plates
Hand Rails
Stair Stringers

Other species

Douglas Fir
Macrocarpa
Lawson Cyprus
Kwila
Plus any others

Alternative to hy90

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hy90 E = 9.5GPa	Prolam PL8 Alternative	Prolam PL12 Alternative
150 x 90	190 x 63	140 x 88
200 x 90	240 x 63	190 x 88
240 x 90	290 x 63	240 x 88
300 x 90	360 x 63	290 x 88
360 x 90	405 x 88	360 x 88
400 x 90	450 x 88	405 x 88

Alternative to hyONE (LVL16)

Prolam sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hyONE E = 16GPa	Prolam PL8 Alternative	Prolam PL12 Alternative
240 x 90	315 x 88	290 x 88
300 x 90	405 x 88	360 x 88
360 x 90	N/A	405 x 88
400 x 90	N/A	450 x 88

This schedule applies only to Prolam products

Comparison with hyJOISTS
Domestic Floors

1.5kPa Live load SINGLE SPAN

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hyJOIST	Joist Spacing	Span Range	Prolam Equivalent			
			Joist size	Spacing	Grade	Max Span
HJ200 45	450	3.5 to 3.8	190x63	450	PL8	3.85
			240x42	450	PL8	4.15
			190x42	450	PL12	3.75
HJ200 45	600	3.1 to 3.6	190x63	600	PL8	3.50
			240x42	600	PL8	3.75
			190x42	600	PL12	3.45
HJ240 63	450	4.4 to 4.9	240x63	450	PL8	4.85
			290x42	450	PL8	5.00
			240x42	450	PL12	4.70
HJ240 63	600	4.0 to 4.5	240x63	600	PL8	4.35
			290x42	600	PL8	4.55
			240x42	600	PL12	4.25
HJ240 90	450	4.9 to 5.4	290x63	450	PL8	5.60
			315x42	450	PL8	5.40
			240x63	450	PL12	5.35
			290x42	450	PL12	5.55
HJ240 90	600	4.5 to 5.0	290x63	600	PL8	5.25
			315x42	600	PL8	4.95
			240x63	600	PL12	4.90
			290x42	600	PL12	5.15

This schedule applies only to Prolam products

Comparison with hyJOISTS continued
Domestic Floors

1.5kPa Live load SINGLE SPAN

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hyJOIST	Joist Spacing	Span Range	Prolam Equivalent			
			Joist size	Spacing	Grade	Max Span
HJ300 63	450	5.0 to 5.5	290x63	450	PL8	5.60
			315x42	450	PL8	5.40
			240x63	450	PL12	5.35
			290x42	450	PL12	5.55
HJ300 63	600	4.6 to 5.1	290x63	600	PL8	5.25
			315x42	600	PL8	4.95
			240x63	600	PL12	4.90
			290x42	600	PL12	5.15
HJ300 90	450	5.6 to 6.1	315x63	450	PL8	6.00
			360x42	400	PL8	6.15
			290x63	450	PL12	6.15
			315x42	400	PL12	6.10
HJ300 90	600	5.2 to 5.7	315x63	450	PL8	6.00
			360x42	450	PL8	5.95
			290x63	600	PL12	5.75
			315x42	450	PL12	5.90
HJ360 63	450	5.6 to 6.2	315x63	400	PL8	6.15
			360x42	400	PL8	6.15
			290x63	450	PL12	6.15
			315x42	400	PL12	6.10
HJ360 63	600	5.2 to 5.7	315x63	450	PL8	6.00
			360x42	450	PL8	5.95
			290x63	600	PL12	5.75
			315x42	450	PL12	5.90

Comparison with hyJOISTS continued
Domestic Floor

1.5kPa Live load SINGLE SPAN

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hyJOIST	Joist Spacing	Span Range	Prolam Equivalent			
			Joist size	Spacing	Grade	Max Span
HJ360 90	450	6.3 to 6.8	360x63	400	PL8	6.80
			405x42	400	PL8	6.70
			315x63	400	PL12	6.75
			360x42	400	PL12	6.75
HJ360 90	600	5.8 to 6.3	360x63	450	PL8	6.60
			405x42	450	PL8	6.55
			315x63	450	PL12	6.55
			360x42	450	PL12	6.55
HJ400 90	450	6.8 to 7.2	405x63	450	PL8	7.25
			360x63	450	PL12	7.25
			405x42	450	PL12	7.15
HJ400 90	600	6.3 to 6.7	405x63	600	PL8	6.70
			360x63	600	PL12	6.75
			405x42	600	PL12	6.65
HJ360 63	600	5.2 to 5.7	315x36	450	PL8	6.00
			360x42	450	PL8	5.95
			290x63	600	PL12	5.75
			315x42	450	PL12	5.90

This schedule applies only to Prolam products

Comparison with hyJOISTS continued
Domestic Floors

1.5kPa Live load SINGLE SPAN

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hyJOIST	Joist Spacing	Span Range	Prolam Equivalent			
			Joist size	Spacing	Grade	Max Span
HJ360 90	450	6.3 to 6.8	360x63	400	PL8	6.80
			405x42	400	PL8	6.70
			315x63	400	PL12	6.75
			360x42	400	PL12	6.75
HJ360 90	600	5.8 to 6.3	360x63	450	PL8	6.60
			405x42	450	PL8	6.55
			315x63	450	PL12	6.55
			360x42	450	PL12	6.55
HJ400 90	450	6.8 to 7.2	405x63	450	PL8	7.25
			360x63	450	PL12	7.25
			405x42	450	PL12	7.15
HJ400 90	600	6.3 to 6.7	405x63	600	PL8	6.70
			360x63	600	PL12	6.75
			405x42	600	PL12	6.65

This schedule applies only to Prolam products

Alternative to Hyne 17c Glulam

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

Hyne 17c E = 16.7GPa	Prolam PL8 Alternative	Prolam PL12 Alternative
130 x 65	190 x 63	190 x 42 or 140 x 88
165 x 65	240 x 63 or 190 x 88	190 x 63
195 x 65	240 x 88 or 290 x 42	240 x 63
230 x 65	290 x 88	240 x 88
245 x 65	315 x 63 or 290 x 88	290 x 63
260 x 65	315 x 88	315 x 63 or 290 x 88
295 x 65	360 x 88	315 x 88 or 405 x 42
330 x 65	405 x 88	405 x 63
360 x 65	450 x 88	450 x 63
395 x 65	N/A	450 x 63
425 x 65	N/A	450 x 88
525 x 65	N/A	N/A
295 x 85	405 x 88	360 x 88
330 x 85	450 x 88	405 x 88
360 x 85	N/A	405 x 88
425 x 85	N/A	N/A
460 x 85	N/A	N/A
525 x 85	N/A	N/A

This schedule applies only to Prolam products

Alternative to hySPAN or LVL13

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

hySPAN E = 13.2GPa	Prolam PL8 Alternative	Prolam PL12 Alternative
150 x 45	190 x 42 or 140 x 88	140 x 63
170 x 45	240 x 42 or 190 x 63	190 x 63
200 x 45	240 x 42 or 190 x 88	190 x 63
240 x 45	290 x 42 or 240 x 88	240 x 63
300 x 45	315 x 63 or 290 x 88	290 x 63
360 x 45	360 x 88	360 x 63
400 x 45	405 x 88	405 x 63
150 x 63	190 x 63	140 x 88
170 x 63	190 x 88 or 240 x 63	190 x 63
200 x 63	240 x 63	190 x 88
240 x 63	290 x 63	240 x 88
300 x 63	315 x 88 or 360 x 63	290 x 88
360 x 63	405 x 88 or 450 x 63	360 x 88
400 x 63	450 x 88	450 x 88
600 x 63	N/A	585 x 88
150 x 90	190 x 88	190 x 88
170 x 90	240 x 88	240 x 63
200 x 90	240 x 88	240 x 88
240 x 90	315 x 88	290 x 88
300 x 90	360 x 88	315 x 88
360 x 90	450 x 88	405 x 88
400 x 90	N/A	450 x 88

This schedule applies only to Prolam products

Alternative to LVL11

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

LVL11 E = 11GPa	Prolam PL8 Alternative	Prolam PL12 Alternative
140 x 45	190 x 42 or 140 x 63	140 x 42
190 x 45	190 x 63 or 240 x 42	190 x 42
200 x 45	240 x 42 or 190 x 88	190 x 63 or 240 x 42
240 x 45	290 x 42 or 240 x 63	240 x 42
300 x 45	315 x 63 or 290 x 88	315 x 42 or 290 x 63
360 x 45	360 x 63	360 x 42
400 x 45	405 x 63	405 x 42
140 x 63	190 x 63	140 x 63
190 x 63	190 x 88 or 240 x 63	190 x 63
200 x 63	240 x 63	190 x 88 or 240 x 42
240 x 63	290 x 63	240 x 63
300 x 63	315 x 88 or 360 x 63	290 x 88 or 315 x 63
360 x 63	360 x 88 or 405 x 63	315 x 88 or 360 x 63
400 x 63	405 x 88	405 x 63
140 x 90	190 x 88	140 x 88
190 x 90	240 x 88	190 x 88
200 x 90	240 x 88	240 x 88 or 290 x 63
240 x 90	315 x 88	240 x 88 or 290 x 63
300 x 90	360 x 88	315 x 88 or 360 x 63
360 x 90	405 x 88	360 x 88 or 405 x 63
400 x 90	450 x 88	405 x 88

This schedule applies only to Prolam products

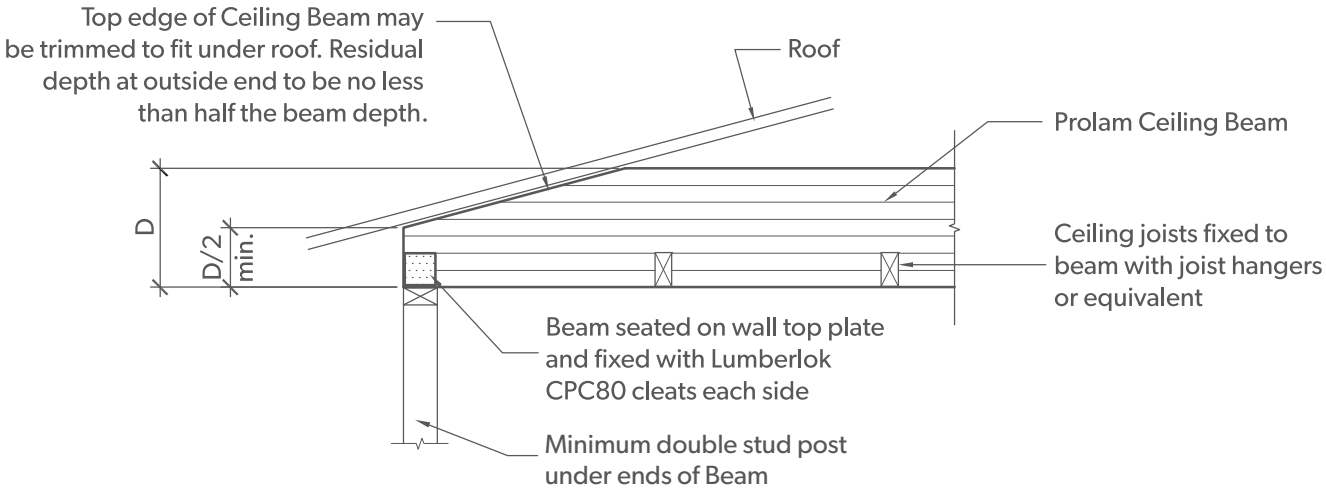
Alternative to GL13 (includes Hyne LGL)

Prolam® sizes are based on equivalent defection. These tables are for guidance only, and any Prolam substitution should be verified against the complete selection chart or the Prolam online calculator. Alternatives may not be suitable for all situations.

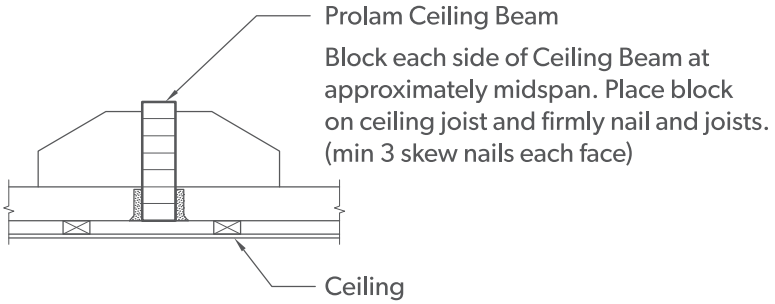
GL13 E = 13.3GPa	Prolam PL8 Alternative	Prolam PL12 Alternative
140 x 42	190 x 42 or 140 x 88	140 x 63 or 190 x 42
190 x 42	240 x 42 or 190 x 88	190 x 63 or 240 x 42
240 x 42	290 x 42 or 240 x 88	240 x 63 or 290 x 42
290 x 42	315 x 63 or 290 x 88	290 x 63 or 315 x 42
315 x 42	360 x 63 or 290 x 88	315 x 63 or 360 x 42
360 x 42	360 x 88	360 x 63 or 405 x 42
405 x 42	405 x 88	405 x 63
140 x 63	190 x 63	140 x 88 or 190 x 42
190 x 63	240 x 63	190 x 88 or 240 x 63
240 x 63	290 x 63	240 x 88 or 290 x 63
290 x 63	315 x 88	290 x 88 or 315 x 63
315 x 63	360 x 88	315 x 88 or 360 x 63
360 x 63	405 x 88 or 450 x 63	360 x 88 or 405 x 63
405 x 63	450 x 88	405 x 88 or 450 x 63
140 x 90	190 x 63	190 x 42
190 x 90	240 x 88	240 x 63
240 x 90	290 x 88	290 x 63
290 x 90	360 x 88	315 x 88
315 x 90	405 x 88	360 x 88
360 x 90	450 x 88	405 x 88

This schedule applies only to Prolam products

Prolam®
Tapered Ceiling Beam Detail



ELEVATION AT END OF CEILING BEAM



SECTION THROUGH CEILING BEAM

This schedule applies only to Prolam products

Stud Requirement Table

Construction Specifications

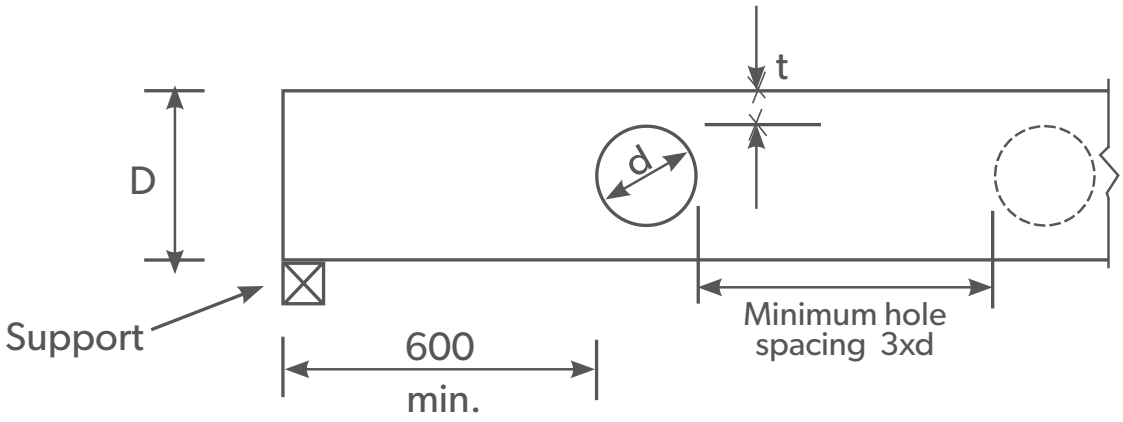
Walls are to be fully lined on at least one face. Full bearing on top plate (i.e. no eccentric loading).

Bearing Reaction	Stud Requirement for Concentrated Loads	
	Stud Height	**Requirements**
Bearing reaction up to & including 10kN	2400	Refer to NZS 3604:2011
	2700	
	3000	
	Stud Height	**Stud Required**
Bearing reaction up to & including 20kN	2400	PL8H1-100 90 x 90
	2700	PL8H1-100 90 x 90
	3000	PL8H1-150 140 x 90
	Stud Height	**Stud Required**
Bearing reaction up to & including 30kN	2400	PL8H1-150 140 x 90
	2700	PL8H1-150 140 x 90
	3000	PL8H1-200 190 x 90

* Notes: The stud requirement for 20 kN & 30 kN bearing reactions can be applied to external walls as well. Reactions over 30kN will require specific design.

These span tables apply only to Prolam products

Prolam® Holes in Laminated Timber



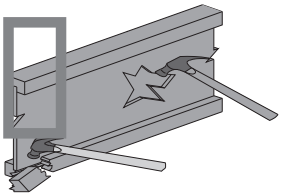
Circular Holes are only Permitted		
Joist Depth D	**Max Hole Dia. (d)**	**Min. Edge Dist. (t)**
140	40	45
190	50	65
240	70	80
290	90	95
315	100	100
360	120	110
405	135	120

No holes in cantilever joist

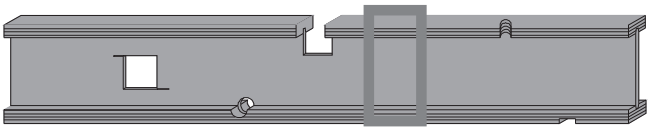
This schedule applies only to Prolam products

Prolam®
I-Joists Hole Charts

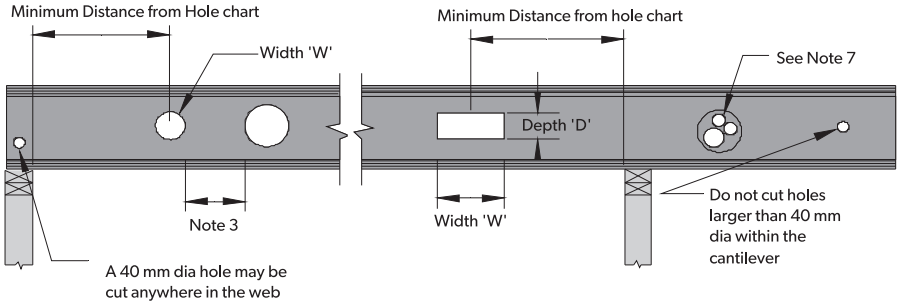
DON'T
make holes with hammer other than pre-punched knockouts



DON'T
hammer on flanges and damage joint



DO NOT cut or notch flanges
DO NOT over cut holes in web



Note: The most accurate method to design the allowable web penetration size and distance from support for Prolam I-Joists is to use the Prolam online software. The table below will give conservative results in some instances.

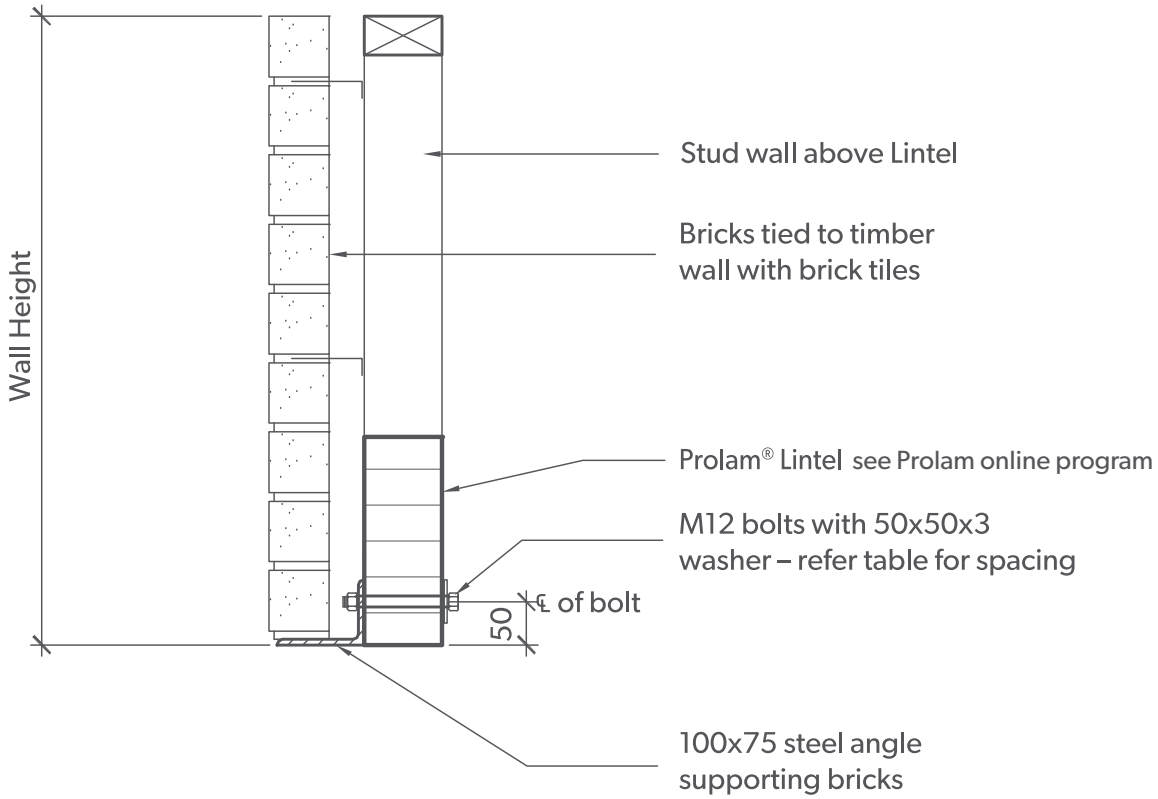
Joist Code	Joist span (mm)	Joist spacing (mm)	Circular Holes								Re ctangular Holes			
			Hole Diameter/Square Hole Width (mm)								Depth x Width (mm)			
			75	100	125	150	175	200	225	250	125x150	150x300	175x350	200x400
			Minimum distance from any support to the centre of the hole (mm)											
PJ20058	3000	600	300	400	-	-	-	-	-	-	-	-	-	-
	3500	600	300	700	-	-	-	-	-	-	-	-	-	-
PJ24070	3500	600	300	300	300	1100	-	-	-	-	1450	1750	-	-
	4000	600	300	300	300	1400	-	-	-	-	1800	2000	-	-
	4500	600	300	300	600	1600	-	-	-	-	2250	2250	-	-
PJ24090	4000	600	300	300	300	1300	-	-	-	-	1650	1900	-	-
	4500	600	300	300	300	1550	-	-	-	-	1950	2250	-	-
	4700	600	300	300	400	1600	-	-	-	-	2150	2350	-	-
SJ30070	4500	600	300	300	300	300	450	1400	-	-	1550	2100	2200	2250
	5000	600	300	300	300	300	700	1650	-	-	2000	2400	2500	2500
SJ30090	5000	600	300	300	300	300	400	1500	-	-	1600	2350	2400	2450
	5300	600	300	300	300	350	600	1650	-	-	1850	2500	2600	2650
SJ36090	5500	600	300	300	300	300	300	300	700	1600	400	1950	2450	2650
	5800	600	300	300	300	300	300	300	850	1750	700	2150	2650	-

Notes:
1. The hole chart is generated on a maximum floor dead load of 40 kg/m with no wall or roof loads. It therefore does not apply for joists supporting either parallel or perpendicular load bearing walls.
2. Hole locations are suitable for joist spacings up to 600 mm centres. Holes may be permitted closer to supports for some member when spacings of 450 or 300 mm are used.
3. The clear distance between holes must equal or exceed twice the diameter of the largest hole, or twice the longest side of a rectangular hole and no more than 3 holes in excess of 75 mm are allowed in any span.
4. Do not cut or damage flanges under any circumstances.
5. Except as noted in 1 and 2 above, a 40 mm hole at a minimum of 450 mm centres is allowed to be drilled anywhere in the web EXCEPT in cantilevered spans.
6. If possible, holes in web should be positioned mid height, minimum edge clearance from any flange is 6 mm.
7. A group of round holes at approximately the same location shall be permitted if they meet the requirements for a single round hole circumscribed around them.

Prolam® Support for Bricks

Wall Height	Angle Size	Bolt Spacing
600mm	100 x 75 x 6mm	900mm
1200mm	100 x 75 x 6mm	900mm
1800mm	100 x 75 x 6mm	600mm
2100mm	100 x 75 x 8mm	500mm
2400mm	100 x 75 x 8mm	450mm
2700mm	100 x 75 x 8mm	400mm

Applies to bricks up to 90mm thickness.



Refer to span tables on software program for lintel sizes.

This schedule applies only to Prolam products

Specifications

Description

Prolam® is engineered, precambered timber with unsurpassed performance, using CCA H5 and H3.2 treatments means it can be used in almost any situation. Prolam is made to standards AS/NZS 1328.1 and AS/NZS 1491 and treated to NZS 3640. Using Prolam elimates the wide variations in solid timber, and allows wide openings to be spanned with ease, along with keeping the lintel depth to a minimum. Prolam is available in many different sizes/grades, meaning there's is a beam for every application.

Design Criteria

Prolam is designed to comply with AS/NZS 1170.0, .1, .2, .3, and .5, structural design actions, NZS3603 Timber Structures, and to comply with the NZBC.

Fixings

Joist Hangers

Top mount hanger, full depth face mount hanger and partial depth face mount hanger. Nails and screws to manufacturer's technical literature requirements.

Steel Brackets - Straps

Mild steel galvanized or stainless steel straps and brackets to suit application. Refer to Prolam User Guide and Prolam Pro Calculator for fixing and support details.

Fixing Plates

Tylok plates to suit application. Refer to Prolam User Guide and Prolam Pro Calculator for fixing and support details.

Installation

Qualifications

Carry out the installation of the laminated engineered timber work with experienced and competent tradesmen familiar with the materials and techniques specified.

Deliver and Handle

Deliver and handle members so no structural damage occurs, corners and edges are not damaged, or surfaces marked or stained.Handle laminated timber products with nylon strops or similar to prevent damage.

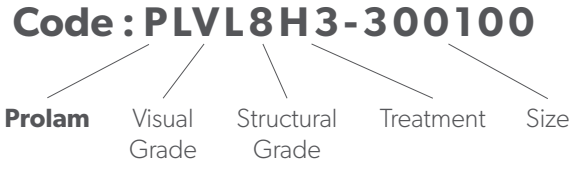
Erection

Carry out the erection of laminated and associated support framing for houses and similar structures to the requirements of NZS 3604. Comply with NZBC B1/VM1, 6.0 Timber. Refer to Prolam guidelines for the installation of laminated structural framing. Prop long length beams and lintels at the mid span until the moisture content has reached a suitable level for the application of internal linings.

Co-ordination

Refer to all drawings to ensure details and fixings required are provided for in the laminated structural work.

Sizes and Codes



Specifications

Storage and Handling

Storage and handling of Prolam® is the same as any dry timber. As timber naturally absorbs moisture from surrounding environment, exposure to wet weather will dimensionally change the product and cause cracking. The end grain of timber is particularly vunerable.

Stack on level bearers, 150 mm minimum clear of the ground. Store under cover to keep dry prior to installation. Keep unsealed product wrapped.

Traceability

All Prolam products are branded for your protection. Each visual beam or post has an individual removable barcode, these must be removed and kept in order for warranty claims to be validated. This is a part of the AS/NZS 1328.1 requirement. Non visual beams are branded down the length.

Inground Use

When using posts inground, we recommend sealing the portion that goes in ground to prevent the post taking up moisture and help prevent cracking of the concrete around the post.

No Substitutions

Substitutions are not permitted to any specified Prolam products or associated components or accessories. The structural properties of other manufactures laminated products may not be comparable, as all Prolam is precambered.

Visually Exposed Prolam Sealing Specifications

Visually exposed Prolam must be undercoated or sealed within 14 days of installation.

Timber naturally absorbs moisture from the surrounding environment. This can cause the product to alter dimensionally and cause resin bleeding, distortion and cracking.

Sealing the product with a good paint or stain system reduces the incidence of dimensional change and increases longevity.

When using Posts inground, the portion of the post that is to be in-ground must be sealed with a moisture-resistant coating prior to installation.

Recommended procedure

1. Fill nail holes with an exterior grade wood filler.

2. Sand back until surface is smooth and completely free from dirt and dust.

3. Painting: Apply a single enamel undercoat and then apply two full topcoats compatible with the undercoat. Painting is to be carried out in accordance with best practice: 1 x undercoat and 2 x topcoats to achieve a total DFT dry film thickness) of 80 microns, comprised of undercoat DFT 30 microns, topcoat DFT 25 microns/coat).

4. Staining: Apply 3 coats of premium oil-based stain, including cut ends and joints. CD50X or Dryden's Penetrating wood oil are some recommended oils. Recoat every 12 months.

Products must be applied as per manufacturer's instructions.

NOTE: Dark colours are not recommended. These will make the timber move more with environmental changes which may cause resin bleeding, distortion and cracking to occur. Prolam should always be painted or stained with colours with an LRV greater than 45%.

NO WARRANTY APPLIES TO ANY PRODUCT THAT HAS NOT BEEN KEPT DRY OR HAS NOT BEEN SEALED AS RECOMMENDED ABOVE.

FAQ – Frequently Asked Questions

Why should I use Prolam Glulam instead of steel?

Here are just a few reasons:

- Easier and lighter to handle and fix
- Friendlier on the environment - stores carbon rather than emitting it
- Uses NZ's only renewable construction material - plantation timber
- Uses 14 times less energy to produce than equivalent steel beam
- Superior Fire Resistance compared to steel
- Lower maintenance - Glulam does not rust or corrode
- Cost effective - no boxing in or covering as with steel beams
- Appearance - natural warmth and beauty of timber cannot be reproduced in steel
- Will not buckle or distort in response to temperature changes
- Direct fixing of plates, joists and other connections is much easier

Why should I use Prolam Glulam instead of solid timber?

Because Prolam Glulam is manufactured from selected grade, kiln-dried material it is more stable than a sawn timber beam of the same section. The tendency of large section sawn timber to twist, split and shrink is greatly minimised in Prolam. A Prolam beam can reduce the overall section of members up to 40% compared to unseasoned timber, as they are pretensioned.

What type of quality assurance comes with Prolam Glulam Beams?

All Prolam Glulam is manufactured to comply with the Australia and New Zealand Standard AS/NZS1328 and AS5096 - Glue Laminated Structural Timber A.

Can Prolam Glulam beams be used in exterior situations?

Yes. Treatment to hazard class 3 (H3.2 or H5) is recommended for all Prolam beams exposed to the weather. Along with this treatment an exterior adhesive resorcinol is used. The finished beams must be suitably coated with either a penetrating sealer or film-forming coating (refer to pg 41). When painting or staining external Prolam Glulam beams it is preferable to use lighter colours. Dark colours attract heat and may cause surface shrinkage. Because Prolam Glulam is chemically inert it is ideal for corrosive atmospheres such as swimming pools, marine structures, fertilisers and scouring plants where steel is subject to rust and corrosion.

What finish should I ask for on my beams?

If your beam is going to be used in a situation where appearance is important such as house interiors, halls etc - Visual Appearance Grade A should be specified. If you require a sanded finish, please specify. Non visual grade is intended for use where the product is not seen and occasional chips and voids are acceptable.

What strength grades should Glulam be designed to?

The Glulam standard, AS/NZS 1328 states grades from GL8 to GL12, Prowood is certified to produce PL8 & PL12 grades.

FAQ – Frequently Asked Questions

Will CCA treated Prolam® cause corrosion on galvanised fixings?

While this may be a problem with solid unseasoned timber, Prolam does not act in the same way. Because all Prolam is manufactured from material that is kiln dried after treatment, the treatment salts are thoroughly fixed into the timber. They will therefore not subsequently leach out or affect galvanised fixings. For additional protection it is recommended that bolts be greased before inserting into CCA treated Prolam beams that are exposed to the weather.

How long should I keep the wrapping on?

Wrapping of Prolam beams is primarily to protect them from marking during handling and transport. This is not designed to be a waterproof protection. Once on-site water can often get in under the wrapping and cannot get out. Wrapping should be slit to provide drainage. Wrapping can be left on Prolam beams for as long as possible (even during construction) to protect against accidental marking. Also be aware that partial removal of wrapping to access connections may cause patches of discolouration by exposure to weather.

Do I need special connections for my beams?

Prolam can be treated as natural solid timber when it comes to fixings. The use of standard nailing systems and bolts is normal. In exposed situations dark stains can appear from the use of unprotected steel brackets and bolts. Use galvanised metalwork where there is any possibility of moisture.

Can finished Prolam beams be re-cut and drilled?

Any cutting, drilling or slotting that exposes unsealed timber must be protected with an application of appropriate weather or treatment sealer. Avoid cut-outs, rebating or drilling in the top and bottom edges of Prolam beams. These could cause serious weakness in tension and compression areas. Consult the manufacturer or designer first.

Do splits along glue lines mean delamination has occurred?

Actual delamination is a failure in the laminating process. While an opening along a glue line may be indicative of delamination there are other more common causes. Typical checking that occurs in large section timber in response to moisture variation will most naturally occur in Prolam along a glue line where the natural continuation of the timber fibres is interrupted. This is often mistaken for delamination. (Refer to pg 47)

How serious are checks and why do they appear?

Surface checking and splits occur as timber is allowed to absorb moisture then dries out in response to environmental changes. Surface fibres are more severely exposed to these changes than the inner core and as a result of the movement in these fibres as they dry and shrink, surface splits may occur. Changes in atmospheric conditions will affect the appearance and disapperarance of these checks. The effect of surface checks are superficial only and do not usually have any effect on the structural performance of the Prolam.

How can these checks be minimised?

Prolam® beams are provided with a sealer coating if requested, which controls the ingress of moisture into the timber, and is done before the beams leave the factory. If the beams are exposed to the weather for a greater period that 8-10 weeks, a further coating should be applied. Consult our painting instructions for permanent sealing requirements.

Where can H1.2 treatment be used?

Prolam treated to H1.2 is only suitable to be used in the building envelope as in NZS3604.

What is the difference between Visual and Non-Visual grades?

Prolam Visual is made from visually selected sharts that are then finger jointed together into a long length and laminated into the required beam. This grade is recommended for use in highly visual areas and when a paint or stain quality finish is required. Prolam Non-Visual is made up from stress graded timber and is not visually graded. The non-visual grade is recommended where the beams are not seen. [Refer to pg 83 for more detail]

What is the difference between GL and PL grade?

The GL prefix is a reference to the old term "Glulam", where the PL is the prefix for branded "Prolam" structural timber.

Why is bandsawn finished smaller than standard?

Bandsawn finished Prolam posts and beams are 6mm smaller than standard, because we have to cut the bandsawn finish into the beams after they are made. Use the Prolam Online calculator to specify this product.

What is the fire rating of Prolam?

The BRANZ appraisal states a charring rate from the table below:

Density (kg/m^3)	Charring Rate (mm/min)
400	0.75
500	0.70
600	0.65

It is recommended that this simplified table of data derived from "White's" model and should be adopted for design of fire resistant timber structures in New Zealand. Prolam density is 550 Kg/m^3.

Can you cut drill, machine Prolam after manufacturing?

Yes, because Prolam is pretreated before laminating, all pieces are fully treated, so any cutting etc. does not need apaint on treatment applied to the cut portion. However, any cuts of be sealed as page 41.

Licensed Builders Practitioners LBP Points Here

This Prolam® Builders Booklet will give you LBP points if you record reading it as your **Skills Maintenance Activity.**

- Log onto **https://lbp.dbh.govt.nz/OnlineAccount/Login.aspx** to set up your user account, or if you are already set up, log in here to record your learning.
- Or you can record your learning by making a note in your Diary.
- One hour of learning = 1 point
- Be sure to write down how and what you learnt and include the date and the time taken.
- You can also go to our web site and download a Q & A sheet as a record of learning.

Record of Skills Maintenance Form

Return this form with your annual licence fee

Full Name	
LBP Number	

Enter details of your Skills Maintenance. Remember to include all of your activities, and include additional pages if needed.

Activity			
Date Completed		Hours	
Details of Activity			

Activity			
Date Completed		Hours	
Details of Activity			

Activity			
Date Completed		Hours	
Details of Activity			

Declaration

I declare this is a true record of my skills maintenance activities. I understand that the Registrar can ask to see my personal skill maintenance records that support this claim. I understand that it is an offence under the Building Act 2004 to provide incorrect or misleading information.

..... / / .....

Signature Date

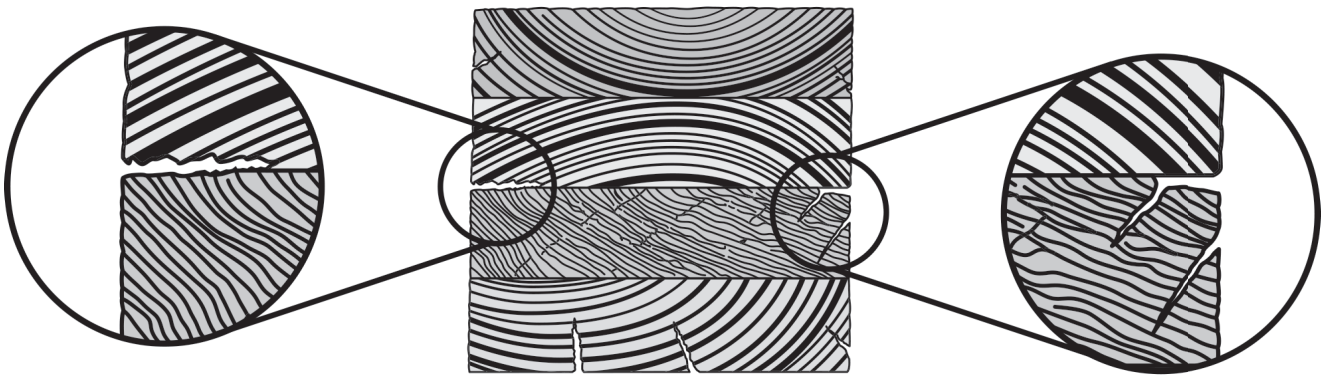
Please Post to: **The Registrar**
Ministry of Business, Innovation and Employment
PO Box 50041, Porirua 5240

Checking in Prolam® Glulam

One of the advantages of glued laminated timber construction is that while seasoning checks may occur for the same reasons that they do in sawn members, checking in glued laminated timber will generally occur to a much lesser degree because of careful control of the moisture content of timber used for laminating. Checks in wood are separations along the fibres normally occurring across the rings of annual growth resulting from stresses developed during changes in moisture content. Checks in glued laminated timber may appear as openings parallel to the grain on the sides of members. As wood loses moisture to the surrounding atmosphere, the outer fibres of the member lose moisture at a more rapid rate than do the inner fibres. As outer fibres try to shrink, they are restrained by the inner portion of the member that has higher moisture content. The more rapid the rate of drying, the greater will be the differential in shrinkage between the outer and inner fibres resulting in higher shrinkage stresses. These resultant stresses perpendicular to the grain of the wood can cause characteristic wood seasoning checks. The influence of checks on the structural performance of glued laminated timber members is generally minor. Checking can be minimised by careful installation practices that avoid prolonged exposure of the members during construction.

Identification of Checking

Checks occur as transverse separations or openings that are nearly parallel to the grain direction in glued laminated timber and generally follow the grain direction around knots and along sloping grain. Differences in the shrinkage rate of individual laminations used is glued laminated timber tend to concentrate shrinkage stresses at or near glue lines, resulting in checks. Checks are often confused with delamination that occurs when the glue bond is not adequate. The presence of wood fibre separation in these openings is the key distinguishing characteristic of seasoning checks. Openings due to inadequate adhesive bonding may appear as smooth wood surface separations, possibly darkened by the adhesive film, or as glossy surface areas of adhesive with an absence of torn wood fibres.



Extract from Issue 2 – Volume 8
NZ Timber Design Journal Exposed

It can be assumed that stresses will develop along glue-lines in exposed glulam, simply because the grain orientation, ring orientation, wood density, response to moisture etc. thus will differ between adjacent laminations. European specifications for exposed glulam state that the growth rings in the laminations must all be oriented the same way, and they show a diagram of flat-sawn laminations all with the pith-side downwards.

This is hardly practical in New Zealand with Radiata as the ring orientation is likely to change across a finger joint, and many laminations will be quarter-sawn, flat sawn and everything in between.

Therefore delamination is to be expected but generally should not penetrate more than 20 mm in properly cured glulam, made with resorcinol adhesive. Exposed treated solid timber is likely to develop similar checking. The reason for this is that the moisture fluctuations that give rise to the stresses do not penetrate far, i.e. they are damped out by the resistance of the wood to diffusion of moisture.

Forest Research has tested glulam from a cool store that showed obvious delamination. There appeared to be little effect on strength unless the delamination goes right through. There have been experiments to determine how much delamination can be tolerated before an effect on shear is noticed. Where the glue-line was artificially narrowed by placing adhesive tape along the laminations prior to gluing, there was no effect down to 25% of the width remaining. When the glued area was reduced by placing adhesive strips across the wood at intervals, an immediate effect was noticed. It all has to do with the stress-raisers generated by the delamination.

Some type of sealing is certainly helpful, and painting is excellent but it must be maintained. An oil-based preservative such as creosote is effective because the oiliness acts as a water repellent. I have seen a thick tacky substance applied to glulam bridge stringers, same as can be applied to steel as a rust preventative.

The bridge in question is at the entrance to the Whakarewarewa village in Rotorua and is still giving good service after 40 years. There are several proprietary formulations of water repellent sealants on the market, and some manufacturers apply "Ensele" as a matter of course.

Written by Bryan Walford, Forest Research Institute, Rotorua

Durability Statement

Prolam® products are manufactured to the requirements of AS/NZS 1328.1:1998, under an approved quality system based on the 1S0 9000 series of standards. As such if the product is used in accordance with Prolam product literature, it will meet the durability clauses of the New Zealand Building Code B2.

Subfloor Applications

- Prolam may be used where approved practices for clearance and ventilation are used.

External Use

- Prolam is recommended for weather exposed applications if sealed and maintained in accordance with Prolam literature.

Preservative Treatment

- Prolam Beams are CCA H3.2 or H1.2 treated as defined by NZS 3640:2011, H3.2 must be used for weather exposed applications, such as verandah beams, deck bearers, and subfloor applications.
- Prolam Posts are CCA H5 treated as defined by NZS 3640:2011 for in-ground and weather exposed applications, such as deck piles, verandah posts and similar applications.

Storage of Prolam

- To ensure Prolam remains straight and true at the time of installation, follow the below recommendations:
  1. Store under cover so that it remains dry until installation.
  2. Stack clear of the ground for good ventilation.
  3. Stack on bearers to keep flat and straight.

Branded Prolam

- Prolam is branded for your protection. Lookalike materials may not perform to the same standard.
- For your protection do not accept unauthorized substitution

AsureQuality

This is to certify that

Prowood Ltd

Waiwhero Road, Motueka

Has been assessed by AsureQuality Limited and found to have a production system that meets the requirements of the:

Engineered Wood Products Programme

Scope of Certification

Prowood Ltd has demonstrated compliance to the AsureQuality Engineered Wood Products Programme for the following standards and products:

Finger Joint and Glue Laminated Standards

AS/NZS 1328.1 Glued laminated structural timber – Part 1 Performance requirements and minimum production requirements

AS/NZS 1328.2 Glued laminated structural timber – Part 2 Guidelines for AS/NZS 1328 – Part 1 for the selection, production and installation of glued laminated structural timber

AS 5068 – Timber – Finger joints in structural products – Production requirements

For the following products

GL8, GL12, GL17, PL8, PL12, PL17

Registration No: AEWP05

Certificate Number: 03

Date of Initial Certification: 31st August 2012

Date of Issue: 3rd July 2017

Re-Issue Date: 3rd July 2020

This certificate is issued on the basis that surveillance audits during the certification period are undertaken annually or at a frequency determined by AsureQuality Limited.

JAS-ANZ

Accreditation by the Joint Accreditation System of Australia and New Zealand, Acc No.

S2080600NH (QMS)

www.jas-anz.org/register

John McKay Chief Executive Officer

AsureQuality

This is to Certify

Prowood Ltd

Waiwhero Road, Motueka

Has been assessed by AsureQuality Limited and found to have a production system that meets the requirements of the:

AsureQuality Timber Treatment Programme

Scope of Certification

NZ Approved Code of Practice for the safe use of - Timber Preservatives and Antisapstain Chemicals.
Best Practice Guideline - For the safe use of Timber Preservative and Anti-Sapstain Chemicals
NZS 3640 – Chemical Preservation of Round and Sawn Timber
AS/NZS 1604 - Specification for preservative timber
AS/NZS 1604.5 - Specification for preservative timber - Glue Laminated Timber Products

For the following products and preservatives:

Boron

Glue Laminated Timber Products

Registration No:	TTP34
Certificate Number:	1
Certification Date:	26th August 2013
Date of Issue:	26th August 2013
Re-Evaluation:	30th July 2015

JAS-ANZ

www.jas-anz.org/register

Michael Thomas

Michael Thomas
Chief Executive Officer

A world-class provider of food safety and biosecurity services

This certificate remains the property of AsureQuality Ltd
8 Pacific Rise | Mt Wellington | Auckland 1741 | New Zealand
+64 9 573 8000 | www.asurequality.com | info@asurequality.com

CODEMARK®

Certificate No: BRANZ-CM-1018
Date of Issue: 02 December 2019
Revision Date: 02 December 2022

CERTIFICATE HOLDER

Prolam®

Prowood Limited

283 Waiwhero Road
Motueka
New Zealand

Tel: 03 526 7436
Email: info@prowoodnz.com
Web: www.prolamnz.com

John Woodman
Managing Director
Prowood Limited

CERTIFICATION BODY

BRANZ

BRANZ Limited

1222 Moonshine Rd,
RD1, Porirua 5381
Private Bag 50 908
Porirua 5240,
New Zealand

Tel: 04 237 1170
Email: assuranceservices@branz.co.nz
Web: branz.nz

Cheyldra Percy
Chief Executive Officer
BRANZ Limited

PRODUCT CERTIFICATE

THIS IS TO CERTIFY

PROLAM H5 GLUE LAMINATED POSTS

KEY INFORMATION

1. DESCRIPTION OF PRODUCT

Prolam H5 Glue Laminated Posts are glue laminated Radiata Pine structural timber posts used to support above ground, applied loads. Prolam H5 Glue Laminated Posts are available in sizes ranging from 88 x 88 mm to 260 x 260 mm. Stock lengths range between 2400 mm and 7200 mm with other lengths available by order. Prolam H5 Glue Laminated Posts are identified by identification tags that contain a detailed product specification stapled to the ends of each individual post.

2. USE OF PRODUCT

Prolam H5 Glue Laminated Posts are for use as exterior structural posts subject to structural specific engineering design. Prolam H5 Glue Laminated Posts can be installed either using proprietary cast-in structural post support brackets or with the posts directly encased in concrete footings below ground.

3. COMPLIES WITH THE FOLLOWING PROVISIONS OF THE NEW ZEALAND BUILDING CODE (NZBC)

Clause B1 STRUCTURE: Performance B1.3.1, B1.3.2 and B1.3.3 (b),(g),(h) and (j) [i.e. imposed gravity loads arising from use, snow, wind and impact]

Clause B2 DURABILITY: Performance B2.3.1 (a) 50 years.

Clause F2 HAZARDOUS BUILDING MATERIALS: Performance F2.3.1.

4. CONDITIONS AND LIMITATIONS OF USE

4.1 Prolam H5 Glue Laminated Posts are suitable as structural posts subject to specific engineering design to AS/ NZS1170. *Note: Guidance for specific engineering design using Prolam H5 Glue Laminated Posts is given in the product technical literature- see section 6 of this certificate.*

4.2 Prolam H5 posts shall not be dimensionally altered in any way that results in a reduction of structural dimension. Dimensional stability and strength rely on the width and thickness remaining unchanged.

4.3 Structural connection details shall be specifically designed. Structural connection details are outside the scope of this certificate.

4.4 Steel fixings and fastenings in contact with Prolam H5 Glue Laminated Posts shall be selected in accordance with section 4 of NZS 3604.

4.5 Where installed directly into concrete below ground, Prolam H5 Glue Laminated Posts shall be encased by a minimum of 100 mm thickness of concrete to all sides and concrete shall finish at or above finished ground level.

4.6 All exposed sections of post must be finished with an exterior grade enamel or acrylic paint system and compatible primer complying with any of Parts 7,8,9 or 10 of AS 3730 within 14 days of installation in accordance with the requirements of the technical literature.

CODEMARK®

Certificate No: BRANZ-CM-1018
Date of Issue: 02 December 2019
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Prolam.

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Web: www.prolamnz.com

John Woodman
Managing Director
Prowood Limited

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Private Bag 50 908
Porirua 5240,
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Tel: 04 237 1170
Email: assuranceservices@branz.co.nz
Web: branz.nz

Cheyldra Percy
Chief Executive Officer
BRANZ Limited

5. HEALTH AND SAFETY INFORMATION

Prolam H5 Glue Laminated Posts are preservative treated with chromated copper arsenate (CCA) preservative. Manufacturer's instructions and typical practices for working with, handling and maintaining CCA treated timber should be observed.

6. REFERENCE DOCUMENTS

This Product Certificate must be read in conjunction with:

- Prolam Structural Timber Guide – 2019

SCHEDULE: INFORMATION THAT SUPPORTS KEY INFORMATION

7. SUPPORTING INFORMATION ABOUT DESCRIPTION OF PRODUCT

PRODUCT SPECIFICATION

Prolam H5 Glue Laminated Posts are engineered glue laminated timber structural posts manufactured from Radiata Pine treated with chromated copper arsenate (CCA) preservative to hazard class H5. Prolam H5 Glue Laminated Posts are assembled from finger jointed, H5 treated lamina layers glued together using resorcinol phenol formaldehyde resin to make up the final post size. Prolam H5 Glue Laminated Posts are available in structural grades PL8 and PL17, which are equivalent to grades GL8 and GL17 given in AS/NZS 1328.

Prolam H5 Glue Laminated Posts are produced to visual grade or appearance grade 'A' which are high visual appearance standards. Prolam H5 Glue Laminated Posts are supplied in a smooth machined finish or can be supplied bandsawn, primed or sanded and sealed. Prolam H5 Glue Laminated Posts shall be painted with an exterior grade enamel or acrylic paint system.

8. SUPPORTING INFORMATION ABOUT INTENDED USE OF PRODUCT

INSTALLATION REQUIREMENTS

Installation must be carried out in accordance with the following:

- Technical Literature: Prolam Structural Timber Guide – 2019.
- The instructions included in the structural design by a Chartered Professional Engineer.

MAINTENANCE REQUIREMENTS

Maintenance required for applied coatings to the posts shall be carried out in accordance with the relevant paint manufacturer's instructions and prescribed recoating intervals.

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Cheyldra Percy
Chief Executive Officer
BRANZ Limited

BUILDING CODE

B1 STRUCTURE

Prolam H5 Glue Laminated Posts will resist structural loads likely to be encountered in normal use. The likelihood of impact damage to the posts and the possibility of consequential structural failure should be reviewed at the design stage, and appropriate mitigation should be considered for vulnerable areas.

B2 DURABILITY

Prolam H5 Glue Laminated Posts, when installed and maintained in accordance with the details given in the technical literature, meets code compliance with NZBC Clause B2.3.1(a), not less than 50 years as a building element that provides structural stability to a building.

F2 HAZARDOUS BUILDING MATERIALS

Prolam H5 Glue Laminated Posts will not present a health hazard to people.

9. SUPPORTING INFORMATION ABOUT CONDITIONS AND LIMITATIONS OF USE

All conditions and limitations provided as stated in this product certificate.

10. BASIS FOR CODEMARK CERTIFICATION

The following evaluations have been carried out on Prolam H5 Glue Laminated Posts to determine compliance with the NZBC:

- Compliance with NZBC Clause B1 (Structure) is determined through standards cited within the Acceptable Solutions and Verification Methods.
- A durability and hazardous building materials assessment has been undertaken of Prolam H5 Glue Laminated Posts by BRANZ technical experts.
- Site visits have been carried out by BRANZ to assess the practicability of installation, and to examine completed installations.
- The referenced Technical Literature has been examined by BRANZ and found to be satisfactory.
- The quality of supply to the market is the responsibility of Prowood Limited.
- Building designers are responsible for the design of the building, and for the incorporation of Prolam H5 Glue Laminated Posts into their design in accordance with the instructions of Prowood Limited.
- Quality of installation is the responsibility of the installer in accordance with the instructions of Prowood Limited.

11. DOCUMENTATION SUPPORTING CERTIFICATION

- AS/NZS 1170 Structural design actions.
- AS/NZS 1328: 1998 part 1 and 2 Glued laminated structural timber.
- AS 3730: 2006 (R2016) parts 7,8,9 and 10 Guide to the properties of paints for buildings.
- NZS 3604: 2011 Timber-framed buildings.
- NZS 3640: 2003 Chemical preservation of round and sawn timber
- Ministry of Business, Innovation and Employment Record of Amendments for Compliance Documents and Handbooks.
- The Building Regulations 1992.

JAS-ANZ

www.jas-anz.org/register

CODEMARK®

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Cheyldra Percy
Chief Executive Officer
BRANZ Limited

12. CONDITIONS RELATING TO NOTIFICATION

The certificate holder (Prowood Limited) must notify the product certification body (BRANZ) in writing, of any intended change to any of the following particulars:

- the name, address, or contact details of the certificate holder;
- any address of a location where a certified product is produced or manufactured.

The certificate holder shall notify the product certification body in writing of any intended change, modification, or alteration to any of the following:

- the certified building method or product;
- the method of its production or manufacture;
- the product quality plan prepared in respect of the certified building method or product;
- the application or installation instructions for the certified building method or product;
- any documentation relating to the use and maintenance of the certified building method or product.

If the certificate holder has any reason to suspect that the certified building method or product does not comply with the Building Code, the certificate holder shall notify the product certification body in writing of the reason for that suspicion.

If the certificate holder or the product certification body finds that a certified building method or product that has been released on the market does not comply with the Building Code, the certificate holder shall disclose that fact in a published disclosure statement in a form that is acceptable to the product certification body and to MBIE.

If the certificate is suspended or revoked, the certificate holder—

- shall notify all customers to whom the building method or product is regularly supplied; and
- immediately cease using the certificate, the mark of conformity, and any reference to the number of this certificate.

JAS-ANZ

www.jas-anz.org/register

The Certificate Holder must maintain compliance with the conditions set out in Regulation 15 of the Building (Product Certification) Regulations 2008.

This Certificate is issued by BRANZ Limited, an independent certification body accredited by the product certification body appointed by the Chief Executive of the Ministry of Business, Innovation and Employment (MBIE) under the Building Act 2004. MBIE does not in any way warrant, guarantee or represent that the building method or product the subject of this certificate conforms with the New Zealand Building Code, nor accept any liability arising out of the use of the building method or product. MBIE disclaims, to the extent permitted by law, all liability (including negligence) for claims of losses, expenses, damages and costs arising as a result of the use of the building method(s) or products(s) referred to in this certificate.

It is advised to check that this Product Certificate is currently valid and not withdrawn, suspended or superseded by a later issue, by referring to the MBIE website, www.mbie.govt.nz

This certificate may only be reproduced in its entirety.

Information regarding BRANZ's complaints process can be found at the following link: Complaints Process

pass™ PRODUCT ASSURANCE SUPPLIER STATEMENT
pass™ no: 19030 | Expires: 08/2020

Prolam®
Engineered Laminated Timber

PROLAM LAMINATED H3.2 POSTS

PURPOSE

Prolam glue laminated H3.2 posts are supplied as a grade PL8 structural member. The post can be supported on a structural bracket above ground.

EXPLANATION

Prolam H3.2 posts are manufactured from N.Z. grown Pinus Radiata. The laminates are glued with resorcinol adhesive.

Prolam H3.2 posts are supplied in:

- a range of sizes
- structural grade PL8
- appearance grade A
- treatment hazard class H3.2 (CCA)

Prolam lamina are individually treated prior to lamination and finishing. This is to ensure each lamina achieves the same penetration and retention as solid lumber treated under NZS 3640:2003.

The manufacture of Prolam H3.2 posts are third-party certified by AsureQuality to AS/NZS 1328 part 2 or AS 1720.1:2010 (but branded with the prefix PL). Prowood NZ is registered by the Timber Preservation Association of Australia in respect of the CCA treatment protocol.

For further assistance please contact:
03 526 7436
info@prowoodnz.com
www.prolamnz.com

WE COMPLY s14G BUILDING ACT 2004

SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Building	
In accordance with NZS3604:2011 or specifically engineered to NZS 3603:1993 and AS/NZS 1170:2002.	❯ Prolam H3.2 posts must not be ripped where this would result in a reduction in the number of lamina; dimensional stability and strength relies on the width and thickness remaining unchanged ❯ Fixing material to be in accordance with section 4, NZS 3604:2011. ❯ Where NZ Building Code Clause C3 applies, the use of Prolam H3.2 posts is subject to specific design by a fire engineer

USEFUL INFORMATION

For information on the design, installation and maintenance of Prolam H3.2 posts and for our warranty refer to www.prolamnz.com.

OTHER CERTIFICATIONS AND APPROVALS HELD BY PROWOOD NZ

The following certifications and approvals are held by Prowood Ltd.

- AsureQuality Engineered Wood Products Programme (AEWP) Reg no: AEWP05/Certificate No: 03, 3/7/2017.
- Certificate of Registration of Preservative Treatment & Allocated Brand, 709 01 H3.2, 708 90 H3.2.

Prolam®
Engineered Laminated Timber

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Prowood Ltd requirements, the Prolam H3.2 posts will comply with or contribute to compliance with the following performance claims:

N.Z. Building Code clauses	BASIS OF COMPLIANCE[1]	
	Compliance statement	Demonstrated by
B1 Structure B1.3.1 B1.3.2 B1.3.3 (a, b, f, j, m, q) B1.3.4 (a, b, c, d, e)	ACCEPTABLE SOLUTION B1/AS1: NZS 3604:2011, clause 2.3.9.3. AS/NZS 1170.2002 (set)	› NZS 3604:2011, clause. 2.3.9.3 requires glue laminated timber to be manufactured in accordance with AS/NZS 1328 (Parts 1, 2) › Prowood Ltd third party certified, AsureQuality Engineered Wood Products Programme: AS/NZS 1328:1998 (Parts 1, 2) › AsureQuality is JAS-ANZ accredited
B2 Durability B2.3.1(a) B2.3.2(a)	VERIFICATION METHOD B2/VM1: Clause 1.3 Verification through comparison with similar material.	› AS/NZS1604.5, clause 1.9 requires the same characteristic values for penetration and retention as defined in NZS 3640:2003 › Registered by Timber Preservers Association of Australia (CCA) › Subject to Prowood treatment protocol to AS/NZS 1604.5:2012 and NZS 3640:2003
C Protection from Fire C6.3 C6.4	ALTERNATIVE SOLUTION NZS 3603:2011, clause 9.4.2.	› NZS 3603:1993, clause 9.4.2 specifies charring rate of radiata pine and other timber species of approximately the same density to be taken as 0.65 mm/min › APA Evaluation of Char Rate (ASTM E119), TT-118 January 2015 › Glue laminated timber elements have a fire performance comparable to solid wood members of equivalent size; Timber Industry Federation New Zealand Timber Design Guide 2007
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION. NZTPC *Best Practice Guideline for the Safe Use of Timber Preservatives & Anti-sapstain Chemicals.* Establishes drying & flash off requirements.	› Subject to Prowood treatment protocol and Prowood health and safety plan › TBB audited manufacturing/treatment process

1. The Compliance Statement is the pass holder's statement that they have met their obligations under s14G(2) of the Building Act 2004.

SOURCES OF INFORMATION

- AS/NZS 1328:1998 (parts 1, 2) *Glued laminated structural timber*
- NZS 3603:1993 *Timber structures*
- NZS 3604:2011 *Timber-framed buildings*
- NZS 3640:2003 *Chemical preservation of round and sawn timber*
- AS/NZS 1604.5:2012 *Specification for preservative treatment Part 5; Glue laminated timber products*

VERSION: V1.1 **DATE:** 30/01/2020

Note: Uncontrolled in printed format.

NAME: John Woodman

POSITION: Managing Director

Signed on behalf of Prowood Ltd:

John Woodman

Digitally signed by John Woodman
Date: 2020.01.30 07:43:44 +13'00'

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

pass

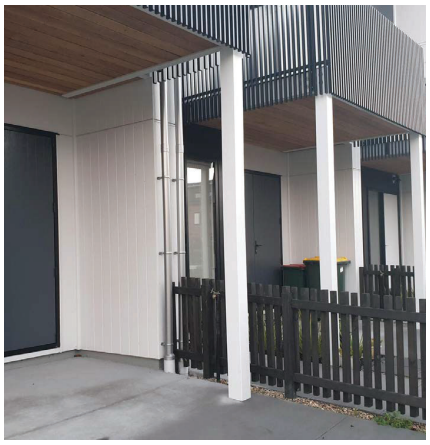
283 Waiwhero Road, Motueka › info@prowoodnz.com › 03 526 7436 › www.prolamnz.com

PRODUCT ASSURANCE SUPPLIER STATEMENT
pass™ no: 19031 | Expires: 08/2020

CODEMARK
BRANZ-CM-1018

Prolam®
Engineered Laminated Timber

PROLAM H5 POSTS



PURPOSE

Prolam H5 posts are glue laminated structural posts that are manufactured from finger jointed lamina that are individually treated to H5. They can be supported on a structural bracket above ground or cast below ground, in a concrete foundation.

EXPLANATION

Prolam H5 posts are manufactured using NZ grown Pinus Radiata. They are third party certified by AsureQuality to AS/NZS 1328, part 2 or AS 1720.1:2010, but branded with the prefix PL.

They are supplied in:

- a range of sizes
- structural grade PL8, PL17
- appearance grades A
- treated to hazard class H5 (CCA).

Individual treatment of the 40mm thick lamina to NZS 3640:2003 ensures that the penetration and retention of the Prolam posts, exceeds the level achieved with larger sections of solid timber. It also demonstrates that the lamination/finishing steps will have no effect on the penetration or retention achieved.

Given the size of the individual lamina, this has the effect of achieving a penetration greater than solid lumber where the solid lumber's dimensions exceed 60 mm in thickness as per the following diagram. It demonstrates that the lamination/finishing will have no effect on the penetration or retention achieved.

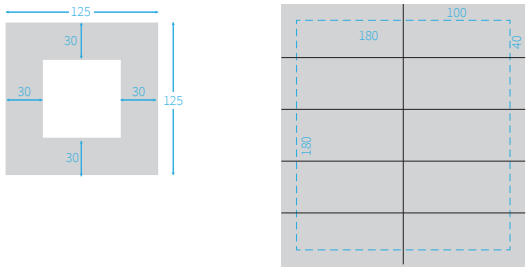
Where used in-ground, the post must be fully encased in concrete to ground level. This ensures that the structural performance and durability of a post is maintained.

When used in accordance with Prolam's installation, care and maintenance instructions, the Prolam H5 posts will not warp, twist or delaminate.

For further assistance please contact:
03 526 7436
info@prowoodnz.com
www.prolamnz.com

WE COMPLY s14G BUILDING ACT 2004

Figure 1: Required penetration as required by NZS3640, dark grey shows penetration.



Senton Piles | Prolam H5 Post

SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Building	
In accordance with NZS 3604:2011 or specifically engineered to NZS 3603:1993 and AS 1720.1:2010.	❯ Prolam H5 posts must not be ripped where this would result in a reduction in the number of lamina. Dimensional stability and strength relies on the width and thickness remaining unchanged. ❯ Fixing material to be in accordance with section 4, NZS 3604:2011. ❯ Where NZ Building Code clause C3 applies, the use of Prolam H5 posts is subject to specific design by a fire engineer.
Above and below-ground applications.	❯ Above ground, the post must be attached to a structural bracket that will resist all applied loads. ❯ Where installed below ground, the post must be: • sealed (in-ground portion only), • seated on a punch pad of a 100 mm, and • fully encased in concrete with a minimum 100 mm side cover.

USEFUL INFORMATION

For information on the design, installation and maintenance of Prolam H5 posts and for our warranty, refer to www.prolamnz.com.

VERSION: V3.1

Prolam®
Engineered Laminated Timber

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all Prowood Ltd requirements, the Prolam H5 posts will comply with or contribute to compliance with the following performance claims.

NZ Building Code clauses	BASIS OF COMPLIANCE	
	Compliance statement[1]	Demonstrated by
B1 Structure B1.3.1 B1.3.2 B1.3.3 (b, g, h, j) B1.3.4 **B2 Durability** B2.3.2(a) **F2 Hazardous Building Materials** F2.3.1	Product Certification CodeMark Certificate BRANZ-CM-1018 2/12/2019 CODEMARK® BRANZ-CM-1018	› CodeMark Certificate issued by BRANZ. › BRANZ is an accredited product certification body under section 263 of the Building Act 2004.
C6 Structural Stability C6.3 C6.4	ALTERNATIVE SOLUTION NZS 3603:2011, clause 9.4.2	› NZS 3603:1993, clause 9.4.2 specifies charring rate of radiata pine and other timber species of approximately the same density to be taken as 0.65 mm/min. › APA Evaluation of Char Rate (ASTM E119), TT-118 January 2015. › Glue laminated timber elements have a fire performance comparable to solid wood members of equivalent size; Timber Industry Federation New Zealand Timber Design Guide 2007.

1. The Compliance Statement is the pass holder's statement that they have met their obligations under s14G(2) of the Building Act 2004.

BASIS OF CERTIFICATION

Technical

› Guidance for specific engineering design using Prolam H5 Glue Laminated Posts.
› NZS 3604:2011 section 4, Steel fixings and fasteners.
› AS 3730:2006 parts 7, 8, 9 and 10 Guide to the properties of paints for buildings.
› AS/NZS 1328:1998 Glue laminated structural timber.
› AS/NZS 1170 Structural Design actions.

Quality

› BRANZ Limited. Audit of Prowood manufacturing facilities.
› BRANZ Limited. Review and audit of Prowood Quality Plan and associated manufacturing.
› Prolam Structural Timber Guide - 2019.

Buildability

› BRANZ Limited. NZ site audits

OTHER SOURCES OF INFORMATION

› NZS 3603:1993, clause 9.4.2, Charing rate of Radiata pine.
› ASTM E119: 2015, TT-118 Elevation of Char Rate.
› Timber Industry Federation, NZ Timber Design Guide:2007 Glue Laminated Timber fire performance

OTHER CERTIFICATIONS AND APPROVALS HELD BY PROWOOD LTD

› AsureQuality Engineered Wood Products Programme (AEWP) Reg no: AEWP05/Certificate No: 03, 3/7/2017.
› Certificate of Registration of Preservative Treatment & Allocated Brand 709 90 H5, 709 01 H5, 708 89 H5, 1/7/18.

VERSION: V3.1 **DATE:** 28/01/2020

Note: Uncontrolled in printed format.

NAME: John Woodman

POSITION: Managing Director

Signed on behalf of Prowood Ltd:

John Woodman

Digitally signed by John Woodman
Date: 2020.01.28 14:40:40 +13'00'

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

pass

283 Waiwhero Road, Motueka › info@prowoodnz.com › 03 526 7436 › www.prolamnz.com

pass™ PRODUCT ASSURANCE SUPPLIER STATEMENT
pass™ no: 19013 | Expires: 06/2020

Prolam®
Engineered Laminated Timber

PROLAM BEAMS

PURPOSE

Prowood Ltd supplies Prolam laminated H1.2 and H3.2 treated beams (Prolam Beams) for use as structural members in buildings.

PROLAM BEAMS EXPLAINED

Prolam Beams are glue laminated, branded with the prefix PL and manufactured from NZ grown Pinus Radiata and Douglas Fir.

The manufacturing of Prolam Beams is third-party certified by AsureQuality.

Structural performance is to AS/NZS 1328 part 2 or AS 1720.1:2010.

They are available in visual and non-visual grades.

Prolam beams are supplied in a range of; sizes; structural grades PL8, PL12 and PL17; appearance grades visual and non-visual; and treatment levels H1.2 (boron) and H3.2 (CCA).

For further assistance please contact:
03 526 7436
info@prowoodnz.com
www.prolamnz.com

WE COMPLY s14G BUILDING ACT 2004

SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Building	
As a direct substitute to SG8 and SG12 (or other equivalent) as referenced in Section 8 NZS 3604:2011; or specifically engineered to NZS 3603:1993 or AS/NZS 1170:2002 (set).	› Prolam beams must not be ripped where this would result in a reduction of width or thickness. Structural performance on the width and thickness remaining unchanged. › Fixing material to be in accordance with section 4, NZS 3604:2011.
In applications appropriate to the hazard class to which the supplied Prolam beams are treated.	› Prolam beams must be separated from exposed uncured concrete and concrete that continues to be exposed to moisture.
In applications where NZ Building Code Clause C3 obligations for Fire affecting areas beyond the source apply.	› The use of Prolam beams is subject to specific design by a fire engineer.

USEFUL INFORMATION

For information on the design, installation and maintenance of Prolam beams, and for our warranty, refer to www.prolamnz.com.

OTHER CERTIFICATIONS HELD BY PROWOOD LTD

The following certifications and approvals are held by Prowood Ltd.

› Certificate of Registration of Preservative Treatment & Allocated Brand (Timber Treatment Plant Registration Authority;
  - 709 11 H1.2, 614 11 H1.2,
  - 709 01 H3.2, 709 90 H3.2.

› AsureQuality Engineered Wood Products Programme Reg: AEWPO5/03 exp 3/7/2020

VERSION: v1.0

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all of Prowood Ltd requirements, Prolam beams will comply with or contribute to compliance with the following performance claims..

NZ Building Code clauses	BASIS OF COMPLIANCE	
	Compliance statement[1]	Demonstrated by
B1 Structure B1.3.1 B1.3.2 B1.3.3 (a, b, f, j, m, q) B1.3.4 (a, b, c, d, e)	ACCEPTABLE SOLUTION B1/AS1: NZS 3604:2011, clause 2.3.9.3.	› NZS 3604:2011, clause 2.3.9.3 requires glue laminated timber to be manufactured in accordance with AS/NZS 1328 (Parts 1, 2). › Prowood Ltd third party certified, AsureQuality Engineered Wood Products Programme: AS/NZS 1328:1998 (parts 1, 2). › AsureQuality is JAS-ANZ accredited.
B2 Durability B2.3.1(a) B2.3.2(a)	ALTERNATIVE SOLUTION	› AS/NZS1604.5, clause 1.9 requires the same characteristic values for penetration and retention as defined in NZS 3640:2003. › Registered by Timber Preservers Association of Australia H1.2 (boron)
C6 Protection from Fire C6.2 C6.3 C6.4	ALTERNATIVE SOLUTION NZS 3603:2011, clause 9.4.2.	› NZS 3603:1993, clause 9.4.2 specifies charring rate of radiata pine and other timber species of approximately the same density to be taken as 0.65 mm/min. › APA Evaluation of Char Rate (ASTM E119), TT-118 January 2015. › Glued laminated timber elements have a fire performance comparable to solid wood members of equivalent size; Timber Industry Federation New Zealand Timber Design Guide 2007.
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION. NZTPC *Best Practice Guideline for the Safe Use of Timber Preservatives & Anti-sapstain Chemicals. Establishes drying & flash off requirements.*	› Subject to Prowood treatment protocol and Prowood health and safety plan. › TBB audited manufacturing/treatment process.

1. The Compliance Statement is the pass holder's statement that they have met their obligations under s14G(2) of the Building Act 2004.

SOURCES OF INFORMATION

The following information was relied upon to prepare this pass.

- ICC-ES and APA Joint Evaluation Report ESR-1225 Pacific Woodtech Corporation PWI Joists 10/17.
- IVS Timber Testing Report 39361 19/11/18.
- IVS Labs Analysis Report R32568 Boron Preservative in Timber 5/12/18.
- NZS 3603:1993 *Timber structures.*
- NZS 3604:2011 *Timber-framed buildings.*
- NZS 3640:2003 *Chemical preservation of round and sawn timber.*
- AS/NZS 1604.5:2012 *Specification for preservative treatment: Glued laminated timber products.*

VERSION: v1.0 **DATE:** 07/06/2019

Note: Uncontrolled in printed format.

NAME: John Woodman

POSITION: Managing Director

Signed on behalf of Prowood Ltd:

John Woodman

Digitally signed by John Woodman
Date: 2019.06.07 10:54:21 +12'00'

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

pass

283 Waiwhero Road, Motueka › info@prowoodnz.com › 03 526 7436 › www.prolamnz.com

pass™ PRODUCT ASSURANCE SUPPLIER STATEMENT
pass™ no: 19014 | Expires: 06/2020

Prolam®
Engineered Laminated Timber

PROLAM SMARTFRAME LVL15 LAMINATED VENEER LUMBER

PURPOSE

Prowood Ltd supplies Prolam Smartframe LVL15 (Smartframe) for use as structural timber beams and studs in buildings.

PROLAM SMARTFRAME EXPLAINED

Smartframe is laminated veneer lumber manufactured from Douglas Fir.

It is manufactured to AS/NZS 4357:2005 under an SAIGlobal StandardsMark licence.

It is supplied boron treated to H1.2 or untreated and is supplied in the following finished dimensions.

- Widths (mm): 90, 120, 140, 190, 240, 290
- Depth (mm): 45 mm
- Stock lengths (m): 3.6, 4.8, 5.4, 6.0, and 7.2

For further assistance please contact:
03 526 7436
info@prowoodnz.com
www.prolamnz.com

WE COMPLY s14G BUILDING ACT 2004

SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Building	
To the requirements of NZS 3604:2011 or NZS 3603:1993, and in accordance with Smartframe span tables.	
Within the building envelope.	› Smartframe must not be exposed to the environment for more than 90 days. › Where the Smartframe is to be left exposed or used in a moisture laden environment it must be protected with an impervious coating.
In applications where NZ Building Code Clause C3 obligations for Fire affecting areas beyond the source apply.	› The use of Smartframe must be specifically designed by a fire engineer.

USEFUL INFORMATION

For information on the design, installation and maintenance of Smartframe, and for our warranty, refer to www.prolamnz.com.

OTHER CERTIFICATIONS HELD BY PROWOOD LTD

The following certifications and approvals are held by Prowood Ltd.

- Certificate of Registration of Preservative Treatment & Allocated Brand Timber Treatment Plant Registration Authority;
  - 709 11 H1.2, 614 11 H1.2

VERSION: v1.0

Prolam®
Engineered Laminated Timber

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with the all Prowood Ltd requirements, Smartframe will comply with or contribute to compliance with the following performance claims.

NZ Building Code clauses	BASIS OF COMPLIANCE	
	Compliance statement[1]	**Demonstrated by**
B1 Structure B1.3.1 B1.3.2 B1.3.3 (a, b, f, j, m, q) B1.3.4 (a, b, c, d, e)	ACCEPTABLE SOLUTION B1/AS1: NZS 3604:2011, clause 2.3.9.2.	› NZS 3604:2011, clause 2.3.9.2 requires LVL to be manufactured in accordance with AS/NZS 4357. › Smartframe manufactured to AS/NZS 4357:2005 under SAIGlobal StandardsMark licence. › SAIGlobal is JAS-ANZ accredited.
B2 Durability B2.3.1(a) B2.3.2(a)	ALTERNATIVE SOLUTION	› AS/NZS1604.4:2012, clause 1.9 requires same characteristic values for penetration and retention as defined in NZS 3640:2003. › In accordance with Prowood treatment protocol to AS/NZS 1604.4:2012 and NZS 3640:2003. › Passed IVS Labs penetration and retention testing of LVL samples to AS/NZS 1605:2018, parts 1 and 2.
C6 Protection from Fire C6.2 C6.3 C6.4	ALTERNATIVE SOLUTION NZS 3603:2011, clause 9.4.2.	› NZS 3603:1993, clause 9.4.2 specifies charring rate of radiata pine and other timber species of approximately the same density to be taken as 0.65 mm/min. › APA Evaluation of Char Rate (ASTM E119), TT-118 January 2015.
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION. NZTPC *Best Practice Guideline for the Safe Use of Timber Preservatives & Anti-sapstain Chemicals. Establishes drying & flash off requirements.*	› In accordance with Prowood treatment protocol and Prowood health and safety plan. › TBB audited manufacturing/treatment process.

1. The Compliance Statement is the pass holder's statement that they have met their obligations under s14G(2) of the Building Act 2004.

SOURCES OF INFORMATION

The following information was relied upon to prepare this pass.

- SAIGlobal StandardsMark Licence Certificate Number SMKB25220 Tilling Timber Pty Ltd.
- IVS Timber Testing Report 39361 19/11/18.
- IVS Labs Analysis Report R32568 Boron Preservative in Timber 5/12/18.
- AS/NZS 4357:2005 *Structural laminated veneer lumber.*
- NZS 3603:1993 *Timber structures.*
- NZS 3604:2011 *Timber-framed buildings.*
- NZS 3640:2003 *Chemical preservation of round and sawn timber.*
- AS/NZS 1604.4:2012 *Specification for preservative treatment Part 4; Laminated Veneer Lumber (LVL).*

VERSION: v1.0 **DATE:** 07/06/2019

Note: Uncontrolled in printed format.

NAME: John Woodman

POSITION: Managing Director

Signed on behalf of Prolam Ltd:

John Woodman

Digitally signed by John Woodman
Date: 2019.06.07 10:52:38 +12'00'

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

pass

283 Waiwhero Road, Motueka › info@prowoodnz.com › 03 526 7436 › www.prolamnz.com

PRODUCT ASSURANCE SUPPLIER STATEMENT
pass™ no: 19012 | Expires: 06/2020

Prolam®
Engineered Laminated Timber

PROLAM SMARTJOISTS

PURPOSE

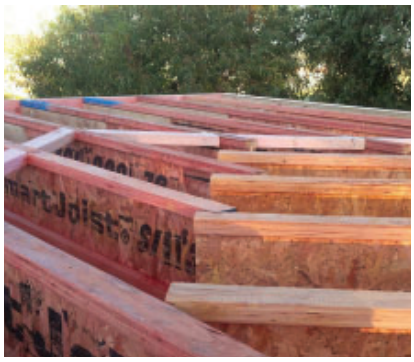
Prowood Ltd supplies Prolam Smartjoists for use as rafters and floor joists in buildings.

PROLAM SMARTJOISTS EXPLAINED

Smartjoists are manufactured from graded Douglas Fir LVL15 flanges and Oriented Strand Board webs bonded together with an exterior, heat durable adhesive that complies with ASTM D5055.

They are supplied boron treated to H1.2 and are available in:

Overall height	Flange width
240 mm	70 mm
300 mm	70mm
360 mm	90 mm



For further assistance please contact:
03 526 7436
info@prowoodnz.com
www.prolamnz.com

WE COMPLY s14G BUILDING ACT 2004

SCOPE AND LIMITATIONS OF USE

Scope	Limitations
Building	
In conjunction with timber or lightweight steel structural framing and in accordance with the Smartjoist span tables.	
Where the framing complies with the NZ Building Code or for existing buildings, where the designer and/or installer have established that the existing structure is suitable for the intended building work.	› Fixing material to be in accordance with section 4, NZS 3604:2011.
Within the building envelope where hazard class H1.2 or less applies.	› The Smartjoist must not be exposed to the environment for more than 90 days. › Where the Smartjoist is to be left exposed or used in a moisture laden environment it must be protected with an impervious coating.

USEFUL INFORMATION

For information on the design, installation and maintenance of Smartjoists, and for our warranty, refer to www.prolamnz.com.

OTHER CERTIFICATIONS HELD BY PROWOOD LTD

The following certifications and approvals are held by Prowood Ltd.

› Certificate of Registration of Preservative Treatment & Allocated Brand Timber Treatment Plant Registration Authority;
- 709 11 H1.2 (13/7/18), 614 11 H1.2 (5/7/18)

VERSION: V1.1

PERFORMANCE CLAIMS

If designed, installed and maintained in accordance with all of Prowood Ltd requirements, Smartjoists will comply with or contribute to compliance with the following performance claims.

NZ Building Code clauses	BASIS OF COMPLIANCE	
	Compliance statement[1]	Demonstrated by
B1 Structure B1.3.1 B1.3.2 B1.3.3 (a, b, f, j, m, q) B1.3.4 (a, b, c, d, e)	ALTERNATIVE SOLUTION IBC section 2303.1.2 and 2015 IRC section R502.1.2 and 2012, 2009 and 2006 IRC Section R502.1.4 for allowable stress design.	› Evaluated by ICC-Evaluation Service (ICC-ES) and APA (The Engineered Wood Association) as manufactured in accordance with IBC and IRC and in accordance with the approved Pacific Woodtech Corporation I-Joist Quality Control Manual. › ICC-ES is accredited by the American National Standards Institute and by the Standards of Council of Canada under ISO/IEC Guide 17065, Conformity Assessment – Requirements for Bodies Certifying Products, Processes, and Services.
B2 Durability B2.3.1(a) B2.3.2(a)	ALTERNATIVE SOLUTION	› AS/NZS1604:2012, clause 1.9 requires same characteristic values for penetration and retention as defined in NZS 3640:2003. › Subject to Prowood treatment protocol to AS/NZS 1604:2012 and NZS 3640:2003.
F2 Hazardous Building Materials F2.3.1	ALTERNATIVE SOLUTION. NZTPC *Best Practice Guideline for the Safe Use of Timber Preservatives & Anti-sapstain Chemicals. Establishes drying & flash off requirements.*	› Subject to Prowood treatment protocol and Prowood health and safety plan. › TBB audited manufacturing/treatment process.

1. The Compliance Statement is the pass holder's statement that they have met their obligations under s14G(2) of the Building Act 2004.

SOURCES OF INFORMATION

The following information was relied upon to prepare this pass.

- ICC-ES and APA Joint Evaluation Report ESR-1225 Pacific Woodtech Corporation PWI Joists 10/17.
- IVS Timber Testing Report 39361 19/11/18.
- IVS Labs Analysis Report R32568 Boron Preservative in Timber 5/12/18.
- NZS 3603:1993 *Timber structures.*
- NZS 3604:2011 *Timber-framed buildings.*
- NZS 3640:2003 *Chemical preservation of round and sawn timber.*
- AS/NZS 1604:2012 *Specification for Preservative treatment (parts 2 & 4).*

VERSION: v1.0 **DATE:** 07/06/2019

Note: Uncontrolled in printed format.

NAME: John Woodman

POSITION: Managing Director

Signed on behalf of Prowood Ltd:

John Woodman

Digitally signed by John Woodman
Date: 2019.06.07 11:09:42 +12'00'

By signing this pass™ the signatory confirms that, in respect of the subject of this pass™, the company has met their s14G obligations under the Building Act 2004.

pass

283 Waiwhero Road, Motueka › info@prowoodnz.com › 03 526 7436 › www.prolamnz.com

Timber Properties in Used Span Table Calculations

Dry Use

Characteristic Stresses and Elastic Moduli for Prolam (Glulam Grades)

		Characteristic Strengths (MPa)				Elastic Moduli (MPa)	
	PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the grain	Short duration modulus of rigidity for beams
Prolam	PL 12	25	12.5	3.7	29	11500	770
Prolam	PL 8	19	10	3.7	24	8000	530
Prolam	LVL 15	59	35	4.2	39	15000	775

For compression perpendicular to the grain, use 8.9 MPa dry and 5.3 MPa wet as per NZS 3603 for Radiata Pine for all PL grades.

Wet Use – (H5 & H3.2 treated)

Characteristic Stresses and Elastic Moduli for Prolam (Glulam Grades)

	Characteristic Strengths (MPa)				Elastic Moduli (MPa)	
PL Grade	Bending	Tension parallel to grain	Shear in Beam	Compression parallel to grain	Short modulus of elasticity parallel to the grain	Short duration modulus of rigidity for beams
PL 12	20	10	2.5	23.2	9200	610
PL 8	15.2	8.0	2.5	19.2	6400	420

Note: Higher grades (i.e. GL10, PL12, etc) will give greater span and load carrying capability than PL8 for the same section size.

Design Data

The tables herein have been designed according to the following loads:

Roof			
Dead Load			Live Load
Lighweight Roof	Heavyweight Roof	Ceiling	0.25 kPa Uniform
0.25 kPa	0.65 kPa	0.20 kPa	1.0 kN point load

Note: 750mm overhang has been included in the derivation of the tables. Spans are horizontal measurements. For heavy roofs over 30° pitch, use the online Prolam® program.

Floor	
Dead Load	Live Load
Particle Board Floor (including ceiling)	Domestic Floor
0.40 kPa	1.50 kPa, 1.80 kN

SNOW: 0.5kPa snow load has been allowed for in the charts.

WIND: The tables are applicable for wind zones up to HIGH WIND, as defined by NZS3604. For other snow, wind and roof loads, use the Prolam online software program.

Deflection Criteria	
Deflection Max long term deflection	Span / 450 or 10mm
Criteria Max live load deflection	Span / 400 or 12mm
Wind Load	Span / 250 or 12mm
Snow Load	Span / 250 or 12mm

Note: The span tables in this booklet do not apply to the bandsawn product. Use the Prolam Online calculator.

January 2020

PRODUCER STATEMENT

TC E Ltd TASMAN CONSULTING ENGINEERS CIVIL & STRUCTURAL

Tasman Consulting Engineers Ltd have been engaged by Prowood to prepare span tables and charts for the Prolam® lintels, beams and posts as presented in the Prolam® Post and Beam Manual.

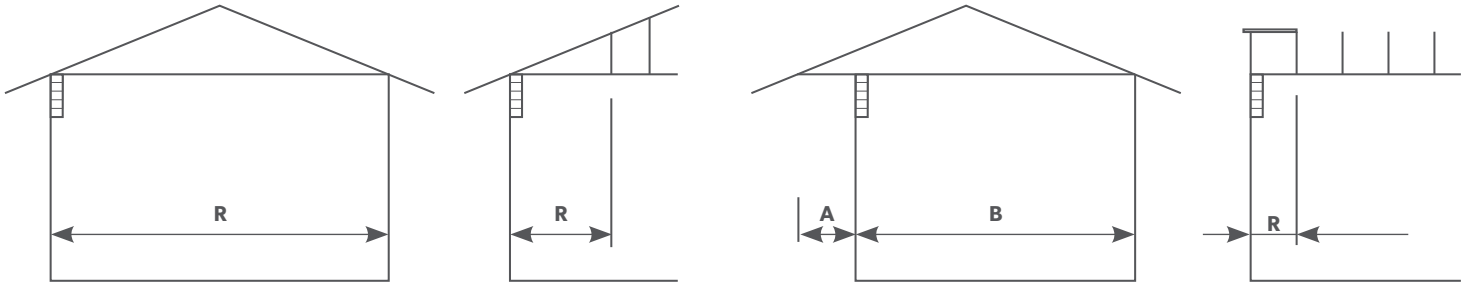
The design has been carried out using sound and widely accepted engineering principles to the requirements of AS/NZS1170:2002, NZS3603:1993 and NZS3604:2011 using the timber properties for PL8 and PL12 glue laminated timber.

Tasman Consulting Engineers Limited
3/237 Queen St, PO Box 3631
Richmond, NELSON 7050

David King

ME(Civil) MIPENZ (No.145511) CPEng IntPE

Selection Charts



A ≤ ¼ (A + B), R = B + 2A

Table 1

Prolam® Lintels supporting roof and ceiling only.

		Lintel Size	Maximum Lintel Span (m) Supported Roof Span 'R' (m)												
			2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
PL8	Light Roof	**PL8H1-150100** 140 x 90mm	3.30	3.10	2.85	2.65	2.45	2.35	2.20	2.10	2.00	1.95	1.85	1.80	1.75
		PL8H1-200100 190 x 90mm	4.40	4.15	3.90	3.60	3.35	3.15	3.00	2.85	2.75	2.60	2.50	2.45	2.35
		PL8H1-250100 240 x 90mm	5.20	4.90	4.70	4.50	4.20	4.00	3.80	3.60	3.40	3.30	3.20	3.00	2.90
		PL8H1-300100 290 x 90mm	6.00	5.70	5.40	5.20	5.00	4.80	4.50	4.30	4.10	4.00	3.80	3.70	3.60
		PL8H1-350100 315 x 90mm	6.40	6.10	5.80	5.60	5.40	5.20	4.90	4.70	4.50	4.30	4.10	4.00	3.90
		PL8H1-400100 360 x 90mm	7.10	6.70	6.40	6.10	5.90	5.80	5.50	5.30	5.10	4.90	4.70	4.50	4.40
PL12	Light Roof	**PL12H1-150100** 140 x 90mm	3.75	3.50	3.30	3.05	2.85	2.65	2.55	2.40	2.30	2.20	2.15	2.05	2.00
		PL12H1-200100 190 x 90mm	4.80	4.55	4.35	4.15	3.85	3.65	3.45	3.30	3.15	3.00	2.90	2.80	2.70
		PL12H1-250100 240 x 90mm	5.70	5.40	5.20	5.00	4.80	4.60	4.30	4.10	3.90	3.80	3.60	3.50	3.40
		PL12H1-300100 290 x 90mm	6.60	6.20	6.00	5.70	5.50	5.40	5.20	5.00	4.80	4.60	4.40	4.20	4.10
		PL12H1-350100 315 x 90mm	7.00	6.60	6.30	6.10	5.90	5.70	5.50	5.40	5.10	4.90	4.80	4.60	4.40
		PL12H1-400100 360 x 90mm	7.80	7.30	7.00	6.70	6.50	6.30	6.10	6.00	5.80	5.60	5.40	5.20	5.00

Note: For heavy roof refer to Prolam Online at www.prolamnz/specifiers

These span tables apply only to Prolam products

Selection Charts

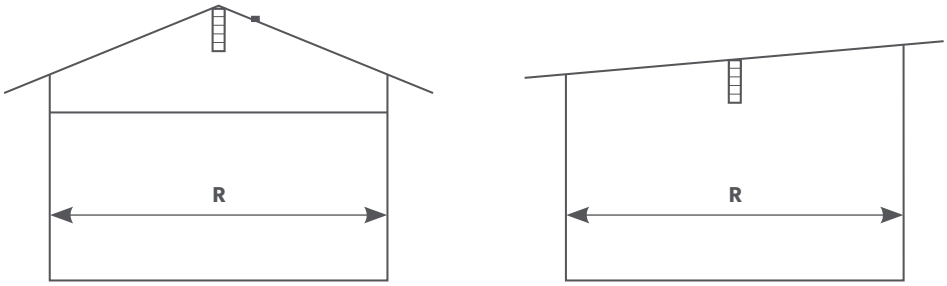


Table 2

Prolam® Ridge Beam supporting roof and sarking or ceiling. (Rafters at 1200mm CRS MAX)

		Lintel Size	Maximum Lintel Span (m)												
			Supported Roof Span 'R' (m)												
			2.0	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0
PL8	Light Roof	**PL8H1-150100** 140 x 90mm	4.05	3.55	3.25	3.05	2.80	2.60	2.40	2.25	2.15	2.05	1.95	1.90	1.80
		PL8H1-200100 190 x 90mm	5.30	4.80	4.40	4.10	3.75	3.50	3.25	3.10	2.95	2.80	2.70	2.55	2.50
		PL8H1-250100 240 x 90mm	6.20	5.70	5.40	5.10	4.70	4.40	4.10	3.90	3.70	3.50	3.40	3.20	3.10
		PL8H1-300100 290 x 90mm	7.10	6.60	6.20	5.90	5.60	5.30	5.00	4.70	4.40	4.20	4.10	3.90	3.80
		PL8H1-35000 315 x 90mm	7.60	7.00	6.50	6.20	6.00	5.70	5.40	5.10	4.80	4.60	4.40	4.20	4.10
		PL8H1-400100 360 x 90mm	8.30	7.70	7.10	6.70	6.30	6.00	5.80	5.60	5.40	5.20	5.00	4.80	4.60
PL12	Light Roof	**PL12H1-150100** 140 x 90mm	4.55	4.05	3.70	3.45	3.20	2.95	2.75	2.60	2.50	2.35	2.25	2.15	2.10
		PL12H1-200100 190 x 90mm	5.80	5.30	4.95	4.65	4.35	4.00	3.75	3.55	3.35	3.20	3.05	2.95	2.85
		PL12H1-250100 240 x 90mm	6.80	6.30	5.90	5.60	5.30	5.00	4.70	4.50	4.20	4.00	3.90	3.70	3.60
		PL12H1-300100 290 x 90mm	7.80	7.20	6.70	6.40	6.20	5.90	5.70	5.40	5.10	4.90	4.70	4.50	4.30
		PL12H1-350100 315 x 90mm	8.30	7.60	7.20	6.80	6.50	6.30	6.10	5.80	5.50	5.30	5.00	4.90	4.70
		PL12H1-400100 360 x 90mm	9.10	8.40	7.90	7.50	7.10	6.80	6.50	6.30	6.10	5.90	5.70	5.50	5.30

Note: For heavy roof refer to Prolam Online at www.prolamnz/specifiers

These span tables apply only to Prolam products

Selection Charts

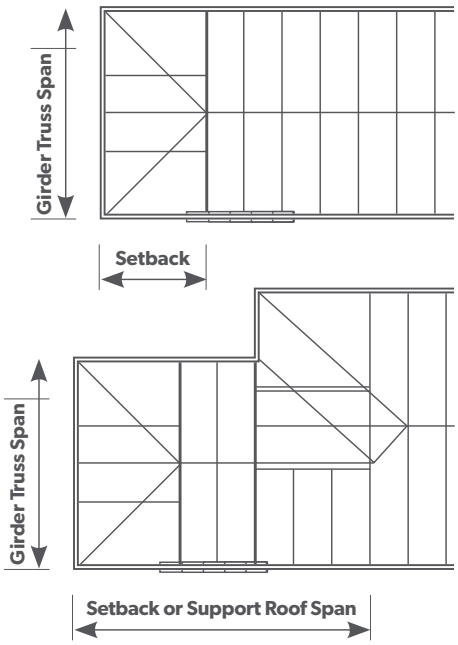


Table 3

PL8 Lintel supporting girder/setback trusses with light roof.

Note: For heavy roof refer to Prolam Online at www.prolamnz/specifiers

Lintel Size	Setback (m)	Maximum Lintel Span (m)										
		Girder Truss Span (m)										
		5.0	6.0	7.0	8.0	9.0	10.0	11.0	12.0	13.0	14.0	15.0
PL8H1-150100 140 x 90mm	1.2	2.45	2.25	2.10	1.95	1.80	1.70	1.60	1.55	1.45	1.40	1.35
	2.4	2.06	1.80	1.65	1.50	1.40	1.30	1.20	1.10	1.05	1.00	0.95
	3.6	1.70	1.50	1.35	1.20	1.10	1.00	0.90	0.85			
	4.8	1.46	1.25	1.10	1.00	0.90	0.80					
	6.0	1.25	1.05	0.95	0.80							
	7.5	1.05	0.90									
	10.0	0.80										
PL8H1-200100 190 x 90mm	1.2	3.45	3.20	3.00	2.85	2.70	2.60	2.50	2.40	2.30	2.20	2.15
	2.4	3.25	2.95	2.70	2.50	2.30	2.15	2.00	1.90	1.80	1.70	1.60
	3.6	2.80	2.50	2.25	2.05	1.85	1.70	1.60	1.50	1.40	1.30	1.25
	4.8	2.40	2.10	1.90	1.70	1.55	1.40	1.30	1.20	1.10	1.05	1.00
	6.0	2.10	1.85	1.60	1.45	1.30	1.20	1.10	1.00	0.95	0.85	
	7.5	1.80	1.55	1.35	1.20	1.05	0.95	0.90	0.80			
	10.0	1.45	1.20	1.06	0.95	0.85						
PL8H1-250100 240 x 90mm	1.2	4.30	4.00	3.70	3.50	3.40	3.20	3.10	2.95	2.80	2.70	2.60
	2.4	3.95	3.60	3.35	3.10	2.90	2.70	2.55	2.40	2.30	2.20	2.10
	3.6	3.55	3.20	2.90	2.65	2.45	2.30	2.15	2.00	1.90	1.80	1.70
	4.8	3.15	2.80	2.55	2.30	2.10	1.95	1.80	1.70	1.60	1.50	1.40
	6.0	2.85	2.50	2.25	2.00	1.85	1.70	1.55	1.45	1.35	1.30	1.20
	7.5	2.50	2.20	1.95	1.75	1.60	1.45	1.35	1.25	1.15	1.05	1.00
	10.0	2.10	1.80	1.55	1.40	1.25	1.15	1.05	0.95	0.90	0.85	0.80
PL8H1-300100 290 x 90mm	1.2	4.90	4.70	4.50	4.30	4.10	3.90	3.70	3.60	3.50	3.30	3.20
	2.4	4.80	4.60	4.45	4.25	3.95	3.75	3.55	3.35	3.20	3.05	2.95
	3.6	4.65	4.45	4.05	3.70	3.45	3.20	3.00	2.85	2.65	2.55	2.40
	4.8	4.40	3.95	3.55	3.25	3.00	2.75	2.55	2.40	2.25	2.10	2.00
	6.0	4.00	3.55	3.15	2.85	2.60	2.40	2.20	2.05	1.95	1.80	1.70
	7.5	3.55	3.10	2.75	2.45	2.25	2.05	1.90	1.75	1.65	1.50	1.45
	10.0	2.95	2.55	2.25	2.00	1.80	1.65	1.50	1.40	1.30	1.20	1.10
PL8H1-350100 315 x 90mm	1.2	5.50	5.30	5.10	5.00	4.70	4.50	4.30	4.20	4.00	3.90	3.80
	2.4	5.45	5.25	5.05	4.85	4.70	4.50	4.30	4.10	3.90	3.75	3.50
	3.6	5.25	5.05	4.90	4.60	4.30	4.00	3.75	3.55	3.35	3.20	3.05
	4.8	5.10	4.90	4.45	4.10	3.75	3.50	3.25	3.05	2.90	2.75	2.60
	6.0	4.95	4.45	4.00	3.65	3.35	3.10	2.85	2.70	2.50	2.35	2.25
	7.5	4.50	3.95	3.55	3.20	2.90	2.65	2.45	2.30	2.15	2.00	1.90
	10.0	3.80	3.30	2.90	2.60	2.35	2.15	2.00	1.85	1.70	1.60	1.50

These span tables apply only to Prolam products

Selection Charts

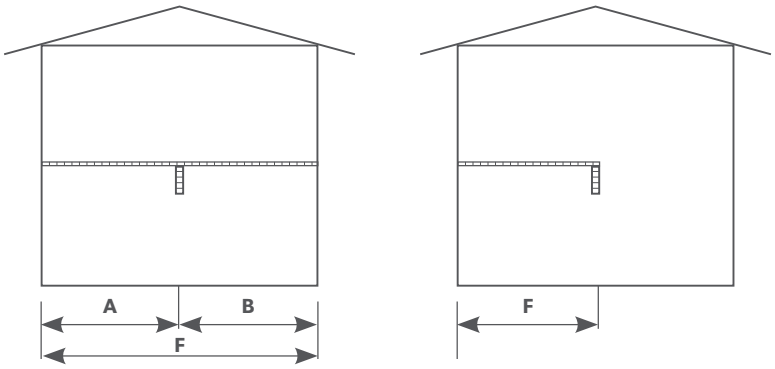


Table 4

1.5kPa L.L. Floor Beam supporting joists.

	Beam Size		Maximum Floor Beam Span (m)					
			Joist Span 'F' (m)					
			2.4	3.6	4.8	6.0	7.2	8.4
PL8	PL8H1-150100	140 x 90mm	2.40	2.20	2.00	1.75	1.60	1.45
	PL8H1-200100	190 x 90mm	3.30	3.00	2.75	2.40	2.15	1.95
	PL8H1-250100	240 x 90mm	4.00	3.75	3.45	3.05	2.70	2.50
	PL8H1-300100	290 x 90mm	4.65	4.40	4.20	3.65	3.30	3.00
	PL8H1-350100	315 x 90mm	4.90	4.70	4.50	4.00	3.60	3.30
PL12	PL12H1-150100	140 x 90mm	2.75	2.50	2.30	2.00	1.80	1.65
	PL12H1-200100	190 x 90mm	3.70	3.40	3.15	2.75	2.45	2.25
	PL12H1-250100	240 x 90mm	4.40	4.20	4.00	3.50	3.15	2.85
	PL12H1-300100	290 x 90mm	5.05	4.80	4.65	4.20	3.80	3.45
	PL12H1-350100	315 x 90mm	5.40	5.15	4.90	4.55	4.10	3.75

Note: For 3.0 kPa L.L. refer to Prolam Online at www.prolamnz/specifiers

These span tables apply only to Prolam products

Selection Charts

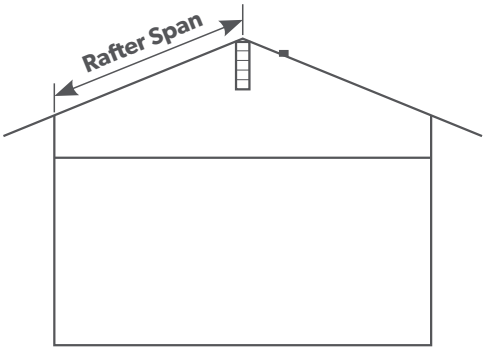


Table 5

Rafters for internal use. Visual ie PLVL, PLVR and Structural ie PLL, PLR light roof – with ceiling – snow loading 0.5 kPa – high wind zone Glulam Grade PL8.

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-15075 140 x 63mm	3.80	3.50	3.30	3.20	3.00
PLVL8H3-20075 190 x 63mm	4.75	4.45	4.30	4.20	4.00
PLVL8H3-25075 240 x 63mm	5.15	4.75	4.50	4.35	4.10
PLVL8H3-30075 290 x 63mm	6.45	6.05	5.80	5.65	5.25
PLVL8H3-35075 315 x 63mm	7.25	6.80	6.25	5.95	5.45
PLVL8H3-15075 140 x 63mm	B	B	B	B	B
PLVL8H3-20075 190 x 63mm	B	B	B	C	C
PLVL8H3-25075 240 x 63mm	B	B	B	C	C
PLVL8H3-30075 290 x 63mm	B	C	C	C	C
PLVL8H3-35075 315 x 63mm	C	C	C	C	C

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-10050 88 x 42mm	1.80	1.75	1.75	1.70	1.70
PLVL8H3-15050 140 x 42mm	3.30	3.00	2.75	2.60	2.40
PLVL8H3-20050 190 x 42mm	3.75	3.30	3.05	2.905	2.65
PLVL8H3-25050 240 x 42mm	4.05	3.60	3.30	3.15	2.85
PLVL8H3-30050 290 x 42mm	4.30	3.80	3.50	3.30	3.00
PLVL8H3-35050 315 x 42mm	4.65	4.10	3.75	3.60	3.25
PLVL8H3-10050 88 x 42mm	B	B	B	B	B
PLVL8H3-15050 140 x 42mm	B	B	B	B	B
PLVL8H3-20050 190 x 42mm	B	B	B	B	B
PLVL8H3-25050 240 x 42mm	B	B	B	B	B
PLVL8H3-30050 290 x 42mm	B	B	B	B	C
PLVL8H3-35050 315 x 42mm	B	B	B	C	C

Fixing type	
B	2/100 x 3.75 skewed nails and 1 wire dog or 2.7kN connection
C	2/100 x 3.75 skewed nails and 2 wire dog or 4.7kN connection
D	2/100 x 3.75 skewed nails and 3 wire dog or 6.7kN connection

End fixing to resist uplift – refer also to NZS3604: 1999

Codes for Structural or Visual	
Visual	PLVL, ie PLVL8H3-25075 250
Structural	PLL, ie PL8H3-25050

These span tables apply only to Prolam products

Selection Charts

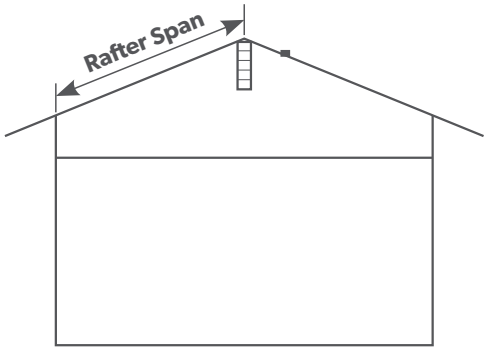


Table 6a

Prolam® LVL 15 rafters for internal use.

Light roof – with ceiling – snow loading 0.5 kPa – high wind zone LVL 15.

Joist Code/Rafter Size	Roof Mass (Kg/m²)	Maximum Rafter Span (m)			
		Rafter Spacing (m)			
		0.45	0.6	0.9	1.2
PSSF15H1-10050 90 x 42mm	40	2.50	2.40	2.30	2.10
PSSF15H1-12550 120 x 42mm	40	3.80	3.50	3.10	2.80
PSSF15H1-15050 140 x 42mm	40	4.50	4.10	3.60	3.30
PSSF15H1-20050 190 x 42mm	40	6.30	5.90	5.20	4.60
PSSF15H1-25050 240 x 42mm	40	7.30	7.00	6.40	5.80

Table 6b

Prolam I-Beam rafters for internal use.

Light roof – with ceiling – snow loading 0.5 kPa – high wind zone – max slope 25° – I-Joists.

Joist Code/Rafter Size	Roof Mass (Kg/m²)	Maximum Rafter Span (m)			
		Rafter Spacing (m)			
		0.45	0.6	0.9	1.2
PJ24070 240 x 70mm	0.4	6.60	6.05	5.35	4.85
PJ30070 290 x 70mm	0.4	7.80	7.20	6.35	5.80
PJ36090 360 x 90mm	0.4	9.15	8.65	7.80	7.15

These span tables apply only to Prolam products

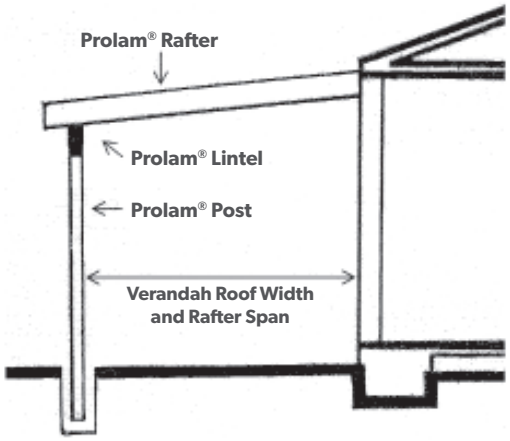
Selection Charts

Table 7

Verandah Rafters (Visual).

Light roof – no ceiling – snow loading 0.5 kPa – high wind zone – Glulam Grade PL8.

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-10050 88 x 42mm	1.80	1.75	1.75	1.70	1.70
PLVL8H3-15050 140 x 42mm	3.30	3.00	2.75	2.60	2.40
PLVL8H3-20050 190 x 42mm	3.75	3.30	3.05	2.905	2.65
PLVL8H3-25050 240 x 42mm	4.05	3.60	3.30	3.15	2.85
PLVL8H3-30050 290 x 42mm	4.30	3.80	3.50	3.30	3.00
PLVL8H3-35050 315 x 42mm	4.65	4.10	3.75	3.60	3.25
PLVL8H3-10050 88 x 42mm	B	B	B	B	B
PLVL8H3-15050 140 x 42mm	B	B	B	B	B
PLVL8H3-20050 190 x 42mm	B	B	B	B	B
PLVL8H3-25050 240 x 42mm	B	B	B	B	B
PLVL8H3-30050 290 x 42mm	B	B	B	B	C
PLVL8H3-35050 315 x 42mm	B	B	B	C	C



Fixing type	End fixing to resist uplift
B	2/100 x 3.75 skewed nails and 1 wire dog or 2.7kN connection
C	2/100 x 3.75 skewed nails and 2 wire dog or 4.7kN connection
D	2/100 x 3.75 skewed nails and 3 wire dog or 6.7kN connection

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-150100 140 x 88mm	4.15	3.90	3.75	3.65	3.40
PLVL8H3-200100 190 x 88mm	5.15	4.85	4.65	4.55	4.35
PLVL8H3-250100 240 x 88mm	5.75	5.30	5.05	4.85	4.55
PLVL8H3-300100 290 x 88mm	7.00	6.60	6.35	6.15	5.90
PLVL8H3-350100 315 x 88mm	7.85	7.40	7.10	6.90	6.60
PLVL8H3-150100 140 x 88mm	B	B	B	C	C
PLVL8H3-200100 190 x 88mm	B	C	C	C	C
PLVL8H3-250100 240 x 88mm	B	C	C	C	C
PLVL8H3-300100 290 x 88mm	C	C	C	C	D
PLVL8H3-350100 315 x 88mm	C	C	D	D	D

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-15075 140 x 63mm	3.80	3.50	3.30	3.20	3.00
PLVL8H3-20075 190 x 63mm	4.75	4.45	4.30	4.20	4.00
PLVL8H3-25075 240 x 63mm	5.15	4.75	4.50	4.35	4.10
PLVL8H3-30075 290 x 63mm	6.45	6.05	5.80	5.65	5.25
PLVL8H3-35075 315 x 63mm	7.25	6.80	6.25	5.95	5.45
PLVL8H3-15075 140 x 63mm	B	B	B	B	B
PLVL8H3-20075 190 x 63mm	B	B	B	C	C
PLVL8H3-25075 240 x 63mm	B	B	B	C	C
PLVL8H3-30075 290 x 63mm	B	C	C	C	C
PLVL8H3-35075 315 x 63mm	C	C	C	C	C

These span tables apply only to Prolam products

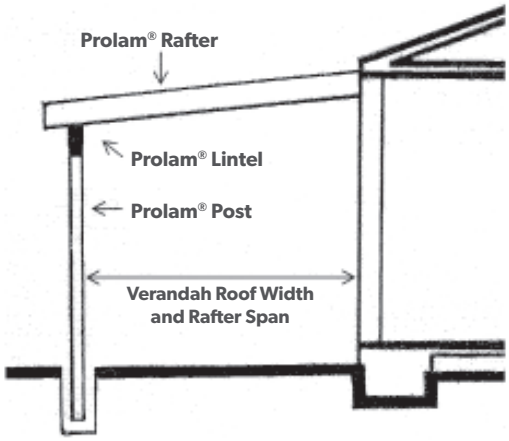
Selection Charts

Table 8

Verandah Rafters. Light roof – with ceiling – snow loading 0.5 kPa – high wind zone – Glulam Grade PL8.

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-15075 140 x 63mm	3.80	3.50	3.30	3.20	3.00
PLVL8H3-20075 190 x 63mm	4.75	4.45	4.30	4.20	4.00
PLVL8H3-25075 240 x 63mm	5.15	4.75	4.50	4.35	4.10
PLVL8H3-30075 290 x 63mm	6.45	6.05	5.80	5.65	5.25
PLVL8H3-35075 315 x 63mm	7.25	6.80	6.25	5.95	5.45
PLVL8H3-15075 140 x 63mm	B	B	B	B	B
PLVL8H3-20075 190 x 63mm	B	B	B	C	C
PLVL8H3-25075 240 x 63mm	B	B	B	C	C
PLVL8H3-30075 290 x 63mm	B	C	C	C	C
PLVL8H3-35075 315 x 63mm	C	C	C	C	C

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-10050 88 x 42mm	1.70	1.65	1.60	1.55	1.50
PLVL8H3-15050 140 x 42mm	3.25	3.00	2.85	2.70	2.50
PLVL8H3-20050 190 x 42mm	4.05	3.60	3.30	3.15	2.85
PLVL8H3-25050 240 x 42mm	4.40	3.90	3.55	3.40	3.10
PLVL8H3-30050 290 x 42mm	4.65	4.10	3.80	3.60	3.25
PLVL8H3-35050 315 x 42mm	5.00	4.45	4.10	3.90	3.65
PLVL8H3-10050 88 x 42mm	B	B	B	B	B
PLVL8H3-15050 140 x 42mm	B	B	B	B	B
PLVL8H3-20050 190 x 42mm	B	B	B	B	B
PLVL8H3-25050 240 x 42mm	B	B	B	B	B
PLVL8H3-30050 290 x 42mm	B	B	B	B	B
PLVL8H3-35050 315 x 42mm	B	B	B	B	C



Fixing type	End fixing to resist uplift
B	2/100 x 3.75 skewed nails and 1 wire dog or 2.7kN connection
C	2/100 x 3.75 skewed nails and 2 wire dog or 4.7kN connection

Codes for Structural or Visual	
Visual	PLVL, ie PLVL8H3-25075 250
Structural	PLL, ie PL8H3-25050

Rafter Size	Maximum Rafter Span (m)				
	Rafter Spacing (m)				
	0.6	0.75	0.9	1.0	1.2
PLVL8H3-150100 140 x 88mm	4.15	3.90	3.70	3.55	3.35
PLVL8H3-200100 190 x 88mm	5.15	4.85	4.65	4.55	4.35
PLVL8H3-250100 240 x 88mm	5.75	5.30	5.05	4.85	4.55
PLVL8H3-300100 290 x 88mm	7.00	6.60	6.35	6.15	5.90
PLVL8H3-350100 315 x 88mm	7.85	7.40	7.10	6.90	6.60
PLVL8H3-150100 140 x 88mm	B	B	B	C	C
PLVL8H3-200100 190 x 88mm	B	C	C	C	C
PLVL8H3-250100 240 x 88mm	B	C	C	C	C
PLVL8H3-300100 290 x 88mm	C	C	C	C	D
PLVL8H3-350100 315 x 88mm	C	C	D	D	D

These span tables apply only to Prolam products

Selection Charts

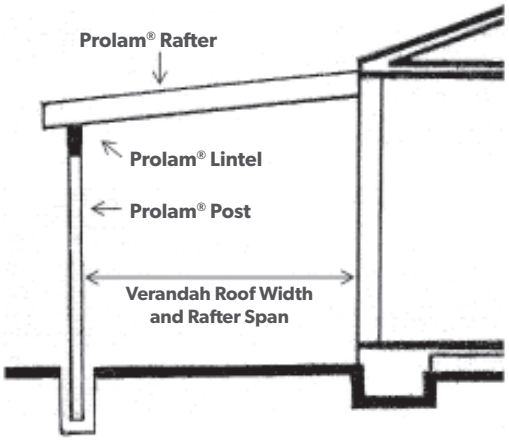


Table 9

Verandah Lintels (Visual). Light roof – no ceiling & with ceiling – high wind zone. Rafters supporting verandah roof only – high wind zone.

		LINTEL SIZE		Maximum lintel span (m)					
				Verandah roof width (m)					
				1.8	2.4	3.0	3.6	4.2	4.8
PL8	No Ceiling	PLVL8H3-15075	140 x 63mm	3.20	3.00	2.85	2.70	2.60	2.50
		PLVL8H3-20075	190 x 63mm	4.10	3.95	3.80	3.65	3.50	3.35
		PLVL8H3-25075	240 x 63mm	4.90	4.60	4.40	4.30	4.10	3.90
		PLVL8H3-30075	290 x 63mm	5.06	5.30	4.90	4.50	4.30	4.00
		PLVL8H3-35075	315 x 63mm	6.10	5.50	5.10	4.70	4.40	4.20
		PLVL8H3-150100	140 x 88mm	3.55	3.35	3.20	3.05	2.90	2.80
		PLVL8H3-200100	190 x 88mm	4.50	4.30	4.10	3.95	3.85	3.75
		PLVL8H3-250100	240 x 88mm	5.30	5.00	4.80	4.70	4.50	4.40
		PLVL8H3-300100	290 x 88mm	6.10	5.80	5.60	5.40	5.20	5.10
		PLVL8H3-350100	315 x 88mm	6.80	6.50	6.20	6.00	5.80	5.70
	With Ceiling	PLVL8H3-15075	140 x 63mm	2.65	2.50	2.40	2.30	2.20	2.10
		PLVL8H3-20075	190 x 63mm	3.50	3.35	3.15	3.05	2.90	2.80
		PLVL8H3-25075	240 x 63mm	4.40	4.10	3.90	3.80	3.60	3.50
		PLVL8H3-30075	290 x 63mm	5.20	4.90	4.70	4.50	4.30	4.20
		PLVL8H3-35075	315 x 63mm	6.00	5.70	5.40	5.20	5.00	4.80
		PLVL8H3-150100	140 x 88mm	2.95	2.80	2.65	2.55	2.45	2.35
		PLVL8H3-200100	190 x 88mm	3.90	3.70	3.50	3.35	3.25	3.15
		PLVL8H3-250100	240 x 88mm	4.80	4.50	4.30	4.20	4.00	3.90
		PLVL8H3-300100	290 x 88mm	5.70	5.40	5.20	5.00	4.80	4.60
		PLVL8H3-350100	315 x 88mm	6.60	6.30	6.00	5.80	5.60	5.40

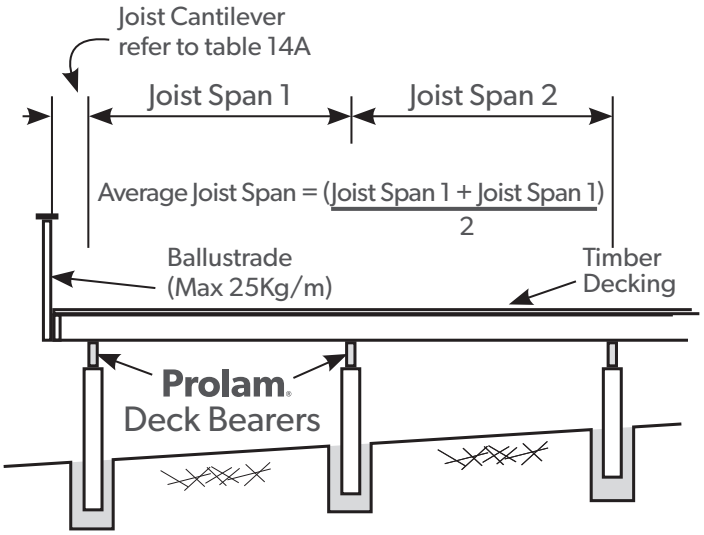
These span tables apply only to Prolam products

Selection Charts

Table 10

Deck Bearers supporting deck and cantilever.

Loads:	**Deck 0.35 kPa** **Live 2.0 kPa**
Deflection Limits:	**Long Term span/400 or 12mm** **Short Term span/400 or 9mm**



Notes:

1. *Timber grade PL8, minimum H3.2 treated – wet use.*
2. *Bearers do not support roof loads.*
3. *Maximum ballustrade weight 25kg/m.*
4. *Maximum joist cantilever 400mm.*
5. *Spans may be increased by 10% for bearers or joists continuous over 2 or more spans.*

	Bearer Size		Maximum Bearer Span (m)								
			Average Joist Span (m)								
			0.9	1.2	1.5	1.8	2.4	3.0	3.6	4.2	4.8
PL8	PL8H3-150100	140 x 90mm	2.20	2.15	2.05	1.95	1.80	1.65	1.50	1.40	1.35
	PL8H3-200100	190 x 90mm	2.95	2.85	2.75	2.60	2.40	2.20	2.05	1.90	1.80
	PL8H3-250100	240 x 90mm	3.65	3.55	3.40	3.25	3.00	2.75	2.55	2.40	2.25
	PL8H3-300100	290 x 90mm	4.15	4.05	3.95	3.85	3.60	3.30	3.05	2.85	2.70
	PL8H3-350100	315 x 90mm	4.65	4.55	4.45	4.35	4.15	3.85	3.60	3.35	3.15
	PL8H3-400100	360 x 90mm	5.15	5.00	4.90	4.80	4.60	4.40	4.10	3.85	3.60
PL12	PL12H3-150100	140 x 90mm	2.50	2.40	2.30	2.25	2.05	1.90	1.75	1.65	1.55
	PL12H3-200100	190 x 90mm	3.30	3.20	3.10	3.00	2.75	2.50	2.35	2.20	2.05
	PL12H3-250100	240 x 90mm	4.00	3.90	3.80	3.70	3.45	3.15	2.95	2.75	2.60
	PL12H3-300100	290 x 90mm	4.55	4.45	4.35	4.25	4.05	3.80	3.50	3.30	3.10
	PL12H3-350100	315 x 90mm	5.10	5.00	4.85	4.75	4.55	4.35	4.10	3.85	3.65
	PL12H3-400100	360 x 90mm	5.65	5.50	5.35	5.25	5.05	4.85	4.65	4.40	4.15

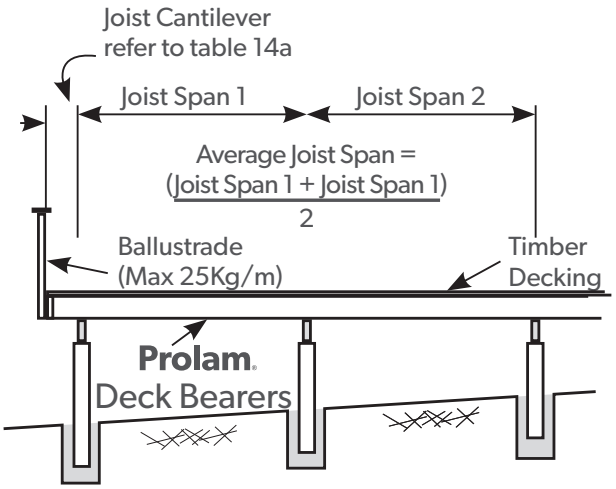
These span tables apply only to Prolam products

Selection Charts

Table 11

Deck joists.

Loads:	**Deck 0.35 kPa** **Live 2.0 kPa** **1.8 kN**
Deflection Limits:	**Long Term span/400 or 12mm** **Short Term span/400 or 9mm**



Notes:

1. *Timber grade PL8, minimum H3.2 treated – wet use.*
2. *Joists do not support roof loads.*
3. *Spans may be increased by 10% for bearers or joists continuous over 2 or more spans.*
4. *Blocking required in accordance with NZS3604:2011 Clause 7.1.2.*

	Joist Size		Deck Joists Single Span (m)		
			Joist Spacing (m)		
			0.40	0.45	0.60
PL8	**PL8H3-15050**	140 x 42mm	2.20	2.10	1.95
	PL8H3-20050	190 x 42mm	2.90	2.80	2.60
	PL8H3-25050	240 x 42mm	3.85	3.50	3.25
	PL8H3-30050	290 x 42mm	4.40	4.25	3.90
	PL8H3-35050	315 x 42mm	5.10	4.95	4.60
	PL8H3-15075	140 x 63mm	2.55	2.45	2.25
	PL8H3-20075	190 x 63mm	3.40	3.30	3.05
	PL8H3-25075	240 x 63mm	4.25	4.10	3.80
	PL8H3-30075	290 x 63mm	5.05	4.90	4.55
	PL8H3-35075	315 x 63mm	5.70	5.55	5.15
	PL8H3-40075	360 x 63mm	6.80	6.10	5.70
	PL8H3-45075	405 x 63mm	6.90	6.70	6.20

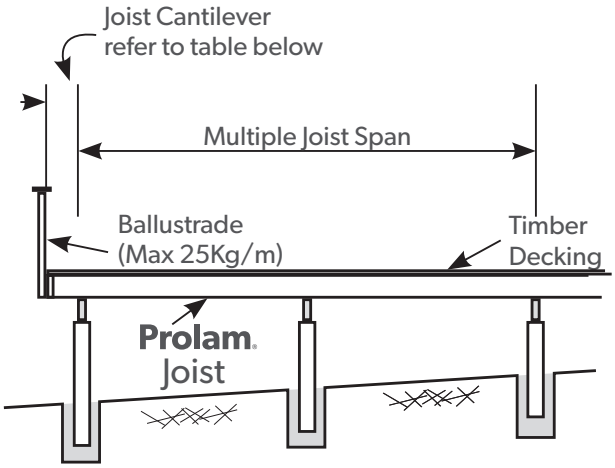
These span tables apply only to Prolam products

Selection Charts

Table 12

Cantilever Deck Joist. 2.0 kPa. No ceiling.

Loads:	**Deck 0.35 kPa** **Live 2.0 kPa** **1.8 kN**
Deflection Limits:	**Long Term span/400 or 12mm** **Short Term span/400 or 9mm**



Notes:

1. *Timber grade PL8, minimum H3.2 treated – wet use.*
2. *Joists do not support roof loads.*
3. *Spans may be increased by 10% for bearers or joists continuous over 2 or more spans.*
4. *Blocking required in accordance with NZS3604:2011 Clause 7.1.2.*

	Joist Size		Deck Joists Cantilever (m)		
			Joist Spacing (m)		
			0.40	0.45	0.60
PL8	**PL8H3-15050**	140 x 42mm	0.95	0.90	0.80
	PL8H3-20050	190 x 42mm	1.35	1.30	1.20
	PL8H3-25050	240 x 42mm	1.80	1.75	1.0
	PL8H3-30050	290 x 42mm	2.25	2.20	2.00
	PL8H3-35050	315 x 42mm	2.65	2.55	2.30
	PL8H3-15075	140 x 63mm	1.10	1.05	0.95
	PL8H3-20075	190 x 63mm	1.65	1.55	1.40
	PL8H3-25075	240 x 63mm	2.15	2.10	1.90
	PL8H3-30075	290 x 63mm	2.60	2.55	2.30
	PL8H3-35075	315 x 63mm	3.10	3.00	2.70

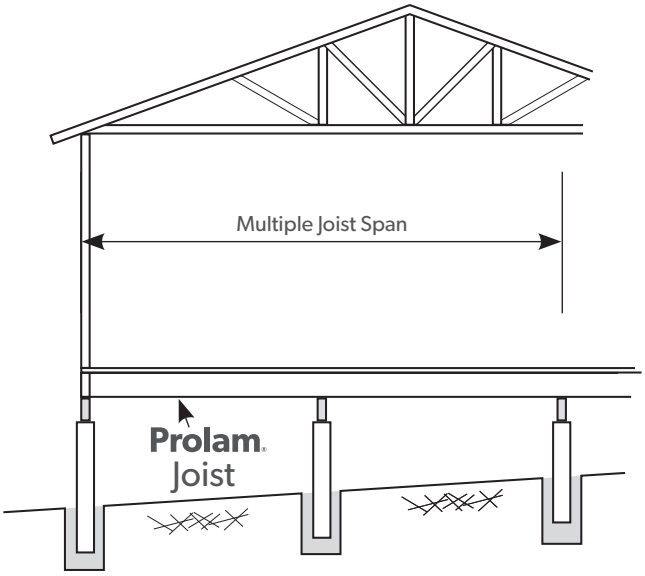
These span tables apply only to Prolam products

Selection Charts

Table 13a

Floor Joists PL8.

Loads:	**Deck**	**0.5 kPa**
	Live	**1.5 kPa**
		1.8 kN
Deflection Limits:	**Long Term span/350 or 12mm**	
	Short Term span/350 or 9mm	
		1kN 2mm



Notes:

1. *Timber grade PL8 – dry use.*
2. *Joists do not support roof loads.*
3. *Spans may be increased by 10% for joists continuous over 2 or more equal spans.*
4. *Blocking required in accordance with NZS3604:2011 Clause 7.1.2.*

	Joist Size		Floor Joists Single Span (m)		
			Joist Spacing (mm)		
			400	450	600
PL8	**PL8H3-15050**	140 x 42mm	2.60	2.50	2.05
	PL8H3-20050	190 x 42mm	3.40	3.30	3.05
	PL8H3-25050	240 x 42mm	4.30	4.15	3.75
	PL8H3-30050	290 x 42mm	5.20	5.00	4.55
	PL8H3-35050	315 x 42mm	5.55	5.40	4.95
	PL8H3-40050	360 x 42mm	6.15	5.95	5.40
	PL8H3-45050	405 x 42mm	6.70	6.55	6.05
	PL8H3-15075	140 x 63mm	3.05	2.90	2.35
	PL8H3-20075	190 x 63mm	3.95	3.85	3.50
	PL8H3-25075	240 x 63mm	5.00	4.85	4.35
	PL8H3-30075	290 x 63mm	5.80	5.60	5.25
	PL8H3-35075	315 x 63mm	6.15	6.00	5.55
	PL8H3-40075	360 x 63mm	6.80	6.60	6.15
	PL8H3-45075	405 x 63mm	7.45	7.25	6.70

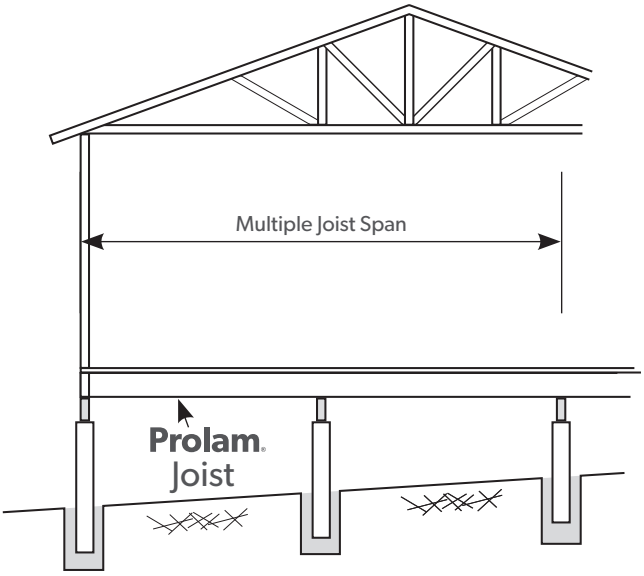
These span tables apply only to Prolam products

Selection Charts

Table 13b

Floor Joists PL12.

Loads:	**Deck**	**0.5 kPa**
	Live	**1.5 kPa**
		1.8 kN
Deflection Limits:	**Long Term span/350 or 12mm**	
	Short Term span/350 or 9mm	
		1kN 2mm



Notes:

1. *Timber grade PL12 – dry use.*
2. *Joists do not support roof loads.*
3. *Spans may be increased by 10% for joists continuous over 2 or more equal spans.*
4. *Blocking required in accordance with NZS3604:2011 Clause 7.1.2.*

	Joist Size		Floor Joists Single Span (m)		
			Joist Spacing (mm)		
			400	450	600
PL12	**PL12H3-15050**	140 x 42mm	2.90	2.80	2.30
	PL12H3-20050	190 x 42mm	3.80	3.75	3.45
	PL12H3-25050	240 x 42mm	4.85	4.70	4.25
	PL12H3-30050	290 x 42mm	5.75	5.55	5.15
	PL12H3-35050	315 x 42mm	6.10	5.90	5.50
	PL12H3-40050	360 x 42mm	6.75	6.55	6.10
	PL12H3-45050	405 x 42mm	7.35	7.15	6.65
	PL12H3-15075	140 x 63mm	3.40	3.25	2.70
	PL12H3-20075	190 x 63mm	4.45	4.35	3.95
	PL12H3-25075	240 x 63mm	5.50	5.35	4.90
	PL12H3-30075	290 x 63mm	6.35	6.15	5.75
	PL12H3-40075	360 x 63mm	7.45	7.25	6.75
	PL12H3-45075	405 x 63mm	8.15	7.90	7.35

These span tables apply only to Prolam products

Selection Charts

Table 13c

Prolam® Floor Joists supporting floor loads only. Prolam LVL15.

Joist Code/Joist Size	Maximum Joist Span (m)		
	Joist Spacing (m)		
	0.30	0.45	0.60
PSSF15H1-10050 90 x 42mm	2.10	1.80	1.65
PSSF15H1-12550 120 x 42mm	3.15	2.50	2.30
PSSF15H1-15050 140 x 42mm	3.60	2.95	2.70
PSSF15H1-20050 190 x 42mm	4.75	4.20	3.80
PSSF15H1-25050 240 x 42mm	5.60	5.15	4.85
PSSF15H1-30050 290 x 42mm	6.40	5.90	5.55

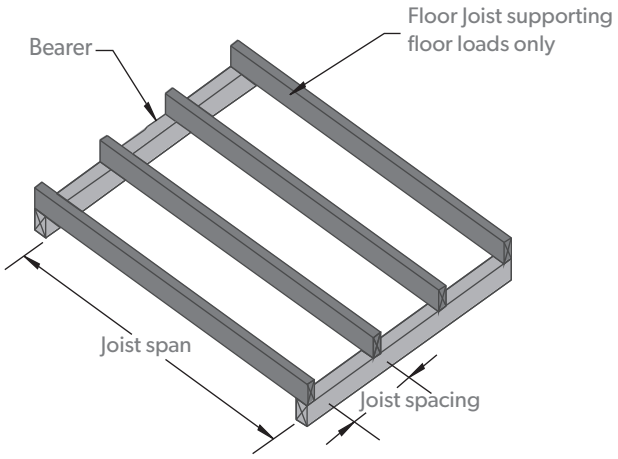


Table 13d

Recommended maximum **Prolam I-Joist** spans for residential floors. 1.5kPa – I-Joist Beam

Projoist Code /Projoist Size	Maximum Floor Joist Span (m)			
	Joist Spacing (m)			
	0.30	0.40	0.45	0.60
PJ20058 200 x 58mm	4.70	4.35	4.10	3.70
PJ24070 240 x 70mm	5.80	5.40	5.20	4.85
PJ24090 240 x 90mm	6.15	5.70	5.60	5.10
PJ30070 300 x 70mm	6.60	6.10	6.00	5.50
PJ30090 300 x 90mm	6.95	6.50	6.30	5.90
PJ36090 360 x 90mm	7.70	7.20	7.00	6.50

These span tables apply only to Prolam products

Selection Charts

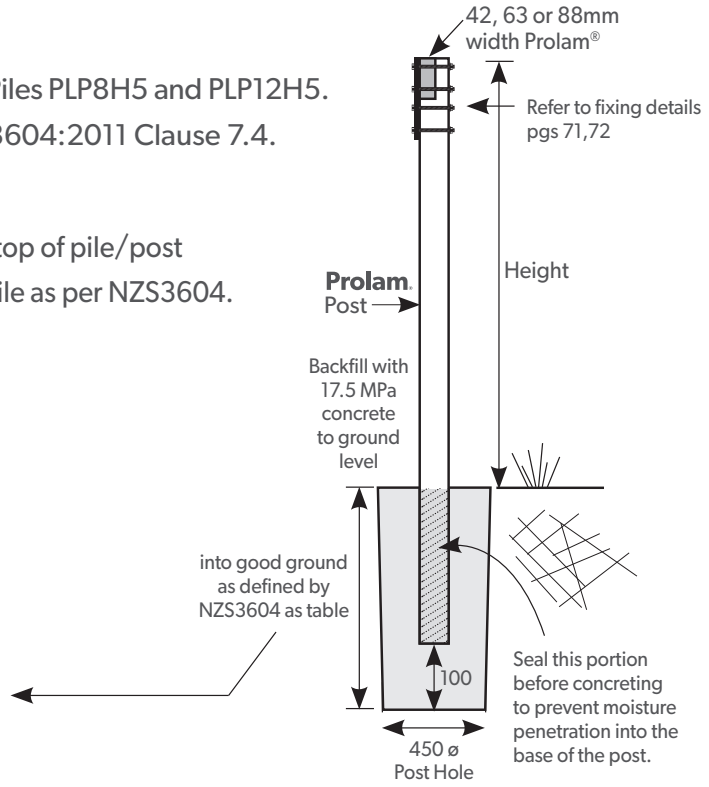
Table 14

Bracing units for Prolam® Posts. For use as Deck Piles PLP8H5 and PLP12H5. Piles supporting timber deck constructed to NZS 3604:2011 Clause 7.4.

Deck Pile Bracing Units

Prolam post height measured from top of concrete to top of pile/post

Piles rated at 120 * BU's are equivalent to an anchor pile as per NZS3604.



Prolam Post Deck Pile	Pile/Post Height (m)	Bracing Units	Bearer / pile connection	Min footing depth @ 450 dia (m)
PLP8H5-150 135x135	0.75	120 *	12 kN Kit	1.2
	1.00	53	6 kN Kit	1.1
	1.20	30	6 kN Kit	1.0
	1.50	19	6 kN Kit	1.0
	1.80	13	6 kN Kit	0.9
	2.10	10	6 kN Kit	0.9
PLP12H5-150 135x135	0.74	120 *	12 kN Kit	1.2
	1.00	63	6 kN Kit	1.2
	1.20	44	6 kN Kit	1.1
	1.50	28	6 kN Kit	1.1
	1.80	19	6 kN Kit	1.0
	2.10	14	6 kN Kit	1.0
	2.40	11	6 kN Kit	1.0
PLP8H5-200 180x180	1.00	120 *	12 kN Kit	1.3
	1.20	95	12 kN Kit	1.2
	1.50	60	6 kN Kit	1.2
	1.80	40	6 kN Kit	1.2
	2.10	30	6 kN Kit	1.2
	2.40	24	6 kN Kit	1.2
	2.70	19	6 kN Kit	1.2
	3.00	15	6 kN Kit	1.2
PLP12H5-200 180x180	1.20	120 *	12 kN Kit	1.4
	1.50	89	12 kN Kit	1.4
	1.80	62	6 kN Kit	1.3
	2.10	45	6 kN Kit	1.3
	2.40	34	6 kN Kit	1.3
	2.70	27	6 kN Kit	1.3
	3.00	21	6 kN Kit	1.2
	3.30	18	6 kN Kit	1.2
	3.60	15	6 kN Kit	1.2
PLP8H5-250 220x220	1.60	120 *	12 kN Kit	1.3
	1.80	95	12 kN Kit	1.3
	2.10	70	12 kN Kit	1.2
	2.40	54	6 kN Kit	1.2
	2.70	42	6 kN Kit	1.2
	3.00	34	6 kN Kit	1.2
	3.30	19	6 kN Kit	1.2
	3.60	24	6 kN Kit	1.2
PLP12H5-250 220x220	1.80	120 *	12 kN Kit	1.5
	2.10	101	12 kN Kit	1.5
	2.40	77	12 kN Kit	1.4
	2.70	61	6 kN Kit	1.4
	3.00	49	6 kN Kit	1.4
	3.30	41	6 kN Kit	1.4
	3.60	34	6 kN Kit	1.4
	3.90	29	6 kN Kit	1.4
	4.20	25	6 kN Kit	1.4
PLP8H5-300 260x260	2.25	120 *	12 kN Kit	1.4
	2.40	105	12 kN Kit	1.4
	2.70	80	12 kN Kit	1.3
	3.00	65	12 kN Kit	1.3
	3.30	55	12 kN Kit	1.3
	3.60	47	12 kN Kit	1.3
	3.90	40	6 kN Kit	1.3
	4.20	34	6 kN Kit	1.3
PLP12H5-300 260x260	2.70	120 *	12 kN Kit	1.5
	3.00	97	12 kN Kit	1.5
	3.30	80	12 kN Kit	1.4
	3.60	67	6 kN Kit	1.4
	3.90	57	6 kN Kit	1.4
	4.20	49	6 kN Kit	1.4
	4.50	43	6 kN Kit	1.4
	4.80	38	6 kN Kit	1.4

These span tables apply only to Prolam products

Selection Charts

Table 15

Bracing units for Prolam® Posts. Verandah Posts PLP8H5 and PLP12H5 Treated.

Verandah Bracing Units

Prolam Post - Height measured from top of concrete to top of Post. Confirm post/post fixing from uplift requirements. Minimum 6kN fixing for posts rated under 60 bracing units. Minimum 12kN fixings for posts rated 60 bracing units and over.

Prolam Post Verandah Posts	Post Height (m)	Bracing Units	Min post depth @ 450 dia (m)
PLP8H5-125 112x112	1.8	10	0.9
	2.1	7	0.9
	2.4	5	0.9
PLP8H5-150 135x135	1.8	21	1.2
	2.1	16	1.2
	2.4	12	1.2
	2.7	9	1.2
PLP12H5-150 135x135	1.8	31	1.1
	2.1	23	1.1
	2.4	17	1.1
	2.7	13	1.0
	3.0	11	1.0
PLP8H5-200 180x180	1.8	60	1.4
	2.1	50	1.4
	2.4	35	1.4
	2.7	30	1.4
	3.0	30	1.4
	3.3	15	1.4
	3.6	12	1.4
PLP12H5-200 180x180	1.8	82	1.4
	2.1	72	1.4
	2.4	55	1.3
	2.7	44	1.3
	3.0	35	1.3
	3.3	29	1.2
	3.6	24	1.2

Prolam Post Verandah Posts	Post Height (m)	Bracing Units	Min post depth @ 450 dia (m)
PLP8H5-250 220x220	2.1	110	1.4
	2.4	85	1.4
	2.7	65	1.4
	3.0	55	1.4
	3.3	45	1.4
	3.6	35	1.4
PLP12H5-250 220x220	2.1	120	1.6
	2.4	120	1.6
	2.7	110	1.6
	3.0	95	1.5
	3.3	80	1.5
	3.6	55	1.5
PLP8H5-300 260x260	2.4	120	1.5
	2.7	120	1.5
	3.0	110	1.5
	3.3	85	1.5
	3.6	75	1.5
	3.9	64	1.5
PLP12H5-300 260x260	2.4	120	1.6
	2.7	120	1.6
	3.0	120	1.6
	3.3	120	1.6
	3.6	108	1.6
	3.9	92	1.6

Footing Size:

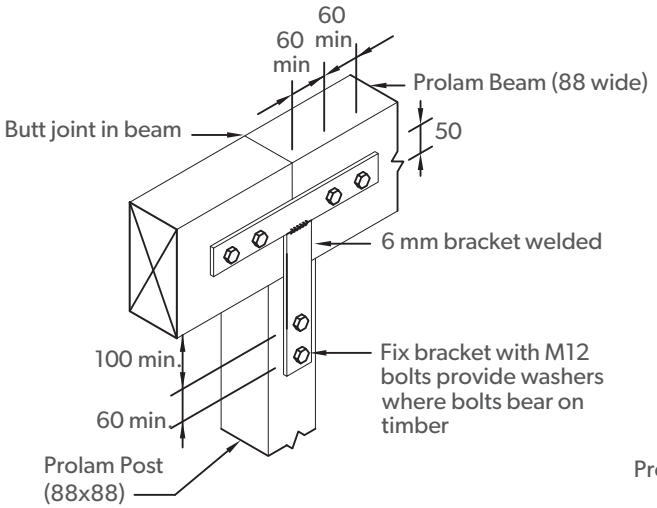
88 x 88, 112 x 112 & 135 x 135 – 900 deep x 450 diameter
180 x 180 – 1200 deep x 450 diameter
} **2 / M12 Bolts - Verandah beam to post connection**

1 kN = 20 Bu's. Linear interpolation between the bracing values given is permitted for intermediate heights

Note: Bracing units have been determined from the lateral load required to give a maximum deflection at the top of the post of H/24.

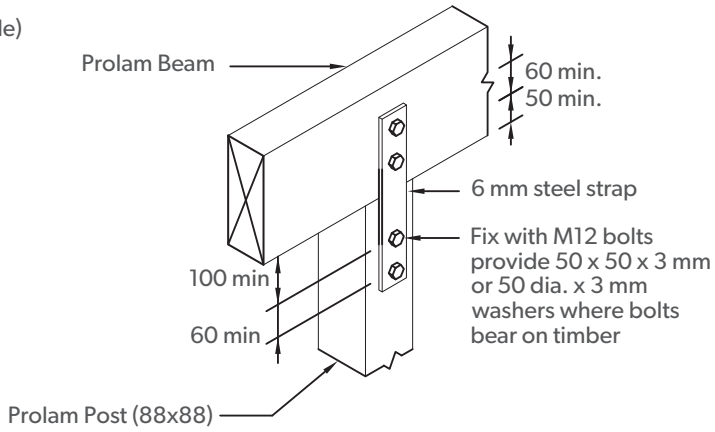
These span tables apply only to Prolam products

Prolam® Post Fixings



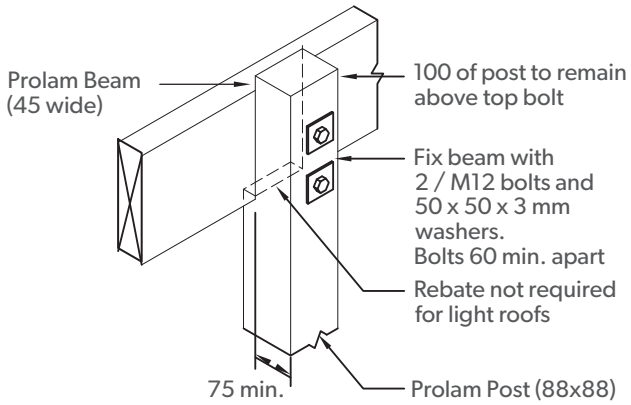
NOTE -
(1) Capacity 12.2 kN for 1 bracket.
(2) Capacity 25.5 kN for 2 brackets.

(A)



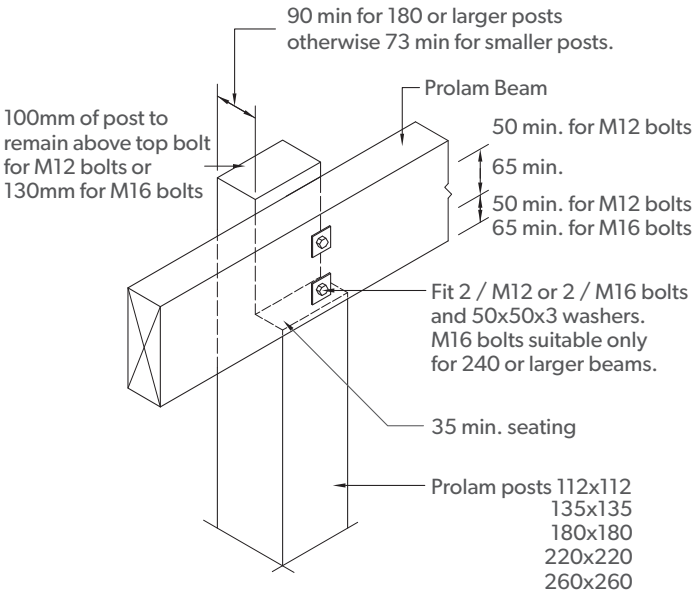
NOTE -
(1) Capacity 6.8 kN for 1 bracket.
(2) Capacity 13.7 kN for 2 brackets.

(B)



NOTE -
Capacity 6.8 kN.

(C)



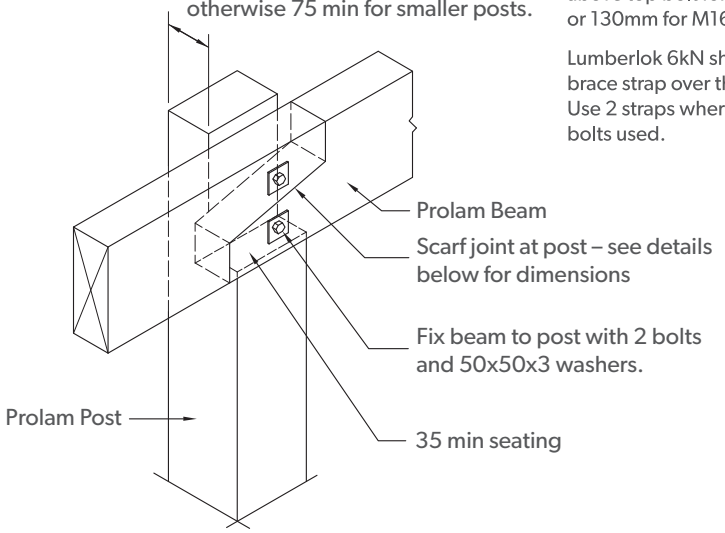
BEAM FIXING

(D)

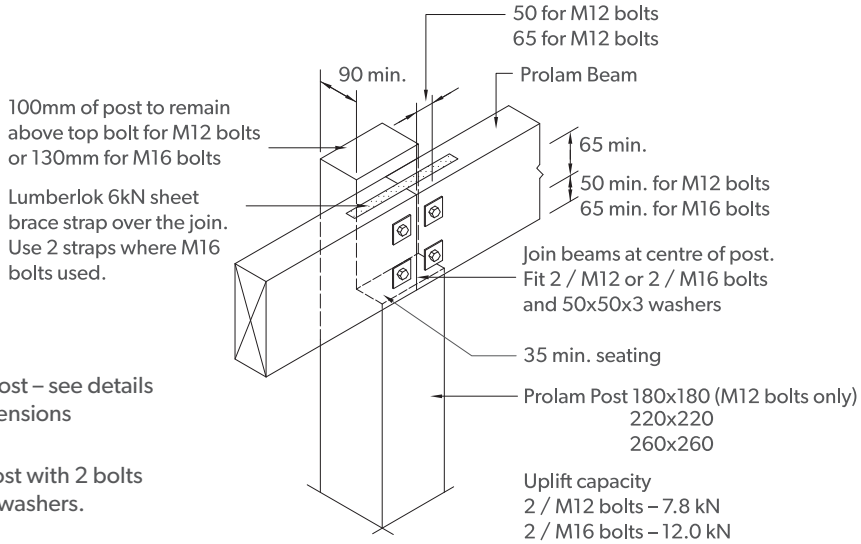
Uplift capacity
2 / M12 bolts – 7.8 kN
2 / M16 bolts – 12.0 kN

Unless otherwise stated, all dimensions are in mm.

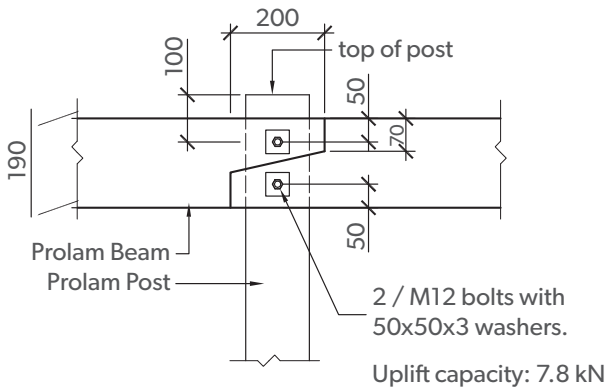
Prolam® Post Fixings



SCARF JOINT AT POSTS

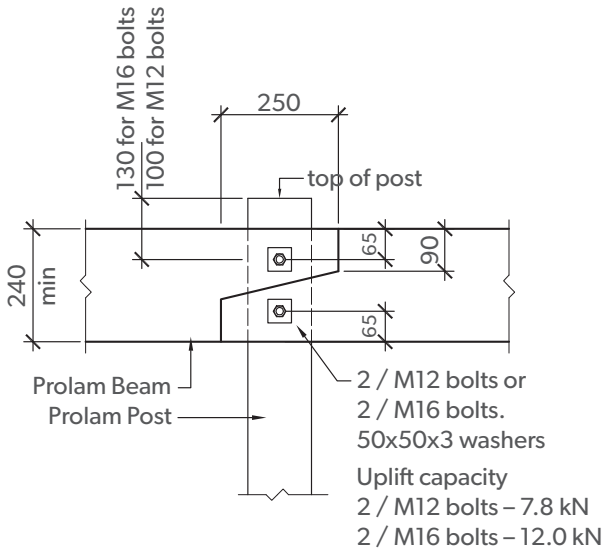


BEAM SPLICE FOR 180x180 OR LARGER POSTS



SCARF JOINT FOR 190 BEAMS

Not suitable for M16 bolts



SCARF JOINT FOR 240 OR LARGER BEAMS

Selection Charts

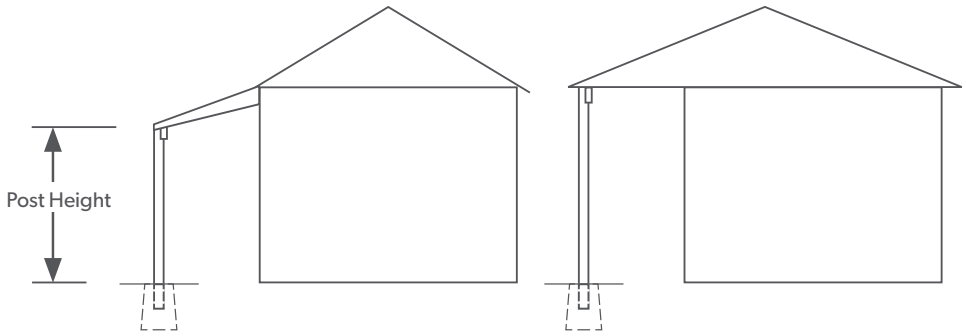


Table 17a

Posts supporting verandah roof only – light roof – attached to house.
Snow load 0.5 kPa – all wind zones.
Glulam Grade PL8 - Post height is measured from ground level to top of roof beam.

Verandah Posts	Maximum Supported Roof Area per Post (m^2)					
	Post Height From Ground (m)					
	1.8	2.4	2.7	3.0	3.6	4.2
PLP8H5-100 88 x 88mm	11.6	10.0	8.2	7.8	6.6	
PLP8H5-125 112 x 112mm	20.4	17.8	16.6	15.4	12.5	10.8
PLP8H5-150 135 x 135mm	30.0	27.4	26.2	25.0	22.0	19.0
PLP8H5-200 180 x 180mm	41.6	38.2	36.6	35.0	31.6	28.2

Verandahs or Carports 2.0m and less and attached to the house, do not require bracing.
Refer to NZS3604:2011 section 9 for size of concrete footings to resist uplift.
For posts sizes to roofs that require bracing refer to separate tables.

These span tables apply only to Prolam products

Selection Charts

Table 17b

Prolam® Posts supporting roof only. PL12 Exterior / wet use.

Non-Bracing Posts

All wind zones to VERY HIGH.
Snow Load 0.4kPa.
Maximum post length limited to 30 x post size.

Tributary roof area (m2)	2	4	6	8	10	12	14	16
Post Size	**Maximum Post Height (m)**							
Roof Weight 20 kg/m2 Light roof no-ceiling								
88x88	2.64	2.64	2.64	2.64	2.64	2.64	0.00	0.00
112x112	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.36
135x135	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
Roof Weight 40 kg/m2 Light roof with ceiling								
88x88	2.64	2.64	2.64	2.64	2.64	2.64	0.00	0.00
112x112	3.36	3.36	3.36	3.36	3.36	3.36	3.36	3.20
135x135	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
Roof Weight 60 kg/m2 Heavy roof no-ceiling								
88x88	2.64	2.64	2.64	2.64	2.40	2.10	1.70	0.00
112x112	3.36	3.36	3.36	3.36	3.36	3.36	3.30	2.60
135x135	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
Roof Weight 90 kg/m2 Heavy roof with ceiling								
88x88	2.64	2.64	2.64	2.20	1.80	1.40	0.90	0.00
112x112	3.36	3.36	3.36	3.36	3.30	2.90	2.40	1.80
135x135	4.05	4.05	4.05	4.05	4.05	4.05	3.90	3.10
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80

These span tables apply only to Prolam products

Selection Charts

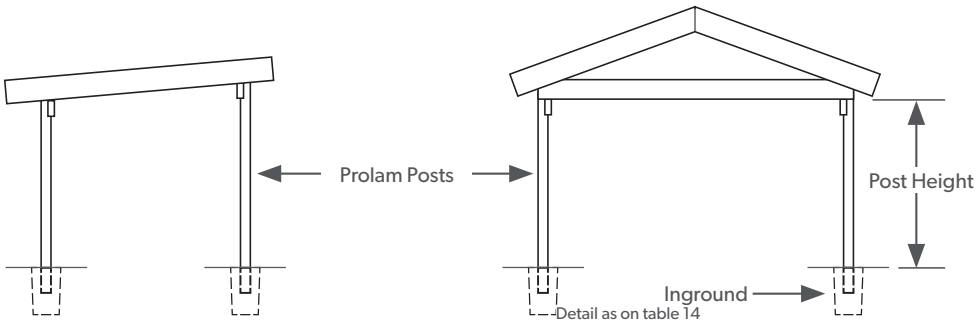


Table 18

Posts bracing carport.

Snow load 0.5 kPa – all wind zones.

Glulam Grade PL8 - Post height is measured from ground level to top of roof beam.

Verandah Posts	Maximum Supported Roof Area per Post (m²)					
	Post Height From Ground (m)					
	1.8	2.4	2.7	3.0	3.6	4.2
PLP8H5-125 112 x 112mm	10.2	8.9	8.3			
PLP8H5-150 135 x 135mm	15.0	13.7	13.1	12.5	11.0	9.5
PLP8H5-200 180 x 180mm	20.8	19.1	18.3	17.5	15.8	14.1

For Carports attached to the house, use table 17.

Selection Charts

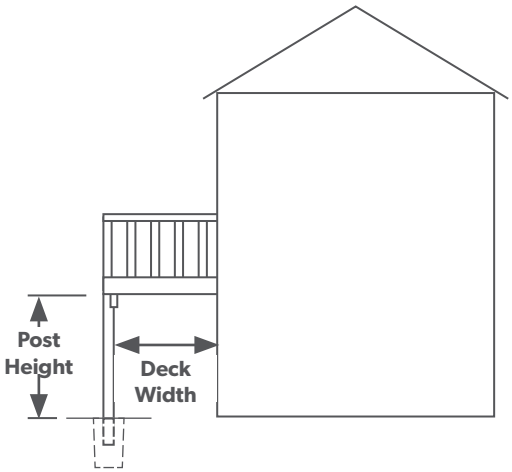


Table 19a

Posts supporting verandah or deck floor only.
Floor live load 2.0 kPa.
Glulam Grade PL8.

Post Size	Maximum Supported Deck Area per Post (m²)					
	Post Height From Ground (m)					
	1.8	2.4	2.7	3.0	3.6	4.2
PLP8H5-125 112 x 112mm	4.2	2.2	1.7	1.4	0.9	
PLP8H5-150 135 x 135mm	9.1	5.1	4.0	3.1	1.9	
PLP8H5-200 180 x 180mm	28.5	16.5	13.1	10.2	6.2	4.2

$$\text{Deck Area} = \frac{\text{Deck Width}}{2} \times \text{Post Spacing}$$

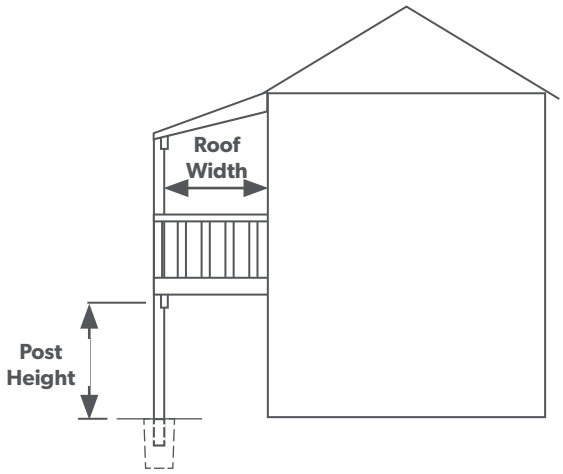


Table 19b

Posts bracing verandah deck floor and roof.
Floor live load 2.0 kPa – Light roof with ceiling.
Glulam Grade PL8. Tributary roof area must be no greater than the tributary floor area.
Post height is measured from ground level to floor bearer connection point.

Post Size	Maximum Supported & Verandah Roof Area per Post (m²)					
	Post Height From Ground (m)					
	1.8	2.4	2.7	3.0	3.6	4.2
PLP8H5-125 112 x 112mm	2.8	1.4	1.1	0.9	0.6	
PLP8H5-150 135 x 135mm	6.1	3.4	5.8	4.5	2.7	
PLP8H5-200 180 x 180mm	41.9	24.2	19.2	15.0	9.1	6.1

$$\text{Roof Area} = \frac{\text{Roof Width}}{2} \times \text{Post Spacing}$$

These span tables apply only to Prolam products

Selection Charts

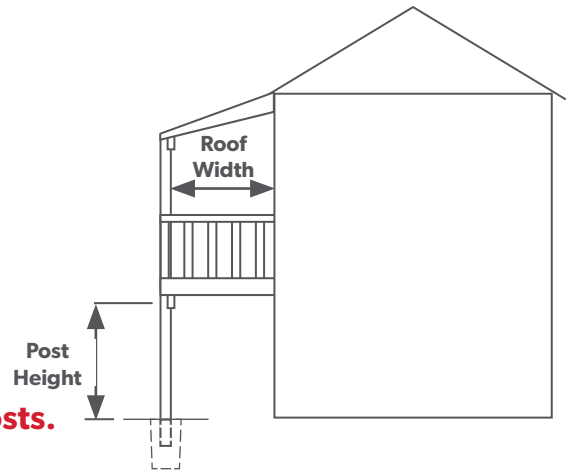


Table 19c

Prolam Grade PL12. Exterior/Wet Use.

Floor Live Load 2 kPa – wind zones VERY HIGH.

Posts supporting Floor and Roof. Non-Bracing Posts.

Allows for snow loads up to 0.4 kPa.

Post height is measured from Ground to first floor bearer connection point.

Post to be concreted into the ground and are continuous to roof level without notching.

Assumes roof tributart area equals fllor tributary area.

Post height limited to 30 times post size.

Tributary floor area (m2)	2	3	4	5	6	7	8	9	10	12	14
Post Size	**Maximum Post Height (m)**										
Roof Weight 20 kg/m2											
112x112	3.36	3.36	3.36	3.36	3.36	3.00	2.50	2.00	0.00	0.00	0.00
135x135	4.05	4.05	4.05	4.05	4.05	4.05	4.05	4.05	3.70	3.00	1.80
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
Roof Weight 40 kg/m2											
112x112	3.36	3.36	3.36	3.36	3.30	2.80	2.20	1.40	0.00	0.00	0.00
135x135	4.05	4.05	4.05	4.05	4.05	4.05	4.05	3.90	3.50	2.60	0.00
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
Roof Weight 60 kg/m2											
112x112	3.36	3.36	3.36	3.36	3.00	2.50	1.80	0.00	0.00	0.00	0.00
135x135	4.05	4.05	4.05	4.05	4.05	4.05	4.05	3.60	3.20	2.10	0.00
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80
Roof Weight 90 kg/m2											
112x112	3.36	3.36	3.6	3.30	2.70	2.10	0.00	0.00	0.00	0.00	0.00
135x135	4.05	4.05	4.05	4.05	4.05	4.05	3.70	3.30	2.80	0.00	0.00
180x180	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.40	5.30
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80

These span tables apply only to Prolam products

Selection Charts

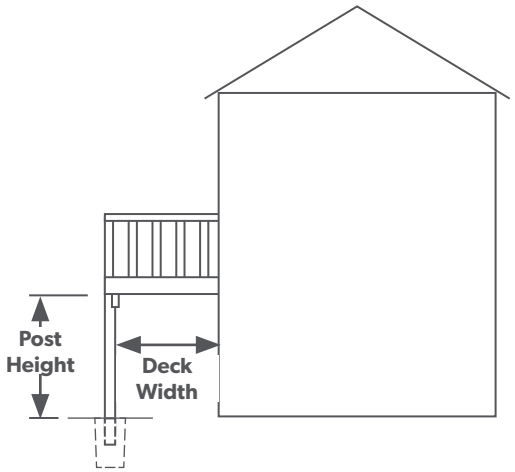


Table 19d

Prolam Grade PL12. Exterior/Wet Use.

Prolam Posts Supporting Floor or Deck. Non-Bracing Posts

Floor Weight	0.5 kPa
Live Load UDL	2 kPa
Point Load	1.8 kN

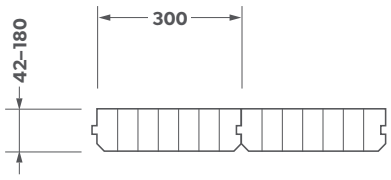
Post height is measured from ground to bearer connection point. Assumes post is concreted into the ground.

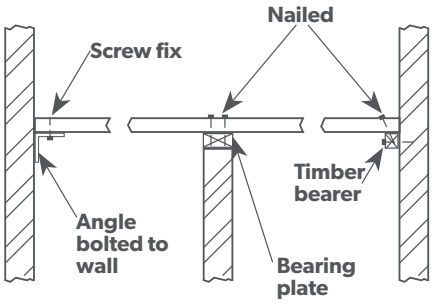
Post height limited to 30 x post size.

Tributary floor area (m2)	2	3	4	5	6	8	10	12	14	16	18
Post Size	**Maximum Post Height (m)**										
112x112	3.90	3.90	3.90	3.90	3.90	3.10	2.30	0.00	0.00	0.00	0.00
135x135	4.70	4.70	4.70	4.70	4.70	4.70	4.40	3.70	3.00	2.10	0.00
180x180	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20	5.20
220x220	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60	6.60
260x260	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80	7.80

These span tables apply only to Prolam products

Prolam® Laminated Timber Flooring





PANEL TO CONCRETE

Table 20

Allowable spans for Prolam Flooring.

Decking Thickness	Live Load (kPa)	Length in metres (m)					
		Two Spans		Single Span		Cantilever	
PLF50 300x42	Domestic - 1.5	2.6	*1.7	2.0	*1.3	0.8	*0.5
	Office - 2.5	2.2	*1.7	1.7	*1.3	0.7	*0.5
	Storage - 5.0	1.5		1.1		0.4	
PLF60 300x52	Domestic - 1.5	3.1	*2.2	2.4	*1.7	1.0	*0.7
	Office - 2.5	2.7	*2.2	2.1	*1.7	0.8	*0.7
	Storage - 5.0	1.8		1.3		0.5	
PLF75 300x65	Domestic - 1.5	3.9	*2.8	3.0	*2.2	1.2	*0.9
	Office - 2.5	3.4	*2.8	2.6	*2.2	1.0	*0.9
	Storage - 5.0	2.3		1.7		0.6	
PLF100 300x90	Domestic - 1.5	5.1	*3.8	3.9	*2.9	1.6	*1.2
	Office - 2.5	4.7	*3.8	3.6	*2.9	1.4	*1.2
	Storage - 5.0	3.1		2.3		0.9	
PLF125 300x115	Domestic - 1.5	6.4	*4.8	4.9	*3.7	2.0	*1.6
	Office - 2.5	5.7	*4.8	4.4	*3.7	1.8	*1.6
	Storage - 5.0	4.0		2.9		1.1	
PLF150 300x135	Domestic - 1.5	7.3	*5.8	5.6	*4.4	2.2	*1.8
	Office - 2.5	6.7	*5.8	5.1	*4.4	2.1	*1.8
	Storage - 5.5	4.6		3.4		1.1	

Fixing

Fixing of the decking panels is achieved by either nailing or screwing. Coach screwing or bolting may be used on the thicker decking where the heads would be recessed. Loose tongues in decking 115mm and over are fitted on site and only elastomeric glues should be used if the tongue is to be glued. Span governed by deflection 1/400, or strength. *These limits on spans have been set to reduce floor liveliness. Floor dynamics is a complex consideration and experience shows that floor spans based on strength and static load deflection limits alone can be unacceptably lively.

These span tables apply only to Prolam products

The Prolam® Finishes

Visual - Appearance A

This grade is intended for use in applications where appearance of the member is important and clear or painted finishes are used. All surface voids are filled, small tight knots are permitted. The surfaces are planer machined to a high quality finish.

Non-Visual - Appearance C

This grade is intended for use in applications where appearance is unimportant. All appearance blemishes are permitted in this grade. The surfaces are machined, but machine skip is permissible and blemishes, voids and manufacturing will remain unrepaired. Loose, knots, wane, pith and open knot holes may be present.

Bandsawn

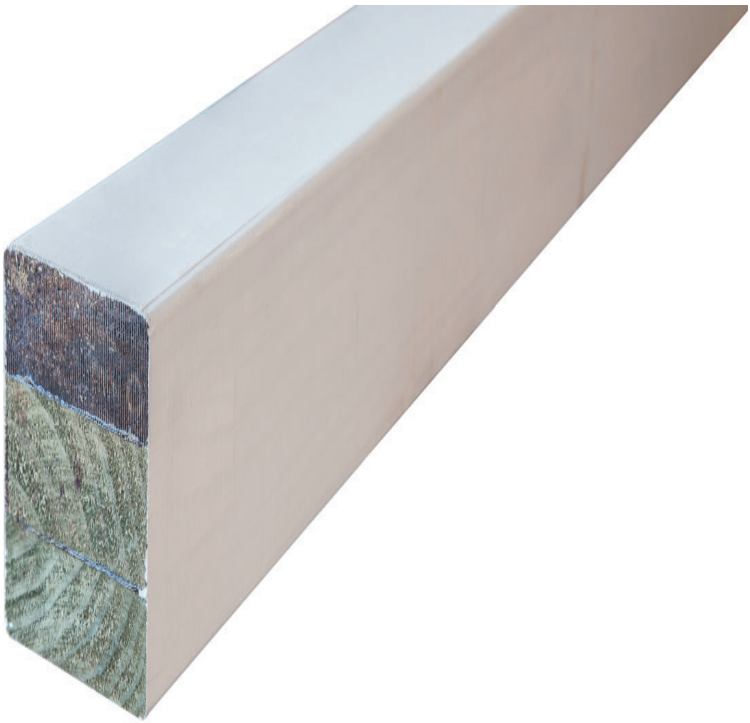
This is usually required in the visual grade, as it is used for its rustic visual appearance, the "roughness" of the bandsawn finish will vary as every saw will put a different finish on the product.

Sanded and sealed

This is a premium finish added to a visual product, where all blemishes are filled, the whole product is sanded and then coated with a sealer that will protect the product from ingress of moisture for 6 weeks. This sealer is not a long term sealer. The product must be sealed for the long term as per our painting/sealing requirements on page 40.

Preprimed

This is a primary coat that is applied in our factory as a protective coat to stop ingress of moisture until the undercoat and top coats are applied. This primer coat is not to be used as the final finish and the product must be sealed for the long term as per our painting/sealing requirements on page 40.



Visual Posts PLP H5

Visual Beams PLVL8 H3.2

Non-Visual PL8 H3.2

Non-Visual PL8 H1.2

Non-Visual PL12 H3.2

Non-Visual PL12 H1.2

Lifestyle Fencing

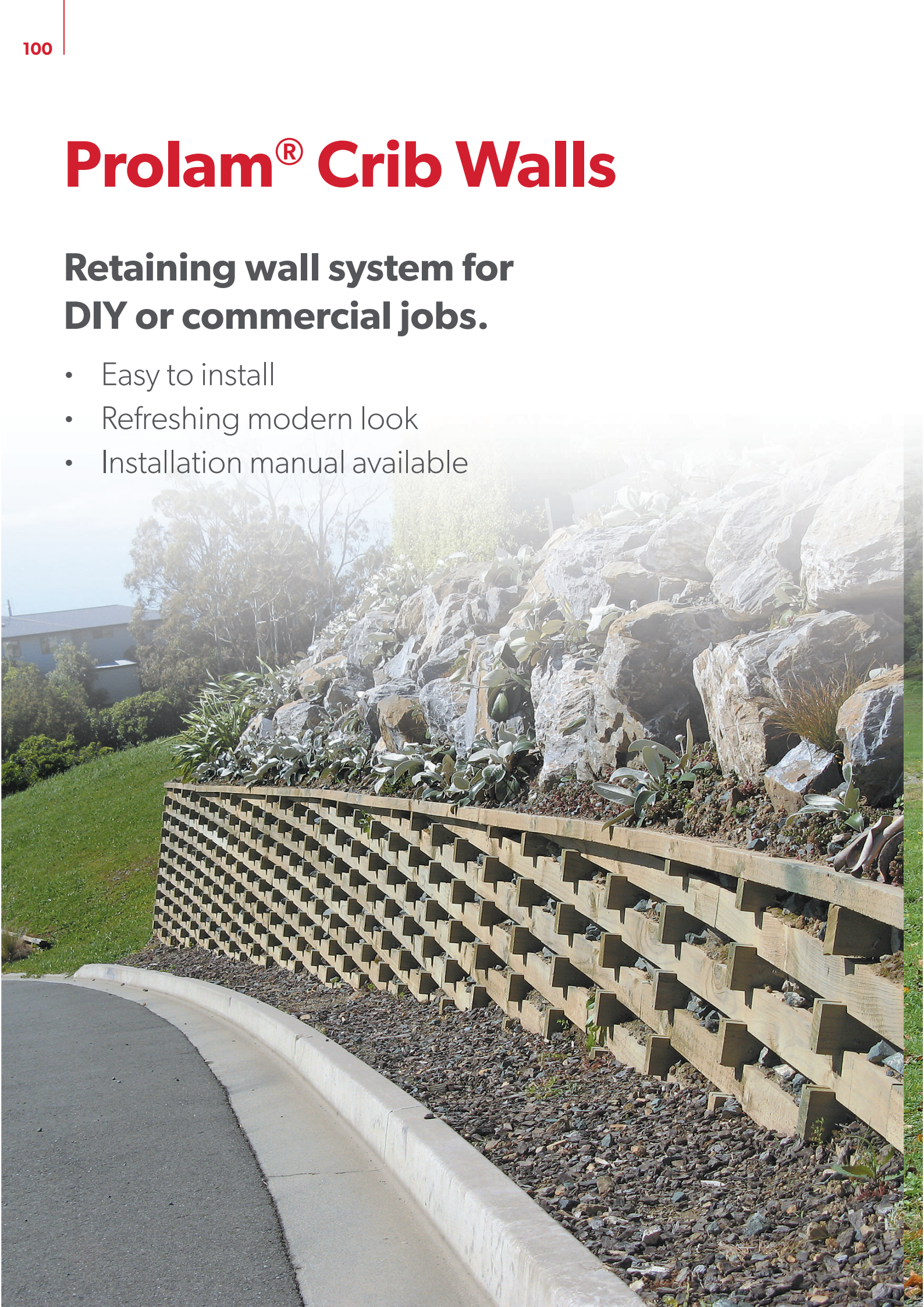
The ultimate kitset post and rail fencing that will enhance your boundary.

- Rails slot into posts for quick & easy installation
- Maintenance-free
- Made of sustainable treated Pinus Radiata

Prolam® Crib Walls

Retaining wall system for DIY or commercial jobs.

- Easy to install
- Refreshing modern look
- Installation manual available



Bollards

Provide safe barriers using these superior bollards, sized to suit your job.

- Optional hole for rope or chain
- Treated to last the distance

Prolam®
Engineered Laminated Timber

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