



Span Tables for Metrix Timber E13 LVL

Floor Joists

Table 1: Single Span

Joist Spacing (mm)	Maximum Span (mm)				
	2100	2400	4000	5000	6500
300	90x45	150x45	150x45	200x45	300x45
			200x45	240x45	360x45
	1700	3000	4400	5000	6000
450	90x45	150x45	200x45	240x45	300x45
		200x45	240x45	300x45	360x45
	1600	2600	3600	4700	5400
600	90x45	150x45	200x45	240x45	300x45
		200x45	240x45	300x45	360x45

Table values relate to Allowable Maximum Span in mm

Notes:

1. Floor Dead Load: Total Roof Weight - 40kg/m²

2. Basic Loading Data

Floor Live Load: Domestic Standard (1.5,1.8kPa)

Wind Area: Very High

End Bearing Length: 45mm

Continuous Bearing: 63mm

AS1684.1 Dynamics for 1.0kN static load

3. Dimensional Data

Top Edge Restraint: continuous restraint

Bottom Edge Restraint: nil

4. Design Deflection Limits

Dead Load: Span/300 or 15mm max

Live Load: Span/360 or 9mm max

Dynamic Criteria - 1kN Point Load 2mm max

5. Flooring Material

The above tables allow for a timber flooring material only.

6. External Use

Where overhanging joists are to be used in an external application such as a balcony, the members must be fully protected from the weather, or treated to an H3 level.

Table 2: Continuous Span

Joist Spacing (mm)	Maximum Span (mm)				
	2500	3100	4200	5300	7000
300	90x45	150x45	150x45	200x45	300x45
			200x45	240x45	360x45
	1800	3200	4500	5600	6400
450	90x45	150x45	200x45	240x50	300x45
		200x45	240x45	300x45	360x45
	1800	2900	4100	5200	5900
600	90x45	150x45	200x45	240x50	300x45
		200x45	240x45	300x45	360x45

Table values relate to Allowable Maximum Span in mm

Important:

These Span Tables only apply to Metrix Timber LVL products

LVL Manufacturing: AS/NZS 4357.0

Structural Design Properties: AS 1720.1

Phenolic Adhesive: AS 2754.1

Bond: AS/NZS 2098.2 A-bond E0

TPAA Approved Treatment for H2S

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Floor Bearers

Table 1: Single Span

Floor Load Width (mm)	Maximum Span (mm)				
	1800	2800	3700	4700	5400
1200	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1600	2600	3500	4500	5100
1500	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	200x63	240x63	300x63	360x63
	1500	2400	3300	4300	4900
1800	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1500	2300	3100	4100	4700
2100	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1400	2200	3000	4000	4500
2400	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1300	2000	2800	3700	4300
3000	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1200	1800	2500	3500	4000
4000	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63*	360x63*
	1100	1700	2300	3200	3800
5000	2/90x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63*	360x63*

Table values relate to Allowable Maximum Span in mm

* denotes member must have a minimum 65mm bearing length at the two supports.

Notes:

1. Floor Dead Load: without ceiling - 40kg/m²

2. Basic Loading Data:

Floor Live Load: Domestic Std (1.5, 1.8kPa),

Min End Bearing Length: 45mm,

Min Intermediate Bearing: 63mm

3. Dimensional Data:

Top Edge Restraint: 45mm,

Bottom Edge Restraint: nil

4. Design Deflection Limits:

Dead Load: Span/300 or 12mm max,

Live Load: Span/360 or 9mm max

5. Floor Joist Spacing:

The tables have been designed assuming the supported floor joists are spaced at a maximum of 600mm centres.

6. Concentrated Loads:

No allowance has been made in the tables for floor joists supporting concentrated loads from load bearing walls. There should be a dynamic check included for floor bearers.

Table 2: Continuous Span

Floor Load Width (mm)	Maximum Span (mm)				
	2100	3200	4200	5200	5900
1200	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	240x63	300x63	360x63
	1900	3000	3900	4900	5600
1500	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	200x63	240x63	300x63	360x63
	1800	2800	3800	4700	5400
1800	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	240x63	300x63	360x63*
	1700	2700	3600	4500	5100
2100	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63*	360x63#
	1600	2600	3500	4300	5000
2400	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63#	360x63#
	1500	2400	3200	4100	4700
3000	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63#	360x63#
	1400	2000	2900	3800	4400
4000	2/90x45	2/150x45	2/200x45	2/240x45*	2/300x45
	150x63	150x63	200x63#		
	1300	2000	2700	3600	4100
5000	2/90x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	240x63#		

Table values relate to Allowable Maximum Span in mm

* denotes member must have a minimum 85mm bearing length at the internal support. # denotes member must have a minimum 115mm bearing length at the internal support.

Important:

These Span Tables only apply to Metrix Timber LVL products LVL Manufacturing: AS/NZS 4357.0

Structural Design Properties: AS 1720.1

Phenolic Adhesive: AS 2754.1

Bond: AS/NZS 2098.2 A-bond E0

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Lintels - Single or Upper Storey

Table 1: Light Sheet Roof: with ceiling - 40kg/m²

Single Span Roof Load Width (mm)	Maximum Span (mm)				
	2100	3200	4000	4700	5500
1800	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	2000	3100	3900	4600	5400
2100	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1900	3000	3800	4500	5300
2400	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1800	2800	3600	4400	5200
3000	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1600	2600	3300	4200	5000
4000	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/360x45
	1500	2400	3200	4000	4800
5000	150x45	150x45	200x63	240x63	360x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/360x45

Table values relate to Allowable Maximum Span in mm

Notes:

- Basic Loading Data** Snow Load: 0.9kPa
Wind Speed: N3
Min End Bearing Length: 35mm
- Dimensional Data**
Roof Pitch: 15.0 degrees
Bottom Edge Restraint: nil
- Design Deflection Limits**
Dead Load: Span/300 or 10mm max
Live Load: Span/360 or 10mm max

Table 2: Heavy Tile Roof: with ceiling - 90kg/m²

Single Span Roof Load Width (mm)	Maximum Span (mm)				
	1600	2600	3300	4000	4700
1800	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1600	2400	3200	3900	4600
2100	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1500	2300	3100	3800	4500
2400	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1400	2200	2900	3600	4300
3000	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1200	2000	2700	3400	4100
4000	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	1200	1800	2500	3200	3900
5000	150x45	150x45	200x63	240x63	300x63
	2/150x45	2/150x45	2/200x45	2/240x45	2/360x45

Table values relate to Allowable Maximum Span in mm

Important:

These Span Tables only apply to Metrix Timber LVL products
LVL Manufacturing: AS/NZS 4357.0
Structural Design Properties: AS 1720.1
Phenolic Adhesive: AS 2754.1
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Rafters

Table 1+2: Light Sheet Roof: with ceiling - 40kg/m²

Table 3+4: Heavy Tile Roof: with ceiling - 90kg/m²

Table 1

Single Span Rafter Spacing (mm)	Maximum Span (mm)				
	2400	3700	4900	5200	6500
600	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	2100	3200	4400	4700	6000
900	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	1900	3000	4000	4300	5700
1200	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63

Table values relate to Allowable Maximum Span in mm

Table 3

Single Span Roof Load Width (mm)	Maximum Span (mm)				
	1800	2900	3900	4200	5500
600	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	1600	2500	3400	3700	4900
900	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	1500	2300	3100	3400	4500
1200	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63

Table values relate to Allowable Maximum Span in mm

Table 2

Continuous Span Roof Load Width (mm)	Maximum Span (mm)				
	3200	5000	6400	6700	8200
600	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	2800	4400	5900	6200	7600
900	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	2600	4000	5400	5800	7200
1200	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63

Table values relate to Allowable Maximum Span in mm

Table 4

Continuous Span Roof Load Width (mm)	Maximum Span (mm)				
	2500	3900	5300	5700	7000
600	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	2200	3400	4600	5000	6400
900	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63
	2000	3100	4200	4600	6000
1200	90x45	150x45	200x45	200x45	300x45
			150x63	200x63	240x63

Table values relate to Allowable Maximum Span in mm

Notes:

1. Basic Loading Data:

Snow Load: 0.9kPa,
Wind Area: Very High,
Min End Bearing Length: 36mm

2. Dimensional Data:

Roof Pitch: 15.0 degrees,
Bottom Edge Restraint: 0.45m

3. Design Deflection Limits:

Dead Load: Span/300 or 200mm max,
Live Load: Span/250 or 12.5mm max,
Overhang: Span/300 or 10mm max

4. Overhangs:

The overhanging rafters must be tied together at their ends by a fascia board. No overhang is to be greater than one half of the adjacent back span.

Important:

These Span Tables only apply to Metrix Timber LVL products
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Structural Design Properties: AS 1720.1
Phenolic Adhesive: AS 2754.1
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