



LUMINEN JOIST

BY TRUE BLUE LVL

QUALITY MADE I JOIST
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Span Tables

In compiling the span tables in this specification sheet, the requirements of the relevant Australian standards and codes along with established Industry standard design guidelines for Residential Construction have been followed. In particular, the following codes and references have been used:

- ◆ AS 1720.3:2016 Timber structures Design criteria for timber-framed residential buildings
- ◆ AS 1170.1 Structural design actions -permanent imposed and other actions
- ◆ AS 1720.1:2010 Timber Structures Design Methods
- ◆ AS 4055 Wind loads for housing
- ◆ AS/NZS 4063 Characterization of structural timber Test methods
- ◆ ASTM D5055 Standard specification for establishing and monitoring structural capacities of prefabricated wood I-Joists

Strength reduction factor, Duration of load factor, Partial seasoning factor, Length and position of bearing factor, Load sharing factor, Stability factor and Temperature factor were according to AS 1720.1-2010. The calculation process was design according to AS 1684.1.

LVL Flange, thickness 45mm, width 45/60/90mm

OSB Web, 9.5mm

Tolerance:

Depth: - 0 +1 mm,

Flange width: +/- 1 mm,

Length:-10mm - +10mm

Spring:1/1000mm

Moisture content:8-15%

Length:	3.6 to 12.0
Width:	240, 300, 360
Thickness:	45, 60, 90



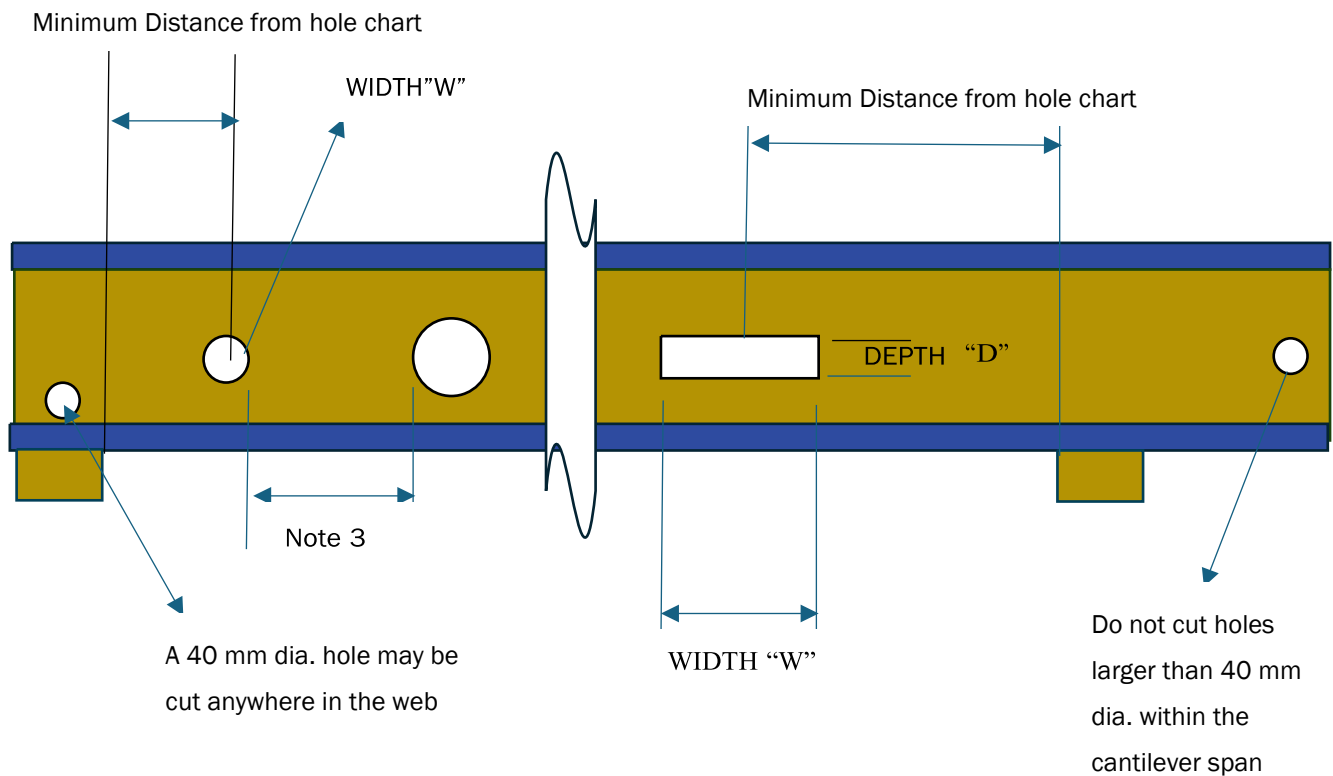
Floor dynamics criteria									
Joist Spacing		300	450	500	600	300	450	500	600
Specification (mm)	Self weight (kg/m)	Maximum Floor Joist Span (mm)							
		Single Span				Continuous Span			
24045	3.2	5100	4500	4300	4100	5900	5100	4800	4400
24060	4.0	5500	5050	4800	4500	6500	5700	5400	4900
30045	3.5	6050	5650	5500	5000	7000	6100	5750	5000
30060	4.3	6350	5900	5750	5350	7400	6850	6550	5700
30090	5.7	6900	6400	6200	5800	8000	7450	7200	6700

Grout and tiled floor - 65 kg/m ²									
Joist Spacing		300	450	500	600	300	450	500	600
Specification (mm)	Self weight (kg/m)	Maximum Floor Joist Span (mm)							
		Single Span				Continuous Span			
24045	3.2	5000	4200	4000	3800	5800	4800	4500	4200
24060	4.0	5400	4850	4400	4100	6400	5300	5200	4800
30045	3.5	6050	5200	5000	4800	6750	5900	5600	4850
30060	4.3	6300	5450	5200	5000	7050	6200	5850	5500
30090	5.7	6750	5850	5650	5400	7650	6650	6350	6050

40mm Grout and tiled floor - 120 kg/m ²									
Joist Spacing		300	450	500	600	300	450	500	600
Specification (mm)	Self weight (kg/m)	Maximum Floor Joist Span (mm)							
		Single Span				Continuous Span			
24045	3.2	4500	4050	3900	3600	5450	5000	5800	4600
24060	4.0	4900	4400	4100	4000	5950	5600	5400	5100
30045	3.5	5550	5100	4900	4450	6450	5600	5250	4550
30060	4.3	5750	5400	5200	4750	7050	6200	5850	5200
30090	5.7	6200	5800	5650	5250	7650	6650	6350	6050

Luminen Joist Hole & Notching Charts

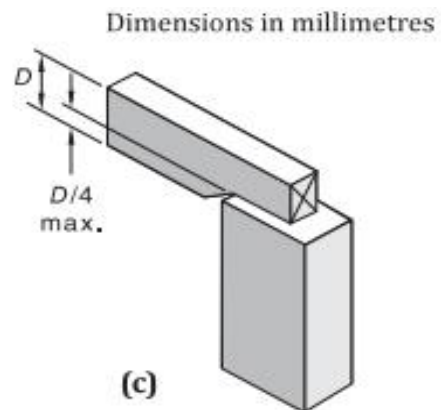
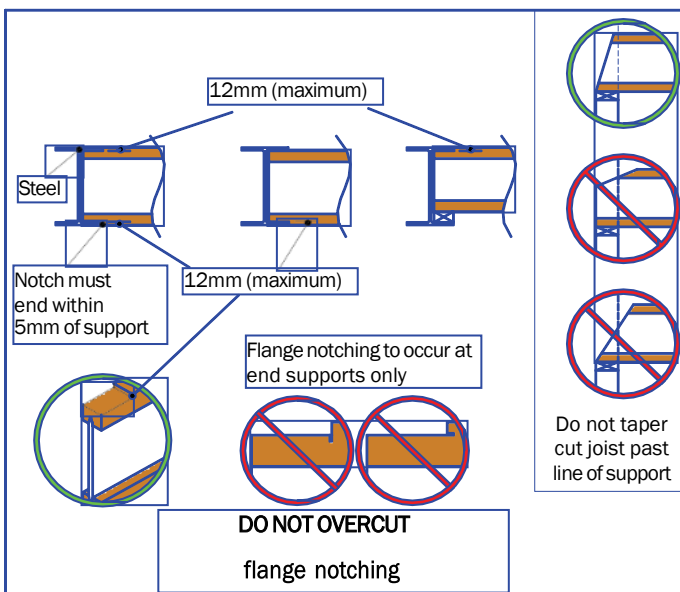
Holes may be cut through the web of Luminen Joist provided they are located within the central part of the span as specified using below Figure. The Table specify allowable hole locations for some sizes of circular and rectangular holes.



Specification	Joist span (m)	Joist Spacing (mm)	Circular Holes						Rectangular Holes			
			Hole Diameter/Square Hole Width (mm)						Depth x Width (mm)			
			75	100	125	150	175	200	125 x 150	150 x 300	175 x 350	200 x 400
			Minimum distance from any support to the centre of the hole (mm)									
Luminen 24045	3.5	600	300	300	300	1200	X	X	1650	1750	X	X
	4.0	600	300	300	600	1600	X	X	1950	2050	X	X
Luminen 24060	3.5	600	300	300	300	1200	X	X	1600	1800	X	X
	4.0	600	300	300	300	1550	X	X	1950	2050	X	X
	4.5	600	300	300	600	1700	X	X	2300	2350	X	X
Luminen 30045	4.0	600	300	300	300	300	600	1250	1550	1950	2000	2000
	4.5	600	300	300	300	300	800	1500	1900	2200	2200	X
Luminen 30060	4.5	600	300	300	300	300	600	1500	1600	2200	2300	2300
	5.0	600	300	300	300	300	800	1700	2050	2450	2550	2550
Luminen 30090	5.0	600	300	300	300	300	400	1550	1600	2300	2400	2450
	5.3	600	300	300	300	300	700	1700	1900	2500	2600	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
3. 75 mm are allowed in any span
4. Do not cut or damage flanges under any circumstances
5. If possible, holes in web should be positioned mid height, minimum edge clearance from any flange is 6 mm



¹ AS1684.3:2021 Residential Timber-Framed Construction Part 3: Cyclic areas, Standards Australia Limited 2024