



# E-JOIST FOR USE IN OFFICE MEZZANINES

## Overview of Wesbeam e-joists

Wesbeam e-joists are engineered I-joists designed for high-performance floor and roof systems. Combining high-strength Laminated Veneer Lumber (LVL) flanges with a structural OSB web, they offer a lightweight structure, long-span capability, and efficient use of timber resources.

As Australia's only manufacturer of LVL and LVL I-joists, Wesbeam delivers precision-engineered, locally made solutions that provide strength, reliability, and cost-effectiveness—making them an excellent choice for mezzanine floors in office environments.

## Rising Demand for Sustainable Solutions

The demand for office mezzanine floors is growing, especially in commercial and industrial buildings where additional space is needed without major structural changes. Architects and builders are increasingly turning to lightweight, sustainable materials, and Wesbeam e-joists are rapidly becoming the preferred choice over light gauge steel joists.

Offering superior ease of handling, quicker installation, and lower embodied carbon, e-joists provide an ideal solution for modern office mezzanine construction.

## Design Criteria

The office mezzanine span tables in this guide are based on the following design criteria:

- Continuous span assumption: Span 1 is less than or equal to twice Span 2 ( $\leq 2:1$ )
- Live loading: 3 kPa (UDL) / 2.7 kN (concentrated load)
- Assumed floor weight: 60 kg/m<sup>2</sup>
- For continuous joists, the bottom flange of the e-joist is assumed fully laterally restrained by ceiling battens or lining.
- Serviceability limits
  - Long term deflection = Span/300 or 11mm max
  - Short term deflection = Span/360 or 9mm max
  - Dynamic deflection = 2mm under 1kN point load mid-span

**Office mezzanine floor  
joist span tables**

e-joist section	Maximum Single Span (mm)			
	Joist Spacing (mm)			
	300	360	400	450
ej 240 45	4100	3900	3700	3600
ej 240 63	4500	4200	4100	4000
ej 240 90	4800	4600	4500	4300
ej 300 45	4600	4400	4300	4100
ej 300 63	5100	4800	4700	4500
ej 300 90	5500	5300	5100	4900
ej 360 63	5600	5300	5200	5000
ej 360 90	6100	5800	5700	5500

  

e-joist section	Maximum Continuous Span (mm)			
	Joist Spacing (mm)			
	300	360	400	450
ej 240 45	4700	4500	4300	4200
ej 240 63	5200	4900	4800	4600
ej 240 90	5600	5300	5200	5000
ej 300 45	5300	5000	4500	4200
ej 300 63	5900	5600	5400	5300
ej 300 90	6400	6100	5900	5700
ej 360 63	6500	6200	6000	5400
ej 360 90	7100	6500	6000	5400

**Storage and  
Installation**

Correct storage and installation of Wesbeam e-joists for office mezzanine floors generally follows the same principles as residential construction, including temporary bracing, brackets, and connection details. For comprehensive guidance, refer to the Wesbeam e-joist Installation Guide available online at [wesbeam.com](https://wesbeam.com).

**Design Centre  
Optimisation**

The span tables in this document are simplified and based on assumptions around serviceability, span continuity, and conservative deflection limits targeting high-end office performance. In many scenarios, deflection and dynamic performance requirements for mezzanine floors may be relaxed where such stringent criteria are not essential. Similarly, adjusting continuous span ratios could offer a more economical joist design.

For alternative designs or to discuss optimisation of your next office mezzanine floor design, contact Wesbeam's Structural Engineering Team at [technical@wesbeam.com](mailto:technical@wesbeam.com) or via our **Technical Hotline 1300 356 460**.



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