

## hyJOIST® SELECTION GUIDE

The concepts of acceptable deflection and floor rigidity in floors are subjective and not easily definable by calculation to everyone's personal 'acceptance' levels. Typically, design software solutions like designIT for houses provide designs with deflection limits that have been applied over a number of decades in design codes and guidance across Australasia.

These deflection limits, however, may not be acceptable to some homeowners and a tighter level of deformation/deflection may produce more satisfactory results. Some options to provide 'stiffer' floors include:

- Using a deeper joist or wider flange.
- Reducing the joist spacing.
- Using a more rigid or thicker flooring product.
- Fixing cross battens or installing a 'strong back' to enhance load sharing across the floor system.

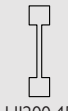



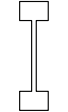
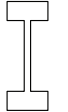

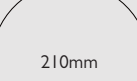






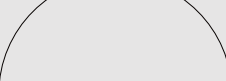
To endeavour to achieve a tighter level of deflection and reduce the effects of floor dynamics and vibration, Futurebuild LVL has developed a concept around 'span range' taking into account the effects of reduced deflection and increased stiffness across floors.

Note: HJ360 90 and HJ400 90 hyJOIST have had minor reductions applied to their respective stiffness values based on product mix changes and in-grade testing, effective for product manufactured from July 2022. Please consult designIT for houses for information relating to spanning capability.





Table 2. hyJOIST Span tables – floor joists supporting floor loads only – Dead load 40kg/m<sup>2</sup>, Live load 1.5kPa/1.8kN.

Overall Depth (mm)	Nominal clear distance between flanges (mm)	Dimensions for Detailing			hyJOIST Section Code	Weight (kg/m)	Maximum hole size for services <sup>2,3</sup>	Floor joists for houses	
		Flange Width (mm)						Single Span	
		45	63	90				Joist spacing (m)	
		Flange Outstand <sup>1</sup> (mm)						450	600
		18	27	39			Recommended Span Range (m)		
200	116	 HJ200 45			HJ200 45	3.3		3.0 to 3.5	3.0 to 3.3
240	156	 HJ240 45			HJ240 45	3.5		3.7 to 4.3	3.4 to 3.9
		 HJ240 63			HJ240 63	4.5		4.4 to 4.8	4.0 to 4.4
		 HJ240 90			HJ240 90	6.4		4.9 to 5.3	4.5 to 4.9
300	216	 HJ300 45			HJ300 45	3.9		4.8 to 5.1	4.2 to 4.7
		 HJ300 63			HJ300 63	4.9		5.0 to 5.5	4.6 to 5.1
		 HJ300 90			HJ300 90 <sup>4</sup>	6.9		5.6 to 6.1	5.2 to 5.6
360	276	 HJ360 63			HJ360 63	5.2		5.6 to 6.1	5.2 to 5.6
		 HJ360 90			HJ360 90 <sup>4</sup>	7.3		6.3 to 6.7	5.8 to 6.2
		 HJ400 90			HJ400 90 <sup>4</sup>	7.6			6.8 to 7.1

1. Used to determine the thickness of packing to pack web flush with flanges
2. Refer to designIT for houses or designIT siTe APP for permitted hole locations and limitations
3. Includes an allowance for a 3mm clearance between the hole and the flange-web joint
4. HJ360 90 and HJ400 90 hyJOIST have had minor reductions applied to their respective Elx values based on product mix changes and in-grade testing, effective for product manufactured from July 2022. Please consult designIT for houses for information relating to spanning capability.

Information provided should only be considered a general guide and is specific to the Futurebuild® LVL range of LVL products and cannot be used with any other LVL products no matter how similar they may appear. For further information contact our technical team on 0800 585 244 or visit [www.futurebuild.co.nz](http://www.futurebuild.co.nz).