

## 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:






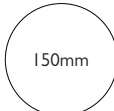



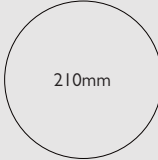


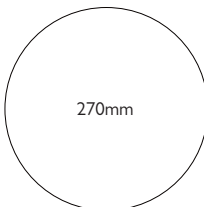

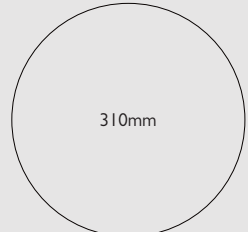
- Using a deeper joist or wider flange.
- Reducing the joist spacing.
- Using a more rigid or thicker flooring product.
- Fixing cross battens or installing a 'strong back' to enhance load sharing across the floor system.

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.





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

Dimensions for Detailing								Floor joists for houses	
Overall Depth (mm)	Nominal clear distance between flanges (mm)	Flange Width (mm)			hyJOIST Section Code	Weight (kg/m)	Maximum hole size for services <sup>2,3</sup>	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 63	 HJ240 90	HJ240 45	3.5		3.7 to 4.3	3.4 to 3.9
					HJ240 63	4.5		4.4 to 4.8	4.0 to 4.4
					HJ240 90	6.4		4.9 to 5.3	4.5 to 4.9
300	216	 HJ300 45	 HJ300 63	 HJ300 90	HJ300 45	3.9		4.8 to 5.1	4.2 to 4.7
					HJ300 63	4.9		5.0 to 5.5	4.6 to 5.1
					HJ300 90	6.9		5.6 to 6.1	5.2 to 5.6
360	276		 HJ360 63	 HJ360 90	HJ360 63	5.2		5.6 to 6.1	5.2 to 5.6
					HJ360 90	7.3		6.3 to 6.8	5.8 to 6.3
400	316	 HJ400 90			HJ400 90	7.6		6.8 to 7.2	6.3 to 6.7

1. Used to determine the thickness of packing to pack web flush with flanges
2. Refer to designIT for houses or designIT sTe APP for permitted hole locations and limitations
3. Includes an allowance for a 3mm clearance between the hole and the flange-web joint