

hyJOIST® AS
A SUBSTITUTE
FOR SG8

TECHNICAL
NOTE

hyJOIST® FLOOR JOISTS

AN ENGINEERED SOLUTION FOR A WIDER PROBLEM

hyJOIST® provides an engineered wood product solution for floor joist and rafter applications in residential and light commercial buildings. The hyJOIST range provides a cost-effective installed flooring solution, offering builders, designers and developers the following advantages:

- **Optimisation:** the 45mm, 63mm and 90mm flange hyJOIST options provide the ability to optimise floor layouts, limiting:
 - The need for additional supporting beams; and
 - The need to close-up joist spacings in heavily loaded floor areas.
- **Dimensionally stable:** removes the need for packing and planing – saving time on site.
- **No need for mid-span blocking:** ability to reduce the number of lineal metres per floor by up to 10% whilst also removing the need to install mid-span blocking – saving time on site and reducing the possibility of the floor squeaking.
- **Ease of installation of services:** easy installation of services such as plumbing and ventilation ducts within the floor cavity, which may avoid the need for expensive dropped ceilings and bulkheads or the installation of proprietary reinforcement.
- **Lightweight:** the 45mm hyJOIST floor joist range are between 22% to 40% lighter than sawn timber alternatives (span for span) which makes it easier to lift and handle.
- **Quality Assured:** hyJOIST products are branded with the EWPA quality assurance stamp, thereby demonstrating that the hyJOIST products have been made in a quality controlled environment at our LVL mill at Marsden Point.



hyJOIST 45mm RANGE AS A DIRECT SUBSTITUTE FOR SG8.

When considering structural performance, HJ240 45 and HJ300 45 hyJOIST sections may be directly substituted for 240 x 45 SG8 and 290 x 45 SG8 as specified in NZS 3604:2011, **when supporting floor loads only**, provided they do not form part of an external structure. Some subtle differences apply between the installation of hyJOIST and SG8. These differences are detailed within the **hyJOIST Design and Installation Guide**. At all times hyJOIST should be installed in accordance with the most current hyJOIST Design and Installation Guide and Futurebuild® LVL recommendations.

Table 1 provides the spanning capability of hyJOIST HJ240 45 and HJ300 45 products as well as 240x45 and 290x45 SG8 products when supporting floor live loads not exceeding 1.5kPa/1.8kN.

Table 1: Floor Joists Supporting Floor Loads Only (1.5kPa/1.8kN)

Section	Product	Maximum single span of floor joists at a maximum spacing (mm) of:		
		400	450	600
240x45 ¹	SG8	4.40	4.30	3.90
HJ240 45 ²	hyJOIST	4.70	4.30	4.00
290x45 ¹	SG8	5.20	5.05	4.60
HJ300 45 ²	hyJOIST	5.35	5.15	4.80

1. SG8 spans as per table 7.1(a) NZS 3604 Floor Joists.

2. hyJOIST spans determined using designIT® for Houses software.

Note: Any product substitution should be completed as an amendment or minor variation to the building consent with associated span tables or designIT output.



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OPTIMISED DESIGN SOLUTIONS USING hyJOIST FOR 240mm AND 300mm DEEP FLOOR SOLUTIONS

The hyJOIST range of products includes three flange sizes across 240mm and 300mm joist depths. This allows designers to fully optimise a floor solution to cater for changes in:

- **Span** - Typically an extra 1.0m from 45mm to 90mm section.
- **Loading** - Change flange width, not joist spacing to suit tiled floor areas.
- **Support Beams** – use larger flange widths to limit the need for intermediate support beams.
- **Longer Lengths** – available in longer lengths than sawn timber, suitable for continuous span application.

All these factors increase the overall cost effectiveness of the total floor solution.

Table 2:

Overall Depth (mm)	Flange Width (mm)		
	45	63	90
240			
300			

SPECIFICATION TOOLS AND SUPPORT

The hyJOIST range of products are supported by software and support tools to aid designers in the development of cost-effective, fit for purpose structural solutions.

Software for Residential Applications



designIT for Houses is a software tool for all building practitioners for designing with the Futurebuild LVL range of engineered wood products and SG8 materials for houses and similar structures.

Download from chsoftware.co.nz.



- Floor joist and hole calculator.
- Specification of holes in both hyJOIST and solid Futurebuild LVL joists including designs with multiple spans and overhangs.
- View all installation details.
- Save projects across devices.
- Create a project on one device, save to the cloud and access on another.
- View literature or download it to your device and access anytime.



Technical Support and Literature

Futurebuild LVL provides on-site support through literature in the form of the Futurebuild LVL Residential Design and hyJOIST Design and Installation Guide, as well as the free designIT app.

Futurebuild LVL's in-house technical team of engineers are also available to provide design and installation support - call 0800 585 244 or contact us via the website.

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