

Application: Floor Bearers

A Floor Bearer is a beam required to support floor joists.
The joists may be on top of, level with, or below the bearer.

Floor Dead Load - without ceiling - 30kg/m²

Basic Loading Data

Flooring = Particle Board (30kg/m²)
Wind Area = Very High
Floor Live Load = Domestic Std (1.5,1.8)
Min End Bearing Length = 45mm
Min Intermediate Bearing = 65mm

Dimensional Data

Top Edge Restraint = 45mm
Bottom Edge Restraint = nil

Design Deflection Limits

Dead Load - Span/300 or 12mm max
Live Load - Span/360 or 9mm max

Floor Joist Spacing - The tables have been designed assuming the supported floor joists are spaced at a maximum of 600mm centres.
Concentrated Loads - No allowance has been made in the tables for floor joists supporting concentrated loads from load bearing walls.
There should be a dynamic check included for floor bearers.

NP Frame LVL 8
NP Frame LVL 11
NP Frame LVL 13

Single Span Floor load width (mm)	Max Span (mm)				
	1800	2800	3700	4700	5400
1200	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1600	2600	3500	4500	5100
1500	2/140x45	2/190x45	2/240x45		
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	200x63	240x63	300x63	360x63
	1500	2400	3300	4300	4900
1800	2/140x45	2/190x45	2/240x45		
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1500	2300	3100	4100	4700
2100	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1400	2200	3000	4000	4500
2400	2/140x45	2/190x45	2/240x45		
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1300	2000	2800	3700	4300
3000	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63	360x63
	1200	1800	2500	3500	4000
4000	2/140x45	2/190x45	2/240x45		
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63*	360x63*
	1100	1700	2300	3200	3800
5000	2/140x45	2/190x45	2/240x45	2/290x45*	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/240x45	2/200x45	2/300x45	2/300x45
	150x63	150x63	200x63	300x63*	360x63*

Table values relate to Allowable Maximum Span in mm

* denotes member must have a minimum 65mm bearing length at the two supports.

Continuous Span Floor load width (mm)	Max Span (mm)				
	2100	3200	4200	5200	5900
300	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	240x63	300x63	360x63
	1900	3000	3900	4900	5600
1500	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	200x63	240x63	300x63	360x63
	1800	2800	3800	4700	5400
1800	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	360x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	240x63	300x63	360x63*
	1700	2700	3600	4500	5100
2100	2/140x45	2/190x45	2/240x45	2/290x45	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63*	360x63#
	1600	2600	3500	4300	5000
2400	2/140x45	2/190x45	2/240x45	2/290x45*	
	2/90x45	2/140x45	2/190x45	300x90	360x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63#	360x63#
	1500	2400	3200	4100	4700
3000	2/140x45	2/190x45	2/240x45*	2/290x45#	
	2/90x45	2/140x45	2/190x45	300x90	300x90
	2/150x45	2/150x45	2/200x45	2/240x45	2/300x45
	150x63	150x63	200x63	300x63#	360x63#
	1400	2100	2900	3800	4400
4000	2/140x45	2/190x45	2/240x45#		
	2/90x45	2/140x45	2/190x45	300x90#	360x90#
	2/150x45	2/150x45	2/200x45	2/240x45*	2/300x45#
	150x63	150x63	200x63#		
	1300	2000	2700	3600	4100
5000	2/140x45	2/190x45	2/240x45#		
	2/90x45	2/140x45	2/190x45	300x90#	300x90#
	2/150x45	2/150x45	2/200x45*	2/240x45#	2/300x45#
	150x63	150x63	240x63#		

Table values relate to Allowable Maximum Span in mm

* denotes member must have a minimum 85mm bearing length at the internal support.

denotes member must have a minimum 115mm bearing length at the internal support.

Note: Span tables shown here for NP Frame LVL 8, 11 and 13 are representative for the basic design function in the NP Design program.
For specific design options, refer to NP Design's professional design feature at www.nelsonpine.co.nz

These span tables apply only to NelsonPine®LVL products