

**E13.2 Floor Joist Span Table –
Supporting Floor Loads Only Single Span**
D = member depth, B = member breadth, NS = not suitable

D×B (mm)	Floor mass (kg/m ²)	Single Span									
		Floor Joist Spacing (mm)									
		300		400		450		480		600	
		Maximum Span and Cantilever (m)									
		Span	Cant.	Span	Cant.	Span	Cant.	Span	Cant.	Span	Cant.
90×45	40	2.2	0.5	1.9	0.5	1.8	0.4	1.8	0.5	1.7	0.4
	100	2.1	0.5	1.9	0.5	1.8	0.4	1.8	0.5	1.7	0.4
90×63	40	2.7	0.7	2.1	0.5	2.0	0.5	2.0	0.5	1.9	0.5
	100	2.4	0.6	2.1	0.5	2.0	0.5	2.0	0.5	1.9	0.5
150×45	40	4.0	1.0	3.4	0.8	3.2	0.8	3.2	0.8	3.0	0.7
	100	3.5	0.9	3.2	0.8	3.1	0.8	3.0	0.8	2.8	0.7
150×63	40	4.4	1.1	3.9	1.0	3.6	0.9	3.7	0.9	3.4	0.8
	100	3.9	1.0	3.6	0.9	3.4	0.9	3.4	0.8	3.1	0.8
170×45	40	4.4	1.1	3.9	1.0	3.7	0.9	3.7	0.9	3.4	0.9
	100	3.9	1.0	3.6	0.9	3.5	0.9	3.4	0.9	3.2	0.8
170×63	40	4.8	1.2	4.5	1.1	4.2	1.0	4.3	1.1	3.9	1.0
	100	4.4	1.1	4.0	1.0	3.9	1.0	3.8	0.9	3.5	0.9
200×45	40	5.0	1.2	4.6	1.2	4.4	1.1	4.4	1.1	4.1	1.0
	100	4.6	1.2	4.2	1.1	4.1	1.0	4.0	1.0	3.7	0.9
200×63	40	5.4	1.4	5.0	1.3	4.9	1.2	4.8	1.2	4.5	1.1
	100	5.1	1.3	4.7	1.2	4.5	1.1	4.4	1.1	4.2	1.0

240×45	40	5.7	1.4	5.3	1.3	5.1	1.3	5.1	1.3	4.8	1.2
	100	5.5	1.4	5.1	1.3	4.9	1.2	4.8	1.2	4.5	1.1
240×63	40	6.2	1.5	5.8	1.4	5.6	1.4	5.5	1.4	5.2	1.3
	100	6.0	1.5	5.6	1.4	5.4	1.3	5.3	1.3	5.0	1.2
300×45	40	6.7	1.7	6.3	1.6	6.1	1.5	6.0	1.5	5.7	1.4
	100	6.7	1.7	6.3	1.6	6.0	1.5	5.9	1.5	5.6	1.4
300×63	40	7.3	1.8	6.8	1.7	6.6	1.7	6.5	1.6	6.2	1.5
	100	7.3	1.8	6.8	1.7	6.6	1.7	6.5	1.6	6.1	1.5
360×45	40	7.7	1.9	7.2	1.8	7.0	1.7	6.9	1.7	6.5	1.6
	100	7.7	1.9	7.2	1.8	7.0	1.7	6.9	1.7	6.5	1.6
360×63	40	8.4	2.1	7.8	2.0	7.6	1.9	7.5	1.9	7.1	1.8
	100	8.4	2.1	7.8	2.0	7.6	1.9	7.5	1.9	7.1	1.8
400×63	40	9.1	2.3	8.5	2.1	8.2	2.1	8.1	2.0	7.6	1.9
	100	9.1	2.3	8.5	2.1	8.2	2.1	8.1	2.0	7.6	1.9



D×B (mm)	Floor mass (kg/m²)	Continuous Span									
		Floor Joist Spacing (mm)									
		300		400		450		480		600	
		Maximum Span and Cantilever (m)									
		Span	Cant.	Span	Cant.	Span	Cant.	Span	Cant.	Span	Cant.
90×45	40	2.9	0.7	2.2	0.5	2.1	0.5	2.1	0.5	2.0	0.5
	100	2.9	0.7	2.2	0.5	2.1	0.5	2.1	0.5	2.0	0.5
90×63	40	3.2	0.8	2.6	0.6	2.4	0.6	2.4	0.6	2.3	0.6
	100	3.2	0.8	2.6	0.6	2.4	0.6	2.4	0.6	2.3	0.6
150×45	40	4.8	1.2	4.3	1.1	3.8	0.9	3.9	1.0	3.5	0.9
	100	4.7	1.2	4.3	1.1	3.8	0.9	3.9	1.0	3.5	0.9
150×63	100	5.2	1.3	4.8	1.2	4.4	1.1	4.6	1.1	4.0	1.0

170×45	40	5.5	1.4	5.1	1.3	4.5	1.1	4.7	1.2	4.1	1.0
	100	5.4	1.3	4.9	1.2	4.5	1.1	4.6	1.2	4.1	1.0
170×63	40	6.0	1.5	5.6	1.4	5.2	1.3	5.3	1.3	4.6	1.1
	100	5.9	1.5	5.4	1.4	5.2	1.3	5.1	1.3	4.6	1.1
200×45	40	6.2	1.6	5.8	1.5	5.5	1.4	5.6	1.4	4.9	1.2
	100	6.2	1.6	5.8	1.4	5.4	1.4	5.4	1.4	4.9	1.2
200×63	40	6.8	1.7	6.3	1.6	6.1	1.5	6.0	1.5	5.6	1.4
	100	6.8	1.7	6.3	1.6	6.1	1.5	6.0	1.5	5.6	1.4
240×45	40	7.2	1.8	6.7	1.7	6.5	1.6	6.4	1.6	6.0	1.5
	100	7.2	1.8	6.7	1.7	6.5	1.6	6.4	1.6	6.0	1.5
240×63	40	7.8	1.9	7.2	1.8	7.0	1.8	6.9	1.7	6.5	1.6
	100	7.8	1.9	7.2	1.8	7.0	1.8	6.9	1.7	6.5	1.6
300×45	40	8.5	2.1	7.9	2.0	7.6	1.9	7.5	1.9	7.1	1.8
	100	8.5	2.1	7.9	2.0	7.6	1.9	7.5	1.9	7.1	1.8
300×63	40	9.2	2.3	8.6	2.1	8.3	2.1	8.2	2.0	7.7	1.9
	100	9.2	2.3	8.6	2.1	8.3	2.1	8.2	2.0	7.7	1.9
360×45	40	9.7	2.4	9.0	2.3	8.8	2.2	8.6	2.2	8.2	2.0
	100	9.7	2.4	9.0	2.3	8.8	2.2	8.6	2.2	8.2	2.0
360×63	40	10.6	2.6	9.8	2.5	9.5	2.4	9.4	2.3	8.9	2.2
	100	10.6	2.6	9.8	2.5	9.5	2.4	9.4	2.3	8.9	2.2
400×45	40	10.5	2.6	9.8	2.4	9.5	2.4	9.3	2.3	8.8	2.2
	100	10.5	2.6	9.8	2.4	9.5	2.4	9.3	2.3	8.8	2.2
400×63	40	11.4	2.9	10.6	2.7	10.3	2.6	10.2	2.5	9.6	2.4
	100	11.4	2.9	10.6	2.7	10.3	2.6	10.2	2.5	9.6	2.4

IMPORTANT NOTES:

- The above spans are suitable for solid timber, particle board and ply flooring.
- To improve floor rigidity, floor sheeting should be glued and nailed and an allowable increase to 1.2 kPa should be applied when additional loads are placed in certain areas such as heavy overlay materials. An example of this is a mortar bed or a tiled or slate floor creating a permanent load.
To accommodate the extra permanent load, reducing joist spacing can be used in design.
- For beams which are continuous over two unequal spans, the design span and the resultant span description depend upon the percentage span differences between the two spans.
- End bearing lengths = a minimum 45 mm at end supports and 63 mm at internal supports for continuous members.