




Floor Bearers

Bearers supporting normal residential floors, 42kg/m² maximum dead load, 1.5kPa floor live load

Size & Grade	Single Span Bearers - Span Values in mm							
	Floor Load Width (mm)							
	1200	1500	1800	2100	2400	3000	4000	5000
90x45 F7	1100	1100	1100	1000	900	0	0	0
140x45 F7	2000	1800	1700	1600	1400	1300	1100	1000
190x45 F7	2700	2500	2300	2100	2000	1800	1500	1300
240x45 F7	3400	3200	2900	2700	2500	2200	1900	1700
290x45 F7	4000	3700	3500	3300	3000	2700	2300	2100
140x65 GL8	2200	2100	1900	1800	1800	1600	1400	1200
190x65 GL8	3000	2800	2700	2500	2400	2200	1900	1700
240x65 GL8	3800	3600	3400	3200	3000	2800	2400	2200
290x65 GL8	4300	4100	3900	3800	3600	3400	3000	2600

 Denotes minimum bearing width of 65mm at end supports

Size & Grade	Continuous Span Bearers - Span Values in mm							
	Floor Load Width (mm)							
	1200	1500	1800	2100	2400	3000	4000	5000
90x45 F7	1300	1200	1100	1000	900	0	0	0
140x45 F7	2100	1800	1700	1600	1400	1300	1100	900
190x45 F7	2800	2500	2300	2100	2000	1800	1500	1300
240x45 F7	3600	3200	2900	2700	2500	2200	1900	1600
290x45 F7	4100	3700	3300	3100	2900	2600	2200	2000
140x65 GL8	2600	2400	2100	2000	1800	1600	1400	1200
190x65 GL8	3500	3200	2900	2700	2500	2200	1900	1700
240x65 GL8	4200	4000	3700	3400	3200	2800	2400	2200
290x65 GL8	4900	4600	4400	4100	3900	3400	3000	2600

 Denotes minimum bearing width of 85mm at interior supports

 Denotes minimum bearing width of 115mm at interior supports

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Floor Bearers

Loading Data:

Dead Load of floor maximum 42 kg/m²

(Covers standard residential floor materials, including plasterboard ceiling below)

Live Load for residential loads 1.5kPa (with a check on a concentrated live load of 1.8kN anywhere)

TREATED PINE DISTRIBUTERS beams are manufactured straight, without any camber built into the beams.

Floor Joist design criteria in accordance with methods presented in AS1684.1-1999, and structural timber design in accordance with AS1720.1-2010.

Notes:

1. Minimum bearing lengths for support of bearers: 45mm on end supports, and 65mm internal supports.
2. The span value shown is the distance between centrelines of supports.
3. For continuous spans, the adjacent bearer spans may be different, but look up the larger of the spans, and the shorter span must be more than 50% of the larger span. If this rule is not met, then consider the bearers are simply supported, and look up the larger span in the single span table.
4. Deflection criteria: for permanent load combinations, the lesser of Span/300, or 12mm, and for Floor Live Loads, the lesser of Span/360, or 9mm.
5. For bearers the lateral restraint is assumed to be achieved via the fixing of floor joists direct to the top edge. No restraint of the bottom edge of the bearer is assumed.
6. Where there are conflicts in design between loading codes (AS/NZS1170 series), timber code (AS1720.1-2010) and AS1684.1-1999, the loading codes and timber codes take preference.
7. Floor dynamic load check is made for a 1kN concentrated load to ensure less than 2mm deflection.
8. These floor joist designs assume the joists are seasoned, and remain dry in service.

The above span table values have been designed in accordance with the following codes:

AS1720.1-2010 Timber Design Code

AS1170.0, .1-2002, .2-2011 Loading Codes for Limit State design, Live Loads, and Wind Loads respectively.

AS1684.1-1999 Design Criteria for Residential Timber Framing (secondary code if in conflict with the above).

A handwritten signature in black ink, appearing to read "S. Hunt".

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