

GL17S Floor Bearers

| Size (mm) | Single Span Floor Bearers – Floor Load Width (m) | | | | | | | |
|-----------|--|-----|-----|-----|-----|-----|-----|-----|
| | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 |
| 140x42 | 2.8 | 2.2 | 1.9 | 1.7 | 1.5 | 1.3 | 1.2 | 1.1 |
| 190x42 | 3.7 | 3.0 | 2.6 | 2.3 | 2.0 | 1.8 | 1.8 | 1.6 |
| 240x42 | 4.4 | 3.7 | 3.3 | 2.9 | 2.5 | 2.3 | 2.1 | 2.0 |
| 290x42 | 5.0 | 4.2 | 3.8 | 3.5 | 3.1 | 2.8 | 2.6 | 2.4 |
| 140x65 | 3.2 | 2.6 | 2.2 | 2.0 | 1.8 | 1.7 | 1.5 | 1.4 |
| 190x65 | 4.1 | 3.4 | 3.1 | 2.8 | 2.5 | 2.3 | 2.1 | 1.9 |
| 240x65 | 4.9 | 4.1 | 3.7 | 3.4 | 3.2 | 2.9 | 2.6 | 2.5 |
| 290x65 | 5.6 | 4.7 | 4.3 | 4.0 | 3.7 | 3.5 | 3.2 | 3.0 |
| 240x80 | 5.1 | 4.3 | 3.9 | 3.6 | 3.4 | 3.2 | 2.9 | 2.7 |
| Size (mm) | Continuous Span Floor Bearers – Floor Load Width (m) | | | | | | | |
| | 1.0 | 2.0 | 3.0 | 4.0 | 5.0 | 6.0 | 7.0 | 8.0 |
| 140x42 | 3.2 | 2.4 | 1.9 | 1.7 | 1.5 | 1.3 | 1.2 | 1.1 |
| 190x42 | 4.0 | 3.2 | 2.6 | 2.3 | 2.0 | 1.8 | 1.7 | 1.5 |
| 240x42 | 4.8 | 4.0 | 3.3 | 2.9 | 2.5 | 2.3 | 2.1 | 2.0 |
| 290x42 | 5.5 | 4.6 | 4.0 | 3.5 | 3.1 | 2.8 | 2.6 | 2.3 |
| 140x65 | 3.5 | 2.9 | 2.4 | 2.1 | 1.8 | 1.7 | 1.5 | 1.4 |
| 190x65 | 4.5 | 3.7 | 3.3 | 2.8 | 2.5 | 2.3 | 2.1 | 1.9 |
| 240x65 | 5.3 | 4.5 | 4.0 | 3.6 | 3.2 | 2.9 | 2.6 | 2.5 |
| 290x65 | 6.2 | 5.2 | 4.7 | 4.3 | 3.8 | 3.5 | 3.2 | 3.0 |
| 240x80 | 5.6 | 4.7 | 4.3 | 4.0 | 3.5 | 3.2 | 2.9 | 2.7 |

Span values are in metres

| | |
|--|---|
| | Member must have a minimum bearing length of 65mm at the supports. |
| | Member must have a minimum bearing length of 85mm at the supports. |
| | Member must have a minimum bearing length of 115mm at the supports. |

Loading Data:

Dead load of floor maximum 40 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). ETH LAM GL beams are manufactured straight, without any camber built into the beams. Bearer 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 spans, and 60mm internal spans. Shaded areas in the tables represent areas where longer bearing lengths may be required to achieve the span values shown.
- 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 a maximum of 600mm.
- 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 checks are not generally applicable to bearers, but these tables have been checked for these loads to ensure stable performance of these bearers.

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

- ☑ AS1720.1-2010 Timber Design Code
- ☑ AS1170.0, .1, .2-2002 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).