

GL17S Roof Beams – Sheet N3

| Size (mm) | Sheet Roof Single Span - Roof load Width (m) | | | | | | | |
|-----------|--|-----|-----|-----|-----|-----|-----|-----|
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 140x42 | 4.0 | 3.2 | 2.7 | 2.5 | 2.2 | 2.1 | 1.9 | 1.8 |
| 190x42 | 5.4 | 4.3 | 3.7 | 3.3 | 3.1 | 2.8 | 2.6 | 2.5 |
| 240x42 | 6.6 | 5.4 | 4.7 | 4.2 | 3.9 | 3.6 | 3.3 | 3.2 |
| 290x42 | 7.5 | 6.4 | 5.7 | 5.1 | 4.7 | 4.3 | 4.1 | 3.8 |
| 140x65 | 4.6 | 3.7 | 3.2 | 2.8 | 2.6 | 2.4 | 2.2 | 2.1 |
| 190x65 | 6.1 | 4.9 | 4.3 | 3.8 | 3.5 | 3.3 | 3.1 | 2.9 |
| 240x65 | 7.2 | 6.1 | 5.4 | 4.8 | 4.4 | 4.1 | 3.9 | 3.7 |
| 290x65 | 8.2 | 7.0 | 6.3 | 5.8 | 5.4 | 5.0 | 4.7 | 4.4 |
| 240x80 | 7.4 | 6.4 | 5.7 | 5.2 | 4.7 | 4.4 | 4.1 | 3.9 |
| Size (mm) | Sheet Roof Continuous Span - Roof load Width (m) | | | | | | | |
| | 1 | 2 | 3 | 4 | 5 | 6 | 7 | 8 |
| 140x42 | 5.5 | 3.9 | 3.2 | 2.7 | 2.4 | 2.2 | 2.0 | 1.8 |
| 190x42 | 7.0 | 5.3 | 4.3 | 3.7 | 3.3 | 2.9 | 2.7 | 2.5 |
| 240x42 | 8.3 | 6.5 | 5.3 | 4.5 | 4.1 | 3.7 | 3.4 | 3.2 |
| 290x42 | 9.4 | 7.6 | 6.2 | 5.3 | 4.7 | 4.3 | 4.0 | 3.7 |
| 140x65 | 6.2 | 4.8 | 3.9 | 3.4 | 3.0 | 2.7 | 2.5 | 2.3 |
| 190x65 | 7.7 | 6.5 | 5.3 | 4.6 | 4.1 | 3.7 | 3.4 | 3.1 |
| 240x65 | 9.0 | 7.7 | 6.7 | 5.8 | 5.1 | 4.6 | 4.3 | 3.9 |
| 290x65 | 10.3 | 8.8 | 8.0 | 7.0 | 6.2 | 5.6 | 5.1 | 4.8 |
| 240x80 | 9.4 | 8.1 | 7.3 | 6.4 | 5.7 | 5.1 | 4.7 | 4.4 |

Span values are in metres

Loading Data:

Dead Load of roof and ceiling maximum 40 kg/m² for sheet roof with ceiling.

(Covers standard up to metal sheet roofing, plasterboard ceiling below, roof trusses or raftered roof)

Roof Live Load of 0.25kPa. Wind design for up to N3 wind area, in accordance with AS4055-2006 – Wind Loads for Housing. ETH LAM GL 17 beams are manufactured straight, without any camber built into the beams. Roof Beam 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 roof beams: 45mm on end spans, and 65mm internal spans.
- 2) The span value shown is the distance between centrelines of supports.
- 3) For continuous spans, the adjacent roof beam 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 roof beams 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 20mm, and for Roof Live Loads, the lesser of Span/250.
- 5) For roof beams the lateral restraint is assumed to be a supported rafter or truss spacing at 900mm centres. The roof beam spans are suitable for unrestrained bottom edges.
- 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.