

## AS 1684.3 C3 Supplement 15—2010

### **Residential timber-framed construction**

#### **Part 3: Cyclonic areas**

#### **C3 Supplement 15: Timber framing span tables—Wind classification C3— Unseasoned hardwood—Stress Grade F17 (Supplement to AS 1684.3—2010)**



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- Mr Peter Juniper
- 

Standards Australia wishes to acknowledge the participation of the expert individuals that contributed to the development of this Supplement through their representation on the Committee.

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# AS 1684.3 C3 Supplement 15—2010

## Residential timber-framed construction

### **Part 3: Cyclonic areas C3 Supplement 15: Timber framing span tables—Wind classification C3— Unseasoned hardwood—Stress Grade F17 (Supplement to AS 1684.3—2010)**

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**TABLE 1** **FLOOR BEARERS - Floor load width 1200 mm**  
**Supporting single or upper storey loadbearing walls**

| Roof Load Width (mm) | 1500                     |            | 4500 |            | 7500 |            | 1500            |            | 4500 |            | 7500 |            |
|----------------------|--------------------------|------------|------|------------|------|------------|-----------------|------------|------|------------|------|------------|
| Size DxB (mm)        | Maximum Bearer Span (mm) |            |      |            |      |            |                 |            |      |            |      |            |
|                      | Span                     | Cantilever | Span | Cantilever | Span | Cantilever | Span            | Cantilever | Span | Cantilever | Span | Cantilever |
|                      | Single Span              |            |      |            |      |            | Continuous Span |            |      |            |      |            |
| Sheet Roof           |                          |            |      |            |      |            |                 |            |      |            |      |            |
| 100x75               | 1500                     | 400        | 1300 | 300        | 1100 | 300        | 2000            | 600        | 1700 | 500        | 1500 | 400        |
| 125x75               | 1800                     | 500        | 1600 | 400        | 1400 | 400        | 2500            | 700        | 2100 | 600        | 1900 | 500        |
| 150x75               | 2200                     | 600        | 1900 | 500        | 1700 | 500        | 3000            | 900        | 2600 | 700        | 2300 | 600        |
| 175x75               | 2600                     | 700        | 2200 | 600        | 2000 | 600        | 3500            | 1000       | 3000 | 900        | 2700 | 800        |
| 200x75               | 2900                     | 800        | 2500 | 700        | 2300 | 600        | 3900            | 1100       | 3500 | 1000       | 3100 | 900        |
| 225x75               | 3300                     | 900        | 2900 | 800        | 2600 | 700        | 4200            | 1200       | 3800 | 1100       | 3500 | 1000       |
| 250x75               | 3700                     | 1100       | 3200 | 900        | 2900 | 800        | 4600            | 1300       | 4100 | 1200       | 3800 | 1100       |
| 275x75               | 3900                     | 1100       | 3500 | 1000       | 3200 | 900        | 5000            | 1500       | 4400 | 1300       | 4100 | 1200       |
| 300x75               | 4200                     | 1200       | 3800 | 1100       | 3500 | 1000       | 5300            | 1500       | 4700 | 1400       | 4400 | 1300       |
| Tile Roof            |                          |            |      |            |      |            |                 |            |      |            |      |            |
| 100x75               | 1300                     | 300        | 1100 | 300        | NS   | NS         | 1800            | 500        | 1400 | 400        | 1300 | 300        |
| 125x75               | 1700                     | 500        | 1300 | 300        | 1200 | 300        | 2300            | 600        | 1800 | 500        | 1600 | 400        |
| 150x75               | 2000                     | 600        | 1600 | 400        | 1400 | 400        | 2700            | 800        | 2200 | 600        | 1900 | 500        |
| 175x75               | 2300                     | 600        | 1900 | 500        | 1600 | 400        | 3200            | 900        | 2500 | 700        | 2200 | 600        |
| 200x75               | 2700                     | 800        | 2100 | 600        | 1900 | 500        | 3600            | 1000       | 2900 | 800        | 2600 | 700        |
| 225x75               | 3000                     | 900        | 2400 | 700        | 2100 | 600        | 4000            | 1200       | 3300 | 900        | 2900 | 800        |
| 250x75               | 3300                     | 900        | 2700 | 800        | 2400 | 700        | 4300            | 1200       | 3600 | 1000       | 3200 | 900        |
| 275x75               | 3700                     | 1100       | 3000 | 900        | 2600 | 700        | 4600            | 1300       | 3900 | 1100       | 3500 | 1000       |
| 300x75               | 3900                     | 1100       | 3200 | 900        | 2800 | 800        | 4900            | 1400       | 4200 | 1200       | 3800 | 1100       |

**NOTES:**

- Maximum bearer spans supporting roof loads are based on the support of a maximum total sheet roof, framing and ceiling mass of 40 kg/m<sup>2</sup>, a maximum total tile roof, framing and ceiling mass of 90 kg/m<sup>2</sup> and a maximum flooring mass of 40 kg/m<sup>2</sup>. For guidance on determination of roof mass refer to Appendix B.
- Cantilevers shall not exceed 50% of actual backspan.
- Minimum bearing length = 50 mm at end supports and 100 mm at internal supports for continuous members.
- Multiple members shall be nailed together as per Clause 2.3.
- For design parameters refer to Figure 4.6.
- Where loadbearing walls are supported at right angles to bearer within the bearer span reference should be made to Clause 4.3.1.5.
- Where bearers support roof point loads, reference should be made to Clause 4.3.1.6.

**TABLE 2** **FLOOR BEARERS - Floor load width 2400 mm**  
**Supporting single or upper storey loadbearing walls**

| Roof Load Width (mm) | 1500                     |            | 4500 |            | 7500 |            | 1500            |            | 4500 |            | 7500 |            |
|----------------------|--------------------------|------------|------|------------|------|------------|-----------------|------------|------|------------|------|------------|
| Size DxB (mm)        | Maximum Bearer Span (mm) |            |      |            |      |            |                 |            |      |            |      |            |
|                      | Span                     | Cantilever | Span | Cantilever | Span | Cantilever | Span            | Cantilever | Span | Cantilever | Span | Cantilever |
|                      | Single Span              |            |      |            |      |            | Continuous Span |            |      |            |      |            |
| Sheet Roof           |                          |            |      |            |      |            |                 |            |      |            |      |            |
| 100x75               | 1200                     | 300        | 1100 | 300        | 1000 | 300        | 1700            | 500        | 1500 | 400        | 1400 | 400        |
| 125x75               | 1600                     | 400        | 1400 | 400        | 1300 | 300        | 2100            | 600        | 1900 | 500        | 1800 | 500        |
| 150x75               | 1900                     | 500        | 1700 | 500        | 1600 | 400        | 2600            | 700        | 2300 | 600        | 2200 | 600        |
| 175x75               | 2200                     | 600        | 2000 | 600        | 1900 | 500        | 3000            | 900        | 2700 | 800        | 2500 | 700        |
| 200x75               | 2500                     | 700        | 2300 | 600        | 2100 | 600        | 3400            | 1000       | 3100 | 900        | 2900 | 800        |
| 225x75               | 2800                     | 800        | 2600 | 700        | 2400 | 700        | 3800            | 1100       | 3500 | 1000       | 3200 | 900        |
| 250x75               | 3200                     | 900        | 2900 | 800        | 2700 | 800        | 4100            | 1200       | 3800 | 1100       | 3600 | 1000       |
| 275x75               | 3500                     | 1000       | 3200 | 900        | 2900 | 800        | 4400            | 1300       | 4100 | 1200       | 3900 | 1100       |
| 300x75               | 3800                     | 1100       | 3400 | 1000       | 3200 | 900        | 4700            | 1400       | 4400 | 1300       | 4100 | 1200       |
| Tile Roof            |                          |            |      |            |      |            |                 |            |      |            |      |            |
| 100x75               | 1200                     | 300        | 1000 | 300        | NS   | NS         | 1600            | 400        | 1300 | 300        | 1200 | 300        |
| 125x75               | 1500                     | 400        | 1200 | 300        | 1100 | 300        | 2000            | 600        | 1700 | 500        | 1500 | 400        |
| 150x75               | 1800                     | 500        | 1500 | 400        | 1300 | 300        | 2400            | 700        | 2000 | 600        | 1800 | 500        |
| 175x75               | 2100                     | 600        | 1800 | 500        | 1600 | 400        | 2800            | 800        | 2400 | 700        | 2100 | 600        |
| 200x75               | 2400                     | 700        | 2000 | 600        | 1800 | 500        | 3200            | 900        | 2700 | 800        | 2400 | 700        |
| 225x75               | 2700                     | 800        | 2300 | 600        | 2000 | 600        | 3600            | 1000       | 3100 | 900        | 2800 | 800        |
| 250x75               | 3000                     | 900        | 2500 | 700        | 2300 | 600        | 3900            | 1100       | 3400 | 1000       | 3100 | 900        |
| 275x75               | 3300                     | 900        | 2800 | 800        | 2500 | 700        | 4200            | 1200       | 3700 | 1100       | 3400 | 1000       |
| 300x75               | 3600                     | 1000       | 3000 | 900        | 2700 | 800        | 4500            | 1300       | 4000 | 1200       | 3700 | 1100       |

**NOTES:**

- Maximum bearer spans supporting roof loads are based on the support of a maximum total sheet roof, framing and ceiling mass of 40 kg/m<sup>2</sup>, a maximum total tile roof, framing and ceiling mass of 90 kg/m<sup>2</sup> and a maximum flooring mass of 40 kg/m<sup>2</sup>. For guidance on determination of roof mass refer to Appendix B.
- Cantilevers shall not exceed 50% of actual backspan.
- Minimum bearing length = 50 mm at end supports and 100 mm at internal supports for continuous members.
- Multiple members shall be nailed together as per Clause 2.3.
- For design parameters refer to Figure 4.6.
- Where loadbearing walls are supported at right angles to bearer within the bearer span reference should be made to Clause 4.3.1.5.
- Where bearers support roof point loads, reference should be made to Clause 4.3.1.6.

**TABLE 3** **FLOOR BEARERS - Floor load width 3600 mm**  
**Supporting single or upper storey loadbearing walls**

| Roof Load Width (mm) | 1500                     |            | 4500 |            | 7500 |            | 1500            |            | 4500 |            | 7500 |            |
|----------------------|--------------------------|------------|------|------------|------|------------|-----------------|------------|------|------------|------|------------|
| Size DxB (mm)        | Maximum Bearer Span (mm) |            |      |            |      |            |                 |            |      |            |      |            |
|                      | Span                     | Cantilever | Span | Cantilever | Span | Cantilever | Span            | Cantilever | Span | Cantilever | Span | Cantilever |
|                      | Single Span              |            |      |            |      |            | Continuous Span |            |      |            |      |            |
| Sheet Roof           |                          |            |      |            |      |            |                 |            |      |            |      |            |
| 100x75               | 1100                     | 300        | 1000 | 300        | 1000 | 300        | 1500            | 400        | 1400 | 400        | 1300 | 300        |
| 125x75               | 1400                     | 400        | 1300 | 300        | 1200 | 300        | 1900            | 500        | 1800 | 500        | 1700 | 500        |
| 150x75               | 1700                     | 500        | 1600 | 400        | 1500 | 400        | 2300            | 600        | 2100 | 600        | 2000 | 600        |
| 175x75               | 2000                     | 600        | 1800 | 500        | 1700 | 500        | 2700            | 800        | 2500 | 700        | 2300 | 600        |
| 200x75               | 2300                     | 600        | 2100 | 600        | 2000 | 600        | 3100            | 900        | 2800 | 800        | 2700 | 800        |
| 225x75               | 2500                     | 700        | 2400 | 700        | 2200 | 600        | 3500            | 1000       | 3200 | 900        | 3000 | 900        |
| 250x75               | 2800                     | 800        | 2600 | 700        | 2500 | 700        | 3800            | 1100       | 3600 | 1000       | 3400 | 1000       |
| 275x75               | 3100                     | 900        | 2900 | 800        | 2700 | 800        | 4100            | 1200       | 3800 | 1100       | 3700 | 1100       |
| 300x75               | 3400                     | 1000       | 3200 | 900        | 3000 | 900        | 4300            | 1200       | 4100 | 1200       | 3900 | 1100       |
| Tile Roof            |                          |            |      |            |      |            |                 |            |      |            |      |            |
| 100x75               | 1100                     | 300        | 1000 | 300        | 1000 | 300        | 1500            | 400        | 1400 | 400        | 1300 | 300        |
| 125x75               | 1400                     | 400        | 1300 | 300        | 1200 | 300        | 1900            | 500        | 1800 | 500        | 1700 | 500        |
| 150x75               | 1700                     | 500        | 1600 | 400        | 1500 | 400        | 2300            | 600        | 2100 | 600        | 2000 | 600        |
| 175x75               | 2000                     | 600        | 1800 | 500        | 1700 | 500        | 2700            | 800        | 2500 | 700        | 2300 | 600        |
| 200x75               | 2300                     | 600        | 2100 | 600        | 2000 | 600        | 3100            | 900        | 2800 | 800        | 2700 | 800        |
| 225x75               | 2500                     | 700        | 2400 | 700        | 2200 | 600        | 3500            | 1000       | 3200 | 900        | 3000 | 900        |
| 250x75               | 2800                     | 800        | 2600 | 700        | 2500 | 700        | 3800            | 1100       | 3600 | 1000       | 3400 | 1000       |
| 275x75               | 3100                     | 900        | 2900 | 800        | 2700 | 800        | 4100            | 1200       | 3800 | 1100       | 3700 | 1100       |
| 300x75               | 3200                     | 900        | 2800 | 800        | 2600 | 700        | 4200            | 1200       | 3800 | 1100       | 3500 | 1000       |

**NOTES:**

- Maximum bearer spans supporting roof loads are based on the support of a maximum total sheet roof, framing and ceiling mass of 40 kg/m<sup>2</sup>, a maximum total tile roof, framing and ceiling mass of 90 kg/m<sup>2</sup> and a maximum flooring mass of 40 kg/m<sup>2</sup>. For guidance on determination of roof mass refer to Appendix B.
- Cantilevers shall not exceed 50% of actual backspan.
- Minimum bearing length = 50 mm at end supports and 100 mm at internal supports for continuous members.
- Multiple members shall be nailed together as per Clause 2.3.
- For design parameters refer to Figure 4.6.
- Where loadbearing walls are supported at right angles to bearer within the bearer span reference should be made to Clause 4.3.1.5.
- Where bearers support roof point loads, reference should be made to Clause 4.3.1.6.