

F7 Seasoned Floor Joists



Solid seasoned timber floor joists are an excellent and versatile choice of material for a wide range of flooring applications. Seasoned F7 timber is available in a long lengths – up to 6 m and in a range of sectional sizes up to 290 x 45 mm (300 x 50 mm Nominal)

Solid seasoned timber F7 material is easily worked on site, connections are quickly made with standard carpentry tools and nails and there is a range of metal connectors well suited to the material.

Versatile, economical and widely available straight off the rack, seasoned F7 solid timber sections are an effective solution for your next project.

No Mid Span Blocking

Changes to the Residential Timber Framed Construction Code AS 1684 has removed the requirement for mid-span blocking or herringbone strutting for seasoned products.

No Shrinkage

F7 Seasoned Floor Joists offer excellent in service stability – no more shrinkage problems.

Dimensionally Accurate

F7 Seasoned Floor Joists are dimensioned offering accurate and reliable sizing. Available in a wide range of sizes, the materials strict quality controls ensures an excellent end product.

No Squeaks

Squeaky floors can be avoided by utilising Seasoned F7 floor joists and following simple good building practice.

Easy Handling

Seasoned F7 floor joists offer an easily handled material up to a third lighter than unseasoned alternatives.

Preservative Treated Option

F7 seasoned joists are available with preservative treatments making them suitable for exposed applications.

Simple Installation

Seasoned F7 floor joists are ideally suited to the standard connectors ket.

available on the market. This makes construction on site simple, easy and reliable.

Silent Floors

Squeak free timber floors are easily achieved following some simple good building practices. The following information is a small checklist to be worked through to ensure a quiet floor is the end result.

> Incorrect Joist Size.

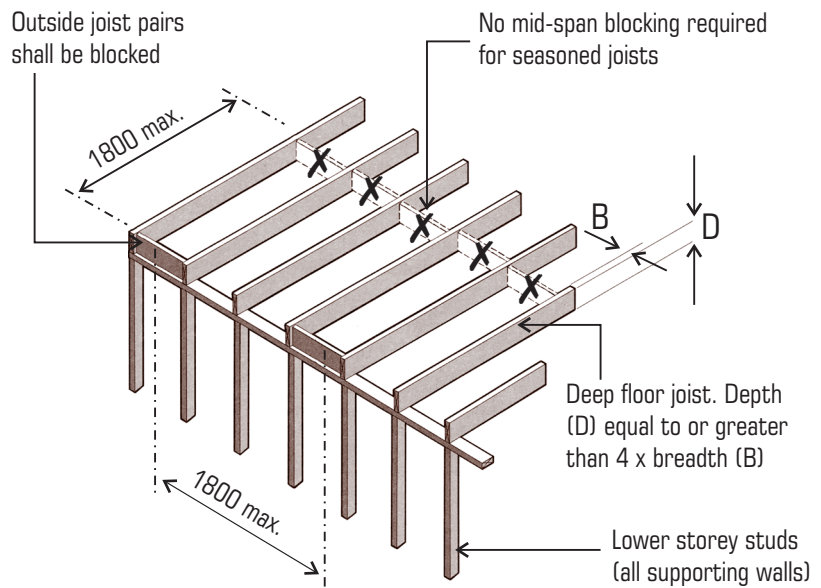
One of the key problems is simply under-sizing of floor joists. This causes excessive deflection and subsequently floor squeaks.

Solution – Ensure the span tables are accurately read and followed.

> Inadequate Nailing

Poor nailing practices or undersized nails cause potential squeaks.

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> AS1684.2 Figure 4.5 Blocking for Seasoned F7 Solid Timber



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With the compliments of:



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Solution – Use the correctly sized nails. String line the joists to ensure all nails get full penetration. Inspect the subfloor after nailing and remove any missed or near missed nails and replace nails correctly.

> Interior Wall / Floor junction

A common cause of floor squeaks occurs where the bottom plate of the partitions are nailed into the flooring rather than into the joists.

Solution – Ensure nails get fixed into the floor joists or the nail is clinched. Install the wall frame onto a bead of construction adhesive. This practice will minimise any deflection of the floor sheet.

> Joist Hangers

Joists should rest firmly on the bottom of the hanger and be nailed in accordance with the manufacturers' recommendations.

Solution – Use the correctly sized hanger and fix in accordance with manufacturers' recommendations. Construction adhesive may be used at the hanger / joist junction to further reduce any potential movement.

> Incorrect Floor Sheet Installation

Floor sheets not gapped correctly may expand and peak creating a potential source of squeaks.

Solution – Follow manufacturers' fixing instructions for floor sheets – gap size, adhesive and nail requirements.

> Changes In Joist Direction

Changes in floor joist direction can impact on the floor sheet installation. It is imperative that the butt joints between sheets where there is no tongue and groove joint be supported by installing noggings at this joint. At all

times follow the manufacturer's fixing instructions.

> Adhesive Bond and Dirty Floor Joists

The adhesive bond required for sheet floor installation may be impaired by dirt and contaminants on the floor joists.

Solution – Ensure the top surface of the joist is adequately clean and free of contaminants for application of adhesive and fixing of floor sheets.

> Variation in Joist Alignment

If joists are installed with their camber or spring facing down, gaps occur between the floor sheet and the low joists. The floor sheet will deflect under load where it is not adequately supported, working on the nail fasteners and resulting in squeaks.

Solution – Ensure the top surface of the joists are level. Where the joists

may have some spring – ensure the spring is orientated upwards so it levels slightly on loading.

Note: Seasoned products should be adequately protected from exposure to moisture.

Seasoned F7 Floor Joist Span Tables

Span Tables published in the Residential Timber Framed Construction Standard AS1684 are for floor joists that support floor sheets only. When the floor joists support tongue and grooved 19 mm flooring the spanning capacity of the floor joist may increase.

The two span tables in this brochure are for sheet flooring (Table 1) and tongue and grooved floors (Table 2).

Where a mixture of tongue and grooved flooring and sheet flooring are used the sheet floor table must be used.

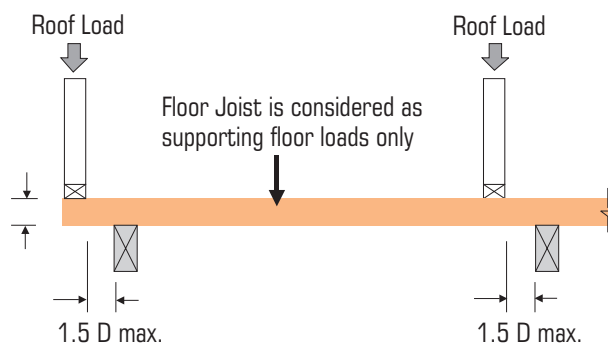
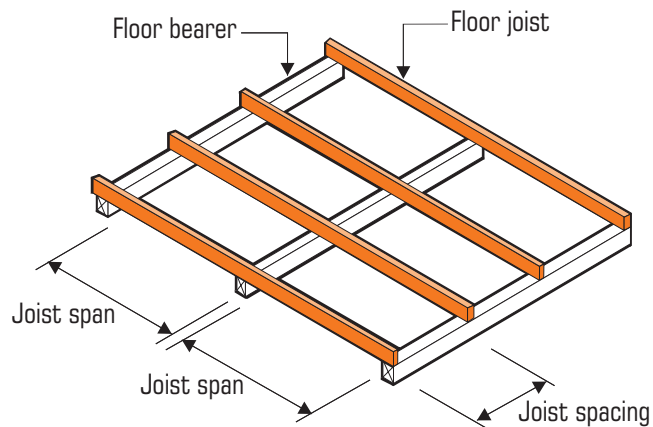




Table 1 – Floor Joists Supporting Floor Loads, Sheet Flooring – Seasoned Softwood F7
and/or supporting loadbearing wall perpendicular to joists

Size DxB (mm)	Roof Load Width (mm)								Roof Load Width (mm)							
	0	1500	4500	7500	0	1500	4500	7500	0	1500	4500	7500	0	1500	4500	7500
	Maximum Floor Joist Span (mm) – Sheet Roof				Maximum Floor Joist Span (mm) – Tile Roof				Maximum Floor Joist Span (mm) – Sheet Roof				Maximum Floor Joist Span (mm) – Tile Roof			
	Single Span				Continuous Span				Single Span				Continuous Span			
	Joist Spacing 450 mm															
90x35	1000	NS	NS	NS	1500	1300	NS	NS	1000	NS	NS	NS	1500	1000	NS	NS
90x45	1400	1300	NS	NS	1700	1700	1400	1000	1400	1000	NS	NS	1700	1600	NS	NS
120x35	1800	1800	1500	1200	2100	2100	2000	1700	1800	1600	1000	NS	2100	2100	1400	NS
120x45	2000	2000	1800	1500	2300	2300	2200	1900	2000	1900	1300	1000	2300	2300	1600	1300
140x35	2100	2100	1900	1700	2600	2600	2400	2100	2100	2100	1500	1100	2500	2500	1800	1400
140x45	2400	2400	2100	1900	2800	2800	2700	2300	2400	2300	1700	1400	2800	2800	2100	1600
170x35	2700	2700	2500	2200	3200	3200	3100	2700	2700	2600	2000	1600	3200	3200	2400	1900
170x45	2900	2900	2700	2400	3500	3500	3500	3000	3000	2900	2200	1800	3500	3500	2700	2200
190x35	3000	3000	2800	2500	3600	3700	3600	3100	3000	3000	2300	1900	3700	3700	2800	2300
190x45	3300	3300	3100	2800	4000	4000	4000	3500	3400	3300	2500	2100	4000	4000	3100	2600
240x35	4000	4000	3700	3300	4900	4900	4700	4200	4000	3900	3100	2600	4900	4900	3900	3200
240x45	4400	4400	4100	3700	5200	5200	5000	4600	4400	4200	3400	2900	5200	5200	4300	3600
290x45	5200	5200	4900	4600	6100	6000	5900	5500	5200	5000	4300	3800	6000	6000	5200	4600
	Joist Spacing 600 mm															
90x35	NS	NS	NS	NS	1200	1000	NS	NS	NS	NS	NS	NS	1200	NS	NS	NS
90x45	1100	1000	NS	NS	1500	1500	1000	NS	1100	NS	NS	NS	1500	1100	NS	NS
120x35	1700	1500	1100	NS	1900	1900	1600	1200	1700	1200	NS	NS	1900	1800	1000	NS
120x45	1800	1800	1500	1200	2100	2100	2000	1600	1800	1700	1100	NS	2100	2100	1400	NS
140x35	2000	2000	1600	1300	2300	2300	2200	1800	2000	1800	1100	NS	2300	2300	1500	1000
140x45	2200	2200	1900	1600	2500	2500	2400	2000	2200	2000	1500	1000	2500	2500	1800	1300
170x35	2500	2500	2200	1900	2900	2900	2800	2400	2500	2300	1700	1100	2900	2900	2100	1500
170x45	2700	2700	2400	2100	3100	3100	3100	2600	2700	2600	1900	1500	3100	3100	2400	1900
190x35	2800	2800	2500	2200	3200	3200	3200	2700	2800	2700	2000	1500	3200	3200	2500	1900
190x45	3000	3000	2800	2500	3500	3600	3600	3100	3000	2900	2200	1800	3500	3600	2800	2200
240x35	3600	3600	3300	3000	4200	4200	4200	3700	3600	3500	2700	2300	4200	4200	3400	2800
240x45	3900	3900	3700	3300	4600	4600	4600	4200	3900	3800	3000	2600	4600	4600	3800	3100
290x45	4800	4800	4500	4200	5600	5600	5500	5000	4800	4600	3900	3300	5600	5600	4700	4100

- Notes**
- i D= member depth, B=member breadth, NS = not suitable
 - ii The above table was based on a maximum Sheet Roof Mass of 40 (kg/m²), Tile Roof Mass of 90 (kg/m²), Total Ground Floor Mass of 40 (kg/m²), Floor Live Load of 1.5 (kPa), Floor Point Load of 1.8 (kN).
 - iii end bearing lengths = 35 mm at end supports and 70 mm at internal supports for continuous members.
 - iv Floor sheeting may be Plywood or Particleboard of standard thickness or tongue and groove flooring must be 19mm or greater. Floor loads may consist of floor covering, flooring and /or ceilings. No heavy point roof loads shall be applied to Floor Joists. Cantilevers may be up to 25%. For loadbearing walls supported by cantilevered floor joists, the maximum floor joist cantilever shall not exceed 15% of the span for the appropriate roof load width (RLW) provided that the minimum backspan is at least four times the cantilever distance.
 - v Span Tables have been produced from Timber Solution Software version 1-3 FWPRDC and are required to be read in conjunction with AS1684 Residential Timber Framed Construction Standard.



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Table 2 – Floor Joists Supporting Floor Loads, Tongue and Groove Flooring – Seasoned Softwood F7
and/or supporting loadbearing wall perpendicular to joists

Size DxB (mm)	Roof Load Width (mm)								Roof Load Width (mm)							
	0	1500	4500	7500	0	1500	4500	7500	0	1500	4500	7500	0	1500	4500	7500
	Maximum Floor Joist Span (mm) – Sheet Roof				Maximum Floor Joist Span (mm) – Tile Roof				Maximum Floor Joist Span (mm) – Sheet Roof				Maximum Floor Joist Span (mm) – Tile Roof			
	Single Span				Continuous Span				Single Span				Continuous Span			
	Joist Spacing 450 mm															
90x35	1200	1000	NS	NS	1900	1600	1100	NS	1200	NS	NS	NS	1900	1200	NS	NS
90x45	1700	1500	1100	NS	2200	2000	1500	1200	1700	1200	NS	NS	2200	1700	NS	NS
120x35	2200	2000	1600	1300	2900	2600	2000	1700	2200	1700	1000	NS	2900	2200	1500	1000
120x45	2500	2200	1800	1500	3100	2800	2200	1900	2500	1900	1300	1000	3100	2400	1600	1300
140x35	2600	2300	1900	1700	3300	3100	2400	2100	2600	2100	1500	1100	3300	2600	1800	1400
140x45	2900	2600	2100	1900	3500	3400	2700	2300	2900	2300	1700	1400	3500	2900	2100	1600
170x35	3200	2900	2500	2200	3800	3800	3100	2700	3200	2600	2000	1600	3800	3400	2400	1900
170x45	3500	3200	2700	2400	4000	4000	3500	3000	3500	2900	2200	1800	4000	3700	2700	2200
190x35	3500	3300	2800	2500	4100	4100	3600	3100	3500	3000	2300	1900	4100	3900	2800	2300
190x45	3800	3600	3100	2800	4400	4400	4000	3500	3800	3300	2500	2100	4400	4200	3100	2600
240x35	4200	4200	3700	3300	4900	4900	4700	4200	4200	3900	3100	2600	4900	4900	3900	3200
240x45	4500	4500	4100	3700	5200	5200	5000	4600	4500	4200	3400	2900	5200	5200	4300	3600
290x45	5200	5200	4900	4600	6100	6000	5900	5500	5200	5000	4300	3800	6000	6000	5200	4600
	Joist Spacing 600 mm															
90x35	1000	NS	NS	NS	1500	1100	NS	NS	1000	NS	NS	NS	1500	NS	NS	NS
90x45	1300	1100	NS	NS	1800	1700	1100	NS	1300	NS	NS	NS	1800	1300	NS	NS
120x35	1900	1700	1200	NS	2200	2200	1800	1300	1900	1300	NS	NS	2200	1900	1000	NS
120x45	2100	1900	1600	1300	2500	2500	2000	1600	2100	1700	1100	NS	2500	2100	1400	NS
140x35	2200	2100	1700	1400	2700	2700	2200	1800	2200	1800	1100	NS	2700	2300	1600	1000
140x45	2500	2300	1900	1600	3000	3000	2400	2000	2500	2000	1500	1000	3000	2600	1800	1300
170x35	2800	2600	2200	1900	3400	3400	2800	2400	2800	2300	1700	1100	3400	3000	2100	1500
170x45	3100	2900	2400	2100	3800	3800	3100	2600	3100	2600	1900	1500	3800	3300	2400	1900
190x35	3200	3000	2500	2200	3800	3800	3200	2700	3200	2700	2000	1500	3800	3400	2500	1900
190x45	3500	3200	2800	2500	4100	4100	3600	3100	3500	2900	2200	1800	4100	3800	2800	2200
240x35	3900	3800	3300	3000	4600	4600	4300	3700	3900	3500	2700	2300	4600	4500	3400	2800
240x45	4200	4100	3700	3300	4900	4900	4700	4200	4200	3800	3000	2600	4900	4800	3800	3100
290x45	4800	4800	4500	4200	5600	5600	5500	5000	4800	4600	3900	3300	5600	5600	4700	4100

Notes See notes accompanying Table 1 on previous page

For further information on this brochure, contact the Timber Advisory Service on free call 1800 044 529 or email showroom@tdansw.asn.au Level 6, 525 Elizabeth Street, Surry Hills NSW 2010. General Information on the use of timber can also be found at the web page www.timber.net.au

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