

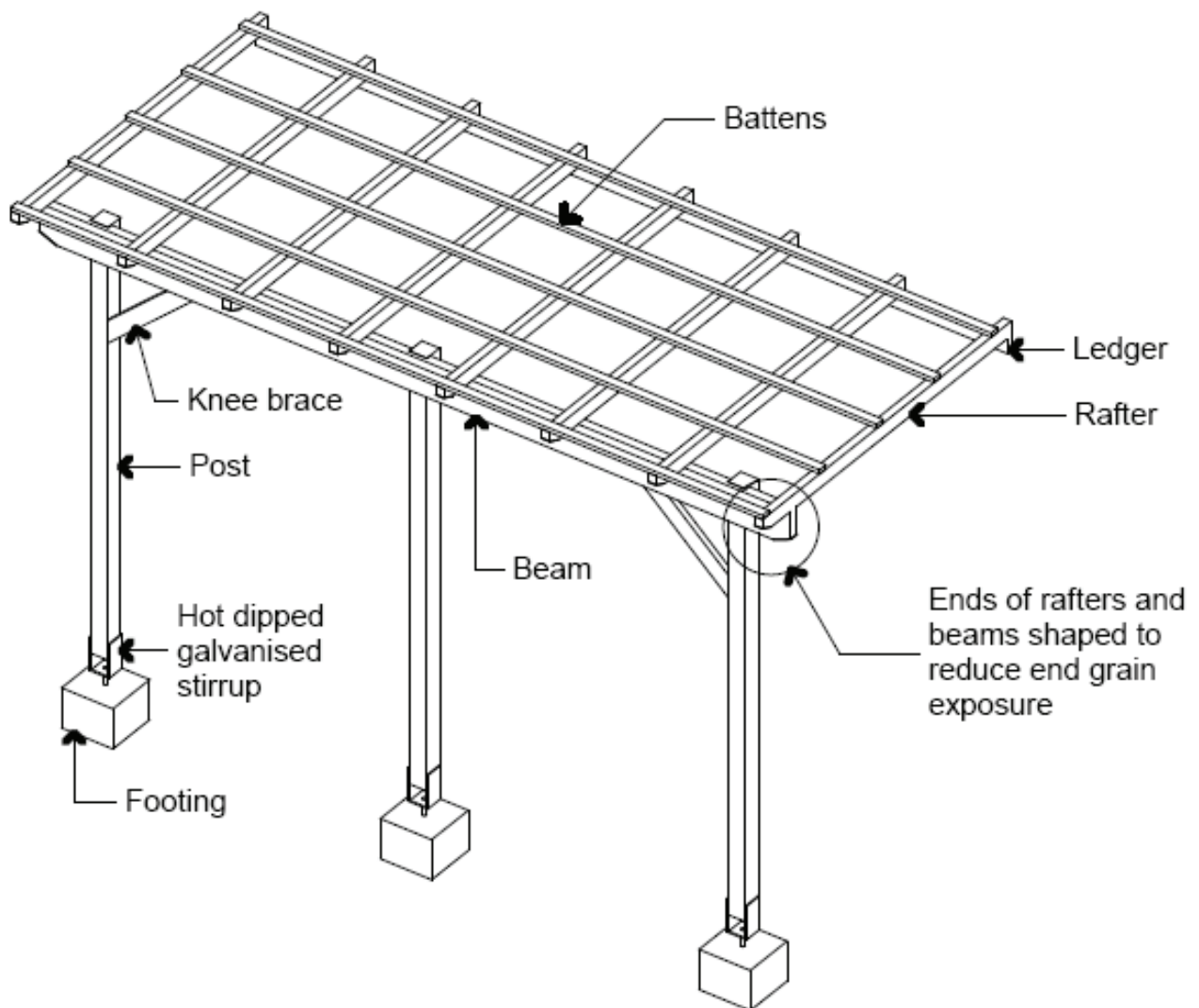
Seasoned Softwood Pergola Span Tables: With or without lightweight sheet roof

Seasoned softwood is a popular choice for house construction in Australia, particularly when used in pergolas, for a number of important reasons:

- Economical and readily available in lengths of up to 6 m. (For spans over 6 m, check with your supplier)
- Seasoned to minimise movement of the installed timber
- Readily available preservative treated against borers and termites.

The following table provides an easy comparison of popular seasoned softwood grades and sizes for common timber elements used in residential domestic pergola applications. The sizes of timber are suitable for use with or without a lightweight roof material. Maximum roof mass is 10 kg/m² and timber sizes are adequate for wind speeds up to and including N2.

Where roof material is placed on the rafter, the rafter must be connected to the verandah beam and ledger and the verandah beam and ledger must be bolted to the post or supporting structure. Refer to Residential Timber Frame Construction Standards, AS1684 for appropriate connectors to be used.



Typical Seasoned Softwood Pergola Layout

Pergola Rafter Spans for 600 mm and 900 mm Spacing - (Wind Classification N1 & N2)

Size DxB (mm)	Single Span						Continuous Span					
	Rafter Spacing 600 mm			Rafter Spacing 900 mm			Rafter Spacing 600 mm			Rafter Spacing 900 mm		
	F5	F7	MGP 10	F5	F7	MGP 10	F5	F7	MGP 10	F5	F7	MGP 10
90x35	1800	1900	2200	1500	1800	1700	2200	2400	2800	2000	2200	2200
90x45	2100	2200	2700	1900	2100	2300	2700	2900	3300	2300	2500	2700
120x35	3000	3300	3800	2800	3000	3000	3500	4000	3800	2800	3100	3000
120x45	3600	3900	4300	3200	3400	3700	4100	4500	4700	3200	3600	3700
140x35	4000	4300	4500	3300	3700	3500	4200	4700	4500	3300	3700	3500
140x45	4500	4700	5100	3800	4100	4400	4800	5300	5500	3800	4200	4400
190x35	5600	5800	5900	4600	5100	4700	5700	6400	5900	4600	5100	4700
190x45	6000	6200	6800	5200	5600	5800	6500	7200	7200	5200	5900	5800
240x35	7000	7200	7200	5800	6400	5800	7200	7200	7200	5800	6500	5800
240x45	7200	7200	7200	6700	7000	7200	7200	7200	7200	6700	7200	7200

- Notes:**
1. Refer to General Notes for information that is relevant for all Span Tables.
 2. For design parameters, refer to Figure 7.26, AS1684.2 and 3.
 3. Where rafters are equal to or exceed four times their breath, blocking should be used to reduce member distortion.

Pergola Beam Spans - (Wind Classification N1 & N2)

Size DxB (mm)	Roof Load Width (RLW)								
	1800			2400			3000		
	F5	F7	MGP 10	F5	F7	MGP 10	F5	F7	MGP 10
	Single Span								
120x45	1700	2000	2200	1600*	1700	1700	NS	1700	1700*
140x45	2200	2600	2700	1900	2200	2200	1700*	1900	2000
190x45	3100	3500	3500	2700	3000	3000	2400	2800	2700
240x45	3900	4500	4300	3400	3800	3700	3000	3400	3300
	Continuous Span								
120x45	1900	2200	2300	1700	1900	1900	1500*	1700	1700
140x45	2300	2600	2700	1900	2200	2300	1800	1900	2000
190x45	3200	3500	3500	2800	3100	3100	2500	2800	2800
240x45	4100	4500	4400	3400	3900	3800	3100	3400	3300

- Notes:**
1. Refer to General Notes for information that is relevant for all Span Tables.
 2. * denotes 600 mm rafter spacing only. Member span is not suitable for rafter spacing greater than 600 mm.
 3. For design parameters, refer to Figure 6.22, AS1684.2 and 3.
 4. For the pergola beams shown in illustration, the Roof Load Width is the dimension representing half the rafter span plus any rafter overhang. Refer to AS1684.2 and 3 Clause 2.6.4 for other configurations.
 5. NS = Not Suitable

Batten Spans - (Wind Classification N1 & N2)

Size DxB (mm)	Batten Spacing 600 mm			Batten Spacing 900 mm			Batten Spacing 1200 mm		
	F5	F7	MGP 10	F5	F7	MGP 10	F5	F7	MGP 10
35x70	650	850	800	500	650	600	NS	650	600
45x70	850	1050	1000	650	850	800	650	850	800
35x90	1100	1200	1200	850	1050	1200	850	1050	1200
45x90	1200	1200	1200	1100	1200	1200	1100	1200	1200

- Notes:**
1. Refer to General Notes for information that is relevant for all Span Tables.
 2. Maximum overhang of batten is 250 mm. Refer to AS1684 tables for other overhang spans.
 3. NS = Not Suitable

General Notes

1. All Tables have been reproduced from AS1684 – 2006 Residential Timber Framed Construction Standard and assumes that a roof sheet mass of 10 kg/m² is added.
2. Maximum wind speed N2, refer to AS4055 for site wind classification.
3. These tables assume the building practice contained in AS1684 – 2006 Residential Timber Framed Construction Standard and the tables should be read in conjunction with that standard.
4. For design parameters, refer to Figure 4.9, AS1684.2 and 3.
5. NS = Not Suitable

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