

Rafters

Roof Lintels

Deck Joists

Deck Bearer

Ridge Beams

Calculations

Paint specs

Span Tables

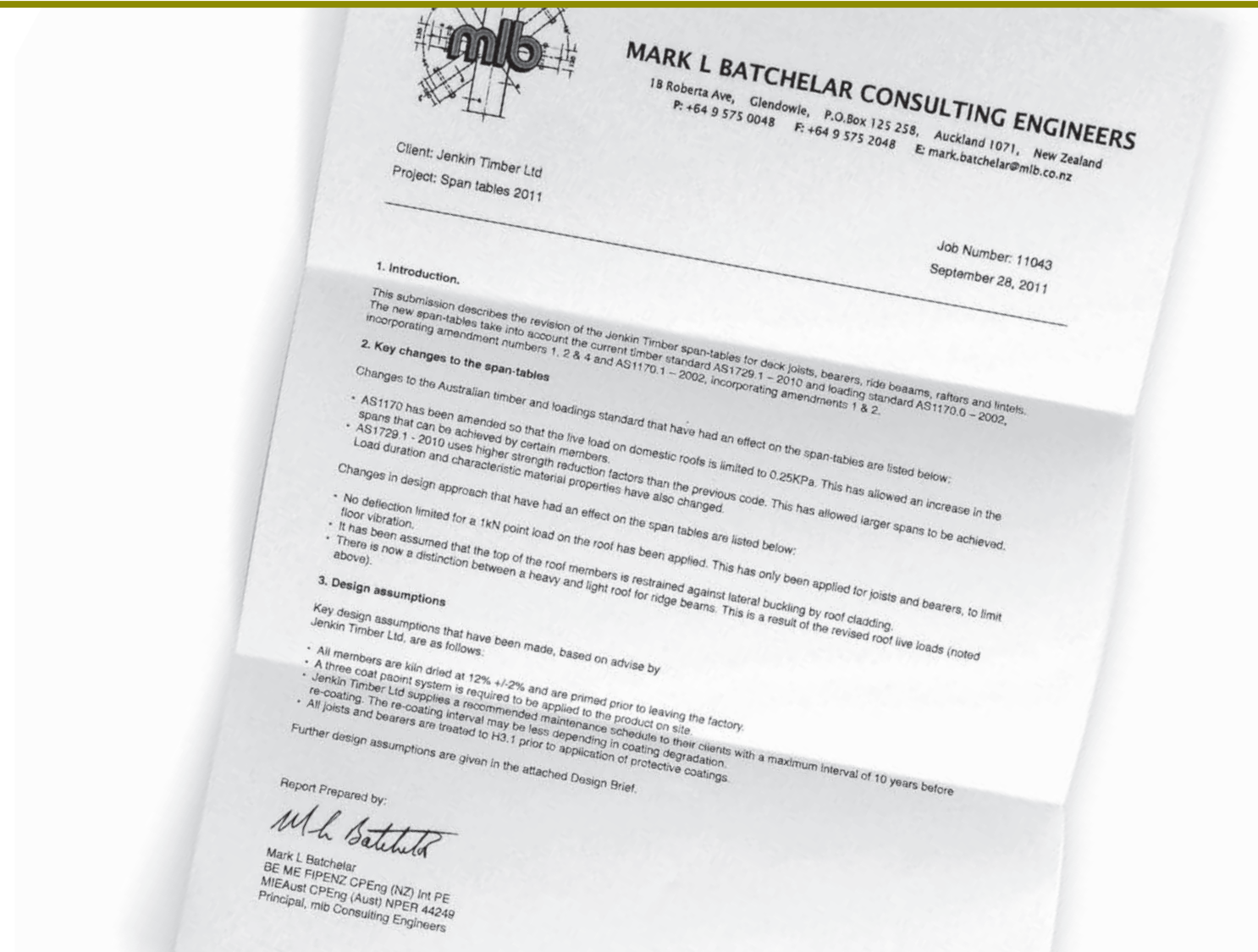
Design with Jenkin Tru-Pine Span Tables



Proven since 1922 jenkin.co.nz

Span Tables - Contents

Rafters	3-7
Roof Lintels	8-18
Deck Joists	19
Deck Bearer	20-21
Ridge Beams	22-26
Calculations	27-28
Paint Specs	29



Span Tables - Rafters

Maximum Rafter Span F7										
N1, N2 wind	Spacing (mm)									
	Light Roof					Heavy Roof				
Rafter Size	600	760	900	1000	1200	600	760	900	1000	1200
66X42	1720	1420	1410	1340	1240	1220	1130	1070	1030	970
90X42	2400	2220	2100	2020	1900	1670	1540	1460	1410	1320
138X42	3680	3400	3210	3100	2920	2560	2360	2230	2160	2030
185X42	4590	4320	4140	4040	3860	3430	3170	2990	2890	2720
230X42	5400	5090	4880	4750	4540	4260	3940	3720	3590	3380
280X42	6260	5900	5650	5510	5260	5180	4790	4530	4370	4110

Philosophy	<ul style="list-style-type: none"> • Wind classification zones from AS4055:1992 • Loading and combinations from AS1170:2002 • Servicability limits from AS1170.0:2002 					<ul style="list-style-type: none"> • Design is for decks, balconies and deck roofs only • Deck joists and bearers supporting deck load only • Roof beams supporting roof load only • Roof pitch up to 30 degrees 					Scope	Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure			Timber Grades to AS1720.1 - 2010				
	Loads		Wind loading from AS4055					Modification Factors				Serviceability Limits							
	Dead loads* G (kPa)	Live loads Qu (kPa)		Qc(kN)	Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients	Strength reduction factor Φ	0.9 0.95	F7 GL8	Grade	Bending strength	Mod of elasticity			
Light roof (metal roof cladding)**	0.2	0.25		1.1	N1	34	0.69	26	0.41	Cp -1.5	Duration of load factor	0.57	permanent loads - 1.35G	F7 - seasoned visually graded solid	18 MPa	7.9 GPa			
Heavy roof (Concrete or ceramic cladding)	0.6	0.25		1.1	N2	40	0.96	26	0.41	0.7		0.8	Floor distributed load - 1.2G+1.5Qu	GL8 - seasoned glulam grade	19 MPa	8 GPa			
Floor	0.3	2		1.8	N3	50	1.50	32	0.61	(AS/NZS 1170.2)		0.94	Floor point load - 1.2G+1.5Qc						
Ceiling	0.08				N4	61	2.23	39	0.91			0.94	Roof distributed - 1.2G+1.5Qu						
					N5	74	3.29	47	1.33			0.97	Roof point load - 1.2G+1.5Qc						
					N6	86	4.44	55	1.82			1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2						
											Creep factor	k2	2 2	solid timber glulam timber					

Span Tables - Rafters

Maximum Rafter Span F7										
N3 wind	Spacing (mm)									
	Light Roof					Heavy Roof				
Rafter Size	600	760	900	1000	1200	600	760	900	1000	1200
66X42	1530	1420	1340	1290	1220	1220	1130	1070	1030	970
90X42	2090	1930	1830	1760	1660	1670	1540	1460	1410	1320
138X42	3200	2960	2800	2700	2540	2560	2360	2230	2160	2030
185X42	4130	3900	3730	3620	3410	3430	3170	2990	2890	2720
230X42	4870	4590	4400	4280	4090	4260	3940	3720	3590	3380
280X42	5640	5320	5100	4960	4740	5180	4790	4530	4370	4110

Philosophy	<ul style="list-style-type: none"> • Wind classification zones from AS4055:1992 • Loading and combinations from AS1170:2002 • Servicability limits from AS1170.0:2002 					<ul style="list-style-type: none"> • Design is for decks, balconies and deck roofs only • Deck joists and bearers supporting deck load only • Roof beams supporting roof load only • Roof pitch up to 30 degrees 					Scope	Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure			Timber Grades to AS1720.1 - 2010				
	Loads		Wind loading from AS4055					Modification Factors				Serviceability Limits							
	Dead loads* G (kPa)	Live loads Qu (kPa)	Qc(kN)	Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients	Strength reduction factor Φ	0.9 0.95	F7 GL8	Grade	Bending strength	Mod of elasticity				
Light roof (metal roof cladding)**	0.2	0.25	1.1	N1	34	0.69	26	0.41	Cp -1.5	Duration of load factor	k1	0.57	permanent loads - 1.35G	F7 - seasoned visually graded solid	18 MPa	7.9 GPa			
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	N2	40	0.96	26	0.41	0.7		0.8	Floor distributed load - 1.2G+1.5Qu	GL8 - seasoned glulam grade	19 MPa	8 GPa				
Floor	0.3	2	1.8	N3	50	1.50	32	0.61	(AS/NZS 1170.2)		0.94	Floor point load - 1.2G+1.5Qc							
Ceiling	0.08			N4	61	2.23	39	0.91			0.97	Roof distributed - 1.2G+1.5Qu							
				N5	74	3.29	47	1.33			1.0	Roof point load - 1.2G+1.5Qc							
				N6	86	4.44	55	1.82		Creep factor	k2	2	short term load - 0.9G+Wu1 and 1.2G+Wu2						
												2	solid timber						
												2	glulam timber						

*Including self weight of members.
**(AS/NZS 1170.0)

*with a 1kN point load

Span Tables - Rafters

Maximum Rafter Span F7										
N4 wind	Spacing (mm)									
	Light Roof					Heavy Roof				
Rafter Size	600	760	900	1000	1200	600	760	900	1000	1200
66X42	1340	1240	1170	1130	1030	1220	1130	1070	1030	970
90X42	1830	1690	1600	1540	1410	1660	1540	1450	1400	1320
138X42	2810	2590	2450	2370	2160	2550	2360	2230	2150	2020
185X42	3740	3480	3290	3170	2940	3420	3160	2990	2880	2710
230X42	4410	4150	3980	3880	3660	4250	3930	3710	3580	3370
280X42	5110	4820	4620	4500	4220	5110	4780	4520	4360	4110

Philosophy	<ul style="list-style-type: none"> • Wind classification zones from AS4055:1992 • Loading and combinations from AS1170:2002 • Servicability limits from AS1170.0:2002 					<ul style="list-style-type: none"> • Design is for decks, balconies and deck roofs only • Deck joists and bearers supporting deck load only • Roof beams supporting roof load only • Roof pitch up to 30 degrees 					Scope	Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure			Timber Grades to AS1720.1 - 2010				
	Loads		Wind loading from AS4055					Modification Factors				Serviceability Limits							
	Dead loads* G (kPa)	Live loads Qu (kPa)		Qc(kN)	Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients	Strength reduction factor Φ	0.9 0.95	F7 GL8	Grade	Bending strength	Mod of elasticity			
Light roof (metal roof cladding)**	0.2	0.25		1.1	N1	34	0.69	26	0.41	Cp -1.5	Duration of load factor	0.57	permanent loads - 1.35G	F7 - seasoned visually graded solid	18 MPa	7.9 GPa			
Heavy roof (Concrete or ceramic cladding)	0.6	0.25		1.1	N2	40	0.96	26	0.41	0.7		0.8	Floor distributed load - 1.2G+1.5Qu	GL8 - seasoned glulam grade	19 MPa	8 GPa			
Floor	0.3	2		1.8	N3	50	1.50	32	0.61	(AS/NZS 1170.2)		0.94	Floor point load - 1.2G+1.5Qc						
Ceiling	0.08				N4	61	2.23	39	0.91			0.97	Roof distributed - 1.2G+1.5Qu						
					N5	74	3.29	47	1.33			1.0	Roof point load - 1.2G+1.5Qc						
					N6	86	4.44	55	1.82		Creep factor	k2	2 2	short term load - 0.9G+Wu1 and 1.2G+Wu2 solid timber glulamated timber					

Span Tables - Rafters

Maximum Rafter Span F7										
N6 wind	Spacing (mm)									
	Light Roof					Heavy Roof				
Rafter Size	600	760	900	1000	1200	600	760	900	1000	1200
66X42	1010	900	830	790	720	970	900	850	810	740
90X42	1400	1230	1130	1070	980	1320	1220	1160	1100	1010
138X42	2220	1920	1730	1640	1500	2030	1880	1770	1690	1540
185X42	2990	2630	2380	2220	2010	2720	2510	2380	2270	2070
230X42	3710	3260	2950	2770	2470	3380	3120	2930	2780	2530
280X42	4260	3740	3400	3200	2860	4090	3640	3340	3170	2900

Philosophy	<ul style="list-style-type: none"> • Wind classification zones from AS4055:1992 • Loading and combinations from AS1170:2002 • Servicability limits from AS1170.0:2002 					<ul style="list-style-type: none"> • Design is for decks, balconies and deck roofs only • Deck joists and bearers supporting deck load only • Roof beams supporting roof load only • Roof pitch up to 30 degrees 					Scope	Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure			Timber Grades to AS1720.1 - 2010			
	Loads		Wind loading from AS4055				Modification Factors			Serviceability Limits								
	Dead loads* G (kPa)	Live loads Qu (kPa)	Qc(kN)	Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients	Strength reduction factor Φ	0.9 0.95	F7 GL8	Grade	Bending strength	Mod of elasticity			
Light roof (metal roof cladding)**	0.2	0.25	1.1	N1	34	0.69	26	0.41	Cp -1.5	Duration of load factor	k1	0.57	permanent loads - 1.35G	F7 - seasoned visually graded solid	18 MPa	7.9 GPa		
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	N2	40	0.96	26	0.41	0.7		0.8	0.94	Floor distributed load - 1.2G+1.5Qu	GL8 - seasoned glulam grade	19 MPa	8 GPa		
Floor	0.3	2	1.8	N3	50	1.50	32	0.61	(AS/NZS 1170.2)		0.8	0.94	Floor point load - 1.2G+1.5Qu					
Ceiling	0.08			N4	61	2.23	39	0.91			0.94	0.97	Roof distributed - 1.2G+1.5Qu					
				N5	74	3.29	47	1.33			0.97	1.0	Roof point load - 1.2G+1.5Qc					
				N6	86	4.44	55	1.82			1.0	2	short term load - 0.9G+Wu1 and 1.2G+Wu2					
										Creep factor	k2	2	solid timber					
											2	glulam timber						

*Including self weight of members.
**(AS/NZS 1170.0)

*with a 1kN point load

Span Tables - Roof Lintels (F7)

Maximum Roof Lintel Span F7 (post spacing maximum)										
N1, N2 wind		Balcony width (mm)								
Roof Lintel Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	2850	2620	2450	2320	2210	2120	2040	1980	1920
185X42	F7	3820	3510	3290	3110	2960	2840	2740	2650	2570
230X42	F7	4690	4370	4090	3860	3680	3530	3410	3290	3200
280X42	F7	5440	5110	4860	4660	4480	4300	4150	4010	3850
Roof Lintel Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	2120	1950	1830	1730	1650	1580	1520	1470	1430
185X42	F7	2840	2610	2450	2310	2210	2120	2040	1970	1910
230X42	F7	3530	3250	3040	2880	2740	2630	2530	2450	2380
280X42	F7	4300	3960	3700	3500	3340	3200	3080	2980	2890

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u1sQ)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (F7)

Maximum Lintel Span F7 (post spacing maximum)										
N3 wind		Balcony width (mm)								
Roof Lintel Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	2660	2440	2290	2110	1960	1840	1740	1660	1580
185X42	F7	3560	3280	3060	2820	2630	2470	2340	2220	2120
230X42	F7	4230	3970	3760	3460	3220	3020	2860	2720	2600
280X42	F7	4900	4600	4290	3950	3680	3450	3270	3110	2970
Roof Lintel Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	2120	1950	1830	1730	1650	1580	1520	1470	1430
185X42	F7	2840	2610	2450	2310	2210	2120	2040	1970	1910
230X42	F7	3530	3250	3040	2880	2740	2630	2530	2450	2380
280X42	F7	4300	3960	3700	3500	3340	3200	3080	2980	2890

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u1sQ)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (F7)

Maximum Lintel Span F7 (post spacing maximum)										
N4 wind		Balcony width (mm)								
Roof Lintel Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	2310	2030	1840	1690	1570	1480	1400	1330	1270
185X42	F7	3090	2730	2470	2270	2110	1980	1880	1780	1700
230X42	F7	3780	3340	3020	2780	2580	2430	2300	2180	2090
280X42	F7	4320	3810	3450	3170	2950	2770	2620	2500	2390
Roof Lintel Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	2120	1950	1830	1730	1650	1570	1490	1420	1350
185X42	F7	2840	2610	2450	2310	2210	2110	2000	1900	1810
230X42	F7	3530	3250	3040	2880	2740	2580	2440	2320	2220
280X42	F7	4300	3960	3670	3380	3140	2950	2790	2660	2540

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (F7)

Maximum Lintel Span F7 (post spacing maximum)										
N5 wind		Balcony width (mm)								
Roof Lintel Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	1880	1650	1500	1380	1280	1200	1140	1080	1030
185X42	F7	2510	2220	2010	1850	1720	1610	1530	1450	1390
230X42	F7	3080	2720	2460	2260	2100	1980	1870	1780	1700
280X42	F7	3520	3100	2810	2580	2400	2260	2140	2030	1940
Roof Lintel Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	1950	1720	1560	1430	1330	1250	1190	1130	1080
185X42	F7	2620	2310	2090	1920	1790	1680	1590	1510	1440
230X42	F7	3210	2830	2560	2350	2190	2060	1950	1850	1770
280X42	F7	3660	3230	2920	2690	2500	2350	2220	2110	2020

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1QU)	Shortterm (G+u5Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (F7)

Maximum Lintel Span F7 (post spacing maximum)										
N6 wind		Balcony width (mm)								
Roof Lintel Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	1600	1410	1280	1180	1090	1030	970	930	880
185X42	F7	2150	1900	1710	1580	1470	1380	1300	1240	1190
230X42	F7	2630	2320	2100	1930	1800	1690	1600	1520	1450
280X42	F7	3010	2650	2400	2210	2050	1930	1830	1740	1660
Roof Lintel Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	1650	1460	1320	1210	1130	1060	1000	950	910
185X42	F7	2210	1950	1760	1620	1510	1420	1340	1280	1220
230X42	F7	2710	2390	2160	1990	1850	1740	1640	1560	1490
280X42	F7	3100	2730	2470	2270	2110	1990	1880	1790	1710

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Qc(kN)
	G (kPa)	Qu (kPa)	
Light roof (metal roof cladding)**	0.2	0.25	1.1
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1
Floor	0.3	2	1.8
Ceiling	0.08		

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	k1	0.9	F7
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.8	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qc
		0.94	Roof distributed - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
Creep factor	k2	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
		2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm	Shortterm	Point live load	Wind
		(G+u1Qu)	(G+u3Q)	(Qc)	(Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

*Including self weight of members.
**(AS/NZS 1170.0)

Span Tables - Roof Lintels (GL8)

Maximum Roof Lintel Span GL8 (post spacing maximum)										
N1, N2 wind		Balcony width (mm)								
Roof Lintel Required		Light Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	3600	3310	3090	2930	2790	2680	2580	2490	2420
180x65	GL8	4370	4100	3900	3740	3590	3440	3310	3210	3110
240x65	GL8	5420	5090	4840	4640	4480	4340	4220	4120	4030
280x65	GL8	6090	5720	5440	5210	5030	4880	4740	4620	4520
Roof Lintel Required		Heavy Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2500	2300	2150	2030	1940	1860	1790	1730	1680
180x65	GL8	3210	2950	2760	2610	2490	2390	2300	2230	2160
240x65	GL8	4280	3940	3680	3480	3320	3190	3070	2970	2880
280x65	GL8	5000	4590	4300	4070	3880	3720	3580	3470	3360

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	k1	0.9	F7
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.94	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qu
		0.97	Roof distributed load - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qu
Creep factor	k2	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
		2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm	Shortterm	Point live load	Wind
		(G+u1Qu)	(G+u1sQ)	(Qc)	(Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (GL8)

Maximum Roof Lintel Span GL8 (post spacing maximum)										
N3 wind		Balcony width (mm)								
Roof Lintel Required		Light Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	3130	2880	2690	2550	2430	2330	2250	2170	2110
180x65	GL8	3940	3700	3460	3280	3120	3000	2890	2790	2710
240x65	GL8	4890	4590	4370	4190	4040	3910	3810	3710	3610
280x65	GL8	5490	5150	4900	4700	4530	4390	4270	4170	4070
Roof Lintel Required		Heavy Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2500	2300	2150	2030	1940	1860	1790	1730	1680
180x65	GL8	3210	2950	2760	2610	2490	2390	2300	2230	2160
240x65	GL8	4280	3940	3680	3480	3320	3190	3070	2970	2880
280x65	GL8	5000	4590	4300	4070	3880	3720	3580	3470	3360

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
 **(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.94	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.97	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
Creep factor	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (GL8)

Maximum Roof Lintel Span GL8 (post spacing maximum)										
N4 wind		Balcony width (mm)								
Roof Lintel Required		Light Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2740	2520	2360	2230	2100	1970	1860	1770	1690
180x65	GL8	3530	3240	3040	2870	2700	2530	2400	2280	2180
240x65	GL8	4430	4160	3950	3790	3600	3380	3200	3040	2900
280x65	GL8	4970	4670	4440	4260	4110	3940	3730	3550	3390
Roof Lintel Required		Heavy Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2500	2300	2150	2030	1940	1860	1790	1730	1680
180x65	GL8	3210	2950	2760	2610	2490	2390	2300	2230	2160
240x65	GL8	4280	3940	3680	3480	3320	3190	3070	2970	2880
280x65	GL8	4970	4590	4300	4070	3880	3720	3580	3470	3360

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u1sQ)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (GL8)

Maximum Roof Lintel Span GL8 (post spacing maximum)										
N5 wind		Balcony width (mm)								
Roof Lintel Required		Light Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2420	2200	1990	1830	1710	1600	1520	1440	1380
180x65	GL8	3120	2830	2560	2360	2190	2060	1950	1850	1770
240x65	GL8	4030	3780	3420	3140	2930	2750	2600	2470	2360
280x65	GL8	4530	4250	3990	3670	3410	3210	3030	2890	2760
Roof Lintel Required		Heavy Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2420	2230	2070	1910	1780	1670	1580	1500	1430
180x65	GL8	3120	2870	2670	2450	2280	2150	2030	1930	1840
240x65	GL8	4030	3790	3560	3270	3050	2860	2710	2570	2460
280x65	GL8	4530	4250	4040	3820	3550	3340	3160	3000	2870

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
 **(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	k1	0.9	F7
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.8	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qc
		0.94	Roof distributed - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
Creep factor	k2	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
		2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm	Shortterm	Point live load	Wind
		(G+u1Qu)	(G+u1sQ)	(Qc)	(Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Roof Lintels (GL8)

Maximum Roof Lintel Span GL8 (post spacing maximum)										
N6 wind		Balcony width (mm)								
Roof Lintel Required		Light Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2140	1880	1700	1570	1460	1370	1300	1230	1180
180x65	GL8	2750	2420	2190	2010	1880	1760	1670	1590	1510
240x65	GL8	3660	3230	2920	2690	2500	2350	2220	2110	2020
280x65	GL8	4180	3770	3410	3130	2920	2740	2590	2470	2360
Roof Lintel Required		Heavy Roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2180	1940	1750	1610	1500	1410	1330	1270	1210
180x65	GL8	2810	2490	2250	2070	1930	1810	1720	1630	1560
240x65	GL8	3730	3320	3010	2760	2570	2420	2290	2180	2080
280x65	GL8	4180	3880	3510	3230	3000	2820	2670	2540	2430

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Deck Joists

Maximum Joist Span F7			
Floor Joists with 2.0 kPa Live Load			
Floor Joist Size Required	Spacing (mm)		
	400	450	600
66X42	1080	1050	1010
90X42	1490	1460	1400
138X42	2360	2300	2190
185X42	3230	3140	2980
230X42	4080	3970	3750
280X42	5050	4900	4620

Philosophy	<ul style="list-style-type: none"> • Wind classification zones from AS4055:1992 • Loading and combinations from AS1170:2002 • Servicability limits from AS1170.0:2002 		<ul style="list-style-type: none"> • Design is for decks, balconies and deck roofs only • Deck joists and bearers supporting deck load only • Roof beams supporting roof load only • Roof pitch up to 30 degrees 		Scope	Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure		Timber Grades to AS1720.1 - 2010														
	Loads		Wind loading from AS4055			Modification Factors			Serviceability Limits													
	Dead loads* G (kPa)	Live loads Qu (kPa)	Qc(kN)	Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients	Strength reduction factor Φ	0.9 0.95	F7 GL8	Grade	Bending strength	Mod of elasticity							
Light roof (metal roof cladding)**	0.2	0.25	1.1	N1	34	0.69	26	0.41	Cp -1.5	Duration of load factor	k1	0.57	permanent loads - 1.35G	Longterm (G+uQu)	Shortterm (G+usQ)	Point live load (Qc)	Wind (Ws)					
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	N2	40	0.96	26	0.41	0.7			0.8	Floor distributed load - 1.2G+1.5Qu					- light roof	L/300	L/300	-	L/300 or 12mm
Floor	0.3	2	1.8	N3	50	1.50	32	0.61	(AS/NZS 1170.2)			0.94	Floor point load - 1.2G+1.5Qc					- heavy roof	L/400	L/300	-	L/400 or 12mm
Ceiling	0.08			N4	61	2.23	39	0.91				0.94	Roof distributed - 1.2G+1.5Qu					- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
				N5	74	3.29	47	1.33				0.97	Roof point load - 1.2G+1.5Qc					- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
				N6	86	4.44	55	1.82				1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2					Joists	L/300	-	L/300 or 2mm*	-
										Creep factor	k2	2 2	solid timber glulam timber	Bearers	L/300	-	L/360 -					
*Including self weight of members. **(AS/NZS 1170.0)																						
*with a 1kN point load																						

Span Tables - Deck Bearer (F7)

Maximum Deck Bearer Span F7 (post spacing maximum)										
Spacing (mm)										
Bearer Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
138X42	F7	1850	1510	1310	1170	1070	990	930	870	830
185X42	F7	2480	2030	1760	1570	1430	1330	1240	1170	1110
230X42	F7	3090	2520	2180	1950	1780	1650	1540	1450	1380
280X42	F7	3760	3070	2660	2380	2170	2010	1880	1770	1680

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Deck Bearer (GL8)

Maximum Deck Bearer Span GL8										
Spacing (mm)										
Bearer Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
140x65	GL8	2240	1960	1740	1560	1420	1320	1230	1160	1100
180x65	GL8	2880	2520	2240	2010	1830	1700	1590	1490	1420
240x65	GL8	3840	3360	2990	2670	2440	2260	2110	1990	1890
280x65	GL8	4480	3910	3490	3120	2850	2640	2470	2330	2210

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ		0.9	F7
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.8	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qc
		0.94	Roof distributed - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2	
Creep factor	k2	2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

*Including self weight of members.
**(AS/NZS 1170.0)

Span Tables - Ridge Beams (F7)

Maximum Ridge Beam Span F7										
N1, N2 wind		Loaded width (mm)								
Beam Size Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	1400	1220	1110	1030	960	890	830	780	740
90X42	F7	1900	1660	1510	1400	1310	1210	1140	1070	1020
138X42	F7	2920	2550	2320	2150	2010	1860	1740	1640	1560
185X42	F7	3860	3420	3110	2880	2690	2490	2330	2200	2090
230X42	F7	4540	4100	3820	3580	3350	3100	2900	2740	2590
280X42	F7	5260	4750	4420	4180	4000	3780	3530	3330	3160
Beam Size Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	970	850	770	720	670	640	610	590	570
90X42	F7	1320	1160	1050	980	920	870	830	800	770
138X42	F7	2030	1770	1610	1500	1410	1340	1280	1230	1190
185X42	F7	2720	2380	2160	2000	1890	1790	1710	1650	1590
230X42	F7	3380	2950	2680	2490	2340	2230	2130	2050	1980
280X42	F7	4110	3590	3270	3030	2850	2710	2590	2490	2410

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
Creep factor	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Ridge Beams (F7)

Maximum Ridge Beam Span F7										
N3 wind		Loaded width (mm)								
Beam Size Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	1220	1050	910	810	740	690	640	610	570
90X42	F7	1660	1430	1240	1110	1010	940	880	830	780
138X42	F7	2540	2190	1900	1700	1550	1430	1340	1270	1200
185X42	F7	3410	2940	2540	2280	2080	1920	1800	1700	1610
230X42	F7	4090	3650	3160	2830	2580	2390	2240	2110	2000
280X42	F7	4740	4290	3850	3440	3140	2910	2720	2570	2440
Beam Size Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	970	850	770	720	670	640	610	590	570
90X42	F7	1320	1160	1050	980	920	870	830	800	770
138X42	F7	2030	1770	1610	1500	1410	1340	1280	1230	1190
185X42	F7	2720	2380	2160	2000	1890	1790	1710	1650	1590
230X42	F7	3380	2950	2680	2490	2340	2230	2130	2050	1980
280X42	F7	4110	3590	3270	3030	2850	2710	2590	2490	2410

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	k1	0.9	F7
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.8	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qc
		0.94	Roof distributed load - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
Creep factor	k2	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
		2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm	Shortterm	Point live load	Wind
		(G+u1Qu)	(G+u1sQ)	(Qc)	(Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

*Including self weight of members.
**(AS/NZS 1170.0)

Span Tables - Ridge Beams (F7)

Maximum Ridge Beam Span F7										
N4 wind		Loaded width (mm)								
Beam Size Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	1030	840	730	650	600	550	520	490	460
90X42	F7	1410	1150	990	890	810	750	700	660	630
138X42	F7	2160	1760	1520	1360	1240	1150	1080	1020	960
185X42	F7	2890	2360	2040	1830	1670	1550	1450	1360	1290
230X42	F7	3590	2930	2540	2270	2070	1920	1800	1690	1610
280X42	F7	4300	3570	3090	2770	2530	2340	2190	2060	1960
Beam Size Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	970	850	770	690	630	590	550	520	490
90X42	F7	1320	1150	1050	950	860	800	750	710	670
138X42	F7	2020	1770	1610	1450	1320	1230	1150	1080	1030
185X42	F7	2710	2370	2150	1940	1780	1640	1540	1450	1380
230X42	F7	3370	2950	2680	2420	2210	2040	1910	1800	1710
280X42	F7	4110	3590	3260	2940	2690	2490	2330	2190	2080

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	k1	0.57 permanent loads - 1.35G
		0.8 Floor distributed load - 1.2G+1.5Qu
		0.94 Floor point load - 1.2G+1.5Qc
		0.94 Roof distributed - 1.2G+1.5Qu
		0.97 Roof point load - 1.2G+1.5Qc
Creep factor	k2	1.0 short term load - 0.9G+Wu1 and 1.2G+Wu2
		2 solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Ridge Beams (F7)

Maximum Ridge Beam Span F7										
N5 wind		Loaded width (mm)								
Beam Size Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	840	690	590	530	480	450	420	400	380
90X42	F7	1140	930	810	720	660	610	570	540	510
138X42	F7	1750	1430	1240	1110	1010	940	880	830	780
185X42	F7	2350	1920	1660	1490	1360	1260	1180	1110	1050
230X42	F7	2920	2390	2070	1850	1690	1560	1460	1380	1310
280X42	F7	3560	2910	2520	2250	2060	1900	1780	1680	1590
Beam Size Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	860	710	620	550	500	470	440	410	390
90X42	F7	1170	970	840	750	690	640	600	560	530
138X42	F7	1790	1490	1290	1160	1050	980	910	860	820
185X42	F7	2400	2000	1730	1550	1410	1310	1220	1150	1090
230X42	F7	2980	2490	2150	1930	1760	1630	1520	1430	1360
280X42	F7	3630	3030	2620	2340	2140	1980	1850	1750	1660

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	0.9	F7
	0.95	GL8
Duration of load factor	0.57	permanent loads - 1.35G
	0.8	Floor distributed load - 1.2G+1.5Qu
	0.94	Floor point load - 1.2G+1.5Qc
	0.94	Roof distributed load - 1.2G+1.5Qu
	0.97	Roof point load - 1.2G+1.5Qc
Creep factor	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
	2	solid timber
	2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

*Including self weight of members.
**(AS/NZS 1170.0)

Span Tables - Ridge Beams (F7)

Maximum Ridge Beam Span F7										
N6 wind		Loaded width (mm)								
Beam Size Required		Light roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	720	590	510	450	410	380	360	340	320
90X42	F7	980	800	690	620	560	520	490	460	440
138X42	F7	1500	1220	1060	950	870	800	750	710	670
185X42	F7	2010	1640	1420	1270	1160	1070	1000	950	900
230X42	F7	2500	2040	1770	1580	1440	1340	1250	1180	1120
280X42	F7	3040	2480	2150	1920	1760	1630	1520	1430	1360
Beam Size Required		Heavy roof								
Size	Spec	1200	1800	2400	3000	3600	4200	4800	5400	6000
66X42	F7	740	600	520	470	430	390	370	350	330
90X42	F7	1010	820	710	640	580	540	500	470	450
138X42	F7	1540	1260	1090	980	890	820	770	730	690
185X42	F7	2070	1690	1460	1310	1190	1110	1030	980	930
230X42	F7	2570	2100	1820	1630	1490	1370	1290	1210	1150
280X42	F7	3130	2560	2210	1980	1810	1670	1570	1480	1400

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Live loads	
	G (kPa)	Qu (kPa)	Qc(kN)	
Light roof (metal roof cladding)**	0.2	0.25	1.1	
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	
Floor	0.3	2	1.8	
Ceiling	0.08			

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

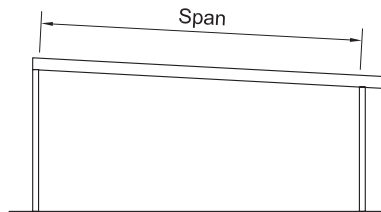
Strength reduction factor Φ	0.9	F7	
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.94	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qc
		0.94	Roof distributed - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
Creep factor	k2	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
		2	solid timber
	2	glulam timber	

Serviceability Limits

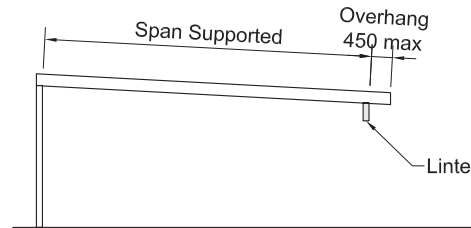
		Longterm (G+u1Qu)	Shortterm (G+u1sQ)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

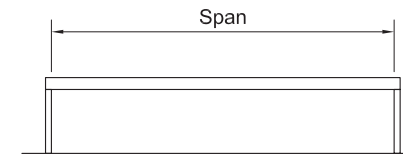
Span Tables - Calculations



Rafters



Lintels



Floor Joists

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Qc(kN)
	G (kPa)	Qu (kPa)	
Light roof (metal roof cladding)**	0.2	0.25	1.1
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1
Floor	0.3	2	1.8
Ceiling	0.08		

*Including self weight of members.
**(AS/NZS 1170.0)

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

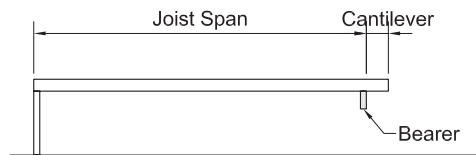
Strength reduction factor Φ	k1	0.9	F7
		0.95	GL8
Duration of load factor	k1	0.57	permanent loads - 1.35G
		0.8	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qu
		0.94	Roof distributed - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
Creep factor	k2	1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
		2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+usQ)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

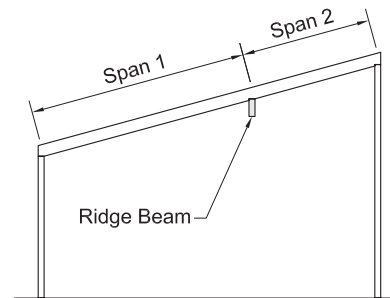
*with a 1kN point load

Span Tables - Calculations



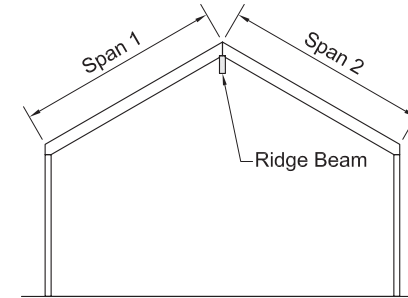
Floor Joists

$$\text{Load Width} = \frac{\text{Joist Span}}{2} + \text{Cantilever}$$



Ridge Beam

$$\text{Load Width} = \frac{\text{Span 1} + \text{Span 2}}{2}$$



Ridge Beam

$$\text{Load Width} = \frac{\text{Span 1} + \text{Span 2}}{2}$$

Philosophy

- Wind classification zones from AS4055:1992
- Loading and combinations from AS1170:2002
- Servicability limits from AS1170.0:2002

- Design is for decks, balconies and deck roofs only
- Deck joists and bearers supporting deck load only
- Roof beams supporting roof load only
- Roof pitch up to 30 degrees

Scope

Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure

Timber Grades to AS1720.1 - 2010

Grade	Bending strength	Mod of elasticity
F7 - seasoned visually graded solid	18 MPa	7.9 GPa
GL8 - seasoned glulam grade	19 MPa	8 GPa

Loads

	Dead loads*		Qc(kN)
	G (kPa)	Qu (kPa)	
Light roof (metal roof cladding)**	0.2	0.25	1.1
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1
Floor	0.3	2	1.8
Ceiling	0.08		

Wind loading from AS4055

Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients
N1	34	0.69	26	0.41	Cp -1.5
N2	40	0.96	26	0.41	0.7
N3	50	1.50	32	0.61	(AS/NZS 1170.2)
N4	61	2.23	39	0.91	
N5	74	3.29	47	1.33	
N6	86	4.44	55	1.82	

Modification Factors

Strength reduction factor Φ	Duration of load factor	0.9	
		F7	GL8
	k1	0.57	permanent loads - 1.35G
		0.8	Floor distributed load - 1.2G+1.5Qu
		0.94	Floor point load - 1.2G+1.5Qc
		0.94	Roof distributed - 1.2G+1.5Qu
		0.97	Roof point load - 1.2G+1.5Qc
		1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2
Creep factor	k2	2	solid timber
		2	glulam timber

Serviceability Limits

		Longterm (G+u1Qu)	Shortterm (G+u3Q)	Point live load (Qc)	Wind (Ws)
Rafters and ridges	- light roof	L/300	L/300	-	L/300 or 12mm
	- heavy roof	L/400	L/300	-	L/400 or 12mm
Roof lintels	- light roof	L/300	L/300	L/250 or 10mm	L/240 or 12mm
	- heavy roof	L/400	L/300	L/250 or 10mm	L/240 or 12mm
Joists		L/300	-	L/300 or 2mm*	-
Bearers		L/300	-	L/360 -	

*with a 1kN point load

Span Tables - Paint specs

Painting Specifications

1. Spot prime and putty all nail holes.
2. Ensure primed surfaces are clean and free from contaminants such as dust, grease or mildew.
3. Apply a minimum of two full coats of premium acrylic exterior house paint to recommended film thickness. For a better finish and extended paint durability we recommend the application of one full coat of premium quality OIL BASED primer undercoat.

Use colours that have a Light Reflective Value (LRV) of 45 to 100 (100 being pure white). Colours with a LRV of 44 to 0 (0 being pure black) progressively generate extreme surface heat when exposed to direct sunlight and can cause resin bleed, shrinkage, distortion and cracking. It will also reduce the service life of the paint coatings.

Technical data and installation guide

Please refer to the Building Code of Australia guidelines or your local building authority/council to ensure correct construction practices are followed.
Jenkin Tru-Pine meets Service Class 3/AS5068 standards for structural products.

Visit www.jenkin.co.nz for technical specifications, product information guides, span tables, application guides and warranties.

Philosophy	<ul style="list-style-type: none"> • Wind classification zones from AS4055:1992 • Loading and combinations from AS1170:2002 • Servicability limits from AS1170.0:2002 				<ul style="list-style-type: none"> • Design is for decks, balconies and deck roofs only • Deck joists and bearers supporting deck load only • Roof beams supporting roof load only • Roof pitch up to 30 degrees 				Scope	Structural design charts for members shown only, excluding fixings, foundations, or any other part of the structure			Timber Grades to AS1720.1 - 2010				
	Loads				Wind loading from AS4055					Modification Factors				Serviceability Limits			
	Dead loads*	Live loads		Region	Vu m/s	qu kPa	Vs m/s	qs kPa	Pressure coefficients	Strength reduction factor Φ	0.9	F7	Grade	Bending strength		Mod of elasticity	
	G (kPa)	Qu (kPa)	Qc(kN)							0.95	GL8	F7 - seasoned visually graded solid	18 MPa	7.9 GPa			
Light roof (metal roof cladding)**	0.2	0.25	1.1	N1	34	0.69	26	0.41	Cp -1.5	Duration of load factor	0.57	permanent loads - 1.35G	GL8 - seasoned glulam grade	19 MPa	8 GPa		
Heavy roof (Concrete or ceramic cladding)	0.6	0.25	1.1	N2	40	0.96	26	0.41	0.7		0.8	Floor distributed load - 1.2G+1.5Qu					
Floor	0.3	2	1.8	N3	50	1.50	32	0.61	(AS/NZS 1170.2)		0.94	Floor point load - 1.2G+1.5Qc					
Ceiling	0.08			N4	61	2.23	39	0.91			0.94	Roof distributed - 1.2G+1.5Qu					
				N5	74	3.29	47	1.33			0.97	Roof point load - 1.2G+1.5Qc					
				N6	86	4.44	55	1.82			1.0	short term load - 0.9G+Wu1 and 1.2G+Wu2					
										Creep factor	2	solid timber					
											2	glulam timber					

*Including self weight of members.
**(AS/NZS 1170.0)