

ROOF BEAMS, RAFTERS & RIDGES – LIGHT ROOF

Instructions:

To use this table you will need to know:

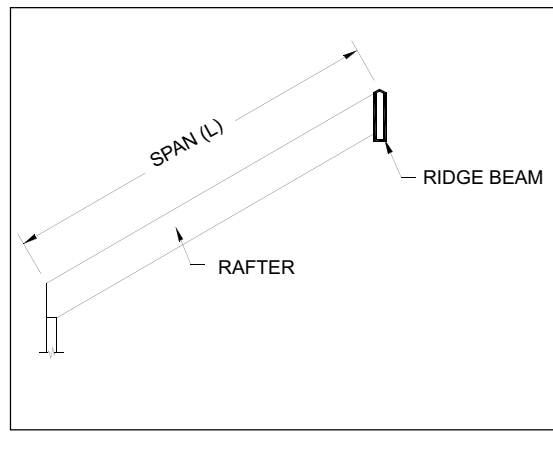
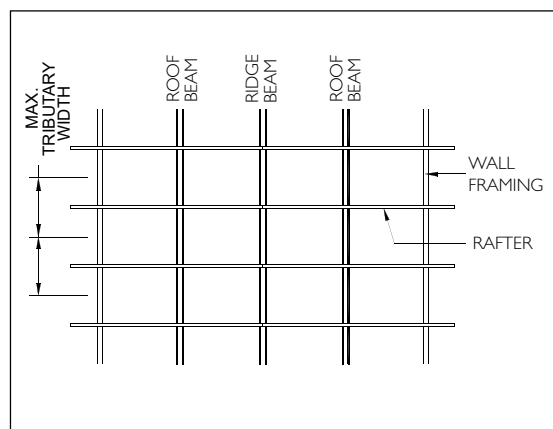
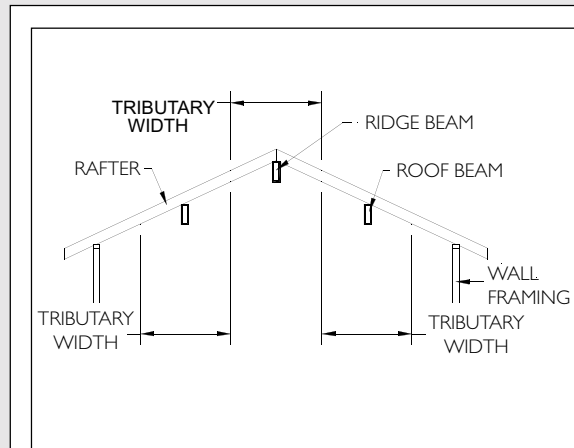
- The Span of the Roof Beam.
- The Maximum Tributary Width – (this is the measured spacing between rafter beams).

1. Under the 'Span of Glulam Beam' heading, locate the column headed with a span that meets or exceeds the required span.
2. Read down this column until you find a figure equal to or greater than the Maximum Tributary width required.
3. The section size of the Glulam beam can be read off the left hand column.

Example:

For a roof beam spanning 6m at centres of 3m carrying a light roof and ceiling.

Span of Glulam Beam = 6
 Maximum Tributary Width = 3
 Therefore Section Size = 360 x 90



Tip:

Glulam is an engineered kiln dried product and should always be stored clear of the ground and under cover.



ROOF BEAMS, RAFTERS & RIDGES - LIGHT ROOF - Continued

Section Size dxb (mm)	Span Glulam Beam, L (m)																				
	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10				
	Maximum Tributary Width (m) at Span L																				
135 x 65	4.3	2.1	1.2																		
135 x 65 Precambered	4.9	2.9	1.6	1.0																	
precamber required (mm)	5.0	6.0	7.0	9.0																	
180 x 65	9.6	5.2	2.9	1.8	1.1																
180 x 65 Precambered		6.1	3.9	2.5	1.6	1.1															
precamber required (mm)		6.0	7.0	9.0	10.0	11.0															
225 x 65		10.0	5.8	3.6	2.3	1.6	1.1														
225 x 65 Precambered		10.0	6.9	4.9	3.2	2.3	1.6	1.2	0.9												
precamber required (mm)		6.0	7.0	9.0	10.0	11.0	13.0	14.0	14.0												
225 x 90			8.1	5.0	3.2	2.2	1.5	1.1													
225 x 90 Precambered			9.6	6.7	4.5	3.1	2.3	1.7	1.3	1.0											
precamber required (mm)			7.0	9.0	10.0	11.0	12.0	14.0	16.0	16.0											
270 x 90				8.8	5.8	3.9	2.8	2.0	1.5	1.1											
270 x 90 Precambered					7.8	5.5	4.0	3.0	2.3	1.8	1.4	1.1	0.9								
precamber required (mm)					10.0	11.0	13.0	14.0	15.0	17.0	18.0	20.0	20.0								
315 x 90					9.3	6.4	4.6	3.3	2.5	1.9	1.4	1.1									
315 x 90 Precambered						8.7	6.3	4.8	3.7	2.9	2.3	1.8	1.5	1.3	1.0	0.9					
precamber required (mm)						11.0	13.0	14.0	15.0	17.0	18.0	20.0	20.0	22.0	25.0	24.0					
360 x 90						9.7	7.0	5.1	3.9	2.9	2.3	1.8	1.4	1.1							
360 x 90 Precambered							9.2	7.1	5.5	4.3	3.4	2.8	2.3	1.9	1.6	1.3	1.1				
precamber required (mm)							13.0	14.0	15.0	16.0	18.0	20.0	21.0	23.0	23.0	26.0	27.0				
405 x 90								7.4	5.6	4.3	3.4	2.6	2.1	1.7	1.3	1.1					
405 x 90 Precambered									9.6	7.8	6.1	4.9	4.0	3.3	2.7	2.3	1.9	1.6			
precamber required (mm)									14.0	15.0	16.0	18.0	19.0	21.0	22.0	23.0	26.0	26.0			
450 x 90										7.8	6.1	4.7	3.8	3.0	2.4	2.0	1.6	1.3			
450 x 90 Precambered											9.9	8.3	6.7	5.5	4.5	3.7	3.1	2.7	2.3		
precamber required (mm)										15.0	17.0	18.0	19.0	21.0	22.0	24.0	25.0	27.0			
495 x 90												8.2	6.4	5.1	4.1	3.3	2.7	2.2	1.8		
495 x 90 Precambered													8.6	7.3	6.0	5.0	4.2	3.6	3.1		
precamber required (mm)													18.0	19.0	20.0	22.0	23.0	25.0	26.0		
540 x 90														8.5	6.8	5.5	4.5	3.7	3.0	2.5	
540 x 90 Precambered															8.9	7.8	6.5	5.5	4.6	4.0	
precamber required (mm)															19.0	21.0	22.0	24.0	25.0	26.0	
585 x 90																8.7	7.1	5.8	4.8	4.0	3.3
585 x 90 Precambered																	9.1	8.0	7.0	5.9	5.1
precamber required (mm)																	21.0	22.0	23.0	25.0	26.0
630 x 90																	9.0	7.4	6.1	5.1	4.2
630 x 90 Precambered																		9.3	8.2	7.4	6.3
precamber required (mm)																		22.0	23.0	25.0	26.0

Light Roof

Beams Fully Restrained @ Top Edge Only

Wind Speed = Medium

Roof Pitch < 20°

Maximum Precamber = 1.5 x Dead Load deflection or span / 400 whichever is the least

If precamber width not shown there is no additional benefit of precamber

Deflection Limit = span / 300

Glulam Grade = GL8



ROOF BEAMS, RAFTERS & RIDGES – HEAVY ROOF

Section Size dxb (mm)	Span Glulam Beam, L (m)																		
	1.5	2	2.5	3	3.5	4	4.5	5	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10	
	Maximum Tributary Width (m) at Span L																		
135 x 65	5.2	2.4	1.2																
135 x 65 Precambered		2.9	1.8	1.2															
precamber required (mm)		5.0	7.0	7.0															
180 x 65	10.0	5.6	2.9	1.6	1.0														
180 x 65 Precambered			3.5	2.4	1.8	1.2													
precamber required (mm)			7.0	8.0	10.0	10.0													
225 x 65		9.2	5.7	3.3	2.0	1.3	0.9												
225 x 65 Precambered			5.9	4.0	2.9	2.2	1.7	1.2	0.9										
precamber required (mm)			7.0	8.0	10.0	11.0	13.0	14.0	14.0										
225 x 90			8.0	4.5	2.8	1.8	1.2												
225 x 90 Precambered			8.1	5.6	4.1	3.1	2.4	1.7	1.2	0.9									
precamber required (mm)			7.0	8.0	10.0	11.0	12.0	13.0	15.0	16.0									
270 x 90				7.9	4.9	3.2	2.2	1.5	1.1										
270 x 90 Precambered				8.4	6.1	4.7	3.6	2.9	2.2	1.7	1.3	0.9							
precamber required (mm)				8.0	10.0	11.0	12.0	13.0	15.0	16.0	18.0	18.0							
315 x 90					7.9	5.2	3.6	2.6	1.9	1.4	1.0								
315 x 90 Precambered					8.6	6.5	5.1	4.1	3.3	2.8	2.1	1.7	1.3	1.0					
precamber required (mm)					10.0	11.0	13.0	14.0	16.0	17.0	18.0	20.0	21.0	20.0					
360 x 90						7.9	5.5	3.9	2.9	2.2	1.6	1.3	1.0						
360 x 90 Precambered						8.5	6.7	5.4	4.4	3.7	3.1	2.6	2.1	1.7	1.3	1.1			
precamber required (mm)						11.0	13.0	14.0	16.0	17.0	18.0	20.0	21.0	23.0	24.0	27.0			
405 x 90							7.9	5.6	4.2	3.1	2.4	1.9	1.5	1.2	0.9				
405 x 90 Precambered							8.5	6.8	5.6	4.6	3.9	3.3	2.9	2.4	1.9	1.6	1.3	1.1	
precamber required (mm)							13.0	14.0	16.0	17.0	18.0	20.0	21.0	23.0	24.0	25.0	27.0	30.0	
450 x 90								7.8	5.8	4.4	3.4	2.7	2.1	1.7	1.3	1.1	0.9		
450 x 90 Precambered								8.4	6.9	5.8	4.9	4.2	3.6	3.1	2.7	2.3	1.9	1.6	
precamber required (mm)								14.0	15.0	17.0	18.0	20.0	21.0	23.0	23.0	26.0	28.0	28.0	
495 x 90									7.8	5.9	4.6	3.6	2.9	2.3	1.9	1.5	1.2	1.0	
495 x 90 Precambered									8.4	7.0	5.9	5.0	4.4	3.8	3.3	2.9	2.6	2.2	
precamber required (mm)									15.0	17.0	18.0	20.0	21.0	23.0	25.0	25.0	26.0	28.0	

Heavy Roof

Beams Fully Restrained @ Top Edge Only

Wind Speed = Medium

Roof Pitch < 20°

Maximum Precamber = 1.5 x Dead Load deflection or span / 400 whichever is the least

Deflection Limit = span / 300

If precamber width not shown there is no additional benefit of precamber

Glulam Grade = GL8

Instructions

To use this table you will need to know:

- The Span of the Roof Beam.
 - The Maximum Tributary Width – (this is the measured spacing between rafter beams).
1. Under the 'Span of Glulam Beam' heading, locate the column headed with a span that meets or exceeds the required span.
 2. Read down this column until you find a figure equal to or greater than the Maximum Tributary width required.
 3. The section size of the Glulam beam can be read off the left hand column.

Example:

For a rafter beam spanning 6m at centres of 3m carrying a heavy roof and ceiling.

Span of Glulam Beam = 6
 Maximum Tributary Width = 3
 Therefore Section = 405 x 90



ROOF BEAMS, RAFTERS & RIDGES – HEAVY ROOF – Continued

Section Size dxb (mm)	Span of Glulam Beam, L (m)									
	5.5	6	6.5	7	7.5	8	8.5	9	9.5	10
	Maximum Tributary Width (m) at Span L									
540 x 90	9.9	7.8	6.0	4.8	3.8	3.1	2.5	2.0	1.7	1.4
540 x 90 Precambered		8.3	7.0	6.0	5.2	4.5	4.0	3.5	3.1	2.8
precamber required (mm)		17.0	18.0	20.0	21.0	23.0	24.0	25.0	27.0	29.0
585 x 90		9.7	7.7	6.1	4.9	4.0	3.2	2.7	2.2	1.8
585 x 90 Precambered			8.2	7.0	6.1	5.3	4.7	4.1	3.7	3.3
precamber required (mm)			18.0	20.0	21.0	23.0	24.0	26.0	27.0	28.0
630 x 90			9.5	7.7	6.2	5.0	4.1	3.4	2.8	2.4
630 x 90 Precambered				8.2	7.1	6.2	5.4	4.8	4.3	3.8
precamber required (mm)				20.0	21.0	23.0	24.0	26.0	27.0	29.0
675 x 135						9.4	7.7	6.4	5.4	4.5
675 x 135 Precambered							9.4	8.3	7.4	6.6
precamber required (mm)							24.0	26.0	27.0	29.0
720 x 135							9.5	7.9	6.6	5.6
720 x 135 Precambered								9.4	8.4	7.5
precamber required (mm)								26.0	27.0	29.0
765 x 135								9.6	8.0	6.8
765 x 135 Precambered									9.5	8.5
precamber required (mm)									27.0	29.0

Heavy Roof Beams Fully Restrained @ Top Edge Only
 Wind Speed = Medium
 Roof Pitch < 20°
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 Deflection Limit = span / 300
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