

**DURAGAL<sup>®</sup>** **onesteel**

**DURAGAL<sup>®</sup> VERANDAH BEAM SPANNING TABLES**



The company that published this work is now in a joint venture company named **Australian Tube Mills**. For technical support or sale enquiries please contact **Australian Tube Mills**.



**MORGAN FOX**  
Consulting Engineers Structural and Civil

Wednesday, 9 October 1996

Tubemakers Structural & Pipeline Products  
PO Box 156  
NEWCASTLE NSW 2300


Dear Sir,

**RE: Structural Engineers Certification**  
**DuraGal Verandah Beam Spanning Tables**

We hereby certify that we have checked the structural aspects of the DuraGal Verandah Beam Spanning Tables.

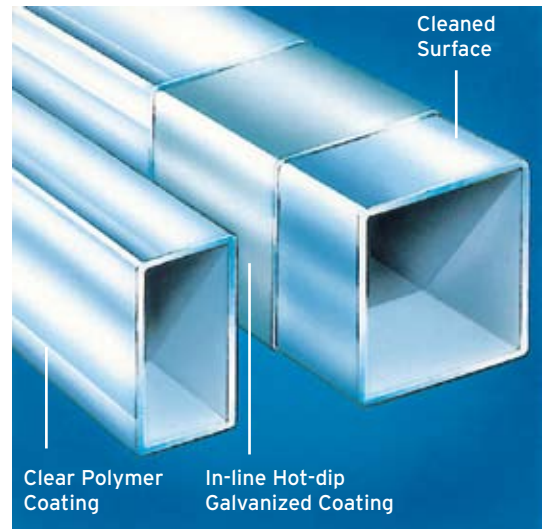
We certify that these members are structurally adequate and in accordance with the Building Code of Australia and relevant SAA Codes of Practice.

Yours Faithfully,  
**Morgan Fox & Harvey Pty Ltd**

  
Eric Fox CPEng



**Morgan Fox & Harvey Pty Ltd**  
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## 10 DURAGAL® BENEFITS

1. High Tensile, stronger and lighter
2. Up to 28% more strength at no extra cost
3. Save weight - Save money by using a lighter wall in many applications
4. DualGrade® product - complies with both C350LO and C450LO requirements
5. Corrosion resistant In-line, Hot-dip, Galvanized coating system
6. Uniform in-line galvanized coating - no weld line repair
7. Surface prepared for easy painting
8. Easy to cut, weld, drill, paint or powder coat
9. Cost savings - practically eliminates the costs incurred by shot-blasting, cleaning & painting after fabrication
10. Consistent quality and dimensional tolerances

For advice on painting systems for a wide range of environments see the *DuraGal® Easy Painting Guide*, and for practical welding hints and recommendations on consumables see the *DuraGal® Easy Welding Guide*.

These publications are available from OneSteel Direct as listed on the back page.

# How to use these tables...

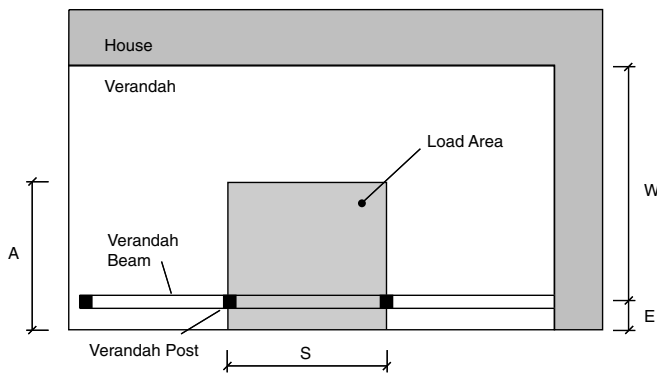
Contained in the following pages are tables that enable the user to select a DuraGal® beam based on a required span or determine the maximum span of a particular size. Outlined below are steps to guide you, along with an example.

1. Select a table with the appropriate:

- wind category
- roof pitch, and
- roof type

2. Determine the width of roof (A) supported by the verandah beam.

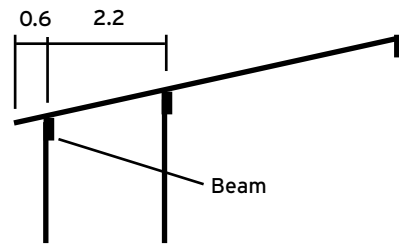
$A = W/2 + E$  (m) see the diagram below.



Note that trusses are assumed to be supported at the house wall.

3. Determine the span, S, of the beam. S = the largest distance between supports.
4. Determine if the span is continuous or single:
  - Single span...*  
one span only, or the variation between spans exceeds 30% of the larger span
  - Continuous span...*  
two or more spans
5. Select the column with the next largest value to the calculated 'A' dimension.
6. Read down the 'A' column and find the closest larger value to the required span (S) for each size in the left hand column.
7. Select the beam with the least mass/metre and note the connection loads.

## Example



Information:

Wind Category: W33N  
 Roof Pitch: 22°  
 Roof Type: Steel Sheet  
 Verandah Length: 12m  
 Number Spans: 3

Find beam size?

1. From the wind category, roof pitch, and roof type given use the table on page 6. Notice the table is for W41N and below.
2.  $A = 2.2/2 + 0.6 = 1.7$  m  
...the verandah width divided by two plus the eaves.
3. Verandah beam span,  $S = 12.0/3 = 4.0$  m.
4. Continuous span, as there are 3 equal spans.
5. Select 1.8 m (next largest value after 1.7) Dimension 'A' column for continuous span.
6. From the table...

Size	Span (m)	Mass per metre (kg/m)
150x50x2.0	5.88	6.07
125x75x2.0	5.59	6.07
100x50x2.0	4.58	4.50
90x90x2.0	4.70	5.45
100x100x2.0	5.10	6.07

7. Select 100x50x2.0 DuraGal® RHS with:
  - Downward force on connection = 8.56 kN
  - Upward force on connection = 10.8 kN

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Up to 20°  
**Roof Type:** Steel Sheet

**Wind Classification:** N3 and below  
W41N and below

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.94	5.64	5.37	5.16	4.99	4.84	7.40	6.97	6.65	6.39	6.17	5.82
D		3.49	3.96	4.39	4.79	5.18	5.56	8.04	9.16	10.2	11.2	12.2	12.9
U		5.35	6.84	8.19	9.48	10.7	11.9	13.3	16.9	20.3	23.5	26.5	28.6
150x50x2.5RHS	7.53	5.72	5.45	5.19	4.98	4.81	4.66	7.17	6.74	6.42	6.16	5.72	5.35
D		3.36	3.82	4.23	4.63	5.00	5.37	7.75	8.82	9.84	10.8	11.4	11.9
U		5.18	6.64	7.94	9.17	10.4	11.5	13.0	16.4	19.6	22.7	24.6	26.4
150x50x2.0RHS	6.07	5.44	5.18	4.96	4.75	4.59	4.43	6.85	6.45	6.05	5.51	5.10	4.77
D		3.22	3.66	4.06	4.44	4.80	5.13	7.40	8.44	9.32	9.86	10.4	10.8
U		4.96	6.34	7.62	8.79	9.91	10.9	12.5	15.8	18.6	20.4	22.0	23.6
125x75x3.0RHS	8.96	5.62	5.35	5.10	4.90	4.73	4.59	7.03	6.62	6.31	6.06	5.86	5.53
D		3.38	3.83	4.23	4.62	4.99	5.35	7.77	8.83	9.83	10.8	11.7	12.3
U		5.06	6.49	7.78	9.00	10.2	11.3	12.7	16.1	19.3	22.3	25.2	27.2
125x75x2.5RHS	7.53	5.41	5.15	4.93	4.73	4.56	4.40	6.80	6.40	6.06	5.53	5.11	4.78
D		3.25	3.69	4.09	4.46	4.82	5.14	7.49	8.51	9.44	9.97	10.5	10.9
U		4.90	6.28	7.54	8.71	9.83	10.9	12.3	15.6	18.6	20.4	22.0	23.6
125x75x2.0RHS	6.07	5.14	4.90	4.71	4.51	4.31	4.03	6.48	5.73	5.12	4.66	4.31	4.03
D		3.11	3.53	3.93	4.28	4.59	4.79	7.15	7.80	8.30	8.75	9.18	9.58
U		4.69	6.00	7.23	8.34	9.31	9.97	11.8	14.0	15.7	17.2	18.6	19.9
100x50x3.0RHS	6.60	4.53	4.32	4.09	3.87	3.69	3.54	5.71	5.44	5.18	4.84	4.47	4.18
D		2.92	3.29	3.60	3.87	4.13	4.38	6.66	7.58	8.40	9.01	9.45	9.86
U		4.12	5.28	6.27	7.14	7.96	8.74	10.4	13.3	15.9	17.9	19.3	20.7
100x50x2.5RHS	5.56	4.35	4.16	3.90	3.69	3.52	3.37	5.50	5.23	4.89	4.46	4.12	3.85
D		2.83	3.19	3.47	3.73	3.98	4.22	6.44	7.33	8.02	8.46	8.87	9.25
U		3.98	5.10	6.00	6.83	7.60	8.34	10.0	12.8	15.0	16.5	17.8	19.1
100x50x2.0RHS	4.50	4.14	3.94	3.68	3.47	3.31	3.17	5.23	4.90	4.37	3.99	3.69	3.45
D		2.73	3.06	3.33	3.57	3.80	4.02	6.19	6.96	7.40	7.80	8.17	8.52
U		3.80	4.84	5.67	6.44	7.16	7.86	9.61	12.0	13.5	14.8	16.0	17.1
90x90x2.5SHS	6.74	4.55	4.34	4.11	3.89	3.71	3.56	5.74	5.44	4.85	4.42	4.09	3.82
D		2.93	3.30	3.62	3.89	4.15	4.40	6.68	7.59	8.05	8.48	8.88	9.26
U		4.14	5.31	6.31	7.18	8.01	8.79	10.4	13.3	14.9	16.3	17.7	18.9
90x90x2.0SHS	5.45	4.32	4.13	3.87	3.66	3.46	3.24	5.32	4.60	4.10	3.74	3.46	3.24
D		2.82	3.17	3.45	3.71	3.94	4.10	6.31	6.76	7.16	7.53	7.88	8.20
U		3.96	5.06	5.96	6.77	7.49	8.01	9.74	11.3	12.6	13.9	15.0	16.0
100x100x3.0SHS	8.96	5.16	4.92	4.72	4.53	4.33	4.16	6.49	6.12	5.83	5.50	5.09	4.76
D		3.21	3.63	4.01	4.37	4.68	4.97	7.39	8.37	9.29	10.0	10.5	11.0
U		4.65	5.97	7.19	8.32	9.31	10.2	11.7	14.8	17.8	20.2	21.9	23.4
100x100x2.5SHS	7.53	4.96	4.73	4.55	4.33	4.13	3.96	6.25	5.89	5.26	4.79	4.43	4.14
D		3.10	3.50	3.88	4.20	4.49	4.76	7.10	8.05	8.55	9.01	9.44	9.84
U		4.50	5.77	6.97	7.97	8.89	9.77	11.3	14.4	16.1	17.7	19.1	20.4
100x100x2.0SHS	6.07	4.72	4.50	4.30	4.06	3.76	3.51	5.78	4.99	4.46	4.06	3.76	3.51
D		2.97	3.35	3.70	3.99	4.17	4.35	6.67	7.14	7.58	7.97	8.35	8.69
U		4.30	5.51	6.61	7.51	8.12	8.68	10.6	12.2	13.7	15.0	16.2	17.4

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
  - Serviceability  $G + 0.7Q$  span/180 max deflection 20mm
  - $G + W_s$  span/180 max deflection 20mm
  - $G$  span/360 max deflection 12.5mm
  - $0.7Q$  span/240 max deflection 15mm
  - Strength  $1.25G + 1.5Q$ ;  $0.8G + W_u$
- $G = 0.4$  kPa for steel sheet roof,  $G = 0.9$  kPa for tile roof.  
 $Q = (0.12 + 1.8/\text{Area supported})$  but not less than 0.25 kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

DuraGal® Verandah Beam Spanning Tables

Roof Pitch: Up to 20°  
Roof Type: Tile

Wind Classification: N3 and below  
W41N and below

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.82	5.53	5.30	5.11	4.94
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.5	14.1	15.7	17.3	18.7
U		3.62	4.58	5.46	6.22	6.93	7.61	8.97	11.3	13.5	15.6	17.7	19.6
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.65	6.00	5.61	5.32	5.10	4.91	4.76
D		4.42	5.11	5.69	6.23	6.74	7.23	10.3	12.0	13.6	15.1	16.6	18.0
U		3.52	4.44	5.21	5.93	6.60	7.25	8.71	11.0	13.1	15.1	17.0	18.9
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.75	3.57	3.42	5.72	5.35	5.07	4.86	4.68	4.53
D		4.24	4.85	5.39	5.89	6.37	6.83	9.85	11.5	13.0	14.5	15.9	17.2
U		3.39	4.20	4.91	5.58	6.21	6.81	8.38	10.5	12.5	14.5	16.3	18.0
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.53	5.25	5.03	4.85	4.70
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	12.0	13.6	15.1	16.5	17.9
U		3.44	4.34	5.10	5.80	6.47	7.10	8.52	10.8	12.9	14.9	16.8	18.6
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.55	3.40	5.69	5.33	5.05	4.84	4.66	4.52
D		4.26	4.87	5.40	5.91	6.38	6.84	9.91	11.5	13.1	14.5	15.9	17.3
U		3.34	4.15	4.87	5.53	6.16	6.76	8.27	10.4	12.4	14.3	16.2	17.9
125x75x2.0RHS	6.07	4.36	3.98	3.71	3.50	3.33	3.19	5.43	5.08	4.82	4.61	4.42	4.23
D		4.07	4.62	5.12	5.59	6.03	6.46	9.49	11.0	12.5	13.9	15.1	16.3
U		3.19	3.92	4.58	5.21	5.79	6.35	7.96	10.0	11.9	13.7	15.4	16.9
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.84	4.52	4.22	3.98	3.79	3.63
D		3.69	4.16	4.59	4.99	5.38	5.74	8.77	10.1	11.3	12.4	13.4	14.4
U		2.72	3.35	3.92	4.46	4.96	5.44	7.06	8.88	10.4	11.8	13.2	14.4
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.67	4.32	4.02	3.79	3.61	3.45
D		3.56	4.00	4.41	4.80	5.16	5.51	8.50	9.75	10.8	11.9	12.8	13.8
U		2.61	3.20	3.75	4.25	4.73	5.18	6.85	8.51	9.95	11.3	12.6	13.8
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.55	2.44	4.44	4.06	3.77	3.56	3.38	3.24
D		3.41	3.82	4.21	4.57	4.91	5.24	8.16	9.27	10.3	11.3	12.2	13.0
U		2.47	3.02	3.53	4.00	4.45	4.87	6.56	8.03	9.38	10.6	11.8	12.9
90x90x2.5SHS	6.74	3.75	3.43	3.20	3.02	2.87	2.75	4.86	4.54	4.25	4.01	3.81	3.65
D		3.71	4.18	4.61	5.02	5.40	5.77	8.81	10.2	11.4	12.4	13.5	14.4
U		2.74	3.37	3.94	4.48	4.99	5.47	7.09	8.92	10.5	11.9	13.3	14.5
90x90x2.0SHS	5.45	3.53	3.22	3.00	2.83	2.69	2.58	4.64	4.28	3.99	3.76	3.58	3.42
D		3.54	3.98	4.39	4.77	5.13	5.47	8.46	9.69	10.8	11.8	12.7	13.7
U		2.59	3.18	3.72	4.22	4.69	5.14	6.82	8.44	9.87	11.2	12.5	13.7
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.23	5.46	5.11	4.85	4.65	4.47	4.29
D		4.16	4.71	5.22	5.70	6.15	6.58	9.71	11.3	12.7	14.1	15.4	16.6
U		3.16	3.91	4.59	5.22	5.82	6.39	7.87	9.94	11.9	13.7	15.5	17.0
100x100x2.5SHS	7.53	4.17	3.82	3.56	3.36	3.20	3.06	5.26	4.92	4.67	4.46	4.25	4.07
D		3.99	4.52	5.00	5.45	5.88	6.29	9.37	10.9	12.3	13.6	14.7	15.8
U		3.03	3.74	4.38	4.98	5.55	6.09	7.65	9.63	11.5	13.2	14.7	16.2
100x100x2.0SHS	6.07	3.92	3.58	3.34	3.15	3.00	2.87	5.02	4.69	4.44	4.18	3.98	3.81
D		3.80	4.29	4.74	5.17	5.57	5.95	8.97	10.4	11.7	12.8	13.9	14.9
U		2.87	3.53	4.13	4.69	5.22	5.72	7.36	9.24	11.0	12.5	13.9	15.2

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

## DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Over 20° to 35°  
**Roof Type:** Steel Sheet

**Wind Classification:** N3 and below  
W41N and below

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.94	5.64	5.37	5.16	4.99	4.84	7.40	6.97	6.65	6.39	6.17	5.98
D		3.49	3.96	4.39	4.79	5.18	5.56	8.04	9.16	10.2	11.2	12.2	13.2
U		3.35	4.30	5.17	6.00	6.79	7.55	8.34	10.6	12.8	14.8	16.8	18.7
150x50x2.5RHS	7.53	5.72	5.45	5.19	4.98	4.81	4.66	7.17	6.74	6.42	6.16	5.95	5.77
D		3.36	3.82	4.23	4.63	5.00	5.37	7.75	8.82	9.84	10.8	11.7	12.6
U		3.25	4.19	5.02	5.81	6.57	7.30	8.15	10.4	12.4	14.4	16.3	18.1
150x50x2.0RHS	6.07	5.44	5.18	4.96	4.75	4.59	4.43	6.85	6.45	6.13	5.88	5.68	5.50
D		3.22	3.66	4.06	4.44	4.80	5.13	7.40	8.44	9.41	10.3	11.2	12.1
U		3.13	4.01	4.83	5.58	6.30	6.96	7.87	9.99	11.9	13.8	15.6	17.3
125x75x3.0RHS	8.96	5.62	5.35	5.10	4.90	4.73	4.59	7.03	6.62	6.31	6.06	5.86	5.68
D		3.38	3.83	4.23	4.62	4.99	5.35	7.77	8.83	9.83	10.8	11.7	12.6
U		3.17	4.08	4.91	5.69	6.45	7.17	7.92	10.1	12.2	14.1	16.0	17.7
125x75x2.5RHS	7.53	5.41	5.15	4.93	4.73	4.56	4.40	6.80	6.40	6.09	5.85	5.65	5.48
D		3.25	3.69	4.09	4.46	4.82	5.14	7.49	8.51	9.48	10.4	11.3	12.1
U		3.08	3.96	4.77	5.52	6.24	6.89	7.74	9.84	11.8	13.7	15.4	17.2
125x75x2.0RHS	6.07	5.14	4.90	4.71	4.51	4.31	4.13	6.48	6.12	5.82	5.59	5.39	5.06
D		3.11	3.53	3.93	4.28	4.59	4.87	7.15	8.15	9.07	9.95	10.8	11.3
U		2.96	3.79	4.58	5.30	5.91	6.50	7.44	9.48	11.3	13.1	14.8	15.9
100x50x3.0RHS	6.60	4.53	4.32	4.09	3.87	3.69	3.54	5.71	5.44	5.18	4.97	4.80	4.65
D		2.92	3.29	3.60	3.87	4.13	4.38	6.66	7.58	8.40	9.19	9.94	10.7
U		2.59	3.34	3.97	4.53	5.06	5.56	6.54	8.40	10.1	11.6	13.1	14.6
100x50x2.5RHS	5.56	4.35	4.16	3.90	3.69	3.52	3.37	5.50	5.23	5.00	4.80	4.63	4.48
D		2.83	3.19	3.47	3.73	3.98	4.22	6.44	7.33	8.15	8.90	9.62	10.3
U		2.51	3.23	3.81	4.34	4.83	5.31	6.34	8.12	9.77	11.3	12.7	14.1
100x50x2.0RHS	4.50	4.14	3.94	3.68	3.47	3.31	3.17	5.23	4.98	4.78	4.58	4.39	4.21
D		2.73	3.06	3.33	3.57	3.80	4.02	6.19	7.04	7.84	8.56	9.22	9.80
U		2.40	3.07	3.60	4.09	4.56	5.00	6.08	7.77	9.37	10.8	12.1	13.3
90x90x2.5SHS	6.74	4.55	4.34	4.11	3.89	3.71	3.56	5.74	5.46	5.20	4.99	4.82	4.67
D		2.93	3.30	3.62	3.89	4.15	4.40	6.68	7.61	8.44	9.22	9.98	10.7
U		2.60	3.35	3.99	4.55	5.08	5.59	6.56	8.43	10.1	11.7	13.2	14.7
90x90x2.0SHS	5.45	4.32	4.13	3.87	3.66	3.49	3.34	5.46	5.20	4.97	4.70	4.34	4.06
D		2.82	3.17	3.45	3.71	3.96	4.19	6.41	7.29	8.11	8.76	9.19	9.59
U		2.50	3.21	3.78	4.30	4.80	5.27	6.30	8.07	9.71	11.0	11.9	12.8
100x100x3.0SHS	8.96	5.16	4.92	4.72	4.53	4.33	4.16	6.49	6.12	5.83	5.60	5.41	5.25
D		3.21	3.63	4.01	4.37	4.68	4.97	7.39	8.37	9.29	10.2	11.0	11.8
U		2.91	3.76	4.54	5.26	5.90	6.50	7.31	9.34	11.2	13.0	14.7	16.4
100x100x2.5SHS	7.53	4.96	4.73	4.55	4.33	4.13	3.96	6.25	5.91	5.63	5.41	5.22	5.06
D		3.10	3.50	3.88	4.20	4.49	4.76	7.10	8.07	8.96	9.82	10.6	11.4
U		2.82	3.64	4.41	5.05	5.64	6.21	7.11	9.09	10.9	12.6	14.3	15.9
100x100x2.0SHS	6.07	4.72	4.50	4.30	4.07	3.88	3.72	5.95	5.66	5.38	5.10	4.71	4.40
D		2.97	3.35	3.70	3.99	4.26	4.52	6.78	7.74	8.59	9.32	9.78	10.2
U		2.71	3.48	4.19	4.77	5.32	5.85	6.84	8.76	10.5	12.0	12.9	13.9

### Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
  - Serviceability  $G + 0.7Q$  span/180 max deflection 20mm
  - $G + W_s$  span/180 max deflection 20mm
  - $G$  span/360 max deflection 12.5mm
  - $0.7Q$  span/240 max deflection 15mm
  - Strength  $1.25G + 1.5Q$ ;  $0.8G + W_u$
- $G = 0.4$  kPa for steel sheet roof,  $G = 0.9$  kPa for tile roof.  
 $Q = (0.12 + 1.8/\text{Area supported})$  but not less than 0.25 kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

DuraGal® Verandah Beam Spanning Tables

Roof Pitch: Over 20° to 35°  
Roof Type: Tile

Wind Classification: N3 and below  
W41N and below

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.82	5.53	5.30	5.11	4.94
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.5	14.1	15.7	17.3	18.7
U		1.93	2.46	2.95	3.38	3.77	4.15	4.77	6.09	7.32	8.49	9.61	10.7
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.65	6.00	5.61	5.32	5.10	4.91	4.76
D		4.42	5.11	5.69	6.23	6.74	7.23	10.3	12.0	13.6	15.1	16.6	18.0
U		1.89	2.40	2.83	3.23	3.61	3.96	4.67	5.93	7.11	8.23	9.30	10.3
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.75	3.57	3.42	5.72	5.35	5.07	4.86	4.68	4.53
D		4.24	4.85	5.39	5.89	6.37	6.83	9.85	11.5	13.0	14.5	15.9	17.2
U		1.83	2.28	2.68	3.05	3.40	3.73	4.52	5.72	6.84	7.90	8.91	9.89
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.53	5.25	5.03	4.85	4.70
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	12.0	13.6	15.1	16.5	17.9
U		1.83	2.33	2.76	3.15	3.52	3.88	4.53	5.78	6.96	8.07	9.13	10.2
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.55	3.40	5.69	5.33	5.05	4.84	4.66	4.52
D		4.26	4.87	5.40	5.91	6.38	6.84	9.91	11.5	13.1	14.5	15.9	17.3
U		1.79	2.24	2.64	3.01	3.36	3.70	4.43	5.63	6.75	7.82	8.83	9.81
125x75x2.0RHS	6.07	4.36	3.98	3.71	3.50	3.33	3.19	5.43	5.08	4.82	4.61	4.42	4.23
D		4.07	4.62	5.12	5.59	6.03	6.46	9.49	11.0	12.5	13.9	15.1	16.3
U		1.72	2.13	2.50	2.84	3.17	3.48	4.29	5.43	6.49	7.50	8.42	9.25
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.84	4.52	4.22	3.98	3.79	3.63
D		3.69	4.16	4.59	4.99	5.38	5.74	8.77	10.1	11.3	12.4	13.4	14.4
U		1.46	1.81	2.13	2.43	2.71	2.98	3.80	4.81	5.67	6.46	7.21	7.91
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.67	4.32	4.02	3.79	3.61	3.45
D		3.56	4.00	4.41	4.80	5.16	5.51	8.50	9.75	10.8	11.9	12.8	13.8
U		1.41	1.74	2.04	2.33	2.59	2.84	3.70	4.63	5.43	6.18	6.89	7.56
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.55	2.44	4.44	4.06	3.77	3.56	3.38	3.24
D		3.41	3.82	4.21	4.57	4.91	5.24	8.16	9.27	10.3	11.3	12.2	13.0
U		1.34	1.65	1.93	2.19	2.44	2.68	3.56	4.38	5.13	5.83	6.49	7.12
90x90x2.5SHS	6.74	3.75	3.43	3.20	3.02	2.87	2.75	4.86	4.54	4.25	4.01	3.81	3.65
D		3.71	4.18	4.61	5.02	5.40	5.77	8.81	10.2	11.4	12.4	13.5	14.4
U		1.47	1.82	2.15	2.45	2.73	3.00	3.81	4.83	5.70	6.50	7.25	7.96
90x90x2.0SHS	5.45	3.53	3.22	3.00	2.83	2.69	2.58	4.64	4.28	3.99	3.76	3.58	3.42
D		3.54	3.98	4.39	4.77	5.13	5.47	8.46	9.69	10.8	11.8	12.7	13.7
U		1.40	1.73	2.03	2.31	2.57	2.82	3.68	4.59	5.39	6.13	6.83	7.50
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.23	5.46	5.11	4.85	4.65	4.47	4.29
D		4.16	4.71	5.22	5.70	6.15	6.58	9.71	11.3	12.7	14.1	15.4	16.6
U		1.68	2.10	2.48	2.84	3.17	3.49	4.18	5.34	6.43	7.45	8.42	9.27
100x100x2.5SHS	7.53	4.17	3.82	3.56	3.36	3.20	3.06	5.26	4.92	4.67	4.46	4.25	4.07
D		3.99	4.52	5.00	5.45	5.88	6.29	9.37	10.9	12.3	13.6	14.7	15.8
U		1.62	2.02	2.38	2.71	3.03	3.33	4.09	5.20	6.24	7.21	8.05	8.84
100x100x2.0SHS	6.07	3.92	3.58	3.34	3.15	3.00	2.87	5.02	4.69	4.44	4.18	3.98	3.81
D		3.80	4.29	4.74	5.17	5.57	5.95	8.97	10.4	11.7	12.8	13.9	14.9
U		1.55	1.91	2.25	2.56	2.86	3.13	3.97	5.02	5.98	6.80	7.59	8.33

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Up to 20°  
**Roof Type:** Steel Sheet

**Wind Classification:** N4, C2  
**W50N,W50C**

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.70	5.28	4.97	4.74	4.55	4.40	7.06	6.53	5.89	5.37	4.97	4.64
D		3.41	3.79	4.16	4.51	4.85	5.18	7.79	8.74	9.35	9.86	10.3	10.8
U		8.15	10.1	11.9	13.7	15.4	17.0	20.2	25.0	28.3	31.0	33.6	35.9
150x50x2.5RHS	7.53	5.46	5.05	4.76	4.54	4.36	4.22	6.75	6.06	5.41	4.93	4.56	4.27
D		3.27	3.64	4.00	4.34	4.67	4.98	7.45	8.20	8.72	9.19	9.64	10.1
U		7.82	9.71	11.5	13.2	14.8	16.3	19.4	23.3	26.1	28.6	30.9	33.0
150x50x2.0RHS	6.07	5.17	4.79	4.52	4.31	4.07	3.81	6.25	5.40	4.82	4.40	4.07	3.81
D		3.12	3.48	3.82	4.15	4.41	4.60	6.99	7.51	7.98	8.41	8.82	9.19
U		7.44	9.23	10.9	12.5	13.8	14.8	18.0	20.8	23.3	25.5	27.6	29.5
125x75x3.0RHS	8.96	5.42	5.01	4.72	4.50	4.32	4.17	6.70	6.20	5.60	5.11	4.72	4.42
D		3.30	3.67	4.02	4.35	4.67	4.99	7.54	8.44	9.03	9.51	9.96	10.4
U		7.74	9.60	11.3	13.0	14.6	16.1	19.1	23.8	26.9	29.5	31.9	34.2
125x75x2.5RHS	7.53	5.18	4.80	4.52	4.31	4.08	3.81	6.26	5.41	4.83	4.41	4.08	3.81
D		3.17	3.53	3.87	4.19	4.45	4.64	7.11	7.61	8.07	8.50	8.90	9.27
U		7.43	9.22	10.9	12.5	13.8	14.8	18.0	20.8	23.3	25.5	27.6	29.5
125x75x2.0RHS	6.07	4.90	4.55	4.08	3.72	3.44	3.22	5.28	4.57	4.08	3.72	3.44	3.22
D		3.03	3.37	3.58	3.77	3.94	4.10	6.33	6.77	7.16	7.53	7.87	8.19
U		7.06	8.76	9.85	10.8	11.7	12.5	15.2	17.6	19.7	21.6	23.3	25.0
100x50x3.0RHS	6.60	4.38	4.06	3.83	3.65	3.48	3.32	5.42	4.74	4.23	3.86	3.57	3.34
D		2.87	3.17	3.46	3.73	3.97	4.19	6.45	6.95	7.36	7.73	8.09	8.42
U		6.30	7.81	9.23	10.6	11.8	12.9	15.6	18.2	20.4	22.4	24.2	25.9
100x50x2.5RHS	5.56	4.20	3.89	3.68	3.48	3.29	3.08	5.05	4.36	3.90	3.56	3.29	3.08
D		2.78	3.07	3.35	3.60	3.81	3.97	6.13	6.56	6.94	7.29	7.62	7.93
U		6.06	7.51	8.88	10.1	11.2	11.9	14.6	16.8	18.8	20.7	22.3	23.9
100x50x2.0RHS	4.50	3.99	3.70	3.46	3.18	2.95	2.76	4.52	3.91	3.49	3.18	2.95	2.76
D		2.68	2.96	3.21	3.39	3.53	3.67	5.71	6.10	6.45	6.77	7.07	7.35
U		5.77	7.16	8.37	9.26	10.0	10.7	13.1	15.1	16.9	18.5	20.0	21.4
90x90x2.5SHS	6.74	4.40	4.08	3.85	3.53	3.26	3.05	5.01	4.33	3.87	3.53	3.26	3.05
D		2.88	3.18	3.47	3.66	3.82	3.97	6.18	6.59	6.97	7.31	7.63	7.93
U		6.33	7.85	9.28	10.2	11.1	11.8	14.4	16.7	18.7	20.5	22.1	23.7
90x90x2.0SHS	5.45	4.17	3.67	3.27	2.99	2.76	2.58	4.24	3.67	3.27	2.99	2.76	2.58
D		2.77	2.97	3.13	3.28	3.42	3.55	5.58	5.94	6.26	6.56	6.83	7.09
U		6.02	7.07	7.92	8.68	9.38	10.0	12.2	14.1	15.8	17.4	18.8	20.1
100x100x3.0SHS	8.96	5.01	4.63	4.36	4.16	3.99	3.79	6.19	5.39	4.81	4.39	4.06	3.79
D		3.16	3.49	3.81	4.12	4.42	4.65	7.17	7.69	8.14	8.55	8.94	9.31
U		7.15	8.87	10.5	12.0	13.5	14.7	17.7	20.7	23.1	25.4	27.4	29.3
100x100x2.5SHS	7.53	4.79	4.43	4.18	3.82	3.54	3.31	5.43	4.69	4.19	3.82	3.54	3.31
D		3.04	3.36	3.67	3.87	4.04	4.20	6.53	6.96	7.36	7.73	8.07	8.40
U		6.87	8.52	10.1	11.1	12.0	12.8	15.6	18.0	20.2	22.1	23.9	25.6
100x100x2.0SHS	6.07	4.53	3.98	3.55	3.24	3.00	2.80	4.60	3.98	3.55	3.24	3.00	2.80
D		2.91	3.12	3.29	3.45	3.60	3.74	5.86	6.24	6.59	6.91	7.21	7.49
U		6.53	7.67	8.58	9.41	10.2	10.9	13.3	15.3	17.2	18.8	20.3	21.8

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

DuraGal® Verandah Beam Spanning Tables

Roof Pitch: Up to 20°  
Roof Type: Tile

Wind Classification: N4,C2  
W50N,W50C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.82	5.53	5.30	5.11	4.94
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.5	14.1	15.7	17.3	18.7
U		6.28	7.89	9.38	10.7	11.9	13.0	15.5	19.5	23.3	26.8	30.2	33.5
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.65	6.00	5.61	5.32	5.10	4.88	4.56
D		4.42	5.11	5.69	6.23	6.74	7.23	10.3	12.0	13.6	15.1	16.5	17.4
U		6.08	7.63	8.94	10.1	11.3	12.4	15.0	18.9	22.5	25.9	28.9	30.9
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.75	3.57	3.42	5.72	5.35	5.07	4.70	4.35	4.07
D		4.24	4.85	5.39	5.89	6.37	6.83	9.85	11.5	13.0	14.1	14.9	15.7
U		5.83	7.20	8.41	9.54	10.6	11.6	14.4	18.1	21.5	23.9	25.8	27.6
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.53	5.25	5.03	4.85	4.70
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	12.0	13.6	15.1	16.5	17.9
U		5.96	7.48	8.75	9.95	11.1	12.1	14.7	18.5	22.1	25.5	28.7	31.8
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.55	3.40	5.69	5.33	5.05	4.71	4.36	4.07
D		4.26	4.87	5.40	5.91	6.38	6.84	9.91	11.5	13.1	14.2	15.0	15.8
U		5.77	7.13	8.34	9.47	10.5	11.5	14.3	17.9	21.3	23.9	25.8	27.6
125x75x2.0RHS	6.07	4.36	3.98	3.71	3.50	3.33	3.19	5.43	4.88	4.36	3.98	3.68	3.44
D		4.07	4.62	5.12	5.59	6.03	6.46	9.49	10.7	11.6	12.3	13.1	13.7
U		5.49	6.72	7.85	8.90	9.89	10.8	13.7	16.5	18.4	20.2	21.9	23.4
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.84	4.52	4.22	3.98	3.79	3.57
D		3.69	4.16	4.59	4.99	5.38	5.74	8.77	10.1	11.3	12.4	13.4	14.2
U		4.69	5.75	6.72	7.62	8.47	9.28	12.2	15.2	17.8	20.2	22.5	24.2
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.67	4.32	4.02	3.79	3.51	3.29
D		3.56	4.00	4.41	4.80	5.16	5.51	8.50	9.75	10.8	11.9	12.6	13.2
U		4.49	5.49	6.41	7.26	8.07	8.84	11.8	14.6	17.0	19.3	20.9	22.4
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.55	2.44	4.44	4.06	3.73	3.40	3.15	2.94
D		3.41	3.82	4.21	4.57	4.91	5.24	8.16	9.27	10.2	10.9	11.5	12.1
U		4.23	5.17	6.03	6.83	7.58	8.31	11.3	13.7	15.8	17.3	18.7	20.0
90x90x2.5SHS	6.74	3.75	3.43	3.20	3.02	2.87	2.75	4.86	4.54	4.13	3.77	3.49	3.26
D		3.71	4.18	4.61	5.02	5.40	5.77	8.81	10.2	11.1	11.9	12.5	13.2
U		4.72	5.78	6.76	7.66	8.52	9.34	12.2	15.3	17.5	19.2	20.7	22.2
90x90x2.0SHS	5.45	3.53	3.22	3.00	2.83	2.69	2.58	4.53	3.92	3.50	3.19	2.95	2.76
D		3.54	3.98	4.39	4.77	5.13	5.47	8.33	9.10	9.78	10.4	11.0	11.5
U		4.45	5.44	6.35	7.20	8.00	8.77	11.4	13.2	14.8	16.2	17.6	18.8
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.23	5.46	5.11	4.85	4.65	4.34	4.05
D		4.16	4.71	5.22	5.70	6.15	6.58	9.71	11.3	12.7	14.1	15.1	15.8
U		5.47	6.73	7.88	8.95	9.97	10.9	13.6	17.1	20.4	23.5	25.7	27.5
100x100x2.5SHS	7.53	4.17	3.82	3.56	3.36	3.20	3.06	5.26	4.92	4.48	4.08	3.78	3.53
D		3.99	4.52	5.00	5.45	5.88	6.29	9.37	10.9	11.9	12.7	13.4	14.1
U		5.23	6.42	7.51	8.53	9.48	10.4	13.2	16.6	18.9	20.7	22.4	24.0
100x100x2.0SHS	6.07	3.92	3.58	3.34	3.15	3.00	2.87	4.92	4.25	3.80	3.46	3.20	3.00
D		3.80	4.29	4.74	5.17	5.57	5.95	8.85	9.67	10.4	11.1	11.7	12.3
U		4.94	6.05	7.06	8.01	8.90	9.75	12.4	14.3	16.1	17.6	19.0	20.4

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Over 20° to 35°  
**Roof Type:** Steel Sheet

**Wind Classification:** N4,C2  
**W50N,W50C**

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.94	5.64	5.37	5.16	4.99	4.84	7.40	6.97	6.65	6.39	6.14	5.74
D		3.49	3.96	4.39	4.79	5.18	5.56	8.04	9.16	10.2	11.2	12.1	12.7
U		5.50	7.03	8.42	9.74	11.0	12.2	13.7	17.4	20.8	24.1	27.1	29.0
150x50x2.5RHS	7.53	5.72	5.45	5.19	4.98	4.81	4.66	7.17	6.74	6.42	6.10	5.64	5.28
D		3.36	3.82	4.23	4.63	5.00	5.37	7.75	8.82	9.84	10.7	11.3	11.8
U		5.33	6.82	8.16	9.42	10.6	11.8	13.4	16.9	20.2	23.1	25.0	26.7
150x50x2.0RHS	6.07	5.44	5.18	4.96	4.75	4.59	4.43	6.85	6.45	5.97	5.44	5.03	4.70
D		3.22	3.66	4.06	4.44	4.80	5.13	7.40	8.44	9.23	9.76	10.3	10.7
U		5.10	6.52	7.82	9.03	10.2	11.2	12.8	16.2	18.8	20.7	22.3	23.9
125x75x3.0RHS	8.96	5.62	5.35	5.10	4.90	4.73	4.59	7.03	6.62	6.31	6.06	5.84	5.46
D		3.38	3.83	4.23	4.62	4.99	5.35	7.77	8.83	9.83	10.8	11.7	12.2
U		5.20	6.67	7.99	9.25	10.5	11.6	13.0	16.5	19.8	22.9	25.8	27.6
125x75x2.5RHS	7.53	5.41	5.15	4.93	4.73	4.56	4.40	6.80	6.40	5.98	5.45	5.04	4.71
D		3.25	3.69	4.09	4.46	4.82	5.14	7.49	8.51	9.35	9.88	10.4	10.8
U		5.04	6.45	7.74	8.95	10.1	11.1	12.7	16.0	18.8	20.6	22.3	23.9
125x75x2.0RHS	6.07	5.14	4.90	4.71	4.51	4.26	3.98	6.48	5.65	5.05	4.60	4.26	3.98
D		3.11	3.53	3.93	4.28	4.55	4.74	7.15	7.73	8.22	8.67	9.09	9.49
U		4.82	6.16	7.43	8.57	9.44	10.1	12.1	14.2	15.9	17.5	18.9	20.2
100x50x3.0RHS	6.60	4.53	4.32	4.09	3.87	3.69	3.54	5.71	5.44	5.18	4.77	4.41	4.13
D		2.92	3.29	3.60	3.87	4.13	4.38	6.66	7.58	8.40	8.93	9.36	9.77
U		4.23	5.43	6.44	7.34	8.18	8.98	10.7	13.7	16.3	18.1	19.6	20.9
100x50x2.5RHS	5.56	4.35	4.16	3.90	3.69	3.52	3.37	5.50	5.23	4.82	4.40	4.07	3.80
D		2.83	3.19	3.47	3.73	3.98	4.22	6.44	7.33	7.95	8.38	8.78	9.16
U		4.09	5.24	6.17	7.01	7.81	8.57	10.3	13.2	15.2	16.7	18.1	19.3
100x50x2.0RHS	4.50	4.14	3.94	3.68	3.47	3.31	3.17	5.23	4.83	4.31	3.93	3.64	3.40
D		2.73	3.06	3.33	3.57	3.80	4.02	6.19	6.91	7.34	7.73	8.10	8.44
U		3.91	4.98	5.82	6.61	7.36	8.07	9.87	12.2	13.7	15.0	16.2	17.3
90x90x2.5SHS	6.74	4.55	4.34	4.11	3.89	3.71	3.56	5.74	5.36	4.79	4.36	4.04	3.77
D		2.93	3.30	3.62	3.89	4.15	4.40	6.68	7.52	7.98	8.40	8.80	9.17
U		4.25	5.45	6.48	7.38	8.22	9.03	10.7	13.5	15.1	16.5	17.9	19.1
90x90x2.0SHS	5.45	4.32	4.13	3.87	3.66	3.42	3.19	5.25	4.54	4.05	3.69	3.42	3.19
D		2.82	3.17	3.45	3.71	3.90	4.06	6.26	6.70	7.10	7.47	7.81	8.13
U		4.06	5.20	6.12	6.96	7.59	8.12	9.87	11.4	12.8	14.0	15.2	16.2
100x100x3.0SHS	8.96	5.16	4.92	4.72	4.53	4.33	4.16	6.49	6.12	5.83	5.43	5.02	4.69
D		3.21	3.63	4.01	4.37	4.68	4.97	7.39	8.37	9.29	9.94	10.4	10.9
U		4.78	6.14	7.39	8.55	9.57	10.5	12.0	15.3	18.3	20.5	22.2	23.7
100x100x2.5SHS	7.53	4.96	4.73	4.55	4.33	4.13	3.96	6.25	5.81	5.19	4.73	4.37	4.09
D		3.10	3.50	3.88	4.20	4.49	4.76	7.10	7.98	8.47	8.92	9.35	9.75
U		4.62	5.93	7.16	8.19	9.13	10.0	11.6	14.6	16.3	17.9	19.4	20.7
100x100x2.0SHS	6.07	4.72	4.50	4.30	4.01	3.71	3.47	5.70	4.92	4.40	4.01	3.71	3.47
D		2.97	3.35	3.70	3.95	4.14	4.31	6.62	7.08	7.51	7.90	8.27	8.61
U		4.42	5.66	6.79	7.61	8.23	8.80	10.7	12.4	13.9	15.2	16.5	17.6

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

DuraGal® Verandah Beam Spanning Tables

Roof Pitch: Over 20° to 35°  
Roof Type: Tile

Wind Classification: N4,C2  
W50N,W50C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.82	5.53	5.30	5.11	4.94
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.5	14.1	15.7	17.3	18.7
U		3.75	4.74	5.65	6.43	7.16	7.87	9.28	11.7	14.0	16.2	18.3	20.3
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.65	6.00	5.61	5.32	5.10	4.91	4.76
D		4.42	5.11	5.69	6.23	6.74	7.23	10.3	12.0	13.6	15.1	16.6	18.0
U		3.64	4.59	5.39	6.13	6.83	7.49	9.02	11.4	13.5	15.6	17.6	19.5
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.75	3.57	3.42	5.72	5.35	5.07	4.86	4.68	4.53
D		4.24	4.85	5.39	5.89	6.37	6.83	9.85	11.5	13.0	14.5	15.9	17.2
U		3.50	4.34	5.08	5.77	6.42	7.04	8.67	10.9	13.0	14.9	16.8	18.7
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.53	5.25	5.03	4.85	4.70
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	12.0	13.6	15.1	16.5	17.9
U		3.56	4.49	5.27	6.00	6.69	7.34	8.81	11.1	13.3	15.4	17.3	19.2
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.55	3.40	5.69	5.33	5.05	4.84	4.66	4.52
D		4.26	4.87	5.40	5.91	6.38	6.84	9.91	11.5	13.1	14.5	15.9	17.3
U		3.46	4.29	5.03	5.72	6.37	6.99	8.56	10.8	12.9	14.8	16.7	18.5
125x75x2.0RHS	6.07	4.36	3.98	3.71	3.50	3.33	3.19	5.43	5.08	4.82	4.61	4.42	4.23
D		4.07	4.62	5.12	5.59	6.03	6.46	9.49	11.0	12.5	13.9	15.1	16.3
U		3.30	4.05	4.74	5.38	5.99	6.56	8.23	10.3	12.3	14.2	15.9	17.4
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.84	4.52	4.22	3.98	3.79	3.63
D		3.69	4.16	4.59	4.99	5.38	5.74	8.77	10.1	11.3	12.4	13.4	14.4
U		2.82	3.46	4.06	4.61	5.13	5.62	7.31	9.19	10.8	12.2	13.6	14.9
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.67	4.32	4.02	3.79	3.61	3.45
D		3.56	4.00	4.41	4.80	5.16	5.51	8.50	9.75	10.8	11.9	12.8	13.8
U		2.70	3.31	3.87	4.40	4.89	5.36	7.09	8.80	10.3	11.7	13.0	14.2
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.55	2.44	4.44	4.06	3.77	3.56	3.38	3.24
D		3.41	3.82	4.21	4.57	4.91	5.24	8.16	9.27	10.3	11.3	12.2	13.0
U		2.55	3.13	3.65	4.14	4.60	5.04	6.79	8.30	9.69	11.0	12.2	13.4
90x90x2.5SHS	6.74	3.75	3.43	3.20	3.02	2.87	2.75	4.86	4.54	4.25	4.01	3.81	3.65
D		3.71	4.18	4.61	5.02	5.40	5.77	8.81	10.2	11.4	12.4	13.5	14.4
U		2.83	3.48	4.08	4.63	5.16	5.66	7.33	9.22	10.8	12.3	13.7	15.0
90x90x2.0SHS	5.45	3.53	3.22	3.00	2.83	2.69	2.58	4.64	4.28	3.99	3.76	3.58	3.42
D		3.54	3.98	4.39	4.77	5.13	5.47	8.46	9.69	10.8	11.8	12.7	13.7
U		2.68	3.29	3.84	4.36	4.85	5.31	7.05	8.73	10.2	11.6	12.9	14.1
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.23	5.46	5.11	4.85	4.65	4.47	4.29
D		4.16	4.71	5.22	5.70	6.15	6.58	9.71	11.3	12.7	14.1	15.4	16.6
U		3.27	4.04	4.74	5.40	6.02	6.61	8.14	10.3	12.3	14.2	16.0	17.6
100x100x2.5SHS	7.53	4.17	3.82	3.56	3.36	3.20	3.06	5.26	4.92	4.67	4.46	4.25	4.07
D		3.99	4.52	5.00	5.45	5.88	6.29	9.37	10.9	12.3	13.6	14.7	15.8
U		3.14	3.86	4.53	5.15	5.74	6.29	7.91	9.96	11.9	13.7	15.2	16.7
100x100x2.0SHS	6.07	3.58	3.34	3.15	3.00	2.87	2.75	4.69	4.44	4.18	3.98	3.81	3.65
D		3.80	4.29	4.74	5.17	5.57	5.95	8.97	10.4	11.7	12.8	13.9	14.9
U		2.97	3.65	4.27	4.85	5.39	5.91	7.61	9.56	11.3	12.9	14.3	15.7

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Up to 20°  
**Roof Type:** Steel Sheet

**Wind Classification:** N5,C3  
W60N,W60C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.01	4.64	4.38	4.18	4.02	3.76	6.17	5.34	4.77	4.35	4.02	3.76
D		3.16	3.50	3.82	4.14	4.44	4.63	7.16	7.64	8.08	8.50	8.89	9.25
U		10.9	13.6	16.1	18.4	20.7	22.2	27.0	31.2	35.0	38.3	41.4	44.3
150x50x2.5RHS	7.53	4.80	4.45	4.20	4.00	3.70	3.46	5.67	4.90	4.38	4.00	3.70	3.46
D		3.04	3.37	3.69	3.98	4.16	4.33	6.69	7.15	7.57	7.96	8.32	8.66
U		10.5	13.0	15.4	17.6	19.1	20.4	24.9	28.8	32.2	35.3	38.1	40.8
150x50x2.0RHS	6.07	4.55	4.22	3.91	3.57	3.30	3.09	5.06	4.37	3.91	3.57	3.30	3.09
D		2.91	3.23	3.49	3.66	3.83	3.98	6.17	6.59	6.98	7.33	7.66	7.97
U		10.0	12.4	14.4	15.8	17.0	18.2	22.2	25.7	28.8	31.5	34.1	36.4
125x75x3.0RHS	8.96	4.75	4.41	4.16	3.97	3.81	3.58	5.87	5.07	4.53	4.14	3.83	3.58
D		3.07	3.39	3.70	4.00	4.28	4.47	6.94	7.40	7.82	8.22	8.58	8.93
U		10.4	12.9	15.3	17.5	19.6	21.1	25.7	29.7	33.3	36.5	39.4	42.1
125x75x2.5RHS	7.53	4.55	4.22	3.91	3.57	3.30	3.09	5.07	4.38	3.91	3.57	3.30	3.09
D		2.95	3.27	3.53	3.70	3.86	4.01	6.27	6.68	7.05	7.40	7.72	8.03
U		9.98	12.4	14.4	15.8	17.0	18.2	22.2	25.7	28.8	31.5	34.1	36.4
125x75x2.0RHS	6.07	4.28	3.70	3.31	3.02	2.79	2.61	4.28	3.70	3.31	3.02	2.79	2.61
D		2.82	3.00	3.16	3.31	3.45	3.58	5.64	5.99	6.32	6.62	6.89	7.15
U		9.40	10.9	12.2	13.3	14.4	15.4	18.8	21.7	24.3	26.7	28.8	30.8
100x50x3.0RHS	6.60	3.85	3.57	3.30	3.11	2.89	2.71	4.43	3.84	3.43	3.13	2.89	2.71
D		2.68	2.95	3.17	3.38	3.53	3.67	5.77	6.14	6.47	6.78	7.07	7.33
U		8.46	10.5	12.2	13.7	14.9	16.0	19.5	22.5	25.2	27.6	29.8	31.9
100x50x2.5RHS	5.56	3.70	3.38	3.13	2.88	2.67	2.49	4.09	3.53	3.16	2.88	2.67	2.49
D		2.61	2.85	3.06	3.21	3.35	3.47	5.48	5.82	6.14	6.42	6.69	6.94
U		8.14	9.95	11.5	12.7	13.8	14.7	18.0	20.8	23.3	25.5	27.5	29.4
100x50x2.0RHS	4.50	3.49	3.16	2.83	2.58	2.39	2.23	3.66	3.16	2.83	2.58	2.39	2.23
D		2.51	2.73	2.87	3.00	3.12	3.23	5.14	5.46	5.74	6.00	6.24	6.47
U		7.69	9.31	10.4	11.4	12.3	13.2	16.1	18.6	20.8	22.8	24.7	26.4
90x90x2.5SHS	6.74	3.87	3.51	3.13	2.86	2.65	2.47	4.06	3.51	3.13	2.86	2.65	2.47
D		2.69	2.93	3.08	3.22	3.35	3.47	5.52	5.85	6.16	6.44	6.70	6.94
U		8.50	10.3	11.5	12.6	13.6	14.6	17.8	20.6	23.0	25.3	27.3	29.2
90x90x2.0SHS	5.45	3.43	2.97	2.65	2.42	2.24	2.10	3.43	2.97	2.65	2.42	2.24	2.10
D		2.51	2.66	2.79	2.91	3.02	3.13	5.03	5.32	5.58	5.83	6.05	6.26
U		7.55	8.73	9.77	10.7	11.6	12.4	15.1	17.5	19.5	21.4	23.1	24.7
100x100x3.0SHS	8.96	4.39	4.07	3.84	3.55	3.29	3.07	5.05	4.36	3.90	3.55	3.29	3.07
D		2.94	3.24	3.52	3.72	3.88	4.03	6.34	6.74	7.10	7.44	7.76	8.05
U		9.60	11.9	14.1	15.7	16.9	18.1	22.1	25.5	28.6	31.3	33.9	36.2
100x100x2.5SHS	7.53	4.21	3.80	3.39	3.10	2.87	2.68	4.39	3.80	3.39	3.10	2.87	2.68
D		2.83	3.08	3.24	3.39	3.53	3.66	5.79	6.15	6.48	6.78	7.06	7.32
U		9.23	11.1	12.5	13.7	14.8	15.8	19.3	22.3	24.9	27.3	29.5	31.6
100x100x2.0SHS	6.07	3.73	3.22	2.88	2.63	2.43	2.27	3.73	3.22	2.88	2.63	2.43	2.27
D		2.63	2.78	2.93	3.06	3.18	3.29	5.26	5.57	5.85	6.11	6.35	6.58
U		8.19	9.47	10.6	11.6	12.5	13.4	16.4	18.9	21.2	23.2	25.1	26.8

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
  - Serviceability  $G + 0.7Q$  span/180 max deflection 20mm
  - $G + W_s$  span/180 max deflection 20mm
  - $G$  span/360 max deflection 12.5mm
  - $0.7Q$  span/240 max deflection 15mm
  - Strength  $1.25G + 1.5Q$ ;  $0.8G + W_u$
- $G = 0.4$  kPa for steel sheet roof,  $G = 0.9$  kPa for tile roof.  
 $Q = (0.12 + 1.8/\text{Area supported})$  but not less than 0.25 kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

Roof Pitch: Up to 20°  
Roof Type: Tile

Wind Classification: N5, C3  
W60N, W60C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.57	4.97	4.54	4.20	3.92
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.0	13.0	13.9	14.7	15.4
U		10.1	12.6	15.0	17.0	19.0	20.8	25.0	29.9	33.5	36.7	39.7	42.5
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.61	5.92	5.12	4.57	4.17	3.86	3.61
D		4.42	5.11	5.69	6.23	6.74	7.17	10.2	11.2	12.1	12.9	13.6	14.3
U		9.75	12.2	14.3	16.2	18.0	19.5	23.8	27.6	30.8	33.8	36.5	39.1
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.72	3.44	3.22	5.28	4.56	4.08	3.72	3.44	3.22
D		4.24	4.85	5.39	5.86	6.20	6.51	9.29	10.2	11.0	11.7	12.4	13.0
U		9.34	11.5	13.4	15.1	16.3	17.5	21.3	24.6	27.6	30.2	32.6	34.9
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.30	4.73	4.32	3.99	3.73
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	11.6	12.5	13.3	14.1	14.8
U		9.58	12.0	14.0	15.9	17.7	19.4	23.7	28.5	31.9	34.9	37.8	40.4
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.45	3.22	5.29	4.57	4.08	3.73	3.45	3.22
D		4.26	4.87	5.40	5.90	6.23	6.55	9.40	10.3	11.1	11.8	12.5	13.1
U		9.26	11.4	13.3	15.1	16.3	17.5	21.3	24.6	27.6	30.2	32.6	34.9
125x75x2.0RHS	6.07	4.36	3.86	3.45	3.15	2.91	2.72	4.46	3.86	3.45	3.15	2.91	2.72
D		4.07	4.52	4.85	5.16	5.45	5.72	8.27	9.03	9.71	10.3	10.9	11.4
U		8.79	10.4	11.7	12.8	13.8	14.8	18.0	20.8	23.3	25.5	27.6	29.5
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.63	4.00	3.58	3.26	3.02	2.82
D		3.69	4.16	4.59	4.99	5.38	5.74	8.51	9.29	9.99	10.6	11.2	11.8
U		7.52	9.20	10.7	12.2	13.5	14.8	18.7	21.6	24.2	26.5	28.6	30.6
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.26	3.69	3.30	3.01	2.78	2.60
D		3.56	4.00	4.41	4.80	5.16	5.51	8.00	8.73	9.38	9.97	10.5	11.0
U		7.18	8.77	10.2	11.6	12.9	14.1	17.2	19.9	22.3	24.4	26.4	28.2
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.49	2.33	3.82	3.30	2.95	2.69	2.49	2.33
D		3.41	3.82	4.21	4.57	4.83	5.06	7.39	8.05	8.64	9.17	9.67	10.1
U		6.77	8.26	9.62	10.9	11.8	12.7	15.5	17.9	20.0	21.9	23.7	25.3
90x90x2.5SHS	6.74	3.75	3.43	3.20	2.98	2.76	2.58	4.23	3.66	3.27	2.98	2.76	2.58
D		3.71	4.18	4.61	4.98	5.25	5.50	8.02	8.73	9.37	9.96	10.5	11.0
U		7.56	9.25	10.8	12.1	13.1	14.0	17.1	19.7	22.1	24.2	26.2	28.0
90x90x2.0SHS	5.45	3.53	3.10	2.77	2.53	2.34	2.19	3.58	3.10	2.77	2.53	2.34	2.19
D		3.54	3.88	4.15	4.40	4.63	4.85	7.15	7.76	8.30	8.80	9.26	9.69
U		7.13	8.37	9.36	10.3	11.1	11.9	14.5	16.7	18.7	20.5	22.2	23.7
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.21	5.27	4.55	4.07	3.71	3.43	3.21
D		4.16	4.71	5.22	5.70	6.15	6.55	9.46	10.3	11.1	11.8	12.5	13.1
U		8.79	10.8	12.6	14.3	15.9	17.4	21.1	24.5	27.4	30.0	32.4	34.7
100x100x2.5SHS	7.53	4.17	3.82	3.54	3.23	2.99	2.80	4.59	3.96	3.54	3.23	2.99	2.80
D		3.99	4.52	4.98	5.29	5.58	5.86	8.51	9.27	9.96	10.6	11.2	11.7
U		8.40	10.3	11.9	13.1	14.2	15.1	18.5	21.3	23.9	26.2	28.3	30.3
100x100x2.0SHS	6.07	3.89	3.36	3.00	2.74	2.54	2.37	3.89	3.36	3.00	2.74	2.54	2.37
D		3.78	4.11	4.40	4.67	4.92	5.15	7.56	8.22	8.81	9.34	9.84	10.3
U		7.85	9.07	10.2	11.1	12.0	12.9	15.7	18.1	20.3	22.3	24.0	25.7

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Over 20° to 35°  
**Roof Type:** Steel Sheet

**Wind Classification:** N5, C3  
**W60N, W60C**

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.71	5.28	4.97	4.74	4.55	4.40	7.06	6.53	5.85	5.33	4.93	4.61
D		3.41	3.79	4.16	4.51	4.85	5.18	7.80	8.75	9.31	9.81	10.3	10.7
U		8.26	10.2	12.1	13.9	15.6	17.2	20.4	25.4	28.5	31.2	33.8	36.1
150x50x2.5RHS	7.53	5.46	5.05	4.77	4.54	4.37	4.22	6.76	6.02	5.37	4.90	4.53	4.24
D		3.27	3.65	4.00	4.34	4.67	4.99	7.46	8.17	8.68	9.15	9.59	10.0
U		7.93	9.84	11.6	13.3	15.0	16.6	19.6	23.4	26.2	28.8	31.1	33.3
150x50x2.0RHS	6.07	5.17	4.79	4.52	4.31	4.04	3.78	6.21	5.36	4.79	4.37	4.04	3.78
D		3.12	3.48	3.82	4.15	4.39	4.58	6.96	7.48	7.94	8.38	8.78	9.15
U		7.54	9.36	11.1	12.7	13.9	14.9	18.1	21.0	23.5	25.7	27.8	29.7
125x75x3.0RHS	8.96	5.42	5.01	4.72	4.50	4.32	4.18	6.71	6.20	5.56	5.07	4.69	4.39
D		3.31	3.67	4.02	4.35	4.67	4.99	7.54	8.44	8.99	9.47	9.92	10.3
U		7.84	9.73	11.5	13.2	14.8	16.4	19.4	24.1	27.1	29.7	32.1	34.4
125x75x2.5RHS	7.53	5.18	4.80	4.53	4.31	4.05	3.79	6.22	5.38	4.80	4.38	4.05	3.79
D		3.18	3.53	3.87	4.19	4.43	4.61	7.08	7.58	8.04	8.46	8.86	9.23
U		7.53	9.34	11.0	12.7	13.9	14.9	18.1	20.9	23.4	25.7	27.8	29.7
125x75x2.0RHS	6.07	4.91	4.54	4.05	3.70	3.42	3.20	5.25	4.54	4.05	3.70	3.42	3.20
D		3.03	3.37	3.57	3.75	3.92	4.08	6.30	6.74	7.14	7.50	7.84	8.16
U		7.16	8.86	9.92	10.9	11.8	12.6	15.3	17.7	19.8	21.7	23.5	25.1
100x50x3.0RHS	6.60	4.38	4.06	3.83	3.65	3.48	3.32	5.42	4.71	4.20	3.83	3.55	3.32
D		2.87	3.17	3.46	3.73	3.97	4.19	6.46	6.92	7.33	7.70	8.05	8.38
U		6.38	7.92	9.36	10.7	11.9	13.0	15.8	18.4	20.6	22.5	24.4	26.0
100x50x2.5RHS	5.56	4.20	3.90	3.68	3.48	3.27	3.06	5.01	4.33	3.87	3.53	3.27	3.06
D		2.78	3.07	3.35	3.60	3.80	3.95	6.11	6.53	6.91	7.26	7.59	7.90
U		6.14	7.62	9.00	10.2	11.2	12.0	14.6	16.9	19.0	20.8	22.5	24.0
100x50x2.0RHS	4.50	3.99	3.70	3.46	3.16	2.93	2.74	4.49	3.88	3.47	3.16	2.93	2.74
D		2.68	2.96	3.21	3.37	3.52	3.66	5.69	6.08	6.43	6.75	7.04	7.32
U		5.85	7.25	8.49	9.32	10.1	10.8	13.1	15.2	17.0	18.6	20.1	21.5
90x90x2.5SHS	6.74	4.40	4.08	3.84	3.51	3.24	3.03	4.98	4.30	3.84	3.51	3.24	3.03
D		2.88	3.18	3.47	3.64	3.80	3.95	6.16	6.57	6.94	7.28	7.60	7.90
U		6.41	7.96	9.40	10.3	11.1	11.9	14.5	16.8	18.8	20.6	22.3	23.8
90x90x2.0SHS	5.45	4.17	3.64	3.25	2.97	2.75	2.57	4.21	3.64	3.25	2.97	2.75	2.57
D		2.77	2.96	3.12	3.27	3.40	3.53	5.56	5.91	6.24	6.53	6.80	7.06
U		6.10	7.12	7.97	8.74	9.44	10.1	12.3	14.2	15.9	17.5	18.9	20.2
100x100x3.0SHS	8.96	5.01	4.63	4.36	4.16	4.00	3.77	6.20	5.35	4.78	4.36	4.03	3.77
D		3.16	3.49	3.82	4.12	4.42	4.63	7.17	7.66	8.10	8.51	8.90	9.26
U		7.25	8.99	10.6	12.2	13.7	14.8	17.9	20.8	23.3	25.5	27.6	29.5
100x100x2.5SHS	7.53	4.79	4.44	4.16	3.80	3.51	3.28	5.40	4.66	4.16	3.80	3.51	3.28
D		3.04	3.36	3.67	3.85	4.02	4.18	6.50	6.93	7.33	7.70	8.04	8.36
U		6.96	8.64	10.2	11.1	12.0	12.9	15.7	18.2	20.3	22.3	24.1	25.8
100x100x2.0SHS	6.07	4.54	3.95	3.53	3.22	2.98	2.79	4.57	3.95	3.53	3.22	2.98	2.79
D		2.91	3.11	3.28	3.44	3.59	3.73	5.84	6.22	6.56	6.88	7.18	7.45
U		6.62	7.72	8.64	9.47	10.2	10.9	13.3	15.4	17.3	18.9	20.5	21.9

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

DuraGal® Verandah Beam Spanning Tables

Roof Pitch: Over 20° to 35°  
Roof Type: Tile

Wind Classification: N5, C3  
W60N, W60C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.82	5.53	5.30	5.11	4.92
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.5	14.1	15.7	17.3	18.7
U		6.37	8.01	9.52	10.8	12.0	13.2	15.8	19.8	23.6	27.2	30.7	33.8
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.65	6.00	5.61	5.32	5.10	4.84	4.52
D		4.42	5.11	5.69	6.23	6.74	7.23	10.3	12.0	13.6	15.1	16.4	17.3
U		6.17	7.74	9.07	10.3	11.5	12.6	15.3	19.2	22.8	26.3	29.1	31.2
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.75	3.57	3.42	5.72	5.35	5.07	4.67	4.32	4.04
D		4.24	4.85	5.39	5.89	6.37	6.83	9.85	11.5	13.0	14.0	14.9	15.6
U		5.92	7.31	8.53	9.68	10.8	11.8	14.6	18.3	21.8	24.1	26.0	27.8
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.53	5.25	5.03	4.85	4.68
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	12.0	13.6	15.1	16.5	17.9
U		6.05	7.59	8.89	10.1	11.2	12.3	15.0	18.8	22.4	25.8	29.1	32.2
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.55	3.40	5.69	5.33	5.05	4.67	4.32	4.04
D		4.26	4.87	5.40	5.91	6.38	6.84	9.91	11.5	13.1	14.1	14.9	15.7
U		5.86	7.24	8.47	9.61	10.7	11.7	14.5	18.2	21.6	24.1	26.0	27.8
125x75x2.0RHS	6.07	4.36	3.98	3.71	3.50	3.33	3.19	5.43	4.84	4.33	3.95	3.65	3.41
D		4.07	4.62	5.12	5.59	6.03	6.46	9.49	10.6	11.5	12.3	13.0	13.6
U		5.57	6.82	7.96	9.03	10.0	11.0	13.9	16.6	18.6	20.4	22.0	23.5
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.84	4.52	4.22	3.98	3.79	3.54
D		3.69	4.16	4.59	4.99	5.38	5.74	8.77	10.1	11.3	12.4	13.4	14.1
U		4.76	5.83	6.82	7.73	8.60	9.42	12.4	15.5	18.1	20.5	22.8	24.4
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.67	4.32	4.02	3.77	3.49	3.26
D		3.56	4.00	4.41	4.80	5.16	5.51	8.50	9.75	10.8	11.8	12.5	13.1
U		4.55	5.57	6.50	7.37	8.19	8.97	12.0	14.8	17.3	19.5	21.1	22.5
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.55	2.44	4.44	4.06	3.70	3.38	3.12	2.92
D		3.41	3.82	4.21	4.57	4.91	5.24	8.16	9.27	10.1	10.8	11.4	12.0
U		4.30	5.25	6.12	6.93	7.70	8.43	11.4	13.9	15.9	17.5	18.9	20.2
90x90x2.5SHS	6.74	3.75	3.43	3.20	3.02	2.87	2.75	4.86	4.54	4.10	3.74	3.46	3.24
D		3.71	4.18	4.61	5.02	5.40	5.77	8.81	10.2	11.1	11.8	12.5	13.1
U		4.79	5.87	6.86	7.78	8.65	9.48	12.4	15.5	17.6	19.3	20.9	22.3
90x90x2.0SHS	5.45	3.53	3.22	3.00	2.83	2.69	2.58	4.50	3.89	3.47	3.17	2.93	2.74
D		3.54	3.98	4.39	4.77	5.13	5.47	8.28	9.05	9.73	10.4	10.9	11.5
U		4.52	5.53	6.45	7.31	8.12	8.90	11.5	13.3	14.9	16.4	17.7	18.9
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.23	5.46	5.11	4.85	4.65	4.30	4.02
D		4.16	4.71	5.22	5.70	6.15	6.58	9.71	11.3	12.7	14.1	15.0	15.7
U		5.55	6.83	8.00	9.09	10.1	11.1	13.8	17.4	20.7	23.9	25.9	27.7
100x100x2.5SHS	7.53	4.17	3.82	3.56	3.36	3.20	3.06	5.26	4.92	4.45	4.05	3.75	3.51
D		3.99	4.52	5.00	5.45	5.88	6.29	9.37	10.9	11.8	12.6	13.3	14.0
U		5.31	6.52	7.62	8.65	9.63	10.6	13.4	16.8	19.0	20.9	22.6	24.1
100x100x2.0SHS	6.07	3.92	3.58	3.34	3.15	3.00	2.87	4.88	4.22	3.77	3.44	3.18	2.97
D		3.80	4.29	4.74	5.17	5.57	5.95	8.80	9.62	10.4	11.0	11.7	12.2
U		5.02	6.14	7.17	8.13	9.04	9.90	12.5	14.5	16.2	17.7	19.2	20.5

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Up to 20°  
**Roof Type:** Steel Sheet

**Wind Classification:** N6, C4  
W70N, W70C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	4.54	4.21	3.98	3.71	3.43	3.21	5.26	4.55	4.06	3.71	3.43	3.21
D		2.99	3.30	3.60	3.82	3.99	4.14	6.49	6.91	7.29	7.64	7.97	8.29
U		13.7	17.0	20.1	22.5	24.3	26.0	31.7	36.7	41.0	45.0	48.6	52.0
150x50x2.5RHS	7.53	4.35	4.04	3.73	3.41	3.15	2.95	4.83	4.18	3.73	3.41	3.15	2.95
D		2.88	3.18	3.43	3.59	3.75	3.89	6.10	6.49	6.85	7.18	7.49	7.78
U		13.1	16.3	18.9	20.7	22.4	23.9	29.2	33.7	37.8	41.4	44.7	47.8
150x50x2.0RHS	6.07	4.13	3.73	3.33	3.04	2.81	2.63	4.31	3.73	3.33	3.04	2.81	2.63
D		2.77	3.01	3.17	3.32	3.46	3.60	5.66	6.02	6.35	6.65	6.93	7.19
U		12.5	15.1	16.9	18.5	20.0	21.4	26.1	30.2	33.7	37.0	39.9	42.7
125x75x3.0RHS	8.96	4.31	4.00	3.78	3.53	3.26	3.05	5.00	4.32	3.86	3.53	3.26	3.05
D		2.90	3.20	3.48	3.70	3.86	4.01	6.31	6.70	7.07	7.40	7.72	8.01
U		13.0	16.1	19.1	21.4	23.1	24.7	30.2	34.9	39.0	42.8	46.2	49.4
125x75x2.5RHS	7.53	4.13	3.73	3.34	3.04	2.82	2.63	4.32	3.73	3.34	3.04	2.82	2.63
D		2.80	3.04	3.21	3.35	3.49	3.62	5.74	6.09	6.41	6.71	6.98	7.24
U		12.5	15.1	16.9	18.5	20.0	21.4	26.1	30.1	33.7	37.0	39.9	42.7
125x75x2.0RHS	6.07	3.64	3.15	2.82	2.57	2.38	2.23	3.64	3.15	2.82	2.57	2.38	2.23
D		2.60	2.75	2.89	3.02	3.14	3.25	5.20	5.51	5.78	6.04	6.28	6.50
U		11.0	12.7	14.3	15.6	16.9	18.1	22.1	25.5	28.5	31.3	33.8	36.1
100x50x3.0RHS	6.60	3.46	3.14	2.91	2.67	2.47	2.31	3.78	3.27	2.92	2.67	2.47	2.31
D		2.55	2.76	2.95	3.09	3.21	3.33	5.32	5.63	5.92	6.18	6.42	6.65
U		10.5	12.7	14.7	16.2	17.5	18.7	22.9	26.4	29.6	32.4	35.0	37.4
100x50x2.5RHS	5.56	3.28	2.98	2.69	2.46	2.27	2.13	3.48	3.01	2.69	2.46	2.27	2.13
D		2.47	2.67	2.82	2.94	3.05	3.16	5.07	5.36	5.63	5.88	6.10	6.32
U		9.94	12.0	13.6	14.9	16.1	17.3	21.1	24.4	27.3	29.9	32.3	34.5
100x50x2.0RHS	4.50	3.07	2.70	2.41	2.20	2.04	1.91	3.12	2.70	2.41	2.20	2.04	1.91
D		2.37	2.53	2.65	2.76	2.86	2.96	4.78	5.05	5.29	5.52	5.72	5.92
U		9.31	10.9	12.2	13.4	14.5	15.5	18.9	21.9	24.4	26.8	28.9	30.9
90x90x2.5SHS	6.74	3.46	2.99	2.67	2.44	2.26	2.11	3.46	2.99	2.67	2.44	2.26	2.11
D		2.55	2.69	2.82	2.94	3.05	3.16	5.10	5.39	5.65	5.89	6.11	6.32
U		10.5	12.1	13.5	14.8	16.0	17.1	20.9	24.2	27.0	29.6	32.0	34.2
90x90x2.0SHS	5.45	2.93	2.53	2.26	2.06	1.91	1.79	2.93	2.53	2.26	2.06	1.91	1.79
D		2.34	2.47	2.58	2.68	2.78	2.87	4.69	4.93	5.16	5.37	5.56	5.74
U		8.86	10.2	11.5	12.6	13.6	14.5	17.7	20.5	22.9	25.1	27.1	29.0
100x100x3.0SHS	8.96	3.98	3.70	3.32	3.03	2.80	2.62	4.30	3.71	3.32	3.03	2.80	2.62
D		2.79	3.06	3.23	3.37	3.51	3.63	5.80	6.14	6.45	6.74	7.01	7.27
U		12.0	14.9	16.8	18.4	19.9	21.2	25.9	30.0	33.5	36.8	39.7	42.5
100x100x2.5SHS	7.53	3.74	3.24	2.89	2.64	2.44	2.28	3.74	3.24	2.89	2.64	2.44	2.28
D		2.67	2.82	2.96	3.09	3.21	3.32	5.34	5.64	5.92	6.17	6.41	6.64
U		11.3	13.1	14.6	16.0	17.3	18.5	22.6	26.1	29.3	32.1	34.6	37.0
100x100x2.0SHS	6.07	3.17	2.75	2.46	2.24	2.07	1.94	3.17	2.75	2.46	2.24	2.07	1.94
D		2.44	2.57	2.69	2.80	2.91	3.00	4.88	5.15	5.39	5.61	5.82	6.01
U		9.61	11.1	12.4	13.6	14.7	15.7	19.2	22.2	24.9	27.2	29.4	31.5

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
  - Serviceability  $G + 0.7Q$  span/180 max deflection 20mm
  - $G + W_s$  span/180 max deflection 20mm
  - $G$  span/360 max deflection 12.5mm
  - $0.7Q$  span/240 max deflection 15mm
  - Strength  $1.25G + 1.5Q$ ;  $0.8G + W_u$
- $G = 0.4$  kPa for steel sheet roof,  $G = 0.9$  kPa for tile roof.  
 $Q = (0.12 + 1.8/\text{Area supported})$  but not less than 0.25 kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

Roof Pitch: Up to 20°  
Roof Type: Tile

Wind Classification: N6, C4  
W70N, W70C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	4.81	4.46	4.19	3.82	3.54	3.31	5.42	4.69	4.19	3.82	3.54	3.31
D		4.44	5.09	5.68	6.05	6.39	6.71	9.66	10.6	11.4	12.1	12.8	13.4
U		13.6	16.9	19.9	21.8	23.6	25.2	30.7	35.6	39.8	43.6	47.1	50.4
150x50x2.5RHS	7.53	4.61	4.28	3.85	3.51	3.25	3.04	4.98	4.31	3.85	3.51	3.25	3.04
D		4.27	4.90	5.30	5.64	5.95	6.25	9.01	9.84	10.6	11.3	11.9	12.5
U		13.1	16.2	18.3	20.1	21.7	23.2	28.3	32.7	36.6	40.1	43.4	46.4
150x50x2.0RHS	6.07	4.37	3.84	3.44	3.13	2.90	2.71	4.44	3.84	3.44	3.13	2.90	2.71
D		4.08	4.50	4.84	5.15	5.43	5.70	8.25	9.00	9.68	10.3	10.9	11.4
U		12.4	14.6	16.4	17.9	19.4	20.7	25.3	29.2	32.7	35.9	38.7	41.4
125x75x3.0RHS	8.96	4.57	4.24	3.98	3.63	3.36	3.15	5.16	4.46	3.98	3.63	3.36	3.15
D		4.28	4.90	5.47	5.82	6.14	6.45	9.32	10.2	10.9	11.6	12.3	12.9
U		13.0	16.1	18.9	20.7	22.4	24.0	29.2	33.8	37.8	41.5	44.8	47.9
125x75x2.5RHS	7.53	4.38	3.85	3.44	3.14	2.90	2.72	4.45	3.85	3.44	3.14	2.90	2.72
D		4.12	4.54	4.88	5.18	5.46	5.73	8.34	9.08	9.75	10.4	10.9	11.5
U		12.4	14.6	16.4	17.9	19.4	20.7	25.3	29.2	32.7	35.9	38.7	41.4
125x75x2.0RHS	6.07	3.76	3.25	2.91	2.65	2.45	2.29	3.76	3.25	2.91	2.65	2.45	2.29
D		3.70	4.02	4.30	4.56	4.80	5.03	7.39	8.03	8.60	9.12	9.61	10.1
U		10.7	12.4	13.8	15.2	16.4	17.5	21.4	24.7	27.7	30.3	32.8	35.0
100x50x3.0RHS	6.60	3.70	3.37	3.01	2.75	2.54	2.38	3.90	3.37	3.01	2.75	2.54	2.38
D		3.67	4.13	4.42	4.69	4.94	5.17	7.59	8.25	8.84	9.38	9.88	10.3
U		10.5	12.8	14.3	15.7	17.0	18.2	22.2	25.6	28.7	31.4	34.0	36.3
100x50x2.5RHS	5.56	3.54	3.11	2.78	2.53	2.35	2.19	3.59	3.11	2.78	2.53	2.35	2.19
D		3.55	3.89	4.16	4.41	4.64	4.86	7.16	7.78	8.32	8.82	9.29	9.72
U		10.1	11.8	13.2	14.5	15.7	16.7	20.5	23.6	26.5	29.0	31.3	33.5
100x50x2.0RHS	4.50	3.21	2.78	2.49	2.27	2.10	1.96	3.21	2.78	2.49	2.27	2.10	1.96
D		3.33	3.60	3.85	4.08	4.29	4.48	6.65	7.21	7.71	8.16	8.57	8.96
U		9.17	10.6	11.9	13.0	14.0	15.0	18.3	21.2	23.7	26.0	28.1	30.0
90x90x2.5SHS	6.74	3.56	3.08	2.75	2.51	2.33	2.18	3.56	3.08	2.75	2.51	2.33	2.18
D		3.59	3.89	4.16	4.41	4.63	4.85	7.18	7.78	8.32	8.81	9.27	9.69
U		10.1	11.7	13.1	14.4	15.5	16.6	20.3	23.4	26.2	28.7	31.0	33.2
90x90x2.0SHS	5.45	3.02	2.61	2.33	2.13	1.97	1.84	3.02	2.61	2.33	2.13	1.97	1.84
D		3.22	3.48	3.71	3.92	4.12	4.30	6.44	6.96	7.42	7.84	8.23	8.59
U		8.60	9.93	11.1	12.2	13.2	14.1	17.2	19.9	22.2	24.4	26.3	28.1
100x100x3.0SHS	8.96	4.22	3.83	3.42	3.12	2.89	2.70	4.43	3.83	3.42	3.12	2.89	2.70
D		4.06	4.56	4.89	5.19	5.47	5.73	8.39	9.12	9.78	10.4	10.9	11.5
U		12.0	14.5	16.3	17.8	19.3	20.6	25.1	29.1	32.5	35.6	38.5	41.2
100x100x2.5SHS	7.53	3.86	3.34	2.98	2.72	2.52	2.36	3.86	3.34	2.98	2.72	2.52	2.36
D		3.79	4.12	4.41	4.67	4.92	5.15	7.59	8.23	8.81	9.34	9.84	10.3
U		11.0	12.7	14.2	15.5	16.8	18.0	21.9	25.4	28.4	31.1	33.6	35.9
100x100x2.0SHS	6.07	3.27	2.83	2.53	2.31	2.14	2.00	3.27	2.83	2.53	2.31	2.14	2.00
D		3.39	3.67	3.92	4.15	4.36	4.56	6.79	7.35	7.84	8.30	8.72	9.11
U		9.32	10.8	12.1	13.2	14.3	15.3	18.6	21.5	24.1	26.4	28.5	30.5

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

# DuraGal® Verandah Beam Spanning Tables

**Roof Pitch:** Over 20° to 35°  
**Roof Type:** Steel Sheet

**Wind Classification:** N6, C4  
W70N, W70C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.11	4.73	4.47	4.26	4.09	3.91	6.32	5.55	4.96	4.52	4.19	3.91
D		3.19	3.54	3.87	4.19	4.50	4.76	7.26	7.84	8.30	8.73	9.14	9.52
U		10.3	12.8	15.1	17.3	19.5	21.3	25.5	30.0	33.6	36.8	39.8	42.6
150x50x2.5RHS	7.53	4.89	4.54	4.28	4.09	3.85	3.60	5.90	5.10	4.56	4.16	3.85	3.60
D		3.07	3.41	3.73	4.04	4.28	4.45	6.86	7.33	7.77	8.17	8.55	8.90
U		9.90	12.3	14.5	16.7	18.3	19.6	23.9	27.6	30.9	33.9	36.6	39.2
150x50x2.0RHS	6.07	4.64	4.30	4.06	3.71	3.43	3.21	5.26	4.55	4.07	3.71	3.43	3.21
D		2.94	3.27	3.57	3.76	3.93	4.09	6.31	6.75	7.15	7.52	7.86	8.18
U		9.41	11.7	13.8	15.1	16.4	17.5	21.4	24.7	27.6	30.3	32.7	35.0
125x75x3.0RHS	8.96	4.85	4.49	4.24	4.05	3.89	3.72	6.00	5.28	4.72	4.30	3.98	3.72
D		3.10	3.43	3.75	4.05	4.34	4.59	7.03	7.59	8.03	8.44	8.82	9.18
U		9.78	12.1	14.4	16.5	18.5	20.2	24.2	28.5	32.0	35.0	37.9	40.5
125x75x2.5RHS	7.53	4.64	4.31	4.07	3.72	3.44	3.21	5.27	4.56	4.07	3.72	3.44	3.21
D		2.99	3.31	3.61	3.80	3.96	4.12	6.41	6.84	7.23	7.59	7.93	8.24
U		9.40	11.7	13.8	15.1	16.4	17.5	21.3	24.7	27.6	30.3	32.7	35.0
125x75x2.0RHS	6.07	4.40	3.85	3.44	3.14	2.90	2.72	4.45	3.85	3.44	3.14	2.90	2.72
D		2.86	3.06	3.23	3.39	3.53	3.67	5.75	6.13	6.46	6.77	7.06	7.33
U		8.93	10.4	11.7	12.8	13.8	14.8	18.1	20.9	23.4	25.6	27.7	29.6
100x50x3.0RHS	6.60	3.93	3.65	3.39	3.19	3.01	2.82	4.62	3.99	3.57	3.25	3.01	2.82
D		2.71	2.98	3.22	3.43	3.62	3.76	5.90	6.28	6.63	6.95	7.24	7.52
U		7.96	9.88	11.5	13.0	14.3	15.3	18.7	21.6	24.2	26.5	28.7	30.7
100x50x2.5RHS	5.56	3.77	3.47	3.22	3.00	2.78	2.60	4.25	3.68	3.29	3.00	2.78	2.60
D		2.63	2.88	3.10	3.29	3.43	3.56	5.59	5.95	6.28	6.58	6.85	7.11
U		7.66	9.42	10.9	12.2	13.2	14.2	17.3	20.0	22.3	24.5	26.5	28.3
100x50x2.0RHS	4.50	3.58	3.25	2.94	2.69	2.49	2.32	3.81	3.29	2.94	2.69	2.49	2.32
D		2.54	2.76	2.93	3.07	3.19	3.31	5.24	5.57	5.86	6.14	6.39	6.62
U		7.29	8.82	10.0	11.0	11.9	12.7	15.5	17.9	20.0	22.0	23.7	25.4
90x90x2.5SHS	6.74	3.95	3.65	3.26	2.98	2.75	2.57	4.22	3.65	3.26	2.98	2.75	2.57
D		2.72	2.99	3.15	3.29	3.43	3.56	5.63	5.98	6.30	6.59	6.86	7.11
U		8.00	9.89	11.1	12.1	13.1	14.0	17.1	19.8	22.1	24.3	26.2	28.1
90x90x2.0SHS	5.45	3.57	3.09	2.76	2.52	2.33	2.18	3.57	3.09	2.76	2.52	2.33	2.18
D		2.56	2.71	2.85	2.98	3.09	3.20	5.12	5.43	5.70	5.95	6.19	6.40
U		7.26	8.39	9.39	10.3	11.1	11.9	14.5	16.8	18.8	20.6	22.2	23.8
100x100x3.0SHS	8.96	4.48	4.15	3.92	3.70	3.42	3.20	5.25	4.54	4.05	3.70	3.42	3.20
D		2.97	3.27	3.56	3.82	3.98	4.14	6.49	6.90	7.28	7.63	7.96	8.27
U		9.04	11.2	13.3	15.1	16.3	17.4	21.2	24.5	27.5	30.1	32.5	34.8
100x100x2.5SHS	7.53	4.29	3.95	3.53	3.22	2.98	2.79	4.57	3.95	3.53	3.22	2.98	2.79
D		2.86	3.15	3.31	3.47	3.62	3.75	5.92	6.29	6.63	6.94	7.23	7.51
U		8.68	10.7	12.0	13.1	14.2	15.2	18.5	21.4	24.0	26.3	28.4	30.4
100x100x2.0SHS	6.07	3.88	3.35	3.00	2.73	2.53	2.37	3.88	3.35	3.00	2.73	2.53	2.37
D		2.68	2.84	2.99	3.12	3.25	3.37	5.36	5.69	5.98	6.25	6.50	6.74
U		7.87	9.10	10.2	11.2	12.1	12.9	15.7	18.2	20.4	22.3	24.1	25.8

## Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
  - Serviceability  $G + 0.7Q$  span/180 max deflection 20mm
  - $G + W_s$  span/180 max deflection 20mm
  - $G$  span/360 max deflection 12.5mm
  - $0.7Q$  span/240 max deflection 15mm
  - Strength  $1.25G + 1.5Q$ ;  $0.8G + W_u$
- $G = 0.4$  kPa for steel sheet roof,  $G = 0.9$  kPa for tile roof.  
 $Q = (0.12 + 1.8/\text{Area supported})$  but not less than 0.25 kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.

Roof Pitch: Over 20° to 35°  
Roof Type: Tile

Wind Classification: N6, C4  
W70N, W70C

Designation  d x b x t mm x mm x mm	Mass per metre  kg/m	Maximum Span (m)											
		(D)ownward Force at Connection (kN)						(U)pward Force at Connection (kN)					
		Dimension A for Single Span						Dimension A for Continuous Span					
		0.9	1.2	1.5	1.8	2.1	2.4	0.9	1.2	1.5	1.8	2.1	2.4
150x50x3.0RHS	8.96	5.03	4.71	4.46	4.21	4.01	3.84	6.22	5.82	5.20	4.74	4.38	4.10
D		4.58	5.29	5.96	6.52	7.06	7.58	10.7	12.4	13.4	14.4	15.2	16.0
U		9.24	11.6	13.8	15.6	17.4	19.0	22.9	28.6	32.1	35.2	38.0	40.7
150x50x2.5RHS	7.53	4.85	4.53	4.24	4.00	3.81	3.65	6.00	5.35	4.78	4.36	4.03	3.77
D		4.42	5.11	5.69	6.23	6.74	7.23	10.3	11.6	12.5	13.3	14.1	14.9
U		8.93	11.2	13.1	14.9	16.5	18.1	22.1	26.4	29.5	32.4	35.0	37.4
150x50x2.0RHS	6.07	4.63	4.27	3.97	3.75	3.57	3.36	5.51	4.77	4.26	3.89	3.60	3.36
D		4.24	4.85	5.39	5.89	6.37	6.74	9.59	10.5	11.4	12.1	12.8	13.5
U		8.55	10.6	12.3	14.0	15.5	16.7	20.4	23.6	26.4	28.9	31.3	33.4
125x75x3.0RHS	8.96	4.77	4.46	4.16	3.93	3.74	3.59	5.91	5.53	4.94	4.51	4.17	3.90
D		4.42	5.09	5.65	6.18	6.68	7.16	10.3	12.0	12.9	13.8	14.6	15.3
U		8.77	11.0	12.8	14.6	16.2	17.8	21.7	27.2	30.5	33.4	36.2	38.7
125x75x2.5RHS	7.53	4.60	4.24	3.96	3.73	3.55	3.37	5.52	4.78	4.27	3.89	3.60	3.37
D		4.26	4.87	5.40	5.91	6.38	6.78	9.70	10.6	11.4	12.2	12.9	13.6
U		8.48	10.5	12.2	13.9	15.4	16.7	20.4	23.6	26.4	28.9	31.3	33.4
125x75x2.0RHS	6.07	4.36	3.98	3.60	3.29	3.04	2.84	4.66	4.03	3.60	3.29	3.04	
2.84													
D		4.07	4.62	5.01	5.33	5.63	5.91	8.52	9.31	10.0	10.7	11.3	11.8
U		8.05	9.85	11.2	12.2	13.2	14.1	17.2	19.9	22.3	24.5	26.4	28.3
100x50x3.0RHS	6.60	3.73	3.41	3.18	3.00	2.85	2.73	4.84	4.18	3.74	3.41	3.15	2.95
D		3.69	4.16	4.59	4.99	5.38	5.74	8.77	9.58	10.3	11.0	11.6	12.2
U		6.89	8.43	9.84	11.2	12.4	13.6	17.9	20.7	23.1	25.3	27.4	29.3
100x50x2.5RHS	5.56	3.56	3.25	3.03	2.85	2.71	2.60	4.45	3.85	3.44	3.14	2.91	2.72
D		3.56	4.00	4.41	4.80	5.16	5.51	8.24	8.99	9.67	10.3	10.9	11.4
U		6.58	8.04	9.38	10.6	11.8	12.9	16.5	19.1	21.3	23.4	25.3	27.0
100x50x2.0RHS	4.50	3.35	3.05	2.84	2.68	2.55	2.43	3.99	3.45	3.08	2.81	2.60	
2.43													
D		3.41	3.82	4.21	4.57	4.91	5.23	7.60	8.29	8.90	9.46	9.98	10.5
U		6.21	7.57	8.82	9.98	11.1	12.1	14.8	17.1	19.1	21.0	22.7	24.2
90x90x2.5SHS	6.74	3.75	3.43	3.20	3.02	2.87	2.70	4.42	3.82	3.42	3.12	2.88	2.70
D		3.71	4.18	4.61	5.02	5.40	5.68	8.26	9.00	9.67	10.3	10.8	11.4
U		6.93	8.48	9.90	11.2	12.5	13.4	16.3	18.9	21.1	23.2	25.0	26.8
90x90x2.0SHS	5.45	3.53	3.22	2.89	2.64	2.44	2.28	3.74	3.24	2.89	2.64	2.44	
2.28													
D		3.54	3.98	4.28	4.54	4.78	5.00	7.34	7.98	8.55	9.07	9.55	10.0
U		6.53	7.98	8.96	9.83	10.6	11.4	13.9	16.0	17.9	19.7	21.2	22.7
100x100x3.0SHS	8.96	4.38	4.01	3.75	3.54	3.37	3.23	5.46	4.75	4.25	3.87	3.58	3.35
D		4.16	4.71	5.22	5.70	6.15	6.58	9.71	10.7	11.5	12.2	12.9	13.6
U		8.05	9.88	11.6	13.1	14.6	16.0	20.1	23.4	26.2	28.7	31.1	33.2
100x100x2.5SHS	7.53	4.17	3.82	3.56	3.36	3.12	2.92	4.79	4.14	3.70	3.37	3.12	2.92
D		3.99	4.52	5.00	5.45	5.77	6.06	8.77	9.57	10.3	10.9	11.5	12.1

Notes:

- $W_u = 0.6C_{pn} V_{h,u}^2 \times 10^{-3}$  kPa,  $W_s = 0.6C_{pn} V_s^2 \times 10^{-3}$  kPa.
- Values of  $V_{h,u}$  and  $V_s$  from AS4055.
- For a roof pitch up to 20°  $C_{pn} = -1.6$ , over 20° to 35°  $C_{pn} = -1.1$ .
- Load combinations and limits considered include:
 

Serviceability	G + 0.7Q	span/180	max deflection 20mm
	G + $W_s$	span/180	max deflection 20mm
	G	span/360	max deflection 12.5mm
	0.7Q	span/240	max deflection 15mm
Strength	1.25G + 1.5Q; 0.8G + $W_u$		
- G = 0.4kPa for steel sheet roof, G = 0.9kPa for tile roof.  
Q = (0.12+1.8/Area supported) but not less than 0.25kPa.
- These tables only apply to beams supporting standard trusses or rafters. Point loads acting within the span have not been considered. Trusses are assumed to be supported at the house wall.
- If the variation between spans exceeds 30% of the larger span, the beam should be considered as single span between supports.
- The values underneath the span are the maximum design loads at the support for the given span. D refers to downward force, U to upward force. For continuous spans the loads are for an inner support.
- The beam is to be installed with the dimension 'd' as the vertical dimension.



# onesteel

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