

2.4.6 TOP NOTCH PURLINS & GIRTS – SINGLE SPAN

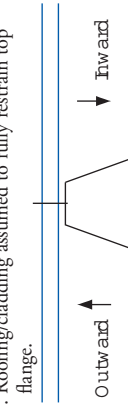
Uniformly loaded bending capacities (kN/m) $f_b W_{bx}$

Span (m)	60x0.75		60x0.95		100x0.75		100x0.95		120x0.75		120x0.95		150x0.95		150x1.15	
	Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward	-Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward
1.00																
1.25	5.90	4.00	3.59													
1.50	4.10	2.78	2.08	5.48	3.76	2.75										
1.75	3.01	2.04	1.31	4.03	2.76	1.73										
2.00	2.30	1.56	0.88	3.08	2.11	1.16	4.54	3.22	3.90							
2.25	1.82	1.23	0.62	2.44	1.67	0.81	3.59	2.55	2.74							
2.50	1.47	1.00	0.45	1.97	1.35	0.59	2.91	2.06	2.00	5.24	3.68	4.20				
2.75	1.22	0.83	0.34	1.63	1.12	0.45	2.40	1.70	1.50	2.91	2.03	2.22	4.33	3.07	3.15	
3.00				1.37	0.94	0.34	2.02	1.43	1.16	2.45	1.71	1.71	3.64	2.58	2.43	
3.25							1.72	1.22	0.91	2.08	1.45	1.34	3.10	2.19	1.91	4.57
3.50							1.48	1.05	0.73	1.80	1.25	1.08	2.68	1.89	1.53	3.90
3.75							1.29	0.92	0.59	1.57	1.09	0.87	2.33	1.65	1.24	2.70
4.00							1.14	0.81	0.49	1.38	0.96	0.72	2.05	1.45	1.02	3.08
4.25							1.01	0.71	0.41	1.22	0.85	0.60	1.81	1.28	0.85	2.57
4.50							0.90	0.64	0.34	1.09	0.76	0.51	1.62	1.14	0.72	2.28
4.75										0.98	0.68	0.43	1.45	1.03	0.61	1.82
5.00										0.88	0.61	0.37	1.31	0.93	0.52	1.65
5.25										0.80	0.56	0.32	1.19	0.84	0.45	1.49
5.50													1.08	0.77	0.39	1.36
5.75													0.99	0.70	0.34	1.25
6.00													0.91	0.64	0.30	1.14
6.25																1.05
6.50																0.97
6.75																0.90
7.00																0.84
7.25																0.84
7.50																0.84
7.75																0.84
8.00																0.84
8.25																0.84
8.50																0.84
8.75																0.84
9.00																0.84
9.25																0.84
9.50																0.84
9.75																0.84
10.00																0.84

1. W_s = Load at deflection of span/150

2. Outward loads shown are based on the screw fixings and minimum thickness shown in Section 2.4.7 Fasteners.

3. Roofing/cladding assumed to fully restrain top flange.

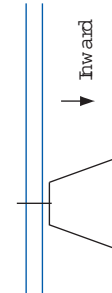


4. Shaded areas of the table relate to spans which will not support a point load of 1.4 kN (refer AS/NZS 1170.1). This assumes no load sharing between purlins.

2.4.6 TOP NOTCH PURLINS & GIRTS – DOUBLE SPAN

Uniformly loaded bending capacities (kN/m) $f_b W_{b,x}$

Span (m)	60x0.75		60x0.95		100x0.75		100x0.95		120x0.75		120x0.95		150x0.95		150x1.15	
	Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward	-Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward
1.00																
1.25	5.90	3.73	7.88													
1.50	4.10	3.11	4.56	5.48	3.55	5.95										
1.75	3.01	2.66	2.87	4.03	3.04	3.75										
2.00	2.30	2.30	1.92	3.08	2.66	2.51										
2.25	1.82	1.82	1.35	2.44	2.37	1.76	5.09	2.99	5.92							
2.50	1.47	1.47	0.98	1.97	1.97	1.29	4.12	2.69	4.32	4.19	2.94	6.55				
2.75	1.22	1.22	0.74	1.63	1.63	0.97	3.41	2.40	3.24	3.81	2.68	4.92	5.82	4.01	6.73	
3.00	1.02	1.02	0.57	1.37	1.37	0.74	2.85	2.02	2.50	3.41	2.45	3.79	4.89	3.64	5.18	8.64
3.25	0.87	0.87	0.45	1.17	1.17	0.59	2.38	1.72	1.97	2.91	2.08	2.98	4.17	3.10	4.08	6.79
3.50	0.75	0.75	0.36	1.01	1.01	0.47	2.01	1.48	1.57	2.49	1.80	2.39	3.60	2.68	3.26	5.44
3.75				0.88	0.88	0.38	1.71	1.29	1.28	2.13	1.57	1.94	3.13	2.33	2.65	4.42
4.00				0.77	0.77	0.31	1.46	1.14	1.05	1.84	1.38	1.60	2.75	2.05	2.19	3.64
4.25							1.26	1.01	0.88	1.59	1.22	1.33	2.41	1.81	1.82	3.04
4.50							1.09	0.90	0.74	1.39	1.09	1.12	2.10	1.62	1.54	2.56
4.75							0.94	0.81	0.63	1.22	0.98	0.95	1.84	1.45	1.31	2.18
5.00							0.82	0.73	0.54	1.15	1.09	0.72	1.62	1.31	1.12	1.87
5.25							0.72	0.66	0.47	1.00	0.99	0.63	1.43	1.19	0.97	1.61
5.50							0.64	0.60	0.41	0.90	0.90	0.54	1.26	1.08	0.84	1.42
5.75							0.58	0.55	0.35	0.82	0.82	0.48	1.12	0.99	0.74	1.29
6.00							0.54	0.50	0.31	0.76	0.76	0.42	0.99	0.91	0.65	1.19
6.25										0.59	0.56	0.42	0.88	0.84	0.57	1.09
6.50										0.55	0.52	0.37	0.78	0.78	0.51	1.01
6.75										0.51	0.48	0.33	0.73	0.72	0.45	0.94
7.00										0.47	0.45	0.30	0.67	0.67	0.41	0.87
7.25													0.63	0.62	0.37	0.81
7.50													0.59	0.58	0.33	0.76
7.75													0.55	0.55	0.30	0.71
8.00													0.67	0.64	0.46	0.67
8.25													0.63	0.60	0.42	0.63
8.50													0.59	0.57	0.38	0.59
8.75													0.56	0.54	0.35	0.56
9.00													0.53	0.51	0.32	0.53
9.25													0.71	0.67	0.41	0.71
9.50													0.67	0.63	0.35	0.67
9.75													0.64	0.60	0.32	0.64
10.00													0.61	0.57	0.30	0.61

1. W_s = Load at deflection of span/150
2. Outward loads shown are based on the screw fixings and minimum thickness shown in Section 2.4.7 Fasteners.
3. Roofing/cladding assumed to fully restrain top flange.

4. Shaded areas of the table relate to spans which will not support a point load of 1.4 kN (refer AS/NZS 1170.1). This assumes no load sharing between purlins.

2.4.6 TOP NOTCH PURLINS & GIRTS – LAPPED END SPAN

Uniformly loaded bending capacities (kN/m) $f_b W_{bx}$

Span (m)	60x0.75		60x0.95		100x0.75		100x0.95		120x0.75		120x0.95		150x0.95		150x1.15	
	Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward	-Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward
1.00																
1.25																
1.50	6.00	3.55	4.70													
1.75	4.34	3.04	2.96	5.88	3.04	3.87										
2.00	3.19	2.54	1.98	4.33	2.66	2.59										
2.25	2.40	2.00	1.39	3.26	2.37	1.82	5.84	4.48	5.50							
2.50	1.84	1.62	1.02	2.51	2.13	1.33	4.73	4.26	4.45							
2.75	1.43	1.34	0.76	1.95	1.82	1.00	3.91	3.67	3.34	5.84	3.67	4.49	4.49	4.01	4.42	
3.00	1.13	1.13	0.59	1.53	1.53	0.77	3.28	3.28	2.58	4.91	3.36	3.46	3.97	3.97	3.91	5.92
3.25	0.96	0.96	0.46	1.30	1.30	0.60	2.80	2.80	2.03	4.18	3.10	2.72	3.39	3.39	3.07	5.04
3.50	0.83	0.83	0.37	1.12	1.12	0.48	2.41	2.41	1.62	3.61	2.88	2.18	2.92	2.92	2.46	4.35
3.75				0.98	0.98	0.39	2.10	2.10	1.32	3.14	2.69	1.77	2.54	2.54	2.00	3.79
4.00				0.86	0.86	0.32	1.85	1.85	1.09	2.76	2.52	1.46	2.24	2.24	1.65	3.33
4.25							1.64	1.64	0.91	2.45	2.37	1.22	1.98	1.98	1.37	2.95
4.50							1.46	1.46	0.76	2.18	2.17	1.02	1.77	1.77	1.16	2.63
4.75							1.31	1.31	0.65	1.96	1.95	0.87	1.59	1.59	0.98	2.36
5.00							1.18	1.18	0.56	1.77	1.76	0.75	1.43	1.43	0.84	2.13
5.25							1.07	1.07	0.48	1.60	1.59	0.65	1.30	1.30	0.73	1.93
5.50							0.98	0.98	0.42	1.45	1.45	0.56	1.18	1.18	0.63	1.76
5.75							0.89	0.89	0.37	1.33	1.33	0.49	1.08	1.08	0.56	1.61
6.00							0.82	0.82	0.32	1.22	1.22	0.43	0.99	0.99	0.49	1.48
6.25										1.12	1.12	0.38	0.92	0.92	0.43	1.36
6.50										1.04	1.04	0.34	0.85	0.85	0.38	1.26
6.75										0.96	0.96	0.30	0.79	0.79	0.34	1.17
7.00										0.73	0.73	0.31	1.09	1.09	0.42	1.37
7.25													1.01	1.01	0.38	1.27
7.50													0.95	0.95	0.34	1.19
7.75													0.89	0.89	0.31	1.11
8.00																1.05
8.25																0.98
8.50																0.93
8.75																0.87
9.00																0.83
9.25																0.78
9.50																1.03
9.75																0.97
10.00																0.93

1. W_s = Load at deflection of span/150

2. Outward loads shown are based on the screw fixings and minimum thickness shown in Section 2.4.7 Fasteners.

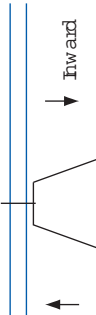
3. Roofing/cladding assumed to fully restrain top flange.

4. Shaded areas of the table relate to spans which will not support a point load of 1.4 kN (refer AS/NZS 1170.1). This assumes no load sharing between purlins.

2.4.6 TOP NOTCH PURLINS & GIRTS – LAPPED INTERNAL SPAN

Uniformly loaded bending capacities (kN/m) $f_b W_{b,x}$

Span (m)	60x0.75		60x0.95		100x0.75		100x0.95		120x0.75		120x0.95		150x0.95		150x1.15	
	Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward	-Inward	Outward	Inward	Outward	Inward	Outward	Inward	Outward
1.00																
1.25																
1.50																
1.75	6.00	3.81	5.38													
2.00	4.42	3.33	3.61	5.99	3.33	4.71										
2.25	3.33	2.78	2.53	4.52	2.96	3.31										
2.50	2.55	2.25	1.85	3.47	2.66	2.41										
2.75	1.98	1.86	1.39	2.69	2.42	1.81	5.41	4.58	5.41							
3.00	1.56	1.56	1.07	2.11	2.11	1.39	4.54	4.20	4.54							
3.25	1.33	1.33	0.84	1.80	1.80	1.10	3.87	3.87	3.68	4.03	4.03					
3.50	1.15	1.15	0.67	1.55	1.55	0.88	3.34	3.34	2.95	3.74	3.74	6.00	3.94	6.00		
3.75	1.00	1.00	0.55	1.35	1.35	0.71	2.91	2.91	2.40	3.50	3.50	5.24	3.68	4.97	5.60	3.68
4.00	0.88	0.88	0.45	1.19	1.19	0.59	2.56	2.56	1.98	3.10	3.10	4.61	3.45	4.10	5.25	3.45
4.25	0.78	0.78	0.38	1.05	1.05	0.49	2.26	2.26	1.65	2.74	2.74	4.08	3.25	3.42	4.94	3.25
4.50				0.94	0.94	0.41	2.02	2.02	1.39	2.45	2.45	3.64	3.07	2.88	4.57	3.07
4.75				0.84	0.84	0.35	1.81	1.81	1.18	2.20	2.20	3.27	2.91	2.45	4.10	2.91
5.00				0.76	0.76	0.30	1.64	1.64	1.01	1.98	1.98	2.95	2.76	2.10	3.70	2.76
5.25							1.48	1.48	0.87	1.80	1.80	2.68	2.63	1.81	3.36	2.63
5.50							1.35	1.35	0.76	1.64	1.64	2.44	2.44	1.58	3.06	2.51
5.75							1.24	1.24	0.67	1.50	1.50	2.23	2.23	1.38	2.80	2.40
6.00							1.14	1.14	0.59	1.38	1.38	2.05	2.05	1.21	2.57	2.30
6.25							1.05	1.05	0.52	1.27	1.27	1.89	1.89	1.07	2.37	2.21
6.50							0.97	0.97	0.46	1.17	1.17	1.75	1.75	0.96	2.19	2.12
6.75							0.90	0.90	0.41	1.09	1.09	1.62	1.62	0.85	2.03	2.03
7.00							0.83	0.83	0.37	1.01	1.01	1.50	1.50	0.76	1.89	1.89
7.25							0.78	0.78	0.33	0.94	0.94	1.40	1.40	0.69	1.76	1.76
7.50							0.73	0.73	0.30	0.88	0.88	1.31	1.31	0.62	1.65	1.65
7.75										0.82	0.82	1.23	1.23	0.56	1.54	1.54
8.00										0.77	0.77	1.15	1.15	0.51	1.45	1.45
8.25										0.73	0.73	1.08	1.08	0.47	1.36	1.36
8.50										0.69	0.69	1.02	1.02	0.43	1.28	1.28
8.75												0.96	0.96	0.39	1.21	1.21
9.00												0.91	0.91	0.36	1.14	1.14
9.25												0.86	0.86	0.33	1.08	1.08
9.50												0.82	0.82	0.31	1.03	1.03
9.75												0.97	0.97	0.47	0.97	0.97
10.00												0.93	0.93	0.44	0.93	0.93

1. W_s = Load at deflection of span/150
2. Outward loads shown are based on the screw fixings and minimum thickness shown in Section 2.4.7 Fasteners.
3. Roofing/cladding assumed to fully restrain top flange.

4. Shaded areas of the table relate to spans which will not support a point load of 1.4 kN (refer AS/NZS 1170.1). This assumes no load sharing between purlins.