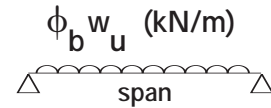


# MS TOPHATS STRENGTH LOAD SPAN TABLE

UNIFORMLY DISTRIBUTED LOAD =  $\phi_b w_u$  (kN/m)



## SINGLE SPAN

Span (m)	60 x 0.75			60 x 0.95			100 x 0.75			100 x 0.95			120 x 0.75		
	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m
Load	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl
2.0	2.30	1.56	0.88	3.08	2.11	1.16	4.54	3.10	3.90						
2.2	1.90	1.29	0.66	2.55	1.75	0.87	3.76	2.66	2.93						
2.4	1.60	1.08	0.51	2.14	1.47	0.67	3.16	2.24	2.26	4.72	2.58	3.08	3.82	2.67	3.34
2.6	1.36	0.92	0.40	1.83	1.25	0.53	2.69	1.91	1.78	4.02	2.38	2.42	3.26	2.27	2.62
2.8	1.18	0.80	0.32	1.57	1.08	0.42	2.32	1.64	1.42	3.47	2.21	1.94	2.81	1.96	2.10
3.0				1.37	0.94	0.34	2.02	1.43	1.16	3.02	2.00	1.58	2.45	1.71	1.71
3.2				1.20	0.83	0.28	1.78	1.26	0.95	2.66	1.76	1.30	2.15	1.50	1.41
3.4							1.57	1.11	0.79	2.35	1.56	1.08	1.90	1.33	1.17
3.6							1.40	0.99	0.67	2.10	1.39	0.91	1.70	1.19	0.99
3.8							1.26	0.89	0.57	1.88	1.25	0.78	1.52	1.06	0.84
4.0							1.14	0.81	0.49	1.70	1.13	0.67	1.38	0.96	0.72
4.2							1.03	0.73	0.42	1.54	1.02	0.58	1.25	0.87	0.62
4.4							0.94	0.67	0.37	1.40	0.93	0.50	1.14	0.79	0.54
4.6							0.86	0.61	0.32	1.28	0.85	0.44	1.04	0.73	0.47
4.8							0.79	0.56	0.28	1.18	0.78	0.39	0.96	0.67	0.42
5.0										1.09	0.72	0.34	0.88	0.61	0.37
5.2										1.01	0.67	0.30	0.81	0.57	0.33
5.4										0.93	0.62	0.27	0.75	0.53	0.29
5.6												0.24	0.70	0.49	0.26
5.8															
6.0															
6.2															
6.4															
6.6															
6.8															
7.0															
7.2															
7.4															
7.6															
7.8															
8.0															
8.2															
8.4															
8.6															
8.8															
9.0															
Fixings Steel/Timber Cold Formed	2/12 g 2/12 g / 1.2 mm			2/12 g 2/12 g / 1.2 mm			4/12 g 2/12 g / 1.5 mm			4/12 g 2/12 g / 1.5 mm			4/14 g 2/14 g / 1.5 mm		

Steel/ Timber Fixings = Number and gauge of Tek screws fixing to G300 hot rolled steel a minimum of 3mm thick or type T17 tek screws a minimum of 37mm into timber.

Cold Formed Fixings = Number and gauge of screws and minimum thickness of G450 cold formed support member.

Outward Loads = Must be adjusted if support member thickness or grades are lower.

The above loads assume the Top Flange is fully restrained by the sheeting.

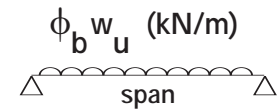
$w_s$  = Uniformly distributed serviceability load for deflection limit

= Span (kN/m)  
150

$\phi_b w_u$  = Dependable strength load resistance applied at the centroid (kN/m)

# MS TOPHATS STRENGTH LOAD SPAN TABLE

UNIFORMLY DISTRIBUTED LOAD =  $\phi_b w_u$  (kN/m)



## SINGLE SPAN

Span (m)	120 x 0.95			150 x 0.95			150 x 1.15			150 x 1.55		
	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m
Load	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl
2.0												
2.2												
2.4												
2.6	4.85	3.43	3.73									
2.8	4.18	2.96	2.99									
3.0	3.64	2.58	2.43	4.57	3.07	3.91						
3.2	3.20	2.26	2.00	4.02	2.78	3.22						
3.4	2.84	2.01	1.67	3.56	2.46	2.69	4.93	2.71	3.73			
3.6	2.53	1.79	1.41	3.18	2.20	2.26	4.39	2.56	3.01			
3.8	2.27	1.61	1.19	2.85	1.97	1.93	3.94	2.42	2.56	6.41	3.93	3.51
4.0	2.05	1.45	1.02	2.57	1.78	1.65	3.56	2.30	2.19	5.78	3.55	3.01
4.2	1.86	1.31	0.88	2.33	1.62	1.43	3.23	2.19	1.90	5.24	3.22	2.60
4.4	1.69	1.20	0.77	2.13	1.47	1.24	2.94	2.09	1.65	4.78	2.93	2.26
4.6	1.55	1.10	0.67	1.95	1.35	1.09	2.69	1.91	1.44	4.37	2.68	1.98
4.8	1.42	1.01	0.59	1.79	1.24	0.96	2.47	1.75	1.27	4.02	2.46	1.74
5.0	1.31	0.93	0.52	1.65	1.14	0.85	2.28	1.62	1.12	3.70	2.27	1.54
5.2	1.21	0.86	0.47	1.52	1.05	0.75	2.11	1.50	1.00	3.42	2.10	1.37
5.4	1.12	0.79	0.42	1.41	0.98	0.67	1.95	1.39	0.89	3.17	1.95	1.22
5.6	1.05	0.74	0.37	1.31	0.91	0.60	1.82	1.29	0.80	2.95	1.81	1.10
5.8	0.97	0.69	0.34	1.22	0.85	0.54	1.69	1.20	0.72	2.75	1.69	0.99
6.0	0.91	0.64	0.30	1.14	0.79	0.49	1.58	1.12	0.65	2.57	1.58	0.89
6.2	0.85	0.60	0.28	1.07	0.74	0.44	1.48	1.05	0.59	2.41	1.48	0.81
6.4				1.00	0.70	0.40	1.39	0.99	0.54	2.26	1.39	0.74
6.6				0.94	0.65	0.37	1.31	0.93	0.49	2.12	1.30	0.67
6.8				0.89	0.62	0.34	1.23	0.87	0.45	2.00	1.23	0.61
7.0				0.84	0.58	0.31	1.16	0.83	0.41	1.89	1.16	0.56
7.2				0.79	0.55	0.28	1.10	0.78	0.38	1.78	1.09	0.52
7.4							1.04	0.74	0.35	1.69	1.04	0.48
7.6							0.99	0.70	0.32	1.60	0.98	0.44
7.8							0.94	0.66	0.30	1.52	0.93	0.41
8.0							0.89	0.63	0.27	1.45	0.89	0.38
8.2										1.38	0.84	0.35
8.4										1.31	0.80	0.33
8.6										1.25	0.77	0.30
8.8												
9.0												
Fixings Steel/Timber Cold Formed	2/14 g 2/14 g / 1.5 mm			2/14 g 2/14 g / 1.5 mm			2/14 g 2/14 g / 1.5 mm			2/14 g 4/14 g / 1.5 mm		

Steel/ Timber Fixings = Number and gauge of Tek screws fixing to G300 hot rolled steel a minimum of 3mm thick or type T17 tek screws a minimum of 37mm into timber.

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The above loads assume the Top Flange is fully restrained by the sheeting.

$w_s$  = Uniformly distributed serviceability load for deflection limit

= Span (kN/m)  
150

$\phi_b w_u$  = Dependable strength load resistance applied at the centroid (kN/m)

## MS TOPHATS STRENGTH LOAD SPAN TABLE

UNIFORMLY DISTRIBUTED LOAD =  $\phi_b w_u$  (kN/m)

$\phi_b w_u$  (kN/m)

### LAPPED SPAN



Span (m)	60 x 0.75			60 x 0.95			100 x 0.75			100 x 0.95			120 x 0.75		
	$\phi_b w_u$ (kN/m)	$w_s$ kN/m	Defl	$\phi_b w_u$ (kN/m)	$w_s$ kN/m	Defl	$\phi_b w_u$ (kN/m)	$w_s$ kN/m	Defl	$\phi_b w_u$ (kN/m)	$w_s$ kN/m	Defl	$\phi_b w_u$ (kN/m)	$w_s$ kN/m	Defl
<b>Load</b>	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl
2.0	3.37	2.40	1.89	4.58	2.48	2.46	7.38	3.36	8.27						
2.2	2.69	2.10	1.42	3.65	2.25	1.85	6.10	3.05	8.22						
2.4	2.16	1.76	1.09	2.94	2.07	1.43	5.13	2.80	4.79	7.67	4.20	6.43	5.14	4.60	7.26
2.6	1.76	1.50	0.86	2.39	1.19	1.12	4.37	2.58	3.77	6.54	3.88	5.06	4.74	4.5	5.71
2.8	1.44	1.29	0.69	1.96	1.75	0.90	3.77	2.40	3.02	5.64	3.60	4.05	4.41	3.94	4.57
3.0	1.19	1.13	0.56	1.61	1.53	0.73	3.28	2.24	2.45	4.91	3.36	3.29	3.97	3.68	3.72
3.2	1.05	0.99	0.46	1.42	1.34	0.60	2.88	2.10	2.02	4.31	3.15	2.71	3.49	3.45	3.06
3.4	0.93	0.88	0.38	1.26	1.19	0.50	2.56	1.98	1.68	3.82	2.96	2.26	3.09	3.24	2.55
3.6	0.83	0.78	0.32	1.12	1.06	0.42	2.28	1.87	1.42	3.41	2.80	1.90	2.76	2.89	2.15
3.8				1.01	0.95	0.36	2.05	1.77	1.21	3.06	2.65	1.62	2.48	2.59	1.83
4.0				0.91	0.86	0.31	1.85	1.68	1.03	2.76	2.52	1.39	2.24	2.34	1.57
4.2							1.67	1.60	0.89	2.50	2.40	1.20	2.03	2.12	1.36
4.4							1.53	1.53	0.78	2.28	2.27	1.04	1.85	1.93	1.18
4.6							1.40	1.46	0.68	2.09	2.07	0.91	1.69	1.77	1.03
4.8							1.28	1.36	0.60	1.92	1.90	0.80	1.55	1.63	0.91
5.0							1.18	1.25	0.53	1.77	1.76	0.71	1.43	1.50	0.80
5.2							1.09	1.16	0.47	1.63	1.62	0.63	1.32	1.39	0.71
5.4							1.01	1.07	0.42	1.52	1.50	0.56	1.23	1.28	0.64
5.6							0.94	1.00	0.38	1.41	1.40	0.51	1.14	1.19	0.57
5.8							0.88	0.93	0.34	1.31	1.30	0.46	1.06	1.11	0.51
6.0							0.82	0.87	0.31	1.23	1.22	0.41	0.99	1.04	0.46
6.2										1.15	1.14	0.37	0.93	0.97	0.42
6.4										1.08	1.07	0.34	0.87	0.91	0.38
6.6										1.01	1.01	0.31	0.82	0.86	0.35
6.8										0.96	0.95	0.28	0.77	0.81	0.32
7.0													0.73	0.76	0.29
7.2													0.69	0.72	0.27
7.4															
7.6															
7.8															
8.0															
8.2															
8.4															
8.6															
8.8															
9.0															
Fixings Steel/Timber Cold Formed	2/12 g 4/12 g / 1.2 mm			2/12 g 4/12 g / 1.2 mm			4/12 g 4/12 g / 1.5 mm			4/12 g 6/12 g / 1.5 mm			4/14 g 6/14 g / 1.5 mm		

Steel/ Timber Fixings = Number and gauge of Tek screws fixing to G300 hot rolled steel a minimum of 3mm thick or type T17 tek screws a minimum of 37mm into timber.

Cold Formed Fixings = Number and gauge of screws and minimum thickness of G450 cold formed support member.

Outward Loads = Must be adjusted if support member thickness or grades are lower.

The above loads assume the Top Flange is fully restrained by the sheeting.

Total lap length shall be 15% of the maximum adjacent span.

60 MS Tophat Lap ends to be fixed with 2 Tek screws (one in each web)

100/120/150 MS Tophat Lap ends to be fixed with 4 Tek screws (one in each web and flange).

$w_s$  = Uniformly distributed serviceability load for deflection limit

=  $\frac{\text{Span} (kN/m)}{150}$

$\phi_b w_u$  = Dependable strength load resistance applied at the centroid (kN/m)

# MS TOPHATS STRENGTH LOAD SPAN TABLE

UNIFORMLY DISTRIBUTED LOAD =  $\phi_b w_u$  (kN/m)

$\phi_b w_u$  (kN/m)

## LAPPED SPAN



Span (m)	120 x 0.95			150 x 0.95			150 x 1.15			150 x 1.55			
	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	$\phi_b w_u$ (kN/m)		$w_s$ kN/m	
	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward	Defl	Inward	Outward Steel/Timber	Outward Cold Formed	Defl
2.0													
2.2													
2.4													
2.6													
2.8	6.79	3.94	6.25										
3.0	5.92	3.68	5.08										
3.2	5.20	3.45	4.19	6.18	3.45	6.98							
3.4	4.61	3.25	3.49	5.79	3.25	5.82							
3.6	4.11	3.07	2.94	5.16	3.07	4.90	7.14	4.09	6.29				
3.8	3.69	2.91	2.50	4.63	2.91	4.17	6.41	3.87	5.35	10.41	5.05	3.87	7.28
4.0	3.33	2.75	2.15	4.18	2.76	3.58	5.78	3.68	4.58	9.40	4.80	3.68	6.24
4.2	3.02	2.63	1.85	3.79	2.63	3.09	5.25	3.50	3.96	8.52	4.57	3.50	5.39
4.4	2.75	2.51	1.61	3.46	2.51	2.69	4.78	3.35	3.44	7.77	4.36	3.53	4.69
4.6	2.52	2.40	1.41	3.16	2.40	2.35	4.37	3.20	3.01	7.10	4.17	3.20	4.11
4.8	2.31	2.30	1.24	2.90	2.30	2.07	4.02	3.07	2.65	6.52	4.00	3.07	3.61
5.0	2.13	2.21	1.10	2.68	2.21	1.83	3.70	2.94	2.35	6.01	3.84	2.94	3.20
5.2	1.97	2.08	0.98	2.47	2.12	1.63	3.42	2.83	2.09	5.56	3.69	2.83	2.84
5.4	1.83	1.93	0.87	2.29	2.04	1.45	3.17	2.73	1.86	5.16	3.56	2.73	2.54
5.6	1.70	1.80	0.78	2.13	1.97	1.30	2.95	2.63	1.67	4.67	3.43	2.63	2.28
5.8	1.58	1.67	0.70	1.99	1.90	1.17	2.75	2.54	1.50	4.35	3.31	2.54	2.05
6.0	1.48	1.56	0.64	1.86	1.84	1.06	2.57	2.45	1.36	4.06	3.20	2.45	1.85
6.2	1.39	1.47	0.58	1.74	1.78	0.96	2.41	2.37	1.23	3.81	3.10	2.37	1.68
6.4	1.30	1.38	0.52	1.63	1.70	0.87	2.26	2.30	1.12	3.57	3.00	2.30	1.52
6.6	1.22	1.29	0.48	1.54	1.59	0.80	2.12	2.23	1.02	3.36	2.91	2.23	1.39
6.8	1.15	1.22	0.44	1.45	1.50	0.73	2.00	2.12	0.93	3.16	2.82	2.16	1.27
7.0	1.09	1.15	0.40	1.37	1.42	0.67	1.89	2.00	0.86	2.99	2.74	2.10	1.17
7.2	1.03	1.09	0.37	1.29	1.34	0.61	1.79	1.89	0.79	2.82	2.67	2.04	1.07
7.4	0.97	1.03	0.34	1.22	1.27	0.56	1.69	1.79	0.72	2.67	2.53	1.99	0.99
7.6	0.92	0.98	0.31	1.16	1.20	0.52	1.60	1.69	0.67	2.53	2.40	1.94	0.91
7.8	0.88	0.93	0.29	1.10	1.14	0.48	1.52	1.61	0.62	2.41	2.27	1.89	0.84
8.0	0.83	0.88	0.27	1.05	1.09	0.45	1.45	1.53	0.57	2.29	2.16	1.84	0.78
8.2				0.99	1.03	0.42	1.38	1.46	0.53	2.18	2.06	1.80	0.72
8.4				0.95	0.98	0.39	1.31	1.39	0.49	2.07	1.96	1.75	0.67
8.6				0.90	0.94	0.36	1.25	1.32	0.46	1.98	1.87	1.71	0.63
8.8							1.20	1.25	0.43	1.89	1.79	1.67	0.59
9.0							1.14	1.21	0.40	1.81	1.71	1.64	0.55
Fixings Steel/Timber Cold Formed	4/14 g 6/14 g / 1.5 mm			4/14 g 6/14 g / 1.5 mm			6/14 g 8/14 g / 1.5 mm			6/12 g 8/14 g / 1.5 mm			

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$w_s$  = Uniformly distributed serviceability load for deflection limit

=  $\frac{\text{Span}}{150}$  (kN/m)

$\phi_b w_u$  = Dependable strength load resistance applied at the centroid (kN/m)