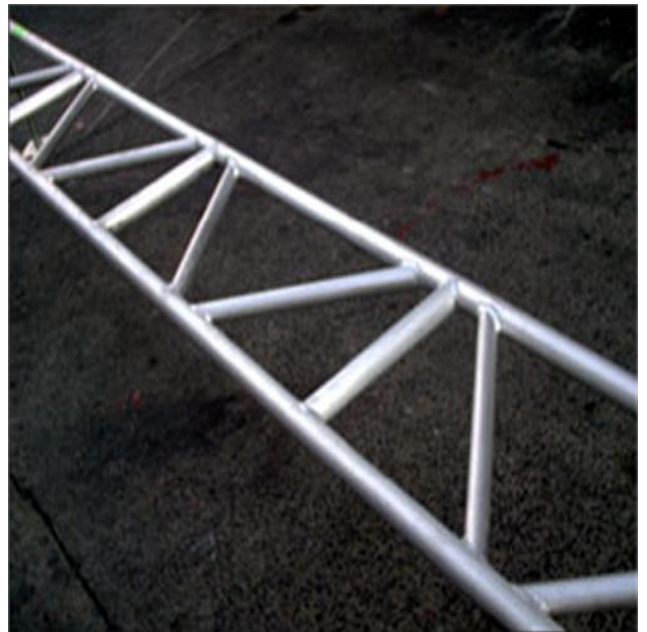


450MM ALUMINIUM BEAM

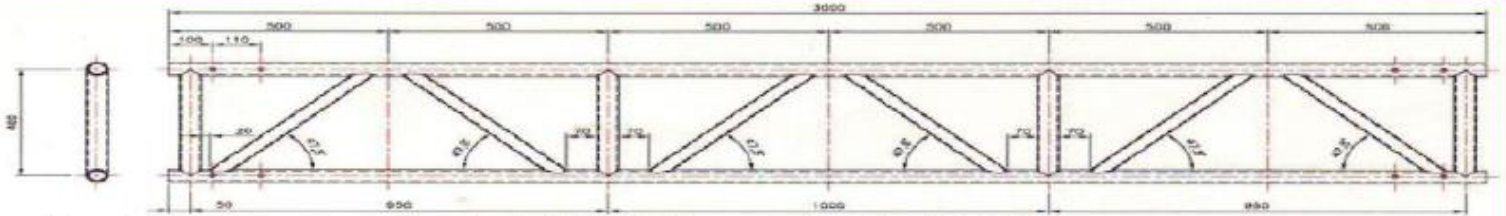
INFO	DETAIL
Length	3m 4m 5m 6m 8m
Width	450mm
Material	Aluminum
Tube Diameter	48.3mm
Weight	13.5kg (3m) 18kg (4m) 22.5kg (5m) 27kg (6m) 36kg (8m)
Load Capacity	Please see below
Manufacturing Standard	ISO 9001:2000

We also stock [beam connecting spigots](#). Steel ladder beams are also available upon request.



Aluminium Beam Loading Table

Section 1



Element Cross Sections

Upper Chord: CHS 48.3x4.47mm

Lower Chord: 48.3x4.47mm

All diagonals: CHS 38.1x2.60mm

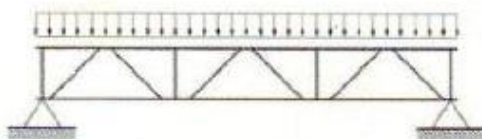
All struts: 48.3x2.60mm

Material: 6062 T6 Alloy

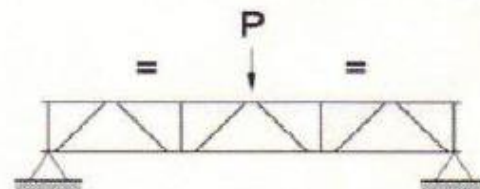
Section 2

Safe Load Tables	Span (m)	3.0	4.0	5.0	6.0	7.0	8.0	9.0	10.0	12.0
Compression chord bracing interval = 1.0m										
Uniformly Distributed Load	(kN/m)	10.43	7.11	4.86	3.58	2.77	2.19	1.73	1.35	0.98
	Deflection (mm)	11	14	19	25	35	43	54	63	90
Single point load Mid Span	(kN)	15.07	11.95	10.96	9.73	8.29	7.6	6.57	6	5.18
	Deflection (mm)	13	10	19	20	28	32	41	47	67
Compression chord bracing interval = 1.5m										
Uniformly Distributed Load	(kN/m)	10.43	5.33	4.15	2.67	1.98	1.54	1.2	0.94	0.87
	Deflection (mm)	11	10	16	19	25	30	38	44	63
Single point load Mid Span	(kN)	12.6	9.3	8.34	7.25	6.32	5.55	4.8	4.33	3.68
	Deflection (mm)	11	8	14	15	22	24	30	34	49
Compression chord bracing interval = 2.0m										
Uniformly Distributed Load	(kN/m)	6.46	3.12	2.25	1.47	1.06	0.82	0.63	0.49	0.34
	Deflection (mm)	7	6	9	10	14	16	21	24	34
Single point load Mid Span	(kN)	8.05	5.75	4.98	4.18	3.57	3.11	2.69	2.38	1.96
	Deflection (mm)	7	5	9	9	12	14	17	20	28

i) Uniformly Distributed Load



ii) Single Point Load Mid Span



Notes

These tables have been produced using the following design criteria:

1. The Load capacities shown in the tables above are for guidance only
2. All loads are unfactored safe imposed working loads applied vertically downwards to the top chord. No allowance has been made for dynamically applied loads
3. Where a point load is applied between node points additional bending checks of the chord member will be required
4. The load capacities quoted may be increased by 10% if the load acting on the beam are solely Wind
5. It has been assumed that the beam is simply supported at either end on the bottom chord
6. Design has been carried out in accordance with the following codes of practice or British Standards:
 - > BS 8118: Part 1 : 1991. Structural use of Aluminium
 - > BS 8118: Part 2 : 1991. Specification for materials, workmanship and protection.
 - > BS 6399: Part 1: 1988. Loadings for Buildings - Code of practice for Dead and Imposed Loads
7. The beam is fabricated from drawn tube sections described in section 1
8. The structure has been analysed under the assumption that it is fabricated from 6082-T6 Aluminium Alloy and has been welded together in accordance with BS 8118 : Part 1 : 1991
9. No allowance has been made for the type of connection between adjoining trusses
10. The estimated deflection under the quoted safe load is given in section 2. Figures in boxes indicate the beam is limited by deflection rather than strength