

Material Specification	Grade 6082 T6 Aluminium Alloy (only UK sourced aluminium used)
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Dimension Specification	Tube: 48.3mm dia. x 4.2-4.4mm wall thickness Oval/Diagonal: 50mm x 19.05mm x 3.25mm wall thickness (rec tube 4 rads)
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Main Boom & Verticals

If markings are not present then specification is invalid.

1. BS / EN Mark
2. Manufacturing date
3. Serial number

Ovals / Diagonals

Loading Specification	For simply supported single X-Beams to EUROCODE EN-1999-1 / BS 8118.
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Overall Graded Results for Allowable Working Loads

Compression chord restraint at 1.0m intervals

		Span (m)				
		9	12	15	18	24
Allowable Bending Moment	kN/m	71.10	72.25	73.00	72.50	68.25
Allowable Shear	kN	55.50	53.00	52.25	50.50	44.25

Weight	11.2 kg/m
Area	1188mm ²
I _x	513000000mm ⁴
I _y	290000mm ⁴

Allowable loads for load distributions

Type of Load		Clear span (m)																
		6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
Uniformly distributed load	kN/m	15.8	11.6	8.9	7.0	5.7	4.7	4.0	3.4	2.9	2.6	2.3	2.0	1.8	1.5	1.4	1.2	1.1
Total UDL	kN	94.8	81.3	71.1	63.2	56.9	51.7	48.2	44.5	41.3	38.9	36.5	34.1	32.2	28.7	27.3	26.0	24.8
Single point load (mid point)	kN	47.4	40.6	35.6	31.6	28.4	25.9	24.1	22.2	20.6	19.5	18.3	17.1	16.1	14.4	13.7	13.0	12.4
Two point loads (third points)	Each kN	35.6	30.5	26.7	23.7	21.3	19.4	18.1	16.7	15.5	14.6	13.7	12.8	12.1	10.8	10.2	9.8	9.3
Three point loads (quarter points)	Each kN	23.7	20.3	17.8	15.8	14.2	12.9	12.0	11.1	10.3	9.7	9.1	8.5	8.1	7.2	6.8	6.5	6.2

- Notes:**
- Above allowable loads may be increased by 1.11 for **wind loading only**
 - This table is provided as a guide only and assume all loads are applied at nodes.
 - Maximum capacity of a point load mid-way between nodes is 15kN, but overall buckling of the top chord should be checked if loads are placed other than at restrained loads. Compression chord restraint required at 1m c/c.
 - Restraint point must support both top and bottom booms at restraint location.

Additional Information	Our welders are qualified to: EN 287-1 AS/NZS 1665 2004 BS EN 9606-2 2004 ISO 5817 2007 Welding and material test certs available on request. Apollo Scaffold Services are accredited to EN 1090-1:2009+A1:2011 - Execution of steel structures and aluminium structures (0086-CPR-637568). The manufacture (including welding) of structural work in steel and aluminium up to and including Execution Class 2 (EXC 2) as defined in EN 1090-2 and EN 1090-3. Full set of calculations available on Apollo Scaffold Services website: apolloscaffoldservices.co.uk
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Disclaimer	VR Access Solutions Ltd. advise on using a qualified structural engineer to design any project using aluminium beams.
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