

## TECHNICAL DATA SHEET

# **Apollo 1500mm X-Beam**

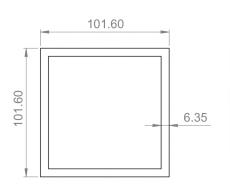
## **Material Specification**

Grade 6082 T6 Aluminium Alloy (only UK sourced aluminium used)

# **Dimension Specification**

Main Boom: 101.6mm x 101.6mm x 6.35mm wall thickness

Vertical: 48.3mm dia. x 4.2-4.4mm wall thickness / Diagonal: 50.8mm x 50.8mm x 3mm wall thickness

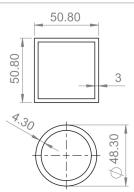


Main Boom

If markings are not present then specification is invalid.



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



Diagonals/Verticals

# **Loading Specification**

For simply supported single X-Beams to EUROCODE EN-1999-1 / BS 8118.

## **Overall Graded Results for Allowable Working Loads**

Compression chord restraint at 1.0m intervals

	Span (m)								
		12	18	24	36				
Allowable Bending Moment	kN/m	287.4	300.0	298.5	286.0				
Allowable Shear	kN	97.0	79.5	74.5	67.0				

Weight	28.0 kg/m
Area	4838mm <sup>2</sup>
lx	2730000000mm <sup>4</sup>
ly	7350000mm <sup>4</sup>

## Extrapolated allowable loads for load distributions

Type of Load	Clear span (m)													
		12	14	16	18	20	22	24	26	28	30	32	34	36
Uniformally distributed load	kN/m	16.0	11.7	9.0	7.4	6.0	4.9	4.1	3.4	2.9	2.5	2.2	2.0	2.0
Total UDL	kN	191.6	164.2	143.8	133.3	119.4	108.5	99.5	88.0	81.7	76.3	71.5	67.3	64.0
Single point load (mid point)	kN	95.8	82.1	71.9	66.7	59.7	54.3	49.8	44.0	40.9	38.1	35.8	33.6	32.0
Two point loads (third points)	Each kN	71.8	61.6	53.9	50.0	44.8	40.7	37.3	33.0	30.6	28.6	26.8	25.2	24.0
Three point loads (quarter points)	Each kN	47.9	41.1	35.9	33.3	29.9	27.1	24.9	22.0	20.4	19.1	17.9	16.8	16.0

### Notes:

- 1. Above allowable loads may be increased by 1.11 for wind loading only
- 2. This table is provided as a guide only and assume all loads are applied at restrained nodes.
- Maximum capacity of a point load mid-way between nodes is 45kN, but overall buckling of the top chord should be checked if loads are placed other than at restrained loads.

## **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

#### Disclaimer

Apollo Scaffold Services Ltd. advise on using a qualified structural engineer to design any project using aluminium beams.









