

OV Truss OV40 Truss with Centre Bar



This OV40 variant comes with a removable centre cord, to give more usability when attaching your lighting fixtures. The truss is fully compatible with the existing OV40 range so all the corners, accessories etc can be fully utilised.

The OV range represents an innovative engineering solution to a common size of truss for the entertainment, event and presentation industry. Designed to the latest Eurocodes, combines high comparative load capacities, low self-weight, and comes at a competitive price. All this whilst analysing the most common slinging / support methods on the truss has determined an 'engineered' product that can utilise the most modern manufacturing techniques.

The OV range is a series of square and triangular truss systems using conical connectors for a quick fixing method. Brace patterns are specifically designed to withstand the loads and forces implied by all common slinging and support methods. The extrusions used in the construction of the trusses are bespoke to Total Solutions Group and have been rigorously designed to enhance the structural effectiveness of the trusses and also to speed up manufacturing.

OV Truss

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Load Tables

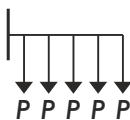
Span (metres)	3	6	9	12	15	18
UDL kg	2160	1740	1440	960	750	540
DEFL mm	3	18	51	80	122	152
CPL kg	720	720	560	430	330	265
DEFL mm	2	12	32	57	86	119
TPL kg	1350	1270	890	660	520	410
DEFL mm	2	18	43	75	115	157
QPL kg	1380	1320	980	720	540	420
DEFL mm	2	17	44	76	111	150

No single point load should exceed 720kg on the 48.4x4.47 CHS centre bar

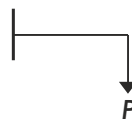
Third and Quarter point loads are displayed as a total load and NOT individual point loads.

Span (metres)		
Cantilever Span		3
UDL	kg	650
DEFL	mm	8.2
EPL	kg	260
DEFL	mm	7.6
CPL	kg	520
DEFL	mm	6.8

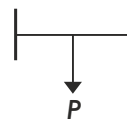
Uniform Load (UDL)



Point Load (Edge)



Point Load (Central)



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- All loads are given in kilograms and are total safe working loads (unfactored) at node points of a chord members only.
- Allowance has been made for self-weight of the truss
- Allowance has been made for frequent use factor of 85%
- The payload on a truss has been calculated as a permanent action. Should it be necessary to consider the payload as a variable action, the tabulated figures should be reduced to 90% of the given values
- No allowance for dynamic loading has been made
- All loads have been applied to the centre bar
- Capacity has been calculated in accordance with BS EN 1999 – Design of Aluminium Structures
- All deflections stated are theoretical deflections which do not account for any connection slippage. As such the values stated in these tables will be less than the actual deflection of the truss.
- Care must be taken regarding the support condition of the truss, Figure 1 shows the acceptable supporting conditions and figures 2 to 4 show the support condition that should not be used.
- No single point load should exceed 720kg on the 48.4x4.47 CHS centre bar

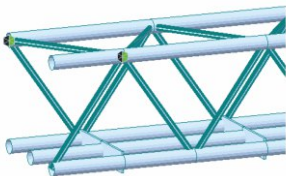


Figure 1: Orientation of the truss supported off top chords

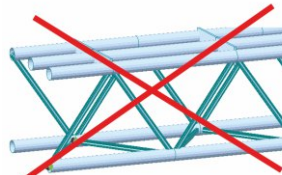


Figure 2: Not allowed orientation of the truss supported off bottom chords

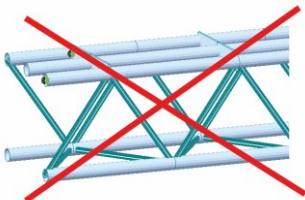


Figure 3: Not allowed orientation of the truss supported off top chords

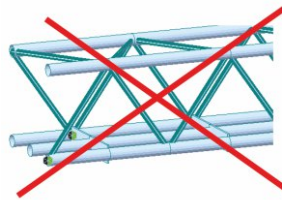


Figure 4: Not allowed orientation of the truss supported off bottom chords

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Material Specifications

Main Chord:	48 x 3mm
Braces:	Special Extrusion
Material Specifications:	EN AW-6082 T6
Fixings:	Conical : TFC pins & R3 Clips

Accessories

Circles
Hinges and Swivels
Bespoke Lengths
Ladder Sections

Item Codes, Weights and Dimensions

OV40-050-CB	'OV' Truss, 40cm Squ, 0.5Mt section with centre bar	500mm x 400mm x 400mm	10kg
OV40-100-CB	'OV' Truss, 40cm Squ, 1.0Mt section with centre bar	1000mm x 400mm x 400mm	12.4kg
OV40-200-CB	'OV' Truss, 40cm Squ, 2.0Mt section with centre bar	2000mm x 400mm x 400mm	17.2kg
OV40-300-CB	'OV' Truss, 40cm Squ, 3.0Mt section with centre bar	3000mm x 400mm x 400mm	22.0kg
OV40-400-CB	'OV' Truss, 40cm Squ, 4.0Mt section with centre bar	4000mm x 400mm x 400mm	26.8kg
OV40-4W	'OV' Truss, 40cm Squ, 4way corner	600mm x 600mm x 400mm	10.6kg
OV40-CB	'OV' Truss, 40cm Squ, Basic Universal Corner Block	400mm x 400mm x 400mm	11.5kg
OV30-FC100	'OV' Truss, Female bolt-on Connector - 100mm	100mm x 48mm x 48mm	0.4kg
OV30-MC100	'OV' Truss, Male bolt-on Connector - 100mm	100mm x 48mm x 48mm	0.6kg
OV40-BP	'OV' Truss, 40cm Squ, Ali Base plate, 50cm Squ - No conns	600mm x 600mm x 8mm	5kg
OV40-TPB	'OV' Truss, 40cm, Truss Pickup Beam - 1000Kgs	422mm x 170mm x 65mm	5.2kg

Design Specification

Manufactured in accordance with

BS EN 1090-3:2008 : Technical Requirements for aluminium structures

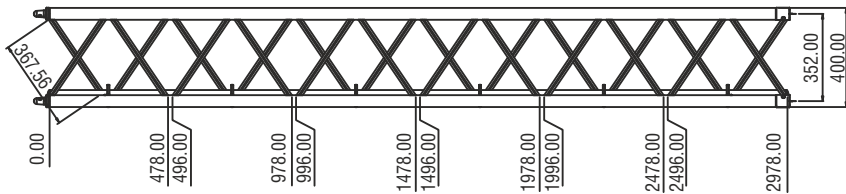
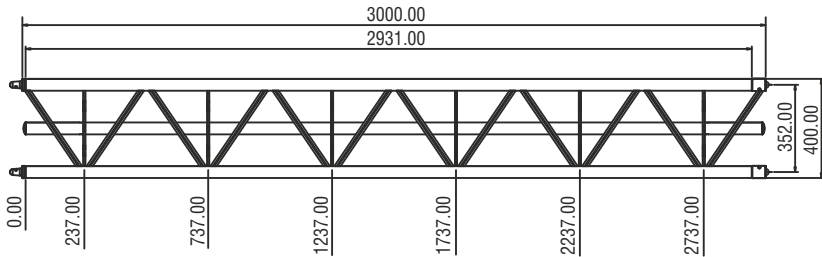
EN ISO 9001:2015 : Quality management systems

BS EN 1999 Pt 1-1 : Design of Aluminium Structures, General structural rules

EN17115: Entertainment Technology : Specifications for design, manufacture of aluminium and steel trusses and towers

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PIN INSERTION
DIRECTION

