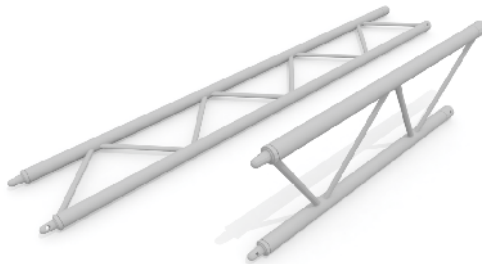


OV Truss OV40 Ladder



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.

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Load Table - OV40 ladder (lateral supports at 1m intervals)

Span (metres)	3	6	9	12
UDL kg	810	805	770	560
DEFL mm	2	13	43	75
CPL kg	700	585	385	282
DEFL mm	2	16	35	60
TPL kg	700	690	580	420
DEFL mm	2	16	44	77
QPL kg	700	690	580	420
DEFL mm	2	15	41	74

Load Table - OV40 ladder (lateral supports at 2m intervals)

Span (metres)	3	6	9	12
UDL kg	810	410	262	182
DEFL mm	2	8	16	27
CPL kg	425	207	131	91
DEFL mm	2	6	13	22
TPL kg	640	310	196	136
DEFL mm	2	8	17	28
QPL kg	640	310	196	136
DEFL mm	2	7	16	26

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

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Load Table - OV40 ladder (lateral supports at 3m intervals)

Span (metres)	3	6	9	12
UDL kg	400	188	111	68
DEFL mm	1	4	9	13
CPL kg	201	94	55	34
DEFL mm	1	4	7	10
TPL kg	300	141	83	51
DEFL mm	1	5	9	13
QPL kg	300	141	83	51
DEFL mm	1	4	8	12

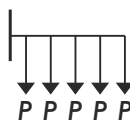
Load Table - OV40 ladder (lateral supports at 4m intervals)

Span (metres)	4	6	8	10
UDL kg	167	102	66	43
DEFL mm	2	4	6	7
CPL kg	83	51	33	21
DEFL mm	1	3	5	6
TPL kg	125	76	50	32
DEFL mm	2	4	6	7
QPL kg	125	76	50	32
DEFL mm	2	4	5	7

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

Span (metres)		
Cantilever Span		3
UDL	kg	106
DEFL	mm	2.7
EPL	kg	53
DEFL	mm	3.3
CPL	kg	106
DEFL	mm	2.3

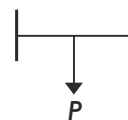
Uniform Load
(UDL)



Point Load
(Edge)



Point Load
(Central)



OV Truss OV40 Ladder



- 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
- Capacity has been calculated in accordance with BS EN 1999 – Design of Aluminium Structures
- All loads applied at the bottom chord.
- 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 condition and figures 2 to 4 show the support conditions that should not be used.
- Lateral support to restrain top and bottom chords.

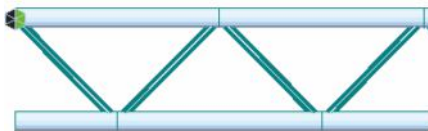


Figure 1: Orientation of the truss supported of top chords

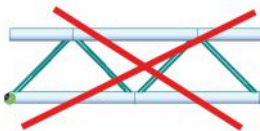


Figure 2: Not allowed orientation of the truss supported of bottom chords

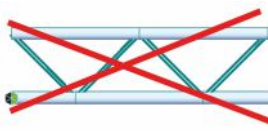


Figure 3: Not allowed orientation of the truss supported of bottom chords

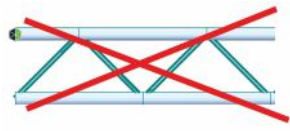


Figure 4: Not allowed orientation of the truss supported of top chords

OV Truss OV40 Ladder



Material Specifications

Main Cord:	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

OV40L-025	'OV' Truss, 40cm Ladder, 0.25Mt section	250mm x 400mm x 353mm	1.8kg
OV40L-050	'OV' Truss, 40cm Ladder, 0.5Mt section	500mm x 400mm x 353mm	2.2kg
OV40L-100	'OV' Truss, 40cm Ladder, 1.0Mt section	1000mm x 400mm x 353mm	3.3kg
OV40L-200	'OV' Truss, 40cm Ladder, 2.0Mt section	2000mm x 400mm x 353mm	5.64kg
OV40L-300	'OV' Truss, 40cm Ladder, 3.0Mt section	3000mm x 400mm x 353mm	8.9kg
OV40L-400	'OV' Truss, 40cm Ladder, 4.0Mt section	4000mm x 400mm x 353mm	11.7kg
OV40L-90	'OV' Truss, 40cm Ladder, 90 deg corner	500mm x 500mm x 353mm	2.8kg
OV40L-3W	'OV' Truss, 40cm Ladder, 3way corner	600mm x 500mm x 353mm	3.4kg
OV40L-4W	'OV' Truss, 40cm Ladder, 4way corner	600mm x 600mm x 353mm	4.0kg
OV40L-GPC	'OV' Truss, 40cm Ladder, Goal Post corner	500mm x 500mm x 353mm	2.7kg
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, Ali Base plate, 50cm Squ - No conns	600mm x 600mm x 8mm	5kg
OV40L-LTA-F	'OV' Truss, 40cm Ladder to Truss adapter, Female	100mm x 48mm x 300mm	1.55kg
OV40L-LTA-M	'OV' Truss, 40cm Ladder to Truss adapter, Male	100mm x 48mm x 300mm	1.71kg

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

OV Truss
OV40 Ladder

