



TOMCAT<sup>4</sup>

# Strength Under Pressure

Staging and Support Systems

# Contents

---

<b>In the beginning</b>	<b>4</b>
<b>The Structure Behind Performer Flying</b>	<b>6</b>
<b>New West Coast office and warehouse</b>	<b>8</b>

## Products

---

<b>Box Truss</b>	<b>10</b>
<b>Triangle Truss</b>	<b>36</b>
<b>Folding Box Truss</b>	<b>48</b>
<b>Touring Truss</b>	<b>54</b>
<b>Truss Circles</b>	<b>74</b>
<b>Dance tower</b>	<b>80</b>
<b>Spot chair</b>	<b>81</b>
<b>Rigging Hardware</b>	<b>82</b>
<b>Sound Delay Towers</b>	<b>90</b>
<b>Ground Support Systems</b>	<b>98</b>
<b>Roofs</b>	<b>104</b>
<b>Barriers</b>	<b>136</b>

## Articles, technical specifications and policies

---

<b>Tips for a safe outdoor concert season</b>	<b>142</b>
<b>Indeterminate grids</b>	<b>146</b>
<b>Truss use guidelines</b>	<b>150</b>
<b>Policies</b>	<b>151</b>



# In the beginning

---

**Since the genesis of the company in 1987, TOMCAT has embodied the spirit of innovation. Its long-standing commitment to customer service and reputation for manufacturing products of the highest quality, have given TOMCAT a worldwide reputation as a leader in the truss industry.**

As the demand for TOMCAT products has grown through the years, so too has the company. This growth is apparent in both the size of the physical plant and the number of employees. TOMCAT's factory and headquarters are currently located in Knoxville, TN. This office is perfectly positioned to carry out sales and distribution in the eastern half of the country. The second, and newest TOMCAT office, is located in Thousand Oaks, CA, which is only about a one hour drive from Los Angeles. The "West" location is loaded with sales and administration offices, a dedicated "West" sales team, and a fully stocked warehouse with 25000 sq ft of inventory. They are fully responsible for sales and distribution in the Western half of the country and western Canada.

In 2014, TOMCAT became part of the Area Four Industries group, the largest manufacturing group in the world for aluminum modular support structures and staging systems.

## Continuous evolution

The wide range of projects that have been entrusted to TOMCAT over the years have also continued to evolve. TOMCAT initially established its strong reputation for providing trussing and related items to major touring acts in the rock-and-roll industry. The manufacture of portable outdoor roof systems was one of the company's early successes, and continues to be a major part of the TOMCAT product line today.

## Innovator and problem-solver for Rock 'n Roll royalty

TOMCAT has been fortunate to manufacture items for some of the major names in rock-and-roll. Demanding projects for customers such as Pink Floyd, The Rolling Stones, U2, Janet Jackson, and others, established TOMCAT as an industry leader and partner that could be trusted to get the job done. From cobra heads to large Jumbotron trolleys, TOMCAT exceeded at projects that others claimed were impossible to carry out. Those achievements succeeded in positioning the company as an innovator and problem-solver. A company that creates and delivers solutions for its customers.

## TOMCAT design department

One of the keys to TOMCAT's success with custom projects is a fully staffed in-house design department that works closely with customers, designers and consulting engineering firms to maintain the highest standards of quality and safety. TOMCAT ensures that each and every project is engineered to perform with "Strength Under Pressure". After more than 25 years of setting the standard, TOMCAT has proven its claim of being "Tried, Tested, Trusted" throughout the industry, over a wide range of projects and across the globe.

## A broad range of projects that extend all the way to Broadway and the West End

Just as TOMCAT has grown and expanded into other countries, so too has the scope of projects it has been involved with. The touring entertainment industry is still a large part of TOMCAT's activities. High profile rock-and-roll shows is an area where TOMCAT exceeds, and it has also manufactured items for touring country music artists. It's even extended its reach to touring Broadway and West End shows such as Mamma Mia, The Producers, Aida, and Lion King.

## Trade show displays – Compact, light and easy to transport

Another type of touring show that benefits from TOMCAT craftsmanship is the trade show market. Trade show displays are becoming ever larger and increasingly complex, yet have the same requirements for easy assembly and quick disassembly. TOMCAT meets these needs while keeping the structures compact, light and easy to transport.

TOMCAT has extensive experience in producing a wide variety of trade show booths for many different types of clients. This includes small and relatively simple structures for hospital equipment suppliers, to large and complicated structures for major computer and television programming companies.



# The Structure Behind Performer Flying

---

Some of our most technically challenging projects are those where performers are suspended from overhead truss structures. In fact, TOMCAT had the opportunity to be involved in a ground up design of a new show where the flying of both performers and scenery took center stage. The initial communication with the customer was fairly simple. A sketch was sent over with a truss section and track similar to other components that we had manufactured for them in the past, with the simple question of cost for the items in the drawing. It wasn't until a few months later when the show's storyboard was sent over that we knew we were about to set off on a special journey to design something quite amazing.

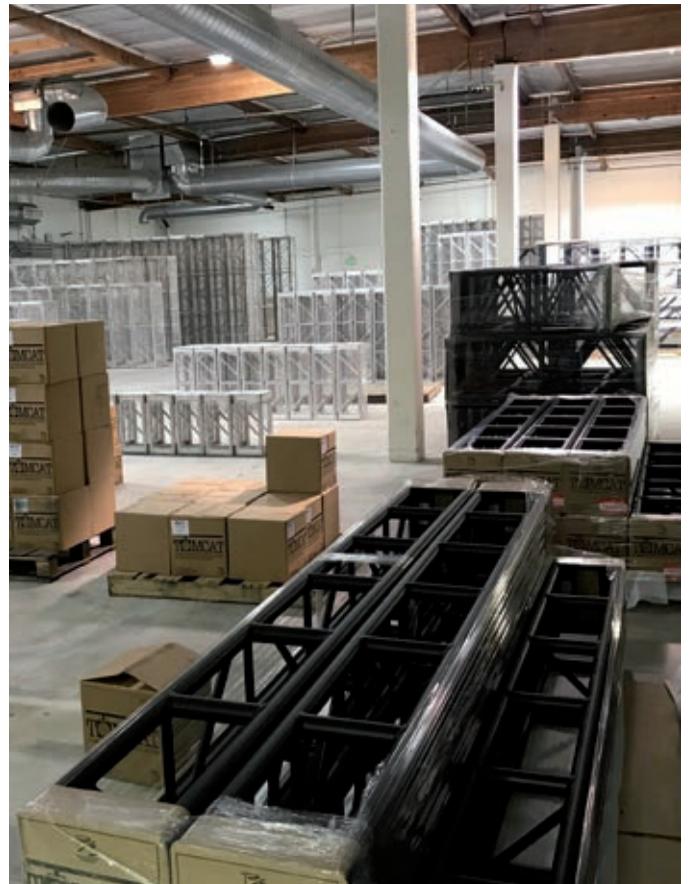
It was determined that the structure was going to be supported both from the ground and from the rigging above. However, the suspended load of the complete structure was going to be high enough that we didn't want any of the "legs" of the structure to transfer load of the suspended grid overhead. We were already running into capacity issues in venues and this was going to be a critical design criteria for us to maintain. So what we landed on was a slip connection that would allow the crew to assemble the grid from the ground using the hoists, then sit the towers down on the ground. There was 12" of variable adjustment built into the slip allowing the crew +/- 6" of adjustability from their desired trim height.

Flying both performers and scenic elements were going to be a large part of the show. So it was decided to use the maximum winch capacity for both lift and travel to set the demands on the structure. ANSI E1.43, the American

National Standard for Performer Flying was referenced throughout the design process when it came to the flying elements of the show. Using a worst case scenario, some of the structure components had to be highly customized to support the loads. All structure hoists were upgraded to 2-ton chain hoists and each truss member in the system had to be reviewed. In some components, truss chords were upgraded to 1/2" wall thickness to get the performance that was required per the engineering review.

The towers of the system has to be multi-functional as well. Technicians required access to the winches in the main structure, safety nets had to be tensioned during the show and scenic elements still needed to be able to move within the structure. The bottom tower sections were designed to house the required ballast to hold the towers in place during use. Keeping in mind there is not a fixed connection at the top to the main grid, we had a vertical cantilever that needed to remain stable during show operation.

After the design was finally set for the structure, production began. This project required 3 months of processing through the various departments in the shop and to receive a powder coating. TOMCAT takes pride in having the ability to sit down with customers, design these types of projects based on the needs of the show, and then fabricate high quality products. It's not always easy and things never go as planned on these projects, as our Mission Statement says: "Strength Under Pressure, it's engineered into Everything We Do".



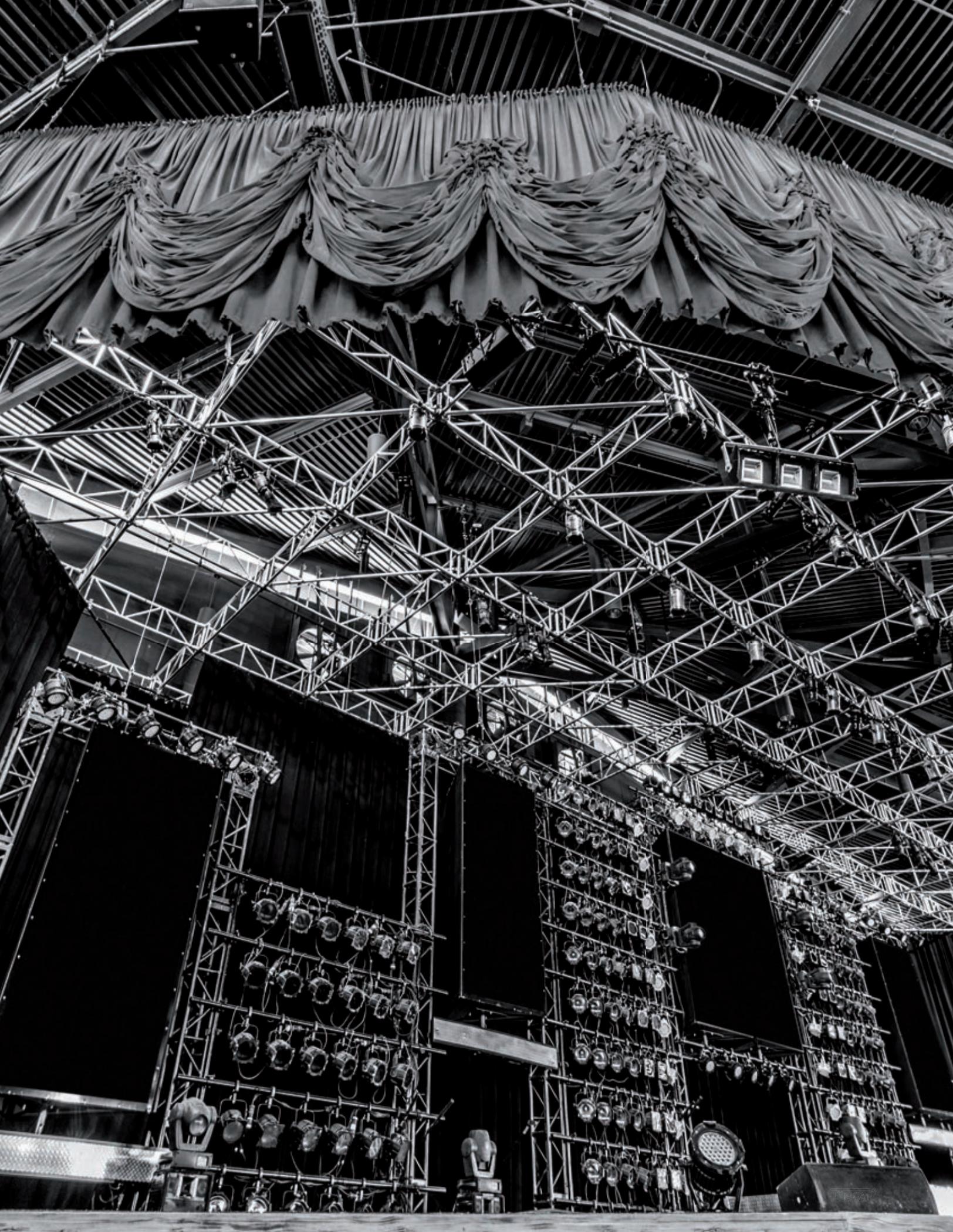
# New West Coast office and warehouse

---

We now have a new TOMCAT office and warehouse that's just a stone's throw from our many customers in the western United States and Canada! Located in Thousand Oaks, California (one hour drive from LAX and downtown Los Angeles), we provide local customer service, technical support and rapid physical product shipments from our 25,000 sq ft office and warehouse space.

Customers in this part of the country now have instant and convenient access to TOMCAT products in the most popular sizes and lengths. Regular shipments from our factory in Tennessee ensure the West warehouse is always stocked up and products always ready to ship.







# Box truss

---

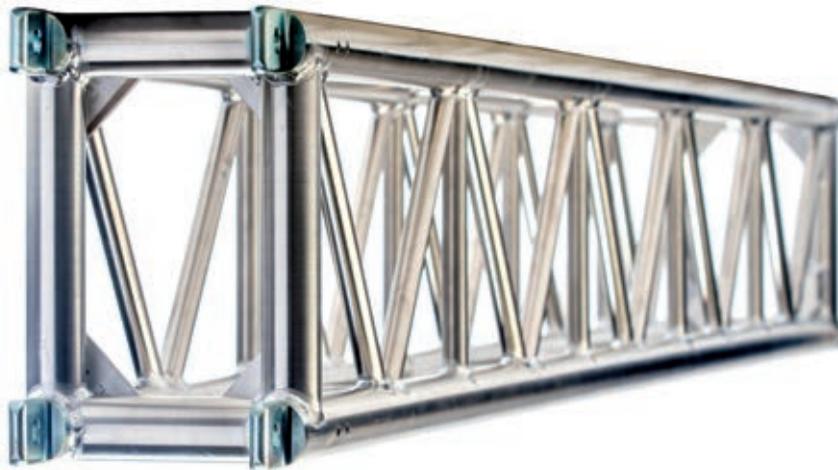
<b>Super beam truss 13.7 x 10 spigoted</b>	<b>12</b>
<b>Light-duty truss 12 x 12 plated</b>	<b>14</b>
<b>Light-duty truss 12 x 12 spigoted</b>	<b>16</b>
<b>Light-duty truss 12 x 18 plated</b>	<b>18</b>
<b>Ballroom truss 12 x 30 spigoted</b>	<b>20</b>
<b>Medium-duty truss 20.5 x 20.5 plated</b>	<b>22</b>
<b>Medium-duty truss 20.5 x 20.5 spigoted</b>	<b>24</b>
<b>Heavy-duty truss 30 x 20.5 plated</b>	<b>26</b>
<b>Heavy-duty truss 30 x 20.5 spigoted</b>	<b>28</b>
<b>Extra heavy-duty truss 36 x 24 spigoted</b>	<b>30</b>
<b>Stacking truss 25 spigoted</b>	<b>32</b>
<b>Zig-Zag truss</b>	<b>34</b>

**Strength  
Under  
Pressure**

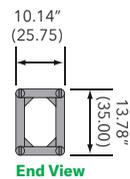
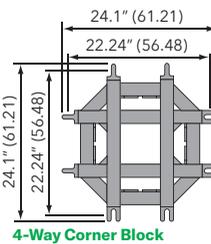
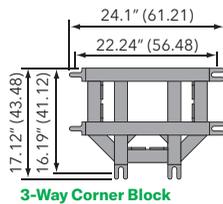
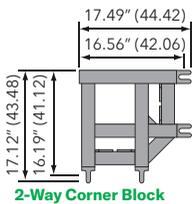
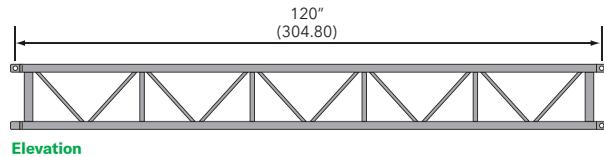
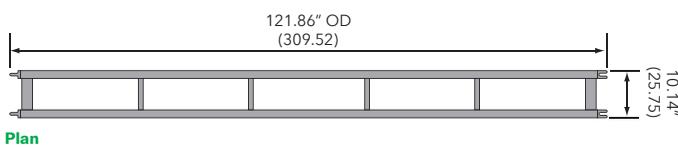
# Box truss

## Super beam 13.7 × 10 spigoted truss

- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD × 3/16" aluminum
- › Diagonals are 1" OD × 1/8"
- › Fabricated by AWS / SFL certified welders



Plan Views – Connector orientation specified by customer



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	766	7660 (3475)	0.15	3831 (1738)	0.12	2873 (1303)	0.16	1916 (869)	0.15
20 (6.09)	186	3720 (1687)	0.61	1863 (845)	0.49	1397 (634)	0.63	932 (423)	0.58
30 (9.14)	78	2340 (1061)	1.36	1184 (537)	1.12	888 (403)	1.41	592 (269)	1.32
40 (12.21)	41	1640 (744)	2.44	827 (375)	2.03	620 (281)	2.50	413 (187)	2.35

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

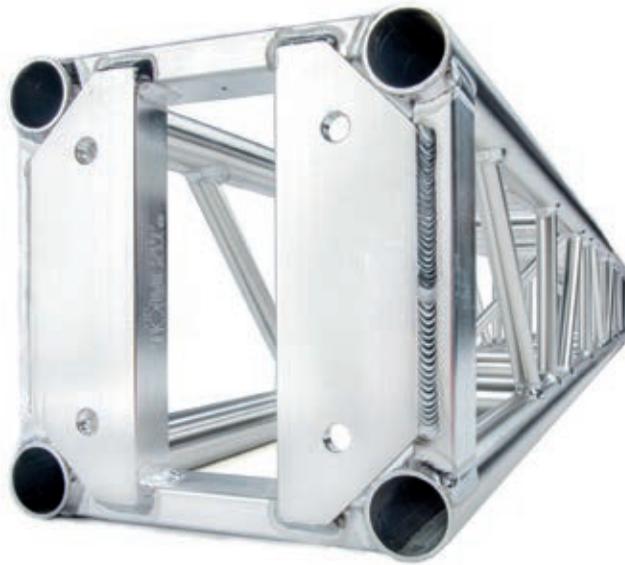
## Super beam 13.7 × 10 spigoted truss Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT SUPER BEAM TRUSS	TC 1310-060S	44 (20)
8 FT SUPER BEAM TRUSS	TC 1310-096S	64 (29)
10 FT SUPER BEAM TRUSS	TC 1310-120S	77 (35)
SUPER BEAM 2-WAY CORNER BLOCK	TC 1310-C2S	27 (12)
SUPER BEAM 3-WAY CORNER BLOCK	TC 1310.C3S	38 (17)
SUPER BEAM 4-way corner block	TC 1310-C4S	46 (21)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

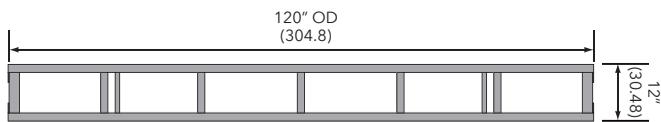
# Box truss

## Light-duty truss 12 x 12 plated

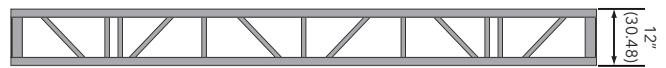
- › Light-duty truss 12 x 12 plated
- › Standard lengths are 10', 8', 6', 5', 4', 3', 2.5', 2'
- › Custom lengths available upon request
- › Equipped with bolts
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



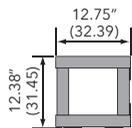
### Plan Views



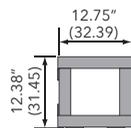
Plan



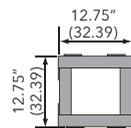
Elevation



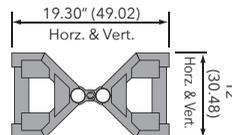
2-Way Corner Block



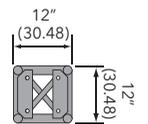
3-Way Corner Block



4-Way Corner Block



Horizontal Variable Corner



End View

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point Load lbs (kgs)	Max Defl. in.	third point Load lbs (kgs)	Max Defl. in.	quarter point Load lbs (kgs)	Max Defl. in.
10 (3.05)	446	4460 (2023)	0.14	2231 (1012)	0.11	1673 (759)	0.14	1116 (506)	0.13
20 (6.09)	106	2120 (962)	0.54	1063 (482)	0.44	797 (362)	0.56	531 (241)	0.52
30 (9.14)	43	1290 (585)	1.22	650 (295)	1.01	487 (221)	1.25	325 (147)	1.17
40 (12.21)	21	840 (381)	2.16	426 (193)	1.85	319 (145)	2.21	213 (97)	2.10

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Light-Duty truss 12 x 12 plated Connections are single sets of bolts

Product Description	Item Code	Weight lbs (kgs)
2 FT LIGHT-DUTY PLATED TRUSS	TC 1212-024B	20 (9)
2.5 FT LIGHT-DUTY PLATED TRUSS	TC 1212-030B	24 (11)
3 FT LIGHT-DUTY PLATED TRUSS	TC 1212-036B	26 (12)
4 FT LIGHT-DUTY PLATED TRUSS	TC 1212-048B	33 (15)
5 FT LIGHT-DUTY PLATED TRUSS	TC 1212-060B	36 (16)
6 FT LIGHT-DUTY PLATED TRUSS	TC 1212-072B	42 (19)
8 FT LIGHT-DUTY PLATED TRUSS	TC 1212-096B	51 (23)
10 FT LIGHT-DUTY PLATED TRUSS	TC 1212-120B	61 (28)
LIGHT-DUTY PLATED 2-WAY CORNER BLOCK	TC 1212-C2B	16 (7)
LIGHT-DUTY PLATED 3-WAY CORNER BLOCK	TC 1212-C3B	20 (9)
LIGHT-DUTY PLATED 4-WAY CORNER BLOCK	TC 1212-C4B	22 (10)
LIGHT-DUTY PLATED 5-WAY CORNER BLOCK	TC 1212-C5B	26 (12)
LIGHT-DUTY PLATED 6-WAY CORNER BLOCK	TC 1212-C6B	28 (13)
LIGHT-DUTY PLATED HORIZ. ARTICULATING BLOCK	TC 1212-AHB	24 (11)
LIGHT-DUTY PLATED VERT. ARTICULATING BLOCK	TC 1212-AVB	24 (11)
LIGHT-DUTY PLATED VARIABLE HORIZ. BLOCK	TC 1212-VHB	22 (10)
LIGHT-DUTY PLATED VARIABLE VERT. BLOCK	TC 1212-VVB	22 (10)

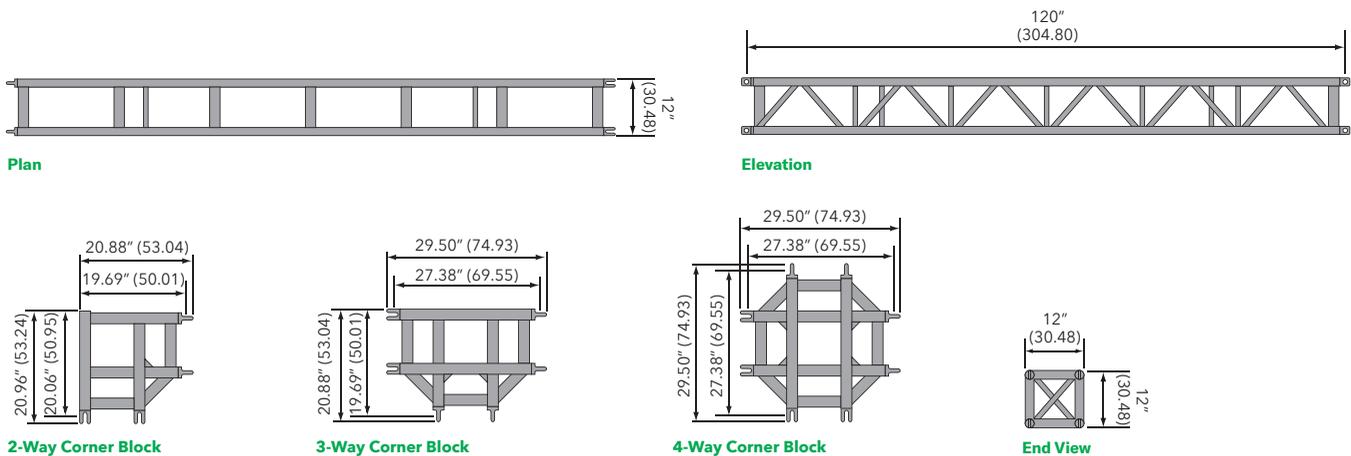
# Box truss

## Light-duty truss 12 x 12 spigoted

- › Light-duty truss 12 x 12 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



Plan Views – Connector Orientation Specified by Customer



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	1148	11480 (5207)	0.24	7785 (3531)	0.26	5742 (2604)	0.32	3828 (1736)	0.30
20 (6.09)	309	6180 (2803)	1.04	3099 (1405)	0.84	2324 (1054)	1.07	1549 (702)	1.00
30 (9.14)	111	3330 (1510)	2.00	2089 (947)	2.00	1226 (556)	2.00	879 (398)	2.00
40 (12.21)	41	1640 (743)	2.62	824 (373)	2.20	614 (278)	2.67	412 (186)	2.52

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Light-duty truss 12 x 12 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)	
5 FT LIGHT-DUTY SPIGOTED TRUSS	TC 1212-060S	61	(27.7)
8 FT LIGHT-DUTY SPIGOTED TRUSS	TC 1212-096S	80	(36.3)
10 FT LIGHT-DUTY SPIGOTED TRUSS	TC 1212-120S	92	(41.7)
LIGHT-DUTY SPIGOTED 2-WAY CORNER BLOCK	TC 1212-C2S	39	(17.7)
LIGHT-DUTY SPIGOTED 3-WAY CORNER BLOCK	TC 1212-C3S	54	(24.5)
LIGHT-DUTY SPIGOTED 4-WAY CORNER BLOCK	TC 1212-C4S	66	(29.9)
LIGHT-DUTY SPIGOTED 5-WAY CORNER BLOCK	TC 1212-C5S	81	(36.7)
LIGHT-DUTY SPIGOTED 6-WAY CORNER BLOCK	TC 1212-C6S	95	(43.1)
3/4" CLEVIS PIN	TC CP-75	0.4	(0.18)
MEDIUM R-CLIP	TC RC-MED	-	(-)

Custom length truss and custom corner designs, inc. angles, available upon request.

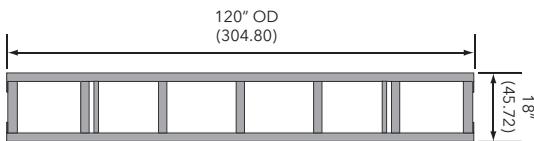
# Box truss

## Light-duty truss 12 x 18 plated

- > Light-duty truss 12 x 18 plated
- > Standard lengths are 10', 8' and 5'
- > Custom lengths available upon request
- > Equipped with bolts
- > Main chords are 2" OD x 1/8" aluminum
- > Diagonals are 1" OD x 1/8" aluminum
- > Fabricated by AWS / SFL certified welders



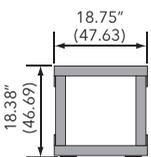
### Plan Views



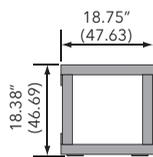
Plan



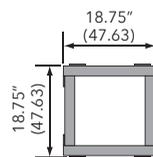
Elevation



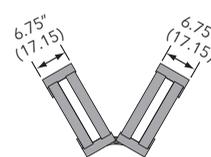
2-Way Corner Block



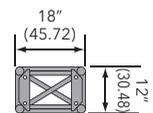
3-Way Corner Block



4-Way Corner Block



Horizontal Variable Corner



End View

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	445	4450 (2019)	0.14	2229 (1011)	0.11	1672 (758)	0.14	1115 (506)	0.13
20 (6.09)	105	2100 (953)	0.54	1058 (480)	0.44	794 (360)	0.56	529 (240)	0.52
30 (9.14)	42	1260 (572)	1.20	643 (292)	1.02	482 (219)	1.25	322 (146)	1.17
40 (12.21)	20	800 (363)	2.11	417 (189)	1.86	312 (142)	2.21	208 (94)	2.10

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Light-duty truss 12 x 18 plated Connections are single sets of bolts

Product Description	Item Code	Weight lbs (kgs)	
2 FT LIGHT-DUTY PLATED TRUSS	TC 1218-024B	21	(10)
3 FT LIGHT-DUTY PLATED TRUSS	TC 1218-036B	28	(13)
4 FT LIGHT-DUTY PLATED TRUSS	TC 1218-048B	34	(16)
5 FT LIGHT-DUTY PLATED TRUSS	TC 1218-060B	39	(18)
6 FT LIGHT-DUTY PLATED TRUSS	TC 1218-072B	46	(21)
8 FT LIGHT-DUTY PLATED TRUSS	TC 1218-096B	57	(26)
10 FT LIGHT-DUTY PLATED TRUSS	TC 1218-120B	67	(30)
LIGHT-DUTY PLATED 2-WAY CORNER BLOCK	TC 1218-C2B	19	(9)
LIGHT-DUTY PLATED 3-WAY CORNER BLOCK	TC 1218-C3B	21	(10)
LIGHT-DUTY PLATED 4-WAY CORNER BLOCK	TC 1218-C4B	25	(11)
LIGHT-DUTY PLATED HORIZ. ARTICULATING BLOCK	TC 1218-AHB	29	(13)
LIGHT-DUTY PLATED VERT. ARTICULATING BLOCK	TC 1218-AVB	29	(13)
LIGHT-DUTY PLATED VARIABLE HORIZ. BLOCK	TC 1218-VHB	30	(14)
LIGHT-DUTY PLATED VARIABLE VERT. BLOCK	TC 1218-VVB	30	(14)

Custom length truss and custom corner designs, inc. angles, available upon request.

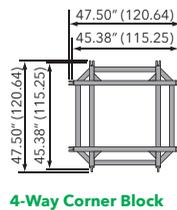
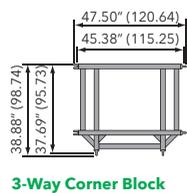
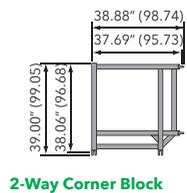
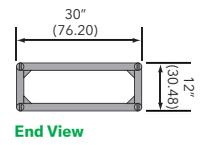
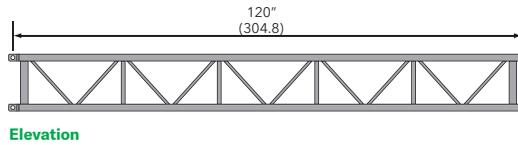
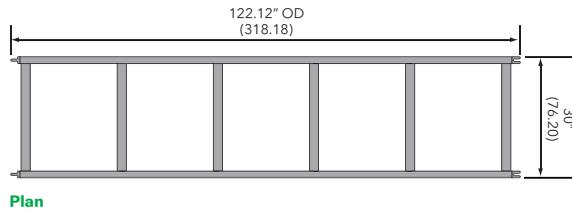
# Box truss

## Ballroom truss 12 x 30 spigoted

- › Ballroom truss 12 x 30 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



Plan Views – Connector Orientation Specified by Customer



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
5 (1.52)	2272	11360 (5153)	0.03	11361 (5153)	0.05	5681 (2577)	0.04	3787 (1718)	0.04
10 (3.05)	1120	11200 (5080)	0.23	6299 (2857)	0.21	4724 (2143)	0.27	3150 (1429)	0.25
15 (4.57)	680	10200 (4626)	0.72	5106 (2316)	0.58	3112 (1412)	0.60	2489 (1129)	0.67
20 (6.09)	303	6060 (2749)	1.04	3036 (1377)	0.85	2277 (1033)	1.07	1518 (689)	1.00
25 (7.62)	192	4800 (2177)	1.67	2942 (1334)	1.63	1767 (802)	1.67	1267 (575)	1.67
30 (9.14)	105	3150 (1429)	2.00	1897 (860)	1.93	1157 (525)	2.00	830 (377)	2.00
35 (10.67)	60	2100 (953)	2.33	1229 (557)	2.20	778 (353)	2.33	558 (253)	2.33
40 (12.21)	34	1360 (617)	2.58	697 (316)	2.26	523 (237)	2.37	349 (158)	2.54

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

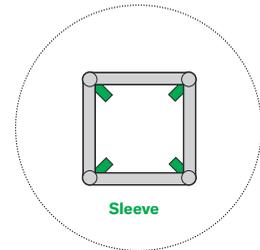
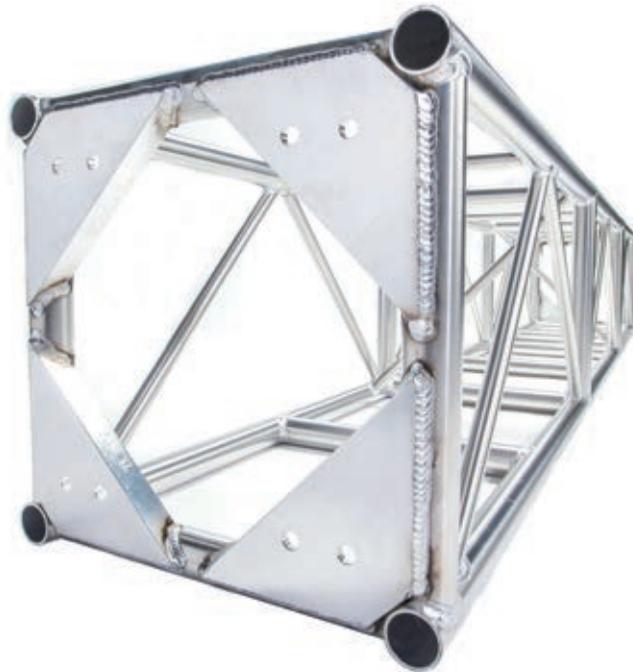
## Ballroom truss 12 x 30 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT BALLROOM TRUSS	TC 1230-060S	75 (34.0)
8 FT BALLROOM TRUSS	TC 1230-096S	105 (47.6)
10 FT BALLROOM TRUSS	TC 1230-120S	126 (57.2)
BALLROOM SPIGOTED 2-WAY CORNER BLOCK	TC 1230-C2S	45 (20.4)
BALLROOM SPIGOTED 3-WAY CORNER BLOCK	TC 1230-C3S	56 (25.4)
BALLROOM SPIGOTED 4-WAY CORNER BLOCK	TC 1230-C4S	68 (30.9)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

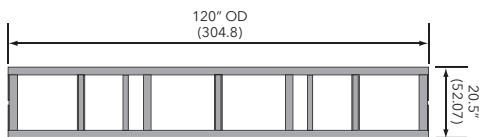
# Box truss

## Medium-duty truss 20.5 x 20.5 plated

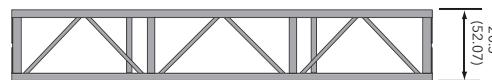
- › Medium-duty truss 20.5 x 20.5 plated
- › Standard lengths are 10', 8', 6', 5', 4', 3', 2'
- › Custom lengths available upon request
- › Equipped with bolts
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Studio version available with 2" OD x 3/16" main chords
- › Available with casters
- › Fabricated by AWS / SFL certified welders



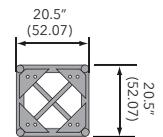
Plan Views – 5-Way & 6-Way Corners Available



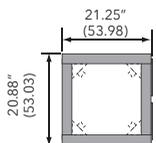
Plan



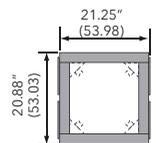
Elevation



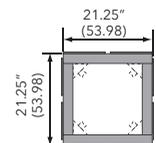
End View



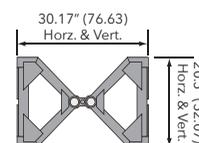
2-Way Corner Block



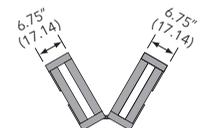
3-Way Corner Block



4-Way Corner Block



Center Pivot Horiz.  
Articulating Block



Horizontal Variable Corner

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	839	8390 (3806)	0.08	4744 (2152)	0.07	3558 (1614)	0.09	2372 (1076)	0.08
20 (6.09)	230	4600 (2087)	0.34	2306 (1046)	0.27	1729 (784)	0.35	1153 (523)	0.32
30 (9.14)	97	2910 (1320)	0.76	1464 (664)	0.62	1098 (498)	0.78	732 (332)	0.73
40 (12.21)	51	2040 (925)	1.36	1021 (463)	1.13	765 (347)	1.39	510 (231)	1.30
50 (15.24)	29	1450 (658)	2.10	737 (334)	1.80	553 (251)	2.16	369 (167)	2.05

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

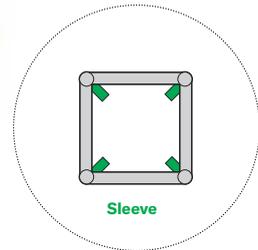
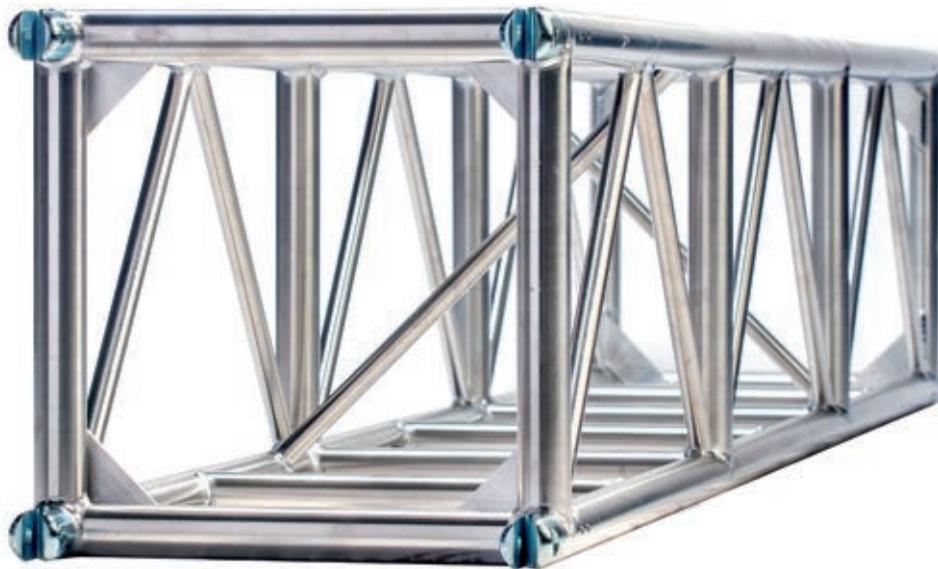
## Medium-duty truss 20.5 x 20.5 plated End plates equipped for double sets of bolts, supplied with one set only

Product Description	Item Code	Weight lbs (kgs)
2 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-024B	34 (15)
3 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-036B	39 (18)
4 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-048B	51 (23)
5 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-060B	56 (25)
6 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-072B	59 (27)
8 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-096B	77 (35)
10 FT MEDIUM-DUTY PLATED TRUSS	TC 2020-120B	85 (39)
2 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-024B	37 (17)
3 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-036B	43 (20)
4 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-048B	59 (27)
5 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-060B	66 (30)
6 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-072B	73 (33)
8 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-096B	91 (42)
10 FT MEDIUM-DUTY PLATED STUDIO TRUSS	TC 20ST-120B	102 (47)
MEDIUM-DUTY PLATED 2-WAY CORNER BLOCK	TC 2020-C2B	31 (14)
MEDIUM-DUTY PLATED 3-WAY CORNER BLOCK	TC 2020-C3B	32 (15)
MEDIUM-DUTY PLATED 4-WAY CORNER BLOCK	TC 2020-C4B	39 (18)
MEDIUM-DUTY PLATED 5-WAY CORNER BLOCK	TC 2020-C5B	52 (24)
MEDIUM-DUTY PLATED 6-WAY CORNER BLOCK	TC 2020-C6B	58 (27)
MEDIUM-DUTY PLATED HORIZ. ARTICULATING BLOCK	TC 2020-AHB	59 (27)
MEDIUM-DUTY PLATED VERT. ARTICULATING BLOCK	TC 2020-AVB	59 (27)
MEDIUM-DUTY PLATED VARIABLE HORIZ. BLOCK	TC 2020-VHB	45 (21)
MEDIUM-DUTY PLATED VARIABLE VERT. BLOCK	TC 2020-VVB	45 (21)
MEDIUM-DUTY PLATED 2 WAY SLEEVE FOR 12" TOWER	TC 2020-S2B	43 (20)
MEDIUM-DUTY PLATED 3 WAY SLEEVE FOR 12" TOWER	TC 2020-S3B	50 (23)
MEDIUM-DUTY PLATED 4 WAY SLEEVE FOR 12" TOWER	TC 2020-S4B	56 (26)

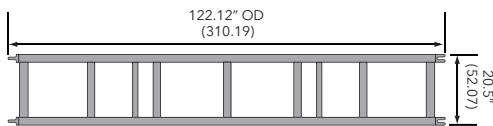
# Box truss

## Medium-duty truss 20.5 x 20.5 spigoted

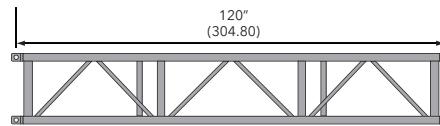
- › Medium-duty truss 20.5 x 20.5 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Available with casters
- › Fabricated by AWS / SFL certified welders



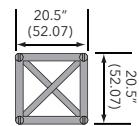
Plan Views – Connector Orientation Specified by Customer – 5-Way & 6-Way Corners Available



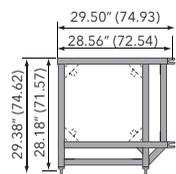
Plan



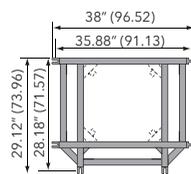
Elevation



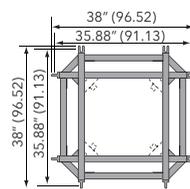
End View



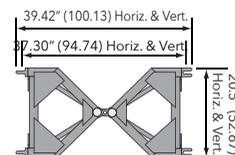
2-Way Corner Block



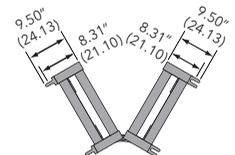
3-Way Corner Block



4-Way Corner Block



Center Pivot Horiz. Articulating Block



Horizontal Variable Corner

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	920	9200 (4173)	0.06	9204 (4175)	0.09	4602 (2087)	0.08	3068 (1392)	0.07
20 (6.09)	450	9000 (4082)	0.45	5797 (2630)	0.46	4348 (1972)	0.59	2898 (1315)	0.54
30 (9.14)	252	7560 (3429)	1.29	3781 (1715)	1.04	2836 (1286)	1.32	1891 (858)	1.23
40 (12.19)	137	5480 (2486)	2.28	2748 (1246)	1.86	2061 (935)	2.34	1374 (623)	2.18
50 (15.24)	77	3850 (1746)	3.30	2109 (957)	2.94	1429 (648)	3.33	1025 (465)	3.33

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

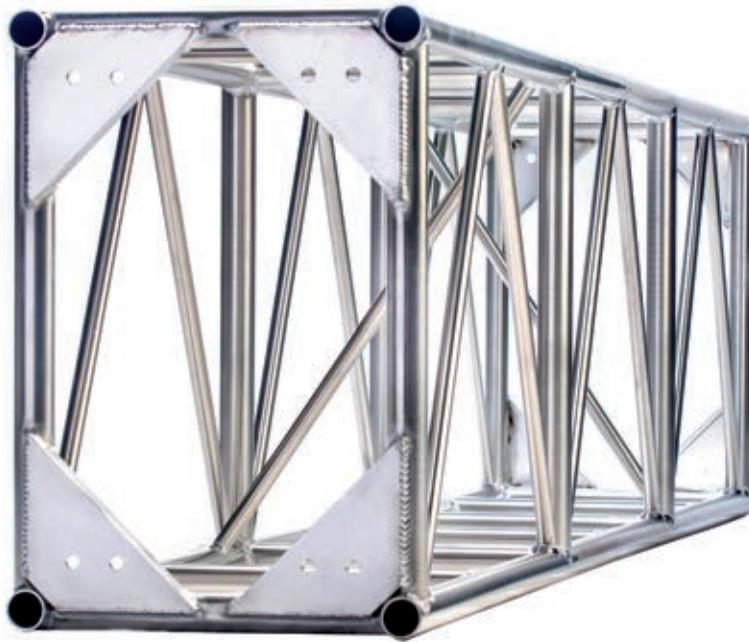
## Medium-duty truss 20.5 x 20.5 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT MEDIUM-DUTYTRUSS	TC 2020-060S	79 (36)
8 FT MEDIUM-DUTYTRUSS	TC 2020-096S	104 (47)
10 FT MEDIUM-DUTYTRUSS	TC 2020-120S	115 (53)
MEDIUM-DUTY 2-WAY CORNER	TC 2020-C2S	67 (31)
MEDIUM-DUTY 3-WAY CORNER	TC 2020-C3S	90 (41)
MEDIUM-DUTY 4-WAY CORNER	TC 2020-C4S	113 (51)
MEDIUM-DUTY 5-WAY CORNER	TC 2020-C5S	142 (65)
MEDIUM-DUTY 6-WAY CORNER	TC 2020-C6S	168 (77)
MD ARTICULATING HORIZ. (center pivot)	TC 2020-AHS	82 (38)
MD ARTICULATING VERT. (center pivot)	TC 2020-AVS	82 (38)
MD VARIABLE CORNER HORIZ. (book style with brace)	TC 2020-VHS	62 (28)
MD VARIABLE CORNER VERT. (book style with brace)	TC 2020-VVS	62 (28)
MD 2-WAY SLEEVE FOR 12" TOWER	TC 2020-S2S	79 (36)
MD 3-WAY SLEEVE FOR 12" TOWER	TC 2020-S3S	101 (46)
MD 4-WAY SLEEVE FOR 12" TOWER	TC 2020-S4S	124 (57)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

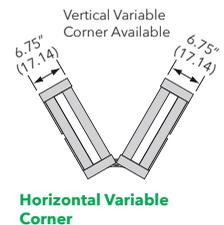
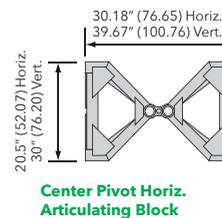
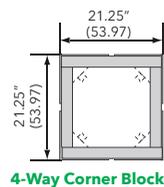
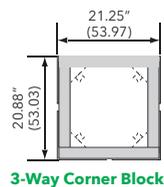
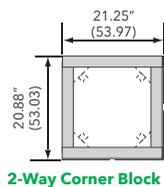
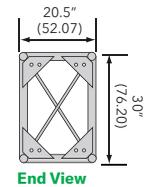
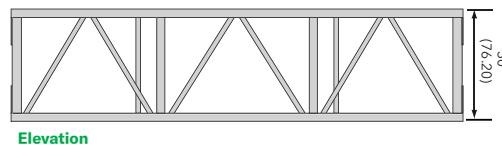
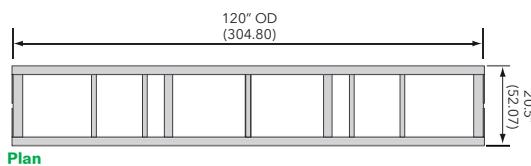
# Box truss

## Heavy-duty 30 x 20.5 plated

- › Heavy-duty 30 x 20.5 plated
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with bolts
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Available with casters
- › Fabricated by AWS / SFL certified welders



### Plan Views



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point Load lbs (kgs)	Max Defl. in.	third point Load lbs (kgs)	Max Defl. in.	quarter point Load lbs (kgs)	Max Defl. in.
10 (3.05)	584	5840 (2649)	0.02	5840 (2649)	0.04	2920 (1325)	0.03	1947 (883)	0.03
20 (6.09)	287	5740 (2604)	0.18	3704 (1680)	0.19	2778 (1260)	0.24	1852 (840)	0.23
30 (9.14)	159	4770 (2164)	0.53	2387 (1083)	0.43	1790 (812)	0.54	1193 (541)	0.51
40 (12.21)	85	3400 (1542)	0.95	1703 (772)	0.78	1277 (579)	0.97	852 (386)	0.90
50 (15.24)	50	2500 (1134)	1.46	1273 (577)	1.23	955 (433)	1.51	637 (289)	1.42
60 (18.28)	32	1920 (871)	2.11	970 (440)	1.80	728 (330)	2.17	485 (220)	2.05

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

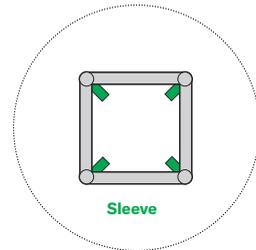
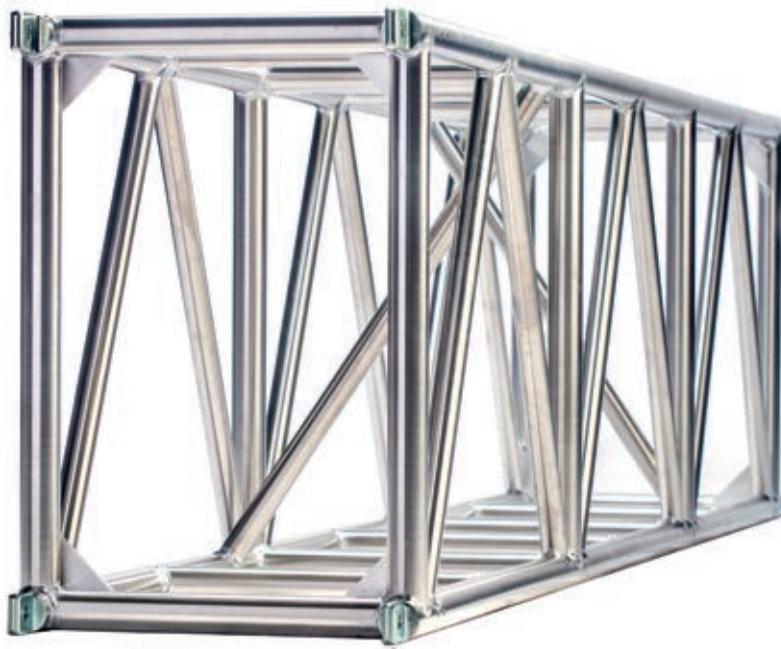
## Heavy-duty truss 30 x 20.5 plated End plates equipped for double sets of bolts, supplied with one set only

Product Description	Item Code	Weight lbs (kgs)
5 FT HEAVY-DUTY TRUSS	TC 3020-060B	63 (28)
8 FT HEAVY-DUTY TRUSS	TC 3020-096B	86 (39)
10 FT HEAVY-DUTY TRUSS	TC 3020-120B	94 (43)
HEAVY-DUTY 2-WAY CORNER	TC 3020-C2B	35 (16)
HEAVY-DUTY 3-WAY CORNER	TC 3020-C3B	42 (19)
HEAVY-DUTY 4-WAY CORNER	TC 3020-C4B	47 (21)
HD ARTICULATING BLOCK HORIZONTAL (center pivot)	TC 3020-AHB	67 (31)
HD ARTICULATING BLOCK VERTICAL (center pivot)	TC 3020-AVB	67 (31)
HD VARIABLE CORNER HORIZ. (book style with brace)	TC 3020-VHB	55 (25)
HD VARIABLE CORNER VERT. (book style with brace)	TC 3020-VVB	50 (23)
HD 2-WAY SLEEVE BLOCK FOR 12" TOWER	TC 3020-S2B	46 (21)
HD 3-WAY SLEEVE BLOCK FOR 12" TOWER	TC 3020-S3B	53 (24)
HD 4-WAY SLEEVE BLOCK FOR 12" TOWER	TC 3020-S4B	59 (27)

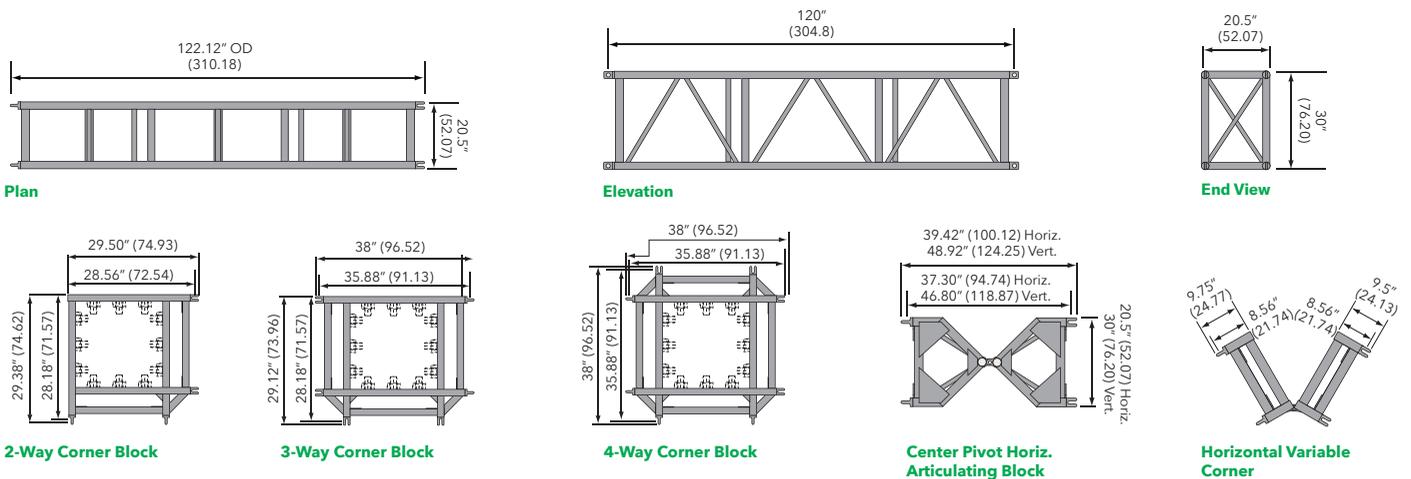
# Box truss

## Heavy-duty truss 30 x 20.5 spigoted

- › Heavy-duty truss 30 x 20.5 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1-1/2" OD x 1/8" aluminum
- › Available with casters
- › Fabricated by AWS / SFL certified welders



### Plan Views - Connector Orientation Specified by Customer



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	3555	35550 (16125)	0.09	17780 (8065)	0.08	13330 (6046)	0.10	8888 (4032)	0.09
20 (6.09)	877	17540 (7956)	0.38	8775 (3980)	0.30	6581 (2985)	0.39	4388 (1990)	0.36
30 (9.14)	381	11430 (5185)	0.85	5725 (2597)	0.69	4294 (1948)	0.87	2863 (1299)	0.81
40 (12.19)	208	8320 (3774)	1.52	4163 (1888)	1.23	3122 (1416)	1.55	2081 (944)	1.45
50 (15.24)	127	6350 (2880)	2.36	3195 (1449)	1.95	2396 (1087)	2.42	1598 (725)	2.27
60 (18.29)	79	4710 (2136)	3.22	2356 (1069)	2.67	1767 (802)	3.28	1178 (534)	3.10

5/8" diameter Grade 8 Bolts with standard washers through 3/8" gusset plates

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Heavy-duty truss 30 x 20.5 spigoted Connections are steel spigots & 3/4" clevis pins

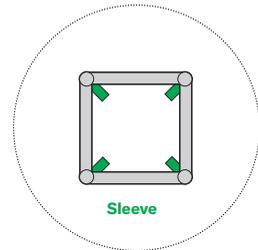
Product Description	Item Code	Weight lbs (kgs)
5 FT HEAVY-DUTYTRUSS	TC 3020-060S	90 (41)
8 FT HEAVY-DUTYTRUSS	TC 3020-096S	120 (55)
10 FT HEAVY-DUTYTRUSS	TC 3020-120S	132 (60)
HEAVY-DUTY 2-WAY CORNER	TC 3020-CS2	77 (35)
HEAVY-DUTY 3-WAY CORNER	TC 3020-C3S	95 (43)
HEAVY-DUTY 4-WAY CORNER	TC 3020-C4S	121 (55)
HD ARTICULATING BLOCK HORIZONTAL (center pivot)	TC 3020-AHS	91 (42)
HD ARTICULATING BLOCK VERTICAL (center pivot)	TC 3020-AVS	92 (42)
HD VARIABLE CORNER HORIZONTAL (book style with brace)	TC 3020-VHS	72 (33)
HD VARIABLE CORNER VERTICAL (book style with brace)	TC 3020-VVS	68 (31)
HD 2-WAY SLEEVE FOR 12" TOWER*	TC 3020-S2S	97 (44)
HD 3-WAY SLEEVE FOR 12" TOWER*	TC 3020-S3S	115 (53)
HD 4-WAY SLEEVE FOR 12" TOWER*	TC 3020-S4S	141 (64)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

\* Spans greater than 40 ft require custom sleeves for larger towers

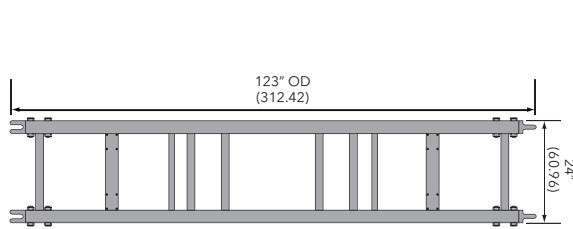
# Box truss

## Extra heavy-duty truss 36 x 24 spigoted

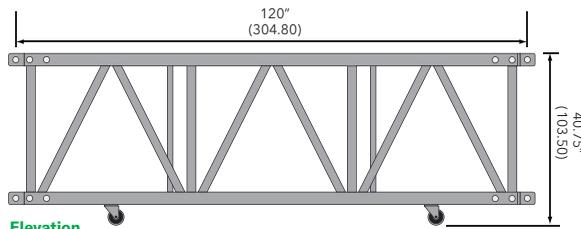
- › Extra heavy-duty truss 36 x 24 spigoted
- › Standard lengths are 20', 10' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 3" OD x 1/4" aluminum
- › Diagonals are 1-1/2" OD x 1/8" aluminum
- › Equipped with castors
- › Fabricated by AWS / SFL certified welders



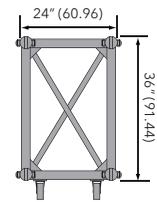
### Plan Views – Connector Orientation Specified by Customer



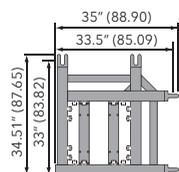
Plan



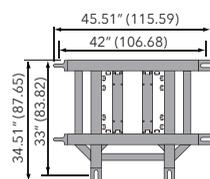
Elevation



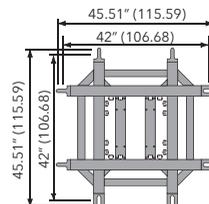
End View



2-Way Corner Block



3-Way Corner Block



4-Way Corner Block

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	2068	20680 (9380)	0.02	20683 (9382)	0.03	10341 (4691)	0.03	6894 (3127)	0.03
20 (6.09)	1011	20220 (9172)	0.16	20220 (9172)	0.25	10111 (4586)	0.22	6741 (3058)	0.20
30 (9.14)	658	19740 (8954)	0.55	17077 (7746)	0.74	9880 (4482)	0.73	6587 (2988)	0.68
40 (12.21)	482	19280 (8745)	1.30	10264 (4656)	1.13	7698 (3492)	1.40	5132 (2328)	1.32
50 (15.24)	376	18800 (8528)	2.55	9877 (4480)	2.20	6020 (2731)	2.27	4459 (2023)	2.33
60 (18.28)	215	12900 (5851)	3.32	6458 (2929)	2.80	4844 (2197)	3.39	3229 (1465)	3.20
70 (21.33)	132	9240 (4191)	4.28	4649 (2109)	3.69	3487 (1582)	4.36	2324 (1054)	4.14
80 (24.38)	68	5440 (2468)	4.82	2733 (1240)	4.30	2050 (930)	4.89	1366 (620)	4.70

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Extra heavy-duty truss 36 x 24 spigoted Connections are steel spigots & 1" clevis pins

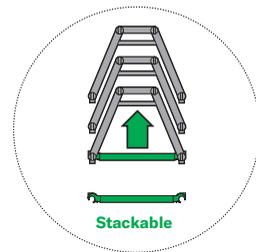
Product Description	Item Code	Weight lbs (kgs)
5 FT EXTRA HEAVY-DUTY TRUSS	TC 3624-060S	171 (78)
10 FT EXTRA HEAVY-DUTY TRUSS	TC 3624-120S	249 (113)
20 FT EXTRA HEAVY-DUTY TRUSS	TC 3624-240S	402 (182)
EXTRA HEAVY-DUTY 2-WAY CORNER BLOCK	TC 3624-C2S	174 (79)
EXTRA HEAVY-DUTY 3-WAY CORNER BLOCK	TC 3624-C3S	226 (103)
EXTRA HEAVY-DUTY 4-WAY CORNER BLOCK	TC 3624-C4S	278 (126)
EXTRA HEAVY-DUTY 2-WAY SLEEVE BLOCK FOR 16" TOWER*	TC 3624-S2S	270 (123)
EXTRA HEAVY-DUTY 3-WAY SLEEVE BLOCK FOR 16" TOWER*	TC 3624-S3S	325 (148)
EXTRA HEAVY-DUTY 4-WAY SLEEVE BLOCK FOR 16" TOWER*	TC 3624-S4S	380 (173)
1" CLEVIS PIN	TC CP-1	1 (0.46)
LARGE R-CLIP	TC RC-LG	- (-)

\*Spans greater than 60 ft require custom sleeves for larger towers

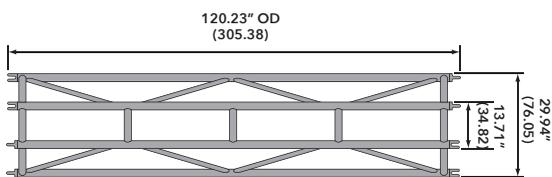
# Box truss

## Stacking truss 25 spigoted

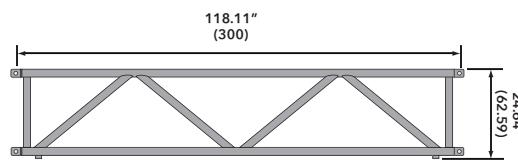
- › Stacking truss 25 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Truss dollies available
- › Equipped with steel spigots
- › Main chords are 1.90" OD x 3/16" aluminum
- › Diagonals are 1.5" OD x 1/8" aluminum
- › Snap Braces provided
- › Fabricated by AWS / SFL certified welders



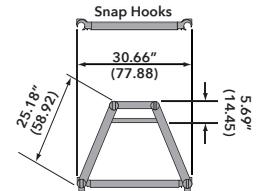
### Plan Views - Connector Orientation Specified by Customer



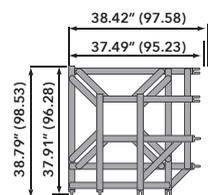
Plan



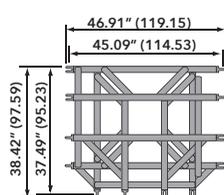
Elevation



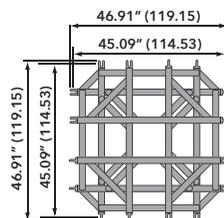
End View



2-Way Corner Block



3-Way Corner Block



4-Way Corner Block

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	1107	11070 (5021)	0.05	10206 (4629)	0.08	5451 (2472)	0.07	3634 (1648)	0.07
20 (6.09)	511	10220 (4636)	0.39	5033 (2283)	0.32	3775 (1712)	0.40	2517 (1142)	0.37
30 (9.14)	222	6660 (3021)	0.88	3278 (1487)	0.71	2458 (1115)	0.90	1639 (743)	0.84
40 (12.21)	120	4800 (2177)	1.56	2377 (1078)	1.28	1783 (809)	1.60	1189 (539)	1.50
50 (15.24)	73	3650 (1656)	2.43	1818 (825)	2.02	1364 (619)	2.50	909 (412)	2.35
60 (18.28)	48	2880 (1306)	3.51	1430 (649)	2.94	1072 (486)	3.60	715 (324)	3.39

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

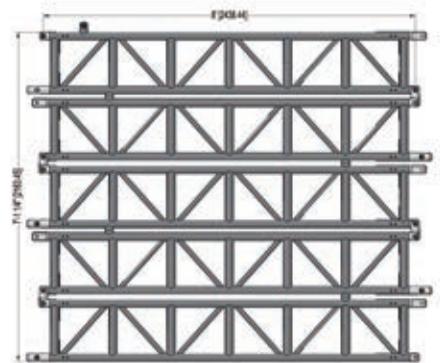
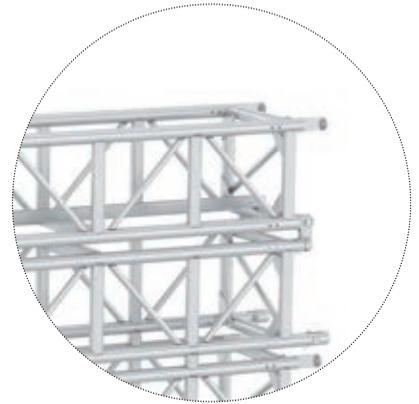
## Stacking truss 25 spigoted Connections are steel spigots & 5/8" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT STACKING TRUSS	TC 25SK-060S	45 (20.4)
8 FT STACKING TRUSS	TC 25SK-096S	72 (32.7)
10 FT STACKING TRUSS	TC 25SK-120S	90 (40.8)
2-WAY CORNER BLOCK	TC 25SK-C2S	96 (43.52)
3-WAY CORNER BLOCK	TC 25SK-C3S	120 (54.40)
4-WAY CORNER BLOCK	TC 25SK-C4S	143 (64.83)
5/8" CLEVIS PIN	TC CP-625	0.25 (0.11)
SMALL R-CLIP	TC RC-SM	- (-)

# Box truss

## Zig-Zag truss

TOMCAT Zig-Zag truss combines aspects of Pre-Rigged Truss, efficient truck packing, and speedy load-in/load-out by utilizing a hinging spigot design that allows the truss system to fold over itself for storage/travel and unfolds via vertical lift and pinning applications. Zig-Zag Truss can be used in both vertical and horizontal lighting applications.



Stacked view



Side view

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads							
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point		fifth point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
8 (2.44)	1098	8784 (3984)	0.05	5600 (2540)	0.08	3000 (1361)	0.07	2950 (1338)	0.06	2200 (998)	0.06
16 (4.88)	516	8256 (3745)	0.40	3600 (1633)	0.34	2250 (1021)	0.44	2100 (953)	0.41	1260 (572)	0.43
24 (7.32)	197	4728 (2145)	0.95	2350 (1066)	0.78	1600 (726)	0.99	1300 (590)	0.92	950 (431)	0.96
32 (9.75)	116	3712 (1684)	1.69	2000 (907)	1.39	1180 (535)	1.75	960 (435)	1.63	820 (372)	1.71
40 (12.19)	83	3320 (1506)	2.65	1560 (708)	2.20	1140 (517)	2.66	790 (358)	2.56	680 (308)	2.66

## Parts list

### Product Description

CHORDS	2"Øx3/16" TUBE
HORIZONTALS (SMALL)	1 1/2"Øx1/8" TUBE
HORIZONTALS (LARGE)	2"Øx1/8" TUBE
VERTICALS	2"Øx1/8" TUBE
DIAGONALS	1"Øx1/8" TUBE
SPIGOTS	STEEL SPIGOTS
END PLATES	PL1/4"
STUDS	2"Ø ROUND





# Triangle truss

---

<b>Fixed triangle truss 20.5 plated</b>	<b>38</b>
<b>Fixed triangle truss 20.5 spigoted</b>	<b>40</b>
<b>Folding triangle truss 14 spigoted</b>	<b>42</b>
<b>Folding triangle truss 20.5 spigoted</b>	<b>44</b>
<b>Folding triangle truss 26 spigoted</b>	<b>46</b>

**Strength  
Under  
Pressure**

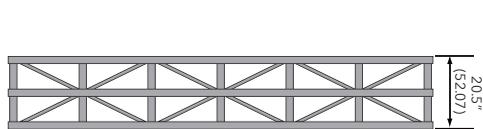
# Triangle truss

## Fixed triangle truss 20.5 plated

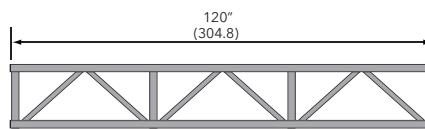
- › Fixed triangle truss 20.5 plated
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with bolts
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



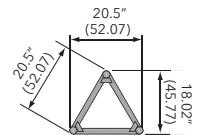
Plan Views – Connector Orientation Specified by Customer



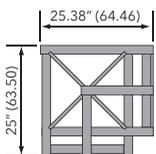
Plan



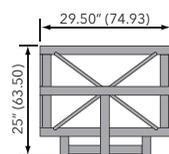
Elevation



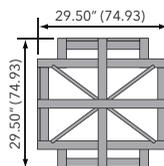
End View



2-Way Corner Block



3-Way Corner Block



4-Way Corner Block

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	287	2870 (1302)	0.05	1569 (712)	0.05	1177 (534)	0.06	784 (356)	0.05
20 (6.09)	74	1480 (671)	0.22	747 (339)	0.18	560 (254)	0.23	373 (169)	0.22
30 (9.14)	30	900 (408)	0.50	456 (207)	0.42	342 (155)	0.52	228 (103)	0.49

5/8" diameter Grade 8 Bolts with standard washers through 3/8" gusset plates

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Fixed triangle truss 20.5 plated Connections are single sets of bolts

Product Description	Item Code	Weight lbs (kgs)
5 FT FIXED TRIANGLE TRUSS	TC 20FX-060B	40 (18)
8 FT FIXED TRIANGLE TRUSS	TC 20FX-096B	56 (25)
10 FT FIXED TRIANGLE TRUSS	TC 20FX-120B	62 (28)
FIXED TRIANGLE 2-WAY CORNER BLOCK	TC 20FX-C2B	27 (12)
FIXED TRIANGLE 3-WAY CORNER BLOCK	TC 20FX-C3B	35 (16)
FIXED TRIANGLE 4-WAY CORNER BLOCK	TC 20FX-C4B	43 (20)

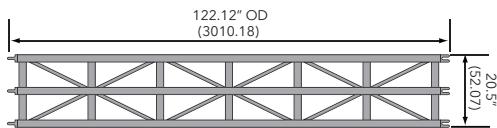
# Triangle truss

## Fixed triangle truss 20.5 spigoted

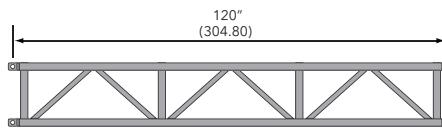
- › Fixed triangle truss 20.5 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



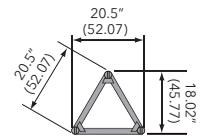
### Plan Views – Connector Orientation Specified by Customer



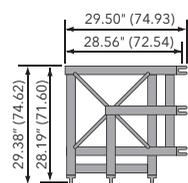
Plan



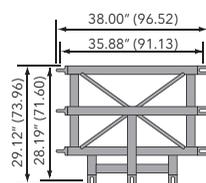
Elevation



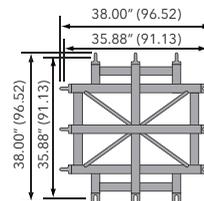
End View



2-Way Corner Block



3-Way Corner Block



4-Way Corner Block

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point	Max Defl. in.	third point	Max Defl. in.	quarter point	Load lbs (kgs)
10 (3.05)	773	7730 (3506)	0.09	6229 (2825)	0.12	3867 (1754)	0.13	2578 (1169)	0.12
20 (6.09)	246	4920 (2232)	0.49	2468 (1119)	0.40	1851 (840)	0.51	1234 (560)	0.47
30 (9.14)	104	3120 (1415)	1.10	1574 (714)	0.91	1180 (535)	1.14	787 (357)	1.06
40 (12.19)	55	2200 (998)	1.97	1106 (502)	1.64	829 (376)	2.02	553 (251)	1.89
50 (15.24)	32	1600 (726)	3.07	807 (366)	2.60	606 (275)	3.15	404 (183)	2.97

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

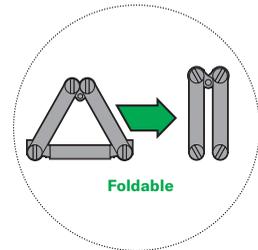
## Fixed triangle truss 20.5 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5FT FOLDING TRIANGLE TRUSS	TC 20FT-060S	55 (25)
8FT FOLDING TRIANGLE TRUSS	TC 20FT-096S	77 (35)
10FT FOLDING TRIANGLE TRUSS	TC 20FT-120S	85 (39)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

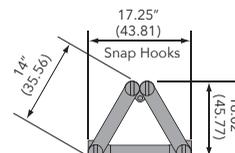
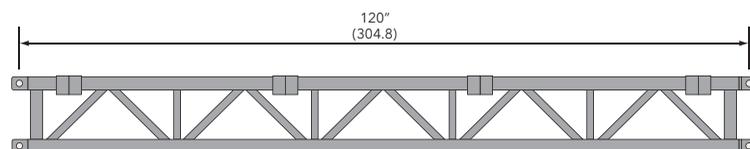
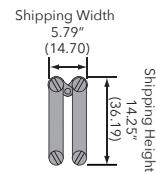
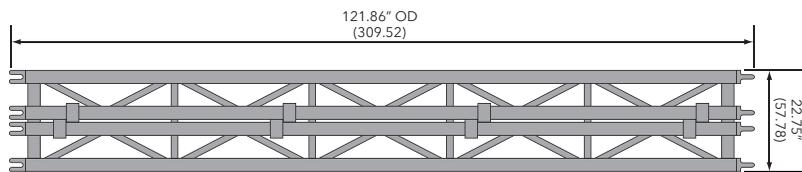
# Triangle truss

## Folding triangle truss 14 spigoted

- › Folding triangle truss 14 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Snap braces provided to lock truss in open position
- › Fabricated by AWS / SFL certified welders



### Plan Views



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point	Max Defl. in.	third point	Max Defl. in.	quarter point	Load lbs (kgs)
10 (3.05)	577	5770 (2617)	0.16	2889 (1310)	0.13	2167 (983)	0.17	1445 (655)	0.15
20 (6.09)	139	2780 (1261)	0.65	1394 (632)	0.53	1046 (474)	0.67	697 (316)	0.62
30 (9.14)	58	1740 (789)	1.46	874 (396)	1.20	655 (297)	1.49	437 (198)	1.40

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

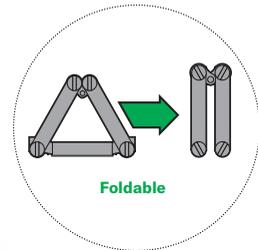
## Folding triangle truss 14 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5FT FOLDING TRIANGLE TRUSS	TC 14FT-060S	54 (25)
8FT FOLDING TRIANGLE TRUSS	TC 14FT-096S	71 (32)
10FT FOLDING TRIANGLE TRUSS	TC 14FT-120S	78 (36)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
TOP HITCH PIN 3/4" x 4-3/4"	TC HP3/4X4-3/4	0.7 (0.32)
MEDIUM R-CLIP	TC RC-MED	- (-)

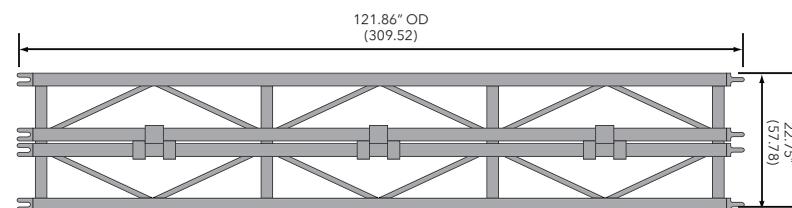
# Triangle truss

## Folding triangle truss 20.5 spigoted

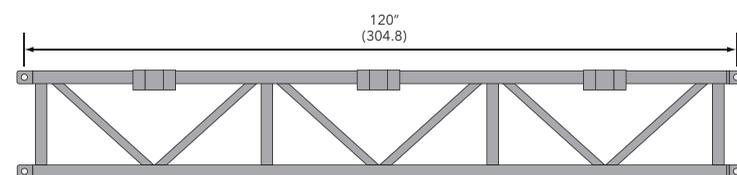
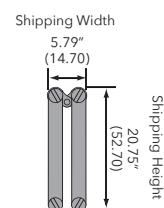
- › Folding triangle truss 20.5 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Snap braces provided to lock truss in an open position
- › Fabricated by AWS / SFL certified welders



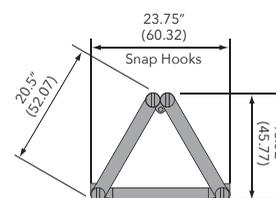
### Plan Views



Plan



Elevation



End View

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	653	6530 (2962)	0.08	4468 (2027)	0.09	3266 (1481)	0.11	2177 (987)	0.10
20 (6.09)	217	4340 (1969)	0.42	2178 (988)	0.34	1633 (741)	0.44	1089 (494)	0.41
30 (9.14)	92	2760 (1252)	0.95	1389 (630)	0.78	1042 (473)	0.98	695 (315)	0.92
40 (12.21)	48	1920 (871)	1.68	976 (443)	1.41	732 (332)	1.74	488 (221)	1.63

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

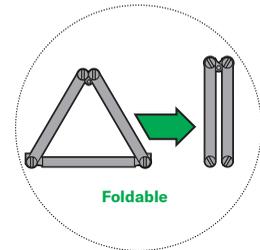
## Folding triangle truss 20.5 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT FOLDING TRIANGLE TRUSS	TC 20FT-060S	55 (25)
8 FT FOLDING TRIANGLE TRUSS	TC 20FT-096S	77 (35)
10 FT FOLDING TRIANGLE TRUSS	TC 20FT-120S	85 (39)
3/4" CLEVIS PIN	TC CP-75	0.25 (0.11)
TOP HITCH PIN 3/4" x 4-3/4"	TC HP5/8X4-3/4	0.57 (0.26)
MEDIUM R-CLIP	TC RC- MED	- (-)

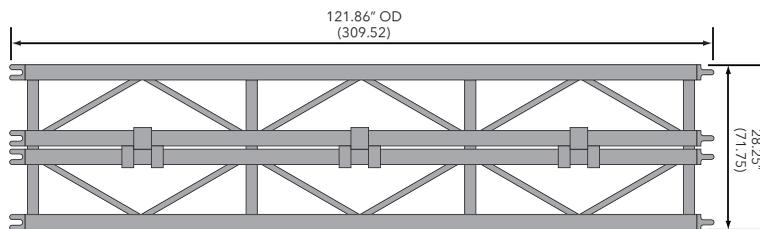
# Triangle truss

## Folding triangle truss 26 spigoted

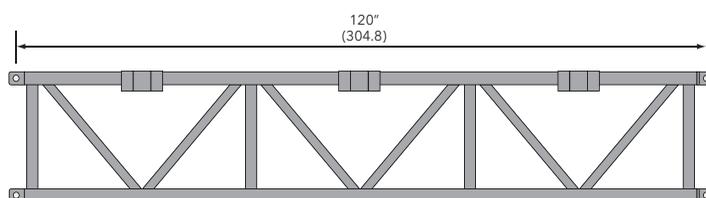
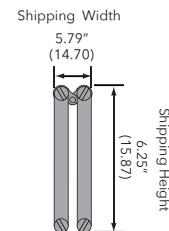
- › Folding triangle truss 26 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 1/8" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Snap braces provided to lock truss in open position
- › Fabricated by AWS / SFL certified welders



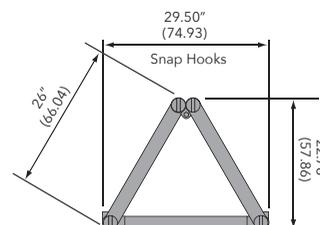
### Plan Views



Plan



Elevation



End View

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
10 (3.05)	546	5460 (2477)	0.04	5470 (2481)	0.06	2735 (1241)	0.05	1823 (827)	0.05
20 (6.09)	269	5380 (2440)	0.31	3812 (1729)	0.35	2692 (1221)	0.42	1795 (814)	0.39
30 (9.14)	164	4920 (2232)	0.98	2471 (1121)	0.80	1853 (841)	1.01	1235 (560)	0.94
40 (12.21)	88	3520 (1597)	1.74	1779 (807)	1.43	1334 (605)	1.79	889 (403)	1.68
50 (15.24)	53	2650 (1202)	2.71	1346 (611)	2.27	1010 (458)	2.80	673 (305)	2.63

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Folding triangle truss 26 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT FOLDING TRIANGLE TRUSS	TC 26FT-060S	60 (27)
8 FT FOLDING TRIANGLE TRUSS	TC 26FT-096S	84 (38)
10 FT FOLDING TRIANGLE TRUSS	TC 26FT-120S	92 (42)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
TOP HITCH PIN 3/4" x 4-3/4"	TC HP3/4X4-3/4	0.7 (0.32)
MEDIUM R-CLIP	TC RC-MED	- (-)





# Folding box truss

---

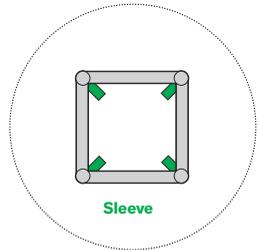
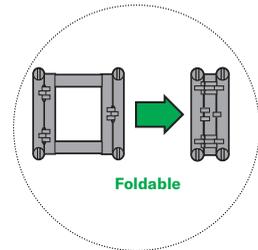
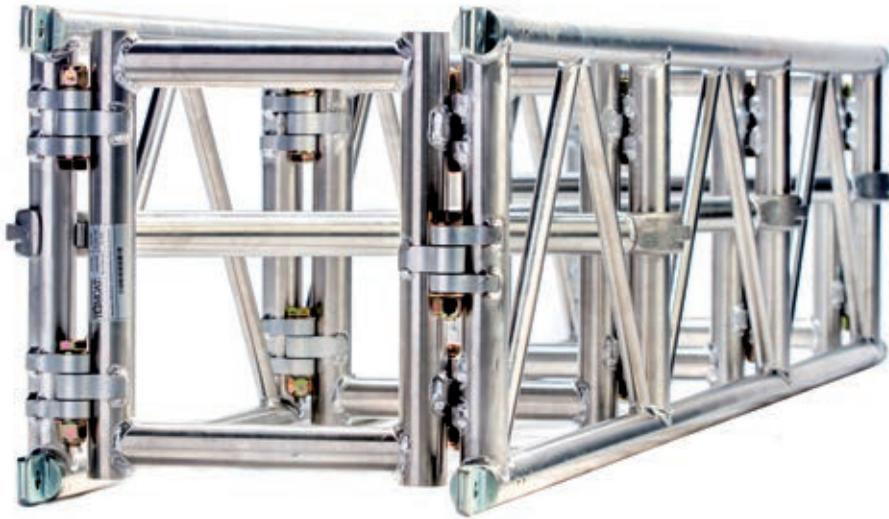
Medium-duty folding truss 20.5 x 20.5 spigoted	50
Heavy-duty folding truss 30 x 20.5 spigoted	52

**Strength  
Under  
Pressure**

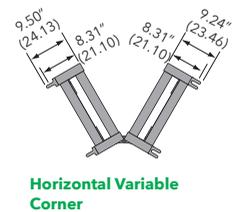
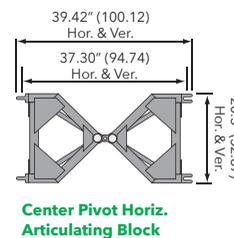
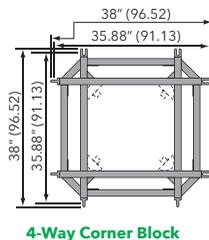
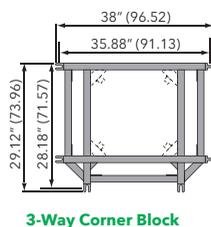
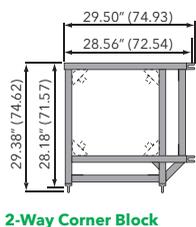
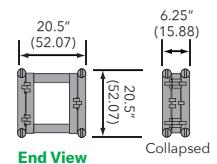
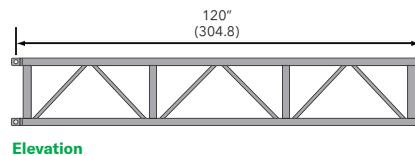
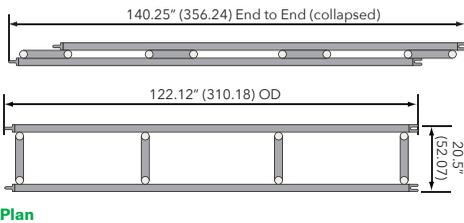
# Folding box truss

## Medium-duty folding truss 20.5 x 20.5 spigoted

- › Medium-duty folding truss 20.5 x 20.5 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Snap braces provided to lock truss in open position
- › Fabricated by AWS / SFL certified welders



### Plan Views – Connector Orientation Specified by Customer



Note: Corners are same as Medium-Duty Truss

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point	Max Defl. in.	third point	Max Defl. in.	quarter point	Load lbs (kgs)
10 (3.05)	920	9200 (4173)	0.06	9204 (4175)	0.09	4602 (2087)	0.08	3068 (1392)	0.07
20 (6.09)	450	9000 (4082)	0.45	5797 (2630)	0.46	4348 (1972)	0.59	2898 (1315)	0.54
30 (9.14)	252	7560 (3429)	1.29	3781 (1715)	1.04	2836 (1286)	1.32	1891 (858)	1.23
40 (12.19)	137	5480 (2486)	2.28	2748 (1246)	1.86	2061 (935)	2.34	1374 (623)	2.18
50 (15.24)	77	3850 (1746)	3.30	2109 (957)	2.94	1429 (648)	3.33	1025 (465)	3.33

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

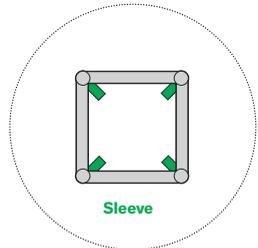
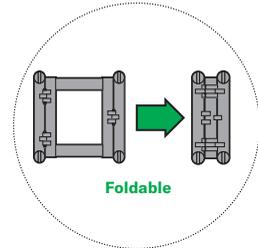
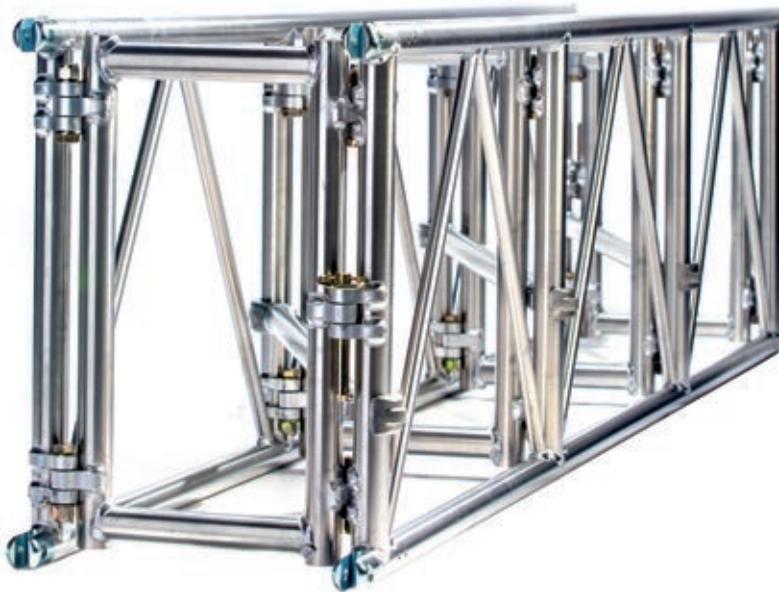
## Medium-duty folding truss 20.5 x 20.5 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT FOLDING MEDIUM-DUTY TRUSS	TC 2020-060F	85 (38.5)
8 FT FOLDING MEDIUM-DUTY TRUSS	TC 2020-096F	115 (52.2)
10 FT FOLDING MEDIUM-DUTY TRUSS	TC 2020-120F	125 (56.7)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

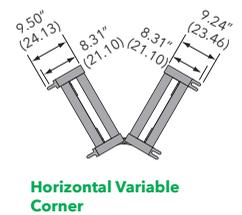
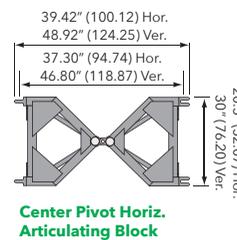
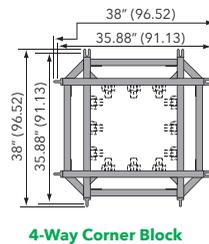
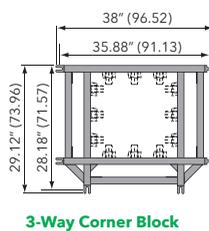
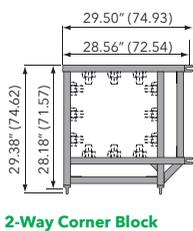
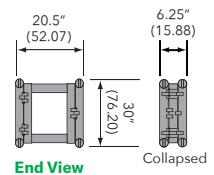
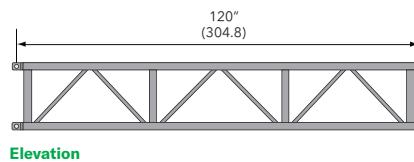
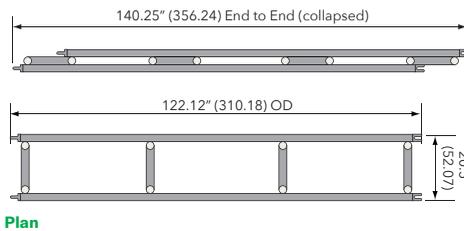
# Folding box truss

## Heavy-duty folding truss 30 x 20.5 spigoted

- › Heavy-duty folding truss 30 x 20.5 spigoted
- › Standard lengths are 10', 8' and 5'
- › Custom lengths available upon request
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Snap braces provided to lock truss in open position
- › Fabricated by AWS / SFL certified welders



### Plan Views – Connector Orientation Specified by Customer



Note: Junctions are same as Heavy-Duty Truss

## Loading chart

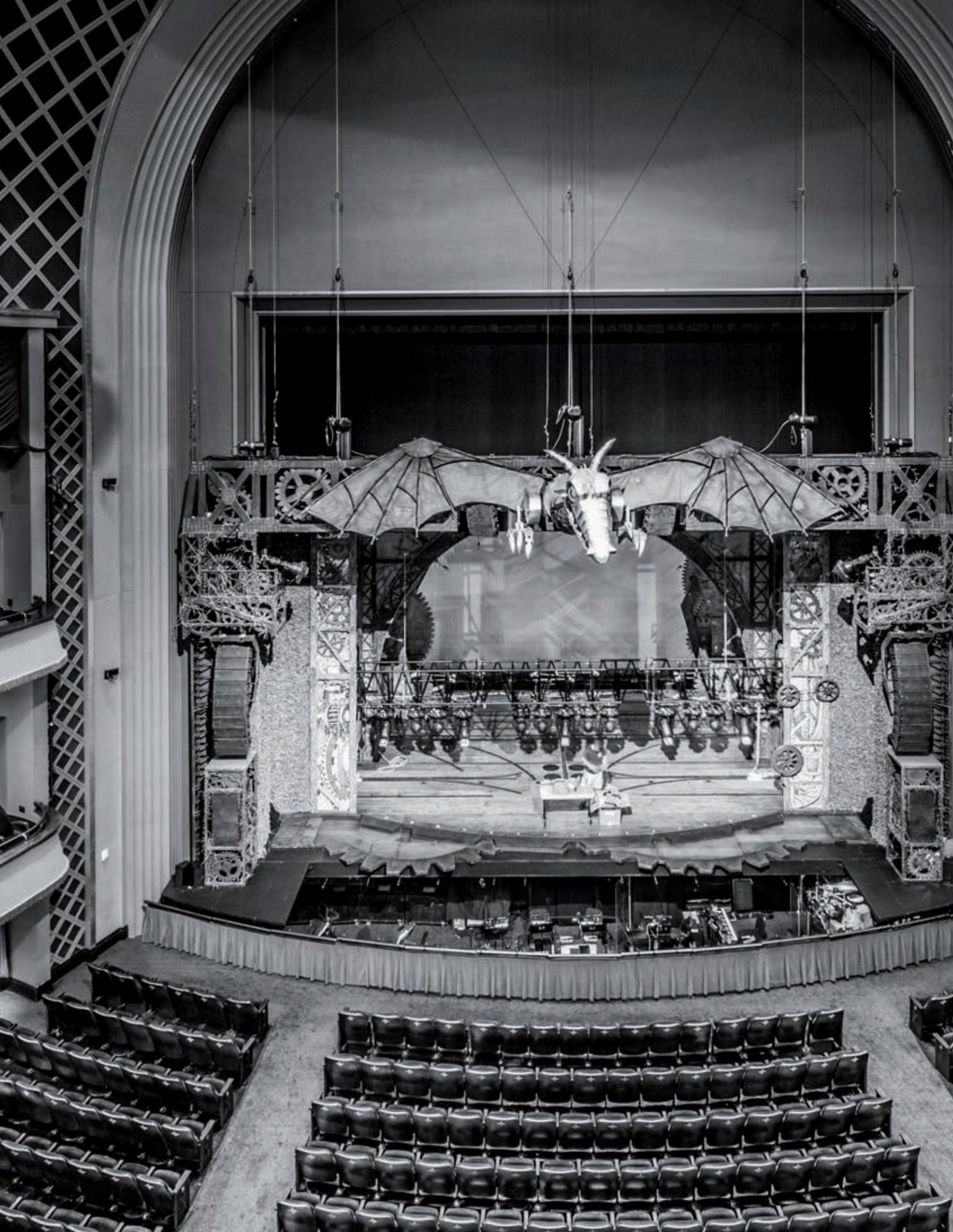
Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point	Max Defl. in.	third point	Max Defl. in.	quarter point	Load lbs (kgs)
10 (3.05)	3555	35550 (16125)	0.09	17780 (8065)	0.08	13330 (6046)	0.10	8888 (4032)	0.09
20 (6.09)	877	17540 (7956)	0.38	8775 (3980)	0.30	6581 (2985)	0.39	4388 (1990)	0.36
30 (9.14)	381	11430 (5185)	0.85	5725 (2597)	0.69	4294 (1948)	0.87	2863 (1299)	0.81
40 (12.19)	208	8320 (3774)	1.52	4163 (1888)	1.23	3122 (1416)	1.55	2081 (944)	1.45
50 (15.24)	127	6350 (2880)	2.36	3195 (1449)	1.95	2396 (1087)	2.42	1598 (725)	2.27
60 (18.29)	79	4710 (2136)	3.22	2356 (1069)	2.67	1767 (802)	3.28	1178 (534)	3.10

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Heavy-duty folding truss 30 x 20.5 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
5 FT HEAVY-DUTY TRUSS	TC 3020-060F	90 (41)
8 FT HEAVY-DUTY TRUSS	TC 3020-096F	120 (55)
10 FT HEAVY-DUTY TRUSS	TC 3020-120F	132 (60)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)





# Touring truss

---

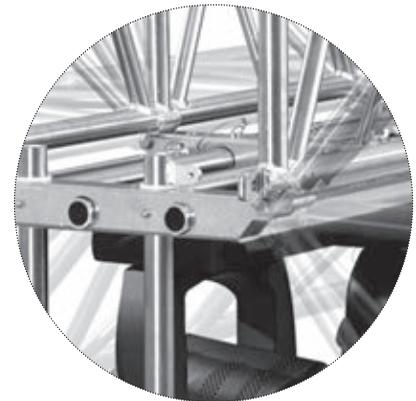
<b>Swing wing truss 30 x 30 spigoted</b>	<b>56</b>
<b>Edge truss 30 x 24 spigoted</b>	<b>58</b>
<b>Nemesis 14"x24" spigoted aluminum box truss</b>	<b>60</b>
<b>Single hung pre-rig truss 26 x 18.5 plated</b>	<b>62</b>
<b>Single hung pre-rig truss 26 x 18.5 spigoted</b>	<b>64</b>
<b>Double hung pre-rig truss 26 x 30 plated</b>	<b>66</b>
<b>Double hung pre-rig truss 26 x 30 spigoted</b>	<b>68</b>
<b>Heavy-duty pre-rig truss 30 x 30 spigoted</b>	<b>70</b>
<b>Lighting pod</b>	<b>72</b>

**Strength  
Under  
Pressure**

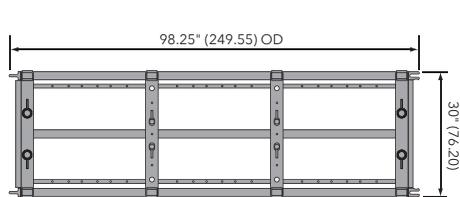
# Touring truss

## Swing wing truss 30 x 30 spigoted

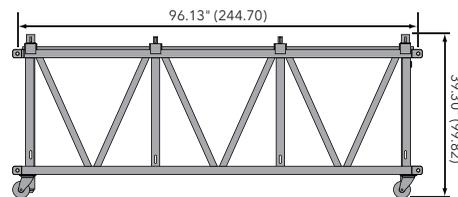
- › Swing wing truss 30 x 30 spigoted
- › Standard lengths:
  - 96" (3 bay, fits 3 moving heads)
  - 126" (4 bay, fits 4 moving heads)
- › Supports up to 3 lamp bars
- › Accessories include a 3rd caster assembly and cable hooks
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1-1/2" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



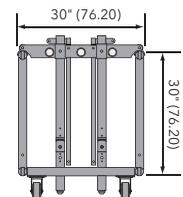
Plan Views – Connector Orientation Specified by Customer



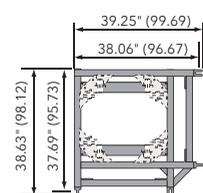
Plan



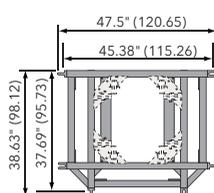
Elevation



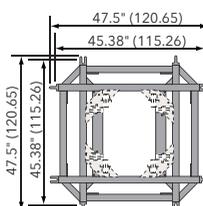
End View



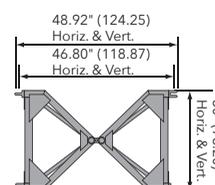
2-Way Corner Block



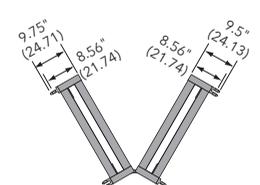
3-Way Corner Block



4-Way Corner Block



Center Pivot Horiz.  
Articulating Block



Horizontal Variable  
Corner

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
8 (2.43)	2180	17440 (7911)	0.03	10910 (4949)	0.03	6350 (2880)	0.01	4610 (2091)	0.02
16 (4.87)	1080	17280 (7838)	0.20	7490 (3398)	0.14	4690 (2127)	0.03	3570 (1619)	0.12
24 (7.31)	570	13680 (6205)	0.53	5610 (2545)	0.36	3650 (1656)	0.09	2870 (1302)	0.33
32 (9.75)	340	10880 (4935)	1.02	4400 (1996)	0.69	2940 (1334)	0.19	2360 (1071)	0.66
40 (12.19)	210	8400 (3810)	1.59	3550 (1610)	1.13	2420 (1098)	0.36	1970 (894)	1.12
48 (14.63)	140	6720 (3048)	2.32	2910 (1320)	1.69	2010 (912)	0.60	1650 (748)	1.71
56 (17.06)	100	5600 (2540)	3.16	2400 (1089)	2.33	1680 (762)	0.95	1390 (631)	2.44
64 (19.50)	70	4480 (2032)	4.15	1990 (903)	3.19	1400 (635)	1.43	1170 (531)	3.30

Spigots Only

Note: Deflections reported in the above tables are maximum expected for full loadings (indoor only). All loads are based on 96" (2.44 m) sections. Load tables are reprinted from engineering reports developed by Geiger, Gossen, Hamilton, Campbell Engineers, P.C. Structural Engineers.

## Swing wing truss 30 x 30 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
96" HDSW TRUSS (EMPTY)	TC 30SW-096S	240 (109)
126" HDSW TRUSS (EMPTY)	TC 30SW-126S	280 (127)
HDPRT 2-WAY CORNER BLOCK	TC 3030-C2S	109 (50)
HDPRT 3-WAY CORNER BLOCK	TC 3030-C3S	134 (61)
HDPRT 4-WAY CORNER BLOCK	TC 3030-C4S	160 (73)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

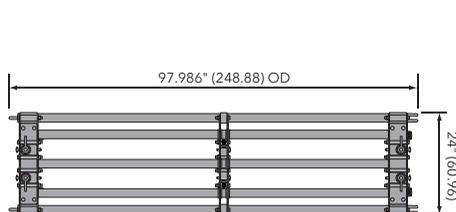
# Touring truss

## Edge truss 30 x 24 spigoted

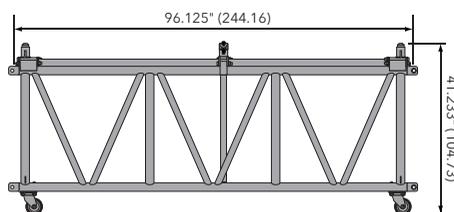
- › Edge truss 30 x 24 spigoted
- › Standard lengths:
  - 96" (3 bay, fits 3 moving heads)
  - 126" (4 bay, fits 4 moving heads)
- › Equipped with 3 lamp bars
- › Adjustable middle bay
- › Interchangeable ladders
- › Stacking spigots
- › Equipped with Edge rotating steel spigot connections
- › Main chords are 2" OD x 3/16"
- › Diagonals are 1-1/2" OD x 1/8"
- › Fabricated by AWS / SFL certified welders



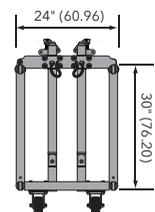
Plan Views – Connector Orientation Specified by Customer



Plan



Elevation



End View

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads						
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point	Max Defl. in.	third point	Max Defl. in.	quarter point	Load lbs (kgs)	Max Defl. in.
8 (2.44)	920	7360 (3338)	0.01	7363 (3340)	0.02	3681 (1670)	0.02	2454 (1113)	0.02	
16 (4.88)	450	7200 (3266)	0.10	5011 (2273)	0.11	3437 (1559)	0.13	2398 (1087)	0.12	
24 (7.32)	293	7032 (3190)	0.33	3349 (1519)	0.26	2421 (1098)	0.31	1929 (875)	0.34	
32 (9.75)	169	5408 (2453)	0.63	2340 (1061)	0.46	1788 (811)	0.57	1384 (728)	0.61	
40 (12.20)	94	3760 (1706)	0.93	1632 (740)	0.70	1343 (609)	0.91	1024 (465)	0.96	
48 (14.60)	53	2544 (1154)	1.24	1089 (494)	0.96	1002 (455)	1.31	761 (346)	1.36	

Spigots Only

Note: Deflections reported in the above tables are maximum expected for full loadings (indoor only). All loads are based on 96" (2.44 m) sections. Load tables are reprinted from engineering reports developed by Theta Consulting and apply to truss fabricated after April 2009.

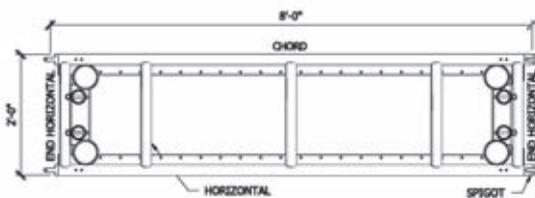
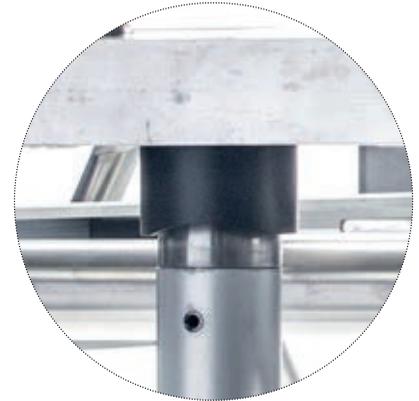
## Edge truss 30 x 24 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
96" EDGE TRUSS	TC 30ED-096SR	195 (89)
126" EDGE TRUSS	TC 30ED-126SR	235 (107)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

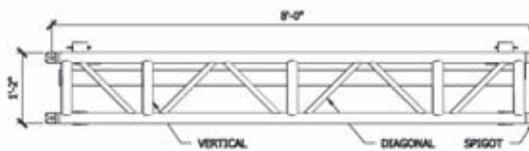
# Touring truss

## Nemesis 14 x 24 Spigoted aluminum Box truss

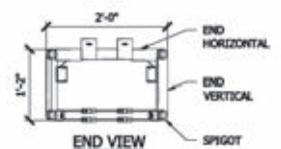
Nemesis utilizes the popular touring 14"x24" truss profile and features an end loading system that allows a single technician to prep a section of truss in the shop prior to shipping.



Plan



Elevation



End View

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
8 (2.44)	920	7360 (3345)	0.05	7135 (3236)	0.09	3680 (1669)	0.08	2453 (1112)	0.07
16 (4.88)	431	6896 (3134)	0.43	3450 (1564)	0.35	2587 (1173)	0.44	1725 (782)	0.41
24 (7.32)	181	4344 (1974)	0.97	2169 (983)	0.80	1626 (737)	1	1084 (491)	0.93
32 (9.75)	93	2976 (1352)	1.75	1489 (675)	1.48	1117 (506)	1.79	744 (337)	1.69
40 (12.20)	52	2080 (945)	2.77	1049 (475)	2.4	713 (323)	2.66	516 (243)	2.67
48 (14.60)	27	1296 (589)	3.85	563 (255)	3.2	327 (148)	3.19	237 (107)	3.2

Spigots Only

## Nemesis 14"x24"

Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
8FT NEMESIS TRUSS	TC NEME-096S	177 (81)
10FT NEMESIS TRUSS	TC NEME-120S	192 (87)
2" ROUND TUBE LIGHT MOUNTING BRACKET	TC NEME-LB-2RT	12 (6)
2" X 1" BOX TUBE LIGHT MOUNT BRACKET	TC NEME-LB-2X1	12 (6)
2" X 2" BOX TUBE LIGHT MOUNT BRACKET	TC NEME-LB-2X2	13 (6)
2" TUBE DROP MOUNT BRACKET	TC NEME-LB-DROP	14 (7)
SNAP BRACE LIGHT MOUNT BRACKET	TC NEME-SB	12 (6)
NEMESIS TRUSS STAND	TC NEME-STND	13 (6)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

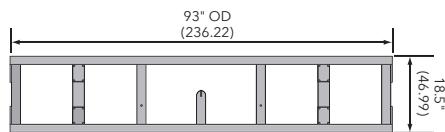
# Touring truss

## Single hung pre-rig truss 26 x 18.5 plated

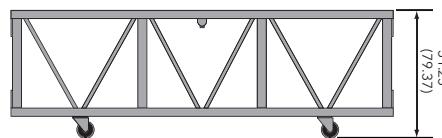
- > Single hung pre-rig truss 26 x 18.5 plated
- > Standard length are 63", 93" and 123"
- > Equipped with bolts
- > Main chords are 2" OD x 1/8" aluminum
- > Diagonals are 1" OD x 1/8" aluminum
- > Fabricated by AWS / SFL certified welders



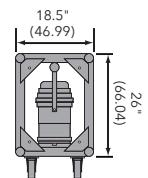
### Plan Views



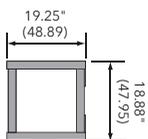
Plan



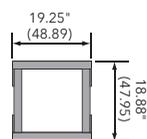
Elevation



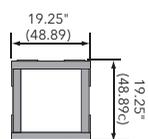
End View



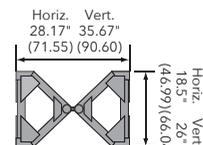
2-Way Corner Block



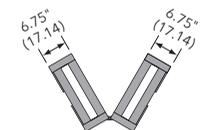
3-Way Corner Block



4-Way Corner Block



Center Pivot Horiz.  
Articulating Block



Horizontal Variable  
Corner

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
7'-9" (2.35)	1136	8804 (3993)	0.02	8251 (3743)	0.03	4403 (1997)	0.03	2936 (1332)	0.03
15'-6" (4.72)	526	8153 (3698)	0.16	4077 (1849)	0.13	3058 (1387)	0.17	2038 (924)	0.16
23'-3" (7.04)	229	5324 (2415)	0.37	2664 (1208)	0.30	1998 (906)	0.38	1332 (604)	0.35
31'-0" (9.44)	125	3875 (1758)	0.65	1941 (880)	0.53	1456 (660)	0.67	970 (604)	0.62
38'-9" (11.80)	77	2983 (1358)	1.02	1494 (678)	0.83	1120 (508)	1.04	747 (339)	0.97
46'-6" (14.17)	50	2325 (1055)	1.44	1185 (538)	1.21	889 (403)	1.50	593 (269)	1.41
54'-3" (16.52)	35	1898 (861)	1.99	956 (434)	1.67	717 (325)	2.03	478 (217)	1.92

5/8" diameter Grade 8 Bolts with standard washers through 3/8" gusset plates

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Single hung pre-rig truss 26 x 18.5 plated Connections are single sets of bolts

Product Description	Item Code	Weight lbs (kgs)
63" SHPRT TRUSS (EMPTY)	TC 2618-063B	73 (33)
93" SHPRT TRUSS (EMPTY)	TC 2618-093B	90 (41)
123" SHPRT TRUSS (EMPTY)	TC 2618-123B	109 (50)
SHPRT 2-WAY CORNER BLOCK	TC 2618-C2B	30 (13)
SHPRT 3-WAY CORNER BLOCK	TC 2618-C3B	35 (16)
SHPRT 4-WAY CORNER BLOCK	TC 2618-C4B	39 (18)

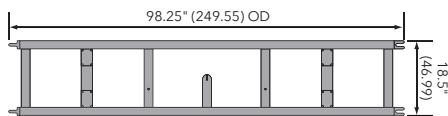
# Touring truss

## Single hung pre-rig truss 26 x 18.5 spigoted

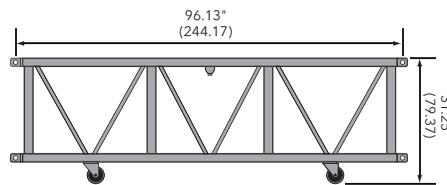
- > Single hung pre-rig truss 26 x 18.5 spigoted
- > Standard lengths are 66", 96" and 126"
- > Equipped with steel spigots
- > Main chords are 2" OD x 3/16" aluminum
- > Diagonals are 1" OD x 1/8" aluminum
- > Fabricated by AWS / SFL certified welders



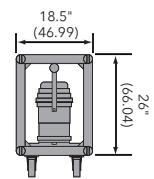
### Plan Views



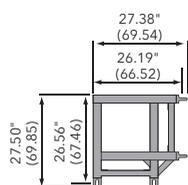
Plan



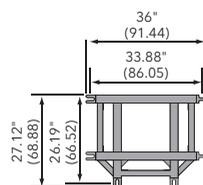
Elevation



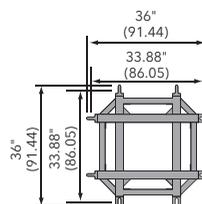
End View



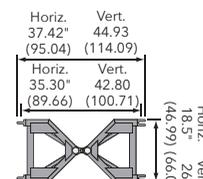
2-Way Corner Block



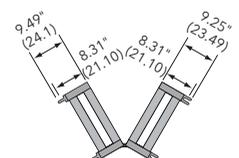
3-Way Corner Block



4-Way Corner Block



Center Pivot Horiz. Articulating Block



Horizontal Variable Corner

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
8 (2.43)	1171	9368 (4249)	0.04	9372 (4251)	0.06	4686 (2126)	0.05	3124 (1417)	0.05
16 (4.87)	573	9168 (4159)	0.29	9175 (4162)	0.46	4587 (2081)	0.40	3058 (1387)	0.37
24 (7.31)	374	8976 (4072)	0.98	7682 (3485)	1.33	4489 (2036)	1.32	2993 (1358)	1.23
32 (9.75)	254	8128 (3687)	2.13	4584 (2079)	1.93	2990 (1356)	2.13	2145 (973)	2.13
40 (12.19)	124	4960 (2250)	2.67	3111 (1411)	2.67	1826 (828)	2.67	1309 (594)	2.67
48 (14.63)	66	3168 (1437)	3.20	2005 (909)	3.20	1176 (533)	3.20	844 (383)	3.20
56 (17.06)	37	2072 (940)	3.73	1313 (596)	3.73	771 (350)	3.73	553 (251)	3.73

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

## Single hung pre-rig truss 26 x 18.5 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
66" SHPRT TRUSS (EMPTY)	TC 2618-066S	100 (45)
96" SHPRT TRUSS (EMPTY)	TC 2618-096S	121 (55)
126" SHPRT TRUSS (EMPTY)	TC 2618-126S	144 (65)
SHPRT 2-WAY CORNER BLOCK	TC 2618-C2S	69 (32)
SHPRT 3-WAY CORNER BLOCK	TC 2618-C3S	92 (42)
SHPRT 4-WAY CORNER BLOCK	TC 2618-C4S	115 (53)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

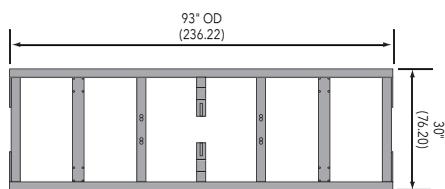
# Touring truss

## Double hung pre-rig truss 26 x 30 plated

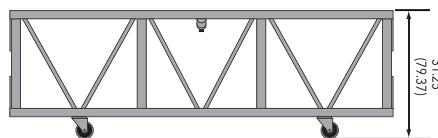
- > Double hung pre-rig truss 26 x 30 plated
- > Standard lengths are 63", 93" and 123"
- > Equipped with bolts
- > Main chords are 2" OD x 1/8" aluminum
- > Diagonals are 1" OD x 1/8" aluminum
- > Fabricated by AWS / SFL certified welders



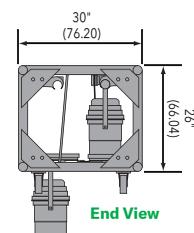
### Plan Views



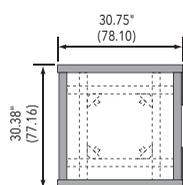
Plan



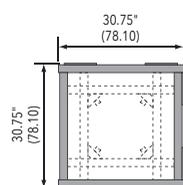
Elevation



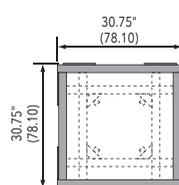
End View



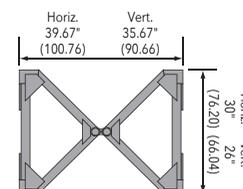
2-Way Corner Block



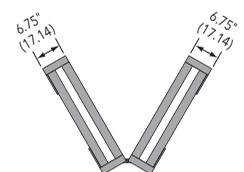
3-Way Corner Block



4-Way Corner Block



Center Pivot Horiz. Articulating Block



Horizontal Variable Corner

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
7' - 9" (2.35)	1135	8796 (3990)	0.02	8248 (3741)	0.03	4400 (1996)	0.03	2933 (1330)	0.03
15' - 6" (4.72)	525	8137 (3691)	0.16	4070 (1846)	0.13	3052 (1384)	0.17	2035 (923)	0.16
23' - 3" (7.04)	228	5301 (2405)	0.37	2653 (1203)	0.30	1990 (903)	0.38	1327 (602)	0.35
31' - 0" (9.44)	124	3844 (1744)	0.65	1927 (874)	0.53	1445 (655)	0.67	963 (437)	0.62
38' - 9" (11.80)	76	2945 (1336)	1.02	1477 (670)	0.84	1107 (502)	1.04	738 (335)	0.97
46' - 6" (14.17)	50	2325 (1055)	1.47	1164 (528)	1.22	873 (396)	1.50	582 (264)	1.41
54' - 3" (16.52)	34	1844 (836)	1.98	931 (422)	1.68	698 (317)	2.03	466 (211)	1.92

5/8" diameter Grade 8 Bolts with standard washers through 3/8" gusset plates

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

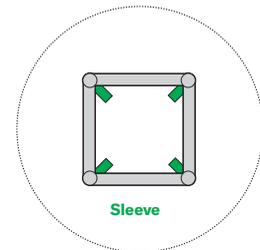
## Double hung pre-rig truss 26 x 30 plated End plates equipped for double sets of bolts, supplied with one set only

Product Description	Item Code	Weight lbs (kgs)
63" PRT TRUSS (EMPTY)	TC 2630-063B	90 (41)
93" PRT TRUSS (EMPTY)	TC 2630-093B	109 (49)
123" PRT TRUSS (EMPTY)	TC 2630-123B	131 (60)
PRT 2-WAY CORNER BLOCK	TC 2630-C2B	40 (18)
PRT 3-WAY CORNER BLOCK	TC 2630-C3B	46 (21)
PRT 4-WAY CORNER BLOCK	TC 2630-C4B	51 (23)
PRT 2-WAY SLEEVE FOR 12" TOWER	TC 2630-S2B	73 (33)
PRT 3-WAY SLEEVE FOR 12" TOWER	TC 2630-S3B	79 (36)
PRT 4-WAY SLEEVE FOR 12" TOWER	TC 2630-S4B	84 (38)

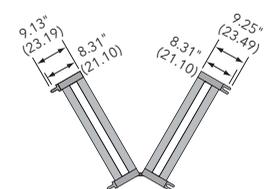
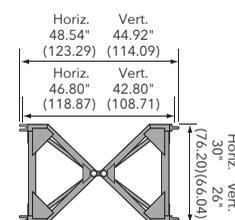
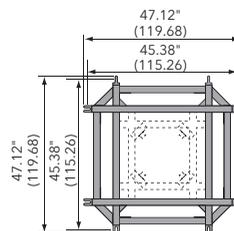
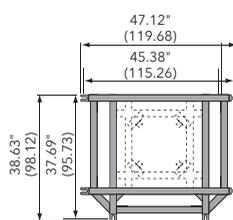
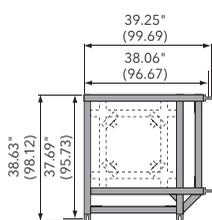
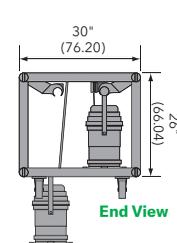
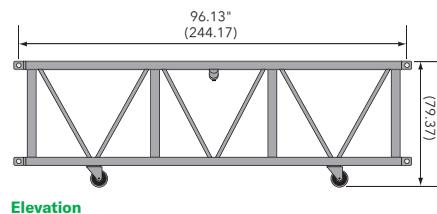
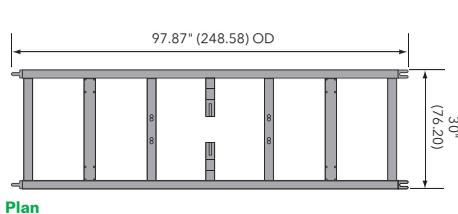
# Touring truss

## Double hung pre-rig truss 26 x 30 spigoted

- › Double hung pre-rig truss 26 x 30 spigoted
- › Standard lengths are 66", 96" and 126"
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



### Plan Views – Connector Orientation Specified by Customer



## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
8 (2.43)	1169	9352 (4242)	0.02	9353 (4243)	0.03	4676 (2121)	0.02	3118 (1414)	0.02
16 (4.87)	571	9136 (4144)	0.14	9136 (4144)	0.22	4568 (2072)	0.19	3045 (1381)	0.17
24 (7.31)	371	8904 (4039)	0.46	7668 (3478)	0.63	4460 (2023)	0.62	2973 (1349)	0.58
32 (9.75)	271	8672 (3934)	1.08	4565 (2071)	0.92	3424 (1553)	1.16	2282 (1035)	1.08
40 (12.19)	185	7400 (3357)	1.84	4427 (2008)	1.76	2674 (1213)	1.81	1981 (899)	1.87
48 (14.63)	119	5712 (2591)	2.54	2863 (1299)	2.09	2147 (974)	2.60	1431 (649)	2.43
56 (17.06)	86	4816 (2185)	3.54	2755 (1250)	3.28	1771 (803)	3.54	1271 (577)	3.55

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

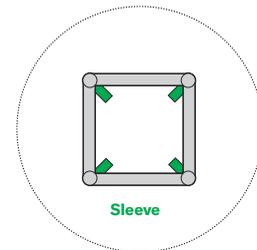
## Double hung pre-rig truss 26 x 30 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
66" PRTTRUSS (EMPTY)	TC 2630-066S	117 (53)
96" PRTTRUSS (EMPTY)	TC 2630-096S	134 (61)
126" PRTTRUSS (EMPTY)	TC 2630-126S	163 (74)
PRT 2-WAY CORNER BLOCK	TC 2630-C2S	83 (38)
PRT 3-WAY CORNER BLOCK	TC 2630-C3S	106 (48)
PRT 4-WAY CORNER BLOCK	TC 2630-C4S	130 (59)
PRT 2-WAY SLEEVE FOR 12" TOWER	TC 2630-S2S	114 (52)
PRT 3-WAY SLEEVE FOR 12" TOWER	TC 2630-S3S	137 (62)
PRT4-WAY SLEEVE FOR 12" TOWER	TC 2630-S4S	160 (73)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

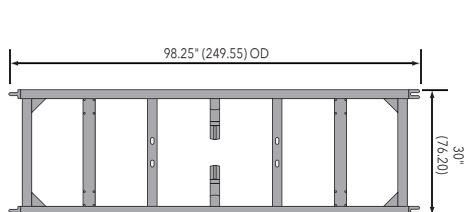
# Touring truss

## Heavy-duty pre-rig truss 30 x 30 spigoted

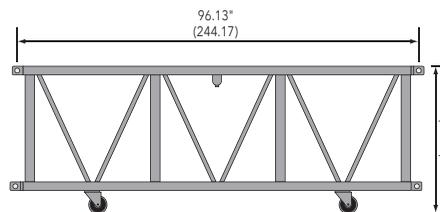
- › Heavy-duty pre-rig truss 30 x 30 spigoted
- › Standard lengths are 66", 96" and 126"
- › Equipped with steel spigots
- › Main chords are 2" OD x 3/16" aluminum
- › Diagonals are 1-1/2" OD x 1/8" aluminum
- › Fabricated by AWS / SFL certified welders



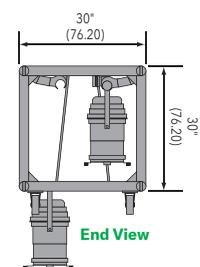
### Plan Views – Connector Orientation Specified by Customer



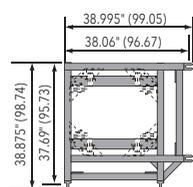
Plan



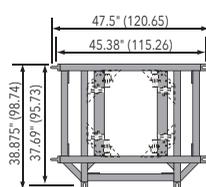
Elevation



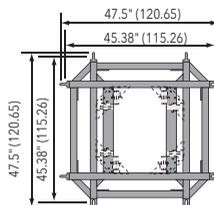
End View



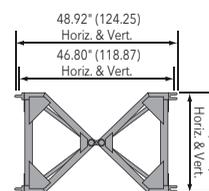
2-Way Corner Block



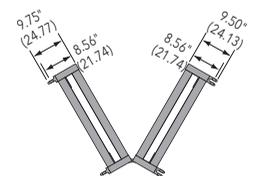
3-Way Corner Block



4-Way Corner Block



Horizontal Variable Corner



Center Pivot Horiz. Articulating Block

## Loading chart

Span feet (meters)	Maximum allowable uniform loads			Maximum allowable point loads					
	Load lbs/ft	Load lbs (kgs)	Max Defl. in.	center point		third point		quarter point	
				Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.	Load lbs (kgs)	Max Defl. in.
8 (2.43)	2849	22821 (10352)	0.03	22220 (10079)	0.05	11410 (5176)	0.04	7608 (3451)	0.04
16 (4.87)	1374	22012 (9985)	0.24	11010 (4994)	0.20	8260 (3747)	0.25	5507 (2498)	0.23
24 (7.31)	602	14466 (6562)	0.55	7236 (3282)	0.44	5427 (2462)	0.56	3618 (1641)	0.52
32 (9.75)	331	10605 (4810)	0.97	5315 (2411)	0.79	3986 (1808)	0.99	2657 (1205)	0.93
40 (12.19)	206	8250 (3742)	1.52	4136 (1876)	1.24	3102 (1407)	1.55	2068 (938)	1.45
48 (14.63)	138	6632 (3008)	2.18	3329 (1510)	1.80	2497 (1133)	2.23	1665 (755)	2.09
56 (17.06)	97	5439 (2467)	2.97	2735 (1241)	2.47	2051 (930)	3.04	1367 (620)	2.85
64 (19.50)	70	4485 (2034)	3.85	2273 (1031)	3.26	170 (773)	3.97	1136 (515)	3.74

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoor only). All loads are based on 10' (3.05 m) sections. Other section lengths are available. Load tables are reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc., Structural Engineers, and apply to truss fabricated after December 1989.

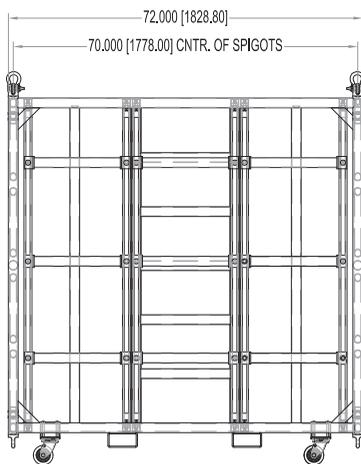
## Heavy-duty pre-rig truss 30 x 30 spigoted Connections are steel spigots & 3/4" clevis pins

Product Description	Item Code	Weight lbs (kgs)
66" HDPRTTRUSS (EMPTY)	TC 3030-066S	122 (53)
96" HDPRT TRUSS (EMPTY)	TC 3030-096S	147 (61)
126" HDPRT TRUSS (EMPTY)	TC 3030-126S	164 (74)
HDPRT 2-WAY CORNER BLOCK	TC 3030-C2S	109 (38)
HDPRT 3-WAY CORNER BLOCK	TC 3030-C3S	134 (48)
HDPRT 4-WAY CORNER BLOCK	TC 3030-C4S	160 (59)
HDPRT 2-WAY SLEEVE FOR 16" TOWER	TC 3030-S2S	159 (52)
HDPRT 3-WAY SLEEVE FOR 16" TOWER	TC 3030-S3S	181 (62)
HDPRT 4-WAY SLEEVE FOR 16" TOWER	TC 3030-S4S	204 (73)
3/4" CLEVIS PIN	TC CP-75	0.4 (0.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

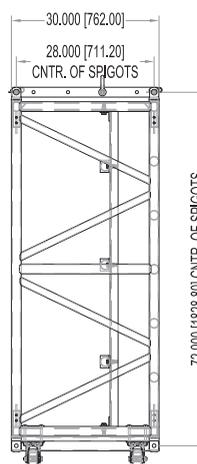
# Touring truss

## Lighting pod

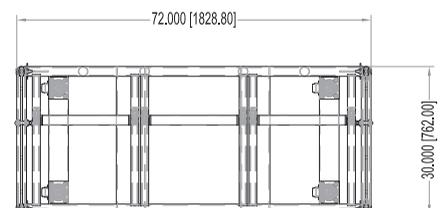
The TOMCAT Lighting Pod offers lighting designers a much larger area to work with and affords them the opportunity to create “walls of light” on a much larger scale than traditional truss profiles can accommodate. Extreme adjustability and flexibility allow for the use of multiple lighting options within one framework that can be utilized both vertically and horizontally.



Elevation



End View



Elevation

## LOAD TABLE

### HORIZONTAL LOAD TABLE

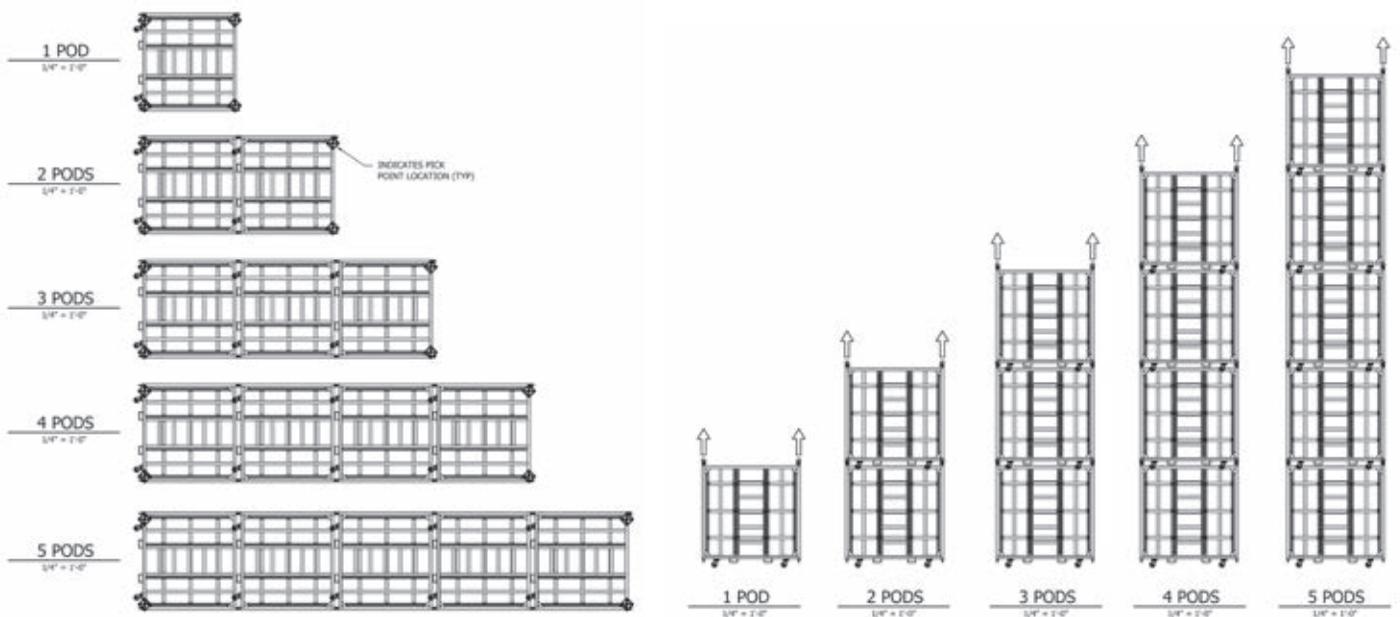
NUMBER OF LIGHTING PODS	MAXIMUM CENTER POINT LOAD ON LIGHT BARS lbs (kgs)
1	80 (36.29)
2	80 (36.29)
3	80 (36.29)
4	80 (36.29)
5	80 (36.29)

### VERTICAL LOAD TABLE

NUMBER OF LIGHTING PODS	MAXIMUM CENTER POINT LOAD ON LIGHT BARS lbs (kgs)
1	200 (90.72)
2	200 (90.72)
3	200 (90.72)
4	185 (83.91)
5	175 (79.38)

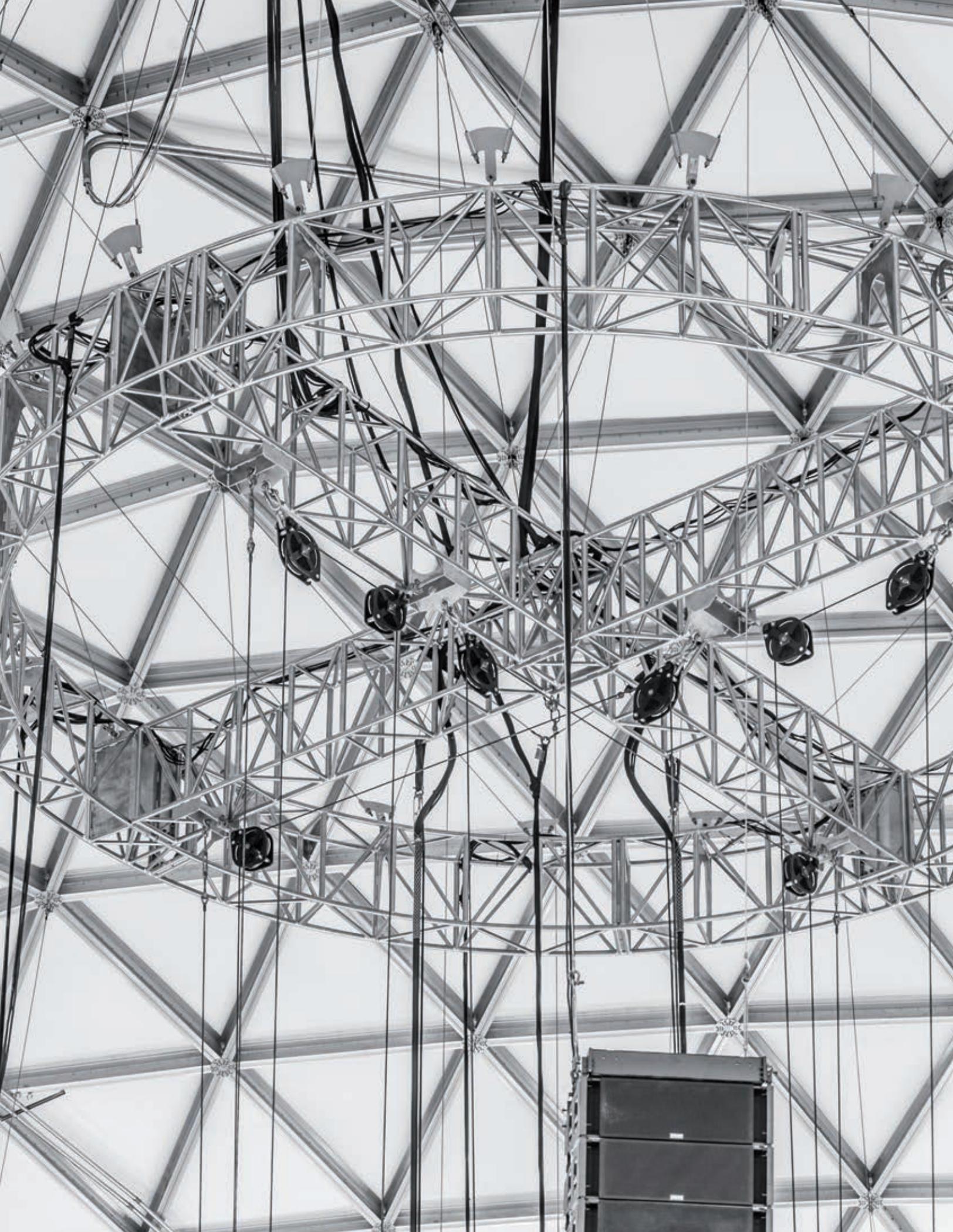
## PARTS LIST

Product Description	Item Code	Weight Lbs. (Kg)
6' x 6' x 2'6" Lighting pod inc. 9 lamp bars	TC TOM-R2-B10	250 (114)
Lighting pod lamp bar (as spare)	TC TOM-R2-B30	2 (1)
Lighting pod hanging plate inc. hardware (Each)	TC TOM-R2-B40	13 (6)



HORIZONTAL RIGGING CONFIGURATION

VERTICAL RIGGING CONFIGURATIONS





# Truss Circles

## Dance tower

## Spot chair

---

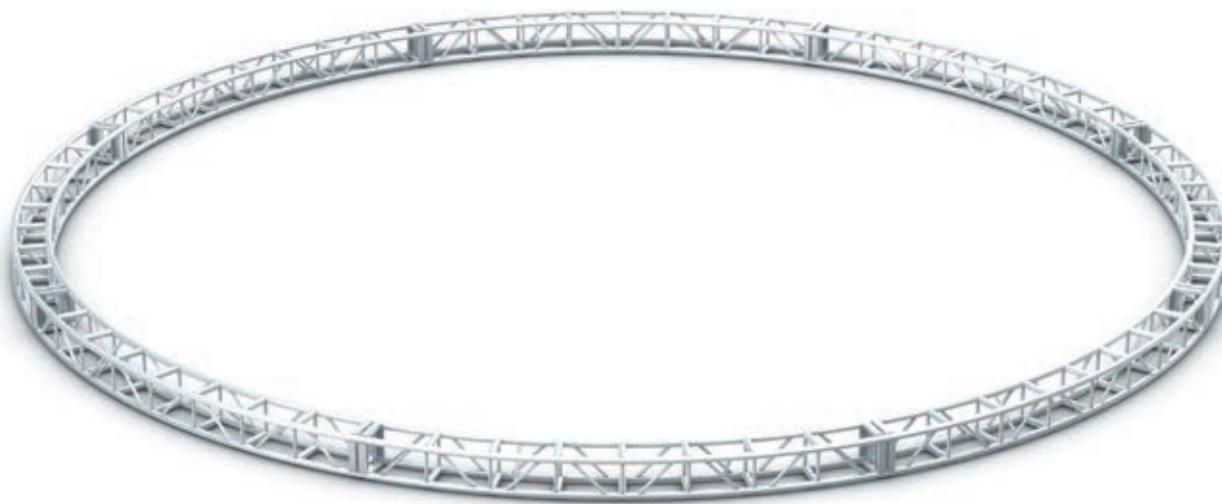
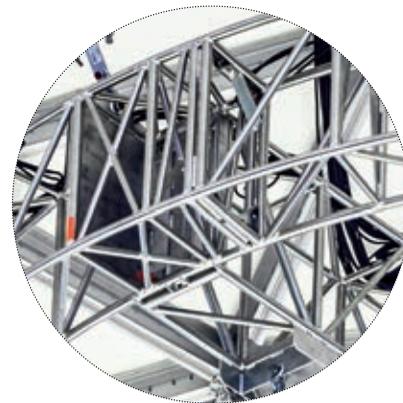
<b>Truss Circles</b>	<b>76</b>
<b>Light duty truss 12x12 plated</b>	
<b>Truss Circles</b>	<b>78</b>
<b>Medium duty truss 20.5x20.5 plated</b>	
<b>Dance tower</b>	<b>80</b>
<b>Spot chair</b>	<b>81</b>

# Truss Circles

## Light duty truss 12 x 12 plated

All standard product circle trusses are fabricated using:

- › Main Chords – 2"x1/8" Aluminum Round Tube
- › Diagonals – 1"x1/8" Aluminum Round Tube
- › All truss use bolted connections
- › All truss fabricated by AWS Certified Welders



### SHOWN ABOVE

Outer diameter	Number of segments	Truss system
20'	8	TC 1212

Custom sizes available on request

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 1212-8D4B	12" Light-Duty Circle 8' Diameter	4
TC 1212-10D4B	12" Light-Duty Circle 10' Diameter	4
TC 1212-11D4B	12" Light-Duty Circle 11' Diameter	4
TC 1212-12D4B	12" Light-Duty Circle 12' Diameter	4
TC 1212-13D4B	12" Light-Duty Circle 13' Diameter	4
TC 1212-14D4B	12" Light-Duty Circle 14' Diameter	4
TC 1212-15D4B	12" Light-Duty Circle 15' Diameter	4
TC 1212-16D4B	12" Light-Duty Circle 16' Diameter	4

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 1212-17D6B	12" Light-Duty Circle 17' Diameter	6
TC 1212-18D6B	12" Light-Duty Circle 18' Diameter	6
TC 1212-19D6B	12" Light-Duty Circle 19' Diameter	6
TC 1212-20D6B	12" Light-Duty Circle 20' Diameter	6

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 1212-20D8B	12" Light-Duty Circle 20' Diameter	8
TC 1212-25D8B	12" Light-Duty Circle 25' Diameter	8
TC 1212-30D8B	12" Light-Duty Circle 30' Diameter	8
TC 1212-35D8B	12" Light-Duty Circle 35' Diameter	8

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 1212-35D12B	12" Light-Duty Circle 35' Diameter	12
TC 1212-40D12B	12" Light-Duty Circle 40' Diameter	12
TC 1212-45D12B	12" Light-Duty Circle 45' Diameter	12
TC 1212-50D12B	12" Light-Duty Circle 50' Diameter	12

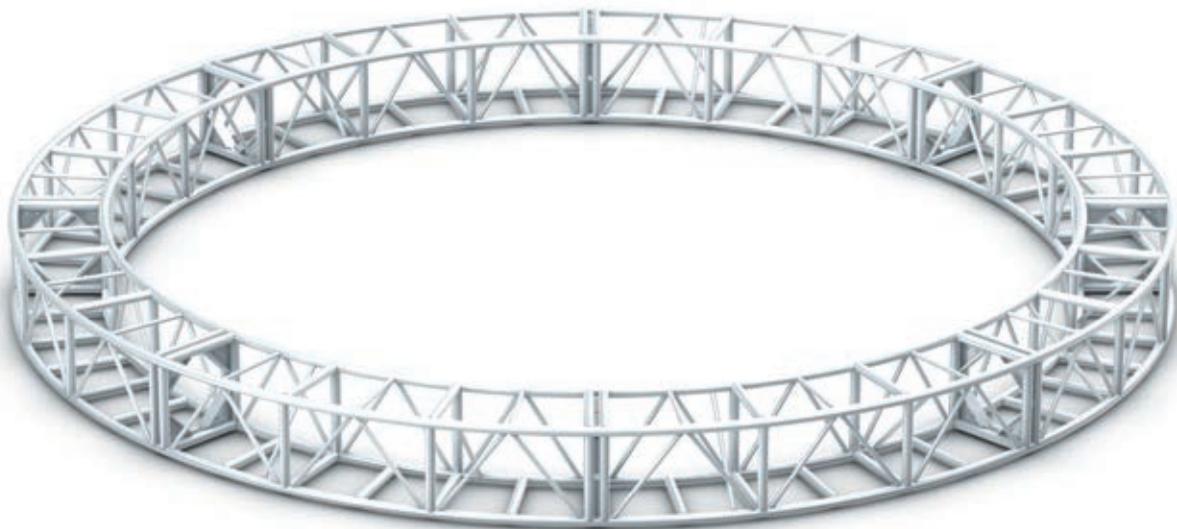
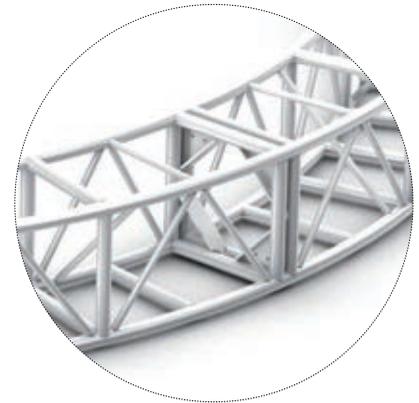
<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 1212-40D16B	12" Light-Duty Circle 40' Diameter	16
TC 1212-50D16B	12" Light-Duty Circle 50' Diameter	16
TC 1212-55D16B	12" Light-Duty Circle 55' Diameter	16
TC 1212-60D16B	12" Light-Duty Circle 60' Diameter	16

# Truss Circles

## Medium duty truss 20.5 x 20.5 plated

All standard product circle trusses are fabricated using:

- › Main Chords – 2"x1/8" Aluminum Round Tube
- › Diagonals – 1"x1/8" Aluminum Round Tube
- › All truss uses bolted connections
- › All truss fabricated by AWS Certified Welders



### SHOWN ABOVE

Outer diameter	Number of segments	Truss system
20'	8	TC 2020

Custom sizes available on request

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 2020-10D4B	20.5" Medium-Duty Circle 10' Diameter	4
TC 2020-11D4B	20.5" Medium-Duty Circle 11' Diameter	4
TC 2020-12D4B	20.5" Medium-Duty Circle 12' Diameter	4
TC 2020-13D4B	20.5" Medium-Duty Circle 13' Diameter	4
TC 2020-14D4B	20.5" Medium-Duty Circle 14' Diameter	4
TC 2020-15D4B	20.5" Medium-Duty Circle 15' Diameter	4
TC 2020-16D4B	20.5" Medium-Duty Circle 16' Diameter	4
TC 2020-20D4B	20.5" Medium-Duty Circle 20' Diameter	4

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 2020-17D6B	20.5" Medium-Duty Circle 17' Diameter	6
TC 2020-18D6B	20.5" Medium-Duty Circle 18' Diameter	6
TC 2020-19D6B	20.5" Medium-Duty Circle 19' Diameter	6
TC 2020-20D6B	20.5" Medium-Duty Circle 20' Diameter	6

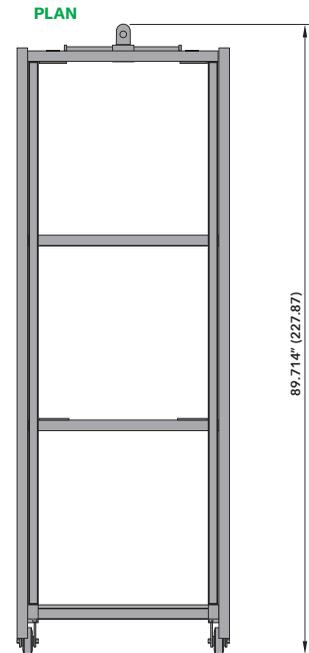
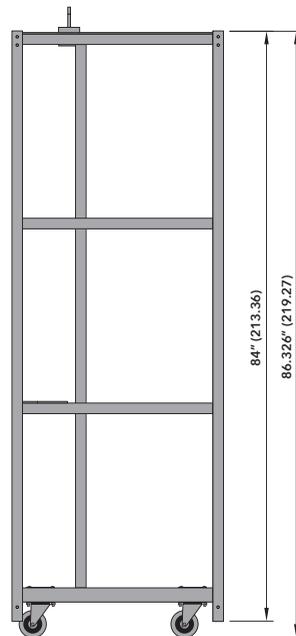
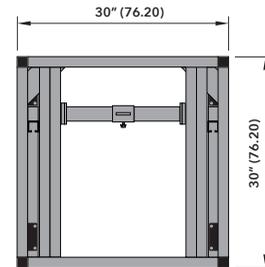
<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 2020-20D8B	20.5" Medium-Duty Circle 20' Diameter	8
TC 2020-25D8B	20.5" Medium-Duty Circle 25' Diameter	8
TC 2020-30D8B	20.5" Medium-Duty Circle 30' Diameter	8
TC 2020-35D8B	20.5" Medium-Duty Circle 35' Diameter	8

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 2020-35D12B	20.5" Medium-Duty Circle 35' Diameter	12
TC 2020-40D12B	20.5" Medium-Duty Circle 40' Diameter	12
TC 2020-45D12B	20.5" Medium-Duty Circle 45' Diameter	12
TC 2020-50D12B	20.5" Medium-Duty Circle 50' Diameter	12

<b>PART NUMBER</b>	<b>DESCRIPTION</b>	<b># OF SECTIONS</b>
TC 2020-50D16B	20.5" Medium-Duty Circle 50' Diameter	16
TC 2020-55D16B	20.5" Medium-Duty Circle 55' Diameter	16
TC 2020-60D16B	20.5" Medium-Duty Circle 60' Diameter	16

# Dance tower

The TOMCAT Dance Tower is a versatile truss product used in numerous Broadway theatrical productions such as Mamma Mia, Hairspray and The Producers. The tower provides a side lighting position for performers on stage and is designed so that truss members don't interfere with the lighting fixtures. The most common size manufactured is 30" x 30" x 84" with various custom sizes available, including double and single wide configurations. A caster bottom is also available depending on lighting needs. Lamp mounting options include round tube for clamps, unistrut or tees.



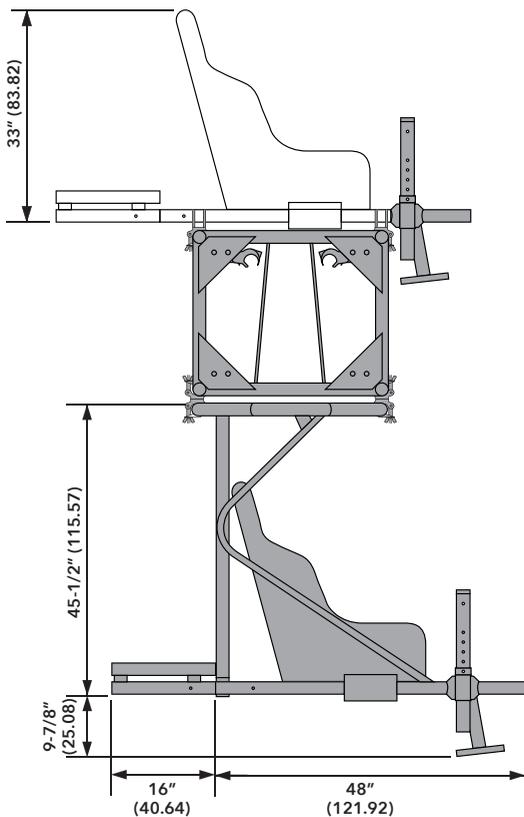
Product Description	Item Code	Weight lbs (kgs)
DANCE TOWER SECTION	TC 3030-084DTT	76 (34.5)
DANCE TOWER BOTTOM SECTION	TC 3030-084DTB	76 (34.5)

# Spot chair

- › Top mount, universal mount or rotating spot chairs available
- › Seat belt provided
- › Top and universal mount Spot Chairs contain removable 15-3/4" x 20-3/4" ballast trays
- › Spot mount provided
- › Swivel couplers available separately
- › Universal mount spot chair has removable halo section
- › Rotating spot chair is under hung only



Top Mount Spot Chair



Product Description	Item Code	Weight lbs (kgs)
TOP MOUNT SPOT CHAIR	TC ACC-SCTOP	*43 (20)
UNIVERSAL SPOT CHAIR	TC ACC-SCUNI	*71 (33)
ROTATING SPOT CHAIR	TC ACC-SC360	*165 (75)

\* includes seat.



# Rigging hardware

---

<b>Cell clamps</b>	<b>84</b>
<b>Truss accessories</b>	<b>86</b>
<b>Rigging accessories</b>	<b>88</b>

**Strength  
Under  
Pressure**

# Cell clamps



## HALF COUPLER COUNTERSUNK 3/8" HOLE

TC HCNH

SWL	Weight	Ø
1000 lbs	1.2 lbs	1.89"-2"
455 Kg	0.54 Kg	48-51 mm



## HALF COUPLER COUNTERBORED HOLE

TC HCCB

SWL	Weight	Ø
750 lbs	1.1 lbs	1.89"-2"
342 Kg	0.50 Kg	48-51 mm



## HALF COUPLER COUNTERBORED 3/8" HOLE

TC HCCS3/8

SWL	Weight	Ø
1000 lbs	1.1 lbs	1.89"-2"
455 Kg	0.50 Kg	48-51 mm



## HALF COUPLER COUNTERSUNK 1/2" HOLE

TC HCCS1/2

SWL	Weight	Ø
1000 lbs	1.2 lbs	1.89"-2"
455 Kg	0.54 Kg	48-51 mm



## FIXED 90 DEGREE COUPLER PINNED OR WELDED

TC HC90P OR HC90W

SWL	Weight	Ø
750 lbs	2.4 lbs	1.89"-2"
342 Kg	1.08 Kg	48-51 mm



## SWIVEL COUPLER

TC HCSW

SWL	Weight	Ø
750 lbs	2.4 lbs	1.89"-2"
342 Kg	1.08 Kg	48-51 mm



## CLAMP BASIC

TC CELL201

SWL	Weight	Ø
1102 lbs	1.10 lbs	1.89"-2"
500 Kg	0.50 Kg	48-51 mm



## CLAMP WITH BOLT AND WINGNUT

TC CELL202

SWL	Weight	Ø
1102 lbs	1.43 lbs	1.89"-2"
500 Kg	0.65 Kg	48-51 mm



## CLAMP WITH LIFTING EYE

TC CELL203

SWL	Weight	Ø
749 lbs	1.43 lbs	1.89" - 2"
340 Kg	0.65 Kg	48 - 51 mm
1102 lbs	1.43 lbs	1.89"-2"
500 Kg	0.65 Kg	48-51 mm



**SIDE CLAMP**

TC CELL211

SWL	Weight	Ø
1102 lbs	1.21 lbs	1.89"-2"
500 Kg	0.55 Kg	48-51 mm



**QUICK CLAMP**

TC CELL401

SWL	Weight	Ø
551 lbs	1.50 lbs	1.5"-2"
250 Kg	0.68 Kg	38-51 mm



**QUICK CLAMP WITH BOLT AND WINGNUT**

TC CELL402

SWL	Weight	Ø
551 lbs	1.65 lbs	1.5"-2"
250 Kg	0.75 Kg	38-51 mm



**CLAMP BASIC**

TC CELL501

SWL	Weight	Ø
165 lbs	0.30 lbs	1.89"-2"
75 Kg	0.14 Kg	48-51 mm



**CLAMP BASIC**

TC CELL601

SWL	Weight	Ø
165 lbs	0.30 lbs	1.89"-2"
75 Kg	0.14 Kg	48-51 mm



**CLAMP WITH BOLT AND WINGNUT**

TC CELL602

SWL	Weight	Ø
165 lbs	0.30 lbs	1.89"-2"
75 Kg	0.14 Kg	48-51 mm

# Truss accessories



## PICK UP BAR

Product Description	Item Code
10" EXTRUDED PICK UP BAR WITH SHACKLE	TC 10EX-PUB
12" EXTRUDED PICKUP BAR WITH SHACKLE	TC 12EX-PUB
18" EXTRUDED PICKUP BAR WITH SHACKLE	TC 18EX-PUB
20.5" EXTRUDED PICKUP BAR WITH SHACKLE	TC 20EX-PUB
30" EXTRUDED PICKUP BAR WITH SHACKLE	TC 30EX-PUB

Available for all truss types



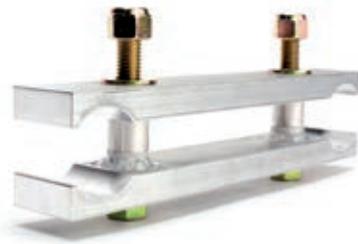
## CHAIN GUIDE

Product Description	Item Code
LIGHT-DUTY 12X12 TRUSS CHAIN GUIDE	TC 1212-CG
LIGHT-DUTY 12X18 TRUSS CHAIN GUIDE	TC 1218-CG
MEDIUM-DUTY 20.5X20.5 TRUSS CHAIN GUIDE	TC 2020-CG
DOUBLE HUNG PRE-RIG TRUSS CHAIN GUIDE	TC 2630-CG



## PIN PULLER

Product Description	Item Code
3/4" CLEVIS PIN PULLER	TC PINPULLER
1" CLEVIS PIN PULLER	TC PINPULLER-1



## 12 TRUSS ATTACHMENT BRACKET

TC 1212-TAB

Product Description	Item Code
12" TRUSS ATTACHMENT BRACKET	TC 1212-TAB
16" TRUSS ATTACHMENT BRACKET	TC 16G1-TAB
20.5" TRUSS ATTACHMENT BRACKET	TC 2020-TAB
26" TRUSS ATTACHMENT BRACKET	TC 2630-TAB
30" TRUSS ATTACHMENT BRACKET	TC 3020-TAB



## SNAPHOOK FOR 1.9" OD TUBE SNAP HOOK FOR 2"OD TUBE

TC SHK1.9, TC SHK2



## GUY CABLE TENSION GAGE

TC GCT



### R-CLIPS

Product Description	Item Code
SMALL R-CLIP	TC RC-SM
MEDIUM R-CLIP	TC RC-MED
LARGE R-CLIP	TC RC-LG



### CLEVIS PINS

Product Description	Item Code
5/8IN CLEVIS PIN	TC CP-625
3/4IN CLEVIS PIN	TC CP-75
3/4IN RADIUS HEAD CLEVIS PIN	TC CP-75R
1IN CLEVIS PIN	TC CP-1



### TRADESHOW BASE

Product Description	Item Code
24" x 24" Aluminum trade show base for 12" x 12" truss - Natural finish	TC 12GS-TSBB
24" x 24" Aluminum trade show base for 12" x 18" truss - Natural finish	TC 1218-TSBB
30" x 30" Aluminum trade show base for 12" x 12" & 20.5" x 20.5" truss - Natural finish	TC 2020-TSBB
24" x 24" Steel trade show base for 12" x 12", 12" x 18", 15" x 15" 20.5" x 20.5" truss - Powder coated black	B4620
36" x 36" Steel trade show base for 12" x 12", 12" x 18", 15" x 15" 20.5" x 20.5" truss - Powder coated black	18645-01

Various sizes available.



### Truss Boltset

TC BOLTSET

Includes: One - 5/8" x 1-3/4" Grade 8 Bolt,  
Two - washers, One - nut



### Snaphook

TC SHK2



### TRUSS HAMMER

TC HAMMER

# Rigging accessories



## WIRE ROPE SLINGS

Product Description	Item Code
3/8INX5FT WIRE ROPE SLING	TC SL3/8X5
3/8INX10FT WIRE ROPE SLING	TC SL3/8X10
3/8INX20FT WIRE ROPE SLING	TC SL3/8X20
3/8INX30FT WIRE ROPE SLING	TC SL3/8X30
1/2INX5FT WIRE ROPE SLING	TC SL1/2X5
1/2INX10FT WIRE ROPE SLING	TC SL1/2X10
1/2INX20FT WIRE ROPE SLING	TC SL1/2X20
1/2INX30FT WIRE ROPE SLING	TC SL1/2X30

Custom sizes available.



## TOMCAT POLYESTER ROUNDSLINGS

Product Description	Item Code
1.5FT POLYESTER ROUND SLING	TC EN60-1.5
2FT POLYESTER ROUND SLING	TC EN60-2
3FT POLYESTER ROUND SLING	TC EN60-3
4FT POLYESTER ROUND SLING	TC EN60-4
5FT POLYESTER ROUND SLING	TC EN60-5
6FT POLYESTER ROUND SLING	TC EN60-6
8FT POLYESTER ROUND SLING	TC EN60-8
9FT POLYESTER ROUND SLING	TC EN60-9

Custom sizes available.



## TOMCAT POLYESTER COVERED WIRE ROPE SLINGS

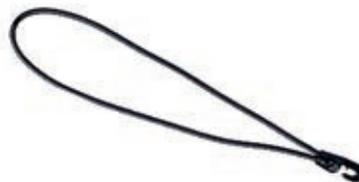
Product Description	Item Code
3FT POLYESTER COVERED WIRE ROPE SLING	TC GACEN60-3
4FT POLYESTER COVERED WIRE ROPE SLING	TC GACEN60-4
6FT POLYESTER COVERED WIRE ROPE SLING	TC GACEN60-6
9FT POLYESTER COVERED WIRE ROPE SLING	TC GACEN60-9

Custom sizes available.



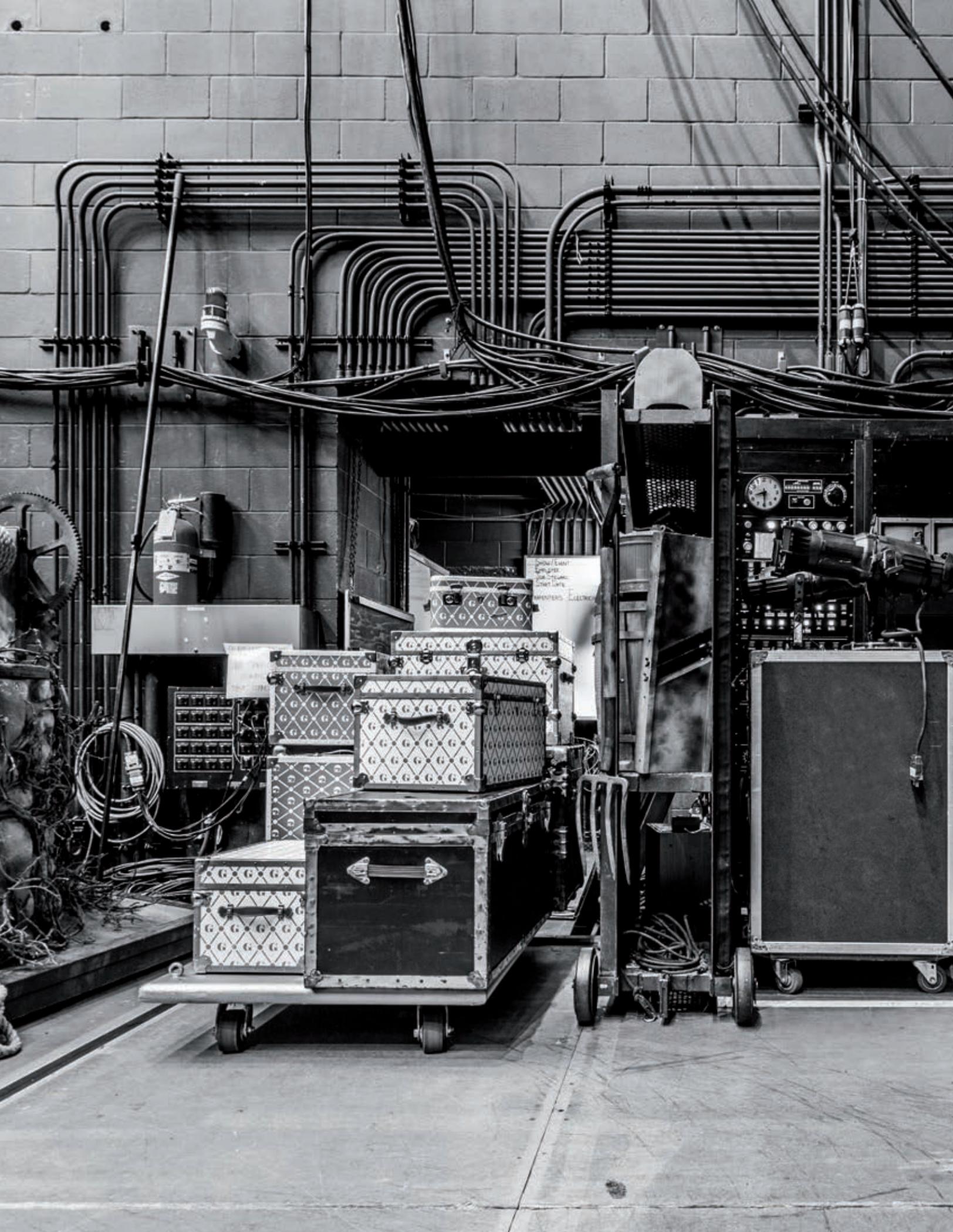
## SHACKLES

Product Description	Item Code
1/4IN GALVANIZED SHACKLE	TC SHG1/4
3/8IN GALVANIZED SHACKLE	TC SHG3/8
1/2IN GALVANIZED SHACKLE	TC SHG1/2
5/8IN GALVANIZED SHACKLE	TC SHG5/8
3/4IN GALVANIZED SHACKLE	TC SHG3/4
7/8IN GALVANIZED SHACKLE	TC SHG7/8
1IN GALVANIZED SHACKLE	TC SHG1



## BUNGIES

TC BUNGIE  
10-1/2" light-duty



Sound / Light  
Control  
Room  
Cable Lock  
MEMBERS: LALONCA



@wetpublic

# Sound delay towers

---

<b>Speaker tower L-25</b>	<b>92</b>
<b>Speaker tower M-30</b>	<b>94</b>
<b>Speaker tower V-45</b>	<b>96</b>

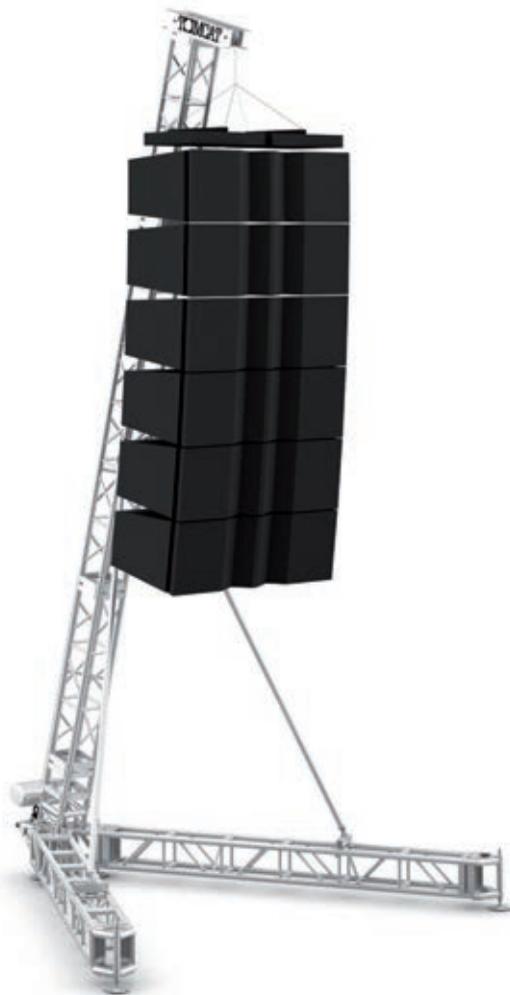


**Strength  
Under  
Pressure**

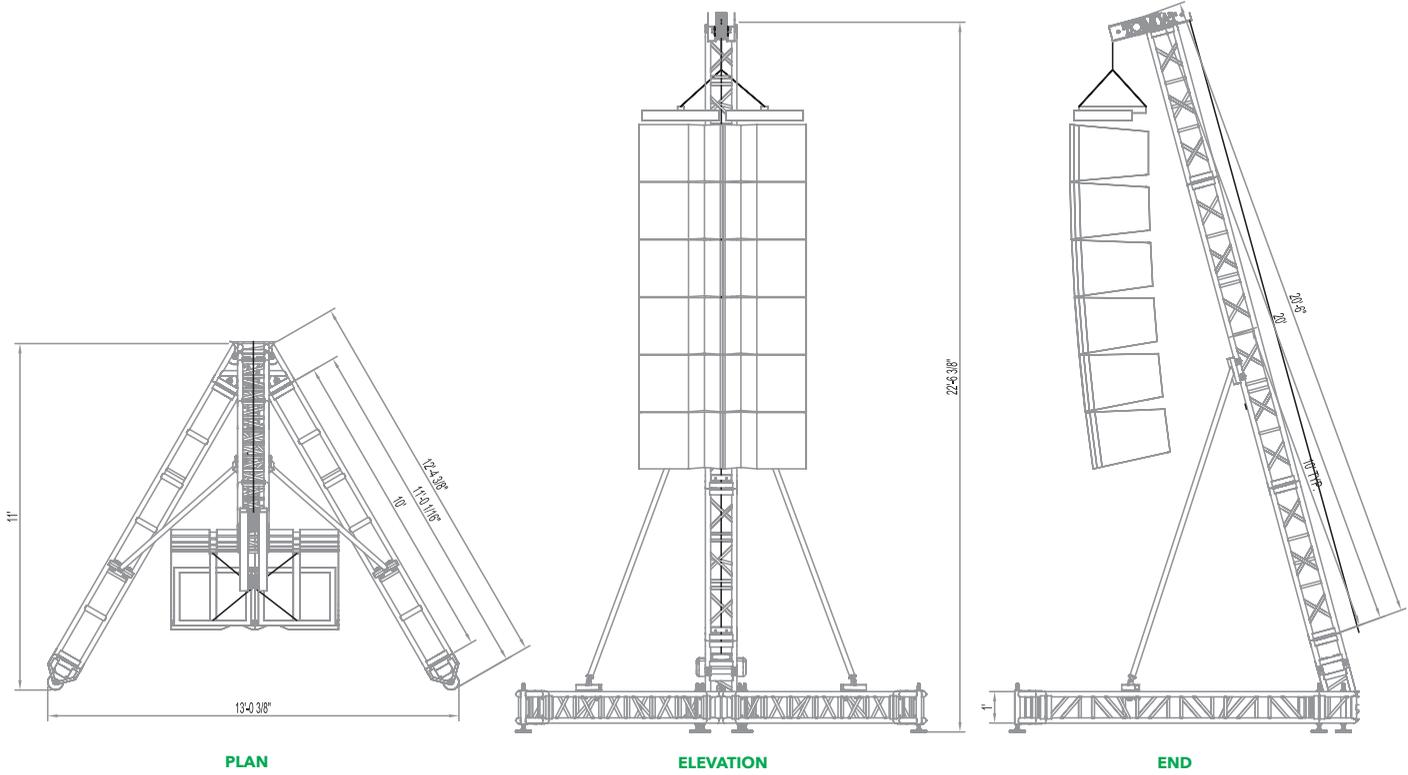
# Sound delay towers

## Speaker Tower L-25

- › **Constructed with 12" Light-duty plated truss**
- › **Max. load capacity of 1,500 lbs.**
- › **Engineered to safely operate in wind speeds up to a maximum of 40 mph**



ALL TOWER FABRICATED BY AWS CERTIFIED WELDERS  
ALL COMPONENTS COMPLY WITH ANSI E1.2  
ENGINEERING REPORTS SUPPLIED WITH TOWER PURCHASE



ITEM CODE	DESCRIPTION	QTY.
TC SPKR-L25-B10	10' LD SPEAKER TOWER TRUSS	1
TC SPKR-L25-B15	5' LD SPEAKER TOWER TRUSS	2
TC SPKR-L25-B20	LD SPEAKER TOWER HINGE BLOCK	1
TC SPKR-L25-B30	STABILIZER ARM	1
TC SPKR-L25-B35	STABILIZER ARM	1
TC SPKR-L25-B40	L25 SPEAKER TOWER LEVELING FEET	2
TC 1212-120B	10' STANDARD LIGHT-DUTY TRUSS	2
TC 12GS-HBB	12" GROUND SUPPORT HEADBLOCK	1

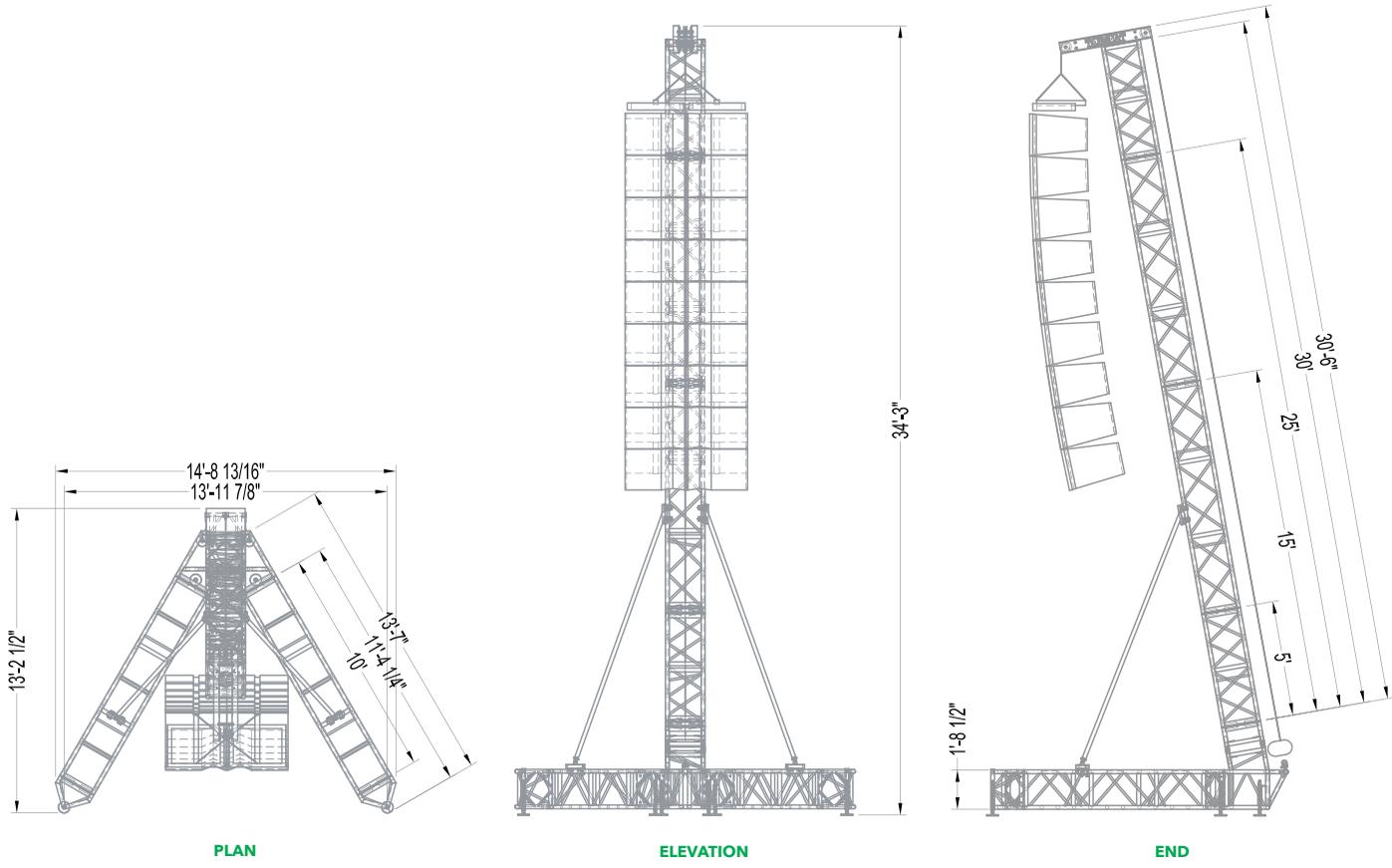
# Sound delay towers

## SPEAKER TOWER M-30

- › Constructed with 20.5" Medium-duty plated truss
- › Max. load capacity of 1,800 lbs.
- › Engineered to safely operate in wind speeds up to a maximum of 40 mph



ALL TOWERS FABRICATED BY AWS CERTIFIED WELDERS  
ALL COMPONENTS COMPLY WITH ANSI E1.2  
ENGINEERING REPORTS SUPPLIED WITH TOWER PURCHASE

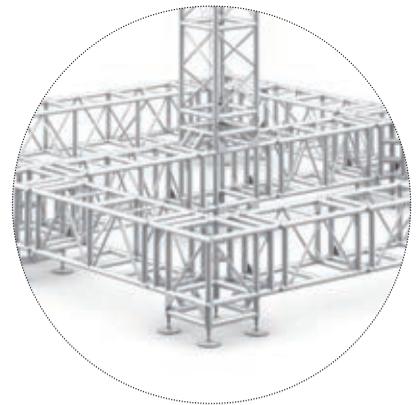
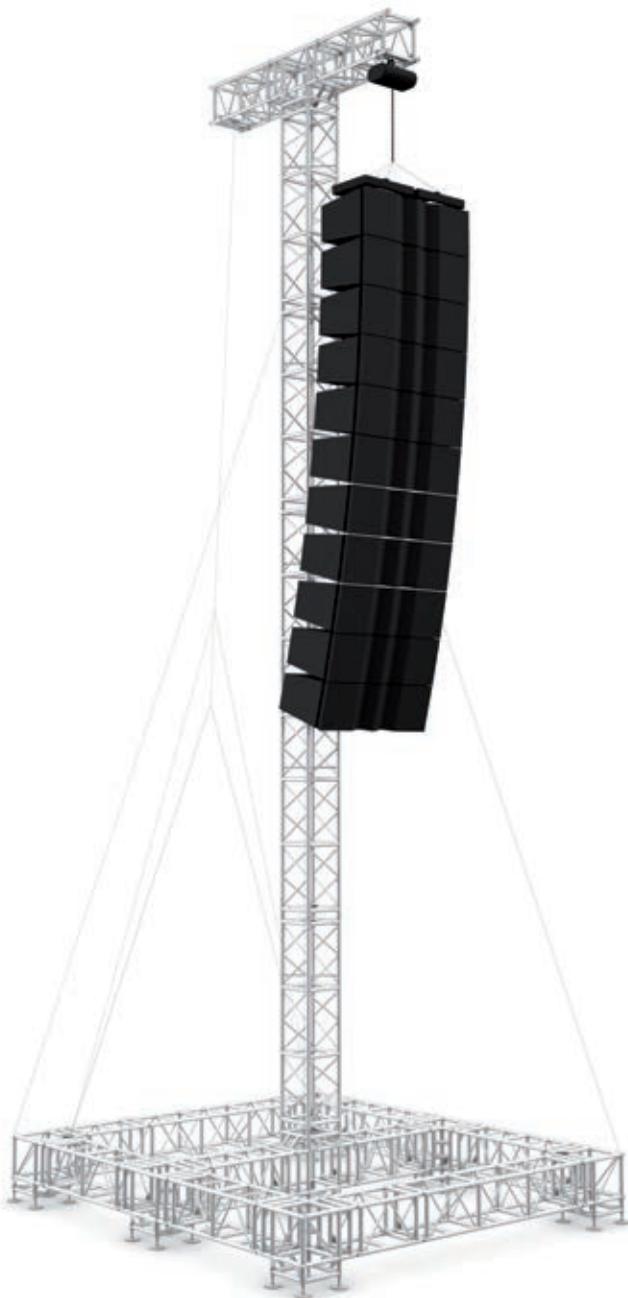


ITEM CODE	DESCRIPTION	QTY.
TC 2020-120B	10' MEDIUM-DUTY PLATED TRUSS	2
TC 20GS-HBB	20.5" GROUND SUPPORT HEADBLOCK	1
TC SPKR-M30-B05	5' TOWER TOPTRUSS	1
TC SKPR-M30-B10	10' TOWER TRUSS	2
TC SKPR-M30-B15	5' TOWER TRUSS	1
TC SPKR-M30-B20	MD SPEAKER TOWER HINGE BLOCK	1
TC SPKR-M30-B30	STABILIZER ARM	1
TC SPKR-M30-B35	STABILIZER ARM	1
TC SPKR-M30-B40	M30 SPEAKER TOWER LEVELING FEET	2

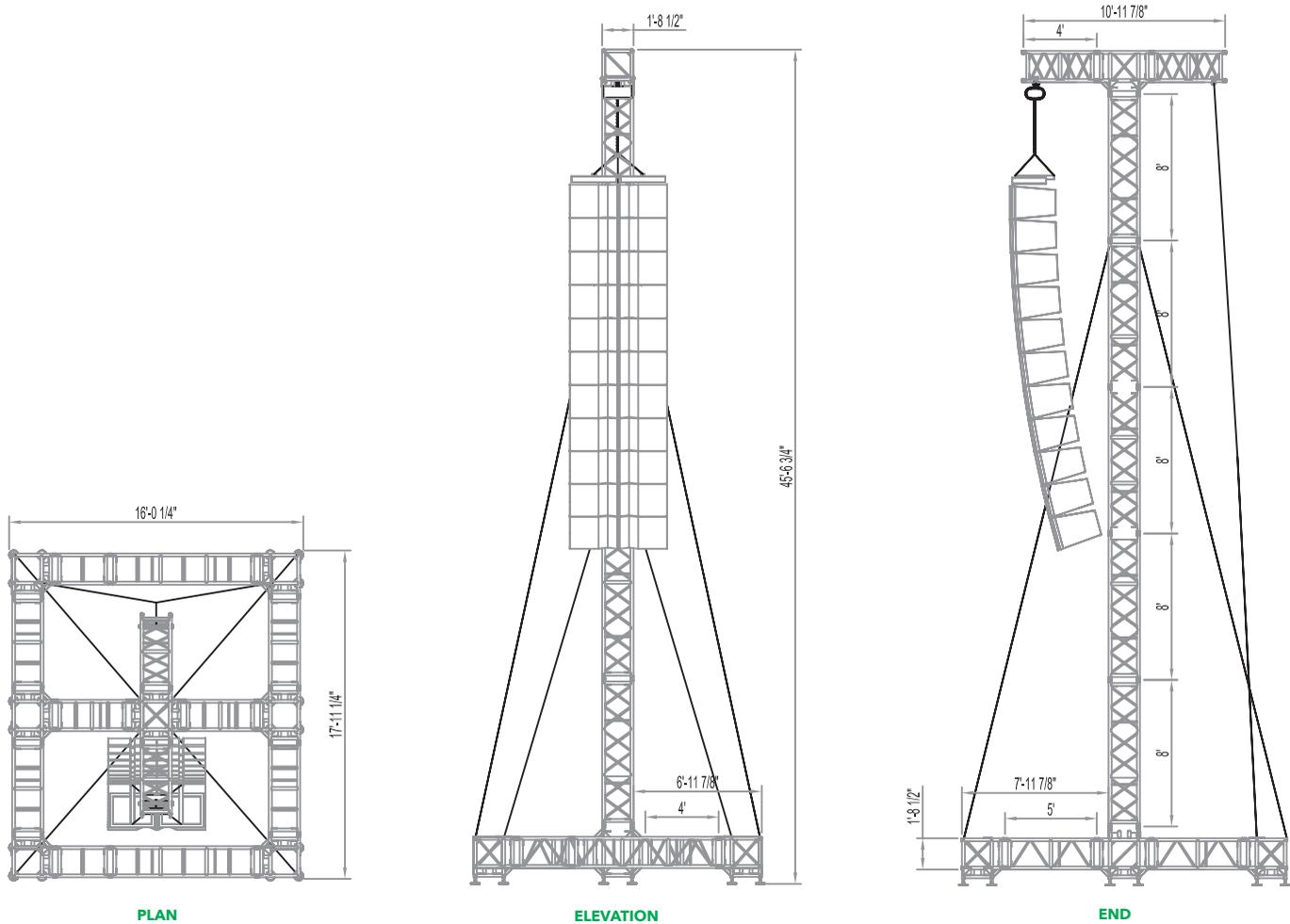
# Sound delay tower

## Speaker Tower V-45

- › Constructed with 20.5" Medium-duty spigoted truss
- › Max. load capacity of 4,000 lbs.
- › Engineered to safely operate in wind speeds up to a maximum of 45 mph



ALL TOWERS FABRICATED BY AWS CERTIFIED WELDERS  
ALL COMPONENTS COMPLY WITH ANSI E1.2  
ENGINEERING REPORTS SUPPLIED WITH TOWER PURCHASE



ITEM CODE	DESCRIPTION	QTY.
TC 2020-036S	3' MEDIUM-DUTY SPIGOTED TRUSS	2
TC 2020-048S	4' MEDIUM-DUTY SPIGOTED TRUSS	2
TC 2020-060S	5' MEDIUM-DUTY SPIGOTED TRUSS	4
TC 2020-096S	8' MEDIUM-DUTY SPIGOTED TRUSS	2
TC SKPR-V45-B10	8' V45 TOWER TRUSS	4
TC SKPR-V45-B15	8' V45 HINGE TOWER TRUSS	1
TC SKPR-V45-B20	4' V45 CANTILEVER TRUSS	2
TC SPKR-V45-B30	V45 TOWER TOP 3-WAY CORNER	1
TC SPKR-V45-C2S	V45 TOWER BASE 2-WAY CORNER	4
TC SPKR-V45-C3S	V45 TOWER BASE 3-WAY CORNER	2
TC SPKR-V45-C4S	V45 TOWER BASE 4-WAY CORNER	1
TC SPKR-V45-VL	V45 TOWER LIFTER	1
TC SHG5/8	5/8" GALVANIZED SHACKLE	18
TC EN60-3	3' POLYESTER ROUND SLING	11
TC SL3/8X20	3/8"X20" WIRE ROPE SLING	5
TC SL3/8X10	3/8"X10" WIRE ROPE SLING	2
TC RS3X15	3'X15" RATCHET STRAP	6





# Ground support systems

---

**12" Tower MK1, MK2, MK3**

**100**

**16" Tower**

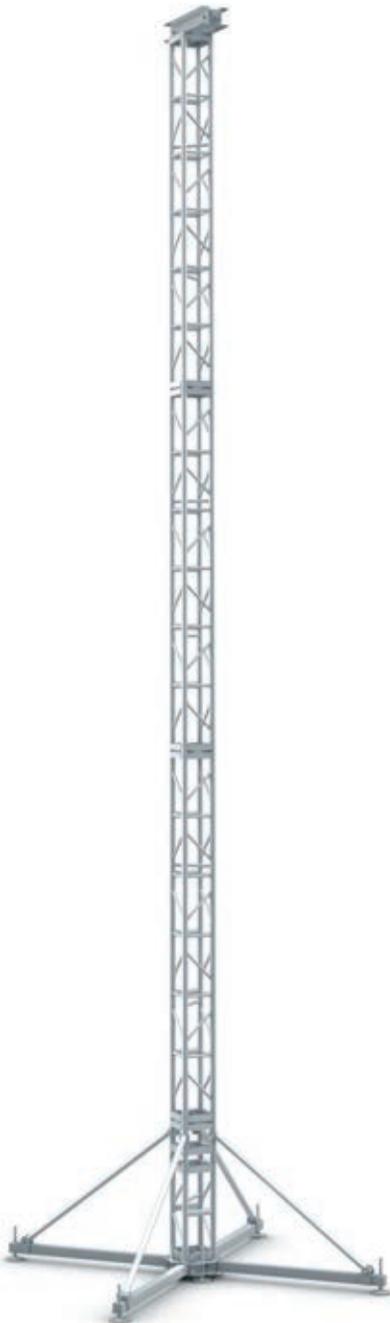
**102**

**Strength  
Under  
Pressure**

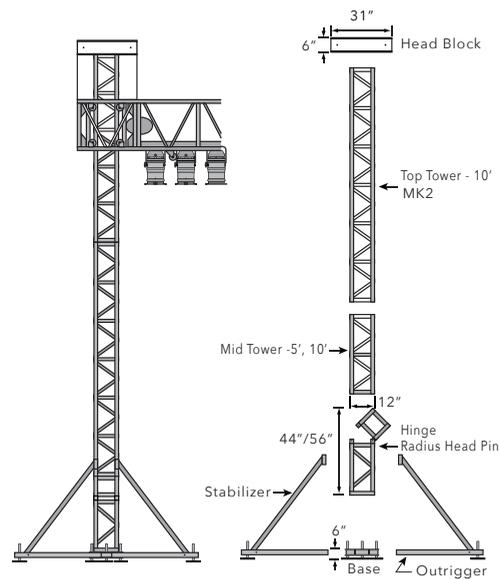
# Ground support systems

## 12" Tower MK1, MK2 and MK3

- › Connections are single sets of bolts for MK1 and MK3 12" Tower
- › Connections are steel spigots & 3/4" clevis pins for MK3 12" Tower
- › MK-1 tower is standard

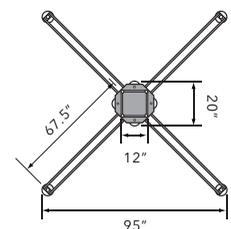


12" Tower Configuration



Style  
 Mark I Tower  
 Mark II Tower  
 Mark III 12" Tower

**CONNECTIONS**  
 Bolts  
 Spigots



## MK-1 & MK-2 tower components

Product Description	Item Code	Weight lbs (kgs)
3FT MK3 12 x 12 TOWER	TC 12G3-036S	29 (13)
5FT MK3 12 x 12 TOWER	TC 12G3-060S	40 (18)
8FT MK3 12 x 12 TOWER	TC 12G3-096S	58 (27)
10FT MK3 12 x 12 TOWER	TC 12G3-120S	69 (31)
44" HINGE BLOCK FOR 12" TOWER (for use with MD and PRT trusses)	TC 12G3-H44S	61 (27)
56" HINGE BLOCK FOR 12" TOWER (for use with HD trusses)	TC 12G3-H56S	67 (30)
BASE FOR 12 x 12 TOWER	TC 12G3-BS-2	46 (21)
OUTRIGGER/STABILIZER SET PER TOWER for use with 44" hinge block	TC 12G3-OS44-2	101 (46)
for use with 56" hinge block	TC 12G3-OS56-2	103 (47)
HEADBLOCK FOR 12 x 12 TOWER (for use with 2020, 2630, 3020)	TC 12G3-HBB	41 (18)
RADIUS HEAD 3/4" CLEVIS PIN	TC CP-75R	

\* Standard for GS 5/16" chain

## MK-3 tower components

Product Description	Item Code	Weight lbs (kgs)
3' MK1 12" x 12" TOWER	TC 12G1-036B	26 (13)
5' MK1 12" x 12" TOWER	TC 12G1-060B	40 (18)
8' MK1 12" x 12" TOWER	TC 12G1-096B	58 (27)
10' MK1 12" x 12" TOWER	TC 12G1-120B	69 (31)
3' MK2 12" x 12" TOWER	TC 12G2-036B	34 (15)
5' MK2 12" x 12" TOWER	TC 12G2-060B	49 (22)
8' MK2 12" x 12" TOWER	TC 12G2-096B	71 (32)
10' MK2 12" x 12" TOWER	TC 12G2-120B	87 (39)
44" HINGE BLOCK FOR 12" TOWER (for use with MD & PRT Trusses)	TC 12GS-H44B	61 (27)
56" HINGE BLOCK FOR 12" TOWER (for use with HD Trusses)	TC 12GS-H56B	67 (30)
BASE FOR 12" X 12" TOWER	TC 12GS-BB-2	46 (21)
OUTRIGGER/STABILIZER SET/TOWER For use with 44" Hinge Block	TC 12GS-OS44-2	101 (46)
For use with 56" Hinge Block	TC 12GS-OS56-2	103 (47)
HEAD BLOCK FOR 12" x 12" TOWER* (for use with 2020, 2630, 3020)	TC 12GS-HBB	41 (18)
RADIUS HEAD 3/4" CLEVIS PIN	TC CP-75R	
5/8" GRADE 8 BOLT, NUT & WASHER BOLT		

\* Standard for GS 5/16" chain

	Mark I	Mark II	Mark III
Profile size (square)	12" (30.5 cm)	12" (30.5 cm)	12" (30.5 cm)
Indoor Use	Yes	Yes	Yes
Outdoor Use	No	Yes	Yes
Bolt Connection	Available	Available	No
Spigot Connection	No	No	Yes
Maximum Height	35' (10.67 m)	35' (10.67 m)	35' (10.67 m)
Max. Axial Load*	2000 lbs (907 kg)	3000 lbs (1361 kg)	3000 lbs (1361 kg)
Max. Flexural Load*	3.63 Kft.	3.63 Kft.	14.69 Kft.

Note: Designed to raise TOMCAT truss using Columbus McKinnon Theatrical Chain Hoists (Headblock sheaves for 5/16" chain is standard, but 1/4" chain sheaves are available). Standard sleeve blocks are available for midsize to large types of TOMCAT truss. All hinge and spigot connections employ 3/4" radius head pins.

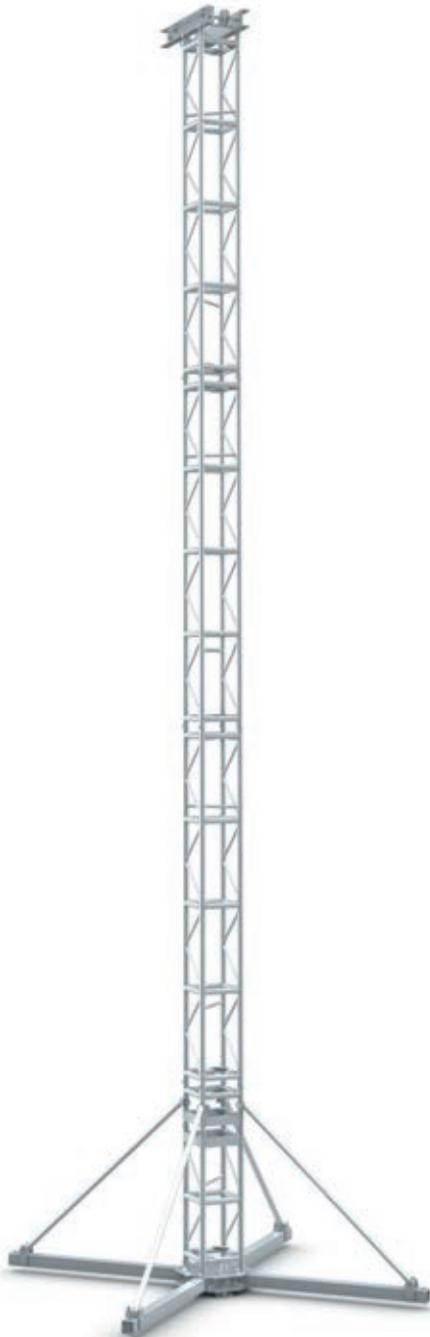
\*Towers are designed to support both axial and flexural (bending) loads simultaneously.

Axial load capacity is dependent upon the amount of flexural loading placed upon the structure through a number of sources including, but not limited to, the eccentric axial loads, moment transfer from horizontal truss loading (via sleeve and corner blocks), wind forces and seismic forces. Due to the interdependent nature of the two forces, the loads stated above should be used for reference only. As either of the variables change along their respective planes, allowable loads may increase or decrease as a result. Axial loads are represented in the table above in both pounds and kilograms. Flexural loads are represented in kip feet. Dynamic loads must be converted into a static load equivalent for comparison with the rated capacity. All towers for outdoor use must be checked for flexural loads introduced by wind loading on the towers and related structures. Contact your TOMCAT representative for further assistance and additional information on the specific use of towers for your particular situation.

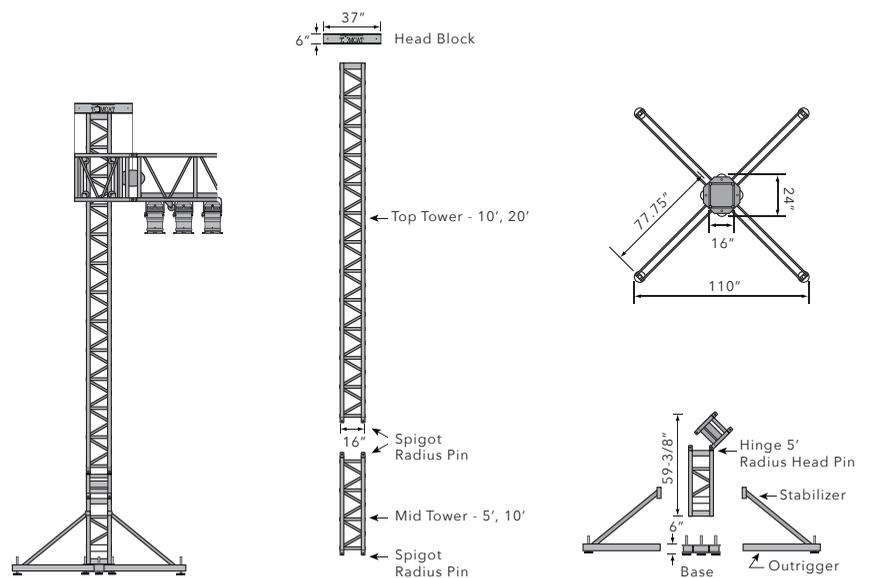
# Ground support systems

## 16" Tower

› Connections are steel spigots & 3/4" clevis pins



16" Tower Configuration



\* Standard for GS 5/16" chain

**16" ground system components**  
**Connections are steel spigots & 3/4" clevis pins**

Product Description	Item Code	Weight lbs (kgs)
10' 16" x 16" TOWER TOP SECTION	TC 16G1-120B	116 (53)
20' 16" x 16" TOWER TOP SECTION	TC 16G1-240B	191 (87)
5' 16" x 16" TOWER	TC 16G1-060S	63 (29)
10' 16" x 16" TOWER	TC 16G1-120S	101 (46)
20' 16" x 16" TOWER	TC 16G1-240S	176 (80)
5' HINGE BLOCK FOR 16" x 16" TOWER (for use with HDPRT Trusses)	TC 16G1-H60B	109 (50)
BASE FOR 16" x 16" TOWER	TC 16G1-BB-2	69 (31)
OUTRIGGER/STABILIZER SET PER TOWER	TC 16G1-OS60-2	151 (68)
HEAD BLOCK FOR 16" x 16" TOWER* (for use with HDPRT Trusses)	TC 16G1-HBB	50 (23)
3/4" CLEVIS PIN	TC CP-75	- (-)
RADIUS HEAD 3/4" CLEVIS PIN	TC CP-75R	- (-)
5/8" GRADE 8 BOLT, NUT & WASHERS	TC BOLT SET	- (-)

**16" Tower**

Profile size (square)	16" (40.6 cm)
Indoor Use	Yes
Outdoor Use	Yes
Bolt Connection	No
Spigot Connection	Yes
Maximum Height	45' (13.72 m)
Max. Axial Load*	4000 lbs (1815 kg)
Max. Flexural Load*	19.98 Kft.

Note: Designed to raise TOMCAT truss using Columbus McKinnon Theatrical Chain Hoists (Headblock sheaves for 5/16" chain is standard, but 1/4" chain sheaves are available). Standard sleeve blocks are available for midsize to large types of TOMCAT truss. All hinge and spigot connections employ 3/4" radius head pins.

\*Towers are designed to support both axial and flexural (bending) loads simultaneously. Axial load capacity is dependent upon the amount of flexural loading placed upon the structure through a number of sources including, but not limited to, the eccentric axial loads, moment transfer from horizontal truss loading (via sleeve and corner blocks), wind forces and seismic forces. Due to the interdependent nature of the two forces, the loads stated above should be used for reference only. As either of the variables change along their respective planes, allowable loads may increase or decrease as a result. Axial loads are represented in the table above in both pounds and kilograms. Flexural loads are represented in kip feet. Dynamic loads must be converted into a static load equivalent for comparison with the rated capacity. All towers for outdoor use must be checked for flexural loads introduced by wind loading on the towers and related structures. Contact your TOMCAT representative for further assistance and additional information on the specific use of towers for your particular situation.





# Outdoor roof systems

---

<b>46 x 43 Roof</b>	<b>106</b>
<b>46 x 43 Roof with wings</b>	<b>108</b>
<b>PRT Sunshade roof system 5x5</b>	<b>110</b>
<b>PRT Sunshade flat with wings</b>	<b>112</b>
<b>PRT Sunshade roof system peaked</b>	<b>114</b>
<b>PRT Sunshade peaked with wings</b>	<b>116</b>
<b>45 x 45 Ladder roof</b>	<b>118</b>
<b>45 x 45 Ladder roof with PA wings</b>	<b>120</b>
<b>65 x 45 Ladder roof</b>	<b>122</b>
<b>65 x 45 Ladder roof with PA wings</b>	<b>124</b>
<b>64 x 40 BFT</b>	<b>126</b>
<b>64 x 40 BFT with PA wings</b>	<b>128</b>
<b>64 x 55 BFT with PA wings</b>	<b>130</b>
<b>KT - 7 100 x 80 Roof system with PA wings</b>	<b>132</b>

**Strength  
Under  
Pressure**

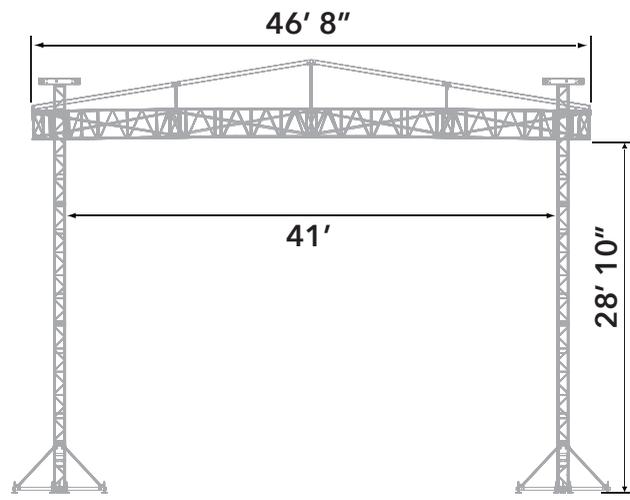
# Outdoor roof systems

---

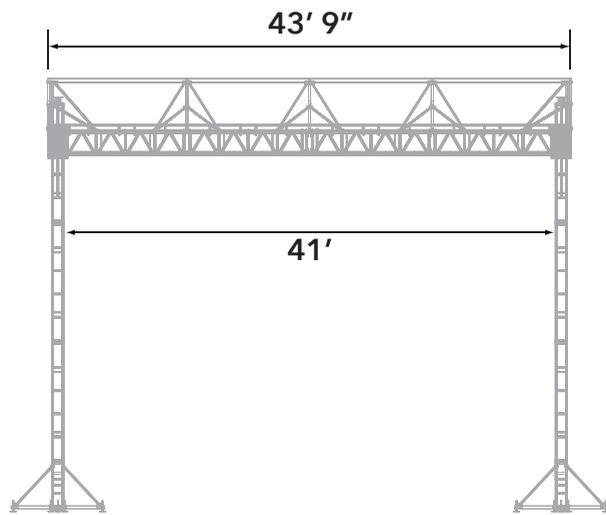
## 46 x 43 Roof

This roof design has long been one of the most popular ever offered by TOMCAT, due to its loading capabilities and ease of transportation. Because of its unique construction, including sleeves for the 12" tower that are built into the perimeter grid, the system boasts a total maximum uniform distributed load of 16,000 pounds (7,258 kg) and provides a safe operating speed of up to 67 mph. The name of this roof is derived from the outside dimensions of the grid: 43' (13.11 m) deep by 46' (14.02 m) wide. In addition to the ability to erect the system in just a few hours, all components of the entire structure easily fit into a mid-sized truck. The system is shown here without the guy wires that are required for outdoor installation.

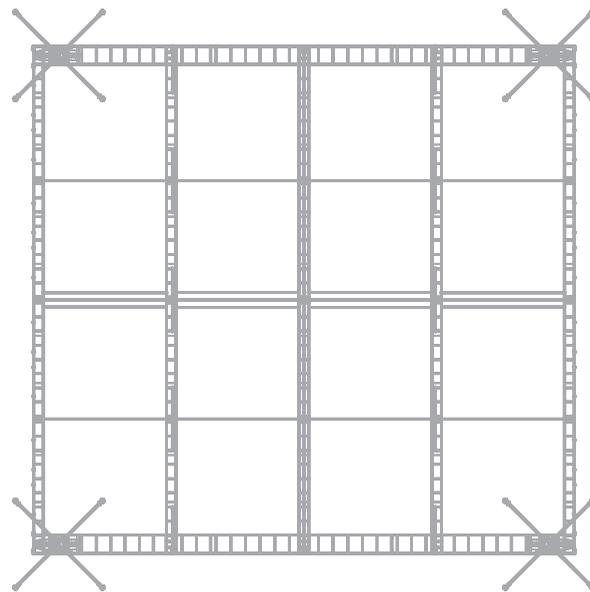




Elevation



End View



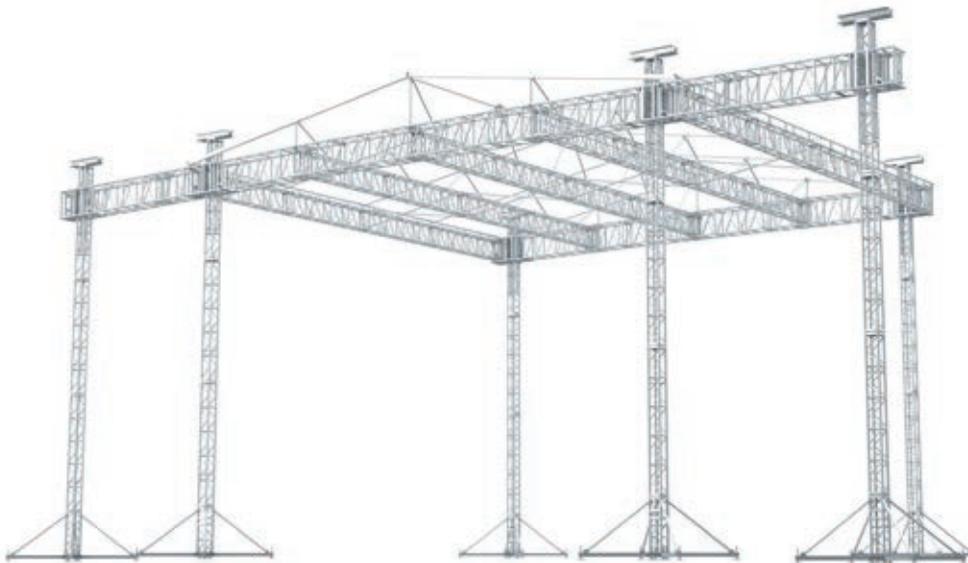
Plan

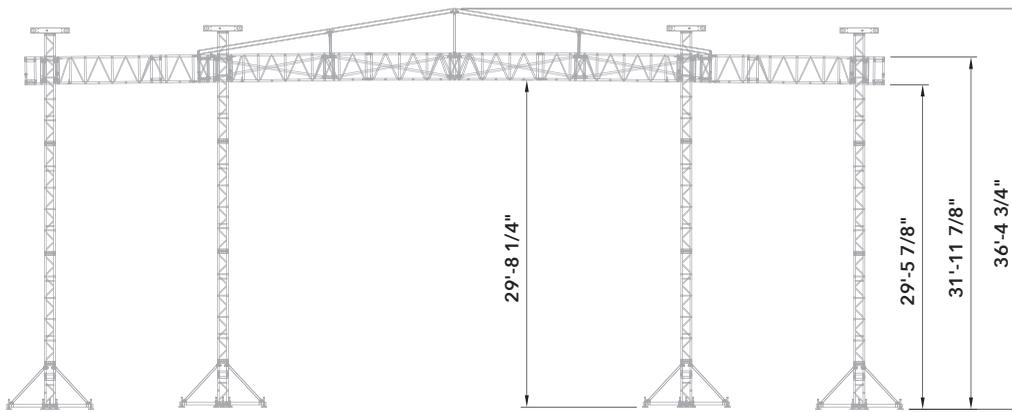
# Outdoor roof systems

---

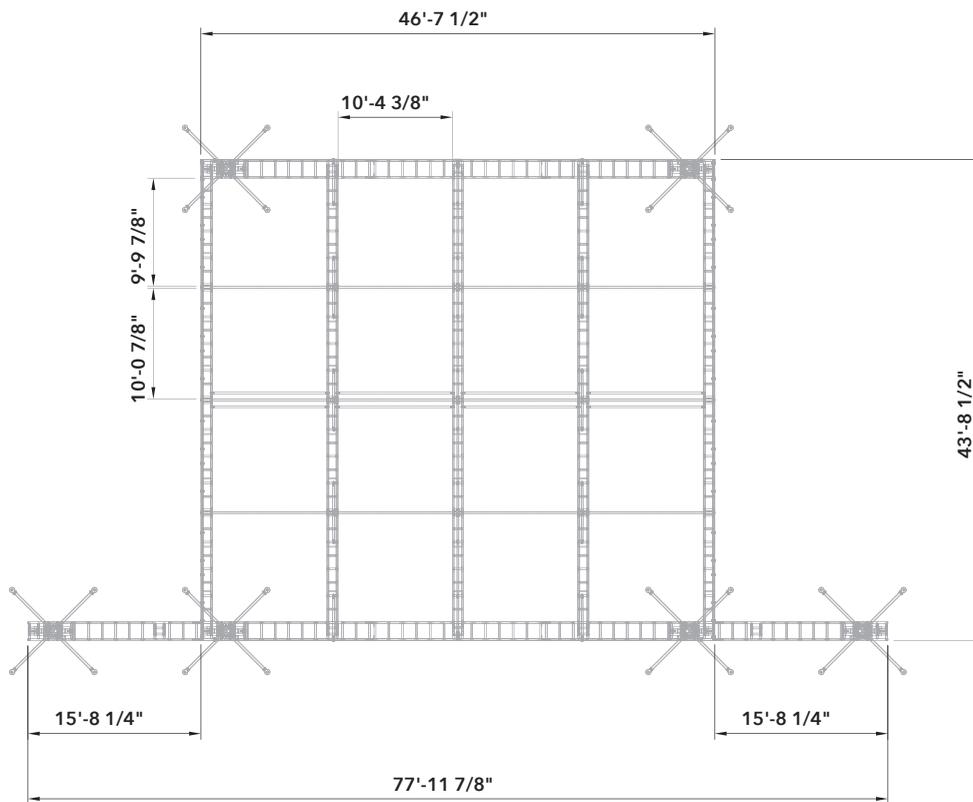
## 46 x 43 with wings

This roof design, with single tower 20' PA wings, has long been one of the most popular ever offered by TOMCAT, due to its loading capabilities and ease of transportation. Because of its unique construction, including sleeves for the 12" tower that are built into the perimeter grid, the system boasts a total maximum uniform distributed load (UDL) of 16,000 pounds (7,258 kg) and 6,000 pounds (2,722 kg) max. load per wing. It also provides a safe operating wind speed of up to 67 mph. The name of this roof is derived from the outside dimensions of the grid: 43' (13.11 m) deep by 46' (14.02 m) wide. In addition to the ability to erect the system in just a few hours, the entire system easily fits into a mid-sized truck. The system is shown here without the guy wires that are required for outdoor installations.





Elevation



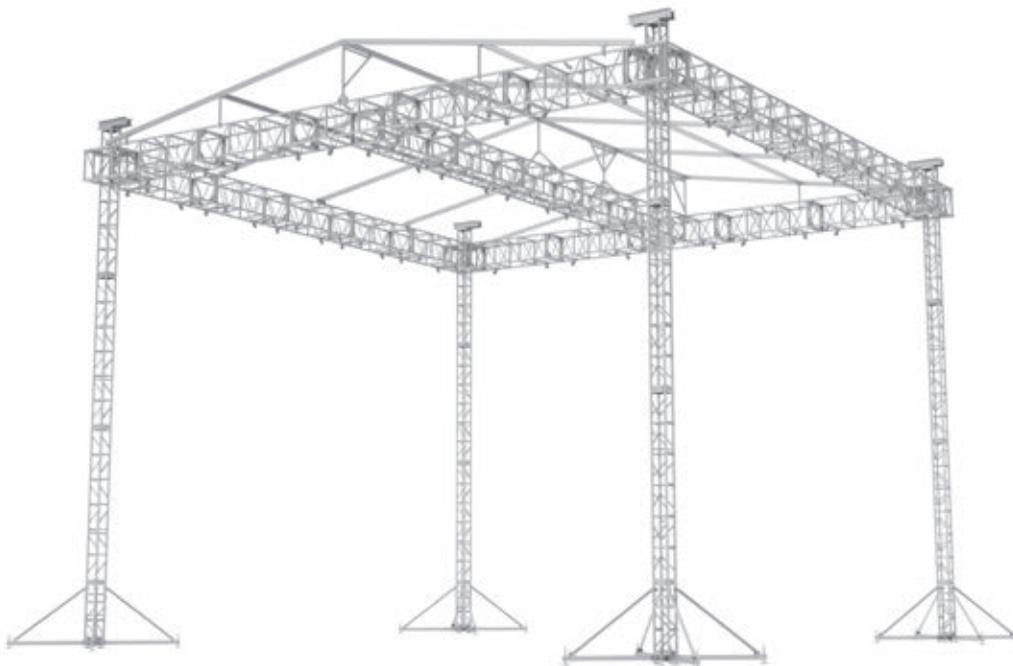
Plan

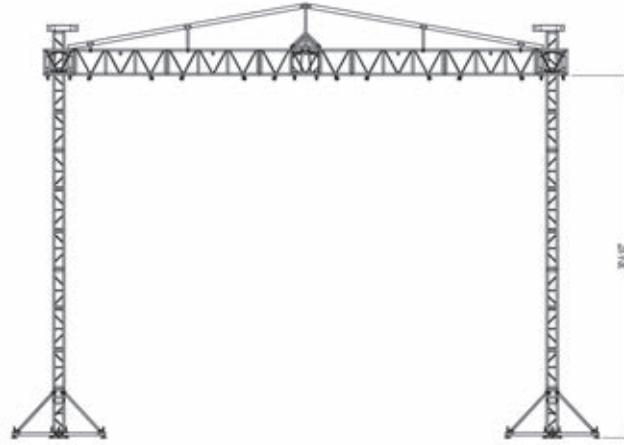
# Outdoor roof systems

---

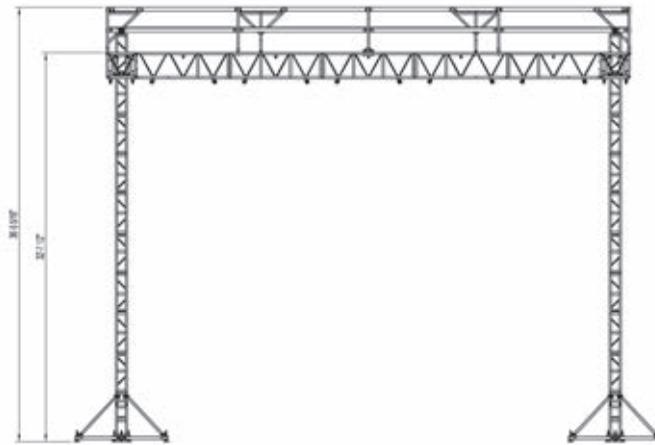
## PRT Sunshade roof system 5 x 5

Long demanded by the touring industry, the Pre-Rig Truss (PRT) Sunshade has quickly become a favorite system for small to medium-sized productions. Designed for rapid disassembly and mobility, the PRT Sunshade may be utilized in a variety of venues. More importantly, the system is built from industry standard components, like 93" Double Hung Pre-Rig Truss and Mark I Towers, which add to its versatility. Two options are available. The "Peaked" Sunshade is patterned after our BFT, where the cross stage runs of truss are sloped approximately 5% to form a peak in the center. A canopy is attached to the components of the main body. The "Flat" Sunshade (shown below) incorporates a canopy rail system above a flat Pre-Rig Truss grid to form the roof's pitch. Both options are available with PA Wings formed with a 123" section of Double-Hung Pre-Rig Truss used to connect each downstage tower to an additional tower. It provides a safe operating windspeed of up to 67 mph and the live loads (equipment loads) that can be applied to the system include a 13,500 pound (6,124 kg) uniformly distributed load (UDL) on the main grid and 5,000 pound (2,268 kg) speaker load on each PA Wing - making it ideal for many applications.

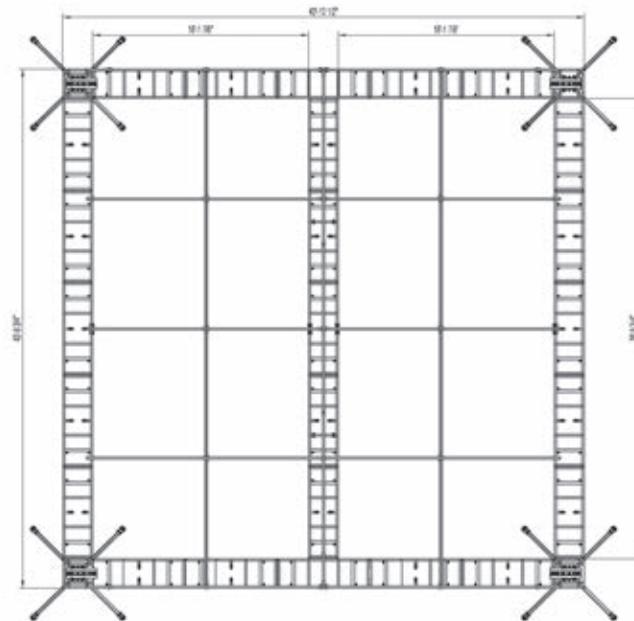




Elevation



End View



Plan

# Outdoor roof systems

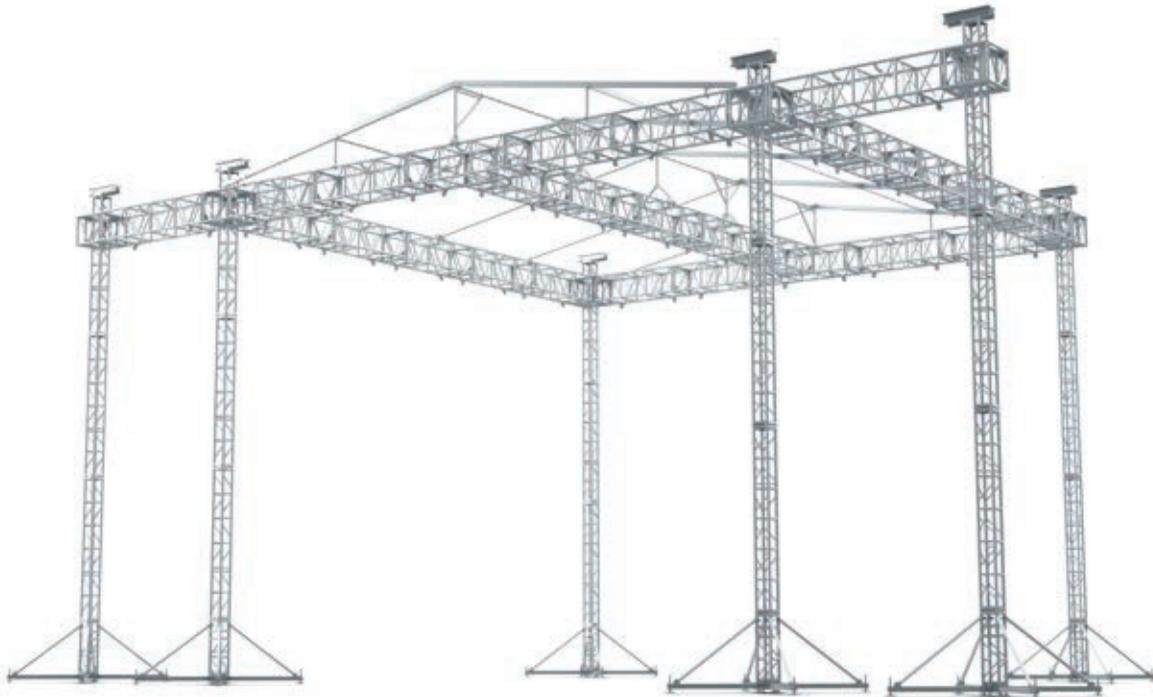
---

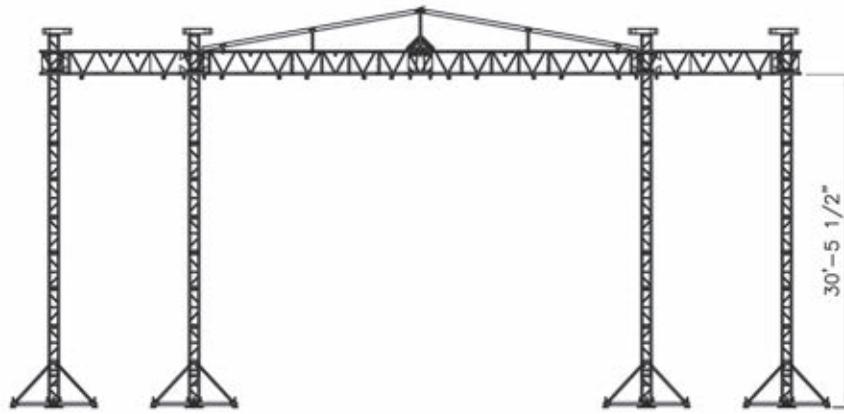
## PRT Sunshade flat with wings

Long demanded by the touring industry, the Pre-Rig Truss (PRT) Sunshade has quickly become a favorite system for small to medium-sized productions. Designed for rapid disassembly and mobility, the PRT Sunshade may be utilized in a variety of venues. More importantly, the system is built from industry standard components, like 93" Double Hung Pre-Rig Truss and Mark I Towers, which add to its versatility.

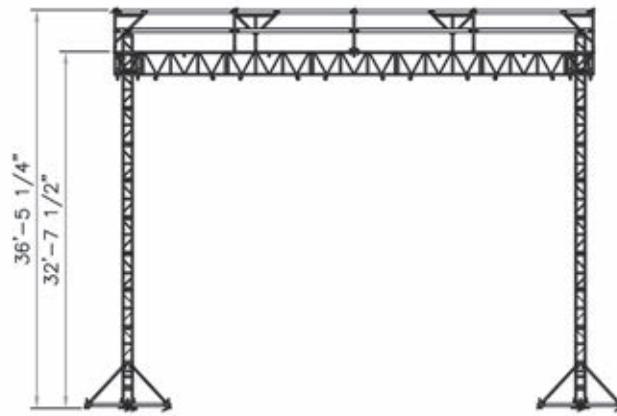
Two options are available. The "Peaked" Sunshade is patterned after our BFT, where the cross stage runs of truss are sloped approximately 5% to form a peak in the center. A canopy is attached to the components of the main body. The "Flat" Sunshade (shown below) incorporates a canopy rail system above a flat Pre-Rig Truss grid to form the roof's pitch. Both options are available with PA Wings formed with a 123" section of Double-Hung Pre-Rig Truss used to connect each downstage tower to an additional tower.

It provides a safe operating wind speed of up to 67 mph and the live loads (equipment loads) that can be applied to the system include a 19,500 pound (8,845 kg) uniformly distributed load (UDL) on the main grid and a 5,000 pound (2,268 kg) speaker load on each PA Wing - making it ideal for many applications.

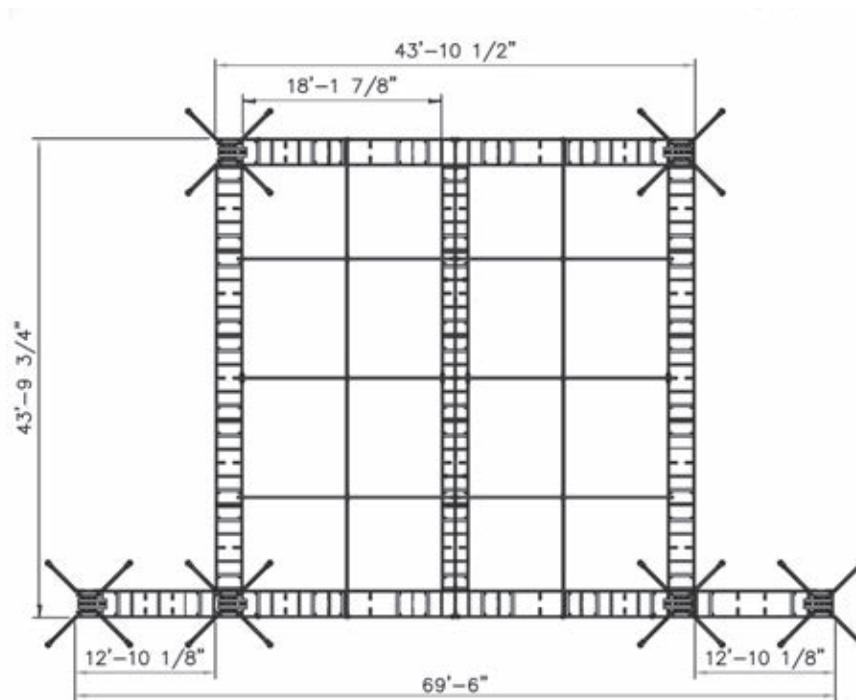




Elevation



End View



Plan

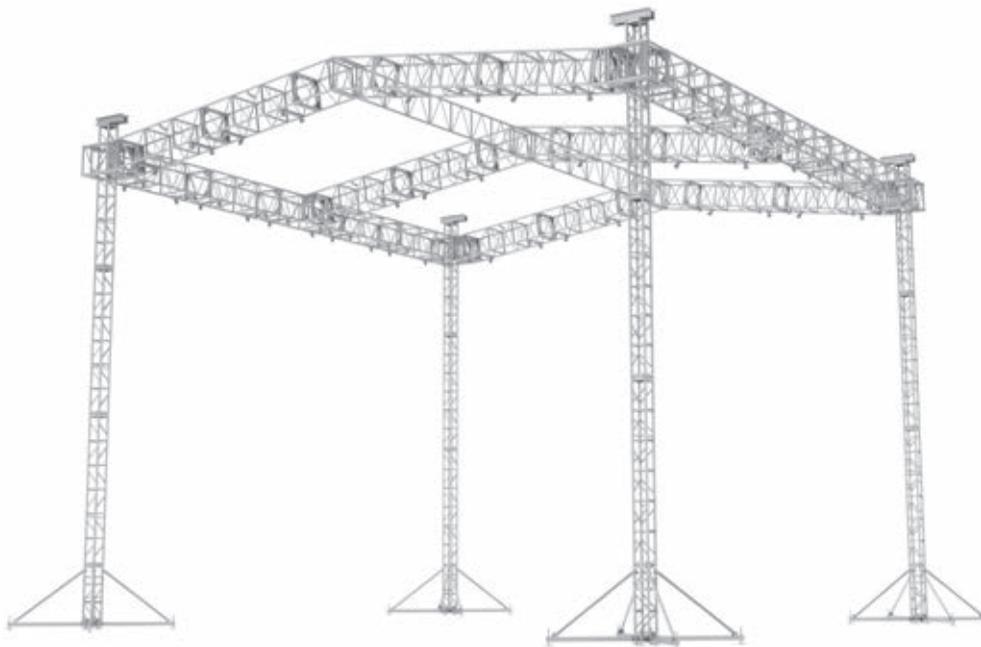
# Outdoor roof systems

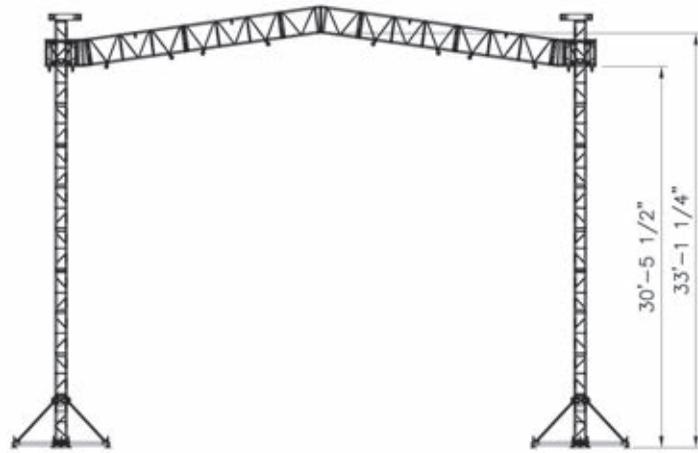
## PRT Sunshade roof system peaked

Long demanded by the touring industry, the Pre-Rig Truss (PRT) Sunshade has quickly become a favorite system for small to medium-sized productions. Designed for rapid disassembly and mobility, the PRT Sunshade may be utilized in a variety of venues. More importantly, the system is built from industry standard components, like 93" Double Hung Pre-Rig Truss and Mark I Towers, which add to its versatility.

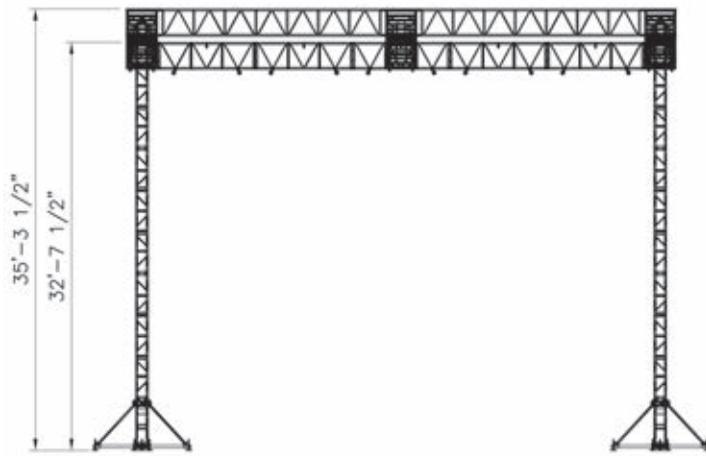
Two options are available. The "Peaked" Sunshade is patterned after our BFT, where the cross stage runs of truss are sloped approximately 5% to form a peak in the center. A canopy is attached to the components of the main body. The "Flat" Sunshade (shown below) incorporates a canopy rail system above a flat Pre-Rig Truss grid to form the roof's pitch. Both options are available with PA Wings formed with a 123" section of Double-Hung Pre-Rig Truss used to connect each downstage tower to an additional tower.

It provides a safe operating wind speed of up to 40 mph and the live loads (equipment loads) that can be applied to the system include a 5,000 pound (2,268 kg) uniformly distributed load (UDL) on the main grid and a 5,000 pound (2,268 kg) speaker load on each PA Wing - making it ideal for many applications.

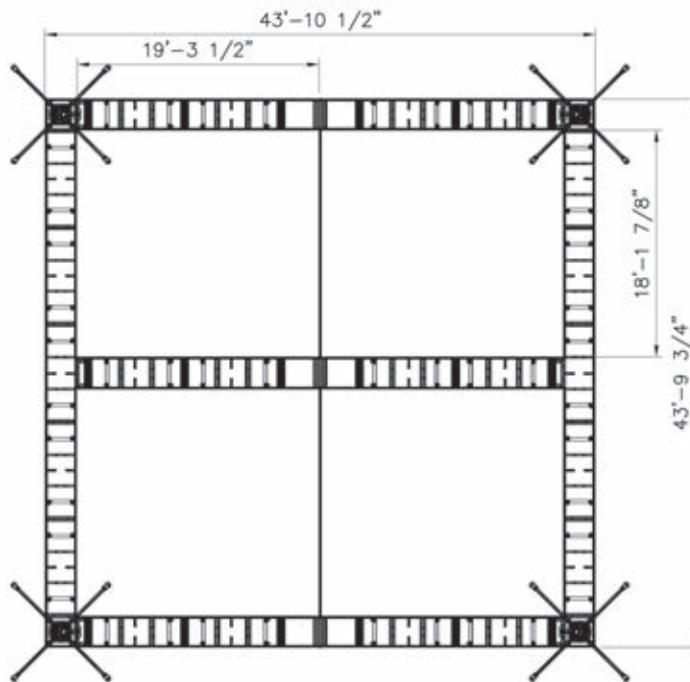




Elevation



End View



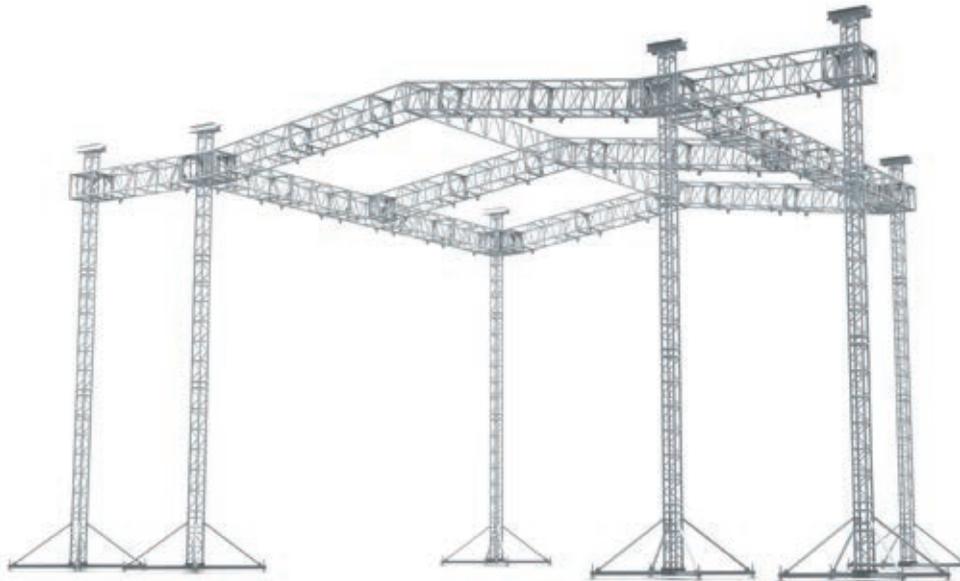
Plan

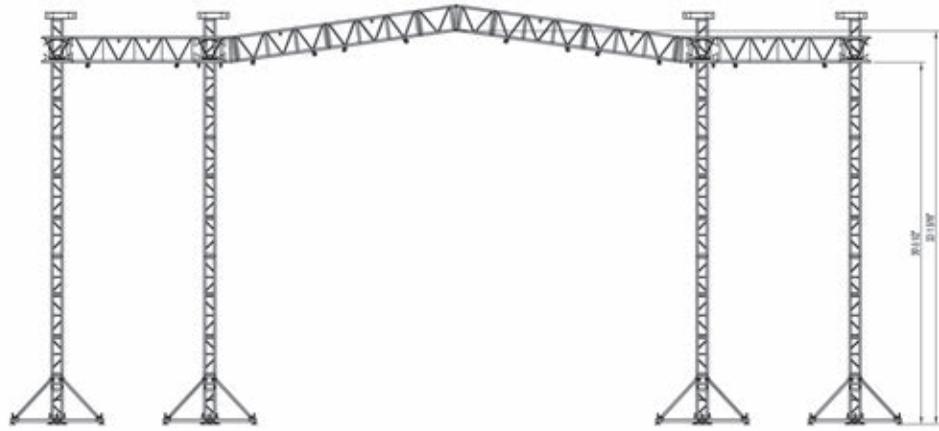
# Outdoor roof systems

## PRT Sunshade peaked with wings

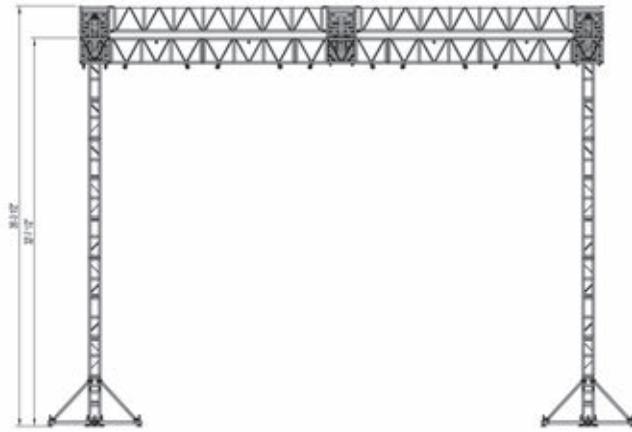
Long demanded by the touring industry, the Pre-Rig Truss (PRT) Sunshade has quickly become a favorite system for small to medium-sized productions. Designed for rapid disassembly and mobility, the PRT Sunshade may be utilized in a variety of venues. More importantly, the system is built from industry standard components, like 93” Double Hung Pre-Rig Truss and Mark I Towers, which add to its versatility.

Two options are available. The “Peaked” Sunshade is patterned after our BFT, where the cross stage runs of truss are sloped approximately 5% to form a peak in the center. A canopy is attached to the components of the main body. The “Flat” Sunshade (shown below) incorporates a canopy rail system above a flat Pre-Rig Truss grid to form the roof’s pitch. Both options are available with PA Wings formed with a 123” section of Double-Hung Pre-Rig Truss used to connect each downstage tower to an additional tower. It provides a safe operating wind speed of up to 40 mph and the live loads (equipment loads) that can be applied to the system include a 16,000 pound (7,258 kg) uniformly distributed load (UDL) on the main grid and a 5,000 pound (2,268 kg) speaker load on each PA Wing - making it ideal for many applications.

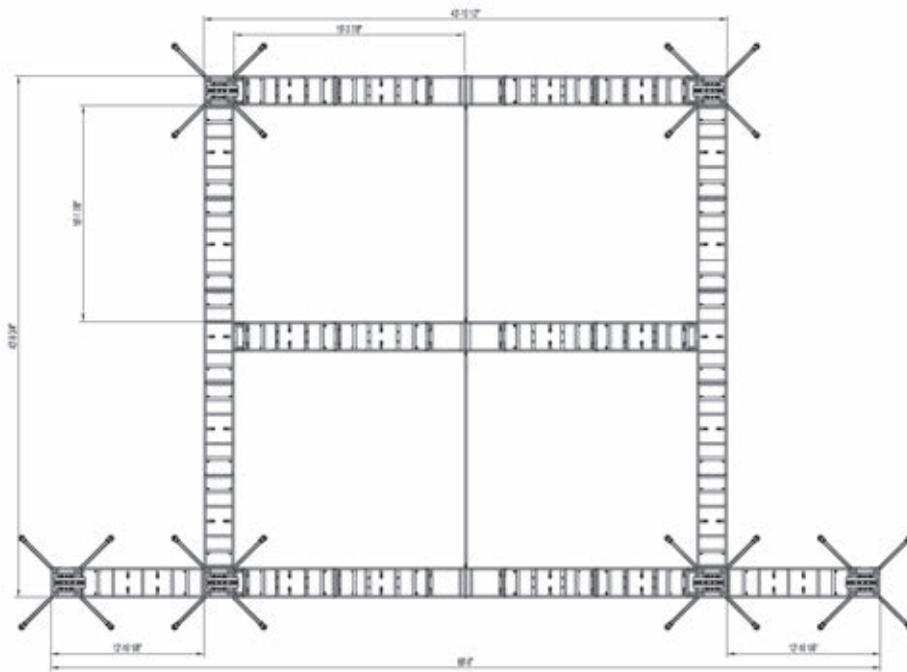




Elevation



End View



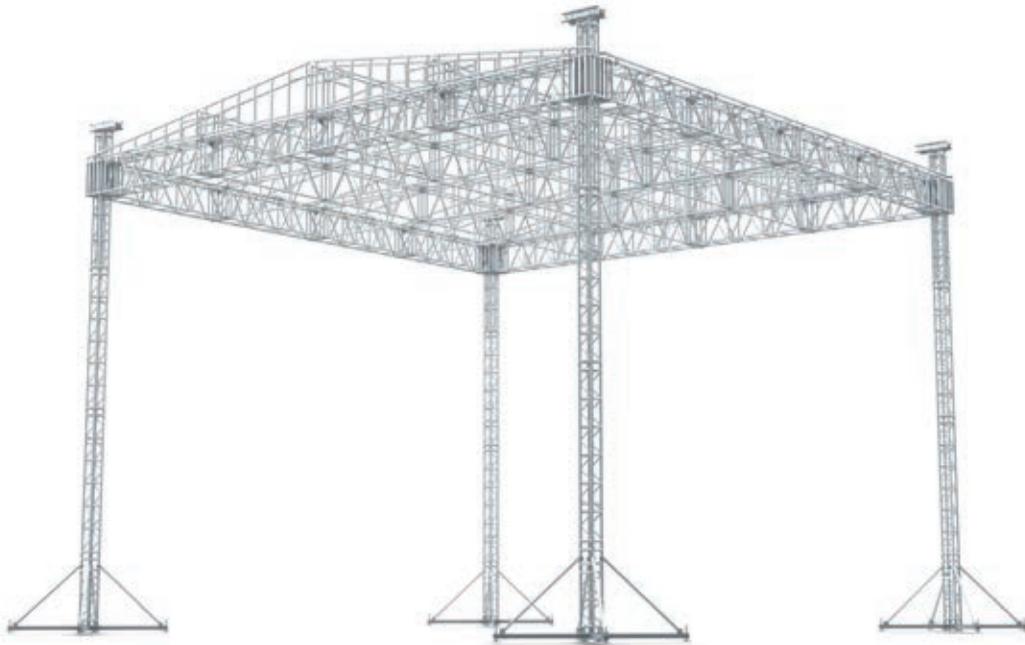
Plan

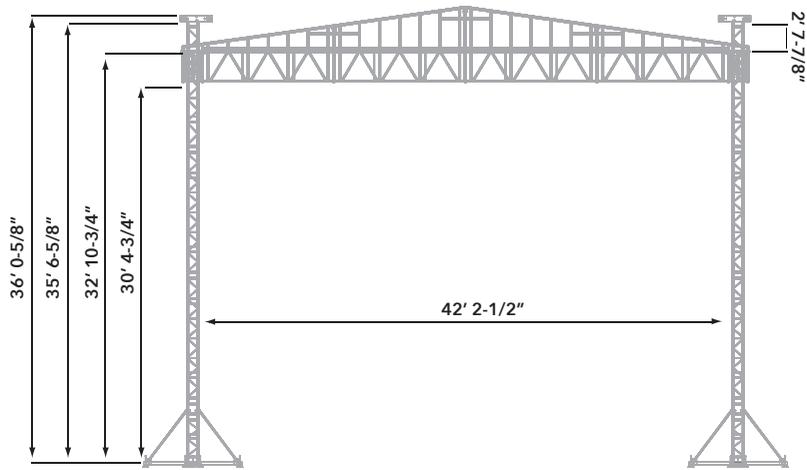
# Outdoor roof systems

---

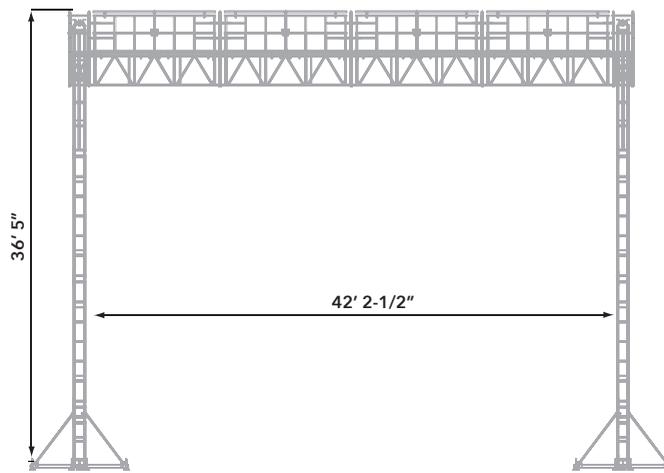
## 45 x 45 Ladder roof

The 45 x 45 ladder roof is one of the newer additions to TOMCAT roof systems and is designed to meet customer demands for economy of shipping space without sacrificing loading capabilities. Constructed with an optional perimeter of folding 20.5" x 30" truss, it uses a system of single truss ladders to form the internal grid. The ladders are joined by TOMCAT's own unique intersection spigot connection. The use of the folding box truss, along with the ladder grid, allows for compact shipping and storage. Due to its unique design, a maximum uniformly distributed load of 16,000 pounds (7,257 kg) is still provided.

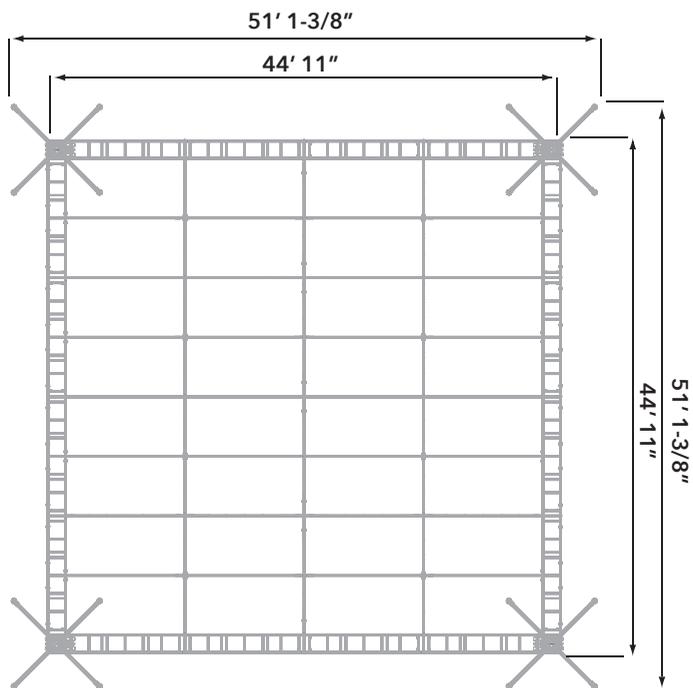




Elevation



End View

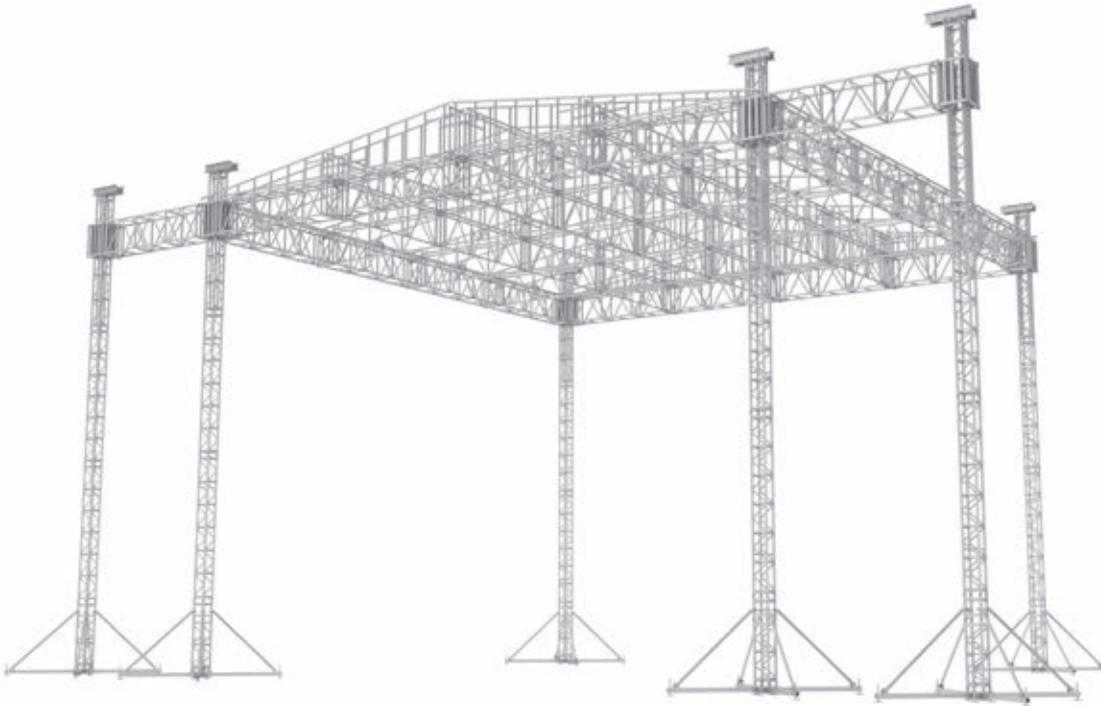


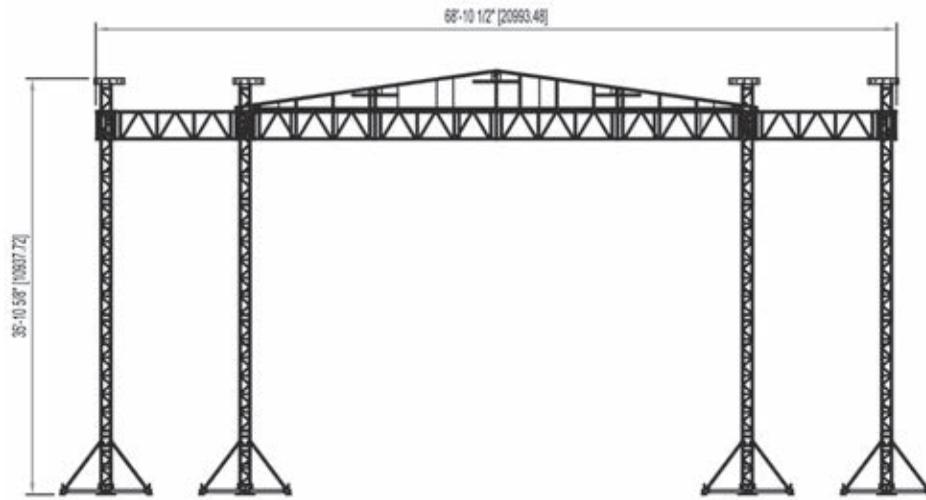
Plan

# Outdoor roof systems

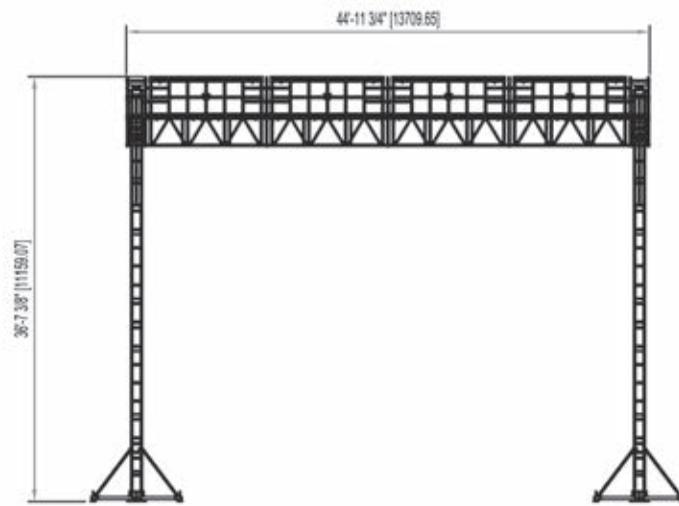
## 45 x 45 Ladder roof with PA wings

The 45 x 45 ladder roof is one of the newer additions to TOMCAT roof systems and is designed to meet customer demands for economy of shipping space without sacrificing loading capabilities. Constructed with an optional perimeter of folding 20.5" x 30" truss, it uses a system of single truss ladders to form the internal grid. The ladders are joined by TOMCAT's own unique intersection spigot connection. The use of the folding box truss, along with the ladder grid, allows for compact shipping and storage. Due to its unique design, a maximum uniformly distributed load of 51,000 pounds (23,133 kg) is still provided. It also provides a safe operating wind speed of up to 67 mph.

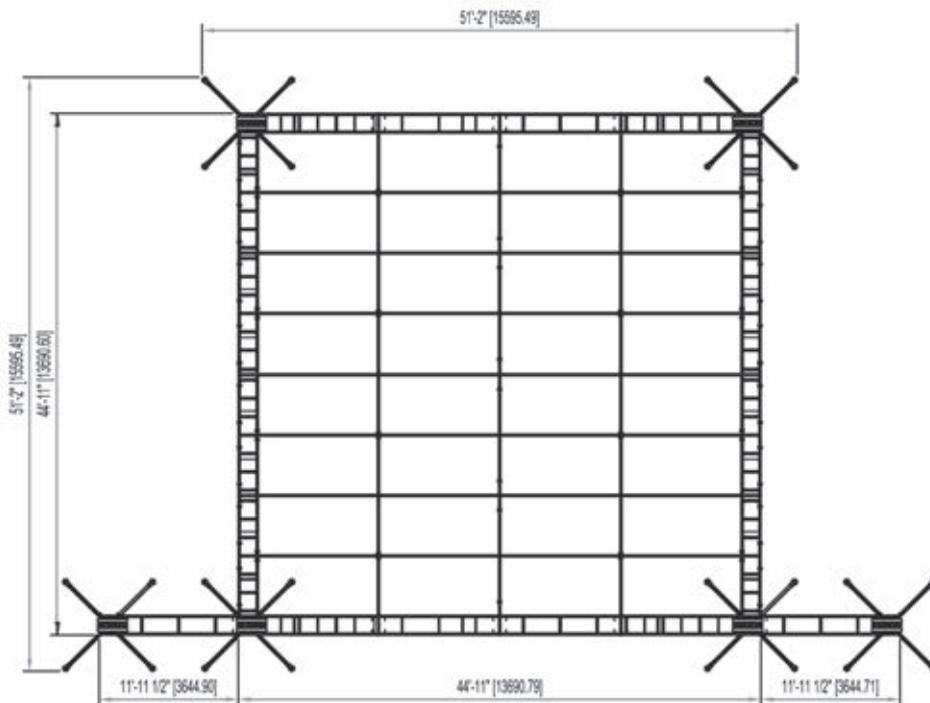




Elevation



End View

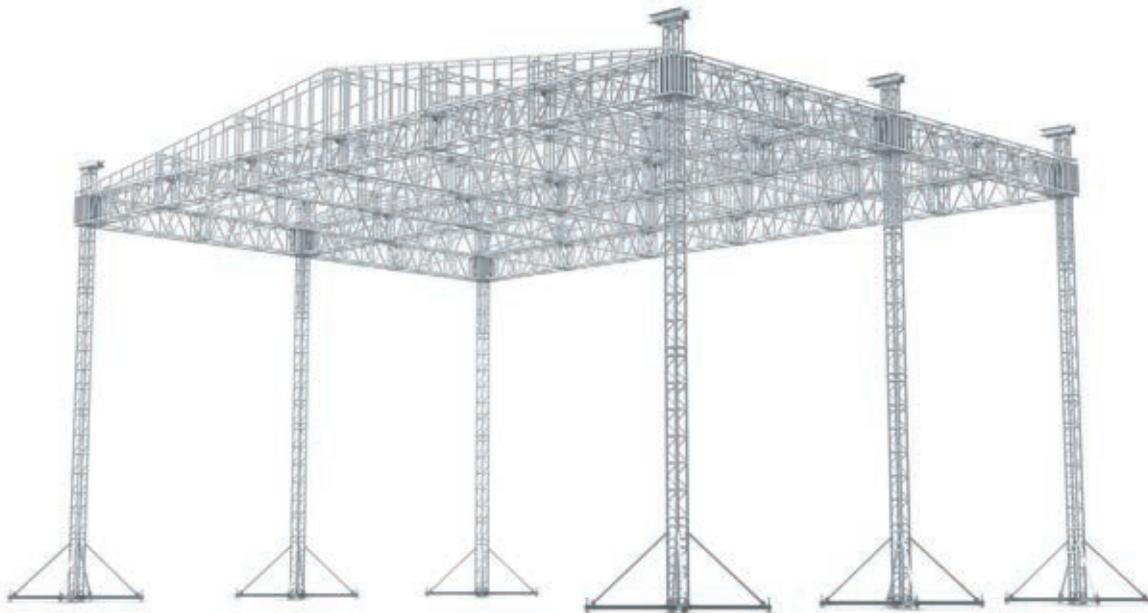


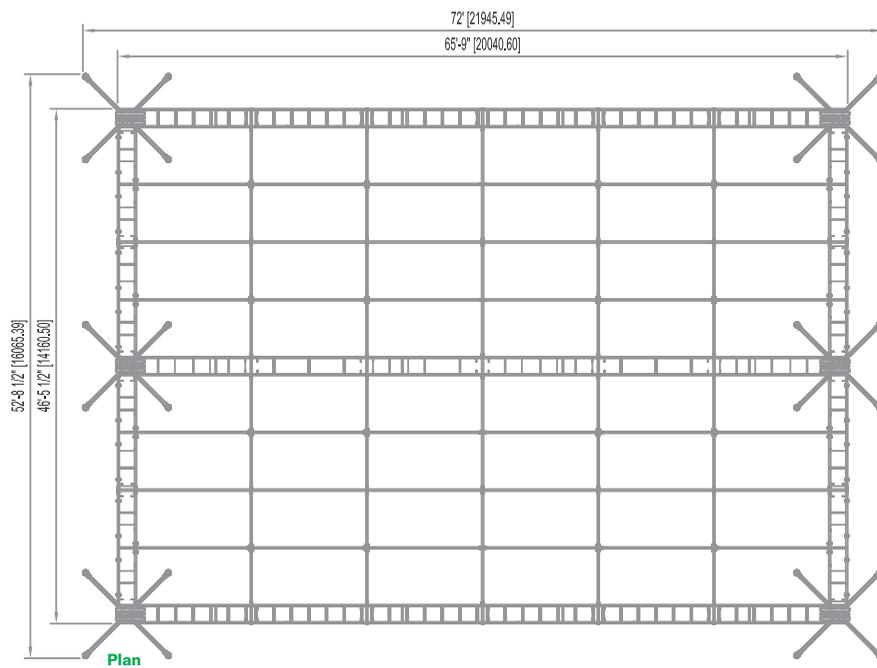
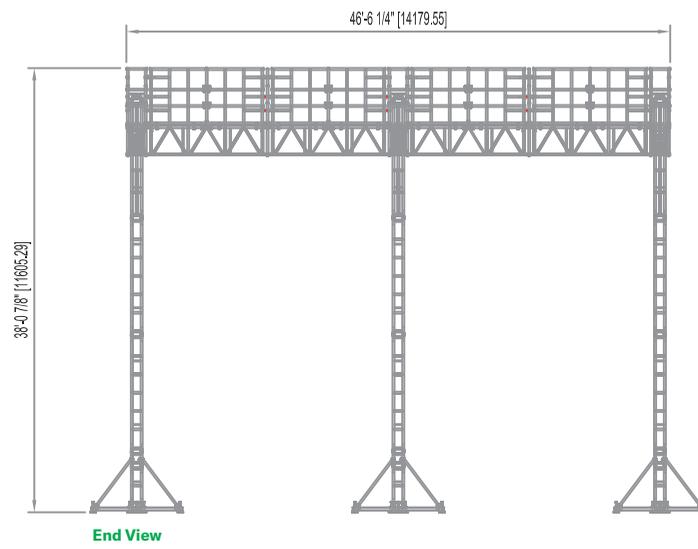
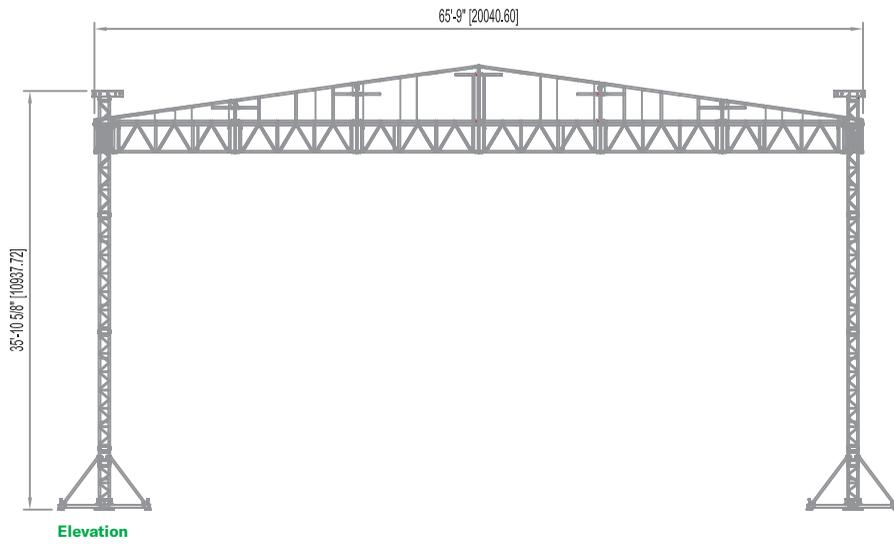
Plan

# Outdoor roof systems

## 65 x 45 Ladder roof

The 65 x 45 ladder roof is the newest member of TOMCAT roof systems and is similar to the 45 x 45 ladder roof. It is designed to meet customer demands for a more economic truck pack without sacrificing its loading capabilities. Constructed with an optional perimeter of folding 20.5" x 30" truss, it uses a system of single truss ladders to form the internal grid. The ladders are joined by TOMCAT's own unique intersection spigot connection. The use of the folding box truss, along with the ladder grid, allows for compact shipping and storage. Due to its unique design, a maximum uniformly distributed load of 20,000 pounds (9,072 kg) is still provided. Available in smaller configurations, the 60' x 40' (18.28 m x 12.19 m) is shown here without the rafters for the canvas or the guy wires, which are required for outdoor use. It provides a safe operating wind speed of up to 67 mph.

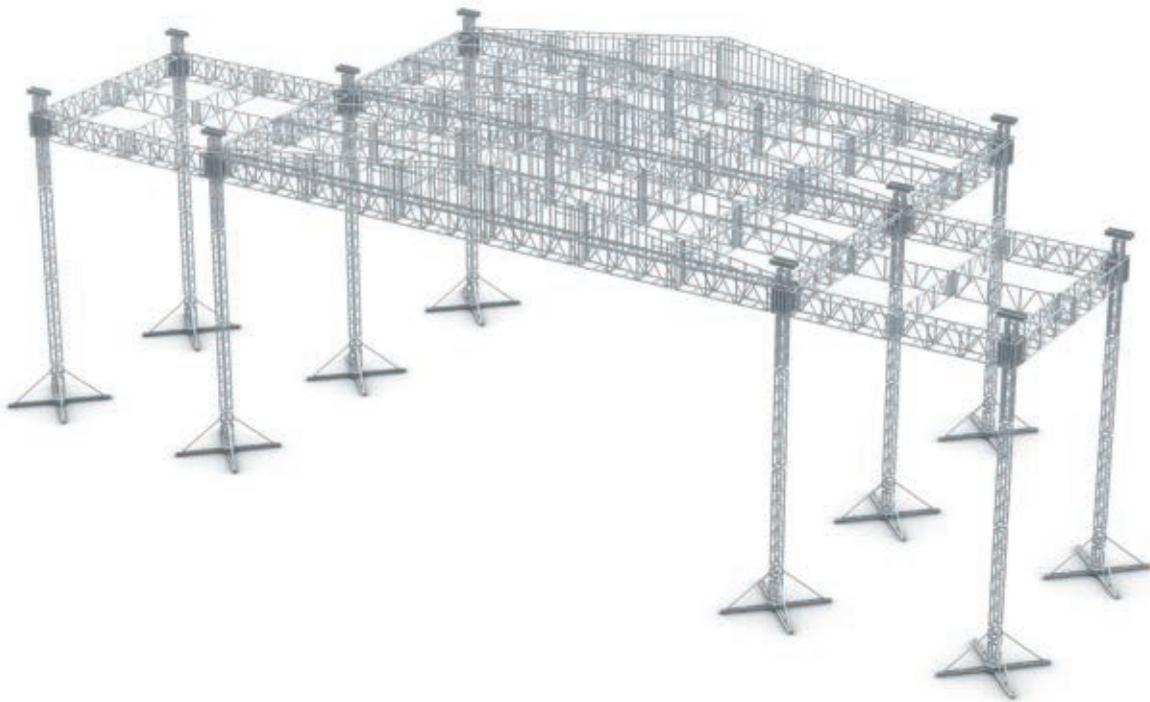


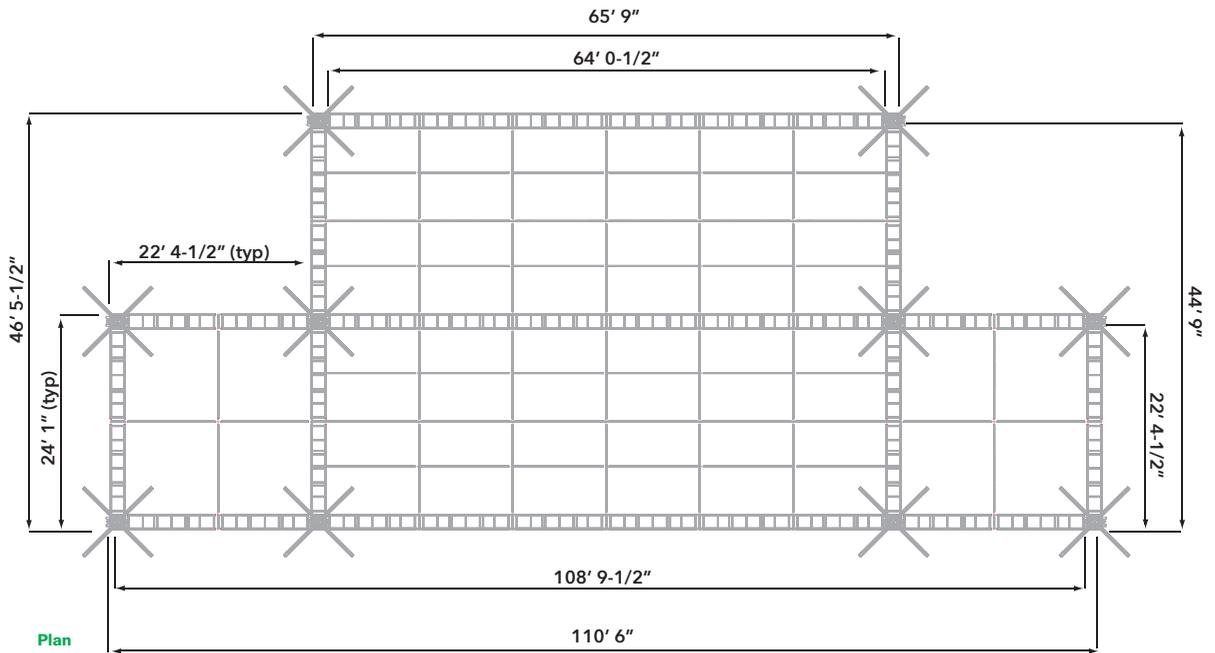
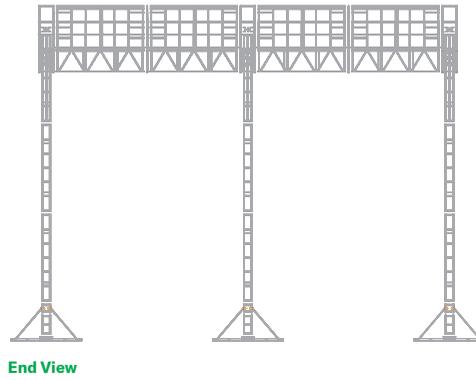
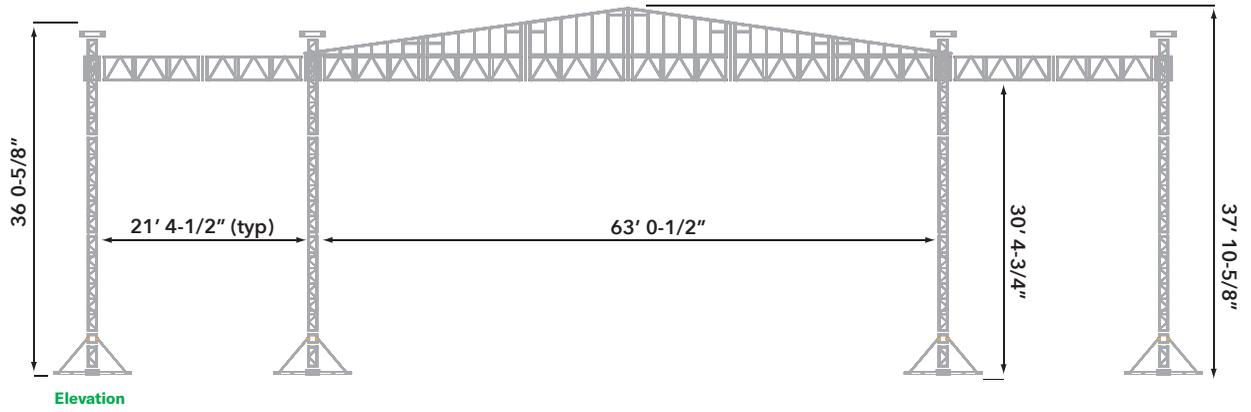


# Outdoor roof systems

## 65 x 45 Ladder roof with PA wings

The 65 x 45 ladder roof, with 24 x 22 PA wings on each side, is the newest member of TOMCAT roof systems and is similar to the 45 x 45 ladder roof. It is designed to meet customer demands for a more economic truck pack without sacrificing its loading capabilities. Constructed with an optional perimeter of folding 20.5" x 30" truss, it uses a system of single truss ladders to form the internal grid. The ladders are joined by TOMCAT's own unique intersection spigot connection. The use of the folding box truss, along with the ladder grid, allows for compact shipping and storage. Due to its unique design, it still provides for a maximum uniformly distributed load of 20,000 pounds (9,072 kg) and 22,000 pounds (9,979 kg) max. load per wing. Available in smaller configurations, the 60' x 40' (18.28 m x 12.19 m) is shown here without the rafters for the canvas or the guy wires, which are required for outdoor use. It provides a safe operating wind speed of up to 67 mph.

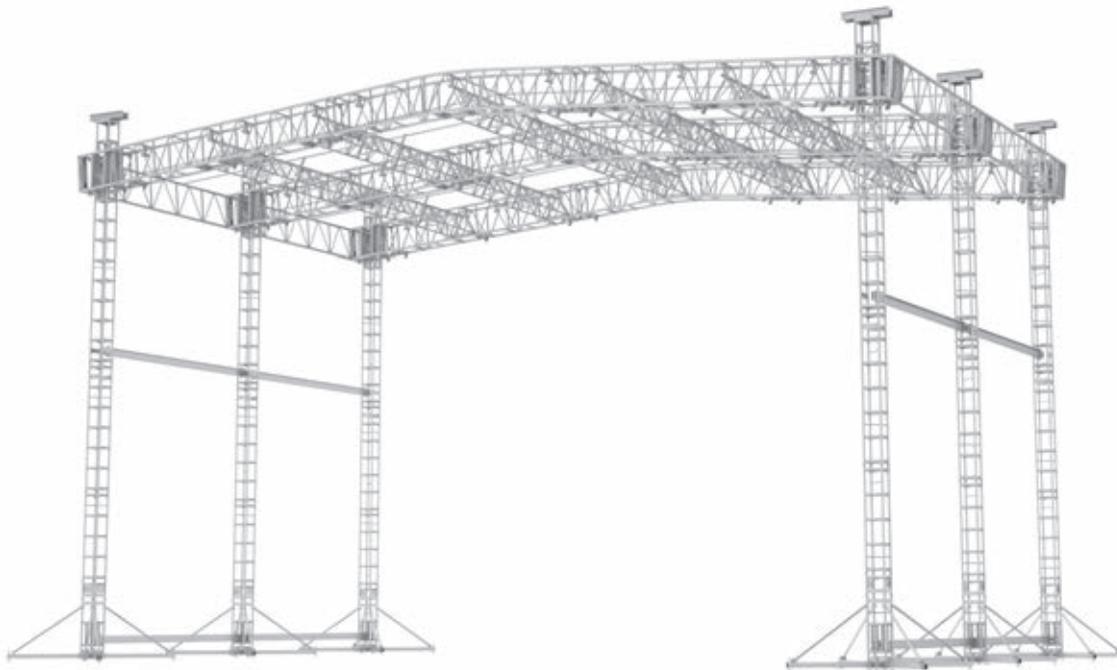


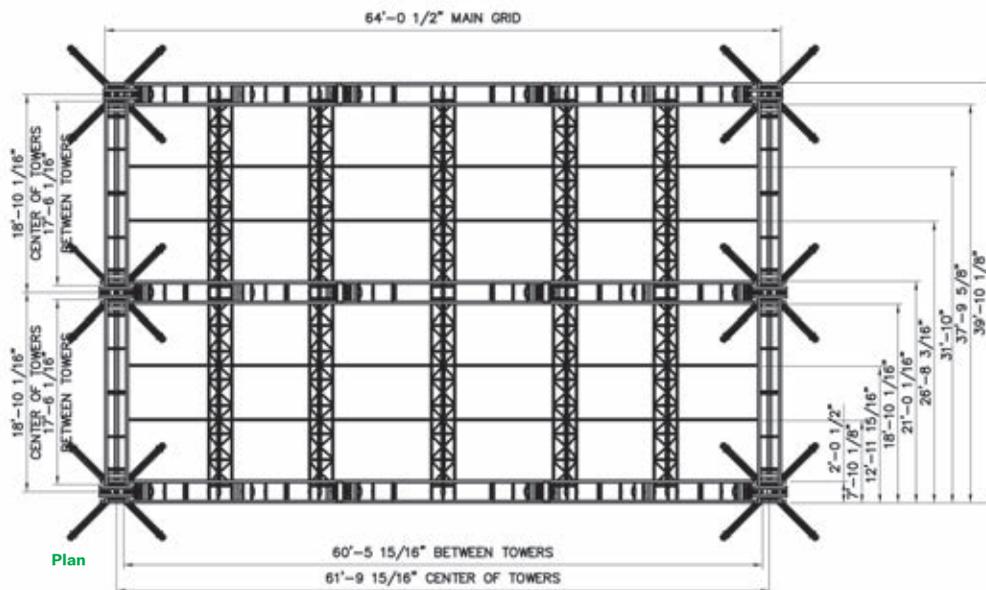
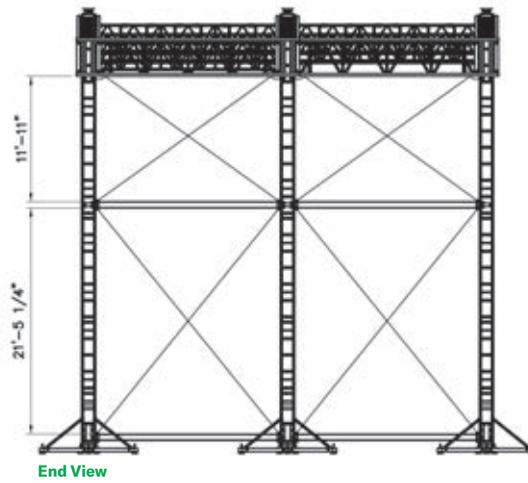
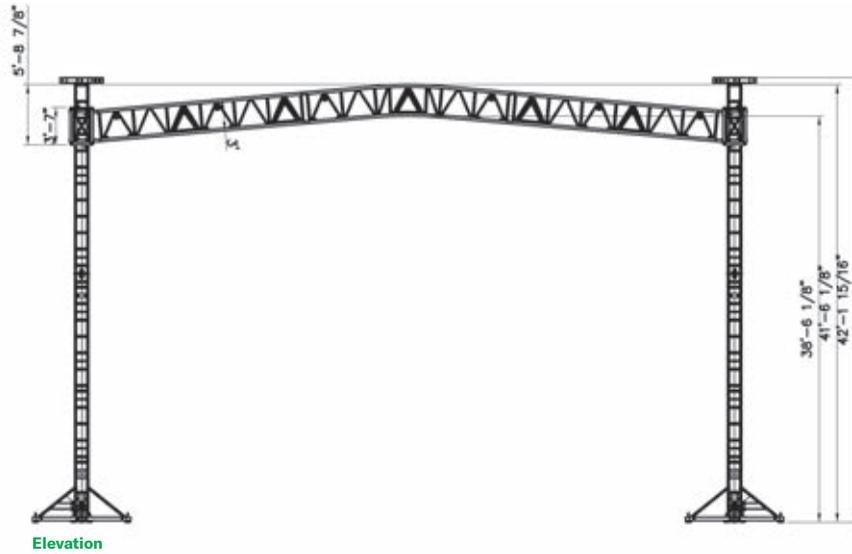


# Outdoor roof systems

## 64 x 40 BFT

Standing for "Big Frame Truss", the BFT roof design is true to its name as it features 26" x 36" crossstage truss, 26" x 43" end truss and folding 26" triangle truss as the up-stage/down-stage part of the grid. The system utilizes 16" x 16" towers. The general dimensions of the BFT are 60' x 40' (18.29 m x 12.19 m), not including the optional PA wings. It provides a safe operating wind speed of up to 67 mph and the live loads (equipment loads) that can be applied to the system include a 60,000 pound (27,216 kg) uniformly distributed load (UDL) on the main grid - making it the right choice for a range of applications.



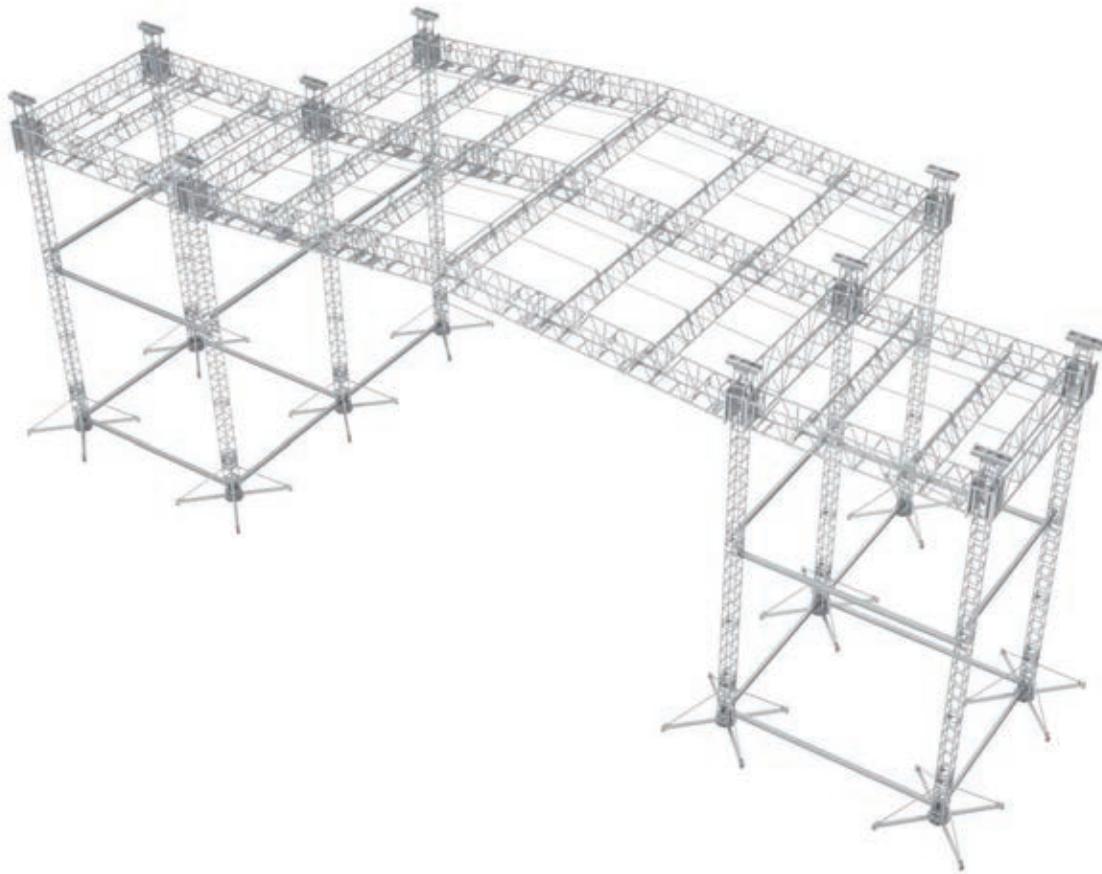


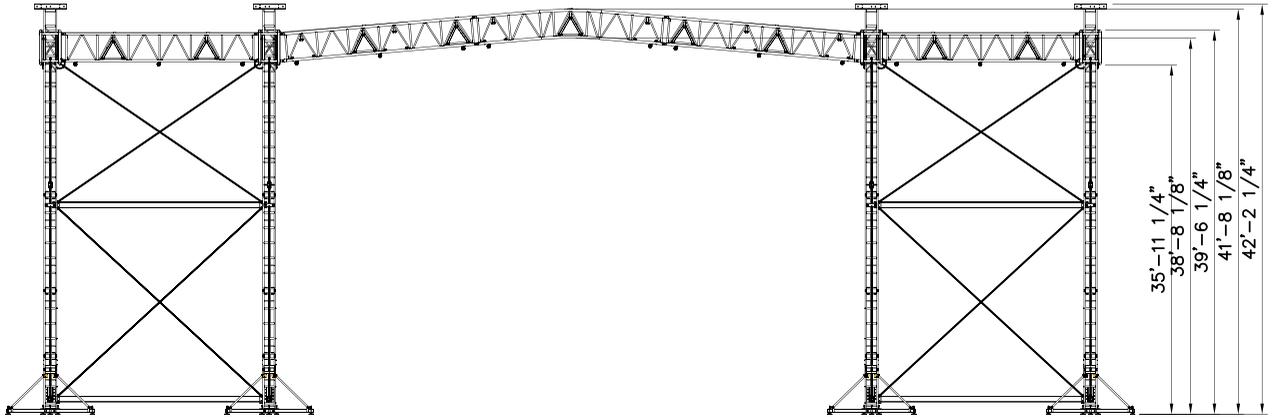
# Outdoor roof systems

---

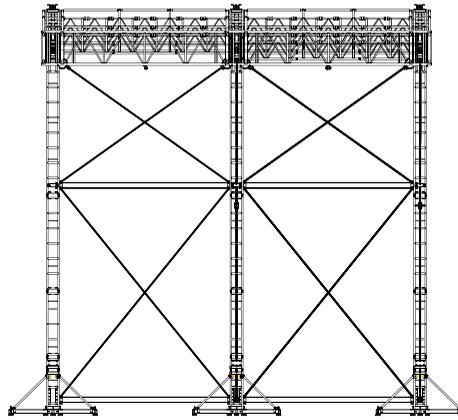
## 64 x 40 BFT with PA wings

Standing for "Big Frame Truss", this BTF roof design with PA wings is true to its name as it features 26" x 36" crossstage truss, 26" x 43" end truss and folding 26" triangle truss as the up-stage/down-stage part of the grid. The system utilizes 16" x 16" towers. The general dimensions of the BFT are 60' x 40' (18.29 m x 12.19 m), plus 20' x 20' PA wings on each side. It provides a safe operating wind speed of up to 67 mph and the live loads (equipment loads) that can be applied to the system include a 60,000 pound (27,216 kg) uniformly distributed load (UDL) on the main grid and a 24,000 pound (10,886 kg) speaker load on each PA Wing - making it the right choice for a range of applications.

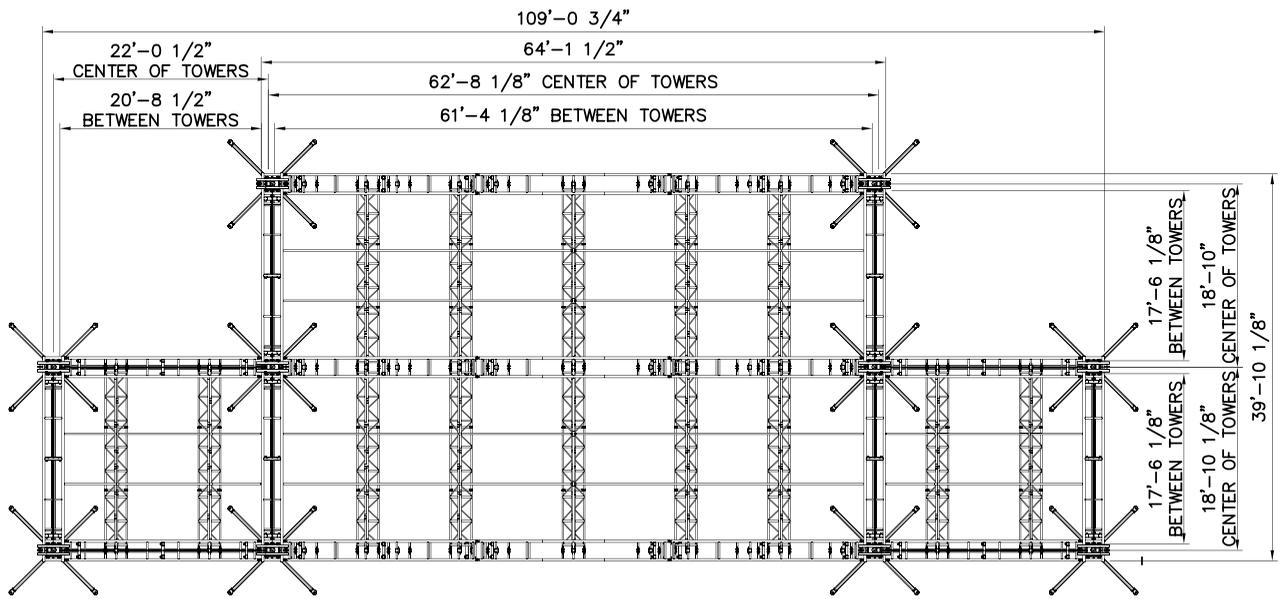




Elevation



End View



Plan

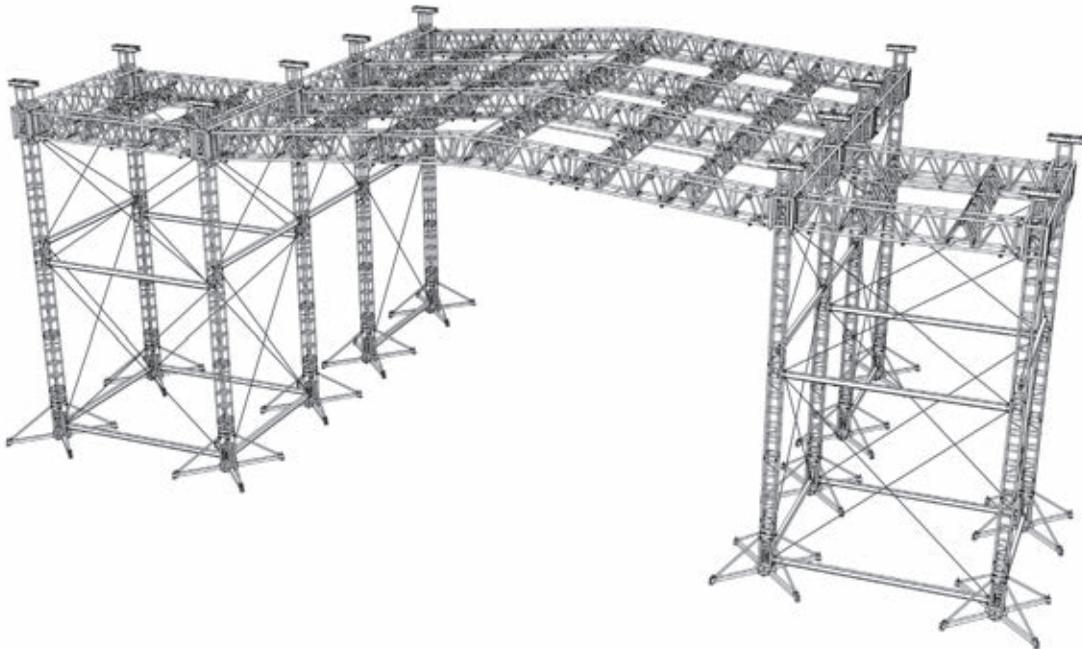
# Outdoor roof systems

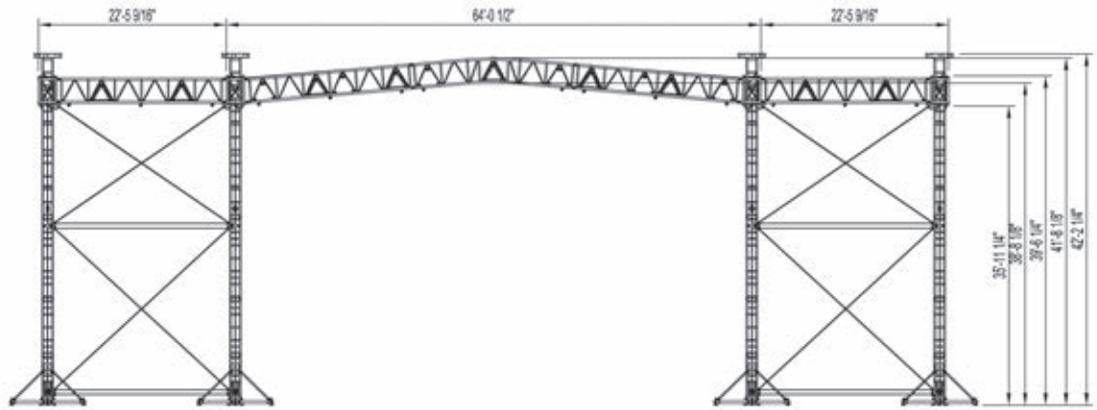
---

## 64 x 55 BFT with PA wings

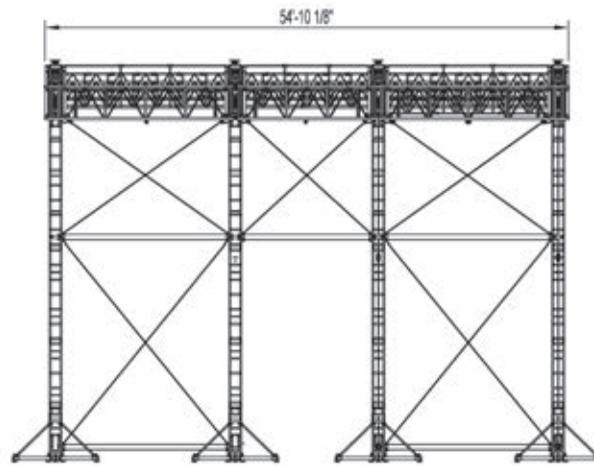
The 64 x 55 BFT Roof System utilizes the same format components as the 64 x 40 BFT Roof and has an additional main cross stage truss span for support of larger productions. The general dimensions of this BFT is approximately 64' wide x 55' deep, not including the optional PA Wings shown here.

The maximum uniformly distributed load capacity for this BFT is approximately 65,000 pounds. It can also be customized to suit each customer's specific needs, which also includes being designed for permanent installations. Guy cables are required for temporary outdoor applications. Permanently installed BFT systems can be designed without the need for external guy cables, due to modifications carried out on the tower components.

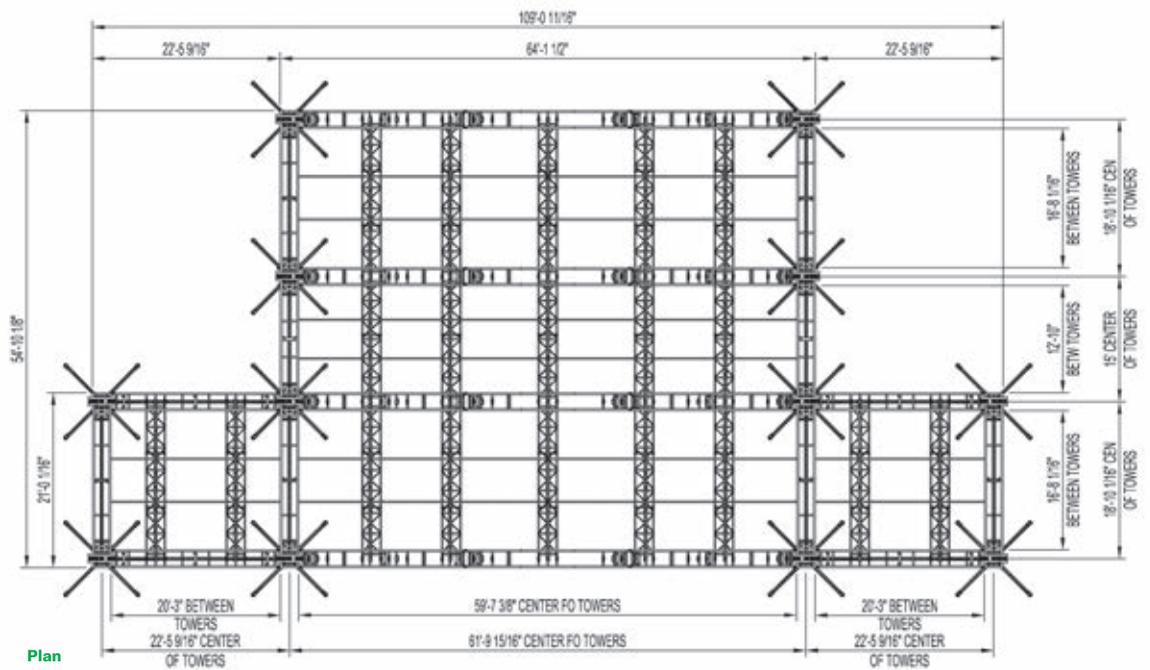




Elevation



End View

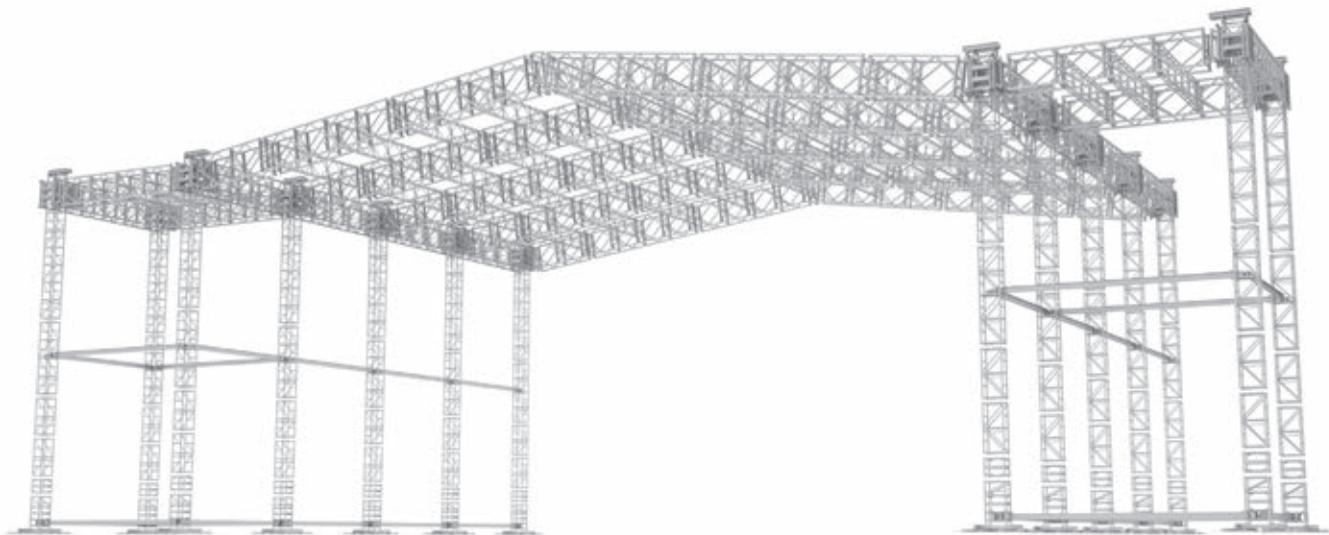


Plan

# Outdoor roof systems

## KT-7 100 x 80 Roof system with PA wings

Raised on 22-1/2" towers, and with 20' x 20' PA wings on each side, this roof system provides customers with an unobstructed opening of over 100' (30.48 m) and a depth of 60' (18.28 m). The grid is made up of folding 31" x 54" truss, with truss ladders providing the up-stage/down-stage part of the grid. This provides for a dramatically reduced size for transport. The maximum uniformly distributed load for the KT-7 system as shown is 140,000 pounds (63,503 kg) and 20,000 pounds (9,072 kg) max. load per wing. The system is shown here with a roof peak incorporated into the design, but is also available in a flat configuration to meet each customer's specific needs. It provides a safe operating wind speed of up to 67 mph. The required guy wires for outdoor applications are not shown.







ANDIA  
rt & Casino



UNIVISION  
EVO MEXICO

BANK OF AMERICA





# Crowd barriers

---

<b>Standard module</b>	<b>138</b>
<b>Adjustable corner module</b>	<b>138</b>
<b>Standard half module</b>	<b>138</b>
<b>Gate access &amp; cable slot module</b>	<b>138</b>
<b>Cable access module</b>	<b>139</b>
<b>Trolley module</b>	<b>139</b>
<b>Vario light module</b>	<b>139</b>
<b>Vario light with 15 cm module</b>	<b>139</b>
<b>Outside corner 90° module</b>	<b>140</b>
<b>Inside corner 30° module</b>	<b>140</b>
<b>Inside corner 90° module</b>	<b>140</b>
<b>Single gate access module</b>	<b>140</b>
<b>Two entrance checkpoint</b>	<b>141</b>
<b>90° Compensator</b>	<b>141</b>
<b>Emergency gate module</b>	<b>141</b>
<b>Height adjustable adaptor</b>	<b>141</b>

# Crowd barriers



## CROWD BARRIER - STANDARD MODULE

### TC CWB-B

They are standard lightweight crowd control systems. They can be bolted together for one firmly anchored fence that will remain in place even in very agitated situations. They fold flat after use and can be stacked on dollies or easy transport and storage.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	40.74 x 49.21 x 46.65 (H) inch 1035 x 1250 x 1185 (H) mm	88.85 lbs 40.3 kg

Connection kit included



## CROWD BARRIER - ADJUSTABLE CORNER MODULE

### TC CWB-VC

Apart from the standard section, the barrier can be delivered in several corner types to meet any environment requirements. It folds flat after use and can be stacked on dollies for easy transport and storage.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	40.74 x 49.21 x 46.65 (H) inch 1035 x 1250x1185 (H) mm	105.82 lbs 48 kg

Connection kit included



## CROWD BARRIER - STANDARD HALF MODULE

### TC CWB-BH

Foldable, all aluminium barrier that's half the size of a standard barrier. Bolts together with single modules for a unified, firmly anchored barrier that withstands unruly crowds. Fold flat after use and stack on dollies for convenient transport and storage

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	20.39 x 49.21 x 46.65 (H) inch 518 x 1250 x 1186 (H) mm	45.85 lbs 20.8 kg

Connection kit included



## CROWD BARRIER - GATE ACCESS & CABLE SLOT MODULE

### TC CWB-DC

Crowd barriers are used ad hoc when audiences and spectators need to be held at a distance, but sometimes you need to have an easy access. This is the case with this variant provided with a gate. Crowd barriers ensure safety, high quality and ease of use with ergonomics and easy handling. They fold flat after use and can be stacked on dollies for easy transport and storage

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	40.74 x 49.21 x 46.65 (H) inch 1035 x 1250 x 1185 (H) mm	99.20 lbs 45 kg

Connection kit included



### CROWD BARRIER – CABLE ACCESS MODULE

TC CWB-BC

Crowd barriers are used at sports events, political rallies, parades, demonstrations, and outdoor and indoor performances. This model can hold cables for a safe way of laying and protecting cables, hoses and ducts. All profiles have soft, rounded edges for maximum comfort. They fold flat after use and can be stacked on dollies for easy transport and storage

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	40.74 x 49.21 x 46.65 (H) inch 1035 x 1250 x 1185 (H) mm	108.68 lbs 49.3 kg

Connection kit included



### CROWD BARRIER - TROLLEY MODULE

TC CWB-V-CART

A quality aluminum trolley has been developed to hold 10 folded standard crowd barriers. Crowd barriers folded flat are easily stored and transported in the trolley.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	53.54 x 45.47 x 50.08 inch 1360 x 1155 x 1272 (H) mm	130.07 lbs 59 kg



### CROWD BARRIER – VARIO LIGHT MODULE

TC CWB-VL

A double-hinged corner without floorplate, the Vario Light module is a vertical part that connects with other barriers sections. This enables the Vario Light module to angle in any shape wanted varying from -90° to +90°.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	41.53 x 45.07 inch 1055 x 1145 mm	44.09 lbs 20 kg

Connection kit included



### CROWD BARRIER – VARIO LIGHT WITH 15 CM MODULE

TC CWB-VLC

A double-hinged corner without floorplate, the Vario Light module is a vertical part that connects with other barriers sections. Barrier module with 15 cm cable slot. 0° to 90°

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	36.30 x 8.84 x 46.70 inch 922 x 250 x 1186 (H) mm	42.10 lbs 19.1 kg

Connection kit included

# Crowd barriers



## CROWD BARRIER – OUTSIDE CORNER 90° MODULE

TC CWB-OC90

Barrier module for cretaing 90° outside corners. Bolts together with single modules for a unified, firmly anchored barrier that withstands unruly crowds. Fold flat after use and stack on dollies for convenient transport and storage

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	38.11 x 70.00 x 46.69 inch 968 x 1778 x 1186 (H) mm	67.02 lbs 30.4 kg

Connection kit included



## CROWD BARRIER – INSIDE CORNER 30° MODULE

TC CWB-IC30

Barrier module for cretaing 30° inside corners. Bolts together with single modules for a unified, firmly anchored barrier that withstands unruly crowds. Fold flat after use and stack on dollies for convenient transport and storage.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	27.01 x 49.21 x 46.69 inch 686 x 1250 x 1186 (H) mm	34.83 lbs 15.8 kg

Connection kit included



## CROWD BARRIER – INSIDE CORNER 90° MODULE

TC CWB-IC90

Barrier module for cretaing 90° inside corners. Bolts together with single modules for a unified, firmly anchored barrier that withstands unruly crowds. Fold flat after use and stack on dollies for convenient transport and storage.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	30.80 x 69.88 x 46.69 inch 884 x 1775 x 1186 mm	60.62 lbs 27.5 kg

Connection kit included



## CROWD BARRIER – SINGLE GATE ACCESS MODULE

TC CWB-SGA

The single gate barrier module is the right choice when you need only one access point for crowds entering live events. Bolts together with single modules for a unified, firmly anchored barrier. Fold flat after use and stack on dollies for convenient transport and storage.

Material	Dimensions	Weight
Aluminum alloy EN AW-6082 T6	52.08 x 43.30 x 46.69 (H) inch 1323 x 1100 x 1186 (H) mm	126.97 lbs 57.6 kg



### CROWD BARRIER – TWO ENTRANCE CHECKPOINT

(2)TC CWB-B; (4)TC CWB-90C; (2)TC CWB-SGA

A safe and secure check point with two entry points. Easy to move, store, transport, install and disassemble. All aluminium construction offers you extreme durability during all seasons, as well resistance to aging and corrosion.

#### Material

Aluminum alloy EN AW-6082 T6

Connection kit included



### CROWD BARRIER – 90° COMPENSATOR

TC CWB-90C

The compensator serves as a standing area between the two entry points of the Two entrance check point and to connect the entry point to the standard barrier.

#### Material

Aluminum alloy EN AW-6082 T6

#### Dimensions

16.73 x 5.55 x 46.69 (H) inch  
425 x 141 x 1186 (H) mm

#### Weight

17.86 lbs  
8.1 kg

Connection kit included



### CROWD BARRIER - EMERGENCY GATE MODULE

TC CWB-EG

Emergency Gate Module provides immediate access to your audience when it counts the most. Footsteps above the deck allow for easier lifting of persons with health issue over the barrier and two separate door gates provide a convenient 115 cm entrance/exit point for your staff before, during and after the event.

#### Material

Aluminum alloy EN AW-6082 T6

#### Dimensions

81.50 x 49.21 x 46.69 (H) inch  
2070 x 1250 x 1186 mm

#### Weight

222.27 lbs  
100.8 kg

Connection kit included



### CROWD BARRIER – HEIGHT ADJUSTABLE ADAPTOR

TC CWB-LHA

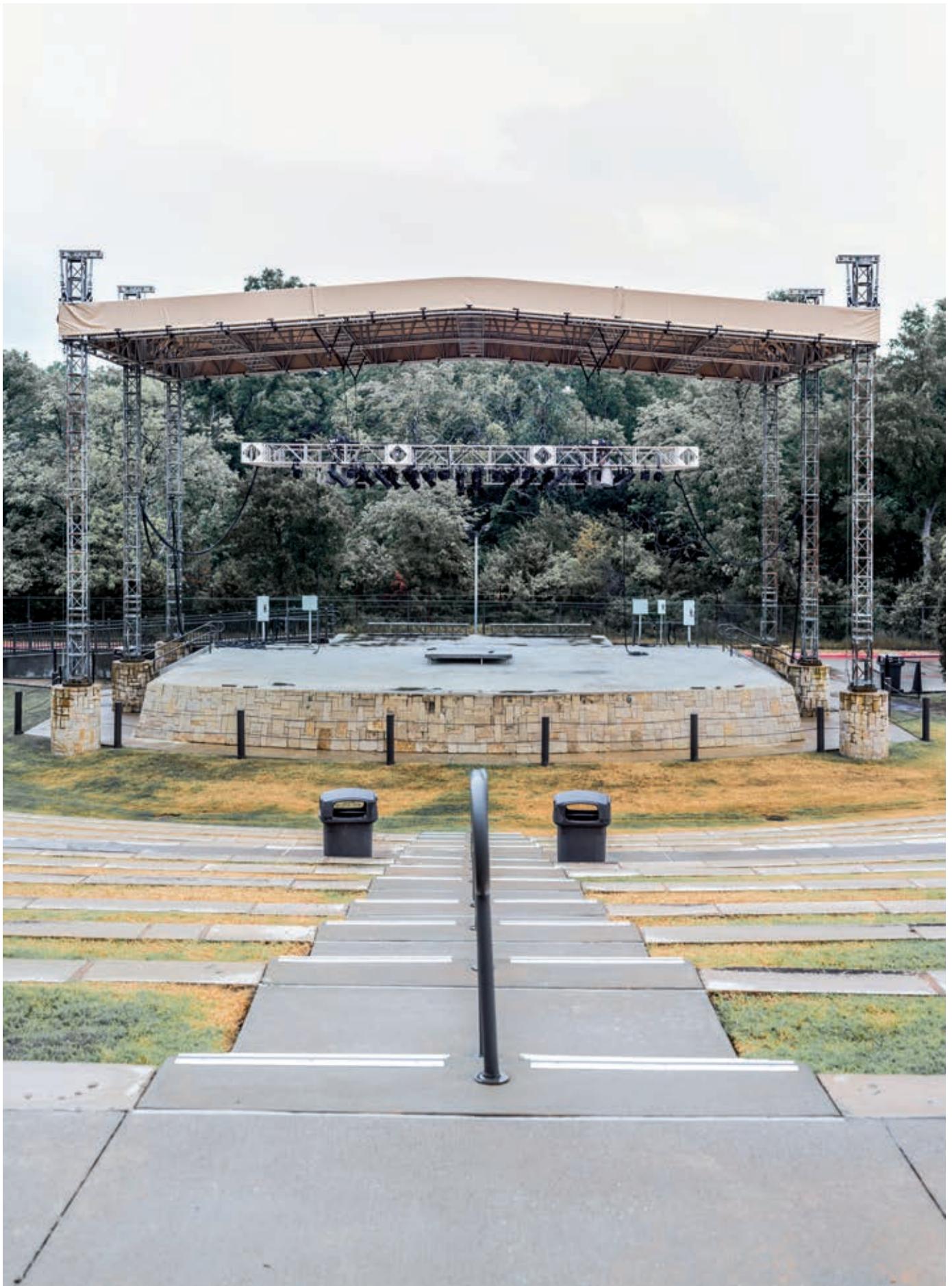
height adjustable adapter ensures that your barrier modules are stable and secure on uneven ground and other types of challenging terrain.

#### Material

Aluminum alloy EN AW-6082 T6

#### Weight

9.48 lbs  
4.3 kg



# Tips for you

## Safe outdoor concert season

### **The ANSI E1.21-2006 standard requires an Operations Management Plan – a full risk assessment and risk mitigation tool for all parties at outdoor events**

As you are reading this article, an outdoor concert season is either coming up or one has recently passed. In both cases, now would be a good time to review how to ensure your summer concert season will be as safe as possible.

Much attention has been focused on outdoor structures, and with good reason. No one ever wants injuries, let alone fatalities, to occur at concerts or any other entertainment events. Recent incidents have prompted a number of questions, ranging from what guidelines exist for outdoor roof structures and events, to who is responsible for various aspects of these events.

Fortunately, published guidelines have been available to the US temporary outdoor roof market since 2006: ANSI E1.21-2006. This standard provides minimum guidelines for these structures and is an important reference for anyone involved in these types of events. We must add that this document should not be limited to people who design, manufacture, and set up these structures; in fact, those who hire or perform under these structures should be aware of it, too.

However, the next 1,500 or so words will focus on stakeholders who own, maintain, and operate these structures. Many other stakeholders should depend on the expertise of this group to provide guidance and make decisions, so it is imperative that owner/operators have a thorough grasp of the realities of these structures.

In the age of the 24/7 news cycle, with its constant stream of information and misinformation, the discussion of sensitive issues can be marred by fact-free speculation and a rush to judgment. Some statements are based on minimal information; others are outright false. After 2011's tragic stage collapse at the Indiana State Fair, even entertainment industry blogs and forums were spreading incorrect information. Many so-called "experts" made it clear, by virtue of their comments, that they were out of their depth. To dispel some of these myths, let's start with what comprises a proper temporary outdoor structure that complies with ANSI E1.21-2006. One of the lengthiest and most critical sections in E1.21-2006 deals with design and engineering. In brief, it says that for any structure to comply, it must be designed in accordance with accepted engineering practice as a purpose-built structure.

There seems to be common misconceptions about this requirement. Many outdoor structures in the marketplace use multi-purpose components. For example, the lifting mechanism may be a chain hoist frequently used for an indoor event, or some of the structural framework of the structure itself may be aluminum truss that is also regularly used indoors. Regardless of the other uses of these components, if their specific capability within the context of the "system" has been considered by the design professional and is found to be sufficient for the outdoor application, then they can be used for this purpose without question.

Many smaller or younger companies purchase various parts and components in phases, with the intent that they will ultimately be able to assemble all of these pieces into a complete structure. This is an acceptable way to proceed if, and only if, the engineering analysis of the structure is also a part of the process. In other words, just because you see an erected structure in use doesn't mean you can simply buy what you think are all of the exact components you have seen, and voila, you are in the roof business. The components in some structures may have the appearance of common items, but could indeed be fabricated or assembled differently in order to accommodate changes in how they must perform within the context of a compliant outdoor structure. What is key is that the structure must be designed as a complete system, not simply as a grocery list of parts.

The ANSI standard does not dictate which materials can or cannot be used. This is an important point, because there are different ways to accomplish different things. It wouldn't be appropriate, even for a voluntary standard such as this, to dictate methods and materials, or even eliminate the possibility of building a better mousetrap. What it does dictate, however, is that the structure must comply with the prevailing engineering methods and practices, basically using the same laws of physics that we all have to deal with here on the third rock. For owner/operators, this engineering analysis must be documented and in your possession. Regardless of whether you get it from the manufacturer, the previous owner of your structure, or an independent engineer of your choosing, it is your responsibility to keep copies of the drawings, calculations, operating limits, and set-up requirements. These documents have long been required by various municipalities, and many of those authorities might also require event permits or local oversight. Certainly, in light of recent catastrophes, the focus is going to increase exponentially on your possession of this documentation.

# Tips for you

## Safe outdoor concert season

This point can't be overstated. It is paramount to ensure that the erected structure, loads and operating limits match these documents. Just because you might have a package of engineering calculations, with drawings and some text, doesn't mean you have fulfilled the requirements. You must be able to demonstrate with each and every use that what is physically setup is compliant with that big package of documents. The requests for this package of information are going to be coming from multiple directions, so be prepared for it.

The recently formed Event Safety Alliance ([www.eventsafetyalliance.org](http://www.eventsafetyalliance.org)) has established contract language related to outdoor structures that specifically identifies compliance with ANSI E1.21-2006. This language has already been adopted by some major artists and events for inclusion in their performance contracts. This means that promoters, or anyone hiring these artists, must comply with this language. Knowing that this all rolls downhill, we can expect that if the artist requires it, the promoter or venue will require it. And this is separate from the local authority having jurisdiction (building official) requiring or requesting this documentation. So, if you have a structure that you intend to use outdoors, and you DON'T have engineering documentation, you need professional engineering assistance right away.

The next important aspect, and one of the first things that investigators ask for, is inspection records. Once again, the ANSI standard outlines some minimum requirements for inspections, along with which records need to be documented and their frequency. Basically, the components of the structures shall be visually inspected for every single use. The record-keeping process for each component must take place annually, at a minimum, with the component being out of service; it doesn't do any good to inspect something for damage when it is 50' above the stage.

The intent is that you must demonstrate you are taking the appropriate measures to ensure that all of the components you are using are in the correct condition, in addition to the first requirement mentioned above of having engineering documents identifying what components to use. This record-keeping process will mean that you have unique

**What is key is that the structure must be designed as a complete system, not simply as a grocery list of parts.**

identification for each component (i.e. serial numbers), and specific dates correlating to each inspection. If you don't have these records on hand for your structure right now, immediately take the time to get each component inspected.

The manufacturer of your components should be able to provide you with inspection guidelines if needed, so do not hesitate to contact them.

Lastly, and arguably the most important aspect of outdoor roof structures, is how they are managed during events. The ANSI standard identifies a requirement for an Operations Management Plan (OMP). This plan, which is to be developed with input from the designer and manufacturer, must be a full risk assessment and risk mitigation tool. The OMP is meant to identify what action must take place with the structure in the event that various foreseeable events occur. These could include anything from the issuance of local weather alerts, to certain amounts of rain falling, to specific wind thresholds being reached on the site.

Of course, weather is likely the biggest variable for outdoor shows and it is important to be very clear about what action you will take when unfavorable weather occurs. Some of the Tomcat team recently attended a seminar at the National Weather Center in Norman, OK. Aside from meteorologists' extreme dislike for being mocked about their perceived lack of forecasting skills, it was quickly reinforced that weather is unpredictable even with the most state-of-the-art technology. It was clear to us, however, that one of the most fundamental things we took away from this event is that much of the available weather information we receive from local news or websites is not specific enough to be used for decision-making.

For example, most weather forecasts do not include information about wind forces that may be coming in front of a storm. It is possible that extraordinary wind could be as much as 10 miles ahead of a storm front, but the available radar images might not pick that up. Additionally, the radar images that you have access to may be out of date. Sometimes, even a few minutes makes a big difference with evacuation or other preventative safety measures. On top of that, radar technology may not provide a wholly accurate picture of what is approaching due to the proximity of the storm to the radar itself.

If all of this sounds discouraging, there is a better option. There are a multitude of reputable private weather services available. These services can be dedicated to your event so that you have a person that is monitoring your exact location and is in constant contact with you. Of course, this is an expense, but it can be far less expensive than going without the service, considering the destructive capabilities of weather.

Another portion of the OMP needs to be training and understanding of the actions in various conditions for all the people involved with the structure. These can include the promoter, artist, venue staff, security personnel, EMS, and local authorities. It doesn't do any good to have an action plan if no one knows what it is, or if everyone involved has

his own plan and they don't work together. The language from the Event Safety Alliance includes requirements for having an event suspension and cancellation procedure in place. These can prevent an ugly argument from happening when everyone's emotions and adrenaline are preventing rational thought.

We would hope that if you are an owner/operator of an outdoor roof structure, everything here is simply a gentle reminder of what you are already doing. There are certainly risks with these structures that we would never be able to fully eliminate, but if we all take the appropriate precautions and plan accordingly, we can do our best to keep ourselves and all of the artists and concertgoers safe at our next event. Along the same lines, a triangle-shaped grid supported on three points is also relatively straightforward when it comes to support calculations.

**You must be able to demonstrate with each and every use that what is physically set up is compliant with that big package of documents.**

There are a few additional variables here, but the support reactions are clear with each leg of the triangle essentially acting as a simple span. The three point supported grid will always shift loads predictably between the three supports if it is on moving rigging. While it is still possible to overload a single point, the truss structure itself stays balanced and stable for the most part. Circle-shaped truss supported on three points will react similarly, albeit careful consideration must be given to the cantilevers created by the arcs of the truss between the supports. These structures are effectively statically determinate as opposed to indeterminate. An indeterminate structure is one where the normal static calculations are insufficient to determine the various forces and reactions that might exist in a structure. Rigging for truss structures, and calculating support reactions, start to become a bit more complex when used in an indeterminate structure. It is regularly taken for granted that the standard published load tables can be applied to calculate the capacity and support reactions for a complete grid configuration. The problem is that most grids and their supporting rigging tend to be indeterminate, and the assumptions used for simple spans don't fully apply.





# Indeterminate grids

## Getting back to simple

**While not the most exciting or sexy product, aluminum truss has become a mainstay rigging and support solution in a variety of markets and applications. It is used for exhibits, displays, lighting and audio support, screen frames, stage supports, outdoor structures, etc. The list goes on and on. Anytime there is something that needs to be hung either temporarily or permanently, truss could be part of the solution. There are certainly some exciting and exotic examples of truss usage that could be examined as a case study, but perhaps something more typical would be more helpful, such as a discussion of truss rigging grids.**

**An indeterminate structure is one where the normal static calculations are insufficient to determine the various forces and reactions that might exist...**

Most reputable truss manufacturers publish load tables for standard truss products they build. An understanding of this published data, and what it includes, is critical to making sure that the information is applied in the appropriate manner. Specifically, most load tables outline what a given truss span is capable of supporting in a “simple span” configuration. These supports are likely not to see the exact same load simply due to load placement. This is basically a single span of truss that is supported on each end.

It is relatively easy to determine the support reactions for a simple span configuration of truss. Simply observing a sketch of a simple span, you can easily see that the truss span, supported at each end, must share its total load between the two supports. While these supports are likely not to see the exact same load simply due to load placement, it is still within reason to calculate the reactions with a relative degree of accuracy. With a simple span, it also doesn't make any difference if the load is on moving rigging, such as a hoist or winch, or if it is permanently fixed; the load

will always be supported between these two points, and the reactions are relatively predictable.

Along the same lines, a triangle-shaped grid supported on three points is also relatively straightforward when it comes to support calculations. There are a few additional variables here, but the support reactions are clear with each leg of the triangle essentially acting as a simple span. The three point supported grid will always shift loads predictably between the three supports if it is on moving rigging. While it is still possible to overload a single point, the truss structure itself stays balanced and stable for the most part. Circle-shaped truss supported on three points will react similarly, albeit careful consideration must be given to the cantilevers created by the arcs of the truss between the supports. These structures are effectively statically determinate as opposed to indeterminate.

An indeterminate structure is one where the normal static calculations are insufficient to determine the various forces and reactions that might exist in a structure. Rigging for truss structures, and calculating support reactions, start to become a bit more complex when used in an indeterminate structure. It is regularly taken for granted that the standard published load tables can be applied to calculate the capacity and support reactions for a complete grid configuration. The problem is that most grids and their supporting rigging tend to be indeterminate, and the assumptions used for simple spans don't fully apply.

For example, in the previously mentioned simple span, an applied load along the span must transfer through the truss (beam), and the location of that applied load will determine what percentage of the load is transferred into each support point. If we then take the same simple span, but add a third support in the center of the span, we have just created an indeterminate structure. We are unable to clearly determine how an applied load might react as we now have reaction forces happening at each support and the potential of a horizontal or lateral force as well. When considering this, some contributing factors might be whether the span is moving up and down, what the stiffness of the truss is, how much deflection is created, etc.

This is a much more complicated scenario than what might be initially considered. Of course, if a straight span of truss with three support points is indeterminate, and has a myriad of variables, then imagine the forces and reactions present in a multipoint grid comprised of a multitude of supports.

# Indeterminate grids

## Getting back to simple

One of the challenges with these structures is ensuring the supporting rigging stays appropriately engaged and the structure's loads remain within safe limits. In a moving grid scenario, lifting devices with absolute encoders can provide good feedback to understand the relative position between the various support points. This technology, used in conjunction with load monitoring, can provide additional feedback to understand a little better what is happening within the system. However, if improperly used, it is still possible to maintain the reactions to the supports within safe limits but overstress portions of the grid.

If a structure is on permanent rigging, and does not have to move up and down, there are typically fewer variables. Differences in lifting speed, however slight, between support points, or even the potential failure of a single lifting device, are factors that are eliminated in permanent fixed rigging. At first glance, it would appear that the issue is solved. In fact, there are many truss grids designed and installed every year that use this simplified logic. The truss is on fixed length cables and installed in a level manner and will never move. But what happens if the superstructure deflects? Many buildings are designed for snow loads, and many have acceptable ranges of deflection incorporated in their design. So, if you have a grid hanging on fixed length cables from a structure that is now deflecting a few inches due to the 12" of wet snow that is now on the roof, what happens to your simple truss grid? Well, certain cables effectively become longer than others, which cause effective spans of the truss to become longer, which changes the support reactions, which shifts the loads, and so on.

There is, however, a simple solution to this dilemma. Tomcat has incorporated this solution in a number of multipoint truss grid projects. The idea is to simply remove the rigidity from the structure at the support points. Imagine allowing the grid to pivot freely about an axis at specified support points. This can relieve both tensile and compressive forces within the structure and changes the forces present at the support locations to become almost solely reliant on shear capacity at these special support locations. In the case of moving rigging, if one hoist were to move faster than another, the effective impact to the structure is nominal since the structure is now not forced into a rigid position. And in the case of fixed rigging, where the superstructure deflects, the support cables may indeed change their relative length, but the truss grid simply pivots at the support points to match the changes in the superstructure and the load remains safely supported.

Certainly this solution must be reviewed on a case-by-case basis to ascertain which supports need to be modified, but the incorporation of this concept solves a number of the challenges mentioned previously regarding indeterminate structures such as these.



Figure 1: A span supported on each end—simple

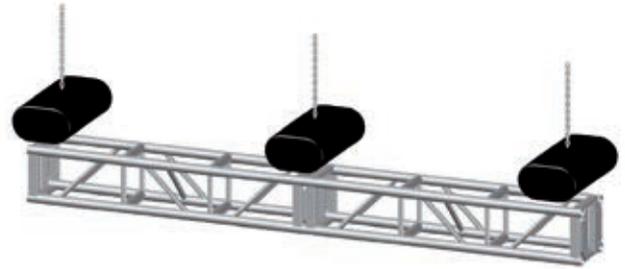


Figure 2: Three supports, but still simple

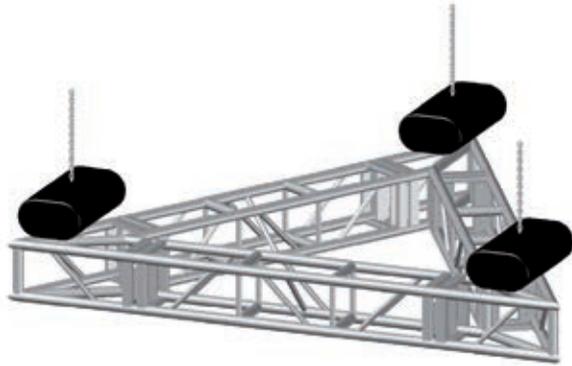


Figure 3: Three supports and circular, but still simple

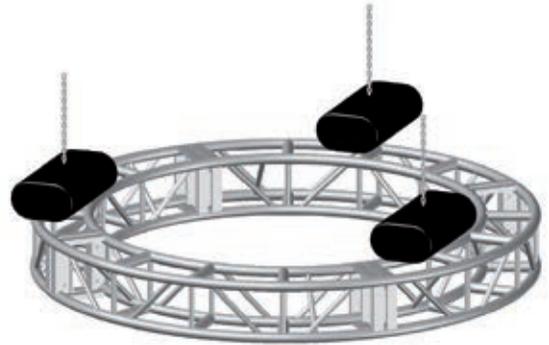


Figure 4: A beam, but an indeterminate structure—not simple

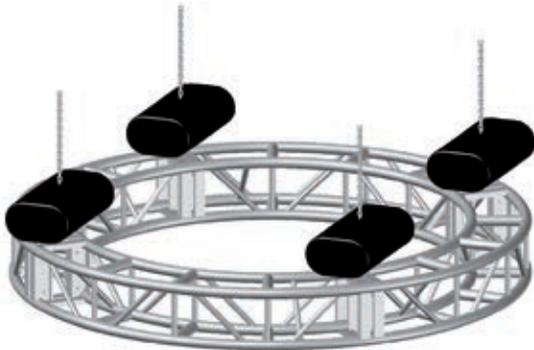


Figure 5: A circular indeterminate structure —not simple



Figure 6: Simple again

# Truss use guidelines

## Handling

Tomcat Truss is engineered to provide many years of dependable service provided that it is handled properly and used within the recommended loading parameters.

Do not drag or drop truss as this may damage the ends of the truss or result in other unseen damage. The ends of the tubes need to be maintained as round as possible so that connections will be complete.

When transporting, take steps to ensure that nothing rubs against the truss that might cause wear or punctures. When transporting vertically, truss with spigots should be arranged with the male members. When stacking truss for transport, secure the truss to prevent bouncing and do not load other items on top of the truss that could bounce and cause damage.

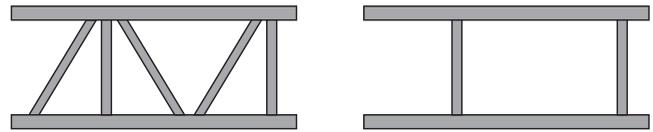
When loading, unloading, or moving truss, do so with enough personnel as to ensure that the truss is not dropped or dragged over other truss. This also ensures personal safety. Use forklifts with extreme caution! Place forks only under the bottom chord, as placing forks through the truss could damage diagonals.

## Assembly & use

Tomcat box truss is typically designed with horizontal cross members on two opposing faces with diagonal and vertical members on the other two faces. The intersection of vertical and horizontal members with the continuous chord member is called a panel point. The faces with horizontal cross members make up the top and bottom of the truss, while the faces with diagonals are the sides. (See Figure 1). Load data is only valid when the truss is oriented in this fashion. Load data is only to be considered for indoor use. Load data takes into consideration the self-weight of the truss and indicates how much additional weight may be safely added.

Triangle truss should be oriented with the apex up. Turning it over reduces load capacity significantly. For folding-triangle truss, the apex is the hinged pair of chords. When connecting sections of truss, make sure the diagonals form a continuous pattern. (See Figure 2.) The diagonals on each side of the connection should be opposed, not parallel. Span lengths and load specifications as published by Tomcat should not be exceeded without first contacting Tomcat. The balance between members and the even distribution of the load across the truss is an important consideration, as unbalanced loads could twist the truss resulting in damage. For optimum weight distribution, it is recommended that the truss itself be hung using the lower chords, while additional loads be suspended from the upper chords. All loads should be applied at panel points as described above. Local bend-

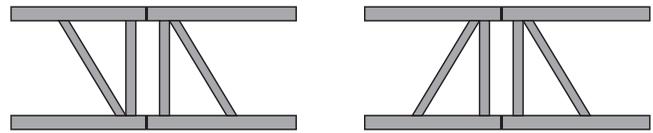
Figure 1



Side View

Plan view

Figure 2



Incorrect

Correct

ing of members may occur if loads are applied at locations other than panel points.

All truss connecting parts should be inspected regularly. When using nuts and bolts, each should be inspected on a regular basis. Use only grade 8 bolts and nuts. Washers should be used on both sides. Nuts and bolts should be replaced periodically as regular use degrades bolt threads. Never over-torque the nuts and bolts beyond manufacturer's specifications.

Prior to lifting a truss, one person should be responsible for checking all truss connections and the rigging on the truss, ensuring that rigging has been done at the panel points. When raising truss, hoists should run simultaneously once the truss is leveled. Always observe the hoists closely when moving truss, and stop every 15 feet to check the level of the grid. This is particularly important if the grid is unevenly loaded. When disassembling truss, do not break any connections until there is no weight on the joints.

# Policies

---

## Credit policy

It is the policy of Tomcat Global Corporation (herein after referred to as “Tomcat”) that payment be received with the order unless other arrangements have been made, such as cash on delivery. Credit will only be extended to those clients who have successfully completed a credit application, signed a purchase agreement, or otherwise established credit with Tomcat. Down payments may be required from customers (including those with credit approval) for custom products or other situations that require special raw material purchases or engineering. In such cases, the ordering of materials and fabrication will not proceed until payment or a letter of credit has been received.

## Shipping policy

All shipments are “Ex-works” at the geographic location where the order is placed and shall be in good order upon release to the carrier. All claims for damage or loss in transit must be filed by the consignee against the carrier. All freight should be checked for quantity against bill provided by the carrier. Shipments should be inspected by removing all packaging and checking the truss for damage to chords, internals or to the end of tubes before signing the carrier’s receipt. Damage noted on the freight bill will enable the consignee to file a claim against the carrier. Any transport insurance is the responsibility of the purchaser. Tomcat will not be held responsible or liable for damage, loss or delay in transit.

## Product guarantee

Tomcat guarantees its products will be free from defects in workmanship and materials at the time of purchase, providing the purchaser follows the manufacturer’s guidelines for use. The product will be guaranteed for a period of one year from the date of shipment to perform according to the published product specifications. Tomcat is not responsible for damage to the product during transit, nor in cases where load specifications were exceeded or where guidelines for usage were not followed.

Except as expressly stated and warranted herein: (i) Tomcat disclaims any other warranties, whether expressed or implied, including any warranty of merchantability or fitness for a specific purpose; (ii) unless project engineer reports are included, Tomcat has made no affirmations of fact or promise relating to the goods being sold that has become the basis of this bargain, or that has created or amounted to an express warranty that the goods would conform to any such affirmation or promise; (iii) this warranty extends exclusively to the original purchaser of the warranted goods and subsequent purchasers are not covered by this warranty; (iv) this warranty does not apply to a part which the buyer misuses, damages, improperly maintains, repairs, or replaces with

a part not of Tomcat’s manufacture; and (v) except for its duty to repair or replace defective parts, Tomcat shall not be liable for any consequential or incidental damages resulting from a defective part.

Tomcat reserves the right to change materials or design, when, in our opinion, such changes will improve the product. This warranty is performed in the geographic location where the originating order was placed and all obligations, rights, and duties of the buyer and Tomcat shall be governed by the laws of that same geographic location.

## Return policy

Prior to returning any item purchased from Tomcat, a customer must first contact Tomcat to obtain a Returned Goods Authorization number (RGA no.). Returned goods without prior authorization will not be accepted. Tomcat will not generally pay the cost of return freight, and reserves the right to refuse return shipments where the freight has not been prepaid by the returning party.



TOMCAT®

**TOMCAT USA, Inc.**

5427 N. National Dr.  
Knoxville, TN 37914  
USA

950 Lawrence Dr., Suite B  
Thousand Oaks, CA 91320  
USA

T +1 (865) 219-3700  
[sales@tomcatusa.com](mailto:sales@tomcatusa.com)  
[www.tomcatglobal.com](http://www.tomcatglobal.com)

