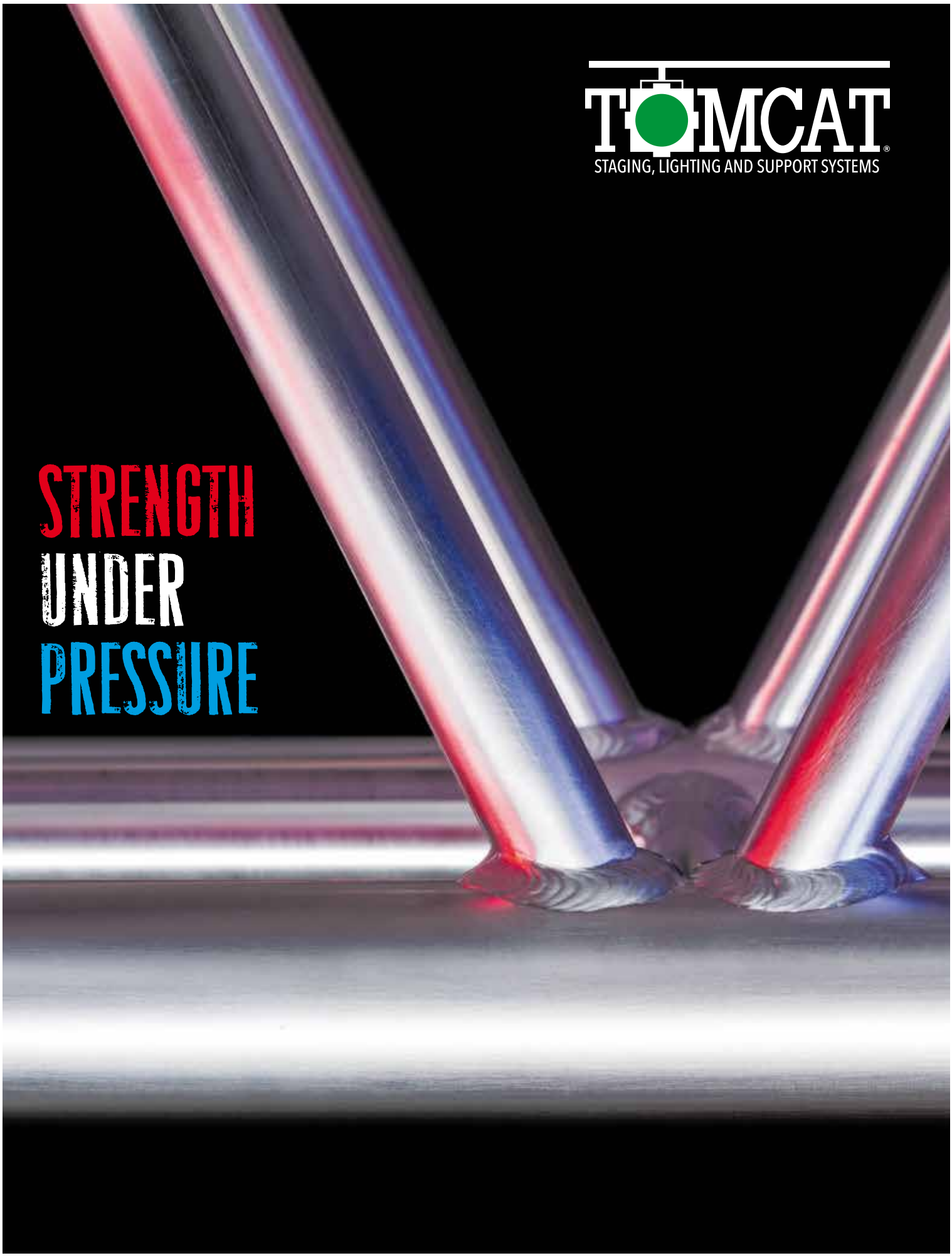

TOMCAT®
STAGING, LIGHTING AND SUPPORT SYSTEMS
STRENGTH
UNDER
PRESSURE

Contents


CONTROL

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. What started with fewer than five people in a less than 5,000 square feet building, has grown to a corporation of more than 210 people in manufacturing plants all over the globe.

In 2012, TOMCAT and the Italian aluminum truss manufacturer, Litec, were acquired by Milos Group. Milos Group is the largest manufacturer of modular support structures and staging systems in the world. The Group now consists of TOMCAT, Litec (Italy) and Milos Structural Systems (Czech Republic).

TOMCAT's new home within Milos Group has provided further impetus for increasing their already impressive range of activities, while affording them the opportunity to extend their global reach.

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 Robbie Williams, 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, Bob the Builder, 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.


Speedglas
3M


TOMCAT

Project highlights

Sandia Amphitheater - Rising up with the Sandia mountains

The Sandia Resort and Casino complex in Albuquerque, New Mexico, features a unique amphitheater with a massive TOMCAT-designed truss grid structure. The immense 60' x 52' truss grid was designed to optimize sightlines and is supported by four towers which mimic the hotel's distinct architecture. These towers provide lateral stability to the grid using a discreet guide system on the front face of each tower. Additionally, each tower contains a hidden tandem hoist system for raising and lowering the truss grid. The front towers are set back to create a downstage cantilever on the front of the grid (20') which lends an open feeling to the stage area, while providing excellent viewing angles from each of the 4,000 seats.

Oak Point Park Amphitheater – In tune with nature

The Oak Point Park Amphitheater is a 3,000 seat outdoor venue in Plano, Texas. It features a TOMCAT 60' x 40' BFT roof system set in a permanent foundation. The hybrid steel and aluminum structure covers a 5' high concert stage edged with sandstone. This all natural amphitheater, locally known as the "Plano Amp", is adjacent to a nature preserve and has grass covered landings in its seating area for keeping its visitors in close contact with Mother Earth. The all natural environment, unfettered access to the stage, and unrestricted view of the performers, makes Plano Amp an ideal outdoor venue for hosting high profile concerts, cultural festivals and a wide variety of special events.

Ferrell Center - Supporting the multimedia atmosphere of Baylor University sports

The Ferrell Center is located at Baylor University in Waco, Texas. It sees active duty as the home to Baylor basketball and volleyball, as well as hosting other university and special events. The crowning jewel of this modern and spacious center is its dazzling geodesic dome roof, which features a massive scoreboard/video board centerpiece that is held up by a custom TOMCAT truss system. Building this truss system was a unique challenge for TOMCAT engineers, as the supporting positions available to the truss were limited in location and capacity due to the construction of the geodesic dome. Working within these limitations, TOMCAT successfully designed the truss system to be supported on 42 separate bridled cables, with each cable being a different length and angle. The resulting effect of this TOMCAT success is the multimedia atmosphere enjoyed by the thousands upon thousands of spectators who attend the center's various events during the year.

MGM Grand's Wet Republic – Resisting the elements

MGM Grand's "Wet Republic" outdoor stage hosts a wide variety of music groups, DJ's and entertainment activities. The TOMCAT permanent installation at this unique MGM venue is a fixed ground support structure that consists of 20.5" x 20.5" custom built towers and a main grid of medium duty 20.5" x 20.5" spigoted truss. Custom curved 12x12 truss is also installed to support the LED wall that Wet Republic uses in their two pronged audio/visual assault on the venue's fun loving guests.

Considering the sweltering desert heat, close proximity of many pools, water misters, audio equipment, lighting equipment, fog machines, and the large number of party people crowding around the stage during Wet Republic's many events, this structure still looks spectacular.

Success stories

A lasting relationship with Quickbeam

Quickbeam is an event production company based in Albuquerque, New Mexico. Its long history can be traced back to when founders Kurt Jaeckel and Gary Matthews established the company while they were in the eighth grade. Over the years, Quickbeam has grown into one of the premier creative and technical service suppliers for the North American event industry.

We recently spoke with co-owner/event coordinator Kurt Jaeckel at the Sandia Resort and Casino Amphitheater in Albuquerque to get his views on TOMCAT products and why he uses them.

Quickbeam and TOMCAT

"We don't have any other truss in our shop except TOMCAT…. I don't work with any other company." - Kurt Jaeckel

Quickbeam started its relationship with TOMCAT in the early 1990s, when they were commissioned to build a 60' x 40' roof with 20' x 20' wings for the University of New Mexico. The success of this structure led to other jobs where Quickbeam used TOMCAT truss, such as a 60' x 40' roof built for the Jeep Corporation at the Texas State Fair and a roof with steel towers in Plano, Texas.

After more than 20 years in business, Quickbeam continues to rely exclusively on TOMCAT truss for all of its projects. One of the most recent and noteworthy Quickbeam structures was the huge roof that was designed and built for the Sandia Amphitheater, which is located at the Sandia Resort and Casino in Albuquerque (featured on the previous page).
The early and continued successes of TOMCAT truss used in Quickbeam structures were instrumental in building a strong Quickbeam/TOMCAT relationship that continues until this day.

Safety is our prime concern

Quickbeam constantly relies on the safety of TOMCAT truss and its knowledgeable staff, who are able to answer all of their questions concerning safety and working with the truss. The event business is focused on safety and TOMCAT provides personal access to essential information for all of its clients regarding weights, loads and static calculations. As Kurt stated, "I can call up TOMCAT at a drop of a hat and talk about weights and make sure that we're safe."

Although Quickbeam had tried other truss manufacturers in their early years of operation, they were always pushed back to TOMCAT because of safety concerns. TOMCAT realizes the importance of safety when working with support structures and therefore makes it one of their prime directives.

A company you can count on

"The thing that I have always appreciated about TOMCAT is they do what they say they're going to do. They hit their deadlines." - Kurt Jaeckel

"I believe in the product. It's always supported me." - Kurt Jaeckel

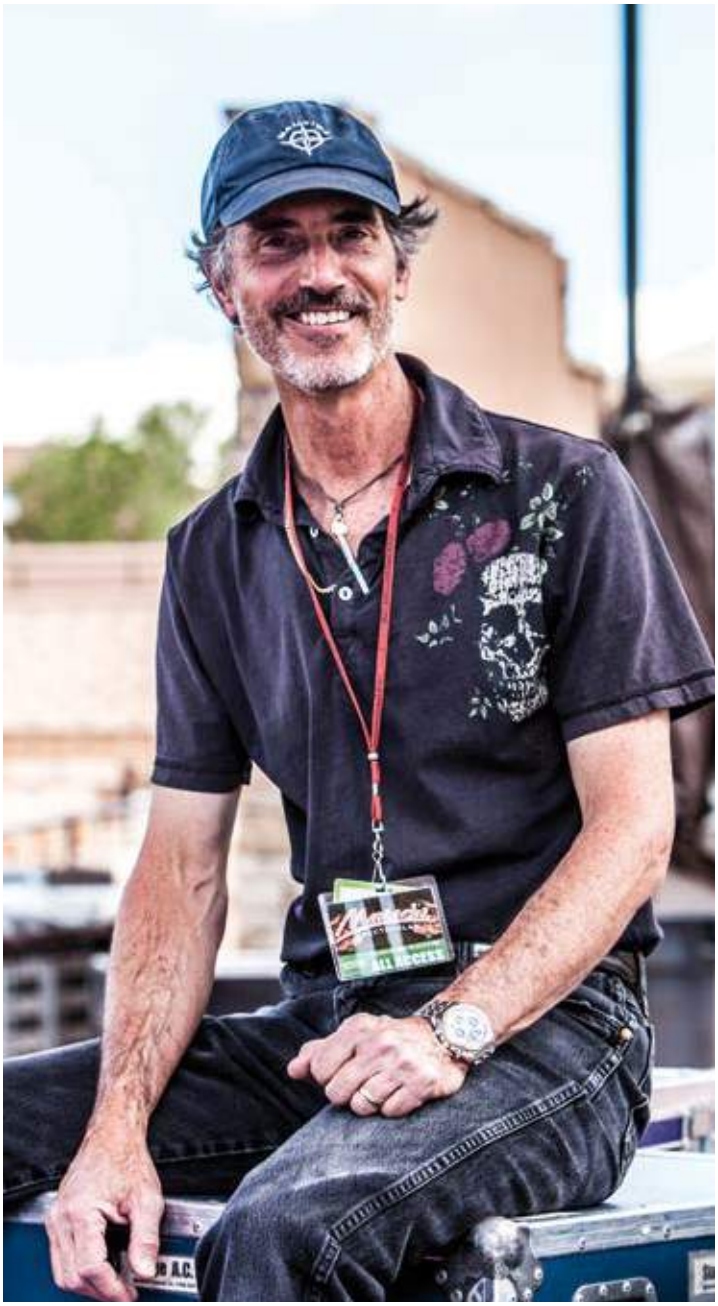
TOMCAT always strives to work together with its customers so they not only receive the truss they need, but receive it on time. Ever present deadlines are an integral part of the event structure industry and TOMCAT takes these deadlines just as seriously as their customers. The truth of this was stressed by Kurt during our discussion, "…as everybody knows, this industry is about deadlines……When we've had deadlines, we've always hit 'em."

Extreme sound reinforcement

During our talk with Kurt, we were told about an Elton John show at "The Pit" in Albuquerque, where Quickbeam was responsible for the support structure. The show had a huge amount of P.A. equipment that needed to be hung on the roof and the weight was taken to the absolute maximum it could handle. Kurt went on to say that he was comforted in knowing he could reach out to TOMCAT to make sure that everything was safe. In the end, Elton put on a fantastic show, the roof carried the weight and the audience had a great time.

Mutual appreciation

When asked if he would like to give a personal message to TOMCAT, Kurt simply answered, "Thanks for all your help." You're welcome, Kurt and Quickbeam. And we thank you, too.



Success stories

A strong bond with FTSI

FTSI Automation, based in Las Vegas, is a supplier and manufacturer of scenic design staging equipment, LED integration, show control and high performance automated rigging. FTSI also offers most of their products for long-term or short-term rental.
We recently caught up with Vice-President of West Coast Operations, Dana Bartholomew, to speak about how and why FTSI uses TOMCAT products and services.

Specializing in truss

FTSI works with truss, a lot. About 85% of all projects they carry out utilize truss in some way. So it's extremely important that the truss they use is of the highest quality, structurally superior and adheres to the uppermost levels of safety. Throughout the years, FTSI has chosen to work with TOMCAT for both their external and in-house projects. "They're kind of our go to guys when it comes to trussing", said Dana.

Original designs and concepts

FTSI works on a full spectrum of projects for a wide range of clients. With this diverse workload, it comes as no surprise that there are times when FTSI requires design and conceptual work. When these services are required, they rely on TOMCAT's expertise to deliver professional and trusted results. TOMCAT has a full design staff and custom projects division that has extensive experience and a long list of satisfied clients.

As Dana stated during our conversation, "It's one thing to be able to just open up a catalog and order trussing. It's another thing when we have a custom application that needs design, engineering and proof of concept. TOMCAT really does a good job at that. It really comes down to what your needs are and who can support those the best… TOMCAT has the resources and the personnel to do it."

Building bridges

Relationships are very important in the trussing business and TOMCAT knows the value of building a strong and personal relationship with their customers. Understanding and maintaining a dialogue with their customers are the keys to being able to give them exactly what they need, when they need it and how they need it. As Dana told us, "In this industry, relationships mean a lot…being taken care of and having somebody that you can call and ask questions…is one of the real big things."

Keeping everyone safe

Safety is important in all situations where truss is used and TOMCAT always focuses on this aspect of its truss and trussing services. This is especially true for FTSI and was emphasized by Dana during our discussion, "Safety is of the utmost importance to us as a company, so we like to align ourselves with people that take it as seriously as we do…TOMCAT is one of those manufacturers."

Personalized service

When asked if he would recommend TOMCAT to his customers and other suppliers, Dana answered, "I would recommend them, and I have. I think it comes down to that personal service and having people that you can call and count on and know that they'll get back to you…when you have a question or you need a quick response."

Final words

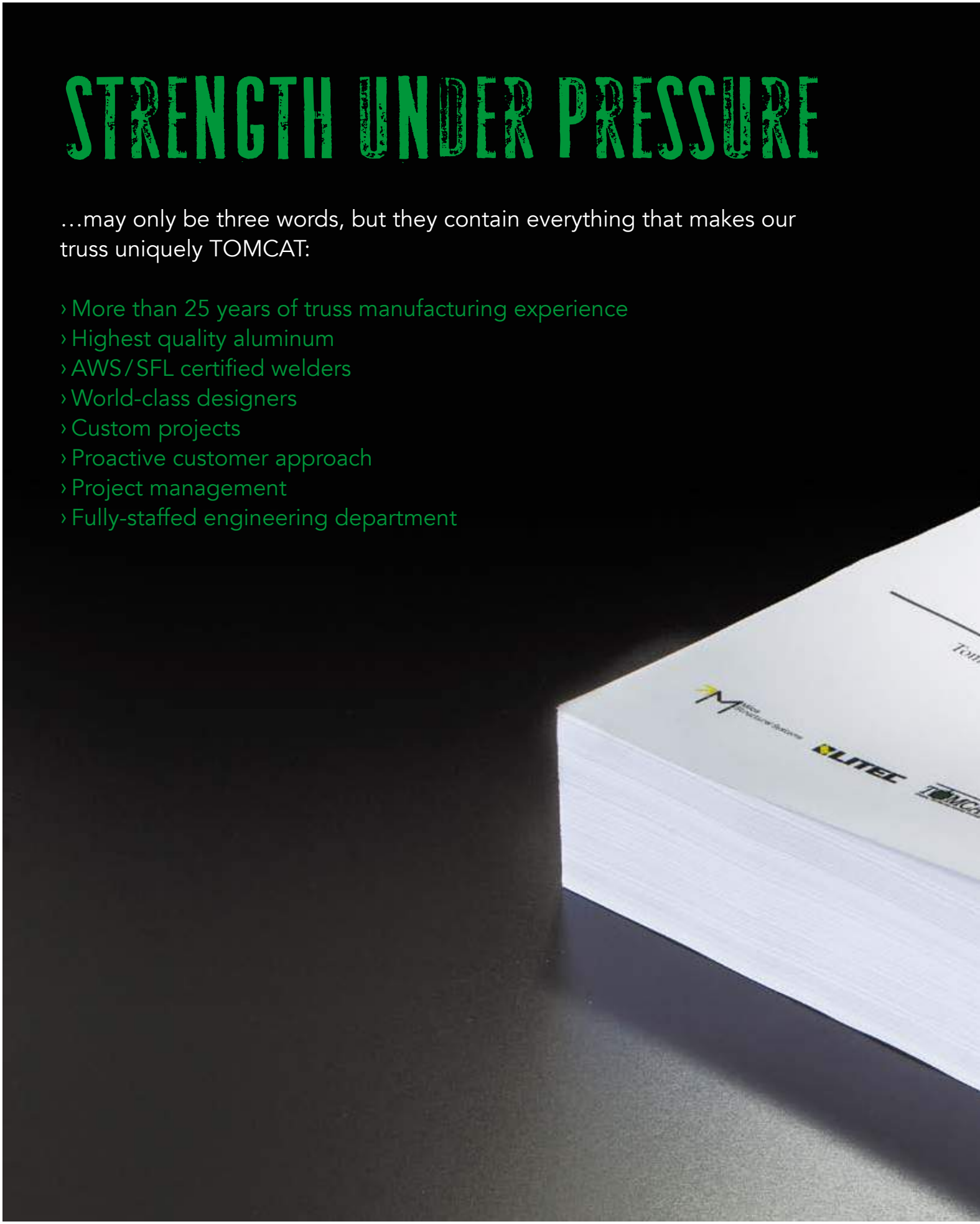
When Dana was asked to describe TOMCAT in one sentence, he answered with six words, "Great service and a wonderful product." When TOMCAT considered how it could describe FTSI, it only needed two words, "True professionals".


BEARD

STRENGTH UNDER PRESSURE

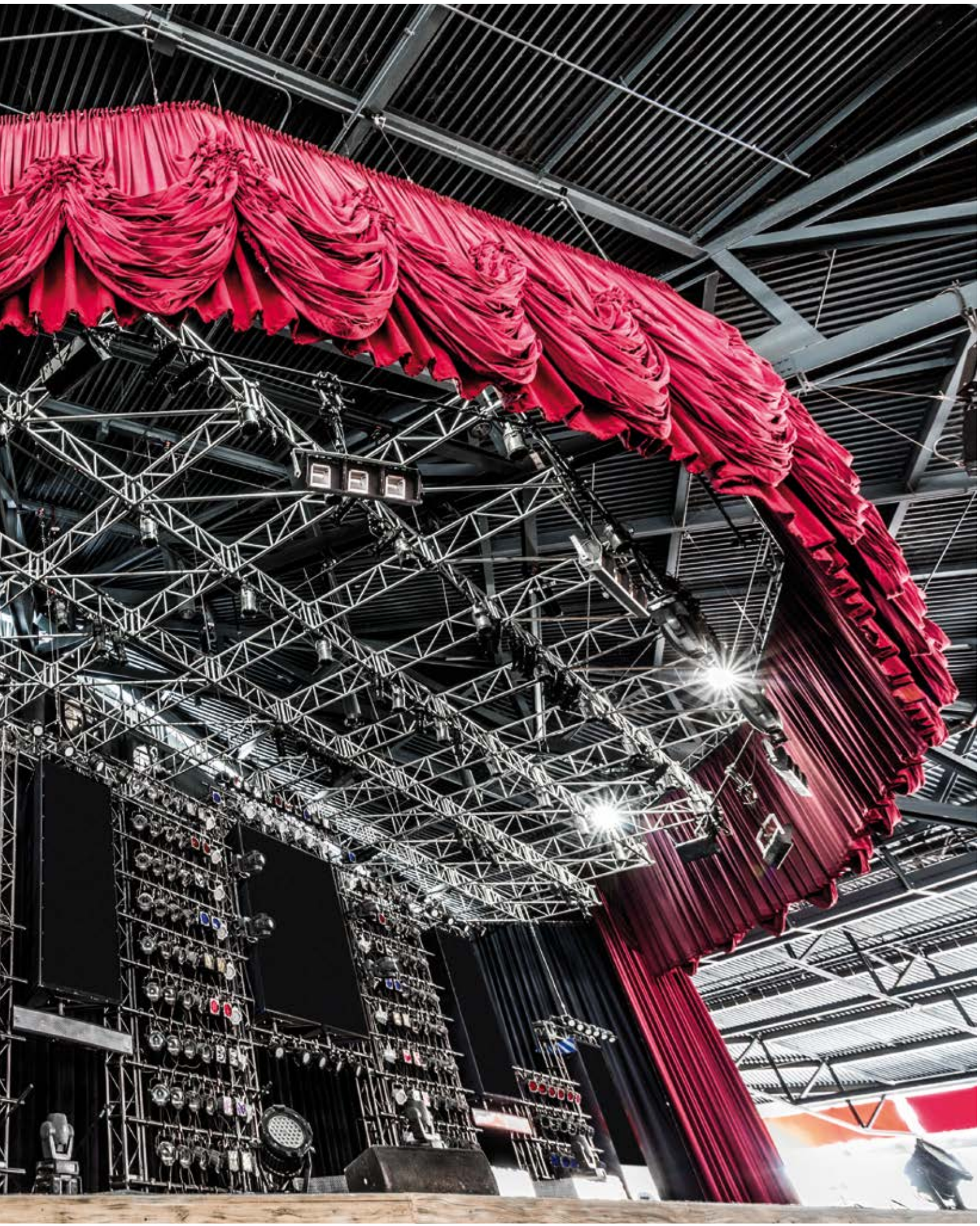
…may only be three words, but they contain everything that makes our truss uniquely TOMCAT:

› More than 25 years of truss manufacturing experience
› Highest quality aluminum
› AWS / SFL certified welders
› World-class designers
› Custom projects
› Proactive customer approach
› Project management
› Fully-staffed engineering department



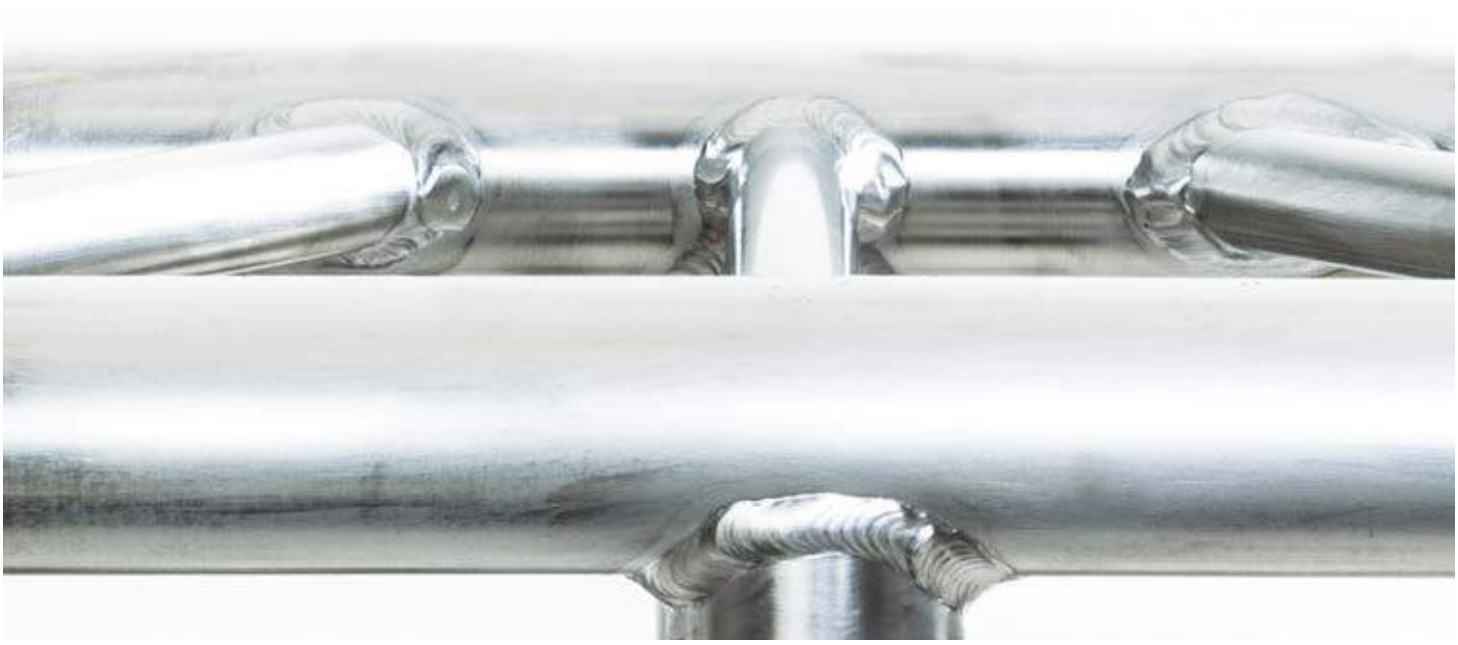
"Strength under pressure" is an expression of TOMCAT's commitment to producing the highest quality truss for your individual support structure needs. TOMCAT studies truss inside and out to assure that the product you receive not only looks great but performs even better. Under all circumstances, all the time.

Box truss



Box truss

Super beam 13.7 x 10 spigoted truss

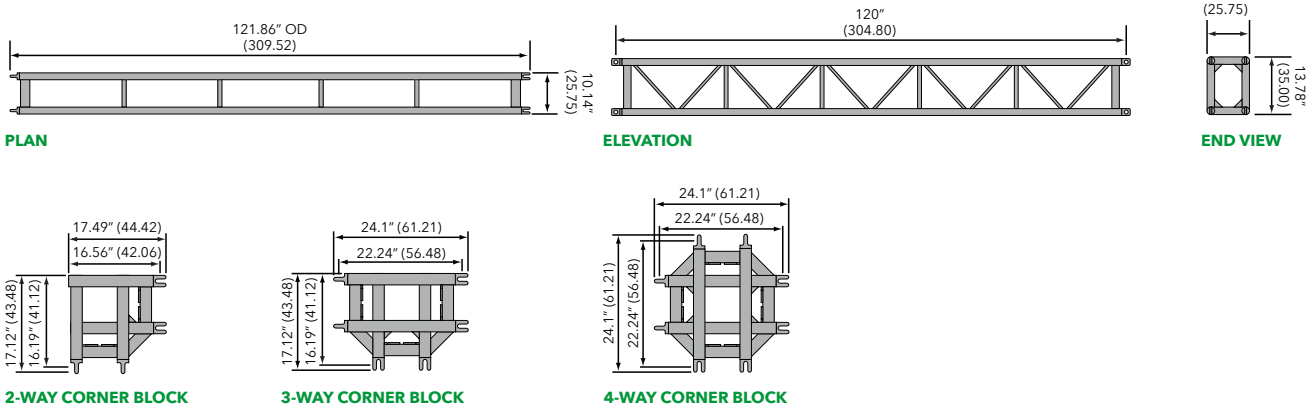


Super beam truss 13.7 x 10 spigoted

› 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



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	center point LOAD LBS (KGS)	center point MAX DEFL. IN.	third point LOAD LBS (KGS)	third point MAX DEFL. IN.	quarter point LOAD LBS (KGS)	quarter point 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

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoors 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 13.7X10 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

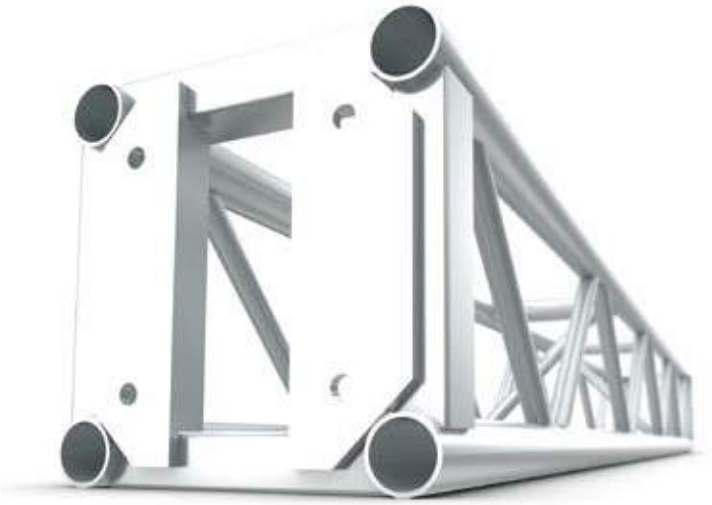
Box truss

Core truss 12 x 12 plated

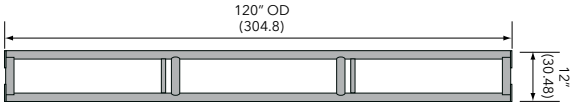
Core truss 12 x 12 plated

› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

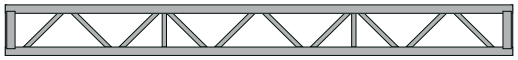
› Equipped with bolts
› Main chords are 2" OD x 1/8" aluminum
› Diagonals are 1" OD x 1/8" aluminum
› Fabricated by AWS / SFL certified welders



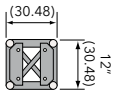
PLAN VIEWS 5-WAY & 6-WAY AVAILABLE



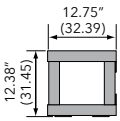
PLAN



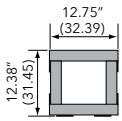
ELEVATION



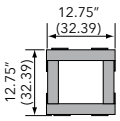
END VIEW



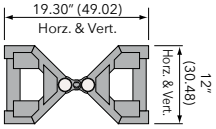
2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

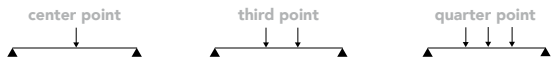


CENTER PIVOT HORIZ. ARTICULATING BLOCK

Note: Corners are same as Light Duty Truss

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	497	4907 (2226)	0.18	2483 (1129)	0.14	1862 (846)	0.18	1242 (565)	0.17
2	20 (6.09)	120	2400 (1089)	0.90	1200 (545)	0.77	900 (409)	0.92	600 (273)	0.87
3	30 (9.14)	50	1500 (680)	1.98	753 (342)	1.69	565 (257)	2.01	377 (171)	1.91
4	40 (12.21)	26	1040 (471)	3.41	516 (235)	2.95	387 (176)	3.46	258 (117)	3.30

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 (indoors 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 Theta Consulting and apply to truss fabricated after March 2009.

CORE TRUSS 12 X 12 PLATED
CONNECTIONS ARE SINGLE SETS OF BOLTS

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5 FT LIGHT DUTY PLATED TRUSS	TC C1212-060B	33 (15)
8 FT LIGHT DUTY PLATED TRUSS	TC C1212-096B	49 (22)
10 FT LIGHT DUTY PLATED TRUSS	TC C1212-120B	60 (27)

Box truss

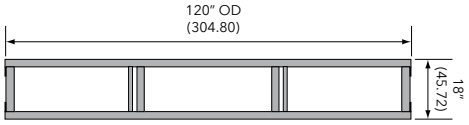
Core truss 12 x 18 plated

Core truss 12 x 18 plated

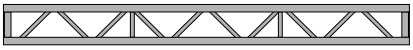
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

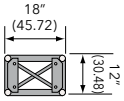
PLAN VIEWS



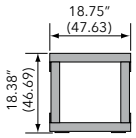
PLAN



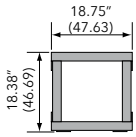
ELEVATION



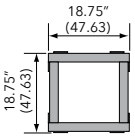
END VIEW



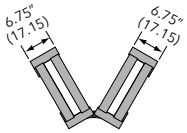
2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



HORIZONTAL VARIABLE CORNER

Note: Corners are same as Light Duty Truss

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	496	4960 (2250)	0.15	2481 (1125)	0.14	1861 (844)	0.18	1240 (563)	0.17
2	20 (6.09)	119	2380 (1080)	0.77	1195 (542)	0.57	896 (406)	0.72	597 (271)	0.67
3	30 (9.14)	49	1470 (667)	1.68	746 (338)	1.30	559 (254)	1.61	373 (169)	1.51
4	40 (12.21)	25	1000 (454)	2.90	506 (229)	2.35	379 (172)	2.86	253 (115)	2.70

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 (indoors 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 Theta Consulting and apply to truss fabricated after March 2009.

CORE TRUSS 12 X 18 PLATED
CONNECTIONS ARE SINGLE SETS OF BOLTS

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5 FT LIGHT DUTY PLATED TRUSS	TC C1218-060B	39 (18)
8 FT LIGHT DUTY PLATED TRUSS	TC C1218-096B	52 (24)
10 FT LIGHT DUTY PLATED TRUSS	TC C1218-120B	62 (28)

Box truss

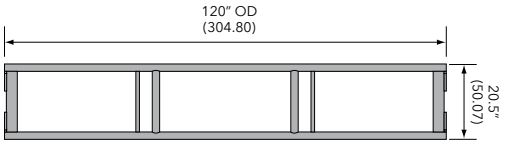
Core truss 20.5 x 20.5 plated

Core truss 20.5 x 20.5 plated

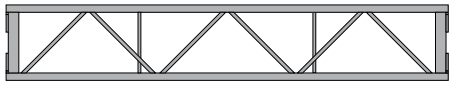
› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

› Equipped with bolts
› Main chords are 2" OD x 1/8" aluminum
› Diagonals are 1" OD x 1/8" aluminum
› Fabricated by AWS / SFL certified welders

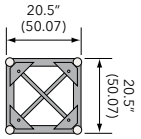
PLAN VIEWS



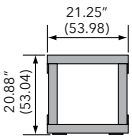
PLAN



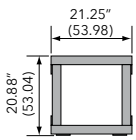
ELEVATION



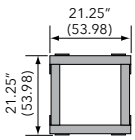
END VIEW



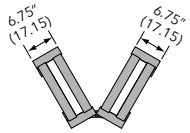
2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

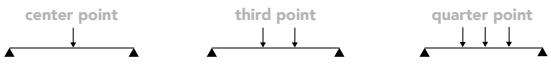


HORIZONTAL VARIABLE CORNER

Note: Corners are same as Light Duty Truss

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	620	6200 (2812)	0.06	5289 (2404)	0.09	3101 (1410)	0.09	2068 (940)	0.08
2	20 (6.09)	306	6120 (2776)	0.52	2925 (1330)	0.40	2074 (942.7)	0.48	1611 (732.3)	0.52
3	30 (9.14)	142	4260 (1932)	1.25	1927 (875.9)	0.92	1424 (647.3)	1.15	1061 (48.3)	1.19
4	40 (12.19)	76	3040 (1379)	2.22	1278 (580.9)	1.56	993 (451.4)	2.00	722 (328.2)	2.02
5	50 (15.24)	44	2200 (998)	3.29	1066 (484.5)	2.70	752 (341.8)	3.15	549 (249.5)	3.20
6	60 (18.29)	22	1320 (599)	4.02	655 (297.7)	3.38	424 (192.7)	3.62	316 (143.6)	3.72

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 (indoors 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 Theta Consulting and apply to truss fabricated after March 2009.

CORE TRUSS 20.5 X 20.5 PLATED
CONNECTIONS ARE SINGLE SETS OF BOLTS

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5 FT MEDIUM DUTY PLATED TRUSS	TC C2020-060B	45 (20)
8 FT MEDIUM DUTY PLATED TRUSS	TC C2020-096B	61 (28)
10 FT MEDIUM DUTY PLATED TRUSS	TC C2020-120B	69 (31)

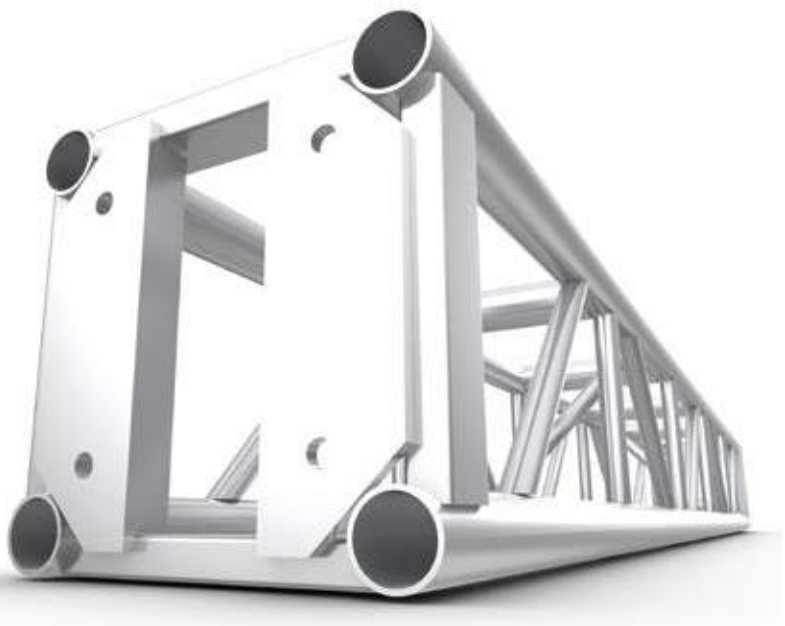
Box truss

Light duty truss 12 x 12 plated

Light duty truss 12 x 12 plated

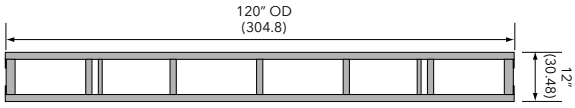
› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

› 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

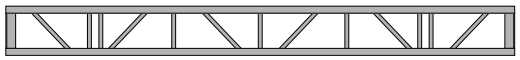


STRENGTH UNDER PRESSURE

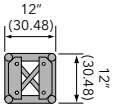
PLAN VIEWS



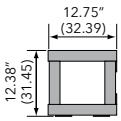
PLAN



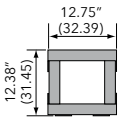
ELEVATION



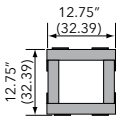
END VIEW



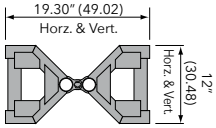
2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



HORIZONTAL VARIABLE CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point third point quarter point

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	446	4460 (2023)	0.14	2231 (1012)	0.11	1673 (759)	0.14	1116 (506)	0.13
2	20 (6.09)	106	2120 (962)	0.54	1063 (482)	0.44	797 (362)	0.56	531 (241)	0.52
3	30 (9.14)	43	1290 (585)	1.22	650 (295)	1.01	487 (221)	1.25	325 (147)	1.17
4	40 (12.21)	21	840 (381)	2.16	426 (193)	1.85	319 (145)	2.21	213 (97)	2.10

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 (indoors 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)
5 FT LIGHT DUTY PLATED TRUSS	TC 1212-060B	36 (16)
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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	33 (15)
LIGHT DUTY PLATED VERT. ARTICULATING BLOCK	TC 1212-AVB	33 (15)
LIGHT DUTY PLATED VERT. HORIZ. BLOCK	TC 1212-VHB	33 (15)
LIGHT DUTY PLATED VARIABLE VERT. BLOCK	TC 1212-VVB	33 (15)

Box truss

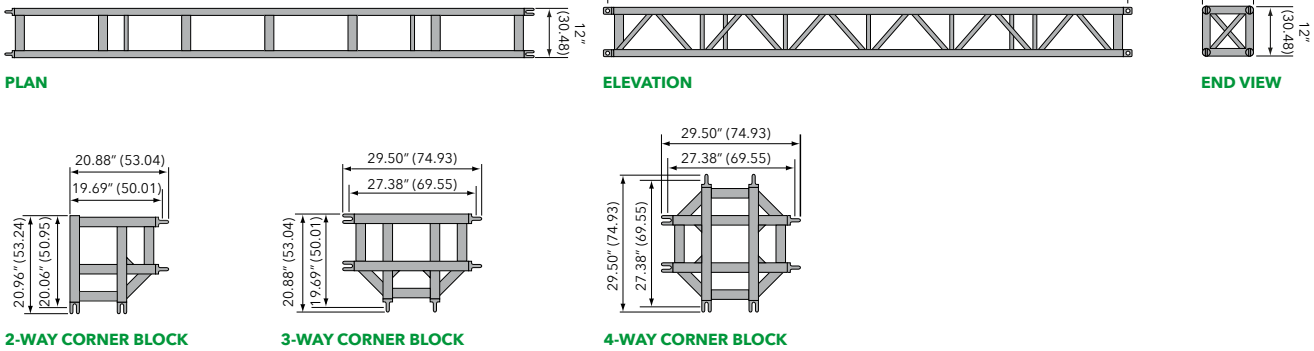
Light duty truss 12 x 12 spigoted

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



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point third point quarter point

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	1148	11480 (5207)	0.24	7785 (3531)	0.26	5742 (2604)	0.32	3828 (1736)	0.30
2	20 (6.09)	309	6180 (2803)	1.04	3099 (1405)	0.84	2324 (1054)	1.07	1549 (702)	1.00
3	30 (9.14)	111	3330 (1510)	2.00	2089 (947)	2.00	1226 (556)	2.00	879 (398)	2.00
4	40 (12.21)	41	1640 (743)	2.62	824 (373)	2.20	614 (278)	2.67	412 (186)	2.52

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

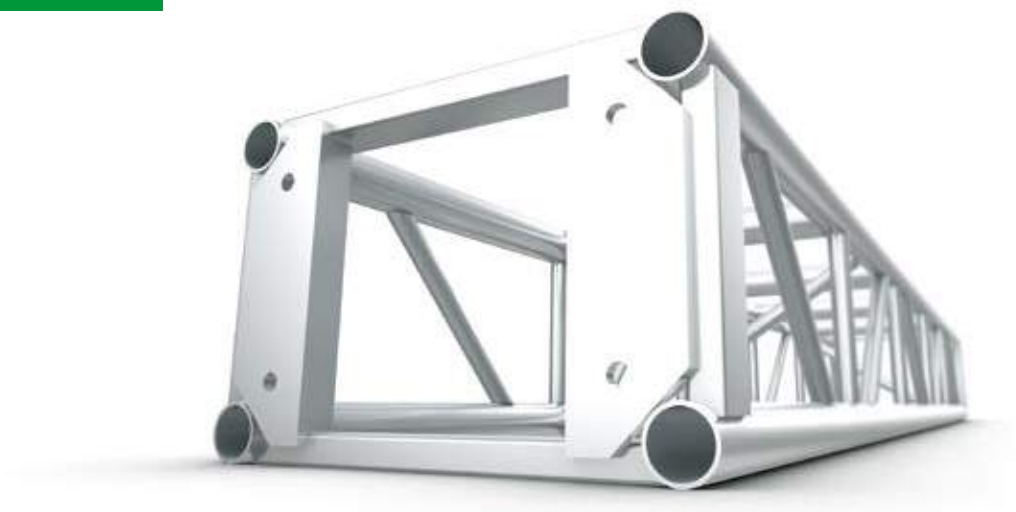
Box truss

Light duty truss 12 x 18 plated

Light duty truss 12 x 18 plated

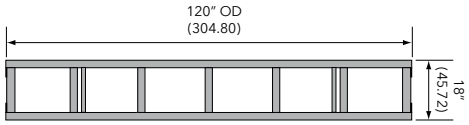
› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

› 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

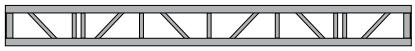


STRENGTH UNDER PRESSURE

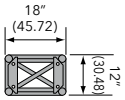
PLAN VIEWS



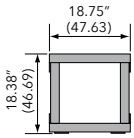
PLAN



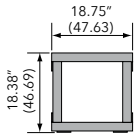
ELEVATION



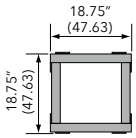
END VIEW



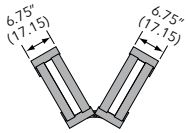
2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



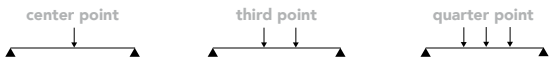
4-WAY CORNER BLOCK



HORIZONTAL VARIABLE CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	445	4450 (2019)	0.14	2229 (1011)	0.11	1672 (758)	0.14	1115 (506)	0.13
2	20 (6.09)	105	2100 (953)	0.54	1058 (480)	0.44	794 (360)	0.56	529 (240)	0.52
3	30 (9.14)	42	1260 (572)	1.20	643 (292)	1.02	482 (219)	1.25	322 (146)	1.17
4	40 (12.21)	20	800 (363)	2.11	417 (189)	1.86	312 (142)	2.21	208 (94)	2.10

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 (indoors 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)
5 FT LIGHT DUTY PLATED TRUSS	TC 1218-060B	39 (18)
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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
LIGHT DUTY PLATED 4-WAY CORNER BLOCK	TC 1218-C4B	25 (11)
LIGHT DUTY PLATED BLOCK VERT. (center pivot)	TC 1218-AVB	29 (13)
LIGHT DUTY PLATED VARIABLE CORNER VERT. (book style with brace pivot)	TC 1218-VVB	30 (13)

Box truss

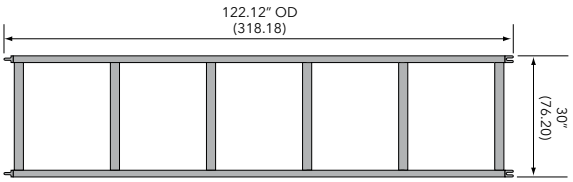
Ballroom truss 12 x 30 spigoted

Ballroom truss 12 x 30 spigoted

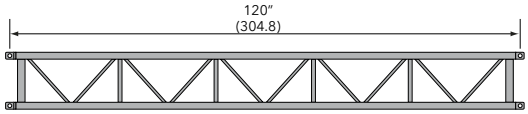
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

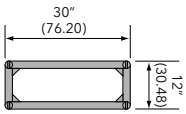
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



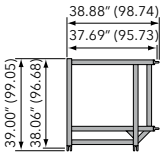
PLAN



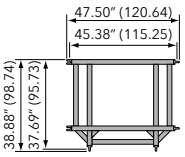
ELEVATION



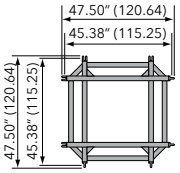
END VIEW



2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

NO. OF SECTS.	SPAN FT (MTRS)	MAXIMUM ALLOWABLE UNIFORM LOADS LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	MAXIMUM ALLOWABLE POINT LOADS center point LOAD LBS (KGS)	MAX DEFL. IN.	third point LOAD LBS (KGS)	MAX DEFL. IN.	quarter point LOAD LBS (KGS)	MAX DEFL. IN.
1	5 (1.52)	2272	11360 (5153)	0.03	11361 (5153)	0.05	5681 (2577)	0.04	3787 (1718)	0.04
2	10 (3.05)	1120	11200 (5080)	0.23	6299 (2857)	0.21	4724 (2143)	0.27	3150 (1429)	0.25
3	15 (4.57)	680	10200 (4626)	0.72	5106 (2316)	0.58	3112 (1412)	0.60	2489 (1129)	0.67
4	20 (6.09)	303	6060 (2749)	1.04	3036 (1377)	0.85	2277 (1033)	1.07	1518 (689)	1.00
5	25 (7.62)	192	4800 (2177)	1.67	2942 (1334)	1.63	1767 (802)	1.67	1267 (575)	1.67
6	30 (9.14)	105	3150 (1429)	2.00	1897 (860)	1.93	1157 (525)	2.00	830 (377)	2.00
7	35 (10.67)	60	2100 (953)	2.33	1229 (557)	2.20	778 (353)	2.33	558 (253)	2.33
8	40 (12.21)	34	1360 (617)	2.58	697 (316)	2.26	523 (237)	2.37	349 (158)	2.54

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

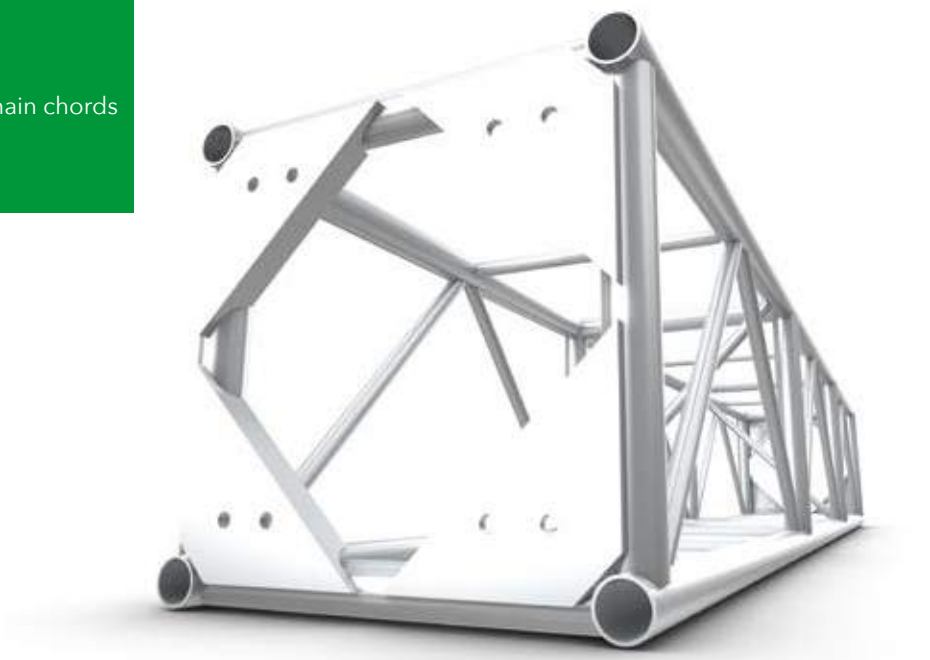
Box truss

Medium duty truss 20.5 x 20.5 plated

Medium duty truss 20.5 x 20.5 plated

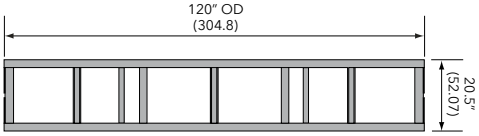
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› Equipped with bolts
› Main chords are 2″ OD x 1/8″ aluminum
› Diagonals are 1″ OD x 1/8″ aluminum
› Studio version available with 2″ OD x 3/16″ main chords
› Available with casters
› Fabricated by AWS / SFL certified welders

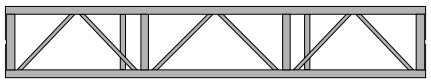


STRENGTH UNDER PRESSURE

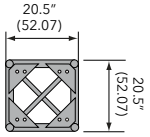
PLAN VIEWS 5-WAY & 6-WAY AVAILABLE



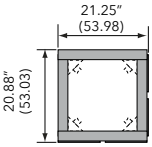
PLAN



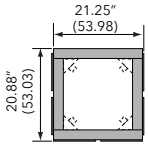
ELEVATION



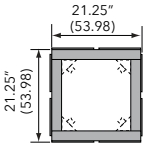
END VIEW



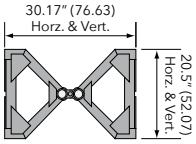
2-WAY CORNER BLOCK



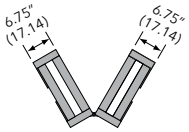
3-WAY CORNER BLOCK



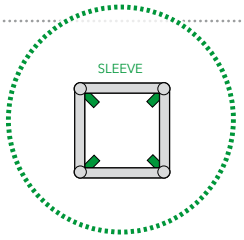
4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	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

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 (indoors 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

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5 FT MEDIUM DUTY TRUSS	TC 2020-060B	56 (25)
8 FT MEDIUM DUTY TRUSS	TC 2020-096B	77 (35)
10 FT MEDIUM DUTY TRUSS	TC 2020-120B	85 (39)
MEDIUM DUTY 2-WAY CORNER	TC 2020-C2B	31 (14)
MEDIUM DUTY 3-WAY CORNER	TC 2020-C3B	32 (15)
MEDIUM DUTY 4-WAY CORNER	TC 2020-C4B	39 (18)
MEDIUM DUTY 5-WAY CORNER	TC 2020-C5B	52 (24)
MEDIUM DUTY 6-WAY CORNER	TC 2020-C6B	58 (27)
5 FT MEDIUM DUTY TRUSS (studio)	TC 20ST-060B	66 (30)
8 FT MEDIUM DUTY TRUSS (studio)	TC 20ST-096B	91 (42)
10 FT MEDIUM DUTY TRUSS (studio)	TC 20ST-120B	102 (47)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
MD ARTICULATING BLOCK HORIZONTAL (center pivot)	TC 2020-AHB	59 (27)
MD ARTICULATING BLOCK VERTICAL (center pivot)	TC 2020-AVB	59 (27)
MD VARIABLE CORNER HOR. (book style with brace)	TC 2020-VHB	45 (21)
MD VARIABLE CORNER VER. (book style with brace)	TC 2020-VVB	45 (21)
MD 2-WAY SLEEVE FOR 12" TOWER	TC 2020-S2B	43 (20)
MD 3-WAY SLEEVE FOR 12" TOWER	TC 2020-S3B	50 (23)
MD 4-WAY SLEEVE FOR 12" TOWER	TC 2020-S4B	56 (26)

Box truss

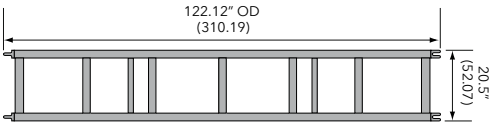
Medium duty truss 20.5 x 20.5 spigoted

Medium duty truss 20.5 x 20.5 spigoted

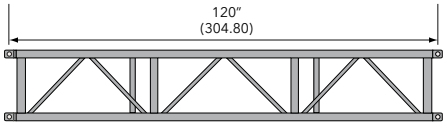
› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

› Equipped with steel spigots
› Main chords are 2" OD x 3/16" aluminum
› Diagonals are 1" OD x 1/8" aluminum
› Studio version available with 2" OD x 3/16" main chords
› Available with casters
› Fabricated by AWS / SFL certified welders

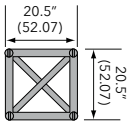
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER 5-WAY & 6-WAY AVAILABLE



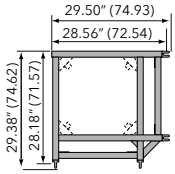
PLAN



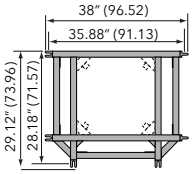
ELEVATION



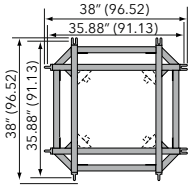
END VIEW



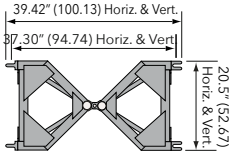
2-WAY CORNER BLOCK



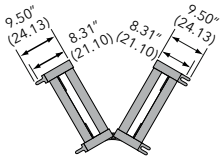
3-WAY CORNER BLOCK



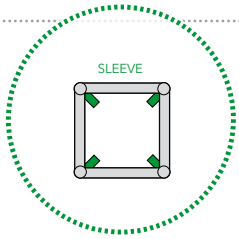
4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK

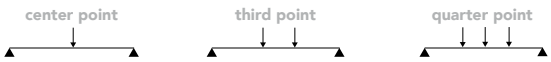


HORIZONTAL VARIABLE CORNER



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	920	9200 (4173)	0.06	9204 (4175)	0.09	4602 (2087)	0.08	3068 (1392)	0.07
2	20 (6.09)	450	9000 (4082)	0.45	5797 (2630)	0.46	4348 (1972)	0.59	2898 (1315)	0.54
3	30 (9.14)	252	7560 (3429)	1.29	3781 (1715)	1.04	2836 (1286)	1.32	1891 (858)	1.23
4	40 (12.19)	137	5480 (2486)	2.28	2748 (1246)	1.86	2061 (935)	2.34	1374 (623)	2.18
5	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 (indoors 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 DUTY TRUSS	TC 2020-060S	79 (36)
8 FT MEDIUM DUTY TRUSS	TC 2020-096S	104 (47)
10 FT MEDIUM DUTY TRUSS	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)
5 FT MEDIUM DUTY TRUSS (STUDIO)	TC 20ST-060S	80 (37)
8 FT MEDIUM DUTY TRUSS (STUDIO)	TC 20ST-096S	106 (49)
10 FT MEDIUM DUTY TRUSS (STUDIO)	TC 20ST-120S	117 (54)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

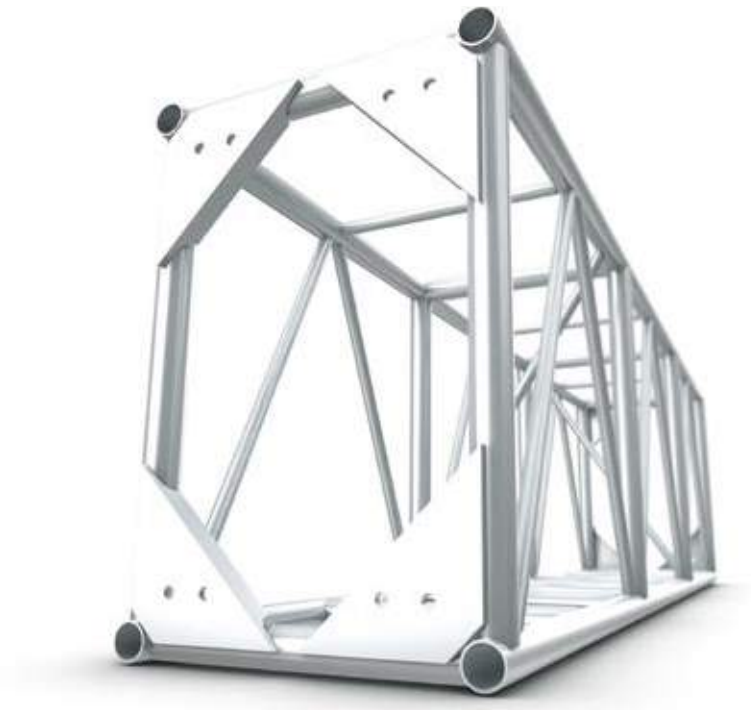
Box truss

Heavy duty 30 x 20.5 plated

Heavy duty 30 x 20.5 plated

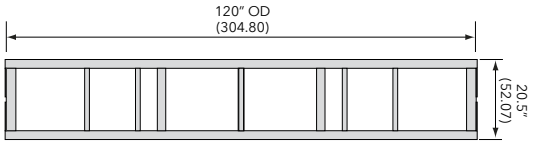
› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

› 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

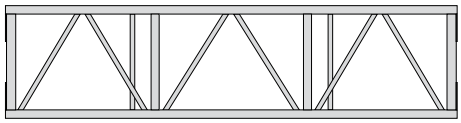


STRENGTH UNDER PRESSURE

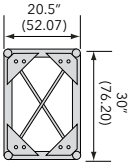
PLAN VIEWS



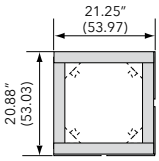
PLAN



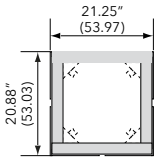
ELEVATION



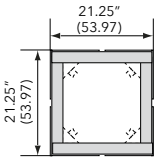
END VIEW



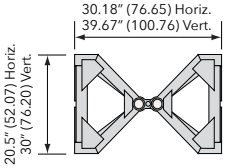
2-WAY CORNER BLOCK



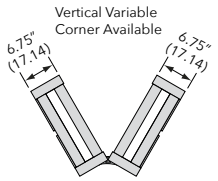
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



CENTER PIVOT HORIZ.
ARTICULATING BLOCK



HORIZONTAL VARIABLE
CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	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

Spigots Only

Note: Deflections reported in the tables on the left are the maximum expected for full loadings (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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

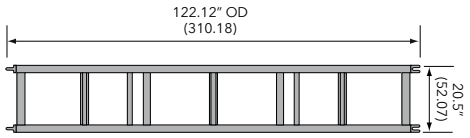
Heavy duty truss 30 x 20.5 spigoted

Heavy duty truss 30 x 20.5 spigoted

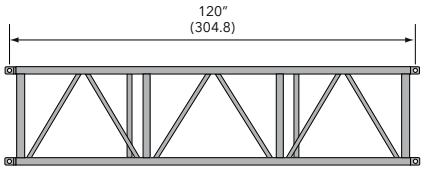
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

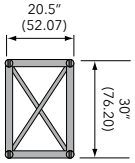
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



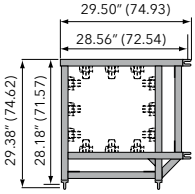
PLAN



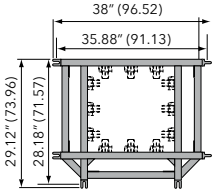
ELEVATION



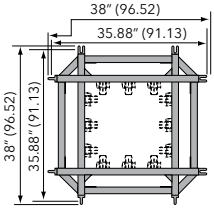
END VIEW



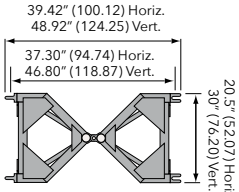
2-WAY CORNER BLOCK



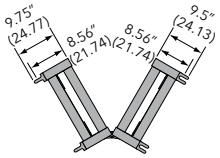
3-WAY CORNER BLOCK



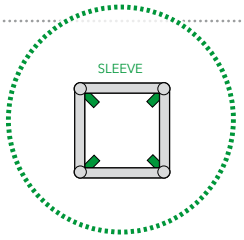
4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point third point quarter point

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	3555	35550 (16125)	0.09	17780 (8065)	0.08	13330 (6046)	0.10	8888 (4032)	0.09
2	20 (6.09)	877	17540 (7956)	0.38	8775 (3980)	0.30	6581 (2985)	0.39	4388 (1990)	0.36
3	30 (9.14)	381	11430 (5185)	0.85	5725 (2597)	0.69	4294 (1948)	0.87	2863 (1299)	0.81
4	40 (12.19)	208	8320 (3774)	1.52	4163 (1888)	1.23	3122 (1416)	1.55	2081 (944)	1.45
5	50 (15.24)	127	6350 (2880)	2.36	3195 (1449)	1.95	2396 (1087)	2.42	1598 (725)	2.27
6	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 (indoors 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 DUTY TRUSS	TC 3020-060S	90 (41)
8 FT HEAVY DUTY TRUSS	TC 3020-096S	120 (55)
10 FT HEAVY DUTY TRUSS	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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

*** Spans greater than 40 ft require custom sleeves for larger tower**

Box truss

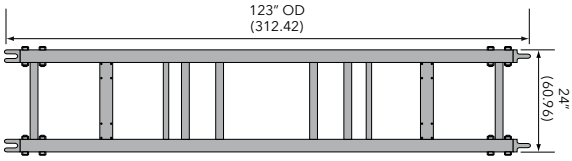
Extra heavy duty truss 36 x 24 spigoted

Extra heavy duty truss 36 x 24 spigoted

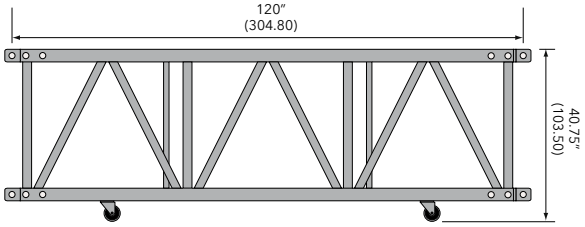
› Standard lengths are 20', 10' and 5'
› Custom lengths available upon request

› 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

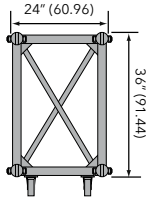
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



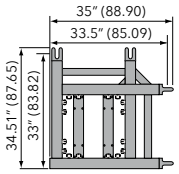
PLAN



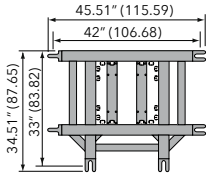
ELEVATION



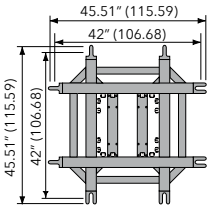
END VIEW



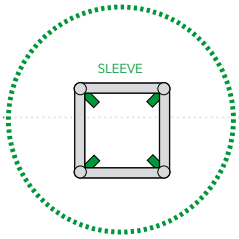
2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	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 (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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 (.46)
LARGE R-CLIP	TC RC-LG	- (-)

***Spans greater than 60 ft require custom sleeves for larger tower**

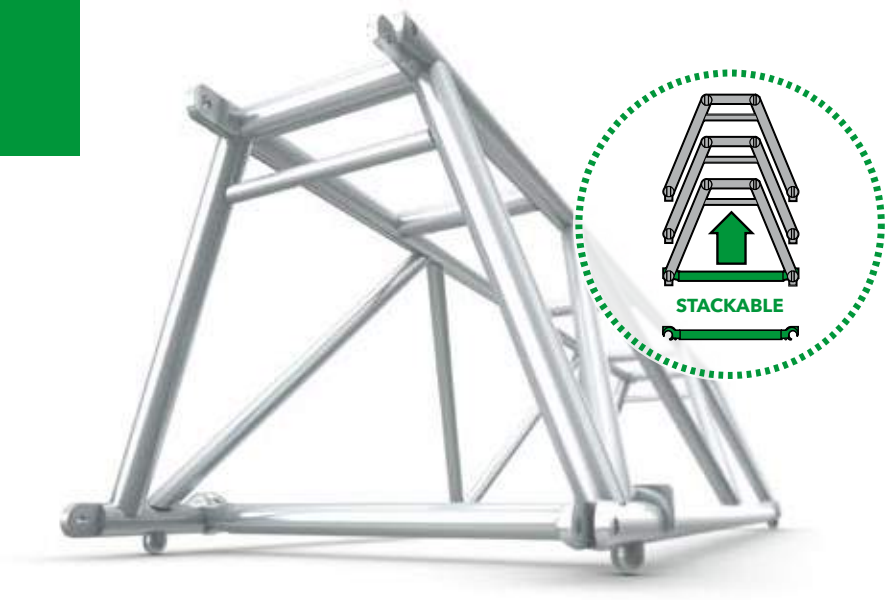
Box truss

Stacking truss 25 spigoted

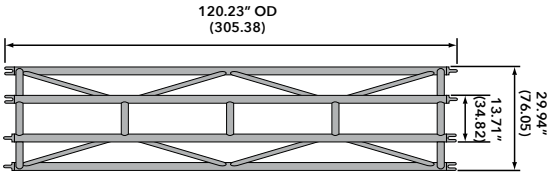
Stacking truss 25 spigoted

› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request
› Truss dollies available

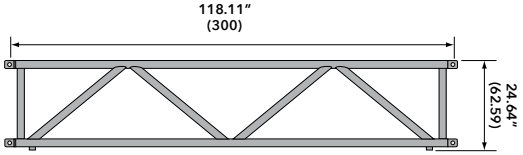
› Equipped with steel spigots
› Main chords are 1.90″ OD x 3/16″ aluminum
› Diagonals are 1.5″ OD x 1/8″ aluminum
› Snap Braces provided
› Fabricated by AWS / SFL certified welders



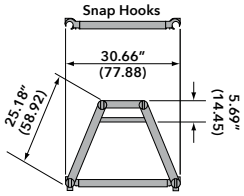
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



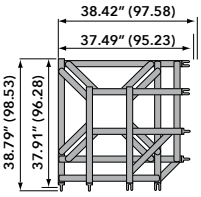
PLAN



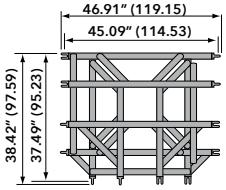
ELEVATION



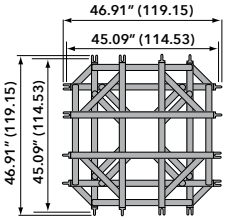
END VIEW



2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	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 (indoors 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 255K-060S	45 (20.4)
8 FT STACKING TRUSS	TC 255K-096S	72 (32.7)
10 FT STACKING TRUSS	TC 255K-120S	90 (40.8)
5/8" CLEVIS PIN	TC CP-625	.25 (.11)
MEDIUM R-CLIP	TC RC-MED	.10 (.04)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.25 (.11)
MEDIUM R-CLIP	TC RC-MED	.10 (.04)

Triangle truss


FERRELL CENTER

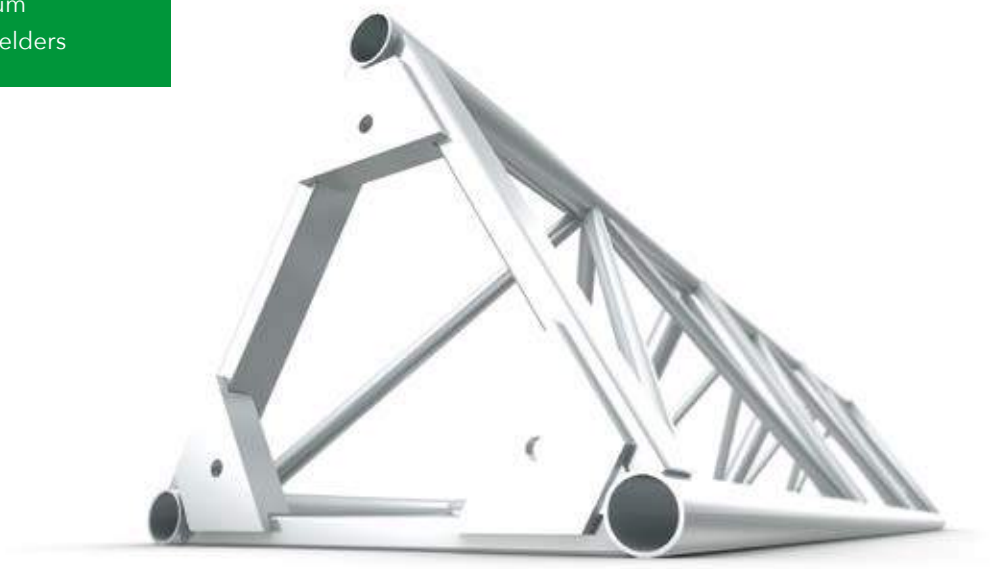
Triangle truss

Fixed triangle truss 20.5 plated

Fixed triangle truss 20.5 plated

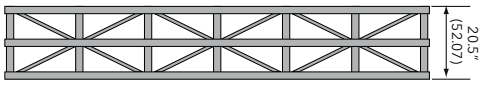
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

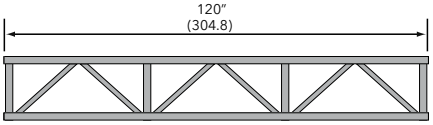


STRENGTH UNDER PRESSURE

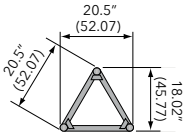
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



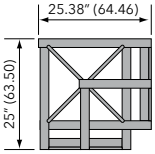
PLAN



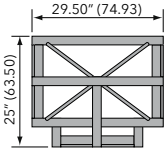
ELEVATION



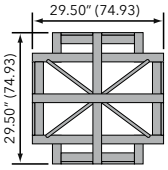
END VIEW



2-WAY CORNER BLOCK



3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	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 (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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

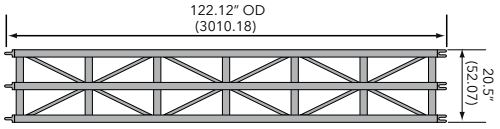
Fixed triangle truss 20.5 spigoted

Fixed triangle truss 20.5 spigoted

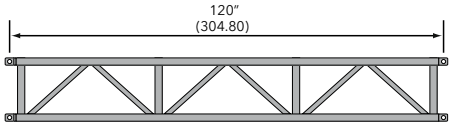
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

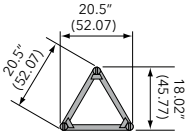
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



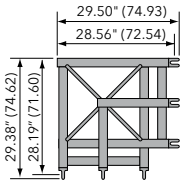
PLAN



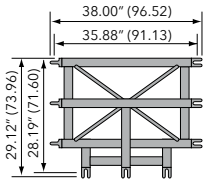
ELEVATION



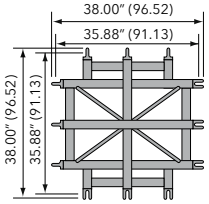
END VIEW



2-WAY CORNER BLOCK



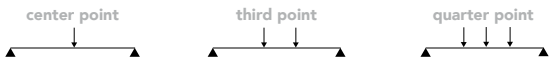
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	773	7730 (3506)	0.09	6229 (2825)	0.12	3867 (1754)	0.13	2578 (1169)	0.12
2	20 (6.09)	246	4920 (2232)	0.49	2468 (1119)	0.40	1851 (840)	0.51	1234 (560)	0.47
3	30 (9.14)	104	3120 (1415)	1.10	1574 (714)	0.91	1180 (535)	1.14	787 (357)	1.06
4	40 (12.19)	55	2200 (998)	1.97	1106 (502)	1.64	829 (376)	2.02	553 (251)	1.89
5	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 (indoors 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)
5 FT FIXED TRIANGLE TRUSS	TC 20FX-060S	62 (29)
8 FT FIXED TRIANGLE TRUSS	TC 20FX-096S	82 (37)
10 FT FIXED TRIANGLE TRUSS	TC 20FX-120S	90 (41)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
FIXED TRIANGLE 2-WAY CORNER BLOCK	TC 20FX-C2S	49 (22)
FIXED TRIANGLE 3-WAY CORNER BLOCK	TC 20FX-C3S	63 (29)
FIXED TRIANGLE 4-WAY CORNER BLOCK	TC 20FX-C4S	80 (36)
3/4" CLEVIS PIN	TC CP-75	4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

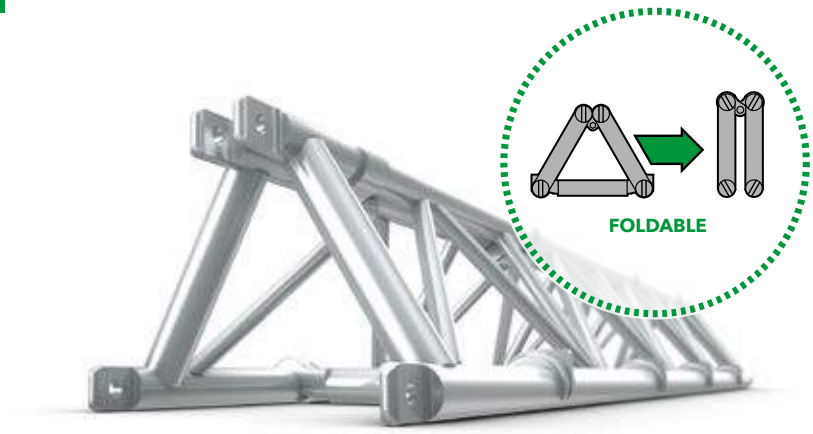
Triangle truss

Folding triangle truss 14 spigoted

Folding triangle truss 14 spigoted

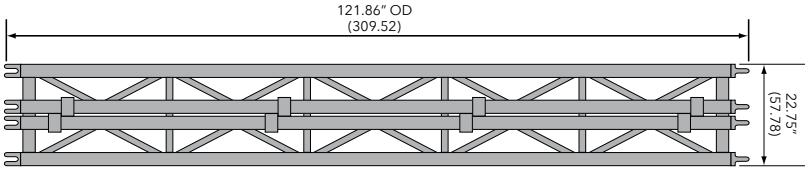
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

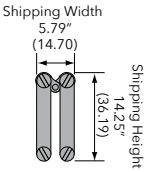


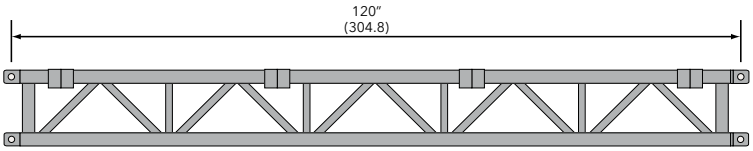
STRENGTH UNDER PRESSURE

PLAN VIEWS

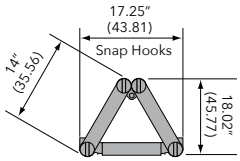


PLAN





ELEVATION



END VIEW

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point | third point | quarter point

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
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 (indoors 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 ALUMINUM SPIGOTS & 5/8″ CLEVIS PINS

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5 FT FOLDING TRIANGLE TRUSS	TC 14FT-060S	54 (25)
8 FT FOLDING TRIANGLE TRUSS	TC 14FT-096S	71 (32)
10 FT FOLDING TRIANGLE TRUSS	TC 14FT-120S	78 (36)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5/8″ CLEVIS PIN	TC CP-625	.25 (.11)
TOP HITCH PIN 5/8″ x 4-3/4″	TC HP5/8X4-3/4	.57 (.26)
MEDIUM R-CLIP	TC RC- MED	- (-)

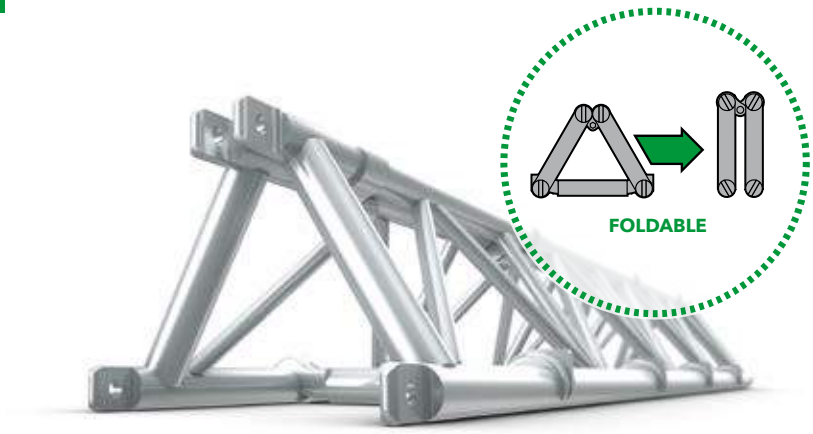
Triangle truss

Folding triangle truss 20.5 spigoted

Folding triangle truss 20.5 spigoted

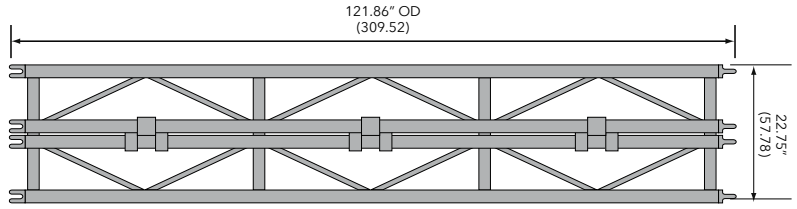
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› Equipped with steel spigots
› Main chords are 2″ OD x 1/18″ aluminum
› Diagonals are 1″ OD x 1/8″ aluminum
› Snap Braces provided to lock truss in open position
› Fabricated by AWS / SFL certified welders

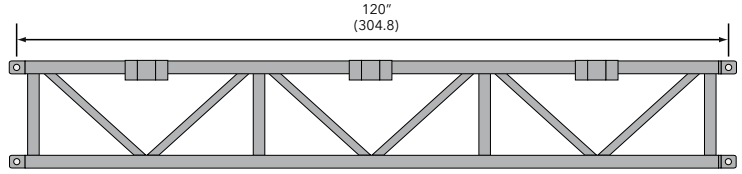


STRENGTH UNDER PRESSURE

PLAN VIEWS



PLAN



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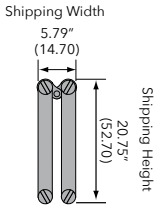
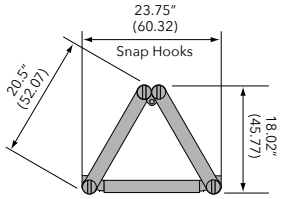




END VIEW

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	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 (indoors 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 ALUMINUM SPIGOTS & 5/8" 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5/8" CLEVIS PIN	TC CP-625	.25 (.11)
TOP HITCH PIN 5/8" x 4-3/4"	TC HP5/8X4-3/4	.57 (.26)
MEDIUM R-CLIP	TC RC- MED	- (-)

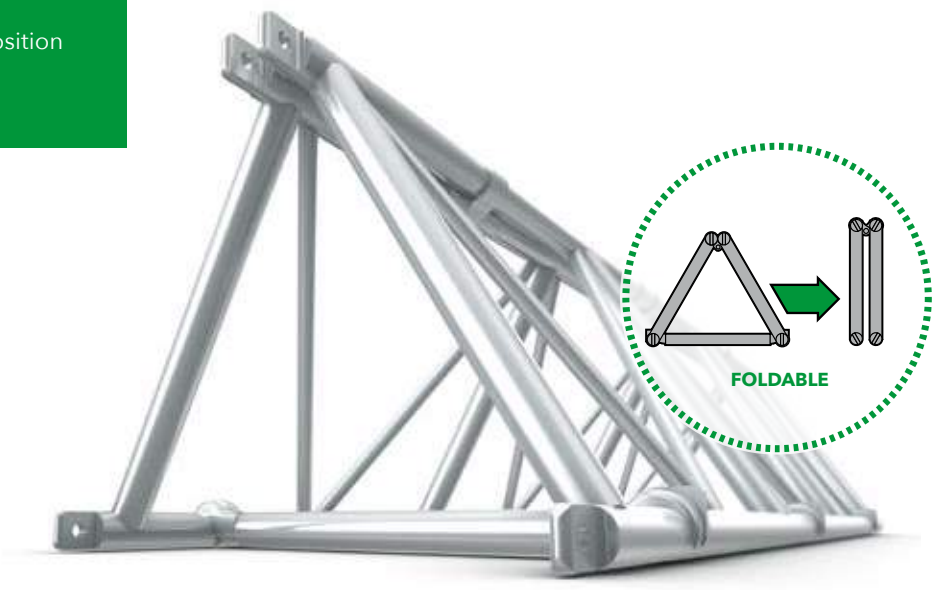
Triangle truss

Folding triangle truss 26 spigoted

Folding triangle truss 26 spigoted

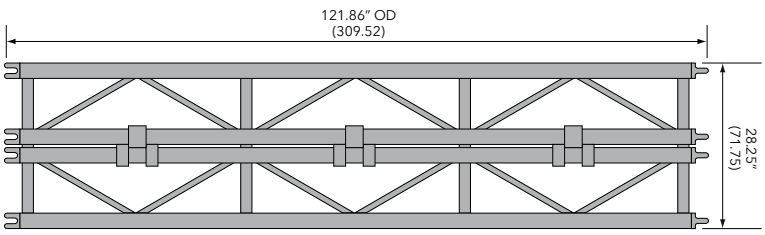
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

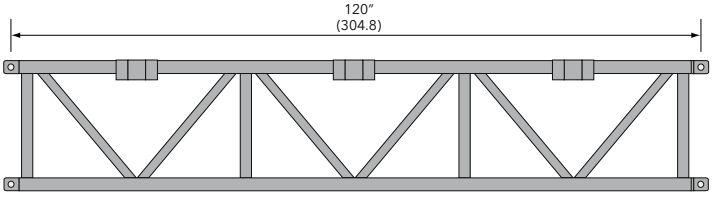


STRENGTH UNDER PRESSURE

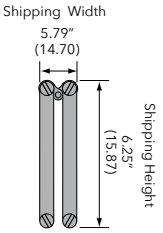
PLAN VIEWS

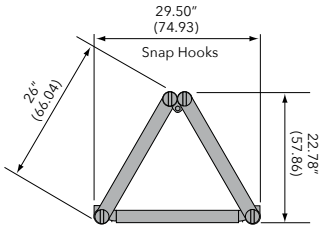


PLAN



ELEVATION





END VIEW

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	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 (indoors 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 ALUMINUM SPIGOTS & 5/8" 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-96S	84 (38)
10 FT FOLDING TRIANGLE TRUSS	TC 26FT-120S	92 (42)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
5/8" CLEVIS PIN	TC CP-625	.25 (.11)
TOP HITCH PIN 5/8" x 4-3/4"	TC HP5/8X4-3/4	.57 (.26)
MEDIUM R-CLIP	TC RC- MED	- (-)

Folding box truss

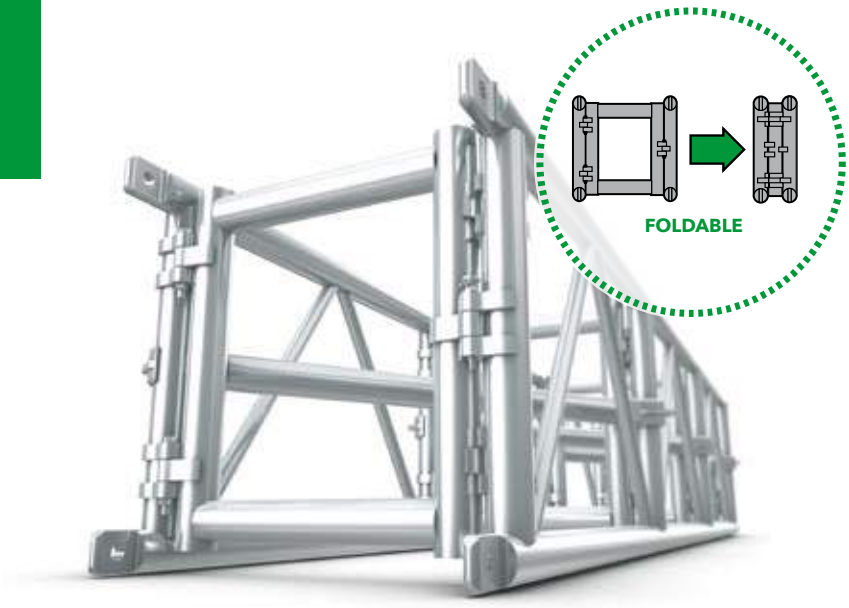
Folding box truss

Medium duty folding truss 20.5 x 20.5 spigoted

Medium duty folding truss 20.5 x 20.5 spigoted

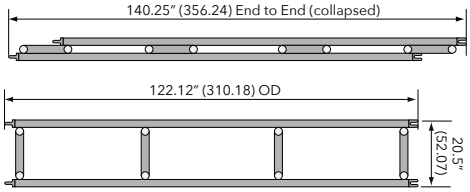
› Standard lengths are 10′, 8′ and 5′
› Custom lengths available upon request

› 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

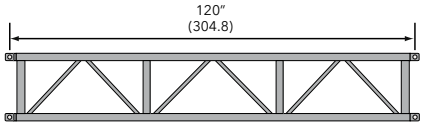


STRENGTH UNDER PRESSURE

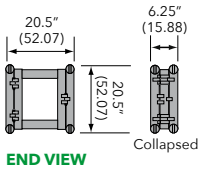
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



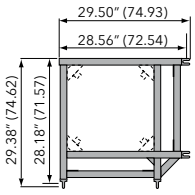
PLAN



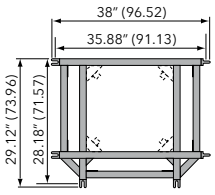
ELEVATION



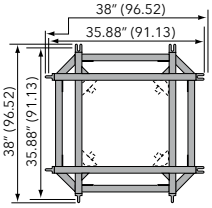
END VIEW



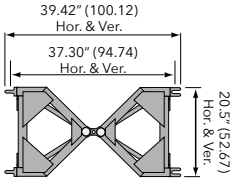
2-WAY CORNER BLOCK



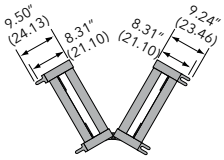
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

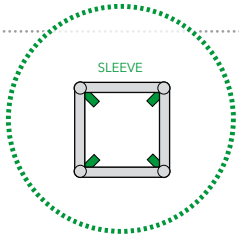


CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER

Note: Corners are same as Medium Duty Truss



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	920	9200 (4173)	0.06	9204 (4175)	0.09	4602 (2087)	0.08	3068 (1392)	0.07
2	20 (6.09)	450	9000 (4082)	0.45	5797 (2630)	0.46	4348 (1972)	0.59	2898 (1315)	0.54
3	30 (9.14)	252	7560 (3429)	1.29	3781 (1715)	1.04	2836 (1286)	1.32	1891 (858)	1.23
4	40 (12.19)	137	5480 (2486)	2.28	2748 (1246)	1.86	2061 (935)	2.34	1374 (623)	2.18
5	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 (indoors 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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

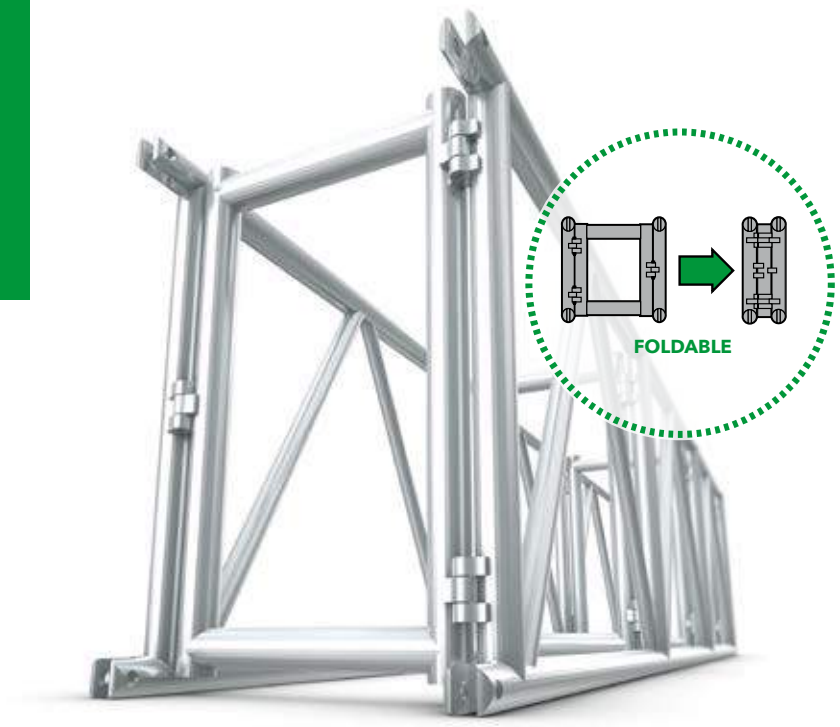
Folding box truss

Heavy duty folding truss 30 x 20.5 spigoted

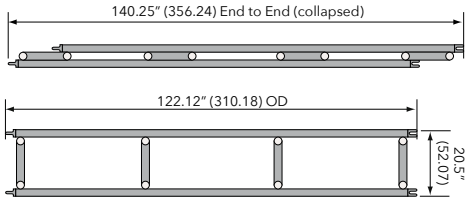
Heavy duty folding truss 30 x 20.5 spigoted

› Standard lengths are 10', 8' and 5'
› Custom lengths available upon request

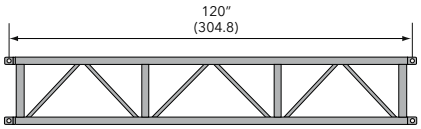
› Equipped with steel spigots
› Main chords are 2" OD x 3/16" aluminum
› Diagonals are 1" OD x 1/8" aluminum
› Snap Braces provided to lock truss in open position
› Fabricated by AWS / SFL certified welders



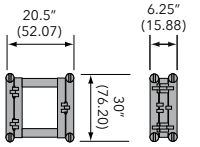
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



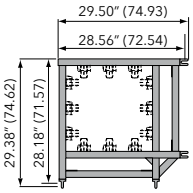
PLAN



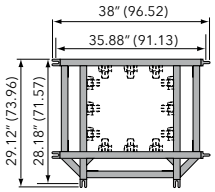
ELEVATION



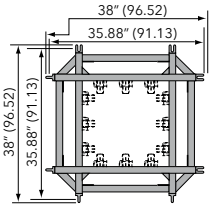
END VIEW



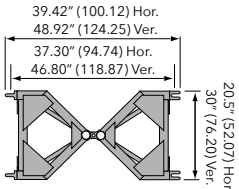
2-WAY CORNER BLOCK



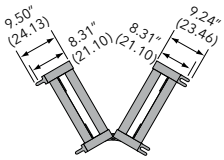
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK

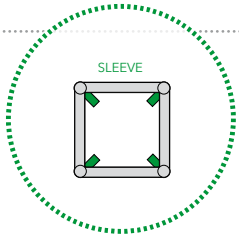


CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER

Note: Junctions are same as Heavy Duty Truss



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	3555	35550 (16125)	0.09	17780 (8065)	0.08	13330 (6046)	0.10	8888 (4032)	0.09
2	20 (6.09)	877	17540 (7956)	0.38	8775 (3980)	0.30	6581 (2985)	0.39	4388 (1990)	0.36
3	30 (9.14)	381	11430 (5185)	0.85	5725 (2597)	0.69	4294 (1948)	0.87	2863 (1299)	0.81
4	40 (12.19)	208	8320 (3774)	1.52	4163 (1888)	1.23	3122 (1416)	1.55	2081 (944)	1.45
5	50 (15.24)	127	6350 (2880)	2.36	3195 (1449)	1.95	2396 (1087)	2.42	1598 (725)	2.27
6	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 (indoors 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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

Swing truss

Swing truss

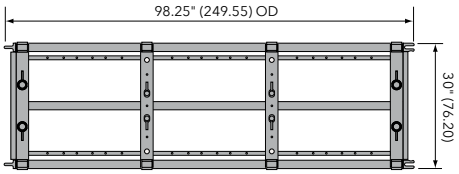
Swing wing truss 30 x 30 spigoted

Swing wing truss 30 x 30 spigoted

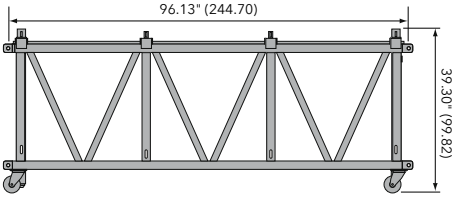
› Standard lengths are:
  › 96″ (3 bay, fits 3 moving heads)
  › 126″ (4 bay, fits 4 moving heads)
› Supports up to 3 lamp bars
› Accessories include a 3rd caster assembly and cable hooks

› 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

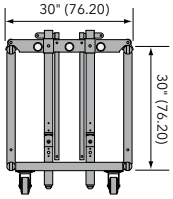
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



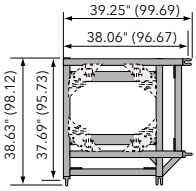
PLAN



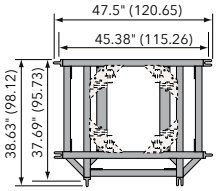
ELEVATION



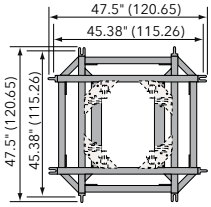
END VIEW



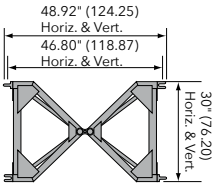
2-WAY CORNER BLOCK



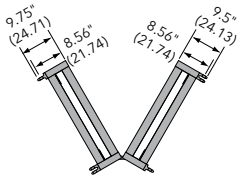
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	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 (2.43)	2180	17440 (7911)	0.03	10910 (4949)	.03	6350 (2880)	.01	4610 (2091)	.02
16 (4.87)	1080	17280 (7838)	0.20	7490 (3398)	.14	4690 (2127)	.03	3570 (1619)	.12
24 (7.31)	570	13680 (6205)	0.53	5610 (2545)	.36	3650 (1656)	.09	2870 (1302)	.33
32 (9.75)	340	10880 (4935)	1.02	4400 (1996)	.69	2940 (1334)	.19	2360 (1071)	.66
40 (12.19)	210	8400 (3810)	1.59	3550 (1610)	1.13	2420 (1098)	.36	1970 (894)	1.12
48 (14.63)	140	6720 (3048)	2.32	2910 (1320)	1.69	2010 (912)	.60	1650 (748)	1.71
56 (17.06)	100	5600 (2540)	3.16	2400 (1089)	2.33	1680 (762)	.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 (indoors 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 AND 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
HDPRT 4-WAY CORNER BLOCK	TC 3030-C4S	160 (73)
3/4" CLEVIS PIN	TC CP-75	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

Swing truss

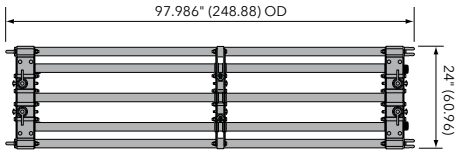
Edge truss 30 x 24 spigoted

Edge truss 30 x 24 spigoted

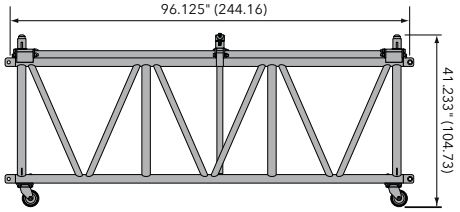
- Standard lengths are:
  - 96" (3 bay, fits 3 moving heads)
  - 126" (4 bay, fits 4 moving heads)
- Metric lengths are 243.84 cm and 304.8 cm
- Equipped with 3 lamp bars
- Adjustable middle bay
- Interchangeable ladders
- Stacking spigots

- Equipped with Edge rotating steel spigot connections
- Main chords are 2" OD x 3/16" - 50.8 mm OD x 4.7 mm aluminum
- Diagonals are 1-1/2" OD x 1/8" - 38.1 mm OD x 3.1 mm aluminum
- Fabricated by AWS / SFL certified welders

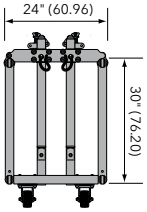
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



PLAN



ELEVATION



END VIEW

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

SPAN FT (MTRS)	LOAD LBS/FT	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)	920	7360 (3338)	.01	7363 (3340)	.02	3681 (1670)	.02	2454 (1113)	.02
16 (4.88)	450	7200 (3266)	.10	5011 (2273)	.11	3437 (1559)	.13	2398 (1087)	.12
24 (7.32)	293	7032 (3190)	.33	3349 1519)	.26	2421 (1098)	.31	1929 (875)	.34
32 (9.75)	169	5408 (2453)	.63	2340 (1061)	.46	1788 (811)	.57	1384 (728)	.61
40 (12.20)	94	3760 (1706)	.93	1632 (740)	.70	1343 (609)	.91	1024 (465)	.96
48 (14.60)	53	2544 (1154)	1.24	1089 (494)	.96	1002 (455)	1.31	761 (346)	1.36

Spigots Only

Note: Deflections reported in the above tables are maximum expected for full loadings (indoors 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 AND 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 in clevis pin	TC CP-75	.4 (.18)
Med. R-Clip	TC RC-MED	- (-)

Pre-Rig truss


SANDIA

Pre-Rig truss

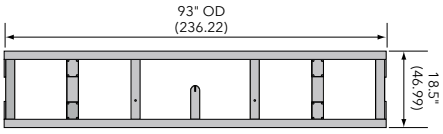
Single hung pre-rig truss 26 x 18.5 plated

Single hung pre-rig truss 26 x 18.5 plated

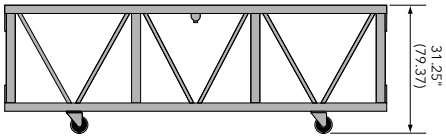
› Standard length are 63", 93" and 123"
› Available in 63" (4 Par) and 123" (8 Par) lengths
› Available loaded with wired lamp bar of 6 Par 64's

› 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

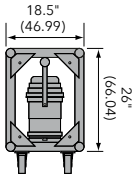
PLAN VIEWS



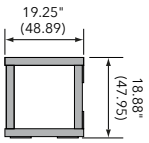
PLAN



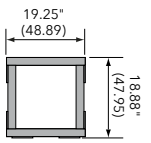
ELEVATION



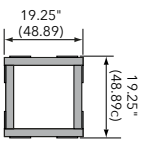
END VIEW



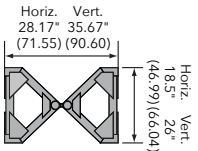
2-WAY CORNER BLOCK



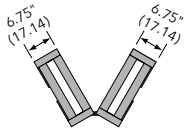
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point | third point | quarter point

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	7'-9" (2.35)	1136	8804 (3993)	0.02	8251 (3743)	0.03	4403 (1997)	0.03	2936 (1332)	0.03
2	15'-6" (4.72)	526	8153 (3698)	0.16	4077 (1849)	0.13	3058 (1387)	0.17	2038 (924)	0.16
3	23'-3" (7.04)	229	5324 (2415)	0.37	2664 (1208)	0.30	1998 (906)	0.38	1332 (604)	0.35
4	31'-0" (9.44)	125	3875 (1758)	0.65	1941 (880)	0.53	1456 (660)	0.67	970 (604)	0.62
5	38'-9" (11.80)	77	2983 (1358)	1.02	1494 (678)	0.83	1120 (508)	1.04	747 (339)	0.97
6	46'-6" (14.17)	50	2325 (1055)	1.44	1185 (538)	1.21	889 (403)	1.50	593 (269)	1.41
7	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 (indoors 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)

Pre-Rig truss

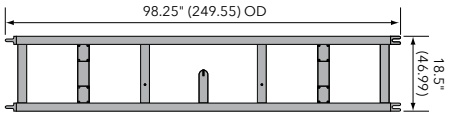
Single hung pre-rig truss 26 x 18.5 spigoted

Single hung pre-rig truss 26 x 18.5 spigoted

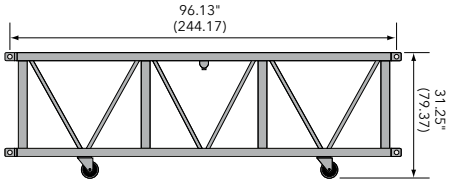
› Standard lengths are 66", 96" and 126"
› Available in 66" (4 PAR) and 126" (8 PAR) lengths
› Available loaded with wired lamp bar of 6 Par 64's

› 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

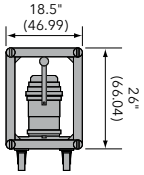
PLAN VIEWS



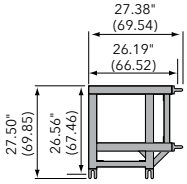
PLAN



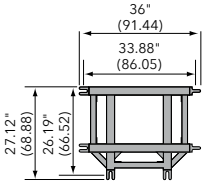
ELEVATION



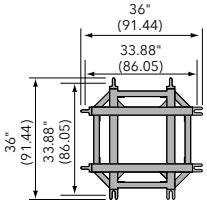
END VIEW



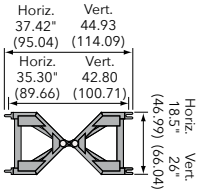
2-WAY CORNER BLOCK



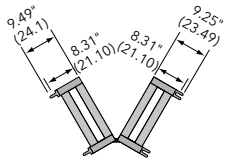
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



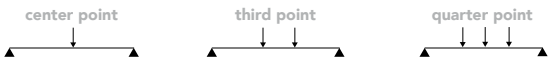
CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	8 (2.43)	1171	9368 (4249)	0.04	9372 (4251)	0.06	4686 (2126)	0.05	3124 (1417)	0.05
2	16 (4.87)	573	9168 (4159)	0.29	9175 (4162)	0.46	4587 (2081)	0.40	3058 (1387)	0.37
3	24 (7.31)	374	8976 (4072)	0.98	7682 (3485)	1.33	4489 (2036)	1.32	2993 (1358)	1.23
4	32 (9.75)	254	8128 (3687)	2.13	4584 (2079)	1.93	2990 (1356)	2.13	2145 (973)	2.13
5	40 (12.19)	124	4960 (2250)	2.67	3111 (1411)	2.67	1826 (828)	2.67	1309 (594)	2.67
6	48 (14.63)	66	3168 (1437)	3.20	2005 (909)	3.20	1176 (533)	3.20	844 (383)	3.20
7	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 (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
3/4" CLEVIS PIN	TC CP-75	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

Pre-Rig truss

Double hung pre-rig truss 26 x 30 plated

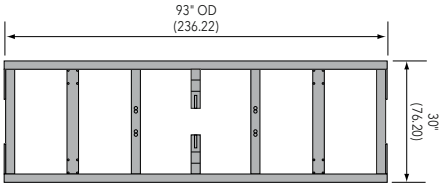
Double hung pre-rig truss 26 x 30 plated

› Standard length are 63", 93" and 123"
› Available in 63" (4 Par) and 123" (8 Par) lengths
› Available loaded with wired lamp bar of 6 Par 64's

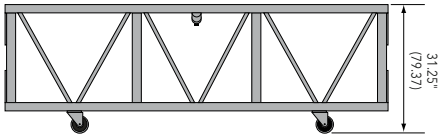
› Equipped with bolts
› Main chords are 2" OD x 1/8" aluminum
› Diagonals are 1" OD x 1/8" aluminum
› Fabricated by AWS / SFL certified welders

STRENGTH UNDER PRESSURE

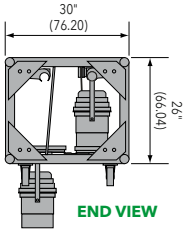
PLAN VIEWS



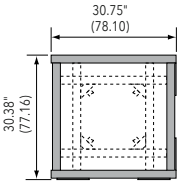
PLAN



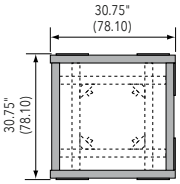
ELEVATION



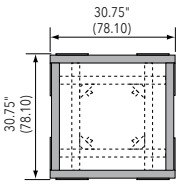
END VIEW



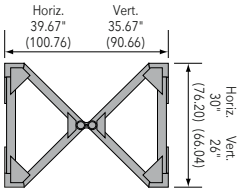
2-WAY CORNER BLOCK



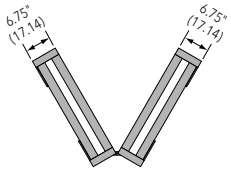
3-WAY CORNER BLOCK



4-WAY CORNER BLOCK



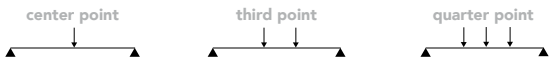
CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER

MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS



NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	7' - 9" (2.35)	1135	8796 (3990)	0.02	8248 (3741)	0.03	4400 (1996)	0.03	2933 (1330)	0.03
2	15' - 6" (4.72)	525	8137 (3691)	0.16	4070 (1846)	0.13	3052 (1384)	0.17	2035 (923)	0.16
3	23' - 3" (7.04)	228	5301 (2405)	0.37	2653 (1203)	0.30	1990 (903)	0.38	1327 (602)	0.35
4	31' - 0" (9.44)	124	3844 (1744)	0.65	1927 (874)	0.53	1445 (655)	0.67	963 (437)	0.62
5	38' - 9" (11.80)	76	2945 (1336)	1.02	1477 (670)	0.84	1107 (502)	1.04	738 (335)	0.97
6	46' - 6" (14.17)	50	2325 (1055)	1.47	1164 528)	1.22	873 (396)	1.50	582 (264)	1.41
7	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 (indoors 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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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)

Pre-Rig truss

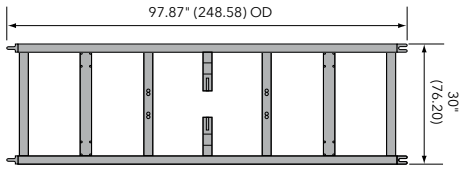
Double hung pre-rig truss 26 x 30 spigoted

Double hung pre-rig truss 26 x 30 spigoted

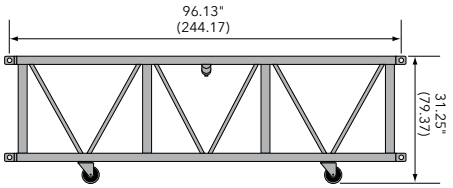
› Standard lengths are 66", 96" and 126"
› Available in 66-1/8" (4 Par) and 126-1/8" (8 Par) lengths
› Available loaded with wired lamp bar of 6 Par 64's

› 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

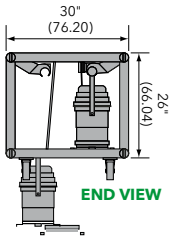
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



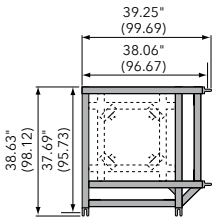
PLAN



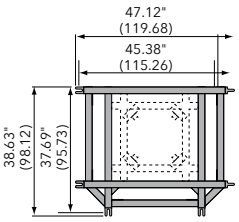
ELEVATION



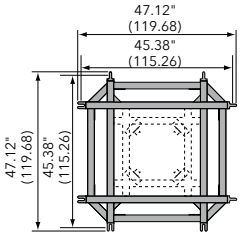
END VIEW



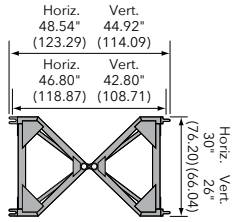
2-WAY CORNER BLOCK



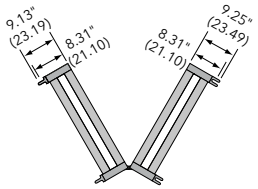
3-WAY CORNER BLOCK



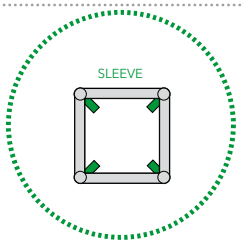
4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point third point quarter point

NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	8 (2.43)	1169	9352 (4242)	0.02	9353 (4243)	0.03	4676 (2121)	0.02	3118 (1414)	0.02
2	16 (4.87)	571	9136 (4144)	0.14	9136 (4144)	0.22	4568 (2072)	0.19	3045 (1381)	0.17
3	24 (7.31)	371	8904 (4039)	0.46	7668 (3478)	0.63	4460 (2023)	0.62	2973 (1349)	0.58
4	32 (9.75)	271	8672 (3934)	1.08	4565 (2071)	0.92	3424 (1553)	1.16	2282 (1035)	1.08
5	40 (12.19)	185	7400 (3357)	1.84	4427 (2008)	1.76	2674 (1213)	1.81	1981 (899)	1.87
6	48 (14.63)	119	5712 (2591)	2.54	2863 (1299)	2.09	2147 (974)	2.60	1431 (649)	2.43
7	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 (indoors 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
SPIGOTED CONNECTIONS ARE STEEL SPIGOTS & 3/4" CLEVIS PINS

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
66" PRT TRUSS (EMPTY)	TC 2630-066S	117 (53)
96" PRT TRUSS (EMPTY)	TC 2630-096S	134 (61)
126" PRT TRUSS (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)

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
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	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

Pre-Rig truss

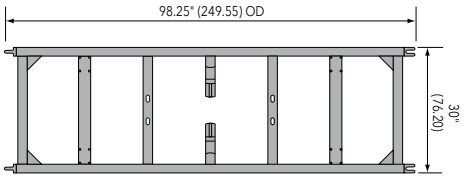
Heavy duty pre-rig truss 30 x 30 spigoted

Heavy duty pre-rig truss 30 x 30 spigoted

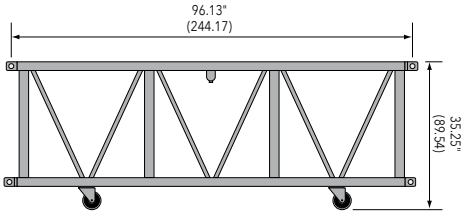
› Standard lengths are 66", 96" and 126"
› Available in 66" (66-1/8", 4 Par) and 126" (126-1/8", 8 Par) lengths

› Equipped with steel spigots
› Designed for use with color changers
› 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

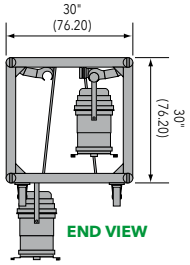
PLAN VIEWS CONNECTOR ORIENTATION SPECIFIED BY CUSTOMER



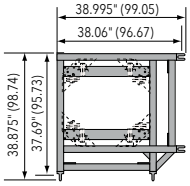
PLAN



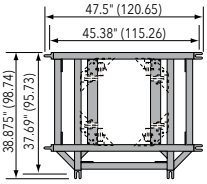
ELEVATION



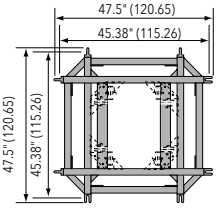
END VIEW



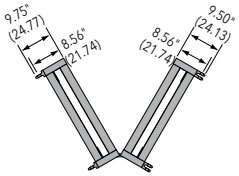
2-WAY CORNER BLOCK



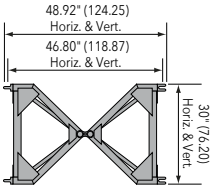
3-WAY CORNER BLOCK



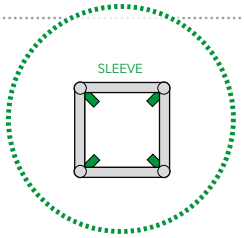
4-WAY CORNER BLOCK



CENTER PIVOT HORIZ. ARTICULATING BLOCK



HORIZONTAL VARIABLE CORNER



MAXIMUM ALLOWABLE UNIFORM LOADS

MAXIMUM ALLOWABLE POINT LOADS

center point third point quarter point

SPAN FT (MTRS)	LOAD LBS/FT	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 (2.43)	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 (indoors 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.

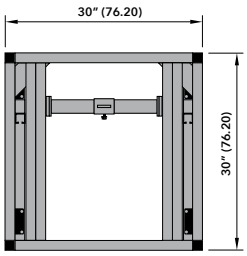
HEAVY DUTY PRE-RIG TRUSS 30 X 30 SPIGOTED
CONNECTIONS ARE STEEL SPIGOTS & 3/4" CLEVIS PINS

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
66" HDPRT TRUSS (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)

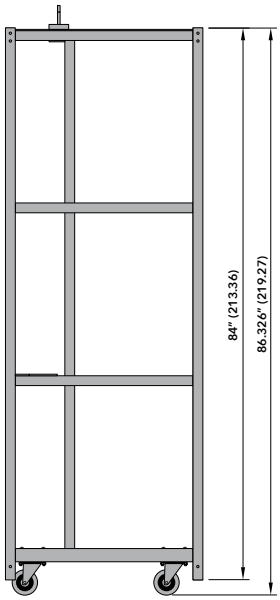
PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
HDPRT 2-WAY SLEEVE FOR 16" TOWER	TC 3030-S2S	159 (52)
HDPRT 3-WAY SLEEVE FOR 16" TOWER	TC 3030-S3S	181 (62)
HDPRT 4-WAY SLEEVE FOR 16" TOWER	TC 3030-S4S	204 (73)
3/4" CLEVIS PIN	TC CP-75	.4 (.18)
MEDIUM R-CLIP	TC RC-MED	- (-)

Dance tower

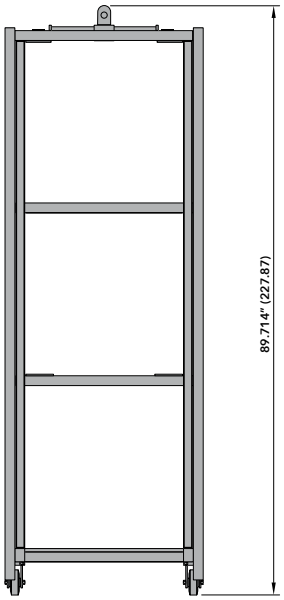
**The TOMCAT dance tower is a versatile truss product used in numerous Broadway theatrical productions such as Mamma Mia, Hairspray and The Producers.
The tower provides a side lighting position for performers on stage and is designed so that truss members don't interfere with the lighting fixtures. 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.**



PLAN



LEFT SIDE



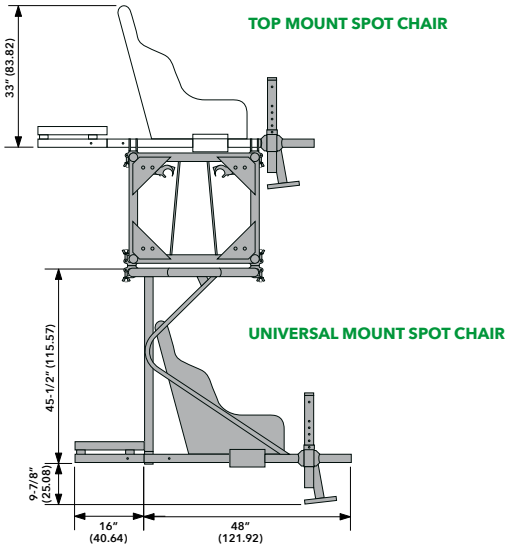
FRONT

DANCE TOWER		
PRODUCT DESCRIPTION	**ITEM CODE**	**WEIGHT LBS (KGS)**
DANCE TOWER TOP SECTION	TC 3030-084DTT	76 (34.5)
DANCE TOWER BOTTOM SECTION	TC 3030-084DTB	76 (34.5)

Spot chair

Universal mount or rotating Spot chairs

› 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

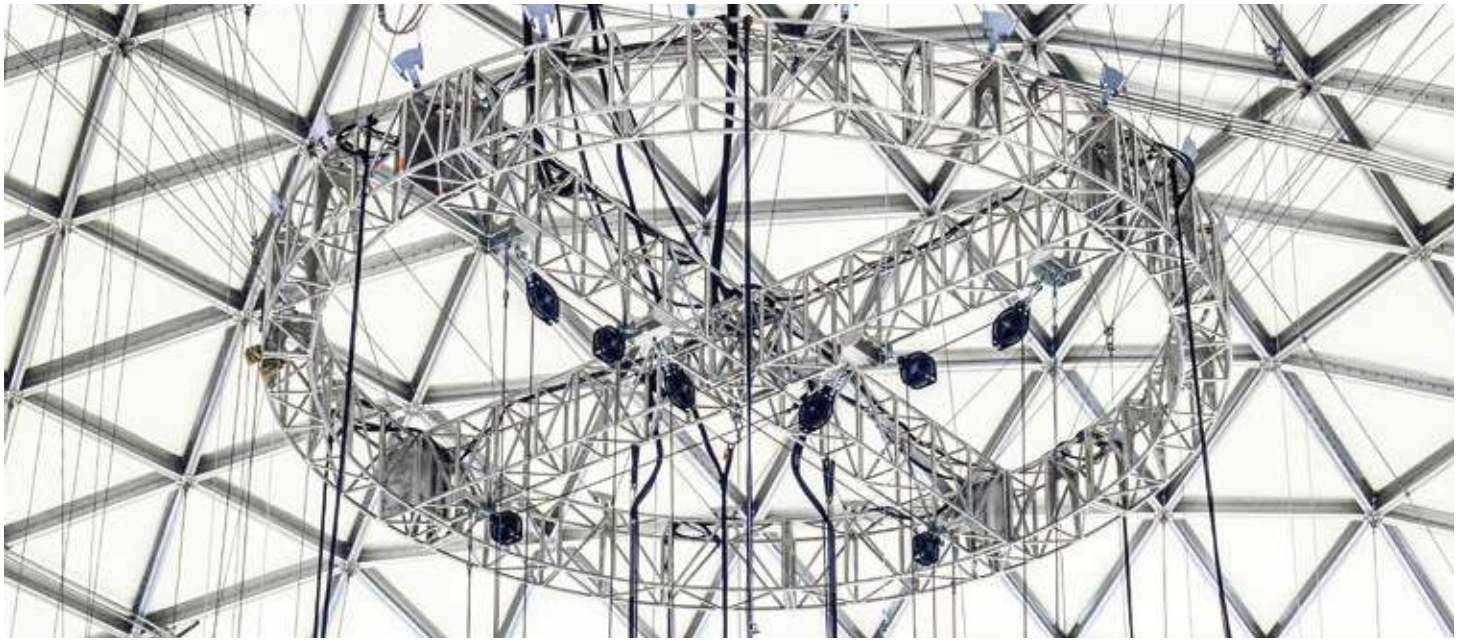


SPOT CHAIRS
FOLLOW SPOT CHAIRS - DO NOT INCLUDE SWIVEL COUPLERS TO MOUNT CHAIR TO TRUSSING. SPECIFY SPOT TYPE WHEN ORDERING.

PRODUCT DESCRIPTION	ITEM CODE	WEIGHT LBS (KGS)
TOP MOUNT SPOT CHAIR	TC ACC-SCTOP	*23 (10)
UNIVERSAL MOUNT SPOT CHAIR	TC ACC-SCUNI	*51 (23)
ROTATING SPOT CHAIR	TC ACC-SC360	*145 (66)

*** Approximate weight without seat**

Circles



Circles

› Standard diameters 20´, 30´, 40´ and 50´
› Custom diameter available upon request
› Plated connections
› Fabricated by AWS / SFL certified welders

TC 1212-20D8B

OUTER DIAMETER	20´
NUMBER OF SEGMENTS	8
TRUSS SYSTEM	TC 1212

TC 1212-30D8B

OUTER DIAMETER	30´
NUMBER OF SEGMENTS	8
TRUSS SYSTEM	TC 1212

TC 2020-20D8B

OUTER DIAMETER	20´
NUMBER OF SEGMENTS	8
TRUSS SYSTEM	TC 2020

TC 2020-30D8B

OUTER DIAMETER	30´
NUMBER OF SEGMENTS	8
TRUSS SYSTEM	TC 2020

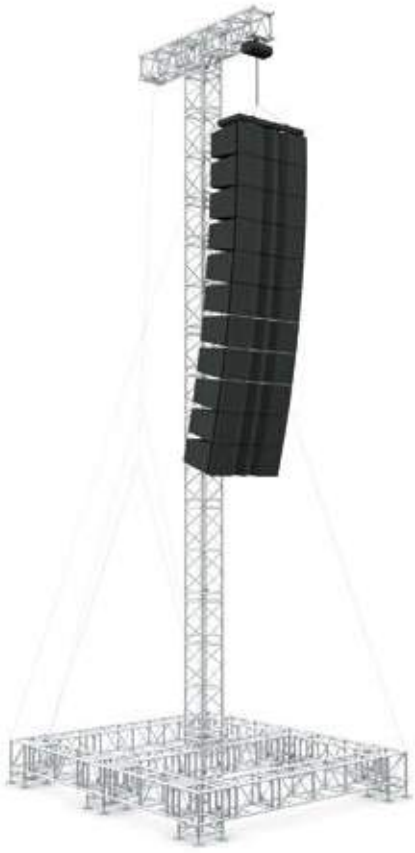
Sound delay tower

Sound delay tower

› Contact us for more information about tower loading
› SWL are just for informational purposes
› Fabricated by AWS / SFL certified welders

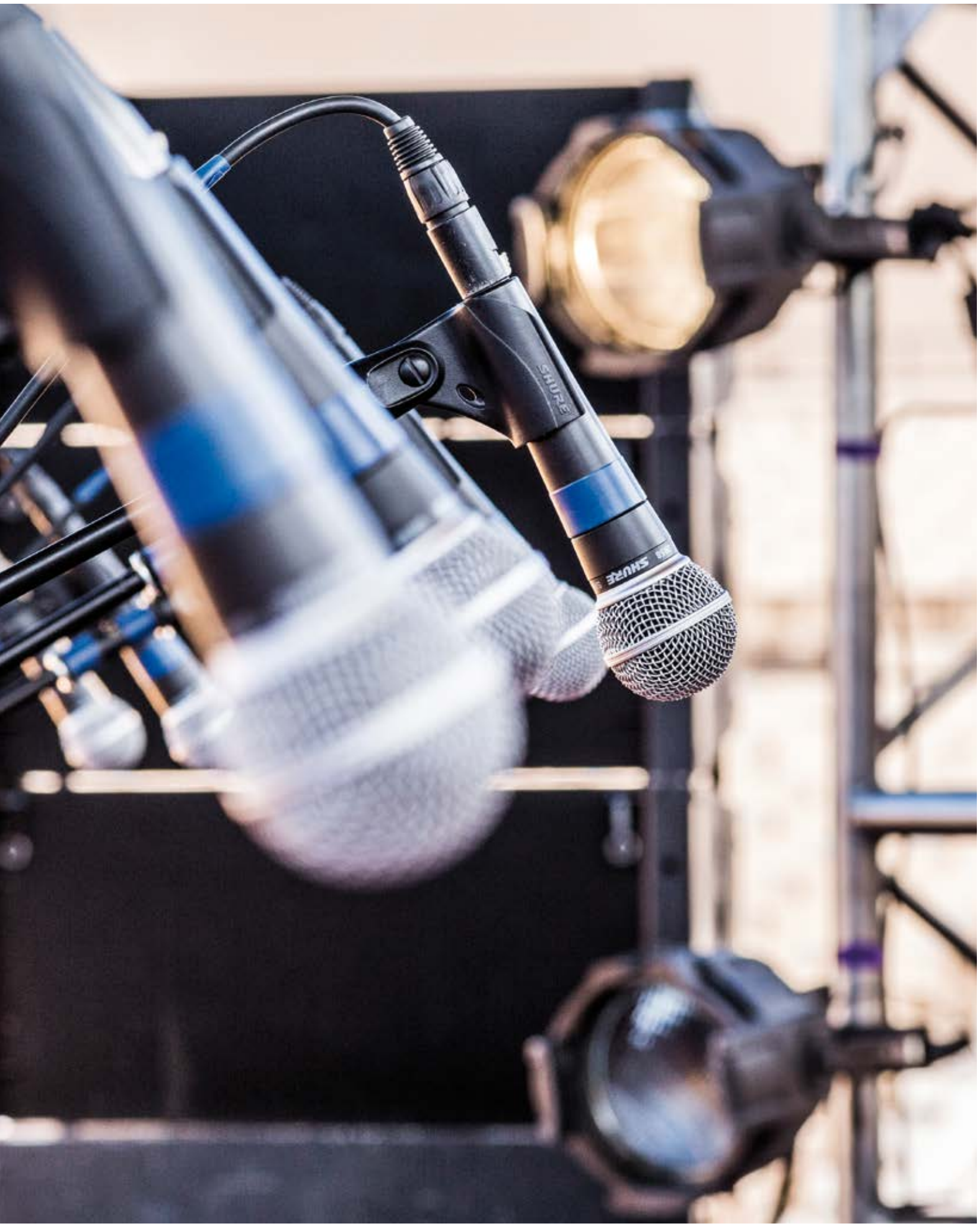
LIGHT DUTY
TC SPKR-L25
SWL 1400 LBS

MED DUTY
TC SPKR-M30
SWL 1800 LBS



HEAVY DUTY
TC SPKR-V45
SWL 4000 LBS

Miscellaneous


SHURE
SHURE

Miscellaneous

Rigging hardware

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 COUTERSUNK 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

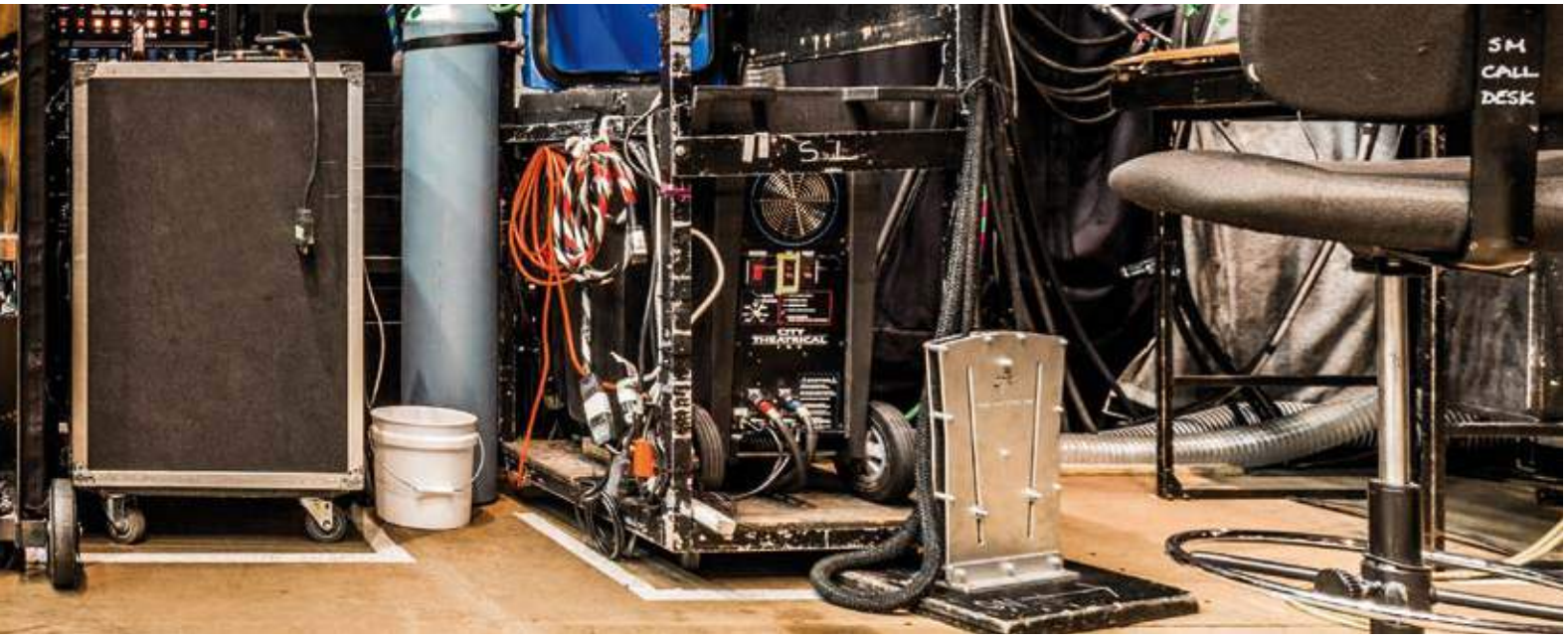
FIXED 90 DEGREE COUPLER PINNED OR WELDED
TC HC90P OR HC90W

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

STRENGTH UNDER PRESSURE



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

Miscellaneous

Rigging hardware

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
551 LBS	1.10 LBS	1.89" - 2"
250 KG	0.50 KG	48 - 51 MM

CLAMP WITH BOLT AND WINGNUT
TC CELL602

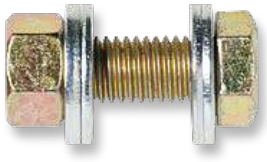
SWL	WEIGHT	Ø
551 LBS	1.28 LBS	1.89" - 2"
250 KG	0.58 KG	48 - 51 MM

PICK UP BAR
Available for all truss types

CHAIN GUIDE

PIN PULLER

SHACKLES
Dee, bow, screw pin & safety pin available 1/2", 5/8" and 3/4" in stock



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

TOMCAT ROUNDSLINGS
18", 3', 6', 9' and 12' in stock
Custom sizes available

TRUSS HAMMER

CLEVIS PINS
Standard or radius head

R-CLIPS
Small, medium, large

SNAPHOOK FOR 1.9" OD TUBE SNAP HOOK FOR 2" OD TUBE
TC SHK1.9
TC SHK2

GUY CABLE TENSION GAGE
TC GCT

BUNGIES
10-1/2" light duty

WIRE ROPE SLINGS
3/8" diameter - 5', 10', 20' and 30' in stock. 1/2" diameter - 5', 10' and 20' in stock. Custom sizes available.

CARABINES

TRADESHOW BASE
Various sizes available

Hoists

CM Prostar series

Lightweight, quiet and portable. The CM Prostar is designed and built for the unique rigging needs encountered at small venues. Featuring an overload device that protects the hoist, operator and structure from damaging overloads.

Specifications

- Capacities: 300 to 1000 LBS
- Lift: 60 feet standard
- Speeds: 8 to 40 feet/minute
- Voltages: Single & 3-phase available

Key features

- **DC Electro-Mechanical double brakes**
  Non-adjusting for low maintenance and quiet operation
- **Gearing**
  Precision machined gears heat treated for strength and durability
- **Chain guide**
  One piece jam free for smooth operation
- **Housing**
  Lightweight, cast aluminum, durable and tough black powder coated finish for low visibility
- **Lift wheel**
  CM patented 10 pocket oblique lift wheel for quiet and smooth operation
- **Low voltage control**
  110 Volt for long cable runs without voltage drop
  Optional 24 and 48 volt versions
- **Duty cycle**
  H-4 duty rated, designed for heavy duty applications

Standard features

- **Overload protection**
  Helps prevent lifting of dangerous overloads
  Mounted on Load Chain to prevent over-travel
- **Metric rated**
- **Load chain**
  Designed and manufactured by Columbus McKinnon
  Zinc plated against corrosion
  Optional black phosphate finish
- **The Industry's best lifetime warranty**
- **Meets or exceeds world standards**

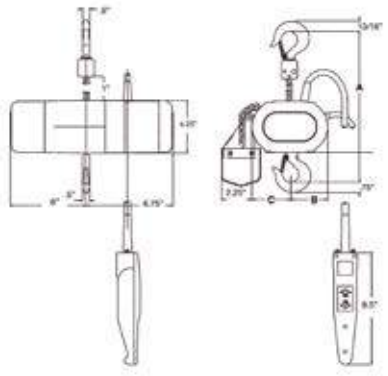
Optional features

- **Chain bag**
  Easy-to-mount cloth type bags
- **Double brake**
- **Encoder**

SPECIFICATIONS

CAPACITY	NUMBER OF CHAINS	MOTOR HP	LIFT SPEED (FPM)	WT. LESS LESS CHAIN (LBS)	WEIGHT 1FT OF CHAIN (LBS)	FULL LOAD AMPS	
						1-PHASE	3-PHASE
300	1	1/6	16	28	.35	3.6	.6* / 1.2**
300	1	1/6	16	28	.35		.6* / 1.1**
500	1	1/6	16	28	.35		.7* / 1.2**
500	1	1/6	12	28	.35	4	-
600	2	1/6	8	36	.7	3.6	.6* / 1.1**
600	2	1/6	8	36	.7	3.6	.6* / 1.1**
1000	2	1/6	8	36	.7		.7* / 1.2

***415 Volt operation ˜220 Volt operation**



SPECIFICATIONS

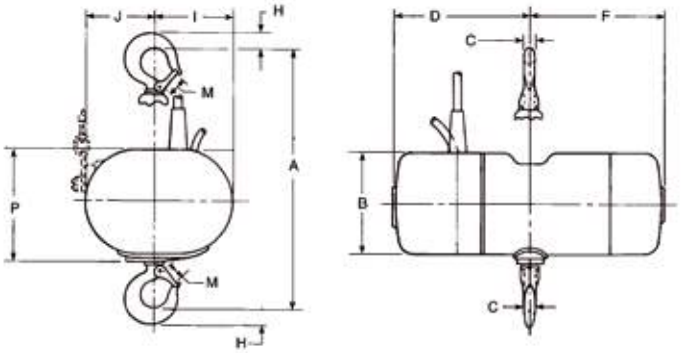
MODELS (LBS)	LIFT SPEED (FPM)	OPERATING VOLTAGE			
		SINGLE PHASE		THREE PHASE	
300	16	115 - 1 - 50/60	220 - 1 - 50/60	220 - 3 - 50/60	415 - 3 - 50/60
300	24	-	-	220 - 3 - 50/60	415 - 3 - 50/60
300	40	-	-	220 - 3 - 50/60	415 - 3 - 50/60
500	12	115 - 1 - 50/60	220 - 1 - 50/60	-	-
500	16	-	-	220 - 3 - 50/60	415 - 3 - 50/60
500	20	-	-	220 - 3 - 50/60	415 - 3 - 50/60
600	8	115 - 1 - 50/60	220 - 1 - 50/60	-	-
600	12	-	-	220 - 3 - 50/60	415 - 3 - 50/60
1000	6	115 - 1 - 50/60	220 - 1 - 50/60	-	-
1000	8	-	-	220 - 3 - 50/60	415 - 3 - 50/60
1000	12	-	-	220 - 3 - 50/60	415 - 3 - 50/60

DIMENSIONS

DRAWING LEGEND	REEVING	
	SINGLE	DOUBLE
A	11″	12-1/8″
B	2-15/16″	3-1/2″
C	2-7/8″	2-3/8″

Hoists

CM Lodestar series



DIMENSIONS

DRAWING LEGEND	LODESTAR MODELS		
	B, C, F	J, JJ, L, LL	R, RR
A	16.20"	18.5625"	24.125"
B	6.08"	7.62"	7.62"
C	.67"	.875"	1.125"
D	11.80"	10.03"	10.03"
F	8.94"	13.01"	13.01"
H	1"	1.1875"	1.5"
I	4.46"	6.93"	5.57"
J	4.22"	5.69"	7.05"
M	1"	1.125"	1.3125"
P	6.62"	8.22"	8.22"

SPECIFICATIONS

MODEL	RATED LOAD TON*	LIFTING SPEED (FPM)	MOTOR HP	OPERATING VOLTAGE **	FULL LOAD AMPS	WORK RATING HMI	WORK RATING FEM	REEVING	PROTECTION CLASS	NOISE LEVEL	LIFT (FEET)**
B	1/4	16	1/4	230/460 - 3 - 60	1.8/1.1	H4	2M+	1	IP54	73 dB	60
C	1/4	32	1/2	230/460 - 3 - 60	2.2/1.3	H4	2M+	1	IP54	73 dB	60
F	1/2	16	1/2	230/460 - 3 - 60	2.2/1.3	H4	2M+	1	IP54	73 dB	60
J	1/2	32	1	230/460 - 3 - 60	3.7/2.2	H4	2M+	1	IP54	73 dB	60
JJ	1/2	64	2	230/460 - 3 - 60	7.9/5.0	H4	2M+	1	IP54	73 dB	60
L	1	16	1	230/460 - 3 - 60	3.7/2.2	H4	2M+	1	IP54	73 dB	60
LL	1	32	2	230/460 - 3 - 60	7.9/5.0	H4	2M+	1	IP54	73 dB	60
R	2	8	1	230/460 - 3 - 60	3.7/2.2	H4	2M+	2	IP54	73 dB	60
RR	2	16	2	230/460 - 3 - 60	7.9/5.0	H4	2M+	2	IP54	73 dB	60

*** Metric Tons**

**** Single Phase Models available**

***** Lifts other than 60 ft available (Standard Units shipped less chain unless specified)**

Consult factory for additional speeds and capacities

1) LIFT WHEEL

5 Pocket Liftwheel increases chain and liftwheel engagement while providing smoother lifting, less vibration, and reduced chain wear when properly maintained.

2) BRAKE

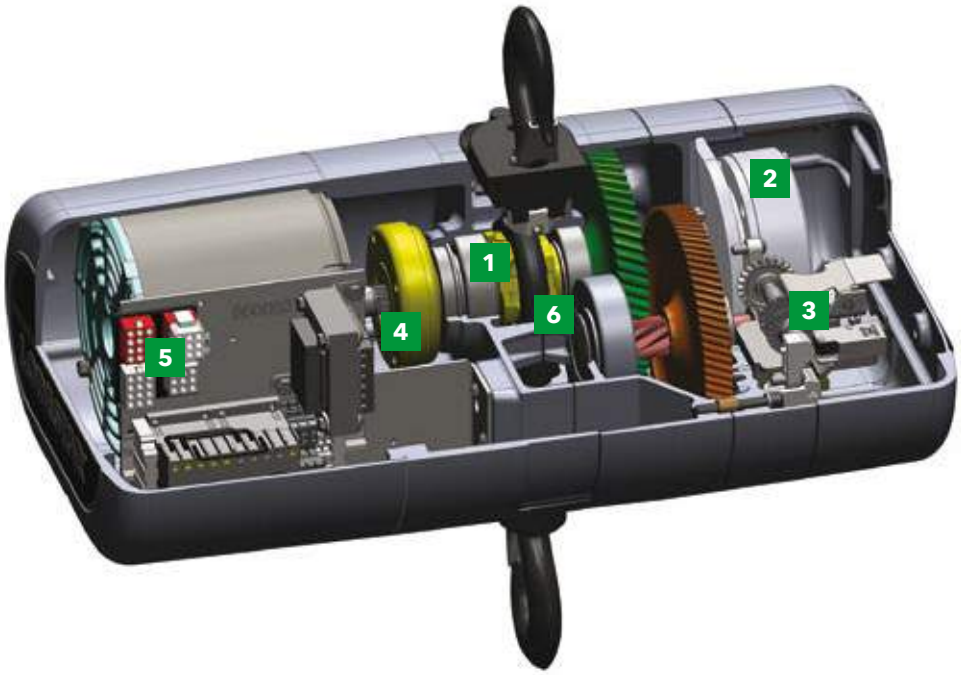
Heavy Duty DC Brake is standard. AC Brake and Double DC Brake are also available.

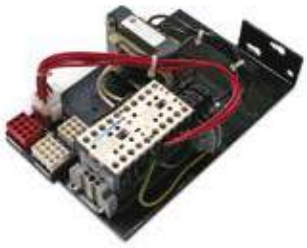
3) LIMIT SWITCH

Adjustable screw limit switch that will automatically stop the hook at any predetermined point when either hoisting or lifting.

4) CLUTCH

Designed to prevent lifting of excessive loads. Located outside the gear box. Adjustable and easy to access.





5) CONTROL PANEL

Provides easy access to controls. Plug and play connectors allow for quick voltage change for dual voltage motors. Fuses located on terminal strip (optional).

6) INTERNAL CHAIN GUIDE

Stamped steel guide coated for corrosion resistance and quiet operation, while keeping the load chain and liftwheel aligned.

LOAD CHAIN

Sizes available from 1/4 in. to 5/16 in. Meets or exceeds many national and international standards. Zinc plating comes as standard. Black phosphate finish available. 100% proof tested.

Hoists

Stagemaker

Innovations

› Hoist body is powder coated with black, protective 70µm paint, allowing it to perform under the most extreme conditions
› Hoist meets ecology regulations and is RoHS compliant
› New "Perfect Push" patented concept, which uses a 5 pocket load wheel, fitted with 5 intermediate teeth. This innovation improves guiding and flow of the chain, which helps reduce the risk of the chain jamming
› Chainflux design provides a horizontal flow of the chain from the load wheel. This design, along with high strength aluminum construction, allows for a more fluid flow of the chain into the chain bag and helps reduce the risk of jammed chains.
› Motor design provides consistent speeds when both fully loaded or unloaded
› Electrical components designed for "plug and play" connectivity

Improved ergonomics

› Rubber buffers on the corners of the hoist provide added protection
› New ergonomic design of the retractable, rubber clad handgrips, allow for easy transportation
› The lifting hook has an ergonomic, rubber clad gripping surface

Types of control

› Config A – Direct voltage control
› Config B – 3 phase with low voltage control

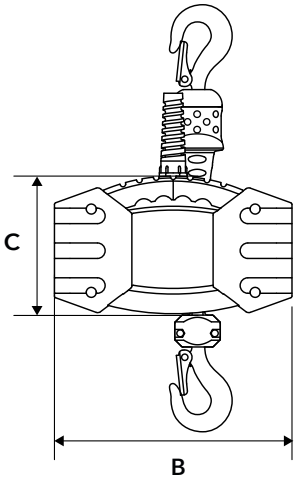
Technical specifications

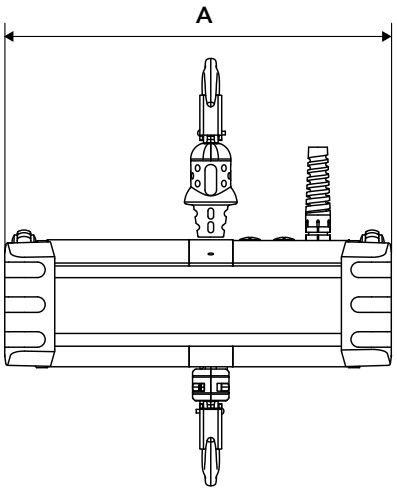
› Complies with CE, CSA and Ghost standards
› Easy changeover between body up and body down positions
› Electric limit switch as standard on config B
› Hoist comes with a black chain
› Specially designed ChainFlux MKII® chain guide
› New "Perfect Push®" 5 pocket load wheel with 5 intermediate guide teeth
› ACF control board (config A)
› Adjustable torque limiter
› Maintenance-free DC disk brake
› Power options:
  › 208v/230v/3Ph/60Hz
  › 460v/3Ph/60Hz
  › 415v/3Ph/50Hz
› Black hoist body (RAL 7021)
› Rotating upper and lower hooks along with fixed body hook available
› Retractable, rubber clad handgrips
› Lifting hook with ergonomic, rubber clad gripping surface
› High capacity, reversible chain bag
› Available plugs:
  › CE type plugs (config A, direct control hoist only)
  › 7 pin
  › Dual Twist Lock
  › P14
  › L14-20 or XLR for local control

OPERATING CONFIGURATIONS

BODY UP

BODY DOWN





plasa MEMBER

SPECIFICATIONS

LOAD CAPACITY	MODEL	SPEED (M/MIN)	SPEED (FPM)	NUMBER OF FALLS	CHAIN SIZE	DIMENSIONS A		B		C		HOIST WEIGHT (WITHOUT CHAIN)		CHAIN WEIGHT	
					mm	mm	inch	mm	inch	mm	inch	kg	lb	kg/m	lb/ft.
250 kg 1/4 ton	SR2 254 m2	4	16	1	4 x 11	425	16.7	250	9.8	150	5.9	20.1	44.3	.37	.247
	SR2 258 m2	8	32	1	4 x 11	425	16.7	250	9.8	150	5.9	20.1	44.3	.37	.247
	SR2 2516 m2	16	64	1	4 x 11	425	16.7	250	9.8	175	5.9	20.1	44.3	.37	.247
500 kg 1/2 ton	SR5 504 m2	4	16	1	4 x 11	472	18.6	290	11.4	175	6.9	29.6	65.3	.57	.384
	SR2 508 m2	8	32	1	4 x 11	472	18.6	290	11.4	175	6.9	29.6	65.3	.57	.384

Hoist controller

Skjonberg

CS-400R

30 amp main input 3 phase 1hp motor at 208v - 240v

1) 4 channel power and control unit is portable and compact
2) Rack back
3) Safety key switch for on/off and phase selection

Power control
Various cable lengths

Detachable cable
Custom unit available for single phase motors

CS-800

50 amp main input 3ph 1hp motor at 208v - 240v

1) Optional road case

Two styles of control pendants

Optional detachable cable

Hoist controller

Motion Laboratories

Power distribution systems

Safe and reliable power is a must to ensure that events go off without a hitch. Our systems come with a diverse array of connector and breaker arrangements, and can be configured for 110V single-phase, 125/250V, 120/208V three-phase Y, and 208V three-phase power. Whether you need to power lighting, amplifiers, backline, or accessories, we have the right solution for you.

Hoist control systems

Chain hoist control is a precise business, and lifting tons of gear above a stage requires skill and planning. Our hoist control systems ensure safe and reliable solutions that work with all industry standard chain hoists, and incorporate electrical phase reversing for extra convenience.

Cell*Mate weight monitoring system

Use our Cell*Mate weight monitoring system to simultaneously watch critical loads from one or more remote locations. Using state-of-the-art stainless steel load cells to measure tension on your rigging points, cells are rated for either 2 ton or 5 ton loads and work in unison with our Cell*Mate Hub and Digital Display Modules.

Cable assemblies

We have connections for every product we make which are made of the highest quality materials. Our advanced production techniques enable us to build Cable Assemblies efficiently and cost-effectively.

The server - Advanced rigging intelligence

Design dynamic productions with the easy-to-use and portable SERVER System, an advanced hardware/software solution that monitors the exact position of every hoist in a grid. Easily create groups of hoists that move together with one-click automated sequencing by setting the thresholds and watch the entire grid move safely into place.

Satellite power distribution products

Our RacPacs and Stringers are designed with utmost flexibility to deliver power where you need it – for your amp rack, dimmers, or just a rack full of gear. If your truss or backline needs power, we have a variety of Stringer boxes to match your needs.

Ground support systems


WET( )REPUBLIC

12" Ground support system

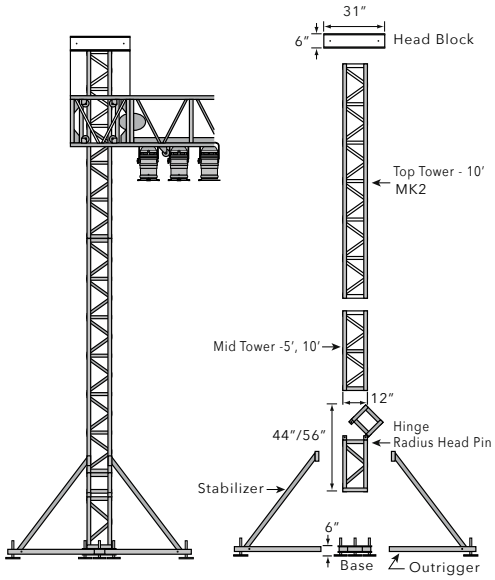
MK1, MK2 and MK3 tower components

MK1, MK2 and MK3 tower components

› Connections are single sets of bolts

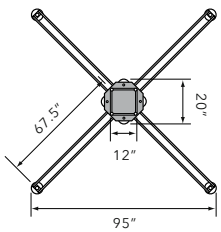
› MK-1 tower is standard

12" TOWER CONFIGURATION



STYLE
MARK I TOWER
MARK II TOWER
MARK III 12" TOWER

CONNECTIONS
BOLTS
SPIGOTS



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 (2)1
OUTRIGGER/STABILIZER SET/TOWER For use with 44" Hinge Block For use with 56" Hinge Block	 TC 12GSS-OS44-2 TC 12GSS-OS56-2	 101 (46) 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**

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 for use with 56" hinge block	 TC 12G3-OS44-2 TC 12G3-OS56-2	 101 (46) 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	

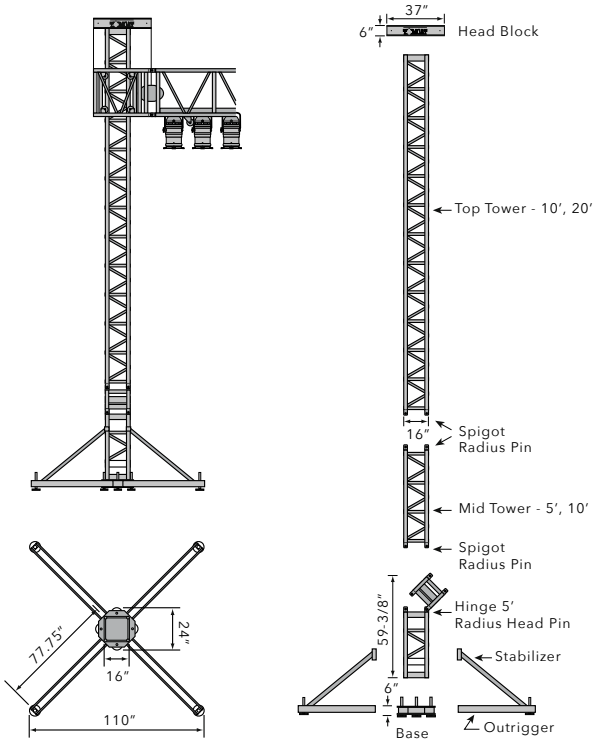
*** Standard for GS 5/16" chain**

16″ ground support system

16″ ground support system

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

16″ TOWER CONFIGURATION



STRENGTH UNDER PRESSURE

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	- (-)

*** Standard for GS 5/16" chain**

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.

	MARK I	MARK II	MARK III	16" TOWER
Profile size (square)	12" (30.5 cm)	12" (30.5 cm)	12" (30.5 cm)	16" (40.6 cm)
Indoor Use	Yes	Yes	Yes	Yes
Outdoor Use	No	Yes	Yes	Yes
Bolt Connection	Available	Available	No	No
Spigot Connection	No	No	Yes	Yes
Maximum Height	35' (10.67 m)	35' (10.67 m)	35' (10.67 m)	45' (13.72 m)
Max. Axial Load*	2000 lbs (907 kg)	3000 lbs (1,361 kg)	3000 lbs (1,361 kg)	4000 lbs (1,815 kg)
Max. Flexural Load*	3.63 Kft.	3.63 Kft.	14.69 Kft.	19.98 Kft.

Roofs

Roofs

PRT Sunshade

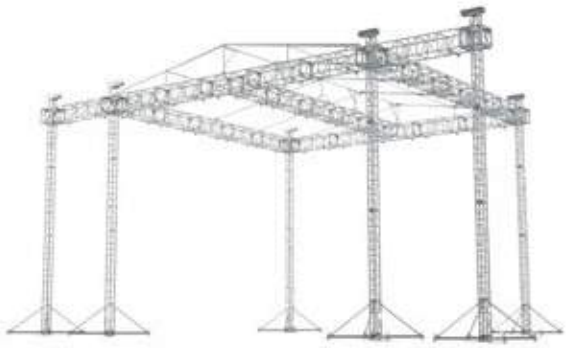
PRT Sunshade

Long demanded by the touring industry, the Pre-Rig Truss (PRT) Sunshade has quickly become the favorite system for small to medium-sized productions.

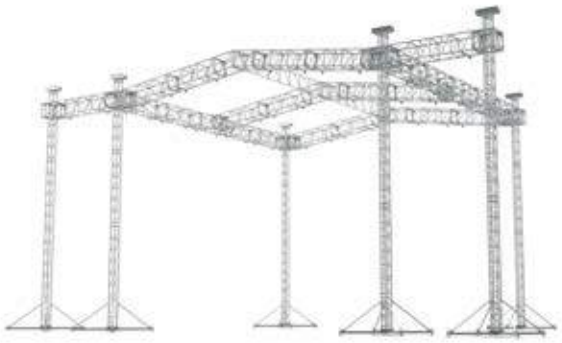
Designed for rapid disassembly and mobility, the PRT Sunshade may be utilized in a variety of venues. More importantly, the system is built from industry standard components like 93" Double Hung Pre-Rig Truss and Mark I Towers which add to its versatility. Two options are available. The "Peaked" Sunshade 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.

The live loads (equipment loads) that can be applied to the system include a 6,000 pound uniformly distributed load (UDL) on the main grid and a 5,000 pound speaker load on each PA Wing - making it ideal for many applications.



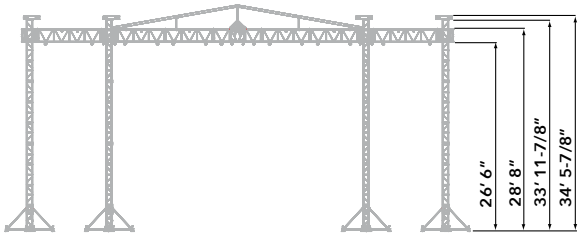
PRT SUNSHADE FLAT WITH WINGS

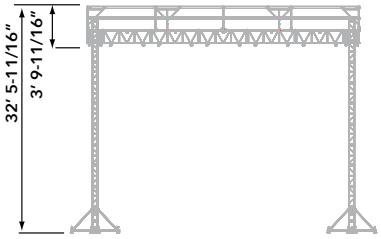


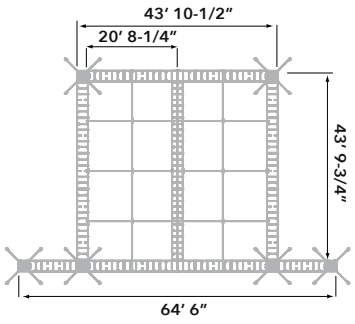
PRT SUNSHADE PEAKED WITH WINGS

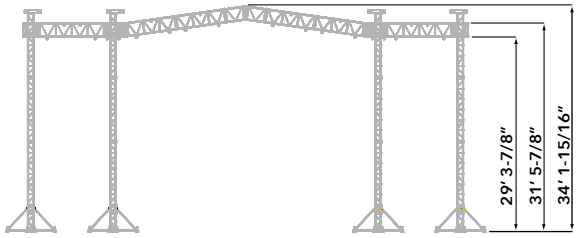
STRENGTH UNDER PRESSURE

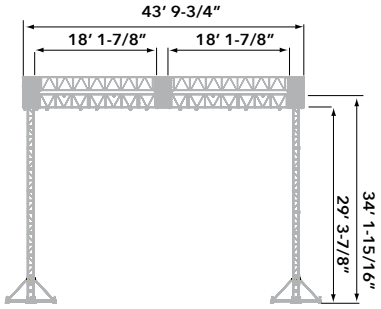
PLAN VIEWS

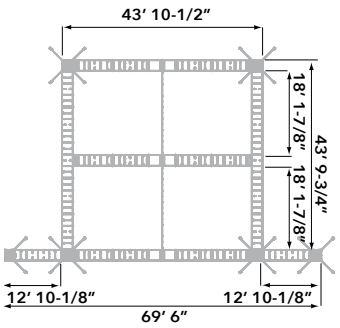












Roofs

46 x 43

46 x 43

- Roof Grid will support 16,000 lbs (7,257 kg)
- Roof Cover provided
- Entire System will pack into 24 ft truck
- Roof lifts with four chain hoists
- Guy package required for outdoor use
- Detailed engineering information available on request

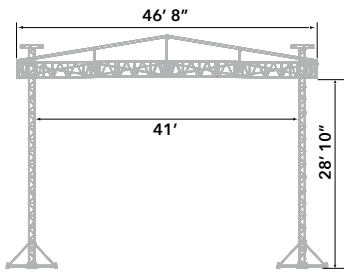
This roof design has long been one of the most popular ever offered by TOMCAT due to its loading capabilities and its ease of transportation. Because of its unique construction, including sleeves for the 12" tower that are built into the perimeter grid, the system boasts a total maximum uniform distributed load of 16,000 pounds (7,258 kg). The name of this roof is derived from the outside dimensions of the grid: 43 ft (13.11m) deep by 46 ft (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-size truck. The system is shown here without the guy wires that are required for outdoor installations.

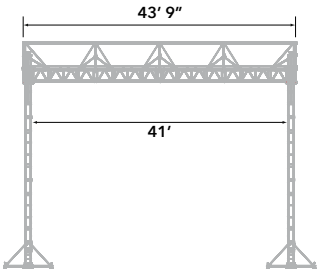
46 X 43

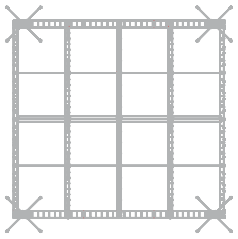
46 X 43 WITH WINGS

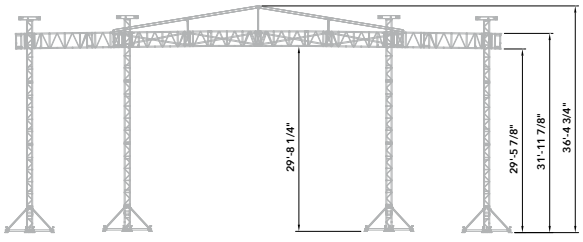
STRENGTH UNDER PRESSURE

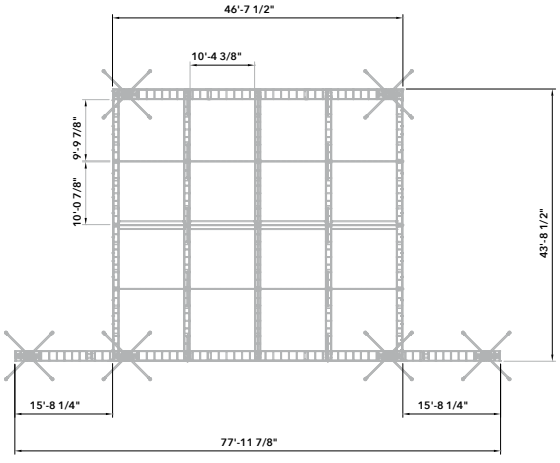
PLAN VIEWS









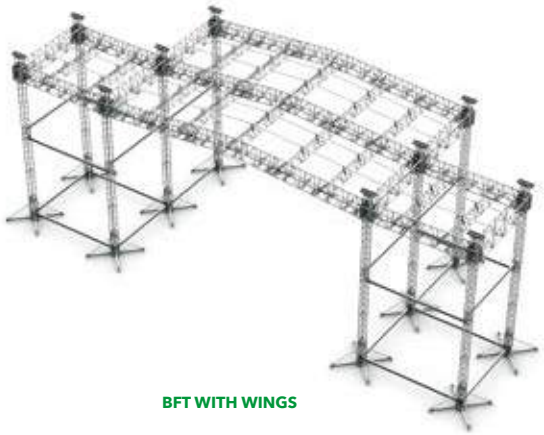


Roofs

BFT

BFT

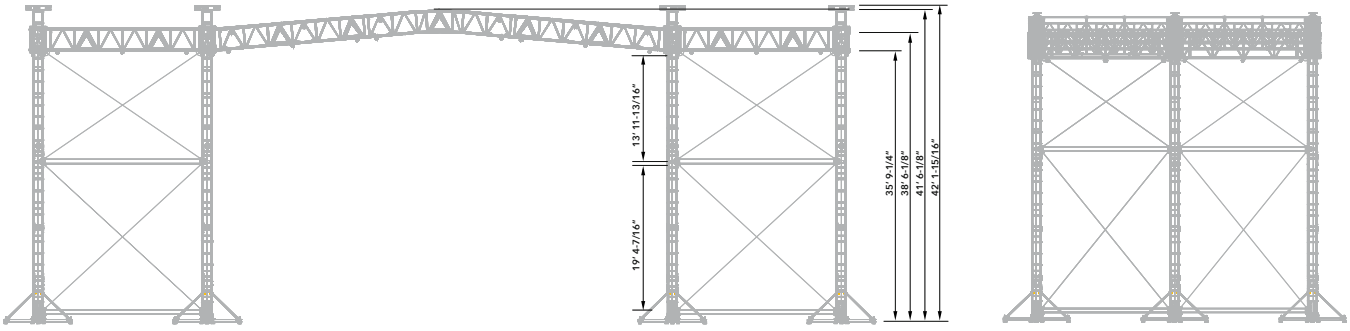
Standing for Big Frame Truss, this roof design is true to its name as it features 26" x 36" crossstage truss, 26" x 43" end truss and folding 26" triangle truss as the up-stage/down-stage part of the grid. The system utilizes 16" x 16" towers. The general dimensions of the BFT are 60' x 40' (18.29 m x 12.19 m), not including the optional PA wings that are shown here.

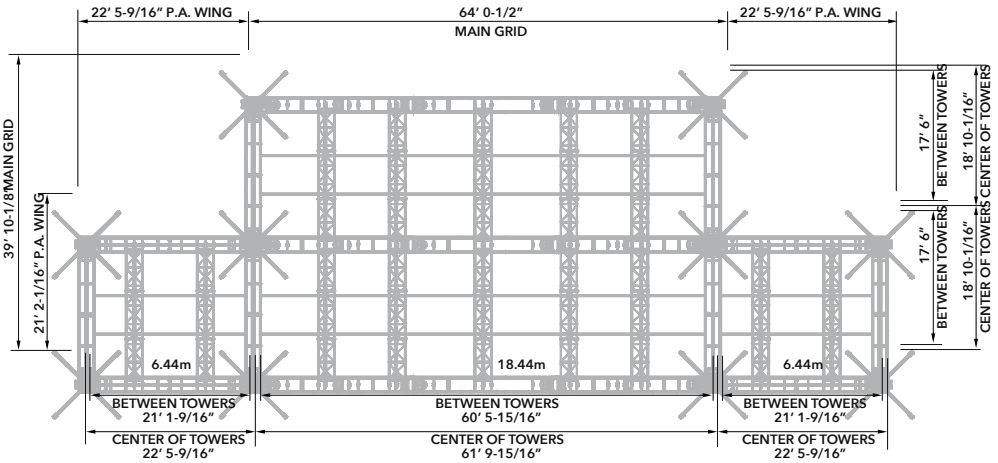


BFT WITH WINGS

STRENGTH UNDER PRESSURE

PLAN VIEWS



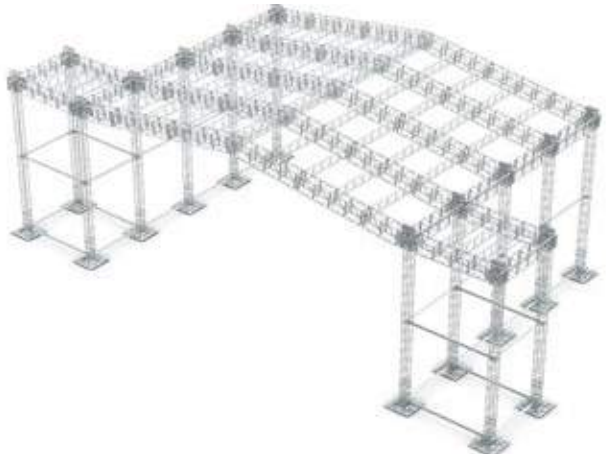


Roofs

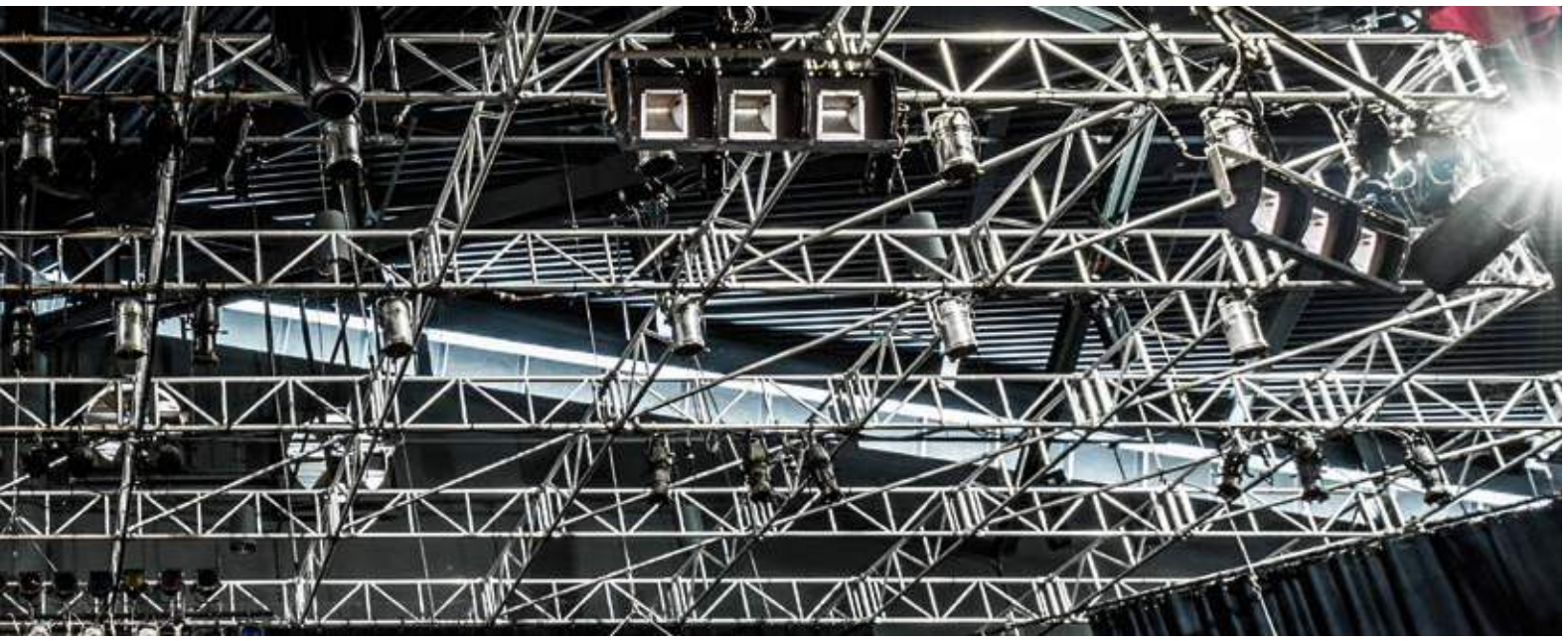
KT-7

KT-7

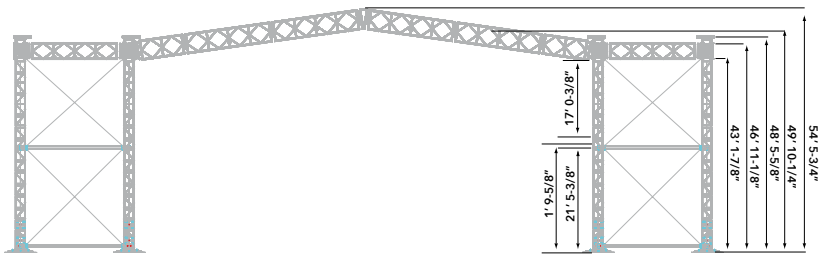
Raised on 22-1/2″ towers, this roof system provides customers with an unobstructed opening of over 100′ (30.48 m) and a depth of 60′ (18.28 m). The grid is made up of folding 31″ x 54″ truss, with truss ladders providing the up-stage/down-stage part of the grid. This provides for a dramatically reduced size for transport. The maximum uniformly distributed load for the KT-7 system as shown is 100,000 pounds (45,360 kgs). The system is shown here with a roof peak incorporated into the design, but is also available in a flat configuration to meet the specific needs of customers. It is also shown without the required guy wires for outdoor applications.

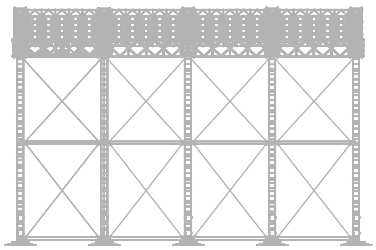


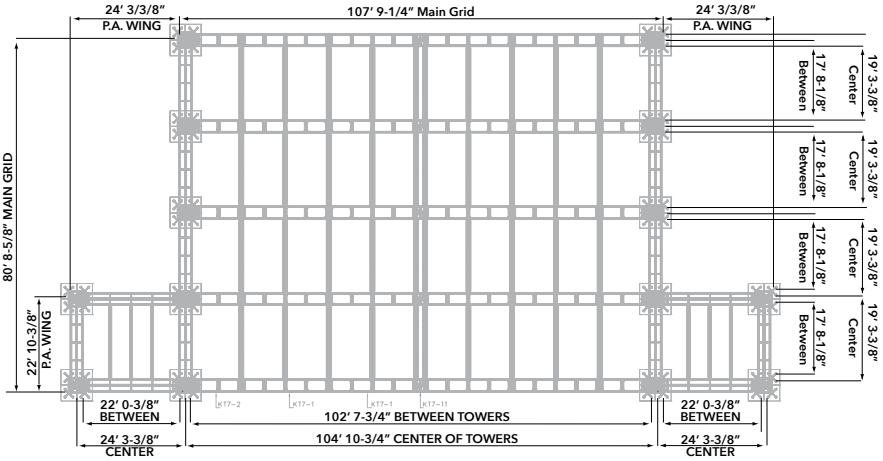
STRENGTH UNDER PRESSURE



PLAN VIEWS







Roofs

45 x 45 ladder

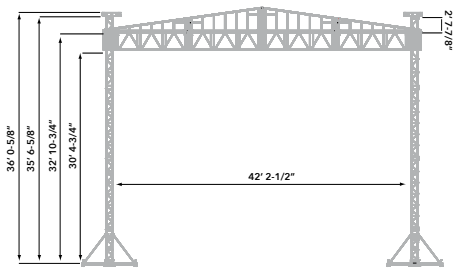
45 x 45 ladder

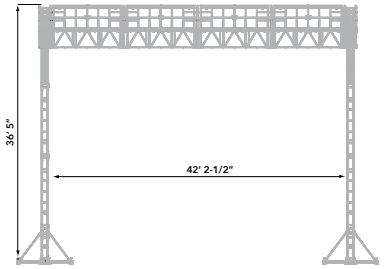
The 45 X 45 ladder roof is one of the newer additions to TOMCAT roof systems and is designed to meet customer demands for economy of shipping space without sacrificing loading capabilities. Constructed with an optional perimeter of folding 20.5" x 30" truss, it uses a system of single truss ladders to 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, but because of the unique design, it still provides for a maximum uniformly distributed load of 16,000 pounds (7,257 kg).

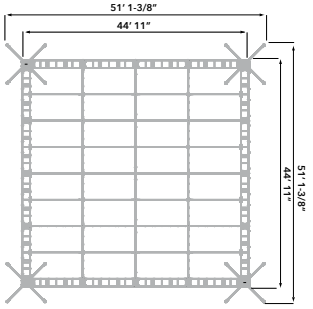
45 X 45 LADDER

STRENGTH UNDER PRESSURE

PLAN VIEWS







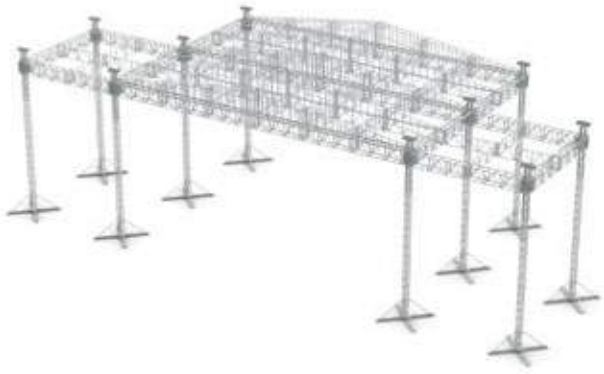
Roofs

65 x 45 ladder

65 x 45 ladder

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, but because of the unique design, it still provides for a maximum uniformly distributed load of 20,000 pounds (9,072 kg). 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.

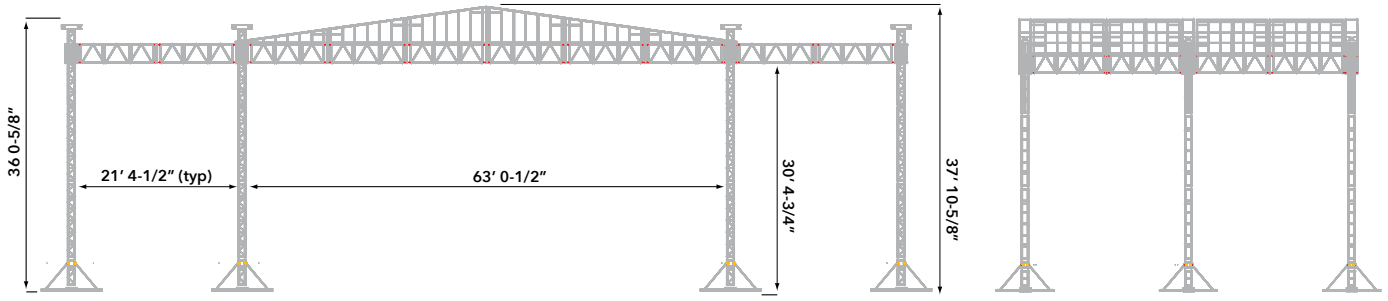
65 X 45 LADDER

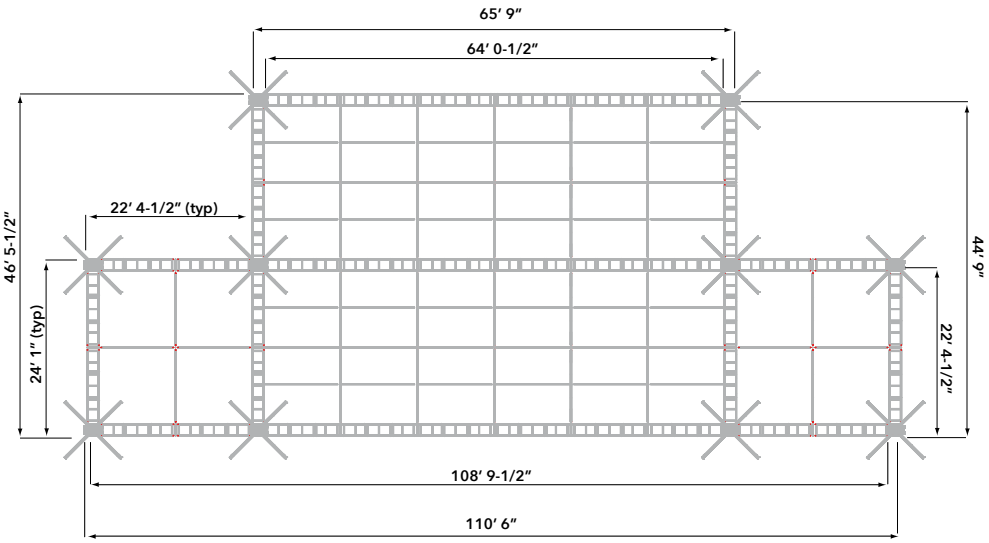


65 X 45 LADDER WITH WINGS

STRENGTH UNDER PRESSURE

PLAN VIEWS





Barriers

Barriers

TOMCAT modular crowd barrier system. Designed with both sides of the barrier in mind.

People are the lifeblood of the entertainment business. The more people that come to your event, the happier you are, and the more successful your event will be. But when you have a larger amount of attendees, you have an increased need for tools that help you organize, segregate, block and contain. Enter the TOMCAT modular crowd barrier system.

TOMCAT has a large array of barriers that have been designed with both you and event attendees in mind. TOMCAT knows that people on both sides of the barrier must be offered comfort, convenience, safety and security.

Advantages for event organizers:

› Made from rust-free aluminum
› Extremely durable for many years of trouble-free use
› Light weight for quick set-up and break down
› Hand cut-outs for easy and convenient manipulation
› Foldable design for compact storage and reduced transport size
› No sharp edges for the safety of security personnel , as well as for safe set-up and break down
› Clean and professional look
› Available in a wide variety of colors
› Custom barrier designs on request

Advantages for event attendees:

› Perforated plate so fingers or jewelry don't get caught
› No sharp edges
› Flexible corners on some barrier products for increased safety during crowd pushing

ADJUSTABLE CORNER
TCTS BVCI

WEIGHT LBS (KGS) 106 (48)

STANDARD UNIT
TCTS BBSI

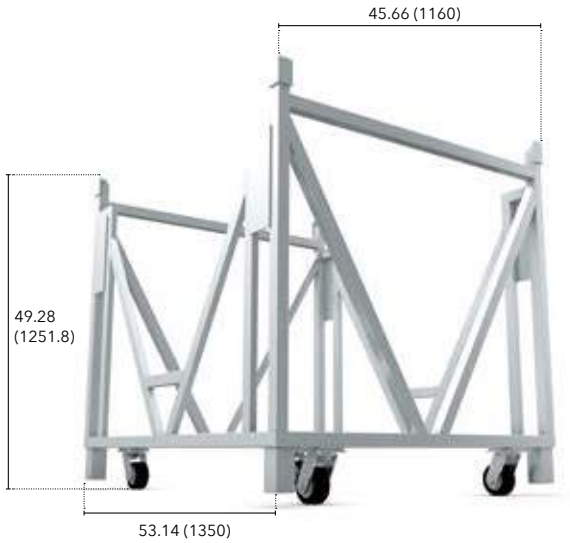
WEIGHT LBS (KGS) 89 (40.3)

MULTICORE
TCTS BMAG

WEIGHT LBS (KGS) 109 (49.3)

EMERGENCY GATE
TCTS BEMG

WEIGHT LBS (KGS)	221 (100.25)



STOCKING BASKET AND TROLLEY
TCTS-BD10-A

WEIGHT LBS (KGS)	90 (40.7)

Tips for a 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

Here we are on the cusp of another outdoor concert season. In fact, many events have already taken place. Hopefully, we have already ensured that this is the safest summer concert season possible.

Much attention has been focused on outdoor structures over the last nine months, 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; those who hire or perform under these structures should be aware of it, too.

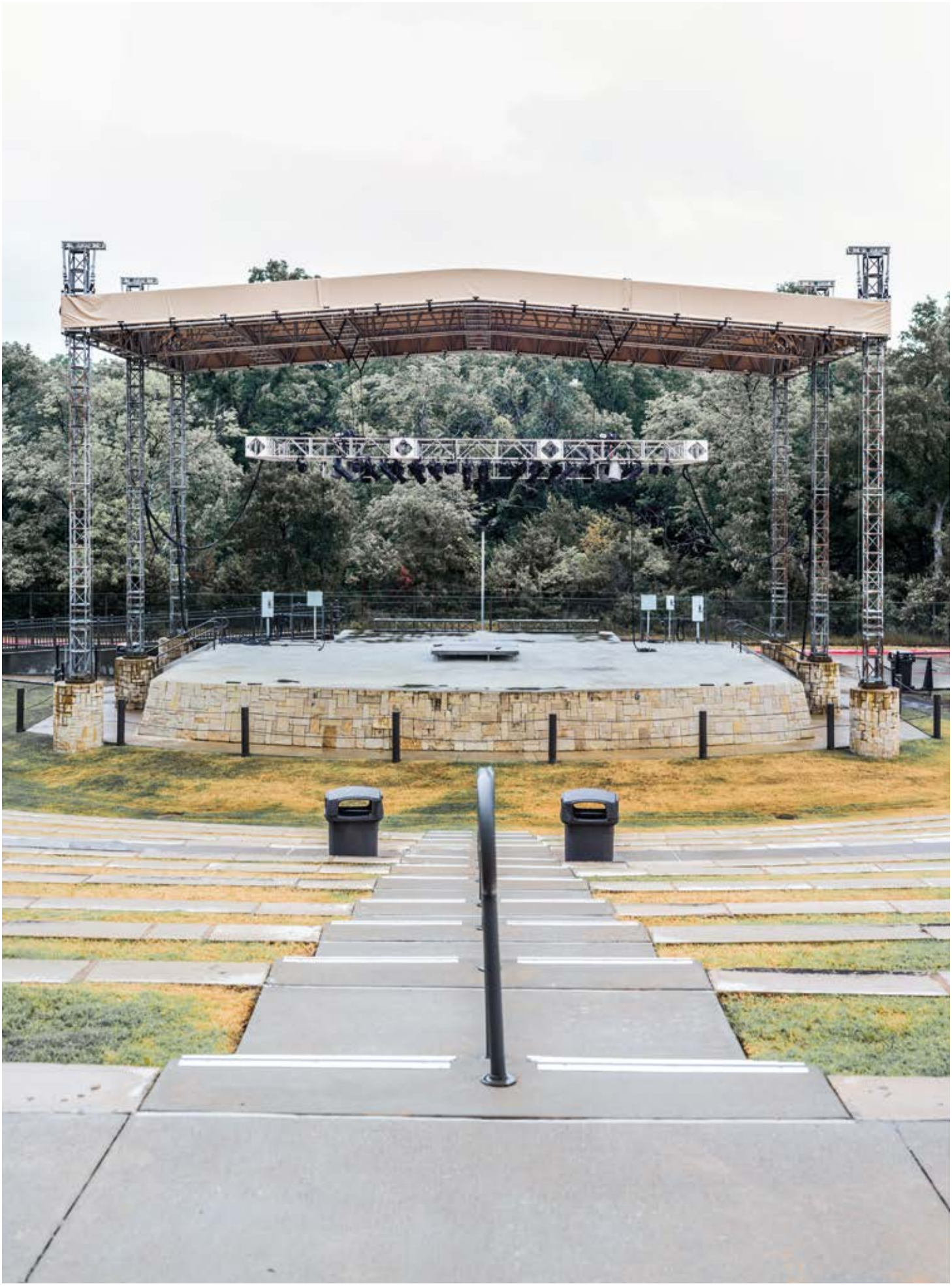
However, the next 1,500 or so words will focus on stakeholders who own, maintain, and operate these structures. Many other stakeholders should depend on the expertise of this group to provide guidance and make decisions, so it is imperative that owner/operators have a thorough grasp of the realities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



Tips for a safe outdoor concert season

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, 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 having this documentation.

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) 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.

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

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 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.

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.

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 the 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.

Block orientation

Corner & sleeve block orientation

In an effort to make it easier for clients to relate to the construction and orientation of corner and sleeve blocks for TOMCAT truss, we are providing the drawings on this page.

The blocks are defined by the orientation of the main chords of the blocks and by the type of connection. For demonstration purposes, we have shown only the 4-way versions of each. All are available in 2, 3, and 4-way versions. Additionally, those truss types that have 5 and 6-way versions available are indicated with an asterisk (*).

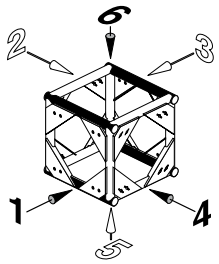
We have numbered each of the faces of the blocks so that you can easily refer to the faces on which you need connections. In the case of spigot connections, you can also specify the gender of the connection you need on each particular face.

When ordering corner blocks, refer to the appropriate truss page for the item code of the corner or sleeve block, then refer to this page to identify the faces on which you need connections (Side 1, 2, 3, 4, 5, or 6). For sleeve applications, connections are not possible on sides 5 & 6.

If you have any questions, don't hesitate to call the TOMCAT sales staff for assistance.

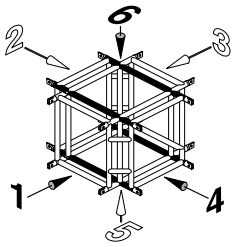
Corner Blocks with Horizontal Chords and a Bolt Connection

Single Hung Pre-Rig
Double Hung Pre-Rig
12" x 12" Light Duty*
12" x 18" Light Duty
Medium Duty*
Heavy Duty



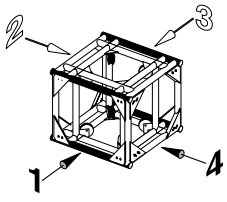
Corner Blocks with Horizontal Chords and a Spigot Connection

Single Hung Pre-Rig
Double Hung Pre-Rig
Heavy Duty Pre-Rig
Super Beam
Medium Duty*
Heavy Duty
Extra Heavy Duty



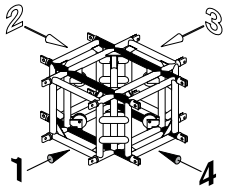
Sleeve Block with Horizontal Chords and a Bolt Connection

Double Hung Pre-Rig



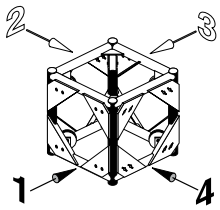
Sleeve Blocks with Horizontal Chords and a Spigot Connection

Double Hung Pre-Rig
Heavy Duty Pre-Rig
Medium Duty
Heavy Duty
Extra Heavy Duty



Sleeve Blocks with Vertical Chords and a Bolt Connection

Medium Duty
Heavy Duty



Ground support systems

Leveling the roof & ground support systems

In order to properly use ground support systems, the truss must be level during lift and at trim (unless it has been specifically designed for other orientations). Below are some guidelines to be followed in order to properly use ground support systems.
The first step when erecting a ground support system is to select a site which has a minimal difference in grade. Sites with large slopes, mounds or depressions should be avoided or leveled prior to erecting the system. Once a level site is selected, the locations of the bases should be determined.

A firm foundation is required under each base which will not settle under heavy loading, even in the presence of moisture. The user should have an understanding of what loading is going to be present at each tower base, as well as the bearing capacity of the surface on which the tower base is supported, so that the bearing capacity is not exceeded. Plywood, steel plates, or both, may be required under the tower bases to provide less concentrated loading to the ground directly under the base screw jacks.

Once the base locations are level, the bases can be placed, the tower hinges can be set, the sleeves can be positioned over the tower hinges, and the grid can be assembled on the ground. After assembly of the grid, the towers can be assembled on the grid, attached to the hinge and raised into vertical position. Then the grid can be raised to a level just high enough so that the outriggers can be inserted into the base. All screw jacks should be turned so that each pad is making contact with the ground or bearing plate (wood or steel). Additional wood blocks may be needed under the screw jacks so that at this point no more than two inches of the screw jack threads extend below the base or outriggers.

After checking that all screw jacks at each tower base are making contact with the ground, the grid can be raised to just above the tower hinge. Now the stabilizers can be attached to the outriggers and to the tower, however, initially leave the clamps loose at the tower. With the use of a long spirit level (3 feet or longer) against a tower leg, determine which stabilizer is required to "push" the tower into level. Tighten the clamp of this stabilizer first and check the level. It may be required to tighten two stabilizer clamps at a time in order to level the tower. Once the tower is level, the remaining stabilizer clamps can be tightened.

All of the screw jacks should be checked again for contact with the ground after the stabilizers are installed. It may be necessary to adjust the screw jacks on the outriggers, but they should never be turned down to an extent that they take weight off of the base. After all adjustments are made to the screw jacks, it is important to never have more than three inches of thread extending below the base or outriggers.

The tower should now be perpendicular to a true horizontal plane. You may visually align the tower from a distance using other vertical lines in the background as a reference, such as the edge of permanent buildings, poles or towers. Once confident that the towers are vertical, it is time to begin the process of lifting the grid to trim height. The chain motors may run at slightly different speeds (possibly from uneven loading on the grid). Therefore, stop the lift of the grid approximately every 15 feet and check for level. To check for level, a tape measure can be placed at each lift point of the grid to measure the distance to the ground. If the ground is level, all of the measurements should be the same. If the ground is not level, a level line or laser level should be used to create a true horizontal plane to which the measurements can be made. This process should continue until the grid reaches trim height. After the grid is lifted into level trim height, the installation of guy wires (if required) can proceed.

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. This is basically a single span of truss that is supported on each end.

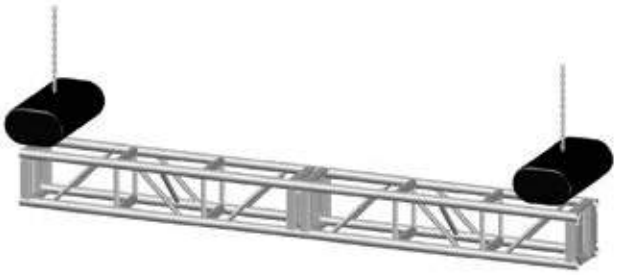


Figure 1: A span supported on each end—simple

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.

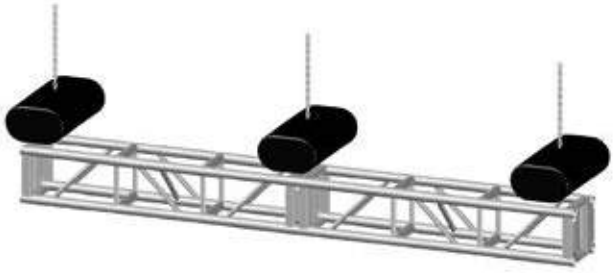


Figure 2: Three supports, but still simple

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.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Indeterminate grids

Getting back to simple

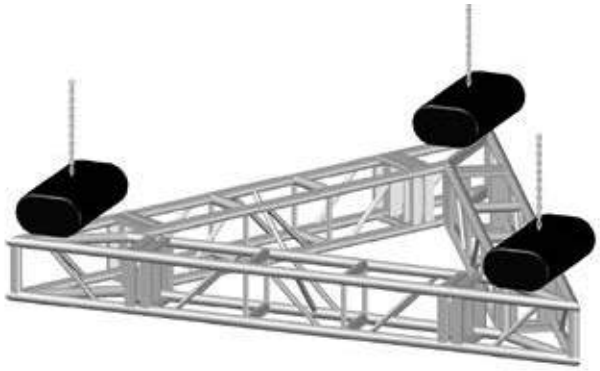


Figure 3: Three supports and circular, but still simple

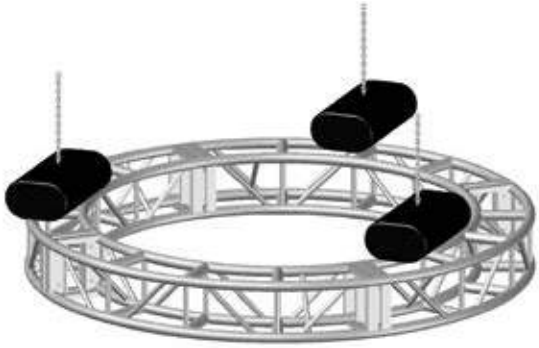


Figure 4: A beam, but an indeterminate structure—not simple

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.

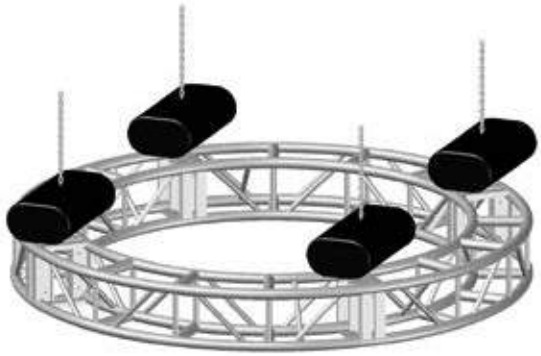


Figure 5: A circular indeterminate structure—not simple

One of the challenges with these structures is ensuring the supporting rigging stays appropriately engaged and the structure's loads remain within the 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.

Figure 6: Simple again

One of the challenges… is ensuring the supporting rigging stays appropriately engaged and the loads on the structure remain within the safe limits

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.

Dents, bends, abrasions and twists

Considerations for truss inspection

Safety is a huge concern for the live event production industry. The following information focuses on a critical component: Inspecting truss and referencing ANSI E1.2-2012 Entertainment Technology – Design, manufacture and use of aluminum trusses and towers.

Checking geometry

Your first clue that a section of truss might have a geometry problem would be if it doesn't sit flat on a flat floor. To investigate further, place two or three flat bars on the top of the truss section. If they don't line up, it's likely that the truss has been racked in the center. If there is a successive dip from bar to bar, then the truss is showing signs of a twist. Any time that these three alignment bars don't align, you have cause for concern.

You can also measure the truss diagonally in all faces, comparing the distance from the upper left corner to lower right corner with the distance from the upper right corner to the lower left corner. A good tolerance range on this diagonal measurement would be 1/16 inch. You should contact the manufacturer if you find any more than that.

Inspecting truss members

Dents, bends and abrasions can happen to any of the members. This is usually due to poor handling, but can also be caused by using the wrong type of clamps, the chain rubbing against the truss, or any variety of other occurrences. A good rule of thumb to determine excessive damage is the 25 percent rule. If any abrasion, bend or dent is deeper than 25 percent of the wall thickness of the material, then the truss needs to be removed from service.

Keep in mind that most members in typical bolted truss are only 1/8 inch thick. So dents, bends and abrasions that are only 1/32 inch deep would fall into this category.

Any damage to the chords are of particularly high concern. They effectively transfer the load down the length of the truss section. Furthermore, since there are so many other mem¬bers welded to them, it is not reasonable to repair or replace them.

Checking welds

There are a couple of types of weld cracks that you might find when inspecting truss. The first is what you could call a "hairline" crack. Found in the final tie-in of the weld, these are typically surface cracks and usually run perpendicular to the weld bead around the member. The second type of weld crack would be a "stress" crack. A stress crack typically runs parallel to the weld bead. These are of great concern since they're an indication of excessive stress on the truss, or at least on that member. With all cracks, make sure you consult the manufacturer for advice.

Since aluminum truss is fabricated using tempered material, adding excessive heat to it, like welding, changes the properties of the material. This creates a heat affected zone (HAZ) around the weld. It is in this area that you would be more likely to see a sign of failure, as it is much weaker than raw, un-welded material.

Checking connections

Next, check the connections. Many people forget to inspect the hardware when inspecting truss, but the pins and bolts are just as relevant as anything else.

First, ensure that graded hardware matches. If you are using Grade 8 bolts, you need to have Grade 8 nuts. Next, make sure there isn't excessive wear on the fasteners.

Next, check fasteners for deformation. This applies to both the hardware and the connection device itself. Deformation in the hardware is pretty straightforward. You want threads on bolts to be clean, and the pins in spigoted or other pinned truss to be straight and the proper diameter. A bent or bowed pin is a sure sign of overstress.

Deformation in bolted truss plates can take two forms. You need to inspect for both. First would be the holes themselves. They need to have the appropriate roundness. If they are oval-shaped, there is a problem. Second is the flatness of the plates. When bolted truss is overstressed, the plates can potentially bow or stretch outward. Once this happens, they will not return to their original shape. This makes the truss dangerous.

Spigoted truss is a little different, but you are looking for similar evidence. First, the holes need to be the proper shape. Once again, they need to maintain their original shape. If you are using spigot or fork connections, make sure that the blades are straight.

With spigot-type connections, you also have to look at how the connection is installed in the truss. If they are welded, you should have already inspected them, but again review for cracks. If they are mechanically fastened with roll pins, you need to check if the connection is loose. Inspect the rollpins as well. They should be flush on both sides of the tubes, and the holes they are in should be tight all the way around. If you see a gap between the back of the roll pin and the material it is mounted into, this is a sign that the truss has seen excessive loads and needs to be removed from service.

"Frequent" vs. "Periodic"

The ANSI standard notes two types of inspections: "frequent" and "periodic." Frequent inspections are to be conducted every time a truss is used. Before you start rolling your eyes, first consider that you are hanging stuff overhead, but second, consider how long it re¬ally takes to do a visual inspection of the truss.

This can be done with the truss coming off the truck during load-in. Specifically, the standard calls for the person doing the inspection to be a "competent" person, who is, and I am paraphrasing, someone who is capable of identifying hazards and authorized to take action. So, presumably, someone who is responsible for hanging equipment overhead would also be someone that is competent to conduct these visual truss inspections.

Here is a list of the items that must be inspected, as per ANSI E1.2-2012:

Geometry of trusses and towers for:
Twisting of the truss or tower
Racking of the truss or tower
Bending of the truss or tower
Chords for:
Dents
Bends
Abrasions
Diagonals for:
Dents
Bends
Abrasions
Being Missing
Connecting plates for:
Flatness
Deformation or excessive wear of holes
Pinned connector forks for:
Deformation
Fasteners for:
Proper Grade - Must Be Matched
Deformation
Excessive Wear
Welds for:
Breaks, Cracks, or Deformation
by visual Inspection

The second type of inspection is a periodic inspection. This inspection is one that requires records to be kept. You should start keeping records of each section of truss when it is first acquired, and then every year thereafter. The records should indicate the date of inspection, and who performed the inspection. As opposed to the competent person for frequent inspection, the periodic inspection requires a "qualified" person. This is defined as someone that has either through a degree, certificate or extensive experience, demonstrated the ability to solve problems related to truss.

Along with a commitment to inspections, the record-keeping aspect of truss inspection is important. When an investigation begins, a request for inspection records will be one of the first things to come up.

A last word of caution. Truss has long been considered an afterthought, or less important, than the lights, audio or whatever else. But considering that it is a key element to holding all of that equipment in the air, it definitely needs the appropriate attention and respect to ensure safety for the performers, technicians and audience. Be safe out there.

Loading tables

The following abbreviations are used in the load tables for the truss sections in this manual:

UDL	Uniformly Distributed Load
Max. Defl.	Maximum Deflection
lbs/ft.	Pounds per Linear Foot
mtrs.	Meters
lbs.	Pounds
in.	Inches
ft.	Feet
kgs.	Kilograms

All point loads shall occur at panel points (the intersection of a chord and a diagonal or a chord and a vertical). The self weight of the truss has been taken into account in each of the load tables and therefore does not have to be included in the calculation of superimposed live load.

The effects of shock loadings and dynamic loadings have not been taken into account in the preparation of the tables. Significant dynamic loads can be induced upon a truss during movement. One such example is when a truss is lifted by a chain motor. Dynamic loads must be resolved to static load equivalents before they can be compared to the allowable load data. The deflections reported are based upon the corresponding maximum allowable load being applied to the truss. Actual deflections may be slightly higher than those reported due to connection tolerances.

All load table data is reprinted from engineering reports developed by Parkhill, Smith & Cooper, Inc. structural engineers, and apply to truss fabricated after December 1989.

For the sake of explanation and clarification, we have selected the load table for Spigoted Medium Duty Truss as an example:

Medium duty truss 20.5" x 20.5" spigoted

		MAXIMUM ALLOWABLE UNIFORM LOADS			MAXIMUM ALLOWABLE POINT LOADS					
					center point		third point		quarter point	
NO. OF SECTS.	SPAN FT (MTRS)	LOAD LBS/FT	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.	LOAD LBS (KGS)	MAX DEFL. IN.
1	10 (3.05)	497	**4907** (C)	0.18	**2483** (D)	0.14	**1862** (E)	0.18	**1242** (F)	0.17
2	20 (6.09)	120	**2400** (1089)	0.90	**1200** (545)	0.77	**900** (409)	0.92	**600** (273)	0.87
3	30 (9.14)	50	**1500** (680)	1.98	**753** (342)	1.69	**565** (257)	2.01	**377** (171)	1.91
4	40 (12.21)	26	**1040** (471)	3.41	**516** (235)	2.95	**387** (176)	3.46	**258** (117)	3.30

Spigots Only (B)

Note: Deflections in the tables on the left are expected for full loadings (indoors only). **All loads are based on 10' (3.04m) sections.** (A) lengths are available.

(A) The published load tables contain a note describing the length of truss used to determine the allowable load data. Other section lengths are available which make up spans other than those given. It is acceptable to interpolate between the values given for such spans.

(B) Load data is provided for each truss according to its connection type.

(C) The uniformly distributed load is permitted only if the load is evenly distributed across the entire span of truss.

(D) The reported center-point load is the maximum allowable point load applied at midspan of the truss.

(E) The third-point load is the maximum allowable point load applied at each third point along the span of the truss.

(F) The quarter-point load is the maximum allowable point load applied at each quarter point along the span of the truss.

Calculating loads

A quick rule-of-thumb you might want to remember is: "If the total weight you plan to place on the truss (no matter the location of the hanging point or points) is less than half of the total UDL for your span, you will not be overstressing the truss". For example, a 40 foot span of Medium Duty spigoted truss has a total allowable UDL of 5,480 lbs. If you have an irregular pattern of point loads that do not correspond with one of the published load configurations, you can still be sure that you are within allowable load limits if the total weight of all of the point loads is less than half of the total UDL. Using our example, if the point loads on the truss totaled 2,740 lbs. or less, you would not be overstressing the truss. Additionally, a truss may be loaded with a combination of point loads and uniformly distributed loads. In this condition, the percentage of point load capacity is equal to the percentage of uniformly distributed load capacity not used. Of course, if you are uncertain whether your specific load configuration is acceptable, you can always call your TOMCAT representative for assistance.

It may be necessary to calculate the load each of your chain hoists will be required to lift. To determine those "end reactions" we would employ the following formulas:

$$R_1 = \frac{R_1\, b_1}{L} + \frac{R_2\, b_2}{L} + \frac{R_3\, b_3}{L} + \ldots$$

$$R_2 = \frac{R_1\, a_1}{L} + \frac{R_2\, a_2}{L} + \frac{R_3\, a_3}{L} + \ldots$$

Where:

P_1, P_2, P_3, etc. are point loads applied to the truss (typically rigging points);

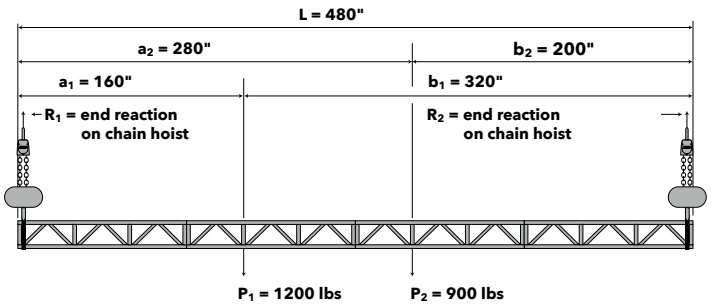
R_1 and R_2 are end reactions of the truss resulting from the application of point loads P_1, P_2, P_3, etc.;

a_1, a_2, a_3, etc. are the dimensions from the R_1 end of the truss to P_1, P_2, P_3, etc. respectively; and b_1, b_2, b_3,

etc. are the dimensions from the R_2 end of the truss to P_1, P_2, P_3, etc., respectively.

For example, four sections of 10' (3.05 m) Medium Duty Truss are supported at each end with chain hoists.

The truss is loaded with two point loads rigged at panel points:



To calculate the load that each chain hoist is supporting, plug the values into the equations given above:

$$R_1 = \frac{(P_1 = 1200\ \text{lbs}) \times (b_1 = 320")}{(L = 480")} + \frac{(P_2 = 900\ \text{lbs}) \times (b_2 = 200")}{(L = 480")}$$

$$= \qquad\qquad = \qquad\qquad$$

$$R_1 = \quad 800\ \text{lbs} \quad + \quad 375\ \text{lbs} = 1175\ \text{lbs}$$

R1 + end reaction on chain hoist

$$R_2 = \frac{(P_1 = 1200\ \text{lbs}) \times (a_1 = 160")}{(L = 480")} + \frac{(P_2 = 900\ \text{lbs}) \times (a_2 = 280")}{(L = 480")}$$

$$= \qquad\qquad = \qquad\qquad$$

$$R_2 = \quad 400\ \text{lbs} \quad + \quad 525\ \text{lbs} = 925\ \text{lbs}$$

R2 + end reaction on chain hoist

By adding half of the self weight of the truss as given in the product code table $\left(\frac{117x4}{2}\right)$ to each end reaction, the total load to be lifted by the chain hoist is determined; for R1 it is 1,409 lbs. and for R2 it is 1.159 lbs. By adding the weight of the chain hoists and rigging, the total load on the supporting structure can be determined.

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.

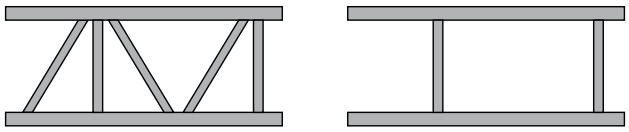
When loading, unloading, or moving truss, do so with enough personnel as to ensure that the truss is not dropped or dragged over other truss. This also ensures personal safety. Use forklifts with extreme caution! Place forks only under the bottom chord, as placing forks through the truss could damage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

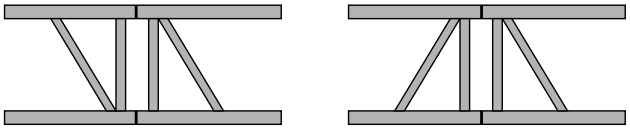
TRIANGLE truss should be oriented with the apex up. Turning it over reduces load capacity significantly. For folding-triangle truss, the apex is the hinged pair of chords. When connecting sections of truss, make sure the diagonals form a continuous pattern. (See Figure 2.) The diagonals on each side 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 bending of members may occur if loads are applied at locations other than panel points.

Figure 1.



Side View | Top of Bottom View

Figure 2.



Incorrect | Correct

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.

Design by www.wemakebrandsgroup.com
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