STAGELINE®

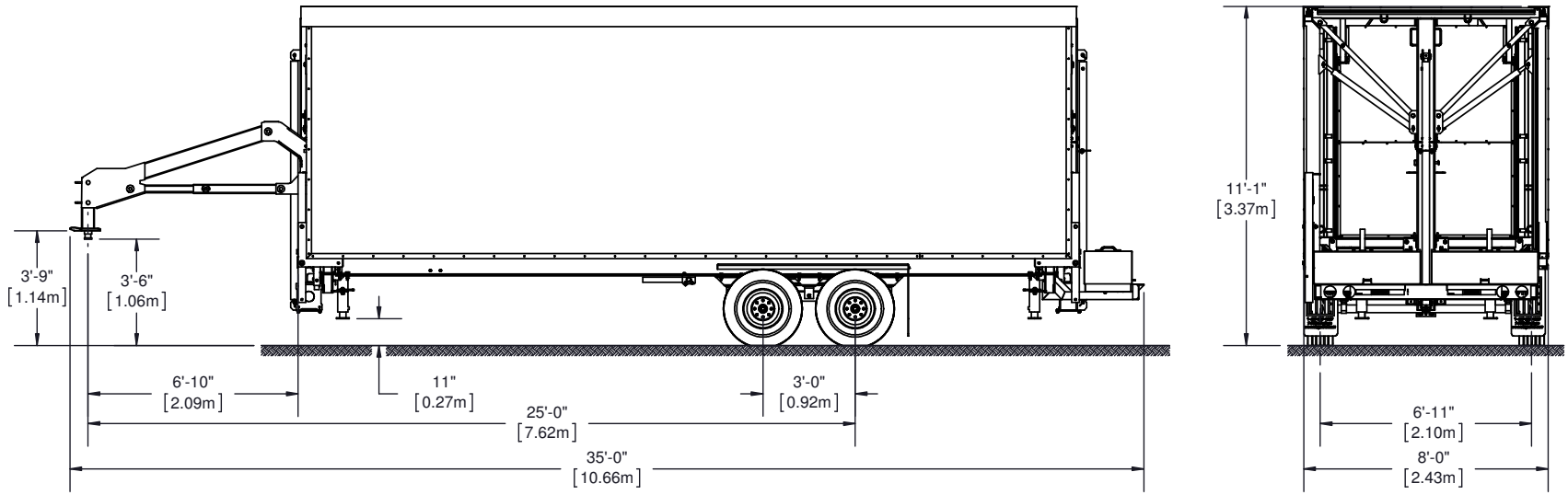
RENTAL DIVISION - DIVISION LOCATION

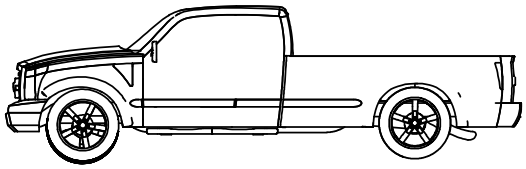
SL100
UNITS #218 TO 945
TECHNICAL DRAWINGS
2020

SL100 UNITS NO. 218 TO 945

MASS & DIMENSIONS

Trailer Hitch
KingPin / Fifth Wheel



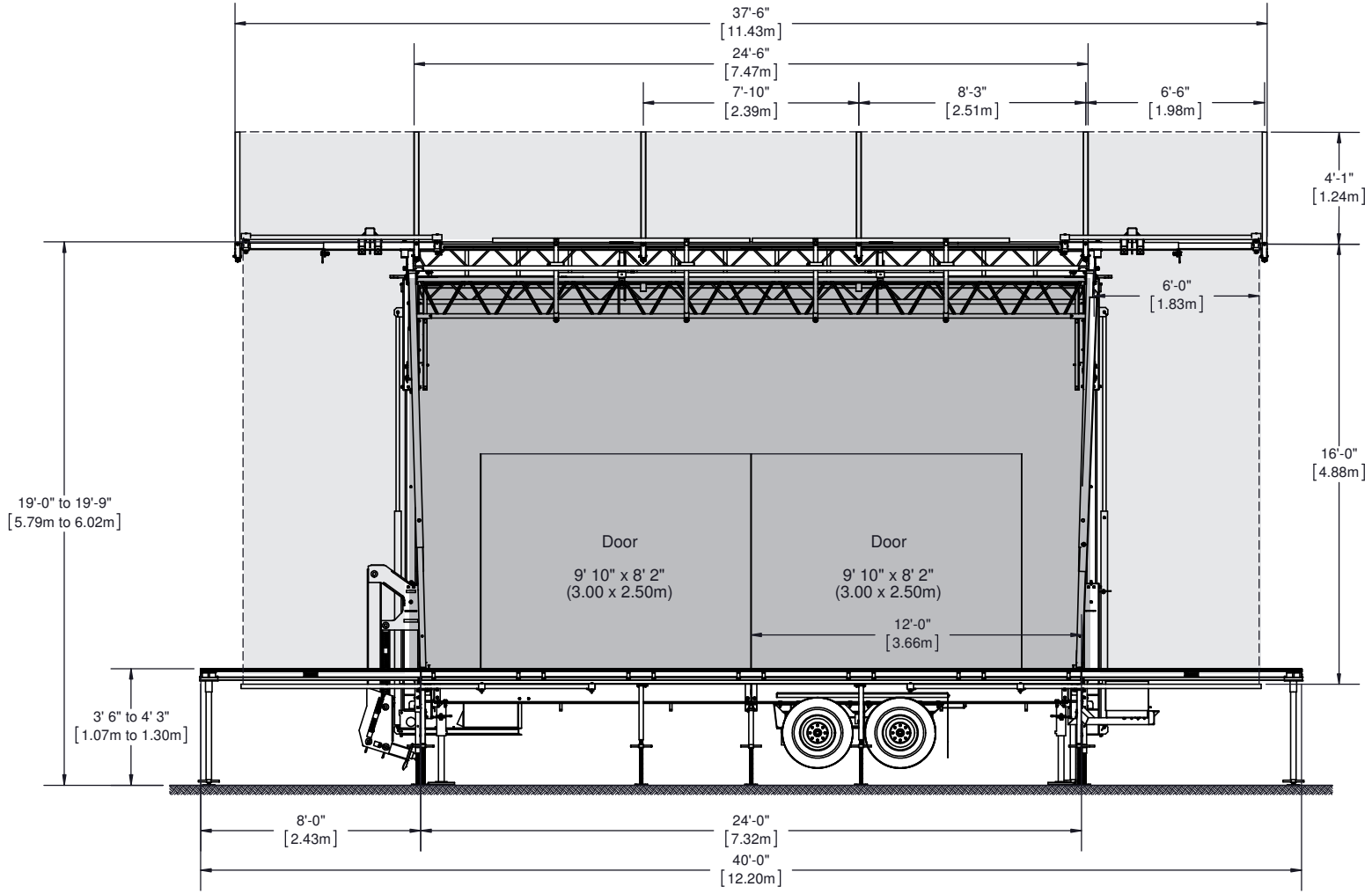


Mass SL100 #599 and up	Unladen		Standard Equipment		Maximum Capacity	
	Lbs	Kg	Lbs	Kg	Lbs	Kg
Total Mass	8752	3970	10604	4810	15000	6804
Mass on Axle	7496	3400	9171	4160	14000	6350
Mass on Hitch	1257	570	1433	650	3750	1701

Drawings may show stage equipped with optional accessories. May be sold separately.

SL100 UNITS NO. 218 TO 945

FRONT VIEW



WINDWALL

BANNER (For dimensions, please refer to Banner Book)

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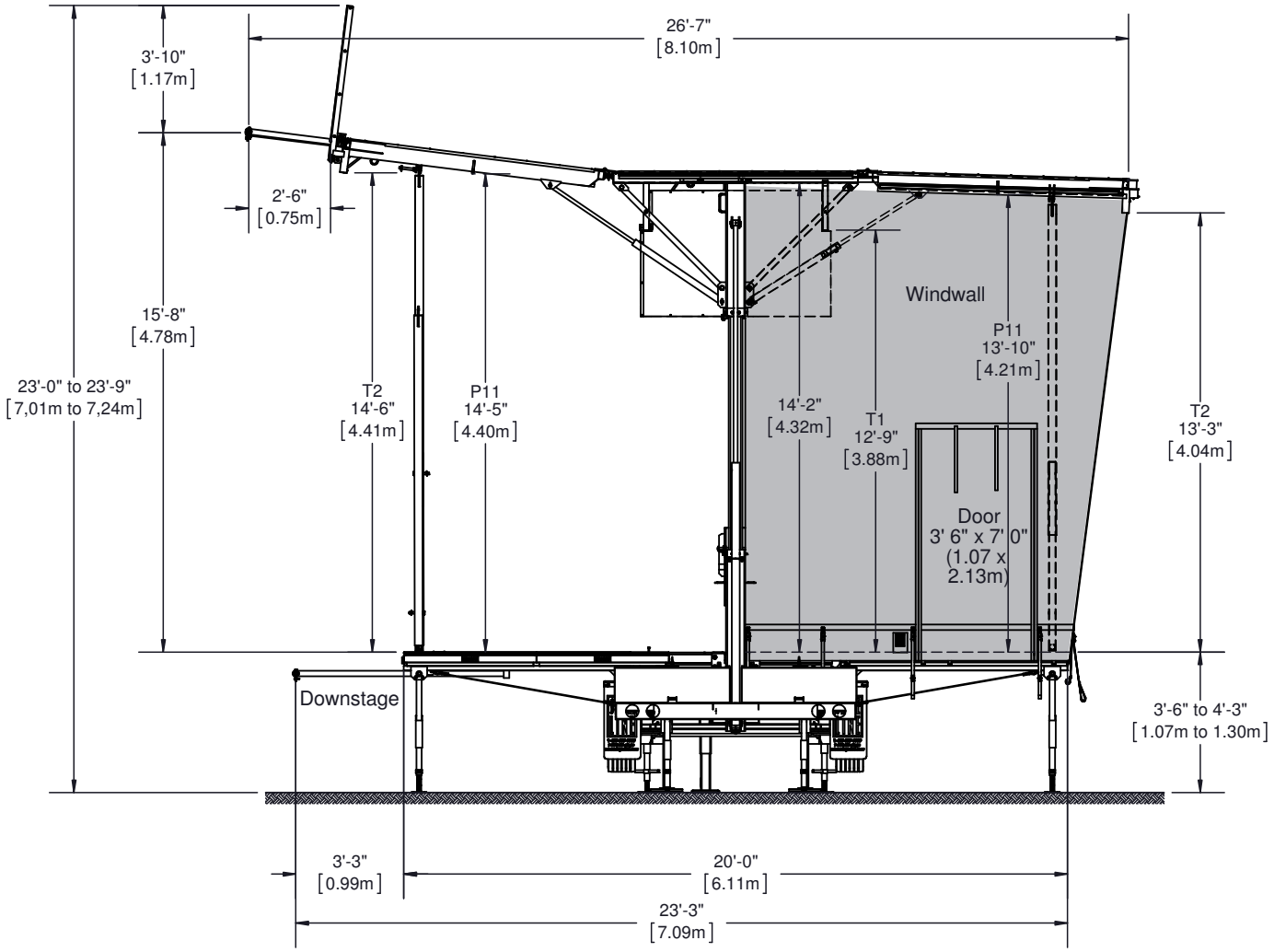
SL100 UNITS NO. 218 TO 945

SIDE VIEW



WINDWALL

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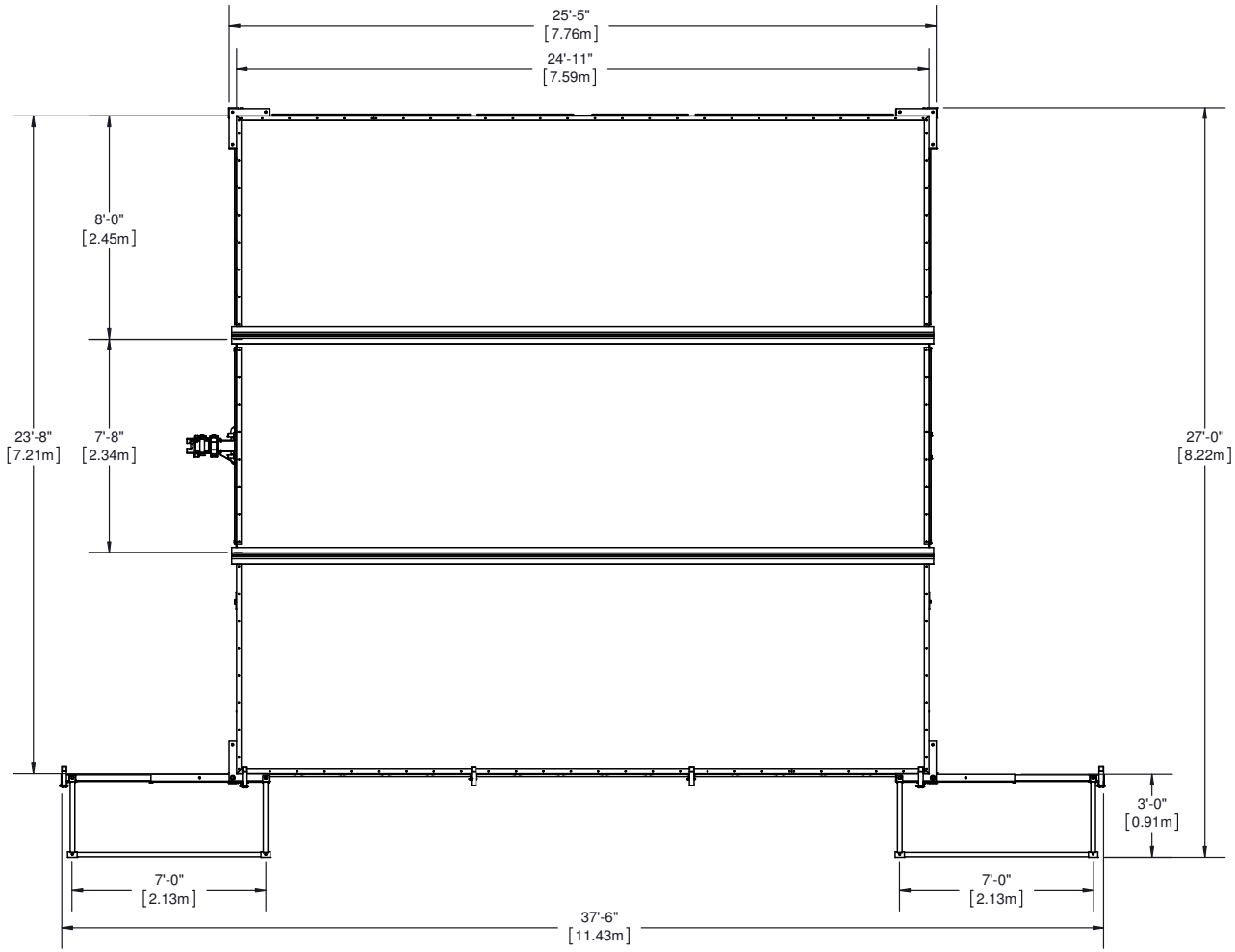
SL100 UNITS NO. 218 TO 945

ROOF VIEW



DOWNSTAGE

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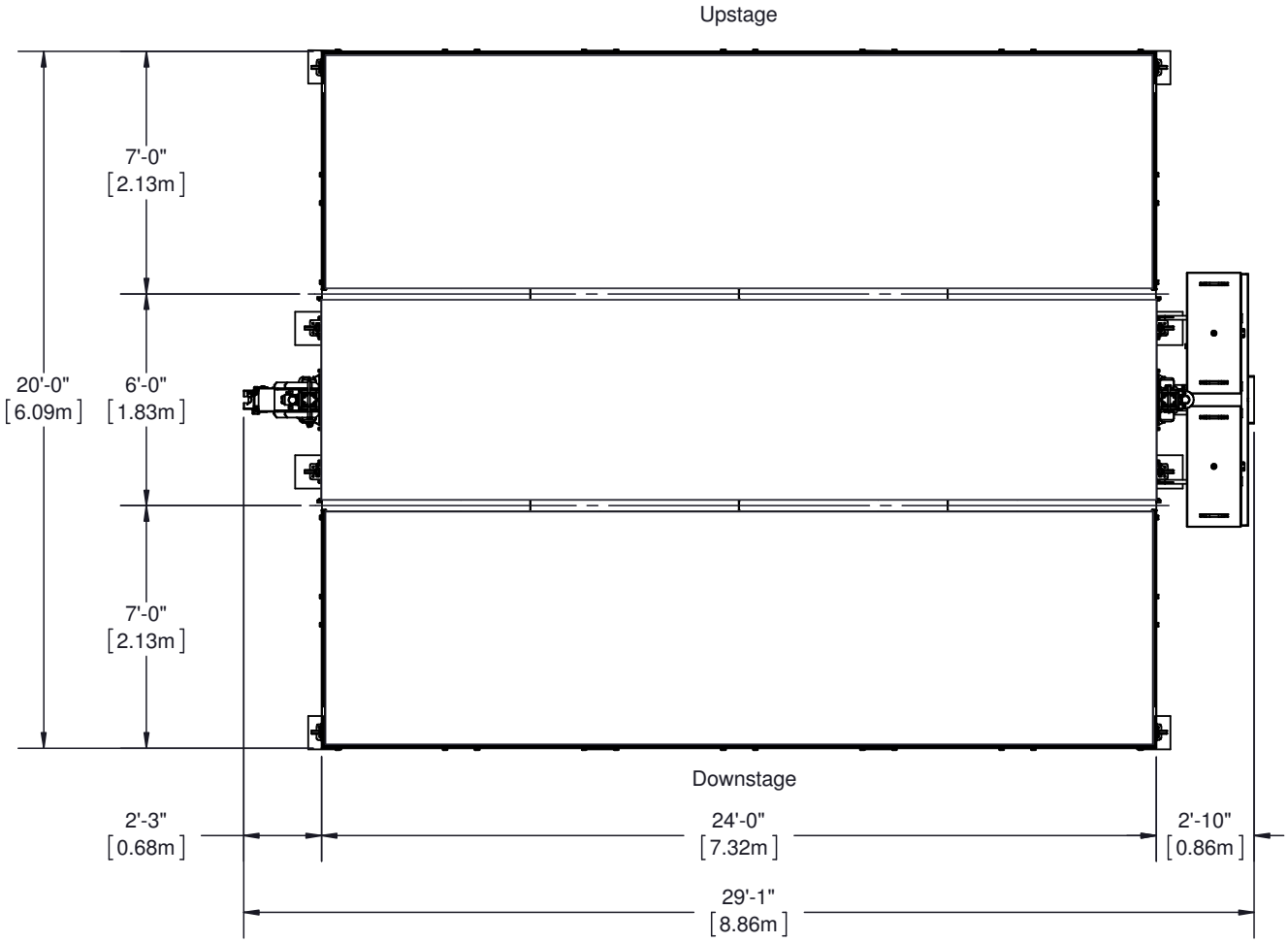
FLOOR VIEW



CAPACITY: 100lbs/ft² (490kg/m²)

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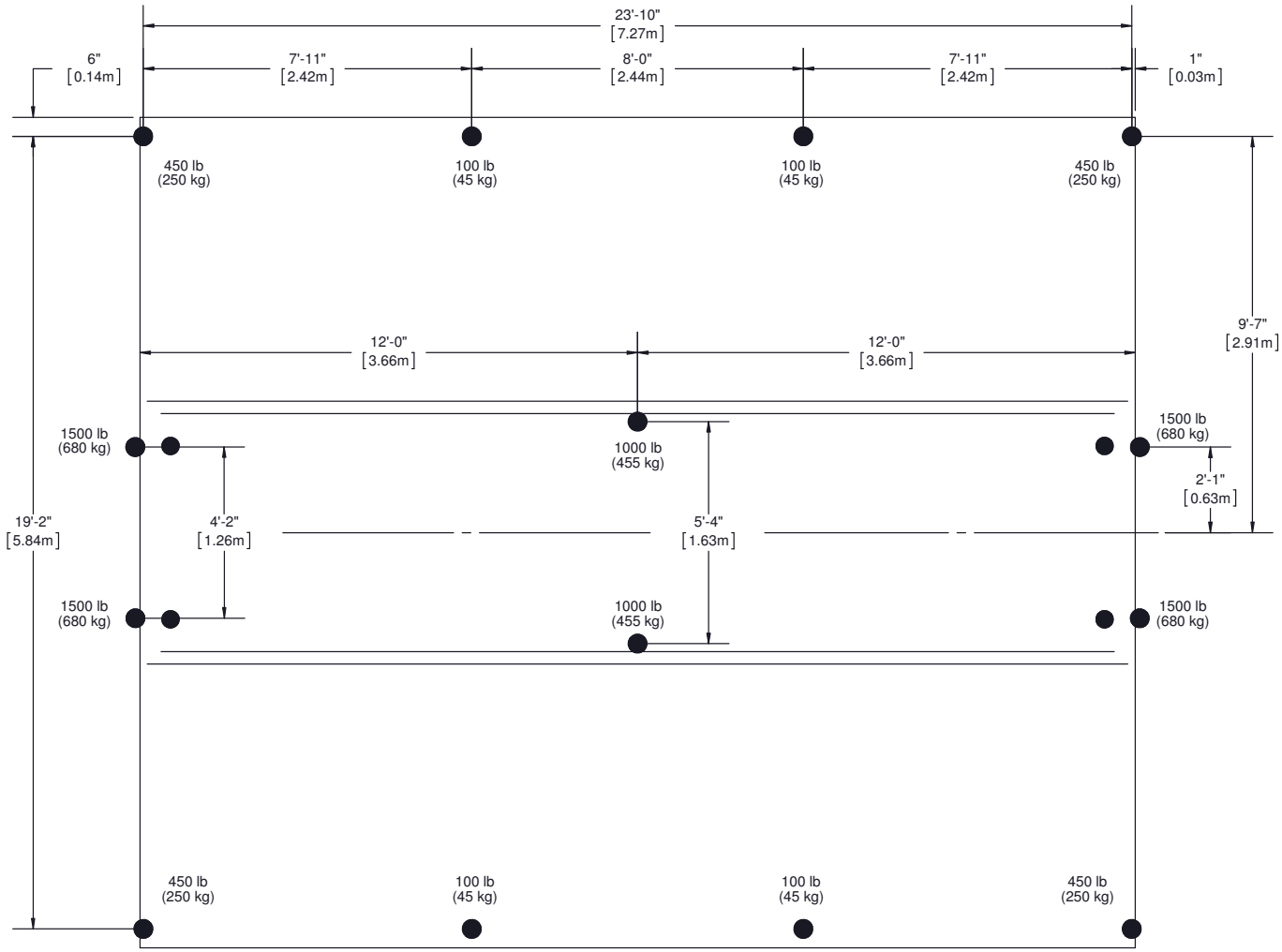
DEAD LOAD GROUND SUPPPORT



● FLOOR STABILIZERS, EXTENSIONS AND LEVELLING JACKS

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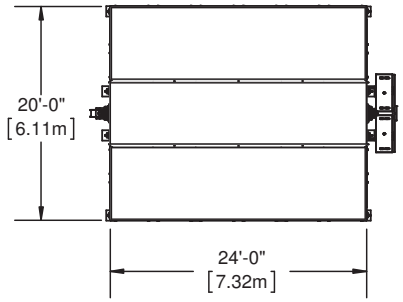
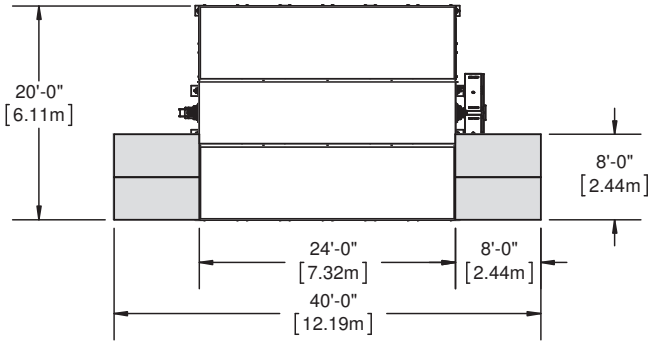
Standard Configurations





PLATFORM

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A THOROUGH UNDERSTANDING OF THE INTER-RELATED LOADINGS SHOWN IN THIS RIGGING PLAN IS NEEDED IN ORDER TO SAFELY USE THIS MOBILE STAGE ROOF AND TAKE FULL ADVANTAGE OF THE MANY RIGGING OPPORTUNITIES IT OFFERS.

This mobile stage roof offers a variety of rigging options with regard to load capacity, placement and type.

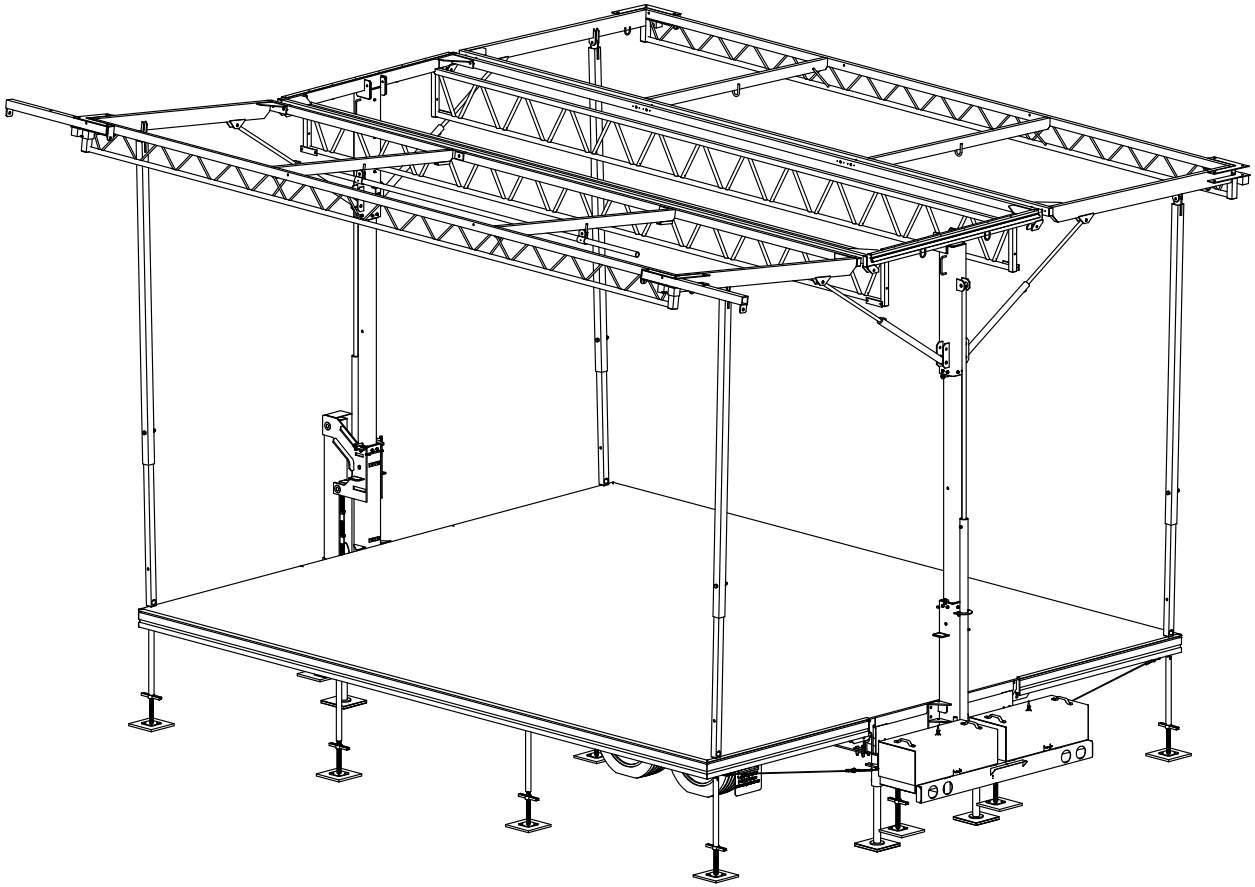
There are rigging pipes, trusses, roof rigging points and side overhang rigging beams.

This rigging plan locates and defines these rigging features, includes load capacity for each and describes maximum combinations of loads amongst features.

Take note of exclusions, maximum sub-totals in a group, load balance requirements, maximum lifting capacity of roof and maximum rigging load on roof.

The maximum load on the roof is less than the sum of the maximum load on each rigging feature.

Refer to Operator's Manual for procedures in regards to proper setup and setup methods of the stage and its options.



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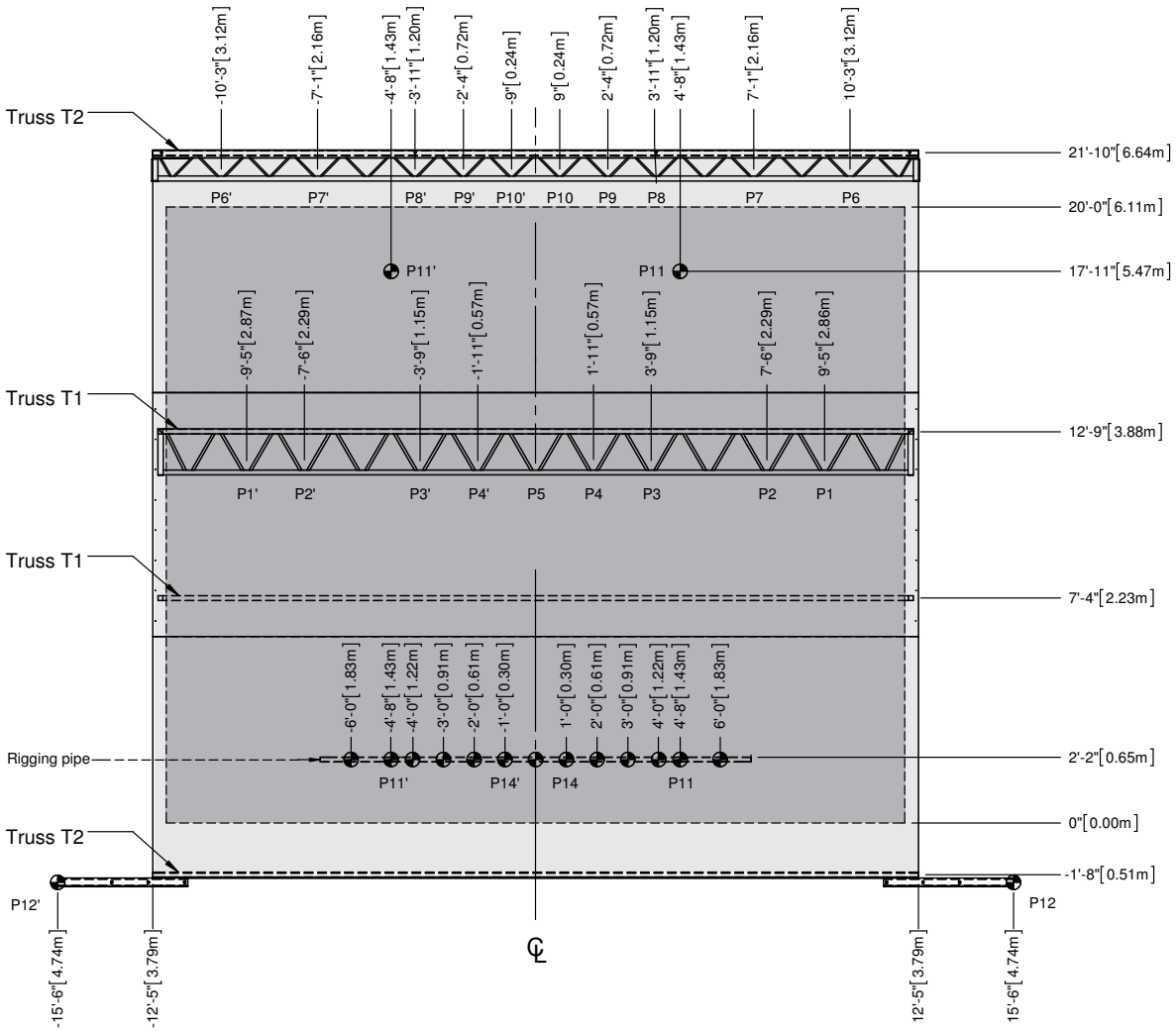
RIGGING RESTRICTIONS

- MAXIMUM LOAD BEARING CAPACITY: 4800 lb (2177 kg). All corner posts must be installed and pinned, and telescopic columns pinned and secured.
- Total loads on P12s is 200 lb (91 kg) once all corner posts have been installed and lateral banners are installed. Capacity can be increased to 500 lb (227 kg) if all corner posts are installed and lateral banners are not installed.
- Do not load more than 250 lb (115 kg) on downstage roof pannel, when corner posts are replaced by cylinder locks (Cylinder locks can only be used on the downstage roof panel).
- Load any number of P14s on rigging pipe, symmetrically, at positions shown on diagram, or use P11s.

LIFTING RESTRICTIONS

- MAXIMUM ROOF LIFTING CAPACITY: 3800 lb (1725 kg)
- Maximum asymmetric load difference between downstage and upstage roof must not exceed 1550 lb (705 kg) including loads on T1 trusses.
- When lifting, make sure loads are evenly divided between right and left side of roof.
- Total load on T2 and P12s must not exceed 500 lb (227 kg) when using downstage P11s or rigging pipe. Total load can be increased to 850 lb (386 kg) if not using downstage P11s or rigging pipe.



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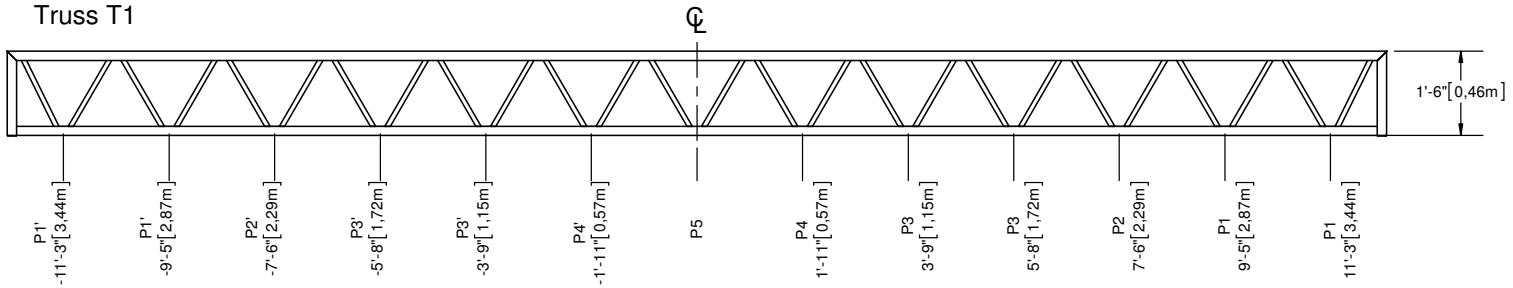
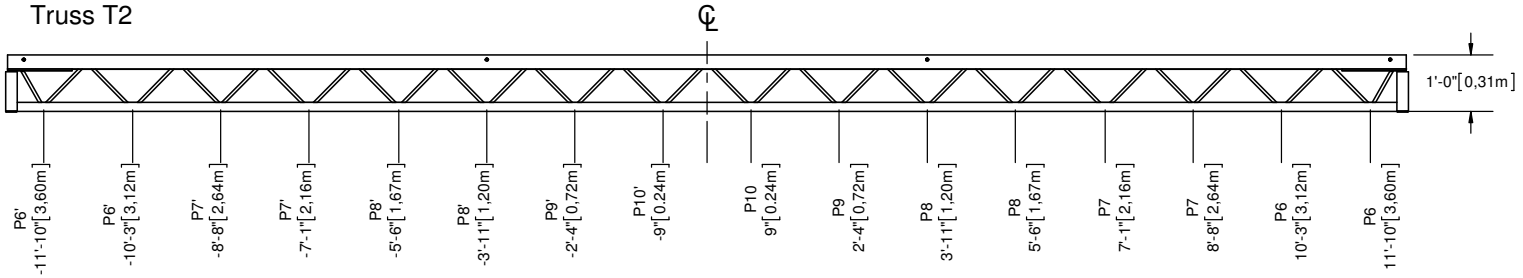
Truss T1



$$\textbf{Truss T1}^{**}: \frac{\text{Load } \mathbf{P1}}{\text{Capacity } \mathbf{P1}} + \frac{\text{Load } \mathbf{P2}}{\text{Capacity } \mathbf{P2}} + \frac{\text{Load } \mathbf{P3}}{\text{Capacity } \mathbf{P3}} + \frac{\text{Load } \mathbf{P4}}{\text{Capacity } \mathbf{P4}} + \frac{\text{Load } \mathbf{P5}}{\text{Capacity } \mathbf{P5}} \leq 1.00$$

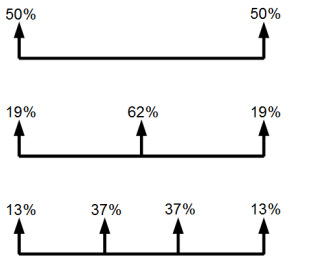
Truss T2



$$\textbf{Truss T2}^{**}: \frac{\text{Load } \mathbf{P6}}{\text{Capacity } \mathbf{P6}} + \frac{\text{Load } \mathbf{P7}}{\text{Capacity } \mathbf{P7}} + \frac{\text{Load } \mathbf{P8}}{\text{Capacity } \mathbf{P8}} + \frac{\text{Load } \mathbf{P9}}{\text{Capacity } \mathbf{P9}} + \frac{\text{Load } \mathbf{P10}}{\text{Capacity } \mathbf{P10}} \leq 1.00$$

MAXIMUM LOAD CAPACITY					
Point No.	Lbs	Kg	Point No.	Lbs	Kg
P1, P2, P3	350	160	P12	425	190
P4, P5, P6, P7, P8	250	115	P14	30	13
P9	175	80			
P10	90	41			
P11	350	160			

UDL CHART



*** Valid for symmetric loads only. In other cases, contact Stageline for assistance.*

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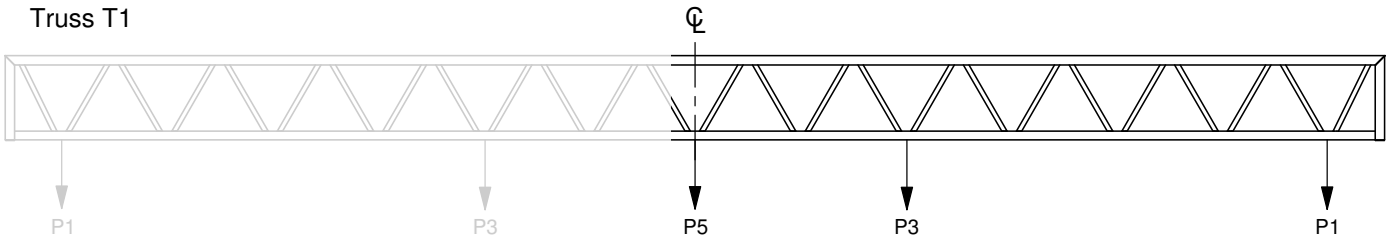
WHEN CALCULATING THE LOAD ON A SL100 TRUSS, USE FOLLOWING METHOD.

Each truss in the roof must be visualized as 2 trusses put together that share a center point, which in the following example is the P5.

Example: T1 on a SL100.
Points from left to right are P1', P2', P3', P4', P5, P4, P3, P2, P1. We will only verify loads on 1 side of the truss, Meaning P1 thru P5.



CALCULATION EXAMPLE #1:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 500lbs.
The motors will be hung from P1.

- 250lbs (50% of weight, see UDL chart) /
  350 (the capacity of the P1 on the T1 truss) = 0.71
- 0.71 = 71 %, as 1.00 would equal 100 %.

So the T1 truss is at 71 % of its total capacity.

CALCULATION EXAMPLE #2:

1 lighting truss on 3 motors, total uniformly distributed weight of the truss is 500lbs.
The motors will be hung from P1, P5, P1.

- **P1**
  0.19 x 500 (19% of weight, see UDL chart) / 350 (P1) = 0.95,
  so this one point will use 95 % of the truss capacity.
- **P5**
  0.62 x 500 (62% of weight, see UDL chart) / 250 (P5) = 1.24, so this one point will use 124 % of the truss capacity.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

1.24 + 0.95 = 2.19
So the T1 truss is at 219 % of its total capacity, which is overloaded.

CALCULATION EXAMPLE #3:

1 lighting truss on 4 motors, total uniformly distributed weight of the truss is 500lbs.
The motors will be hung from P1, P3, P3, P1.

- **P1**
  0.13 x 500 (13% of weight, see UDL chart) / 350 (P1) = 0.19,
  so this one point will use 19 % of the truss capacity.
- **P3**
  0.37 x 500 (37% of weight, see UDL chart) / 350 (P3) = 0.53,
  so this one point will use 53 % of the truss capacity.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

0.19 + 0.53 = 0.72
So the T1 truss is at 72 % of its total capacity.

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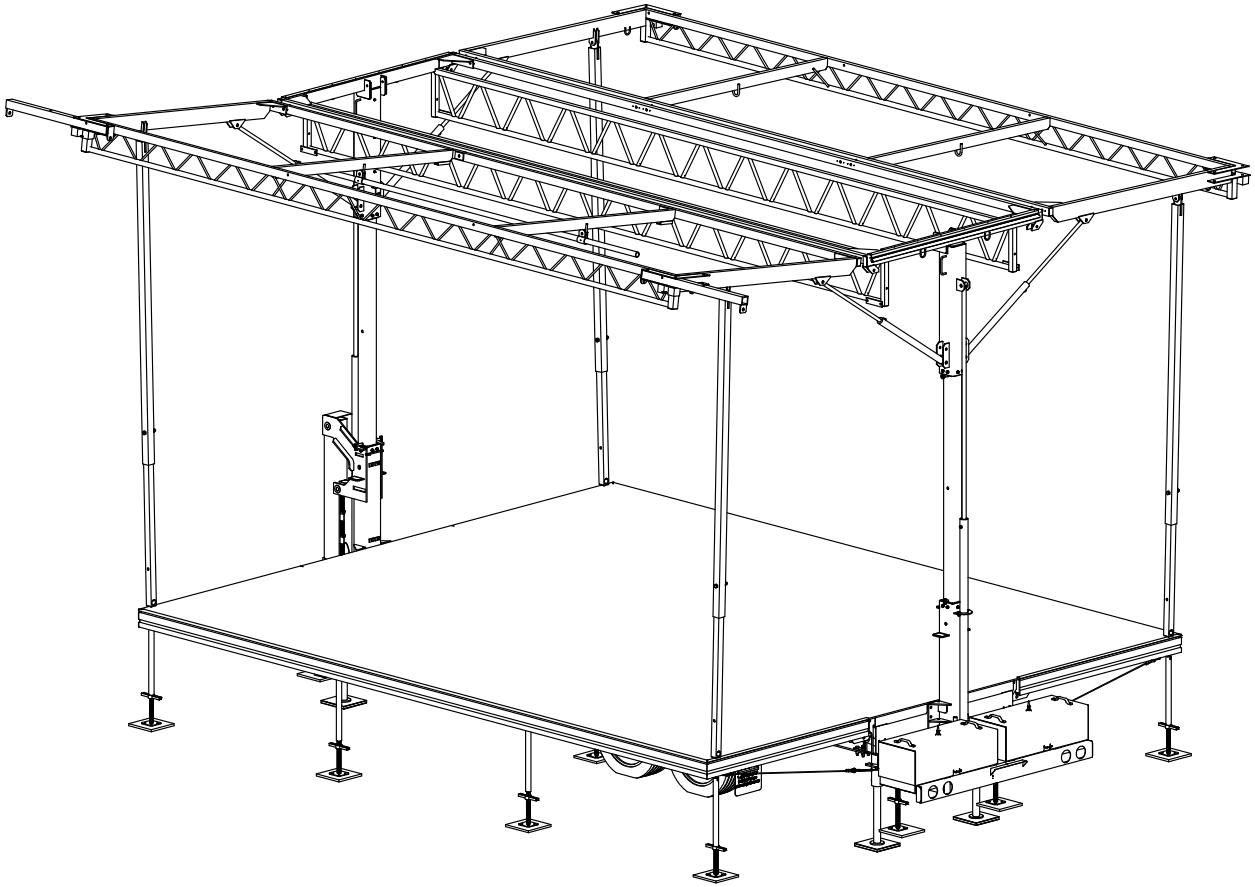

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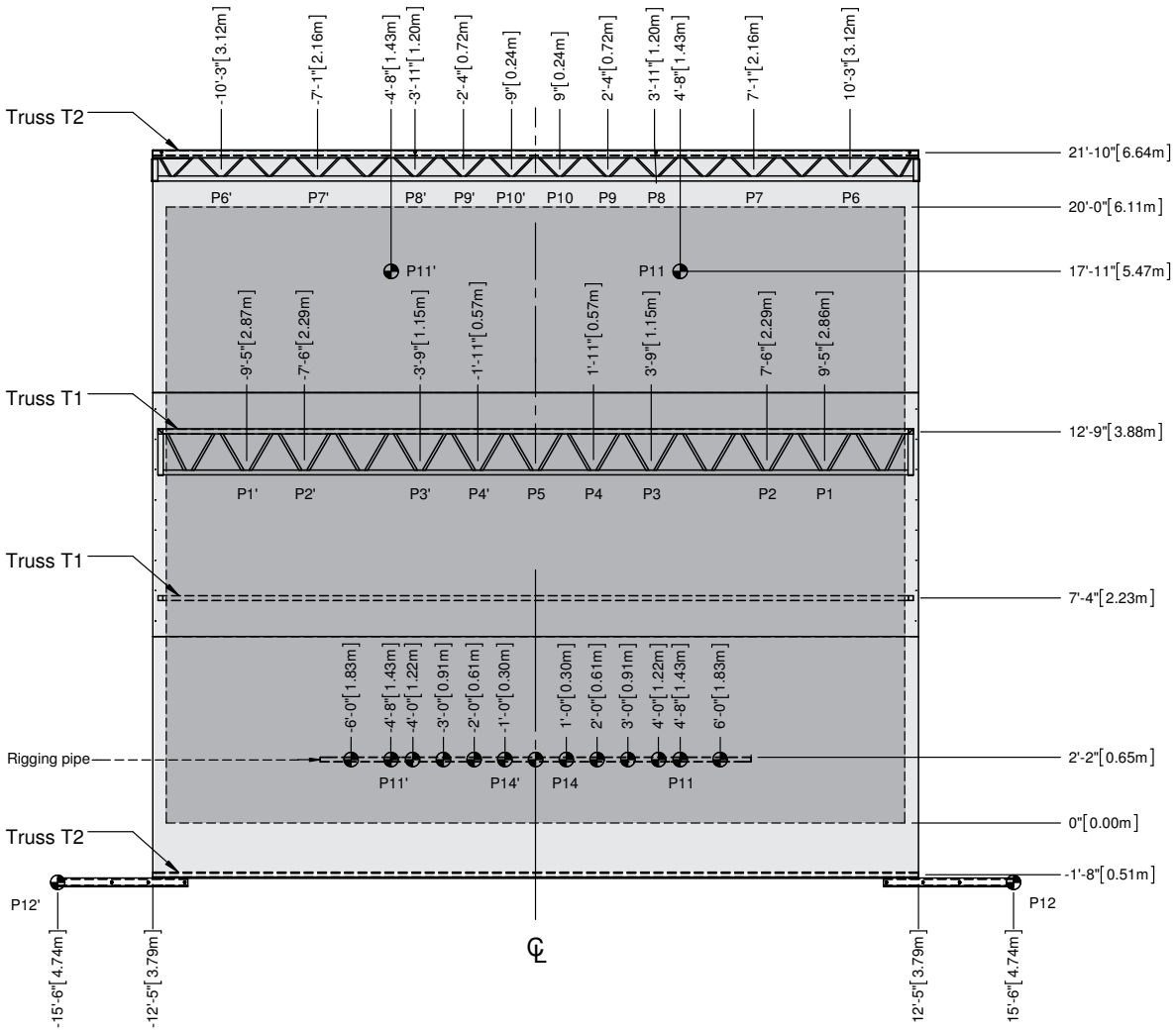
RIGGING RESTRICTIONS

- MAXIMUM LOAD BEARING CAPACITY: 5400 lb (2450 kg). All corner posts must be installed and pinned, and telescopic columns pinned and secured.
- Total loads on P12s is 425 lb (190 kg) once all corner posts have been installed and lateral banners are installed. Capacity can be increased to 800 lb (363 kg) if all corner posts are installed and lateral banners are not installed.
- Do not load more than 250 lb (115 kg) on downstage roof pannel, when corner posts are replaced by cylinder locks (Cylinder locks can only be used on the downstage roof panel).
- Load any number of P14s on rigging pipe, symmetrically, at positions shown on diagram, or use P11s.

LIFTING RESTRICTIONS

- MAXIMUM ROOF LIFTING CAPACITY: 3800 lb (1725 kg)
- Maximum asymmetric load difference between downstage and upstage roof must not exceed 1550 lb (705 kg) including loads on T1 trusses.
- When lifting, make sure loads are evenly divided between right and left side of roof.
- Total load on T2 and P12s must not exceed 500 lb (227 kg) when using downstage P11s or rigging pipe. Total load can be increased to 850 lb (386 kg) if not using downstage P11s or rigging pipe.



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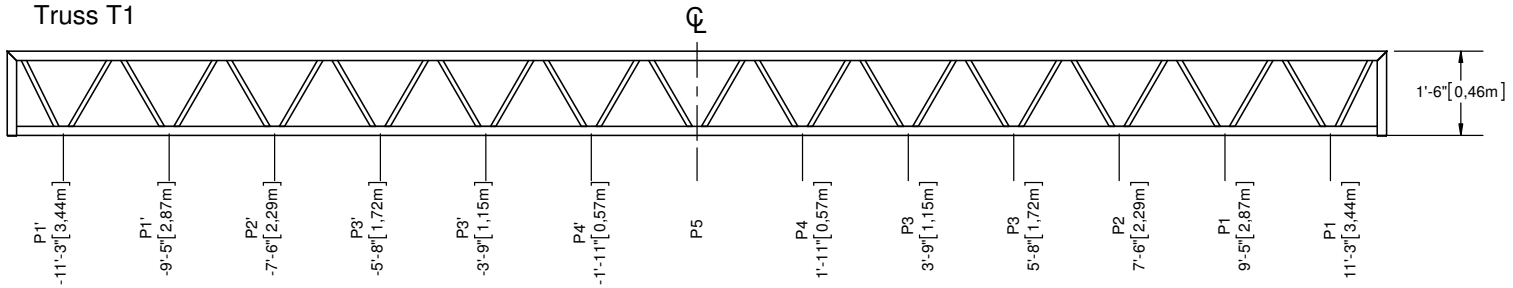
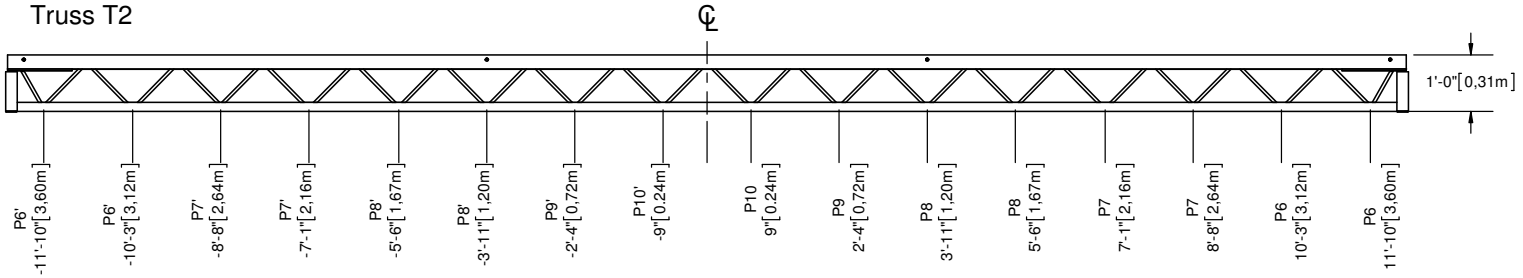
Truss T1



$$\textbf{Truss T1}^{**}: \frac{\text{Load } \mathbf{P1}}{\text{Capacity } \mathbf{P1}} + \frac{\text{Load } \mathbf{P2}}{\text{Capacity } \mathbf{P2}} + \frac{\text{Load } \mathbf{P3}}{\text{Capacity } \mathbf{P3}} + \frac{\text{Load } \mathbf{P4}}{\text{Capacity } \mathbf{P4}} + \frac{\text{Load } \mathbf{P5}}{\text{Capacity } \mathbf{P5}} \leq 1.00$$

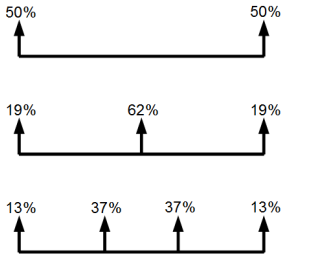
Truss T2



$$\textbf{Truss T2}^{**}: \frac{\text{Load } \mathbf{P6}}{\text{Capacity } \mathbf{P6}} + \frac{\text{Load } \mathbf{P7}}{\text{Capacity } \mathbf{P7}} + \frac{\text{Load } \mathbf{P8}}{\text{Capacity } \mathbf{P8}} + \frac{\text{Load } \mathbf{P9}}{\text{Capacity } \mathbf{P9}} + \frac{\text{Load } \mathbf{P10}}{\text{Capacity } \mathbf{P10}} \leq 1.00$$

MAXIMUM LOAD CAPACITY					
Point No.	Lbs	Kg	Point No.	Lbs	Kg
P1, P2, P3	350	160	P12	800	364
P4, P5, P6, P7, P8	250	115	P14	30	13
P9	175	80			
P10	90	41			
P11	350	160			

UDL CHART



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Example: T1 on a SL100.
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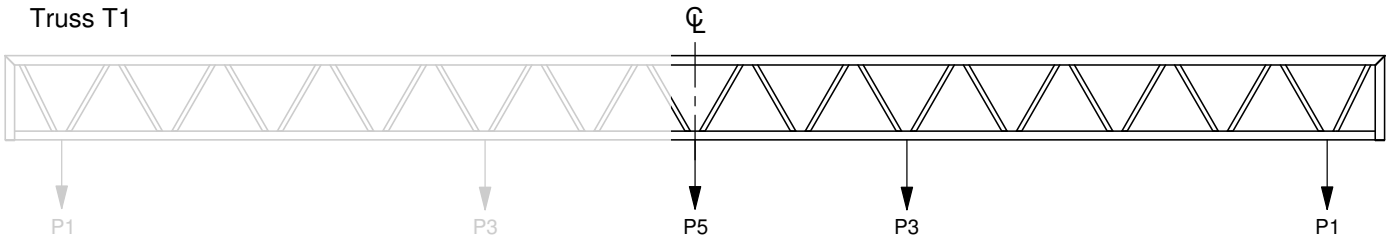

CALCULATION EXAMPLE #1:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 500lbs.
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- 250lbs (50% of weight, see UDL chart) /
  350 (the capacity of the P1 on the T1 truss) = 0.71
- 0.71 = 71 %, as 1.00 would equal 100 %.

So the T1 truss is at 71 % of its total capacity.

CALCULATION EXAMPLE #2:

1 lighting truss on 3 motors, total uniformly distributed weight of the truss is 500lbs.
The motors will be hung from P1, P5, P1.

- **P1**
  0.19 x 500 (19% of weight, see UDL chart) / 350 (P1) = 0.95,
  so this one point will use 95 % of the truss capacity.
- **P5**
  0.62 x 500 (62% of weight, see UDL chart) / 250 (P5) = 1.24, so this one point will use 124 % of the truss capacity.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

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CALCULATION EXAMPLE #3:

1 lighting truss on 4 motors, total uniformly distributed weight of the truss is 500lbs.
The motors will be hung from P1, P3, P3, P1.

- **P1**
  0.13 x 500 (13% of weight, see UDL chart) / 350 (P1) = 0.19,
  so this one point will use 19 % of the truss capacity.
- **P3**
  0.37 x 500 (37% of weight, see UDL chart) / 350 (P3) = 0.53,
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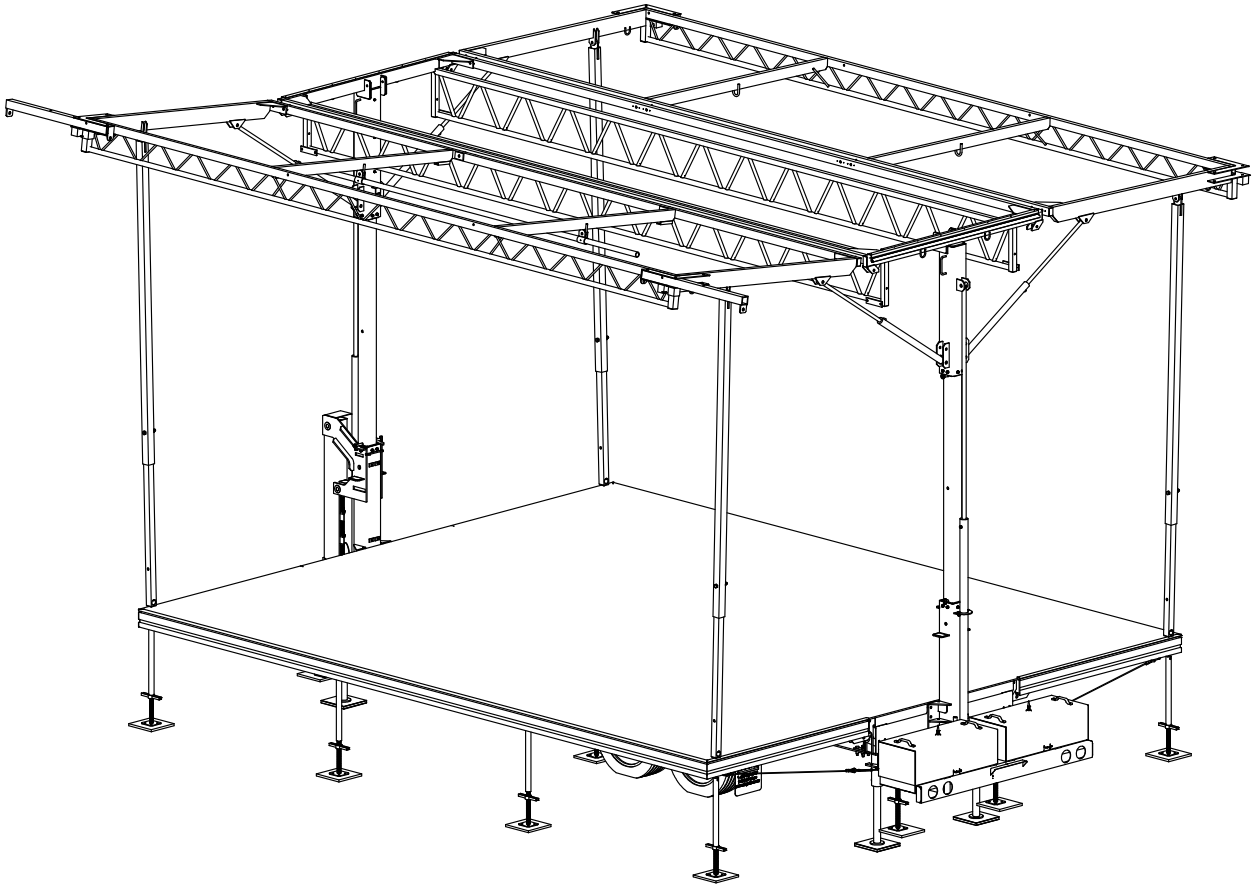

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RIGGING RESTRICTIONS

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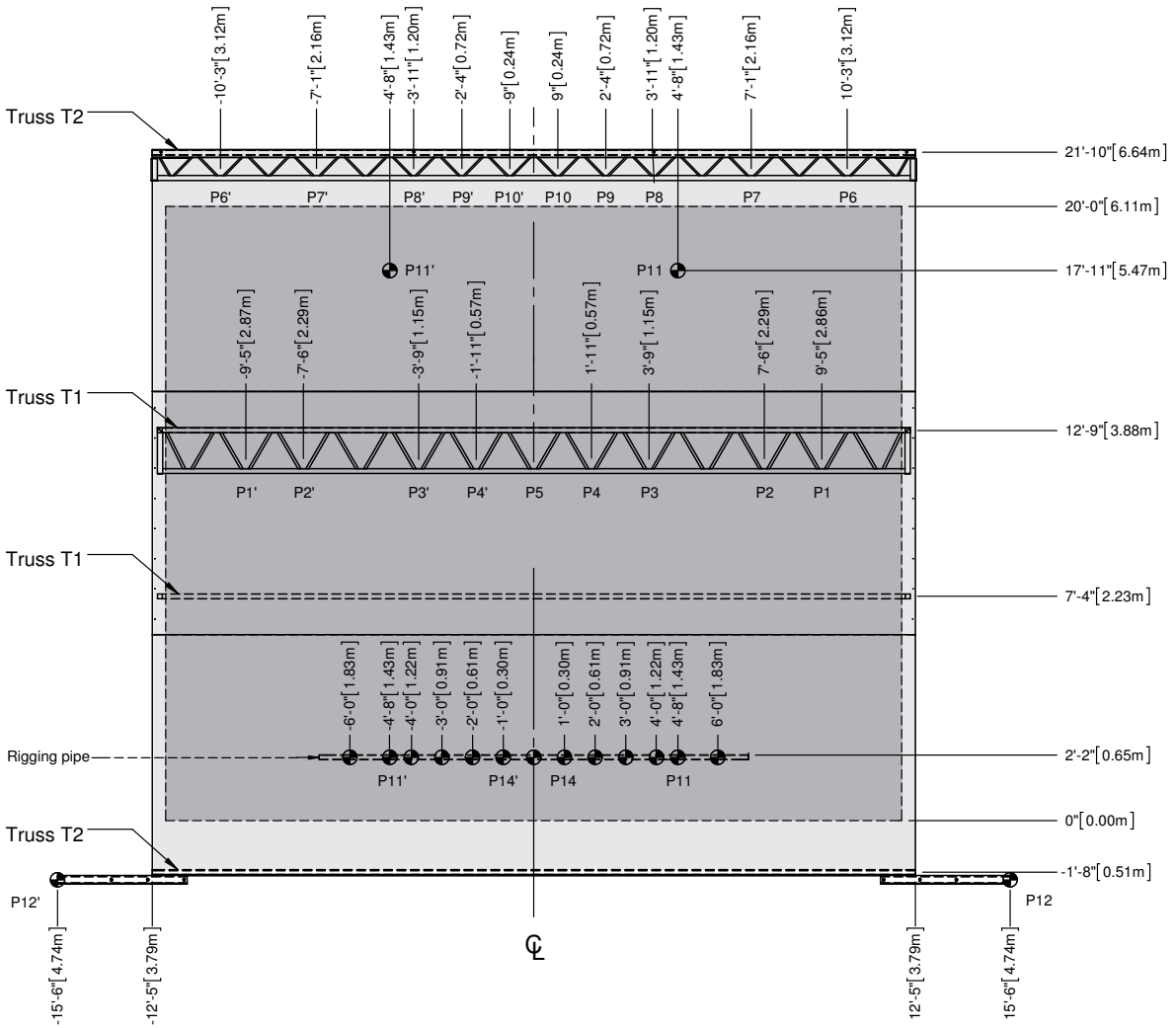
  All corner posts must be installed and pinned, and telescopic columns pinned and secured.
- Total loads on P12s is 500 lb (227 kg) once all corner posts have been installed and lateral banners are installed. Capacity can be increased to 800 lb (363 kg) if all corner posts are installed and lateral banners are not installed.
- Do not load more than 250 lb (115 kg) on downstage roof pannel, when corner posts are replaced by cylinder locks (Cylinder locks can only be used on the downstage roof panel).
- Load any number of P14s on rigging pipe, symmetrically, at positions shown on diagram, or use P11s.

LIFTING RESTRICTIONS

- MAXIMUM ROOF LIFTING CAPACITY: 3800 lb (1725 kg)
- Maximum asymmetric load difference between downstage and upstage roof must not exceed 1550 lb (705 kg) including loads on T1 trusses.
- When lifting, make sure loads are evenly divided between right and left side of roof.
- Total load on T2 and P12s must not exceed 500 lb (227 kg) when using downstage P11s or rigging pipe. Total load can be increased to 800 lb (363 kg) if not using downstage P11s or rigging pipe.



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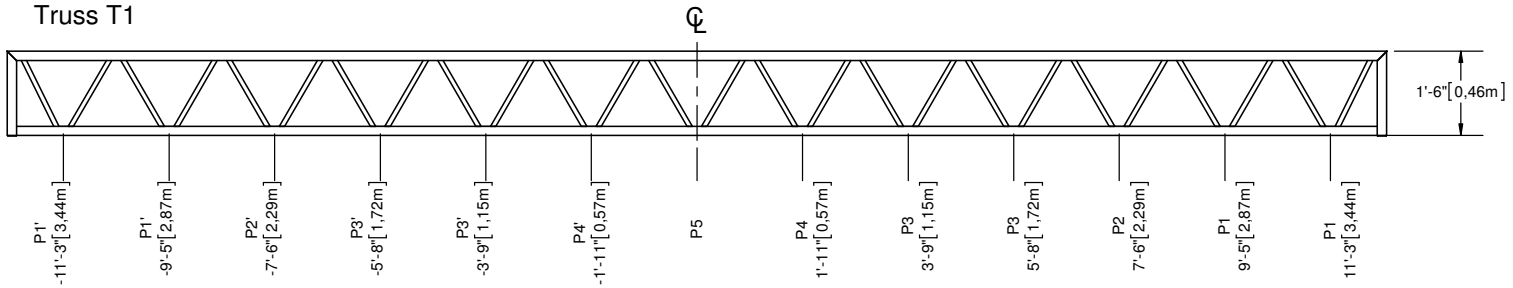
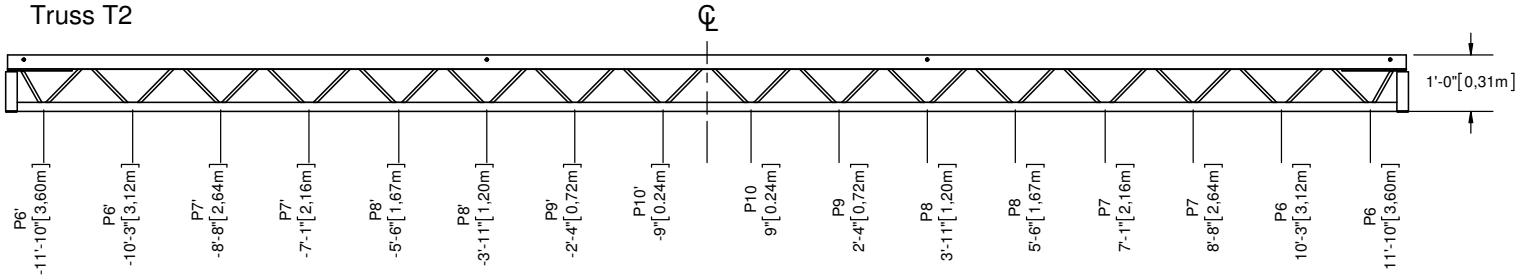
Truss T1



$$\textbf{Truss T1}^{**}: \frac{\text{Load } \mathbf{P1}}{\text{Capacity } \mathbf{P1}} + \frac{\text{Load } \mathbf{P2}}{\text{Capacity } \mathbf{P2}} + \frac{\text{Load } \mathbf{P3}}{\text{Capacity } \mathbf{P3}} + \frac{\text{Load } \mathbf{P4}}{\text{Capacity } \mathbf{P4}} + \frac{\text{Load } \mathbf{P5}}{\text{Capacity } \mathbf{P5}} \leq 1.00$$

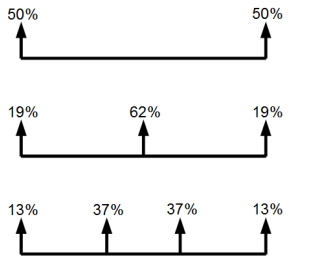
Truss T2



$$\textbf{Truss T2}^{**}: \frac{\text{Load } \mathbf{P6}}{\text{Capacity } \mathbf{P6}} + \frac{\text{Load } \mathbf{P7}}{\text{Capacity } \mathbf{P7}} + \frac{\text{Load } \mathbf{P8}}{\text{Capacity } \mathbf{P8}} + \frac{\text{Load } \mathbf{P9}}{\text{Capacity } \mathbf{P9}} + \frac{\text{Load } \mathbf{P10}}{\text{Capacity } \mathbf{P10}} \leq 1.00$$

MAXIMUM LOAD CAPACITY					
Point No.	Lbs	Kg	Point No.	Lbs	Kg
P1, P2, P3	625	283	P12	800	364
P4, P5	500	227	P14	30	13
P6, P7, P8	250	113			
P9	175	79			
P10	90	41			
P11	350	159			

UDL CHART



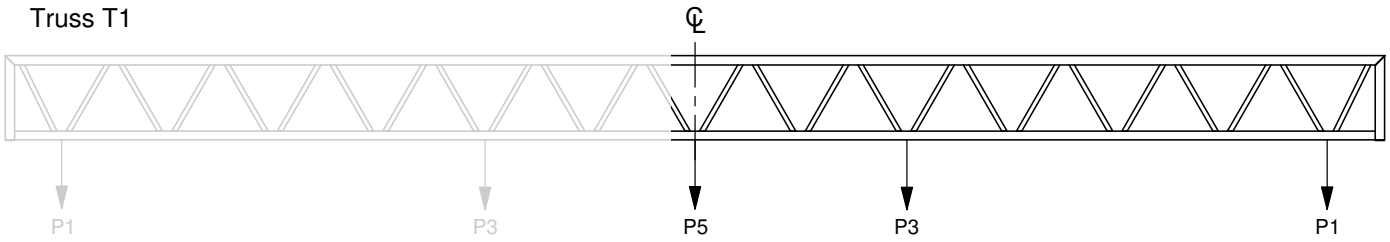
** *Valid for symmetric loads only. In other cases, contact Stageline for assistance.*

Drawings may show stage equipped with optional accessories. May be sold separately.

WHEN CALCULATING THE LOAD ON A SL100 TRUSS, USE FOLLOWING METHOD.

Each truss in the roof must be visualized as 2 trusses put together that share a center point, which in the following example is the P5.

Example: T1 on a SL100.
Points from left to right are P1', P2', P3', P4', P5, P4, P3, P2, P1. We will only verify loads on 1 side of the truss, Meaning P1 thru P5.



CALCULATION EXAMPLE #1:

1 lighting truss on 2 motors, total uniformly distributed weight of the truss is 1000lbs.
The motors will be hung from P1.

- 500lbs (50% of weight, see UDL chart) /
  625 (the capacity of the P1 on the T1 truss) = 0.8
- 0.8 = 80 %, as 1.00 would equal 100 %.

So the T1 truss is at 80 % of its total capacity.

CALCULATION EXAMPLE #2:

1 lighting truss on 3 motors, total uniformly distributed weight of the truss is 1000lbs.
The motors will be hung from P1, P5, P1.

- **P1**
  0.19 x 1000 (19% of weight, see UDL chart) / 625 (P1) = 0.3,
  so this one point will use 30 % of the truss capacity.
- **P5**
  0.62 x 1000 (62% of weight, see UDL chart) / 500 (P5) = 1.24,
  so this one point will use 124 % of the truss capacity.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

1.24 + 0.30 = 1.54
**So the T1 truss is at 154 % of its total capacity,
which is overloaded.**

CALCULATION EXAMPLE #3:

1 lighting truss on 4 motors, total uniformly distributed weight of the truss is 1000lbs.
The motors will be hung from P1, P3, P3, P1.

- **P1**
  0.13 x 1000 (13% of weight, see UDL chart) / 625 (P1) = 0.21,
  so this one point will use 21 % of the truss capacity.
- **P3**
  0.37 x 1000 (37% of weight, see UDL chart) / 625 (P3) = 0.59,
  so this one point will use 59 % of the truss capacity.

Now that we have the loads for both points, we add them together to determine the total load on the truss.

0.21 + 0.59 = 0.80
So the T1 truss is at 80 % of its total capacity.