

12" X 12" X 120" AV, 3/16" chord Bolt Plate Truss Load Capacity (Repetitive Use)

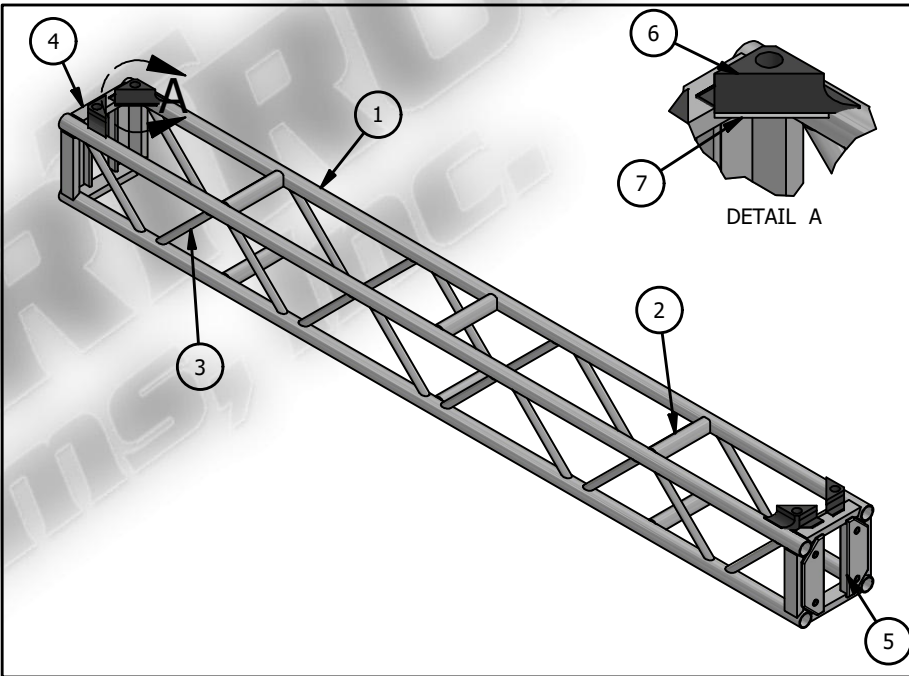
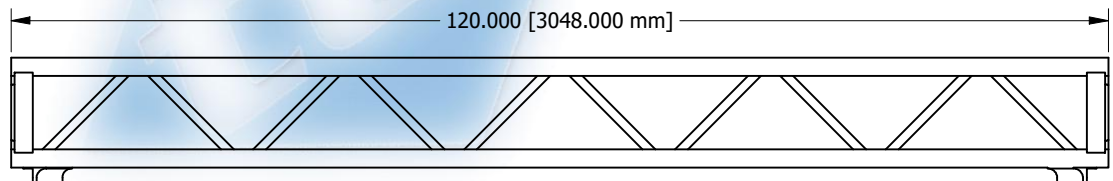
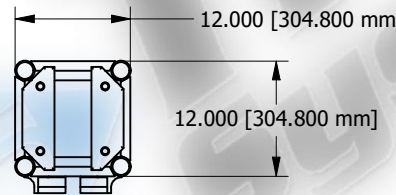
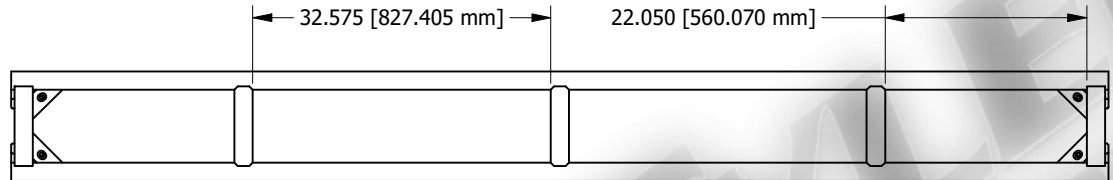
| TRUSS SPAN | UNIFORMLY DISTRIBUTED LOAD | | CENTER POINT LOAD | | THIRD POINT LOAD | | QUARTER POINT LOAD | | FIFTH POINT LOAD | |
|------------|----------------------------|------------|-------------------|------------|------------------|------------|--------------------|------------|------------------|------------|
| | | | | | | | | | | |
| | LOAD (pfl) | DEFL. (in) | LOAD (lbs) | DEFL. (in) | LOAD (lbs) | DEFL. (in) | LOAD (lbs) | DEFL. (in) | LOAD (lbs) | DEFL. (in) |
| 10'-0" | 643 | 0.133 | 4768 | 0.159 | 3217 | 0.183 | 2144 | 0.17 | 1608 | 0.16 |
| 20'-0" | 235 | 0.787 | 2352 | 0.638 | 1764 | 0.816 | 1176 | 0.756 | 980 | 0.793 |
| 30'-0" | 102 | 1.778 | 1532 | 1.45 | 1149 | 1.841 | 766 | 1.711 | 638 | 1.792 |
| 40'-0" | 46 | 2.671 | 1111 | 2.615 | 659 | 2.654 | 477 | 2.667 | 379 | 2.667 |
| 50'-0" | 21 | 3.33 | 650 | 3.33 | 377 | 3.33 | 273 | 3.33 | 217 | 3.33 |

| PARTS LIST | | |
|------------|----------------|-------------------------------|
| ITEM | PART NUMBER | DESCRIPTION |
| 1 | CHORDS | Ø2" X .1875" ALUMINUM TUBE |
| 2 | HORIZONTALS | Ø2" X .125" ALUMINUM TUBE |
| 3 | DIAGONALS | Ø1" X .125" ALUMINUM TUBE |
| 4 | ENDS | 1" X 2" X .125" ALUMINUM TUBE |
| 5 | SMALL CAMLOCK | .375" ALUMINUM |
| 6 | STACKING BLOCK | BLACK UHMW |
| 7 | STACKING PLATE | ALUMINUM FLAT BAR |

Table Usage Notes:

- The truss is supporting vertical loads only, i.e. the truss diagonals are oriented vertically and no lateral loads are applied to the truss.
- The truss is analyzed as a simple span beam. Truss support points are located at truss panel points.
- The truss has been analyzed for static loads only.
- All loads are applied at the centroid of the truss between the two ladder trusses below the truss.
- All loads are applied at the panel points of the truss as to not induce local bending stresses in the chords.
- All capacities are reduced by 0.85 per ANSI E1.2-2012 for repetitive use members.
- Self weight has been considered.
- Maximum deflection limited to span/180.
- Allowable loads based on 2010 Aluminum Design Manual.

Information extracted from the structural report by: **CLARK REDER ENGINEERING**



Notes:

TITLE: 12" X 12" X 120" AV TRUSS 3/16" MAIN CHORDS & STACKERS
 PART NUMBER: 815120
 WEIGHT: 71 lbs
 DATE: 12/9/2021
 AUTHOR: NATHAN V
 REV: A

TOLERANCE: +/- 0.010 (0.254mm) U.O.S



1810 Fairfield Ln, Pendleton, Indiana, 46064
 765-221-5050