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Load - Span Tables
For Tomcat Truss 16" Forked End Truss

Table 1: 16" Deep x 16" Wide Forked End Truss Load Capacity Table (Single Use)										
Span	Uniformly Distributed Load		Center Point Load		3rd Point Load		Quarter Point Load		5th Point Load	
(ft)	Load (plf)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)
10'-0"	872	0.099	4543	0.008	2892	0.090	1928	0.084	1529	0.083
20'-0"	347	0.641	2665	0.402	1803	0.463	1202	0.433	970	0.437
30'-0"	147	1.441	1809	0.982	1258	1.149	839	1.080	683	1.097
40'-0"	77	2.562	1301	1.837	920	2.151	613	2.031	502	2.069
50'-0"	36	3.333	955	2.987	648	3.333	455	3.291	370	3.333

Table Usage Notes:

1) The truss is supporting vertical loads only, i.e. the truss ladders are oriented vertically and no lateral loads are applied to the truss.

2) The truss is analyzed as a simple span beam. Truss support points are located at truss panel points.

3) The truss will be analyzed for static loads only.

4) All loads are applied at the centroid of the truss between the two ladder trusses below the truss.

5) All loads are applied at the panel points of the truss as to not induce local bending stresses in the chords.

6) Selfweight has been considered.

7) Maximum deflection based on span/180

8) Tables based on the 2010 Aluminum Design Manual

Table 2: 16" Deep x 16" Wide Forked End Truss Load Capacity Table (Repetitive Use)										
Span	Uniformly Distributed Load		Center Point Load		3rd Point Load		Quarter Point Load		5th Point Load	
(ft)	Load (plf)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)
10'-0"	741	0.084	3862	0.007	2458	0.077	1639	0.071	1300	0.071
20'-0"	295	0.545	2265	0.342	1533	0.394	1022	0.368	825	0.371
30'-0"	125	1.225	1538	0.835	1069	0.977	713	0.918	581	0.932
40'-0"	65	2.178	1106	1.561	782	1.828	521	1.726	427	1.759
50'-0"	31	2.833	812	2.539	551	2.833	387	2.797	315	2.833

Table Usage Notes:

1) The truss is supporting vertical loads only, i.e. the truss ladders are oriented vertically and no lateral loads are applied to the truss.

2) The truss is analyzed as a simple span beam. Truss support points are located at truss panel points.

3) The truss will be analyzed for static loads only.

4) All loads are applied at the centroid of the truss between the two ladder trusses below the truss.

5) All loads are applied at the panel points of the truss as to not induce local bending stresses in the chords.

6) All capacities are reduced by 0.85 per ANSI E1.2-2000 for repetive use members

7) Selfweight has been considered.

8) Maximum deflection based on span/180

9) Tables based on the 2010 Aluminum Design Manual