

Clark-Reder Engineering, Inc

PO Box 317825
Cincinnati, OH 45231
Office: (513) 851-1223
Fax: (513) 297-0934

Appendix A: Load Tables
For Tyler Truss 16"x20" Forked End Truss

Table 1: 16" Deep x 20" wide Forked End Truss Load Capacity Table (Single Use)										
Span (ft)	Uniformly Distributed Load		Center Point Load		3rd Point Load		Quarter Point Load		5th Point Load	
	Load (plf)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)
10'-0"	839	0.05	5783	0.06	3481	0.06	2321	0.06	1815	0.06
20'-0"	414	0.44	3737	0.32	2410	0.35	1606	0.33	1279	0.33
30'-0"	245	1.33	2692	0.81	1799	0.92	1200	0.86	965	0.87
40'-0"	133	2.36	2044	1.54	1397	1.78	931	1.66	754	1.69
50'-0"	72	3.34	1593	2.52	1105	2.92	737	2.73	599	2.79

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

Table 2: 16" Deep x 20" wide Forked End Truss Load Capacity Table (Repetitive Use)										
Span (ft)	Uniformly Distributed Load		Center Point Load		3rd Point Load		Quarter Point Load		5th Point Load	
	Load (plf)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)	Load (lbs)	Defl (in)
10'-0"	713	0.04	4916	0.05	2959	0.05	1973	0.05	1543	0.05
20'-0"	352	0.37	3176	0.27	2049	0.30	1365	0.28	1087	0.28
30'-0"	208	1.13	2288	0.69	1529	0.78	1020	0.73	820	0.74
40'-0"	113	2.01	1737	1.31	1187	1.51	791	1.41	641	1.44
50'-0"	61	2.84	1354	2.14	939	2.48	626	2.32	509	2.37

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 repetitive use members
- 7) Selfweight has been considered.
- 8) Maximum deflection based on span/180