

**Tyler Truss - 20.5"x20.5" Medium Duty Truss
w/End Plates & Bolted Connections**

Material: 6005A- T61 Chords: 2" x0.125" Diags: 1"x0.125"

Table 1: 20.5" x 20.5" Plated End 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"	753	0.067	7129	0.102	3767	0.092	2511	0.086	1884	0.081
20'-0"	350	0.505	3500	0.409	2625	0.523	1750	0.485	1459	0.509
30'-0"	151	1.136	2263	0.928	1697	1.175	1131	1.093	943	1.144
40'-0"	81	2.019	1623	1.665	1217	2.086	811	1.946	676	2.034
50'-0"	49	3.155	1222	2.634	916	3.254	611	3.047	509	3.176

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) Allowable loads based on 2010 Aluminum Design Manual

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Material: 6005A- T61 Chords: 2" x0.125" Diags: 1"x0.125"

Table 2: 20.5" x 20.5" Plated End Load Capacity Table (Repetitive Use)										
This table should be used for typical truss installations due to the repetitive nature of truss 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"	640	0.06	6060	0.09	3202	0.08	2134	0.07	1601	0.07
20'-0"	298	0.43	2975	0.35	2231	0.44	1488	0.41	1240	0.43
30'-0"	128	0.97	1924	0.79	1442	1.00	961	0.93	802	0.97
40'-0"	69	1.72	1380	1.42	1034	1.77	689	1.65	575	1.73
50'-0"	42	2.68	1039	2.24	779	2.77	519	2.59	433	2.70

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 E1.2-2012 for repetitive use members
- 7) Selfweight has been considered.
- 8) Maximum deflection based on span/180
- 9) Allowable loads based on 2010 Aluminum Design Manual

