American Institute of Timber Construction

Glued Laminated Timber Columns with Eccentric End Loads*

Combination 2 (DF L2)** **Duration of Load (C_D) = 1.15**

Lamination Thickness = 1- 1/2 in. **Dry Conditions of Use**

Width (in)	3 1/8	3 1/8	5 1/8	5 1/8	5 1/8	6 3/4	6 3/4	6 3/4	8 3/4	Width (in)
Depth (in)	4 1/2	6	4 1/2	6	7 1/2	6	7 1/2	9	9	Depth (in)
Length (ft)	Column Capacity (lb)									Length (ft)
4	12330	17910	23180	35430	45620	46960	60750	74100	96560	4
5	10150	14350	21190	33240	42530	44320	58480	71990	94150	5
6	8200	11420	18920	30610	38390	41260	55750	68910	91250	6
7	6670	9200	16560	27180	33970	37860	52610	64360	87900	7
8	5490	7540	14330	23740	29680	34290	49080	59390	84130	8
9	4580	6270	12400	20670	25840	30750	45160	54190	80010	9
10	3880	5290	10770	18040	22550	27450	40870	49040	75580	10
11	3320	4520	9410	15820	19780	24500	36840	44210	70930	11
12	2870	3900	8280	13960	17450	21920	33190	39830	66170	12
13	2510	3400	7330	12380	15480	19680	29950	35940	61460	13
14	--	--	6530	11050	13810	17740	27100	32520	56940	14
15	--	--	5840	9920	12390	16050	24600	29510	52710	15
16	--	--	5260	8940	11180	14570	22400	26880	48800	16
17	--	--	4760	8100	10120	13290	20470	24560	45220	17
18	--	--	4330	7370	9210	12160	18760	22520	41930	18
19	--	--	--	6730	8410	11160	17250	20710	38920	19
20	--	--	--	6170	7720	10280	15910	19100	36200	20
21	--	--	--	5680	7100	9490	14720	17660	33730	21
22	--	--	--	--	--	8790	13650	16370	31490	22
23	--	--	--	--	--	8170	12690	15210	29420	23
24	--	--	--	--	--	7600	11830	14170	27550	24
25	--	--	--	--	--	7100	11050	13230	25840	25
26	--	--	--	--	--	--	10340	12370	24280	26
27	--	--	--	--	--	--	9690	11600	22860	27
28	--	--	--	--	--	--	9100	10900	21550	28
29	--	--	--	--	--	--	--	--	20350	29
30	--	--	--	--	--	--	--	--	19250	30
31	--	--	--	--	--	--	--	--	18230	31
32	--	--	--	--	--	--	--	--	17290	32
33	--	--	--	--	--	--	--	--	16420	33
34	--	--	--	--	--	--	--	--	15610	34
35	--	--	--	--	--	--	--	--	14860	35
36	--	--	--	--	--	--	--	--	14160	36

Table Specifications: The tabulated capacities are for glued laminated timber columns of constant cross section under dry conditions of use.
Capacities have been rounded to nearest 10 lb.
Columns are limited to a maximum effective length/least dimension (l_e/d) of 50.

End Conditions: Capacities are based on column ends being supported to prevent translation.
The effective buckling length factor used is Ke = 1.00.

*** Eccentricity:** End loads are limited to a maximum eccentricity of 1/6 of either cross sectional dimension.

**** Design Properties:** AITC *117-93 Design*
F_C = 1900 psi for 4 or more lams, 1600 psi for 3 lams.
E = 1.7 x 10^6 psi
Fby = 1800 psi for 4 or more lams, 1600 psi for 3 lams.
Fbx = 1700 psi.

While these capacity tables have been prepared in accordance with recognized engineering principles and are based on the most accurate and reliable technical data available, these tables should not be used or relied upon for any general or specific application without competent professional examination and verification of their accuracy, suitability, and applicability by a licensed professional engineer, designer, or architect.