

American Institute of Timber Construction

Glued Laminated Timber Columns with Eccentric End Loads*

N1D14 Outer, N2D12 Core**

Duration of Load = 1.15
Dry Conditions of Use

Width (in)	3 1/2	3 1/2	3 1/2	3 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	5 1/2	Width (in)
Depth (in)	5 1/2	6 7/8	8 1/4	9 5/8	5 1/2	6 7/8	8 1/4	9 5/8	11		Depth (in)
Length (ft)	Column Capacity (lb)										Length (ft)
4	23360	29200	35040	40880	41810	52990	63590	74180	84780		4
5	19840	24800	29760	34720	39390	49790	59740	69700	79660		5
6	16430	20540	24650	28750	36540	46050	55260	64470	73670		6
7	13570	16960	20360	23750	33380	41910	50290	58670	67050		7
8	11300	14130	16950	19780	30040	37590	45110	52630	60140		8
9	9520	11900	14280	16660	26720	33400	40080	46760	53440		9
10	8110	10130	12160	14190	23670	29590	35510	41430	47350		10
11	6980	8720	10460	12210	21000	26250	31500	36750	42010		11
12	6060	7580	9090	10610	18690	23370	28040	32710	37390		12
13	5310	6640	7970	9290	16710	20890	25070	29240	33420		13
14	4690	5860	7030	8210	15000	18750	22510	26260	30010		14
15	--	--	--	--	13530	16910	20300	23680	27060		15
16	--	--	--	--	12260	15320	18390	21450	24520		16
17	--	--	--	--	11150	13930	16720	19510	22290		17
18	--	--	--	--	10180	12720	15270	17810	20350		18
19	--	--	--	--	9320	11660	13990	16320	18650		19
20	--	--	--	--	8570	10720	12860	15000	17140		20
21	--	--	--	--	7910	9880	11860	13840	15820		21
22	--	--	--	--	7310	9140	10970	12800	14630		22
23	--	--	--	--	--	--	--	--	--		23
24	--	--	--	--	--	--	--	--	--		24
25	--	--	--	--	--	--	--	--	--		25
26	--	--	--	--	--	--	--	--	--		26
27	--	--	--	--	--	--	--	--	--		27
28	--	--	--	--	--	--	--	--	--		28
29	--	--	--	--	--	--	--	--	--		29
30	--	--	--	--	--	--	--	--	--		30

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/d) of 50.

End Conditions:

Capacities are based on column ends being supported to prevent translation.

The effective buckling length factor used is $K_e = 1.00$.

* **Eccentricity:**

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

** **Design Properties:**

E (psi)	F _c (psi)		F _{by} (psi)			F _{bx} (psi)	
	4 or More Lams	2 or 3 Lams	4 or More Lams	3 Lams	2 Lams	2 Lams to 15 Inches Deep without 302 Tension Lam	4 or more Lams with 302 Tension Lam
1,800,000	2200	0	2000	0	0	2100	0

302 tension laminations are not required to develop the capacities shown in this table.

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 design professional.

AITC MAKES NO REPRESENTATION OR WARRANTY, EXPRESSED OR IMPLIED, THAT THE INFORMATION CONTAINED HEREIN IS SUITABLE FOR ANY GENERAL OR SPECIFIC USE OR IS FREE FROM INFRINGEMENT OF ANY PATENT OR COPYRIGHT. ANY USER OF THIS INFORMATION ASSUMES ALL RISK AND LIABILITY ARISING FROM SUCH USE.