Power Preserved Column™
Wet Use

Allowable Axial Loads (Pounds) for Combination No. 50 Glulam Columns

Effective Column Length (ft)	Lamination Net Width = 3-1/2"					
	Net Depth = 3-1/2" (3 lams)			Net Depth = 5-1/2" (4 lams)		
	Load Duration Factor			Load Duration Factor		
	1.00	1.15	1.25	1.00	1.15	1.25
4	8,980	10,070	10,770	17,790	19,750	20,960
6	7,210	7,800	8,140	13,160	14,000	14,480
8	5,330	5,600	5,760	9,200	9,580	9,800
10	3,930	4,080	4,170	6,630	6,840	6,960
12	2,990	3,080	3,130	4,970	5,090	5,160
14	2,340	2,390	2,430	3,850	3,930	3,980

Effective Column Length (ft)	Lamination Net Width = 5-1/4"					
	Net Depth = 5-1/2" (4 lams)			Net Depth = 6-7/8" (5 lams)		
	Load Duration Factor			Load Duration Factor		
	1.00	1.15	1.25	1.00	1.15	1.25
6	24,500	27,280	29,010	32,410	36,270	38,500
8	20,650	22,380	23,400	27,120	29,250	30,480
10	16,660	17,660	18,240	21,520	22,700	23,380
12	13,330	13,960	14,320	17,010	17,730	18,150
14	10,790	11,200	11,440	13,630	14,110	14,390
16	8,860	9,150	9,320	11,120	11,460	11,650
18	7,380	7,570	7,680	9,220	9,470	9,600
20	6,210	6,350	6,440	7,760	7,940	8,050

Effective Column Length (ft)	Lamination Net Width = 6-3/4"		
	Net Depth = 6-7/8" (5 lams)		
	Load Duration Factor		
	1.00	1.15	1.25
8	38,360	42,540	45,120
10	33,440	36,310	37,990
12	28,340	30,200	31,270
14	23,770	25,020	25,740
16	20,000	20,890	21,400
18	16,970	17,620	18,000
20	14,540	15,030	15,310
22	12,570	12,950	13,170
24	10,960	11,260	11,430

Effective Column Length (ft)	Lamination Net Width = 8-3/4"		
	Net Depth = 8-1/4" (6 lams)		
	Load Duration Factor		
	1.00	1.15	1.25
8	65,290	73,990	78,720
10	60,160	67,520	70,960
12	54,290	60,160	62,350
14	48,050	52,520	53,770
16	42,000	45,410	46,090
18	36,590	39,260	39,620
20	31,910	34,050	34,220
22	27,970	29,730	29,780
24	24,670	26,130	31,680

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Power Preserved Column™
Wet Use

Allowable Axial Loads (Pounds) for Combination No. 50 Glulam Columns

Effective Column Length (ft)	Lamination Net Width = 10 3/4" Net Depth = 10 3/4" (8 lams) Load Duration Factor 1.00	1.15	1.25	Effective Column Length (ft)	Lamination Net Width = 10 3/4: Net Depth = 10 3/4" (8 lams) Load Duration Factor 1.00	1.15	1.25
8	110,770	125,820	135,640	26	50,670	53,040	54,410
10	105,720	119,200	127,860	28	45,810	47,770	48,900
12	99,560	111,210	118,540	30	41,550	43,200	44,140
14	92,460	102,120	108,040	32	37,830	39,210	40,010
16	84,880	92,580	97,150	34	34,550	35,740	36,420
18	77,110	83,060	86,540	36	31,670	32,680	33,270
20	69,540	74,140	76,810	38	29,110	30,000	30,500
22	62,520	66,140	68,240	40	26,850	27,620	28,060
24	56,230	59,130	60,810	42	24,830	25,510	25,890
				44	23,030	23,620	23,960

Notes:

1. The tabulated allowable loads apply only to one-piece glulam members made with all N1D14 laminations (Combination 50) without special tension laminations.
2. Applicable service conditions = wet.
3. The tabulated allowable loads are based on simply axially loaded columns subjected to a maximum eccentricity of either 1/6 column width or 1/6 column depth, whichever is worse. For side loads, other eccentric end loads, or other combined axial and flexural loads, see 2005 NDS.
4. The column is assumed to be unbraced, except at the column ends, and the effective column length is equal to the actual column length.
5. Design properties for normal load duration and wet-use service conditions:
   Compression parallel to grain (F_c) = 0.73 x 2,300 psi for 4 or more lams, or 1,700 psi for 2 or 3 lams.
   Modulus of elasticity (E) = 0.833 x 1.9 x 10^6 psi
   Flexural stress when loaded parallel to wide faces of lamination (F_{by}) = 0.8 x 2,300 psi for 4 or more lams, or 0.8 x 2,100 psi for 3 lams.
   Flexural stress when loaded perpendicular to wide faces of lamination (F_{bx}) =0.8 x 2,100 psi for 2 lams to 15 in. deep without special tension laminations.
   Volume factor for F_{bx} is in accordance with 2005 NDS. Size factor for F_{by} is $(12/d)^{1/9}$, where d is equal to the lamination width in inches.

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