TECHNICAL BULLETIN

Column Capacity Comparison Chart for 1.8E Parallam® PSL

ALLOWABLE AXIAL LOAD (lb) FOR 1.8E PARALLAM® PSL[1]

Column Bearing Type	Effective Column Length	1.8E Parallam® PSL Column Size																	
		3 ½″ x 3 ½″			3 ½″ x 5 ¼″			3 ½″ x 7″			5 ¼″ x 5 ¼″			5 ¼″ x 7″			7″ x 7″		
		100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%
On Column Base	7′	8,735	9,140	9,370	13,105	13,710	14,060	17,475	18,280	18,745	30,010	32,545	34,030	40,000	40,000	40,000	40,000	40,000	40,000
	8′	7,265	7,550	7,715	10,900	11,325	11,570	14,535	15,100	15,425	26,650	28,490	29,555	35,530	37,985	39,410	40,000	40,000	40,000
	9′	6,115	6,320	6,440	9,170	9,480	9,660	12,225	12,640	12,880	23,475	24,835	25,620	31,300	33,115	34,165	40,000	40,000	40,000
	10′	5,200	5,355	5,445	7,800	8,035	8,170	10,400	10,715	10,895	20,660	21,695	22,290	27,545	28,925	29,725	40,000	40,000	40,000
	12′	3,885	3,980	4,030	5,825	5,965	6,050	7,765	7,955	8,065	16,160	16,805	17,175	21,545	22,405	22,900	40,000	40,000	40,000

[1] Parallam® PSL allowable loads are based on solid, one-piece member.

ALLOWABLE AXIAL LOAD (lb) FOR SPRUCE-PINE-FIR NO. 2 AND SOUTHERN PINE NO. 2 BUILT-UP COLUMNS[1][2]

Column Bearing Type	Effective Column Length	Spruce-Pine-Fir (SPF) No. 2 Column Size																	
		(2) 2x4			(3) 2x4			(4) 2x4			(2) 2x6			(3) 2x6			(4) 2x6		
		100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%
On Column Base	7′	2,485	2,570	2,620	5,455	5,810	6,015	7,775	8,180	8,420	3,825	3,965	4,045	9,360	10,055	10,460	14,330	15,855	16,790
	8′	2,025	2,080	2,115	4,685	4,930	5,070	6,540	6,830	6,995	3,125	3,220	3,270	8,165	8,650	8,925	13,235	14,455	15,180
	9′	1,675	1,710	1,735	4,025	4,200	4,300	5,545	5,760	5,885	2,590	2,655	2,690	7,085	7,425	7,620	12,080	13,030	13,585
	10′	1,400	1,430	1,445	3,475	3,605	3,680	4,750	4,910	5,005	2,175	2,220	2,245	6,150	6,395	6,535	10,940	11,670	12,090
	12′	1,020	1,035	1,040	2,640	2,715	2,760	3,580	3,680	3,735	1,585	1,610	1,620	4,690	4,830	4,910	8,870	9,315	9,570
Column Bearing Type	Effective Column Length	Southern Pine (SP) No. 2 Column Size																	
		(2) 2x4			(3) 2x4			(4) 2x4			(2) 2x6			(3) 2x6			(4) 2x6		
		100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%	100%	115%	125%
On Column Base	7′	2,430	2,515	2,565	5,260	5,600	5,795	7,385	7,795	8,030	3,765	3,910	3,990	9,280	9,945	10,330	14,260	15,725	16,625
	8′	1,985	2,040	2,075	4,515	4,755	4,895	6,245	6,535	6,705	3,085	3,180	3,230	8,060	8,530	8,795	13,090	14,260	14,955
	9′	1,645	1,685	1,705	3,880	4,060	4,160	5,320	5,535	5,665	2,560	2,625	2,660	6,980	7,315	7,505	11,895	12,805	13,335
	10′	1,380	1,405	1,425	3,355	3,490	3,565	4,570	4,740	4,835	2,150	2,195	2,220	6,055	6,300	6,440	10,735	11,440	11,845
	12′	1,005	1,020	1,030	2,560	2,640	2,690	3,465	3,570	3,630	1,570	1,595	1,610	4,625	4,765	4,845	8,690	9,125	9,375

[1] SPF No. 2 and SP No. 2 allowable loads are based on built-up sawn members nailed together as prescribed by 2018 NDS® Section 15.3.3; K_f factor of 0.6 applies.
[2] Per NDS®, each nail must penetrate all plies of column to achieve tabulated values.
a) For example: 4¼″ long (30d) nails required for 3-ply columns, 6″ long 60d nails required for 4-ply columns.
b) Smaller fasteners may reduce allowable loads shown.

General Notes

- Table based on:
  - 2018 NDS®
  - Dry use conditions.
  - Bracing in both directions at column ends.
  - Free standing columns (no exterior wall applications) with axial loads only.
- Allowable axial loads for 1.8E Parallam® PSL have been adjusted to accommodate the worst case of the following eccentric conditions: 1/6 of the column thickness (first dimension) or 1/6 of the column width.
- Allowable axial loads for SPF No. 2 and SP No.2 built-up columns have been adjusted to accommodate the following eccentric condition: 1/6 of the column width.
- Tables are based on column sitting on a steel base. If column sits on a wood plate, loads must be checked against plate crushing.

Additional care is required for built up columns due to code required fastener penetration, spacing, and size.

If you have any questions, please contact your Weyerhaeuser representative.