

Axial Factored Resistances (lb) for 2.0E or 2.2E Parallam® PSL Beams Used as Columns

Column Bearing Type	Effective Column Length	Column Size			
		3½" x 9¼"	3½" x 9½"	3½" x 11¼"	3½" x 11⅞"
On Column Base	8'	34,285	35,190	41,505	43,750
	9'	28,000	28,755	34,055	35,940
	10'	22,690	23,305	27,595	29,130
	11'	18,505	19,005	22,510	23,755
	12'	15,205	15,620	18,495	19,520
On SPF Wood Plate	8'	19,910 ^[1]	20,455 ^[1]	24,215 ^[1]	25,560 ^[1]
	9'				
	10'				
	11'	18,505	19,005	22,510	23,755
	12'	15,205	15,620	18,495	19,520
Column Bearing Type	Effective Column Length	Column Size			
		5¼" x 9¼"	5¼" x 9½"	5¼" x 11¼"	5¼" x 11⅞"
On Column Base	8'	78,210	80,245	94,445	99,495
	9'	71,235	73,095	86,075	90,695
	10'	64,145	65,825	77,560	81,735
	11'	56,615	58,180	69,075	72,950
	12'	49,020	50,370	59,790	63,140
On SPF Wood Plate	8'	29,865 ^[1]	30,670 ^[1]	36,320 ^[1]	38,340 ^[1]
	9'				
	10'				
	11'				
	12'				

[1] Allowable axial load is controlled by wood plate bearing capacity.

General Notes

- Table is based on:
 - Solid, one-piece column members used in dry-service conditions.
 - Bracing in both directions at column ends.
 - CSA O86, *Engineering design in wood* (CSA O86).
 - Simple columns with axial loads only. For side loads or other combined bending and axial loads, see the CSA O86 provisions.
 - $K_D = 1.0$, where the specified snow or live load is greater than the specified dead load.
- Refer to [TJ-9500](#) or [TJ-9505](#) for additional design and installation guidance.
- Columns must remain straight to within $\frac{5L^2}{4608}$ [in.] of true alignment where L is column length [ft].
- Factored resistances have been adjusted to accommodate the worst case of the following eccentric load conditions:
 - $e_1 = \frac{1}{6}$ of column depth (second dimension).
 - $e_2 = \frac{1}{6}$ of column thickness (first dimension) + $\frac{5L^2}{4608}$ where L is column length [ft].
- Factored resistances for "On Column Base" is based on the strength of the column material; design of supporting structure (e.g. foundation) has not been performed.
- Factored resistances for "On SPF Wood Plate" are based on Spruce-Pine-Fir specified strength in compression perpendicular to grain ($f_{cp} = 5.3 \text{ MPa} \approx 769 \text{ psi}$).

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