

AXIALLY LOADED PINNED END POST FOR FLOOR LOADING							
Temperature Adjustment Factors For Deflection							
	Temperature	73°F	90°F	100°F	110°F	120°F	
	Factor	1.334	1.000	0.844	0.712	0.601	
Temperature Adjusted Compressive Modulus Of Elasticity (90°F) = 148050 psi							
Temperature Adjusted Compressive Strength (90°F) =							
Temperature Adjusted Allowable Compressive Stress (90°F) =							
	Size:	4x4 (Nom.)	4x6 (Nom.)	6x6 (Nom.)	6x8 (Act.)	8x8 (Nom.)	10x10 (Act.)
	Thickness (in)	3.5	3.5	5.5	6.0	7.5	10.0
	Depth (in)	3.5	5.5	5.5	8.0	7.5	10.0
	A _{gross} (in ²)	12.25	19.25	30.25	48.00	56.25	100.00
	A _[t=1.75] (in ²)	12.25	19.25	26.25	36.75	40.25	57.75
Allowable Uniform Load (Lbs. / Ft.)							
Span (Ft.)	4	9446	14844	20241	28338	31037	44531
	5	7557	11875	16193	22670	24829	35625
	6	6297	9896	13494	18892	20691	29687
	7	L/r>50	L/r>50	11566	16193	17735	25446
	8			10121	14169	15518	22265
	9			8996	12595	13794	19791
	10			8096	11335	12415	17812
	11			L/r>50	10305	11286	16193
	12				L/r>50	10346	14844
	13					9550	13702
	14					8868	12723
	15					8276	11875
	16					L/r>50	11133
	17						10478
	18						9896

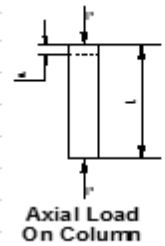


TABLE NOTES

1. Table provides load values that are temperature-adjusted to 90°F. Because elastic shortening of the post controls design, 90°F values are considered to be conservative. However, to determine higher temperature allowable loads, multiply the listed values by the adjustment factors listed.
2. Allowable compressive stress is the temperature-adjusted compressive stress divided by a factor of safety of 1.50. However, this stress will generally not influence design.
3. Although TRIMAX Lumber is manufactured as a solid element, the density of the cross-section decreases toward the center. The above calculations assume the maximum effective dense skin thickness is 1.75"
4. The allowable loads in the above table are controlled by deflection criteria. Elastic shortening of the post ($d=PL/AE$) is limited to 0.25" at 90°F. To determine loads of other d's, multiply table by desired value divided by 0.25. The effective skin thickness for all d calculations is 1.75".
5. Load duration factor (Cd) for the table is 1.0 and is appropriate for typical floor loading. Cd is an adjustment factor to limit long-term creep. The adjustment factor for permanent load (30 years) is 0.91.