

Sizes: 2" to 4" thick by 2"-4" wide (2x2, 2x3, 2x4, 3x3, 3x4, 4x4)

GRADE	Extreme Fiber Stress in Bending, F_b			Tension Parallel to Grain	Horizontal Shear	Compression		Modulus of Elasticity	
						Perpendicular to Grain	Parallel to Grain		
	2" & 3" thick single	2" & 3" thick repetitive	4" thick single ²	F_t	F_v	$F_{c\perp}$	$F_{c//}$	E	E_{min}
Sel. Str.	2025	2330	2025	1240	180	625	1955	1,900,000	690,000
No. 1 & Btr.	1725	1985	1725	1125	180	625	1785	1,800,000	660,000
No. 1	1275	1465	1275	750	180	625	1610	1,600,000	580,000
No. 2	1275	1465	1275	750	180	625	1555	1,600,000	580,000
No. 3	715	820	715	450	180	625	890	1,400,000	510,000

Table 3. Combined Douglas Fir-Larch & Douglas Fir-Larch (North) • SIZE-ADJUSTED VALUES FOR WESTERN DIMENSION LUMBER¹

Nominal Sizes: 2" to 4" thick by 2"-4" wide (2x2, 2x3, 2x4, 3x3, 3x4, 4x4) • Apply other Adjustment Factors when appropriate. • Grades described in *Western Lumber Grading Rules*, Sections 40.00, 41.00, 42.00 and 62.00 • ¹ Design values in pounds per square inch. • ² If using 4" thick lumber in repetitive systems, multiply the 4" thick single F_b value by 1.15 to yield the repetitive member value. *Example:* No. 1 4x8 repetitive F_b is $1105 \times 1.15 = 1270$ psi. • Note: Due to rounding to the nearest 5, some numbers in this table are slightly different from those computed when SIZE & REPETITIVE MEMBER adjustments are applied to BASE VALUES for dimension lumber.

GRADE	Extreme Fiber Stress in Bending, F_b			Tension Parallel to Grain	Horizontal Shear	Compression		Modulus of Elasticity	
						Perpendicular to Grain	Parallel to Grain		
	2" & 3" thick single	2" & 3" thick repetitive	4" thick single ²	F_t	F_v	$F_{c\perp}$	$F_{c//}$	E	E_{min}
Sel. Str.	1950	2245	1950	1165	145	370	1725	1,600,000	580,000
No. 1 & Btr.	1650	1900	1650	1090	145	370	1555	1,500,000	550,000
No. 1	1465	1680	1465	865	145	370	1555	1,500,000	550,000
No. 2	1275	1465	1275	790	145	370	1495	1,300,000	470,000
No. 3	750	865	750	450	145	370	835	1,200,000	440,000

Table 4. Combined Hem-Fir & Hem-Fir (North) • SIZE-ADJUSTED VALUES FOR WESTERN DIMENSION LUMBER¹

Nominal Sizes: 2" to 4" thick by 2"-4" wide (2x2, 2x3, 2x4, 3x3, 3x4, 4x4) • Apply other Adjustment Factors when appropriate. • Grades described in *Western Lumber Grading Rules*, Sections 40.00, 41.00, 42.00 and 62.00 • ¹ Design values in pounds per square inch. • ² If using 4" thick lumber in repetitive systems, multiply the 4" thick single F_b value by 1.15 to yield the repetitive member value. *Example:* No. 1 4x8 repetitive F_b is $1270 \times 1.15 = 1460$ psi. • Note: Due to rounding to the nearest 5, some numbers in this table are slightly different from those computed when SIZE & REPETITIVE MEMBER adjustments are applied to BASE VALUES for dimension lumber.

GRADE	Extreme Fiber Stress in Bending, F_b			Tension Parallel to Grain	Horizontal Shear	Compression		Modulus of Elasticity	
						Perpendicular to Grain	Parallel to Grain		
	2" & 3" thick single	2" & 3" thick repetitive	4" thick single ²	F_t	F_v	$F_{c\perp}$	$F_{c//}$	E	E_{min}
Sel. Str.	1875	2155	1875	865	135	335	1380	1,300,000	470,000
No. 1	1315	1510	1315	600	135	335	1210	1,200,000	440,000
No. 2	1165	1335	1165	525	135	335	1150	1,100,000	400,000
No. 3	675	775	675	300	135	335	660	1,000,000	370,000

Table 5. Combined Spruce-Pine-Fir (South) & Spruce-Pine-Fir • SIZE-ADJUSTED VALUES FOR WESTERN DIMENSION LUMBER¹

Nominal Sizes: 2" to 4" thick by 2"-4" wide (2x2, 2x3, 2x4, 3x3, 3x4, 4x4) • Apply other Adjustment Factors when appropriate. • Grades described in *Western Lumber Grading Rules*, Sections 40.00, 41.00, 42.00 and 62.00 • ¹ Design values in pounds per square inch. • ² If using 4" thick lumber in repetitive systems, multiply the 4" thick single F_b value by 1.15 to yield the repetitive member value. *Example:* No. 1 4x8 repetitive F_b is $1140 \times 1.15 = 1310$ psi. • Note: Due to rounding to the nearest 5, some numbers in this table are slightly different from those computed when SIZE & REPETITIVE MEMBER adjustments are applied to BASE VALUES for dimension lumber.