

# PRG® DESIGN PROPERTIES

Flexural Stress	Modulus of Elasticity	Horizontal Shear	Compression Perp
$F_b$	E	$F_v$	$F_{cperp}$
2400 psi	1,900,000 psi	300 psi	740 psi

## PRG® SECTION PROPERTIES AND ALLOWABLE CAPACITIES

3-1/2" WIDTH							
Depth	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"
Weight [lbs/ft.]	8.5	8.8	10.4	11.0	12.9	14.8	16.6
$C_{db}$ Factor (L=21')	1.00	1.00	1.00	1.00	1.00	1.00	0.99
Moment of Inertia I [in <sup>4</sup> ]	231	250	415	489	800	1195	1701
Moment Capacity M [ft-lbs]	9982	10858	15099	16791	23128	30007	37422
Shear Capacity [Lbs]	6475	6650	7875	8316	9800	11200	12600

  

5-1/2" WIDTH							
Depth	9-1/4"	9-1/2"	11-1/4"	11-7/8"	14"	16"	18"
Weight [lbs/ft.]	13.4	13.8	16.3	17.2	20.3	23.2	26.1
$C_{db}$ Factor (L=21')	1.00	1.00	1.00	0.989	0.989	0.982	0.976
Moment of Inertia I [in <sup>4</sup> ]	363	393	653	768	1258	1877	2673
Moment Capacity M [ft-lbs]	15686	16681	23133	25546	35538	46088	57974
Shear Capacity [Lbs]	10175	10450	12375	13068	15400	17600	19800

### Balanced Lay-up

The strongest laminations in glulams are placed in the zones where tension and compression stresses are highest under in-service loading conditions.

Balanced lay-up beams (PRG®) are symmetric in their lay-up and have the same grade lumber on both the top and bottom of the member. Balanced lay-up members have the same strength characteristics regardless of which face lamination is on top. Balanced beams are designed for use in cantilevered and continuous span applications and are also suitable for simple span applications.

### Framing Appearance Classification

A classification that denotes the member is intended only for use in concealed applications. Beams with this appearance classification are provided in widths designed to fit flush with 2x4 and 2x6 wall framing.

- Flexural stress  $F_b$  shall be modified by Volume Factor,  $C_v$ , as outlined in ICC ESR-1940, APA Product Report-L263 and APA-EWS Y117 where:

$$C_v = \left[ \frac{5.125/b}{12/d} \right]^{0.5} \times \left[ \frac{21/L}{1} \right]^{0.5} \leq 1.0$$

$$C_v = \left[ \frac{C_{db}}{21/L} \right]^{0.5} \leq 1.0$$

- Width and depth portions of Volume Factor,  $C_v$ , are incorporated into tabulated Moment  $C_{db}$  Factor.
- Tabulated Moment capacities based on width and depth portions of Volume Factor

Note: Allowable design properties and load capacities are based on a load duration of 100 percent and dry use conditions.

### POWER SIZER® SOFTWARE

PRG® is available in iStruct® branded Power Sizer® software suite. To download the latest version of iStruct®, go to our website <https://www.anthonyforest.com/sizing-software.shtml> and download a copy at no charge.



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# BUILD EFFICIENTLY WITH PRG®

VERSATILE  
SUSTAINABLE  
EFFICIENT



PRG®  
POWER RATED  
GLULAM

### PRG® FEATURES

- Value engineered for a cost-efficient, high-performance solution for load-bearing structural applications
- Fast, easy one-piece installation that is more efficient than bolting or nailing multi-ply dimension or structural composite lumber members together
- Available in I-Joist compatible and framing lumber depths
- Manufactured with superior strength southern yellow pine Machine Stress Rated Lumber
- Sustainable Forestry Initiative (SFI®) Certified
- Versatile product choice for Prefab Modular Construction, Multi-Family/Mixed-Use, Educational, Commercial Low-Rise, and Institutional/Healthcare building types
- PRG's strength and span capabilities allow for the best utilization of high-quality fiber, design versatility, ease and efficiency of construction when compared to other engineered wood products



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# BEAM COMPARISON

## ALLOWABLE UNIFORM LOAD CAPACITY PLF

Product	Design Value				DEPTH																
	E		F <sub>b</sub>	F <sub>v</sub>	11-7/8"				14"				16"				18"				
	E <sub>TRUE</sub>	E <sub>APPARENT</sub>			SPAN																
	x10 <sup>6</sup> psi	x10 <sup>6</sup> psi	psi	psi	10'	12'	14'	16'-6"	12'	14'	16'-6"	18'-6"	14'	16'-6"	18'-6"	20'	16'-6"	18'-6"	20'	22'	
3-1/2" WIDTH	PRG®	1.9	1.8	2400	300	1306/1302	904/754	661/475	424/290	1258/1235	921/778	659/475	493/337	1205/1161	863/709	683/503	583/398	1094/1010	867/716	740/567	607/426
	SCL 2 ply	2.1	2.0	3100	290	1517/1447	1172/837	781/527	480/326	1484/1372	1170/864	791/536	556/379	1446/1290	1085/799	834/565	650/442	1345/1138	1075/805	912/630	694/473
	SCL 1 ply	2.0	1.9	2900	290	1514/1257	1092/758	721/489	444/305	1480/1198	1093/780	720/490	514/352	1386/1131	1009/716	759/517	603/414	1173/995	1000/722	850/579	642/441
	SCL 2 ply	2.0	1.9	2900	285	1250/1250	1040/758	722/488	446/304	1226/1198	1048/780	720/490	514/352	1198/1132	1000/716	760/516	604/414	1142/994	988/722	844/578	644/440
	SCL 2 ply	2.0	1.9	2600	285	1415/1257	979/758	716/489	445/305	1333/1198	975/780	698/490	515/352	1253/1132	897/716	710/517	604/414	1120/995	887/722	756/579	622/441
	SCL 1 ply	1.55	1.50	2325	310	1263/974	868/587	556/379	341/236	1198/928	876/605	554/379	395/273	1132/877	810/555	584/401	463/320	NA	NA	NA	NA
5-1/2" WIDTH	PRG®	1.9	1.8	2400	300	2052/2047	1420/1184	1039/746	666/456	1977/1941	1447/1222	1036/747	775/530	1894/1824	1356/1114	1074/791	902/626	1719/1587	1362/1126	1138/891	932/669
	SCL 3 ply (5-1/4")	2.1	2.0	3100	290	2276/2171	1758/1256	1171/791	720/490	2225/2058	1755/1296	1187/803	835/568	2169/1935	1628/1199	1252/848	975/664	2018/1708	1613/1208	1369/945	1041/710
	SCL 1 ply (5-1/4")	2.0	1.9	2900	290	2271/1886	1639/1137	1082/734	667/457	2220/1797	1639/1171	1080/735	771/529	2079/1698	1514/1074	1138/776	905/621	1760/1493	1501/1084	1275/869	964/662
	SCL 3 ply (5-1/4")	2.0	1.9	2900	285	1875/1875	1560/1137	1083/732	669/456	1839/1797	1572/1170	1080/735	771/528	1797/1698	1500/1074	1140/774	906/621	1713/1491	1482/1083	1266/867	966/660
	SCL 3 ply (5-1/4")	2.0	1.9	2600	285	2123/1886	1469/1137	1074/734	668/457	2000/1797	1463/1171	1047/735	772/529	1880/1698	1346/1074	1066/776	907/621	1680/1493	1331/1084	1135/869	933/662
	SCL 1 or 2 ply	1.55	1.50	2325	310	1894/1462	1302/881	834/569	512/354	1797/1393	1314/907	831/569	592/410	1698/1316	1215/832	876/601	695/481	NA	NA	NA	NA

**Notes:**

- Floor TL/LL (Load Duration= 1.0)
- Table is based on on simple span only condition with uniform loading
- L/360 LL Deflection Limit; L/240 TL Deflection Limit
- Beam Weight included in Total Load
- For Comparison Purposes Only. See Manufacturer's Installation Instructions
- Dry use only

