



Doug Fir Timbers Column & Beam - Load Tables

Beam Span (ft)	L/240			3 to 1 LL to DL Ratio			Snow Load Duration (C = 1.15)			L/360			4 to 1 LL to DL Ratio			Normal Load Duration (C = 1.0)		
	No. 1 Douglas Fir-Larch Roof Beam Maximum Total Load (PLF)									No. 1 Douglas Fir-Larch Floor Beam Maximum Total Load (PLF)								
	4x6	4x8	4x10	4x12	4x14	6x6	6x8	6x10	4x6	4x8	4x10	4x12	4x14	6x6	6x8	6x10		
3	1790	2744	4302	6782	8723	2517	4086	6396	1557	2386	3741	5897	7586	2189	3553	5559		
4	1098	1761	2552	3590	4907	1594	2600	3748	956	1532	2219	3122	4267	1387	2261	3259		
5	703	1227	1814	2441	3141	1020	1907	2651	613	1063	1577	2123	2731	887	1658	2305		
6	488	849	1275	1730	2181	708	1318	2051	425	738	1109	1504	1896	616	1146	1783		
7	359	624	937	1271	1602	521	968	1672	312	542	815	1105	1393	453	842	1453		
8	275	477	717	973	1227	399	741	1338	239	415	624	846	1067	347	645	1163		
9	217	377	567	769	969	315	586	1058	189	328	493	668	843	274	509	919		
10	176	306	459	623	785	255	474	856	153	266	399	541	683	222	415	745		
11	145	253	379	515	648	211	392	708	115	220	330	447	564	170	341	615		
12	122	212	319	432	545	177	329	595	88	185	277	376	474	131	286	517		
13	104	181	272	368	465	151	281	507	70	157	236	320	404	103	244	441		
14	90	156	234	318	401	130	242	437	56	128	204	276	348	82	210	379		

Sources:

-Kevin Cheung P.E., PH.D., Director of Engineering Support, Tech Notes Report No. 6, Western Wood Products Association, Portland OR 97204, September 1998



No. 1 Douglas Fir-Larch Column Capacity (lbs.)									
Column Length (ft)	4x4	4x6	6x6	6x8	8x8	8x10	10x10	10x12	12x12
2	20392	31356	30004	41072	56007	71059	90008	109051	132009
3	19266	30806	29680	40842	55694	70816	89700	108798	131703
4	17342	29949	29194	40509	55240	70468	89259	108439	131269
5	14645	28700	28511	40058	54625	70005	88673	107698	130698
6	11788	26966	27586	39473	53827	69418	87929	107376	129981
7	9358	24723	26373	38731	52815	68691	87008	106654	129107
8	7484	22105	24841	37807	51556	67807	85889	105789	128060
9	6072	19387	23015	36676	50012	66747	84546	104768	126825
10	5004	16830	20989	35315	48157	65488	82951	103575	125380
11	4186	14573	18906	33720	45982	64007	81076	102190	123704
12	3548	12648	16902	31909	43513	62286	78896	100596	121774
13	3042	11030	15061	29932	40817	60313	76396	98771	119565
14	2636	9675	13421	27863	37995	58088	73578	96700	117058
15	-	-	11984	25781	35156	55632	70467	94368	114235
16	-	-	10734	23758	32398	52986	67115	91770	111090

Source:

-Tech Notes Report No. 9, Western Wood Products Association, Lake Oswego OR 97035, November 2022



Douglas Fir Timber Design Vaules										
Species and Commercial Grade	Size Classification	Design values in pounds per square inch (psi)							Specific Gravity ⁴ G	Grading Rules Agency
		Bending F _b	Tension Parallel to grain F _t	Shear parallel to grain F _v	Compression perpendicular to grain F _{c⊥}	Compression parallel to grain F _c	Modulus of Elasticity			
							E	E _{min}		
DOUGLAS FIR-LARCH										
Dense Select Structural	Beams and Stringers	1,900	1,100	170	730	1,300	1,700,000	620,000	0.50	WWPA
Select Structural		1,600	950	170	625	1,100	1,600,000	580,000		
Dense No. 1		1,550	775	170	730	1,100	1,700,000	620,000		
No. 1		1,350	675	170	625	925	1,600,000	580,000		
No. 2 Dense		1,000	500	170	730	700	1,400,000	510,000		
No. 2		875	425	170	625	600	1,300,000	470,000		
Dense Select Structural	Posts and Timbers	1,750	1,150	170	1,350	1,350	1,700,000	620,000		
Select Structural		1,500	1,000	170	1,150	1,150	1,600,000	580,000		
Dense No. 1		1,400	950	170	1,200	1,200	1,700,000	620,000		
No. 1		1,200	825	170	1,000	1,000	1,600,000	580,000		
No. 2 Dense		850	550	170	825	825	1,400,000	510,000		
No. 2		750	475	170	700	700	1,300,000	470,000		

Source:

-American Wood Council, Design Values for Wood Construction, Washington, DC 20005

9264 MANCHESTER RD. ST. LOUIS, MO 63144

PHONE: 314-964-6680 | EMAIL: SUPPORT@FP-TIMBERSUPPLY.COM