

# STANDARD LOAD TABLE

## LONGSPAN STEEL JOISTS, LJ- SERIES

Based on a Maximum Allowable Tensile Stress of 22,000 psi

Adopted by Steel Joist Institute and American Institute of Steel Construction, Inc., October 1, 1974

The black figures in the following table give the TOTAL safe uniformly-distributed load-carrying capacities, in pounds per linear foot, of LJ-Series joists. The weight of DEAD loads, including the joists, must in all cases be deducted to determine the LIVE load-carrying capacities of the joists. The approximate DEAD load of the joists may be determined from the weights per linear foot shown in the tables.

The red figures in this load table are the LIVE loads per linear foot of joist which will produce an approximate deflection of 1/360 of the span. LIVE loads which will produce a deflection of 1/240 of the span may be obtained by multiplying the red figure by 1.5. In no case shall the total load capacity of the joist be exceeded.\*

This load table applies to joists with either parallel

chords or standard pitched top chords. When top chords are pitched, the carrying capacities are determined by the nominal depth of the joists at center of the span.

Standard top chord pitch is 1/4 inch per foot. If pitch exceeds this standard, the load table does not apply. The load table may be used for parallel chord joists installed to a maximum slope of 1/2 inch per foot.

When holes are required in top or bottom chords, the carrying capacities must be reduced in proportion to reduction of chord areas.

The top chords are considered as being stayed laterally by floor slab or roof deck.

The approximate joist weights per linear foot shown in these tables include accessories.

Joist Designation	Approx. Wt. in Lbs. per Linear Ft.	Depth in Inches	SAFE LOAD** in Lbs. Between	CLEAR OPENING OR NET SPAN IN FEET															
				21—24	25	26	27	28	29	30	31	32	33	34	35	36			
18LJ02	13	18	8800	343	324	306	290	275	260	244	230	217	206	195	185				
18LJ03	14	18	9800	313	284	259	236	217	198	180	164	150	139	127	117				
18LJ04	16	18	11500	348	317	289	260	235	213	193	176	161	147	135	125				
18LJ05	17	18	12800	406	364	326	293	265	239	217	198	180	165	152	139				
18LJ06	19	18	15200	452	411	375	343	309	280	254	231	212	193	178	163				
18LJ07	20	18	15800	526	469	419	377	340	307	280	254	232	212	195	180				
18LJ08	22	18	17000	551	510	474	425	384	347	315	288	263	240	221	203				
18LJ09	24	18	17600	593	549	507	473	427	387	351	320	292	267	246	226				
18LJ10	27	18	18900	612	564	524	488	455	418	380	346	316	289	266	245				
18LJ11	29	18	20000	739	711	685	662	639	618	599	581	547	516	488	461				
18LJ12	32	18	20700	656	607	564	526	490	456	428	389	356	325	299	275				
				692	641	596	554	515	482	452	424	393	360	330	304				
				807	776	748	722	698	675	654	634	615	597	580	565				
				716	663	615	570	533	498	467	437	411	387	358	329				
			22—24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20LJ03	14	20	9900	388	369	351	334	318	304	290	276	260	245	232	219	208	197	187	178
20LJ04	16	20	11900	368	350	331	304	280	258	239	220	200	184	169	156	143	133	123	114
20LJ05	17	20	13000	440	417	390	357	328	300	272	248	227	208	190	175	161	150	138	128
20LJ06	19	20	15400	484	460	430	395	364	336	310	287	265	242	222	204	189	174	162	150
20LJ07	20	20	16500	602	579	559	530	498	466	437	410	386	364	344	326	308	293	278	265
20LJ08	22	20	17900	571	550	521	474	427	386	351	320	292	267	246	226	209	192	178	165
20LJ09	24	20	18600	643	619	597	576	557	521	489	459	432	408	385	365	345	328	311	296
20LJ10	27	20	20100	610	588	553	515	481	435	396	360	329	302	277	255	235	217	201	186
20LJ11	29	20	20700	699	673	648	626	605	585	567	533	502	473	447	423	401	380	361	344
20LJ12	32	20	22100	664	639	600	560	520	486	442	402	367	337	309	285	262	242	225	209
20LJ13	36	20	23100	726	699	674	650	628	608	588	570	554	522	493	467	442	420	399	379
				689	664	624	578	540	505	473	437	399	366	336	309	285	264	244	227
				783	753	726	701	677	655	634	615	597	580	548	519	491	466	443	421
				743	715	669	623	581	544	510	477	448	411	377	346	320	296	274	254
				807	776	748	722	698	675	654	634	615	597	580	565	550	522	496	472
				766	737	689	642	599	561	523	492	463	436	410	383	354	326	303	281
				817	787	736	685	637	596	558	525	491	463	438	414	383	355	328	304
				901	867	836	807	779	754	730	708	687	667	648	631	614	598	583	569
				855	823	770	714	665	623	584	546	514	485	457	433	408	387	368	348

See page LT-44 for notes

# STANDARD LOAD TABLE / LONGSPAN STEEL JOISTS, LJ-SERIES

Based on Allowable Stress of 22,000 psi

Joist Designation	Approx. Wt. in Lbs. per Linear Ft.	Depth in Inches	SAFE LOAD** in Lbs. Between	CLEAR OPENING OR NET SPAN IN FEET																
				28-32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
<b>24LJ04</b>	16	24	11000	329	315	302	290	279	268	258	248	236	225	215	206	197	188	181	173	
<b>24LJ05</b>	17	24	12100	307	285	266	248	232	217	204	190	176	164	152	143	133	125	117	110	
<b>24LJ06</b>	19	24	14900	335	313	292	274	257	240	223	208	194	181	169	158	149	140	131	124	
<b>24LJ07</b>	20	24	16400	411	382	356	332	308	285	264	245	228	211	197	184	172	161	152	142	
<b>24LJ08</b>	22	24	19300	450	419	391	365	341	320	297	275	255	238	222	207	194	181	170	160	
<b>24LJ09</b>	24	24	20500	574	549	525	503	482	460	438	418	399	380	363	347	322	318	305	292	
<b>24LJ10</b>	27	24	21700	527	490	455	421	388	359	333	308	286	267	249	232	218	204	191	180	
<b>24LJ11</b>	29	24	22800	609	592	575	560	537	513	487	464	442	421	402	384	368	352	337	324	
<b>24LJ12</b>	32	24	24400	559	528	498	460	424	393	363	337	313	292	272	254	238	223	209	196	
<b>24LJ13</b>	36	24	25200	646	627	610	593	577	563	540	514	490	467	446	426	408	391	374	359	
<b>24LJ14</b>	38	24	26200	593	559	528	497	471	439	406	378	351	326	304	285	266	249	234	220	
				680	660	641	624	607	592	577	563	542	521	499	477	457	437	419	402	
				624	586	553	523	495	471	445	418	388	361	337	315	294	276	259	243	
				727	706	686	667	650	633	617	602	587	574	548	524	501	480	460	441	
				664	626	591	559	528	501	476	453	427	392	366	342	320	300	281	264	
				748	727	706	687	669	651	635	619	604	590	577	564	552	528	506	486	
				683	645	606	573	543	515	490	465	443	421	402	384	366	342	322	302	
				780	757	736	716	697	679	662	646	630	615	601	588	575	563	539	517	
				712	669	632	598	566	537	510	484	460	439	419	401	383	359	337	317	
				<b>33-40</b>	<b>41</b>	<b>42</b>	<b>43</b>	<b>44</b>	<b>45</b>	<b>46</b>	<b>47</b>	<b>48</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>
<b>28LJ06</b>	19	28	14000	338	327	316	304	292	280	269	259	249	240	232	223	215	208	201	194	
<b>28LJ07</b>	20	28	15500	297	281	265	249	234	220	207	195	183	173	164	155	146	139	132	125	
<b>28LJ08</b>	22	28	18200	372	360	348	337	326	316	304	292	281	271	261	252	243	234	226	218	
<b>28LJ09</b>	24	28	20400	327	308	291	275	260	247	233	219	206	195	184	174	165	156	148	140	
<b>28LJ10</b>	27	28	22200	439	423	405	388	372	357	343	330	317	305	294	284	274	264	255	246	
<b>28LJ11</b>	29	28	23800	383	360	337	316	296	278	261	246	232	219	207	196	185	175	166	157	
<b>28LJ12</b>	32	28	25600	491	473	456	441	424	407	391	376	362	348	336	324	312	302	291	281	
<b>28LJ13</b>	36	28	27300	428	403	379	355	332	311	292	274	258	243	228	216	204	193	183	173	
<b>28LJ14</b>	38	28	28600	535	516	498	481	465	449	434	418	402	387	373	359	347	335	323	312	
<b>28LJ15</b>	41	28	29500	465	438	413	390	368	347	325	305	287	271	255	241	228	215	204	193	
				571	558	539	521	504	487	471	456	439	423	408	393	379	366	353	341	
				496	473	446	422	399	376	356	337	318	300	283	267	252	239	226	214	
				615	601	587	574	562	550	531	513	496	478	460	443	427	413	398	384	
				532	507	484	463	443	418	392	368	346	326	307	292	274	260	246	233	
				656	641	626	612	599	586	574	562	551	529	509	490	472	455	438	423	
				567	541	516	493	471	450	432	414	396	373	352	332	314	297	281	266	
				687	670	655	640	626	613	600	588	576	565	544	523	504	486	468	452	
				594	565	538	514	492	471	451	433	416	393	370	349	330	312	296	281	
				612	581	555	530	507	486	465	445	427	410	394	379	366	346	327	310	
				<b>38-48</b>	<b>49</b>	<b>50</b>	<b>51</b>	<b>52</b>	<b>53</b>	<b>54</b>	<b>55</b>	<b>56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>
<b>32LJ07</b>	20	32	14800	298	288	278	269	259	251	242	235	227	220	213	206	200	194	189	183	
<b>32LJ08</b>	22	32	16900	252	239	226	214	202	192	182	174	165	157	149	142	136	130	124	118	
<b>32LJ09</b>	24	32	19500	342	330	318	307	296	286	277	267	259	250	243	235	228	221	214	208	
<b>32LJ10</b>	27	32	21300	289	273	258	244	231	218	208	197	187	178	170	162	154	147	140	134	
<b>32LJ11</b>	28	32	23000	394	380	366	353	341	330	319	308	298	289	280	271	263	255	247	240	
<b>32LJ12</b>	30	32	25900	331	313	296	280	265	252	239	227	216	205	196	186	178	170	162	155	
<b>32LJ13</b>	36	32	29700	429	416	404	392	379	366	353	342	331	320	310	300	291	282	274	266	
<b>32LJ14</b>	38	32	30600	360	342	325	310	294	278	264	251	239	227	216	206	196	187	179	171	
<b>32LJ15</b>	41	32	31700	464	451	435	418	403	388	374	361	349	337	326	315	305	295	286	277	
<b>32LJ16</b>	48	32	34500	389	370	350	330	312	295	279	265	252	239	227	216	205	196	187	178	
				523	502	483	465	447	431	416	401	387	374	362	350	339	328	318	308	
				434	409	385	363	343	325	308	292	277	263	250	238	227	215	206	196	
				599	587	575	565	544	525	506	488	471	455	440	426	412	399	387	375	
				498	478	459	441	418	395	374	354	336	319	304	288	275	262	249	238	
				617	605	593	582	571	561	541	522	504	487	471	456	441	427	414	401	
				513	493	474	456	438	417	395	374	355	337	321	304	290	276	264	251	
				638	625	613	602	590	580	569	559	550	532	514	497	481	466	451	437	
				530	509	490	470	452	436	420	406	392	373	354	337	320	306	291	278	
				696	682	669	656	644	632	621	610	599	589	579	570	560	552	535	518	
				576	554	532	512	492	474	457	441	426	411	397	385	371	359	343	327	
				<b>42-56</b>	<b>57</b>	<b>58</b>	<b>59</b>	<b>60</b>	<b>61</b>	<b>62</b>	<b>63</b>	<b>64</b>	<b>65</b>	<b>66</b>	<b>67</b>	<b>68</b>	<b>69</b>	<b>70</b>	<b>71</b>	<b>72</b>
<b>36LJ08</b>	22	36	15700	273	265	256	249	241	234	227	221	214	208	203	197	192	187	182	177	
<b>36LJ09</b>	23	36	18300	224	214	203	194	185	177	169	162	154	147	142	136	130	125	120	115	
<b>36LJ10</b>	26	36	20200	260	248	236	224	213	203	194	185	177	169	162	154	148	141	135	130	
<b>36LJ11</b>	28	36	22200	352	341	330	320	311	302	293	284	275	267	259	252	245	238	231	225	
<b>36LJ12</b>	30	36	25300	288	274	261	249	238	227	217	207	197	189	180	173	166	159	152	146	
<b>36LJ13</b>	36	36	30200	385	373	361	350	340	330	320	311	302	294	286	278	270	263	256	249	
<b>36LJ14</b>	38	36	32400	314	299	284	271	259	247	236	226	216	207	199	190	182	175	168	161	
<b>36LJ15</b>	41	36	34200	439	424	410	397	384	372	360	349	339	329	319	310	301	292	284	276	
<b>36LJ16</b>	48	36	36800	356	338	321														

