

# STANDARD LOAD TABLE

## FOR DEEP LONGSPAN STEEL JOISTS, DLJ- 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

This table was developed using 22,000 psi allowable tensile stress. The following table gives the TOTAL safe uniformly distributed load-carrying capacities in pounds per linear foot of span.

All loads shown are for roof construction only. The weight of DEAD loads, including weight of joists, must in all cases be deducted to determine the LIVE load-carrying capacity of the joists. Approximate weights per linear foot of joist include accessories.

The figures shown in **red** are the LIVE loads per linear foot of joist which will produce an approximate deflection of 1/360 of the span. Loads which will produce an approximate deflection of 1/240 of the span may be obtained by multiplying the red figures by 1.5. For roofs, LIVE load deflection is limited to 1/360 of the span where a plaster ceiling is attached or suspended; 1/240 of the span for all

other cases. In no case shall the TOTAL capacity of the joists be exceeded.\*

When holes are required in the 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 the roof deck.

The load table applies to joists with either parallel chords or standard pitched chords. When top chords are pitched, the carrying capacities are determined by the nominal depth of the joist at the center of the span. Standard top chord pitch is 1/8" 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" per foot.

Joist Designation	Approx. Wt. in Lbs. per Linear Ft.	Depth in Inches	SAFE LOAD** in Lbs. Between	CLEAR OPENING OR NET SPAN IN FEET																
				61-88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
52DLJ12	31	52	25700	287 216	281 209	275 203	269 196	264 190	258 184	253 178	248 172	243 167	238 162	234 158	229 153	225 148	220 144	216 139	212 135	
52DLJ13	36	52	30400	340 256	332 248	325 240	319 232	312 225	306 218	300 211	294 205	288 198	282 192	277 187	271 181	266 175	261 171	256 166	252 161	
52DLJ14	40	52	33800	378 276	370 266	362 258	355 249	347 242	340 234	333 227	326 220	319 213	313 207	306 201	300 194	294 189	289 184	283 178	278 173	
52DLJ15	44	52	37300	417 311	408 301	399 291	391 282	382 272	374 264	366 256	359 247	352 240	344 233	338 226	331 219	324 213	318 207	312 201	306 195	
52DLJ16	51	52	45100	503 373	492 361	482 349	471 338	462 327	452 317	443 307	434 298	426 288	417 280	409 271	401 264	393 256	386 248	379 241	372 234	
52DLJ17	57	52	50900	568 427	556 413	544 399	533 387	522 375	511 362	501 351	490 341	481 330	471 321	462 311	453 302	444 293	436 285	428 276	420 268	
52DLJ18	64	52	59000	659 475	645 460	631 445	618 431	605 418	592 404	580 392	569 380	557 368	546 357	535 346	525 336	515 326	505 317	496 307	486 299	
				<b>66-96</b>	<b>97</b>	<b>98</b>	<b>99</b>	<b>100</b>	<b>101</b>	<b>102</b>	<b>103</b>	<b>104</b>	<b>105</b>	<b>106</b>	<b>107</b>	<b>108</b>	<b>109</b>	<b>110</b>	<b>111</b>	<b>112</b>
56DLJ13	35	56	28800	295 223	289 216	284 209	278 204	273 197	267 191	262 186	257 181	252 175	248 171	243 166	238 161	234 157	230 152	226 149	222 145	
56DLJ14	40	56	33100	339 249	332 242	326 234	319 228	313 221	307 214	302 209	296 202	291 196	285 190	280 186	275 181	270 175	266 171	261 167	256 162	
56DLJ15	44	56	37100	380 281	372 272	365 264	358 256	351 248	344 242	337 234	331 228	324 221	318 215	313 209	307 204	301 198	296 192	290 188	285 182	
56DLJ16	51	56	43900	450 337	441 326	433 317	425 307	416 299	409 290	401 282	394 273	386 266	379 258	372 251	366 245	359 238	353 231	347 225	341 219	
56DLJ17	57	56	49600	508 385	499 374	489 362	480 352	470 342	462 332	453 323	445 313	436 304	428 296	421 287	413 280	406 272	399 265	392 258	385 251	
56DLJ18	64	56	57900	593 430	582 417	570 404	559 393	549 381	538 370	528 360	518 349	509 340	499 330	490 321	481 312	473 304	465 295	456 287	448 280	
56DLJ19	72	56	65400	670 479	657 465	644 451	632 437	620 425	608 413	597 400	585 389	575 379	564 368	554 358	544 348	534 339	525 329	516 321	507 312	

See page LT-46 for notes



# DEEP LONGSPAN STEEL JOISTS, DLJ-SERIES

Based on a Maximum Allowable Tensile 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																
				70-104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
60DLJ14	40	60	32300	306	300	295	290	285	280	275	270	265	261	257	252	248	244	240	236	
60DLJ15	44	60	36800	227	221	214	209	203	197	192	187	182	177	172	169	164	160	156	152	
60DLJ16	51	60	42900	255	248	242	235	228	223	216	210	205	200	194	190	185	180	175	171	
60DLJ17	57	60	48500	406	399	392	385	378	371	365	359	353	347	341	335	330	324	319	314	
60DLJ18	64	60	56900	307	299	290	282	274	267	260	253	247	240	234	228	222	216	211	206	
60DLJ19	72	60	64300	459	450	442	434	427	419	412	405	398	391	385	378	372	366	360	354	
				351	342	332	323	314	305	298	289	282	275	267	261	254	247	242	236	
				392	381	370	361	350	342	332	323	315	306	299	291	284	277	269	263	
				437	425	414	402	391	380	370	361	351	342	333	324	317	308	301	293	
				75-112	113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
64DLJ14	39	64	30600	270	265	260	256	252	247	243	239	235	231	228	224	221	217	214	210	
64DLJ15	44	64	36200	199	193	189	184	179	174	171	166	162	158	154	151	147	143	140	136	
64DLJ16	49	64	39500	319	314	309	304	299	294	289	284	280	275	271	267	263	259	255	251	
64DLJ17	55	64	45400	234	228	223	217	211	206	201	196	191	187	182	177	173	170	165	161	
64DLJ18	64	64	55900	348	342	336	330	324	319	314	308	303	298	294	289	284	280	275	271	
64DLJ19	72	64	63100	262	254	248	242	235	229	224	218	213	208	203	198	193	189	184	180	
64DLJ20	83	64	74500	400	393	386	380	373	367	361	355	349	343	338	332	327	322	317	312	
				298	290	283	275	268	262	255	248	243	237	231	226	220	215	210	205	
				492	483	475	467	460	452	445	438	431	424	417	411	404	398	392	386	
				361	351	342	333	324	317	308	301	293	286	280	273	266	260	254	248	
				402	393	381	372	362	353	344	336	327	320	312	304	297	290	284	277	
				656	645	634	623	612	602	592	582	573	563	554	545	537	528	520	512	
				467	455	443	432	420	410	399	390	380	371	362	354	345	337	329	322	
				80-120	121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136
68DLJ15	44	68	35400	291	287	282	278	273	269	265	261	257	254	250	246	243	239	236	232	
68DLJ16	49	68	39200	217	211	207	201	196	192	188	183	179	174	171	167	163	159	156	152	
68DLJ17	55	68	45200	323	318	313	308	303	298	293	289	284	280	276	272	268	264	260	256	
68DLJ18	62	68	52100	242	236	230	225	219	214	209	204	199	195	190	186	182	178	174	171	
68DLJ19	72	68	62000	372	366	360	354	348	343	338	332	327	322	317	313	308	303	299	295	
68DLJ20	83	68	74200	275	268	262	256	249	244	238	232	228	222	217	212	208	203	198	194	
				429	422	415	408	402	395	389	383	377	372	366	360	355	350	345	340	
				311	304	297	289	283	276	269	263	257	251	246	240	234	229	225	219	
				510	502	494	486	479	472	464	457	451	444	437	431	425	418	412	407	
				372	363	354	345	338	329	322	314	307	300	293	286	281	274	268	262	
				610	600	591	581	572	563	554	546	537	529	521	513	506	498	491	484	
				432	421	411	401	392	382	374	365	357	348	341	333	325	319	311	304	
				84-128	129	130	131	132	133	134	135	136	137	138	139	140	141	142	143	144
72DLJ16	49	72	39100	302	297	293	288	284	280	275	271	268	264	260	256	253	249	246	242	
72DLJ17	55	72	44900	225	219	214	209	205	200	196	191	188	183	179	175	171	169	165	161	
72DLJ18	62	72	51800	347	342	337	332	327	322	317	312	308	304	299	295	291	287	283	279	
72DLJ19	72	72	60900	256	250	245	239	233	228	224	218	213	209	205	200	196	191	188	184	
72DLJ20	83	72	73900	400	394	388	383	377	371	366	360	355	350	345	340	335	331	326	322	
				289	283	276	270	265	258	252	247	242	236	231	227	222	217	212	209	
				470	463	457	450	443	437	431	425	419	413	407	401	396	390	385	380	
				346	338	330	323	316	309	302	295	289	283	277	271	266	260	254	248	
				570	562	553	545	537	529	521	513	506	499	492	485	478	471	465	458	
				402	393	384	376	367	359	351	343	336	328	322	315	308	302	295	289	

\*Section 104.10 of the "Standard Specifications for Longspan Steel Joists, LJ- and LH-Series and Deep Longspan Steel Joists, DLJ- and DLH-Series" limits the design LIVE load deflection as follows: 1/360 of span where a plaster ceiling is attached or suspended; 1/240 of span for all other cases.

\*\*To solve for safe uniform load between spans shown, divide the Safe Load in pounds by net span in feet plus .67 feet. (The added

.67 feet, eight inches, is necessary to obtain the proper span for which the load tables were developed.)

To solve for live load between spans shown, multiply the live load of the shortest net span shown in the load table by the (shortest net span plus .67 feet)<sup>2</sup>, and divide by the (actual net span plus .67 feet)<sup>2</sup>. The live load shall not exceed the safe uniform load.

