

# STANDARD ASD LOAD TABLE

## DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 50 ksi Maximum Yield Strength  
 Adopted by the Steel Joist Institute May 25, 1983  
 Revised to November 10, 2003 - Effective March 01, 2005

The black figures in the following table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of an **ASD DLH-Series** Steel 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. All loads shown are for roof construction only.

The **RED** figures in this load table are the nominal 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** figures by 1.5. In no case shall the TOTAL load capacity of the joists 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 the center of the span. Standard top chord pitch is 1/8 inch per foot. If pitch exceeds this standard, the load table does not apply. Sloped parallel-chord joists shall use span as defined by the length along the slope.

All rows of bridging shall be diagonal bridging with bolted connections at the chords and intersections.

Where the joist span is in the **BLUE SHADED** area of the load table hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed.

Where the joist span is in the **GRAY SHADED** area of the load table hoisting cables shall not be released until all rows of bridging are completely installed.

The approximate moment of inertia of the joist, in inches<sup>4</sup> is;  $I_j = 26.767(W_{LL})(L^3)(10^{-6})$ , where  $W_{LL}$  = **RED** figure in the Load Table, and  $L$  = (clear span + 0.67) in feet.

When holes are required in top or bottom chords, the carrying capacities must be reduced in proportion to the 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 do not include accessories.

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STANDARD LOAD TABLE LONGSPAN STEEL JOISTS, DLH-SERIES																				
Based on a 50 ksi Maximum Yield Strength - Loads Shown in Pounds per Linear Foot (plf)																				
Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	SAFELOAD* in Lbs. Between	CLEAR SPAN IN FEET																
				61-88	89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
52DLH10	25	52	26700	298	291	285	279	273	267	261	256	251	246	241	236	231	227	223	218	
				171	165	159	154	150	145	140	136	132	128	124	120	116	114	110	107	
52DLH11	26	52	29300	327	320	313	306	299	293	287	281	275	270	264	259	254	249	244	240	
				187	181	174	169	164	158	153	149	144	140	135	132	128	124	120	117	
52DLH12	29	52	32700	365	357	349	342	334	327	320	314	307	301	295	289	284	278	273	268	
				204	197	191	185	179	173	168	163	158	153	149	144	140	135	132	128	
52DLH13	34	52	39700	443	433	424	414	406	397	389	381	373	366	358	351	344	338	331	325	
				247	239	231	224	216	209	203	197	191	185	180	174	170	164	159	155	
52DLH14	39	52	45400	507	497	486	476	466	457	447	438	430	421	413	405	397	390	382	375	
				276	266	258	249	242	234	227	220	213	207	201	194	189	184	178	173	
52DLH15	42	52	51000	569	557	545	533	522	511	500	490	480	470	461	451	443	434	426	418	
				311	301	291	282	272	264	256	247	240	233	226	219	213	207	201	195	
52DLH16	45	52	55000	614	601	588	575	563	551	540	528	518	507	497	487	478	468	459	451	
				346	335	324	314	304	294	285	276	267	260	252	245	237	230	224	217	
52DLH17	52	52	63300	706	691	676	661	647	634	620	608	595	583	572	560	549	539	528	518	
				395	381	369	357	346	335	324	315	304	296	286	279	270	263	255	247	
				66-96	97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
56DLH11	26	56	28100	288	283	277	272	267	262	257	253	248	244	239	235	231	227	223	219	
				169	163	158	153	149	145	140	136	133	129	125	122	118	115	113	110	
56DLH12	30	56	32300	331	324	318	312	306	300	295	289	284	278	273	268	263	259	254	249	
				184	178	173	168	163	158	153	150	145	141	137	133	130	126	123	119	
56DLH13	34	56	39100	401	394	386	379	372	365	358	351	344	338	331	325	319	314	308	303	
				223	216	209	204	197	191	186	181	175	171	166	161	157	152	149	145	
56DLH14	39	56	44200	453	444	435	427	419	411	403	396	388	381	375	368	361	355	349	343	
				249	242	234	228	221	214	209	202	196	190	186	181	175	171	167	162	
56DLH15	42	56	50500	518	508	498	488	478	469	460	451	443	434	426	419	411	403	396	389	
				281	272	264	256	248	242	234	228	221	215	209	204	198	192	188	182	
56DLH16	46	56	54500	559	548	537	526	516	506	496	487	478	469	460	452	444	436	428	420	
				313	304	294	285	277	269	262	254	247	240	233	227	221	214	209	204	
56DLH17	51	56	62800	643	630	618	605	594	582	571	560	549	539	529	520	510	501	492	483	
				356	345	335	325	316	306	298	289	281	273	266	258	251	245	238	231	



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**STANDARD LOAD TABLE LONGSPAN STEEL JOISTS, DLH-SERIES**  
Based on a 50 ksi Maximum Yield Strength - Loads Shown in Pounds per Linear Foot (plf)

Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	SAFE LOAD* in Lbs. Between		CLEAR SPAN IN FEET															
			70-99	100-104	105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
			60DLH12	29	60	31100	31100	295 168	289 163	284 158	279 154	274 150	270 146	265 142	261 138	256 134	252 131	248 128	244 124	240 121
60DLH13	35	60	37800	37800	358 203	351 197	345 191	339 187	333 181	327 176	322 171	316 167	311 163	306 158	301 154	296 151	291 147	286 143	282 139	277 135
60DLH14	40	60	42000	42000	398 216	391 210	383 205	376 199	370 193	363 189	356 183	350 178	344 173	338 170	332 165	327 161	321 156	316 152	310 149	305 145
60DLH15	43	60	49300	49300	467 255	458 248	450 242	442 235	434 228	427 223	419 216	412 210	405 205	398 200	392 194	385 190	379 185	373 180	367 175	361 171
60DLH16	46	60	54200	54200	513 285	504 277	494 269	485 262	476 255	468 247	460 241	451 235	444 228	436 223	428 217	421 211	414 206	407 201	393 196	393 190
60DLH17	52	60	62300	62300	590 324	579 315	569 306	558 298	548 290	538 283	529 275	519 267	510 261	501 254	493 247	484 241	476 235	468 228	460 223	453 217
60DLH18	59	60	71900	71900	681 366	668 357	656 346	644 337	632 327	621 319	610 310	599 303	589 294	578 286	568 279	559 272	549 266	540 259	531 252	522 246
			<b>75-99</b>	<b>100-112</b>	<b>113</b>	<b>114</b>	<b>115</b>	<b>116</b>	<b>117</b>	<b>118</b>	<b>119</b>	<b>120</b>	<b>121</b>	<b>122</b>	<b>123</b>	<b>124</b>	<b>125</b>	<b>126</b>	<b>127</b>	<b>128</b>
64DLH12	31	64	30000	30000	264 153	259 150	255 146	251 142	247 138	243 135	239 132	235 129	231 125	228 122	224 119	221 116	218 114	214 111	211 109	208 106
64DLH13	34	64	36400	36400	321 186	315 181	310 176	305 171	300 168	295 163	291 159	286 155	281 152	277 148	273 144	269 141	264 137	260 134	257 131	253 128
64DLH14	40	64	41700	41700	367 199	360 193	354 189	349 184	343 179	337 174	332 171	326 166	321 162	316 158	311 154	306 151	301 147	296 143	292 140	287 136
64DLH15	43	64	47800	47800	421 234	414 228	407 223	400 217	394 211	387 206	381 201	375 196	369 191	363 187	358 182	352 177	347 173	341 170	336 165	331 161
64DLH16	46	64	53800	53800	474 262	466 254	458 248	450 242	443 235	435 229	428 224	421 218	414 213	407 208	401 203	394 198	388 193	382 189	376 184	370 180
64DLH17	52	64	62000	62000	546 298	536 290	527 283	518 275	509 268	501 262	492 255	484 248	476 242	468 237	461 231	454 226	446 220	439 215	432 210	426 205
64DLH18	59	64	71600	71600	630 337	619 328	608 320	598 311	587 304	578 296	568 288	559 282	549 274	540 267	532 261	523 255	515 249	507 243	499 237	491 232
			<b>80-99</b>	<b>100-120</b>	<b>121</b>	<b>122</b>	<b>123</b>	<b>124</b>	<b>125</b>	<b>126</b>	<b>127</b>	<b>128</b>	<b>129</b>	<b>130</b>	<b>131</b>	<b>132</b>	<b>133</b>	<b>134</b>	<b>135</b>	<b>136</b>
68DLH13	37	68	35000	35000	288 171	284 168	279 164	275 159	271 155	267 152	263 149	259 145	255 142	252 138	248 135	244 133	241 130	237 127	234 124	231 121
68DLH14	40	68	40300	40300	332 184	327 179	322 175	317 171	312 167	308 163	303 159	299 155	294 152	290 148	286 145	281 141	277 138	273 135	269 133	266 130
68DLH15	44	68	45200	45200	372 206	365 201	360 196	354 191	348 187	343 182	337 178	332 174	327 170	322 166	317 162	312 158	308 155	303 152	299 148	294 145
68DLH16	49	68	53600	53600	441 242	433 236	427 230	420 225	413 219	407 214	400 209	394 204	388 199	382 195	376 190	371 186	365 182	354 178	349 174	349 171
68DLH17	55	68	60400	60400	497 275	489 268	481 262	474 256	467 249	460 244	453 238	446 232	439 228	433 222	427 217	420 212	414 208	408 203	403 198	397 194
68DLH18	61	68	69900	69900	575 311	566 304	557 297	549 289	540 283	532 276	524 269	516 263	508 257	501 251	493 246	486 240	479 234	472 230	465 225	459 219
68DLH19	67	68	80500	80500	662 353	651 344	641 336	631 328	621 320	611 313	601 305	592 298	583 291	574 285	565 278	557 272	548 266	540 260	532 254	525 248
			<b>84-99</b>	<b>100-128</b>	<b>129</b>	<b>130</b>	<b>131</b>	<b>132</b>	<b>133</b>	<b>134</b>	<b>135</b>	<b>136</b>	<b>137</b>	<b>138</b>	<b>139</b>	<b>140</b>	<b>141</b>	<b>142</b>	<b>143</b>	<b>144</b>
72DLH14	41	72	39200	39200	303 171	298 167	294 163	290 159	285 155	281 152	277 149	274 146	270 143	266 139	262 136	259 133	255 131	252 128	248 125	245 123
72DLH15	44	72	44900	44900	347 191	342 187	336 183	331 178	326 174	322 171	317 167	312 163	308 160	303 156	299 152	295 150	291 147	286 143	282 140	279 137
72DLH16	50	72	51900	51900	401 225	395 219	390 214	384 209	378 205	373 200	368 196	363 191	358 188	353 183	348 179	343 175	338 171	334 169	329 165	325 161
72DLH17	56	72	58400	58400	451 256	445 250	438 245	432 239	426 233	420 228	414 224	408 218	402 213	397 209	391 205	386 200	381 196	376 191	371 188	366 184
72DLH18	59	72	68400	68400	528 289	520 283	512 276	505 270	497 265	490 258	483 252	479 247	470 242	463 236	457 231	450 227	444 222	438 217	432 212	426 209
72DLH19	70	72	80200	80200	619 328	609 321	600 313	591 306	582 300	573 293	565 286	557 280	549 274	541 268	533 263	526 257	518 251	511 247	504 241	497 236

\* The safe uniform load for the clear spans shown in the Safe Load Column is equal to (Safe Load) / (Clear Span + 0.67). (The added 0.67 feet (8 inches) is required to obtain the proper length on which the Load Tables were developed).

In no case shall the safe uniform load, for clear spans less than the minimum clear span shown in the Safe Load Column, exceed the uniform load calculated for the minimum clear span listed in the Safe Load Column.

To solve for *live* loads for clear spans shown in the Safe Load Column (or lesser clear spans), multiply the live load of the shortest clear span shown in the Load Table by (the shortest clear span shown in the Load Table + 0.67 feet)<sup>2</sup> and divide by (the actual clear span + 0.67 feet)<sup>2</sup>. The live load shall not exceed the safe uniform load.

