

# STANDARD LOAD TABLE

## DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a Maximum Allowable Tensile Stress of 30 ksi  
 Adopted by the Steel Joist Institute May 25, 1983;  
 Revised to May 1, 2000 – Effective August 1, 2002

The black figures in the following table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of 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 LIVE loads per linear foot of joist which will produce an approximate deflection of  $\frac{1}{360}$  of the span. LIVE loads which will produce a deflection of  $\frac{1}{240}$  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  $\frac{1}{8}$  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 + .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.

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	



**STANDARD LOAD TABLE/DEEP LONGSPAN STEEL JOISTS, DLH-SERIES**  
Based on a Maximum Allowable Tensile Stress of 30 ksi

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