

# STANDARD ASD LOAD TABLE

## DEEP LONGSPAN STEEL JOISTS, DLH-SERIES

Based on a 50 ksi Maximum Yield Strength  
Spans up to and including 144 ft. adopted by the Steel Joist Institute May 25, 1983  
Spans greater than 144 ft. up to and including 240 ft. adopted by the Steel Joist Institute May 18, 2010  
Revised to May 18, 2010 – Effective December 31, 2010

The **BLACK** figures in the Load Table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD DLH-Series** Steel Joists.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the DEAD load. In all cases the DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the uniform load for supplementary deflection criteria (i.e. a uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figures by 360/240). In no case shall the prorated load exceed the TOTAL load-carrying capacity of the joist.

The Load Table applies to joists with either parallel chords or pitched top chords. Joists can have a top chord pitch up to 1/2 inch per foot. If the pitch exceeds this limit, the Load Table does not apply. When top chords are pitched, the load-carrying capacities are determined by the nominal depth of the joists at the center of the span. Sloped parallel-chord joists shall use span as defined by the length along the slope.

Where the joist span is in the **BLUE SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed. The **BLUE SHADED** area starts after 60'-0" and extends up through 100'-0".

Where the joist span is in the **GRAY SHADED** area of the Load Table, all rows of bridging shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until all rows of bridging are completely installed. The **GRAY SHADED** area starts after 100'-0" and extends up through 240'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches<sup>4</sup>, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and} \\ L = (\text{span} - 0.33) \text{ in feet.}$$

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

\*The safe uniform load for the spans shown in the SAFE LOAD Column is equal to (SAFE LOAD) / (span). The TOTAL safe uniformly distributed load-carrying capacity, for spans less than those shown in the SAFE LOAD Column are given in the MAX LOAD Column.

To solve for a **RED** figure for spans shown in the SAFE LOAD Column (or lesser spans), multiply the **RED** figure of the shortest span shown in the Load Table by (the shortest span shown in the Load Table - 0.33 feet)<sup>2</sup> and divide by (the actual span - 0.33 feet)<sup>2</sup>. In no case shall the calculated load exceed the TOTAL load-carrying capacity of the joist.





**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	Max Load plf	SAFE LOAD* in Lbs. Between	SPAN IN FEET																
					< 62	62-89	90	91	92	93	94	95	96	97	98	99	100	101	102	103	104
					< 67	67-97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112
52DLH10	25	52	432	26800	298	291	285	279	273	267	261	256	251	246	241	236	231	227	223		
					171	165	159	154	150	145	140	136	132	128	124	120	116	114	110		
52DLH11	26	52	475	29420	327	320	313	306	299	293	287	281	275	270	264	259	254	249	244		
					187	181	174	169	164	158	153	149	144	140	135	132	128	124	120		
52DLH12	29	52	529	32820	365	357	349	342	334	327	320	314	307	301	295	289	284	278	273		
					204	197	191	185	179	173	168	163	158	153	149	144	140	135	132		
52DLH13	34	52	643	39840	443	433	424	414	406	397	389	381	373	366	358	351	344	338	331		
					247	239	231	224	216	209	203	197	191	185	180	174	170	164	159		
52DLH14	39	52	735	45580	507	497	486	476	466	457	447	438	430	421	413	405	397	390	382		
					276	266	258	249	242	234	227	220	213	207	201	194	189	184	178		
52DLH15	42	52	826	51200	569	557	545	533	522	511	500	490	480	470	461	451	443	434	426		
					311	301	291	282	272	264	256	247	240	233	226	219	213	207	201		
52DLH16	45	52	890	55200	614	601	588	575	563	551	540	528	518	507	497	487	478	468	459		
					346	335	324	314	304	294	285	276	267	260	252	245	237	230	224		
52DLH17	52	52	1025	63540	706	691	676	661	647	634	620	608	595	583	572	560	549	539	528		
					395	381	369	357	346	335	324	315	304	296	286	279	270	263	255		
				< 67	67-97	98	99	100	101	102	103	104	105	106	107	108	109	110	111	112	
56DLH11	26	56	421	28200	288	283	277	272	267	262	257	253	248	244	239	235	231	227	223		
					169	163	158	153	149	145	140	136	133	129	125	122	118	115	113		
56DLH12	30	56	484	32400	331	324	318	312	306	300	295	289	284	278	273	268	263	259	254		
					184	178	173	168	163	158	153	150	145	141	137	133	130	126	123		
56DLH13	34	56	586	39240	401	394	386	379	372	365	358	351	344	338	331	325	319	314	308		
					223	216	209	204	197	191	186	181	175	171	166	161	157	152	149		
56DLH14	39	56	662	44360	453	444	435	427	419	411	403	396	388	381	375	368	361	355	349		
					249	242	234	228	221	214	209	202	196	190	185	181	175	171	167		
56DLH15	42	56	756	50680	518	508	498	488	478	469	460	451	443	434	426	419	411	403	396		
					281	272	264	256	248	242	234	228	221	215	209	204	198	192	188		
56DLH16	46	56	816	54680	559	548	537	526	516	506	496	487	478	469	460	452	444	436	428		
					313	304	294	285	277	269	262	254	247	240	233	227	221	214	209		
56DLH17	51	56	941	63020	643	630	618	605	594	582	571	560	549	539	529	520	510	501	492		
					356	345	335	325	316	306	298	289	281	273	266	258	251	245	238		
				< 71	71-99	100-105	106	107	108	109	110	111	112	113	114	115	116	117	118	119	120
60DLH12	29	60	439	31200	31200	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		
60DLH13	35	60	534	37920	37920	358	351	345	339	333	327	322	316	311	306	301	296	291	286		
						203	197	191	187	181	176	171	167	163	158	154	151	147	143		
60DLH14	40	60	594	42140	42140	398	391	383	376	370	363	356	350	344	338	332	327	321	316		
						216	210	205	199	193	189	183	178	173	170	165	161	156	152		
60DLH15	43	60	697	49460	49460	467	458	450	442	434	427	419	412	405	398	392	385	379	373		
						255	248	242	235	228	223	216	210	205	200	194	190	185	180		
60DLH16	46	60	766	54380	54380	513	504	494	485	476	468	460	451	444	436	428	421	414	407		
						285	277	269	262	255	247	241	235	228	223	217	211	206	201		
60DLH17	52	60	880	62500	62500	590	579	569	558	548	538	529	519	510	501	493	484	476	468		
						324	315	306	298	290	283	275	267	261	254	247	241	235	228		
60DLH18	59	60	1016	72120	72120	681	668	656	644	632	621	610	599	589	578	568	559	549	540		
						366	357	346	337	327	319	310	303	294	286	279	272	266	259		
				< 76	76-99	100-113	114	115	116	117	118	119	120	121	122	123	124	125	126	127	128
64DLH12	31	64	396	30080	30080	264	259	255	251	247	243	239	235	231	228	224	221	218	214		
						153	150	146	142	138	135	132	129	125	122	119	116	114	111		
64DLH13	34	64	480	36500	36500	321	315	310	305	300	295	291	286	281	277	273	269	264	260		
						186	181	176	171	168	163	159	155	152	148	144	141	137	134		
64DLH14	40	64	550	41820	41820	367	360	354	349	343	337	332	326	321	316	311	306	301	296		
						199	193	189	184	179	174	171	166	162	158	154	151	147	143		
64DLH15	43	64	631	47940	47940	421	414	407	400	394	387	381	375	369	363	358	352	347	341		
						234	228	223	217	211	206	201	196	191	187	182	177	173	170		
64DLH16	46	64	710	53960	53960	474	466	458	450	443	435	428	421	414	407	401	394	388	382		
						262	254	248	242	235	229	224	218	213	208	203	198	193	189		
64DLH17	52	64	818	62180	62180	546	536	527	518	509	501	492	484	476	468	461	454	446	439		
						298	290	283	275	268	262	255	248	243	237	231	226	220	215		
64DLH18	59	64	945	71800	71800	630	619	608	598	587	578	568	559	549	540	532	523	515	507		
						337	328	320	311	304	296	288	282	274	267	261	255	249	243		
				< 81	81-99	100-121	122	123	124	125	126	127	128	129	130	131	132	133	134	135	136
68DLH13	37	68	433	35100	35100	288	284	279	275	271	267	263	259	255	252	248	244	241	237		
						171	168	164	159	155	152	149	145	142	138	135	133	130	127		
68DLH14	40	68	499	40420	40420	332	327	322	317	312	308	303	299	294	290	286	281	277	273		
						184	179	175	171	167	163	159	155	152	14						



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**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	Max Load plf	SAFE LOAD* in Lbs.																		
				SPAN IN FEET																		
				< 81	81-99	100-111	112	115	118	121	124	127	130	133	136	139	142	145	148	151	155	160
80DLH15	40	80	644	52160	52160	466	442	421	401	383	366	350	335	321	307	295	283	272	261	247	231	
80DLH16	46	80	774	62680	62680	560	535	509	485	461	439	419	400	383	366	350	336	322	309	293	275	
80DLH17	53	80	894	72420	72420	647	617	587	559	533	510	487	466	446	427	410	393	378	363	345	323	
80DLH18	60	80	1010	81840	81840	731	696	662	631	602	575	550	526	504	482	463	444	427	410	389	366	
80DLH19	67	80	1179	95480	95480	853	812	773	736	701	670	640	612	585	560	537	516	495	476	451	423	
80DLH20	75	80	1325	107320	107320	964	921	882	845	807	771	736	704	674	645	618	594	570	547	520	487	
				< 89	89-99	100-111	112	115	118	121	124	127	130	133	136	139	142	145	148	151	155	160
88DLH16	46	88	699	62180	62180	514	490	467	447	428	410	394	378	363	349	335	318	299	281	265	251	
88DLH17	51	88	790	70300	70300	581	553	526	502	479	458	439	420	403	386	371	352	330	310	292	274	
88DLH18	58	88	906	80620	80620	667	635	605	577	551	527	504	483	463	444	426	404	379	356	335	316	
88DLH19	65	88	1048	93260	93260	771	734	699	666	636	608	582	557	534	513	492	467	438	411	387	364	
88DLH20	76	88	1206	107300	107300	889	854	821	789	755	723	694	665	639	614	590	560	527	495	467	440	
88DLH21	89	88	1487	132340	132340	1099	1045	996	950	907	867	829	794	762	731	702	666	624	586	551	519	
				< 97	97-99	100-129	130	133	136	139	142	145	148	151	155	160	165	170	175	180	185	190
96DLH17	52	96	724	70180	70180	540	517	496	474	456	438	421	405	385	362	339	320	302	284	269	255	
96DLH18	58	96	814	79000	79000	608	583	559	535	513	493	475	457	435	410	386	364	344	326	308	292	
96DLH19	66	96	974	94440	94440	727	697	667	638	611	585	561	539	512	480	451	424	401	378	357	338	
96DLH20	74	96	1096	106280	106280	824	789	754	722	691	662	635	610	579	543	510	481	453	428	405	382	
96DLH21	90	96	1375	133340	133340	1027	982	940	900	864	829	797	766	728	684	643	605	571	539	510	484	
96DLH22	102	96	1540	149380	149380	1150	1108	1067	1028	991	957	921	886	843	792	745	702	664	627	594	562	
				< 105	105-138	139	142	145	148	151	155	160	165	170	175	180	185	190	195	200	205	
104DLH18	59	104	733	76980		554	532	512	489	472	450	423	400	378	358	339	321	305	290	276	263	
104DLH19	67	104	892	93620		674	647	622	598	574	546	513	485	457	432	409	387	368	350	332	315	
104DLH20	75	104	1002	105260		764	738	714	688	661	629	591	555	522	493	465	440	417	395	375	357	
104DLH21	90	104	1260	132320		956	917	881	847	813	773	727	685	647	611	578	547	519	493	469	446	
104DLH22	104	104	1413	148360		1071	1034	999	966	934	893	841	792	747	706	668	633	600	570	542	516	
104DLH23	109	104	1556	163400		1181	1141	1096	1052	1009	956	899	845	795	750	708	670	635	602	571	543	
				< 113	113-147	148	151	155	160	165	170	175	180	185	190	195	200	205	210	215	220	
112DLH19	67	112	815	92100		623	600	571	537	506	478	451	428	406	386	366	348	332	317	303	289	
112DLH20	76	112	922	104240		710	688	657	618	582	549	520	493	468	445	422	402	383	365	348	333	
112DLH21	91	112	1162	131300		891	858	816	767	722	681	644	610	578	549	521	496	473	450	430	411	
112DLH22	104	112	1304	147340		999	967	928	880	833	787	744	705	668	635	602	574	546	521	497	474	
112DLH23	110	112	1437	162360		1102	1067	1023	970	913	859	810	765	724	686	651	618	588	560	533	509	
112DLH24	131	112	1703	192440		1304	1263	1212	1151	1087	1026	970	919	871	828	786	748	713	680	648	619	
				< 121	121-165	166	170	175	180	185	190	195	200	205	210	215	220	225	230	235	240	
120DLH20	77	120	819	99100		597	571	538	510	484	461	438	418	399	380	362	347	332	318	305	292	
120DLH21	92	120	1019	123240		748	714	675	639	606	576	548	521	497	474	452	432	414	396	379	363	
120DLH22	104	120	1168	141280		855	823	779	737	699	665	632	602	574	547	522	499	477	457	438	420	
120DLH23	111	120	1292	156320		943	907	858	813	771	733	697	664	632	602	574	548	524	501	479	459	
120DLH24	132	120	1532	185380		1117	1073	1015	961	912	867	824	785	748	713	681	651	623	596	571	548	
120DLH25	152	120	1756	212420		1284	1231	1165	1104	1047	994	946	900	858	819	782	748	715	684	656	628	

