STANDARD ASD LOAD TABLE
LONGSPAN STEEL JOISTS, LH-SERIES

Based on a 50 ksi Maximum Yield Strength
Adopted by the Steel Joist Institute May 25, 1983
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 LH-**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 that 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 **RED SHADED** area of the Load Table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed. The **RED SHADED** area extends up through 60'–0".

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".

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

$I_j = 26.767(W)(L^3)(10^{-6})$, where W= **RED** figure in the Load Table, and
$L = (span – 0.33)$ 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)[2] and divide by (the actual span – 0.33 feet)[2]. In no case shall the calculated load exceed the TOTAL load-carrying capacity of the joist.

STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS, LH-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														
			< 22	22-25	26	27	28	29	30	31	32	33	34	35	36				
18LH02	10	18	553	12160	468	442	418	391	367	345	324	306	289	273	259				
					313	284	259	234	212	193	175	160	147	135	124				
18LH03	11	18	613	13480	521	493	467	438	409	382	359	337	317	299	283				
					348	317	289	262	236	213	194	177	161	148	136				
18LH04	12	18	714	15700	604	571	535	500	469	440	413	388	365	344	325				
					403	367	329	296	266	242	219	200	182	167	153				
18LH05	15	18	806	17740	684	648	614	581	543	508	476	448	421	397	375				
					454	414	378	345	311	282	256	233	212	195	179				
18LH06	15	18	954	20980	809	749	696	648	605	566	531	499	470	443	418				
					526	469	419	377	340	307	280	254	232	212	195				
18LH07	17	18	990	21780	840	809	780	726	678	635	595	559	526	496	469				
					553	513	476	428	386	349	317	288	264	241	222				
18LH08	19	18	1032	22700	876	843	812	784	758	717	680	641	604	571	540				
					577	534	496	462	427	387	351	320	292	267	246				
18LH09	21	18	1105	24320	936	901	868	838	810	783	759	713	671	633	598				
					616	571	527	491	458	418	380	346	316	289	266				
			< 23	23-25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20LH02	10	20	498	11460	442	437	431	410	388	365	344	325	307	291	275	262	249	237	225
					306	303	298	274	250	228	208	190	174	160	147	136	126	117	108
20LH03	11	20	529	12160	469	463	458	452	434	414	395	372	352	333	316	299	283	269	255
					337	333	317	302	280	258	238	218	200	184	169	156	143	133	123
20LH04	12	20	648	14900	574	566	558	528	496	467	440	416	393	372	353	335	318	303	289
					428	406	386	352	320	291	265	243	223	205	189	174	161	149	139
20LH05	14	20	697	16020	616	609	602	595	571	544	513	484	458	434	411	390	371	353	336
					459	437	416	395	366	337	308	281	258	238	219	202	187	173	161
20LH06	15	20	930	21380	822	791	763	723	679	635	596	560	527	497	469	444	421	399	379
					606	521	477	427	386	351	320	292	267	246	226	209	192	178
20LH07	17	20	991	22800	878	845	814	786	760	711	667	627	590	556	526	497	471	447	425
					647	599	556	518	484	438	398	362	331	303	278	256	236	218	202
20LH08	19	20	1023	23520	908	873	842	813	785	760	722	687	654	621	588	558	530	503	479
					669	619	575	536	500	468	428	395	365	336	309	285	262	242	225
20LH09	21	20	1119	25740	990	953	918	886	856	828	802	778	755	712	673	636	603	572	544
					729	675	626	581	542	507	475	437	399	366	336	309	285	264	244
20LH10	23	20	1207	27760	1068	1028	991	956	924	894	865	839	814	791	748	707	670	636	604
					786	724	673	626	585	545	510	479	448	411	377	346	320	296	274

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STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS, LH-SERIES
Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

SPAN IN FEET

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists only)	Depth in inches	Max Load (plf) <29	SAFELOAD* in Lbs. Between 29-33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
24LH03	11	24	401	11620	342	339	336	323	307	293	279	267	255	244	234	224	215	207	199
					235	226	218	204	188	175	162	152	141	132	124	116	109	102	96
24LH04	12	24	491	14240	419	398	379	360	343	327	312	298	285	273	262	251	241	231	222
					288	265	246	227	210	195	182	169	158	148	138	130	122	114	107
24LH05	13	24	526	15260	449	446	440	419	399	380	363	347	331	317	304	291	280	269	258
					308	297	285	264	244	226	210	196	182	171	160	150	141	132	124
24LH06	16	24	708	20520	604	579	555	530	504	480	457	437	417	399	381	364	348	334	320
					411	382	356	331	306	284	263	245	228	211	197	184	172	161	152
24LH07	17	24	777	22540	665	638	613	588	565	541	516	491	468	446	426	407	389	373	357
					452	421	393	367	343	320	297	276	257	239	223	208	195	182	171
24LH08	18	24	829	24040	707	677	649	622	597	572	545	520	497	475	455	435	417	400	384
					480	447	416	388	362	338	314	292	272	254	238	222	208	196	184
24LH09	21	24	976	28300	832	808	785	764	731	696	663	632	602	574	548	524	501	480	460
					562	530	501	460	424	393	363	337	313	292	272	254	238	223	209
24LH10	23	24	1031	29900	882	856	832	809	788	768	737	702	668	637	608	582	556	533	511
					596	559	528	500	474	439	406	378	351	326	304	285	266	249	234
24LH11	25	24	1087	31520	927	900	875	851	829	807	787	768	734	701	671	642	616	590	567
					624	588	555	525	498	472	449	418	388	361	337	315	294	276	259

Joist Designation	Approx. Wt (lbs/ft)	Depth in inches	Max Load (plf) <34	SAFELOAD 34-41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
28LH05	13	28	415	14120	337	323	310	297	286	275	265	255	245	237	228	220	213	206	199
					219	205	192	180	169	159	150	142	133	126	119	113	107	102	97
28LH06	16	28	552	18760	448	429	412	395	379	364	350	337	324	313	301	291	281	271	262
					289	270	253	238	223	209	197	186	175	166	156	148	140	133	126
28LH07	17	28	623	21180	505	484	464	445	427	410	394	379	365	352	339	327	316	305	295
					326	305	285	267	251	236	222	209	197	186	176	166	158	150	142
28LH08	18	28	667	22680	540	517	496	475	456	438	420	403	387	371	357	344	331	319	308
					348	325	305	285	268	252	236	222	209	196	185	175	165	156	148
28LH09	21	28	821	27920	667	639	612	586	563	540	519	499	481	463	446	430	415	401	387
					428	400	375	351	329	309	291	274	258	243	228	216	204	193	183
28LH10	23	28	898	30540	729	704	679	651	625	600	576	554	533	513	495	477	460	444	429
					466	439	414	388	364	342	322	303	285	269	255	241	228	215	204
28LH11	25	28	964	32760	780	762	736	711	682	655	629	605	582	561	540	521	502	485	468
					498	475	448	423	397	373	351	331	312	294	278	263	249	236	223
28LH12	27	28	1058	35980	857	837	818	800	782	766	737	709	682	656	632	609	587	566	546
					545	520	496	476	454	435	408	383	361	340	321	303	285	270	256
28LH13	30	28	1103	37500	895	874	854	835	816	799	782	766	751	722	694	668	643	620	598
					569	543	518	495	472	452	433	415	396	373	352	332	314	297	281

Joist Designation	Approx. Wt (lbs/ft)	Depth in inches	Max Load (plf) <39	SAFELOAD 39-46	SAFELOAD 47-49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
32LH06	14	32	431	16820	16820	338	326	315	304	294	284	275	266	257	249	242	234	227	220	214
						211	199	189	179	169	161	153	145	138	131	125	119	114	108	104
32LH07	16	32	485	18920	18920	379	366	353	341	329	318	308	298	288	279	271	262	254	247	240
						235	223	211	200	189	179	170	162	154	146	140	133	127	121	116
32LH08	17	32	527	20540	20540	411	397	383	369	357	345	333	322	312	302	293	284	275	267	259
						255	242	229	216	205	194	184	175	167	159	151	144	137	131	125
32LH09	21	32	661	25780	25780	516	498	480	463	447	432	418	404	391	379	367	356	345	335	325
						319	302	285	270	256	243	230	219	208	198	189	180	172	164	157
32LH10	21	32	731	28500	28500	571	550	531	512	495	478	462	445	430	416	402	389	376	364	353
						352	332	315	297	282	267	254	240	228	217	206	196	186	178	169
32LH11	24	32	801	31220	31220	625	602	580	560	541	522	505	488	473	458	443	429	416	403	390
						385	363	343	325	308	292	277	263	251	239	227	216	206	196	187
32LH12	27	32	939	36640	36640	734	712	688	664	641	619	598	578	559	541	524	508	492	477	463
						450	428	406	384	364	345	327	311	295	281	267	255	243	232	221
32LH13	30	32	1048	40880	40880	817	801	785	771	742	715	690	666	643	621	600	581	562	544	527
						500	480	461	444	420	397	376	354	336	319	304	288	275	262	249
32LH14	33	32	1079	42080	42080	843	826	810	795	780	766	738	713	688	665	643	622	602	583	564
						515	495	476	458	440	417	395	374	355	337	321	304	290	276	264
32LH15	35	32	1115	43500	43500	870	853	837	821	805	791	776	763	750	725	701	678	656	635	616
						532	511	492	473	454	438	422	407	393	374	355	338	322	306	292

Joist Designation	Approx. Wt (lbs/ft)	Depth in inches	Max Load (plf) <43	SAFELOAD 43-46	SAFELOAD 47-56	SAFELOAD 57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
36LH07	16	36	393		16900	16900	292	283	274	266	258	251	244	237	230	224	218	212	207	201	196
							177	168	160	153	146	140	134	128	122	117	112	107	103	99	95
36LH08	18	36	433		18600	18600	321	311	302	293	284	276	268	260	253	246	239	233	227	221	215
							194	185	176	168	160	153	146	140	134	128	123	118	113	109	104
36LH09	21	36	554	23840	23840		411	398	386	374	363	352	342	333	323	314	306	297	289	282	275
							247	235	224	214	204	195	186	179	171	163	157	150	144	138	133
36LH10	21	36	611	26260	26260		454	440	426	413	401	389	378	367	357	347	338	328	320	311	303
							273	260	248	236	225	215	206	197	188	180	173	165	159	152	146
36LH11	23	36	667	28660	28660		495	480	465	451	438	425	412	401	389	378	368	358	348	339	330
							297	283	269	257	246	234	224	214	205	196	188	180	173	166	159
36LH12	25	36	798	34300	34300		593	575	557	540	523	508	493	478	464	450	437	424	412	400	389
							354	338	322	307	292	279	267	255	243	232	222	213	204	195	187
36LH13	30	36	938	40340	40340		697	675	654	634	615	596	579	562	546	531	516	502	488	475	463
							415	395	376	359	342	327	312	298	285	273	262	251	240	231	222
36LH14	36	36	1034	44460	44460		768	755	729	706	683	661	641	621	602	584	567	551	535	520	505
							456	434	412	392	373	356	339	323	309	295	283	270	259	247	237
36LH15	36	36	1090	46880	46880		809	795	781	769	744	721	698	677	656	637	618	600	583	567	551
							480	464	448	434	413	394	375	358	342	327	312	299	286	274	263

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STANDARD LOAD TABLE FOR LONGSPAN STEEL JOISTS, LH-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) < 48	SAFELOAD* in Lbs. Between 48-59	SAFELOAD 60-65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40LH08	16	40	348	16680	16680	254 / 150	247 / 144	241 / 138	234 / 132	228 / 127	222 / 122	217 / 117	211 / 112	206 / 108	201 / 104	196 / 100	192 / 97	187 / 93	183 / 90	178 / 86
40LH09	21	40	457	21920	21920	332 / 196	323 / 188	315 / 180	306 / 173	298 / 166	291 / 160	283 / 153	276 / 147	269 / 141	263 / 136	256 / 131	250 / 126	244 / 122	239 / 118	233 / 113
40LH10	21	40	503	24120	24120	367 / 216	357 / 207	347 / 198	338 / 190	329 / 183	321 / 176	313 / 169	305 / 162	297 / 156	290 / 150	283 / 144	276 / 139	269 / 134	262 / 129	255 / 124
40LH11	22	40	549	26340	26340	399 / 234	388 / 224	378 / 215	368 / 207	358 / 198	349 / 190	340 / 183	332 / 176	323 / 169	315 / 163	308 / 157	300 / 151	293 / 145	286 / 140	279 / 135
40LH12	25	40	668	32060	32060	486 / 285	472 / 273	459 / 261	447 / 251	435 / 241	424 / 231	413 / 222	402 / 213	392 / 205	382 / 197	373 / 189	364 / 182	355 / 176	346 / 169	338 / 163
40LH13	30	40	788	37800	37800	573 / 334	557 / 320	542 / 307	528 / 295	514 / 283	500 / 271	487 / 260	475 / 250	463 / 241	451 / 231	440 / 223	429 / 214	419 / 207	409 / 199	399 / 192
40LH14	35	40	900	43220	43220	656 / 383	638 / 367	620 / 351	603 / 336	587 / 323	571 / 309	556 / 297	542 / 285	528 / 273	515 / 263	502 / 252	490 / 243	478 / 233	466 / 225	455 / 216
40LH15	36	40	1007	48340	48340	734 / 427	712 / 408	691 / 390	671 / 373	652 / 357	633 / 342	616 / 328	599 / 315	583 / 302	567 / 290	552 / 279	538 / 268	524 / 258	511 / 248	498 / 239
40LH16	42	40	1110	53280	53280	808 / 469	796 / 455	784 / 441	772 / 428	761 / 416	751 / 404	730 / 387	710 / 371	691 / 356	673 / 342	655 / 329	638 / 316	622 / 304	606 / 292	591 / 282

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists Only)	Depth in inches	Max Load (plf) < 53	SAFELOAD* in Lbs. Between 53-59	SAFELOAD 60-73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
44LH09	19	44	379	20100	20100	272 / 158	265 / 152	259 / 146	253 / 141	247 / 136	242 / 131	236 / 127	231 / 122	226 / 118	221 / 114	216 / 110	211 / 106	207 / 103	202 / 99	198 / 96
44LH10	21	44	419	22200	22200	300 / 174	293 / 168	286 / 162	279 / 155	272 / 150	266 / 144	260 / 139	254 / 134	249 / 130	243 / 125	238 / 121	233 / 117	228 / 113	223 / 110	218 / 106
44LH11	22	44	453	24000	24000	325 / 188	317 / 181	310 / 175	302 / 168	295 / 162	289 / 157	282 / 151	276 / 146	269 / 140	264 / 136	258 / 131	252 / 127	247 / 123	242 / 119	236 / 115
44LH12	25	44	561	29740	29740	402 / 232	393 / 224	383 / 215	374 / 207	365 / 200	356 / 192	347 / 185	339 / 179	331 / 172	323 / 166	315 / 160	308 / 155	300 / 149	293 / 144	287 / 139
44LH13	30	44	665	35260	35260	477 / 275	466 / 265	454 / 254	444 / 246	433 / 236	423 / 228	413 / 220	404 / 212	395 / 205	386 / 198	377 / 191	369 / 185	361 / 179	353 / 173	346 / 167
44LH14	31	44	766	40580	40580	549 / 315	534 / 302	520 / 291	506 / 279	493 / 268	481 / 259	469 / 249	457 / 240	446 / 231	436 / 223	425 / 215	415 / 207	406 / 200	396 / 193	387 / 187
44LH15	36	44	891	47220	47220	639 / 366	623 / 352	608 / 339	593 / 326	579 / 314	565 / 303	551 / 292	537 / 281	524 / 271	512 / 261	500 / 252	488 / 243	476 / 234	466 / 227	455 / 219
44LH16	42	44	1027	54440	54440	737 / 421	719 / 405	701 / 390	684 / 375	668 / 362	652 / 348	637 / 336	622 / 324	608 / 313	594 / 302	580 / 291	568 / 282	555 / 272	543 / 263	531 / 255
44LH17	47	44	1103	58460	58460	790 / 450	780 / 438	769 / 426	759 / 415	750 / 405	732 / 390	715 / 376	699 / 363	683 / 351	667 / 338	652 / 327	638 / 316	624 / 305	610 / 295	597 / 285

Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists Only)	Depth in inches	Max Load (plf) < 57	SAFELOAD* in Lbs. Between 57-59	SAFELOAD 60-81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
48LH10	21	48	352	20080	20080	246 / 141	241 / 136	236 / 132	231 / 127	226 / 123	221 / 119	217 / 116	212 / 112	208 / 108	204 / 105	200 / 102	196 / 99	192 / 96	188 / 93	185 / 90
48LH11	22	48	382	21780	21780	266 / 152	260 / 147	255 / 142	249 / 137	244 / 133	239 / 129	234 / 125	229 / 120	225 / 117	220 / 113	216 / 110	212 / 106	208 / 103	204 / 100	200 / 97
48LH12	25	48	482	27500	27500	336 / 191	329 / 185	322 / 179	315 / 173	308 / 167	301 / 161	295 / 156	289 / 151	283 / 147	277 / 142	272 / 138	266 / 133	261 / 129	256 / 126	251 / 122
48LH13	29	48	578	32940	32940	402 / 228	393 / 221	384 / 213	376 / 206	368 / 199	360 / 193	353 / 187	345 / 180	338 / 175	332 / 170	325 / 164	318 / 159	312 / 154	306 / 150	300 / 145
48LH14	32	48	682	38860	38860	475 / 269	464 / 260	454 / 251	444 / 243	434 / 234	425 / 227	416 / 220	407 / 212	399 / 206	390 / 199	383 / 193	375 / 187	367 / 181	360 / 176	353 / 171
48LH15	36	48	784	44680	44680	545 / 308	533 / 298	521 / 287	510 / 278	499 / 269	488 / 260	478 / 252	468 / 244	458 / 236	448 / 228	439 / 221	430 / 214	422 / 208	413 / 201	405 / 195
48LH16	42	48	904	51500	51500	629 / 355	615 / 343	601 / 331	588 / 320	576 / 310	563 / 299	551 / 289	540 / 280	528 / 271	518 / 263	507 / 255	497 / 247	487 / 239	477 / 232	468 / 225
48LH17	47	48	1015	57840	57840	706 / 397	690 / 383	675 / 371	660 / 358	646 / 346	632 / 335	619 / 324	606 / 314	593 / 304	581 / 294	569 / 285	558 / 276	547 / 268	536 / 260	525 / 252