

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 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 **ASD LH-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.

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.

Where the joist span is in the **RED SHADED** area of the load table, the row of bridging nearest the midspan shall be diagonal bridging with bolted connections at chords and intersection. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed.

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 intersection. Hoisting cables shall not be released until the two rows of bridging nearest the third points are completely installed.

The approximate moment of inertia of the joist, in inches⁴ 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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Joist Designation	Approx. Wt in Lbs. Per Linear Ft (Joists only)	Depth in inches	SAFE LOAD* in Lbs. Between	CLEAR SPAN IN FEET															
				25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
18LH02	10	18	12000	468	442	418	391	367	345	324	306	289	273	259	245				
				313	284	259	234	212	193	175	160	147	135	124	114				
18LH03	11	18	13300	521	493	467	438	409	382	359	337	317	299	283	267				
				348	317	289	262	236	213	194	177	161	148	136	124				
18LH04	12	18	15500	604	571	535	500	469	440	413	388	365	344	325	308				
				403	367	329	296	266	242	219	200	182	167	153	141				
18LH05	15	18	17500	684	648	614	581	543	508	476	448	421	397	375	355				
				454	414	378	345	311	282	256	233	212	195	179	164				
18LH06	15	18	20700	809	749	696	648	605	566	531	499	470	443	418	396				
				526	469	419	377	340	307	280	254	232	212	195	180				
18LH07	17	18	21500	840	809	780	726	678	635	595	559	526	496	469	444				
				553	513	476	428	386	349	317	288	264	241	222	204				
18LH08	19	18	22400	876	843	812	784	758	717	680	641	604	571	540	512				
				577	534	496	462	427	387	351	320	292	267	246	226				
18LH09	21	18	24000	936	901	868	838	810	783	759	713	671	633	598	566				
				616	571	527	491	458	418	380	346	316	289	266	245				
			22-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	40
20LH02	10	20	11300	442	437	431	410	388	365	344	325	307	291	275	262	249	237	225	215
				306	303	298	274	250	228	208	190	174	160	147	136	126	117	108	101
20LH03	11	20	12000	469	463	458	452	434	414	395	372	352	333	316	299	283	269	255	243
				337	333	317	302	280	258	238	218	200	184	169	156	143	133	123	114
20LH04	12	20	14700	574	566	558	528	496	467	440	416	393	372	353	335	318	303	289	275
				428	406	386	352	320	291	265	243	223	205	189	174	161	149	139	129
20LH05	14	20	15800	616	609	602	595	571	544	513	484	458	434	411	390	371	353	336	321
				459	437	416	395	366	337	308	281	258	238	219	202	187	173	161	150
20LH06	15	20	21100	822	791	763	723	679	635	596	560	527	497	469	444	421	399	379	361
				606	561	521	477	427	386	351	320	292	267	246	226	209	192	178	165
20LH07	17	20	22500	878	845	814	786	760	711	667	627	590	556	526	497	471	447	425	404
				647	599	556	518	484	438	398	362	331	303	278	256	236	218	202	187
20LH08	19	20	23200	908	873	842	813	785	760	722	687	654	621	588	558	530	503	479	457
				669	619	575	536	500	468	428	395	365	336	309	285	262	242	225	209
20LH09	21	20	25400	990	953	918	886	856	828	802	778	755	712	673	636	603	572	544	517
				729	675	626	581	542	507	475	437	399	366	336	309	285	264	244	227
20LH10	23	20	27400	1068	1028	991	956	924	894	865	839	814	791	748	707	670	636	604	575
				786	724	673	626	585	545	510	479	448	411	377	346	320	296	274	254



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Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists only)	Depth in inches	SAFELOAD* in Lbs. Between	CLEAR SPAN IN FEET																
				28-32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48
24LH03	11	24	11500	342	339	336	323	307	293	279	267	255	244	234	224	215	207	199	191	
24LH04	12	24	14100	419	398	379	360	343	327	312	298	285	273	262	251	241	231	222	214	
24LH05	13	24	15100	449	446	440	419	399	380	363	347	331	317	304	291	280	269	258	248	
24LH06	16	24	20300	604	579	555	530	504	480	457	437	417	399	381	364	348	334	320	307	
24LH07	17	24	22300	665	638	613	588	565	541	516	491	468	446	426	407	389	373	357	343	
24LH08	18	24	23800	707	677	649	622	597	572	545	520	497	475	455	435	417	400	384	369	
24LH09	21	24	28000	832	808	785	764	731	696	663	632	602	574	548	524	501	480	460	441	
24LH10	23	24	29600	882	856	832	809	788	768	737	702	668	637	608	582	556	533	511	490	
24LH11	25	24	31200	927	900	875	851	829	807	787	768	734	701	671	642	616	590	567	544	
			33-40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56	
28LH05	13	28	14000	337	323	310	297	286	275	265	255	245	237	228	220	213	206	199	193	
28LH06	16	28	18600	448	429	412	395	379	364	350	337	324	313	301	291	281	271	262	253	
28LH07	17	28	21000	505	484	464	445	427	410	394	379	365	352	339	327	316	305	295	285	
28LH08	18	28	22500	540	517	496	475	456	438	420	403	387	371	357	344	331	319	308	297	
28LH09	21	28	27700	667	639	612	586	563	540	519	499	481	463	446	430	415	401	387	374	
28LH10	23	28	30300	729	704	679	651	625	600	576	554	533	513	495	477	460	444	429	415	
28LH11	25	28	32500	780	762	736	711	682	655	629	605	582	561	540	521	502	485	468	453	
28LH12	27	28	35700	857	837	818	800	782	766	737	709	682	656	632	609	587	566	546	527	
28LH13	30	28	37200	895	874	854	835	816	799	782	766	751	722	694	668	643	620	598	577	
			38-46	47-48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
32LH06	14	32	16700	16700	338	326	315	304	294	284	275	266	257	249	242	234	227	220	214	208
32LH07	16	32	18800	18800	379	366	353	341	329	318	308	298	288	279	271	262	254	247	240	233
32LH08	17	32	20400	20400	411	397	383	369	357	345	333	322	312	302	293	284	275	267	259	252
32LH09	21	32	25600	25600	516	498	480	463	447	432	418	404	391	379	367	356	345	335	325	315
32LH10	21	32	28300	28300	571	550	531	512	495	478	462	445	430	416	402	389	376	364	353	342
32LH11	24	32	31000	31000	625	602	580	560	541	522	505	488	473	458	443	429	416	403	390	378
32LH12	27	32	36400	36400	734	712	688	664	641	619	598	578	559	541	524	508	492	477	463	449
32LH13	30	32	40600	40600	817	801	785	771	742	715	690	666	643	621	600	581	562	544	527	511
32LH14	33	32	41800	41800	843	826	810	795	780	766	738	713	688	665	643	622	602	583	564	547
32LH15	35	32	43200	43200	870	853	837	821	805	791	776	763	750	725	701	678	656	635	616	597
			42-46	47-56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
36LH07	16	36	16800	16800	292	283	274	266	258	251	244	237	230	224	218	212	207	201	196	191
36LH08	18	36	18500	18500	321	311	302	293	284	276	268	260	253	246	239	233	227	221	215	209
36LH09	21	36	23700	23700	411	398	386	374	363	352	342	333	323	314	306	297	289	282	275	267
36LH10	21	36	26100	26100	454	440	426	413	401	389	378	367	357	347	338	328	320	311	303	295
36LH11	23	36	28500	28500	495	480	465	451	438	425	412	401	389	378	368	358	348	339	330	322
36LH12	25	36	34100	34100	593	575	557	540	523	508	493	478	464	450	437	424	412	400	389	378
36LH13	30	36	40100	40100	697	675	654	634	615	596	579	562	546	531	516	502	488	475	463	451
36LH14	36	36	44200	44200	768	755	729	706	683	661	641	621	602	584	567	551	535	520	505	492
36LH15	36	36	46600	46600	809	795	781	769	744	721	698	677	656	637	618	600	583	567	551	536



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Joist Designation	Approx. Wt in Lbs. Per Linear Ft. (Joists Only)	Depth in inches	SAFELOAD* in Lbs. Between		CLEAR SPAN IN FEET																
			47-59	60-64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80	
40LH08	16	40	16600	16600	254	247	241	234	228	222	217	211	206	201	196	192	187	183	178	174	
40LH09	21	40	21800	21800	332	323	315	306	298	291	283	276	269	263	256	250	244	239	233	228	
40LH10	21	40	24000	24000	367	357	347	338	329	321	313	305	297	290	283	276	269	262	255	249	
40LH11	22	40	26200	26200	399	388	378	368	358	349	340	332	323	315	308	300	293	286	279	273	
40LH12	25	40	31900	31900	486	472	459	447	435	424	413	402	392	382	373	364	355	346	338	330	
40LH13	30	40	37600	37600	573	557	542	528	514	500	487	475	463	451	440	429	419	409	399	390	
40LH14	35	40	43000	43000	656	638	620	603	587	571	556	542	528	515	502	490	478	466	455	444	
40LH15	36	40	48100	48100	734	712	691	671	652	633	616	599	583	567	552	538	524	511	498	486	
40LH16	42	40	53000	53000	808	796	784	772	761	751	730	710	691	673	655	638	622	606	591	576	
					469	455	441	428	416	404	387	371	356	342	329	316	304	292	282	271	
			52-59	60-72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88	
44LH09	19	44	20000	20000	272	265	259	253	247	242	236	231	226	221	216	211	207	202	198	194	
44LH10	21	44	22100	22100	300	293	286	279	272	266	260	254	249	243	238	233	228	223	218	214	
44LH11	22	44	23900	23900	325	317	310	302	295	289	282	276	269	264	258	252	247	242	236	232	
44LH12	25	44	29600	29600	402	393	383	374	365	356	347	339	331	323	315	308	300	293	287	280	
44LH13	30	44	35100	35100	477	466	454	444	433	423	413	404	395	386	377	369	361	353	346	338	
44LH14	31	44	40400	40400	549	534	520	506	493	481	469	457	446	436	425	415	406	396	387	379	
44LH15	36	44	47000	47000	639	623	608	593	579	565	551	537	524	512	500	488	476	466	455	445	
44LH16	42	44	54200	54200	737	719	701	684	668	652	637	622	608	594	580	568	555	543	531	520	
44LH17	47	44	58200	58200	821	803	785	767	750	732	715	699	683	667	652	638	624	610	597	584	
					450	438	426	415	405	390	376	363	351	338	327	316	305	295	285	276	
			56-59	60-80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96	
48LH10	21	48	20000	20000	246	241	236	231	226	221	217	212	208	204	200	196	192	188	185	181	
48LH11	22	48	21700	21700	266	260	255	249	244	239	234	229	225	220	216	212	208	204	200	196	
48LH12	25	48	27400	27400	336	329	322	315	308	301	295	289	283	277	272	266	261	256	251	246	
48LH13	29	48	32800	32800	402	393	384	376	368	360	353	345	338	332	325	318	312	306	300	294	
48LH14	32	48	38700	38700	475	464	454	444	434	425	416	407	399	390	383	375	367	360	353	346	
48LH15	36	48	44500	44500	545	533	521	510	499	488	478	468	458	448	439	430	422	413	405	397	
48LH16	42	48	51300	51300	629	615	601	588	576	563	551	540	528	518	507	497	487	477	468	459	
48LH17	47	48	57600	57600	706	690	675	660	646	632	619	606	593	581	569	558	547	536	525	515	
					397	383	371	358	346	335	324	314	304	294	285	276	268	260	252	245	

* 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 (the shortest clear span shown in the Load Table + 0.67 feet)² and divide by (the actual clear span + 0.67 feet)². The live load shall *not* exceed the safe uniform load.

