

# STANDARD LOAD TABLE

Based on a Maximum Allowable Tensile Stress of 30,000 psi

## LONGSPAN STEEL JOISTS, LH- SERIES

Adopted by Steel Joist Institute and American Institute of Steel Construction, Inc., October 1, 1974

The black figures in the following table give the TOTAL safe uniformly-distributed load-carrying capacities, in pounds per linear foot, of LH-Series 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 blue figures in this load table are the 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 blue figures by 1.5. (Note: The tabulated loads corresponding to these deflection limitations have been computed on the basis of 30,000 psi allowable stress provisions. For joists designed to a lower working stress these loads may be increased in the ratio of 30,000 psi to the design stress used, in order to meet the same

deflection limitations.) 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 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. The load table may be used for parallel chord joists installed to a maximum slope of 1/2 inch per foot.

When holes are required in top or bottom chords, the carrying capacities must be reduced in proportion to 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 include accessories.

Joist Designation	Approx. Wt. in Lbs. per Linear Ft.	Nominal Depth in Inches	SAFE LOAD** in Lbs. Between	CLEAR OPENING OR NET SPAN IN FEET															
				21-24	25	26	27	28	29	30	31	32	33	34	35	36			
18LH02	13	18	12000	468	442	418	391	367	345	324	306	289	273	259	245				
18LH03	14	18	13300	313	284	259	234	212	193	175	160	147	135	124	114				
18LH04	16	18	15500	348	317	289	262	236	213	194	177	161	148	136	124				
18LH05	17	18	17500	403	367	329	296	266	242	219	200	182	167	153	141				
18LH06	19	18	20700	454	414	378	345	311	282	256	233	212	195	179	164				
18LH07	21	18	21500	526	469	419	377	340	307	280	254	232	212	195	180				
18LH08	22	18	22400	553	513	476	428	386	349	317	288	264	241	222	204				
18LH09	24	18	24000	577	534	496	462	427	387	351	320	292	267	246	226				
				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	13	20	11300	442	437	431	410	388	365	344	325	307	291	275	262	249	237	225	215
20LH03	14	20	12000	306	303	298	274	250	228	208	190	174	160	147	136	126	117	108	101
20LH04	16	20	14700	337	333	317	302	280	258	238	218	200	184	169	156	143	133	123	114
20LH05	17	20	15800	428	406	386	352	320	291	265	243	223	205	189	174	161	149	139	129
20LH06	19	20	21100	459	437	416	395	366	337	308	281	258	238	219	202	187	173	161	150
20LH07	21	20	22500	606	561	521	477	427	386	351	320	292	267	246	226	209	192	178	165
20LH08	22	20	23200	878	845	814	786	760	711	667	627	590	556	526	497	471	447	425	404
20LH09	24	20	25400	647	599	556	518	484	438	398	362	331	303	278	256	236	218	202	187
20LH10	27	20	27400	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
				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
				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

See page LT-52 for notes



## STANDARD LOAD TABLE / LONGSPAN STEEL JOISTS, LH SERIES

Based on Allowable Stress of 30,000 psi

Joist Designation	Approx. Wt. in Lbs. per Linear Ft.	Depth in Inches	SAFE LOAD** in Lbs. Between	CLEAR OPENING OR NET SPAN IN FEET																		
				28-32	33	34	35	36	37	38	39	40	41	42	43	44	45	46	47	48		
24LH03	14	24	11500	342	339	336	323	307	293	279	267	255	244	234	224	215	207	199	191			
24LH04	16	24	14100	235	226	218	204	188	175	162	152	141	132	124	116	109	102	96	90			
24LH05	17	24	15100	419	398	379	360	343	327	312	298	285	273	262	251	241	231	222	214			
24LH06	19	24	20300	288	265	246	227	210	195	182	169	158	148	138	130	122	114	107	101			
24LH07	21	24	22300	449	446	440	419	399	380	363	347	331	317	304	291	280	269	258	248			
24LH08	22	24	23800	308	297	285	264	244	226	210	196	182	171	160	150	141	132	124	117			
24LH09	24	24	28000	411	382	356	331	306	284	263	245	228	211	197	184	172	161	152	142			
24LH10	27	24	29600	665	638	613	588	565	541	516	491	468	446	426	407	389	373	357	343			
24LH11	29	24	31200	452	421	393	367	343	320	297	276	257	239	223	208	195	182	171	161			
				707	677	649	622	597	572	545	520	497	475	455	435	417	400	384	369			
				480	447	416	388	362	338	314	292	272	254	238	222	208	196	184	173			
				832	808	785	764	731	696	663	632	602	574	548	524	501	480	460	441			
				562	530	501	460	424	393	363	337	313	292	272	254	238	223	209	196			
				882	856	832	809	788	768	737	702	668	637	608	582	556	533	511	490			
				596	559	528	500	474	439	406	378	351	326	304	285	266	249	234	220			
				927	900	875	851	829	807	787	768	734	701	671	642	616	590	567	544			
				624	588	555	525	498	472	449	418	388	361	337	315	294	276	259	243			
				33-40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56		
28LH05	16	28	14000	337	323	310	297	286	275	265	255	245	237	228	220	213	206	199	193			
28LH06	19	28	18600	219	205	192	180	169	159	150	142	133	126	119	113	107	102	97	92			
28LH07	21	28	21000	448	429	412	395	379	364	350	337	324	313	301	291	281	271	262	253			
28LH08	21	28	22500	289	270	253	238	223	209	197	186	175	166	156	148	140	133	126	120			
28LH09	24	28	27700	505	484	464	445	427	410	394	379	365	352	339	327	316	305	295	285			
28LH10	27	28	30300	326	305	285	267	251	236	222	209	197	186	176	166	158	150	142	135			
28LH11	29	28	32500	540	517	496	475	456	438	420	403	387	371	357	344	331	319	308	297			
28LH12	33	28	35700	348	325	305	285	268	252	236	222	209	196	185	175	165	156	148	140			
28LH13	36	28	37200	667	639	612	586	563	540	519	499	481	463	446	430	415	401	387	374			
				428	400	375	351	329	309	291	274	258	243	228	216	204	193	183	173			
				729	704	679	651	625	600	576	554	533	513	495	477	460	444	429	415			
				466	439	414	388	364	342	322	303	285	269	255	241	228	215	204	193			
				780	762	736	711	682	655	629	605	582	561	540	521	502	485	468	453			
				498	475	448	423	397	373	351	331	312	294	278	263	249	236	223	212			
				857	837	818	800	782	766	737	709	682	656	632	609	587	566	546	527			
				545	520	496	476	454	435	408	383	361	340	321	303	285	270	256	243			
				895	874	854	835	816	799	782	766	751	722	694	668	643	620	598	577			
				569	543	518	495	472	452	433	415	396	373	352	332	314	297	281	266			
				38-48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64		
32LH06	18	32	16700	338	326	315	304	294	284	275	266	257	249	242	234	227	220	214	208			
32LH07	20	32	18800	211	199	189	179	169	161	153	145	138	131	125	119	114	108	104	99			
32LH08	21	32	20400	379	366	353	341	329	318	308	298	288	279	271	262	254	247	240	233			
32LH09	24	32	25600	235	223	211	200	189	179	170	162	154	146	140	133	127	121	116	111			
32LH10	26	32	28300	411	397	383	369	357	345	333	322	312	302	293	284	275	267	259	252			
32LH11	28	32	31000	255	242	229	216	205	194	184	175	167	159	151	144	137	131	125	120			
32LH12	33	32	36400	516	498	480	463	447	432	418	404	391	379	367	356	345	335	325	315			
32LH13	36	32	40600	319	302	285	270	256	243	230	219	208	198	189	180	172	164	157	149			
32LH14	37	32	41800	571	550	531	512	495	478	462	445	430	416	402	389	376	364	353	342			
32LH15	41	32	43200	352	332	315	297	282	267	254	240	228	217	206	196	186	178	169	162			
				625	602	580	560	541	522	505	488	473	458	443	429	416	403	390	378			
				385	363	343	325	308	292	277	263	251	239	227	216	206	196	187	179			
				734	712	688	664	641	619	598	578	559	541	524	508	492	477	463	449			
				450	428	406	384	364	345	327	311	295	281	267	255	243	232	221	211			
				817	801	785	771	742	715	690	666	643	621	600	581	562	544	527	511			
				500	480	461	444	420	397	376	354	336	319	304	288	275	262	249	238			
				843	826	810	795	780	766	738	713	688	665	643	622	602	583	564	547			
				515	495	476	458	440	417	395	374	355	337	321	304	290	276	264	251			
				870	853	837	821	805	791	776	763	750	725	701	678	656	635	616	597			
				532	511	492	473	454	438	422	407	393	374	355	338	322	306	292	279			
				42-56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72		
36LH07	20	36	16800	292	283	274	266	258	251	244	237	230	224	218	212	207	201	196	191			
36LH08	20	36	18500	177	168	160	153	146	140	134	128	122	117	112	107	103	99	95	91			
36LH09	23	36	23700	321	311	302	293	284	276	268	260	253	246	239	233	227	221	215	209			
36LH10	26	36	26100	194	185	176	168	160	153	146	140	134	128	123	118	113	109	104	100			
36LH11	28	36	28500	411	398	386	374	363	352	342	333	323	314	306	297	289	282	275	267			
36LH12	32	36	34100	247	235	224	214	204	195	186	179	171	163	157	150	144	138	133	127			
36LH13	36	36	40100	454	440	426	413	401	389	378	367	357	347	338	328	320	311	303	295			
36LH14	37	36	44200	273	260	248	236	225	215	206	197	188	180	173	165	159	152	146	140			
36LH15	41	36	46600	495	480	465	451	438	425	412	401	389	378	368	358	348	339	330	322			
				297	283	269	257	246	234	224	214	205	196	188	180	173	166	159	153			
				593	575	557	540	523	508	493	478	464	450	437	424	412	400	389	378			
				354	338	322	307	292	279	267	255	243	232	222	213	204	195	187	179			
				697	675	654	634	615	596	579	562	546	531	516	502	488	475	463	451			
				415	395	376	359	342	327	312	298	285	273	262	251	240	231	222	213			
				768	755	729	706	683	661	641	621	602	584	567	551	535	520	505	492			
				456	434	412	392	373	356	339	323	309	295	283	270	259	247	237	228			
				809	795																	

# STANDARD LOAD TABLE / LONGSPAN STEEL JOISTS, LH-SERIES

Based on Allowable Stress of 30,000 psi

Joist Designation	Approx. Wt. in Lbs. per Linear Ft.	Depth in Inches	SAFE LOAD** in Lbs. Between	CLEAR OPENING OR NET SPAN IN FEET																
				47-64	65	66	67	68	69	70	71	72	73	74	75	76	77	78	79	80
40LH08	20	40	16600	254	247	241	234	228	222	217	211	206	201	196	192	187	183	178	174	
40LH09	23	40	21800	150	144	138	132	127	122	117	112	108	104	100	97	93	90	86	83	
40LH10	25	40	24000	196	188	180	173	166	160	153	147	141	136	131	126	122	118	113	109	
40LH11	27	40	26200	216	207	198	190	183	176	169	162	156	150	144	139	134	129	124	119	
40LH12	32	40	31900	234	224	215	207	198	190	183	176	169	163	157	151	145	140	135	130	
40LH13	36	40	37600	285	273	261	251	241	231	222	213	205	197	189	182	176	169	163	157	
40LH14	37	40	43000	334	320	307	295	283	271	260	250	241	231	223	214	207	199	192	185	
40LH15	41	40	48100	383	367	351	336	323	309	297	285	273	263	252	243	233	225	216	209	
40LH16	47	40	53000	427	408	390	373	357	342	328	315	302	290	279	268	258	248	239	230	
				469	455	441	428	416	404	387	371	356	342	329	316	304	292	282	271	
				52-72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
44LH09	22	44	20000	272	265	259	253	247	242	236	231	226	221	216	211	207	202	198	194	
44LH10	25	44	22100	158	152	146	141	136	131	127	122	118	114	110	106	103	99	96	93	
44LH11	27	44	23900	174	168	162	155	150	144	139	134	130	125	121	117	113	110	106	103	
44LH12	31	44	29600	325	317	310	302	295	289	282	276	269	264	258	252	247	242	236	232	
44LH13	35	44	35100	188	181	175	168	162	157	151	146	140	136	131	127	123	119	115	111	
44LH14	36	44	40400	232	224	215	207	200	192	185	179	172	166	160	155	149	144	139	134	
44LH15	41	44	47000	477	466	454	444	433	423	413	404	395	386	377	369	361	353	346	338	
44LH16	47	44	54200	275	265	254	246	236	228	220	212	205	198	191	185	179	173	167	161	
44LH17	54	44	58200	549	534	520	506	493	481	469	457	446	436	425	415	406	396	387	379	
				315	302	291	279	268	259	249	240	231	223	215	207	200	193	187	181	
				639	623	608	593	579	565	551	537	524	512	500	488	476	466	455	445	
				366	352	339	326	314	303	292	281	271	261	252	243	234	227	219	211	
				737	719	701	684	668	652	637	622	608	594	580	568	555	543	531	520	
				421	405	390	375	362	348	336	324	313	302	291	282	272	263	255	246	
				790	780	769	759	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	
				56-80	81	82	83	84	85	86	87	88	89	90	91	92	93	94	95	96
48LH10	25	48	20000	246	241	236	231	226	221	217	212	208	204	200	196	192	188	185	181	
48LH11	27	48	21700	141	136	132	127	123	119	116	112	108	105	102	99	96	93	90	87	
48LH12	31	48	27400	266	260	255	249	244	239	234	229	225	220	216	212	208	204	200	196	
48LH13	35	48	32800	152	147	142	137	133	129	125	120	117	113	110	106	103	100	97	94	
48LH14	36	48	38700	336	329	322	315	308	301	295	289	283	277	272	266	261	256	251	246	
48LH15	41	48	44500	191	185	179	173	167	161	156	151	147	142	138	133	129	126	122	118	
48LH16	47	48	51300	402	393	384	376	368	360	353	345	338	332	325	318	312	306	300	294	
48LH17	54	48	57600	228	221	213	206	199	193	187	180	175	170	164	159	154	150	145	141	
				475	464	454	444	434	425	416	407	399	390	383	375	367	360	353	346	
				269	260	251	243	234	227	220	212	206	199	193	187	181	176	171	165	
				545	533	521	510	499	488	478	468	458	448	439	430	422	413	405	397	
				308	298	287	278	269	260	252	244	236	228	221	214	208	201	195	189	
				629	615	601	588	576	563	551	540	528	518	507	497	487	477	468	459	
				355	343	331	320	310	299	289	280	271	263	255	247	239	232	225	218	
				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	

\*Section 104.10 of the "Standard Specifications for Longspan Steel Joists, LJ- and LH-Series and Deep Longspan Steel Joists, DLJ- and DLH-Series" limits the design LIVE load deflection as follows: Floors, 1/360 of span. Roofs, 1/360 of span where a plaster ceiling is attached or suspended; 1/240 of span for all other cases.

\*\*To solve for safe uniform load between spans shown, divide the Safe Load in pounds by net span in feet plus .67 feet. (The added .67 feet, eight inches, is necessary to obtain the proper span for which the load tables were developed.)

To solve for live load between spans shown, multiply the live load of the shortest net span shown in the load table by the (shortest net span plus .67 feet)<sup>2</sup>, and divide by the (actual net span plus .67 feet)<sup>2</sup>. The live load shall not exceed the safe uniform load.

