

STANDARD LOAD TABLE

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

LONGSPAN STEEL JOISTS, LH- SERIES

Adopted by the Steel Joist Institute,
May 25, 1983

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 do not 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	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	486	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										

See page LT-57 for notes



STANDARD LOAD TABLE / LONGSPAN STEEL JOISTS, LH SERIES

Based on a Maximum Allowable Tensile 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	11	24	11500	342 235	339 226	336 218	323 204	307 188	293 175	279 162	267 152	255 141	244 132	234 124	224 116	215 109	207 102	199 96	191 90	
24LH04	12	24	14100	419 288	446 265	440 246	419 227	399 210	380 195	363 182	347 169	331 158	317 148	304 138	291 130	280 122	269 114	258 107	248 101	
24LH05	13	24	15100	449 308	446 297	440 285	419 264	399 244	380 226	363 210	347 196	331 182	317 171	304 160	291 150	280 141	269 132	258 124	248 117	
24LH06	16	24	20300	604 411	579 382	555 356	530 331	504 306	480 284	457 263	437 245	417 228	399 211	381 197	364 184	348 172	334 161	320 152	307 142	
24LH07	17	24	22300	665 452	638 421	613 393	588 367	565 343	541 320	516 297	491 276	468 257	446 239	426 223	407 208	389 195	373 182	357 171	343 161	
24LH08	18	24	23800	707 480	677 447	649 416	622 388	597 362	572 338	545 314	520 292	497 272	475 254	455 238	435 222	417 208	400 196	384 184	369 173	
24LH09	21	24	28000	832 562	808 530	785 501	764 460	731 424	696 393	663 363	632 337	602 313	574 292	548 272	524 254	501 238	480 223	460 209	441 196	
24LH10	23	24	29600	882 596	856 559	832 528	809 500	788 474	768 439	737 406	702 378	668 351	637 326	608 304	582 285	556 266	533 249	511 234	490 220	
24LH11	25	24	31200	927 624	900 588	875 555	851 525	829 498	807 472	787 449	768 418	734 388	701 361	671 337	642 315	616 294	590 276	567 259	544 243	
				33-40	41	42	43	44	45	46	47	48	49	50	51	52	53	54	55	56
28LH05	13	28	14000	337 219	323 205	310 192	297 180	286 169	275 159	265 150	255 142	245 133	237 126	228 119	220 113	213 107	206 102	199 97	193 92	
28LH06	16	28	18600	448 289	429 270	412 253	395 238	379 223	364 209	350 197	337 186	324 175	313 166	301 156	291 148	281 140	271 133	262 126	253 120	
28LH07	17	28	21000	505 326	484 305	464 285	445 267	427 251	410 236	394 222	379 209	365 197	352 186	339 176	327 166	316 158	305 150	295 142	285 135	
28LH08	18	28	22500	540 348	517 325	496 305	475 285	456 268	438 252	420 236	403 222	387 209	371 196	357 185	344 175	331 165	319 156	308 148	297 140	
28LH09	21	28	27700	667 428	639 400	612 375	586 351	563 329	540 309	519 291	499 274	481 258	463 243	446 228	430 216	415 204	401 193	387 183	374 173	
28LH10	23	28	30300	729 466	704 439	679 414	651 388	625 364	600 342	576 322	554 303	533 285	513 269	495 255	477 241	460 228	444 215	429 204	415 193	
28LH11	25	28	32500	780 498	762 475	736 448	711 423	682 397	655 373	629 351	605 331	582 312	561 294	540 278	521 263	502 249	485 236	468 223	453 212	
28LH12	27	28	35700	857 545	837 520	818 496	800 476	782 454	766 435	737 408	709 383	682 361	656 340	632 321	609 303	587 285	566 270	546 256	527 243	
28LH13	30	28	37200	895 569	874 543	854 518	835 495	816 472	799 452	782 433	766 415	751 396	722 373	694 352	668 332	643 314	620 297	598 281	577 266	
				38-48	49	50	51	52	53	54	55	56	57	58	59	60	61	62	63	64
32LH06	14	32	16700	338 211	326 199	315 189	304 179	294 169	284 161	275 153	266 145	257 138	249 131	242 125	234 119	227 114	220 108	214 104	208 99	
32LH07	16	32	18800	379 235	366 223	353 211	341 200	329 189	318 179	308 170	298 162	288 154	279 146	271 140	262 133	254 127	247 121	240 116	233 111	
32LH08	17	32	20400	411 255	397 242	383 229	369 216	357 205	345 194	333 184	322 175	312 167	302 159	293 151	284 144	275 137	267 131	259 125	252 120	
32LH09	21	32	25600	516 319	498 302	480 285	463 270	447 256	432 243	418 230	404 219	391 208	379 198	367 189	356 180	345 172	335 164	325 157	315 149	
32LH10	21	32	28300	571 352	550 332	531 315	512 297	495 282	478 267	462 254	445 240	430 228	416 217	402 206	389 196	376 186	364 178	353 169	342 162	
32LH11	24	32	31000	625 385	602 363	580 343	560 325	541 308	522 292	505 277	488 263	473 251	458 239	443 227	429 216	416 206	403 196	390 187	378 179	
32LH12	27	32	36400	734 450	712 428	688 406	664 384	641 364	619 345	598 327	578 311	559 295	541 281	524 267	508 255	492 243	477 232	463 221	449 211	
32LH13	30	32	40600	817 500	801 480	785 461	771 444	742 420	715 397	690 376	666 354	643 336	621 319	600 304	581 288	562 275	544 262	527 249	511 238	
32LH14	33	32	41800	843 515	826 495	810 476	795 458	780 440	766 417	738 395	713 374	688 355	665 337	643 321	622 304	602 290	583 276	564 264	547 251	
32LH15	35	32	43200	870 532	853 511	837 492	821 473	805 454	791 438	776 422	763 407	750 393	725 374	701 355	678 338	656 322	635 306	616 292	597 279	
				42-56	57	58	59	60	61	62	63	64	65	66	67	68	69	70	71	72
36LH07	16	36	16800	292 177	283 168	274 160	266 153	258 140	251 134	244 128	237 122	230 117	224 112	218 107	212 103	207 99	201 95	196 91	191 86	
36LH08	18	36	18500	321 194	311 185	302 176	293 168	284 160	276 153	268 146	260 140	253 134	246 128	239 123	233 118	227 113	221 109	215 104	209 100	
36LH09	21	36	23700	411 247	398 235	386 224	374 214	363 204	352 195	342 186	333 179	323 171	314 163	306 157	297 150	289 144	282 138	275 133	267 127	
36LH10	21	36	26100	454 273	440 260	426 248	413 236	401 225	389 215	378 206	367 197	357 188	347 180	338 173	328 165	320 159	311 152	303 146	295 140	
36LH11	23	36	28500	495 297	480 283	465 269	451 257	438 246	425 234	412 224	401 214	389 205	378 196	368 188	358 180	348 173	339 166	330 159	322 153	
36LH12	25	36	34100	593 354	575 338	557 322	540 307	523 292	508 279	493 267	478 255	464 243	450 232	437 222	424 213	412 204	400 195	389 187	378 179	
36LH13	30	36	40100	697 415	675 395	654 376	634 359	615 342	596 327	579 312	562 298	546 285	531 273	516 262	502 251	488 240	475 231	463 222	451 213	
36LH14	36	36	44200	768 456	755 434	729 412	706 392	683 373	661 356	641 339	621 323	602 309	584 295	567 283	551 270	535 259	520 247	505 237	492 228	
36LH15	36	36	46600	809 480	795 464	781 448	769 434	744 413	721 394	698 375	677 358	656 342	637 327	618 312	600 299	583 286	567 274	551 263	536 252	

See page LT-57 for notes

STANDARD LOAD TABLE / LONGSPAN STEEL JOISTS, LH-SERIES
 Based on a Maximum Allowable Tensile 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	16	40	16600	254	247	241	234	228	222	217	211	206	201	196	192	187	183	178	174	
40LH09	21	40	21800	332	323	315	306	298	291	283	276	269	263	256	250	244	239	233	228	
40LH10	21	40	24000	367	357	347	338	329	321	313	305	297	290	283	276	269	262	255	249	
40LH11	22	40	26200	399	388	378	368	358	349	340	332	323	315	308	300	293	286	279	273	
40LH12	25	40	31900	486	472	459	447	435	424	413	402	392	382	373	364	355	346	338	330	
40LH13	30	40	37600	573	557	542	528	514	500	487	475	463	451	440	429	419	409	399	390	
40LH14	35	40	43000	656	638	620	603	587	571	556	542	528	515	502	490	478	466	455	444	
40LH15	36	40	48100	734	712	691	671	652	633	616	599	583	567	552	538	524	511	498	486	
40LH16	42	40	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	
				52-72	73	74	75	76	77	78	79	80	81	82	83	84	85	86	87	88
44LH09	19	44	20000	272	265	259	253	247	242	236	231	226	221	216	211	207	202	198	194	
44LH10	21	44	22100	300	293	286	279	272	266	260	254	249	243	238	233	228	223	218	214	
44LH11	22	44	23900	325	317	310	302	295	289	282	276	269	264	258	252	247	242	236	232	
44LH12	25	44	29600	402	393	383	374	365	356	347	339	331	323	315	308	300	293	287	280	
44LH13	30	44	35100	477	466	454	444	433	423	413	404	395	386	377	369	361	353	346	338	
44LH14	31	44	40400	549	534	520	506	493	481	469	457	446	436	425	415	406	396	387	379	
44LH15	36	44	47000	639	623	608	593	579	565	551	537	524	512	500	488	476	466	455	445	
44LH16	42	44	54200	737	719	701	684	668	652	637	622	608	594	580	568	555	543	531	520	
44LH17	47	44	58200	821	805	790	775	760	745	730	715	699	683	667	652	638	624	610	597	
				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	21	48	20000	246	241	236	231	226	221	217	212	208	204	200	196	192	188	185	181	
48LH11	22	48	21700	266	260	255	249	244	239	234	229	225	220	216	212	208	204	200	196	
48LH12	25	48	27400	336	329	322	315	308	301	295	289	283	277	272	266	261	256	251	246	
48LH13	29	48	32800	402	393	384	376	368	360	353	345	338	332	325	318	312	306	300	294	
48LH14	32	48	38700	475	464	454	444	434	425	416	407	399	390	383	375	367	360	353	346	
48LH15	36	48	44500	545	533	521	510	499	488	478	468	458	448	439	430	422	413	405	397	
48LH16	42	48	51300	629	615	601	588	576	563	551	540	528	518	507	497	487	477	468	459	
48LH17	47	48	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	

* Section 104.10 of the "Standard Specifications for Longspan Steel Joists, LH-Series and Deep Longspan Steel Joists, DLH-Series" limits the design LIVE load deflection.

** 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.)

In no case shall the safe uniform load exceed the uniform load calculated for the minimum span listed.

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)², and divide by the (actual net span plus .67 feet)². The live load shall not exceed the safe uniform load.

*** For an approximate load carrying capacity at a maximum allowable tensile stress of 22,000 psi, the total load carrying capacity shown in the load table should be multiplied by the ratio 22/30.

