

STANDARD LOAD TABLE

OPEN WEB STEEL JOISTS, H- SERIES

Based on Allowable Stress of 30,000 PSI

Adopted by the 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 H-Series Steel Joists. The weight of DEAD loads, including the joists, must be deducted to determine the LIVE load-carrying capacities of the joists. The load table may be used for parallel chord joists installed to a maximum slope of 1/2 inch per foot.

The figures shown in blue 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 figures in blue by 1.5. In no case shall the total load capacity of the joists be exceeded.**

Tests on steel joists designed in accordance with the Standard Specifications have demonstrated that the Standard Load Tables are applicable for concentrated top chord loadings (such as are developed in bulb-tee roof construction) when the sum of the equal concentrated top chord loadings does not exceed the allowable uniform loading for the joist type and span and the loads are placed at spacings not exceeding 33" along the top chord.

LOADS ABOVE THE COLORED LINES ARE GOVERNED BY SHEAR.

Joist Designation	8H3	10H3	10H4	12H3	12H4	12H5	12H6	14H3	14H4	14H5	14H6	14H7	16H4	16H5	16H6	16H7	16H8
Nominal *Depth (in.)	8	10	10	12	12	12	12	14	14	14	14	14	16	16	16	16	16
Resist. Moment (in.-lbs.)	91,000	116,000	148,000	140,000	180,000	222,000	260,000	165,000	212,000	259,000	307,000	369,000	221,000	289,000	344,000	413,000	478,000
Max. End React. (lbs.)	2400	2500	2800	2800	3200	3600	3900	3200	3500	3800	4200	4600	3800	4300	4600	4900	5200
†Approx. Wt. (lbs./ft.)	5.0	5.0	6.1	5.2	6.2	7.1	8.2	5.5	6.5	7.4	8.6	10.0	6.6	7.8	8.6	10.3	11.4
Span in Feet	600																
8	533																
9	480	500	560														
10	460																
11	436	455	509														
12	345	417	467	467	533	600	650										
13	400	385	431	431	492	554	600										
14	266	359	417														
15	310	357	400	400	457	514	557	457	500	543	600	657					
16	167	270	334	373	427	480	520	427	467	507	560	613					
17	270	333	373	373	427	480	520	400	438	475	525	575	475	538	575	613	650
18	136	219	271	320	373	427	480	376	412	447	494	541	447	506	541	576	612
19	232	302	350	350	400	450	488	366	398	422	475	511	422	478	511	544	578
20	112	181	223	264	316	368	400	340	389	422	467	511	422	478	511	544	578
21	151	268	329	323	376	424	459	376	412	447	494	541	447	506	541	576	612
22	127	239	305	288	356	400	433	340	389	422	467	511	422	478	511	544	578
23	108	214	273	259	332	379	411	305	368	400	442	484	400	453	484	516	547
24	92	193	247	157	206	241	286	218	285	334	399	470	351	432	484	516	547
25		108	133	157	206	241	286	275	350	380	420	460	368	430	460	490	520
26		92	114	135	177	207	246	187	245	287	342	403	301	370	437	490	520
27				212	272	336	371	249	320	362	400	438	334	410	438	467	495
28				117	152	179	212	162	212	248	295	348	260	320	377	454	495
29				193	248	306	355	227	292	345	382	418	304	391	418	445	473
30				101	133	155	185	141	184	215	257	302	226	278	328	395	454
31				176	227	280	328	208	267	326	365	400	279	364	400	426	452
32				89	116	136	162	123	161	189	225	265	198	243	287	346	398
33				162	208	257	301	191	245	300	350	383	256	334	383	408	433
34				78	102	120	142	108	142	166	198	233	174	214	253	304	350
35								176	226	276	327	368	236	308	367	392	416
36								96	125	147	175	206	154	190	224	269	310
37								163	209	255	303	354	218	285	339	377	400
38								85	111	131	156	183	137	169	199	239	275
39								151	194	237	281	337	202	264	315	363	385
40								76	99	117	139	164	122	151	177	214	246
41								140	180	220	261	314	188	246	293	350	371
42								68	89	104	125	147	110	135	159	192	220
43													175	229	273	327	359
44													99	121	143	172	198
45													164	214	255	306	347
46													89	110	129	156	179
47													153	200	239	287	332
48													81	99	117	141	162
49													144	188	224	269	311
50													74	90	107	128	148

See page LT-48 for notes

For Joist Depths 18" to 22" inclusive

Joist Designation	18H5	18H6	18H7	18H8	18H9	18H10	18H11	20H5	20H6	20H7	20H8	20H9	20H10	20H11	22H6	22H7	22H8	22H9	22H10	22H11
Nominal *Depth (in.)	18	18	18	18	18	18	18	20	20	20	20	20	20	20	22	22	22	22	22	22
Resist. Moment (in.-lbs.)	325,000	383,000	466,000	540,000	627,000	705,000	814,000	365,000	406,000	499,000	602,000	701,000	789,000	912,000	422,000	526,000	653,000	776,000	873,000	1,009,000
Max. End React. (lbs.)	4500	4800	5200	5400	5900	6600	7600	4800	5100	5400	5600	6400	7000	7900	5400	5600	5800	6700	7200	8100
†Approx. Wt. (lbs./ft.)	8.0	9.2	10.4	11.6	12.6	14.0	15.8	8.4	9.6	10.7	12.2	13.2	14.6	16.4	9.7	10.7	12.0	13.8	15.2	16.9
Span in Feet	18	18	18	18	18	18	18	20	20	20	20	20	20	20	22	22	22	22	22	22
19	474	505	547	568	621															
20	450	480	520	540	590			480	510	540	560	640								
21	429 409	457	495	514	562	629		457	486	514	533	610								
22	409 356	436 420	473	491	536	600		436	464	491	509	582	636		491	509	527	609		
23	391 312	417 368	452 441	470	513	574		417 380	443 434	470	487	557	609		470	487	504	583	626	
24	375 274	400 324	433 388	450 444	492 484	550 546	633 619	400 335	425 382	450	467	533	583		450 446	467	483	558	600	
25	347 243	384 286	416 343	432 393	472 428	528 483	608 548	384 296	408 338	432 411	448	512	560	632	432 395	448	464	536	576	648
26	321 216	369 255	400 305	415 349	454 380	508 429	585 487	360 263	392 300	415 365	431	492 476	538	608	415 351	431 426	446	515	554	623
27	297 193	350 227	385 272	400 312	437 340	489 383	563 435	334 235	371 268	400 326	415 392	474 425	519 480	585 545	386 313	415 380	430	496	533	600
28	276 173	326 204	371 244	386 280	421 305	471 344	543 390	310 211	345 240	386 292	400 352	457 381	500 431	564 488	359 281	400 341	414	479 468	514	579
29	258 155	304 184	359 220	372 252	407 274	455 309	524 351	289 190	322 216	372 263	386 317	441 343	483 388	545 440	335 253	386 307	400 379	462 421	497 473	559 539
30	241 140	284 166	345 199	360 227	393 248	440 280	507 317	270 171	301 195	360 238	373 286	427 310	467 350	527 397	313 228	373 277	387 343	447 381	480 428	540 487
31	225 127	266 150	323 180	348 206	381 224	426 253	490 287	253 155	282 177	346 215	361 259	413 281	452 317	510 360	293 207	361 251	374 311	432 345	465 387	523 441
32	212 116	249 137	303 164	338 187	369 204	413 230	475 261	238 141	264 161	325 196	350 236	400 255	438 288	494 327	275 188	342 228	363 282	419 314	450 352	506 401
33	199 106	234 125	285 149	327 171	358 186	400 210	461 238	223 129	249 147	305 178	339 215	388 233	424 263	479 298	258 172	322 208	352 257	406 286	436 321	491 366
34	187 96	221 114	269 136	311 156	347 170	388 192	447 218	210 118	234 134	288 163	329 196	376 213	412 240	465 273	243 157	303 190	341 235	394 261	424 294	476 335
35	177 88	208 104	254 125	294 143	337 156	377 176	434 200	199 108	221 123	272 150	320 180	366 195	400 220	451 250	230 144	286 175	331 216	383 240	411 269	463 307
36	167 81	197 96	240 115	278 132	323 143	363 162	419 183	188 99	209 113	257 137	310 166	356 179	389 203	439 230	217 132	271 160	322 198	372 220	400 247	450 282
37								178 91	198 104	243 127	293 152	341 165	378 187	427 212	206 122	256 148	314 183	362 203	389 228	438 260
38								169 84	187 96	230 117	278 141	324 153	364 172	416 195	195 112	243 136	301 169	353 187	379 210	426 240
39								160 78	178 89	219 108	264 130	307 141	346 159	400 181	185 104	231 126	286 156	340 173	369 195	415 222
40								152 72	169 82	208 100	251 121	292 131	329 148	380 168	176 96	219 117	272 145	323 161	360 180	405 205
41														167 89	209 109	259 134	308 149	346 167	395 191	
42														159 83	199 101	247 125	293 139	330 156	381 177	
43														152 78	190 94	235 116	280 129	315 145	364 165	
44														145 72	181 88	225 109	267 121	301 136	347 154	

*Indicates Nominal Depth of steel joists only.

†Approximate Weights per Linear Foot of steel joists only. Accessories and nailer strip not included.

*†See manufacturers' catalog for detailed information on specific joist types.

**Section 5.9 of the "Standard Specifications for Open Web Steel Joists, J- and H-Series" limits the design LIVE load deflection as follows:

FLOORS, 1/360 span. ROOFS, 1/360 of span where a plaster ceiling is attached or suspended; 1/240 of span for all other cases.



For Joist Depths 24" to 30" inclusive

Joist Designation	24H6	24H7	24H8	24H9	24H10	24H11	26H8	26H9	26H10	26H11	28H8	28H9	28H10	28H11	30H8	30H9	30H10	30H11
Nominal *Depth (in.)	24	24	24	24	24	24	26	26	26	26	28	28	28	28	30	30	30	30
Resist. Moment (in.-lbs.)	462,000	576,000	716,000	851,000	957,000	1,106,000	784,000	925,000	1,040,000	1,203,000	846,000	1,000,000	1,124,000	1,300,000	909,000	1,075,000	1,207,000	1,397,000
Max. End React. (lbs.)	5600	5800	6000	7000	7500	8200	6700	7200	7600	8300	6700	7200	7700	8400	6800	7500	8100	8700
†Approx. Wt. (lbs./ft.)	10.3	11.5	12.7	14.0	15.5	17.5	12.8	14.8	16.2	17.9	13.5	15.2	16.8	18.3	14.2	15.4	17.3	18.8
Span in Feet																		
24	467	483	500	583	625													
25	448	464	480	560	600													
26	431	446	462	538	577	631	515	554	585	638								
27	415 375	430	444	519	556	607	496	533	563	615								
28	393 336	414 406	429	500	536	586	479	514	543	593	479	514	550	600				
29	366 303	400 365	414	483	517	566	462	497	524	572	462	497	531	579				
30	342 273	387 330	400	467 457	500	547	447	480	507	553	447	480	513	560	453	500	540	580
31	320 248	374 299	387 373	452 414	484 465	529	432 418	465	490	535	432	465	497	542	439	484	523	561
32	301 225	363 272	375 339	438 376	469 423	513	419 380	450 445	475	519	419	450	481	525	425	469	506	544
33	283 205	352 248	364 309	424 343	455 386	497	406 440	436 405	461	503	406 404	436	467	509	412	455	491	527
34	266 188	332 227	353 283	412 314	441 353	482	394 317	424 371	447	488	394 370	424	453	494	400	441	476	512
35	251 172	313 208	343 259	400 288	429 323	469	383 290	411 340	434	474	383 339	411 396	440	480	389	429	463	497
36	238 158	296 191	333 238	389 264	417 297	456	372 339	400 312	422	461	372 311	400 364	428	467	378 359	417	450	483
37	225 146	280 176	324 219	378 243	405 274	443	362 246	389	411	449	362 287	389	416	454	368 330	405	438	470
38	213 135	266 162	316 202	368 225	395 253	432	353 227	379	400	437	353 265	379	405	442	358 305	395	426	458
39	202 124	252 150	308 187	359 208	385 234	421	344 210	369	390	426	344 245	369	395	431	349	385	415	446
40	193 115	240 139	298 174	350 193	375 217	410	327 194	360	380	415	335	360	385	420	340	375	405	435
41	183 107	228 129	284 161	337 179	366 201	400	311 211	351	371	405	327	351	376	410	332	366	395	424
42	175 100	218 120	271 150	322 166	357 187	390	296 168	343	362	395	319	343	367	400	324	357	386	414
43	167 93	208 112	258 140	307 155	345 174	381	283 156	334	353	386	305	335	358	391	316	349	377	405
44	159 87	198 105	247 130	293 145	330 163	373	270 146	319	345	377	291	327	350	382	309	341	368	395
45	152 81	190 98	236 122	280 135	315 152	364	258 137	305	338	369	279	320	342	373	299	333	360	387
46	146 76	181 92	226 114	268 127	302 142	348	247 128	291	328	361	267	313	335	365	286	326	352	378
47	139 71	174 86	216 107	257 119	289 133	334	237 120	279	314	353	255	302	328	357	274	319	345	370
48	134 67	167 81	207 100	246 111	277 125	320	227 112	268	301	346	245	289	321	350	263	311	338	363
49							218	257	289	334	235	278	312	343	252	298	331	355
50							209	247	277	321	226	267	300	336	242	287	322	348
51							201	237	267	308	217	256	288	329	233	276	309	341
52							193	228	256	297	209	247	277	321	224	265	298	335
53							188	204	228	256	193	228	256	297	219	259	298	335
54											193	229	257	297	208	246	276	319
55											186	220	248	287	200	237	266	308
56											180	213	239	276	193	229	257	297
57											187	210	236	273	190	221	248	287
58											180	208	233	268	186	213	239	277
59											174	206	231	263	181	208	231	268
60											168	199	224	259	177	199	224	259

*Indicates Nominal Depth of steel joists only.

†Approximate Weights per Linear Foot of steel joists only. Accessories and nailer strip not included.

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