

# STANDARD LOAD TABLE

## OPEN WEB STEEL JOISTS, H-SERIES

Based on Allowable Stress of 30,000 psi

Adopted by Steel Joist Institute and American Institute of Steel Construction, Inc., May 10, 1971.

The black figures in the following table give the TOTAL safe uniformly-distributed load-carrying capacities, in pounds per linear foot, of H-Series High Strength 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 load table may be used for parallel chord joists installed to a maximum slope of 1/2 inch per foot.

Loads above colored lines are governed by shear.

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.

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 joist be exceeded.\*\*

\*\* - Section 5.9 of the "Standard Specifications for Open Web Steel Joists, J- & H-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.

Allowable Total Safe Loads in Pounds Per Linear Foot of H-SERIES Steel Joists — \* For Joist Depths 8" to 14" inclusive.

Joist Designation	8H3		10H3		10H4		12H3		12H4		12H5		12H6		14H3		14H4		14H5		14H6		14H7		
	8	10	10	10	10	10	12	12	12	12	12	12	12	12	14	14	14	14	14	14	14	14	14	14	
*Depth in Inches																									
Resisting Moment In Inch-Pounds	91,000	116,000	148,000	148,000	148,000	148,000	140,000	140,000	180,000	180,000	222,000	222,000	260,000	260,000	165,000	212,000	212,000	259,000	259,000	307,000	307,000	369,000	369,000	369,000	
Maximum End Reaction In Pounds	2400	2500	2800	2800	2800	2800	2800	2800	3200	3200	3600	3600	3900	3900	3200	3500	3500	3800	3800	4200	4200	4600	4600	4600	
† Approximate Weight in Pounds per Foot	5.0	5.0	6.1	6.1	6.1	6.1	5.2	5.2	6.2	6.2	7.1	7.1	8.2	8.2	5.5	6.5	6.5	7.4	7.4	8.6	8.6	10.0	10.0	10.0	
Span in Feet	600																								
9	533																								
10	480	500	560	560	560	560																			
11	436	455	509	509	509	509																			
12	392	417	467	467	467	467	467	533	533	533	600	600	650	650											
13	302	385	431	431	431	431	431	492	492	492	554	554	600	600											
14	237	382	400	400	400	400	400	457	457	457	514	514	557	557	457	500	500	543	543	600	600	657	657		
15	190	306	357	357	357	357	373	427	427	427	480	480	520	520	427	467	467	507	507	560	560	613	613		
16	155	270	333	333	333	333	365	400	400	400	450	450	488	488	400	438	438	475	475	525	525	575	575		
17	127	237	302	302	302	302	350	376	376	376	424	424	459	459	376	412	412	447	447	494	494	541	541		
18		268	329	329	329	329	382	424	424	424	472	472	507	507	424	462	462	497	497	544	544	591	591		
19		205	247	247	247	247	288	323	323	323	367	367	400	400	340	376	376	411	411	457	457	504	504		
20		171	206	206	206	206	250	288	288	288	336	336	367	367	300	336	336	371	371	417	417	464	464		
21		144	173	173	173	173	211	256	256	256	304	304	336	336	270	304	304	339	339	385	385	431	431		
22		122	147	147	147	147	183	227	227	227	275	275	304	304	249	285	285	320	320	366	366	412	412		
23		105	126	126	126	126	154	193	193	193	241	241	270	270	212	247	247	282	282	328	328	374	374		
24							133	176	176	176	224	224	253	253	195	230	230	265	265	311	311	357	357		
25							115	158	158	158	206	206	235	235	177	212	212	247	247	293	293	339	339		
26							96	140	140	140	191	191	220	220	162	197	197	232	232	278	278	324	324		
27							89	133	133	133	184	184	213	213	155	190	190	225	225	271	271	317	317		
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\*Indicates Nominal Depth of Steel Joists only.

† Approximate Weights per Linear Foot of Steel Joists only. Accessories and nailer strip not included.

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

\*For Joist Depths 16" to 24" inclusive.

Joist Designation	16H4	16H5	16H6	16H7	16H8	18H5	18H6	18H7	18H8	20H5	20H6	20H7	20H8	22H6	22H7	22H8	24H6	24H7	24H8
*Depth in Inches	16	16	16	16	16	18	18	18	18	20	20	20	20	22	22	22	24	24	24
Resisting Moment In Inch-Pounds	221,000	289,000	344,000	413,000	478,000	325,000	383,000	466,000	540,000	365,000	406,000	499,000	602,000	422,000	526,000	653,000	462,000	576,000	716,000
Maximum End Reaction In Pounds	3800	4300	4600	4900	5200	4500	4800	5200	5400	4800	5100	5400	5600	5400	5600	5800	5600	5800	6000
† Approximate Weight In Pounds per Foot	6.6	7.8	8.6	10.3	11.4	8.0	9.2	10.4	11.6	8.4	9.6	10.7	12.2	9.7	10.7	12.0	10.3	11.5	12.7
Span in Feet																			
16	475	538	575	613	650														
17	447	506	541	576	612														
18	422	478	511	544	578	500	533	578	600										
19	400	453	484	516	547	474	505	547	568										
20	399	430	460	490	520	450	480	520	540	480	510	540	560						
21	342	410	438	467	495	429	457	495	514	457	486	514	533						
22	295	357	429	445	473	409	436	473	491	436	464	491	509	491	509	527			
23	257	310	373	434	452	398	417	452	470	417	443	470	487	470	487	504			
24	225	272	326	379	434	348	417	433	450	400	425	450	467	450	467	483	467	483	500
25	198	239	287	334	382	306	367	427	432	380	408	432	448	432	448	464	448	464	480
26	175	211	254	295	338	271	325	378	415	336	405	415	431	415	431	446	431	446	462
27	155	188	226	262	300	241	289	336	385	299	360	400	415	386	415	430	415	430	444
28	139	168	201	234	268	215	258	300	344	267	321	375	400	359	400	414	393	414	429
29	124	150	181	210	240	193	231	269	308	239	288	336	386	351	386	400	366	400	414
30	112	135	162	189	216	173	208	242	278	215	259	302	346	316	368	387	342	387	400
31	101	122	147	171	195	157	188	219	251	194	234	273	313	286	332	382	342	387	400
32	91	111	133	155	177	142	170	198	227	176	212	247	284	259	301	346	310	361	387
33	83	101	121	141	161	129	155	180	206	160	193	225	258	235	274	315	282	329	375
34						117	141	164	188	146	176	205	235	214	250	287	257	300	344
35						107	129	150	172	133	161	187	215	196	228	263	235	274	315
36						98	118	137	158	122	147	172	197	180	209	241	215	251	288
37						167	197	240	278	188	209	257	310	217	271	322	238	296	333
38						90	108	126	145	112	135	158	181	165	192	221	198	231	265
39										178	198	243	293	206	256	314	225	280	324
40										103	125	145	167	152	177	204	182	212	244
41										169	187	230	278	185	243	301	213	266	316
42										160	178	219	264	185	231	286	202	252	308
43										88	106	124	142	130	151	174	155	181	208
44										152	169	208	251	176	219	272	193	240	298
45										82	98	115	132	120	140	161	144	168	193
46														159	199	247	175	218	271
47														104	121	139	124	145	167
48														152	190	235	167	208	258
														145	181	225	159	198	247
														90	105	121	108	126	145
														152	190	236	152	190	236
														101	118	135	101	118	135
														146	181	226	146	181	226
														94	110	127	94	110	127
														139	174	216	139	174	216
														89	103	119	89	103	119
														134	167	207	134	167	207
														83	97	111	83	97	111

\* Indicates Nominal Depth of Steel Joists only.

† Approximate Weights per Linear Foot of Steel Joists only. Accessories and nailer strip not included.

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