

STANDARD LOAD TABLE

Based on Allowable Stress of 22,000 psi

OPEN WEB STEEL JOISTS, J- SERIES

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

The following table gives the TOTAL safe uniformly-distributed load-carrying capacities, in pounds per linear foot, of J-Series Open Web 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.

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

Joist Designation	8J3	10J3	10J4	12J3	12J4	12J5	12J6	14J3	14J4	14J5	14J6	14J7
* Depth in Inches	8	10	10	12	12	12	12	14	14	14	14	14
Resisting Moment In Inch-Pounds	70,000	89,000	111,000	108,000	135,000	161,000	196,000	127,000	159,000	190,000	230,000	276,000
Max. End Reaction In Pounds	2000	2200	2400	2300	2500	2700	3000	2400	2800	3100	3400	3700
† Approx. Joist Wgt. Pounds Per Foot	4.8	4.8	6.0	5.1	6.0	7.0	8.1	5.2	6.4	7.3	8.4	9.7
Span In Feet	500											
8	444											
9												
10	400	440	480									
11	364	400	436									
12	324	367	400	383	417	450	500					
13	276	338	369	354	385	415	462					
14	238	303	343	329	357	386	429	343	400	443	486	529
15	207	264	320	307	333	360	400	320	373	413	453	493
16	182	232	289	281	313	338	375	300	350	388	425	463
17		205	256	249	294	318	353	282	329	365	400	435
18		183	228	222	278	300	333	261	311	344	378	411
19		164	205	199	249	284	316	235	294	326	358	389
20		148	185	180	225	268	300	212	265	310	340	370
21				163	204	243	286	192	240	287	324	352
22				149	186	222	270	175	219	262	309	336
23				136	170	203	247	160	200	239	290	322
24				125	156	186	227	147	184	220	266	308
25								135	170	203	245	294
26								125	157	187	227	272
27								116	145	174	210	252
28								108	135	162	196	235

* 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".

Joist Designation	16J4	16J5	16J6	16J7	16J8	18J5	18J6	18J7	18J8	20J5	20J6	20J7	20J8	22J6	22J7	22J8	24J6	24J7	24J8
* 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	173,000	216,000	258,000	310,000	359,000	243,000	293,000	352,000	406,000	265,000	316,000	382,000	455,000	335,000	420,000	493,000	367,000	460,000	540,000
Max. End Reaction In Pounds	3000	3300	3600	4000	4300	3500	3900	4200	4500	3800	4100	4300	4600	4200	4500	4800	4400	4700	5000
† Approx. Joist Wgt. Pounds Per Foot	6.6	7.6	8.5	10.1	11.3	7.9	9.0	10.2	11.3	8.1	9.2	10.6	11.9	9.6	10.5	11.9	9.9	11.1	12.4
Span In Feet	375	413	450	500	538														
17	353	388	424	471	506														
18	333	367	400	444	478	389	433	467	500										
19	316	347	379	421	453	368	411	442	474										
20	288	330	360	400	430	350	390	420	450	380	410	430	460						
21	262	314	343	381	410	333	371	400	429	362	390	410	438						
22	238	298	327	364	391	318	355	382	409	345	373	391	418						
23	218	272	313	348	374	304	339	365	391	330	357	374	400	382	409	436			
24	200	250	299	333	358	281	325	350	375	307	342	358	383	350	375	400	367	392	417
25	185	230	275	320	344	259	312	336	360	283	328	344	368	336	360	384	352	376	400
26	171	213	254	306	331	240	289	323	346	261	312	331	354	323	346	369	338	362	385
27	158	198	236	283	319	222	268	311	333	242	289	319	341	306	333	356	326	348	370
28	147	184	219	264	305	207	249	299	321	225	269	307	329	285	321	343	312	336	357
29	137	171	205	246	285	193	232	279	310	210	250	297	317	266	310	331	291	324	345
30	128	160	191	230	266	180	217	261	300	196	234	283	307	248	300	320	272	313	333
31	120	150	179	215	249	169	203	244	282	184	219	265	297	232	290	310	255	303	323
32	113	141	168	202	234	158	191	229	264	173	206	249	288	218	273	300	239	294	313
33						149	179	215	249	162	193	234	279	205	257	291	225	282	303
34						140	169	203	234	153	182	220	262	193	242	282	212	265	294
35						132	159	192	221	144	172	208	248	182	229	268	200	250	286
36						125	151	181	209	136	163	197	234	172	216	254	189	237	278
37										129	154	186	222	163	205	240	179	224	263
38										122	146	176	210	155	194	228	169	212	249
39										116	139	167	199	147	184	216	161	202	237
40										110	132	159	190	140	175	205	153	192	225
41														133	167	196	146	182	214
42														127	159	186	139	174	204
43														121	151	178	132	166	195
44														115	145	170	126	158	186
45																	121	151	178
46																	116	145	170
47																	111	139	163
48																	106	133	156

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