

Standard Loading Table

OPEN WEB STEEL JOISTS, SHORTSPAN SERIES

Allowable Total Safe Loads in Pounds per Linear Foot of Open Web Standard and Nailer Steel Joists

The following table gives the TOTAL safe uniformly-distributed load-carrying capacities, in pounds per linear foot, of Open Web Steel Joists and Nailer Joists, adopted by the Steel Joist Institute. The weight of DEAD loads must in all cases be deducted to de-

termine the LIVE load-carrying capacities of the Joists. When Nailer Joists (those with suffix W) are used, they should not be spaced farther apart than the safe span of the wood deck or other material used over them.

The prefix letters "SJ" should precede Joist Designations given below, i.e. SJ81, SJ81W, SJ82, SJ82W, etc.																	
Joist Designation SJ	81 81W	82 82W	102 102W	103 103W	104 104W	123 123W	124 124W	125 125W	126 126W	145 145W	146 146W	147 147W	166 166W	167 167W	186 186W	187 187W	207 207W
* Depth in Inches	8	8	10	10	10	12	12	12	12	14	14	14	16	16	18	18	20
† Approximate Weights in Pounds per Linear Foot	3.5	4.0	4.0	4.75	5.75	5.0	5.75	7.0	8.0	7.0	8.0	10.0	8.5	10.0	9.0	10.5	10.5
Resisting Moment in Inch Kips	29.5	52.5	63.	82.	100.	92.	115.	142.	175.	156.	205.	246.	232.	281.	255.	310.	340.
Maximum End Reaction in Kips	1.60	1.90	1.90	1.95	2.20	2.20	2.30	2.50	2.70	2.90	3.10	3.40	3.20	3.60	3.60	3.80	3.90
Span in Feet																	
7	401																
8	307																
9	243																
10	197	350															
11	163	289															
12	137	243	292														
13	116	207	249														
14	100	179	214			313											
15	87	156	187	243		273											
16	77	137	164	214	260	240											
17			145	189	231	212	265										
18			130	169	206	189	237			321							
19			116	151	185	170	212	262		288							
20			105	137	167	153	192	237		260							
21						139	174	215		236							
22						127	158	196	241	215							
23						116	145	179	221	197	258						
24						106	133	164	203	181	237				295		
25										166	219	262	247		272		
26										154	202	243	229		251		
27										143	187	225	212	257	233		
28										133	174	209	197	239	217	264	
29													184	223	202	246	
30													172	208	189	230	252
31													161	195	177	215	236
32													151	183	166	202	221
33															156	190	208
34															147	179	196
35															139	169	185
36															131	159	175
37																	166
38																	157
39																	149
40																	142

* Indicates Nominal Depth of Standard Steel Joists only. See Manufacturers' Catalog for Depths of Nailer Steel Joists.

† Approximate Weights per Linear Foot of Joists includes accessories, but does not include wood nailer strip.

Adopted by the Steel Joist Institute August 20, 1929 and Revised to September 16, 1952.

This Table in accordance with Simplified Practice Recommendation No. R94-53 of the Bureau of Standards, U. S. Dept. of Commerce.

LOAD TABLE FOR STANDARD EXTENDED ENDS

Total Allowable Uniform Load in Pounds per Linear Foot of Extended End.

Unsupported Length of Extended End	Type of Standard Extended End 2 1/4" Depth*			
	No. 1	No. 2	No. 3	No. 4
2'-6"	250	250	250	250
3'-0"	231	250	250	250
3'-6"	170	207	243	250
4'-0"	131	159	187	234
4'-6"	104	126	148	186
5'-0"		102	120	150
5'-6"			100	123

NOTE: The total allowable uniform load in pounds per linear foot of standard extended end shall not exceed 250 lbs. nor shall it exceed the total allowable uniform load, in pounds per linear foot of the steel joist to which the extended end applies. This table is not a part of R-94-53.

Steel Joist Institute Designation	SJ81 or SJ81W	SJ82 or SJ82W	SJ102 or SJ102W	SJ103 or SJ103W	SJ104 or SJ104W	SJ123 or SJ123W	SJ124 or SJ124W	SJ125 or SJ125W	SJ126 or SJ126W	SJ145 or SJ145W	SJ146 or SJ146W	SJ147 or SJ147W	SJ166 or SJ166W	SJ167 or SJ167W	Steel Joist Institute Designation
* Depth in Inches	8	8	10	10	10	12	12	12	12	14	14	14	16	16	* Depth in Inches
Resisting Moment in Inch Pounds	29,500	52,500	63,000	82,000	100,000	92,000	115,000	142,000	175,000	156,000	205,000	246,000	282,000	281,000	Resisting Moment in Inch Pounds
Maximum End Reaction in Pounds	1,600	1,900	1,900	1,950	2,200	2,200	2,300	2,500	2,700	2,900	3,100	3,400	3,200	3,600	Maximum End Reaction in Pounds
Span 4 Feet	800	640	530	402	308	243	197	162	137	116	100	87	77	64	Span 4 Feet
5															5
6															6
7															7
8															8
9															9
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27															27
28															28
29															29
30															30
31															31
32															32

* Indicates Nominal Depth of Standard Steel Joists only. See Manufacturers' Catalogue for depths of Nailer Steel Joists.

This Table in accordance with Simplified Practice Recommendation No. R94-30 of the Bureau of Standards, U. S. Dept. of Commerce

Adopted by the Steel Joist Institute August 20, 1929 and Revised to June 1, 1948

Open Web Standard and Nailer Steel Joists
Properties and Allowable Total Safe Loads in Pounds per Linear Foot

Steel Joist Institute Standard Loading Table