



Standard Loading Table

OPEN WEB STEEL JOISTS, S-SERIES

Allowable Total Safe Loads in Pounds per Linear Foot of S-Series and Nailer Steel Joists

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

LIVE load-carrying capacities which must be reduced for concentrated loads. When Nailer Joists are used, they should not be spaced farther apart than the safe span of the wood deck or other material used over them and they should be designated with a suffix letter W such as 8S2W.

*For Joist Depths 8" to 14" inclusive.

Joist Designation	8S2	10S2	10S3	10S4	12S3	12S4	12S5	12S6	14S4	14S5	14S6	14S7	Joist Designation
*Depth in Inches	8	10	10	10	12	12	12	12	14	14	14	14	*Depth in Inches
Resisting Moment in Inch Pounds	52,500	65,000	83,000	103,000	100,000	125,000	149,000	182,000	147,000	175,000	214,000	251,000	Resisting Moment in Inch Pounds
†Approx. Weight in Pounds per Linear Foot	4.0	4.5	5.0	6.0	5.0	6.0	6.5	8.0	6.5	7.5	8.0	9.5	†Approx. Weight in Pounds per Linear Foot
Maximum End Reaction in Pounds	1900	1900	2000	2200	2200	2300	2500	2800	2600	2900	3100	3400	Maximum End Reaction in Pounds
Span in Feet													Span in Feet
4	950	950											4
5	760	760	800	880	880								5
6	633	633	667	735	735								6
7	543	543	572	630	630								7
8	475	475	500	550	550								8
9	422	422	445	488	488								9
10	350	380	400	440	440								10
11	289	345	364	400	400	418	455	508					11
12	243	301	333	367	367	383	417	467					12
13	207	256	308	338	338	354	385	431					13
14	179	221	282	314	314	329	357	400	371	414	443	486	14
15	156	193	246	293	293	307	333	373	347	387	413	453	15
16	137	169	216	268	260	288	313	350	325	363	388	425	16
17		150	191	238	231	271	294	329	306	341	365	400	17
18		134	171	212	206	256	278	311	289	322	344	378	18
19		120	153	190	185	231	263	295	271	305	326	358	19
20		108	138	172	167	208	248	280	245	290	310	340	20
21					151	189	225	267	222	265	295	324	21
22					138	172	205	251	202	241	282	309	22
23					126	158	188	229	185	221	270	296	23
24					116	145	172	211	170	203	248	283	24
25									157	187	228	268	25
26									145	173	211	248	26
27									134	160	196	230	27
28									125	149	182	213	28

LOADS ABOVE COLORED LINES ARE GOVERNED BY SHEAR.

*Indicates Nominal Depth of Steel Joists only.

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

*† See Manufacturers' Catalog for detailed information on specific joist types.

Tests on S-Series steel joists designed in accordance with the Steel Joist Institute Standard Specifications have demonstrated that the Steel Joist Institute 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.

Adopted by the Steel Joist Institute August 20, 1929 and Revised to October 26, 1960.

This Table in accordance with Simplified Practice Recommendation filed with the Commodity Standards Division, Office of Technical Services, U. S. Department of Commerce.



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LIVE load-carrying capacities which must be reduced for concentrated loads. When Nailier Joists are used, they should not be spaced farther apart than the safe span of the wood deck or other material used over them and they should be designated with a suffix letter W such as 16SSW.

*For Joist Depths 16" to 24" inclusive.

Joist Designation	16S6	16S6	16S7	16S8	18S6	18S7	18S8	20S6	20S7	20S8	22S7	22S8	24S8	Joist Designation
*Depth in Inches	16	16	16	16	18	18	18	20	20	20	22	22	24	*Depth in Inches
Resisting Moment in Inch Pounds	202,000	242,000	290,000	336,000	272,000	328,000	380,000	295,000	358,000	420,000	385,000	456,000	500,000	Resisting Moment in Inch Pounds
†Approx. Weight in Pounds per Linear Foot	7.5	8.5	10.0	11.5	9.0	10.0	11.5	9.5	10.5	12.0	11.5	12.5	13.0	†Approx. Weight in Pounds per Linear Foot
Maximum End Reaction in Pounds	3000	3300	3600	3900	3600	3800	4100	3700	3900	4200	4000	4300	4500	Maximum End Reaction in Pounds
Span in Feet														Span in Feet
14	428	472	515	556										14
15	400	440	480	520										15
16	375	413	450	488										16
17	353	388	424	459										17
18	333	367	400	433	400	422	456							18
19	316	347	379	411	379	400	432							19
20	300	330	360	390	360	380	410	370	390	420				20
21	286	314	343	371	343	362	390	352	371	400				21
22	273	300	327	355	327	345	373	336	355	382	364	391	410	22
23	255	287	313	339	313	330	357	322	339	365	348	374	392	23
24	234	275	300	325	300	317	342	308	325	350	333	358	375	24
25	215	258	288	312	288	304	328	296	312	336	320	344	360	25
26	199	239	277	300	268	292	315	285	300	323	308	331	346	26
27	185	221	265	289	249	281	304	270	289	311	296	319	333	27
28	172	206	247	279	231	271	293	251	279	300	286	307	321	28
29	160	192	230	266	216	260	283	234	269	290	276	297	310	29
30	150	179	215	249	201	243	273	219	260	280	267	287	300	30
31	140	168	201	233	189	228	264	205	248	271	258	277	290	31
32	132	158	189	219	177	214	247	192	233	263	250	269	281	32
33					167	201	233	181	219	255	236	261	273	33
34					157	189	219	170	206	242	222	253	265	34
35					148	179	207	161	195	229	210	246	257	35
36					140	169	195	152	184	216	198	235	250	36
37								144	174	205	187	222	243	37
38								136	165	194	178	211	231	38
39								129	157	184	169	200	219	39
40								123	149	175	160	190	208	40
41											153	181	198	41
42											146	172	189	42
43											139	164	180	43
44											133	157	172	44
45													165	45
46													158	46
47													151	47
48													145	48

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