

STANDARD **ASD** LOAD TABLE

OPEN WEB STEEL JOISTS, K-SERIES

Based on a 50 ksi Maximum Yield Strength
Adopted by the Steel Joist Institute November 4, 1985
Revised to May 18, 2010 – Effective December 31, 2010

The **BLACK** figures in the Load Table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD K-Series Steel Joists**.

The approximate joist weights, in pounds per linear foot, given in the Load Table may be added to the other building weights to determine the DEAD load. In all cases the DEAD load, including the joist self-weight, must be deducted from the TOTAL load to determine the LIVE load. The approximate joist weights do not include accessories.

The **RED** figures in the Load Table represent the uniform load, in pounds per linear foot, which will produce an approximate joist deflection of 1/360 of the span. This load can be linearly prorated to obtain the uniform load for supplementary deflection criteria (i.e. a uniform load which will produce a joist deflection of 1/240 of the span may be obtained by multiplying the **RED** figure by 360/240). In no case shall the prorated load exceed the TOTAL load-carrying capacity of the joist.

Where the joist span is in the **RED SHADED** area of the Load Table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and intersections. Hoisting cables shall not be released until this row of bolted diagonal bridging is completely installed. The **RED SHADED** area extends up through 60'-0".

The approximate gross moment of inertia (not adjusted for shear deformation), in inches⁴, of a standard joist listed in the Load Table may be determined as follows:

$$I_j = 26.767(W)(L^3)(10^{-6}), \text{ where } W = \text{RED figure in the Load Table, and} \\ L = (\text{span} - 0.33) \text{ in feet.}$$

The TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of **ASD K-Series Steel Joists** shall not exceed 550 plf for spans shorter than what is explicitly shown in the Load Table. The maximum prorated RED load shall not exceed 550 plf (the TOTAL load-carrying capacity of the joist as given in the Standard **ASD** Load Table for Open Web Steel Joists, K-Series).

Loads for span increments not explicitly given in the Load Table may be determined using linear interpolation between the load values given in adjacent span columns.

For the proper handling of concentrated and/or varying loads, see Section 2.3 in the Code of Standard Practice for Steel Joist and Joist Girders.



STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	10K1	12K1	12K3	12K5	14K1	14K3	14K4	14K6	16K2	16K3	16K4	16K5	16K6	16K7	16K9
Depth (in.)	10	12	12	12	14	14	14	14	16	16	16	16	16	16	16
Approx. Wt (lbs./ft.)	5.0	5.0	5.7	7.1	5.2	6.0	6.7	7.7	5.5	6.3	7.0	7.5	8.1	8.6	10.0
Span (ft.)															
↓															
10	550														
	550														
	542														
12	550	550	550	550											
	455	550	550	550											
13	479	550	550	550											
	363	510	510	510											
14	412	500	550	550	550	550	550	550							
	289	425	463	463	550	550	550	550							
15	358	434	543	550	511	550	550	550							
	234	344	428	434	475	507	507	507							
16	313	380	476	550	448	550	550	550	550	550	550	550	550	550	550
	192	282	351	396	390	467	467	467	550	550	550	550	550	550	550
17	277	336	420	550	395	495	550	550	512	550	550	550	550	550	550
	159	234	291	366	324	404	443	443	488	526	526	526	526	526	526
18	246	299	374	507	352	441	530	550	456	508	550	550	550	550	550
	134	197	245	317	272	339	397	408	409	456	490	490	490	490	490
19	221	268	335	454	315	395	475	550	408	455	547	550	550	550	550
	113	167	207	269	230	287	336	383	347	386	452	455	455	455	455
20	199	241	302	409	284	356	428	525	368	410	493	550	550	550	550
	97	142	177	230	197	246	287	347	297	330	386	426	426	426	426
21		218	273	370	257	322	388	475	333	371	447	503	548	550	550
		123	153	198	170	212	248	299	255	285	333	373	405	406	406
22		199	249	337	234	293	353	432	303	337	406	458	498	550	550
		106	132	172	147	184	215	259	222	247	289	323	351	385	385
23		181	227	308	214	268	322	395	277	308	371	418	455	507	550
		93	116	150	128	160	188	226	194	216	252	282	307	339	363
24		166	208	282	196	245	295	362	254	283	340	384	418	465	550
		81	101	132	113	141	165	199	170	189	221	248	269	298	346
25					180	226	272	334	234	260	313	353	384	428	514
					100	124	145	175	150	167	195	219	238	263	311
26					166	209	251	308	216	240	289	326	355	395	474
					88	110	129	156	133	148	173	194	211	233	276
27					154	193	233	285	200	223	268	302	329	366	439
					79	98	115	139	119	132	155	173	188	208	246
28					143	180	216	265	186	207	249	281	306	340	408
					70	88	103	124	106	118	138	155	168	186	220
29									173	193	232	261	285	317	380
									95	106	124	139	151	167	198
30									161	180	216	244	266	296	355
									86	96	112	126	137	151	178
31									151	168	203	228	249	277	332
									78	87	101	114	124	137	161
32									142	158	190	214	233	259	311
									71	79	92	103	112	124	147





STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
 Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	18K3	18K4	18K5	18K6	18K7	18K9	18K10	20K3	20K4	20K5	20K6	20K7	20K9	20K10	22K4	22K5	22K6	22K7	22K9	22K10	22K11
Depth (In.)	18	18	18	18	18	18	18	20	20	20	20	20	20	20	22	22	22	22	22	22	22
Approx. Wt. (lbs./ft.)	6.4	7.2	7.7	8.4	8.9	10.1	11.6	6.5	7.2	7.7	8.4	8.9	10.1	11.6	7.3	7.7	8.5	9.0	10.2	11.7	11.9
Span (ft.)																					
18	550	550	550	550	550	550	550														
19	514	550	550	550	550	550	550	550	550	550	550	550	550	550							
20	463	550	550	550	550	550	550	517	550	550	550	550	550	550							
21	420	506	550	550	550	550	550	468	550	550	550	550	550	550	550	550	550	550	550	550	550
22	382	460	518	550	550	550	550	426	514	550	550	550	550	550	550	550	550	550	550	550	550
23	349	420	473	516	550	550	550	389	469	529	550	550	550	550	518	550	550	550	550	550	550
24	320	385	434	473	526	550	550	357	430	485	528	550	550	550	475	536	550	550	550	550	550
25	294	355	400	435	485	550	550	329	396	446	486	541	550	550	438	493	537	550	550	550	550
26	272	328	369	402	448	538	550	304	366	412	449	500	550	550	404	455	496	550	550	550	550
27	252	303	342	372	415	498	550	281	339	382	416	463	550	550	374	422	459	512	550	550	550
28	234	282	318	346	385	463	548	261	315	355	386	430	517	550	348	392	427	475	550	550	550
29	218	263	296	322	359	431	511	243	293	330	360	401	482	550	324	365	398	443	532	550	550
30	203	245	276	301	335	402	477	227	274	308	336	374	450	533	302	341	371	413	497	550	550
31	190	229	258	281	313	376	446	212	256	289	314	350	421	499	283	319	347	387	465	550	550
32	178	215	242	264	294	353	418	199	240	271	295	328	395	468	265	299	326	363	436	517	549
33	168	202	228	248	276	332	393	187	226	254	277	309	371	440	249	281	306	341	410	486	532
34	158	190	214	233	260	312	370	176	212	239	261	290	349	414	235	265	288	321	386	458	516
35	149	179	202	220	245	294	349	166	200	226	246	274	329	390	221	249	272	303	364	432	494
36	141	169	191	208	232	278	330	157	189	213	232	259	311	369	209	236	257	286	344	408	467
37								148	179	202	220	245	294	349	198	223	243	271	325	386	442
38								141	170	191	208	232	279	331	187	211	230	256	308	366	419
39								133	161	181	198	220	265	314	178	200	218	243	292	347	397
40								127	153	172	188	209	251	298	169	190	207	231	278	330	377
41								111	130	146	158	175	207	243	138	162	182	198	219	259	304
42								81	95	106	115	128	151	178	116	130	141	156	185	217	247
43								74	87	98	106	118	139	164	107	119	130	144	170	200	228
44								69	81	90	98	109	129	151	98	110	120	133	157	185	211
								64	75	84	91	101	119	140	91	102	111	123	146	171	195
															161	181	197	220	264	314	359
															85	95	103	114	135	159	181
															153	173	188	209	252	299	342
															79	88	96	106	126	148	168
															146	165	179	200	240	285	326
															73	82	89	99	117	138	157
															139	157	171	191	229	272	311
															68	76	83	92	109	128	146





STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES
 Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	24K4	24K5	24K6	24K7	24K8	24K9	24K10	24K12	26K5	26K6	26K7	26K8	26K9	26K10	26K12
Depth (In.)	24	24	24	24	24	24	24	24	26	26	26	26	26	26	26
Approx. Wt. (lbs./ft.)	7.8	7.9	8.5	9.0	9.4	10.3	11.7	13.5	8.1	8.6	9.0	9.7	10.4	11.8	13.7
Span (ft.)															
23	550 550	550 550	550 550	550 550	550 550	550 550	550 550	550 550							
24	520 516	550 544	550 544	550 544	550 544	550 544	550 544	550 544							
25	479 456	540 511	550 520	550 520	550 520	550 520	550 520	550 520	550 550	550 550	550 550	550 550	550 550	550 550	550 550
26	442 405	499 453	543 493	550 499	550 499	550 499	550 499	550 499	542 535	550 541	550 541	550 541	550 541	550 541	550 541
27	410 361	462 404	503 439	550 479	550 479	550 479	550 479	550 479	502 477	547 519	550 522	550 522	550 522	550 522	550 522
28	381 323	429 362	467 393	521 436	550 456	550 456	550 456	550 456	466 427	508 464	550 501	550 501	550 501	550 501	550 501
29	354 290	400 325	435 354	485 392	536 429	550 436	550 436	550 436	434 384	473 417	527 463	550 479	550 479	550 479	550 479
30	331 262	373 293	406 319	453 353	500 387	544 419	550 422	550 422	405 346	441 377	492 417	544 457	550 459	550 459	550 459
31	310 237	349 266	380 289	424 320	468 350	510 379	550 410	550 410	379 314	413 341	460 378	509 413	550 444	550 444	550 444
32	290 215	327 241	357 262	397 290	439 318	478 344	549 393	549 393	356 285	387 309	432 343	477 375	519 407	549 431	549 431
33	273 196	308 220	335 239	373 265	413 289	449 313	532 368	532 368	334 259	364 282	406 312	448 342	488 370	532 404	532 404
34	257 179	290 201	315 218	351 242	388 264	423 286	502 337	516 344	315 237	343 257	382 285	422 312	459 338	516 378	516 378
35	242 164	273 184	297 200	331 221	366 242	399 262	473 308	501 324	297 217	323 236	360 261	398 286	433 310	501 356	501 356
36	229 150	258 169	281 183	313 203	346 222	377 241	447 283	487 306	280 199	305 216	340 240	376 263	409 284	486 334	487 334
37	216 138	244 155	266 169	296 187	327 205	356 222	423 260	474 290	265 183	289 199	322 221	356 242	387 262	460 308	474 315
38	205 128	231 143	252 156	281 172	310 189	338 204	401 240	461 275	251 169	274 184	305 204	337 223	367 241	436 284	461 299
39	195 118	219 132	239 144	266 159	294 174	320 189	380 222	449 261	238 156	260 170	289 188	320 206	348 223	413 262	449 283
40	185 109	208 122	227 133	253 148	280 161	304 175	361 206	438 247	227 145	247 157	275 174	304 191	331 207	393 243	438 269
41	176 101	198 114	216 124	241 137	266 150	290 162	344 191	427 235	215 134	235 146	262 162	289 177	315 192	374 225	427 256
42	168 94	189 106	206 115	229 127	253 139	276 151	327 177	417 224	205 125	224 136	249 150	275 164	300 178	356 210	417 244
43	160 88	180 98	196 107	219 118	242 130	263 140	312 165	406 213	196 116	213 126	238 140	263 153	286 166	339 195	407 232
44	153 82	172 92	187 100	209 110	231 121	251 131	298 154	387 199	187 108	204 118	227 131	251 143	273 155	324 182	398 222
45	146 76	164 86	179 93	199 103	220 113	240 122	285 144	370 185	179 101	194 110	217 122	240 133	261 145	310 170	389 212
46	139 71	157 80	171 87	191 97	211 106	230 114	272 135	354 174	171 95	186 103	207 114	229 125	250 135	296 159	380 203
47	133 67	150 75	164 82	183 90	202 99	220 107	261 126	339 163	164 89	178 96	199 107	219 117	239 127	284 149	369 192
48	128 63	144 70	157 77	175 85	194 93	211 101	250 118	325 153	157 83	171 90	190 100	210 110	229 119	272 140	353 180
49									150 78	164 85	183 94	202 103	220 112	261 131	339 169
50									144 73	157 80	175 89	194 97	211 105	250 124	325 159
51									139 69	151 75	168 83	186 91	203 99	241 116	313 150
52									133 65	145 71	162 79	179 86	195 93	231 110	301 142



STANDARD LOAD TABLE FOR OPEN WEB STEEL JOISTS, K-SERIES

Based on a 50 ksi Maximum Yield Strength - Loads Shown In Pounds Per Linear Foot (plf)

Joist Designation	28K6	28K7	28K8	28K9	28K10	28K12	30K7	30K8	30K9	30K10	30K11	30K12
Depth (In.)	28	28	28	28	28	28	30	30	30	30	30	30
Approx. Wt. (lbs./ft.)	8.9	9.2	9.8	10.5	11.8	14.5	9.6	10.0	10.6	11.9	13.3	15.0
Span (ft.)												
↓												
27	550	550	550	550	550	550						
	550	550	550	550	550	550						
28	548	550	550	550	550	550						
	541	543	543	543	543	543						
29	511	550	550	550	550	550	550	550	550	550	550	550
	486	522	522	522	522	522	550	550	550	550	550	550
30	477	531	550	550	550	550	550	550	550	550	550	550
	439	486	500	500	500	500	543	543	543	543	543	543
31	446	497	550	550	550	550	534	550	550	550	550	550
	397	440	480	480	480	480	508	520	520	520	520	520
32	418	466	515	549	549	549	501	549	549	549	549	549
	361	400	438	463	463	463	461	500	500	500	500	500
33	393	438	484	527	532	532	471	520	532	532	532	532
	329	364	399	432	435	435	420	460	468	468	468	468
34	370	412	456	496	516	516	443	490	516	516	516	516
	300	333	364	395	410	410	384	420	441	441	441	441
35	349	389	430	468	501	501	418	462	501	501	501	501
	275	305	333	361	389	389	351	384	415	415	415	415
36	330	367	406	442	487	487	395	436	475	487	487	487
	252	280	306	332	366	366	323	353	383	392	392	392
37	312	348	384	418	474	474	373	413	449	474	474	474
	232	257	282	305	344	344	297	325	352	374	374	374
38	296	329	364	396	461	461	354	391	426	461	461	461
	214	237	260	282	325	325	274	300	325	353	353	353
39	280	313	346	376	447	449	336	371	404	449	449	449
	198	219	240	260	306	308	253	277	300	333	333	333
40	266	297	328	357	424	438	319	353	384	438	438	438
	183	203	222	241	284	291	234	256	278	315	315	315
41	253	283	312	340	404	427	303	335	365	427	427	427
	170	189	206	224	263	277	217	238	258	300	300	300
42	241	269	297	324	384	417	289	320	348	413	417	417
	158	175	192	208	245	264	202	221	240	282	284	284
43	230	257	284	309	367	407	276	305	332	394	407	407
	147	163	179	194	228	252	188	206	223	263	270	270
44	220	245	271	295	350	398	263	291	317	376	398	398
	137	152	167	181	212	240	176	192	208	245	258	258
45	210	234	259	282	334	389	251	278	303	359	389	389
	128	142	156	169	198	229	164	179	195	229	246	246
46	201	224	248	270	320	380	241	266	290	344	380	380
	120	133	146	158	186	219	153	168	182	214	236	236
47	192	214	237	258	306	372	230	255	277	329	372	372
	112	125	136	148	174	210	144	157	171	201	226	226
48	184	206	227	247	294	365	221	244	266	315	362	365
	105	117	128	139	163	201	135	148	160	188	215	216
49	177	197	218	237	282	357	212	234	255	303	347	357
	99	110	120	130	153	193	127	139	150	177	202	207
50	170	189	209	228	270	350	203	225	245	291	333	350
	93	103	113	123	144	185	119	130	141	166	190	199
51	163	182	201	219	260	338	195	216	235	279	320	343
	88	97	106	115	136	175	112	123	133	157	179	192
52	157	175	193	210	250	325	188	208	226	268	308	336
	83	92	100	109	128	165	106	116	126	148	169	184
53	151	168	186	203	240	313	181	200	218	258	296	330
	78	87	95	103	121	156	100	109	119	140	159	177
54	145	162	179	195	232	301	174	192	209	249	285	324
	74	82	89	97	114	147	94	103	112	132	150	170
55	140	156	173	188	223	290	168	185	202	240	275	312
	70	77	85	92	108	139	89	98	106	125	142	161
56	135	151	166	181	215	280	162	179	195	231	265	301
	66	73	80	87	102	132	84	92	100	118	135	153
57							156	173	188	223	256	290
							80	88	95	112	128	145
58							151	167	181	215	247	280
							76	83	90	106	121	137
59							146	161	175	208	239	271
							72	79	86	101	115	130
60							141	156	169	201	231	262
							69	75	81	96	109	124

