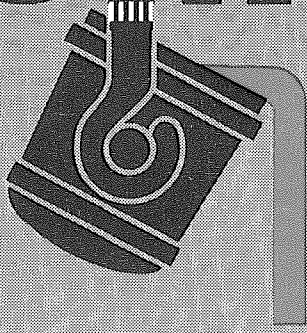




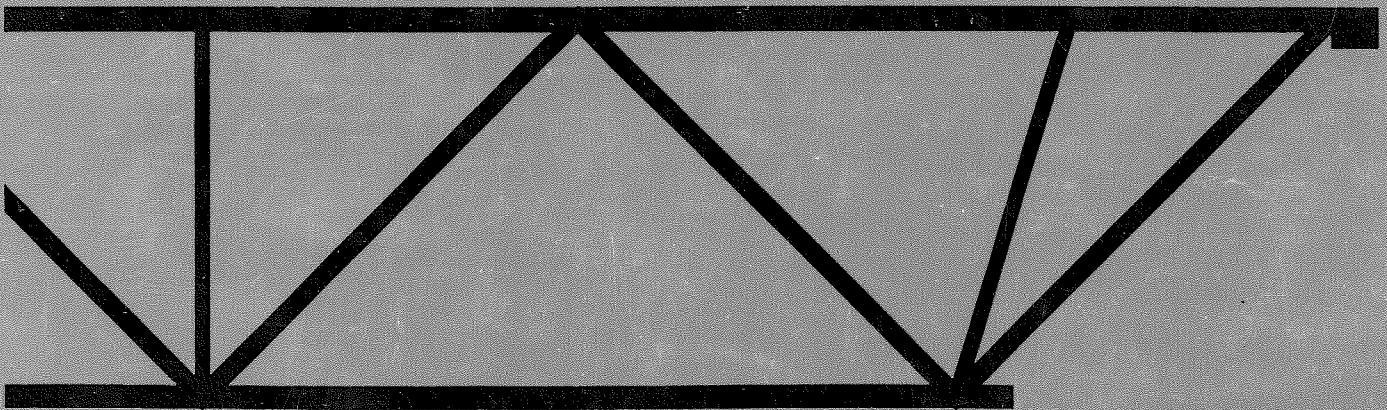
# SMI JOIST



A Commercial Metals  
Company.



FORTIETH EDITION STANDARD SPECIFICATIONS  
LOAD TABLES AND WEIGHT TABLES FOR STEEL JOISTS AND JOIST GIRDERS



# STANDARD LOAD TABLE

## OPEN WEB STEEL JOISTS, K-SERIES

Based on a Maximum Allowable Tensile Stress of 30 ksi

Adopted by the Steel Joist Institute November 4, 1985; Revised to May 2, 1994 - Effective September 1, 1994

The black figures in the following table give the TOTAL safe uniformly distributed load-carrying capacities, in pounds per linear foot, of K-Series Steel Joists. The weight of DEAD loads, including the joists, must 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.

The figures shown in RED 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 RED by 1.5. In no case shall the TOTAL load capacity of the joists be exceeded.

The approximate joist weights per linear foot shown in these tables do not include accessories.

The approximate moment of inertia of the joist, in inches<sup>4</sup> is;  $I_j = 26.767(W_{LL})(L^3)(10^{-6})$ , where  $W_{LL}$  = RED figure in the Load Table and  $L$  = (Span - .33) in feet.

For the proper handling of concentrated and/or varying loads, see Section 5.5 in the Recommended Code of Standard Practice.

Where the joist span exceeds the unshaded area of the table, the row of bridging nearest the mid span shall be diagonal bridging with bolted connections at chords and midspan.

Joist Designation	8K1	10K1	12K1	12K3	12K5	14K1	14K3	14K4	14K6	16K2	16K3	16K4	16K5	16K6	16K7	16K9
Depth (In.)	8	10	12	12	12	14	14	14	14	16	16	16	16	16	16	16
Approx. Wt. (lbs./ft.)	5.1	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.) ↓																
8	550 550															
9	550 550															
10	550 480	550 550														
11	532 377	550 542														
12	444 288	550 455	550 550	550 550	550 550											
13	377 225	479 363	550 510	550 510	550 510											
14	324 179	412 289	500 425	550 463	550 463	550 550	550 550	550 550	550 550							
15	281 145	358 234	434 344	543 428	550 434	511 475	550 507	550 507	550 507							
16	246 119	313 192	380 282	476 351	550 396	448 390	550 467	550 467	550 467	550 550	550 550	550 550	550 550	550 550	550 550	550 550
17		277 159	336 234	420 291	550 366	395 324	495 404	550 443	550 443	512 488	550 526	550 526	550 526	550 526	550 526	550 526
18		246 134	299 197	374 245	507 317	352 272	441 339	530 397	550 408	456 409	508 456	550 490	550 490	550 490	550 490	550 490
19		221 113	268 167	335 207	454 269	315 230	395 287	475 336	550 383	408 347	455 386	547 452	550 455	550 455	550 455	550 455
20		199 97	241 142	302 177	409 230	284 197	356 246	428 287	525 347	368 297	410 330	493 386	550 426	550 426	550 426	550 426
21			218 123	273 153	370 198	257 170	322 212	388 248	475 299	333 255	371 285	447 333	503 373	548 405	550 406	550 406
22			199 106	249 132	337 172	234 147	293 184	353 215	432 259	303 222	337 247	406 289	458 323	498 351	550 385	550 385
23			181 93	227 116	308 150	214 128	268 160	322 188	395 226	277 194	308 216	371 252	418 282	455 307	507 339	550 363
24			166 81	208 101	282 132	196 113	245 141	295 165	362 199	254 170	283 189	340 221	384 248	418 269	465 298	550 346
25						180 100	226 124	272 145	334 175	234 150	260 167	313 195	353 219	384 238	428 263	514 311
26						166 88	209 110	251 129	308 156	216 133	240 148	289 173	326 194	355 211	395 233	474 276
27						154 79	193 98	233 115	285 139	200 119	223 132	268 155	302 173	329 188	366 208	439 246
28						143 70	180 88	216 103	265 124	186 106	207 118	249 138	281 155	306 168	340 186	408 220
29										173 95	193 106	232 124	261 139	285 151	317 167	380 198
30										161 86	180 96	216 112	244 126	266 137	296 151	355 178
31										151 78	168 87	203 101	228 114	249 124	277 137	332 161
32										142 71	158 79	190 92	214 103	233 112	259 124	311 147



**STANDARD LOAD TABLE/OPEN WEB STEEL JOISTS, K-SERIES**  
Based on a Maximum Allowable Tensile Stress of 30 ksi

Joist Designation	30K7	30K8	30K9	30K10	30K11	30K12
Depth (In.)	30	30	30	30	30	30
Approx. Wt. (lbs./ft.)	12.3	13.2	13.4	15.0	16.4	17.6
Span (ft.) ↓						
30	550 543	550 543	550 543	550 543	550 543	550 543
31	534 508	550 520	550 520	550 520	550 520	550 520
32	501 461	549 500	549 500	549 500	549 500	549 500
33	471 420	520 460	532 468	532 468	532 468	532 468
34	443 384	490 420	516 441	516 441	516 441	516 441
35	418 351	462 384	501 415	501 415	501 415	501 415
36	395 323	436 353	475 383	487 392	487 392	487 392
37	373 297	413 325	449 352	474 374	474 374	474 374
38	354 274	391 300	426 325	461 353	461 353	461 353
39	336 253	371 277	404 300	449 333	449 333	449 333
40	319 234	353 256	384 278	438 315	438 315	438 315
41	303 217	335 238	365 258	427 300	427 300	427 300
42	289 202	320 221	348 240	413 282	417 284	417 284
43	276 188	305 206	332 223	394 263	407 270	407 270
44	263 176	291 192	317 208	376 245	398 258	398 258
45	251 164	278 179	303 195	359 229	389 246	389 246
46	241 153	266 168	290 182	344 214	380 236	380 236
47	230 144	255 157	277 171	329 201	372 226	372 226
48	221 135	244 148	266 160	315 188	362 215	365 216
49	212 127	234 139	255 150	303 177	347 202	357 207
50	203 119	225 130	245 141	291 166	333 190	350 199
51	195 112	216 123	235 133	279 157	320 179	343 192
52	188 106	208 116	226 126	268 148	308 169	336 184
53	181 100	200 109	218 119	258 140	296 159	330 177
54	174 94	192 103	209 112	249 132	285 150	324 170
55	168 89	185 98	202 106	240 125	275 142	312 161
56	162 84	179 92	195 100	231 118	265 135	301 153
57	156 80	173 88	188 95	223 112	256 128	290 145
58	151 76	167 83	181 90	215 106	247 121	280 137
59	146 72	161 79	175 86	208 101	239 115	271 130
60	141 69	156 75	169 81	201 96	231 109	262 124