

Floor Loads

MULTIPLE-SPAN JOIST-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 20						PWI 45							
	9½"		11½"		14"		9½"		11½"		14"		16"	
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%
6	-	265	-	265	-	265	-	299	-	300	-	300	-	300
7	-	227	-	227	-	227	-	256	-	257	-	257	-	257
8	-	199	-	199	-	199	-	224	-	225	-	225	-	225
9	-	177	-	177	-	177	-	199	-	200	-	200	-	200
10	-	159	-	159	-	159	-	179	-	180	-	180	-	180
11	143	145	-	145	-	145	-	163	-	164	-	164	-	164
12	113	133	-	133	-	133	144	149	-	150	-	150	-	150
13	91	119	-	122	-	122	116	138	-	138	-	138	-	138
14	74	103	-	114	-	114	95	128	-	129	-	129	-	129
15	61	90	103	106	-	106	79	119	-	120	-	120	-	120
16	51	79	86	100	-	100	66	105	108	113	-	113	-	113
17			73	90	-	94			92	106	-	106	-	106
18			62	81	-	88			78	100	-	100	-	100
19			53	72	77	84			67	95	-	95	-	95
20			46	65	66	78			58	86	84	90	-	90
21					58	71					73	86	-	86
22					51	64					64	82	-	82
23					45	59					57	78	76	78
24					40	54					50	71	68	75
25													61	72
26													54	69
27													49	65
28													44	60
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Notes:

1. Table values apply to uniformly loaded floor joists.
2. Span is measured to the center of each support.
3. The values in the Total columns are based on an L/240 total load deflection limit. Building codes typically require L/360 for live load. Experience has shown that a live load deflection limit of L/480 at 40 psf for residential floors does a better job than L/360 of meeting most performance expectations.
4. Table values do not account for stiffness added by glued or nailed sheathing.
5. Provide at least 1¼" of bearing length at end supports and 3½" at intermediate supports.
6. Provide lateral restraint at supports (e.g. blocking panels, rim board) and along the compression flange of each joist (e.g. floor sheathing, gypsum board ceiling).
7. Use sizing software or consult a professional engineer to analyze conditions outside the scope of this table (e.g. different bearing lengths, concentrated loads) or for multiple span joists if the length of any span is less than half the length of an adjacent span.

Floor Loads

MULTIPLE-SPAN JOIST—ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 47								PWI 50							
	9½"		11½"		14"		16"		9½"		11½"		14"		16"	
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%
6	-	248	-	257	-	266	-	275	-	272	-	272	-	272	-	272
7	-	213	-	221	-	228	-	235	-	233	-	233	-	233	-	233
8	-	186	-	193	-	200	-	206	-	204	-	204	-	204	-	204
9	-	165	-	172	-	177	-	183	-	181	-	181	-	181	-	181
10	-	149	-	154	-	160	-	165	-	163	-	163	-	163	-	163
11	-	135	-	140	-	145	-	150	-	148	-	148	-	148	-	148
12	-	124	-	129	-	133	-	137	-	136	-	136	-	136	-	136
13	-	114	-	119	-	123	-	127	113	126	-	126	-	126	-	126
14	100	106	-	110	-	114	-	118	92	117	-	117	-	117	-	117
15	83	99	-	103	-	106	-	110	76	109	-	109	-	109	-	109
16	70	93	-	97	-	100	-	103	64	102	-	102	-	102	-	102
17			-	91	-	94	-	97			90	96	-	96	-	96
18			81	86	-	89	-	92			77	91	-	91	-	91
19			70	81	-	84	-	87			66	86	-	86	-	86
20			61	77	-	80	-	82			57	82	-	82	-	82
21					75	76	-	78					73	78	-	78
22					66	73	-	75					64	74	-	74
23					58	69	-	72					56	71	-	71
24					52	67	69	69					50	68	68	68
25							61	66							60	65
26							55	63							54	63
27							49	61							49	60
28							44	59							44	58
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See notes on page 16

Floor Loads

MULTIPLE-SPAN JOIST—ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 60								PWI 70									
	9½"		11⅞"		14"		16"		11⅞"		14"		16"		18"		20"	
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%
6	-	299	-	311	-	311	-	311	-	328	-	328	-	328	-	328	-	328
7	-	256	-	266	-	266	-	266	-	281	-	281	-	281	-	281	-	281
8	-	224	-	233	-	233	-	233	-	246	-	246	-	246	-	246	-	246
9	-	199	-	207	-	207	-	207	-	219	-	219	-	219	-	219	-	219
10	-	179	-	186	-	186	-	186	-	197	-	197	-	197	-	197	-	197
11	-	163	-	169	-	169	-	169	-	179	-	179	-	179	-	179	-	179
12	-	149	-	155	-	155	-	155	-	164	-	164	-	164	-	164	-	164
13	135	138	-	143	-	143	-	143	-	151	-	151	-	151	-	151	-	151
14	111	128	-	133	-	133	-	133	-	141	-	141	-	141	-	141	-	141
15	92	119	-	124	-	124	-	124	-	131	-	131	-	131	-	131	-	131
16	77	112	-	117	-	117	-	117	-	123	-	123	-	123	-	123	-	123
17			107	110	-	110	-	110	-	116	-	116	-	116	-	116	-	116
18			92	104	-	104	-	104	100	109	-	109	-	109	-	109	-	109
19			79	98	-	98	-	98	87	104	-	104	-	104	-	104	-	104
20			69	93	-	93	-	93	75	98	-	98	-	98	-	98	-	98
21					86	89	-	89			94	94	-	94	-	94	-	94
22					76	85	-	85			83	89	-	89	-	89	-	89
23					67	81	-	81			73	86	-	86	-	86	-	86
24					60	78	-	78			65	82	-	82	-	82	-	82
25							71	75					77	79	-	79	-	79
26							64	72					69	76	-	76	-	76
27							58	69					62	73	-	73	-	73
28							52	67					56	70	-	70	-	70
29															66	68	-	68
30															60	66	-	66
31															55	63	-	63
32																	-	62
33																	57	60
34																	53	58
35																	49	56
36																		
37																		
38																		
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Floor Loads

MULTIPLE-SPAN JOIST-ALLOWABLE UNIFORM FLOOR LOAD (PLF)

Joist Span (ft)	PWI 77														PWI 90																			
	9½"		11½"		14"		16"		18"		20"		22"		24"		9½"		11½"		14"		16"		18"		20"		22"		24"			
	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%	Live L/480	Total 100%		
6	-	359	-	359	-	359	-	359	-	359	-	359	-	550	-	550	-	381	-	447	-	447	-	447	-	447	-	447	-	614	-	614		
7	-	308	-	308	-	308	-	308	-	308	-	308	-	471	-	471	-	327	-	383	-	383	-	383	-	383	-	383	-	526	-	526		
8	-	270	-	270	-	270	-	270	-	270	-	270	-	413	-	413	-	286	-	336	-	336	-	336	-	336	-	336	-	461	-	461		
9	-	240	-	240	-	240	-	240	-	240	-	240	-	367	-	367	-	254	-	298	-	298	-	298	-	298	-	298	-	409	-	409		
10	-	216	-	216	-	216	-	216	-	216	-	216	-	330	-	330	-	229	-	268	-	268	-	268	-	268	-	268	-	368	-	368		
11	-	196	-	196	-	196	-	196	-	196	-	196	-	300	-	300	-	208	-	244	-	244	-	244	-	244	-	244	-	335	-	335		
12	-	180	-	180	-	180	-	180	-	180	-	180	-	275	-	275	-	191	-	224	-	224	-	224	-	224	-	224	-	307	-	307		
13	155	166	-	166	-	166	-	166	-	166	-	166	-	254	-	254	-	176	-	206	-	206	-	206	-	206	-	206	-	283	-	283		
14	127	154	-	154	-	154	-	154	-	154	-	154	-	236	-	236	-	163	-	192	-	192	-	192	-	192	-	192	-	263	-	263		
15	105	144	-	144	-	144	-	144	-	144	-	144	-	220	-	220	148	153	-	179	-	179	-	179	-	179	-	179	-	246	-	246		
16	88	135	-	135	-	135	-	135	-	135	-	135	-	206	-	206	125	143	-	168	-	168	-	168	-	168	-	168	-	230	-	230		
17			121	127	-	127	-	127	-	127	-	127	-	194	-	194			-	158	-	158	-	158	-	158	-	158	-	217	-	217		
18			104	120	-	120	-	120	-	120	-	120	-	183	-	183			146	149	-	149	-	149	-	149	-	149	-	205	-	205		
19			89	113	-	113	-	113	-	113	-	113	-	174	-	174			126	141	-	141	-	141	-	141	-	141	-	194	-	194		
20			78	108	-	108	-	108	-	108	-	108	-	165	-	165			110	134	-	134	-	134	-	134	-	134	-	184	-	184		
21					97	103	-	103	-	103	-	103	-	157	-	157					-	128	-	128	-	128	-	128	-	175	-	175		
22					85	98	-	98	-	98	-	98	-	150	-	150					120	122	-	122	-	122	-	122	-	167	-	167		
23					75	94	-	94	-	94	-	94	-	143	-	143					107	117	-	117	-	117	-	117	-	160	-	160		
24					67	90	89	90	-	90	-	90	-	138	-	138					95	112	-	112	-	112	-	112	-	154	-	154		
25							80	86	-	86	-	86	-	132	-	132							-	107	-	107	-	107	-	147	-	147		
26							71	83	-	83	-	83	-	127	-	127							101	103	-	103	-	103	-	142	-	142		
27							64	80	-	80	-	80	-	122	-	122							91	99	-	99	-	99	-	136	-	136		
28							58	77	75	77	-	77	115	118	-	118							83	96	-	96	-	96	-	132	-	132		
29									68	74	-	74	104	114	-	114									-	93	-	93	-	127	-	127		
30									61	72	-	72	95	110	-	110									87	89	-	89	-	123	-	123		
31									56	70	-	70	86	104	104	106										80	87	-	87	-	119	-	119	
32											64	67	79	98	95	103											-	84	111	115	-	115		
33											59	65	72	92	87	100											-	81	102	112	-	112		
34											54	63	67	87	80	94												77	79	94	108	-	108	
35											50	62	61	82	74	89												71	77	87	105	104	105	
36													57	77	68	84														80	102	96	102	
37														52	73	63	80													74	100	89	100	
38														48	69	59	76												69	97	83	97		
39																54	72														77	94		
40																	51	68													72	92		
41																		47	65												67	90		
42																															62	88		

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