

WJ24W Truss - Allowable Uniform Load Table (PLF) / Parallel Chord

Clear Span (Ft.)	Depth																								Clear Span (Ft.)									
	14"		16"		18"		20"		22"		24"		26"		28"		30"		32"		34"		36"			38"		40"						
	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL		100% TL L/600 Δ	115% TL	100% TL L/600 Δ	115% TL					
14	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388	388		
16	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342	342		
18	278	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306		
20	226	260	262	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277		
22	187	215	217	249	247	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253		
24	157	180	182	209	207	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232		
26	134	154	155	179	177	203	198	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215		
28	115	133	134	154	152	175	171	197	189	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200		
30	100	116	117	134	133	153	149	171	165	187	181	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187		
32	88	102	102	118	117	134	131	151	145	167	159	176	173	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	
34	78	90	91	104	103	119	116	133	128	148	141	162	154	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	
36	70	80	81	93	92	106	103	119	115	132	126	145	137	157	148	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	157	
38	62	69	73	84	83	95	93	107	103	118	113	130	123	141	133	149	143	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	149	
40	56	59	65	75	75	86	84	96	93	107	102	117	111	128	120	138	129	141	138	141	141	141	141	141	141	141	141	141	141	141	141	141	141	
42	51	59	68	78	78	87	84	97	92	106	101	116	109	125	117	135	125	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	135	
44	44	59	62	71	69	80	77	88	84	97	92	105	99	114	107	123	114	129	122	129	129	129	129	129	129	129	129	129	129	129	129	129	129	
46	44	59	65	75	75	86	84	96	96	105	96	111	105	120	111	127	118	129	122	129	129	129	129	129	129	129	129	129	129	129	129	129	129	
48	46	59	67	79	79	88	84	96	96	105	96	111	105	120	111	127	118	129	122	129	129	129	129	129	129	129	129	129	129	129	129	129	129	
50	40	52	62	75	62	75	65	75	71	82	77	88	83	95	88	102	94	108	100	113	106	106	99	99	99	99	99	99	99	99	99	99	99	
52	40	52	66	80	66	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74
54	36	47	59	71	59	69	58	64	56	64	61	70	66	76	71	81	76	87	81	93	86	99	91	98	91	91	91	91	91	91	91	91	91	
56	47	59	75	88	69	75	65	75	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74	65	74
58	42	51	60	71	51	56	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58	47	58
60	42	51	60	71	42	51	60	71	42	51	60	71	42	51	60	71	42	51	60	71	42	51	60	71	42	51	60	71	42	51	60	71	42	51

TERMS:
Clear Span is horizontal distance from inside face of bearing surface to inside face of bearing surface.
Depth is out to out depth.

L/600 Δ column is Load that will cause L/600 Deflection.
For other deflection limits.
 L/180 Δ Load = L/600 Δ value x 3.3333
 L/240 Δ Load = L/600 Δ value x 2.5000
 L/360 Δ Load = L/600 Δ value x 1.6667
 L/480 Δ Load = L/600 Δ value x 1.2500

NOTES:
 1. Total loads shown in table are maximum possible. Trusses will be custom designed to loads specified for project (not maximum shown in this table).
 TL = Live (LL) + Dead (DL) + Part. (PL)

2. Deflection limits may control maximum load. Web Joist recommends the following deflection limits:
Residential:
 L/240 @ TL and/or L/360 @ LL (min.) or L/360 @ TL and/or L/480 @ LL (preferred)
Non-Residential:
 L/360 @ TL and/or L/480 @ LL (min.) or L/480 @ TL and/or L/600 @ LL (preferred)
 With plaster or gyp ceiling use L/360 @ LL.
 TL = Live (LL) + Dead (DL) (exclude Part. (PL))

3. Allowable Total Load (TL) may be reduced at top chord bearings if bearing pin to end of chord is less than 3.50". See Table 6 of ESR-2504 for allowable reaction with reduced pin to end length.

4. The load table is limited to simple-span and uniform load. The table may also be used for bottom chord bearing and/or for cantilevers at both or either ends which do not exceed 1/3 of the main span length. For other conditions, inquire through your Web Joist representative.

5. Straight line interpretation may be made between depths and spans indicated.

Prop.	Depth (D) (In.)														Prop.	
	14	16	18	20	22	24	26	28	30	32	34	36	38	40		
R	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	2,900.0	R
T	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	11,437.2	T
EI	1.2953E+09	1.7408E+09	2.2523E+09	2.8298E+09	3.4733E+09	4.1828E+09	4.9583E+09	5.7998E+09	6.7073E+09	7.6808E+09	8.7203E+09	9.8258E+09	1.0997E+10	1.2235E+10	1.2235E+10	EI
d	12.5000	14.5000	16.5000	18.5000	20.5000	22.5000	24.5000	26.5000	28.5000	30.5000	32.5000	34.5000	36.5000	38.5000	38.5000	d
W	4.9	5.0	5.0	5.1	5.1	5.1	5.2	5.2	5.2	5.3	5.3	5.4	5.4	5.4	5.4	W

E (psi) = 2.00E+06 I ((in.⁴)=I₁d²+I₂ I₁ = 4.125 I₂ = 3.094 d = Pin to Pin Depth (In.) = D - 1.500

R = Reaction (Lbs.) T = Tension (Lbs.) EI = MOE x I (Lbs.-in.²) W = Approx. Truss Weight (plf) xx 7% Repetive use increase allowed for Trusses at 24" or less o/c
 Load Tables for Web Joist Truss.xls

WJ24W