

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

Web Joist NW Corp.
Chehalis, WA ESR-2504

Clear Span (Ft.)	Depth																												Clear Span (Ft.)
	14"		16"		18"		20"		22"		24"		26"		28"		30"		32"		34"		36"		38"		40"		
	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	100% TL #/600 Δ	115% TL 125% TL	
14	413	413	416	416	430	430	403	403	391	391	377	377	363	363	348	348	334	334	320	320	307	307	295	295	283	283	272	272	14
16	352	379	379	379	379	379	379	379	375	375	363	363	351	351	338	338	325	325	313	313	301	301	289	289	278	278	268	268	16
18	278	320	323	339	339	339	339	339	339	339	339	339	339	339	328	328	317	317	306	306	294	294	284	284	273	273	263	263	18
20	226	260	262	301	298	307	307	307	307	307	307	307	307	307	307	307	307	307	299	299	288	288	278	278	269	269	259	259	20
22	187	215	217	249	247	280	276	280	280	280	280	280	280	280	280	280	280	280	280	280	280	280	273	273	264	264	255	255	22
24	157	180	182	209	207	238	232	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	257	251	251	24
26	134	154	155	179	177	203	198	228	220	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	238	26
28	115	133	134	154	152	175	171	197	189	218	208	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	222	28
30	100	116	117	134	133	153	149	171	165	190	181	207	197	207	207	207	207	207	207	207	207	207	207	207	207	207	207	207	30
32	88	102	102	118	117	134	131	151	145	167	159	183	173	195	188	195	195	195	195	195	195	195	195	195	195	195	195	195	32
34	78	90	91	104	103	119	116	133	128	148	141	162	154	177	166	183	179	183	183	183	183	183	183	183	183	183	183	183	34
36	70	80	81	93	92	106	103	119	115	132	126	145	137	158	148	171	159	174	171	174	174	174	174	174	174	174	174	174	36
38	62	69	73	84	83	95	93	107	103	118	113	130	123	141	133	153	143	165	153	165	163	165	165	165	165	165	165	165	38
40	56	59	65	75	75	86	84	96	93	107	102	117	111	128	120	138	129	149	138	157	147	157	156	157	157	157	157	157	40
42	51	59	68	68	78	76	87	84	97	92	106	101	116	109	125	117	135	125	144	134	149	142	149	149	149	149	149	149	42
44	44	59	62	71	69	80	77	88	84	97	92	105	99	114	107	123	114	131	122	140	129	143	137	143	143	143	143	44	
46	39	52	56	65	63	73	70	81	77	89	84	96	91	104	98	112	104	120	111	128	118	136	125	136	132	136	136	46	
48	46	46	59	58	67	64	74	71	81	77	89	83	96	90	103	96	110	102	118	109	125	115	131	121	131	131	131	48	
50	40	52	52	62	59	68	65	75	71	82	77	88	83	95	88	102	94	108	100	115	106	122	112	126	126	126	50		
52	40	47	57	55	63	60	69	66	75	71	82	76	88	82	94	87	100	92	105	98	113	103	119	119	119	119	52		
54	42	42	52	52	58	56	64	61	70	66	76	71	81	76	87	81	93	86	99	91	104	96	110	110	110	110	54		
56	47	47	54	54	60	56	65	61	70	66	76	70	81	75	86	80	92	84	97	89	102	95	106	111	111	111	56		
58	42	51	56	56	61	57	66	61	71	66	76	70	81	74	85	79	90	83	95	87	99	91	104	104	104	104	58		
60	47	52	57	57	62	58	67	62	72	67	77	71	82	75	86	79	91	84	96	88	100	92	104	104	104	104	60		

TERMS:
Clear Span is horizontal distance from inside face of bearing surface to inside face of bearing surface. Depth is out to out depth.
#/600 Δ column is PLF Load that will cause #/600 Deflection.
For other deflection limits.
#/180 Δ Load = #/600 Δ value x 3.3333
#/240 Δ Load = #/600 Δ value x 2.5000
#/360 Δ Load = #/600 Δ value x 1.6667
#/480 Δ Load = #/600 Δ value x 1.2500

LOADS (PSF):
D = Dead Load
L = Live Load Floor
S = Snow Load
Lr = Live Load Roof (≤20 PSF)
P = Partition Load (Include with L) * or Roof Live Load > 20 PSF
Total Load (TL) = D + (L or S or Lr)
TL (PLF) = TL (PSF) x o/c"/12
o/c" = On center spacing (In.)

Stress Level
100%
115%
125%

- 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).
2. Deflection limits may control maximum load. Web Joist recommends the following deflection limits:
ℓ = Span in inches
ΔL = Deflection Load (L or S or Lr) (exclude P in deflection limits)
Residential Floor:
#/240 @ TL and/or #/360 @ ΔL (min.) or #/360 @ TL and/or #/480 @ ΔL (preferred)
Non-Residential Floor:
#/360 @ TL and/or #/480 @ ΔL (min.) or #/480 @ TL and/or #/600 @ ΔL (preferred)
Roof:
#/180 @ TL and/or #/240 @ ΔL
With plaster or gyp ceiling use #/360 @ ΔL
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	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	3,212.0	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	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	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	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	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% Repetitive use increase allowed for Trusses at 24" or less o/c
2017 Load Tables for Web Joist Truss.xls WJ24W