

WJ21W 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	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	100% TL	115% TL	
14	362	362	362	362	362	362	362	362	362	362	362	362	362	362	348	348	334	334	320	320	307	307	295	295	283	283	272	272	14
16	288	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	319	313	313	301	301	289	289	278	278	268	268	16	
18	228	262	264	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	285	284	284	273	273	263	263	18
20	185	212	214	246	244	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	258	20	
22	153	176	177	204	202	232	226	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	235	22	
24	128	148	149	171	169	195	190	216	211	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	216	24	
26	109	126	127	146	144	166	162	186	180	200	197	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	26	
28	94	108	109	126	125	143	140	161	155	178	170	186	185	186	186	186	186	186	186	186	186	186	186	186	186	186	186	28	
30	82	94	95	110	108	125	122	140	135	155	148	170	161	174	174	174	174	174	174	174	174	174	174	174	174	174	174	30	
32	72	83	84	96	95	110	107	123	119	136	130	150	142	163	163	164	164	164	164	164	164	164	164	164	164	164	164	32	
34	64	73	74	85	84	97	95	109	105	121	115	133	126	145	136	154	146	154	154	154	154	154	154	154	154	154	154	34	
36	57	66	66	76	75	87	84	97	94	108	103	118	112	129	121	139	130	146	140	146	146	146	146	146	146	146	146	36	
38	59	59	68	68	78	76	87	84	97	92	106	101	116	109	125	117	135	125	138	134	138	138	138	138	138	138	138	38	
40	53	53	62	61	70	68	79	76	87	83	96	91	104	98	113	106	122	113	130	120	131	128	131	131	131	131	131	40	
42	46	46	56	55	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	125	116	125	125	125	125	125	42	
44	40	40	51	50	58	56	65	63	72	69	79	75	86	81	93	87	100	93	107	100	115	106	120	112	120	118	120	44	
46	35	35	46	45	53	51	59	57	66	63	72	69	79	74	85	80	92	85	98	91	105	97	111	102	115	108	115	46	
48	41	41	49	48	55	53	61	58	66	63	72	68	78	73	84	78	90	84	96	89	102	94	108	99	110	99	110	48	
50	36	36	45	44	50	48	56	54	61	58	67	63	72	67	78	72	83	77	89	82	94	87	100	91	105	97	106	50	
52	41	41	49	48	55	53	61	58	66	63	72	68	78	73	84	78	90	84	96	89	102	94	108	99	110	99	110	52	
54	37	37	45	44	50	48	56	54	61	58	67	63	72	67	78	72	83	77	89	82	94	87	100	91	105	97	106	54	
56	40	40	49	48	55	53	61	58	66	63	72	68	78	73	84	78	90	84	96	89	102	94	108	99	110	99	110	56	
58	41	41	49	48	55	53	61	58	66	63	72	68	78	73	84	78	90	84	96	89	102	94	108	99	110	99	110	58	
60	42	42	50	49	56	54	62	59	67	64	72	68	78	73	84	78	90	84	96	89	102	94	108	99	110	99	110	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):	Stress Level
D = Dead Load	
L = Live Load Floor	100%
S = Snow Load	115%
Lr = Live Load Roof (≤20 PSF)	125%

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.)

- 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	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	2,700.0	R
T	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	9,357.7	T
EI	1.1657E+09	1.5667E+09	2.0270E+09	2.5468E+09	3.1259E+09	3.7645E+09	4.4624E+09	5.2198E+09	6.0365E+09	6.9127E+09	7.8482E+09	8.8432E+09	9.8975E+09	1.1011E+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	4.6	4.7	4.7	4.7	4.8	4.8	4.9	4.9	4.9	5.0	5.0	5.1	5.1	5.1	W

E (psi) = 1.80E+06 I (In.<sup>4</sup>) = I<sub>1</sub>d<sup>2</sup>+I<sub>2</sub> I<sub>1</sub> = 4.125 I<sub>2</sub> = 3.094 d = Pin to Pin Depth (In.) = D - 1.500

R = Reaction (Lbs.) T = Tension (Lbs.) EI = MOE x I (Lbs.-In.<sup>2</sup>) 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 WJ21W