

WJ28 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	341	392	395	416	434	434	403	403	391	391	377	377	363	363	348	348	334	334	320	320	307	307	295	295	283	283	272	272	14
16	261	300	303	349	345	383	383	375	375	363	363	351	351	338	338	325	325	313	313	301	301	289	289	278	278	268	268	16	
18	207	238	240	276	273	314	306	342	339	342	342	342	340	340	328	328	317	317	306	306	294	294	284	284	273	273	263	263	18
20	167	193	194	224	221	254	248	285	275	310	302	310	310	310	310	310	309	309	299	299	288	288	278	278	269	269	259	259	20
22	138	159	161	185	183	210	205	236	227	262	250	283	272	283	283	283	283	283	283	283	283	283	273	273	264	264	255	255	22
24	116	134	135	155	154	177	172	198	191	220	210	241	228	260	247	260	260	260	260	260	260	260	260	260	260	260	251	251	24
26	99	114	115	132	131	151	147	169	163	187	179	206	195	224	211	240	227	240	240	240	240	240	240	240	240	240	240	240	26
28	85	98	99	114	113	130	127	146	140	162	154	177	168	193	182	209	195	224	209	224	223	224	224	224	224	224	224	224	28
30	74	86	86	99	98	113	110	127	122	141	134	155	146	168	158	182	170	196	182	209	194	209	206	209	209	209	209	209	30
32	65	75	76	87	86	99	97	112	108	124	118	136	129	148	139	160	150	172	160	184	171	196	181	197	192	197	197	197	32
34	58	67	67	77	77	88	86	99	95	110	105	120	114	131	123	142	133	153	142	163	151	174	161	185	170	185	179	185	34
36	59	60	69	68	79	77	88	85	98	93	107	102	117	110	126	118	136	127	146	135	155	143	165	152	174	160	175	36	
38	50	50	62	61	70	69	79	76	88	84	96	91	105	99	114	106	122	114	131	121	139	129	148	136	157	144	165	38	
40	43	43	56	55	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	40	
42	37	37	50	50	58	56	65	62	72	68	79	75	86	81	93	87	100	93	107	99	114	105	121	111	128	117	135	42	
44	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	44	
46	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	46	
48	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	48	
50	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	50	
52	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	52	
54	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	54	
56	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	56	
58	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	58	
60	43	43	56	56	64	62	71	69	79	75	87	82	95	89	102	96	110	103	118	109	126	116	133	123	141	130	149	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	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	3,243.0	R
T	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	8,490.2	T
EI	9.4789E+08	1.2739E+09	1.6482E+09	2.0709E+09	2.5418E+09	3.0610E+09	3.6285E+09	4.2444E+09	4.9085E+09	5.6209E+09	6.3816E+09	7.1907E+09	8.0480E+09	8.9536E+09	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	3.7	3.8	3.8	3.8	3.9	3.9	3.9	4.0	4.0	4.1	4.1	4.1	4.2	4.2	W

E (psi) = 2.30E+06 I (In.⁴) = I₁d²+I₂ I₁ = 2.625 I₂ = 1.969 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