WJ28W Truss - Allowable Uniform Load Table (PLF) / Parallel Chord

Clear Span (Ft.)	Depth 14"		16"		18"		20"		22"		24"		26"		28"		30"		32"		34"		36"		38"		40"		Clear Span (Ft.)
	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	100% TL L/600 Δ	115% TL 125% TL	
14	388	388	388	388	388	388	388	388	388	388	377	377	363	363	348	348	334	334	320	320	307	307	295	295	283	283	272	272	14
	467	388	628	388	812	388	1021	388	1253	388	1509	377	1789	363	2093	348	2420	334	2772	320	3147	307	3546	295	3969	283	4415	272	
16	342	342	342	342	342	342	342	342	342	342	342	342	342	342	338	338	325	325	313	313	301	301	289	289	278	278	268	268	16
	314	342	422	342	546	342	686	342	843	342	1015	342	1203	342	1407	338	1628	325	1864	313	2116	301	2385	289	2669	278	2970	268	
18	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	306	294	294	284	284	273	273	263	263	18
	221	306	297	306	385	306	483	306	593	306	715	306	847	306	991	306	1147	306	1313	306	1491	294	1680	284	1880	273	2092	263	
20	270	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	277	269	269	258	258	20
	161	277	217	277	281	277	353	277	434	277	522	277	619	277	724	277	838	277	959	277	1089	277	1227	277	1374	269	1529	258	
22	223	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	253	249	249	233	233	22
	121	253	163	253	211	253	266	253	326	253	393	253	466	253	545	253	631	253	722	253	820	253	924	253	1034	249	1151	233	
24	188	216	218	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	232	227	227	212	212	24
	94	232	126	232	163	232	205	232	252	232	303	232	359	232	421	232	486	232	557	232	633	232	713	232	798	227	888	212	
26	160	184	186	213	211	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	215	209	209	195	195	26
	74	200	99	215	128	215	161	215	198	215	239	215	283	215	331	215	383	215	439	215	498	215	561	215	628	209	699	195	
28	138	159	160	184	182	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	200	193	193	181	181	28
	59	172	79	200	103	200	129	200	159	200	191	200	227	200	265	200	307	200	352	200	399	200	450	200	504	193	560	181	
30	120	138	139	160	159	183	178	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	187	180	180	168	168	30
	48	150	64	174	84	187	105	187	129	187	156	187	184	187	216	187	250	187	286	187	325	187	366	187	410	180	456	168	
32	106	121	122	141	139	160	156	176	173	176	176	176	176	176	176	176	176	176	176	176	176	176	176	176	168	168	157	157	32
		132	53	153	69	174	87	176	106	176	128	176	152	176	178	176	206	176	236	176	268	176	302	176	338	168	376	157	
34	93	108	108	125	124	142	139	159	154	166	166	166	166	166	166	166	166	166	166	166	166	166	166	166	158	158	147	147	34
		110	44	136	57	155	72	166	89	166	107	166	127	166	148	166	172	166	197	166	223	166	252	166	282	158	314	147	
36	83	93	97	111	110	127	124	142	137	157	150	157	157	157	157	157	157	157	157	157	157	157	157	157	149	149	139	139	36
		93		121	48	138	61	155	75	157	90	157	107	157	125	157	145	157	166	157	188	157	212	157	237	149	264	139	
38	75	79	87	100	99	114	111	128	123	141	135	149	147	149	149	149	149	149	149	149	149	149	149	149	141	141	131	131	38
		79		106	41	124	52	139	63	149	77	149	91	149	106	149	123	149	141	149	160	149	180	149	202	141	225	131	
40	67	68	78	90	89	103	100	115	111	128	122	140	133	141	141	141	141	141	141	141	141	141	141	141	133	133	124	124	40
		68		91		112	44	125	54	139	66	141	78	141	91	141	105	141	121	141	137	141	155	141	173	133	193	124	
42	58	58	71	79	81	93	91	104	101	116	110	127	120	135	130	135	135	135	135	135	135	135	135	135	127	127	118	118	42
		58		79		101		114	47	126	57	135	67	135	79	135	91	135	104	135	119	135	134	135	150	127	167	118	
44		51	65	68	74	85	83	95	92	105	101	116	110	126	119	129	128	129	129	129	129	129	129	129	121	121	113	113	44
		51		68		89		103	41	115	49	126	58	129	68	129	79	129	91	129	103	129	116	129	130	121	145	113	
46		44	59	60	67	78	76	87	84	96	92	106	100	115	109	123	117	123	123	123	123	123	123	123	115	115	108	108	46
		44		60		78		95		105	43	115	51	123	60	123	69	123	79	123	90	123	102	123	114	115	127	108	
48				53	62	68	69	80	77	89	85	97	92	106	100	115	107	118	115	118	118	118	118	118	110	110	103	103	48
		39		53		68		86		96		106	45	115	53	118	61	118	70	118	79	118	89	118	100	110	112	103	
50				47	57	60	64	74	71	82	78	90	85	98	92	106	99	113	106	113	113	113	113	113	106	106	99	99	50
				47		60		76		89		97	40	106	47	113	54	113	62	113	70	113	79	113	89	106	99	99	
52				41		54	59	67	66	75	72	83	78	90	85	98	91	105	98	109	104	109	109	109	102	102	95	95	52
				41		54		67		82		90		98	41	106	48	109	55	109	62	109	70	109	79	102	88	95	
54						48	55	60	61	70	67	77	73	84	79	91	85	97	91	104	97	105	103	104	98	98	91	91	54
				37		48		60		74		84		91		98	43	105	49	105	56	105	63	104	70	98	78	91	
56						43		54	56	65	62	71	68	78	73	84	79	91	84	97	90	101	95	101	94	94	88	88	56
						43		54		66		78		85		92		98	44	101	50	101	56	101	63	94	70	88	
58								49		60	58	67	63	72	68	78	73	84	78	90	84	96	89	97	91	91	85	85	58
					39			49		60		72		79		85		92		98	45	98	51	97	57	91	63	85	
60								44		54		62	59	68	64	73	68	79	73	84	78	90	83	94	88	88	82	82	60
					35			44		54		65		74		80		86		92	40	95	46	94	51	88	57	82	

Allowable Properties @ 100%

Prop.	Depth (D) (In.) 14	16	18	20	22	24	26	28	30	32	34	36	38	40	Prop.
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	R
T	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	13,665.2	T
EI	1.4895E+09	2.0019E+09	2.5901E+09	3.2542E+09	3.9942E+09	4.8102E+09	5.7020E+09	6.6697E+09	7.7133E+09	8.8329E+09	1.0028E+10	1.1300E+10	1.2647E+10	1.4070E+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	5.2	5.3	5.3	5.3	5.4	5.4	5.5	5.5	5.5	5.6	5.6	5.7	5.7	5.7	W

E (psi) = 2.30E+06 $I\ (In.^4)=I_1 d^2+I_2$ I_1 = 4.125 I_2 = 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

TERMS:

Clear Span is horizontal distance from indide 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 representive.

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