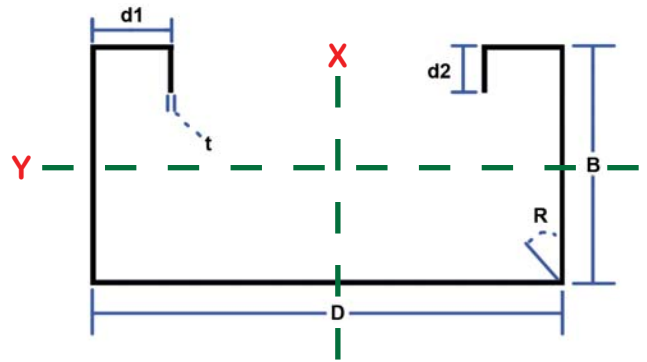


Floor Systems

PrimeJoist® Product Profile

Important Notes

1. Calculated properties are based on AISI S100-12, "North American Specification for the Design of Cold-Formed Steel Structural Members."
2. Effective properties incorporate the strength increase from the cold-work of forming as applicable per AISI A7.2.
3. Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
4. Allowable moment is the lesser of M_{ai} and M_{ad} . Stud distortional buckling is based on an assumed $k_{\phi} = 0$.
5. For deflection calculations, use the effective moment of inertia.
6. The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable moment. AISI S100-12 Specification Procedure I for serviceability determination has been used. Increases in the effective moment of Inertia (I_{xe}) may be possible at lower stress levels. Any modified values would be required to be calculated by a qualified engineer.



PrimeJoist® Section Dimensions

Section (All Studs 50ksi)	Overall Depth	Flange Width	Return Lip 1	Return Lip 2	Inside Bend Radius	Design Thickness	Unit Weight (lbs/ft)
	D (in)	B (in)	d1 (in)	d2 (in)	R (in)	t (in)	
600PJ250-33	6	2.5	0.589	0.5	0.105	0.0346	1.49
600PJ250-43	6	2.5	0.610	0.5	0.105	0.0451	1.94
600PJ250-54	6	2.5	0.633	0.5	0.105	0.0566	2.42
600PJ250-68	6	2.5	0.663	0.5	0.105	0.0713	3.04
600PJ250-97	6	2.5	0.723	0.5	0.105	0.1017	4.30
600PJ250-118	6	2.5	0.768	0.5	0.105	0.1242	5.22
600PJ350-68	6	3.5	0.663	0.5	0.105	0.0713	3.53
600PJ350-97	6	3.5	0.723	0.5	0.105	0.1017	5.00
600PJ350-118	6	3.5	0.768	0.5	0.105	0.1242	6.06
800PJ250-43	8	2.5	0.610	0.5	0.105	0.0451	2.24
800PJ250-54	8	2.5	0.633	0.5	0.105	0.0566	2.81
800PJ250-68	8	2.5	0.663	0.5	0.105	0.0713	3.53
800PJ250-97	8	2.5	0.723	0.5	0.105	0.1017	5.00
800PJ250-118	8	2.5	0.768	0.5	0.105	0.1242	6.06
800PJ350-68	8	3.5	0.663	0.5	0.105	0.0713	4.01
800PJ350-97	8	3.5	0.723	0.5	0.105	0.1017	5.69
800PJ350-118	8	3.5	0.768	0.5	0.105	0.1242	6.90
1000PJ250-43	10	2.5	0.610	0.5	0.105	0.0451	2.55
1000PJ250-54	10	2.5	0.633	0.5	0.105	0.0566	3.19
1000PJ250-68	10	2.5	0.663	0.5	0.105	0.0713	4.01
1000PJ250-97	10	2.5	0.723	0.5	0.105	0.1017	5.69
1000PJ250-118	10	2.5	0.768	0.5	0.105	0.1242	6.90
1000PJ350-68	10	3.5	0.663	0.5	0.105	0.0713	4.50
1000PJ350-97	10	3.5	0.723	0.5	0.105	0.1017	6.38
1000PJ350-118	10	3.5	0.768	0.5	0.105	0.1242	7.75
1200PJ250-54	12	2.5	0.633	0.5	0.105	0.0566	3.58
1200PJ250-68	12	2.5	0.663	0.5	0.105	0.0713	4.50
1200PJ250-97	12	2.5	0.723	0.5	0.105	0.1017	6.38
1200PJ250-118	12	2.5	0.768	0.5	0.105	0.1242	7.75
1200PJ350-68	12	3.5	0.663	0.5	0.105	0.0713	4.98
1200PJ350-97	12	3.5	0.723	0.5	0.105	0.1017	7.07
1200PJ350-118	12	3.5	0.768	0.5	0.105	0.1242	8.59
1400PJ250-54	14	2.5	0.633	0.5	0.105	0.0566	3.96
1400PJ250-68	14	2.5	0.663	0.5	0.105	0.0713	4.98
1400PJ250-97	14	2.5	0.723	0.5	0.105	0.1017	7.07
1400PJ250-118	14	2.5	0.768	0.5	0.105	0.1242	8.59
1400PJ350-68	14	3.5	0.663	0.5	0.105	0.0713	5.47
1400PJ350-97	14	3.5	0.723	0.5	0.105	0.1017	7.76
1400PJ350-118	14	3.5	0.768	0.5	0.105	0.1242	9.44
1600PJ250-68	16	2.5	0.663	0.5	0.105	0.0713	5.47
1600PJ250-97	16	2.5	0.723	0.5	0.105	0.1017	7.76
1600PJ250-118	16	2.5	0.768	0.5	0.105	0.1242	9.44

Material Properties

ASTM A1003/A1003M or ASTM A653/A653M, Grade 50 (340), 50ksi (340MPa) minimum yield strength, 65ksi (450 MPa) minimum tensile strength, G-60 (Z180) hot-dipped galvanized coating.

Important Notes

1. Calculated properties are based on AISI S100-12, "North American Specification for the Design of Cold-Formed Steel Structural Members."
2. Effective properties incorporate the strength increase from the cold-work of forming as applicable per AISI A7.2.
3. Tabulated gross properties are based on the full-unreduced cross section of the studs, away from punchouts.
4. Allowable moment is the lesser of M_{al} and M_{ad} . Stud distortional buckling is based on an assumed $k_{\phi} = 0$.
5. For deflection calculations, use the effective moment of inertia.
6. The effective moment of inertia for deflection is calculated at a stress which results in a section modulus such that the stress times the section modulus at that stress is equal to the allowable moment. AISI S100-12 Specification Procedure I for serviceability determination has been used. Increases in the effective moment of Inertia (I_{xe}) may be possible at lower stress levels. Any modified values would be required to be calculated by a qualified engineer.

Section (All 50 ksi)	Gross Properties						Effective Properties						Torsional Properties						L_u (in)
	Area (in ²)	I_x (in ⁴)	S_x (in ³)	R_x (in)	I_y (in ⁴)	R_y (in)	I_{xe} (in ⁴)	S_{xe} (in ³)	M_{al} (kips-in)	M_{ad} (kips-in)	V_{ag} (lbs)	$V_{a(net)}$ (lbs)	$Jx10^3$ (in ⁴)	C_w (in ⁶)	X_o (in)	m (in)	R_o (in)	β	
600PJ250-33 ²	0.438	2.522	0.841	2.400	0.402	0.958							0.175	3.209	-2.094	1.269	3.326	0.604	53.3
600PJ250-43	0.569	3.261	1.087	2.394	0.519	0.955	3.239	0.919	27.50	23.66	1,432	1,235	0.386	4.150	-2.088	1.266	3.317	0.604	53.3
600PJ250-54	0.712	4.058	1.353	2.387	0.644	0.951	4.058	1.174	35.14	32.38	2,843	1,942	0.760	5.163	-2.082	1.263	3.307	0.604	53.4
600PJ250-68	0.894	5.055	1.685	2.378	0.801	0.947	5.055	1.526	45.68	44.25	5,350	2,882	1.514	6.431	-2.074	1.259	3.295	0.604	53.5
600PJ250-97 ³	1.265	7.047	2.349	2.361	1.111	0.937	7.047	2.305	77.07	76.03	10,653	3,964	4.360	8.956	-2.058	1.250	3.269	0.604	53.8
600PJ250-118 ³	1.533	8.447	2.816	2.348	1.327	0.930	8.447	2.816	95.91	95.91	12,905	3,888	7.855	10.726	-2.045	1.244	3.250	0.604	54.1
600PJ350-68	1.036	6.309	2.103	2.467	1.799	1.318	6.023	1.628	48.76	47.85	5,350	2,882	1.756	14.285	-3.006	1.771	4.106	0.464	71.5
600PJ350-97	1.468	8.816	2.939	2.451	2.513	1.308	8.729	2.534	75.86	77.71	10,653	3,964	5.061	20.020	-2.990	1.763	4.081	0.463	72.0
600PJ350-118	1.781	10.588	3.529	2.438	3.017	1.302	10.588	3.341	100.02	100.89	12,905	3,888	9.127	24.090	-2.978	1.757	4.063	0.463	72.5
800PJ250-43	0.659	6.378	1.595	3.110	0.572	0.931	6.368	1.225	36.66	32.25	1,060	1,060	0.447	7.513	-1.869	1.159	3.746	0.751	52.3
800PJ250-54	0.825	7.949	1.987	3.103	0.710	0.927	7.949	1.700	50.89	44.46	2,102	2,102	0.881	9.340	-1.862	1.156	3.736	0.752	52.2
800PJ250-68	1.036	9.923	2.481	3.095	0.883	0.923	9.923	2.260	67.68	61.31	4,219	3,368	1.756	11.624	-1.854	1.151	3.724	0.752	52.2
800PJ250-97 ³	1.468	13.893	3.473	3.076	1.225	0.914	13.893	3.409	113.95	106.91	10,885	6,032	5.061	16.161	-1.838	1.142	3.698	0.753	52.2
800PJ250-118 ³	1.781	16.707	4.177	3.063	1.464	0.907	16.707	4.177	142.27	140.45	16,235	7,312	9.127	19.330	-1.825	1.136	3.679	0.754	52.3
800PJ350-68	1.179	12.165	3.041	3.212	1.990	1.299	11.749	2.406	72.03	65.37	4,219	3,368	1.998	25.787	-2.733	1.648	4.413	0.616	70.5
800PJ350-97	1.671	17.065	4.266	3.195	2.782	1.290	16.927	3.711	111.11	107.52	10,885	6,032	5.762	36.082	-2.717	1.640	4.388	0.617	70.7
800PJ350-118	2.029	20.553	5.138	3.183	3.341	1.283	20.553	4.870	145.82	140.85	16,235	7,312	10.398	43.367	-2.705	1.633	4.370	0.617	70.9
1000PJ250-43 ¹	0.750	10.814	2.163	3.798	0.611	0.903	10.814	1.532	45.86	40.54	842	842	0.508	12.166	-1.696	1.072	4.257	0.841	51.5
1000PJ250-54	0.939	13.490	2.698	3.791	0.760	0.900	13.490	2.106	63.06	56.25	1,668	1,668	1.002	15.121	-1.690	1.068	4.247	0.842	51.4
1000PJ250-68	1.179	16.864	3.373	3.782	0.945	0.895	16.864	3.055	91.46	78.17	3,344	3,344	1.998	18.812	-1.682	1.064	4.235	0.842	51.3
1000PJ250-97 ³	1.671	23.674	4.735	3.764	1.312	0.886	23.674	4.649	155.43	138.05	9,766	7,190	5.762	26.138	-1.666	1.055	4.210	0.843	51.2
1000PJ250-118 ³	2.029	28.529	5.706	3.750	1.568	0.879	28.529	5.706	194.34	183.17	16,235	9,733	10.398	31.250	-1.653	1.048	4.192	0.844	51.1
1000PJ350-68	1.321	20.378	4.076	3.927	2.140	1.273	19.895	3.095	92.66	83.08	3,344	3,344	2.239	41.705	-2.513	1.545	4.833	0.730	69.9
1000PJ350-97	1.875	28.656	5.731	3.910	2.993	1.263	28.567	5.030	150.59	138.04	9,766	7,190	6.463	58.323	-2.497	1.536	4.808	0.730	69.9
1000PJ350-118	2.277	34.576	6.915	3.897	3.595	1.257	34.576	6.570	196.71	182.15	16,235	9,733	11.669	70.072	-2.485	1.530	4.790	0.731	69.9
1200PJ250-54 ¹	1.052	20.909	3.485	4.459	0.799	0.871	19.920	2.417	72.37	67.25	1,382	1,382	1.123	22.624	-1.550	0.995	4.800	0.896	50.6
1200PJ250-68	1.321	26.162	4.360	4.449	0.993	0.867	25.400	3.342	100.05	94.15	2,770	2,770	2.239	28.143	-1.542	0.991	4.788	0.896	50.5
1200PJ250-97	1.875	36.799	6.133	4.430	1.379	0.858	36.661	5.692	170.41	156.46	8,080	7,420	6.463	39.093	-1.526	0.981	4.764	0.897	50.3
1200PJ250-118	2.277	44.407	7.401	4.416	1.649	0.851	44.407	7.192	215.32	206.07	14,774	11,060	11.669	46.730	-1.514	0.974	4.746	0.898	50.2
1200PJ350-68	1.464	31.235	5.206	4.619	2.261	1.243	30.647	3.689	110.45	100.55	2,770	2,770	2.481	62.405	-2.330	1.456	5.320	0.808	69.3
1200PJ350-97	2.078	43.997	7.333	4.601	3.162	1.234	43.997	6.488	194.25	168.62	8,080	7,420	7.165	87.257	-2.314	1.447	5.296	0.809	69.2
1200PJ350-118	2.525	53.152	8.859	4.588	3.799	1.227	53.152	8.439	252.66	223.92	14,774	11,060	12.940	104.824	-2.301	1.440	5.278	0.810	69.1
1400PJ250-54 ¹	1.165	30.431	4.347	5.111	0.830	0.844	28.394	2.847	85.24	77.15	1,180	1,180	1.244	31.939	-1.433	0.932	5.375	0.929	49.9
1400PJ250-68	1.464	38.104	5.443	5.102	1.032	0.840	36.334	3.948	118.21	108.77	2,364	2,364	2.481	39.728	-1.425	0.928	5.363	0.929	49.7
1400PJ250-97	2.078	53.672	7.667	5.082	1.434	0.831	52.784	6.793	203.38	183.22	6,891	6,891	7.165	55.181	-1.410	0.918	5.339	0.930	49.5
1400PJ250-118	2.525	64.839	9.263	5.068	1.714	0.824	64.835	8.651	259.03	243.57	12,592	11,304	12.940	65.960	-1.398	0.912	5.321	0.931	49.3
1400PJ350-68	1.607	45.020	6.431	5.293	2.360	1.212	44.368	4.287	128.34	117.37	2,364	2,364	2.723	88.183	-2.174	1.378	5.850	0.862	68.7
1400PJ350-97	2.282	63.495	9.071	5.275	3.301	1.203	63.495	7.930	237.41	198.55	6,891	6,891	7.866	123.298	-2.158	1.369	5.825	0.863	68.5
1400PJ350-118	2.773	76.777	10.968	5.262	3.967	1.196	76.777	10.475	313.63	265.25	12,592	11,304	14.211	148.120	-2.146	1.362	5.807	0.863	68.4
1600PJ250-68 ¹	1.607	52.973	6.622	5.742	1.065	0.814	49.610	4.553	136.33	121.82	2,062	2,062	2.723	53.658	-1.326	0.873	5.949	0.950	49.0
1600PJ250-97	2.282	74.702	9.338	5.722	1.478	0.805	72.453	7.893	236.32	207.81	6,007	6,007	7.866	74.527	-1.311	0.864	5.925	0.951	48.7
1600PJ250-118	2.773	90.321	11.290	5.707	1.767	0.798	89.314	10.113	302.79	278.66	10,972	10,972	14.211	89.083	-1.300	0.857	5.908	0.952	48.4

¹Web-height-to-thickness ratio exceeds 200. Web stiffeners are required at all support points and concentric loads. Suitability of web holes must be evaluated independently.
²When web-height-to-thickness ratio exceeds 260, or flange-width-to-thickness ratio exceeds 60, effective properties are not calculated (limitations in AISI Section B1).
³Allowable moment includes cold-work of forming.