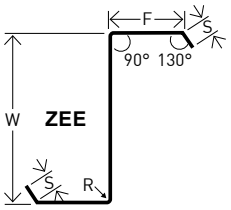
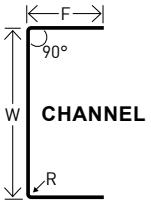
Purlins and EZ-Form® Structural Sections

AEP Span is your source for steel components in the solar mounting, residential framing and pre-engineered metal building markets. We offer a broad range of light gauge steel components to meet your project needs.

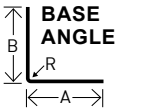
- Broad range of manufacturing capabilities that encompass several variations in part sizes and punching locations.
- Optimum versatility in custom requested punch patterns and punch placements on web and flange areas.
- Large selection of standard punch shapes and sizes.
- Proven quality & performance – approved fabricator certification and listings with LA City and Clark County, NV and Phoenix, AZ for welded fabrication, 3rd party-quality system-certified and CA DSA Approved.
- Manufactured in Fontana, CA.



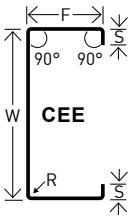
ZEE SECTION CAPABILITIES
Web Height (W): 4" min - 20" max
Flange Size (F): 1⅝" min - 4½" max
Inside Bend Radius (R): 0.188" typ.
Stiffener Lip Length (S): ¾" max lip with 1⅝" flange, 1¼" max lip with 2" or greater flange.
(Maximum stiffener lip length determined by flange width.)
Steel Thickness: 0.047" (18ga) min to 0.135" (10ga)



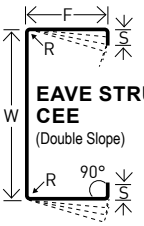
CHANNEL CAPABILITIES
Web Height (W): 4" min - 20" max
Inside Bend Radius (R): 0.188" typ.
Flange Size (F): 1⅝" min - 4½" max
Steel Thickness: 0.047" (18ga) min to 0.135" (10ga)

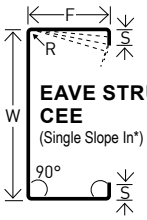


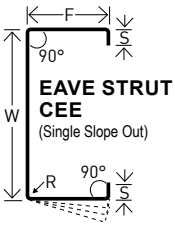
BASE ANGLE CAPABILITIES
Web Size (A): 2" min - 5" max
Leg Size (B): 2" min - 5" max
Inside Bend Radius (R): 0.188" typ.
Steel Thickness: 0.047" (18ga) min to 0.135" (10ga)



CEE SECTION CAPABILITIES
Web Height (W): 4" min - 20" max
Flange Size (F): 1⅝" min - 5" max
Inside Bend Radius (R): 0.188" typ.
Stiffener Lip Length (S): ⅝" max lip with 1⅝" flange, 1¼" max lip with 3" or greater flange.
(Maximum stiffener lip length determined by flange width.)
Steel Thickness: 0.047" (18ga) min to 0.135" (10ga)





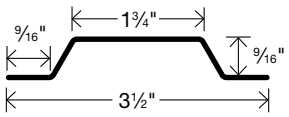


EAVE STRUT CEE CAPABILITIES
Slope: 1:12 - 4:12
Web Height (W): 8" min - 14" max
Flange Size (F): 2½" min to 5" max
Inside Bend Radius (R): 0.188"
Stiffener Lip Length (S): ⅞"
Steel Thickness: 0.047" (18ga) min to 0.135" (10ga)
*Note: On Single Slope In Eave Strut 8" web not available in 3:12 or 4:12 slope.

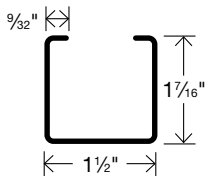
EZ-FORM® STRUCTURAL SECTIONS (Length 20'-0")

EZ-Form structural sections are light gauge framing solution for maximum design flexibility and ease of installation.

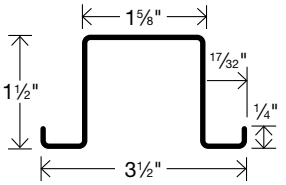
- Nestable hats and channels can be joined without a separate clip angle, increasing speed and reducing cost of on-site fabrication.
- Cost effective alternative to structural steel or wood framing.
- Precision roll formed in twenty foot lengths.
- Hot-dipped galvanized conforming to ASTM A-653, G-60 minimum.



SUB-GIRT
18ga

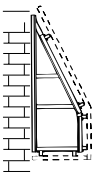


CHANNEL
18ga

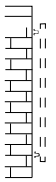


HAT
22ga

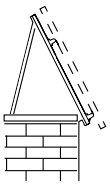
Common Applications



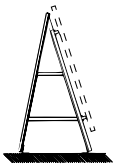
Transitional Mansard



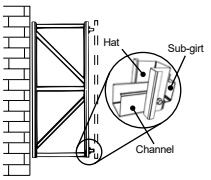
Rainscreen Furring



Roof Overhang

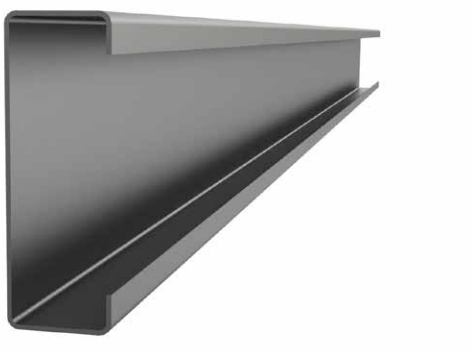


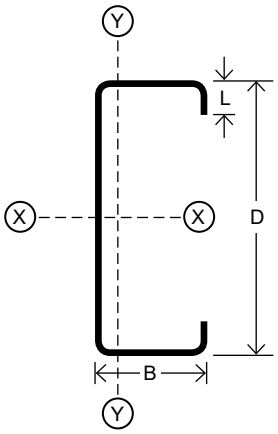
Equipment Screen



Vertical Fascia

Section Properties





Cee Purlins

Physical Properties						Gross Properties							Effective Properties			Torsional Properties		
						X-X Axis			Y-Y Axis									
D (web)	B (flange)	Ga. (nom)	L (lip)	Weight	Area	Ix	Sx	Rx	Iy	Sy_L	Sy_R	Ry	Ae	Ixe	Sxe	J (x10^{-3})	Cw	Xo
(in)	(in)		(in)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(in^3)	(in)	(in^2)	(in^4)	(in^3)	(in^4)	(in^6)	(in)
4	2.25	12	1.17	3.57	1.050	2.533	1.267	1.553	0.827	0.874	0.634	0.887	1.032	2.533	1.267	3.859	4.596	-2.203
		14	1.08	2.38	0.700	1.744	0.872	1.578	0.560	0.606	0.423	0.895	0.600	1.712	0.846	1.143	2.953	-2.190
		16	1.05	2.01	0.590	1.484	0.742	1.586	0.475	0.517	0.356	0.897	0.460	1.417	0.688	0.685	2.460	-2.186
4	2.5	12	0.92	3.57	1.050	2.684	1.342	1.599	0.952	0.961	0.630	0.952	1.032	2.684	1.342	3.859	4.173	-2.277
		14	0.83	2.38	0.700	1.841	0.920	1.622	0.640	0.663	0.417	0.956	0.559	1.750	0.842	1.143	2.677	-2.256
		16	0.81	2.01	0.590	1.565	0.782	1.629	0.541	0.565	0.351	0.958	0.435	1.446	0.684	0.685	2.231	-2.250
5	2	12	0.92	3.57	1.050	3.893	1.557	1.925	0.608	0.869	0.468	0.761	0.960	3.893	1.557	3.859	3.685	-1.662
		14	0.83	2.38	0.700	2.656	1.062	1.948	0.410	0.605	0.310	0.765	0.569	2.656	1.062	1.143	2.406	-1.647
		16	0.81	2.01	0.590	2.255	0.902	1.955	0.347	0.517	0.261	0.767	0.451	2.236	0.899	0.685	2.015	-1.643
5	2.125	12	0.79	3.57	1.050	3.979	1.592	1.947	0.656	0.914	0.466	0.790	0.960	3.979	1.592	3.859	3.647	-1.692
		14	0.71	2.38	0.700	2.710	1.084	1.968	0.440	0.634	0.307	0.793	0.545	2.658	1.047	1.143	2.377	-1.675
		16	0.68	2.01	0.590	2.299	0.920	1.974	0.371	0.541	0.258	0.793	0.406	2.175	0.838	0.685	1.990	-1.669
6	2.25	12	1.17	4.28	1.260	6.683	2.228	2.303	0.967	1.212	0.665	0.876	1.086	6.683	2.228	4.631	8.910	-1.926
		14	1.08	2.86	0.840	4.546	1.515	2.326	0.653	0.841	0.443	0.881	0.616	4.469	1.474	1.372	5.848	-1.913
		16	1.05	2.41	0.708	3.855	1.285	2.334	0.552	0.717	0.373	0.883	0.469	3.687	1.195	0.822	4.904	-1.909
6	2.5	12	0.92	4.28	1.260	6.937	2.313	2.347	1.106	1.326	0.664	0.937	1.086	6.937	2.313	4.631	8.840	-1.992
		14	0.83	2.86	0.840	4.707	1.569	2.367	0.741	0.914	0.439	0.940	0.574	4.467	1.436	1.372	5.787	-1.974
		16	0.80	2.41	0.708	3.989	1.330	2.374	0.626	0.779	0.369	0.940	0.444	3.695	1.172	0.822	4.848	-1.968
7	2	12	0.92	4.28	1.260	8.735	2.496	2.633	0.682	1.151	0.484	0.736	0.995	8.735	2.496	4.631	7.166	-1.448
		14	0.83	2.86	0.840	5.913	1.689	2.653	0.458	0.803	0.321	0.739	0.579	5.913	1.689	1.372	4.738	-1.437
		16	0.80	2.41	0.708	5.006	1.430	2.659	0.387	0.687	0.270	0.740	0.457	4.969	1.414	0.822	3.981	-1.433
7	2.125	12	0.79	4.28	1.260	8.863	2.532	2.652	0.733	1.209	0.483	0.763	0.995	8.863	2.532	4.631	7.304	-1.478
		14	0.71	2.86	0.840	5.992	1.712	2.671	0.491	0.840	0.318	0.764	0.555	5.871	1.654	1.372	4.816	-1.463
		16	0.68	2.41	0.708	5.072	1.449	2.677	0.414	0.717	0.267	0.765	0.412	4.807	1.329	0.822	4.043	-1.458
7	3	10	0.99	6.43	1.890	14.262	4.075	2.747	2.318	2.351	1.151	1.108	1.670	14.262	4.075	11.482	24.205	-2.332
		12	0.92	5.00	1.470	11.231	3.209	2.764	1.808	1.872	0.889	1.109	1.138	10.936	3.061	5.402	18.568	-2.316
		14	0.83	3.33	0.980	7.593	2.170	2.784	1.208	1.284	0.587	1.111	0.588	6.866	1.841	1.601	12.185	-2.297
		16	0.80	2.81	0.826	6.428	1.836	2.790	1.102	1.091	0.493	1.111	0.456	5.693	1.510	0.958	10.217	-2.290
8	2.25	12	1.17	5.00	1.470	13.353	3.338	3.014	1.067	1.544	0.684	0.852	1.110	13.353	3.338	5.402	15.435	-1.712
		14	1.08	3.33	0.980	9.028	2.257	3.035	0.719	1.072	0.455	0.856	0.623	8.874	2.196	1.601	10.229	-1.702
		16	1.05	2.81	0.826	7.642	1.911	3.042	0.608	0.915	0.383	0.858	0.473	7.320	1.784	0.958	8.602	-1.699
8	2.5	10	0.99	6.43	1.890	17.438	4.360	3.038	1.557	2.100	0.885	0.908	1.557	17.438	4.360	11.482	20.720	-1.788
		12	0.92	5.00	1.470	13.711	3.428	3.054	1.216	1.683	0.684	0.910	1.110	13.711	3.428	5.402	15.985	-1.776
		14	0.83	3.33	0.980	9.254	2.313	3.073	0.814	1.162	0.452	0.911	0.581	8.792	2.128	1.601	10.552	-1.762
		16	0.80	2.81	0.80	7.829	1.957	3.079	0.686	0.991	0.380	0.912	0.449	7.241	1.725	0.958	8.863	-1.757
8.5	2.5	10	0.74	6.43	1.890	19.398	4.564	3.204	1.381	2.102	0.749	0.855	1.499	19.398	4.564	11.482	19.025	-1.586
		12	0.67	5.00	1.470	15.220	3.581	3.218	1.073	1.684	0.576	0.854	1.015	14.827	3.431	5.402	14.665	-1.572
		14	0.58	3.33	0.980	10.246	2.411	3.233	0.713	1.162	0.378	0.853	0.525	9.451	2.124	1.601	9.670	-1.555

Cee Purlins

Physical Properties						Gross Properties							Effective Properties			Torsional Properties		
						X-X Axis			Y-Y Axis									
D (web)	B (flange)	Ga. (nom)	L (lip)	Weight	Area	Ix	Sx	Rx	Iy	Sy_L	Sy_R	Ry	Ae	Ixe	Sxe	J ($x10^{-3}$)	Cw	Xo
(in)	(in)		(in)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(in^3)	(in)	(in^2)	(in^4)	(in^3)	(in^4)	(in^6)	(in)
		16	0.55	2.81	0.826	8.661	2.038	3.238	0.600	0.990	0.317	0.852	0.397	7.523	1.623	0.958	8.120	-1.550
8	2.75	12	1.17	5.36	1.575	14.989	3.747	3.085	1.711	1.955	0.913	1.042	1.215	14.989	3.747	5.788	24.479	-2.147
		14	1.08	3.57	1.050	10.128	2.532	3.106	1.149	1.346	0.606	1.046	0.668	9.775	2.392	1.715	16.149	-2.134
		16	1.05	3.01	0.885	8.572	2.143	3.112	0.970	1.146	0.510	1.047	0.504	7.991	1.914	1.027	13.563	-2.129
8	3.5	10	0.99	7.34	2.160	21.614	5.404	3.163	3.531	3.161	1.482	1.279	1.726	20.985	5.131	13.122	46.076	-2.654
		12	0.92	5.71	1.680	16.984	4.246	3.180	2.749	2.509	1.143	1.279	1.142	15.796	3.764	6.174	35.410	-2.637
		14	0.83	3.81	1.120	11.455	2.864	3.198	1.833	1.712	0.755	1.279	0.602	9.966	2.291	1.829	23.288	-2.616
		16	0.80	3.21	0.944	9.689	2.422	3.204	1.545	1.454	0.634	1.279	0.463	7.983	1.768	1.095	19.541	-2.609
8	4	12	0.92	6.07	1.785	18.620	4.655	3.230	3.807	2.943	1.407	1.460	1.156	16.645	3.873	6.560	48.741	-3.080
		14	0.83	4.05	1.190	12.555	3.139	3.248	2.537	2.002	0.929	1.460	0.607	10.466	2.348	1.944	32.035	-3.057
9	2.25	12	1.17	5.36	1.575	17.764	3.948	3.358	1.107	1.707	0.691	0.838	1.118	17.764	3.948	5.788	19.601	-1.624
		14	1.08	3.57	1.050	11.986	2.664	3.379	0.745	1.186	0.459	0.842	0.625	11.783	2.592	1.715	13.026	-1.615
		16	1.05	3.01	0.885	10.140	2.253	3.385	0.630	1.013	0.387	0.844	0.475	9.472	2.009	1.027	10.964	-1.612
9	2.75	12	1.17	5.71	1.680	19.841	4.409	3.437	1.778	2.158	0.923	1.029	1.223	19.841	4.409	6.174	31.084	-2.046
		14	1.08	3.81	1.120	13.382	2.974	3.457	1.193	1.487	0.612	1.032	0.670	12.925	2.814	1.829	20.565	-2.033
9	3	10	0.99	7.34	2.160	25.803	5.734	3.456	2.518	2.890	1.183	1.080	1.709	25.803	5.734	13.122	40.985	-2.113
		12	0.92	5.71	1.680	20.252	4.500	3.472	1.962	2.304	0.913	1.081	1.156	19.706	4.297	6.174	31.610	-2.099
		14	0.83	3.81	1.120	13.640	3.031	3.490	1.309	1.581	0.603	1.081	0.593	12.381	2.597	1.829	20.865	-2.083
		16	0.80	3.21	0.944	11.532	2.563	3.495	1.103	1.345	0.506	1.081	0.459	9.820	1.965	1.095	17.527	-2.077
10	2.25	10	1.24	7.34	2.160	29.252	5.850	3.680	1.455	2.317	0.897	0.821	1.588	29.252	5.850	13.122	31.383	-1.552
		12	1.17	5.71	1.680	22.963	4.593	3.697	1.142	1.868	0.697	0.824	1.125	22.655	4.461	6.174	24.399	-1.546
		14	1.08	3.81	1.120	15.470	3.094	3.717	0.768	1.300	0.463	0.828	0.627	14.373	2.681	1.829	16.247	-1.537
		16	1.06	3.21	0.944	13.081	2.616	3.723	0.649	1.110	0.390	0.829	0.476	11.545	2.077	1.095	13.684	-1.535
10	2.5	10	0.99	7.34	2.160	29.875	5.975	3.719	1.665	2.533	0.903	0.878	1.588	29.875	5.975	13.122	33.409	-1.617
		12	0.92	5.71	1.680	23.425	4.685	3.734	1.299	2.033	0.698	0.879	1.125	23.425	4.685	6.174	25.870	-1.607
		14	0.83	3.81	1.120	15.760	3.152	3.751	0.868	1.407	1.407	0.880	0.585	14.767	2.831	1.829	17.148	-1.594
		16	0.81	3.21	0.944	13.320	2.664	3.757	0.732	1.200	0.387	0.881	0.451	11.674	2.130	1.095	14.422	-1.590
10	3.25	10	1.24	8.26	2.430	35.821	7.164	3.839	3.503	3.596	1.539	1.201	1.858	35.821	7.164	14.763	73.697	-2.386
		12	1.17	6.43	1.890	28.104	5.621	3.856	2.734	2.862	1.191	1.203	1.298	27.873	5.540	6.946	56.928	-2.374
		14	1.08	4.28	1.260	18.921	3.784	3.875	1.829	1.961	0.789	1.205	0.686	17.349	3.279	2.058	37.646	-2.359
10	3.5	10	0.99	8.26	2.430	36.444	7.289	3.873	3.795	3.794	1.518	1.250	1.757	35.364	6.927	14.763	74.307	-2.435
		12	0.92	6.43	1.890	28.566	5.713	3.888	2.952	3.013	1.171	1.250	1.156	26.628	5.098	6.946	57.326	-2.420
		14	0.83	4.28	1.260	19.212	3.842	3.905	1.967	2.058	0.773	1.249	0.606	16.193	2.908	2.058	37.858	-2.402
10[A]	4	12	1.17	6.96	2.048	31.959	6.392	3.951	4.493	3.640	1.625	1.481	1.258	29.421	5.581	7.525	92.354	-3.019
		14	1.08	4.64	1.365	21.510	4.302	3.970	3.000	2.479	1.075	1.483	0.692	18.330	3.306	2.230	60.948	-3.000
10[B]	4	10	1.49	9.18	2.700	41.641	8.328	3.927	6.239	4.721	2.329	1.520	2.128	41.459	8.261	16.403	139.590	-3.204
		12	1.42	7.14	2.100	32.681	6.536	3.945	4.870	3.740	1.805	1.523	1.387	31.128	6.031	7.718	107.610	-3.189
		14	1.33	4.76	1.400	22.014	4.403	3.965	3.259	2.548	1.198	1.526	0.735	19.071	3.475	2.287	71.013	-3.173
11	3	10	0.99	8.26	2.430	41.664	7.575	4.141	2.674	3.419	1.206	1.049	1.733	41.664	7.575	14.763	63.419	-1.936
		12	0.92	6.43	1.890	32.632	5.933	4.155	2.081	2.728	0.930	1.049	1.168	31.762	5.675	6.946	49.050	-1.924
		14	0.83	4.28	1.260	21.927	3.987	4.172	1.388	1.875	0.614	1.049	0.596	18.967	3.133	2.058	32.476	-1.909
12	2.25	10	1.24	8.26	2.430	45.868	7.645	4.345	1.531	2.707	0.909	0.794	1.607	45.419	7.488	14.763	46.155	-1.417
		12	1.17	6.43	1.890	35.933	5.989	4.360	1.200	2.186	0.706	0.797	1.134	34.682	5.564	6.946	35.971	-1.411
		14	1.08	4.28	1.260	24.152	4.025	4.378	0.807	1.524	0.469	0.800	0.629	21.720	3.286	2.058	24.017	-1.404
12	2.5	10	0.99	8.26	2.430	46.632	7.772	4.381	1.748	2.955	0.916	0.848	1.607	46.183	7.614	14.763	49.866	-1.479
		12	0.92	6.43	1.890	36.499	6.083	4.395	1.363	2.376	0.708	0.849	1.134	35.248	5.655	6.946	38.693	-1.470
		14	0.83	4.28	1.260	24.507	4.085	4.410	0.910	1.648	0.467	0.850	0.588	21.143	3.124	2.058	25.705	-1.459
13	2	10	0.99	8.26	2.430	51.213	7.879	4.591	1.029	2.398	0.655	0.651	1.480	50.157	7.552	14.763	35.077	-1.066
		12	0.92	6.43	1.890	40.063	6.164	4.604	0.805	1.952	0.507	0.652	1.032	37.996	5.543	6.946	27.353	-1.060
		14	0.83	4.28	1.260	26.882	4.136	4.619	0.539	1.374	0.335	0.654	0.590	24.053	3.335	2.058	18.266	-1.053
13	2.125	10	0.87	8.26	2.430	51.561	7.933	4.606	1.108	2.520	0.657	0.675	1.480	50.506	7.604	14.763	36.903	-1.093

[A] This product produced from 19.5" feed.
[B] This product produced from 20" feed.

Section Properties

Cee Purlins

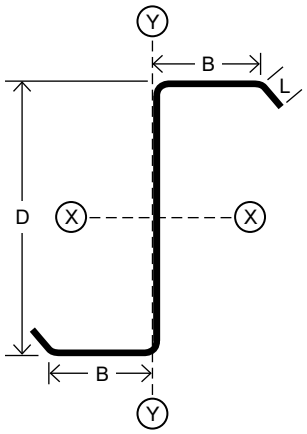
Physical Properties						Gross Properties							Effective Properties			Torsional Properties		
						X-X Axis			Y-Y Axis									
D (web)	B (flange)	Ga. (nom)	L (lip)	Weight	Area	Ix	Sx	Rx	Iy	Sy_L	Sy_R	Ry	Ae	Ixe	Sxe	J (x10^{-3})	Cw	Xo
(in)	(in)		(in)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(in^3)	(in)	(in^2)	(in^4)	(in^3)	(in^4)	(in^6)	(in)
		12	0.79	6.43	1.890	40.317	6.203	4.619	0.863	2.045	0.507	0.676	1.032	38.250	5.580	6.946	28.682	-1.085
		14	0.71	4.28	1.260	27.039	4.160	4.632	0.575	1.434	0.334	0.676	0.566	23.651	3.239	2.058	19.080	-1.076
12	3.5	10	0.99	9.18	2.700	56.135	9.356	4.560	4.007	4.418	1.545	1.218	1.777	54.785	8.987	16.403	111.020	-2.253
		12	0.92	7.14	2.100	43.928	7.321	4.574	3.115	3.511	1.192	1.218	1.165	41.059	6.576	7.718	85.836	-2.239
		14	0.83	4.76	1.400	29.488	4.915	4.589	2.074	2.401	0.787	1.217	0.609	23.875	3.467	2.287	56.816	-2.228
13	3	10	0.99	9.18	2.700	62.385	9.598	4.807	2.798	3.938	1.222	1.018	1.750	61.348	9.260	16.403	91.879	-1.788
		12	0.92	7.14	2.100	48.792	7.507	4.820	2.177	3.147	0.943	1.018	1.175	45.468	6.559	7.718	71.177	-1.778
		14	0.83	4.76	1.400	32.734	5.036	4.835	1.450	2.166	0.622	1.018	0.599	26.549	3.497	2.287	47.209	-1.764
14	2.5	10	0.99	9.18	2.700	68.249	9.750	5.028	1.816	3.367	0.926	0.820	1.621	66.346	9.199	16.403	70.283	-1.364
		12	0.92	7.14	2.100	53.353	7.622	5.041	1.415	2.712	0.715	0.821	1.140	50.267	6.757	7.718	54.601	-1.356
		14	0.83	4.76	1.400	35.774	5.111	5.055	0.944	1.886	0.472	0.821	0.590	29.811	3.688	2.287	36.320	-1.346
15	2	10	0.99	9.18	2.700	73.591	9.812	5.221	1.061	2.701	0.660	0.627	1.492	70.481	9.008	16.403	48.220	-0.981
		12	0.92	7.14	2.100	57.505	7.667	5.233	0.829	2.204	0.511	0.628	1.038	53.002	6.545	7.718	37.634	-0.976
		14	0.83	4.76	1.400	38.539	5.139	5.247	0.555	1.557	0.338	0.630	0.592	33.241	3.898	2.287	25.154	-0.969
15	2.125	10	0.87	9.18	2.700	73.997	9.866	5.235	1.142	2.838	0.663	0.650	1.492	70.888	9.060	16.403	50.918	-1.006
		12	0.79	7.14	2.100	57.802	7.707	5.246	0.889	2.308	0.511	0.651	1.038	53.298	6.582	7.718	39.604	-0.999
		14	0.71	4.76	1.400	38.721	5.163	5.259	0.592	1.625	0.336	0.650	0.568	32.620	3.779	2.287	26.365	-0.991
15	2.25	10	0.74	9.18	2.700	74.348	9.913	5.247	1.214	2.959	0.660	0.670	1.492	71.238	9.105	16.403	53.180	-1.027
		12	0.67	7.14	2.100	58.054	7.740	5.258	0.941	2.400	0.506	0.669	1.038	53.551	6.613	7.718	41.225	-1.018
		14	0.58	4.76	1.400	38.874	5.183	5.269	0.624	1.683	0.332	0.668	0.532	31.367	3.561	2.287	27.338	-1.008
16	3	10	1.12	10.67	3.139	105.390	13.174	5.795	3.120	4.792	1.329	0.997	1.800	100.850	12.036	19.068	157.500	-1.673
		12	1.04	8.30	2.441	82.333	10.292	5.807	2.431	3.837	1.027	0.998	1.252	75.603	8.704	8.972	122.310	-1.665
16	4	10	1.12	11.59	3.409	122.380	15.298	5.992	6.340	6.705	2.077	1.364	1.895	117.760	14.386	20.708	311.360	-2.413
		12	1.04	9.01	2.651	95.600	11.950	6.005	4.930	5.320	1.604	1.364	1.231	83.193	9.503	9.743	241.190	-2.400
16	3.5	10	0.99	11.02	3.240	112.260	14.032	5.886	4.330	5.638	1.583	1.155	1.801	104.670	12.295	19.683	211.870	-1.966
		12	0.92	8.57	2.520	87.670	10.959	5.898	3.360	4.491	1.221	1.155	1.176	75.069	8.321	9.261	164.150	-1.954
17	3	10	0.99	11.02	3.240	120.570	14.185	6.100	2.990	4.947	1.246	0.960	1.771	114.100	12.691	19.683	167.990	-1.556
		12	0.92	8.57	2.520	94.130	11.075	6.112	2.320	3.964	0.961	0.960	1.185	83.425	8.838	9.261	130.350	-1.547
18	2.5	10	0.99	11.02	3.240	128.220	14.247	6.291	1.920	4.161	0.940	0.769	1.639	119.280	12.372	19.683	123.560	-1.183
		12	0.92	8.57	2.520	100.080	11.120	6.302	1.490	3.365	0.725	0.769	1.149	89.354	8.958	9.261	96.106	-1.176
19	2	10	0.99	11.02	3.240	135.090	14.220	6.457	1.110	3.276	0.668	0.585	1.508	123.050	11.928	19.683	81.744	-0.847
		12	0.92	8.57	2.520	105.410	11.096	6.468	0.870	2.688	0.516	0.586	1.045	91.461	8.547	9.261	63.851	-0.843
19	2.125	10	0.87	11.02	3.240	135.610	14.275	6.469	1.190	3.443	0.671	0.607	1.508	123.570	11.978	19.683	86.717	-0.870
		12	0.79	8.57	2.520	105.790	11.136	6.479	0.930	2.815	0.517	0.607	1.045	91.842	8.582	9.261	67.494	-0.864
19	2.25	10	0.74	11.02	3.240	136.060	14.322	6.480	1.270	3.590	0.668	0.625	1.508	124.020	12.022	19.683	90.965	-0.888
		12	0.67	8.57	2.520	106.110	11.170	6.489	0.980	2.926	0.513	0.624	1.045	92.165	8.613	9.261	70.554	-0.881
20	3.5	10	1.24	13.08	3.848	199.630	19.963	7.203	5.060	7.070	1.817	1.147	1.983	184.710	17.103	23.374	398.460	-1.876
20	4.5	10	0.99	13.77	4.050	220.940	22.094	7.386	8.590	9.143	2.411	1.456	1.850	186.030	16.376	24.600	645.820	-2.444
		12	0.92	10.71	3.150	172.360	17.236	7.397	6.660	7.243	1.859	1.454	1.213	131.960	10.986	11.576	500.260	-2.431

Notes:

1. Materials conform to ASTM A653 Grade 55 Class 1 or ASTM A1011 Grade 55 (Fy = 55 ksi, Fu = 70 ksi); G60 minimum galvanized.
2. Section Properties in accordance to the American Iron and Steel Institute Cold Formed Steel Design Manual (AISI S100-12).
3. Lip (L) based on theoretical feed width; actual dimension may vary.
4. Design Base Metal Thickness per nominal Gauge:
   - 18ga = 0.047"
   - 16ga = 0.059"
   - 14ga = 0.070"
   - 12ga = 0.105"
   - 10ga = 0.135"

Symbols and Abbreviations

- Ae - Effective cross sectional area
- Cw - Torsional warping constant
- Ix - Moment of inertia about the X axis
- Ixe - Effective moment of inertia about the X axis
- Iy - Moment of inertia about the Y axis
- J - Torsion constant (St. Venant)
- rx - Radius of gyration about the X axis
- ry - Radius of gyration about the Y axis
- Sx - Section modulus about the X axis for the extreme fiber
- Sxe - Effective section modulus about the X axis for the extreme fiber
- Sy(l) - Section modulus about the Y axis for the extreme left fiber
- Sy(r) - Section modulus about the Y axis for the extreme right fiber
- Xo - Horizontal coordinate of the shear center relative to the centroid



Zee Purlins

Physical Properties						Gross Properties						Effective Properties			Torsional Properties	
						X-X Axis			Y-Y Axis							
D (web)	B (flange)	Ga. (nom)	L (lip)	Weight	Area	Ix	Sx	Rx	Iy	Sy	Ry	Ae	Ixe	Sxe	J (x10^{-3})	Cw
(in)	(in)		(in)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(in)	(in^2)	(in^4)	(in^3)	(in^4)	(in^6)
4	2.25	12	1.02	3.57	1.050	2.675	1.338	1.596	2.013	0.705	1.385	1.032	2.675	1.338	3.859	5.162
		14	0.96	2.38	0.700	1.828	0.914	1.616	1.320	0.466	1.373	0.603	1.802	0.910	1.143	3.405
		16	0.94	2.01	0.590	1.552	0.776	1.622	1.106	0.391	1.369	0.459	1.480	0.716	0.685	2.860
4	2.5	12	0.77	3.57	1.050	2.788	1.394	1.630	2.094	0.711	1.412	0.995	2.738	1.347	3.859	4.921
		14	0.71	2.38	0.700	1.900	0.950	1.648	1.371	0.469	1.399	0.521	1.720	0.802	1.143	3.244
		16	0.69	2.01	0.590	1.612	0.806	1.653	1.149	0.394	1.395	0.407	1.426	0.656	0.685	2.725
5	2	12	0.77	3.57	1.050	4.031	1.612	1.959	1.224	0.501	1.080	0.960	4.031	1.612	3.859	5.017
		14	0.71	2.38	0.700	2.734	1.094	1.976	0.799	0.330	1.068	0.553	2.688	1.061	1.143	3.300
		16	0.69	2.01	0.590	2.317	0.927	1.982	0.669	0.277	1.065	0.409	2.198	0.848	0.685	2.770
5	2.125	12	0.65	3.57	1.050	4.091	1.637	1.974	1.251	0.503	1.091	0.960	4.091	1.637	3.859	4.958
		14	0.59	2.38	0.700	2.772	1.109	1.990	0.816	0.331	1.080	0.510	2.626	1.012	1.143	3.262
		16	0.57	2.01	0.590	2.348	0.939	1.995	0.683	0.277	1.076	0.381	2.129	0.800	0.685	2.736
6	2.25	12	1.02	4.28	1.260	6.927	2.309	2.345	2.013	0.705	1.264	1.086	6.927	2.309	4.630	12.351
		14	0.96	2.86	0.840	4.688	1.563	2.362	1.320	0.466	1.253	0.618	4.615	1.522	1.372	8.144
		16	0.94	2.41	0.708	3.970	1.323	2.368	1.107	0.392	1.250	0.468	3.786	1.224	0.822	6.843
6	2.5	12	0.77	4.28	1.260	7.110	2.370	2.375	2.094	0.711	1.289	1.049	6.961	2.284	4.630	12.154
		14	0.71	2.86	0.840	4.804	1.601	2.392	1.370	0.469	1.277	0.537	4.367	1.370	1.372	8.007
		16	0.69	2.41	0.708	4.066	1.355	2.397	1.149	0.394	1.274	0.416	3.624	1.125	0.822	6.725
7	2	12	0.77	4.28	1.260	8.941	2.555	2.664	1.224	0.501	0.986	0.995	8.941	2.555	4.630	10.591
		14	0.71	2.86	0.840	6.028	1.722	2.679	0.799	0.330	0.975	0.563	5.922	1.672	1.372	6.958
		16	0.69	2.41	0.708	5.099	1.457	2.684	0.669	0.277	0.972	0.415	4.846	1.342	0.822	5.839
7	2.125	12	0.65	4.28	1.260	9.029	2.580	2.677	1.251	0.503	0.996	0.995	9.029	2.580	4.630	10.578
		14	0.59	2.86	0.840	6.083	1.738	2.691	0.816	0.331	0.985	0.520	5.772	1.597	1.372	6.945
		16	0.57	2.41	0.708	5.150	1.470	2.695	0.683	0.278	0.982	0.387	4.698	1.273	0.822	5.827
7	3	10	0.82	6.43	1.890	14.565	4.162	2.776	4.296	1.241	1.508	1.589	14.151	3.959	11.482	33.389
		12	0.77	5.00	1.470	11.437	3.268	2.789	3.295	0.957	1.497	1.078	10.815	2.975	5.402	25.739
		14	0.71	3.33	0.980	7.709	2.203	2.805	2.161	0.631	1.485	0.555	6.725	1.769	1.601	16.980
		16	0.69	2.81	0.826	6.520	1.863	2.810	1.812	0.531	1.481	0.426	5.555	1.444	0.958	14.269
8	2.25	12	1.02	5.00	1.470	13.698	3.425	3.053	2.014	0.706	1.170	1.110	13.698	3.425	5.402	23.176
		14	0.96	3.33	0.980	9.227	2.307	3.069	1.320	0.466	1.161	0.625	9.080	2.247	1.601	15.271
		16	0.94	2.81	0.826	7.803	1.951	3.074	1.107	0.392	1.158	0.472	7.456	1.814	0.958	12.827
8	2.5	10	0.82	6.43	1.890	17.792	4.448	3.068	2.735	0.924	1.203	1.557	17.792	4.448	11.482	30.092
		12	0.77	5.00	1.470	13.951	3.488	3.081	2.094	0.712	1.194	1.073	13.650	3.363	5.402	23.154
		14	0.71	3.33	0.980	9.388	2.347	3.095	1.370	0.469	1.183	0.544	8.583	2.035	1.601	15.239
		16	0.69	2.81	0.826	7.936	1.984	3.100	1.149	0.394	1.179	0.420	7.012	1.625	0.958	12.796
8.5	2.5	10	0.57	6.43	1.890	19.641	4.621	3.224	2.195	0.784	1.078	1.465	19.268	4.480	11.482	27.319
		12	0.52	5.00	1.470	15.378	3.618	3.234	1.676	0.602	1.068	0.995	14.827	3.413	5.402	20.981
		14	0.46	3.33	0.980	10.329	2.431	3.247	1.093	0.396	1.056	0.500	9.257	2.051	1.601	13.780

Section Properties

Zee Purlins

Physical Properties						Gross Properties						Effective Properties			Torsional Properties	
						X-X Axis			Y-Y Axis							
D (web) (in)	B (flange) (in)	Ga. (nom)	L (lip) (in)	Weight (lb/ft)	Area (in^2)	Ix (in^4)	Sx (in^3)	Rx (in)	Iy (in^4)	Sy (in^3)	Ry (in)	Ae (in^2)	Ixe (in^4)	Sxe (in^3)	J ($x10^{-3}$) (in^4)	Cw (in^6)
		16	0.44	2.81	0.826	8.727	2.053	3.250	0.915	0.332	1.053	0.377	7.283	1.538	0.958	11.563
8	2.75	12	1.02	5.36	1.575	15.334	3.834	3.120	3.199	0.954	1.425	1.215	15.252	3.797	5.788	35.152
		14	0.96	3.57	1.050	10.328	2.582	3.136	2.100	0.630	1.414	0.613	9.571	2.282	1.715	23.192
		16	0.94	3.01	0.885	8.733	2.183	3.141	1.762	0.530	1.411	0.483	7.915	1.859	1.027	19.488
8	3.5	10	0.82	7.34	2.160	21.968	5.492	3.189	6.354	1.604	1.715	1.679	21.030	5.101	13.122	64.014
		12	0.77	5.71	1.680	17.224	4.306	3.202	4.881	1.238	1.704	1.086	15.464	3.615	6.174	49.398
		14	0.71	3.81	1.120	11.589	2.897	3.217	3.206	0.817	1.692	0.564	9.702	2.722	1.829	32.630
		16	0.69	3.21	0.944	9.796	2.449	3.221	2.690	0.687	1.688	0.429	7.641	1.643	1.095	27.430
8	4	12	0.77	6.07	1.785	18.860	4.715	3.251	6.902	1.553	1.966	1.098	16.258	3.711	6.560	67.214
		14	0.71	4.05	1.190	12.689	3.172	3.266	4.540	1.027	1.953	0.565	10.029	2.185	1.944	44.462
9	2.25	12	1.02	5.36	1.575	18.160	4.036	3.396	2.014	0.706	1.131	1.118	18.160	4.036	5.788	30.001
		14	0.96	3.57	1.050	12.215	2.714	3.411	1.320	0.466	1.121	0.627	12.020	2.645	1.715	19.760
		16	0.94	3.01	0.885	10.324	2.294	3.416	1.107	0.392	1.118	0.474	9.618	2.035	1.027	16.596
9	2.75	12	1.02	5.71	1.680	20.237	4.497	3.471	3.199	0.954	1.380	1.223	20.122	4.453	6.174	45.603
		14	0.96	3.81	1.120	13.610	3.025	3.486	2.101	0.630	1.370	0.615	12.634	2.684	1.829	30.079
9	3	10	0.82	7.34	2.160	26.208	5.824	3.483	4.297	1.241	1.410	1.629	25.458	5.549	13.122	58.877
		12	0.77	5.71	1.680	20.526	4.561	3.495	3.296	0.957	1.401	1.097	19.437	4.174	6.174	45.359
		14	0.71	3.81	1.120	13.793	3.065	3.509	2.161	0.632	1.389	0.560	12.002	2.456	1.829	29.901
		16	0.69	3.21	0.944	11.655	2.590	3.514	1.812	0.531	1.386	0.429	9.464	1.845	1.095	25.120
10	2.25	10	1.07	7.34	2.160	29.896	5.979	3.720	2.627	0.915	1.103	1.588	29.896	5.979	13.122	49.083
		12	1.02	5.71	1.680	23.410	4.682	3.733	2.014	0.706	1.095	1.125	23.102	4.549	6.174	37.783
		14	0.96	3.81	1.120	15.727	3.146	3.747	1.320	0.466	1.086	0.629	14.644	2.733	1.829	24.878
		16	0.94	3.21	0.944	13.288	2.658	3.752	1.107	0.392	1.083	0.475	11.710	2.103	1.095	20.892
10	2.5	10	0.82	7.34	2.160	30.330	6.066	3.747	2.735	0.924	1.125	1.588	30.330	6.066	13.122	49.518
		12	0.77	5.71	1.680	23.733	4.747	3.759	2.094	0.712	1.117	1.087	23.228	4.584	6.174	38.077
		14	0.71	3.81	1.120	15.932	3.186	3.772	1.371	0.469	1.106	0.548	14.235	2.654	1.829	25.043
		16	0.69	3.21	0.944	13.458	2.692	3.776	1.149	0.394	1.103	0.423	11.280	2.007	1.095	21.023
10	3.25	10	1.07	8.26	2.430	36.466	7.293	3.874	6.204	1.602	1.598	1.810	35.829	7.078	14.762	106.920
		12	1.02	6.43	1.890	28.550	5.710	3.887	4.769	1.237	1.589	1.181	26.955	5.198	6.946	82.479
		14	0.96	4.28	1.260	19.179	3.836	3.902	3.135	0.818	1.578	0.626	16.577	3.020	2.058	54.456
10	3.5	10	0.82	8.26	2.430	36.900	7.380	3.897	6.355	1.604	1.617	1.710	35.363	6.881	14.762	106.180
		12	0.77	6.43	1.890	28.874	5.775	3.909	4.881	1.238	1.607	1.100	26.070	4.909	6.946	81.888
		14	0.71	4.28	1.260	19.383	3.877	3.922	3.206	0.817	1.595	0.568	15.586	2.728	2.058	54.054
10[A]	4	12	1.02	6.96	2.048	32.406	6.481	3.978	7.958	1.728	1.971	1.188	28.791	5.357	7.524	130.420
		14	0.96	4.64	1.365	21.767	4.353	3.993	5.241	1.144	1.960	0.634	17.474	3.044	2.229	86.252
10[B]	4	10	1.32	9.18	2.700	42.494	8.499	3.967	11.798	2.467	2.090	1.926	40.657	7.883	16.403	195.680
		12	1.27	7.14	2.100	33.283	6.657	3.981	9.090	1.908	2.081	1.274	30.317	5.714	7.717	151.230
		14	1.21	4.76	1.400	22.368	4.474	3.997	5.993	1.263	2.069	0.710	18.944	3.401	2.287	100.060
11	3	10	0.82	8.26	2.430	42.170	7.667	4.166	4.297	1.241	1.330	1.653	40.987	7.322	14.762	92.377
		12	0.77	6.43	1.890	32.974	5.995	4.177	3.296	0.957	1.321	1.108	31.292	5.516	6.946	71.130
		14	0.71	4.28	1.260	22.117	4.021	4.190	2.161	0.632	1.310	0.564	18.366	2.968	2.058	46.861
12	2.25	10	1.07	8.26	2.430	46.660	7.777	4.382	2.627	0.915	1.040	1.607	46.211	7.619	14.762	73.109
		12	1.02	6.43	1.890	36.481	6.080	4.394	2.014	0.706	1.032	1.134	35.230	5.652	6.946	56.251
		14	0.96	4.28	1.260	24.467	4.078	4.407	1.320	0.466	1.024	0.632	22.059	3.339	2.058	37.020
12	2.5	10	0.82	8.26	2.430	47.188	7.865	4.407	2.736	0.924	1.061	1.607	46.740	7.706	14.762	74.177
		12	0.77	6.43	1.890	36.875	6.146	4.417	2.095	0.712	1.053	1.096	35.017	5.559	6.946	57.011
		14	0.71	4.28	1.260	24.716	4.119	4.429	1.371	0.469	1.043	0.551	20.391	2.945	2.058	37.473
13	2	10	0.82	8.26	2.430	51.820	7.972	4.618	1.604	0.651	0.812	1.480	50.764	7.643	14.762	53.887
		12	0.77	6.43	1.890	40.472	6.227	4.628	1.225	0.501	0.805	1.032	38.405	5.603	6.946	41.327
		14	0.71	4.28	1.260	27.109	4.171	4.639	0.799	0.330	0.796	0.574	23.901	3.286	2.058	27.092
13	2.125	10	0.70	8.26	2.430	52.052	8.008	4.628	1.640	0.654	0.822	1.480	50.996	7.678	14.762	54.472

[A] This product produced from 19.5" feed.
[B] This product produced from 20" feed.

Zee Purlins

Physical Properties						Gross Properties						Effective Properties			Torsional Properties	
						X-X Axis			Y-Y Axis							
D (web)	B (flange)	Ga. (nom)	L (lip)	Weight	Area	Ix	Sx	Rx	Iy	Sy	Ry	Ae	Ixe	Sxe	J (x10^{-3})	Cw
(in)	(in)		(in)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in)	(in^4)	(in^3)	(in)	(in^2)	(in^4)	(in^3)	(in^4)	(in^6)
		12	0.65	6.43	1.890	40.642	6.253	4.637	1.252	0.503	0.814	1.032	38.575	5.627	6.946	41.744
		14	0.59	4.28	1.260	27.215	4.187	4.648	0.816	0.331	0.805	0.531	22.835	3.063	2.058	27.340
12	3.5	10	0.82	9.18	2.700	56.691	9.449	4.582	6.355	1.604	1.534	1.729	54.420	8.846	16.403	160.160
		12	0.77	7.14	2.100	44.303	7.384	4.593	4.881	1.238	1.525	1.109	40.219	6.347	7.717	123.460
		14	0.71	4.76	1.400	29.697	4.950	4.606	3.206	0.817	1.513	0.571	22.957	3.257	2.287	81.451
13	3	10	0.82	9.18	2.700	62.992	9.691	4.830	4.298	1.242	1.262	1.670	60.430	8.982	16.403	134.060
		12	0.77	7.14	2.100	49.202	7.570	4.840	3.296	0.957	1.253	1.116	44.340	6.279	7.717	103.180
		14	0.71	4.76	1.400	32.961	5.071	4.852	2.161	0.632	1.243	0.566	25.704	3.323	2.287	67.943
14	2.5	10	0.82	9.18	2.700	68.907	9.844	5.052	2.736	0.924	1.007	1.621	67.004	9.290	16.403	104.140
		12	0.77	7.14	2.100	53.796	7.685	5.061	2.095	0.712	0.999	1.103	49.808	6.626	7.717	80.008
		14	0.71	4.76	1.400	36.019	5.146	5.072	1.371	0.469	0.990	0.552	28.695	3.475	2.287	52.565
15	2	10	0.82	9.18	2.700	74.299	9.907	5.246	1.604	0.652	0.771	1.492	71.189	9.099	16.403	73.508
		12	0.77	7.14	2.100	57.982	7.731	5.255	1.225	0.501	0.764	1.038	53.479	6.604	7.717	56.354
		14	0.71	4.76	1.400	38.803	5.174	5.265	0.799	0.330	0.756	0.575	32.960	3.833	2.287	36.927
15	2.125	10	0.70	9.18	2.700	74.569	9.943	5.255	1.640	0.655	0.780	1.492	71.459	9.133	16.403	74.431
		12	0.65	7.14	2.100	58.180	7.757	5.264	1.252	0.503	0.772	1.038	53.676	6.629	7.717	57.016
		14	0.59	4.76	1.400	38.925	5.190	5.273	0.816	0.331	0.763	0.532	31.436	3.570	2.287	37.326
15	2.25	10	0.57	9.18	2.700	74.794	9.973	5.263	1.671	0.655	0.787	1.492	71.684	9.162	16.403	75.118
		12	0.52	7.14	2.100	58.343	7.779	5.271	1.274	0.503	0.779	0.987	52.202	6.345	7.717	57.499
		14	0.46	4.76	1.400	39.024	5.203	5.280	0.829	0.330	0.770	0.507	30.444	3.406	2.287	37.609
16	3	10	0.95	10.67	3.139	106.310	13.288	5.820	4.700	1.327	1.224	1.784	101.410	12.078	19.068	232.350
		12	0.90	8.30	2.441	82.960	10.370	5.830	3.607	1.024	1.216	1.169	73.138	8.233	8.972	178.870
16	4	10	0.95	11.59	3.409	123.300	15.412	6.014	9.650	2.124	1.682	1.797	115.130	13.848	20.710	449.840
		12	0.90	9.01	2.651	96.220	12.028	6.025	7.420	1.640	1.673	1.173	80.803	9.055	9.743	347.060
16	3.5	10	0.82	11.02	3.240	113.010	14.127	5.906	6.360	1.604	1.401	1.753	103.560	12.049	19.683	304.450
		12	0.77	8.57	2.520	88.182	11.023	5.916	4.881	1.238	1.392	1.121	72.952	7.952	9.261	234.540
17	3	10	0.82	11.02	3.240	121.380	14.280	6.121	4.300	1.242	1.152	1.690	111.900	12.262	19.683	242.390
		12	0.77	8.57	2.520	94.678	11.139	6.130	3.296	0.957	1.144	1.125	81.107	8.447	9.261	186.450
18	2.5	10	0.82	11.02	3.240	129.080	14.343	6.312	2.740	0.924	0.919	1.639	120.140	12.462	19.683	180.130
		12	0.77	8.57	2.520	100.660	11.184	6.320	2.100	0.712	0.912	1.111	88.218	8.758	9.261	138.320
19	2	10	0.82	11.02	3.240	136.000	14.315	6.479	1.600	0.652	0.704	1.508	123.960	12.016	19.683	122.240
		12	0.77	8.57	2.520	106.020	11.160	6.486	1.230	0.501	0.697	1.045	92.073	8.604	9.261	93.665
19	2.125	10	0.70	11.02	3.240	136.340	14.352	6.487	1.640	0.655	0.712	1.508	124.310	12.049	19.683	124.050
		12	0.65	8.57	2.520	106.280	11.187	6.494	1.250	0.503	0.705	1.045	92.326	8.628	9.261	94.975
19	2.25	10	0.57	11.02	3.240	136.630	14.382	6.494	1.670	0.656	0.718	1.508	124.590	12.077	19.683	125.470
		12	0.52	8.57	2.520	106.480	11.209	6.500	1.270	0.503	0.711	0.995	89.602	8.248	9.261	95.979
20	3.5	10	1.07	13.08	3.848	201.010	20.101	7.228	7.430	1.803	1.390	1.860	179.340	16.269	23.370	583.140
20	4.5	10	0.82	13.77	4.050	221.900	22.190	7.402	12.230	2.465	1.738	1.761	180.380	15.613	24.600	912.860
		12	0.77	10.71	3.150	173.000	17.300	7.411	9.410	1.904	1.729	1.148	127.290	10.414	11.580	704.390

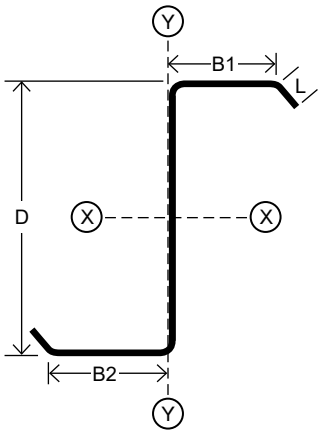
Notes:

1. Materials conform to ASTM A653 Grade 55 Class 1 or ASTM A1011 Grade 55 (Fy = 55 ksi, Fu = 70 ksi); G60 minimum galvanized.
2. Section Properties in accordance to the American Iron and Steel Institute Cold Formed Steel Design Manual (AISI S100-12).
3. Lip (L) based on theoretical feed width; actual dimension may vary.
4. Design Base Metal Thickness per nominal Gauge:
   - 18ga = 0.047"
   - 16ga = 0.059"
   - 14ga = 0.070"
   - 12ga = 0.105"
   - 10ga = 0.135"

Symbols and Abbreviations

- Ae - Effective cross sectional area
- Cw - Torsional warping constant
- Ix - Moment of inertia about the X axis
- Ixe - Effective moment of inertia about the X axis
- Iy - Moment of inertia about the Y axis
- J - Torsion constant (St. Venant)
- rx - Radius of gyration about the X axis
- ry - Radius of gyration about the Y axis
- Sx - Section modulus about the X axis for the extreme fiber
- Sxe - Effective section modulus about the X axis for the extreme fiber
- Sy(l) - Section modulus about the Y axis for the extreme left fiber
- Sy(r) - Section modulus about the Y axis for the extreme right fiber
- Xo - Horizontal coordinate of the shear center relative to the centroid

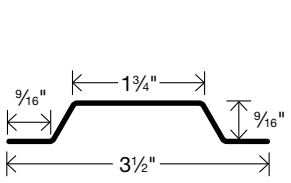
Section Properties



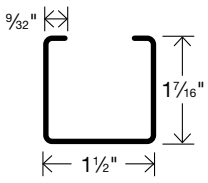
'Easy Lap' Zee Purlins

Physical Properties							Gross Properties								Effective Properties			Torsional Properties		
							X-X Axis				Y-Y Axis									
D (web)	B1 (flange)	B2 (flange)	Ga. (nom)	L (lip)	Weight	Area	Ix	Sx_T	Sx_B	Rx	Iy	Sy_L	Sy_R	Ry	Ae	Ixe	Sxe	J ($x10^{-3}$)	Cw	Xo
(in)	(in)	(in)		(in)	(lb/ft)	(in^2)	(in^4)	(in^3)	(in^3)	(in)	(in^4)	(in^3)	(in^3)	(in)	(in^2)	(in^4)	(in^3)	(in^4)	(in^6)	(in)
4	2.125	2.375	14	0.48	2.38	0.700	1.826	0.891	0.936	1.615	1.322	0.459	0.475	1.374	0.592	1.809	0.878	1.143	3.372	-0.026
			16	0.47	2.01	0.590	1.551	0.757	0.795	1.621	1.109	0.386	0.399	1.371	0.458	1.488	0.706	0.685	2.834	-0.026
6	2.125	2.375	14	0.48	2.86	0.840	4.684	1.530	1.594	2.362	1.323	0.457	0.477	1.255	0.607	4.632	1.502	1.372	8.063	-0.025
			16	0.47	2.41	0.708	3.967	1.296	1.350	2.367	1.109	0.384	0.401	1.252	0.467	3.805	1.211	0.822	6.774	-0.025
8	2.125	2.375	12	0.51	5.00	1.470	13.691	3.363	3.484	3.052	2.019	0.691	0.725	1.172	1.110	13.691	3.363	5.402	22.944	-0.024
			14	0.48	3.33	0.980	9.223	2.266	2.347	3.068	1.324	0.456	0.479	1.162	0.614	9.113	2.222	1.601	15.116	-0.024
			16	0.47	2.81	0.826	7.799	1.916	1.985	3.073	1.110	0.383	0.403	1.159	0.471	7.459	1.783	0.958	12.697	-0.023
8	3.125	3.375	12	0.51	5.71	1.680	16.964	4.177	4.308	3.178	4.775	1.220	1.259	1.686	1.169	16.270	3.893	6.174	49.922	-0.024
			14	0.48	3.81	1.120	11.424	2.813	2.901	3.194	3.140	0.806	0.832	1.674	0.622	10.248	2.363	1.829	32.975	-0.023
			16	0.47	3.21	0.944	9.660	2.378	2.453	3.199	2.635	0.678	0.700	1.671	0.485	8.306	1.859	1.095	27.719	-0.023
10	2.125	2.375	12	0.51	5.71	1.680	23.400	4.609	4.753	3.732	2.020	0.690	0.727	1.097	1.125	23.035	4.458	6.174	37.399	-0.022
			14	0.48	3.81	1.120	15.721	3.096	3.194	3.747	1.324	0.455	0.480	1.087	0.618	14.629	2.687	1.829	24.624	-0.022
			16	0.47	3.21	0.944	13.283	2.616	2.698	3.751	1.110	0.383	0.404	1.085	0.474	11.701	2.071	1.095	20.679	-0.022
10	3.125	3.375	12	0.51	6.43	1.890	28.541	5.631	5.788	3.886	4.776	1.218	1.261	1.590	1.183	27.381	5.261	6.946	82.025	-0.023
			14	0.48	4.28	1.260	19.173	3.782	3.888	3.901	3.140	0.805	0.834	1.579	0.626	16.662	3.004	2.058	54.154	-0.022
12	2.125	2.375	12	0.51	6.43	1.890	36.468	5.996	6.163	4.393	2.021	0.688	0.729	1.034	1.134	35.080	5.536	6.946	55.677	-0.021
			14	0.48	4.28	1.260	24.459	4.021	4.134	4.406	1.324	0.454	0.481	1.025	0.621	22.006	3.283	2.058	36.639	-0.020
12	3.125	3.375	12	0.51	7.14	2.100	43.898	7.227	7.408	4.572	4.777	1.216	1.263	1.508	1.192	42.155	6.772	7.717	122.970	-0.021
			14	0.48	4.76	1.400	29.441	4.847	4.969	4.586	3.141	0.804	0.835	1.498	0.629	24.559	3.581	2.287	81.151	-0.021

EZ-Form Sections



SUB-GIRT
18ga



CHANNEL
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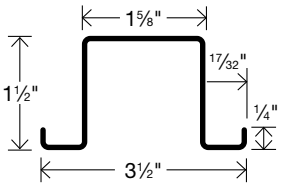

HAT
22ga

	Physical Properties					Full Properties					
						X-X Axis			Y-Y Axis		
	Nominal Ga. (in)	Min. Base Steel Thickness (in)	Yield (ksi)	Tensile (ksi)	Weight (lb/ft)	Ix (in^4)	Sx (in^3)	Rx (in)	Iy (in^4)	Sy (in^3)	Ry (in)
Hat	22	0.027	40	55	0.546	0.056	0.073	0.592	0.114	0.083	0.844
Channel	18	0.044	40	55	0.691	0.055	0.064	0.520	0.081	0.108	0.632
Sub Girt	18	0.044	40	55	0.609	0.009	0.030	0.230	0.183	0.105	1.011

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