

NOTES:

Section properties and allowable are computed in accordance with AISI North American Specification, 2007 edition

I_x and I_y are for deflection determination

S_x and S_y are for bending

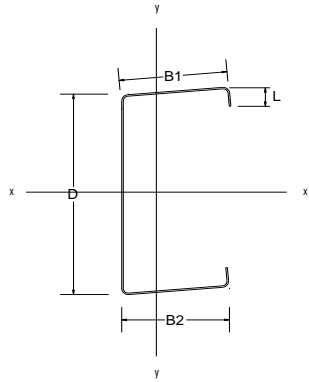
Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 CI-1

$F_y = 55$ ksi

$F_u = 70$ ksi



Section Name	DIMENSIONAL PROPERTIES						ALLOWABLES			AXIS X-X				AXIS Y-Y		
	D x B1 x B2 x Slope (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in ²)	Lip (in)	Positive Ma (k-ft)	Negative Ma (k-ft)	Va (kips)	I_x (in ⁴)	Positive S_{xe} (in ³)	Negative S_{xe} (in ³)	R_x (in)	I_y (in ⁴)	S_{ye} (in ³)	R_y (in)
6DSE16	6.0 x 4.0 x 4.0 x 1	16	0.059	2.997	0.881	0.775	3.204	3.489	3.349	5.545	1.167	1.271	2.508	1.899	0.650	1.468
6DSE14	6.0 x 4.0 x 4.0 x 1	14	0.070	3.555	1.046	0.802	3.974	4.316	5.456	6.547	1.448	1.573	2.502	2.253	0.792	1.468
6DSE13	6.0 x 4.0 x 4.0 x 1	13	0.085	4.317	1.270	0.838	5.100	5.507	8.045	7.896	1.858	2.007	2.494	2.735	0.991	1.468
6DSE12	6.0 x 4.0 x 4.0 x 1	12	0.105	5.333	1.568	0.887	6.698	7.165	11.824	9.666	2.440	2.611	2.483	3.377	1.262	1.467
6DSE16	6.0 x 4.0 x 4.0 x 4	16	0.059	2.997	0.881	0.800	2.676	3.470	3.760	5.701	0.975	1.264	2.543	1.734	0.580	1.403
6DSE14	6.0 x 4.0 x 4.0 x 4	14	0.070	3.555	1.046	0.828	3.318	4.444	6.097	6.731	1.209	1.619	2.537	2.058	0.706	1.403
6DSE13	6.0 x 4.0 x 4.0 x 4	13	0.085	4.317	1.270	0.866	4.274	5.607	8.986	8.119	1.557	2.043	2.529	2.499	0.883	1.403
6DSE12	6.0 x 4.0 x 4.0 x 4	12	0.105	5.333	1.568	0.916	5.652	7.190	13.131	9.939	2.059	2.620	2.517	3.087	1.122	1.403
6DSE14	6.0 x 2.75 x 5.0 x 1	14	0.070	3.555	1.046	0.927	4.190	4.250	5.454	6.042	1.527	1.549	2.404	2.737	0.740	1.618
6DSE12	6.0 x 2.75 x 5.0 x 1	12	0.105	5.333	1.568	1.012	6.961	6.737	11.821	8.911	2.536	2.455	2.384	4.097	1.176	1.616
6DSE14	6.0 x 2.75 x 5.0 x 4	14	0.070	3.555	1.046	0.953	3.644	4.008	6.072	5.639	1.328	1.460	2.322	2.459	0.710	1.534
6DSE12	6.0 x 2.75 x 5.0 x 4	12	0.105	5.333	1.568	1.041	6.147	6.097	13.076	8.312	2.240	2.222	2.302	3.670	1.129	1.530
6DSE14	6.0 x 5.0 x 5.0 x 1	14	0.070	4.031	1.186	0.802	3.978	4.463	5.47	7.788	1.450	1.626	2.563	3.893	1.121	1.820
6DSE12	6.0 x 5.0 x 5.0 x 1	12	0.105	6.047	1.778	0.887	6.821	7.538	11.854	11.507	2.486	2.747	2.544	5.840	1.789	1.812
6DSE14	6.0 x 5.0 x 5.0 x 4	14	0.070	4.031	1.186	0.828	3.164	4.612	6.295	8.119	1.153	1.681	2.617	3.549	1.011	1.730
6DSE12	6.0 x 5.0 x 5.0 x 4	12	0.105	6.047	1.778	0.916	5.485	7.793	13.564	11.999	1.999	2.840	2.598	5.326	1.609	1.731



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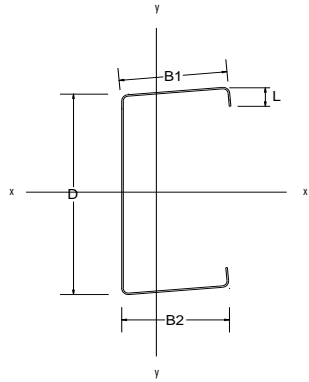
Material is either ASTM A653-06 Gr. 55 or A1011-04 HSLAS Gr. 55 Cl-1

$F_y = 55$ ksi

$F_u = 70$ ksi



Section Name	DIMENSIONAL PROPERTIES						ALLOWABLES			AXIS X-X				AXIS Y-Y		
	D x B1 x B2 x Slope (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in ²)	Lip (in)	Positive Ma (k-ft)	Negative Ma (k-ft)	Va (kips)	I_x (in ⁴)	Positive S_{xe} (in ³)	Negative S_{xe} (in ³)	R_x (in)	I_y (in ⁴)	S_{ye} (in ³)	R_y (in)
7DSE16	7.0 x 4.0 x 4.0 x 1	16	0.059	3.197	0.940	0.775	3.981	4.116	2.830	7.834	1.450	1.500	2.887	2.004	0.652	1.460
7DSE14	7.0 x 4.0 x 4.0 x 1	14	0.070	3.793	1.116	0.802	4.933	5.318	4.743	9.258	1.797	1.938	2.881	2.379	0.796	1.460
7DSE13	7.0 x 4.0 x 4.0 x 1	13	0.085	4.606	1.355	0.838	6.311	6.770	8.034	11.179	2.300	2.467	2.873	2.889	0.997	1.460
7DSE12	7.0 x 4.0 x 4.0 x 1	12	0.105	5.690	1.673	0.887	8.262	8.791	12.259	13.705	3.011	3.203	2.862	3.568	1.273	1.460
7DSE16	7.0 x 4.0 x 4.0 x 4	16	0.059	3.197	0.940	0.800	3.379	4.098	3.124	7.999	1.231	1.493	2.917	1.831	0.582	1.396
7DSE14	7.0 x 4.0 x 4.0 x 4	14	0.070	3.793	1.116	0.828	4.181	5.410	5.235	9.451	1.523	1.971	2.911	2.174	0.710	1.396
7DSE13	7.0 x 4.0 x 4.0 x 4	13	0.085	4.606	1.355	0.866	5.367	6.893	8.829	11.413	1.956	2.512	2.903	2.640	0.890	1.396
7DSE12	7.0 x 4.0 x 4.0 x 4	12	0.105	5.690	1.673	0.916	7.070	8.839	13.466	13.992	2.576	3.221	2.892	3.236	1.133	1.396
7DSE14	7.0 x 2.75 x 5.0 x 1	14	0.070	3.793	1.116	0.927	5.204	5.243	4.742	8.633	1.896	1.910	2.782	2.876	0.744	1.606
7DSE12	7.0 x 2.75 x 5.0 x 1	12	0.105	5.690	1.673	1.012	8.626	8.310	12.256	12.768	3.143	3.028	2.762	4.308	1.188	1.604
7DSE14	7.0 x 2.75 x 5.0 x 4	14	0.070	3.793	1.116	0.953	4.574	4.973	5.217	8.108	1.667	1.812	2.696	2.587	0.714	1.523
7DSE12	7.0 x 2.75 x 5.0 x 4	12	0.105	5.690	1.673	1.041	7.688	7.589	13.418	11.987	2.801	2.765	2.676	3.864	1.141	1.520
7DSE14	7.0 x 5.0 x 5.0 x 1	14	0.070	4.269	1.256	0.802	4.957	5.419	4.753	10.950	1.806	1.975	2.953	4.111	1.126	1.810
7DSE12	7.0 x 5.0 x 5.0 x 1	12	0.105	6.404	1.883	0.887	8.439	9.240	12.285	16.218	3.075	3.367	2.934	6.172	1.803	1.810
7DSE14	7.0 x 5.0 x 5.0 x 4	14	0.070	4.269	1.256	0.828	4.012	5.449	5.381	11.298	1.462	1.985	3.000	3.750	1.016	1.728
7DSE12	7.0 x 5.0 x 5.0 x 4	12	0.105	6.404	1.883	0.916	6.903	9.530	13.847	16.736	2.515	3.472	2.981	5.633	1.624	1.729



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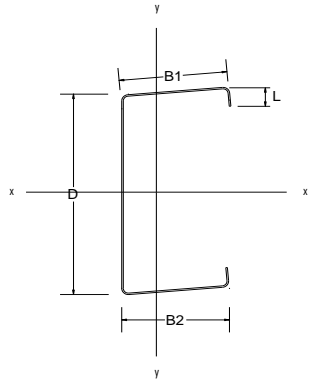
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Section Name	DIMENSIONAL PROPERTIES						ALLOWABLES			AXIS X-X				AXIS Y-Y		
	D x B1 x B2 x Slope (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in ²)	Lip (in)	Positive Ma (k-ft)	Negative Ma (k-ft)	Va (kips)	I_x (in ⁴)	Positive S_{xe} (in ³)	Negative S_{xe} (in ³)	R_x (in)	I_y (in ⁴)	S_{ye} (in ³)	R_y (in)
8DSE16	8.0 x 3.375 x 5.0 x 1	16	0.059	3.598	1.058	1.087	5.298	5.504	2.452	10.944	1.931	2.006	3.216	2.904	0.718	1.656
8DSE14	8.0 x 3.375 x 5.0 x 1	14	0.070	4.269	1.256	1.114	6.966	6.985	4.106	12.934	2.538	2.545	3.210	3.443	0.879	1.656
8DSE13	8.0 x 3.375 x 5.0 x 1	13	0.085	5.184	1.525	1.151	8.602	8.797	7.382	15.623	3.134	3.205	3.201	4.177	1.104	1.655
8DSE12	8.0 x 3.375 x 5.0 x 1	12	0.105	6.404	1.883	1.120	11.237	11.325	12.251	19.158	4.094	4.127	3.189	5.151	1.412	1.654
8DSE16	8.0 x 3.375 x 5.0 x 4	16	0.059	3.598	1.058	1.112	4.932	5.076	2.684	10.585	1.797	1.849	3.163	2.620	0.690	1.574
8DSE14	8.0 x 3.375 x 5.0 x 4	14	0.070	4.269	1.256	1.140	6.216	6.703	4.495	12.509	2.265	2.442	3.156	3.105	0.845	1.573
8DSE13	8.0 x 3.375 x 5.0 x 4	13	0.085	5.184	1.525	1.178	7.651	8.297	8.079	15.106	2.788	3.023	3.148	3.764	1.063	1.571
8DSE12	8.0 x 3.375 x 5.0 x 4	12	0.105	6.404	1.884	1.229	9.960	10.345	13.352	18.524	3.629	3.770	3.136	4.638	1.361	1.569
8DSE16	8.0 x 4.0 x 4.0 x 1	16	0.070	3.398	0.999	0.775	4.571	4.720	2.451	10.594	1.666	1.720	3.256	2.097	0.654	1.449
8DSE14	8.0 x 4.0 x 4.0 x 1	14	0.105	4.031	1.186	0.802	5.963	6.287	4.105	12.526	2.173	2.291	3.250	2.489	0.798	1.449
8DSE13	8.0 x 4.0 x 4.0 x 1	13	0.070	4.895	1.440	0.838	7.608	8.115	7.379	15.138	2.772	2.957	3.243	3.024	1.002	1.449
8DSE12	8.0 x 4.0 x 4.0 x 1	12	0.105	6.047	1.778	0.887	9.932	10.518	12.247	18.580	3.619	3.833	3.232	3.737	1.281	1.450
8DSE16	8.0 x 4.0 x 4.0 x 4	16	0.070	3.398	0.999	0.800	4.146	4.720	2.671	10.765	1.511	1.720	3.282	1.917	0.584	1.385
8DSE14	8.0 x 4.0 x 4.0 x 4	14	0.105	4.031	1.186	0.828	5.120	6.236	4.474	12.728	1.865	2.272	3.277	2.276	0.713	1.385
8DSE13	8.0 x 4.0 x 4.0 x 4	13	0.070	4.895	1.440	0.866	6.553	8.262	8.041	15.382	2.388	3.010	3.269	2.765	0.895	1.386
8DSE12	8.0 x 4.0 x 4.0 x 4	12	0.105	6.047	1.778	0.916	8.602	10.591	13.290	18.879	3.134	3.859	3.258	3.418	1.142	1.386



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Section Name	DIMENSIONAL PROPERTIES						ALLOWABLES				AXIS X-X				AXIS Y-Y		
	D x B1 x B2 x Slope (in)	Gage	Thickness (in)	Weight (lb/ft)	Area (in ²)	Lip (in)	Positive Ma (k-ft)	Negative Ma (k-ft)	Va (kips)	I_x (in ⁴)	Positive S_{xe} (in ³)	Negative S_{xe} (in ³)	R_x (in)	I_y (in ⁴)	S_{ye} (in ³)	R_y (in)	
8DSE14	8.0 x 2.75 x 5.0 x 1	14	0.070	4.031	1.186	0.927	6.186	6.301	4.104	11.777	2.254	2.296	3.152	2.998	0.747	1.590	
8DSE12	8.0 x 2.75 x 5.0 x 1	12	0.105	6.047	1.778	1.012	10.400	9.983	12.244	17.455	3.790	3.637	3.133	4.493	1.197	1.590	
8DSE14	8.0 x 2.75 x 5.0 x 4	14	0.070	4.031	1.186	0.953	5.584	6.007	4.460	11.126	2.035	2.189	3.063	2.699	0.717	1.509	
8DSE12	8.0 x 2.75 x 5.0 x 4	12	0.105	6.047	1.778	1.041	9.348	9.174	13.249	16.485	3.406	3.343	3.045	4.035	1.149	1.506	
8DSE14	8.0 x 5.0 x 5.0 x 1	14	0.070	4.507	1.326	0.802	5.947	6.045	4.112	14.739	2.167	2.203	3.335	4.307	1.130	1.803	
8DSE12	8.0 x 5.0 x 5.0 x 1	12	0.105	6.761	1.988	0.887	10.165	11.047	12.269	21.870	3.704	4.025	3.316	6.470	1.814	1.804	
8DSE14	8.0 x 5.0 x 5.0 x 4	14	0.070	4.507	1.326	0.828	4.941	6.276	4.584	15.103	1.801	2.287	3.375	3.930	1.020	1.722	
8DSE12	8.0 x 5.0 x 5.0 x 4	12	0.105	6.761	1.988	0.916	8.441	11.373	13.620	22.412	3.076	4.144	3.357	5.907	1.635	1.724	
10DSE14	10.0 x 4.0 x 4.0 x 1	14	0.070	4.507	1.326	0.802	7.652	7.858	3.235	20.877	2.788	2.863	3.969	2.675	0.802	1.421	
10DSE13	10.0 x 4.0 x 4.0 x 1	13	0.085	5.473	1.610	0.838	10.452	10.996	5.810	25.259	3.809	4.006	3.961	3.251	1.008	1.421	
10DSE12	10.0 x 4.0 x 4.0 x 1	12	0.105	6.761	1.988	0.887	13.578	14.274	10.998	31.050	4.948	5.201	3.952	4.020	1.291	1.422	
10DSE14	10.0 x 4.0 x 4.0 x 4	14	0.070	4.507	1.326	0.828	7.166	7.858	3.464	21.093	2.611	2.863	3.989	2.447	0.717	1.359	
10DSE13	10.0 x 4.0 x 4.0 x 4	13	0.085	5.473	1.610	0.866	9.190	10.861	6.221	25.520	3.349	3.957	3.982	2.975	0.901	1.360	
10DSE12	10.0 x 4.0 x 4.0 x 4	12	0.105	6.761	1.988	0.916	11.991	14.397	11.774	31.371	4.369	5.246	3.972	3.680	1.153	1.360	
10DSE14	10.0 x 2.75 x 5.0 x 1	14	0.070	4.507	1.326	0.927	7.796	8.345	3.234	19.868	2.841	3.041	3.871	3.204	0.751	1.555	
10DSE12	10.0 x 2.75 x 5.0 x 1	12	0.105	6.761	1.988	1.012	14.270	13.622	10.996	29.532	5.200	4.963	3.854	4.806	1.209	1.555	

