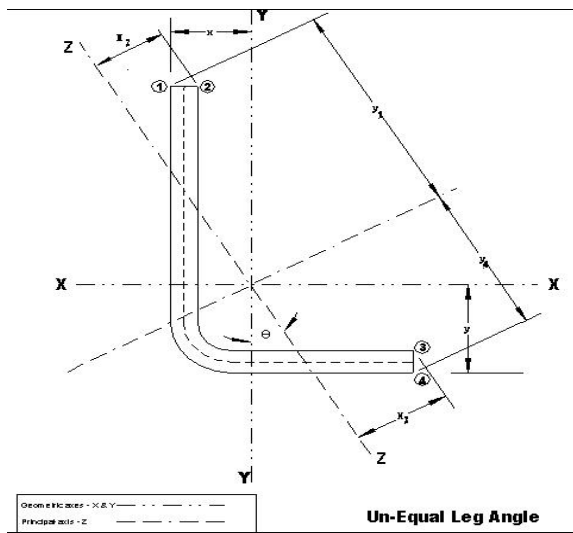


Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I _x	S _x	r _x	y	I _y	S _y	r _y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
1 x 2 x .250	0.250	0.313	2.18	0.640	0.2436	0.2058	0.617	0.816	0.0410	0.0569	0.253	0.280
1 x 2 x .238	0.238	0.313	2.08	0.613	0.2350	0.1976	0.619	0.811	0.0398	0.0549	0.255	0.275
1 x 2 x .220	0.220	0.313	1.94	0.572	0.2216	0.1850	0.623	0.802	0.0379	0.0518	0.258	0.267
1 x 2 x .203	0.203	0.313	1.81	0.532	0.2082	0.1727	0.626	0.794	0.0360	0.0487	0.260	0.260
1 x 2 x .187	0.187	0.156	1.72	0.506	0.2026	0.1643	0.633	0.767	0.0346	0.0459	0.261	0.247
1 x 2 x .180	0.180	0.156	1.66	0.489	0.1965	0.1589	0.634	0.764	0.0337	0.0445	0.263	0.244
1 x 2 x .165	0.165	0.156	1.533	0.451	0.1828	0.1471	0.637	0.757	0.0316	0.0415	0.265	0.238
1 x 2 x .148	0.148	0.156	1.385	0.407	0.1668	0.1334	0.640	0.749	0.0292	0.0379	0.268	0.231
1 x 2 x .134	0.134	0.156	1.262	0.371	0.1532	0.1218	0.642	0.743	0.0270	0.0349	0.270	0.225
1 x 2 x .125	0.125	0.156	1.182	0.348	0.1442	0.1143	0.644	0.739	0.0255	0.0328	0.271	0.222
1 x 2 x .120	0.120	0.156	1.137	0.334	0.1391	0.1101	0.645	0.736	0.0247	0.0317	0.272	0.220
1 x 2 x .109	0.109	0.156	1.038	0.305	0.1277	0.1007	0.647	0.731	0.0228	0.0291	0.274	0.215
1 x 2 x .095	0.095	0.094	0.919	0.270	0.1142	0.0891	0.650	0.718	0.0205	0.0258	0.275	0.207
1 x 2 x .083	0.083	0.094	0.807	0.237	0.1009	0.0784	0.652	0.713	0.0182	0.0228	0.277	0.203

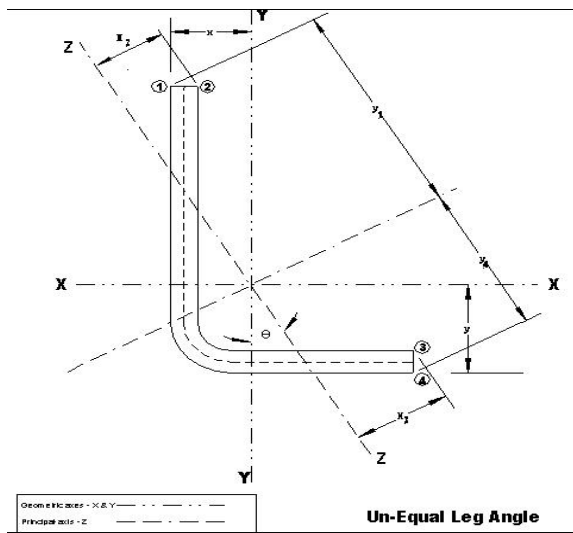
Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
1 x 2 x .250	0.01334	0.752	0.02082	0.180	0.30	0.313	0.527	0.989	1.214
1 x 2 x .238	0.01158	0.755	0.02032	0.182	0.30	0.308	0.529	0.986	1.218
1 x 2 x .220	0.00922	0.760	0.01949	0.185	0.30	0.301	0.533	0.980	1.224
1 x 2 x .203	0.00730	0.764	0.01861	0.187	0.30	0.295	0.537	0.975	1.229
1 x 2 x .187	0.00590	0.761	0.01975	0.198	0.28	0.280	0.565	0.944	1.254
1 x 2 x .180	0.00528	0.763	0.01926	0.199	0.29	0.277	0.567	0.942	1.256
1 x 2 x .165	0.00409	0.767	0.01815	0.201	0.29	0.272	0.570	0.937	1.261
1 x 2 x .148	0.00297	0.771	0.01679	0.203	0.29	0.265	0.573	0.932	1.266
1 x 2 x .134	0.00222	0.775	0.01559	0.205	0.29	0.260	0.576	0.928	1.271
1 x 2 x .125	0.00181	0.777	0.01478	0.206	0.29	0.257	0.578	0.925	1.273
1 x 2 x .120	0.00161	0.779	0.01431	0.207	0.29	0.255	0.579	0.924	1.275
1 x 2 x .109	0.001209	0.781	0.01326	0.208	0.29	0.251	0.581	0.921	1.278
1 x 2 x .095	0.000813	0.782	0.01222	0.213	0.28	0.242	0.592	0.907	1.290
1 x 2 x .083	0.000545	0.785	0.01090	0.214	0.28	0.238	0.594	0.904	1.293



Un-Equal Leg Angle

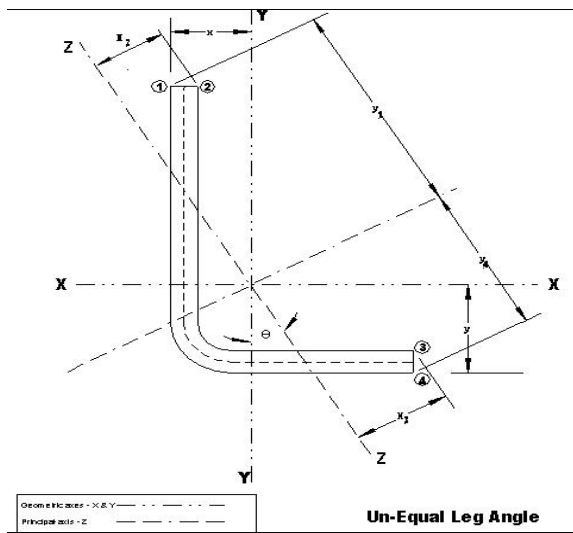
Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I _x	S _x	r _x	y	I _y	S _y	r _y	x	
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
	angle thickness	inside radius											
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
3 x 1 x .250	0.250	0.313	3.03	0.890	0.774	0.452	0.932	1.289	0.045	0.059	0.226	0.236	
3 x 1 x .238	0.238	0.313	2.89	0.851	0.744	0.433	0.935	1.283	0.044	0.057	0.227	0.231	
3 x 1 x .220	0.220	0.313	2.69	0.792	0.698	0.404	0.939	1.274	0.042	0.054	0.230	0.224	
3 x 1 x .203	0.203	0.313	2.50	0.735	0.653	0.376	0.943	1.266	0.040	0.051	0.233	0.216	
3 x 1 x .187	0.187	0.156	2.36	0.693	0.628	0.356	0.952	1.235	0.038	0.048	0.234	0.206	
3 x 1 x .180	0.180	0.156	2.27	0.669	0.608	0.344	0.954	1.231	0.037	0.046	0.235	0.203	
3 x 1 x .165	0.165	0.156	2.094	0.616	0.564	0.317	0.957	1.224	0.035	0.043	0.237	0.196	
3 x 1 x .148	0.148	0.156	1.889	0.555	0.512	0.287	0.960	1.216	0.032	0.039	0.239	0.189	
3 x 1 x .134	0.134	0.156	1.718	0.505	0.468	0.261	0.963	1.209	0.029	0.036	0.242	0.183	
3 x 1 x .125	0.125	0.156	1.607	0.473	0.440	0.245	0.965	1.204	0.028	0.034	0.243	0.180	
3 x 1 x .120	0.120	0.156	1.545	0.454	0.424	0.236	0.966	1.202	0.027	0.033	0.244	0.178	
3 x 1 x .109	0.109	0.156	1.408	0.414	0.388	0.215	0.968	1.197	0.025	0.030	0.245	0.173	
3 x 1 x .095	0.095	0.094	1.242	0.365	0.345	0.190	0.972	1.182	0.022	0.027	0.247	0.166	
3 x 1 x .083	0.083	0.094	1.089	0.320	0.304	0.167	0.975	1.176	0.020	0.024	0.249	0.161	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
						in.	in.	in.	in.
3 x 1 x .250	0.0186	1.001	0.02791	0.177	0.15	0.272	0.598	1.39	1.73
3 x 1 x .238	0.0161	1.004	0.02716	0.179	0.15	0.267	0.602	1.38	1.73
3 x 1 x .220	0.01277	1.009	0.02593	0.181	0.15	0.259	0.607	1.38	1.74
3 x 1 x .203	0.01009	1.014	0.02466	0.183	0.15	0.252	0.612	1.37	1.75
3 x 1 x .187	0.00808	1.019	0.02485	0.189	0.15	0.237	0.634	1.34	1.78
3 x 1 x .180	0.00722	1.020	0.02421	0.190	0.15	0.235	0.636	1.33	1.78
3 x 1 x .165	0.00559	1.024	0.02276	0.192	0.15	0.228	0.640	1.33	1.79
3 x 1 x .148	0.00406	1.029	0.02100	0.194	0.15	0.221	0.645	1.32	1.79
3 x 1 x .134	0.00302	1.032	0.01946	0.196	0.15	0.216	0.649	1.32	1.80
3 x 1 x .125	0.00246	1.035	0.01843	0.197	0.15	0.212	0.651	1.31	1.80
3 x 1 x .120	0.00218	1.036	0.01784	0.198	0.15	0.210	0.653	1.31	1.80
3 x 1 x .109	0.00164	1.039	0.01649	0.200	0.15	0.205	0.656	1.31	1.81
3 x 1 x .095	0.001099	1.042	0.01498	0.203	0.15	0.197	0.666	1.29	1.82
3 x 1 x .083	0.000735	1.046	0.01334	0.204	0.15	0.192	0.669	1.29	1.83



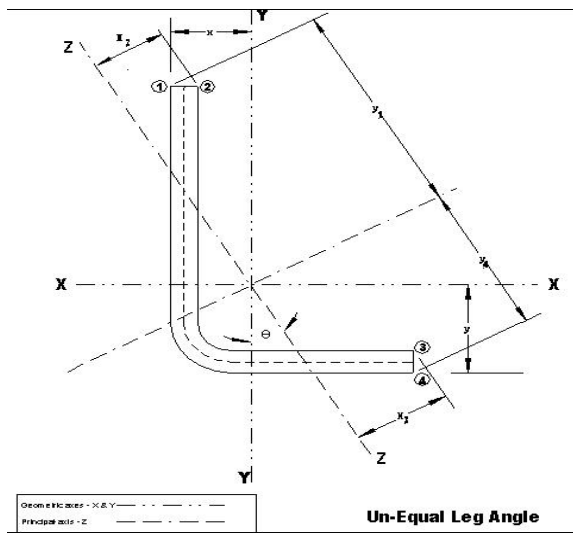
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I_x	S_x	r_x	y	I_y	S_y	r_y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
	angle thickness	inside radius										
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
4 x 1 x .250	0.250	0.313	3.88	1.140	1.749	0.786	1.238	1.774	0.048	0.061	0.205	0.212
4 x 1 x .238	0.238	0.313	3.70	1.089	1.678	0.752	1.241	1.768	0.046	0.058	0.206	0.207
4 x 1 x .220	0.220	0.313	3.44	1.012	1.569	0.700	1.245	1.758	0.044	0.055	0.209	0.199
4 x 1 x .203	0.203	0.313	3.19	0.938	1.464	0.650	1.249	1.749	0.042	0.052	0.211	0.191
4 x 1 x .187	0.187	0.156	2.99	0.880	1.400	0.613	1.261	1.716	0.040	0.048	0.212	0.182
4 x 1 x .180	0.180	0.156	2.89	0.849	1.353	0.592	1.263	1.712	0.039	0.047	0.213	0.179
4 x 1 x .165	0.165	0.156	2.65	0.781	1.252	0.545	1.266	1.705	0.036	0.044	0.215	0.172
4 x 1 x .148	0.148	0.156	2.39	0.703	1.134	0.492	1.270	1.696	0.033	0.040	0.218	0.165
4 x 1 x .134	0.134	0.156	2.17	0.639	1.036	0.448	1.273	1.689	0.031	0.037	0.220	0.159
4 x 1 x .125	0.125	0.156	2.03	0.598	0.971	0.419	1.275	1.685	0.029	0.035	0.221	0.155
4 x 1 x .120	0.120	0.156	1.95	0.574	0.935	0.403	1.276	1.682	0.028	0.033	0.222	0.153
4 x 1 x .109	0.109	0.156	1.78	0.523	0.855	0.368	1.278	1.677	0.026	0.031	0.223	0.148
4 x 1 x .095	0.095	0.094	1.56	0.460	0.758	0.324	1.284	1.660	0.023	0.027	0.225	0.141
4 x 1 x .083	0.083	0.094	1.371	0.403	0.667	0.2844	1.286	1.654	0.021	0.0240	0.227	0.136

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
						in.	in.	in.	in.
4 x 1 x .250	0.02376	1.28	0.0324	0.169	0.09	0.247	0.642	1.84	2.24
4 x 1 x .238	0.02056	1.28	0.0315	0.170	0.09	0.242	0.645	1.83	2.24
4 x 1 x .220	0.01632	1.29	0.0300	0.172	0.10	0.234	0.651	1.83	2.25
4 x 1 x .203	0.01288	1.29	0.0285	0.174	0.10	0.227	0.657	1.82	2.26
4 x 1 x .187	0.01026	1.30	0.0281	0.179	0.09	0.214	0.675	1.78	2.29
4 x 1 x .180	0.00916	1.30	0.0274	0.180	0.09	0.211	0.677	1.78	2.29
4 x 1 x .165	0.00709	1.31	0.0257	0.181	0.09	0.204	0.682	1.77	2.30
4 x 1 x .148	0.00514	1.31	0.0237	0.184	0.09	0.197	0.687	1.77	2.31
4 x 1 x .134	0.00383	1.31	0.0220	0.185	0.09	0.191	0.692	1.76	2.32
4 x 1 x .125	0.00311	1.32	0.0208	0.186	0.09	0.188	0.695	1.76	2.32
4 x 1 x .120	0.00276	1.32	0.0201	0.187	0.09	0.185	0.696	1.75	2.32
4 x 1 x .109	0.002072	1.32	0.0186	0.188	0.10	0.181	0.700	1.75	2.33
4 x 1 x .095	0.001384	1.33	0.0168	0.191	0.09	0.173	0.708	1.73	2.34
4 x 1 x .083	0.000926	1.33	0.0149	0.192	0.09	0.168	0.712	1.73	2.35



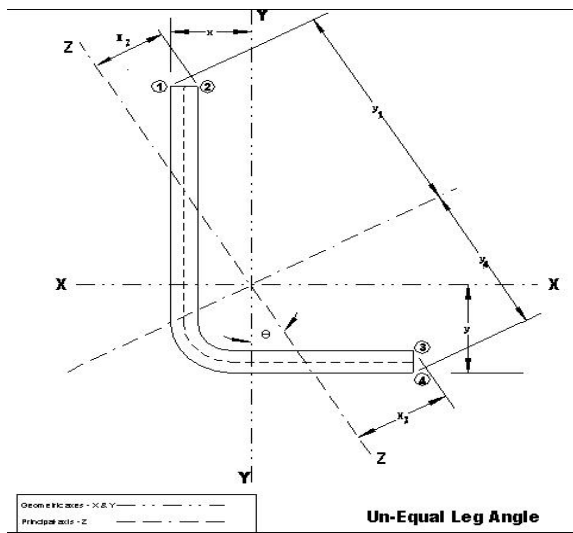
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I_x	S_x	r_x	y	I_y	S_y	r_y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
5 x 1 x .250	0.250	0.313	4.73	1.39	3.294	1.204	1.539	2.264	0.049	0.061	0.188	0.196
5 x 1 x .238	0.238	0.313	4.51	1.33	3.156	1.151	1.542	2.258	0.048	0.059	0.190	0.191
5 x 1 x .220	0.220	0.313	4.19	1.23	2.946	1.070	1.547	2.248	0.046	0.056	0.192	0.183
5 x 1 x .203	0.203	0.313	3.88	1.141	2.743	0.993	1.551	2.239	0.043	0.052	0.195	0.175
5 x 1 x .187	0.187	0.156	3.63	1.067	2.611	0.934	1.564	2.204	0.041	0.049	0.196	0.166
5 x 1 x .180	0.180	0.156	3.50	1.029	2.522	0.901	1.566	2.200	0.040	0.048	0.197	0.163
5 x 1 x .165	0.165	0.156	3.22	0.946	2.330	0.830	1.569	2.192	0.037	0.044	0.199	0.157
5 x 1 x .148	0.148	0.156	2.89	0.851	2.108	0.748	1.573	2.184	0.034	0.040	0.201	0.149
5 x 1 x .134	0.134	0.156	2.63	0.773	1.922	0.681	1.577	2.176	0.032	0.037	0.203	0.143
5 x 1 x .125	0.125	0.156	2.46	0.723	1.801	0.637	1.579	2.172	0.030	0.035	0.204	0.139
5 x 1 x .120	0.120	0.156	2.36	0.694	1.733	0.612	1.580	2.169	0.029	0.034	0.205	0.137
5 x 1 x .109	0.109	0.156	2.15	0.632	1.583	0.558	1.582	2.163	0.027	0.031	0.206	0.132
5 x 1 x .095	0.095	0.094	1.89	0.555	1.401	0.491	1.589	2.146	0.024	0.027	0.208	0.125
5 x 1 x .083	0.083	0.094	1.65	0.486	1.231	0.431	1.591	2.140	0.021	0.024	0.210	0.120

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
5 x 1 x .250	0.0290	1.56	0.036	0.160	0.06	0.230	0.672	2.31	2.74
5 x 1 x .238	0.0251	1.57	0.035	0.162	0.06	0.225	0.676	2.31	2.75
5 x 1 x .220	0.0199	1.57	0.033	0.164	0.07	0.217	0.683	2.30	2.76
5 x 1 x .203	0.0157	1.58	0.031	0.166	0.07	0.210	0.688	2.29	2.77
5 x 1 x .187	0.0124	1.59	0.030	0.169	0.06	0.198	0.704	2.25	2.80
5 x 1 x .180	0.01111	1.59	0.030	0.170	0.06	0.195	0.707	2.25	2.80
5 x 1 x .165	0.00858	1.60	0.028	0.172	0.06	0.188	0.712	2.24	2.81
5 x 1 x .148	0.00622	1.60	0.026	0.174	0.06	0.181	0.717	2.23	2.82
5 x 1 x .134	0.00463	1.60	0.024	0.175	0.07	0.175	0.722	2.23	2.83
5 x 1 x .125	0.00376	1.61	0.022	0.176	0.07	0.171	0.725	2.22	2.83
5 x 1 x .120	0.00333	1.61	0.022	0.177	0.07	0.169	0.727	2.22	2.83
5 x 1 x .109	0.00250	1.61	0.020	0.178	0.07	0.164	0.730	2.22	2.84
5 x 1 x .095	0.00167	1.62	0.018	0.180	0.07	0.156	0.739	2.20	2.86
5 x 1 x .083	0.001117	1.62	0.0161	0.182	0.07	0.151	0.742	2.19	2.86



Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I_x	S_x	r_x	y	I_y	S_y	r_y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
	angle thickness	inside radius										
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
6 x 1 x .250	0.250	0.313	5.58	1.64	5.53	1.706	1.837	2.757	0.050	0.062	0.175	0.185
6 x 1 x .238	0.238	0.313	5.32	1.57	5.30	1.630	1.840	2.751	0.049	0.060	0.177	0.180
6 x 1 x .220	0.220	0.313	4.94	1.45	4.94	1.515	1.844	2.741	0.047	0.056	0.179	0.172
6 x 1 x .203	0.203	0.313	4.57	1.34	4.59	1.405	1.849	2.732	0.044	0.053	0.181	0.164
6 x 1 x .187	0.187	0.156	4.26	1.25	4.355	1.318	1.864	2.695	0.042	0.049	0.182	0.155
6 x 1 x .180	0.180	0.156	4.11	1.21	4.205	1.271	1.865	2.692	0.041	0.048	0.183	0.152
6 x 1 x .165	0.165	0.156	3.78	1.11	3.880	1.170	1.869	2.684	0.038	0.045	0.185	0.146
6 x 1 x .148	0.148	0.156	3.40	1.00	3.507	1.055	1.873	2.675	0.035	0.041	0.187	0.138
6 x 1 x .134	0.134	0.156	3.08	0.907	3.195	0.959	1.877	2.667	0.033	0.037	0.189	0.132
6 x 1 x .125	0.125	0.156	2.88	0.848	2.992	0.896	1.879	2.662	0.031	0.035	0.190	0.128
6 x 1 x .120	0.120	0.156	2.77	0.814	2.879	0.862	1.880	2.660	0.030	0.034	0.191	0.126
6 x 1 x .109	0.109	0.156	2.52	0.741	2.627	0.785	1.883	2.654	0.027	0.031	0.193	0.121
6 x 1 x .095	0.095	0.094	2.21	0.650	2.322	0.690	1.890	2.636	0.024	0.028	0.194	0.114
6 x 1 x .083	0.083	0.094	1.94	0.569	2.039	0.605	1.892	2.630	0.022	0.024	0.196	0.109

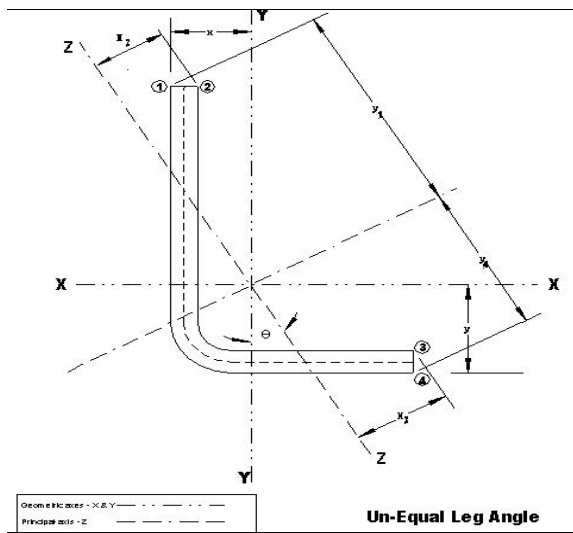
Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
						in.	in.	in.	in.
6 x 1 x .250	0.0342	1.85	0.038	0.152	0.05	0.22	0.70	2.79	3.25
6 x 1 x .238	0.0296	1.86	0.037	0.154	0.05	0.21	0.70	2.79	3.25
6 x 1 x .220	0.0234	1.86	0.035	0.156	0.05	0.20	0.71	2.78	3.26
6 x 1 x .203	0.0185	1.87	0.033	0.158	0.05	0.20	0.71	2.77	3.27
6 x 1 x .187	0.0146	1.88	0.032	0.160	0.05	0.19	0.73	2.73	3.31
6 x 1 x .180	0.0131	1.88	0.031	0.161	0.05	0.18	0.73	2.73	3.31
6 x 1 x .165	0.01008	1.89	0.029	0.163	0.05	0.18	0.73	2.72	3.32
6 x 1 x .148	0.00730	1.89	0.027	0.165	0.05	0.17	0.74	2.71	3.33
6 x 1 x .134	0.00543	1.90	0.025	0.166	0.05	0.16	0.75	2.71	3.34
6 x 1 x .125	0.00441	1.90	0.024	0.167	0.05	0.16	0.75	2.70	3.34
6 x 1 x .120	0.00391	1.90	0.023	0.168	0.05	0.16	0.75	2.70	3.34
6 x 1 x .109	0.00294	1.90	0.021	0.169	0.05	0.15	0.75	2.69	3.35
6 x 1 x .095	0.00196	1.91	0.019	0.171	0.05	0.14	0.76	2.68	3.37
6 x 1 x .083	0.00131	1.91	0.017	0.173	0.05	0.14	0.77	2.67	3.37



Un-Equal Leg Angle

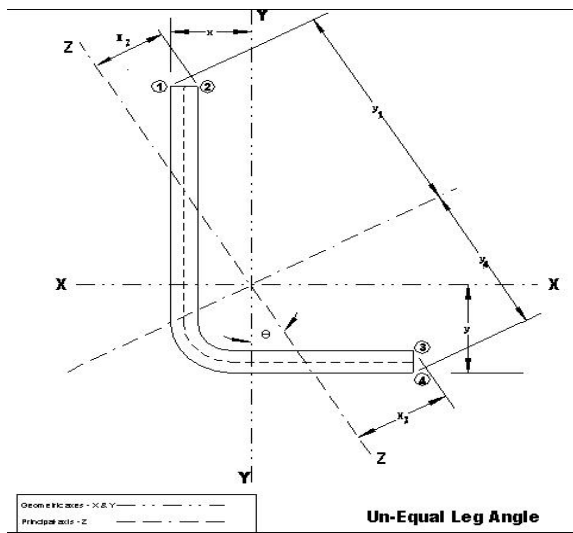
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I _x	S _x	r _x	y	I _y	S _y	r _y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
3 x 2 x .250	0.250	0.313	3.88	1.14	1.04	0.528	0.954	1.034	0.38	0.254	0.58	0.513
3 x 2 x .238	0.238	0.313	3.70	1.09	1.00	0.505	0.956	1.029	0.36	0.244	0.58	0.508
3 x 2 x .220	0.220	0.313	3.44	1.01	0.93	0.470	0.959	1.021	0.34	0.227	0.58	0.501
3 x 2 x .203	0.203	0.313	3.19	0.94	0.87	0.437	0.962	1.014	0.32	0.212	0.58	0.494
3 x 2 x .187	0.187	0.156	2.99	0.88	0.82	0.408	0.965	0.992	0.30	0.198	0.58	0.481
3 x 2 x .180	0.180	0.156	2.89	0.85	0.79	0.394	0.967	0.989	0.29	0.191	0.59	0.478
3 x 2 x .165	0.165	0.156	2.655	0.78	0.73	0.363	0.969	0.983	0.27	0.176	0.59	0.472
3 x 2 x .148	0.148	0.156	2.392	0.70	0.66	0.328	0.972	0.975	0.24	0.160	0.59	0.465
3 x 2 x .134	0.134	0.156	2.173	0.639	0.61	0.299	0.974	0.969	0.22	0.146	0.59	0.459
3 x 2 x .125	0.125	0.156	2.032	0.598	0.57	0.280	0.976	0.966	0.21	0.136	0.59	0.456
3 x 2 x .120	0.120	0.156	1.953	0.574	0.55	0.269	0.976	0.963	0.20	0.131	0.59	0.454
3 x 2 x .109	0.109	0.156	1.779	0.523	0.501	0.245	0.978	0.959	0.186	0.120	0.60	0.449
3 x 2 x .095	0.095	0.094	1.565	0.460	0.442	0.215	0.980	0.948	0.164	0.105	0.60	0.441
3 x 2 x .083	0.083	0.094	1.371	0.403	0.389	0.189	0.982	0.942	0.145	0.093	0.60	0.436

Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
3 x 2 x .250	0.0238	1.34	0.189	0.407	0.47	0.60	1.01	1.57	2.00
3 x 2 x .238	0.0206	1.34	0.182	0.408	0.47	0.60	1.01	1.57	2.00
3 x 2 x .220	0.0163	1.35	0.171	0.411	0.47	0.59	1.01	1.56	2.00
3 x 2 x .203	0.0129	1.35	0.160	0.413	0.47	0.59	1.01	1.56	2.01
3 x 2 x .187	0.0103	1.34	0.159	0.425	0.46	0.58	1.04	1.54	2.02
3 x 2 x .180	0.0092	1.34	0.154	0.426	0.46	0.57	1.04	1.54	2.03
3 x 2 x .165	0.00709	1.35	0.143	0.428	0.46	0.57	1.04	1.53	2.03
3 x 2 x .148	0.00514	1.35	0.130	0.430	0.46	0.56	1.04	1.53	2.03
3 x 2 x .134	0.00383	1.36	0.119	0.432	0.46	0.56	1.05	1.53	2.04
3 x 2 x .125	0.00311	1.36	0.112	0.433	0.46	0.56	1.05	1.53	2.04
3 x 2 x .120	0.00276	1.36	0.108	0.434	0.46	0.56	1.05	1.53	2.04
3 x 2 x .109	0.00207	1.36	0.099	0.435	0.47	0.55	1.05	1.52	2.04
3 x 2 x .095	0.00138	1.36	0.089	0.440	0.46	0.55	1.06	1.51	2.05
3 x 2 x .083	0.00093	1.37	0.079	0.441	0.46	0.54	1.06	1.51	2.05



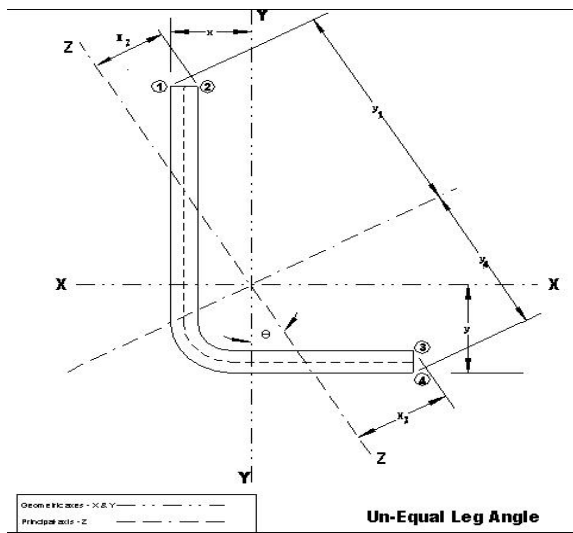
Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I_x	S_x	r_x	y	I_y	S_y	r_y	x	
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
	angle thickness	inside radius	lbs. / ft.	in. ²									
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
4 x 2 x .250	0.250	0.313	4.73	1.39	2.31	0.91	1.29	1.48	0.41	0.26	0.54	0.44	
4 x 2 x .238	0.238	0.313	4.51	1.33	2.21	0.874	1.29	1.47	0.39	0.25	0.54	0.44	
4 x 2 x .220	0.220	0.313	4.19	1.23	2.06	0.812	1.29	1.46	0.37	0.23	0.55	0.43	
4 x 2 x .203	0.203	0.313	3.88	1.14	1.92	0.753	1.30	1.46	0.34	0.22	0.55	0.42	
4 x 2 x .187	0.187	0.156	3.63	1.07	1.81	0.703	1.30	1.43	0.32	0.20	0.55	0.41	
4 x 2 x .180	0.180	0.156	3.50	1.03	1.74	0.678	1.30	1.43	0.31	0.20	0.55	0.41	
4 x 2 x .165	0.165	0.156	3.22	0.95	1.61	0.625	1.30	1.42	0.29	0.18	0.55	0.40	
4 x 2 x .148	0.148	0.156	2.89	0.85	1.46	0.563	1.31	1.41	0.26	0.16	0.56	0.40	
4 x 2 x .134	0.134	0.156	2.63	0.77	1.33	0.512	1.31	1.41	0.24	0.15	0.56	0.39	
4 x 2 x .125	0.125	0.156	2.46	0.723	1.24	0.479	1.31	1.40	0.23	0.14	0.56	0.39	
4 x 2 x .120	0.120	0.156	2.36	0.694	1.20	0.460	1.31	1.40	0.22	0.14	0.56	0.39	
4 x 2 x .109	0.109	0.156	2.15	0.632	1.09	0.420	1.31	1.40	0.20	0.12	0.56	0.38	
4 x 2 x .095	0.095	0.094	1.89	0.555	0.96	0.368	1.32	1.38	0.18	0.11	0.56	0.37	
4 x 2 x .083	0.083	0.094	1.65	0.486	0.85	0.323	1.32	1.38	0.16	0.10	0.57	0.37	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
	in. ⁴	in.	in. ⁴	in.		in.	in.	in.	in.
4 x 2 x .250	0.0290	1.55	0.236	0.412	0.29	0.51	1.16	1.85	2.55
4 x 2 x .238	0.0251	1.56	0.227	0.414	0.29	0.51	1.16	1.85	2.55
4 x 2 x .220	0.0199	1.56	0.214	0.416	0.29	0.50	1.16	1.84	2.56
4 x 2 x .203	0.0157	1.57	0.200	0.419	0.29	0.50	1.16	1.84	2.56
4 x 2 x .187	0.0124	1.56	0.194	0.427	0.28	0.48	1.19	1.81	2.58
4 x 2 x .180	0.0111	1.57	0.188	0.428	0.28	0.48	1.19	1.81	2.59
4 x 2 x .165	0.00858	1.57	0.175	0.430	0.28	0.47	1.19	1.80	2.59
4 x 2 x .148	0.00622	1.57	0.159	0.432	0.28	0.47	1.20	1.80	2.60
4 x 2 x .134	0.00463	1.58	0.146	0.434	0.28	0.46	1.20	1.79	2.60
4 x 2 x .125	0.00376	1.58	0.137	0.435	0.28	0.46	1.20	1.79	2.60
4 x 2 x .120	0.00333	1.58	0.132	0.436	0.29	0.46	1.20	1.79	2.60
4 x 2 x .109	0.00250	1.58	0.121	0.437	0.29	0.45	1.20	1.79	2.61
4 x 2 x .095	0.00167	1.59	0.108	0.441	0.28	0.44	1.21	1.78	2.62
4 x 2 x .083	0.00112	1.59	0.095	0.443	0.28	0.44	1.22	1.77	2.62



Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I _x	S _x	r _x	y	I _y	S _y	r _y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
5 x 2 x .250	0.250	0.313	5.58	1.64	4.26	1.39	1.61	1.94	0.43	0.27	0.51	0.39
5 x 2 x .238	0.238	0.313	5.32	1.57	4.08	1.33	1.61	1.93	0.41	0.26	0.51	0.39
5 x 2 x .220	0.220	0.313	4.94	1.45	3.80	1.24	1.62	1.92	0.39	0.24	0.52	0.38
5 x 2 x .203	0.203	0.313	4.57	1.34	3.53	1.14	1.62	1.92	0.36	0.22	0.52	0.38
5 x 2 x .187	0.187	0.156	4.26	1.25	3.32	1.07	1.63	1.89	0.34	0.21	0.52	0.37
5 x 2 x .180	0.180	0.156	4.11	1.21	3.20	1.029	1.63	1.89	0.33	0.20	0.52	0.36
5 x 2 x .165	0.165	0.156	3.78	1.11	2.96	0.947	1.63	1.88	0.30	0.19	0.52	0.36
5 x 2 x .148	0.148	0.156	3.40	1.00	2.67	0.853	1.63	1.87	0.28	0.17	0.53	0.35
5 x 2 x .134	0.134	0.156	3.08	0.91	2.43	0.775	1.64	1.86	0.25	0.15	0.53	0.34
5 x 2 x .125	0.125	0.156	2.88	0.85	2.28	0.725	1.64	1.86	0.24	0.14	0.53	0.34
5 x 2 x .120	0.120	0.156	2.77	0.81	2.19	0.697	1.64	1.86	0.23	0.14	0.53	0.34
5 x 2 x .109	0.109	0.156	2.52	0.741	2.00	0.634	1.64	1.85	0.21	0.13	0.53	0.33
5 x 2 x .095	0.095	0.094	2.21	0.650	1.76	0.556	1.64	1.84	0.19	0.11	0.53	0.33
5 x 2 x .083	0.083	0.094	1.94	0.569	1.54	0.488	1.65	1.83	0.16	0.10	0.54	0.32

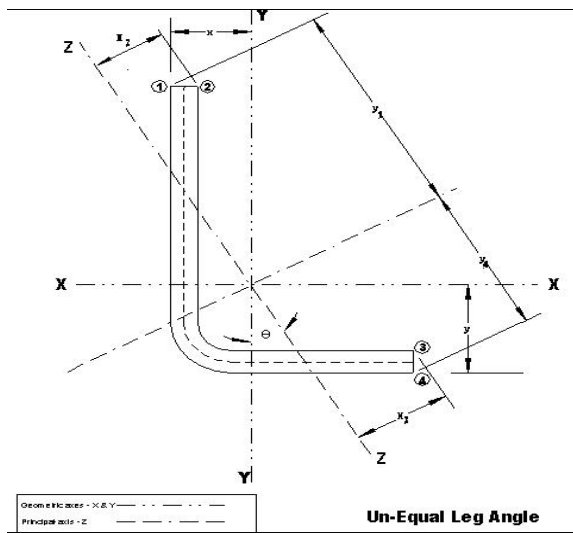
Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
5 x 2 x .250	0.0342	1.80	0.27	0.405	0.20	0.46	1.24	2.22	3.08
5 x 2 x .238	0.0296	1.81	0.26	0.407	0.20	0.46	1.24	2.21	3.08
5 x 2 x .220	0.0234	1.81	0.24	0.409	0.20	0.45	1.25	2.21	3.09
5 x 2 x .203	0.0185	1.81	0.23	0.412	0.20	0.44	1.25	2.20	3.10
5 x 2 x .187	0.0146	1.82	0.22	0.418	0.20	0.43	1.27	2.17	3.12
5 x 2 x .180	0.0131	1.82	0.21	0.419	0.20	0.42	1.28	2.17	3.13
5 x 2 x .165	0.01008	1.82	0.20	0.421	0.20	0.42	1.28	2.16	3.13
5 x 2 x .148	0.00730	1.83	0.18	0.423	0.20	0.41	1.28	2.16	3.14
5 x 2 x .134	0.00543	1.83	0.164	0.425	0.20	0.41	1.29	2.15	3.14
5 x 2 x .125	0.00441	1.83	0.154	0.426	0.20	0.40	1.29	2.15	3.15
5 x 2 x .120	0.00391	1.83	0.148	0.427	0.20	0.40	1.29	2.15	3.15
5 x 2 x .109	0.00294	1.84	0.136	0.428	0.20	0.40	1.29	2.14	3.15
5 x 2 x .095	0.00196	1.84	0.121	0.431	0.20	0.39	1.30	2.13	3.16
5 x 2 x .083	0.00131	1.84	0.107	0.433	0.20	0.38	1.31	2.13	3.17



Un-Equal Leg Angle

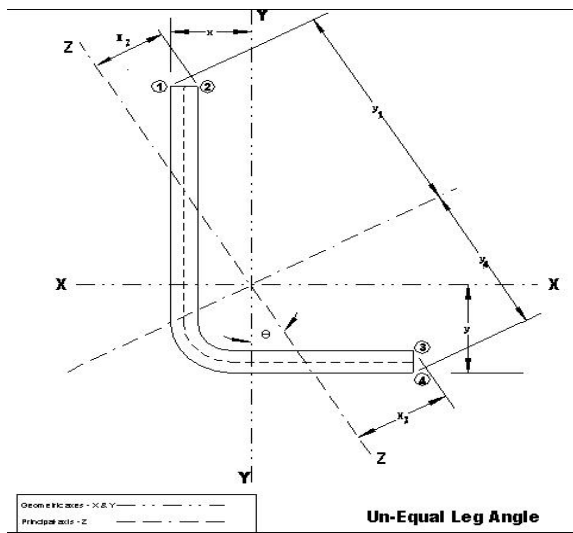
Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I _x	S _x	r _x	y	I _y	S _y	r _y	x	
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
	angle thickness	inside radius	lbs. / ft.	in. ²									
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
6 x 2 x .250	0.250	0.313	6.43	1.89	7.04	1.96	1.93	2.41	0.45	0.27	0.49	0.36	
6 x 2 x .238	0.238	0.313	6.13	1.80	6.73	1.87	1.93	2.40	0.43	0.26	0.49	0.35	
6 x 2 x .220	0.220	0.313	5.68	1.67	6.26	1.74	1.94	2.39	0.40	0.24	0.49	0.35	
6 x 2 x .203	0.203	0.313	5.26	1.55	5.81	1.61	1.94	2.39	0.38	0.23	0.49	0.34	
6 x 2 x .187	0.187	0.156	4.90	1.44	5.46	1.50	1.95	2.36	0.35	0.21	0.49	0.33	
6 x 2 x .180	0.180	0.156	4.72	1.39	5.27	1.44	1.95	2.35	0.34	0.20	0.49	0.33	
6 x 2 x .165	0.165	0.156	4.34	1.28	4.85	1.33	1.95	2.35	0.32	0.19	0.50	0.32	
6 x 2 x .148	0.148	0.156	3.90	1.15	4.38	1.196	1.95	2.34	0.29	0.17	0.50	0.31	
6 x 2 x .134	0.134	0.156	3.54	1.04	3.98	1.086	1.96	2.33	0.26	0.15	0.50	0.31	
6 x 2 x .125	0.125	0.156	3.31	0.97	3.73	1.015	1.96	2.33	0.25	0.15	0.50	0.30	
6 x 2 x .120	0.120	0.156	3.18	0.93	3.59	0.976	1.96	2.33	0.24	0.14	0.50	0.30	
6 x 2 x .109	0.109	0.156	2.89	0.85	3.27	0.889	1.96	2.32	0.22	0.13	0.51	0.30	
6 x 2 x .095	0.095	0.094	2.53	0.745	2.88	0.779	1.96	2.31	0.19	0.11	0.51	0.29	
6 x 2 x .083	0.083	0.094	2.22	0.652	2.52	0.682	1.97	2.30	0.17	0.10	0.51	0.29	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
	in. ⁴	in.	in. ⁴	in.		in.	in.	in.	in.
6 x 2 x .250	0.0394	2.07	0.29	0.395	0.15	0.42	1.30	2.63	3.60
6 x 2 x .238	0.0340	2.07	0.28	0.396	0.15	0.42	1.31	2.62	3.61
6 x 2 x .220	0.0270	2.08	0.27	0.399	0.15	0.41	1.31	2.61	3.62
6 x 2 x .203	0.0212	2.08	0.25	0.401	0.15	0.40	1.32	2.61	3.62
6 x 2 x .187	0.0168	2.09	0.24	0.406	0.15	0.39	1.33	2.58	3.65
6 x 2 x .180	0.0150	2.09	0.23	0.407	0.15	0.39	1.34	2.57	3.65
6 x 2 x .165	0.01158	2.09	0.21	0.409	0.15	0.38	1.34	2.57	3.66
6 x 2 x .148	0.00838	2.10	0.19	0.411	0.15	0.38	1.35	2.56	3.67
6 x 2 x .134	0.00623	2.10	0.18	0.413	0.15	0.37	1.35	2.56	3.67
6 x 2 x .125	0.00507	2.10	0.17	0.414	0.15	0.37	1.35	2.55	3.68
6 x 2 x .120	0.00449	2.10	0.16	0.415	0.15	0.36	1.35	2.55	3.68
6 x 2 x .109	0.00337	2.11	0.15	0.416	0.15	0.36	1.36	2.55	3.68
6 x 2 x .095	0.00224	2.11	0.131	0.42	0.15	0.35	1.36	2.53	3.70
6 x 2 x .083	0.00150	2.11	0.115	0.42	0.15	0.35	1.37	2.53	3.70



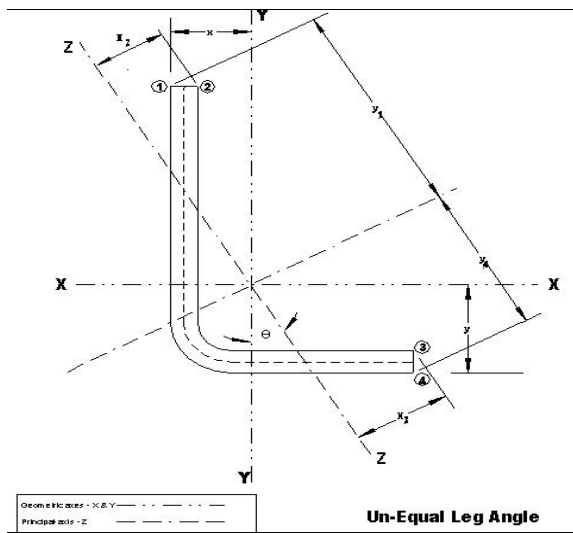
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I_x	S_x	r_x	y	I_y	S_y	r_y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
4 x 3 x .250	0.250	0.313	5.58	1.64	2.69	0.99	1.28	1.27	1.33	0.59	0.90	0.76
4 x 3 x .238	0.238	0.313	5.32	1.57	2.58	0.94	1.28	1.27	1.27	0.57	0.90	0.75
4 x 3 x .220	0.220	0.313	4.94	1.45	2.40	0.88	1.29	1.26	1.19	0.53	0.90	0.74
4 x 3 x .203	0.203	0.313	4.57	1.34	2.23	0.81	1.29	1.25	1.10	0.49	0.91	0.74
4 x 3 x .187	0.187	0.156	4.26	1.25	2.09	0.76	1.29	1.23	1.03	0.45	0.91	0.72
4 x 3 x .180	0.180	0.156	4.11	1.21	2.02	0.73	1.29	1.23	1.00	0.44	0.91	0.72
4 x 3 x .165	0.165	0.156	3.78	1.11	1.86	0.67	1.29	1.22	0.92	0.40	0.91	0.72
4 x 3 x .148	0.148	0.156	3.40	1.00	1.68	0.60	1.30	1.22	0.83	0.36	0.91	0.71
4 x 3 x .134	0.134	0.156	3.08	0.91	1.53	0.55	1.30	1.21	0.76	0.33	0.92	0.70
4 x 3 x .125	0.125	0.156	2.88	0.85	1.43	0.51	1.30	1.21	0.71	0.31	0.92	0.70
4 x 3 x .120	0.120	0.156	2.77	0.81	1.38	0.494	1.30	1.20	0.69	0.30	0.92	0.70
4 x 3 x .109	0.109	0.156	2.52	0.74	1.26	0.450	1.30	1.20	0.63	0.27	0.92	0.69
4 x 3 x .095	0.095	0.094	2.21	0.65	1.11	0.394	1.31	1.19	0.55	0.24	0.92	0.68
4 x 3 x .083	0.083	0.094	1.94	0.569	0.97	0.346	1.31	1.18	0.48	0.21	0.92	0.68

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
4 x 3 x .250	0.0342	1.93	0.64	0.62	0.58	0.93	1.43	2.22	2.74
4 x 3 x .238	0.0296	1.93	0.61	0.63	0.58	0.92	1.43	2.22	2.74
4 x 3 x .220	0.0234	1.93	0.57	0.63	0.58	0.92	1.43	2.22	2.75
4 x 3 x .203	0.0185	1.94	0.54	0.63	0.58	0.91	1.43	2.22	2.75
4 x 3 x .187	0.0146	1.93	0.52	0.64	0.57	0.91	1.46	2.20	2.76
4 x 3 x .180	0.0131	1.93	0.50	0.64	0.57	0.91	1.46	2.20	2.76
4 x 3 x .165	0.01008	1.94	0.46	0.65	0.57	0.90	1.46	2.20	2.77
4 x 3 x .148	0.00730	1.94	0.42	0.65	0.57	0.90	1.46	2.19	2.77
4 x 3 x .134	0.00543	1.94	0.38	0.65	0.57	0.89	1.46	2.19	2.77
4 x 3 x .125	0.00441	1.95	0.36	0.65	0.57	0.89	1.46	2.19	2.77
4 x 3 x .120	0.00391	1.95	0.35	0.65	0.57	0.89	1.46	2.19	2.77
4 x 3 x .109	0.00294	1.95	0.32	0.65	0.57	0.89	1.46	2.19	2.77
4 x 3 x .095	0.00196	1.95	0.28	0.66	0.57	0.88	1.47	2.18	2.78
4 x 3 x .083	0.00131	1.95	0.25	0.66	0.57	0.88	1.47	2.18	2.78



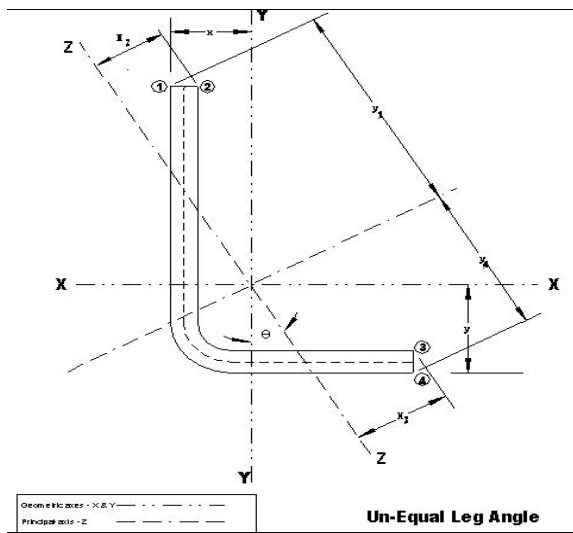
Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I _x	S _x	r _x	y	I _y	S _y	r _y	x	
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
	angle thickness	inside radius											
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
5 x 3 x .250	0.250	0.313	6.43	1.89	4.98	1.51	1.62	1.70	1.41	0.61	0.86	0.67	
5 x 3 x .238	0.238	0.313	6.13	1.80	4.76	1.44	1.62	1.69	1.35	0.58	0.87	0.67	
5 x 3 x .220	0.220	0.313	5.68	1.67	4.43	1.34	1.63	1.69	1.26	0.54	0.87	0.66	
5 x 3 x .203	0.203	0.313	5.26	1.55	4.11	1.24	1.63	1.68	1.18	0.50	0.87	0.65	
5 x 3 x .187	0.187	0.156	4.90	1.44	3.84	1.15	1.63	1.66	1.10	0.47	0.87	0.64	
5 x 3 x .180	0.180	0.156	4.72	1.39	3.71	1.11	1.63	1.65	1.06	0.45	0.87	0.64	
5 x 3 x .165	0.165	0.156	4.34	1.28	3.42	1.02	1.64	1.65	0.98	0.41	0.88	0.63	
5 x 3 x .148	0.148	0.156	3.90	1.15	3.09	0.92	1.64	1.64	0.89	0.37	0.88	0.63	
5 x 3 x .134	0.134	0.156	3.54	1.04	2.81	0.83	1.64	1.63	0.81	0.34	0.88	0.62	
5 x 3 x .125	0.125	0.156	3.31	0.97	2.63	0.78	1.64	1.63	0.76	0.32	0.88	0.62	
5 x 3 x .120	0.120	0.156	3.18	0.93	2.53	0.75	1.64	1.63	0.73	0.31	0.88	0.62	
5 x 3 x .109	0.109	0.156	2.89	0.85	2.30	0.68	1.65	1.62	0.67	0.28	0.88	0.61	
5 x 3 x .095	0.095	0.094	2.53	0.75	2.02	0.597	1.65	1.61	0.58	0.24	0.89	0.60	
5 x 3 x .083	0.083	0.094	2.22	0.652	1.78	0.523	1.65	1.61	0.51	0.21	0.89	0.60	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
						in.	in.	in.	in.
5 x 3 x .250	0.0394	2.13	0.78	0.64	0.39	0.80	1.64	2.43	3.32
5 x 3 x .238	0.0340	2.14	0.75	0.64	0.39	0.80	1.65	2.42	3.32
5 x 3 x .220	0.0270	2.14	0.70	0.65	0.39	0.79	1.65	2.42	3.33
5 x 3 x .203	0.0212	2.14	0.65	0.65	0.39	0.78	1.65	2.41	3.33
5 x 3 x .187	0.0168	2.14	0.62	0.66	0.38	0.77	1.68	2.39	3.35
5 x 3 x .180	0.0150	2.14	0.60	0.66	0.38	0.77	1.68	2.39	3.35
5 x 3 x .165	0.01158	2.15	0.56	0.66	0.38	0.76	1.68	2.39	3.36
5 x 3 x .148	0.00838	2.15	0.50	0.66	0.38	0.76	1.68	2.38	3.36
5 x 3 x .134	0.00623	2.15	0.46	0.66	0.38	0.75	1.68	2.38	3.37
5 x 3 x .125	0.00507	2.16	0.43	0.67	0.39	0.75	1.68	2.38	3.37
5 x 3 x .120	0.00449	2.16	0.41	0.67	0.39	0.75	1.68	2.38	3.37
5 x 3 x .109	0.00337	2.16	0.38	0.67	0.39	0.75	1.68	2.37	3.37
5 x 3 x .095	0.00224	2.16	0.34	0.67	0.38	0.74	1.69	2.36	3.38
5 x 3 x .083	0.00150	2.16	0.30	0.67	0.38	0.74	1.70	2.36	3.38



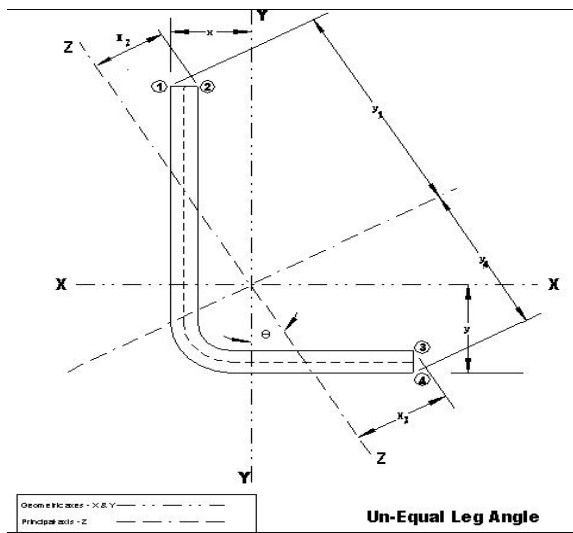
Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I_x	S_x	r_x	y	I_y	S_y	r_y	x	
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
	angle thickness	inside radius	lbs. / ft.	in. ²									
6 x 3 x .250	0.250	0.313	7.28	2.14	8.19	2.12	1.96	2.14	1.48	0.62	0.83	0.61	
6 x 3 x .238	0.238	0.313	6.94	2.04	7.83	2.03	1.96	2.14	1.42	0.59	0.83	0.60	
6 x 3 x .220	0.220	0.313	6.43	1.89	7.28	1.88	1.96	2.13	1.32	0.55	0.84	0.60	
6 x 3 x .203	0.203	0.313	5.95	1.75	6.75	1.74	1.96	2.12	1.23	0.51	0.84	0.59	
6 x 3 x .187	0.187	0.156	5.54	1.63	6.31	1.62	1.97	2.10	1.15	0.47	0.84	0.58	
6 x 3 x .180	0.180	0.156	5.33	1.57	6.08	1.56	1.97	2.09	1.11	0.46	0.84	0.58	
6 x 3 x .165	0.165	0.156	4.90	1.44	5.60	1.43	1.97	2.09	1.02	0.42	0.84	0.57	
6 x 3 x .148	0.148	0.156	4.40	1.30	5.05	1.29	1.97	2.08	0.93	0.38	0.85	0.56	
6 x 3 x .134	0.134	0.156	4.00	1.18	4.59	1.17	1.98	2.07	0.84	0.35	0.85	0.56	
6 x 3 x .125	0.125	0.156	3.73	1.10	4.30	1.09	1.98	2.07	0.79	0.32	0.85	0.55	
6 x 3 x .120	0.120	0.156	3.59	1.05	4.13	1.05	1.98	2.07	0.76	0.31	0.85	0.55	
6 x 3 x .109	0.109	0.156	3.26	0.96	3.77	0.96	1.98	2.06	0.70	0.28	0.85	0.55	
6 x 3 x .095	0.095	0.094	2.86	0.84	3.31	0.837	1.98	2.05	0.61	0.25	0.85	0.54	
6 x 3 x .083	0.083	0.094	2.50	0.735	2.90	0.733	1.99	2.05	0.54	0.22	0.85	0.54	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
						in.	in.	in.	in.
6 x 3 x .250	0.0446	2.36	0.88	0.64	0.29	0.72	1.78	2.72	3.88
6 x 3 x .238	0.0385	2.36	0.84	0.64	0.29	0.71	1.78	2.71	3.88
6 x 3 x .220	0.0305	2.37	0.79	0.65	0.29	0.70	1.78	2.71	3.89
6 x 3 x .203	0.0240	2.37	0.73	0.65	0.29	0.70	1.79	2.70	3.89
6 x 3 x .187	0.0190	2.37	0.70	0.66	0.28	0.68	1.81	2.68	3.91
6 x 3 x .180	0.0169	2.37	0.68	0.66	0.28	0.68	1.81	2.68	3.91
6 x 3 x .165	0.01308	2.37	0.62	0.66	0.28	0.68	1.81	2.67	3.92
6 x 3 x .148	0.00946	2.38	0.56	0.66	0.28	0.67	1.82	2.67	3.92
6 x 3 x .134	0.00703	2.38	0.52	0.66	0.28	0.66	1.82	2.66	3.93
6 x 3 x .125	0.00572	2.38	0.48	0.66	0.28	0.66	1.82	2.66	3.93
6 x 3 x .120	0.00506	2.38	0.46	0.66	0.28	0.66	1.82	2.66	3.93
6 x 3 x .109	0.00380	2.39	0.42	0.67	0.28	0.66	1.82	2.66	3.94
6 x 3 x .095	0.00253	2.39	0.38	0.67	0.28	0.65	1.83	2.64	3.95
6 x 3 x .083	0.00169	2.39	0.33	0.67	0.28	0.64	1.84	2.64	3.95



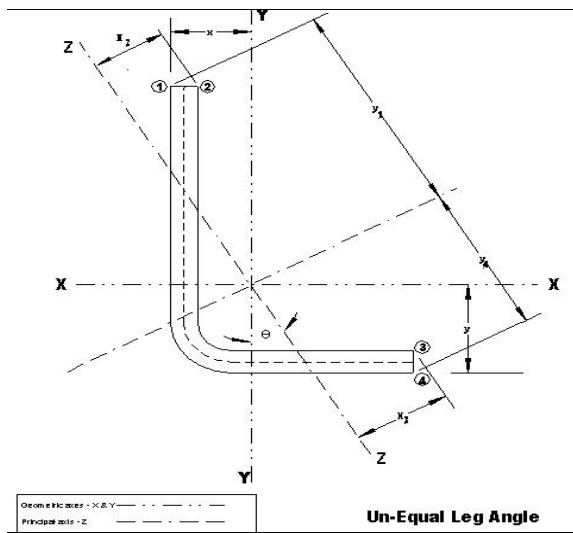
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I_x	S_x	r_x	y	I_y	S_y	r_y	x
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.
5 x 4 x .250	0.250	0.313	7.28	2.14	5.52	1.58	1.61	1.51	3.20	1.07	1.22	1.00
5 x 4 x .238	0.238	0.313	6.94	2.04	5.28	1.51	1.61	1.51	3.06	1.02	1.22	1.00
5 x 4 x .220	0.220	0.313	6.43	1.89	4.91	1.40	1.61	1.50	2.85	0.95	1.23	0.99
5 x 4 x .203	0.203	0.313	5.95	1.75	4.56	1.30	1.61	1.49	2.65	0.88	1.23	0.98
5 x 4 x .187	0.187	0.156	5.54	1.63	4.25	1.21	1.62	1.48	2.46	0.81	1.23	0.97
5 x 4 x .180	0.180	0.156	5.33	1.57	4.10	1.16	1.62	1.47	2.38	0.78	1.23	0.97
5 x 4 x .165	0.165	0.156	4.90	1.44	3.78	1.07	1.62	1.47	2.19	0.72	1.23	0.96
5 x 4 x .148	0.148	0.156	4.40	1.30	3.41	0.96	1.62	1.46	1.98	0.65	1.24	0.95
5 x 4 x .134	0.134	0.156	4.00	1.18	3.10	0.87	1.62	1.45	1.80	0.59	1.24	0.95
5 x 4 x .125	0.125	0.156	3.73	1.10	2.90	0.82	1.63	1.45	1.69	0.55	1.24	0.95
5 x 4 x .120	0.120	0.156	3.59	1.05	2.79	0.79	1.63	1.45	1.62	0.53	1.24	0.94
5 x 4 x .109	0.109	0.156	3.26	0.96	2.54	0.71	1.63	1.44	1.48	0.48	1.24	0.94
5 x 4 x .095	0.095	0.094	2.86	0.84	2.23	0.626	1.63	1.43	1.30	0.42	1.24	0.93
5 x 4 x .083	0.083	0.094	2.50	0.735	1.96	0.548	1.63	1.43	1.14	0.37	1.25	0.93

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
5 x 4 x .250	0.0446	2.51	1.50	0.84	0.65	1.27	1.82	2.90	3.47
5 x 4 x .238	0.0385	2.51	1.44	0.84	0.65	1.26	1.82	2.90	3.47
5 x 4 x .220	0.0305	2.52	1.34	0.84	0.65	1.26	1.82	2.90	3.47
5 x 4 x .203	0.0240	2.52	1.25	0.84	0.65	1.25	1.82	2.90	3.48
5 x 4 x .187	0.0190	2.52	1.19	0.85	0.65	1.25	1.85	2.88	3.49
5 x 4 x .180	0.0169	2.52	1.15	0.86	0.65	1.25	1.85	2.88	3.49
5 x 4 x .165	0.01308	2.52	1.06	0.86	0.65	1.25	1.85	2.88	3.49
5 x 4 x .148	0.00946	2.53	0.96	0.86	0.65	1.24	1.85	2.88	3.49
5 x 4 x .134	0.00703	2.53	0.87	0.86	0.65	1.24	1.85	2.88	3.49
5 x 4 x .125	0.00572	2.53	0.82	0.86	0.65	1.24	1.85	2.88	3.49
5 x 4 x .120	0.00506	2.53	0.79	0.86	0.65	1.24	1.84	2.88	3.49
5 x 4 x .109	0.00380	2.54	0.72	0.86	0.65	1.23	1.84	2.88	3.50
5 x 4 x .095	0.00253	2.54	0.64	0.87	0.65	1.23	1.85	2.87	3.50
5 x 4 x .083	0.00169	2.54	0.56	0.87	0.65	1.23	1.85	2.87	3.50



Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I _x	S _x	r _x	y	I _y	S _y	r _y	x	
	angle thickness	inside radius											
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
6 x 4 x .250	0.250	0.313	8.13	2.39	9.10	2.24	1.95	1.93	3.37	1.09	1.19	0.91	
6 x 4 x .238	0.238	0.313	7.75	2.28	8.69	2.13	1.95	1.93	3.22	1.04	1.19	0.91	
6 x 4 x .220	0.220	0.313	7.18	2.11	8.08	1.98	1.96	1.92	3.00	0.97	1.19	0.90	
6 x 4 x .203	0.203	0.313	6.64	1.95	7.49	1.83	1.96	1.91	2.79	0.90	1.19	0.89	
6 x 4 x .187	0.187	0.156	6.17	1.81	6.98	1.70	1.96	1.89	2.59	0.83	1.20	0.88	
6 x 4 x .180	0.180	0.156	5.95	1.75	6.73	1.64	1.96	1.89	2.50	0.80	1.20	0.88	
6 x 4 x .165	0.165	0.156	5.46	1.61	6.20	1.50	1.96	1.88	2.31	0.74	1.20	0.87	
6 x 4 x .148	0.148	0.156	4.91	1.44	5.59	1.35	1.97	1.87	2.08	0.66	1.20	0.86	
6 x 4 x .134	0.134	0.156	4.45	1.31	5.08	1.23	1.97	1.87	1.90	0.60	1.20	0.86	
6 x 4 x .125	0.125	0.156	4.16	1.22	4.75	1.15	1.97	1.86	1.78	0.56	1.20	0.86	
6 x 4 x .120	0.120	0.156	3.99	1.17	4.57	1.10	1.97	1.86	1.71	0.54	1.21	0.85	
6 x 4 x .109	0.109	0.156	3.63	1.07	4.16	1.00	1.97	1.86	1.56	0.49	1.21	0.85	
6 x 4 x .095	0.095	0.094	3.18	0.94	3.65	0.879	1.98	1.85	1.37	0.43	1.21	0.84	
6 x 4 x .083	0.083	0.094	2.78	0.818	3.20	0.770	1.98	1.84	1.20	0.38	1.21	0.84	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r _o	I _z	r _z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x ₂	x ₃	y ₄	y ₁
						in.	in.	in.	in.
6 x 4 x .250	0.0498	2.72	1.79	0.87	0.46	1.11	2.09	3.05	4.07
6 x 4 x .238	0.0430	2.72	1.72	0.87	0.46	1.11	2.09	3.05	4.08
6 x 4 x .220	0.0341	2.73	1.60	0.87	0.47	1.11	2.09	3.05	4.08
6 x 4 x .203	0.0268	2.73	1.49	0.87	0.47	1.10	2.10	3.04	4.08
6 x 4 x .187	0.0212	2.72	1.41	0.88	0.46	1.09	2.12	3.02	4.10
6 x 4 x .180	0.0189	2.73	1.36	0.88	0.46	1.09	2.12	3.02	4.10
6 x 4 x .165	0.01457	2.73	1.26	0.88	0.46	1.08	2.12	3.02	4.10
6 x 4 x .148	0.01054	2.74	1.13	0.89	0.46	1.08	2.12	3.02	4.11
6 x 4 x .134	0.00784	2.74	1.03	0.89	0.46	1.07	2.12	3.01	4.11
6 x 4 x .125	0.00637	2.74	0.97	0.89	0.46	1.07	2.12	3.01	4.11
6 x 4 x .120	0.00564	2.74	0.93	0.89	0.46	1.07	2.13	3.01	4.11
6 x 4 x .109	0.00423	2.75	0.85	0.89	0.46	1.07	2.13	3.01	4.12
6 x 4 x .095	0.00281	2.75	0.75	0.90	0.46	1.06	2.14	3.00	4.12
6 x 4 x .083	0.00188	2.75	0.66	0.90	0.46	1.06	2.14	3.00	4.13



Angle Designation	t	R	Weight	Area	X Axis				Y Axis				
					I_x	S_x	r_x	y	I_y	S_y	r_y	x	
					in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
	angle thickness	inside radius	lbs. / ft.	in. ²									
	in.	in.	lbs. / ft.	in. ²	in. ⁴	in. ³	in.	in.	in. ⁴	in. ³	in.	in.	
6 x 5 x .250	0.250	0.313	8.98	2.64	9.84	2.32	1.93	1.76	6.31	1.68	1.55	1.25	
6 x 5 x .238	0.238	0.313	8.56	2.52	9.40	2.21	1.93	1.76	6.03	1.61	1.55	1.25	
6 x 5 x .220	0.220	0.313	7.93	2.33	8.73	2.05	1.94	1.75	5.60	1.49	1.55	1.24	
6 x 5 x .203	0.203	0.313	7.33	2.16	8.09	1.90	1.94	1.74	5.20	1.38	1.55	1.23	
6 x 5 x .187	0.187	0.156	6.81	2.00	7.53	1.76	1.94	1.72	4.83	1.28	1.55	1.22	
6 x 5 x .180	0.180	0.156	6.56	1.93	7.26	1.70	1.94	1.72	4.66	1.23	1.55	1.22	
6 x 5 x .165	0.165	0.156	6.02	1.77	6.68	1.56	1.94	1.71	4.29	1.13	1.56	1.21	
6 x 5 x .148	0.148	0.156	5.41	1.59	6.02	1.40	1.95	1.71	3.87	1.02	1.56	1.20	
6 x 5 x .134	0.134	0.156	4.91	1.44	5.47	1.27	1.95	1.70	3.52	0.93	1.56	1.20	
6 x 5 x .125	0.125	0.156	4.58	1.35	5.12	1.19	1.95	1.70	3.29	0.86	1.56	1.19	
6 x 5 x .120	0.120	0.156	4.40	1.29	4.92	1.14	1.95	1.70	3.17	0.83	1.56	1.19	
6 x 5 x .109	0.109	0.156	4.00	1.18	4.48	1.04	1.95	1.69	2.88	0.76	1.57	1.19	
6 x 5 x .095	0.095	0.094	3.50	1.03	3.93	0.910	1.95	1.68	2.53	0.66	1.57	1.18	
6 x 5 x .083	0.083	0.094	3.06	0.901	3.44	0.797	1.95	1.68	2.22	0.58	1.57	1.17	

Angle Designation	Torsion		Z axis			Coordinates			
	J	r_o	I_z	r_z	Tan Theta	Cross Section			
	in. ⁴	in.	in. ⁴	in.		x_2	x_3	y_4	y_1
	in. ⁴	in.	in. ⁴	in.		in.	in.	in.	in.
6 x 5 x .250	0.0550	3.09	2.90	1.05	0.70	1.61	2.20	3.59	4.19
6 x 5 x .238	0.0475	3.10	2.77	1.05	0.70	1.61	2.20	3.59	4.19
6 x 5 x .220	0.0376	3.10	2.58	1.05	0.70	1.61	2.20	3.59	4.19
6 x 5 x .203	0.0296	3.11	2.39	1.05	0.70	1.60	2.20	3.59	4.19
6 x 5 x .187	0.0233	3.10	2.27	1.06	0.70	1.60	2.22	3.58	4.20
6 x 5 x .180	0.0208	3.10	2.19	1.07	0.70	1.60	2.22	3.58	4.20
6 x 5 x .165	0.01607	3.11	2.02	1.07	0.70	1.60	2.22	3.58	4.21
6 x 5 x .148	0.01162	3.11	1.82	1.07	0.70	1.59	2.22	3.57	4.21
6 x 5 x .134	0.00864	3.11	1.66	1.07	0.70	1.59	2.22	3.57	4.21
6 x 5 x .125	0.00702	3.12	1.55	1.07	0.70	1.59	2.22	3.57	4.21
6 x 5 x .120	0.00621	3.12	1.49	1.07	0.70	1.59	2.22	3.57	4.21
6 x 5 x .109	0.00466	3.12	1.36	1.07	0.70	1.58	2.22	3.57	4.21
6 x 5 x .095	0.00310	3.12	1.20	1.08	0.70	1.58	2.23	3.57	4.22
6 x 5 x .083	0.00207	3.12	1.05	1.08	0.70	1.58	2.23	3.56	4.22