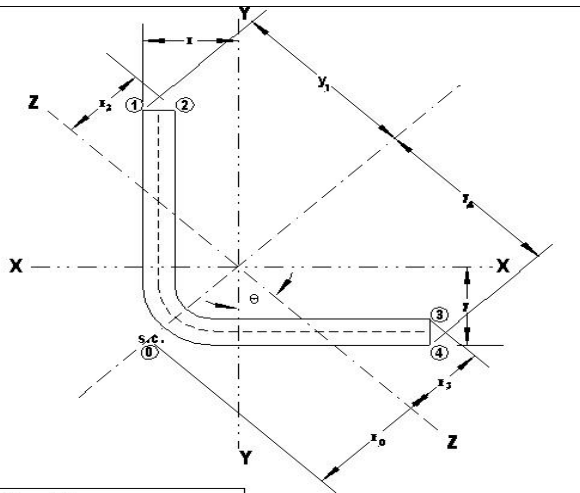


**Equal Leg Angle**

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. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius	lbs. / ft.	in. <sup>2</sup>								
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
1 x 1 x .250	0.250	0.313	1.27	0.390	0.0312	0.0502	0.283	0.379	0.0312	0.0502	0.283	0.379
1 x 1 x .238	0.238	0.313	1.22	0.375	0.0304	0.0485	0.285	0.373	0.0304	0.0485	0.285	0.373
1 x 1 x .220	0.220	0.313	1.14	0.352	0.0291	0.0459	0.288	0.366	0.0291	0.0459	0.288	0.366
1 x 1 x .203	0.203	0.313	1.06	0.329	0.0277	0.0432	0.291	0.358	0.0277	0.0432	0.291	0.358
1 x 1 x .187	0.187	0.156	1.04	0.319	0.0276	0.0416	0.294	0.337	0.0276	0.0416	0.294	0.337
1 x 1 x .180	0.180	0.156	1.00	0.309	0.0269	0.0404	0.295	0.334	0.0269	0.0404	0.295	0.334
1 x 1 x .165	0.165	0.156	0.93	0.286	0.0253	0.0377	0.298	0.328	0.0253	0.0377	0.298	0.328
1 x 1 x .148	0.148	0.156	0.84	0.259	0.0234	0.0345	0.300	0.321	0.0234	0.0345	0.300	0.321
1 x 1 x .134	0.134	0.156	0.76	0.237	0.0217	0.0317	0.303	0.315	0.0217	0.0317	0.303	0.315
1 x 1 x .125	0.125	0.156	0.71	0.223	0.0206	0.0299	0.304	0.311	0.0206	0.0299	0.304	0.311
1 x 1 x .120	0.120	0.156	0.68	0.214	0.0200	0.0289	0.305	0.309	0.0200	0.0289	0.305	0.309
1 x 1 x .109	0.109	0.156	0.62	0.196	0.0185	0.0266	0.307	0.304	0.0185	0.0266	0.307	0.304
1 x 1 x .095	0.095	0.094	0.55	0.175	0.0167	0.0237	0.309	0.294	0.0167	0.0237	0.309	0.294
1 x 1 x .083	0.083	0.094	0.48	0.154	0.0149	0.0210	0.311	0.289	0.0149	0.0210	0.311	0.289

Angle Designation	Torsion		Z axis			Coordinates					
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$	
						in.	in.	in.	in.	in.	
1 x 1 x .250	0.00813	0.537	0.00750	0.139	1.00	0.359	0.348	0.348	0.707	0.707	
1 x 1 x .238	0.00708	0.540	0.00743	0.141	1.00	0.360	0.347	0.347	0.707	0.707	
1 x 1 x .220	0.00567	0.544	0.00728	0.144	1.00	0.362	0.346	0.346	0.707	0.707	
1 x 1 x .203	0.00451	0.548	0.00709	0.147	1.00	0.363	0.344	0.344	0.707	0.707	
1 x 1 x .187	0.00372	0.540	0.00890	0.167	1.00	0.344	0.363	0.363	0.707	0.707	
1 x 1 x .180	0.00333	0.542	0.00872	0.168	1.00	0.345	0.362	0.362	0.707	0.707	
1 x 1 x .165	0.00259	0.545	0.00830	0.170	1.00	0.347	0.360	0.360	0.707	0.707	
1 x 1 x .148	0.00189	0.550	0.00776	0.173	1.00	0.349	0.358	0.358	0.707	0.707	
1 x 1 x .134	0.00142	0.553	0.00727	0.175	1.00	0.351	0.357	0.357	0.707	0.707	
1 x 1 x .125	0.00116	0.556	0.00693	0.176	1.00	0.352	0.356	0.356	0.707	0.707	
1 x 1 x .120	0.00103	0.557	0.00673	0.177	1.00	0.352	0.355	0.355	0.707	0.707	
1 x 1 x .109	0.000777	0.560	0.00628	0.179	1.00	0.354	0.354	0.354	0.707	0.707	
1 x 1 x .095	0.000527	0.559	0.00606	0.186	1.00	0.349	0.358	0.358	0.707	0.707	
1 x 1 x .083	0.000354	0.562	0.00543	0.188	1.00	0.350	0.357	0.357	0.707	0.707	

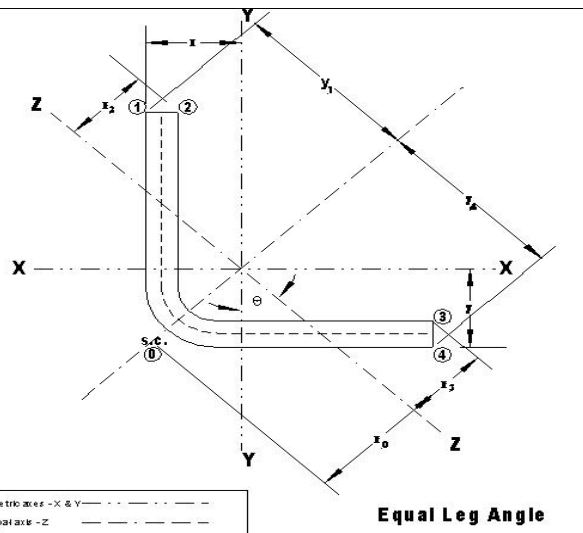


Geometric axes - X & Y  
Principal axes - Z

**Equal Leg Angle**

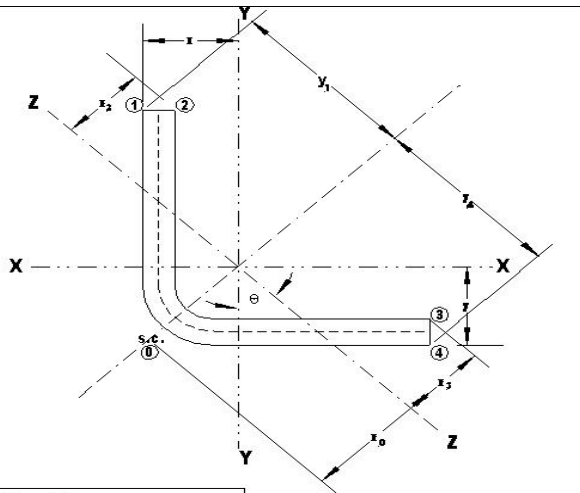
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					$I_x$	$S_x$	$r_x$	y	$I_y$	$S_y$	$r_y$	x
					in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius										
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
1.5 x 1.5 x .250	0.250	0.313	2.09	0.640	0.127	0.127	0.446	0.499	0.127	0.127	0.446	0.499
1.5 x 1.5 x .238	0.238	0.313	2.00	0.613	0.123	0.122	0.448	0.494	0.123	0.122	0.448	0.494
1.5 x 1.5 x .220	0.220	0.313	1.86	0.572	0.116	0.115	0.451	0.487	0.116	0.115	0.451	0.487
1.5 x 1.5 x .203	0.203	0.313	1.72	0.532	0.109	0.107	0.454	0.480	0.109	0.107	0.454	0.480
1.5 x 1.5 x .187	0.187	0.156	1.65	0.506	0.105	0.101	0.456	0.461	0.105	0.101	0.456	0.461
1.5 x 1.5 x .180	0.180	0.156	1.59	0.489	0.102	0.098	0.457	0.458	0.102	0.098	0.457	0.458
1.5 x 1.5 x .165	0.165	0.156	1.46	0.451	0.095	0.091	0.460	0.452	0.095	0.091	0.460	0.452
1.5 x 1.5 x .148	0.148	0.156	1.31	0.407	0.087	0.083	0.462	0.445	0.087	0.083	0.462	0.445
1.5 x 1.5 x .134	0.134	0.156	1.19	0.371	0.080	0.076	0.465	0.439	0.080	0.076	0.465	0.439
1.5 x 1.5 x .125	0.125	0.156	1.11	0.348	0.076	0.071	0.466	0.435	0.076	0.071	0.466	0.435
1.5 x 1.5 x .120	0.120	0.156	1.06	0.334	0.073	0.068	0.467	0.433	0.073	0.068	0.467	0.433
1.5 x 1.5 x .109	0.109	0.156	0.96	0.305	0.067	0.063	0.469	0.429	0.067	0.063	0.469	0.429
1.5 x 1.5 x .095	0.095	0.094	0.84	0.270	0.060	0.055	0.470	0.419	0.060	0.055	0.470	0.419
1.5 x 1.5 x .083	0.083	0.094	0.73	0.237	0.053	0.049	0.472	0.414	0.053	0.049	0.472	0.414

Angle Designation	Torsion		Z axis			Coordinates					
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$	
						in.	in.	in.	in.	in.	
1.5 x 1.5 x .250	0.0133	0.823	0.03917	0.247	1.00	0.529	0.531	0.531	1.061	1.061	
1.5 x 1.5 x .238	0.0116	0.826	0.03808	0.249	1.00	0.531	0.530	0.530	1.061	1.061	
1.5 x 1.5 x .220	0.00922	0.831	0.03631	0.252	1.00	0.533	0.528	0.528	1.061	1.061	
1.5 x 1.5 x .203	0.00730	0.835	0.03449	0.255	1.00	0.535	0.526	0.526	1.061	1.061	
1.5 x 1.5 x .187	0.00590	0.828	0.03728	0.271	1.00	0.519	0.541	0.541	1.061	1.061	
1.5 x 1.5 x .180	0.00528	0.830	0.03626	0.272	1.00	0.520	0.541	0.541	1.061	1.061	
1.5 x 1.5 x .165	0.00409	0.834	0.03399	0.275	1.00	0.522	0.539	0.539	1.061	1.061	
1.5 x 1.5 x .148	0.00297	0.838	0.03127	0.277	1.00	0.524	0.536	0.536	1.061	1.061	
1.5 x 1.5 x .134	0.00222	0.842	0.02889	0.279	1.00	0.526	0.535	0.535	1.061	1.061	
1.5 x 1.5 x .125	0.00181	0.844	0.02731	0.280	1.00	0.527	0.534	0.534	1.061	1.061	
1.5 x 1.5 x .120	0.00161	0.845	0.02640	0.281	1.00	0.528	0.533	0.533	1.061	1.061	
1.5 x 1.5 x .109	0.00121	0.848	0.02436	0.283	1.00	0.529	0.532	0.532	1.061	1.061	
1.5 x 1.5 x .095	0.000813	0.848	0.02253	0.289	1.00	0.525	0.535	0.535	1.061	1.061	
1.5 x 1.5 x .083	0.000545	0.851	0.02001	0.290	1.00	0.527	0.534	0.534	1.061	1.061	



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. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius										
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
2 x 2 x .250	0.250	0.313	2.91	0.890	0.330	0.239	0.608	0.622	0.330	0.239	0.608	0.622
2 x 2 x .238	0.238	0.313	2.77	0.851	0.317	0.229	0.610	0.617	0.317	0.229	0.610	0.617
2 x 2 x .220	0.220	0.313	2.57	0.792	0.298	0.214	0.613	0.610	0.298	0.214	0.613	0.610
2 x 2 x .203	0.203	0.313	2.38	0.735	0.279	0.199	0.616	0.603	0.279	0.199	0.616	0.603
2 x 2 x .187	0.187	0.156	2.26	0.693	0.265	0.187	0.618	0.585	0.265	0.187	0.618	0.585
2 x 2 x .180	0.180	0.156	2.17	0.669	0.256	0.181	0.619	0.582	0.256	0.181	0.619	0.582
2 x 2 x .165	0.165	0.156	2.00	0.616	0.238	0.167	0.621	0.576	0.238	0.167	0.621	0.576
2 x 2 x .148	0.148	0.156	1.79	0.555	0.216	0.151	0.624	0.569	0.216	0.151	0.624	0.569
2 x 2 x .134	0.134	0.156	1.62	0.505	0.198	0.138	0.626	0.563	0.198	0.138	0.626	0.563
2 x 2 x .125	0.125	0.156	1.51	0.473	0.186	0.129	0.628	0.560	0.186	0.129	0.628	0.560
2 x 2 x .120	0.120	0.156	1.45	0.454	0.179	0.124	0.628	0.558	0.179	0.124	0.628	0.558
2 x 2 x .109	0.109	0.156	1.31	0.414	0.165	0.114	0.630	0.553	0.165	0.114	0.630	0.553
2 x 2 x .095	0.095	0.094	1.14	0.365	0.146	0.100	0.632	0.544	0.146	0.100	0.632	0.544
2 x 2 x .083	0.083	0.094	0.99	0.320	0.129	0.088	0.634	0.539	0.129	0.088	0.634	0.539

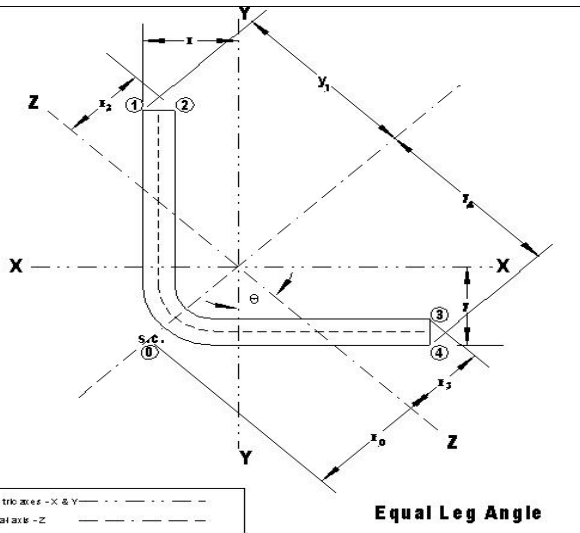
Angle Designation	Torsion		Z axis			Coordinates				
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section			
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$
						in.	in.	in.	in.	in.
2 x 2 x .250	0.01855	1.111	0.1108	0.353	1.00	0.703	0.711	0.711	1.414	1.414
2 x 2 x .238	0.01607	1.114	0.1070	0.355	1.00	0.705	0.709	0.709	1.414	1.414
2 x 2 x .220	0.01277	1.119	0.1011	0.357	1.00	0.707	0.707	0.707	1.414	1.414
2 x 2 x .203	0.01009	1.123	0.0951	0.360	1.00	0.709	0.705	0.705	1.414	1.414
2 x 2 x .187	0.00808	1.117	0.0973	0.375	1.00	0.695	0.719	0.719	1.414	1.414
2 x 2 x .180	0.00722	1.118	0.0943	0.376	1.00	0.696	0.718	0.718	1.414	1.414
2 x 2 x .165	0.00559	1.122	0.0879	0.378	1.00	0.698	0.716	0.716	1.414	1.414
2 x 2 x .148	0.00406	1.127	0.0802	0.380	1.00	0.700	0.714	0.714	1.414	1.414
2 x 2 x .134	0.00302	1.130	0.0737	0.382	1.00	0.702	0.712	0.712	1.414	1.414
2 x 2 x .125	0.00246	1.132	0.0694	0.383	1.00	0.703	0.711	0.711	1.414	1.414
2 x 2 x .120	0.00218	1.134	0.0670	0.384	1.00	0.704	0.710	0.710	1.414	1.414
2 x 2 x .109	0.001641	1.137	0.0615	0.385	1.00	0.705	0.709	0.709	1.414	1.414
2 x 2 x .095	0.001099	1.136	0.0559	0.391	1.00	0.702	0.712	0.712	1.414	1.414
2 x 2 x .083	0.000735	1.139	0.0494	0.393	1.00	0.703	0.711	0.711	1.414	1.414



**Equal Leg Angle**

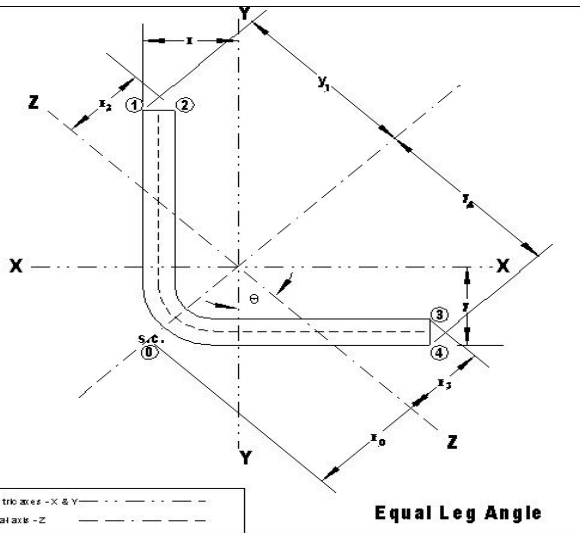
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					$I_x$	$S_x$	$r_x$	y	$I_y$	$S_y$	$r_y$	x
					in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius										
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
2.5 x 2.5 x .250	0.250	0.313	3.72	1.140	0.677	0.386	0.770	0.746	0.677	0.386	0.770	0.746
2.5 x 2.5 x .238	0.238	0.313	3.55	1.089	0.650	0.369	0.772	0.741	0.650	0.369	0.772	0.741
2.5 x 2.5 x .220	0.220	0.313	3.29	1.012	0.608	0.344	0.775	0.734	0.608	0.344	0.775	0.734
2.5 x 2.5 x .203	0.203	0.313	3.04	0.938	0.567	0.320	0.778	0.727	0.567	0.320	0.778	0.727
2.5 x 2.5 x .187	0.187	0.156	2.87	0.880	0.535	0.299	0.779	0.710	0.535	0.299	0.779	0.710
2.5 x 2.5 x .180	0.180	0.156	2.76	0.849	0.517	0.288	0.781	0.707	0.517	0.288	0.781	0.707
2.5 x 2.5 x .165	0.165	0.156	2.53	0.781	0.479	0.266	0.783	0.701	0.479	0.266	0.783	0.701
2.5 x 2.5 x .148	0.148	0.156	2.27	0.703	0.434	0.240	0.786	0.694	0.434	0.240	0.786	0.694
2.5 x 2.5 x .134	0.134	0.156	2.05	0.639	0.397	0.219	0.788	0.688	0.397	0.219	0.788	0.688
2.5 x 2.5 x .125	0.125	0.156	1.91	0.598	0.372	0.205	0.789	0.685	0.372	0.205	0.789	0.685
2.5 x 2.5 x .120	0.120	0.156	1.83	0.574	0.358	0.197	0.790	0.683	0.358	0.197	0.790	0.683
2.5 x 2.5 x .109	0.109	0.156	1.65	0.523	0.328	0.180	0.792	0.678	0.328	0.180	0.792	0.678
2.5 x 2.5 x .095	0.095	0.156	1.44	0.458	0.288	0.158	0.794	0.672	0.288	0.158	0.794	0.672
2.5 x 2.5 x .083	0.083	0.094	1.24	0.403	0.255	0.139	0.795	0.664	0.255	0.139	0.795	0.664

Angle Designation	Torsion		Z axis			Coordinates					
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$	
						in.	in.	in.	in.	in.	
2.5 x 2.5 x .250	0.0238	1.400	0.238	0.457	1.00	0.879	0.889	0.889	1.768	1.768	
2.5 x 2.5 x .238	0.0206	1.403	0.229	0.459	1.00	0.880	0.888	0.888	1.768	1.768	
2.5 x 2.5 x .220	0.0163	1.407	0.215	0.461	1.00	0.882	0.886	0.886	1.768	1.768	
2.5 x 2.5 x .203	0.0129	1.411	0.202	0.464	1.00	0.884	0.883	0.883	1.768	1.768	
2.5 x 2.5 x .187	0.0103	1.405	0.201	0.477	1.00	0.872	0.896	0.896	1.768	1.768	
2.5 x 2.5 x .180	0.00916	1.407	0.194	0.478	1.00	0.872	0.895	0.895	1.768	1.768	
2.5 x 2.5 x .165	0.00709	1.411	0.180	0.480	1.00	0.874	0.893	0.893	1.768	1.768	
2.5 x 2.5 x .148	0.00514	1.415	0.164	0.483	1.00	0.877	0.891	0.891	1.768	1.768	
2.5 x 2.5 x .134	0.00383	1.419	0.150	0.485	1.00	0.879	0.889	0.889	1.768	1.768	
2.5 x 2.5 x .125	0.00311	1.421	0.141	0.486	1.00	0.880	0.888	0.888	1.768	1.768	
2.5 x 2.5 x .120	0.00276	1.422	0.136	0.486	1.00	0.880	0.887	0.887	1.768	1.768	
2.5 x 2.5 x .109	0.00207	1.425	0.125	0.488	1.00	0.882	0.886	0.886	1.768	1.768	
2.5 x 2.5 x .095	0.00138	1.429	0.112	0.493	1.00	0.884	0.884	0.884	1.768	1.768	
2.5 x 2.5 x .083	0.000926	1.428	0.0988	0.495	1.00	0.880	0.888	0.888	1.768	1.768	



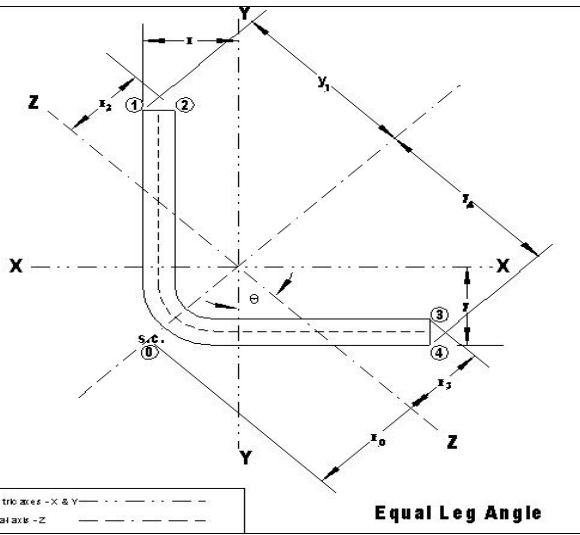
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					$I_x$	$S_x$	$r_x$	y	$I_y$	$S_y$	$r_y$	x
					in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
3 x 3 x .250	0.250	0.313	4.54	1.390	1.208	0.567	0.932	0.871	1.208	0.567	0.932	0.871
3 x 3 x .238	0.238	0.313	4.33	1.327	1.158	0.542	0.934	0.866	1.158	0.542	0.934	0.866
3 x 3 x .220	0.220	0.313	4.00	1.232	1.081	0.505	0.937	0.858	1.081	0.505	0.937	0.858
3 x 3 x .203	0.203	0.313	3.69	1.141	1.007	0.469	0.940	0.851	1.007	0.469	0.940	0.851
3 x 3 x .187	0.187	0.156	3.48	1.067	0.945	0.436	0.941	0.835	0.945	0.436	0.941	0.835
3 x 3 x .180	0.180	0.156	3.35	1.029	0.913	0.421	0.942	0.832	0.913	0.421	0.942	0.832
3 x 3 x .165	0.165	0.156	3.07	0.946	0.844	0.388	0.944	0.826	0.844	0.388	0.944	0.826
3 x 3 x .148	0.148	0.156	2.74	0.851	0.764	0.350	0.947	0.819	0.764	0.350	0.947	0.819
3 x 3 x .134	0.134	0.156	2.48	0.773	0.697	0.319	0.949	0.813	0.697	0.319	0.949	0.813
3 x 3 x .125	0.125	0.156	2.31	0.723	0.653	0.298	0.951	0.809	0.653	0.298	0.951	0.809
3 x 3 x .120	0.120	0.156	2.21	0.694	0.629	0.287	0.951	0.807	0.629	0.287	0.951	0.807
3 x 3 x .109	0.109	0.156	2.00	0.632	0.574	0.261	0.953	0.803	0.574	0.261	0.953	0.803
3 x 3 x .095	0.095	0.094	1.73	0.555	0.506	0.229	0.955	0.794	0.506	0.229	0.955	0.794
3 x 3 x .083	0.083	0.094	1.50	0.486	0.445	0.201	0.957	0.789	0.445	0.201	0.957	0.789

Angle Designation	Torsion		Z axis			shear center	Coordinates				
	J	$r_o$	$I_z$	$r_z$	Tan Theta		Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.			$x_0$	$x_2$	$x_3$	$y_4$	$y_1$
3 x 3 x .250	0.0290	1.688	0.437	0.560	1.00	1.054	1.067	1.067	2.121	2.121	
3 x 3 x .238	0.0251	1.691	0.419	0.562	1.00	1.056	1.065	1.065	2.121	2.121	
3 x 3 x .220	0.0199	1.696	0.393	0.565	1.00	1.058	1.063	1.063	2.121	2.121	
3 x 3 x .203	0.0157	1.700	0.367	0.567	1.00	1.060	1.061	1.061	2.121	2.121	
3 x 3 x .187	0.0124	1.694	0.359	0.580	1.00	1.048	1.073	1.073	2.121	2.121	
3 x 3 x .180	0.0111	1.696	0.347	0.581	1.00	1.049	1.072	1.072	2.121	2.121	
3 x 3 x .165	0.00858	1.699	0.321	0.583	1.00	1.051	1.070	1.070	2.121	2.121	
3 x 3 x .148	0.00622	1.704	0.292	0.585	1.00	1.053	1.068	1.068	2.121	2.121	
3 x 3 x .134	0.00463	1.707	0.266	0.587	1.00	1.055	1.066	1.066	2.121	2.121	
3 x 3 x .125	0.00376	1.710	0.250	0.588	1.00	1.056	1.065	1.065	2.121	2.121	
3 x 3 x .120	0.00333	1.711	0.241	0.589	1.00	1.057	1.064	1.064	2.121	2.121	
3 x 3 x .109	0.00250	1.714	0.220	0.590	1.00	1.058	1.063	1.063	2.121	2.121	
3 x 3 x .095	0.00167	1.713	0.197	0.596	1.00	1.055	1.066	1.066	2.121	2.121	
3 x 3 x .083	0.00112	1.717	0.173	0.597	1.00	1.057	1.065	1.065	2.121	2.121	



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. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
3.5 x 3.5 x .250	0.250	0.313	5.36	1.640	1.962	0.783	1.094	0.995	1.962	0.783	1.094	0.995
3.5 x 3.5 x .238	0.238	0.313	5.10	1.565	1.879	0.749	1.096	0.990	1.879	0.749	1.096	0.990
3.5 x 3.5 x .220	0.220	0.313	4.72	1.452	1.752	0.696	1.098	0.983	1.752	0.696	1.098	0.983
3.5 x 3.5 x .203	0.203	0.313	4.35	1.344	1.629	0.645	1.101	0.976	1.629	0.645	1.101	0.976
3.5 x 3.5 x .187	0.187	0.156	4.09	1.254	1.524	0.600	1.102	0.959	1.524	0.600	1.102	0.959
3.5 x 3.5 x .180	0.180	0.156	3.93	1.209	1.472	0.579	1.103	0.957	1.472	0.579	1.103	0.957
3.5 x 3.5 x .165	0.165	0.156	3.601	1.111	1.358	0.533	1.106	0.950	1.358	0.533	1.106	0.950
3.5 x 3.5 x .148	0.148	0.156	3.221	0.999	1.228	0.480	1.108	0.944	1.228	0.480	1.108	0.944
3.5 x 3.5 x .134	0.134	0.156	2.907	0.907	1.119	0.437	1.111	0.938	1.119	0.437	1.111	0.938
3.5 x 3.5 x .125	0.125	0.156	2.704	0.848	1.048	0.409	1.112	0.934	1.048	0.409	1.112	0.934
3.5 x 3.5 x .120	0.120	0.156	2.591	0.814	1.009	0.393	1.113	0.932	1.009	0.393	1.113	0.932
3.5 x 3.5 x .109	0.109	0.156	2.341	0.741	0.921	0.358	1.115	0.928	0.921	0.358	1.115	0.928
3.5 x 3.5 x .095	0.095	0.156	2.030	0.648	0.808	0.313	1.117	0.922	0.808	0.313	1.117	0.922
3.5 x 3.5 x .083	0.083	0.094	1.754	0.569	0.711	0.275	1.118	0.914	0.711	0.275	1.118	0.914

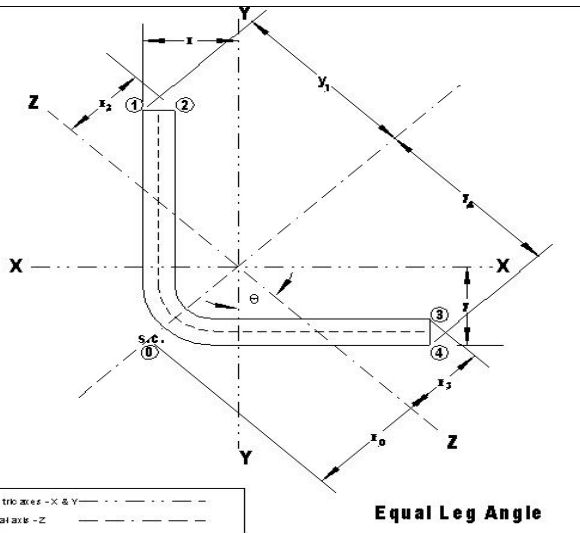
Angle Designation	Torsion		Z axis			Coordinates				
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section			
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		in.	in.	in.	in.	in.
3.5 x 3.5 x .250	0.0342	1.976	0.722	0.664	1.00	1.230	1.244	1.244	2.475	2.475
3.5 x 3.5 x .238	0.0296	1.980	0.693	0.665	1.00	1.232	1.243	1.243	2.475	2.475
3.5 x 3.5 x .220	0.0234	1.984	0.647	0.668	1.00	1.234	1.241	1.241	2.475	2.475
3.5 x 3.5 x .203	0.0185	1.988	0.603	0.670	1.00	1.236	1.238	1.238	2.475	2.475
3.5 x 3.5 x .187	0.0146	1.982	0.584	0.682	1.00	1.225	1.250	1.250	2.475	2.475
3.5 x 3.5 x .180	0.0131	1.984	0.564	0.683	1.00	1.226	1.249	1.249	2.475	2.475
3.5 x 3.5 x .165	0.01008	1.988	0.522	0.685	1.00	1.228	1.247	1.247	2.475	2.475
3.5 x 3.5 x .148	0.00730	1.992	0.472	0.688	1.00	1.230	1.245	1.245	2.475	2.475
3.5 x 3.5 x .134	0.00543	1.996	0.431	0.689	1.00	1.232	1.243	1.243	2.475	2.475
3.5 x 3.5 x .125	0.00441	1.998	0.404	0.691	1.00	1.233	1.242	1.242	2.475	2.475
3.5 x 3.5 x .120	0.00391	2.000	0.389	0.691	1.00	1.234	1.241	1.241	2.475	2.475
3.5 x 3.5 x .109	0.00294	2.002	0.356	0.693	1.00	1.235	1.240	1.240	2.475	2.475
3.5 x 3.5 x .095	0.00195	2.006	0.312	0.694	1.00	1.237	1.238	1.238	2.475	2.475
3.5 x 3.5 x .083	0.00131	2.005	0.278	0.699	1.00	1.233	1.241	1.241	2.475	2.475



**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. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius	lbs. / ft.	in. <sup>2</sup>								
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
4 x 4 x .250	0.250	0.313	6.18	1.890	2.979	1.03	1.255	1.120	2.979	1.034	1.255	1.120
4 x 4 x .238	0.238	0.313	5.88	1.803	2.850	0.988	1.257	1.115	2.850	0.988	1.257	1.115
4 x 4 x .220	0.220	0.313	5.43	1.672	2.654	0.918	1.260	1.107	2.654	0.918	1.260	1.107
4 x 4 x .203	0.203	0.313	5.01	1.547	2.466	0.851	1.263	1.101	2.466	0.851	1.263	1.101
4 x 4 x .187	0.187	0.156	4.70	1.441	2.302	0.789	1.264	1.084	2.302	0.789	1.264	1.084
4 x 4 x .180	0.180	0.156	4.52	1.389	2.222	0.761	1.265	1.081	2.222	0.761	1.265	1.081
4 x 4 x .165	0.165	0.156	4.14	1.276	2.049	0.701	1.267	1.075	2.049	0.701	1.267	1.075
4 x 4 x .148	0.148	0.156	3.70	1.147	1.850	0.631	1.270	1.068	1.850	0.631	1.270	1.068
4 x 4 x .134	0.134	0.156	3.34	1.041	1.685	0.574	1.272	1.063	1.685	0.574	1.272	1.063
4 x 4 x .125	0.125	0.156	3.10	0.973	1.577	0.536	1.274	1.059	1.577	0.536	1.274	1.059
4 x 4 x .120	0.120	0.156	2.97	0.934	1.517	0.516	1.274	1.057	1.517	0.516	1.274	1.057
4 x 4 x .109	0.109	0.156	2.69	0.850	1.384	0.470	1.276	1.053	1.384	0.470	1.276	1.053
4 x 4 x .095	0.095	0.094	2.33	0.745	1.216	0.411	1.277	1.043	1.216	0.411	1.277	1.043
4 x 4 x .083	0.083	0.094	2.01	0.652	1.068	0.361	1.279	1.039	1.068	0.361	1.279	1.039

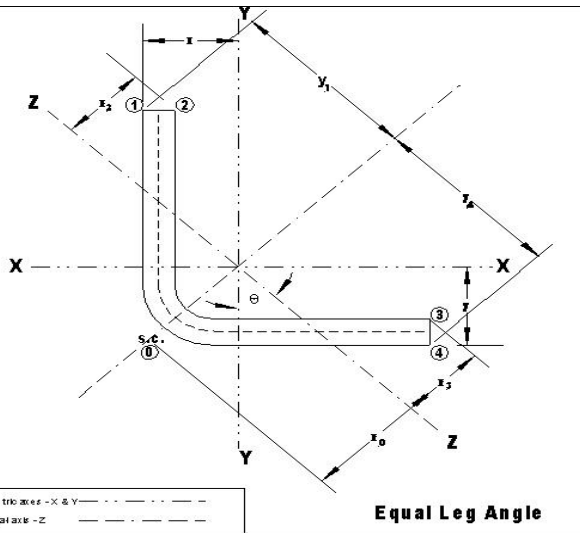
Angle Designation	Torsion		Z axis			shear center	Coordinates				
	J	$r_o$	$I_z$	$r_z$	Tan Theta		Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.			$x_0$	$x_2$	$x_3$	$y_4$	$y_1$
						in.	in.	in.	in.	in.	
4 x 4 x .250	0.0394	2.265	1.110	0.766	1.00	1.407	1.422	1.422	2.828	2.828	
4 x 4 x .238	0.0340	2.268	1.064	0.768	1.00	1.408	1.420	1.420	2.828	2.828	
4 x 4 x .220	0.0270	2.273	0.992	0.770	1.00	1.411	1.418	1.418	2.828	2.828	
4 x 4 x .203	0.0212	2.277	0.924	0.773	1.00	1.413	1.416	1.416	2.828	2.828	
4 x 4 x .187	0.0168	2.271	0.887	0.785	1.00	1.401	1.427	1.427	2.828	2.828	
4 x 4 x .180	0.0150	2.273	0.857	0.786	1.00	1.402	1.426	1.426	2.828	2.828	
4 x 4 x .165	0.01158	2.277	0.791	0.788	1.00	1.404	1.424	1.424	2.828	2.828	
4 x 4 x .148	0.00838	2.281	0.716	0.790	1.00	1.406	1.422	1.422	2.828	2.828	
4 x 4 x .134	0.00623	2.285	0.652	0.792	1.00	1.408	1.420	1.420	2.828	2.828	
4 x 4 x .125	0.00507	2.287	0.611	0.793	1.00	1.410	1.419	1.419	2.828	2.828	
4 x 4 x .120	0.00449	2.288	0.588	0.793	1.00	1.410	1.418	1.418	2.828	2.828	
4 x 4 x .109	0.00337	2.291	0.537	0.795	1.00	1.412	1.417	1.417	2.828	2.828	
4 x 4 x .095	0.00224	2.291	0.477	0.800	1.00	1.409	1.420	1.420	2.828	2.828	
4 x 4 x .083	0.00150	2.294	0.419	0.802	1.00	1.410	1.418	1.418	2.828	2.828	



**Equal Leg Angle**

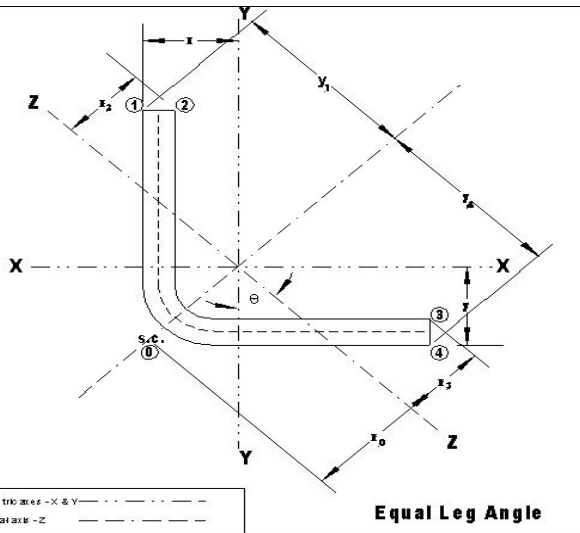
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					$I_x$	$S_x$	$r_x$	y	$I_y$	$S_y$	$r_y$	x
					in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius	lbs. / ft.	in. <sup>2</sup>								
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
4.5 x 4.5 x .250	0.250	0.313	7.00	2.140	4.297	1.320	1.417	1.244	4.297	1.320	1.417	1.244
4.5 x 4.5 x .238	0.238	0.313	6.66	2.041	4.109	1.260	1.419	1.239	4.109	1.260	1.419	1.239
4.5 x 4.5 x .220	0.220	0.313	6.15	1.892	3.823	1.170	1.422	1.232	3.823	1.170	1.422	1.232
4.5 x 4.5 x .203	0.203	0.313	5.67	1.750	3.549	1.084	1.424	1.225	3.549	1.084	1.424	1.225
4.5 x 4.5 x .187	0.187	0.156	5.31	1.628	3.307	1.005	1.425	1.209	3.307	1.005	1.425	1.209
4.5 x 4.5 x .180	0.180	0.156	5.11	1.569	3.191	0.969	1.426	1.206	3.191	0.969	1.426	1.206
4.5 x 4.5 x .165	0.165	0.156	4.67	1.441	2.941	0.891	1.429	1.200	2.941	0.891	1.429	1.200
4.5 x 4.5 x .148	0.148	0.156	4.18	1.295	2.654	0.803	1.431	1.193	2.654	0.803	1.431	1.193
4.5 x 5.5 x .134	0.134	0.156	3.77	1.175	2.415	0.729	1.434	1.188	2.415	0.729	1.434	1.188
4.5 x 4.5 x .125	0.125	0.156	3.50	1.098	2.260	0.682	1.435	1.184	2.260	0.682	1.435	1.184
4.5 x 4.5 x .120	0.120	0.156	3.35	1.054	2.173	0.655	1.436	1.182	2.173	0.655	1.436	1.182
4.5 x 4.5 x .109	0.109	0.156	3.03	0.959	1.982	0.597	1.437	1.178	1.982	0.597	1.437	1.178
4.5 x 4.5 x .095	0.095	0.094	2.62	0.840	1.740	0.522	1.439	1.168	1.740	0.522	1.439	1.168
4.5 x 4.5 x .083	0.083	0.094	2.27	0.735	1.526	0.457	1.441	1.164	1.526	0.457	1.441	1.164

Angle Designation	Torsion		Z axis			Coordinates					
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$	
						in.	in.	in.	in.	in.	
4.5 x 4.5 x .250	0.0446	2.554	1.616	0.869	1.00	1.583	1.599	1.599	3.182	3.182	
4.5 x 4.5 x .238	0.0385	2.557	1.547	0.871	1.00	1.585	1.597	1.597	3.182	3.182	
4.5 x 4.5 x .220	0.0305	2.561	1.442	0.873	1.00	1.587	1.595	1.595	3.182	3.182	
4.5 x 4.5 x .203	0.0240	2.566	1.341	0.875	1.00	1.589	1.593	1.593	3.182	3.182	
4.5 x 4.5 x .187	0.0190	2.560	1.281	0.887	1.00	1.578	1.604	1.604	3.182	3.182	
4.5 x 4.5 x .180	0.0169	2.562	1.236	0.888	1.00	1.579	1.603	1.603	3.182	3.182	
4.5 x 4.5 x .165	0.01308	2.565	1.141	0.890	1.00	1.581	1.601	1.601	3.182	3.182	
4.5 x 4.5 x .148	0.00946	2.570	1.031	0.892	1.00	1.583	1.599	1.599	3.182	3.182	
4.5 x 5.5 x .134	0.00703	2.573	0.939	0.894	1.00	1.585	1.597	1.597	3.182	3.182	
4.5 x 4.5 x .125	0.00572	2.576	0.879	0.895	1.00	1.586	1.596	1.596	3.182	3.182	
4.5 x 4.5 x .120	0.00506	2.577	0.846	0.896	1.00	1.587	1.595	1.595	3.182	3.182	
4.5 x 4.5 x .109	0.00380	2.580	0.772	0.897	1.00	1.588	1.594	1.594	3.182	3.182	
4.5 x 4.5 x .095	0.00253	2.579	0.684	0.902	1.00	1.585	1.597	1.597	3.182	3.182	
4.5 x 4.5 x .083	0.00169	2.583	0.600	0.904	1.00	1.587	1.595	1.595	3.182	3.182	



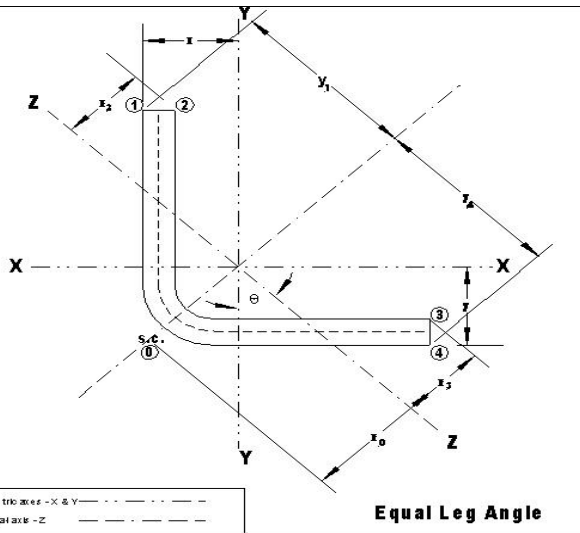
Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I <sub>x</sub>	S <sub>x</sub>	r <sub>x</sub>	y	I <sub>y</sub>	S <sub>y</sub>	r <sub>y</sub>	x
					in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
5 x 5 x .250	0.250	0.313	7.81	2.390	5.955	1.640	1.578	1.369	5.955	1.640	1.578	1.369
5 x 5 x .238	0.238	0.313	7.44	2.279	5.691	1.565	1.580	1.364	5.691	1.565	1.580	1.364
5 x 5 x .220	0.220	0.313	6.87	2.112	5.292	1.453	1.583	1.357	5.292	1.453	1.583	1.357
5 x 5 x .203	0.203	0.313	6.32	1.953	4.910	1.345	1.586	1.350	4.910	1.345	1.586	1.350
5 x 5 x .187	0.187	0.156	5.92	1.815	4.569	1.246	1.587	1.334	4.569	1.246	1.587	1.334
5 x 5 x .180	0.180	0.156	5.69	1.749	4.408	1.202	1.588	1.331	4.408	1.202	1.588	1.331
5 x 5 x .165	0.165	0.156	5.21	1.606	4.060	1.105	1.590	1.325	4.060	1.105	1.590	1.325
5 x 5 x .148	0.148	0.156	4.65	1.443	3.662	0.995	1.593	1.318	3.662	0.995	1.593	1.318
5 x 5 x .134	0.134	0.156	4.20	1.309	3.330	0.903	1.595	1.313	3.330	0.903	1.595	1.313
5 x 5 x .125	0.125	0.156	3.90	1.223	3.116	0.844	1.596	1.309	3.116	0.844	1.596	1.309
5 x 5 x .120	0.120	0.156	3.74	1.174	2.996	0.811	1.597	1.307	2.996	0.811	1.597	1.307
5 x 5 x .109	0.109	0.156	3.37	1.068	2.731	0.739	1.599	1.303	2.731	0.739	1.599	1.303
5 x 5 x .095	0.095	0.094	2.92	0.935	2.395	0.646	1.600	1.293	2.395	0.646	1.600	1.293
5 x 5 x .083	0.083	0.094	2.52	0.818	2.100	0.566	1.602	1.289	2.100	0.566	1.602	1.289

Angle Designation	Torsion		Z axis			Coordinates				
	J	r <sub>0</sub>	I <sub>z</sub>	r <sub>z</sub>	Tan Theta	shear center	Cross Section			
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		x <sub>0</sub>	x <sub>2</sub>	x <sub>3</sub>	y <sub>4</sub>	y <sub>1</sub>
5 x 5 x .250	0.0498	2.842	2.256	0.972	1.00	1.760	1.776	1.776	3.536	3.536
5 x 5 x .238	0.0430	2.845	2.158	0.973	1.00	1.761	1.774	1.774	3.536	3.536
5 x 5 x .220	0.0341	2.850	2.010	0.976	1.00	1.763	1.772	1.772	3.536	3.536
5 x 5 x .203	0.0268	2.854	1.867	0.978	1.00	1.766	1.770	1.770	3.536	3.536
5 x 5 x .187	0.0212	2.848	1.776	0.989	1.00	1.755	1.781	1.781	3.536	3.536
5 x 5 x .180	0.0189	2.850	1.714	0.990	1.00	1.755	1.780	1.780	3.536	3.536
5 x 5 x .165	0.01457	2.854	1.580	0.992	1.00	1.757	1.778	1.778	3.536	3.536
5 x 5 x .148	0.01054	2.858	1.427	0.994	1.00	1.760	1.776	1.776	3.536	3.536
5 x 5 x .134	0.00784	2.862	1.299	0.996	1.00	1.762	1.774	1.774	3.536	3.536
5 x 5 x .125	0.00637	2.864	1.216	0.997	1.00	1.763	1.773	1.773	3.536	3.536
5 x 5 x .120	0.00564	2.866	1.169	0.998	1.00	1.764	1.772	1.772	3.536	3.536
5 x 5 x .109	0.00423	2.868	1.067	0.999	1.00	1.765	1.770	1.770	3.536	3.536
5 x 5 x .095	0.00281	2.868	0.943	1.00	1.00	1.762	1.774	1.774	3.536	3.536
5 x 5 x .083	0.00188	2.871	0.828	1.01	1.00	1.764	1.772	1.772	3.536	3.536



Angle Designation	t	R	Weight	Area	X Axis				Y Axis			
					I <sub>x</sub>	S <sub>x</sub>	r <sub>x</sub>	y	I <sub>y</sub>	S <sub>y</sub>	r <sub>y</sub>	x
					in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
5.5 x 5.5 x .250	0.250	0.313	8.63	2.640	7.993	1.995	1.740	1.494	7.993	1.995	1.740	1.494
5.5 x 5.5 x .238	0.238	0.313	8.21	2.517	7.636	1.904	1.742	1.489	7.636	1.904	1.742	1.489
5.5 x 5.5 x .220	0.220	0.313	7.58	2.332	7.096	1.766	1.745	1.482	7.096	1.766	1.745	1.482
5.5 x 5.5 x .203	0.203	0.313	6.98	2.156	6.580	1.635	1.747	1.475	6.580	1.635	1.747	1.475
5.5 x 5.5 x .187	0.187	0.156	6.53	2.002	6.118	1.514	1.748	1.459	6.118	1.514	1.748	1.459
5.5 x 5.5 x .180	0.180	0.156	6.28	1.929	5.901	1.459	1.749	1.456	5.901	1.459	1.749	1.456
5.5 x 5.5 x .165	0.165	0.156	5.74	1.771	5.433	1.341	1.752	1.450	5.433	1.341	1.752	1.450
5.5 x 5.5 x .148	0.148	0.156	5.13	1.591	4.897	1.207	1.754	1.443	4.897	1.207	1.754	1.443
5.5 x 5.5 x .134	0.134	0.156	4.62	1.443	4.452	1.096	1.756	1.438	4.452	1.096	1.756	1.438
5.5 x 5.5 x .125	0.125	0.156	4.30	1.348	4.164	1.024	1.758	1.434	4.164	1.024	1.758	1.434
5.5 x 5.5 x .120	0.120	0.156	4.12	1.294	4.003	0.984	1.759	1.432	4.003	0.984	1.759	1.432
5.5 x 5.5 x .109	0.109	0.156	3.72	1.177	3.648	0.896	1.760	1.428	3.648	0.896	1.760	1.428
5.5 x 5.5 x .095	0.095	0.094	3.22	1.030	3.197	0.783	1.762	1.418	3.197	0.783	1.762	1.418
5.5 x 5.5 x .083	0.083	0.094	2.78	0.901	2.803	0.686	1.764	1.414	2.803	0.686	1.764	1.414

Angle Designation	Torsion		Z axis			Coordinates				
	J	r <sub>0</sub>	I <sub>z</sub>	r <sub>z</sub>	Tan Theta	shear center	Cross Section			
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		x <sub>0</sub>	x <sub>2</sub>	x <sub>3</sub>	y <sub>4</sub>	y <sub>1</sub>
5.5 x 5.5 x .250	0.0550	3.131	3.046	1.074	1.00	1.936	1.953	1.953	3.889	3.889
5.5 x 5.5 x .238	0.0475	3.134	2.912	1.076	1.00	1.938	1.951	1.951	3.889	3.889
5.5 x 5.5 x .220	0.0376	3.139	2.709	1.078	1.00	1.940	1.949	1.949	3.889	3.889
5.5 x 5.5 x .203	0.0296	3.143	2.515	1.080	1.00	1.942	1.947	1.947	3.889	3.889
5.5 x 5.5 x .187	0.0233	3.137	2.384	1.091	1.00	1.931	1.958	1.958	3.889	3.889
5.5 x 5.5 x .180	0.0208	3.139	2.301	1.092	1.00	1.932	1.957	1.957	3.889	3.889
5.5 x 5.5 x .165	0.01607	3.143	2.120	1.094	1.00	1.934	1.955	1.955	3.889	3.889
5.5 x 5.5 x .148	0.01162	3.147	1.913	1.096	1.00	1.937	1.953	1.953	3.889	3.889
5.5 x 5.5 x .134	0.00864	3.151	1.741	1.098	1.00	1.938	1.951	1.951	3.889	3.889
5.5 x 5.5 x .125	0.00702	3.153	1.629	1.099	1.00	1.940	1.949	1.949	3.889	3.889
5.5 x 5.5 x .120	0.00621	3.154	1.566	1.100	1.00	1.940	1.949	1.949	3.889	3.889
5.5 x 5.5 x .109	0.00466	3.157	1.428	1.101	1.00	1.942	1.947	1.947	3.889	3.889
5.5 x 5.5 x .095	0.00310	3.157	1.261	1.106	1.00	1.939	1.950	1.950	3.889	3.889
5.5 x 5.5 x .083	0.00207	3.160	1.106	1.108	1.00	1.940	1.949	1.949	3.889	3.889



**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. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
	angle thickness	inside radius										
	in.	in.	lbs. / ft.	in. <sup>2</sup>	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.	in. <sup>4</sup>	in. <sup>3</sup>	in.	in.
6 x 6 x .250	0.250	0.313	9.45	2.890	10.449	2.385	1.901	1.619	10.449	2.385	1.901	1.619
6 x 6 x .238	0.238	0.313	8.99	2.755	9.979	2.275	1.903	1.614	9.979	2.275	1.903	1.614
6 x 6 x .220	0.220	0.313	8.30	2.552	9.269	2.110	1.906	1.607	9.269	2.110	1.906	1.607
6 x 6 x .203	0.203	0.313	7.64	2.359	8.592	1.953	1.909	1.600	8.592	1.953	1.909	1.600
6 x 6 x .187	0.187	0.156	7.14	2.189	7.981	1.807	1.909	1.584	7.981	1.807	1.909	1.584
6 x 6 x .180	0.180	0.156	6.86	2.109	7.697	1.742	1.911	1.581	7.697	1.742	1.911	1.581
6 x 6 x .165	0.165	0.156	6.28	1.936	7.084	1.601	1.913	1.575	7.084	1.601	1.913	1.575
6 x 6 x .148	0.148	0.156	5.61	1.739	6.383	1.440	1.916	1.568	6.383	1.440	1.916	1.568
6 x 6 x .134	0.134	0.156	5.05	1.577	5.800	1.307	1.918	1.563	5.800	1.307	1.918	1.563
6 x 6 x .125	0.125	0.156	4.70	1.473	5.424	1.221	1.919	1.559	5.424	1.221	1.919	1.559
6 x 6 x .120	0.120	0.156	4.50	1.414	5.214	1.173	1.920	1.557	5.214	1.173	1.920	1.557
6 x 6 x .109	0.109	0.156	4.06	1.286	4.750	1.068	1.922	1.553	4.750	1.068	1.922	1.553
6 x 6 x .095	0.095	0.094	3.51	1.125	4.161	0.934	1.923	1.543	4.161	0.934	1.923	1.543
6 x 6 x .083	0.083	0.094	3.03	0.984	3.647	0.817	1.925	1.539	3.647	0.817	1.925	1.539

Angle Designation	Torsion		Z axis			Coordinates					
	J	$r_o$	$I_z$	$r_z$	Tan Theta	shear center	Cross Section				
	in. <sup>4</sup>	in.	in. <sup>4</sup>	in.		$x_0$	$x_2$	$x_3$	$y_4$	$y_1$	
						in.	in.	in.	in.	in.	
6 x 6 x .250	0.0602	3.419	4.000	1.176	1.00	2.113	2.130	2.130	4.243	4.243	
6 x 6 x .238	0.0520	3.423	3.823	1.178	1.00	2.114	2.128	2.128	4.243	4.243	
6 x 6 x .220	0.0412	3.427	3.555	1.180	1.00	2.117	2.126	2.126	4.243	4.243	
6 x 6 x .203	0.0324	3.432	3.299	1.183	1.00	2.119	2.124	2.124	4.243	4.243	
6 x 6 x .187	0.0255	3.426	3.118	1.194	1.00	2.108	2.135	2.135	4.243	4.243	
6 x 6 x .180	0.0228	3.428	3.008	1.194	1.00	2.109	2.134	2.134	4.243	4.243	
6 x 6 x .165	0.01757	3.431	2.771	1.196	1.00	2.111	2.132	2.132	4.243	4.243	
6 x 6 x .148	0.01270	3.436	2.499	1.199	1.00	2.113	2.129	2.129	4.243	4.243	
6 x 6 x .134	0.00944	3.439	2.272	1.200	1.00	2.115	2.128	2.128	4.243	4.243	
6 x 6 x .125	0.00767	3.442	2.126	1.201	1.00	2.116	2.126	2.126	4.243	4.243	
6 x 6 x .120	0.00679	3.443	2.044	1.202	1.00	2.117	2.126	2.126	4.243	4.243	
6 x 6 x .109	0.00509	3.446	1.863	1.204	1.00	2.119	2.124	2.124	4.243	4.243	
6 x 6 x .095	0.00338	3.445	1.643	1.208	1.00	2.116	2.127	2.127	4.243	4.243	
6 x 6 x .083	0.00226	3.449	1.441	1.210	1.00	2.117	2.125	2.125	4.243	4.243	