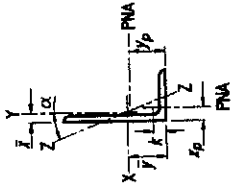


Table 1-7
Angles
Properties



Shape	k in.	Wt. lb/ft	Area, A in. ²	Axis X-X						Flexural-Torsional Properties		
				I in. ⁴	S in. ³	r in.	y-bar in.	Z in. ³	J in. ⁴	C _w in. ⁶	T ₀ in.	
L8x8x1 1/8	3/4	56.9	16.8	98.1	17.5	2.41	2.40	31.6	1.05	7.13	32.5	4.29
x1	1 1/8	51.0	15.1	89.1	15.8	2.43	2.36	28.5	0.944	5.08	23.4	4.32
x3/4	1 1/2	45.0	13.3	79.7	14.0	2.45	2.31	25.3	0.831	3.46	16.1	4.36
x5/8	1 3/4	38.9	11.5	69.9	12.2	2.46	2.26	22.0	0.719	2.21	10.4	4.39
x9/16	1 7/8	32.7	9.69	59.6	10.3	2.48	2.21	18.6	0.606	1.30	6.16	4.42
x1/2	2	29.6	8.77	54.2	9.33	2.49	2.19	16.8	0.548	0.961	4.55	4.43
		26.4	7.84	48.8	8.36	2.49	2.17	15.1	0.490	0.683	3.23	4.45
L8x6x1	1 1/2	44.2	13.1	80.9	15.1	2.49	2.65	27.3	1.45	4.34	16.3	3.88
x7/8	1 3/4	39.1	11.5	72.4	13.4	2.50	2.60	24.3	1.43	2.96	11.3	3.92
x3/4	1 7/8	33.8	9.99	63.5	11.7	2.52	2.55	21.1	1.34	1.90	7.28	3.95
x5/8	2	28.5	8.41	54.2	9.86	2.54	2.50	17.9	1.27	1.12	4.33	3.98
x9/16	2 1/8	25.7	7.61	49.4	8.94	2.55	2.48	16.2	1.24	0.823	3.20	3.99
x1/2	2 3/8	23.0	6.80	44.4	8.01	2.55	2.46	14.6	1.20	0.584	2.28	4.01
x7/16	2 7/8	20.2	5.99	39.3	7.06	2.56	2.43	12.9	1.15	0.396	1.55	4.02
L8x4x1	1 1/2	37.4	11.1	69.7	14.0	2.51	3.03	24.3	2.45	3.68	12.9	3.75
x7/8	1 3/4	33.1	9.79	62.6	12.5	2.53	2.99	21.7	2.41	2.51	8.89	3.78
x3/4	1 7/8	28.7	8.49	55.0	10.9	2.55	2.94	18.9	2.34	1.61	5.75	3.80
x5/8	2	24.2	7.16	47.0	9.20	2.56	2.89	16.1	2.27	0.955	3.42	3.83
x9/16	2 1/8	21.9	6.49	42.9	8.34	2.57	2.86	14.6	2.23	0.704	2.53	3.84
x1/2	2 3/8	19.6	5.80	38.6	7.48	2.58	2.84	13.1	2.20	0.501	1.80	3.86
x7/16	2 7/8	17.2	5.11	34.2	6.59	2.59	2.81	11.6	2.16	0.340	1.22	3.87
L7x4x3/4	1 1/4	26.2	7.74	37.8	8.39	2.21	2.50	14.8	1.84	1.47	3.97	3.31
x5/8	1 3/4	22.1	6.50	32.4	7.12	2.23	2.45	12.5	1.80	0.868	2.37	3.34
x1/2	1 7/8	17.9	5.26	26.6	5.79	2.25	2.40	10.2	1.74	0.456	1.25	3.37
x7/16	2	15.7	4.63	23.6	5.11	2.26	2.38	9.03	1.71	0.310	0.851	3.38
x3/8	2 1/8	13.6	4.00	20.5	4.42	2.27	2.35	7.81	1.67	0.198	0.544	3.40
L6x6x1	1 1/2	37.4	11.0	35.4	8.55	1.79	1.86	15.4	0.917	3.68	9.24	3.18
x7/8	1 3/4	33.1	9.75	31.9	7.61	1.81	1.81	13.7	0.813	2.51	6.41	3.21
x3/4	1 7/8	28.7	8.46	28.1	6.64	1.82	1.77	11.9	0.705	1.61	4.17	3.24
x5/8	2	24.2	7.13	24.1	5.64	1.84	1.72	10.1	0.594	0.955	2.50	3.28
x9/16	2 1/8	21.9	6.45	22.0	5.12	1.85	1.70	9.18	0.538	0.704	1.85	3.29
x1/2	2 3/8	19.6	5.77	19.9	4.59	1.86	1.67	8.22	0.481	0.501	1.32	3.31
x7/16	2 7/8	17.2	5.08	17.6	4.06	1.86	1.65	7.25	0.423	0.340	0.899	3.32
x3/8	3	14.9	4.38	15.4	3.51	1.87	1.62	6.27	0.365	0.218	0.575	3.34
x5/16	3 1/8	12.4	3.67	13.0	2.95	1.88	1.60	5.26	0.306	0.129	0.338	3.35

Note: For workable gauges, refer to Table 1-7A. For compactness criteria, refer to Table 1-7B.

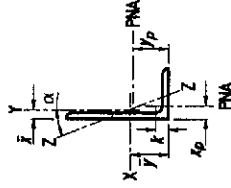
Table 1-7 (continued)
Angles
Properties



Shape	Axis Y-Y						Axis Z-Z						F _y =36 ksi
	I in. ⁴	S in. ³	r in.	x-bar in.	Z in. ³	x _p in.	I in. ⁴	S in. ³	r in.	Tan alpha			
L8x8x1 1/8	98.1	17.5	2.41	2.40	31.6	1.05	40.9	12.0	1.56	1.00	1.00		
x1	89.1	15.8	2.43	2.36	28.5	0.944	36.8	11.0	1.56	1.00	1.00		
x3/4	79.7	14.0	2.45	2.31	25.3	0.831	32.7	10.0	1.57	1.00	1.00		
x5/8	69.9	12.2	2.46	2.26	22.0	0.719	28.5	8.90	1.57	1.00	1.00		
x9/16	59.6	10.3	2.48	2.21	18.6	0.606	24.2	7.72	1.58	1.00	0.987		
x1/2	54.2	9.33	2.49	2.19	16.8	0.548	22.0	7.09	1.58	1.00	0.959		
	48.8	8.36	2.49	2.17	15.1	0.490	19.7	6.44	1.59	1.00	0.912		
L8x6x1	38.8	8.92	1.72	1.65	16.2	0.819	21.3	7.60	1.28	0.542	1.00		
x7/8	34.9	7.94	1.74	1.60	14.4	0.719	18.9	6.71	1.28	0.546	1.00		
x3/4	30.8	6.92	1.75	1.56	12.5	0.624	16.5	5.82	1.29	0.550	1.00		
x5/8	26.4	5.88	1.77	1.51	10.5	0.526	14.1	4.91	1.29	0.554	0.997		
x9/16	24.1	5.34	1.78	1.49	9.52	0.476	12.8	4.45	1.30	0.556	0.959		
x1/2	21.7	4.79	1.79	1.46	8.52	0.425	11.5	3.98	1.30	0.557	0.912		
x7/16	19.3	4.23	1.80	1.44	7.50	0.374	10.2	3.51	1.31	0.559	0.850		
L8x4x1	11.6	3.94	1.03	1.04	7.73	0.694	7.87	3.48	0.844	0.247	1.00		
x7/8	10.5	3.51	1.04	0.997	6.77	0.612	7.01	3.06	0.846	0.252	1.00		
x3/4	9.37	3.07	1.05	0.949	5.82	0.531	6.13	2.65	0.850	0.257	1.00		
x5/8	8.11	2.62	1.06	0.902	4.86	0.448	5.24	2.24	0.856	0.262	0.997		
x9/16	7.44	2.38	1.07	0.878	4.39	0.406	4.79	2.03	0.859	0.264	0.959		
x1/2	6.75	2.15	1.08	0.854	3.91	0.363	4.32	1.82	0.863	0.266	0.912		
x7/16	6.03	1.90	1.09	0.829	3.42	0.319	3.84	1.61	0.867	0.268	0.850		
L7x4x3/4	9.00	3.01	1.08	1.00	5.60	0.553	5.64	2.57	0.855	0.324	1.00		
x5/8	7.79	2.56	1.10	0.958	4.69	0.464	4.80	2.16	0.860	0.329	1.00		
x1/2	6.48	2.10	1.11	0.910	3.77	0.376	3.95	1.76	0.866	0.334	0.965		
x7/16	5.79	1.86	1.12	0.886	3.31	0.331	3.50	1.55	0.869	0.337	0.912		
x3/8	5.06	1.61	1.12	0.861	2.84	0.286	3.05	1.34	0.873	0.339	0.840		
L6x6x1	35.4	8.55	1.79	1.86	15.4	0.917	15.0	5.70	1.17	1.00	1.00		
x7/8	31.9	7.61	1.81	1.81	13.7	0.813	13.3	5.18	1.17	1.00	1.00		
x3/4	28.1	6.64	1.82	1.77	11.9	0.705	11.6	4.63	1.17	1.00	1.00		
x5/8	24.1	5.64	1.84	1.72	10.1	0.594	9.83	4.04	1.17	1.00	1.00		
x9/16	22.0	5.12	1.85	1.70	9.18	0.538	8.94	3.73	1.18	1.00	1.00		
x1/2	19.9	4.59	1.86	1.67	8.22	0.481	8.04	3.40	1.18	1.00	1.00		
x7/16	17.6	4.06	1.86	1.65	7.25	0.423	7.11	3.05	1.18	1.00	0.973		
x3/8	15.4	3.51	1.87	1.62	6.27	0.365	6.17	2.69	1.19	1.00	0.912		
x5/16	13.0	2.95	1.88	1.60	5.26	0.306	5.20	2.30	1.19	1.00	0.826		

Note: For workable gauges, refer to Table 1-7A. For compactness criteria, refer to Table 1-7B.

Table 1-7 (continued)
Angles
Properties



Shape	k in.	Wt. lb/ft	Area, A in. ²	Axis X-X						Flexural-Torsional Properties		
				I in. ⁴	S in. ³	r in.	\bar{Y} in.	Z in. ³	Y_p in.	J in. ⁴	C_w in. ⁶	\bar{r}_0 in.
L6x4x7/8	1 3/8	27.2	8.00	27.7	7.13	1.86	2.12	12.7	1.43	2.03	4.04	2.82
x3/4	1 1/4	23.6	6.94	24.5	6.23	1.88	2.07	11.1	1.37	1.31	2.64	2.85
x3/8	1 1/8	20.0	5.86	21.0	5.29	1.89	2.03	9.44	1.31	0.775	1.59	2.88
x9/16	1 1/16	18.1	5.31	19.2	4.81	1.90	2.00	8.59	1.28	0.572	1.18	2.90
x1/2	1	16.2	4.75	17.3	4.31	1.91	1.98	7.71	1.25	0.407	0.843	2.91
x7/16	3/4	14.3	4.18	15.4	3.81	1.92	1.95	6.81	1.22	0.276	0.575	2.93
x3/8	7/8	12.3	3.61	13.4	3.30	1.93	1.93	5.89	1.19	0.177	0.369	2.94
x9/16	13/16	10.3	3.03	11.4	2.77	1.94	1.90	4.96	1.15	0.104	0.217	2.96
L6x3 1/2 x 1/2	1	15.3	4.50	16.6	4.23	1.92	2.07	7.49	1.50	0.386	0.779	2.88
x3/8	7/8	11.7	3.44	12.9	3.23	1.93	2.02	5.74	1.41	0.168	0.341	2.90
x9/16	13/16	9.80	2.89	10.9	2.72	1.94	2.00	4.84	1.38	0.0990	0.201	2.92
L5x5x7/8	1 3/8	27.2	8.00	17.8	5.16	1.49	1.56	9.31	0.800	2.07	3.53	2.64
x3/4	1 1/4	23.6	6.98	15.7	4.52	1.50	1.52	8.14	0.698	1.33	2.32	2.67
x3/8	1 1/8	20.0	5.90	13.6	3.85	1.52	1.47	6.93	0.590	0.792	1.40	2.70
x1/2	1	16.2	4.79	11.3	3.15	1.53	1.42	5.66	0.479	0.417	0.744	2.73
x7/16	3/4	14.3	4.22	10.0	2.78	1.54	1.40	5.00	0.422	0.284	0.508	2.74
x9/16	7/8	12.3	3.65	8.76	2.41	1.55	1.37	4.33	0.365	0.183	0.327	2.76
x1/2	13/16	10.3	3.07	7.44	2.04	1.56	1.35	3.65	0.307	0.108	0.193	2.77
L5x3 1/2 x 3/4	1 3/8	19.8	5.85	13.9	4.26	1.55	1.74	7.60	1.10	1.09	1.52	2.36
x3/8	1 1/8	16.8	4.93	12.0	3.63	1.56	1.69	6.50	1.06	0.651	0.918	2.39
x1/2	1 1/4	13.6	4.00	10.0	2.97	1.58	1.65	5.33	0.900	0.343	0.491	2.42
x3/8	13/16	10.4	3.05	7.75	2.28	1.59	1.60	4.09	0.833	0.150	0.217	2.45
x9/16	7/8	8.70	2.56	6.58	1.92	1.60	1.57	3.45	0.904	0.0883	0.128	2.47
x1/2	13/16	7.00	2.07	5.36	1.55	1.61	1.55	2.78	0.860	0.0464	0.0670	2.48
L5x3x1/2	1 3/8	12.8	3.75	9.43	2.89	1.58	1.74	5.12	1.25	0.322	0.444	2.38
x7/16	7/8	11.3	3.31	8.41	2.56	1.59	1.72	4.53	1.22	0.220	0.304	2.39
x3/8	13/16	9.80	2.86	7.35	2.22	1.60	1.69	3.93	1.19	0.141	0.196	2.41
x9/16	7/8	8.20	2.41	6.24	1.87	1.61	1.67	3.32	1.14	0.0832	0.116	2.42
x1/2	13/16	6.60	1.94	5.09	1.51	1.62	1.64	2.68	1.12	0.0438	0.0606	2.43
L4x4x3/4	1 3/8	18.5	5.44	7.62	2.79	1.18	1.27	5.02	0.680	1.02	1.12	2.10
x3/8	1 1/8	15.7	4.61	6.62	2.38	1.20	1.22	4.28	0.576	0.610	0.680	2.13
x1/2	1 1/4	12.8	3.75	5.52	1.96	1.21	1.18	3.50	0.469	0.322	0.366	2.16
x7/16	13/16	11.3	3.30	4.93	1.73	1.22	1.15	3.10	0.413	0.220	0.282	2.18
x9/16	7/8	9.80	2.86	4.32	1.50	1.23	1.13	2.69	0.358	0.141	0.162	2.19
x1/2	13/16	8.20	2.40	3.67	1.27	1.24	1.11	2.26	0.300	0.0832	0.0963	2.21
x3/4	1 1/2	6.60	1.93	3.00	1.03	1.25	1.08	1.82	0.241	0.0438	0.0505	2.22

Note: For workable gauges, refer to Table 1-7A. For compactness criteria, refer to Table 1-7B.

Table 1-7 (continued)
Angles
Properties



Shape	Axis Y-Y						Axis Z-Z				$F_y = 36$ ksi
	I in. ⁴	S in. ³	r in.	\bar{X} in.	Z in. ³	X_p in.	I in. ⁴	S in. ³	r in.	Tan α	
L6x4x7/8	9.70	3.37	1.10	1.12	6.26	0.667	5.82	2.91	0.854	0.421	1.00
x3/4	8.63	2.95	1.12	1.07	5.42	0.578	5.08	2.51	0.856	0.428	1.00
x3/8	7.48	2.52	1.13	1.03	4.56	0.488	4.32	2.12	0.859	0.435	1.00
x9/16	6.86	2.29	1.14	1.00	4.13	0.443	3.94	1.92	0.861	0.438	1.00
x1/2	6.22	2.06	1.14	0.981	3.69	0.396	3.55	1.72	0.864	0.440	1.00
x7/16	5.56	1.83	1.15	0.957	3.24	0.348	3.14	1.51	0.867	0.443	0.973
x3/8	4.86	1.58	1.16	0.933	2.79	0.301	2.73	1.31	0.870	0.446	0.912
x9/16	4.13	1.34	1.17	0.908	2.33	0.253	2.31	1.10	0.874	0.449	0.826
L6x3 1/2 x 1/2	4.24	1.59	0.968	0.829	2.88	0.375	2.58	1.34	0.756	0.343	1.00
x3/8	3.33	1.22	0.984	0.781	2.18	0.287	2.00	1.02	0.763	0.349	0.912
x9/16	2.84	1.03	0.991	0.756	1.82	0.241	1.70	0.859	0.767	0.352	0.826
L5x5x7/8	17.8	5.16	1.49	1.56	9.31	0.800	7.56	3.43	0.971	1.00	1.00
x3/4	15.7	4.52	1.50	1.52	8.14	0.698	6.59	3.08	0.972	1.00	1.00
x3/8	13.6	3.85	1.52	1.47	6.93	0.590	5.61	2.70	0.975	1.00	1.00
x1/2	11.3	3.15	1.53	1.42	5.66	0.479	4.60	2.29	0.980	1.00	1.00
x7/16	10.0	2.78	1.54	1.40	5.00	0.422	4.08	2.06	0.983	1.00	1.00
x3/8	8.76	2.41	1.55	1.37	4.33	0.365	3.55	1.83	0.986	1.00	0.983
x9/16	7.44	2.04	1.56	1.35	3.65	0.307	3.01	1.58	0.990	1.00	0.912
L5x3 1/2 x 3/4	5.52	2.20	0.974	0.993	4.07	0.585	3.22	1.90	0.744	0.464	1.00
x3/8	4.80	1.88	0.987	0.947	3.43	0.493	2.74	1.60	0.746	0.472	1.00
x1/2	4.02	1.55	1.00	0.901	2.79	0.400	2.25	1.29	0.750	0.479	1.00
x3/8	3.15	1.19	1.02	0.854	2.12	0.305	1.74	0.985	0.755	0.485	0.983
x9/16	2.69	1.01	1.02	0.829	1.77	0.256	1.47	0.827	0.758	0.489	0.912
x1/2	2.20	0.816	1.03	0.804	1.42	0.207	1.19	0.667	0.761	0.491	0.804
L5x3x1/2	2.55	1.13	0.824	0.746	2.08	0.375	1.55	0.953	0.642	0.357	1.00
x7/16	2.29	1.00	0.831	0.722	1.82	0.331	1.37	0.840	0.644	0.361	1.00
x3/8	2.01	0.874	0.838	0.698	1.57	0.286	1.20	0.726	0.646	0.364	0.983
x9/16	1.72	0.739	0.846	0.673	1.31	0.241	1.01	0.610	0.649	0.368	0.912
x1/2	1.41	0.600	0.853	0.648	1.05	0.194	0.825	0.491	0.652	0.371	0.804
L4x4x3/4	7.62	2.79	1.18	1.27	5.02	0.680	3.25	1.81	0.774	1.00	1.00
x3/8	6.62	2.38	1.20	1.22	4.28	0.576	2.76	1.59	0.774	1.00	1.00
x1/2	5.52	1.96	1.21	1.18	3.50	0.469	2.25	1.35	0.776	1.00	1.00
x7/16	4.93	1.73	1.22	1.15	3.10	0.413	2.00	1.22	0.777	1.00	1.00
x9/16	4.32	1.50	1.23	1.13	2.69	0.358	1.73	1.08	0.779	1.00	1.00
x1/2	3.67	1.27	1.24	1.11	2.26	0.300	1.46	0.936	0.781	1.00	0.997
x3/4	3.00	1.03	1.25	1.08	1.82	0.241	1.18	0.776	0.783	1.00	0.912

Note: For workable gauges, refer to Table 1-7A. For compactness criteria, refer to Table 1-7B.

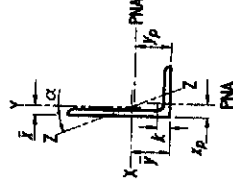


Table 1-7 (continued)
Angles
Properties

Shape	k in.	Wt. lb/ft	Area, A in. ²	Axis X-X						Flexural-Torsional Properties		
				I in. ⁴	S in. ³	r in.	\bar{y} in.	Z in. ³	Y _p in.	J in. ⁴	C _w in. ⁶	\bar{r}_0 in.
L4x3 1/2 x 1/2	7/8	11.9	3.50	5.30	1.92	1.23	1.24	3.46	0.500	0.301	0.302	2.03
x 3/8	3/4	9.10	2.68	4.15	1.48	1.25	1.20	2.66	0.427	0.132	0.134	2.06
x 1/16	1 1/16	7.70	2.25	3.53	1.25	1.17	2.24	2.00	0.400	0.0782	0.0798	2.08
x 1/4	5/8	6.20	1.82	2.89	1.01	1.26	1.81	1.81	0.360	0.0412	0.0419	2.09
L4x3x3/8	1	13.6	3.99	6.01	2.28	1.23	1.37	4.08	0.808	0.529	0.472	1.91
x 1/2	7/8	11.1	3.25	5.02	1.87	1.24	1.32	3.36	0.750	0.281	0.255	1.94
x 3/8	3/4	8.50	2.49	3.94	1.44	1.26	1.27	2.60	0.680	0.123	0.114	1.97
x 1/16	1 1/16	7.20	2.09	3.36	1.22	1.27	1.25	2.19	0.656	0.0731	0.0676	1.98
x 1/4	5/8	5.80	1.69	2.75	0.988	1.27	1.22	1.77	0.620	0.0386	0.0356	1.99
L3 1/2 x 3 1/2 x 1/2	7/8	11.1	3.25	3.63	1.48	1.05	1.05	2.66	0.464	0.281	0.238	1.87
x 1/16	1 1/16	9.80	2.89	3.25	1.32	1.06	1.03	2.36	0.413	0.192	0.164	1.89
x 3/8	3/4	8.50	2.50	2.86	1.15	1.07	1.00	2.06	0.357	0.123	0.106	1.90
x 1/16	1 1/16	7.20	2.10	2.44	0.969	1.08	0.979	1.74	0.300	0.0731	0.0634	1.92
x 1/4	5/8	5.80	1.70	2.00	0.787	1.09	0.954	1.41	0.243	0.0386	0.0334	1.93
L3 1/2 x 3 x 1/2	7/8	10.2	3.02	3.45	1.45	1.07	1.12	2.61	0.480	0.260	0.191	1.75
x 1/16	1 1/16	9.10	2.67	3.10	1.29	1.08	1.09	2.32	0.449	0.178	0.132	1.76
x 3/8	3/4	7.90	2.32	2.73	1.12	1.09	1.07	2.03	0.407	0.114	0.0858	1.78
x 1/16	1 1/16	6.80	1.95	2.33	0.951	1.09	1.05	1.72	0.380	0.0680	0.0512	1.79
x 1/4	5/8	5.40	1.58	1.92	0.773	1.10	1.02	1.39	0.340	0.0360	0.0270	1.80
L3 1/2 x 2 1/2 x 1/2	7/8	9.40	2.77	3.24	1.41	1.08	1.20	2.52	0.730	0.234	0.159	1.66
x 3/8	3/4	7.20	2.12	2.56	1.09	1.10	1.15	1.96	0.673	0.103	0.0714	1.69
x 1/16	1 1/16	6.10	1.79	2.20	0.925	1.11	1.13	1.67	0.636	0.0611	0.0426	1.71
x 1/4	5/8	4.90	1.45	1.81	0.753	1.12	1.10	1.36	0.600	0.0322	0.0225	1.72
L3x3x1/2	7/8	9.40	2.76	2.20	1.06	0.895	0.929	1.91	0.460	0.230	0.144	1.59
x 1/16	1 1/16	8.30	2.43	1.98	0.946	0.903	0.907	1.70	0.405	0.157	0.100	1.60
x 3/8	3/4	7.20	2.11	1.75	0.825	0.910	0.884	1.48	0.352	0.101	0.0652	1.62
x 1/16	1 1/16	6.10	1.78	1.50	0.699	0.918	0.860	1.26	0.297	0.0597	0.0390	1.64
x 1/4	5/8	4.90	1.44	1.23	0.569	0.926	0.836	1.02	0.240	0.0313	0.0206	1.65
x 3/16	9/16	3.71	1.09	0.948	0.433	0.933	0.812	0.774	0.182	0.0136	0.00899	1.67
L3x2 1/2 x 1/2	7/8	8.50	2.50	2.07	1.03	0.910	0.995	1.86	0.500	0.213	0.112	1.46
x 1/16	1 1/16	7.60	2.22	1.87	0.921	0.917	0.972	1.66	0.463	0.146	0.0777	1.48
x 3/8	3/4	6.60	1.93	1.65	0.803	0.924	0.949	1.45	0.427	0.0943	0.0507	1.49
x 1/16	1 1/16	5.60	1.63	1.41	0.681	0.932	0.925	1.23	0.392	0.0560	0.0304	1.51
x 1/4	5/8	4.50	1.32	1.16	0.555	0.940	0.900	1.000	0.360	0.0296	0.0161	1.52
x 3/16	9/16	3.39	1.00	0.899	0.423	0.947	0.874	0.761	0.333	0.0130	0.00705	1.54

Note: For workable gages, refer to Table 1-7A. For compactness criteria, refer to Table 1-7B.

Table 1-7 (continued)
Angles
Properties

Shape	Axis Y-Y						Axis Z-Z						F _y =36 ksi
	I in. ⁴	S in. ³	r in.	\bar{y} in.	Z in. ³	x _p in.	I in. ⁴	S in. ³	r in.	Tan α			
L4x3 1/2 x 1/2	3.76	1.50	1.04	0.994	2.69	0.438	1.80	1.17	0.716	0.750	1.00		
x 3/8	2.96	1.16	1.05	0.947	2.06	0.335	1.38	0.938	0.719	0.755	1.00		
x 1/16	2.52	0.980	1.06	0.923	1.74	0.281	1.17	0.811	0.721	0.757	0.997		
x 1/4	2.07	0.794	1.07	0.897	1.40	0.228	0.950	0.653	0.723	0.759	0.912		
L4x3x3/8	2.85	1.34	0.845	0.867	2.45	0.499	1.59	1.13	0.631	0.534	1.00		
x 1/2	2.40	1.10	0.858	0.822	1.99	0.406	1.30	0.927	0.633	0.542	1.00		
x 3/8	1.89	0.851	0.873	0.775	1.52	0.311	1.01	0.705	0.636	0.551	1.00		
x 1/16	1.62	0.721	0.880	0.750	1.28	0.261	0.851	0.591	0.638	0.554	0.997		
x 1/4	1.33	0.585	0.887	0.725	1.03	0.211	0.691	0.476	0.639	0.558	0.912		
L3 1/2 x 3 1/2 x 1/2	3.63	1.48	1.05	1.05	2.66	0.464	1.51	1.01	0.679	1.00	1.00		
x 1/16	3.25	1.32	1.06	1.03	2.36	0.413	1.34	0.920	0.681	1.00	1.00		
x 3/8	2.86	1.15	1.07	1.00	2.06	0.357	1.17	0.821	0.683	1.00	1.00		
x 1/16	2.44	0.969	1.08	0.979	1.74	0.300	0.989	0.714	0.685	1.00	1.00		
x 1/4	2.00	0.787	1.09	0.954	1.41	0.243	0.807	0.598	0.688	1.00	0.965		
L3 1/2 x 3 x 1/2	2.32	1.09	0.877	0.869	1.97	0.431	1.15	0.851	0.618	0.713	1.00		
x 1/16	2.09	0.971	0.885	0.846	1.75	0.381	1.03	0.774	0.620	0.717	1.00		
x 3/8	1.84	0.847	0.892	0.823	1.52	0.331	0.895	0.692	0.622	0.720	1.00		
x 1/16	1.58	0.718	0.900	0.798	1.28	0.279	0.761	0.602	0.624	0.722	1.00		
x 1/4	1.30	0.585	0.908	0.773	1.04	0.226	0.623	0.487	0.628	0.725	0.965		
L3 1/2 x 2 1/2 x 1/2	1.36	0.756	0.701	0.701	1.39	0.396	0.782	0.649	0.532	0.485	1.00		
x 3/8	1.09	0.589	0.716	0.655	1.07	0.303	0.608	0.496	0.535	0.495	1.00		
x 1/16	0.937	0.501	0.723	0.632	0.900	0.256	0.518	0.419	0.538	0.500	1.00		
x 1/4	0.775	0.410	0.731	0.607	0.728	0.207	0.425	0.340	0.541	0.504	0.965		
L3x3x1/2	2.20	1.06	0.895	0.929	1.91	0.460	0.924	0.703	0.580	1.00	1.00		
x 1/16	1.98	0.946	0.903	0.907	1.70	0.405	0.819	0.639	0.580	1.00	1.00		
x 3/8	1.75	0.825	0.910	0.884	1.48	0.352	0.712	0.570	0.581	1.00	1.00		
x 1/16	1.50	0.699	0.918	0.860	1.26	0.297	0.603	0.496	0.583	1.00	1.00		
x 1/4	1.23	0.569	0.926	0.836	1.02	0.240	0.491	0.415	0.585	1.00	1.00		
x 3/16	0.948	0.433	0.933	0.812	0.774	0.182	0.374	0.326	0.586	1.00	0.912		
L3x2 1/2 x 1/2	1.29	0.736	0.718	0.746	1.34	0.417	0.666	0.568	0.516	0.666	1.00		
x 1/16	1.17	0.656	0.724	0.724	1.19	0.370	0.591	0.517	0.516	0.671	1.00		
x 3/8	1.03	0.573	0.731	0.701	1.03	0.322	0.514	0.463	0.517	0.675	1.00		
x 1/16	0.888	0.487	0.739	0.677	0.873	0.272	0.437	0.404	0.518	0.679	1.00		
x 1/4	0.734	0.397	0.746	0.653	0.707	0.220	0.356	0.327	0.520	0.683	1.00		
x 3/16	0.568	0.303	0.753	0.627	0.536	0.167	0.272	0.247	0.521	0.687	0.912		

Note: For workable gages, refer to Table 1-7A. For compactness criteria, refer to Table 1-7B.