



METRIC WEIGHT TABLES – KILOGRAMS PER METER



SIZE (mm)	STEEL			BRASS			ALUMINUM			SIZE (mm)
	ROUND ●	HEXAGON ⬡	SQUARE ■	ROUND ●	HEXAGON ⬡	SQUARE ■	ROUND ●	HEXAGON ⬡	SQUARE ■	
0.5	.0015	.0017	.0020	.0017	.0018	.0021	.0006	.0006	.0007	0.5
1.0	.0062	.0068	.0078	.0067	.0074	.0085	.0022	.0024	.0028	1.0
1.5	.0139	.0153	.0176	.0150	.0166	.0191	.0050	.0055	.0063	1.5
2.0	.0246	.0271	.0314	.0267	.0294	.0340	.0089	.0098	.0113	2.0
2.5	.0385	.0424	.0490	.0417	.0460	.0531	.0138	.0153	.0176	2.5
3.0	.0554	.0611	.0705	.0601	.0662	.0765	.0199	.0220	.0254	3.0
3.5	.0754	.0831	.0960	.0818	.0901	.1041	.0271	.0299	.0345	3.5
4.0	.0985	.1086	.1254	.1068	.1177	.1360	.0354	.0391	.0451	4.0
4.5	.1247	.1374	.1587	.1352	.1490	.1721	.0448	.0494	.0571	4.5
5.0	.1539	.1696	.1960	.1669	.1839	.2125	.0554	.0610	.0705	5.0
5.5	.1863	.2053	.2371	.2019	.2225	.2571	.0670	.0738	.0853	5.5
6.0	.2217	.2443	.2822	.2403	.2648	.3059	.0797	.0879	.1015	6.0
6.5	.2602	.2867	.3312	.2821	.3108	.3591	.0936	.1031	.1191	6.5
7.0	.3017	.3325	.3841	.3271	.3605	.4164	.1085	.1196	.1382	7.0
7.5	.3464	.3817	.4409	.3755	.4138	.4780	.1246	.1373	.1586	7.5
8.0	.3941	.4343	.5017	.4273	.4708	.5439	.1417	.1562	.1804	8.0
8.5	.4449	.4903	.5663	.4823	.5315	.6140	.1600	.1763	.2037	8.5
9.0	.4988	.5496	.6349	.5407	.5959	.6884	.1794	.1977	.2284	9.0
9.5	.5557	.6124	.7074	.6025	.6640	.7670	.1999	.2203	.2545	9.5
10.0	.6158	.6786	.7839	.6676	.7357	.8498	.2215	.2441	.2819	10.0
10.5	.6789	.7481	.8642	.7360	.8111	.9369	.2442	.2691	.3108	10.5
11.0	.7451	.8211	.9485	.8078	.8902	.10283	.2680	.2953	.3411	11.0
11.5	.8143	.8974	1.0366	.8829	.9729	1.1239	.2929	.3228	.3729	11.5
12.0	.8867	.9771	1.1287	.9613	1.0594	1.2238	.3189	.3515	.4060	12.0
12.5	.9621	1.0603	1.2248	1.0431	1.1495	1.3279	.3461	.3814	.4405	12.5
13.0	1.0406	1.1468	1.3247	1.1282	1.2433	1.4362	.3743	.4125	.4765	13.0
13.5	1.1222	1.2367	1.4286	1.2167	1.3408	1.5488	.4036	.4448	.5138	13.5
14.0	1.2069	1.3300	1.5363	1.3085	1.4419	1.6657	.4341	.4784	.5526	14.0
14.5	1.2946	1.4267	1.6480	1.4036	1.5468	1.7868	.4657	.5132	.5928	14.5
15.0	1.3854	1.5268	1.7637	1.5021	1.6553	1.9121	.4983	.5492	.6344	15.0
15.5	1.4793	1.6302	1.8832	1.6039	1.7675	2.0417	.5321	.5864	.6774	15.5
16.0	1.5763	1.7371	2.0067	1.7090	1.8833	2.1756	.5670	.6248	.7218	16.0
16.5	1.6764	1.8474	2.1340	1.8175	2.0029	2.3137	.6030	.6645	.7676	16.5
17.0	1.7795	1.9610	2.2653	1.9293	2.1261	2.4560	.6401	.7054	.8148	17.0
17.5	1.8857	2.0781	2.4005	2.0445	2.2530	2.6026	.6783	.7475	.8634	17.5
18.0	1.9950	2.1985	2.5397	2.1630	2.3836	2.7535	.7176	.7908	.9135	18.0
18.5	2.1074	2.3224	2.6827	2.2848	2.5179	2.9086	.7580	.8353	.9649	18.5
19.0	2.2229	2.4496	2.8297	2.4100	2.6558	3.0679	.7995	.8811	1.0178	19.0
19.5	2.3414	2.5802	2.9806	2.5385	2.7974	3.2315	.8422	.9281	1.0721	19.5
20.0	2.4630	2.7142	3.1354	2.6704	2.9427	3.3994	.8859	.9763	1.1278	20.0
20.5	2.5877	2.8516	3.2941	2.8055	3.0917	3.5715	.9308	1.0257	1.1849	20.5
21.0	2.7155	2.9924	3.4568	2.9441	3.2443	3.7478	.9767	1.0763	1.2434	21.0
21.5	2.8463	3.1366	3.6233	3.0859	3.4007	3.9284	1.0238	1.1282	1.3033	21.5
22.0	2.9802	3.2842	3.7938	3.2311	3.5607	4.113	1.0720	1.1813	1.3646	22.0
22.5	3.1172	3.4352	3.9682	3.3797	3.7244	4.302	1.1212	1.2356	1.4273	22.5
23.0	3.2573	3.5896	4.147	3.5316	3.8917	4.496	1.1716	1.2911	1.4915	23.0
23.5	3.4005	3.7473	4.329	3.6868	4.063	4.693	1.2231	1.3479	1.5570	23.5
24.0	3.5467	3.9085	4.515	3.8453	4.238	4.895	1.2757	1.4058	1.6240	24.0
24.5	3.6960	4.073	4.705	4.007	4.416	5.101	1.3294	1.4650	1.6923	24.5
25.0	3.8484	4.241	4.899	4.172	4.598	5.312	1.3843	1.5254	1.7621	25.0
25.5	4.004	4.412	5.097	4.341	4.784	5.526	1.4402	1.5871	1.8333	25.5
26.0	4.162	4.587	5.299	4.513	4.973	5.745	1.4972	1.6499	1.9059	26.0
26.5	4.324	4.765	5.505	4.688	5.166	5.968	1.5553	1.7140	1.9799	26.5
27.0	4.489	4.947	5.714	4.867	5.363	6.195	1.6146	1.7793	2.0553	27.0
27.5	4.657	5.132	5.928	5.049	5.564	6.427	1.6749	1.8458	2.1322	27.5
28.0	4.827	5.320	6.145	5.234	5.768	6.663	1.7364	1.9135	2.2104	28.0
28.5	5.001	5.512	6.367	5.422	5.976	6.903	1.7990	1.9825	2.2901	28.5
29.0	5.178	5.707	6.592	5.614	6.187	7.147	1.8626	2.0526	2.3711	29.0
29.5	5.359	5.905	6.821	5.810	6.402	7.396	1.9274	2.1240	2.4536	29.5
30.0	5.542	6.107	7.055	6.008	6.621	7.649	1.9933	2.1966	2.5375	30.0
31.0	5.917	6.521	7.533	6.416	7.070	8.167	2.1284	2.3455	2.7094	31.0
32.0	6.305	6.948	8.027	6.836	7.533	8.702	2.2680	2.4993	2.8871	32.0
33.0	6.706	7.390	8.536	7.270	8.012	9.255	2.4119	2.6579	3.0703	33.0
34.0	7.118	7.844	9.061	7.717	8.504	9.824	2.5603	2.8214	3.2592	34.0
35.0	7.543	8.312	9.602	8.178	9.012	10.411	2.7131	2.9899	3.4538	35.0
36.0	7.980	8.794	10.159	8.652	9.534	11.014	2.8704	3.1631	3.6539	36.0
37.0	8.430	9.289	10.731	9.139	10.071	11.634	3.0321	3.3413	3.8598	37.0
38.0	8.891	9.798	11.319	9.640	10.623	12.272	3.1982	3.5244	4.071	38.0
39.0	9.366	10.321	11.922	10.154	11.190	12.926	3.3687	3.7123	4.288	39.0
40.0	9.852	10.857	12.542	10.681	11.771	13.597	3.5437	3.9051	4.511	40.0
41.0	10.351	11.407	13.177	11.222	12.367	14.286	3.7231	4.103	4.739	41.0
42.0	10.862	11.970	13.827	11.776	12.977	14.991	3.9069	4.305	4.973	42.0
43.0	11.385	12.547	14.493	12.344	13.603	15.714	4.095	4.513	5.213	43.0
44.0	11.921	13.137	15.175	12.925	14.243	16.453	4.288	4.725	5.458	44.0
45.0	12.469	13.741	15.873	13.519	14.898	17.209	4.485	4.942	5.709	45.0
46.0	13.029	14.358	16.586	14.126	15.567	17.983	4.687	5.165	5.966	46.0
47.0	13.602	14.989	17.315	14.747	16.251	18.773	4.892	5.392	6.228	47.0
48.0	14.187	15.634	18.060	15.381	16.950	19.580	5.103	5.623	6.496	48.0
49.0	14.784	16.292	18.820	16.029	17.664	20.405	5.318	5.860	6.769	49.0
50.0	15.394	16.964	19.596	16.690	18.392	21.246	5.537	6.102	7.049	50.0
51.0	16.016	17.649	20.388	17.364	19.135	22.104	5.761	6.348	7.333	51.0
52.0	16.650	18.348	21.195	18.052	19.893	22.980	5.989	6.600	7.624	52.0
53.0	17.296	19.061	22.018	18.753	20.665	23.872	6.221	6.856	7.920	53.0
54.0	17.955	19.787	22.857	19.467	21.452	24.781	6.458	7.117	8.221	54.0
55.0	18.626	20.526	23.711	20.195	22.254	25.708	6.700	7.383	8.529	55.0
56.0	19.310	21.280	24.582	20.936	23.071	26.651	6.946	7.654	8.842	56.0
57.0	20.006	22.046	25.467	21.690	23.902	27.611	7.196	7.930	9.160	57.0
58.0	20.714	22.827	26.369	22.458	24.748	28.589	7.451	8.211	9.484	58.0

METRIC WEIGHT TABLES – KILOGRAMS PER METER

SIZE (mm)	STEEL			BRASS			ALUMINUM			SIZE (mm)
	ROUND	HEXAGON	SQUARE	ROUND	HEXAGON	SQUARE	ROUND	HEXAGON	SQUARE	
59.0	21.434	23.621	27.286	23.239	25.609	29.583	7.710	8.496	9.814	59.0
60.0	22.167	24.428	28.219	24.033	26.484	30.594	7.973	8.787	10.150	60.0
61.0	22.912	25.249	29.167	24.841	27.375	31.623	8.241	9.082	10.491	61.0
62.0	23.669	26.084	30.131	25.662	28.280	32.668	8.514	9.382	10.838	62.0
63.0	24.439	26.932	31.111	26.497	29.199	33.730	8.791	9.687	11.190	63.0
64.0	25.221	27.794	32.106	27.344	30.133	34.809	9.072	9.997	11.548	64.0
65.0	26.015	28.669	33.118	28.206	31.082	35.906	9.358	10.312	11.912	65.0
66.0	26.822	29.558	34.145	29.080	32.046	37.019	9.648	10.632	12.281	66.0
67.0	27.641	30.461	35.187	29.968	33.025	38.149	9.942	10.956	12.656	67.0
68.0	28.472	31.377	36.245	30.869	34.018	39.297	10.241	11.286	13.037	68.0
69.0	29.316	32.306	37.319	31.784	35.026	40.461	10.545	11.620	13.423	69.0
70.0	30.172	33.249	38.409	32.712	36.048	41.642	10.853	11.959	13.815	70.0
71.0	31.040	34.206	39.514	33.653	37.086	42.840	11.165	12.304	14.213	71.0
72.0	31.920	35.177	40.635	34.608	38.138	44.056	11.482	12.653	14.616	72.0
73.0	32.813	36.160	41.771	35.576	39.204	45.288	11.803	13.006	15.025	73.0
74.0	33.718	37.158	42.924	36.557	40.286	46.537	12.128	13.365	15.439	74.0
75.0	34.636	38.169	44.092	37.552	41.382	47.804	12.458	13.729	15.859	75.0
76.0	35.566	39.194	45.275	38.560	42.493	49.087	12.793	14.097	16.285	76.0
77.0	36.508	40.232	46.474	39.581	43.618	50.387	13.132	14.471	16.716	77.0
78.0	37.462	41.284	47.689	40.616	44.759	51.704	13.475	14.849	17.153	78.0
79.0	38.429	42.349	48.920	41.664	45.914	53.039	13.823	15.232	17.596	79.0
80.0	39.408	43.428	50.166	42.726	47.084	54.390	14.175	15.620	18.044	80.0
81.0	40.399	44.520	51.428	43.801	48.268	55.758	14.531	16.013	18.498	81.0
82.0	41.403	45.626	52.706	44.889	49.467	57.143	14.892	16.411	18.958	82.0
83.0	42.419	46.746	53.999	45.990	50.681	58.545	15.258	16.814	19.423	83.0
84.0	43.447	47.879	55.308	47.105	51.910	59.965	15.628	17.222	19.894	84.0
85.0	44.488	49.026	56.633	48.233	53.153	61.401	16.002	17.634	20.370	85.0
90.0	49.876	54.963	63.492	54.075	59.590	68.837	17.940	19.770	22.837	90.0
95.0	55.571	61.240	70.742	60.250	66.395	76.698	19.989	22.027	25.445	95.0
100.0	61.575	67.856	78.385	66.759	73.568	84.984	22.148	24.407	28.194	100.0
105.0	67.886	74.811	86.419	73.602	81.109	93.695	24.418	26.909	31.084	105.0
110.0	74.506	82.106	94.846	80.778	89.017	102.831	26.799	29.532	34.115	110.0
115.0	81.433	89.740	103.664	88.289	97.294	112.391	29.291	32.278	37.287	115.0
120.0	88.668	97.713	112.874	96.133	105.938	122.377	31.893	35.146	40.599	120.0
125.0	96.211	106.025	122.477	104.311	114.950	132.788	34.606	38.136	44.053	125.0
130.0	104.062	114.677	132.471	112.823	124.330	143.623	37.430	41.248	47.648	130.0

MATERIAL CONVERSION FACTORS

STEELS (Basic Material: Steel, density 7.842 g/cm <sup>3</sup> )	CDA Number	Common Name	Factor
CARBON STEELS	Factor		
1008-1095	356	Extra High Leaded Brass	1.000
1109-1151	360	Free Cutting Brass	1.000
1211-12L14	370	Free Cutting Muntz Metal	0.991
	377	Forging Brass	0.991
	385	Architectural Bronze	1.000
ALLOY STEELS	Round based on 1.000		
1330-1345 Mn Steels	464	Naval Brass	0.991
4012-4820 Mo Steels	482	Naval Brass, Medium Leaded	0.991
5015-E52100 Cr Steels	485	Naval Brass, High Leaded	0.991
6118-6150 Cr-V Steels	510	Phosphor Bronze, 5% A	1.050
8615-8822 Ni-Cr-Mo Steels	524	Phosphor Bronze, 10% D	1.030
9254-9260 Si Steels	534	Phosphor Bronze, B-1	1.050
	544	Phosphor Bronze, B-2	1.050
STAINLESS STEELS			
400 Series (Cr types)	623	Aluminum Bronze, 9-10%	0.892
300 Series (Cr-Ni types)	630	Aluminum Nickel Bronze	0.892
200 Series (Cr-Ni-Mn types)	642	Aluminum Silicon Bronze	0.906
	651	Low Silicon Bronze, B	1.030
	655	High Silicon Bronze, A	1.000
	675	Manganese Bronze, B	0.985
NICKEL ALLOYS			
Monel, Monel R	1.126		
K Monel, Inconel	1.083		
Inconel X, W	1.052		
TITANIUM ALLOYS	0.572		
COPPER BASE ALLOYS (Basic Material: CDA 360, density 8.50 g/cm <sup>3</sup> )			
CDA Number	Common Name	Factor	
101	Oxygen Free Electronic Copper	1.050	
102	Oxygen Free Copper	1.050	
110	Electronic Tough Pitch Copper	1.050	
145	Tellurium Copper	1.050	
147	Sulphur Bearing Copper	1.050	
172	Beryllium Copper	0.967	
173	Leaded Beryllium Copper	0.967	
187	Leaded Copper	1.050	
220	Commercial Bronze	1.040	
230	Red Brass 85%	1.040	
260	Cartridge Brass	1.000	
270	Yellow Brass 65%	1.000	
280	Muntz Metal	0.985	
314	Leaded Commercial Bronze, B	1.040	
316	Leaded Commercial Bronze	1.050	
320	Leaded Red Brass	1.030	
335	Low Leaded Brass	1.000	
340	Medium Leaded Brass, 64½%	1.000	
342	High Leaded Brass, 64½%	1.000	
345	High Leaded Brass	1.000	
350	Medium Leaded Brass, 62%	1.000	
353	High Leaded Brass, 62%	1.000	
ALUMINUM BASE ALLOYS (Basic Material: 2011 Aluminum, density 2.82 g/cm <sup>3</sup> )	AA Number	Factor	
	1100	.961	
	2011	1.000	
	2014	.993	
	2017	.989	
	2024	.982	
	2117	.972	
	3003	.968	
	5050	.954	
	5052	.950	
	5056	.936	
	5086	.940	
	6061	.957	
	6063	.957	
	6066	.957	
	6162	.965	
	6262	.965	
	7075	.993	
	6262	.957	
MAGNESIUM ALLOYS			
	AZ31	Dow Metal FS-1	0.628
	AZ61	Dow Metal J-1	0.635

FOR BAR SIZES NOT INCLUDED IN THE TABLES, to calculate the weight in KILOGRAMS (kg) per METER (m) for round, hexagon or square shapes, multiply the size in millimeters squared (mm<sup>2</sup>) by these constants:



	Steels	Brass	Aluminum
Rounds	0.0061575	0.0066759	0.0022148
Hexagons	0.0067856	0.0073568	0.0024407
Squares	0.0078385	0.0084984	0.0028194

CONVERSION FACTORS FOR BAR SHAPES

- Round x 1.273 = Square
- Round x 1.055 = Octagon
- Round x 1.102 = Hexagon
- Hexagon x 1.155 = Square
- Hexagon x 0.957 = Octagon

METRIC WEIGHT TABLES

These METRIC net weight, no allowance, tables are based on information supplied by material suppliers and processors in the United States. They are based on known densities and chemical characteristics of mill ordered materials to maximum mill size tolerances.

The calculations were made using the conversion factors listed below for each material and shape. The weights per meter of length were rounded off to four decimal places for amounts below four kilograms and to three places for amounts over four kilograms.

Using the tables will permit accurate and rapid estimating for pieces per meter and kilograms required.

Note: Where the material conversion factors were within two tenths of one percent of others of similar classification, they were grouped and assigned a common conversion factor.

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