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Errata to
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Magnet Wire

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Table 1-1 (Inch)
DIMENSIONS FOR BARE AND FILM INSULATED ROUND MAGNET WIRE

AWG Size	Bare Wire Diameter			Single Build		Heavy Build		Triple Build		Quad Build		AWG Size
	Minimum	Nominal	Maximum	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	
4/0	0.4554	0.4600	0.4646	—	—	—	—	—	—	—	—	4/0
3/0	0.4055	0.4096	0.4137	—	—	—	—	—	—	—	—	3/0
2/0	0.3612	0.3648	0.3684	—	—	—	—	—	—	—	—	2/0
1/0	0.3170	0.3249	0.3281	—	—	—	—	—	—	—	—	1/0
1	0.2864	0.2893	0.2922	—	—	—	—	—	—	—	—	1
2	0.2550	0.2576	0.2602	—	—	0.0038	0.2634	—	—	—	—	2
2.5	0.2407	0.2431	0.2448	—	—	0.0038	0.2488	—	—	—	—	2.5
3	0.2271	0.2294	0.2317	—	—	0.0038	0.2351	—	—	—	—	3
3.5	0.2143	0.2165	0.2180	—	—	0.0038	0.2221	—	—	—	—	3.5
4	0.2023	0.2043	0.2057	—	—	0.0037	0.2098	—	—	—	—	4
4.5	0.1909	0.1928	0.1941	—	—	0.0037	0.1982	—	—	—	—	4.5
5	0.1801	0.1819	0.1832	—	—	0.0037	0.1873	—	—	—	—	5
5.5	0.1700	0.1717	0.1729	—	—	0.0036	0.1769	—	—	—	—	5.5
6	0.1604	0.1620	0.1631	—	—	0.0036	0.1672	—	—	—	—	6
6.5	0.1514	0.1529	0.1540	—	—	0.0036	0.1579	—	—	—	—	6.5
7	0.1429	0.1443	0.1453	—	—	0.0035	0.1492	—	—	—	—	7
7.5	0.1348	0.1362	0.1372	—	—	0.0035	0.1410	—	—	—	—	7.5
8	0.1272	0.1285	0.1294	0.0017	0.1314	0.0035	0.1332	—	—	—	—	8
8.5	0.1201	0.1213	0.1221	0.0017	0.1241	0.0034	0.1258	—	—	—	—	8.5
9	0.1133	0.1144	0.1153	0.0017	0.1173	0.0034	0.1190	—	—	—	—	9
9.5	0.1069	0.1080	0.1089	0.0017	0.1109	0.0034	0.1125	—	—	—	—	9.5
10	0.1009	0.1019	0.1027	0.0017	0.1047	0.0034	0.1064	—	—	0.0068	0.1098	10
10.5	0.0952	0.0962	0.0970	0.0017	0.0990	0.0033	0.1007	—	—	0.0066	0.1039	10.5
11	0.0898	0.0907	0.0914	0.0017	0.0934	0.0033	0.0952	—	—	0.0066	0.0983	11
11.5	0.0847	0.0856	0.0863	0.0016	0.0882	0.0033	0.0900	—	—	0.0066	0.0932	11.5
12	0.0800	0.0808	0.0814	0.0016	0.0833	0.0032	0.0851	—	—	0.0064	0.0881	12
12.5	0.0755	0.0763	0.0769	0.0016	0.0788	0.0032	0.0805	—	—	0.0064	0.0836	12.5
13	0.0713	0.0720	0.0726	0.0016	0.0745	0.0032	0.0762	—	—	0.0064	0.0793	13
13.5	0.0672	0.0679	0.0684	0.0016	0.0703	0.0032	0.0720	—	—	0.0064	0.0751	13.5
14	0.0635	0.0641	0.0647	0.0016	0.0666	0.0032	0.0682	0.0048	0.0698	0.0064	0.0714	14
14.5	0.0599	0.0605	0.0611	0.0016	0.0629	0.0031	0.0645	0.0047	0.0661	0.0063	0.0676	14.5
15	0.0565	0.0571	0.0577	0.0015	0.0594	0.0030	0.0610	0.0046	0.0625	0.0061	0.0640	15
15.5	0.0534	0.0539	0.0544	0.0015	0.0563	0.0030	0.0578	0.0045	0.0592	0.0059	0.0607	15.5
16	0.0503	0.0508	0.0513	0.0014	0.0531	0.0029	0.0545	0.0043	0.0560	0.0058	0.0574	16

Table continued on next page.

Table 1-1 (Inch) Continued

AWG Size	Bare Wire Diameter			Single Build		Heavy Build		Triple Build		Quad Build		AWG Size
	Minimum	Nominal	Maximum	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	
16.5	0.0475	0.0480	0.0485	0.0014	0.0502	0.0028	0.0516	0.0042	0.0530	0.0056	0.0545	16.5
17	0.0448	0.0453	0.0458	0.0014	0.0475	0.0028	0.0488	0.0041	0.0502	0.0055	0.0516	17
17.5	0.0423	0.0427	0.0431	0.0013	0.0449	0.0027	0.0462	0.0040	0.0476	0.0054	0.0489	17.5
18	0.0399	0.0403	0.0407	0.0013	0.0424	0.0026	0.0437	0.0039	0.0450	0.0052	0.0464	18
18.5	0.0376	0.0380	0.0384	0.0013	0.0400	0.0025	0.0413	0.0038	0.0426	0.0051	0.0441	18.5
19	0.0355	0.0359	0.0363	0.0012	0.0379	0.0025	0.0391	0.0037	0.0404	0.0050	0.0418	19
19.5	0.0336	0.0339	0.0342	0.0012	0.0359	0.0024	0.0371	0.0036	0.0383	0.0048	0.0397	19.5
20	0.0317	0.0320	0.0323	0.0012	0.0340	0.0024	0.0351	0.0035	0.0363	0.0047	0.0377	20
20.5	0.0299	0.0302	0.0305	0.0011	0.0321	0.0023	0.0332	0.0034	0.0344	0.0046	0.0358	20.5
21	0.0282	0.0285	0.0288	0.0011	0.0303	0.0022	0.0315	0.0034	0.0326	0.0045	0.0340	21
21.5	0.0266	0.0269	0.0272	0.0011	0.0287	0.0022	0.0298	0.0033	0.0309	0.0044	0.0323	21.5
22	0.0250	0.0253	0.0256	0.0011	0.0270	0.0021	0.0281	0.0032	0.0292	0.0043	0.0306	22
22.5	0.0237	0.0239	0.0241	0.0010	0.0257	0.0021	0.0267	0.0031	0.0277	0.0041	0.0291	22.5
23	0.0224	0.0226	0.0228	0.0010	0.0243	0.0020	0.0253	0.0030	0.0263	0.0040	0.0277	23
23.5	0.0211	0.0213	0.0215	0.0010	0.0230	0.0020	0.0240	0.0030	0.0249	0.0039	0.0264	23.5
24	0.0199	0.0201	0.0203	0.0010	0.0217	0.0019	0.0227	0.0029	0.0236	0.0038	0.0250	24
24.5	0.0188	0.0190	0.0192	0.0009	0.0206	0.0019	0.0215	0.0028	0.0224	0.0037	0.0238	24.5
25	0.0177	0.0179	0.0181	0.0009	0.0194	0.0018	0.0203	0.0027	0.0212	0.0036	0.0226	25
25.5	0.0167	0.0169	0.0171	0.0009	0.0184	0.0018	0.0193	0.0027	0.0202	0.0036	0.0215	25.5
26	0.0157	0.0159	0.0161	0.0009	0.0173	0.0017	0.0182	0.0026	0.0191	0.0035	0.0204	26
26.5	0.0149	0.0150	0.0152	0.0008	0.0165	0.0017	0.0173	0.0025	0.0182	0.0034	0.0194	26.5
27	0.0141	0.0142	0.0143	0.0008	0.0156	0.0016	0.0165	0.0025	0.0173	0.0033	0.0185	27
27.5	0.0133	0.0134	0.0135	0.0008	0.0148	0.0016	0.0156	0.0024	0.0164	0.0032	0.0175	27.5
28	0.0125	0.0126	0.0127	0.0008	0.0140	0.0016	0.0147	0.0023	0.0155	0.0031	0.0167	28
28.5	0.0118	0.0119	0.0120	0.0008	0.0132	0.0015	0.0140	0.0023	0.0147	0.0030	0.0158	28.5
29	0.0112	0.0113	0.0114	0.0007	0.0126	0.0015	0.0133	0.0022	0.0141	0.0030	0.0151	29
29.5	0.0105	0.0106	0.0107	0.0007	0.0118	0.0014	0.0126	0.0022	0.0133	0.0029	0.0143	29.5

Table continued on next page.

Table 1-1 (Inch) Continued

AWG Size	Bare Wire Diameter			Single Build		Heavy Build		Triple Build		Quad Build		AWG Size
	Minimum	Nominal	Maximum	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	
30	0.0099	0.0100	0.0101	0.0007	0.0112	0.0013	0.0121	0.0020	0.0126	0.0026	0.0138	30
31	0.0088	0.0089	0.0090	0.0006	0.0100	0.0012	0.0108	0.0018	0.0114	0.0024	0.0125	31
32	0.0079	0.0080	0.0081	0.0006	0.0090	0.0011	0.0097	0.0017	0.0102	0.0022	0.0112	32
33	0.0070	0.0071	0.0072	0.0005	0.0081	0.0010	0.0087	0.0015	0.0092	0.0020	0.0101	33
34	0.0062	0.0063	0.0064	0.0005	0.0072	0.0009	0.0078	0.0014	0.0083	0.0019	0.0091	34
35	0.0055	0.0056	0.0057	0.0004	0.0065	0.0009	0.0070	0.0013	0.0075	0.0017	0.0082	35
36	0.0049	0.0050	0.0051	0.0004	0.0058	0.0008	0.0063	0.0012	0.0067	0.0016	0.0074	36
37	0.0044	0.0045	0.0046	0.0004	0.0052	0.0007	0.0057	0.0011	0.0061	0.0014	0.0067	37
38	0.0039	0.0040	0.0041	0.0003	0.0047	0.0007	0.0051	0.0010	0.0055	0.0013	0.0060	38
39	0.0034	0.0035	0.0036	0.0003	0.0042	0.0006	0.0045	0.0009	0.0049	0.0012	0.0054	39
40	0.0030	0.0031	0.0032	0.0003	0.0037	0.0005	0.0041	0.0008	0.0044	0.0011	0.0049	40
41	0.0027	0.0028	0.0029	0.0003	0.0033	0.0005	0.0037	0.0008	0.0040	0.0010	0.0044	41
42	0.0024	0.0025	0.0026	0.0002	0.0030	0.0005	0.0033	0.0007	0.0036	0.0009	0.0039	42
43	0.0021	0.0022	0.0023	0.0002	0.0027	0.0004	0.0029	0.0006	0.0032	0.0008	0.0036	43
44	0.0019	0.0020	0.0021	0.0002	0.0024	0.0004	0.0026	0.0006	0.0029	0.0008	0.0032	44
	Theoretical Nominal Bare Diameter ‡											
45		0.00176		0.0002	0.0022	0.0004	0.0024	0.0005	0.0027	0.0007	0.0029	45
46		0.00157		0.0002	0.0020	0.0003	0.0021	0.0005	0.0024	0.0007	0.0026	46
47		0.00140		0.0001	0.0017	0.0003	0.0019	—	—	—	—	47
48		0.00124		0.0001	0.0015	0.0002	0.0017	—	—	—	—	48
49		0.00111		0.0001	0.0013	0.0002	0.0015	—	—	—	—	49
50		0.00099		0.0001	0.0012	0.0002	0.0014	—	—	—	—	50
51		0.00088		0.0001	0.0011	—	—	—	—	—	—	51
52		0.00078		0.0001	0.0010	—	—	—	—	—	—	52
53		0.00070		0.00005	0.00085	—	—	—	—	—	—	53
54		0.00062		0.00005	0.00075	—	—	—	—	—	—	54
55		0.00055		0.00005	0.00070	—	—	—	—	—	—	55
56		0.00049		0.00005	0.00065	—	—	—	—	—	—	56

‡ Theoretical nominal bare wire diameter by resistance, see 1.6.7.2.
 See Table 1-2 for 45-56 AWG Round Copper Wire, Ultra Fine Sizes by Resistance

Table 1-1 (mm)
DIMENSIONS FOR BARE AND FILM INSULATED ROUND MAGNET WIRE

AWG Size	Bare Wire Diameter			Single Build		Heavy Build		Triple Build		Quad Build		AWG Size
	Minimum	Nominal	Maximum	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	
4/0	11.567	11.684	11.801	—	—	—	—	—	—	—	—	4/0
3/0	10.300	10.404	10.508	—	—	—	—	—	—	—	—	3/0
2/0	9.174	9.266	9.357	—	—	—	—	—	—	—	—	2/0
1/0	8.171	8.252	8.334	—	—	—	—	—	—	—	—	1/0
1	7.275	7.348	7.422	—	—	—	—	—	—	—	—	1
2	6.477	6.543	6.609	—	—	0.097	6.690	—	—	—	—	2
2.5	6.114	6.175	6.218	—	—	0.097	6.320	—	—	—	—	2.5
3	5.768	5.827	5.885	—	—	0.097	5.971	—	—	—	—	3
3.5	5.443	5.499	5.538	—	—	0.097	5.641	—	—	—	—	3.5
4	5.138	5.189	5.225	—	—	0.094	5.330	—	—	—	—	4
4.5	4.849	4.897	4.931	—	—	0.094	5.035	—	—	—	—	4.5
5	4.575	4.620	4.666	—	—	0.094	4.757	—	—	—	—	5
5.5	4.318	4.361	4.392	—	—	0.091	4.494	—	—	—	—	5.5
6	4.074	4.115	4.155	—	—	0.091	4.246	—	—	—	—	6
6.5	3.846	3.884	3.911	—	—	0.091	4.012	—	—	—	—	6.5
7	3.630	3.665	3.701	—	—	0.089	3.790	—	—	—	—	7
7.5	3.424	3.459	3.484	—	—	0.089	3.581	—	—	—	—	7.5
8	3.231	3.264	3.297	0.043	3.338	0.089	3.383	—	—	—	—	8
8.5	3.051	3.081	3.103	0.043	3.153	0.086	3.196	—	—	—	—	8.5
9	2.878	2.906	2.929	0.043	2.980	0.086	3.023	—	—	—	—	9
9.5	2.715	2.743	2.765	0.043	2.816	0.086	2.859	—	—	—	—	9.5
10	2.563	2.588	2.609	0.043	2.660	0.086	2.703	—	—	0.173	2.789	10
10.5	2.418	2.443	2.463	0.043	2.514	0.084	2.557	—	—	0.168	2.638	10.5
11	2.281	2.304	2.322	0.043	2.373	0.084	2.418	—	—	0.168	2.497	11
11.5	2.151	2.174	2.192	0.041	2.240	0.084	2.287	—	—	0.168	2.367	11.5
12	2.032	2.052	2.069	0.041	2.117	0.081	2.163	—	—	0.163	2.239	12
12.5	1.918	1.938	1.954	0.041	2.002	0.081	2.045	—	—	0.163	2.124	12.5
13	1.811	1.829	1.843	0.041	1.892	0.081	1.934	—	—	0.163	2.014	13
13.5	1.707	1.725	1.738	0.041	1.787	0.081	1.829	—	—	0.163	1.909	13.5
14	1.613	1.628	1.643	0.041	1.692	0.081	1.732	0.122	1.773	0.163	1.814	14
14.5	1.521	1.537	1.552	0.041	1.598	0.079	1.638	0.119	1.679	0.160	1.717	14.5
15	1.435	1.450	1.466	0.038	1.509	0.076	1.549	0.117	1.588	0.155	1.626	15
15.5	1.356	1.369	1.382	0.038	1.430	0.076	1.468	0.114	1.504	0.150	1.542	15.5
16	1.278	1.290	1.303	0.036	1.349	0.074	1.384	0.109	1.422	0.147	1.458	16

Table continued on next page.

Table 1-1 (mm) Continued

AWG Size	Bare Wire Diameter			Single Build		Heavy Build		Triple Build		Quad Build		AWG Size
	Minimum	Nominal	Maximum	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	
16.5	1.207	1.219	1.232	0.036	1.275	0.071	1.311	0.107	1.346	0.142	1.384	16.5
17	1.138	1.151	1.163	0.036	1.207	0.071	1.240	0.104	1.275	0.140	1.311	17
17.5	1.074	1.085	1.095	0.033	1.140	0.069	1.173	0.102	1.209	0.137	1.242	17.5
18	1.013	1.024	1.034	0.033	1.077	0.066	1.110	0.099	1.143	0.132	1.179	18
18.5	0.955	0.965	0.975	0.033	1.016	0.064	1.049	0.097	1.082	0.130	1.119	18.5
19	0.902	0.912	0.922	0.030	0.963	0.064	0.993	0.094	1.026	0.127	1.063	19
19.5	0.853	0.861	0.869	0.030	0.912	0.061	0.942	0.091	0.973	0.122	1.009	19.5
20	0.805	0.813	0.820	0.030	0.864	0.061	0.892	0.089	0.922	0.119	0.958	20
20.5	0.759	0.767	0.775	0.028	0.815	0.058	0.843	0.086	0.874	0.117	0.909	20.5
21	0.716	0.724	0.732	0.028	0.770	0.056	0.800	0.086	0.828	0.114	0.863	21
21.5	0.676	0.683	0.691	0.028	0.729	0.056	0.757	0.084	0.785	0.112	0.819	21.5
22	0.635	0.643	0.650	0.028	0.686	0.053	0.714	0.081	0.742	0.109	0.778	22
22.5	0.602	0.607	0.612	0.025	0.653	0.053	0.678	0.079	0.704	0.104	0.738	22.5
23	0.569	0.574	0.579	0.025	0.617	0.051	0.643	0.076	0.668	0.102	0.704	23
23.5	0.536	0.541	0.546	0.025	0.584	0.051	0.610	0.076	0.632	0.099	0.669	23.5
24	0.505	0.511	0.516	0.025	0.551	0.048	0.577	0.074	0.599	0.097	0.635	24
24.5	0.478	0.483	0.488	0.023	0.523	0.048	0.546	0.071	0.569	0.094	0.605	24.5
25	0.450	0.455	0.460	0.023	0.493	0.046	0.516	0.069	0.538	0.091	0.575	25
25.5	0.424	0.429	0.434	0.023	0.467	0.046	0.490	0.069	0.513	0.091	0.546	25.5
26	0.399	0.404	0.409	0.023	0.439	0.043	0.462	0.066	0.485	0.089	0.519	26
26.5	0.378	0.381	0.386	0.020	0.419	0.043	0.439	0.064	0.462	0.086	0.493	26.5
27	0.358	0.361	0.363	0.020	0.396	0.041	0.419	0.064	0.439	0.084	0.469	27
27.5	0.338	0.340	0.343	0.020	0.376	0.041	0.396	0.061	0.417	0.081	0.446	27.5
28	0.318	0.320	0.323	0.020	0.356	0.041	0.373	0.058	0.394	0.079	0.423	28
28.5	0.300	0.302	0.305	0.020	0.335	0.038	0.356	0.058	0.373	0.076	0.401	28.5
29	0.284	0.287	0.290	0.018	0.320	0.038	0.338	0.056	0.358	0.076	0.382	29
29.5	0.267	0.269	0.272	0.018	0.300	0.036	0.320	0.056	0.338	0.074	0.363	29.5

Table continued on next page.

Table 1-1 (mm) Continued

AWG Size	Bare Wire Diameter			Single Build		Heavy Build		Triple Build		Quad Build		AWG Size
	Minimum	Nominal	Maximum	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	Minimum Increase in Diameter	Maximum Overall Diameter	
30	0.251	0.254	0.257	0.018	0.285	0.033	0.307	0.051	0.321	0.066	0.352	30
31	0.224	0.226	0.229	0.015	0.255	0.030	0.275	0.046	0.289	0.061	0.317	31
32	0.201	0.203	0.206	0.015	0.229	0.028	0.247	0.043	0.260	0.056	0.285	32
33	0.178	0.180	0.183	0.013	0.205	0.025	0.222	0.038	0.234	0.051	0.257	33
34	0.157	0.160	0.163	0.013	0.183	0.023	0.199	0.036	0.211	0.048	0.231	34
35	0.140	0.142	0.145	0.010	0.164	0.023	0.178	0.033	0.190	0.043	0.208	35
36	0.124	0.127	0.130	0.010	0.147	0.020	0.160	0.030	0.171	0.041	0.188	36
37	0.112	0.114	0.117	0.010	0.132	0.018	0.144	0.028	0.154	0.036	0.169	37
38	0.099	0.102	0.104	0.008	0.118	0.018	0.129	0.025	0.139	0.033	0.152	38
39	0.086	0.089	0.091	0.008	0.106	0.015	0.116	0.023	0.125	0.030	0.137	39
40	0.076	0.079	0.081	0.008	0.095	0.013	0.104	0.020	0.112	0.028	0.124	40
41	0.069	0.071	0.074	0.008	0.085	0.013	0.093	0.020	0.101	0.025	0.111	41
42	0.061	0.064	0.066	0.005	0.076	0.013	0.083	0.018	0.091	0.023	0.100	42
43	0.053	0.056	0.058	0.005	0.068	0.010	0.075	0.015	0.082	0.020	0.090	43
44	0.048	0.051	0.053	0.005	0.061	0.010	0.067	0.015	0.074	0.020	0.081	44
	Theoretical Nominal Bare Diameter ‡											
45		0.0447		0.0051	0.0559	0.0100	0.0610	0.0127	0.0686	0.0178	0.0737	45
46		0.0399		0.0051	0.0508	0.0076	0.0533	0.0127	0.0610	0.0178	0.0660	46
47		0.0356		0.0025	0.0432	0.0076	0.0483	—	—	—	—	47
48		0.0315		0.0025	0.0381	0.0051	0.0432	—	—	—	—	48
49		0.0282		0.0025	0.0330	0.0051	0.0381	—	—	—	—	49
50		0.0251		0.0025	0.0305	0.0051	0.0356	—	—	—	—	50
51		0.0224		0.0025	0.0279	—	—	—	—	—	—	51
52		0.0198		0.0025	0.0254	—	—	—	—	—	—	52
53		0.0178		0.0013	0.0216	—	—	—	—	—	—	53
54		0.0157		0.0013	0.0191	—	—	—	—	—	—	54
55		0.0140		0.0013	0.0178	—	—	—	—	—	—	55
56		0.0124		0.0013	0.0165	—	—	—	—	—	—	56

‡ Theoretical nominal bare wire diameter by resistance, see 1.6.7.2.

See Table 1-2 for 45-56 AWG Round Copper Wire, Ultra Fine Sizes by Resistance