

TMC SPECIFICATION

NO. S 904

REV: 0

COMPILED: FRD

CHECKED:

APPD:

SHEET 1 OF 6

TITLE:

GAUGES, WIRE AND METAL
STANDARD

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SHEET 2 OF 6

TITLE: GAUGES, WIRE AND METAL
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GENERAL NOTES:

1. All dimensions and tolerances are in inches.
2. In the event of conflict between this specification and any detail drawing or contract, the latter shall take precedence.
3. Unless otherwise specified in this specification, in the detail drawing, or in the contract; the standard tolerances shall be one(1) gauge(e.g., the limits for U. S. Standard Gauge #4/0 are 0.43750 Max. and 0.3750 Min., #3/0 and #5/0 respectively).
4. Dimensions given apply to tubing wall thickness, wire diameter, and sheet thickness.

Birmingham or Stubs Gauges

Aluminum Tubing
 Brass Tubing (≥ 3/8 O.D.)
 Flat Wire
 Steel, Spring
 Steel, Wire(except Music wire and Armature Binding wire).
 Steel Tubing

GAUGE	SIZE	GAUGE	SIZE
4/0	.454	17	.058
3/0	.425	18	.049
2/0	.380	19	.042
0	.340	20	.035
1	.300	21	.032
2	.284	22	.028
3	.259	23	.025
4	.238	24	.022
5	.220	25	.020
6	.203	26	.018
7	.180	27	.016
8	.165	28	.014
9	.148	29	.013
10	.134	30	.012
11	.120	31	.010
12	.109	32	.009
13	.095	33	.008
14	.083	34	.007
15	.072	35	.005
16	.065	36	.004

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SHEET 3 OF 6

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U. S. Standard Gauge

Nickel, Sheet
 Steel, Stainless*
 Steel, Plate*
 Steel, Sheet*

GAUGE	THICKNESS	*TOL. ±	GAUGE	THICKNESS	*TOL. ±
7/0	.500	----	17	.05625	.005
6/0	.46875	----	18	.0500	.005
5/0	.43750	----	19	.04375	.005
4/0	.40625	----	20	.0375	.004
3/0	.3750	----	21	.034375	.004
2/0	.34375	----	22	.03125	.004
0	.3125	----	23	.028125	.004
1	.28125	----	24	.0250	.003
2	.265625	----	25	.021875	.003
3	.250	----	26	.01875	.003
4	.234375	----	27	.0171875	.003
5	.21875	----	28	.015625	.002
6	.203125	----	29	.0140625	.002
7	.1875	----	30	.0125	.002
8	.171875	----	31	.0109375	.002
9	.15625	.014	32	.01015625	.002
10	.140625	.012	33	.009375	.002
11	.125	.010	34	.00859375	.002
12	.109375	.009	35	.0078125	.0015
13	.09375	.008	36	.00703125	.0015
14	.078125	.007	37	.006640625	.0015
15	.0703125	.006	38	.00625	.0015
16	.0625	.006			

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SHEET 4 OF 6

TITLE: GAUGES, WIRE AND METAL

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American or Browne and Sharp Gauges

- Aluminum Sheet Δ
- Armature Binding Wire *
- Brass Sheet
- Brass Tubing ($< 3/8$ O.D.)
- Copper Sheet
- Copper Wire *
- Nickel-Silver Sheet
- Nickel-Silver Wire *
- Phosphor-Bronze Strip

GAUGE	SIZE	*AREA CIRC. MILS.	MAXIMUM LENGTH		
			0-18	18-36 Δ TOLERANCE	36-48 ±
6/0	.5800	-----	----	-----	-----
5/0	.5165	-----	----	-----	-----
4/0	.4600	211,600	----	-----	-----
3/0	.4096	167,800	----	-----	-----
2/0	.3648	133,100	----	-----	-----
0	.3249	105,600	----	-----	-----
1	.2893	83,690	.013	.013	.013
2	.2576	66,360	.013	.013	.013
3	.2294	52,620	.009	.009	.011
4	.2043	41,740	.009	.009	.011
5	.1819	33,090	.007	.007	.010
6	.1620	26,240	.006	.006	.008
7	.1443	20,820	.006	.006	.008
8	.1285	16,510	.0045	.0045	.005
9	.1144	13,090	.0045	.0045	.005
10	.1019	10,380	.004	.004	.005
11	.09074	8,230	.0035	.0035	.004
12	.08081	6,530	.0035	.0035	.004
13	.07196	5,180	.003	.003	.004
14	.06408	4,110	.0025	.003	.004
15	.05707	3,260	.0025	.003	.004
16	.05082	2,580	.0025	.003	.004
17	.04526	2,030	.002	.0025	.003
18	.04030	1,620	.002	.0025	.003
19	.03589	1,290	.002	.002	.0025
20	.03196	1,020	.002	.002	.0025
21	.02846	812.0	.002	.002	.0025
22	.02535	640.0	.0015	.002	.0025
23	.02257	511.0	.0015	.002	.0025
24	.02010	404.0	.0015	.002	.0025
25	.01790	320.0	.0015	.002	.0025
26	.01594	253.0	.0015	.0015	.002

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American or Browne and Sharp Gauges
(continued)

GAUGE	SIZE	AREA CIRC. MILS.	MAXIMUM LENGTH		
			0-18	18-36 TOLERANCE	36-48 ±
27	.01420	201.5	.0015	.0015	.002
28	.01264	159.0	.0015	.0015	.002
29	.01126	128.0	.0015	.0015	.002
30	.01003	100.0	.001	.0015	----
31	.008928	79.2	.001	.0015	----
32	.007950	64.0	.001	.0015	----
33	.007080	50.4	.001	.0015	----
34	.006305	39.7	.001	.0015	----
35	.005615	31.4	.001	.0015	----
36	.005000	25.0	-----	-----	-----
37	.004453	20.2	-----	-----	-----
38	.003965	16.0	-----	-----	-----
39	.003531	12.2	-----	-----	-----
40	.003145	9.61	-----	-----	-----
41	.002800	7.84	-----	-----	-----
42	.002494	6.25	-----	-----	-----
43	.002221	4.84	-----	-----	-----
44	.001978	4.00	-----	-----	-----
45	.001761	3.24	-----	-----	-----
46	.001568	2.56	-----	-----	-----
47	.001397	1.96	-----	-----	-----
48	.001244	1.44	-----	-----	-----
49	.001018	1.21	-----	-----	-----
50	.0009863	1.00	-----	-----	-----

* Tolerances: +.003, -.001 inch or +3%, -1% whichever is greater. The cross-sectional area of stranded wire shall not be less than 98% of the area in circular mils specified. The area shall be considered as the sum of the cross-sectional areas of the component strands.

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Music Wire or Washburn and Moen Gauges

GAUGE	SIZE		GAUGE	SIZE	
	IRON WIRE	MUSIC WIRE		IRON WIRE	MUSIC WIRE
7/0	.4900	----	18	.0475	.041
6/0	.4615	----	19	.0410	.043
5/0	.4305	----	20	.0348	.045
4/0	.3938	----	21	.03175	.047
3/0	.3625	----	22	.0286	.049
2/0	.3310	----	23	.0258	.051
0	.3065	.009	24	.0230	.055
1	.2830	.010	25	.0204	.059
2	.2625	.011	26	.0181	.063
3	.2437	.012	27	.0173	.067
4	.2253	.013	28	.0162	.071
5	.2070	.014	29	.0150	.075
6	.1920	.016	30	.0140	.080
7	.1770	.018	31	.0132	.085
8	.1620	.020	32	.0128	.090
9	.1483	.022	33	.0118	.095
10	.1350	.024	34	.0104	.100
11	.1205	.026	35	.0095	.106
12	.1055	.029	36	.0090	.112
13	.0915	.031	37	.0085	.118
14	.0800	.033	38	.0080	.124
15	.0720	.035	39	.0075	----
16	.0625	.037	40	.0070	----
17	.0540	.039			

