

Wire & Sheet Gauge Conversion Chart

Mining and Industrial Suppliers (Pvt) Ltd

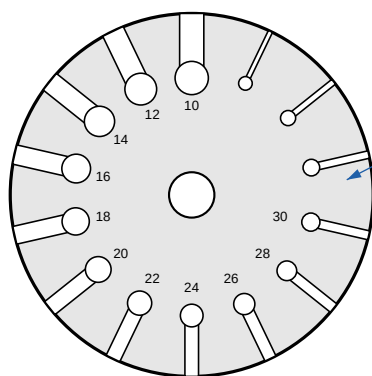
No 2 Hood Road, Southerton, Harare

Gauge numbers to millimetres - SWG, AWG, BWG and US sheet gauges.

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Wire gauge plate



measure in the slot
the hole is only clearance

Gauge numbers run backwards - the higher the number, the thinner the wire or sheet - and each system has its own thicknesses. 16 gauge is 1.63 mm in SWG, 1.29 mm in AWG, 1.52 mm in US steel sheet and 1.61 mm in galvanised sheet.

Check a wire or sheet with a gauge plate for that system, or better, a micrometer or vernier - then order in mm.

Galvanised sheet is quoted over the zinc; the steel under a 0.5 mm zinc-coated sheet is about 0.46 mm.

Electrical cable is sold by area (mm²) in metric countries - use the AWG table on page 2 to match American cable.

Gauges 7/0 to 17

Gauge	SWG mm	SWG inch	AWG (B&S) mm	BWG mm	US steel sheet mm	Galvanised sheet mm	Stainless sheet mm
7/0	12.70	0.5000	-	-	-	-	-
6/0	11.79	0.4640	-	-	-	-	-
5/0	10.97	0.4320	-	-	-	-	-
4/0	10.16	0.4000	11.68	11.53	-	-	-
3/0	9.45	0.3720	10.40	10.79	-	-	-
2/0	8.84	0.3480	9.27	9.65	-	-	-
0	8.23	0.3240	8.25	8.64	-	-	-
1	7.62	0.3000	7.35	7.62	-	-	-
2	7.01	0.2760	6.54	7.21	-	-	-
3	6.40	0.2520	5.83	6.58	6.07	-	-
4	5.89	0.2320	5.19	6.05	5.69	-	-
5	5.38	0.2120	4.62	5.59	5.31	-	-
6	4.88	0.1920	4.12	5.16	4.94	-	-
7	4.47	0.1760	3.66	4.57	4.55	-	-
8	4.06	0.1600	3.26	4.19	4.18	4.27	4.37
9	3.66	0.1440	2.91	3.76	3.80	3.89	-
10	3.25	0.1280	2.59	3.40	3.42	3.51	3.57
11	2.95	0.1160	2.30	3.05	3.04	3.13	3.17
12	2.64	0.1040	2.05	2.77	2.66	2.75	2.78
13	2.34	0.0920	1.83	2.41	2.28	2.37	-
14	2.03	0.0800	1.63	2.11	1.90	1.99	1.98
15	1.83	0.0720	1.45	1.83	1.71	1.80	-
16	1.63	0.0640	1.29	1.65	1.52	1.61	1.59
17	1.42	0.0560	1.15	1.47	1.37	1.46	-

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Gauges 18 to 40, AWG electrical wire in mm², and which system is used where.

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Gauges 18 to 40

Gauge	SWG mm	SWG inch	AWG (B&S) mm	BWG mm	US steel sheet mm	Galvanised sheet mm	Stainless sheet mm
18	1.22	0.0480	1.02	1.24	1.21	1.31	1.27
19	1.02	0.0400	0.912	1.07	1.06	1.16	-
20	0.914	0.0360	0.812	0.889	0.912	1.01	0.952
21	0.813	0.0320	0.723	0.813	0.836	0.930	-
22	0.711	0.0280	0.644	0.711	0.759	0.853	0.794
23	0.610	0.0240	0.573	0.635	0.683	0.777	-
24	0.559	0.0220	0.511	0.559	0.607	0.701	0.635
25	0.508	0.0200	0.455	0.508	0.531	0.627	-
26	0.457	0.0180	0.405	0.457	0.455	0.551	0.476
27	0.417	0.0164	0.361	0.406	0.417	0.513	-
28	0.376	0.0148	0.321	0.356	0.378	0.475	0.397
29	0.345	0.0136	0.286	0.330	0.343	0.437	-
30	0.315	0.0124	0.255	0.305	0.305	0.399	0.318
31	0.295	0.0116	0.227	0.254	-	-	-
32	0.274	0.0108	0.202	0.229	-	-	-
33	0.254	0.0100	0.180	0.203	-	-	-
34	0.234	0.0092	0.160	0.178	-	-	-
35	0.213	0.0084	0.143	0.127	-	-	-
36	0.193	0.0076	0.127	0.102	-	-	-
37	0.173	0.0068	0.113	-	-	-	-
38	0.152	0.0060	0.101	-	-	-	-
39	0.132	0.0052	0.090	-	-	-	-
40	0.122	0.0048	0.080	-	-	-	-

AWG wire - area and the nearest metric cable, and gauge systems

AWG	Dia mm	Area mm ²	Nearest metric cable mm ²
4/0 AWG	11.68	107.2	120
3/0 AWG	10.40	85.0	95
2/0 AWG	9.27	67.4	70
0 AWG	8.25	53.5	50
1 AWG	7.35	42.4	50
2 AWG	6.54	33.6	35
3 AWG	5.83	26.7	25
4 AWG	5.19	21.2	25
5 AWG	4.62	16.8	16
6 AWG	4.12	13.3	16
7 AWG	3.66	10.5	10
8 AWG	3.26	8.37	10
9 AWG	2.91	6.63	6
10 AWG	2.59	5.26	6
11 AWG	2.30	4.17	4
12 AWG	2.05	3.31	4
13 AWG	1.83	2.62	2.5
14 AWG	1.63	2.08	2.5
15 AWG	1.45	1.65	1.5
16 AWG	1.29	1.31	1.5
17 AWG	1.15	1.04	1
18 AWG	1.02	0.82	0.75
19 AWG	0.912	0.65	0.75
20 AWG	0.812	0.52	0.5
21 AWG	0.723	0.41	0.5
22 AWG	0.644	0.33	-
23 AWG	0.573	0.26	-
24 AWG	0.511	0.20	-

Gauge system	Where you meet it
SWG (Standard Wire Gauge)	British wire, sheet, strip and tube - older drawings, fencing and binding wire, welding rod
AWG (American / Brown & Sharpe)	Electrical copper wire, US aluminium, brass and copper sheet
BWG (Birmingham / Stubs)	Tube wall thickness - boiler and heat-exchanger tube, hypodermic tube
US steel sheet (Manufacturers' Standard)	Black and cold-rolled steel sheet from the US
Galvanised sheet gauge	US galvanised sheet - thicker than plain steel of the same number
Stainless sheet gauge	US stainless sheet - close to fractions of an inch
Metric (mm)	Everything sold locally today - quote the thickness in mm to avoid mistakes